CE

EMC TEST REPORT

Product	:	LED Strip
Model	:	See model list
Serial Number	:	N/A
Input voltage	:	AC 230V/50Hz
Date of issue	:	March 31, 2021
Regulations	:	See below

Test Standards	Results
☒ EN 55015:2019+A11:2020	PASS
☒ EN 61000-3-2:2019	PASS
☒ EN 61000-3-3:2013+A1:2019	PASS
☒ EN 61547:2009	PASS

Prepared for:
SHENZHEN LEDMY CO., LTD.
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Prepared by:
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Tested by: LiWenGeng Reviewed by: Simon Yao

Approved by: Tomyxia Date: March 31, 2021

Shenzhen DE-Testing Detection Co., Ltd.

TABLE OF CONTENTS

1. GENERAL INFORMATION

Applicant:	SHENZHEN LEDMY CO., LTD.
Address:	15F 03-05,Merlin Excellence Center Plaza, Building 2,Futian District, Hong Road,Shenzhen City,China
Manufacturer:	DONGGUAN LEDMY CO., LTD.
Address:	No. 9,Industrial Zone Longbei Tongren,Tangxia Town,Dongguan city,Guangdong province.
EMC Directive:	2014/30/EU
Product:	LED Strip
Model:	See model list
Serial Number:	N/A
Sample Received Date:	March 8, 2021
Sample tested Date:	March 9, 2021 to March 29, 2021

The tested sample(s) and the sample information are provided by the client.

2. TEST SUMMARY

The Product has been tested according to the following specifications:

EMISSION		
Standard	**Test Item**	**Test**
EN 55015	Disturbance voltages (CE)	Yes
EN 55015	Radiated disturbance in frequency range 9KHz to 30MHz (ME)	Yes
EN 55015	Radiated disturbance in frequency range 30MHz to 1000MHz (RE)	Yes
EN 61000-3-2	Harmonic current emission	Yes
EN 61000-3-3	Voltage fluctuations & flicker	Yes

IMMUNITY (EN 61547)		
Standard	**Test Item**	**Test**
IEC 61000-4-2	Electrostatic discharge	Yes
IEC 61000-4-3	Radio frequency electromagnetic fields	Yes
IEC 61000-4-4	Fast transients	Yes
IEC 61000-4-5	Surges	Yes
IEC 61000-4-6	Injected currents	Yes
IEC 61000-4-8	Power frequency magnetic fields	N/A
IEC 61000-4-11	Voltage dips and interruptions	Yes

Remark:
1. The Product doesn't contain any device susceptible to magnetic fields.

3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the Product as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Test item	Value (dB)
CE(9kHz-150kHz)	3.8
CE(150kHz-30MHz)	3.4
RE	6.3
ME	3.7

4. PRODUCT INFORMATION AND TEST SETUP

4.1 PRODUCT INFORMATION

Product:LED Strip
Model: See model list
Rating:AC 200-240 50Hz/60Hz
Test volage:AC 230V/50Hz
(Use power equipment for testing)

General product information:

1.These products are class III luminaire, for outdoor or indoor use, suitable for directly mounting on normally flammable surfaces.

2.All models have similar electrical construction and appearance except the rating; length; LED type and quantity; IP rating.

3.All products above IP20 required sealant at the input and output.

4.Series name:Fabxxcd-Py-GzYYefghhpVi###jkkLmmnn

Fa represent Segmentation type; can be FP; FH and FE: FP = Flex Premium, FH = Flex Honor and FE = Flex Essential;
b represent Sub-Segment; can be Blank and N: Blank = Normal versions and N = Neon;
xx represent power consumption per meter; can be any letters but not exceed 100W Max.;
c represent Classification Color Control; can be W, D and C; W = Pure White; D = Digital control; C= Color Mixed
d represent Light Emitting Direction; can be Blank; S and R; Blank = Top Emitting/Bending; S = Side Emitting/Bending and R=360° Round neon strip;
Py represent IP level; can be P0; P2; P5; P7andP8; P0 = IP20; P2 = IP62; P5 = IP65; P7 = IP67 and P8 = IP68;
Gz represent Generation; can be G1; G2 or any other number.
YY represent LED type, can be 06; 14; 18, 21;22; 27; 28; 30; 31; 35; 38; 50; 57; COB; 06=0603; 14 = 3014; 18=1808, 21=2110;22=2216; 27 = 3527; 28 = 2835;30=3030; 31 = 315; 35=3528; 38=3838; 50 = 5050 and 57=5730; COB=COB Module;
e represent LED Spec; can be H; L and Blank; H = 60mA; L = 20mA; H2=Dual chip and Blank for only one LED rating
f represent LED Classification or LED manufacturer, can be Z, X, S, G, A1 or other letter or numbers;
g represent CRI; can be blank; 8; 9 and F; blank = Not available; 8 = CRI>80; 9= CRI>90 and F = full spectrum;
hh represent CCT or color of LED. It can be any numbers or letters. For example: 30; 40; 2765; RGB; RG; R; G; Y and B; 30 = 3000K; 40=4000K; 2765=2700K~6500K; RGB=Mixed color; R= Red; G= Green; Y=Yellow and B= Blue or any other letter;
p represent voltage; P=05; 12 and 24;
i represent CC mode, can be blank; C and T; Blank for constant voltage; C= IC constant current and T=Triodes constant current;
###= three numbers indicate number of LED per meter; can be 30; 56; 60; 64; 80; 96; 120; 140; 160; 180; 210; 240; 280; 300; 420; 560; 700 or any other number; Suffix Can be added S; D; T; F; S represents single line; D represents Double lines; T represents Tribble line; F represents Four lines;
j represent PCB color of normal versions; can be W and Blank; W=White; Blank for Neon version;
kk represent PCB width for normal versions or cross-sectional dimensions for Neon version, For normal versions, it can be 04; 08; 10; 12; 04=4mm; 08=8mm; 10=10mm and 12=12mm and; For Neon version, it can be two number by two number to represent the width and height of the cross-section. For example: 0816=8mm width by 16mm height or other numbers;
mm represent length per reel, can be any letters but max length not exceed 100W;
nn represent Brand, can be blank, NILED;
According to these differences, if there is no special description, all the tests are performed on the main model FEN19WS-P7-G1 50ZRGB8X 24V60S 1018L05; FE14C-P8-G1 38XRGB 24V144S W10L05; FH14D-P5-G1 50B1RGB 5V60S W10L05; FE18C-P5-G2 21X92721X960 24V560D W10L05; FHN11WR-P5-G1 06LZY 24V360D 15L05; FE18W-Px-G1 18X9x 24V350S W10L05; FE15W-Px-G1 COB9x 24V480S W10L05; FEN19CS-P7-G2 28HZ9x28HZ9x 24V240S 1018L05; FEN20D-Px-G1 50AXRGBW 24V24S 1222L10 x° ;

4.2 TEST SETUP CONFIGURATION

See test photographs attached in Appendix 1 for the actual connections between Product and support equipment.

4.3 SUPPORT EQUIPMENT

No.	Device Type	Brand	Model	Series No.	Data Cable	Power Cord
1.	---	---	---	---	---	---

Notes:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

5. FACILITIES AND ACCREDITATIONS

5.1 TEST FACILITY

The site and apparatus are constructed in conformance with the requirements of ANSI C63.4 and CISPR 16-1-1 other equivalent standards.

5.2 TEST EQUIPMENT LIST

Instrumentation:

The calibrations of the measuring instruments, including any accessories that may effect such calibration, are checked frequently to assure their accuracy. Adjustments are made and correction factors applied in accordance with instructions contained in the manual for the measuring instrument.

Equipment used during the tests:

Shielding Room No. 1 - Disturbance voltages Test				
Equipment	**Manufacturer**	**Model**	**Serial No.**	**Due Date**
Test Receiver	ROHDE&SCHWARZ	ESCI	A130901474	2021-05-26
LISN	ROHDE&SCHWARZ	ESH2-Z5	A0304221	2021-05-26
Shield Room	Nanbo Tech	RF-2	A0301188	2021-10-25

Shielding Room No. 1 - ME Test				
Equipment	**Manufacturer**	**Model**	**Serial No.**	**Due Date**
Test Receiver	KEYSIGHT	N9038A	A141202036	2021-10-25
Loop Antenna	Schwarzbeck	HXYZ8170	A0304232	2021-05-26
Shield Room	Nanbo Tech	RF-19X4.5X3m	A9901141	2021-10-25

3M Semi-anechoic Chamber (1)- Radiated disturbance Test				
Equipment	**Manufacturer**	**Model**	**Serial No.**	**Due Date**
Test Receiver	ROHDE&SCHWARZ	ESIB7	A0501375	2021-10-25
Antenna	ETC	2786	A150402239	2021-05-26
Anechoic Chamber	Albatross	SAC-3MAC(9*6*6)	A0412375	2021-05-26

Shielding Room No. 2 - Harmonic / Flicker Test (EN 61000-3-2) / (EN 61000-3-3)				
Equipment	**Manufacturer**	**Model**	**Serial No.**	**Due Date**
Power Frequency Test System	CI	15003iX-400-CTS	A0801521	2021-05-26

Shielding Room No. 3 - Electrostatic discharge Test (IEC 61000-4-2)				
Equipment	**Manufacturer**	**Model**	**Serial No.**	**Due Date**
ESD Simulator	3C TEST	ESD30T	A161002598	2021-05-26

3M Full-anechoic Chamber - Radio frequency electromagnetic fields Test (IEC 61000-4-3)				
Equipment	**Manufacturer**	**Model**	**Serial No.**	**Due Date**
Signal Generator	ROHDE&SCHWARZ	SMB 100A	A141002004	2021-10-25
Amplifier	AR	150W1000A	A0804545	2021-10-25
Antenna	AR	HL562	A0304224	2021-05-26
5m Chamber	Albatross	SAC-5MAC(EMC12.8*6.8*6.4m)	A0304210	2021-05-26

Shielding Room No. 3 - Fast transients (IEC 61000-4-4)				
Equipment	**Manufacturer**	**Model**	**Serial No.**	**Due Date**
EFT Test System	HAEFELY	PEFT-JUNIOR	A0103110	2021-05-26
Capacitive coupling clamp	HAEFELY	PEFT-JUNIOR	A0103110	2021-05-26

Shielding Room No. 3 - Surges Test (IEC 61000-4-5)				
Equipment	**Manufacturer**	**Model**	**Serial No.**	**Due Date**
Surge Test System	EM TEST	VCS500M10	A0712509	2021-05-26
	EM TEST	CNV503S9	A0712510	2021-05-26

Shielding Room No. 2 - Injected currents Test (IEC 61000-4-6)				
Equipment	**Manufacturer**	**Model**	**Serial No.**	**Due Date**
Signal Generator	ROHDE&SCHWARZ	SMB 100A	A141002004	2021-10-25
Amplifier	Amplifier Research	75A250AM	A0304255	2021-10-25
CDN	ROHDE&SCHWARZ	M3	A0304306	2021-05-26
EM Injection clamp	FCC	F-2031	A0308322	2021-05-26

Shielding Room No. 2 –Voltage dips and interruptions Test (IEC 61000-4-11)				
Equipment	**Manufacturer**	**Model**	**Serial No.**	**Due Date**
Power Frequency Test System	CI	15003iX-400-CTS	A0801521	2021-05-26

5.3 LABORATORY ACCREDITATIONS AND LISTINGS

The measuring equipment utilized to perform the tests documented in this report has been calibrated once a year or in accordance with the manufacturer's recommendations, and is traceable under the ISO/IEC/EN 17025 to international or national standards. Equipment has been calibrated by accredited calibration laboratories.

6. DISTURBANCE VOLTAGES (CE)

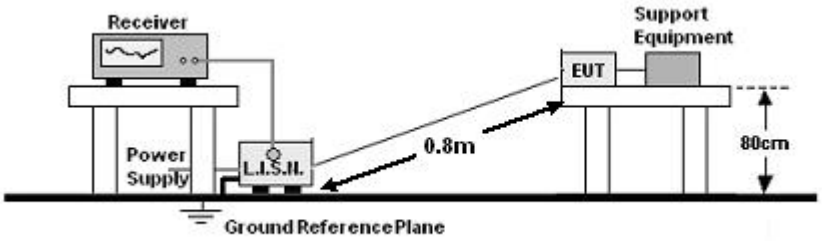
6.1 LIMITS

Frequency range (MHz)	Limits dB(μV)	
	Quasi-peak	Average
0,009 to 0,05	110	--
0.05 to 0.15	90 to 80	--
0,15 to 0,50	66 to 56	56 to 46
0,50 to 5	56	46
5 to 30	60	50

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. The limit decreases linearly with the logarithm of the frequency in the range 0.05 to 0.50 MHz.
3. For electrodeless lamps and luminaries, the limit in the frequency range of 2.51MHz to 3MHz is 73 dB(μV) quasi-peak and 63 dB(μV) average.

6.2 BLOCK DIAGRAM OF TEST SETUP



6.3 TEST PROCEDURE

a. The Product was placed on a non-conductive table above the horizontal ground reference plane, and 0.4 m from the vertical ground reference plane, and connected to the main through Line Impedance Stability Network (L.I.S.N).

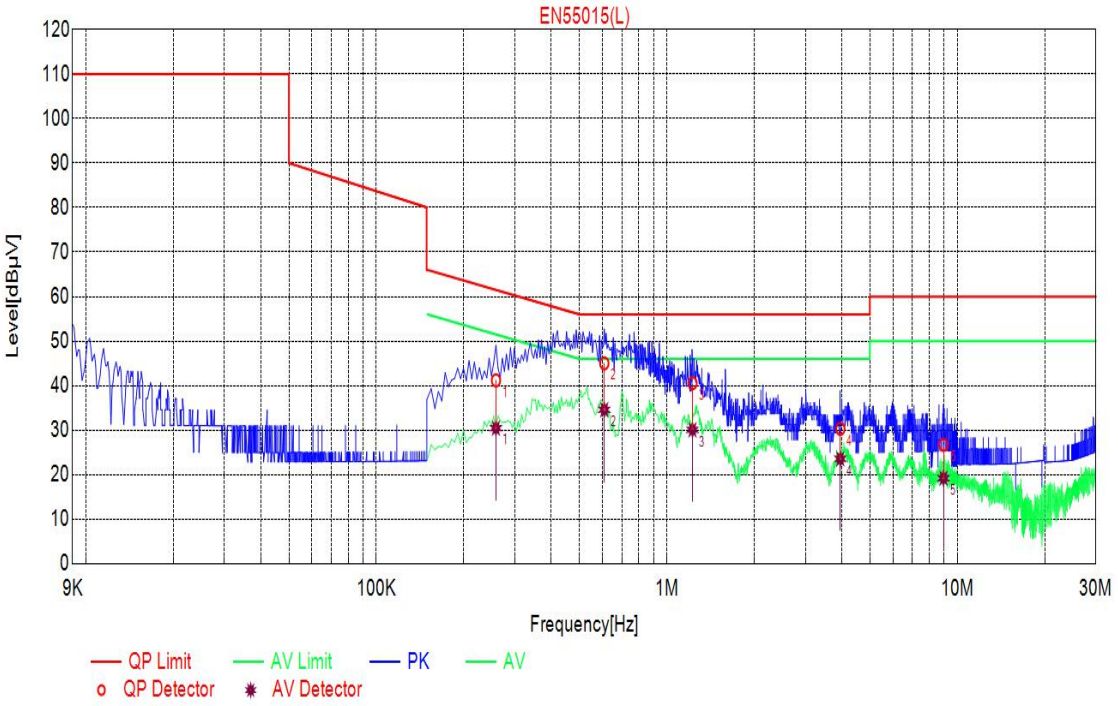
b. The RBW of the receiver was set at 200Hz in 9 kHz ~150 kHz with Peak and 9 kHz in 150 kHz ~ 30MHz with Peak and AVG detector in Max Hold mode. Run the receiver's pre-scan to record the maximum disturbance generated from Product in all power lines in the full band.

c. For each frequency whose maximum record was higher or close to limit, measure its QP or AVG values and record

.

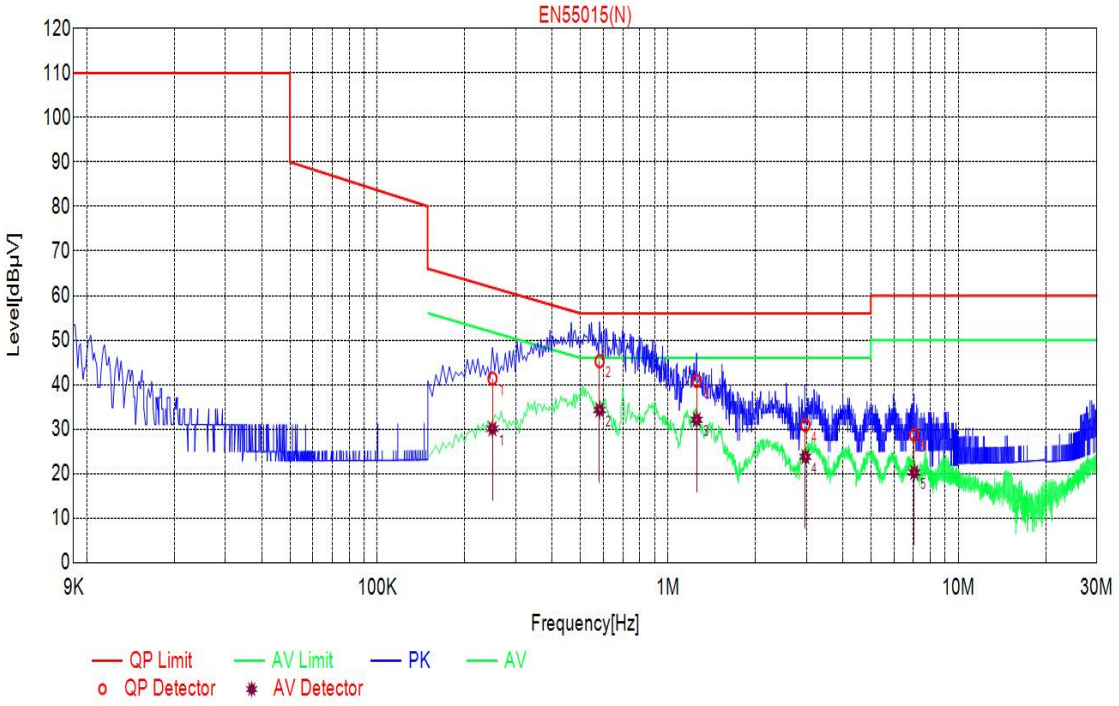
6.4 GRAPHS AND DATA

Product	:	LED Strip	**Model/Type reference**	:	FEN19WS-P7-G1 50ZRGB8X 24V60S 1018L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Phase	:	L			



Suspected List						
NO.	Freq. [MHz]	Level [dBµV]	Factor [dB]	Limit [dBµV]	Margin [dB]	Detector
1	0.2580	49.04	0.00	61.50	12.46	PK
2	0.6090	52.70	0.01	56.00	3.30	PK
3	1.2255	48.10	0.10	56.00	7.90	PK
4	3.9570	38.88	0.17	56.00	17.12	PK
5	8.9655	35.71	0.30	60.00	24.29	PK

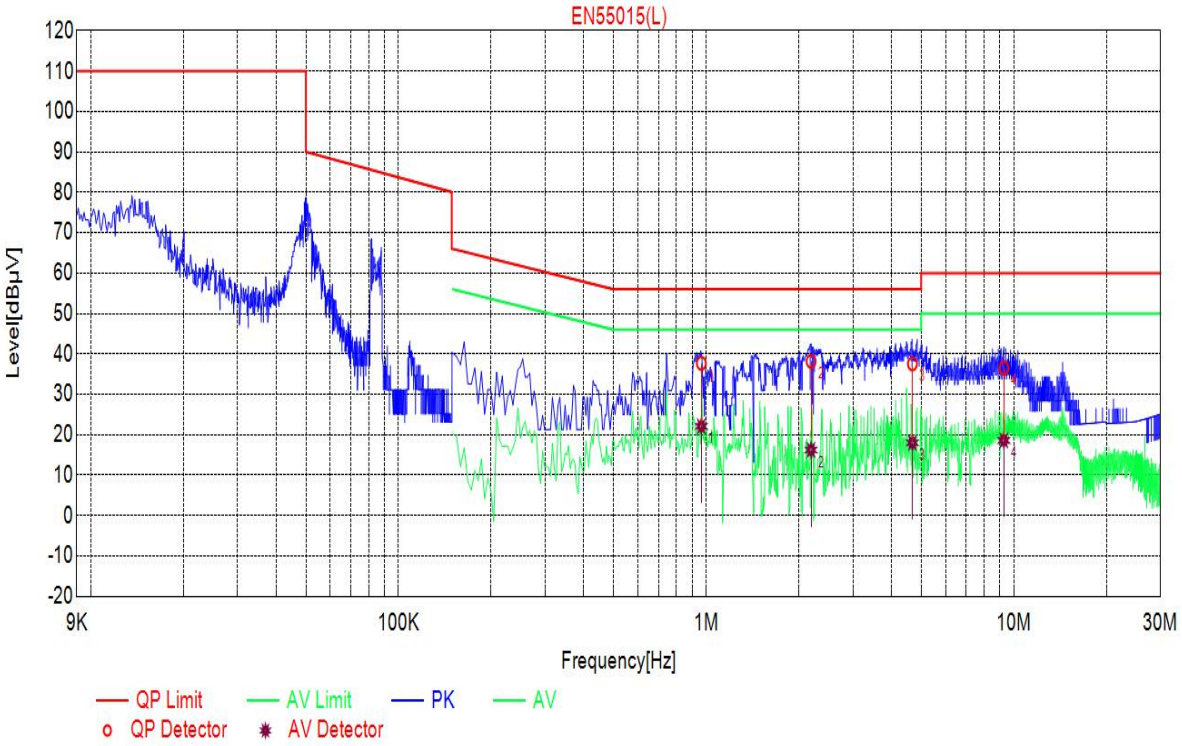
Product	:	LED Strip	**Model/Type reference**	:	FEN19WS-P7-G1 50ZRGB8X 24V60S 1018L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Phase	:	N			



Suspected List

NO.	Freq. [MHz]	Level [dBµV]	Factor [dB]	Limit [dBµV]	Margin [dB]	Detector
1	0.2490	48.31	0.00	61.79	13.48	PK
2	0.5820	54.05	0.10	56.00	1.95	PK
3	1.2570	47.06	0.10	56.00	8.94	PK
4	2.9760	39.89	0.13	56.00	16.11	PK
5	7.0530	37.84	0.30	60.00	22.16	PK

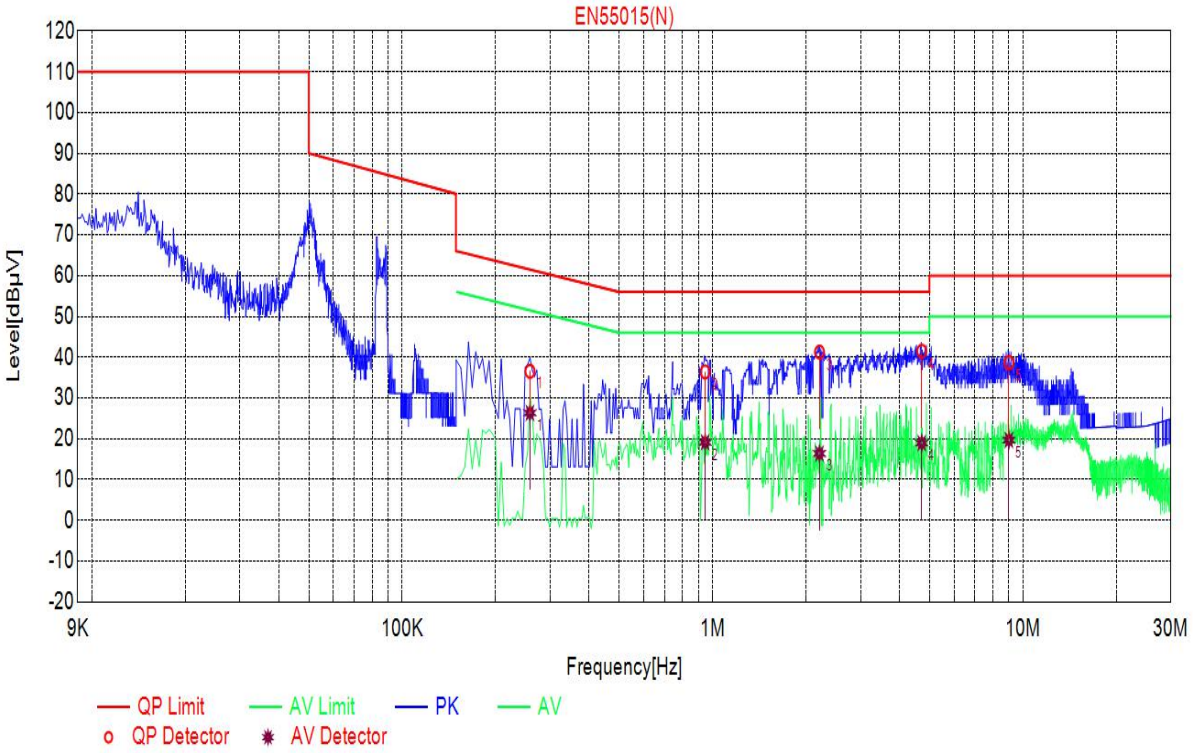
Product	:	LED Strip	**Model/Type reference**	:	FE14C-P8-G1 38XRGB 24V144S W10L05
Power	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Phase	:	L			



Suspected List

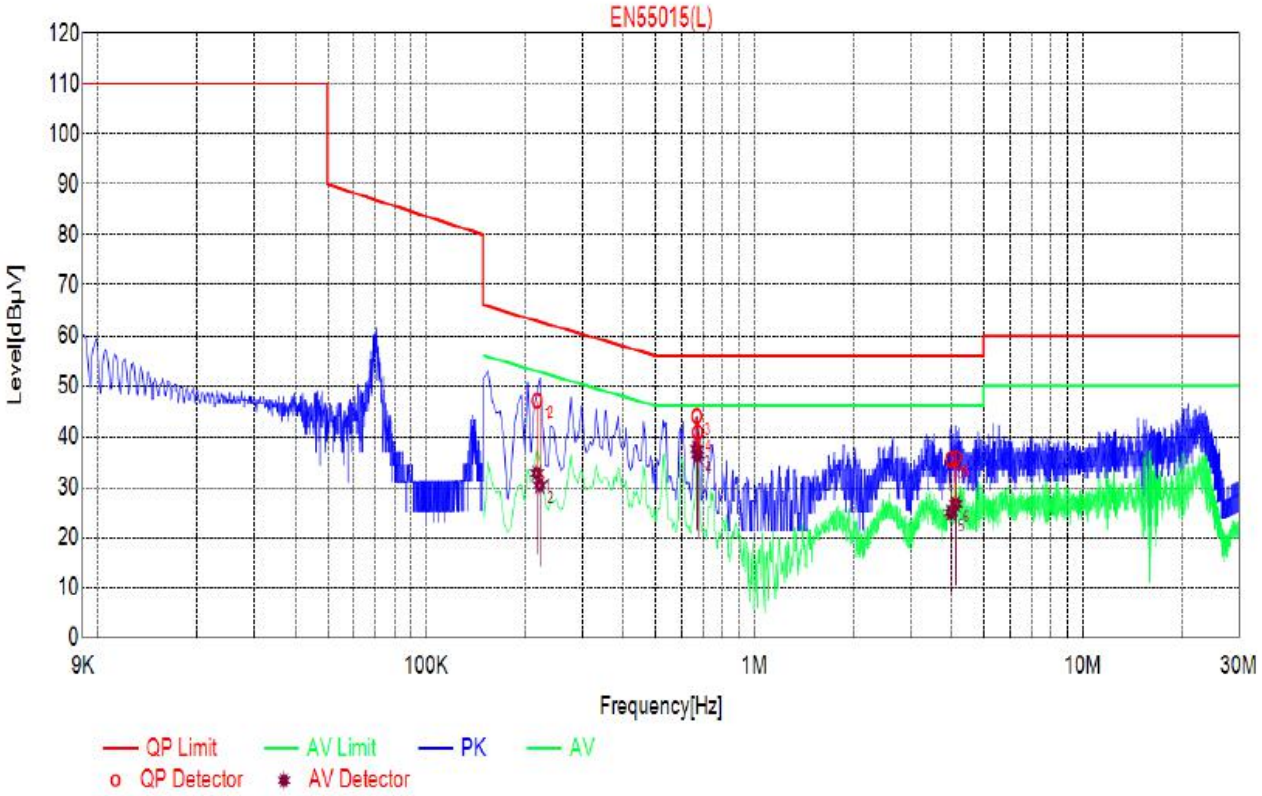
NO.	Freq. [MHz]	Level [dBµV]	Factor [dB]	Limit [dBµV]	Margin [dB]	Detector
1	0.9645	40.77	0.10	56.00	15.23	PK
2	2.1930	42.39	0.11	56.00	13.61	PK
3	4.6815	43.64	0.19	56.00	12.36	PK
4	9.2850	41.76	0.30	60.00	18.24	PK

Product	:	LED Strip	**Model/Type reference**	:	FE14C-P8-G1 38XRGB 24V144S W10L05
Power	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Phase	:	N			



Suspected List						
NO.	Freq. [MHz]	Level [dBµV]	Factor [dB]	Limit [dBµV]	Margin [dB]	Detector
1	0.2580	39.85	0.00	61.50	21.65	PK
2	0.9465	40.31	0.10	56.00	15.69	PK
3	2.2110	42.78	0.11	56.00	13.22	PK
4	4.7220	43.64	0.19	56.00	12.36	PK
5	9.0195	41.73	0.30	60.00	18.27	PK

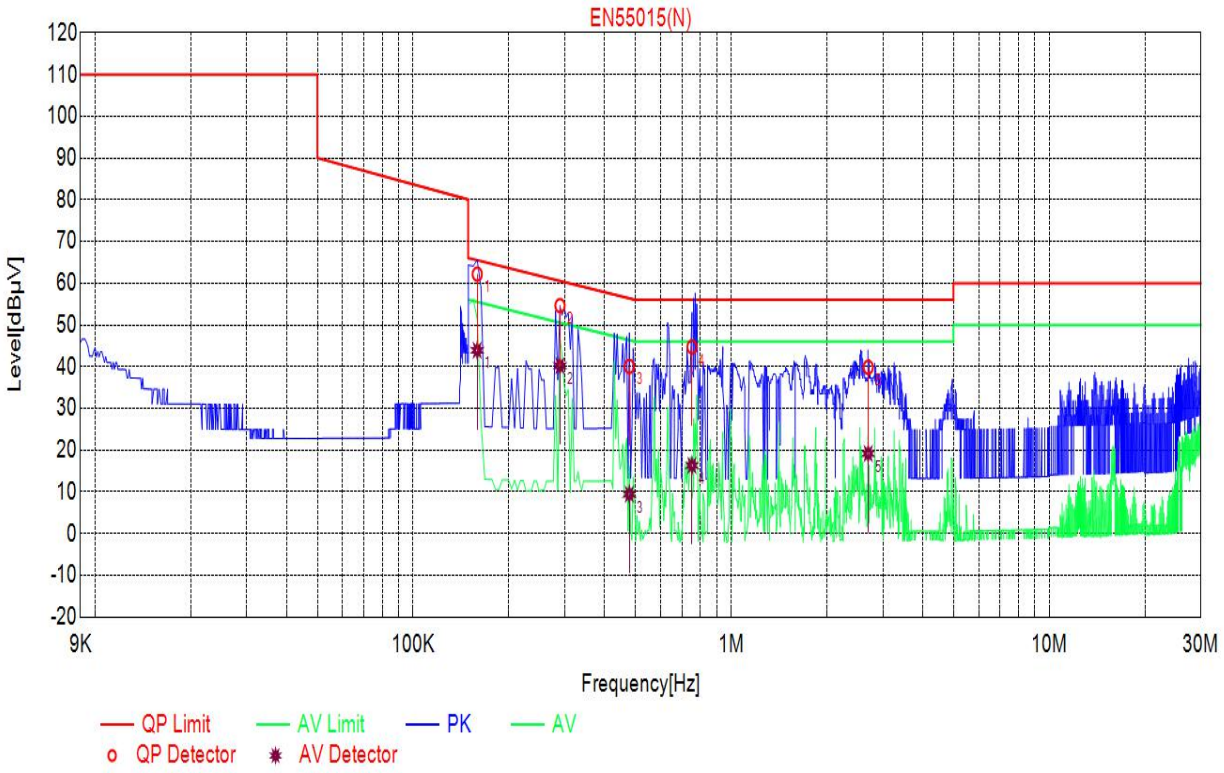
Product	:	LED Strip	**Model/Type reference**	:	FH14D-P5-G1 50B1RGB 5V60S W10L05
Power	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Phase	:	L			



Final Data List

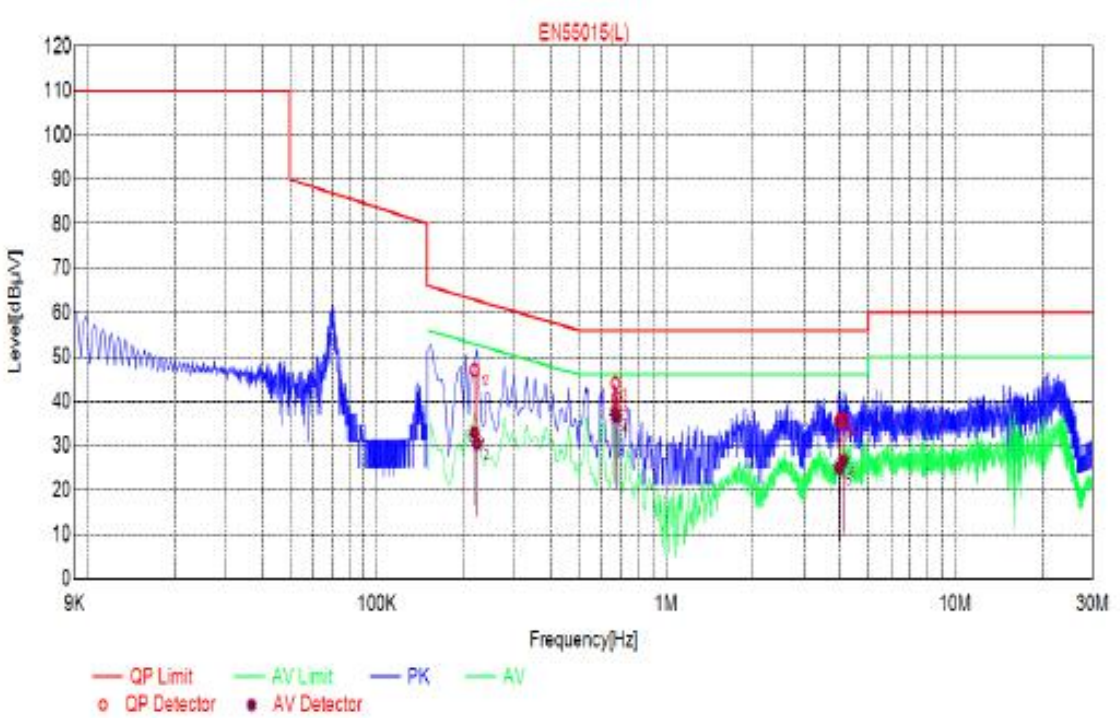
NO.	Freq. [MHz]	Factor [dB]	QP Value	QP Limit	QP Margin	AV Value	AV Limit	AV Margin
1	0.2175	0.00	47.00	62.91	15.91	32.85	52.91	20.06
2	0.2220	0.00	47.17	62.74	15.57	30.42	52.74	22.32
3	0.6675	0.07	44.03	56.00	11.97	37.60	46.00	8.40
4	0.6720	0.07	40.87	56.00	15.13	36.36	46.00	9.64
5	3.9750	0.17	35.62	56.00	20.38	24.96	46.00	21.04
6	4.1100	0.17	35.88	56.00	20.12	26.71	46.00	19.29

Product	:	LED Strip	**Model/Type reference**	:	FH14D-P5-G1 50B1RGB 5V60S W10L05
Power	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Phase	:	N			



Suspected List						
NO.	Freq. [MHz]	Level [dBµV]	Factor [dB]	Limit [dBµV]	Margin [dB]	Detector
1	0.1500	37.30	0.00	80.00	42.70	PK
2	0.2850	50.96	0.00	60.67	9.71	PK
3	0.5325	44.50	0.10	56.00	11.50	PK
4	3.8535	41.81	0.16	56.00	14.19	PK
5	12.8625	43.18	0.41	60.00	16.82	PK

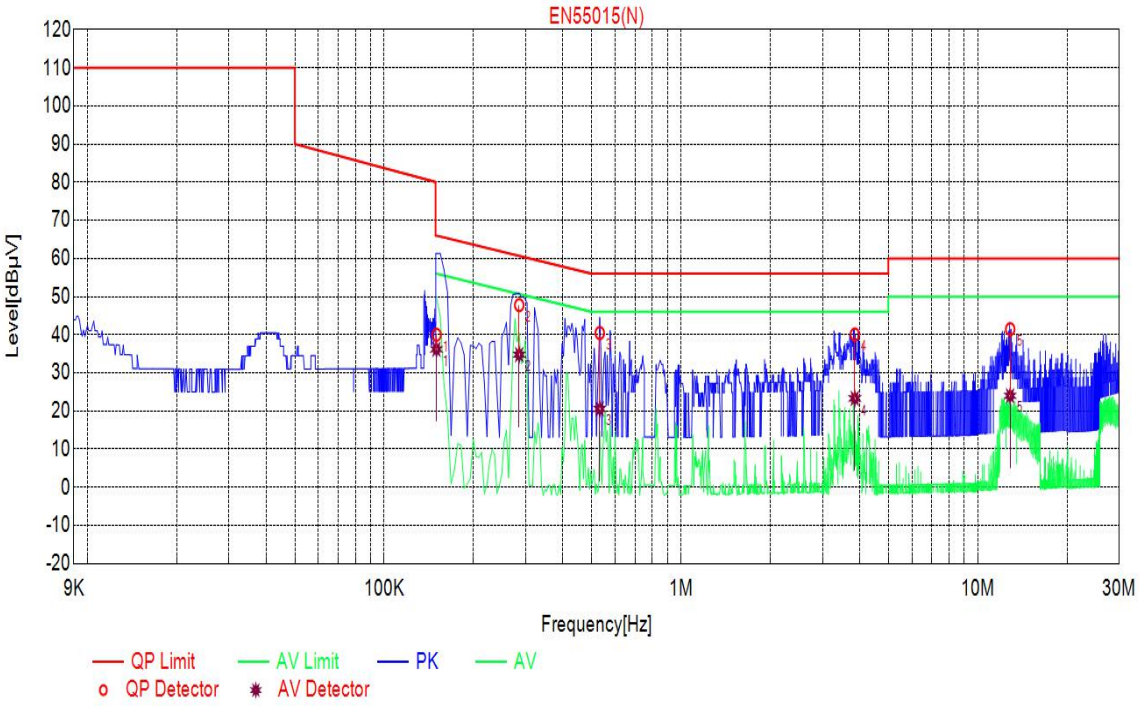
Product	:	LED Strip	**Model/Type reference**	:	FE18C-P5-G2 21X92721X960 24V560D W10L05
Power	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Phase	:	L			



Final Data List

NO.	Freq. [MHz]	Factor [dB]	QP Value	QP Limit	QP Margin	AV Value	AV Limit	AV Margin
1	0.2175	0.00	47.00	62.91	15.91	32.85	52.91	20.06
2	0.2220	0.00	47.17	62.74	15.57	30.42	52.74	22.32
3	0.6675	0.07	44.03	56.00	11.97	37.60	46.00	8.40
4	0.6720	0.07	40.87	56.00	15.13	36.36	46.00	9.64
5	3.9750	0.17	35.62	56.00	20.38	24.96	46.00	21.04
6	4.1100	0.17	35.88	56.00	20.12	26.71	46.00	19.29

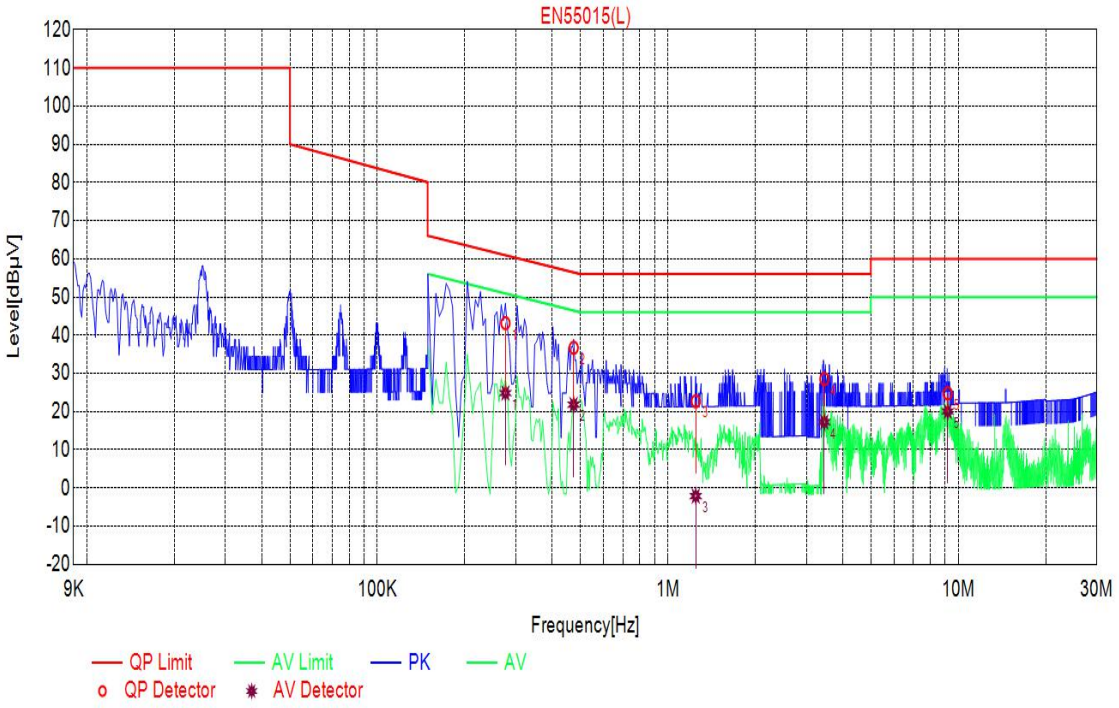
Product	:	LED Strip	**Model/Type reference**	:	FE18C-P5-G2 21X92721X960 24V560D W10L05
Power	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Phase	:	N			



Suspected List

NO.	Freq. [MHz]	Level [dBµV]	Factor [dB]	Limit [dBµV]	Margin [dB]	Detector
1	0.1500	37.30	0.00	80.00	42.70	PK
2	0.2850	50.96	0.00	60.67	9.71	PK
3	0.5325	44.50	0.10	56.00	11.50	PK
4	3.8535	41.81	0.16	56.00	14.19	PK
5	12.8625	43.18	0.41	60.00	16.82	PK

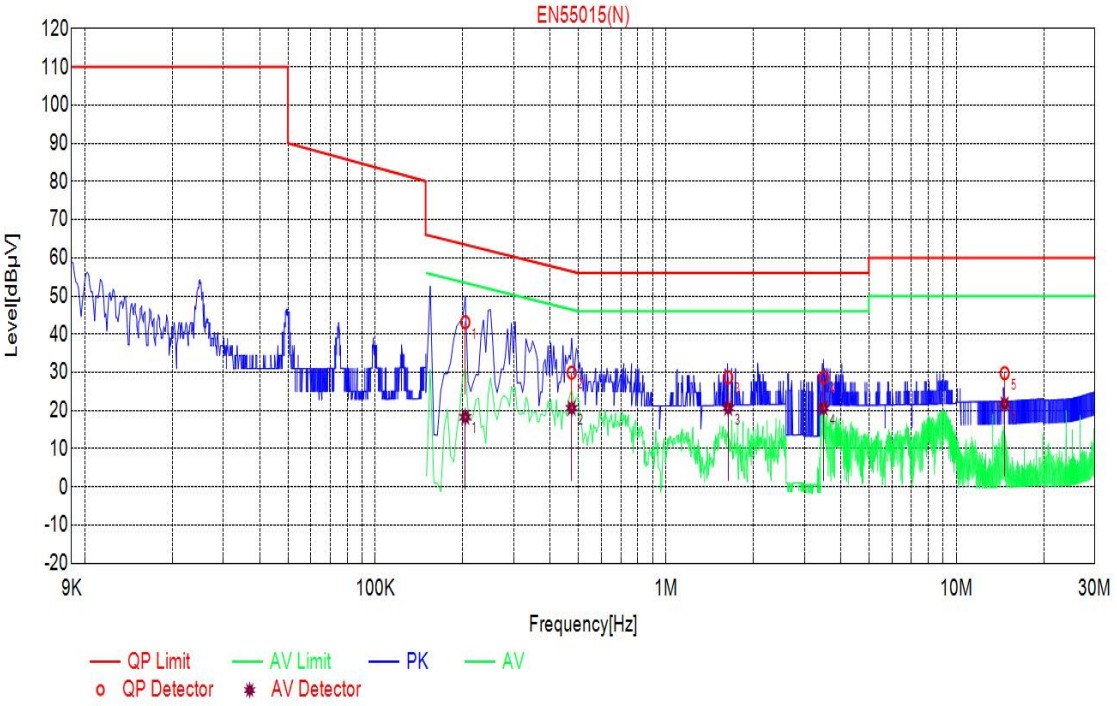
Product	:	LED Strip	**Model/Type reference**	:	FHN11WR-P5-G1 06LZY 24V360D 15L05
Power	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Phase	:	L			



Suspected List

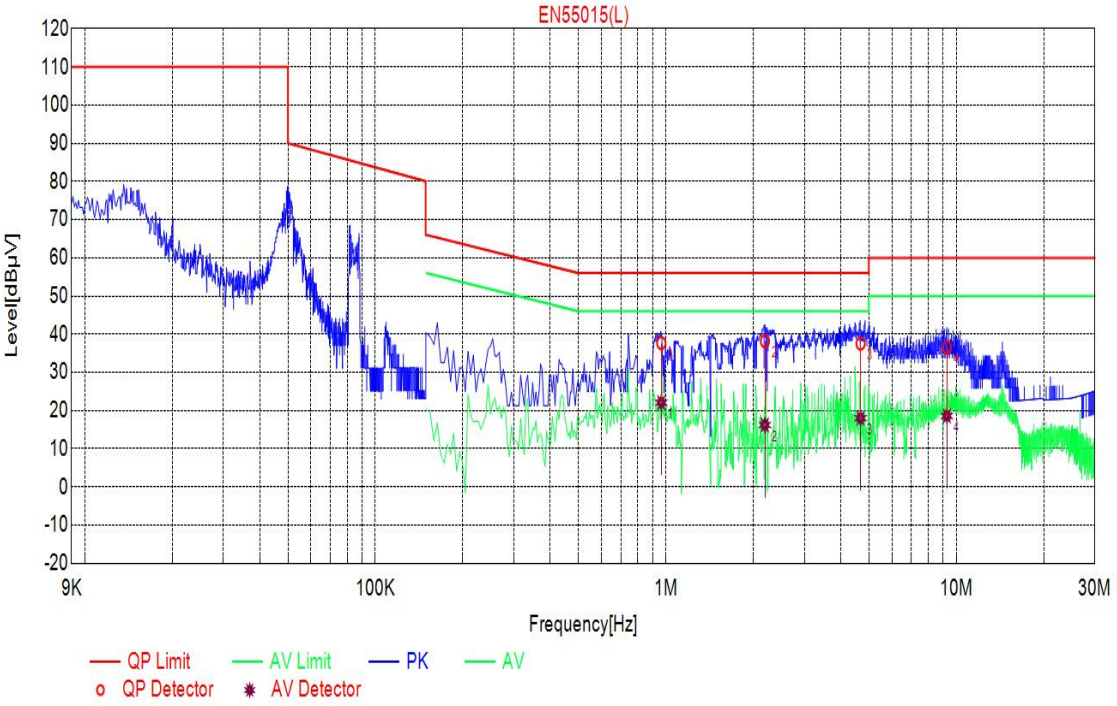
NO.	Freq. [MHz]	Level [dBµV]	Factor [dB]	Limit [dBµV]	Margin [dB]	Detector
1	0.2760	48.30	0.00	60.94	12.64	PK
2	0.4740	38.84	0.00	56.44	17.60	PK
3	1.2480	29.22	0.10	56.00	26.78	PK
4	3.4575	33.43	0.15	56.00	22.57	PK
5	9.1950	31.29	0.30	60.00	28.71	PK

Product	:	LED Strip	**Model/Type reference**	:	FHN11WR-P5-G1 06LZY 24V360D 15L05
Power	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Phase	:	N			



Suspected List						
NO.	Freq. [MHz]	Level [dBµV]	Factor [dB]	Limit [dBµV]	Margin [dB]	Detector
1	0.2040	49.66	0.00	63.45	13.79	PK
2	0.4740	38.91	0.07	56.44	17.53	PK
3	1.6395	32.26	0.10	56.00	23.74	PK
4	3.4935	33.42	0.15	56.00	22.58	PK
5	14.6715	25.96	0.49	60.00	34.04	PK

Product	:	LED Strip	**Model/Type reference**	:	FE18W-Px-G1 18X9x 24V350S W10L05
Power	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Phase	:	L			



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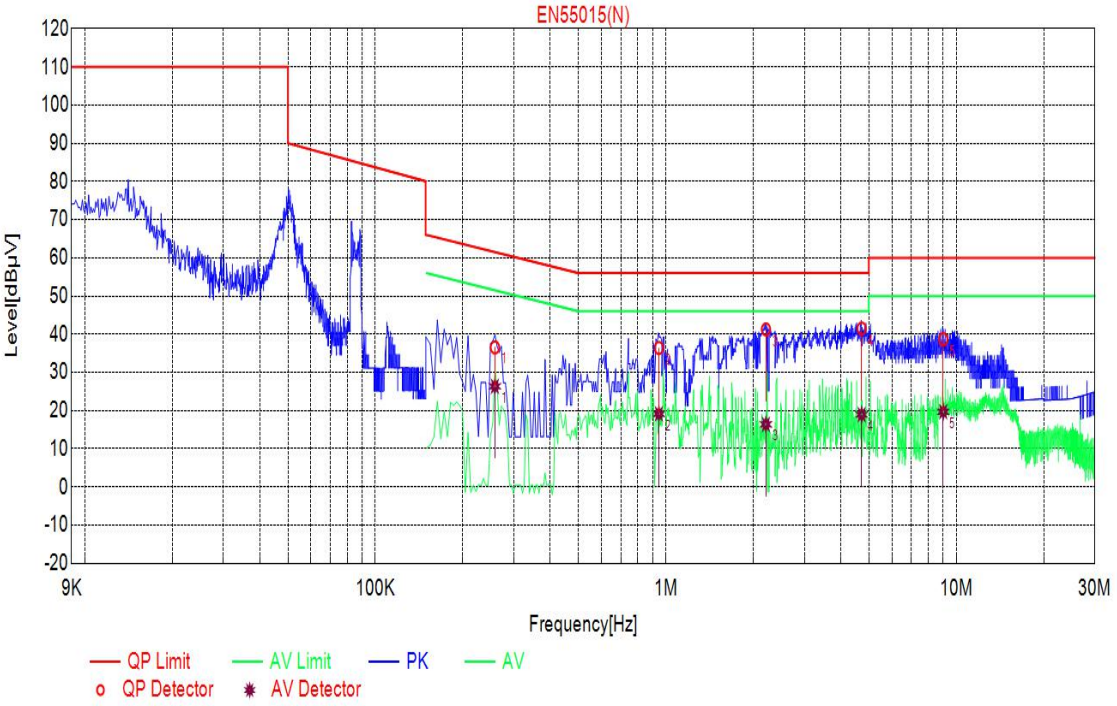
Suspected List

NO.	Freq. [MHz]	Level [dBµV]	Factor [dB]	Limit [dBµV]	Margin [dB]	Detector
1	0.9645	40.82	0.14	56.00	15.12	PK
2	2.1930	42.42	0.07	56.00	13.58	PK
3	4.6815	43.76	0.18	56.00	12.24	PK
4	9.2850	41.84	0.29	60.00	18.16	PK

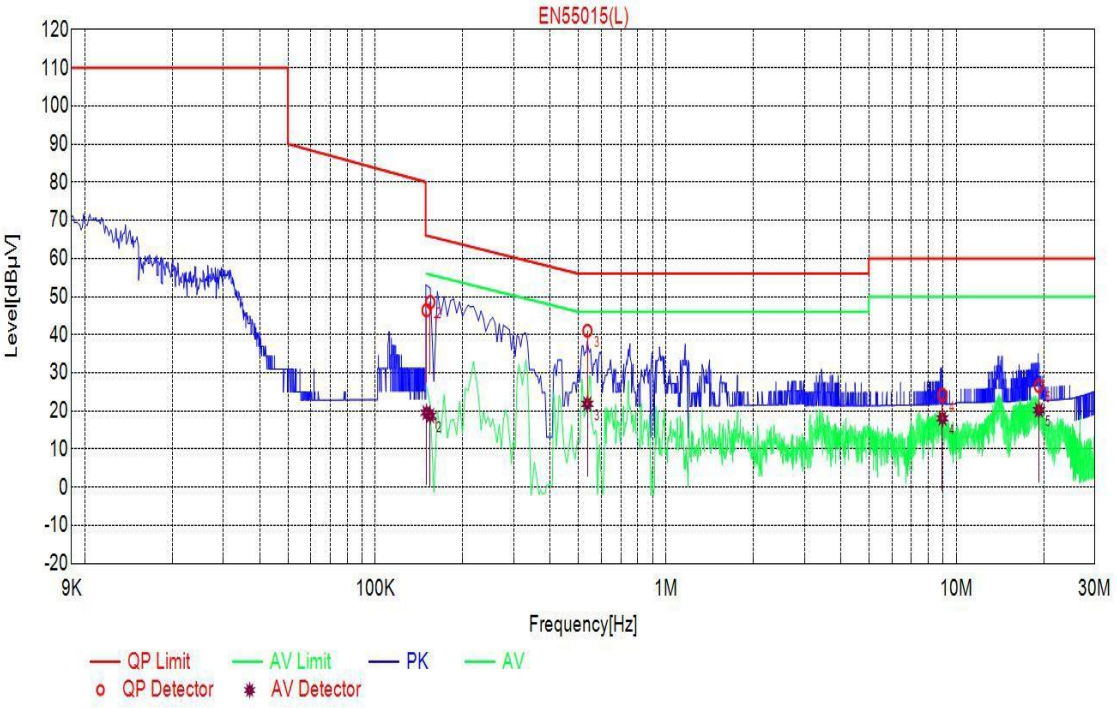
Product	:	LED Strip	**Model/Type reference**	:	FE18W-Px-G1 18X9x 24V350S W10L05
Power	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Phase	:	N			



Suspected List

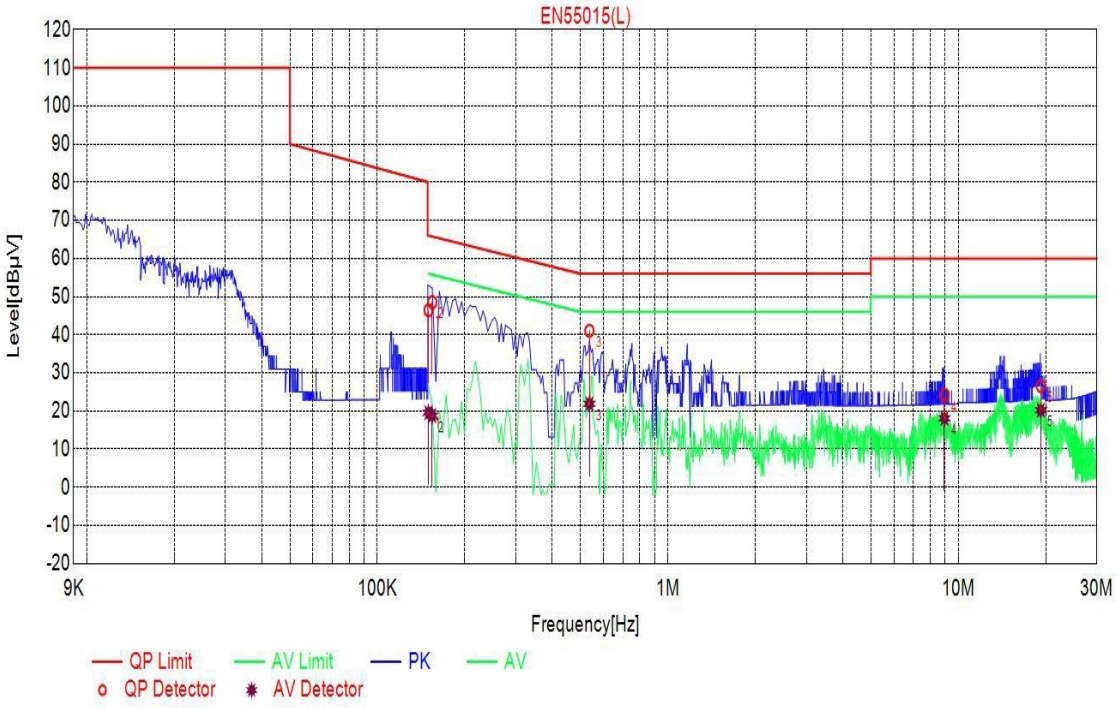
NO.	Freq. [MHz]	Level [dBµV]	Factor [dB]	Limit [dBµV]	Margin [dB]	Detector
1	0.2580	39.64	0.00	61.50	21.36	PK
2	0.9465	40.13	0.08	56.00	15.87	PK
3	2.2110	42.70	0.03	56.00	13.30	PK
4	4.7220	43.48	0.16	56.00	12.52	PK
5	9.0195	41.36	0.27	60.00	18.64	PK

Product	:	LED Strip	**Model/Type reference**	:	FE15W-Px-G1 COB9x 24V480S W10L05
Power	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Phase	:	L			



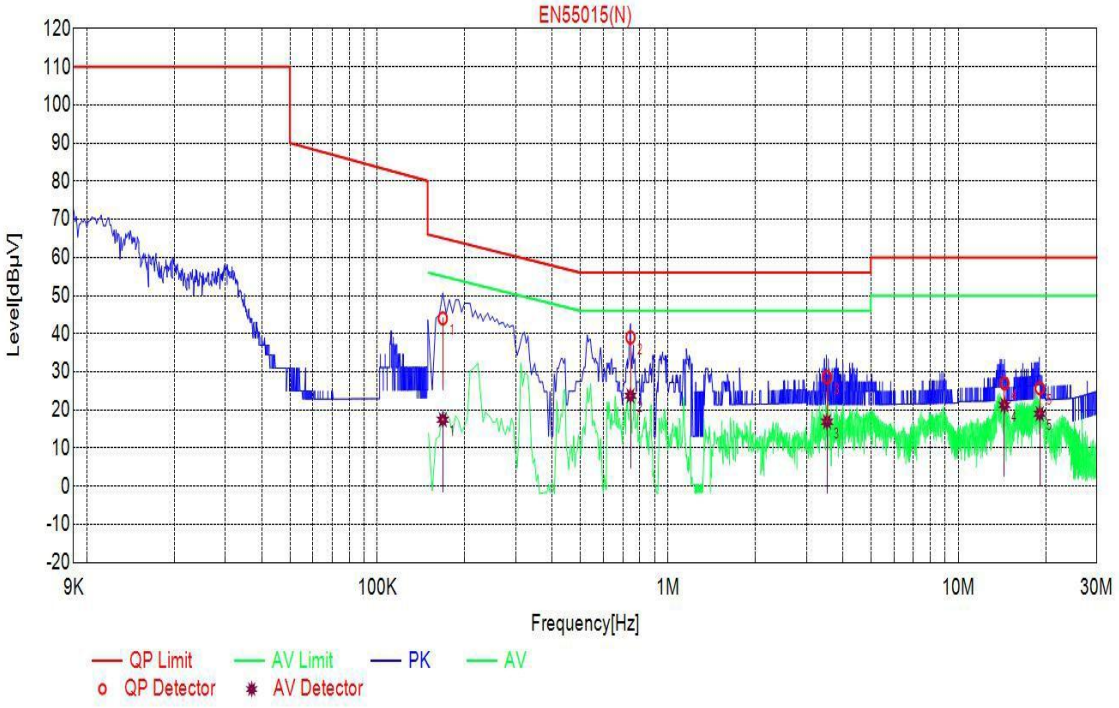
Suspected List								
NO.	Freq.	Factor	QP Value	QP Limit [dBu	QP Margin	AV Value	AV Limit [dBu	AV Margin
1	0.1500	0.00	46.42	80.00	33.58	19.56	56.00	36.44
2	0.1545	0.00	48.54	65.75	17.21	18.79	55.75	36.96
3	0.5370	0.00	41.04	56.00	14.96	21.88	46.00	24.12
4	8.9610	0.30	24.24	60.00	35.76	18.09	50.00	31.91
5	19.2525	0.49	26.55	60.00	33.45	20.23	50.00	29.77

Product	:	LED Strip	**Model/Type reference**	:	FE15W-Px-G1 COB9x 24V480S W10L05
Power	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Phase	:	L			



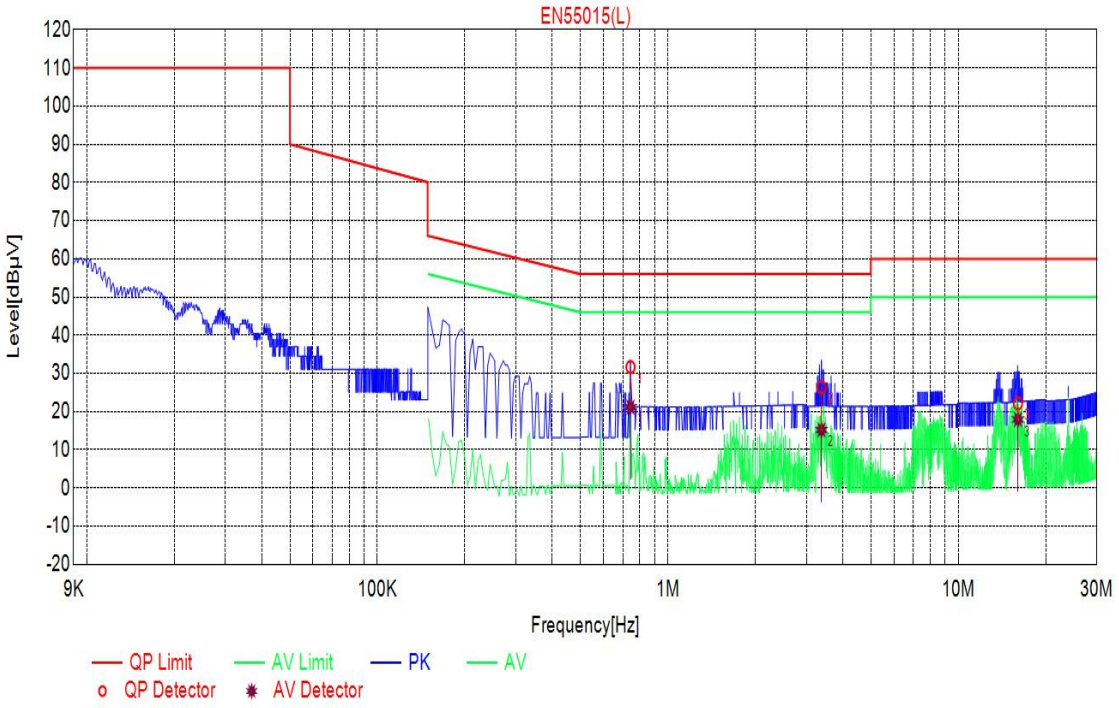
Suspected List								
NO.	Freq.	Factor	QP Value	QP Limit [dBu	QP Margin	AV Value	AV Limit [dBu	AV Margin
1	0.1500	0.00	46.42	80.00	33.58	19.56	56.00	36.44
2	0.1545	0.00	48.54	65.75	17.21	18.79	55.75	36.96
3	0.5370	0.00	41.04	56.00	14.96	21.88	46.00	24.12
4	8.9610	0.30	24.24	60.00	35.76	18.09	50.00	31.91
5	19.2525	0.49	26.55	60.00	33.45	20.23	50.00	29.77

Product	:	LED Strip	**Model/Type reference**	:	FE15W-Px-G1 COB9x 24V480S W10L05
Power	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Phase	:	N			



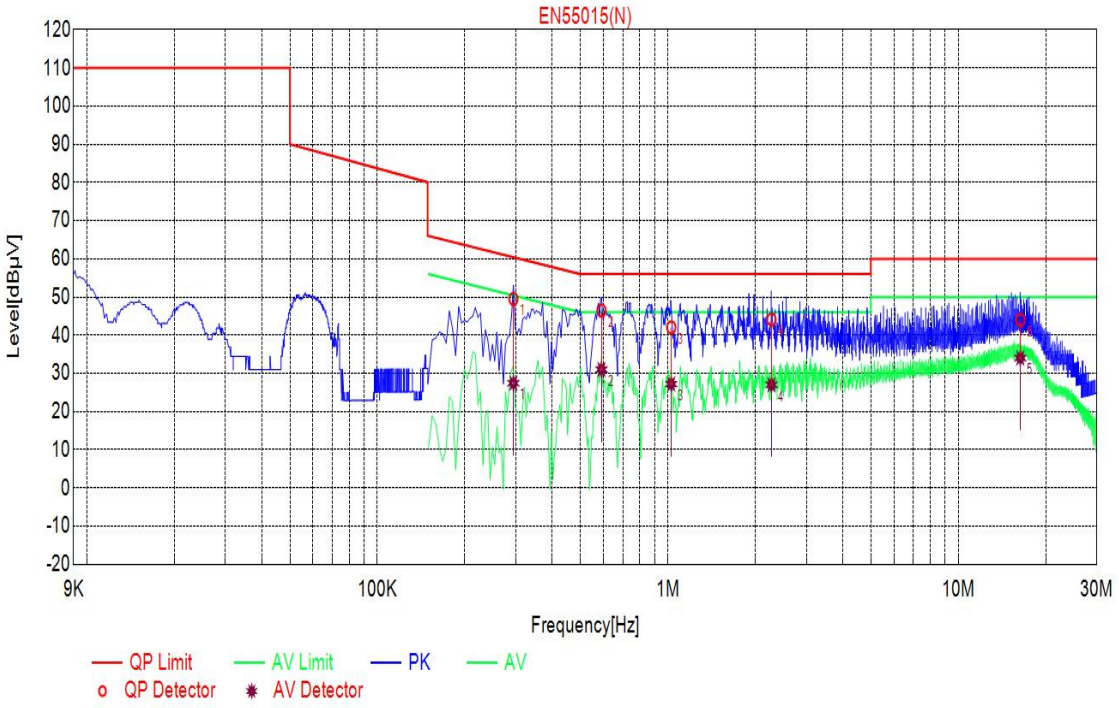
Suspected List								
NO.	Freq.	Factor	QP Value	QP Limit	QP Margin	AV Value	AV Limit	AV Margin
1	0.1680	0.00	44.02	65.06	21.04	17.45	55.06	37.61
2	0.7440	0.10	39.03	56.00	16.97	23.73	46.00	22.27
3	3.5340	0.15	28.60	56.00	27.40	16.92	46.00	29.08
4	14.4240	0.48	26.99	60.00	33.01	21.31	50.00	28.69
5	19.0770	0.42	25.71	60.00	34.29	19.00	50.00	31.00

Product	:	LED Strip	**Model/Type reference**	:	FEN20D-Px-G1 50AXRGBW 24V24S 1222L10 x°
Power	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Phase	:	L			



Suspected List						
NO.	Freq. [MHz]	Level [dBµV]	Factor [dB]	Limit [dBµV]	Margin [dB]	Detector
1	0.7440	33.39	0.10	56.00	22.61	PK
2	3.3810	33.43	0.15	56.00	22.57	PK
3	16.0440	32.07	0.42	60.00	27.93	PK

Product	:	LED Strip	**Model/Type reference**	:	FEN20D-Px-G1 50AXRGBW 24V24S 1222L10 x°
Power	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Phase	:	N			



Suspected List						
NO.	Freq. [MHz]	Level [dBµV]	Factor [dB]	Limit [dBµV]	Margin [dB]	Detector
1	0.2940	53.09	0.00	60.41	7.32	PK
2	0.5910	49.93	0.10	56.00	6.07	PK
3	1.0275	49.15	0.10	56.00	6.85	PK
4	2.2740	51.55	0.11	56.00	4.45	PK
5	16.3545	51.25	0.47	60.00	8.75	PK

RADIATED DISTURBANCE (9KHz-30MHz)

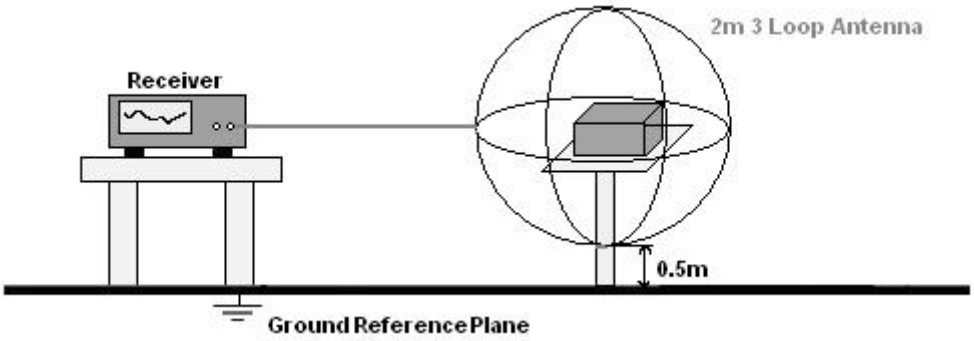
6.5 LIMITS OF RADIATED DISTURBANCE (9KHz-30MHz)

Frequency	Limits for Loop Diameter (dBμA)
	2m
9KHz ~ 70KHz	88
70KHz ~ 150KHz	88 ~ 58*
150KHz ~ 3.0MHz	58 ~ 22*
3.0MHz ~ 30MHz	22

NOTE:

1. At the transition frequency the lower limit applies.
2. * Decreasing linearly with the logarithm of the frequency. For electrodeless lamps and luminaries, the limit in the frequency range of 2.2MHz to 3.0MHz is 58dB (μA) for 2m.

6.6 TEST SETUP



6.7 TEST PROCEDURE

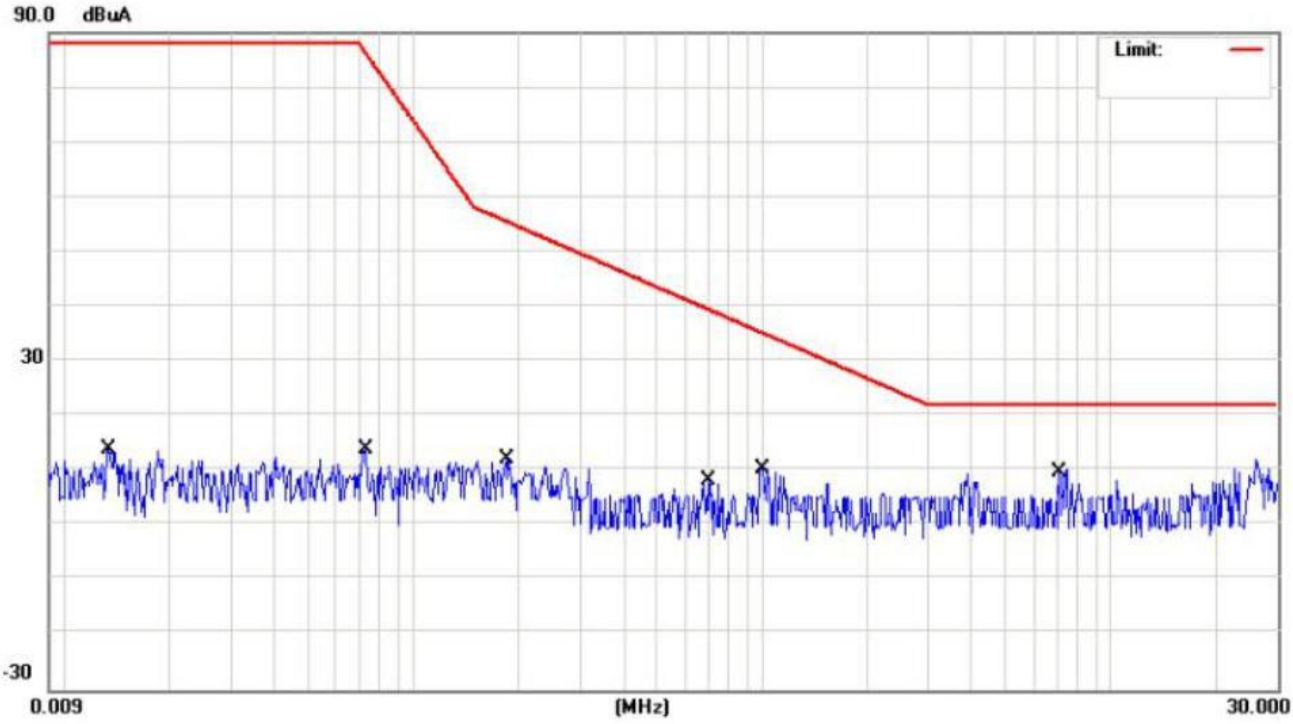
a. The Product was placed on a wooden table in the center of a loop antenna.

b. The induced current in the loop antenna was measured by means of a current probe and the test receiver. Three field components were checked by means of a coaxial switch.

c. The frequency range from 9 KHz to 30MHz is investigated. The receiver was measured with the quasi-peak detector. The RBW of the receiver was set at 200Hz in 9 kHz ~150 kHz and 9 kHzin 150 kHz ~ 30MHz.

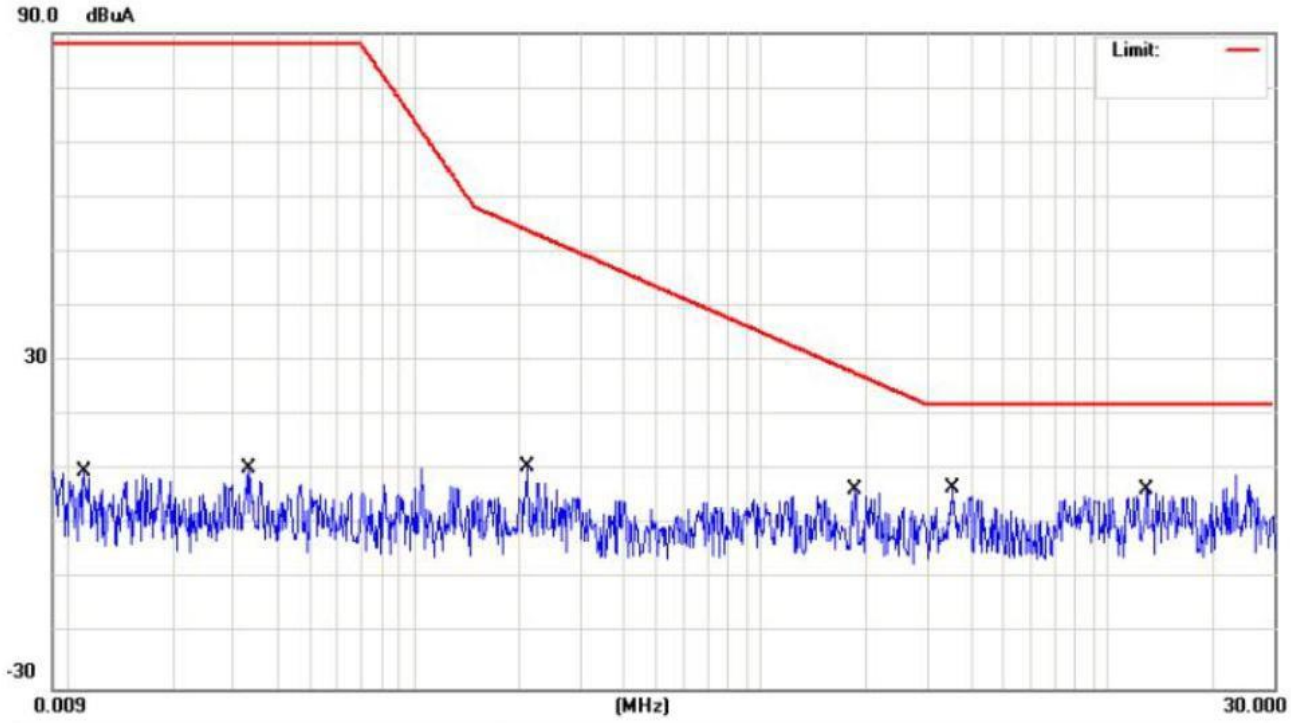
6.8 GRAPHS AND DATA

Product	:	LED Strip	**Model/Type reference**	:	FEN19WS-P7-G1 50ZRGB8X 24V60S 1018L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Phase	:	X			



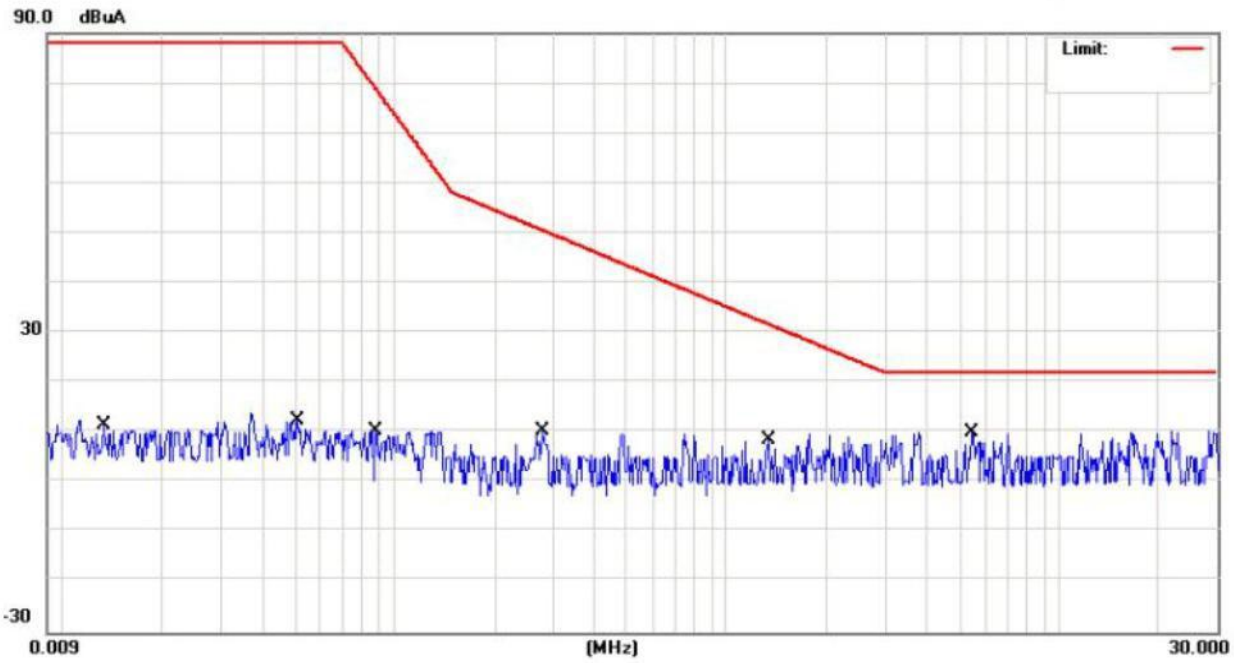
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuA	dB	dBuA	dBuA	dB	Detector	Comment
1		0.0134	14.02	0.07	14.09	88.00	-73.91	QP	
2		0.0734	13.85	0.06	13.91	86.13	-72.22	QP	
3		0.1839	11.93	0.12	12.05	55.54	-43.49	QP	
4		0.6980	8.08	0.17	8.25	39.52	-31.27	QP	
5		0.9979	10.27	0.17	10.44	35.22	-24.78	QP	
6	*	7.0820	9.54	0.18	9.72	22.00	-12.28	QP	

Product	:	LED Strip	**Model/Type reference**	:	FEN19WS-P7-G1 50ZRGB8X 24V60S 1018L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Phase	:	Y			



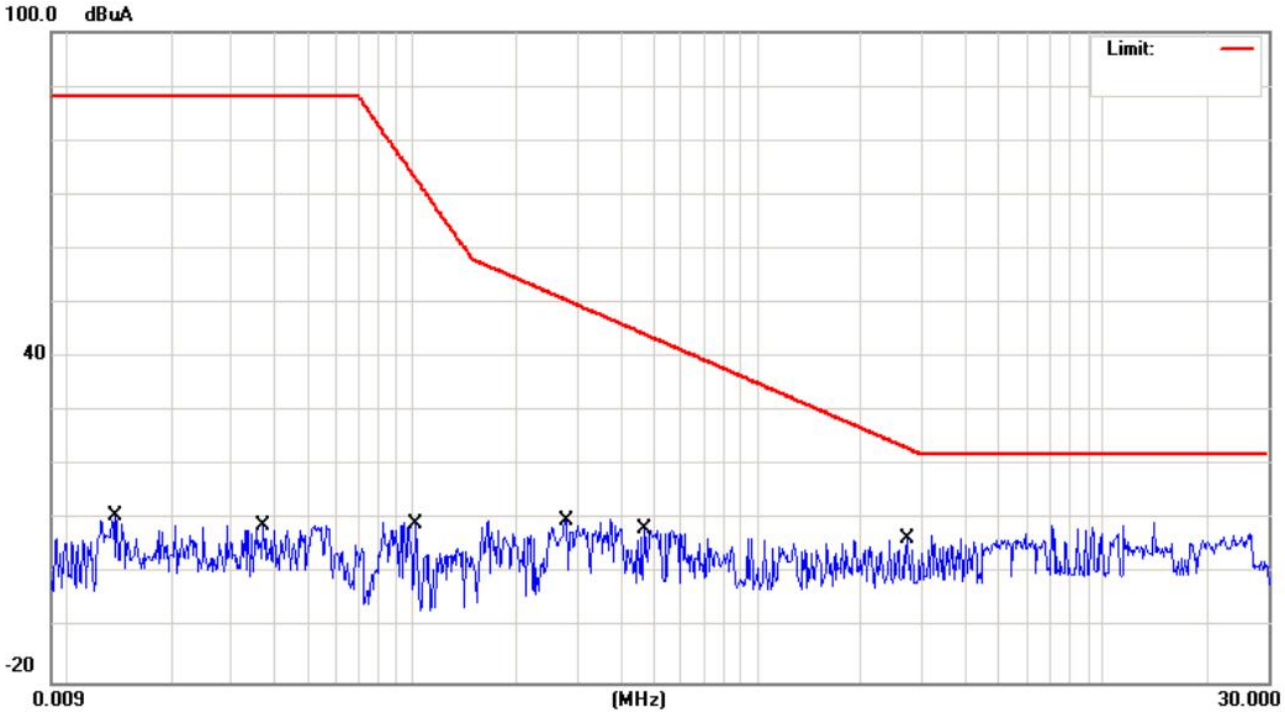
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuA	dB	dBuA	dBuA	dB	Detector	Comment
1		0.0111	9.75	0.07	9.82	88.00	-78.18	QP	
2		0.0333	10.31	0.06	10.37	88.00	-77.63	QP	
3		0.2100	10.46	0.13	10.59	53.95	-43.36	QP	
4		1.8620	6.34	0.16	6.50	27.73	-21.23	QP	
5	*	3.5500	6.50	0.15	6.65	22.00	-15.35	QP	
6		12.8820	6.27	0.23	6.50	22.00	-15.50	QP	

Product	:	LED Strip	**Model/Type reference**	:	FEN19WS-P7-G1 50ZRGB8X 24V60S 1018L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Phase	:	Z			



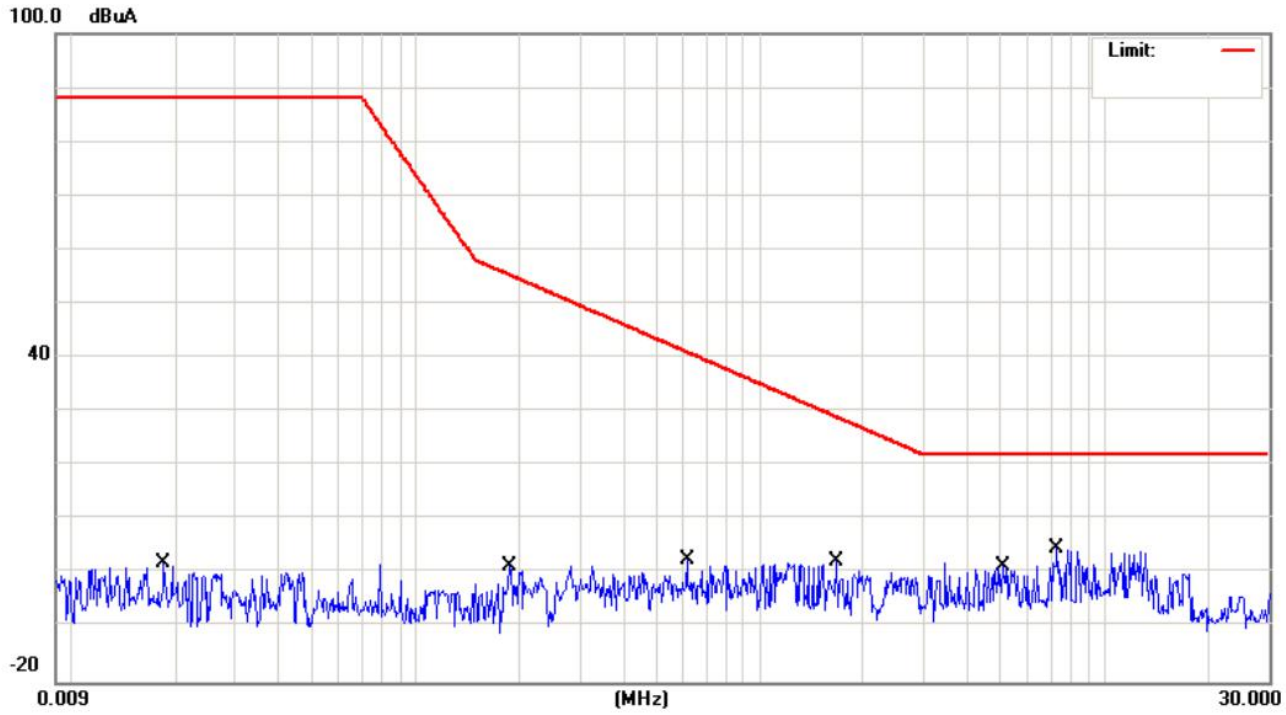
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuA	dB	dBuA	dBuA	dB	Detector	Comment
1		0.0133	11.40	0.07	11.47	88.00	-76.53	QP	
2		0.0510	12.40	0.05	12.45	88.00	-75.55	QP	
3		0.0878	10.17	0.07	10.24	79.07	-68.83	QP	
4		0.2782	10.17	0.14	10.31	50.57	-40.26	QP	
5		1.3460	8.30	0.17	8.47	31.63	-23.16	QP	
6	*	5.4820	9.75	0.15	9.90	22.00	-12.10	QP	

Product	:	LED Strip	**Model/Type reference**	:	FE14C-P8-G1 38XRGB 24V144S W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Phase	:	X			



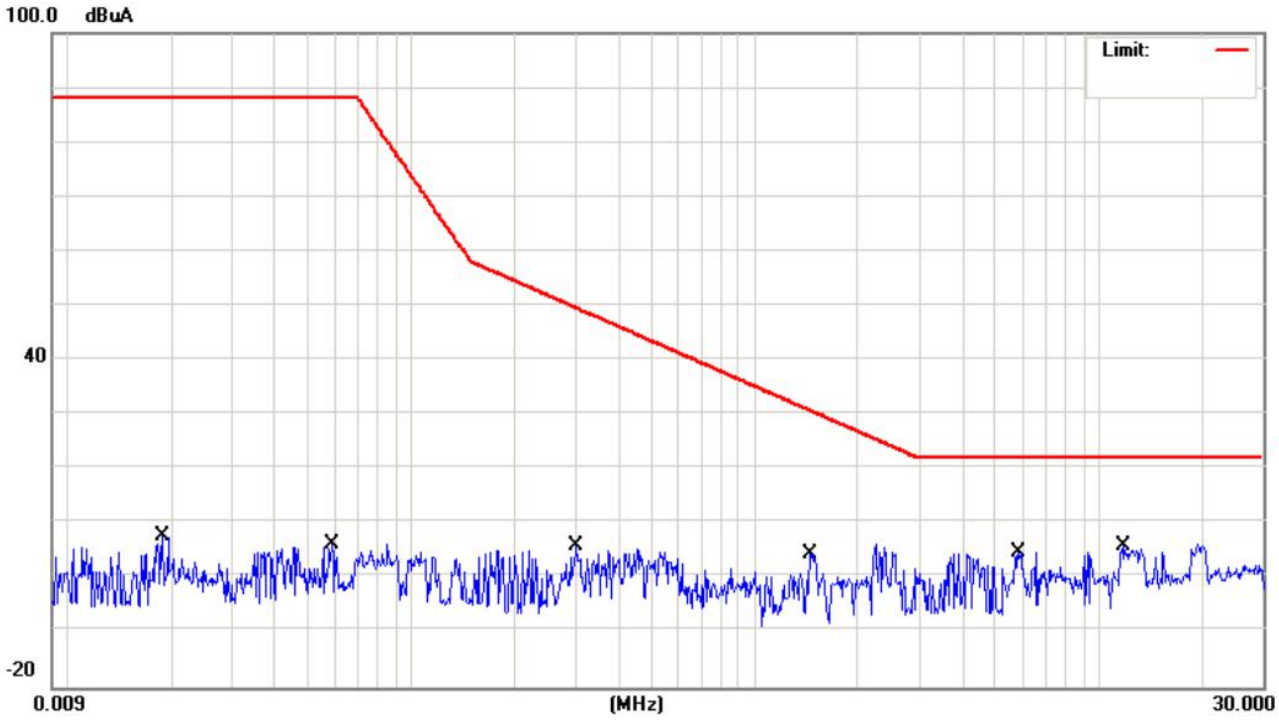
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuA	dB	dBuA	dBuA	dB	Detector	Comment
1		0.0138	-37.51	48.38	10.87	88.00	-77.13	QP	
2		0.0371	-39.45	48.43	8.98	88.00	-79.02	QP	
3		0.1020	-38.32	47.53	9.21	73.17	-63.96	QP	
4		0.2779	-19.25	29.04	9.79	50.58	-40.79	QP	
5		0.4700	-21.93	30.30	8.37	44.27	-35.90	QP	
6	*	2.7139	-23.84	30.40	6.56	23.20	-16.64	QP	

Product	:	LED Strip	**Model/Type reference**	:	FE14C-P8-G1 38XRGB 24V144S W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Phase	:	Y			



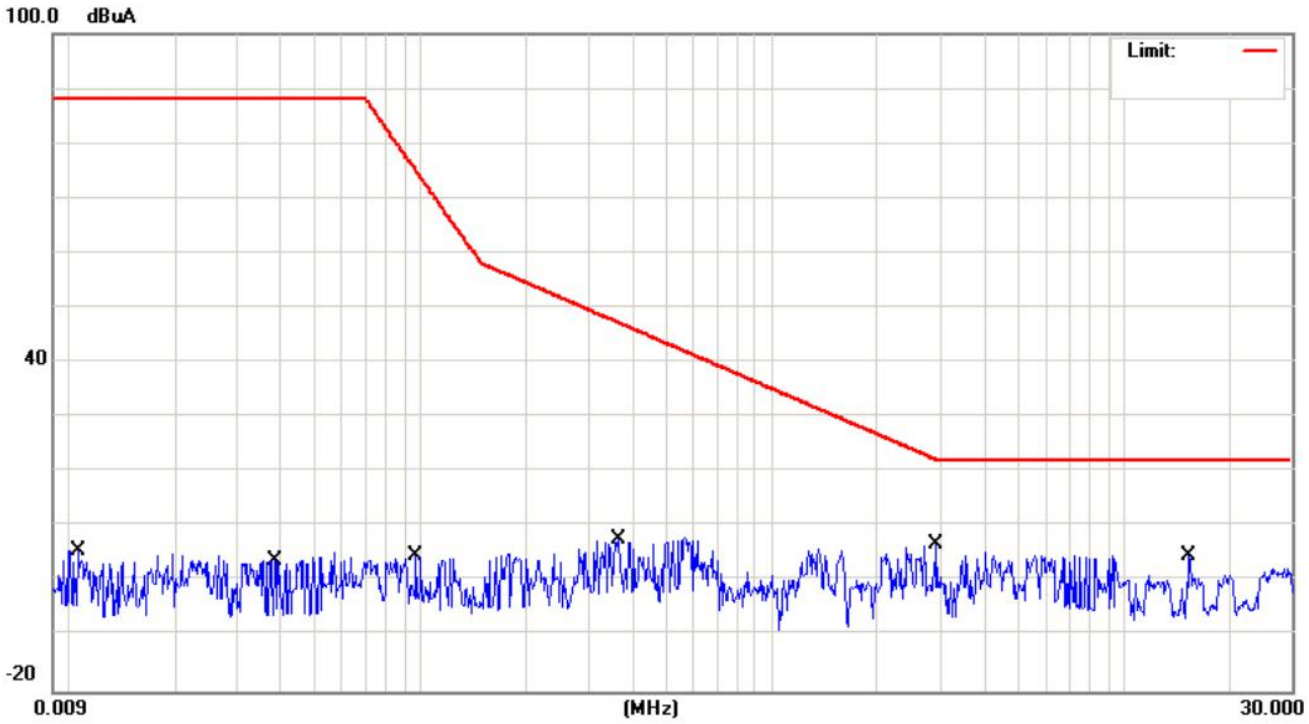
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuA	dB	dBuA	dBuA	dB	Detector	Comment
1		0.0186	-46.65	48.55	1.90	88.00	-86.10	QP	
2		0.1869	-27.07	28.44	1.37	55.35	-53.98	QP	
3		0.6139	-27.96	30.49	2.53	41.06	-38.53	QP	
4		1.6580	-28.12	30.45	2.33	29.12	-26.79	QP	
5		5.1139	-28.92	30.31	1.39	22.00	-20.61	QP	
6	*	7.3100	-25.71	30.40	4.69	22.00	-17.31	QP	

Product	:	LED Strip	**Model/Type reference**	:	FE14C-P8-G1 38XRGB 24V144S W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Phase	:	Z			



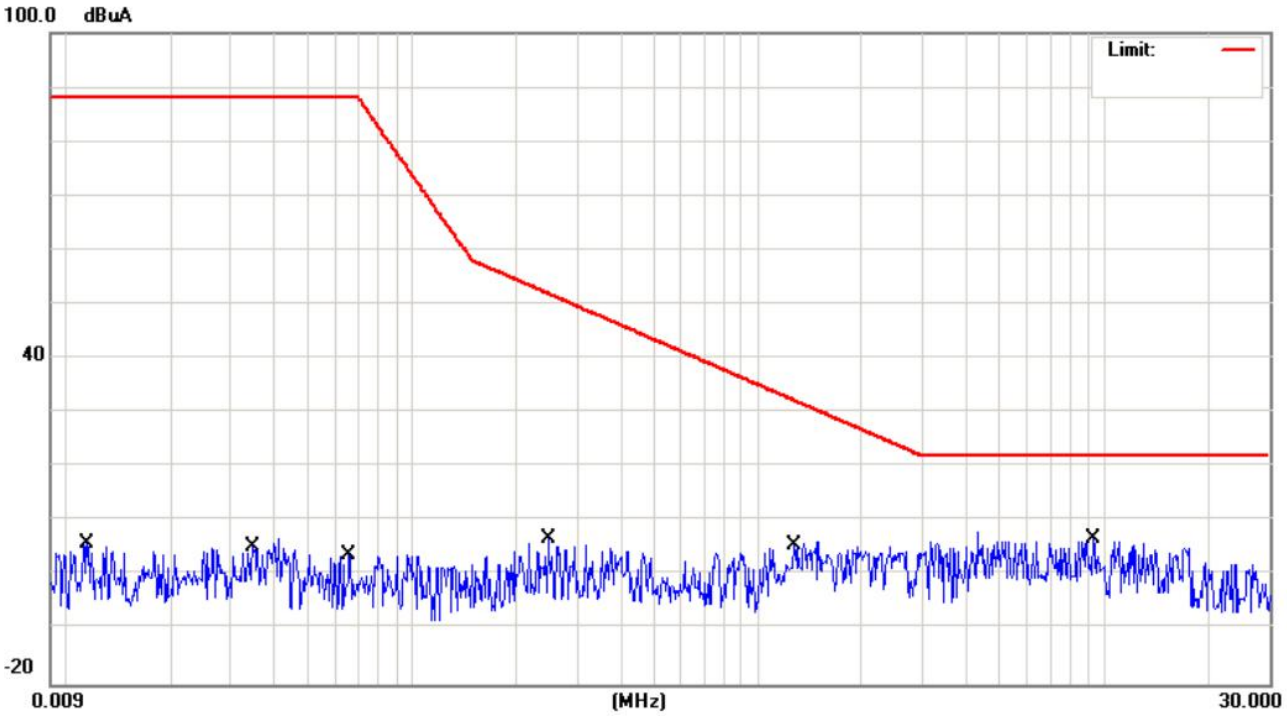
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuA	dB	dBuA	dBuA	dB	Detector	Comment
1		0.0188	-40.83	48.56	7.73	88.00	-80.27	QP	
2		0.0586	-41.95	48.16	6.21	88.00	-81.79	QP	
3		0.3019	-23.26	29.20	5.94	49.59	-43.65	QP	
4		1.4460	-25.93	30.46	4.53	30.77	-26.24	QP	
5		5.8420	-25.73	30.34	4.61	22.00	-17.39	QP	
6	*	11.7820	-24.58	30.60	6.02	22.00	-15.98	QP	

Product	:	LED Strip	**Model/Type reference**	:	FH14D-P5-G1 50B1RGB 5V60S W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Phase	:	X			



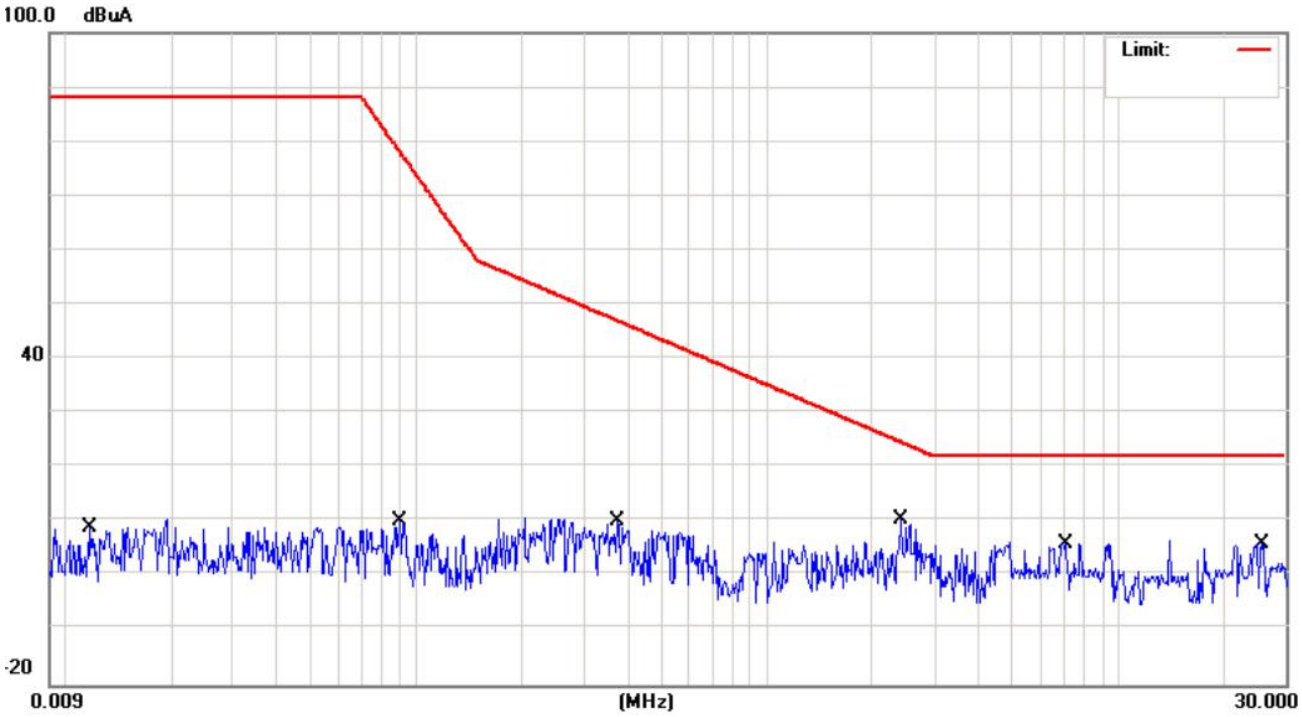
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuA	dB	dBuA	dBuA	dB	Detector	Comment
1		0.0106	-42.71	48.26	5.55	88.00	-82.45	QP	
2		0.0387	-44.65	48.41	3.76	88.00	-84.24	QP	
3		0.0969	-42.80	47.55	4.75	75.19	-70.44	QP	
4		0.3659	-21.84	29.62	7.78	47.28	-39.50	QP	
5	*	2.9340	-23.65	30.39	6.74	22.27	-15.53	QP	
6		15.4100	-25.89	30.76	4.87	22.00	-17.13	QP	

Product	:	LED Strip	**Model/Type reference**	:	FH14D-P5-G1 50B1RGB 5V60S W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Phase	:	Y			



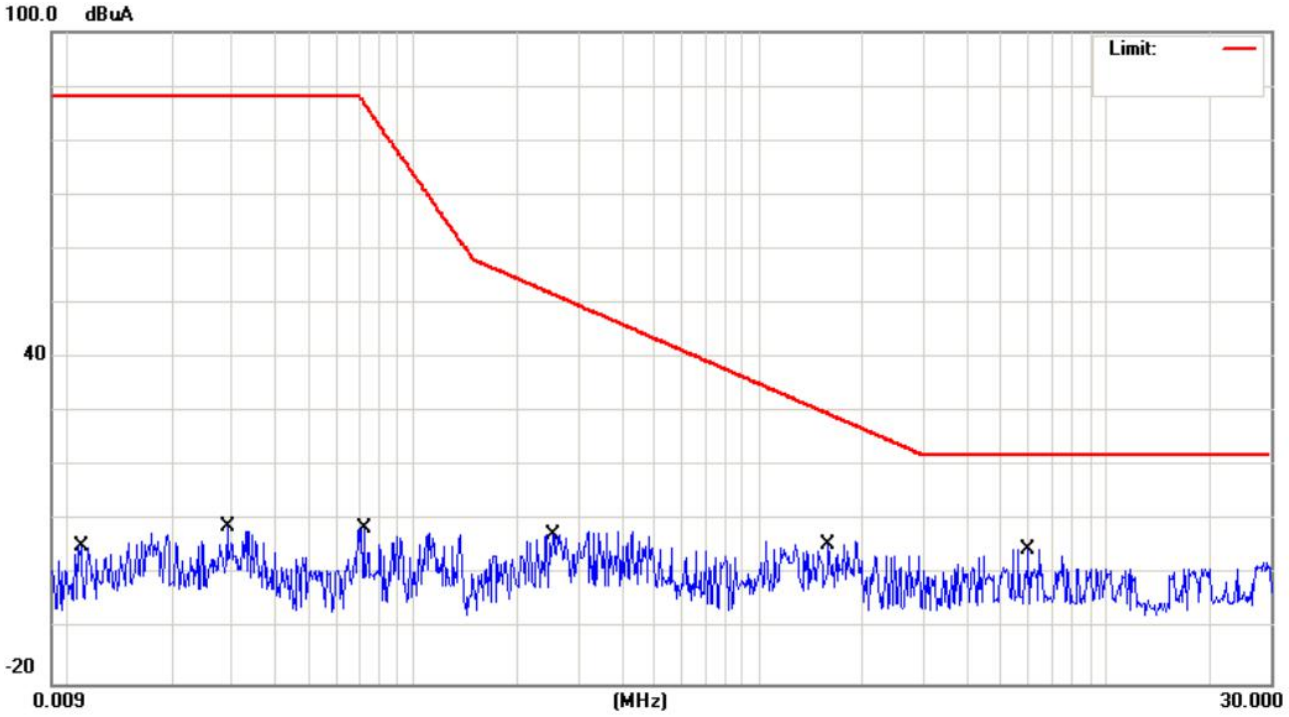
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuA	dB	dBuA	dBuA	dB	Detector	Comment
1		0.0114	-42.38	48.29	5.91	88.00	-82.09	QP	
2		0.0348	-42.97	48.45	5.48	88.00	-82.52	QP	
3		0.0657	-44.16	48.05	3.89	88.00	-84.11	QP	
4		0.2464	-21.98	28.83	6.85	52.03	-45.18	QP	
5		1.2700	-24.93	30.47	5.54	32.33	-26.79	QP	
6	*	9.2660	-23.77	30.49	6.72	22.00	-15.28	QP	

Product	:	LED Strip	**Model/Type reference**	:	FH14D-P5-G1 50B1RGB 5V60S W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Phase	:	Z			



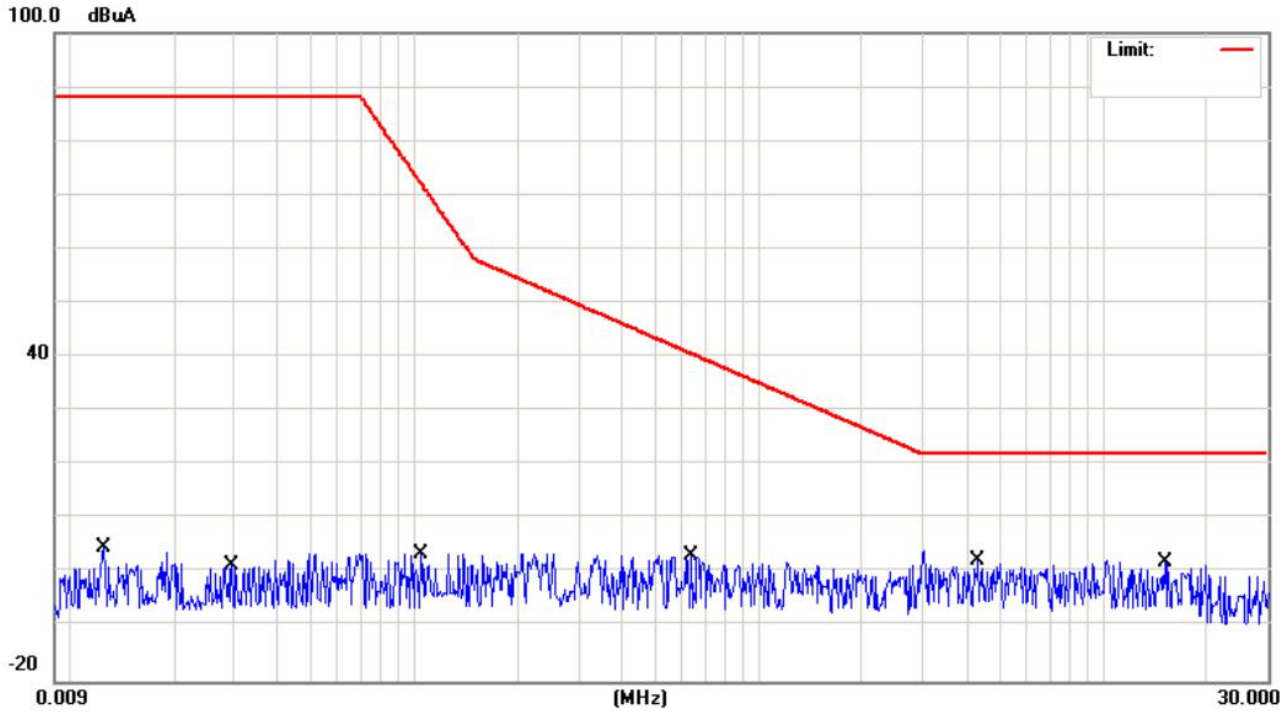
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuA	dB	dBuA	dBuA	dB	Detector	Comment
1		0.0117	-39.32	48.30	8.98	88.00	-79.02	QP	
2		0.0895	-37.55	47.67	10.12	78.32	-68.20	QP	
3		0.3738	-19.57	29.67	10.10	47.02	-36.92	QP	
4	*	2.4100	-20.06	30.42	10.36	24.63	-14.27	QP	
5		7.0820	-24.38	30.39	6.01	22.00	-15.99	QP	
6		25.8220	-25.28	31.22	5.94	22.00	-16.06	QP	

Product	:	LED Strip	**Model/Type reference**	:	FE18C-P5-G2 21X92721X960 24V560D W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Phase	:	X			



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuA	dB	dBuA	dBuA	dB	Detector	Comment
1		0.0108	-42.89	48.27	5.38	88.00	-82.62	QP	
2		0.0290	-39.62	48.51	8.89	88.00	-79.11	QP	
3		0.0720	-39.15	47.95	8.80	86.89	-78.09	QP	
4		0.2540	-21.29	28.88	7.59	51.66	-44.07	QP	
5		1.5859	-24.74	30.45	5.71	29.66	-23.95	QP	
6	*	5.9940	-25.55	30.34	4.79	22.00	-17.21	QP	

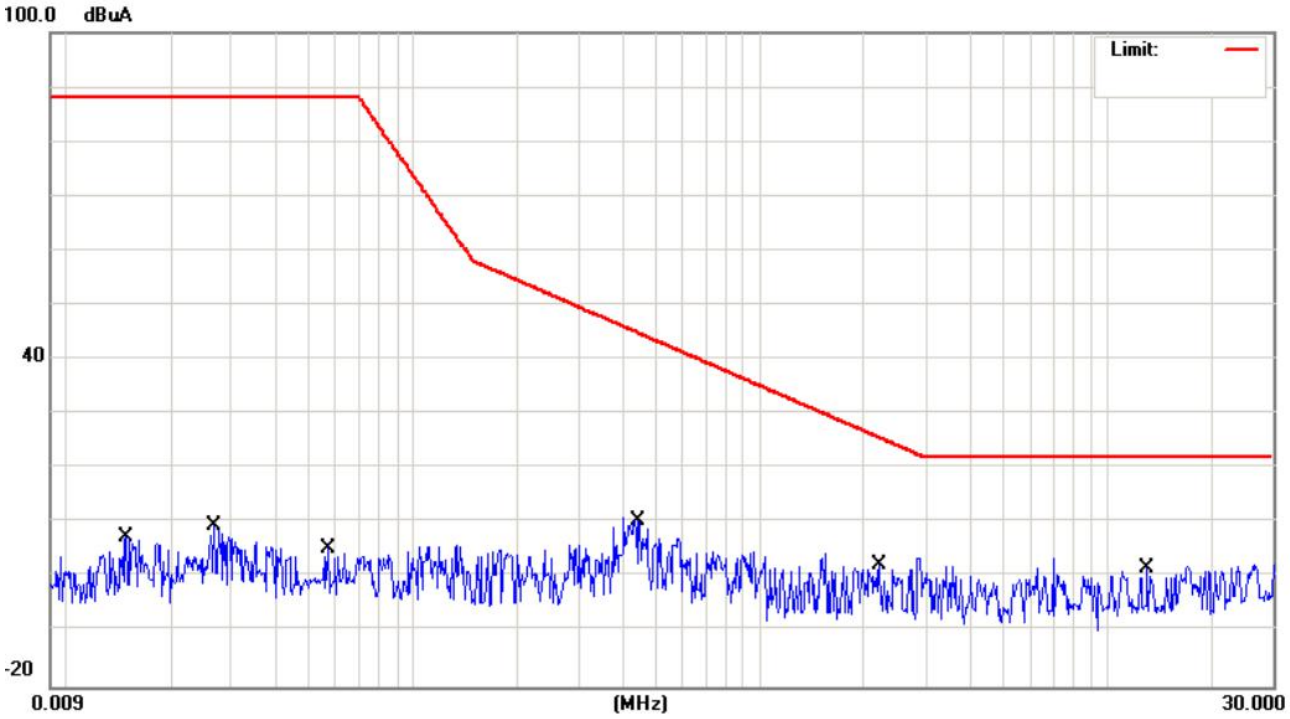
Product	:	LED Strip	**Model/Type reference**	:	FE18C-P5-G2 21X92721X960 24V560D W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Phase	:	Y			



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuA	dB	dBuA	dBuA	dB	Detector	Comment
1		0.0126	-43.62	48.34	4.72	88.00	-83.28	QP	
2		0.0295	-47.19	48.50	1.31	88.00	-86.69	QP	
3		0.1045	-44.00	47.57	3.57	72.21	-68.64	QP	
4		0.6380	-27.30	30.49	3.19	40.60	-37.41	QP	
5	*	4.3380	-27.92	30.33	2.41	22.00	-19.59	QP	
6		15.0780	-28.76	30.74	1.98	22.00	-20.02	QP	

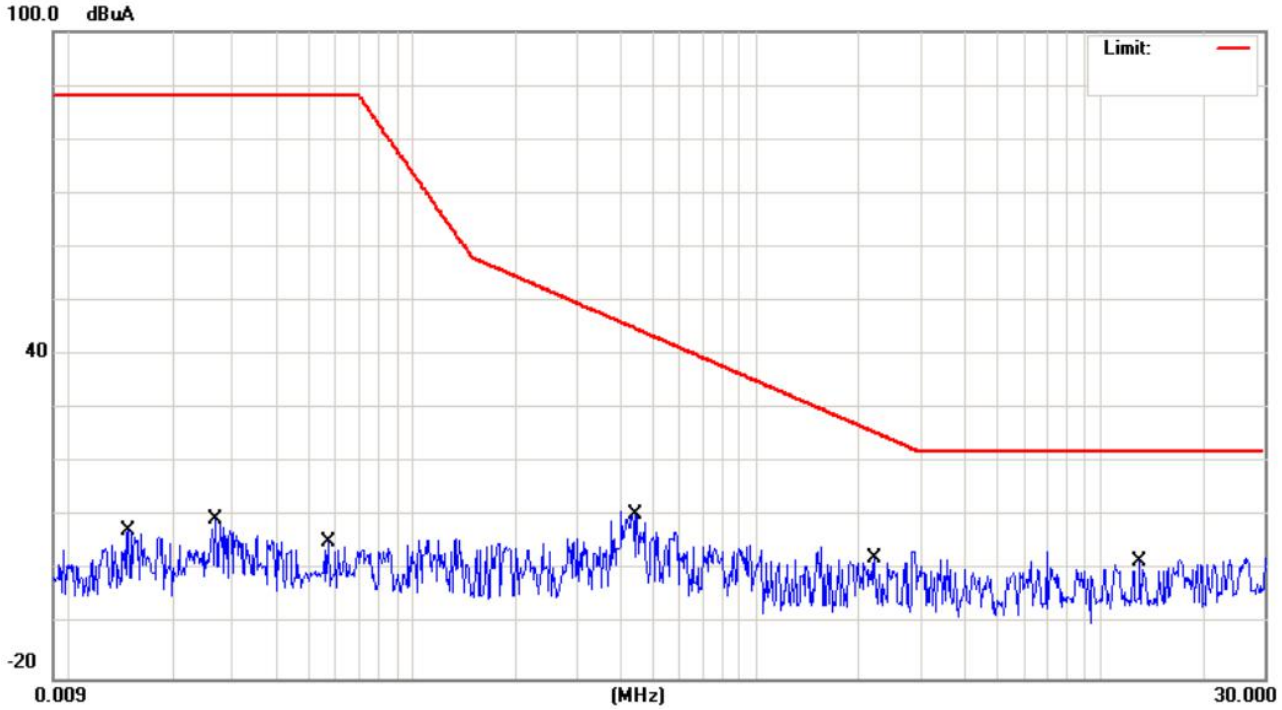
\

Product	:	LED Strip	**Model/Type reference**	:	FE18C-P5-G2 21X92721X960 24V560D W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Phase	:	Z			



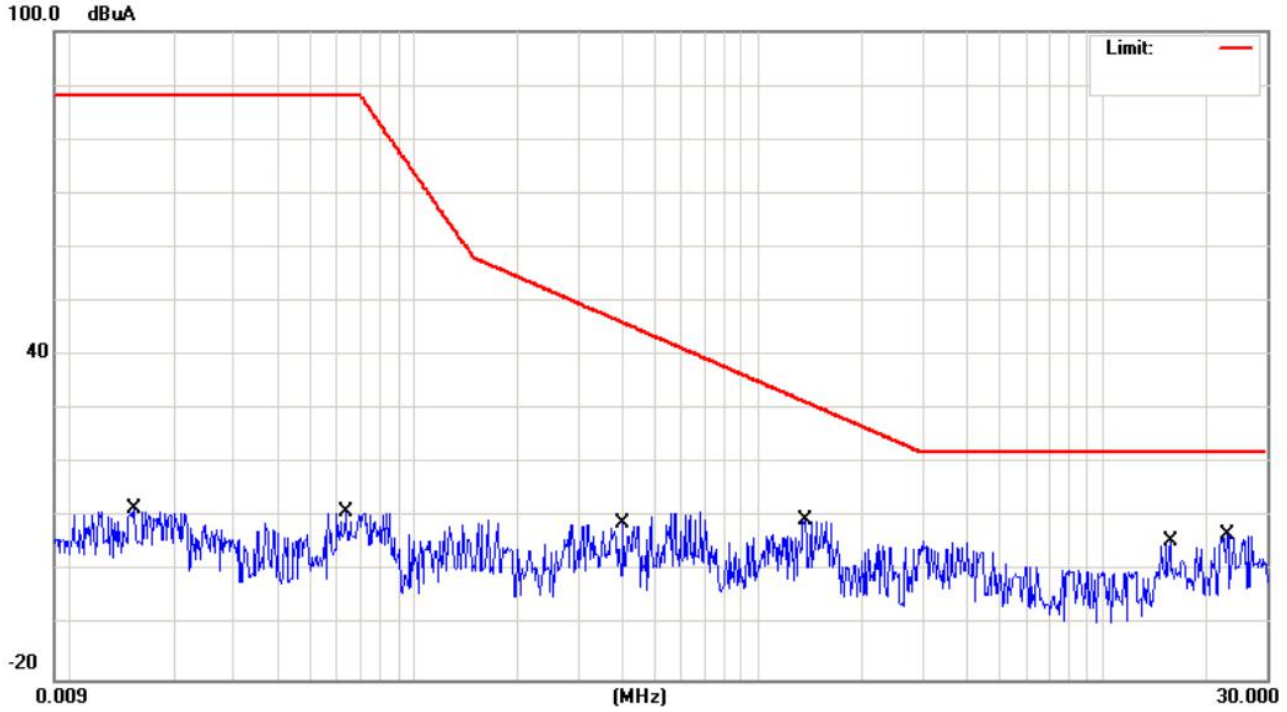
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuA	dB	dBuA	dBuA	dB	Detector	Comment
1		0.0149	-41.11	48.42	7.31	88.00	-80.69	QP	
2		0.0268	-38.84	48.53	9.69	88.00	-78.31	QP	
3		0.0571	-42.99	48.19	5.20	88.00	-82.80	QP	
4		0.4460	-19.72	30.15	10.43	44.90	-34.47	QP	
5		2.2058	-28.11	30.42	2.31	25.69	-23.38	QP	
6	*	13.0980	-28.81	30.66	1.85	22.00	-20.15	QP	

Product	: LED Strip	**Model/Type reference**	:	FHN11WR-P5-G1 06LZY 24V360D 15L05
Power supply	: AC 230V/50Hz	**Temperature**	:	25°C
Mode	: ON	**Humidity**	:	60%
Phase	: X			



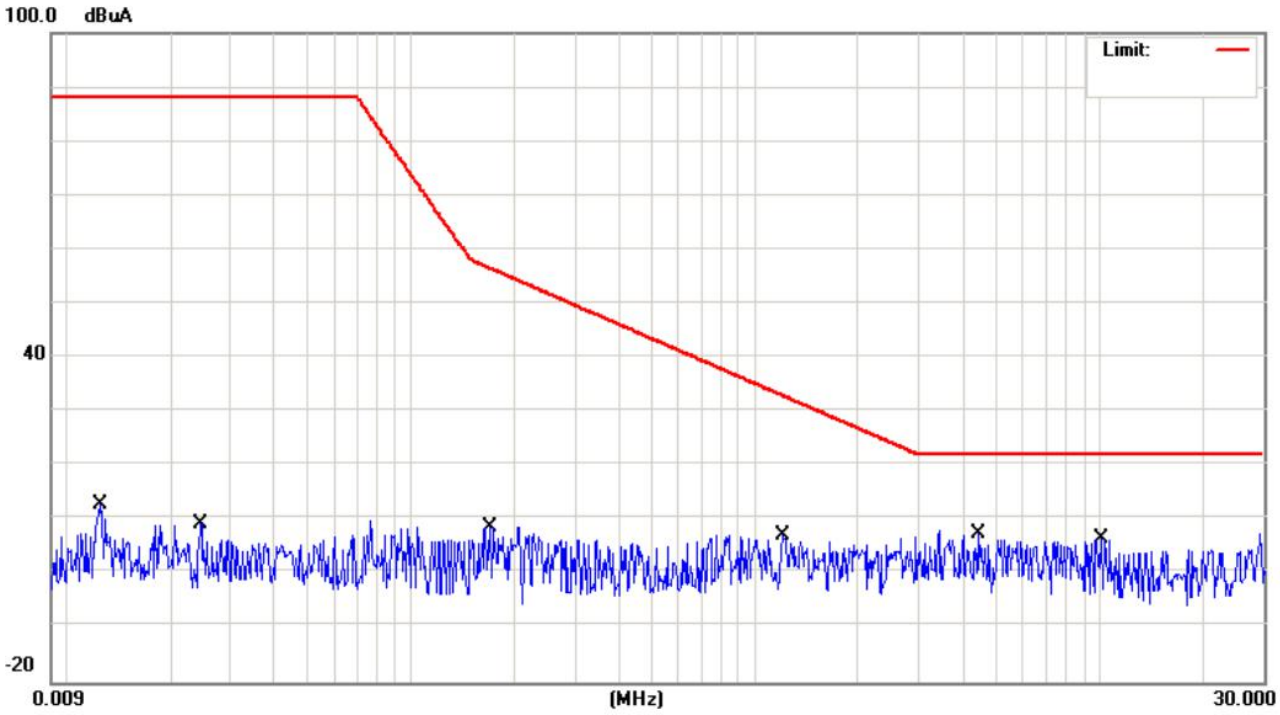
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuA	dB	dBuA	dBuA	dB	Detector	Comment
1		0.0149	-41.11	48.42	7.31	88.00	-80.69	QP	
2		0.0268	-38.84	48.53	9.69	88.00	-78.31	QP	
3		0.0571	-42.99	48.19	5.20	88.00	-82.80	QP	
4		0.4460	-19.72	30.15	10.43	44.90	-34.47	QP	
5		2.2058	-28.11	30.42	2.31	25.69	-23.38	QP	
6	*	13.0980	-28.81	30.66	1.85	22.00	-20.15	QP	

Product	: LED Strip	**Model/Type reference**	:	FHN11WR-P5-G1 06LZY 24V360D 15L05
Power supply	: AC 230V/50Hz	**Temperature**	:	25°C
Mode	: ON	**Humidity**	:	60%
Phase	: Y			



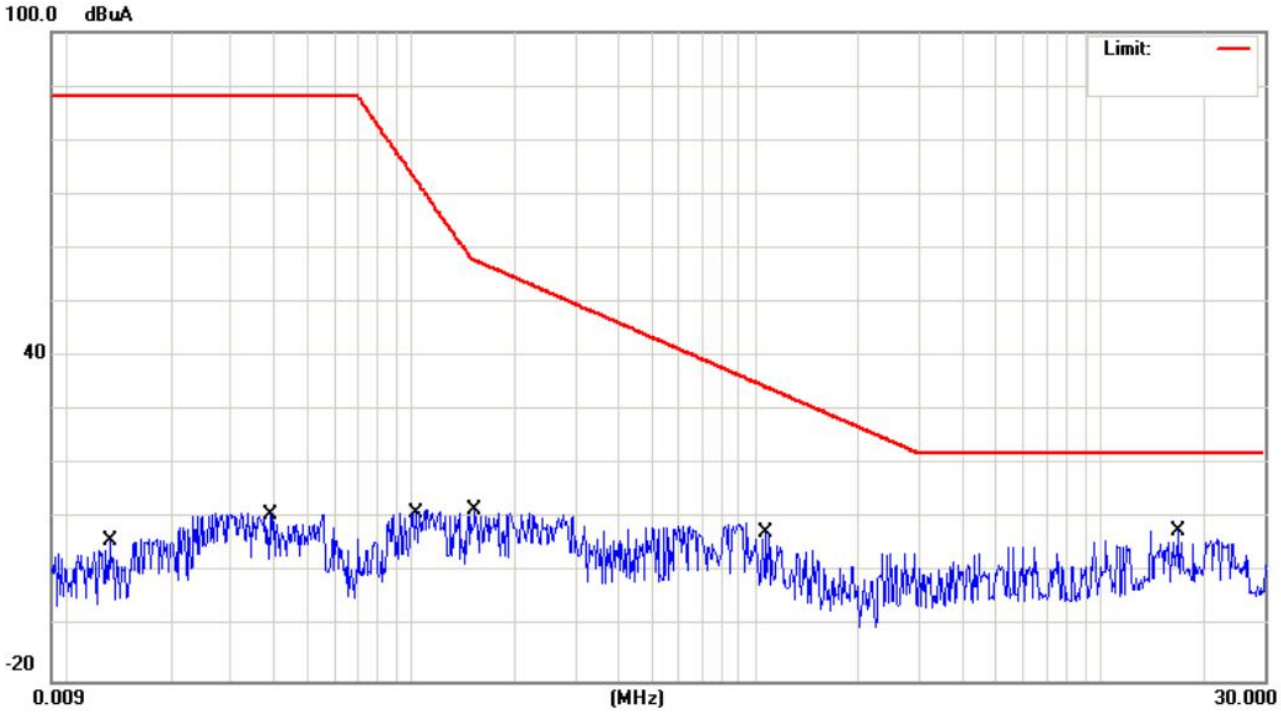
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuA	dB	dBuA	dBuA	dB	Detector	Comment
1		0.0154	-36.85	48.44	11.59	88.00	-76.41	QP	
2		0.0631	-37.15	48.09	10.94	88.00	-77.06	QP	
3		0.4060	-20.85	29.88	9.03	46.03	-37.00	QP	
4		1.3660	-21.04	30.46	9.42	31.45	-22.03	QP	
5		15.7380	-25.11	30.77	5.66	22.00	-16.34	QP	
6	*	23.0777	-24.33	31.10	6.77	22.00	-15.23	QP	

Product	: LED Strip	**Model/Type reference**	:	FHN11WR-P5-G1 06LZY 24V360D 15L05
Power supply	: AC 230V/50Hz	**Temperature**	:	25°C
Mode	: ON	**Humidity**	:	60%
Phase	: Z			



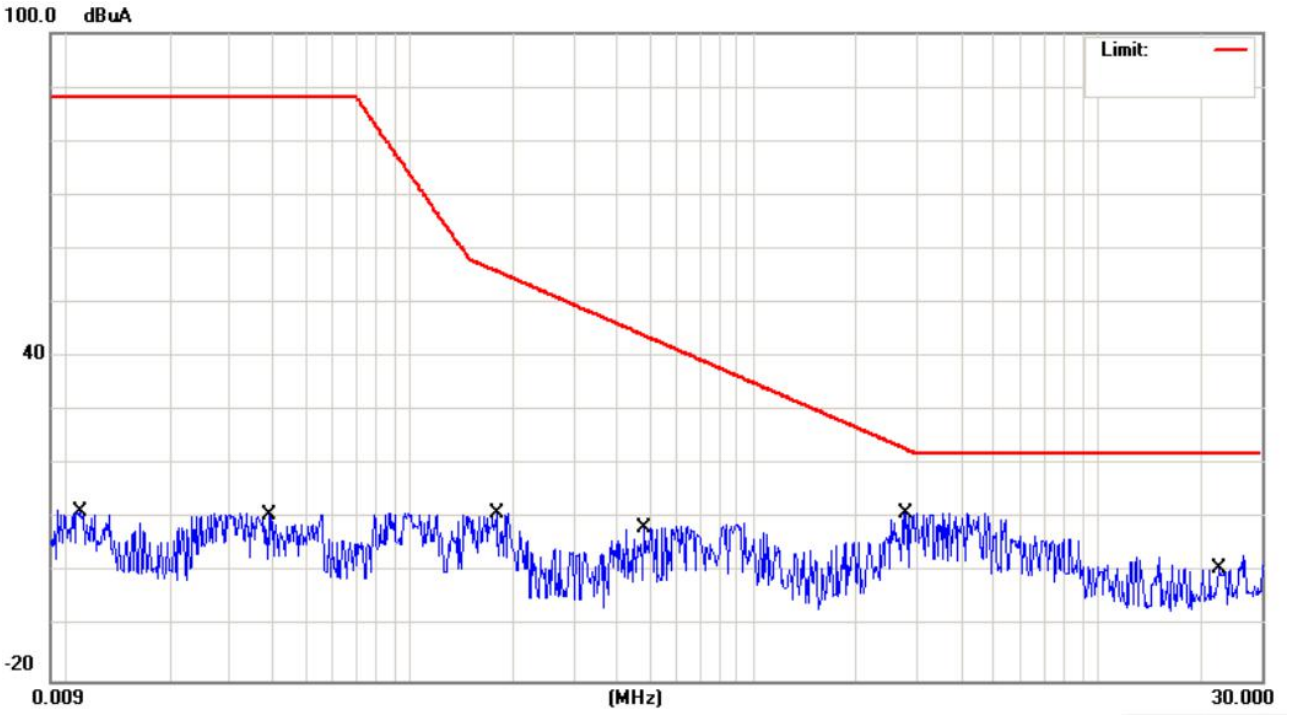
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuA	dB	dBuA	dBuA	dB	Detector	Comment
1		0.0126	-35.62	48.34	12.72	88.00	-75.28	QP	
2		0.0244	-39.29	48.56	9.27	88.00	-78.73	QP	
3		0.1700	-19.64	28.33	8.69	56.49	-47.80	QP	
4		1.2257	-24.04	30.47	6.43	32.75	-26.32	QP	
5	*	4.4380	-22.87	30.32	7.45	22.00	-14.55	QP	
6		10.1699	-23.85	30.53	6.68	22.00	-15.32	QP	

Product	:	LED Strip	**Model/Type reference**	:	FE18W-Px-G1 18X9x 24V350S W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Phase	:	X			



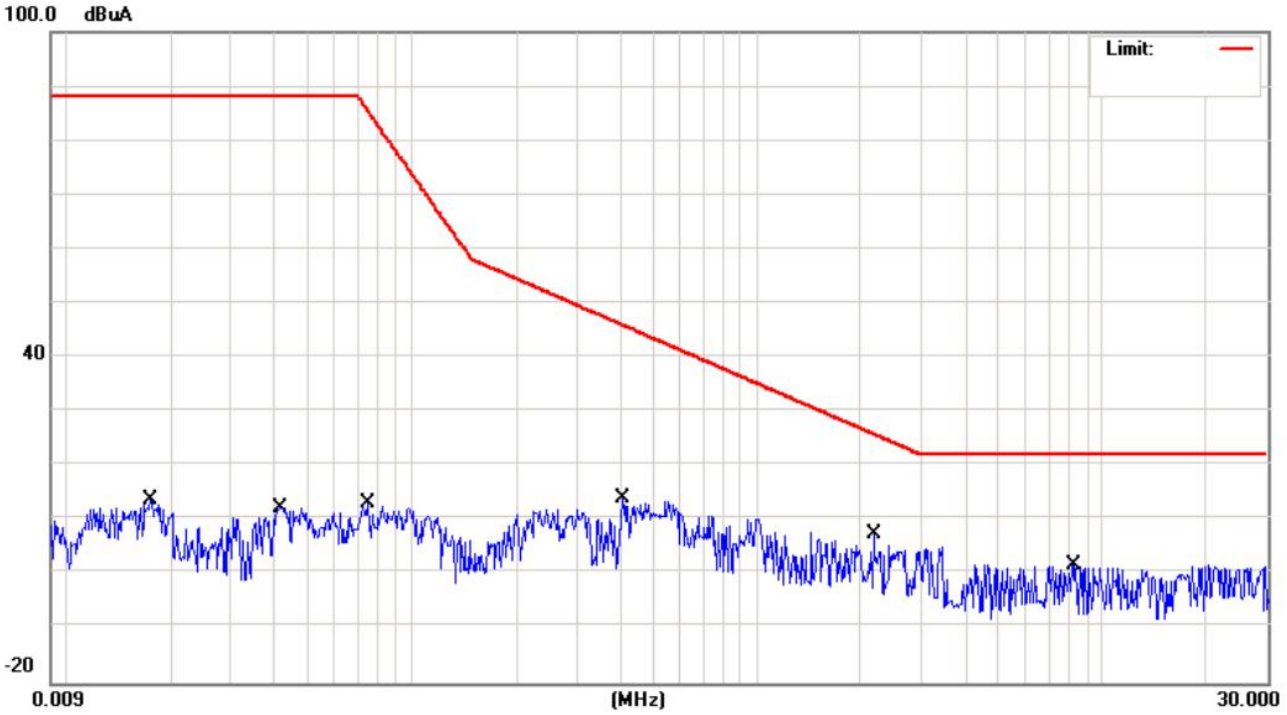
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuA	dB	dBuA	dBuA	dB	Detector	Comment
1		0.0133	-42.37	48.36	5.99	88.00	-82.01	QP	
2		0.0389	-37.74	48.41	10.67	88.00	-77.33	QP	
3		0.1033	-36.51	47.55	11.04	72.67	-61.63	QP	
4		0.1527	-16.45	28.22	11.77	57.78	-46.01	QP	
5		1.0900	-23.23	30.47	7.24	34.16	-26.92	QP	
6	*	16.9900	-23.01	30.83	7.82	22.00	-14.18	QP	

Product	: LED Strip	**Model/Type reference**	:	FE18W-Px-G1 18X9x 24V350S W10L05
Power supply	: AC 230V/50Hz	**Temperature**	:	25°C
Mode	: ON	**Humidity**	:	60%
Phase	: Y			



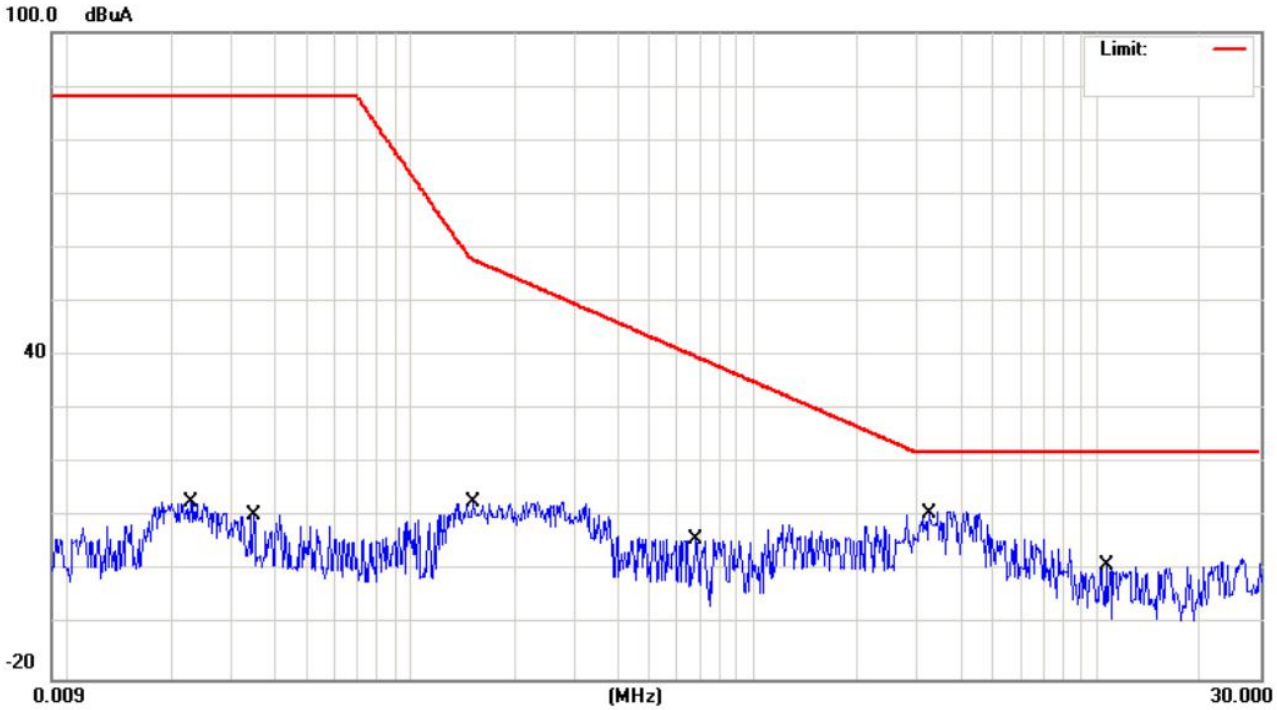
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuA	dB	dBuA	dBuA	dB	Detector	Comment
1		0.0108	-36.89	48.27	11.38	88.00	-76.62	QP	
2		0.0389	-37.74	48.41	10.67	88.00	-77.33	QP	
3		0.1781	-17.36	28.39	11.03	55.93	-44.90	QP	
4		0.4820	-22.12	30.38	8.26	43.97	-35.71	QP	
5	*	2.7659	-19.33	30.40	11.07	22.98	-11.91	QP	
6		22.5980	-30.30	31.07	0.77	22.00	-21.23	QP	

Product	: LED Strip	**Model/Type reference**	:	FE18W-Px-G1 18X9x 24V350S W10L05
Power supply	: AC 230V/50Hz	**Temperature**	:	25°C
Mode	: ON	**Humidity**	:	60%
Phase	: Z			



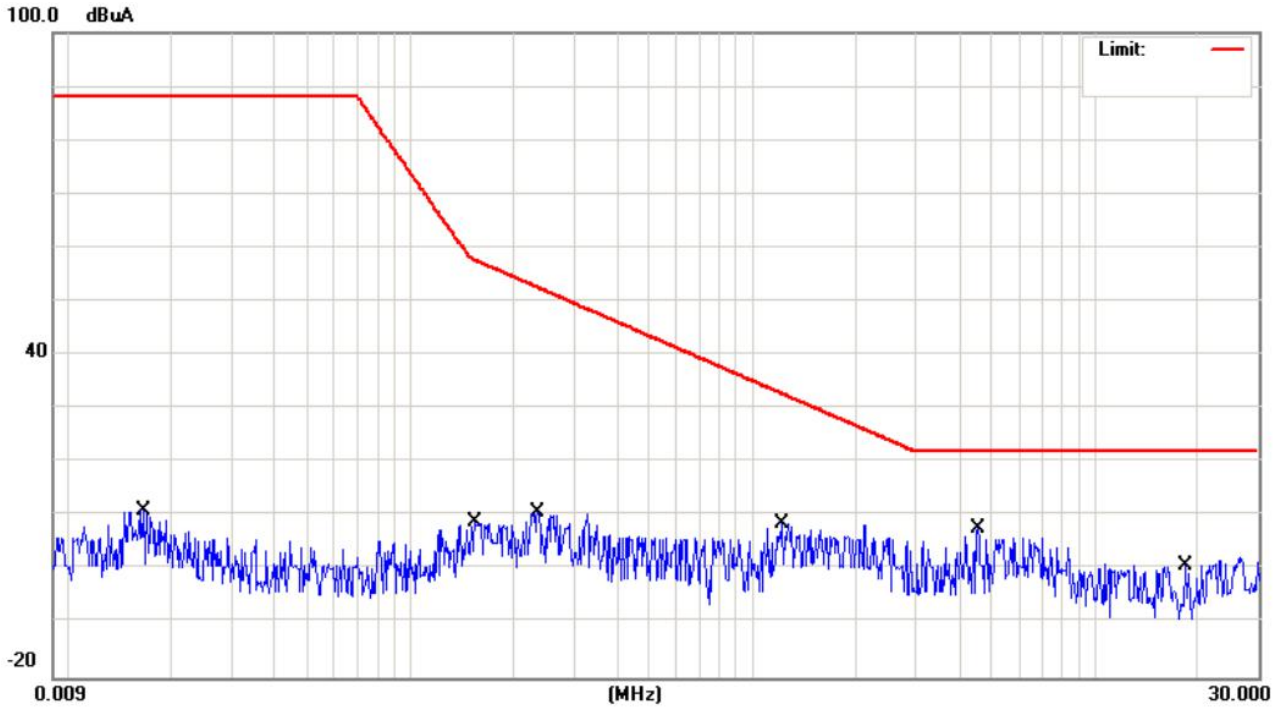
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuA	dB	dBuA	dBuA	dB	Detector	Comment
1		0.0175	-34.72	48.51	13.79	88.00	-74.21	QP	
2		0.0418	-36.01	48.38	12.37	88.00	-75.63	QP	
3		0.0743	-34.84	47.91	13.07	85.65	-72.58	QP	
4		0.4100	-15.90	29.91	14.01	45.91	-31.90	QP	
5	*	2.1699	-23.10	30.43	7.33	25.89	-18.56	QP	
6		8.2339	-28.57	30.44	1.87	22.00	-20.13	QP	

Product	:	LED Strip	**Model/Type reference**	:	FE15W-Px-G1 COB9x 24V480S W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Phase	:	X			



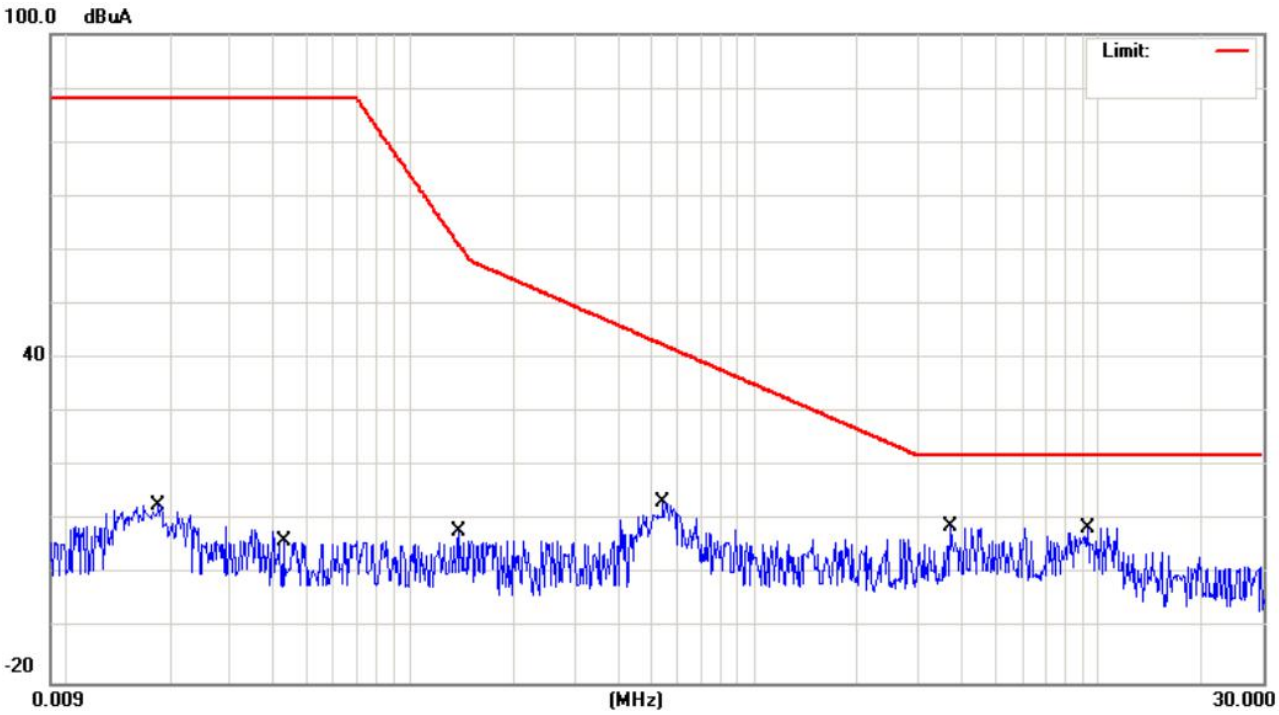
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuA	dB	dBuA	dBuA	dB	Detector	Comment
1		0.0229	-35.66	48.57	12.91	88.00	-75.09	QP	
2		0.0350	-38.05	48.45	10.40	88.00	-77.60	QP	
3		0.1527	-15.45	28.22	12.77	57.78	-45.01	QP	
4		0.6820	-24.58	30.49	5.91	39.80	-33.89	QP	
5	*	3.2580	-19.65	30.38	10.73	22.00	-11.27	QP	
6		10.7018	-29.38	30.55	1.17	22.00	-20.83	QP	

Product	:	LED Strip	**Model/Type reference**	:	FE15W-Px-G1 COB9x 24V480S W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Phase	:	Y			



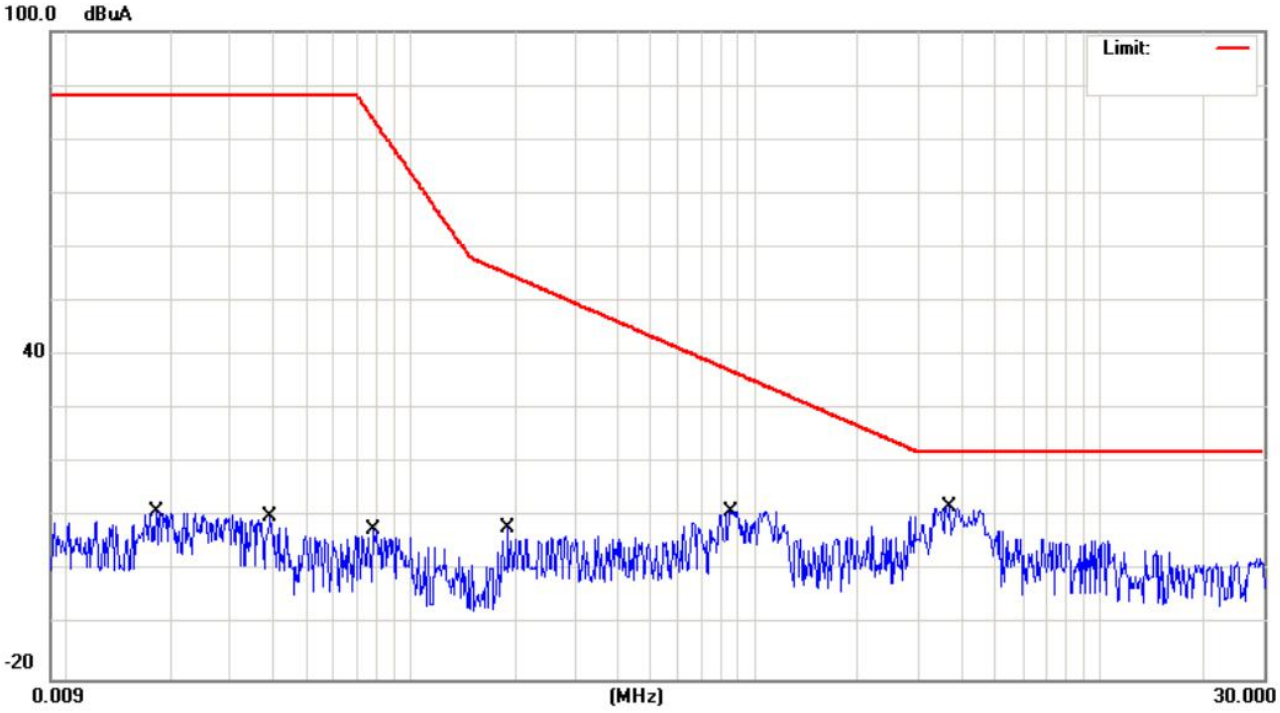
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuA	dB	dBuA	dBuA	dB	Detector	Comment
1		0.0165	-37.48	48.48	11.00	88.00	-77.00	QP	
2		0.1539	-19.29	28.23	8.94	57.68	-48.74	QP	
3		0.2346	-17.97	28.76	10.79	52.62	-41.83	QP	
4		1.2096	-21.86	30.47	8.61	32.91	-24.30	QP	
5	*	4.5380	-22.53	30.32	7.79	22.00	-14.21	QP	
6		18.3819	-30.16	30.89	0.73	22.00	-21.27	QP	

Product	:	LED Strip	**Model/Type reference**	:	FE15W-Px-G1 COB9x 24V480S W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Phase	:	Z			



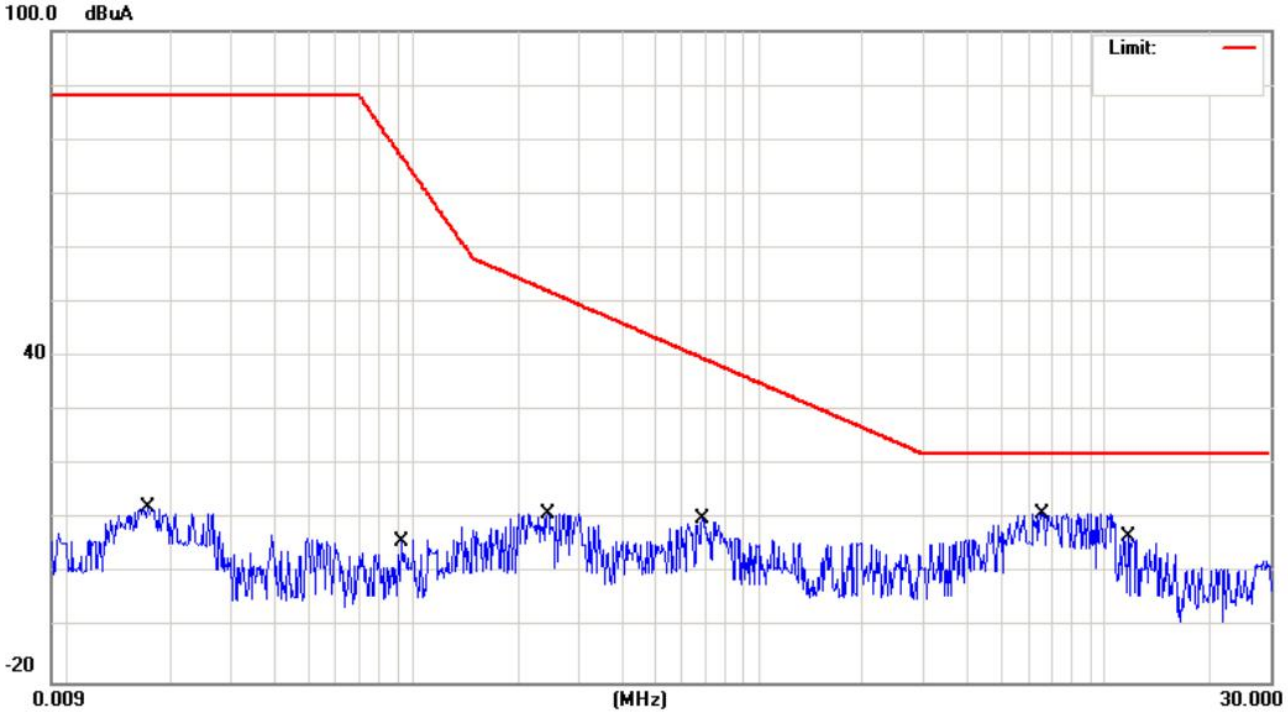
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuA	dB	dBuA	dBuA	dB	Detector	Comment
1		0.0186	-35.65	48.55	12.90	88.00	-75.10	QP	
2		0.0429	-42.17	48.37	6.20	88.00	-81.80	QP	
3		0.1382	-40.07	48.06	7.99	61.20	-53.21	QP	
4		0.5420	-17.11	30.50	13.39	42.56	-29.17	QP	
5	*	3.7179	-21.44	30.36	8.92	22.00	-13.08	QP	
6		9.2660	-21.77	30.49	8.72	22.00	-13.28	QP	

Product	:	LED Strip	**Model/Type reference**	:	FEN19CS-P7-G2 28HZ9x28HZ9x 24V240S 1018L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Phase	:	X			



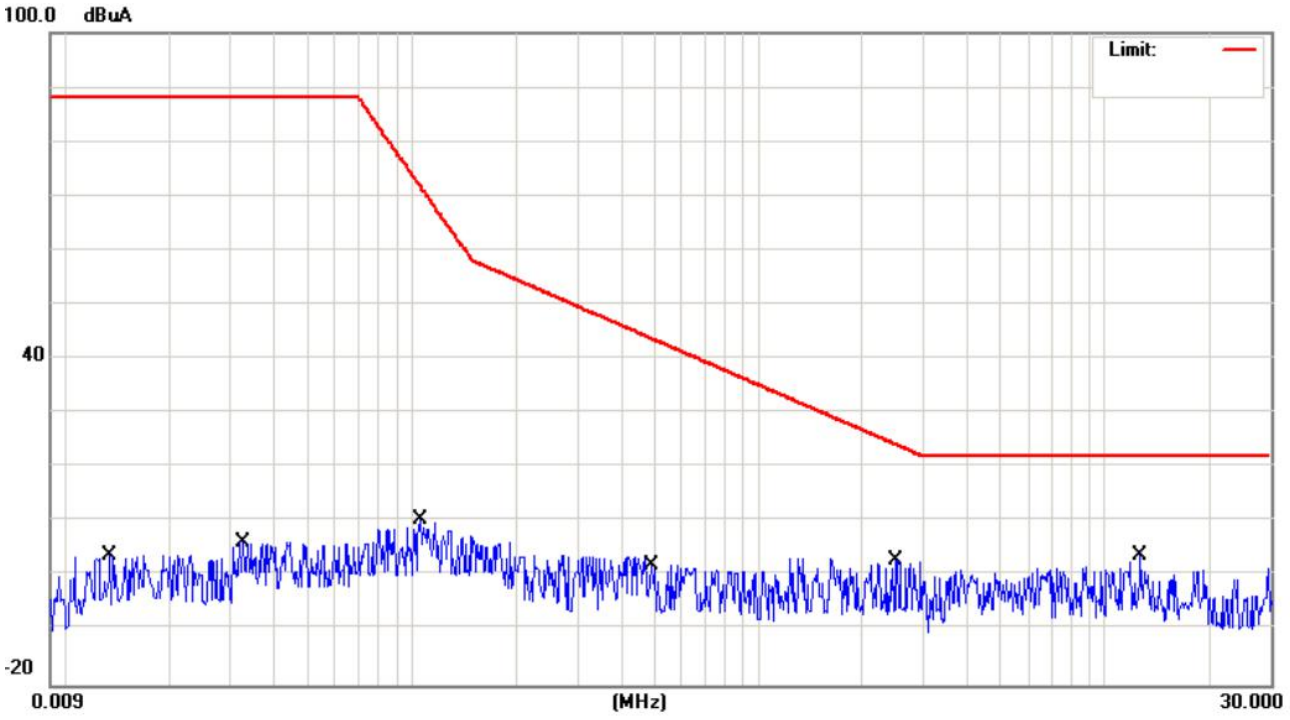
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuA	dB	dBuA	dBuA	dB	Detector	Comment
1		0.0183	-37.39	48.54	11.15	88.00	-76.85	QP	
2		0.0393	-38.14	48.41	10.27	88.00	-77.73	QP	
3		0.0778	-40.25	47.86	7.61	83.84	-76.23	QP	
4		0.1915	-20.28	28.47	8.19	55.06	-46.87	QP	
5		0.8460	-19.31	30.48	11.17	37.21	-26.04	QP	
6	*	3.6980	-18.36	30.36	12.00	22.00	-10.00	QP	

Product	:	LED Strip	**Model/Type reference**	:	FEN19CS-P7-G2 28HZ9x28HZ9x 24V240S 1018L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Phase	:	Y			



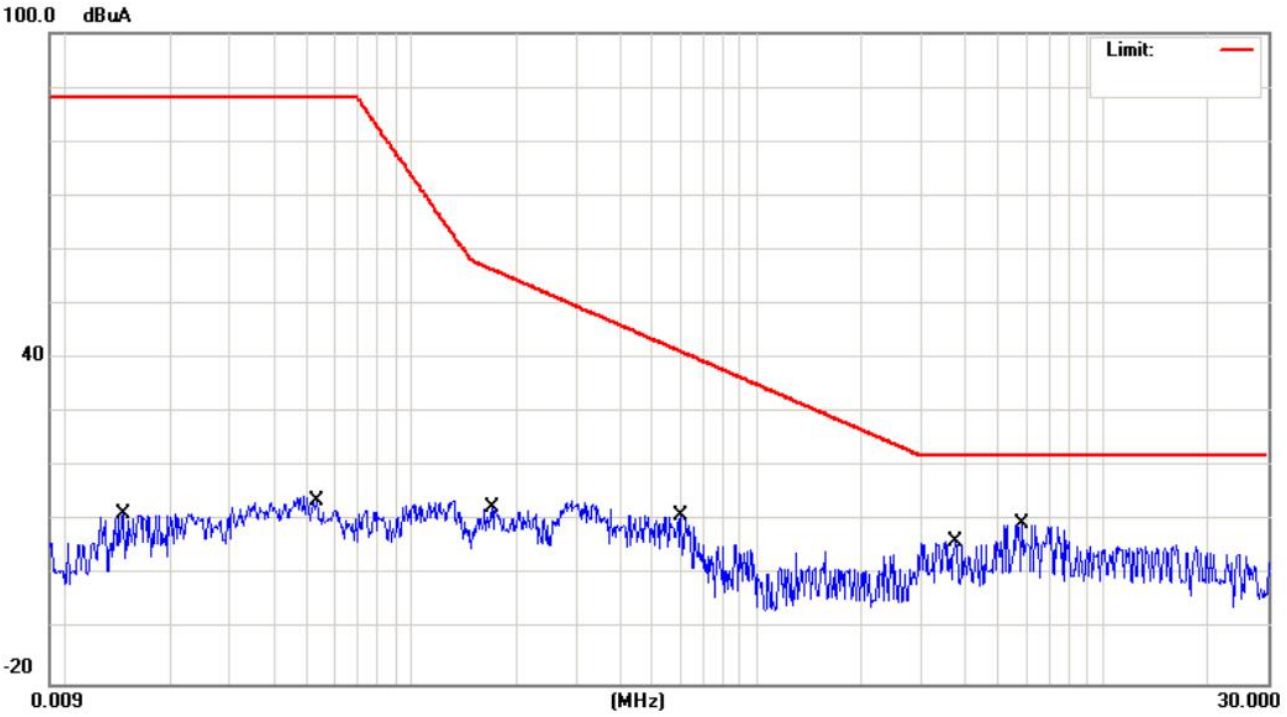
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuA	dB	dBuA	dBuA	dB	Detector	Comment
1		0.0171	-36.25	48.50	12.25	88.00	-75.75	QP	
2		0.0929	-41.61	47.61	6.00	76.85	-70.85	QP	
3		0.2460	-17.83	28.83	11.00	52.05	-41.05	QP	
4		0.6900	-20.43	30.49	10.06	39.66	-29.60	QP	
5	*	6.5700	-19.26	30.37	11.11	22.00	-10.89	QP	
6		11.6180	-23.82	30.59	6.77	22.00	-15.23	QP	

Product	:	LED Strip	**Model/Type reference**	:	FEN19CS-P7-G2 28HZ9x28HZ9x 24V240S 1018L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Phase	:	Z			



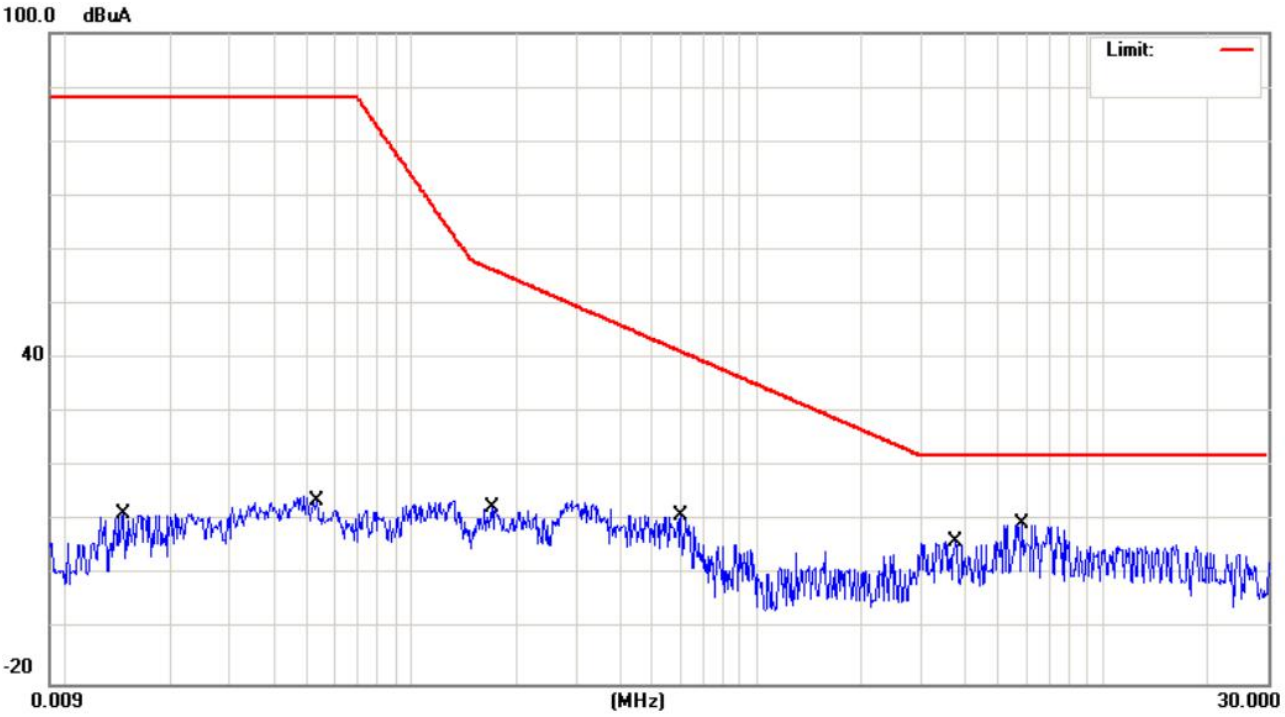
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuA	dB	dBuA	dBuA	dB	Detector	Comment
1		0.0134	-44.56	48.36	3.80	88.00	-84.20	QP	
2		0.0326	-42.24	48.47	6.23	88.00	-81.77	QP	
3		0.1053	-37.17	47.58	10.41	71.91	-61.50	QP	
4		0.4900	-28.24	30.43	2.19	43.77	-41.58	QP	
5		2.4780	-27.42	30.41	2.99	24.30	-21.31	QP	
6	*	12.6100	-26.70	30.63	3.93	22.00	-18.07	QP	

Product	:	LED Strip	**Model/Type reference**	:	FEN20D-Px-G1 50AXRGBW 24V24S 1222L10 x°
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Phase	:	X			



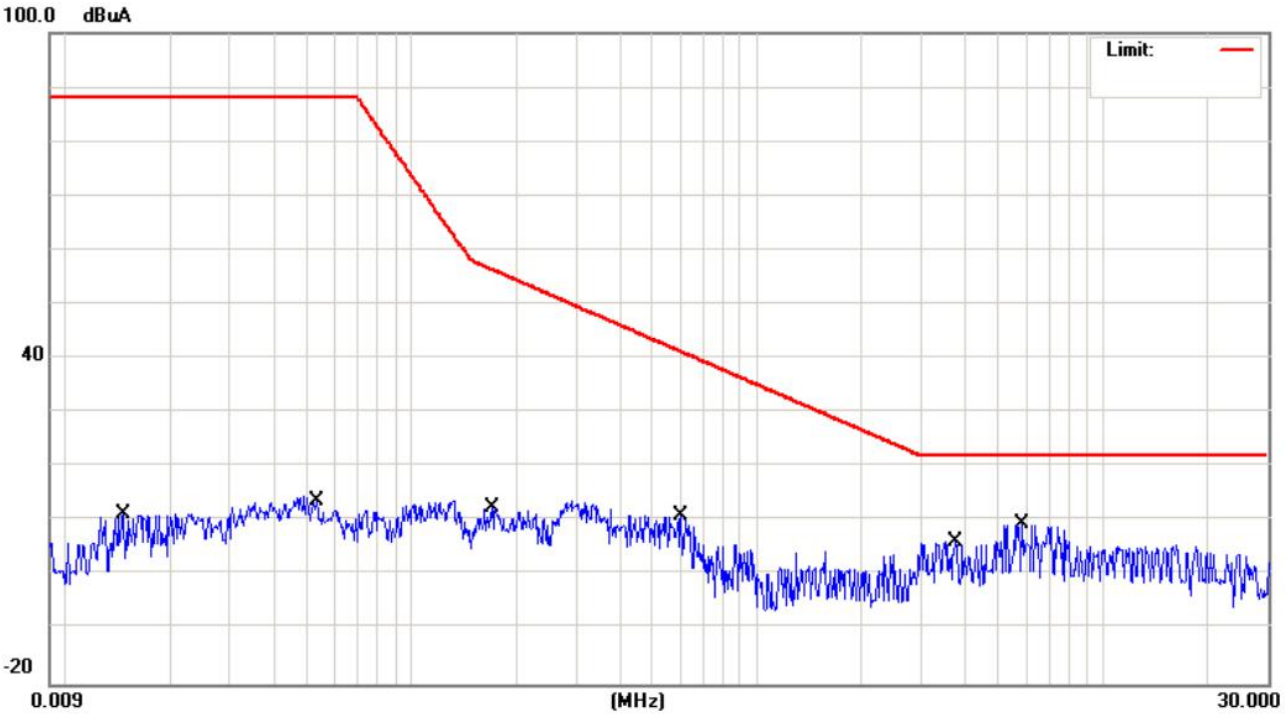
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuA	dB	dBuA	dBuA	dB	Detector	Comment
1		0.0146	-37.12	48.41	11.29	88.00	-76.71	QP	
2		0.0533	-34.45	48.25	13.80	88.00	-74.20	QP	
3		0.1740	-16.33	28.36	12.03	56.21	-44.18	QP	
4		0.6018	-19.44	30.50	11.06	41.30	-30.24	QP	
5		3.7339	-24.24	30.36	6.12	22.00	-15.88	QP	
6	*	5.8420	-20.73	30.34	9.61	22.00	-12.39	QP	

Product	:	LED Strip	**Model/Type reference**	:	FEN20D-Px-G1 50AXRGBW 24V24S 1222L10 x°
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Phase	:	Y			



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuA	dB	dBuA	dBuA	dB	Detector	Comment
1		0.0111	9.75	0.07	9.82	88.00	-78.18	QP	
2		0.0333	10.31	0.06	10.37	88.00	-77.63	QP	
3		0.2100	10.46	0.13	10.59	53.95	-43.36	QP	
4		1.8620	6.34	0.16	6.50	27.73	-21.23	QP	
5	*	3.5500	6.50	0.15	6.65	22.00	-15.35	QP	
6		12.8820	6.27	0.23	6.50	22.00	-15.50	QP	

Product	:	LED Strip	**Model/Type reference**	:	FEN20D-Px-G1 50AXRGBW 24V24S 1222L10 x°
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Phase	:	Z			



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuA	dB	dBuA	dBuA	dB	Detector	Comment
1		0.0134	14.02	0.07	14.09	88.00	-73.91	QP	
2		0.0734	13.85	0.06	13.91	86.13	-72.22	QP	
3		0.1839	11.93	0.12	12.05	55.54	-43.49	QP	
4		0.6980	8.08	0.17	8.25	39.52	-31.27	QP	
5		0.9979	10.27	0.17	10.44	35.22	-24.78	QP	
6	*	7.0820	9.54	0.18	9.72	22.00	-12.28	QP	

7. RADIATED DISTURBANCE (30MHz-1000MHz)

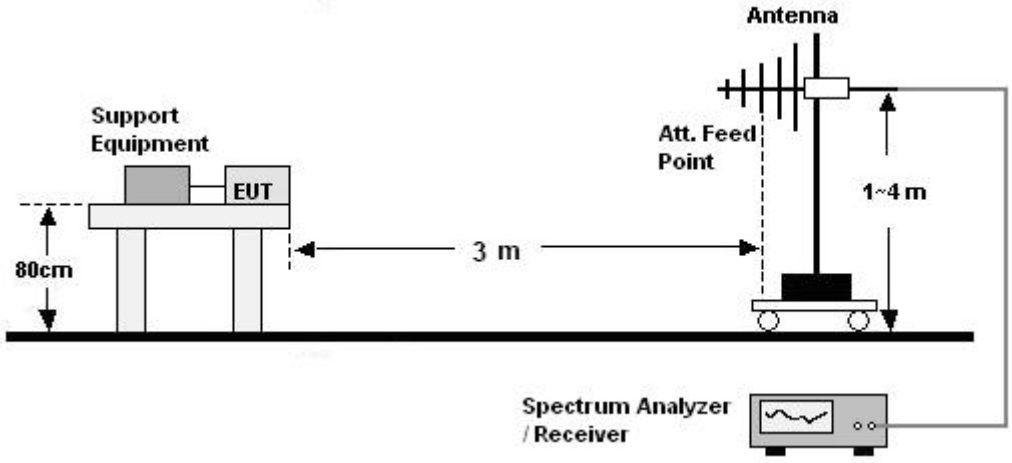
7.1 LIMITS OF RADIATED DISTURBANCE (30MHz-1000MHz)

Limits for radiated disturbance at a measuring distance of 3 m

Frequency (MHz)	Quasi-peak limit at 3m dB (uV/m)
30-230	40
230-1000	47

NOTE: The lower limit shall apply at the transition frequencies.

7.2 TEST SETUP



7.3 TEST PROCEDURE

a. The Product was placed on the non-conductive turntable above the ground at a chamber.

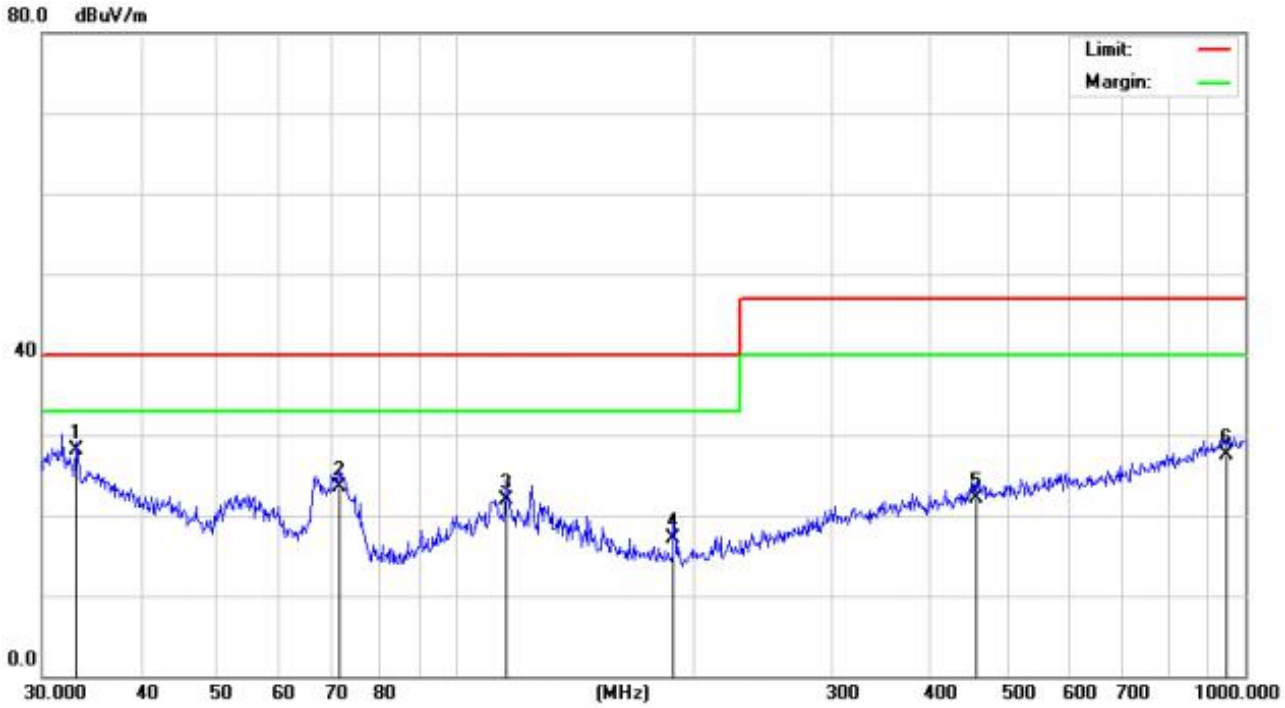
b. Set the spectrum analyzer/receiver in Peak detector, Max Hold mode, and 120 kHz RBW. Record the maximum field strength of all the pre-scan process in the full band when the antenna is varied between 1~4 m in both horizontal and vertical, and the turntable is rotated from 0 to 360 degrees.

c. For each frequency whose maximum record was higher or close to limit, measure its QP value: vary the antenna's height and rotate the turntable from 0 to 360 degrees to find the height and degree where Product radiated the maximum emission, then set the test frequency analyzer/receiver to QP Detector and specified bandwidth with Maximum Hold Mode, and record the maximum value

.

7.4 GRAPHS AND DATA

Product	:	LED Strip	**Model/Type reference**	:	FEN19WS-P7-G 1 50ZRGB8X 24V60S 1018L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Polarization	:	Horizontal			

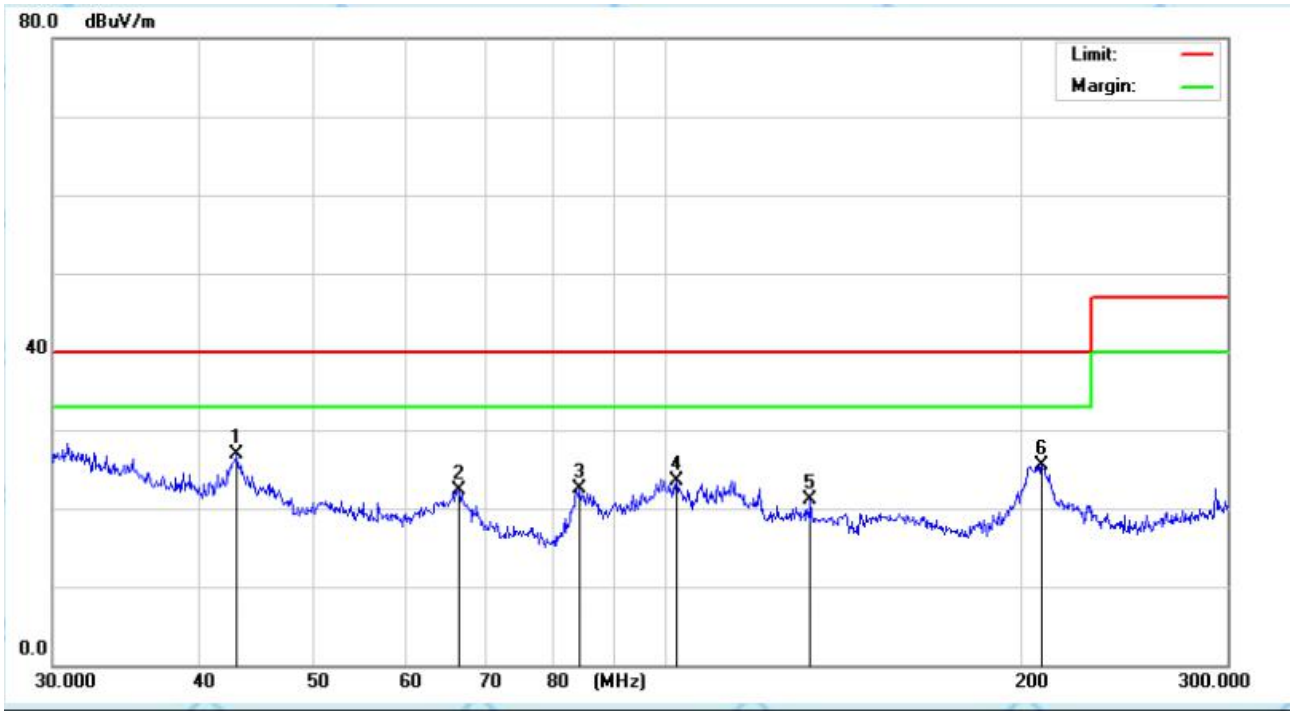


NO.Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1*	33.2112	24.50	3.57	28.07	40.00	-11.93	QP
2	71.3300	30.43	-7.02	23.41	40.00	-16.59	QP
3	116.1321	24.42	-2.46	21.96	40.00	-18.04	QP
4	189.0743	24.27	-7.18	17.09	40.00	-22.91	QP
5	457.5073	22.89	-0.72	22.17	47.00	-24.83	QP
6	945.4399	21.12	6.33	27.45	47.00	-19.55	QP

Product	:	LED Strip	**Model/Type reference**	:	FEN19WS-P7-G 1 50ZRGB8X 24V60S 1018L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Polarization	:	Vertical			

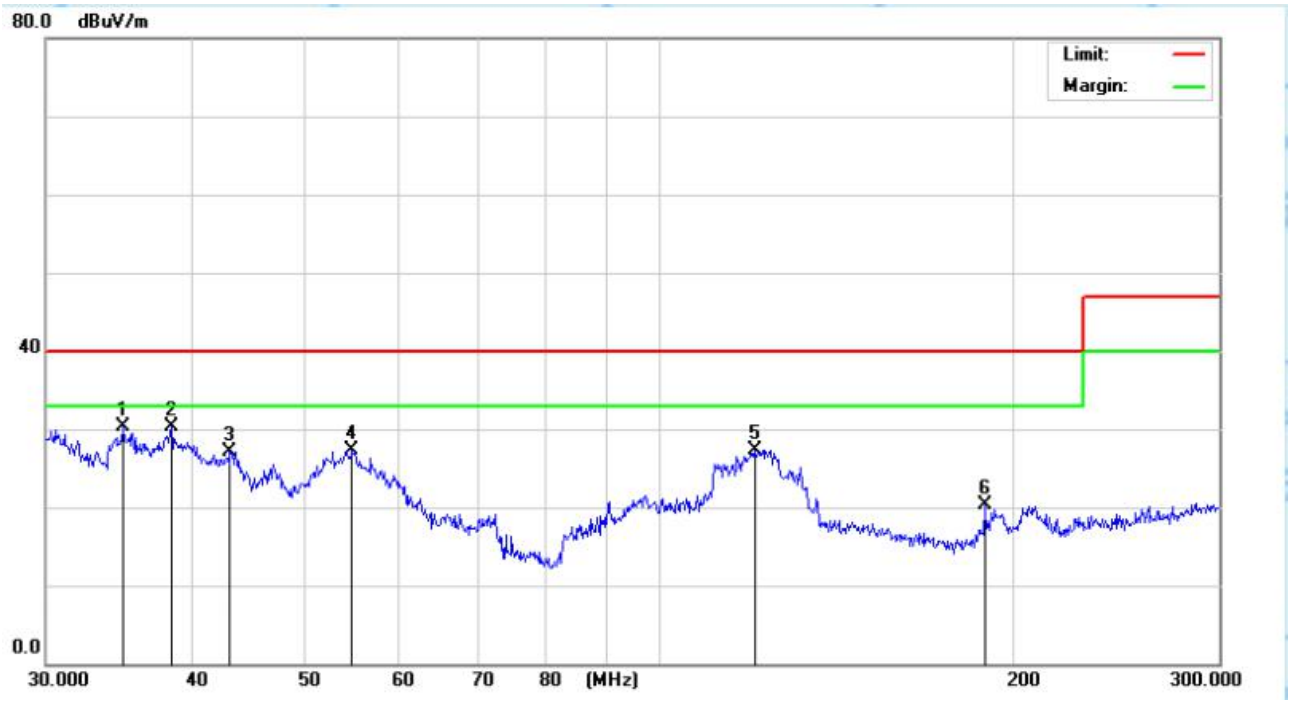
NO.Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1*	30.9619	27.10	4.43	31.53	40.00	-8.47	QP
2	43.2017	24.42	-1.33	23.09	40.00	-16.91	QP
3	67.2022	28.34	-6.78	21.56	40.00	-18.44	QP
4	137.9028	29.60	-4.15	25.45	40.00	-14.55	QP
5	543.2742	23.99	-0.88	24.87	47.00	-22.13	QP
6	948.7610	23.91	-6.39	30.30	47.00	-16.70	QP

Product	:	LED Strip	**Model/Type reference**	:	FE14C-P8-G1 38XRGB 24V144S W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Polarization	:	Horizontal			



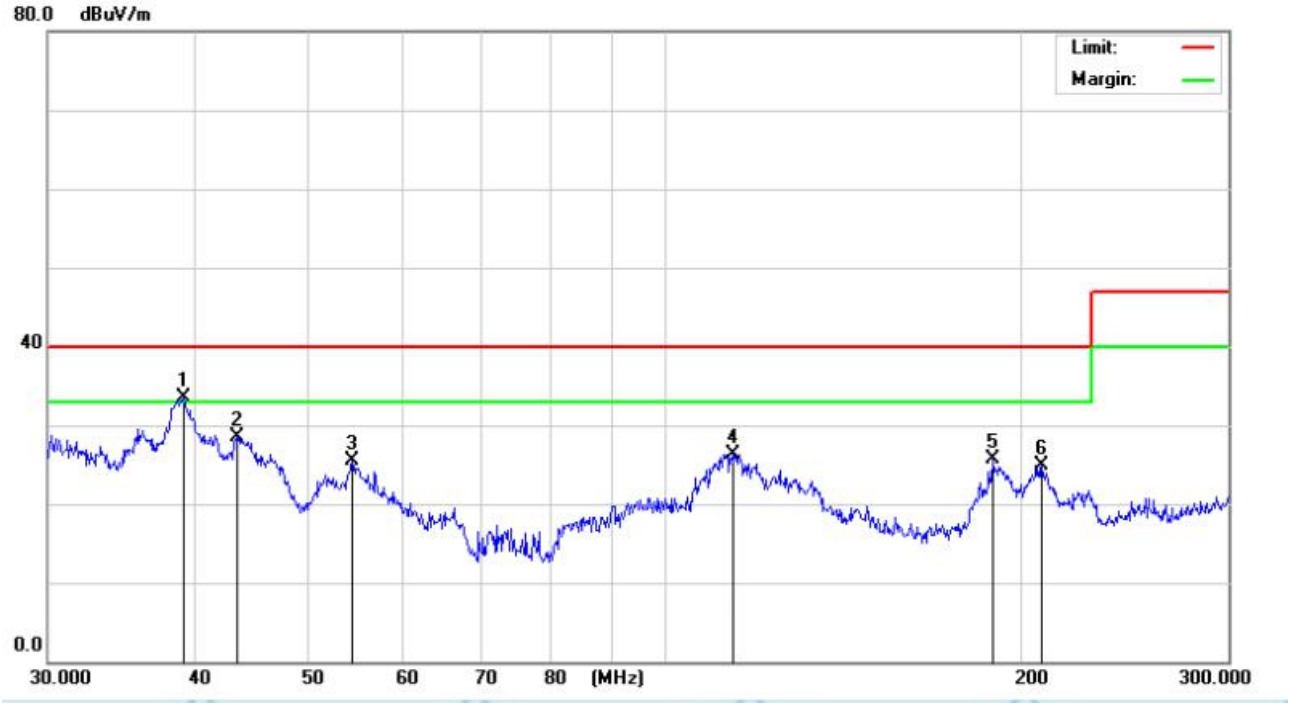
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	43.0647	28.26	-1.28	26.98	40.00	-13.02	QP			
2		66.5459	29.05	-6.72	22.33	40.00	-17.67	QP			
3		84.1628	29.23	-6.65	22.58	40.00	-17.42	QP			
4		101.8876	26.97	-3.45	23.52	40.00	-16.48	QP			
5		132.4711	24.94	-3.75	21.19	40.00	-18.81	QP			
6		208.5072	32.10	-6.61	25.49	40.00	-14.51	QP			

Product	:	LED Strip	**Model/Type reference**	:	FEN19WS-P7-G 1 50ZRGB8X 24V60S 1018L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Polarization	:	Vertical			



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree → Comment
1		34.9236	27.31	2.91	30.22	40.00	-9.78	QP		
2	*	38.3813	29.36	0.88	30.24	40.00	-9.76	QP		
3		43.0647	28.40	-1.28	27.12	40.00	-12.88	QP		
4		54.7169	32.96	-5.58	27.38	40.00	-12.62	QP		
5		120.5370	30.21	-2.87	27.34	40.00	-12.66	QP		
6		189.2872	27.41	-7.18	20.23	40.00	-19.77	QP		

Product	:	LED Strip	**Model/Type reference**	:	FH14D-P5-G1 50B1RGB 5V60S W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Polarization	:	Horizontal			

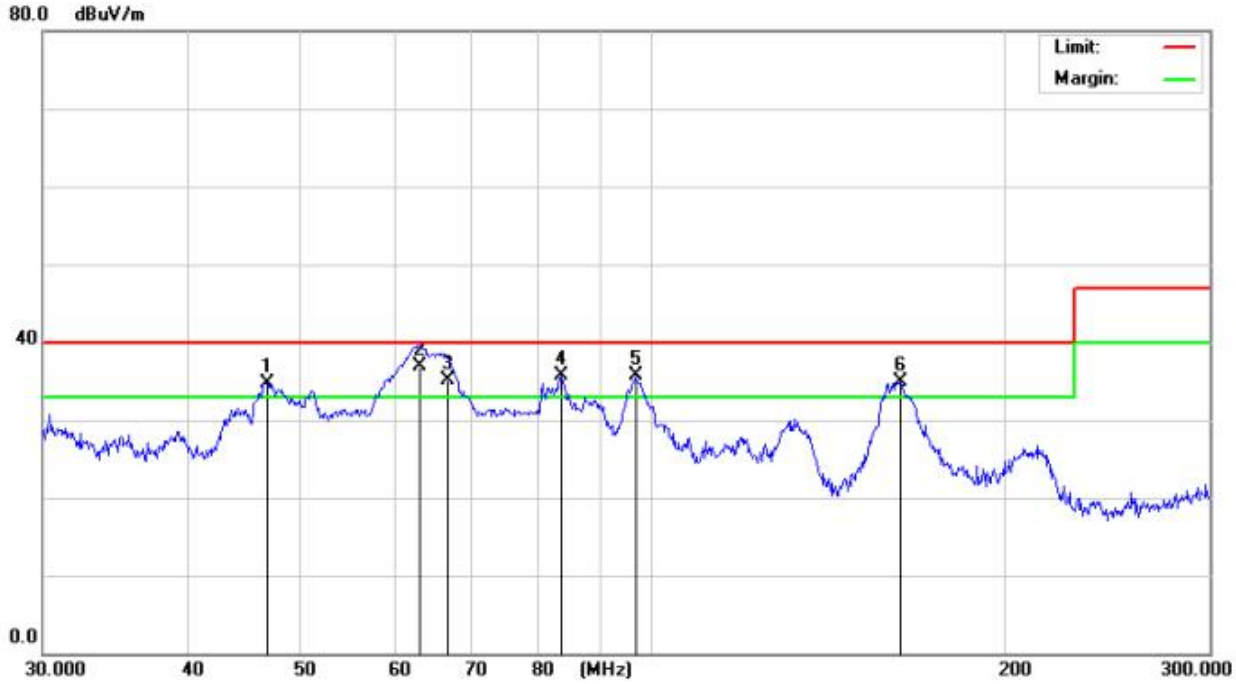


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree → Comment
1	*	39.0949	32.96	0.45	33.41	40.00	-6.59	QP		
2		43.3631	29.92	-1.40	28.52	40.00	-11.48	QP		
3		54.3402	30.94	-5.53	25.41	40.00	-14.59	QP		
4		114.3195	28.68	-2.29	26.39	40.00	-13.61	QP		
5		189.2872	32.79	-7.18	25.61	40.00	-14.39	QP		
6		208.5072	31.58	-6.61	24.97	40.00	-15.03	QP		

Product	:	LED Strip	**Model/Type reference**	:	FH14D-P5-G1 50B1RGB 5V60S W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Polarization	:	Vertical			

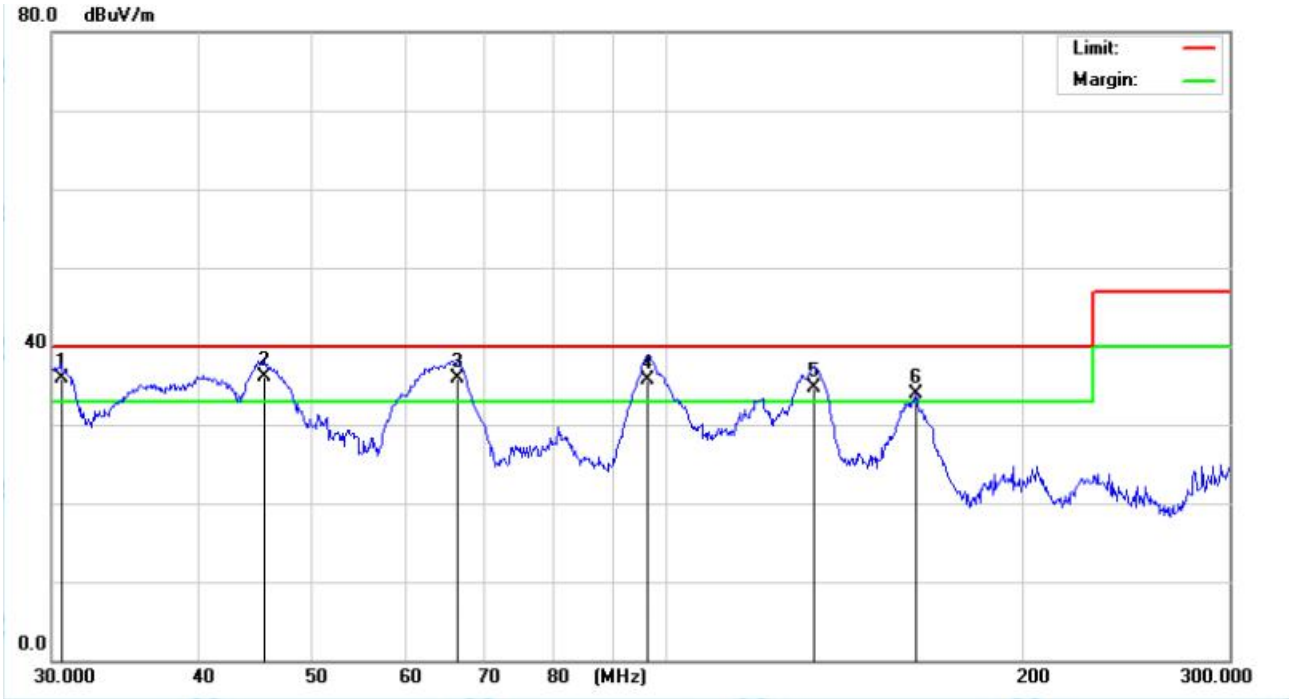
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	31.1976	26.21	4.33	30.54	40.00	-9.46	QP			
2		65.9358	32.08	-6.68	25.40	40.00	-14.60	QP			
3		84.9418	32.93	-6.56	26.37	40.00	-13.63	QP			
4		119.9834	28.77	-2.83	25.94	40.00	-14.06	QP			
5		142.2726	29.54	-4.46	25.08	40.00	-14.92	QP			
6		204.7016	34.93	-6.79	28.14	40.00	-11.86	QP			

Product	:	LED Strip	**Model/Type reference**	:	FE18C-P5-G2 21X92721X960 24V560D W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Polarization	:	Horizontal			



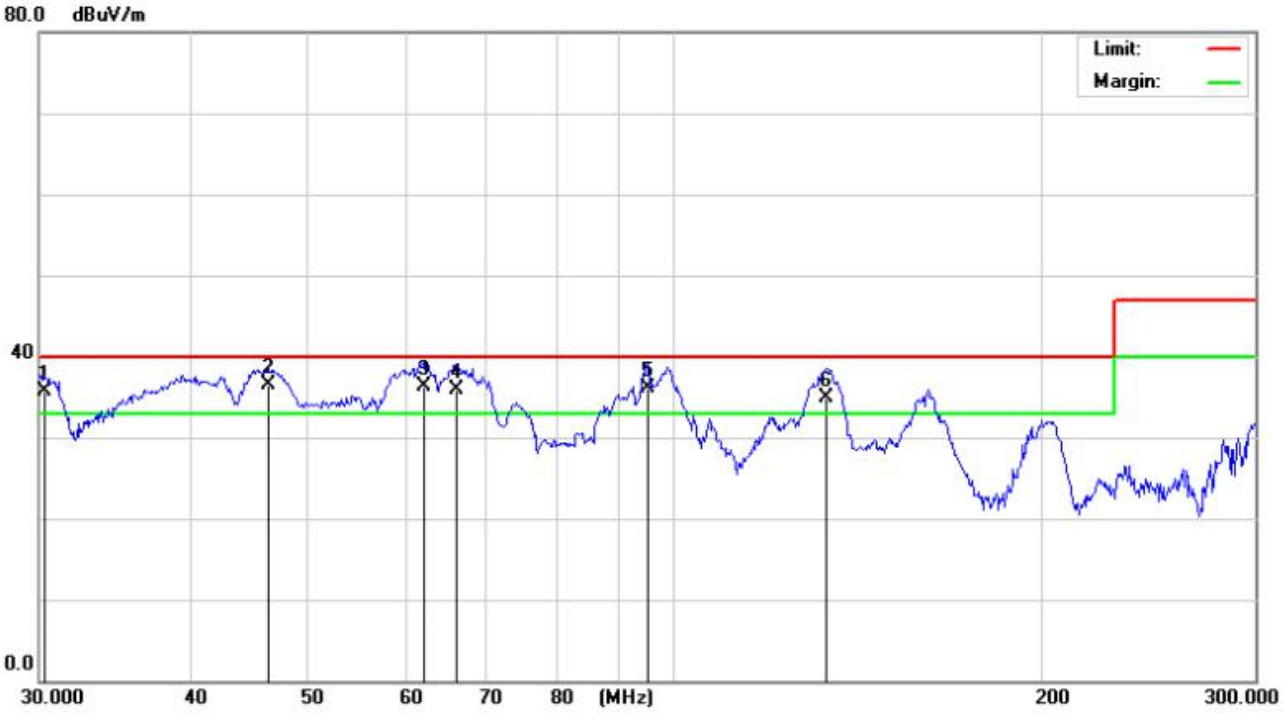
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		46.6790	37.68	-3.04	34.64	40.00	-5.36	QP			
2	*	63.1133	43.29	-6.45	36.84	40.00	-3.16	QP			
3		66.6992	41.80	-6.74	35.06	40.00	-4.94	QP			
4		83.3914	42.39	-6.75	35.64	40.00	-4.36	QP			
5		96.6320	40.22	-4.52	35.70	40.00	-4.30	QP			
6		162.9748	40.93	-5.98	34.95	40.00	-5.05	QP			

Product	:	LED Strip	**Model/Type reference**	:	FE18C-P5-G2 21X92721X960 24V560D W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Polarization	:	Vertical			



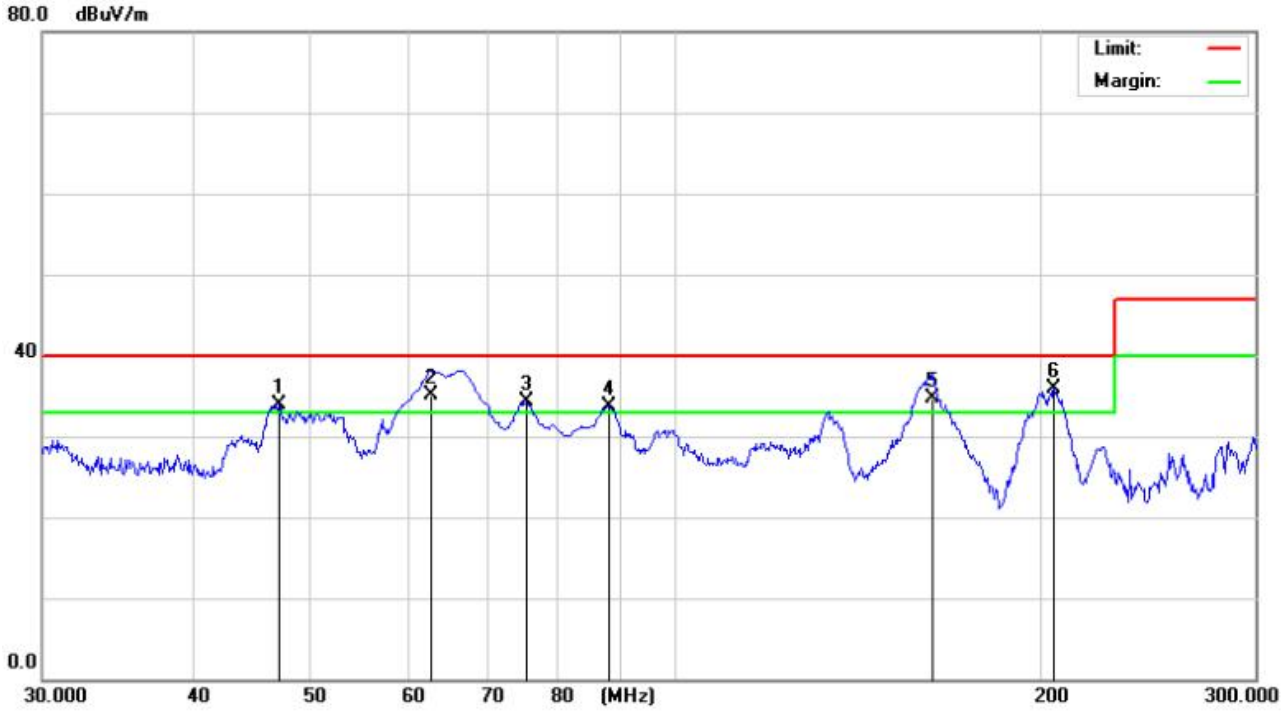
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	!	30.5577	31.36	4.58	35.94	40.00	-4.06	QP			
2	*	45.4067	38.37	-2.27	36.10	40.00	-3.90	QP			
3	!	66.3927	42.66	-6.72	35.94	40.00	-4.06	QP			
4	!	96.1881	40.35	-4.61	35.74	40.00	-4.26	QP			
5	!	133.0826	38.41	-3.79	34.62	40.00	-5.38	QP			
6	!	162.6003	39.77	-5.96	33.81	40.00	-6.19	QP			

Product	:	LED Strip	**Model/Type reference**	:	FHN11WR-P5-G1 06LZY 24V360D 15L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Polarization	:	Horizontal			



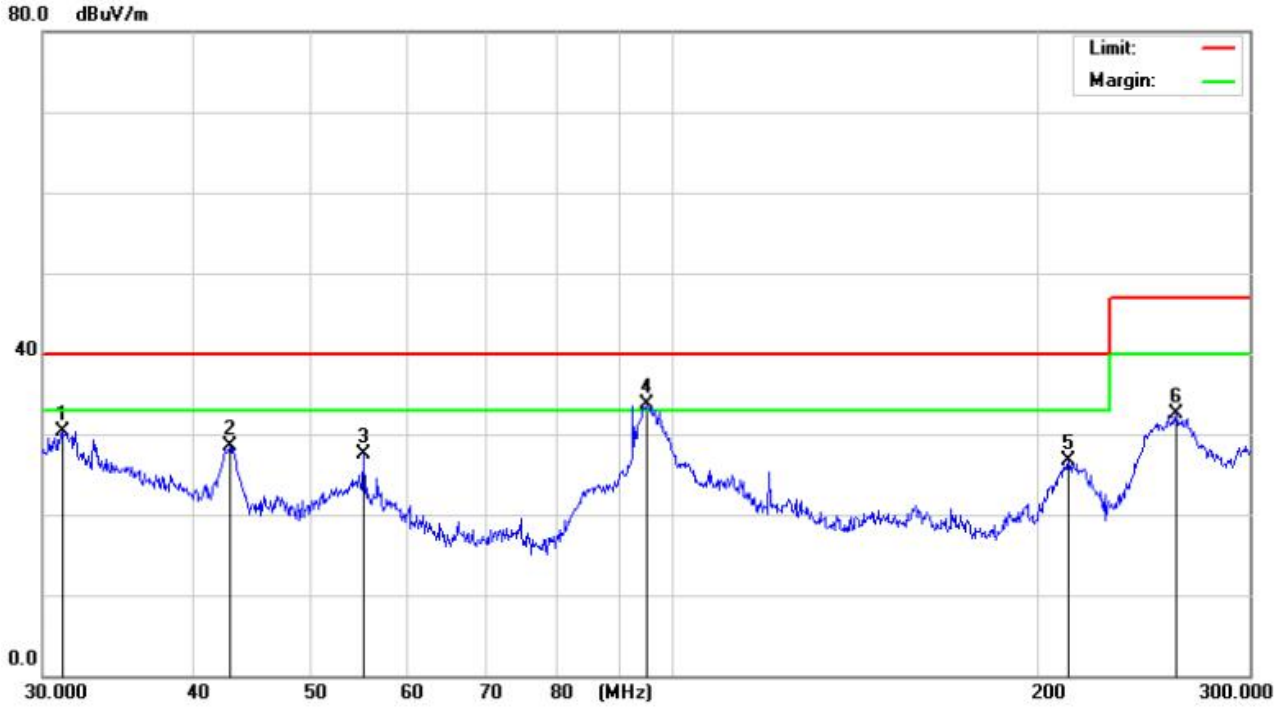
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	!	30.2774	31.01	4.68	35.69	40.00	-4.31	QP			
2	*	46.3574	39.42	-2.84	36.58	40.00	-3.42	QP			
3	!	62.1041	42.70	-6.38	36.32	40.00	-3.68	QP			
4	!	66.0878	42.64	-6.69	35.95	40.00	-4.05	QP			
5	!	94.8683	41.02	-4.90	36.12	40.00	-3.88	QP			
6	!	133.0826	38.62	-3.79	34.83	40.00	-5.17	QP			

Product	:	LED Strip	**Model/Type reference**	:	FHN11WR-P5-G1 06LZY 24V360D 15L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Polarization	:	Vertical			



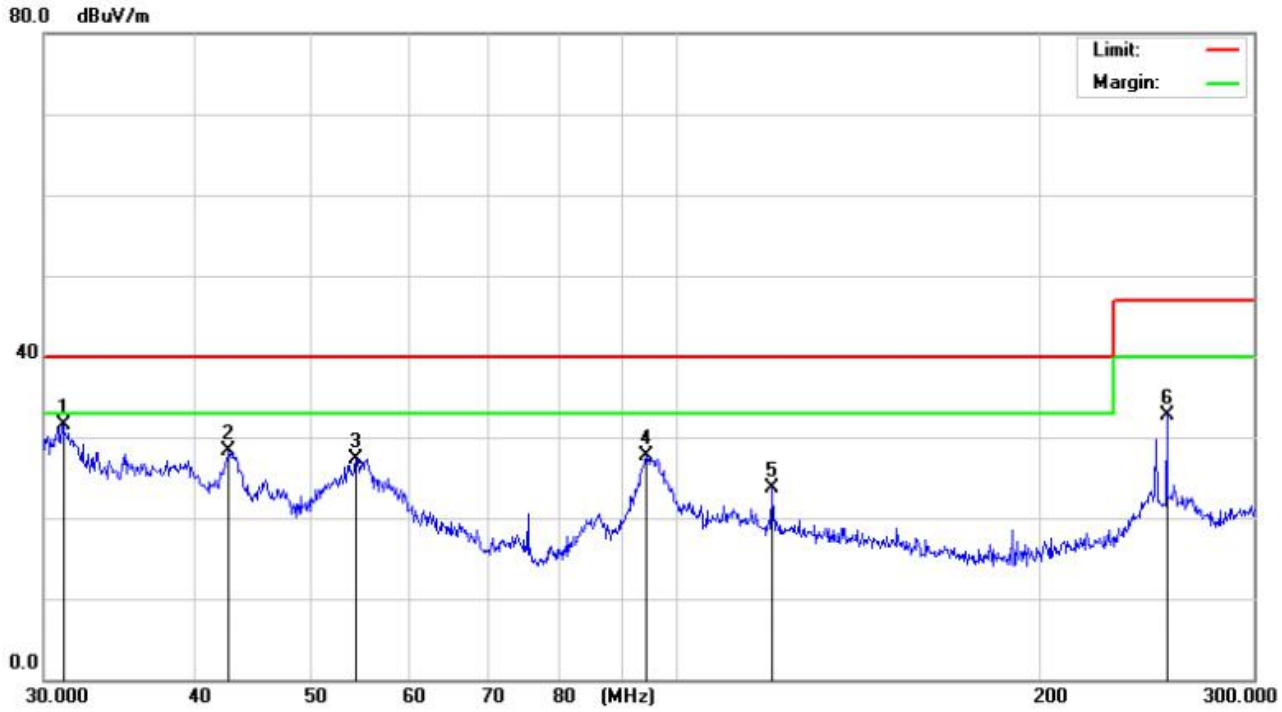
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	!	47.0024	37.19	-3.23	33.96	40.00	-6.04	QP			
2	!	62.8233	41.61	-6.43	35.18	40.00	-4.82	QP			
3	!	75.1833	41.33	-7.09	34.24	40.00	-5.76	QP			
4	!	87.9268	39.95	-6.18	33.77	40.00	-6.23	QP			
5	!	162.6003	40.70	-5.96	34.74	40.00	-5.26	QP			
6	*	204.7016	42.64	-6.79	35.85	40.00	-4.15	QP			

Product	:	LED Strip	**Model/Type reference**	:	FE18W-Px-G1 18X9x 24V350S W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Polarization	:	Horizontal			



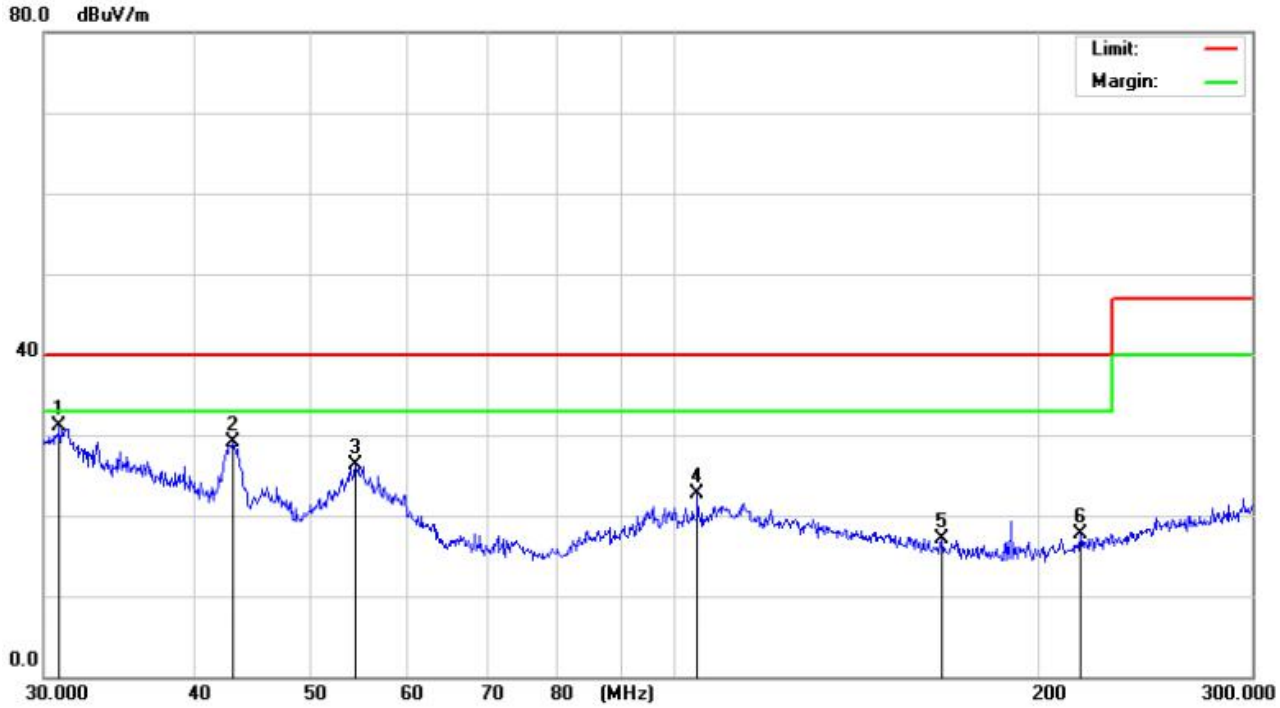
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		31.1259	26.03	4.36	30.39	40.00	-9.61	QP			
2		42.8668	29.76	-1.20	28.56	40.00	-11.44	QP			
3		55.3505	33.21	-5.66	27.55	40.00	-12.45	QP			
4	*	94.8683	38.61	-4.90	33.71	40.00	-6.29	QP			
5		212.3837	33.15	-6.44	26.71	40.00	-13.29	QP			
6		260.6881	36.62	-4.19	32.43	47.00	-14.57	QP			

Product	:	LED Strip	**Model/Type reference**	:	FE18W-Px-G1 18X9x 24V350S W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Polarization	:	Vertical			



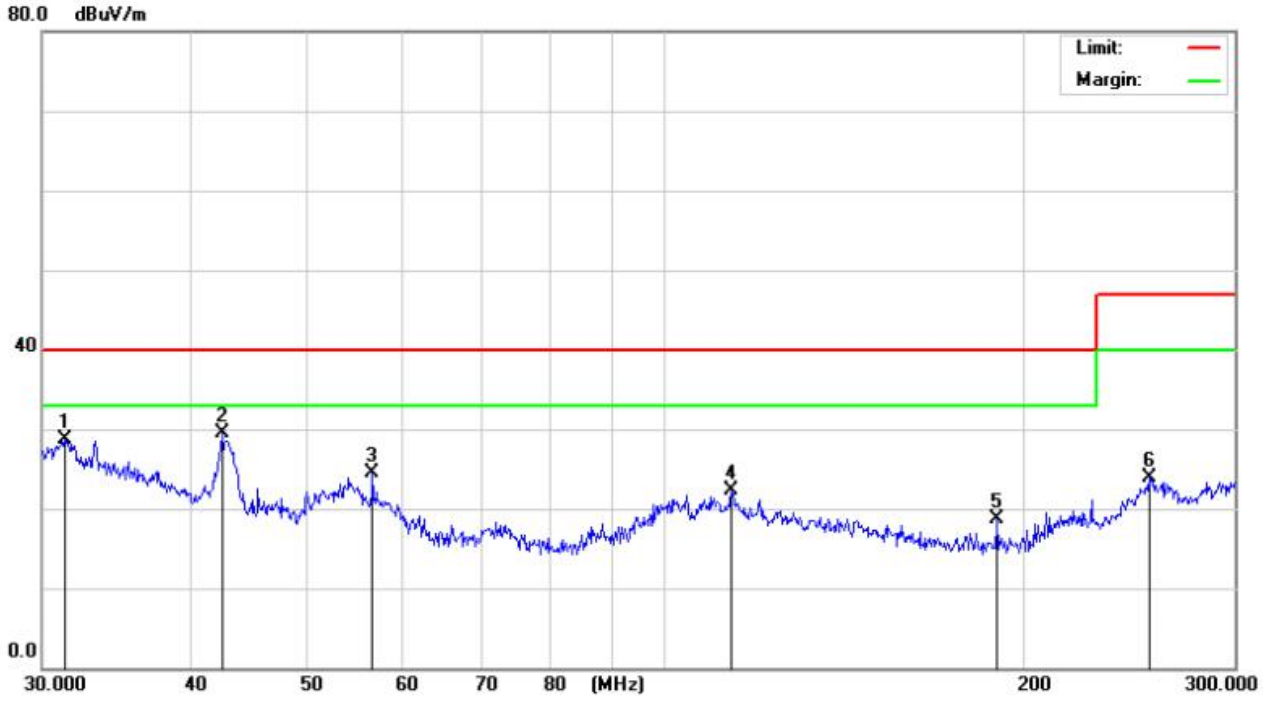
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	31.1259	27.10	4.36	31.46	40.00	-8.54	QP			
2		42.6699	29.47	-1.12	28.35	40.00	-11.65	QP			
3		54.3402	32.83	-5.53	27.30	40.00	-12.70	QP			
4		94.4324	32.59	-4.98	27.61	40.00	-12.39	QP			
5		119.9834	26.58	-2.83	23.75	40.00	-16.25	QP			
6		254.1682	37.14	-4.52	32.62	47.00	-14.38	QP			

Product	:	LED Strip	**Model/Type reference**	:	FE15W-Px-G1 COB9x 24V480S W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Polarization	:	Horizontal			



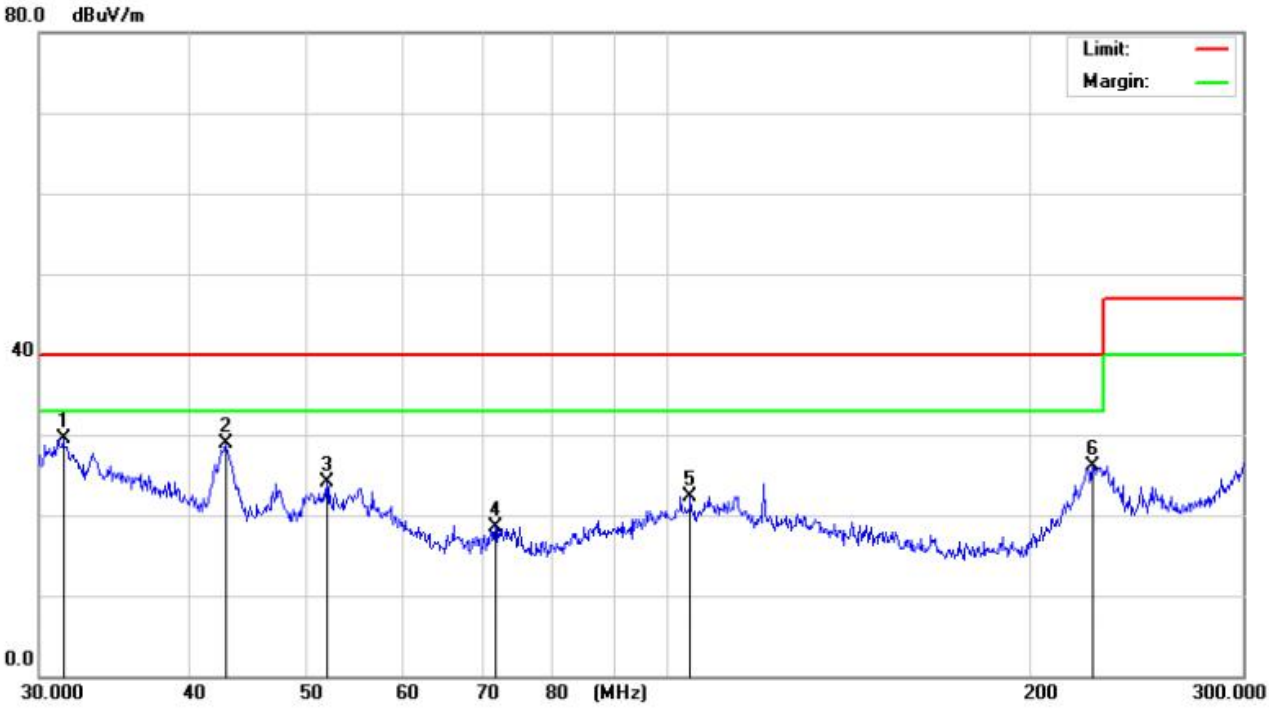
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	30.9116	26.58	4.45	31.03	40.00	-8.97	QP			
2		42.9656	30.37	-1.24	29.13	40.00	-10.87	QP			
3		54.3402	31.76	-5.53	26.23	40.00	-13.77	QP			
4		104.2607	25.66	-2.99	22.67	40.00	-17.33	QP			
5		166.0050	23.28	-6.20	17.08	40.00	-22.92	QP			
6		216.3322	24.01	-6.26	17.75	40.00	-22.25	QP			

Product	:	LED Strip	**Model/Type reference**	:	FE15W-Px-G1 COB9x 24V480S W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Polarization	:	Vertical			



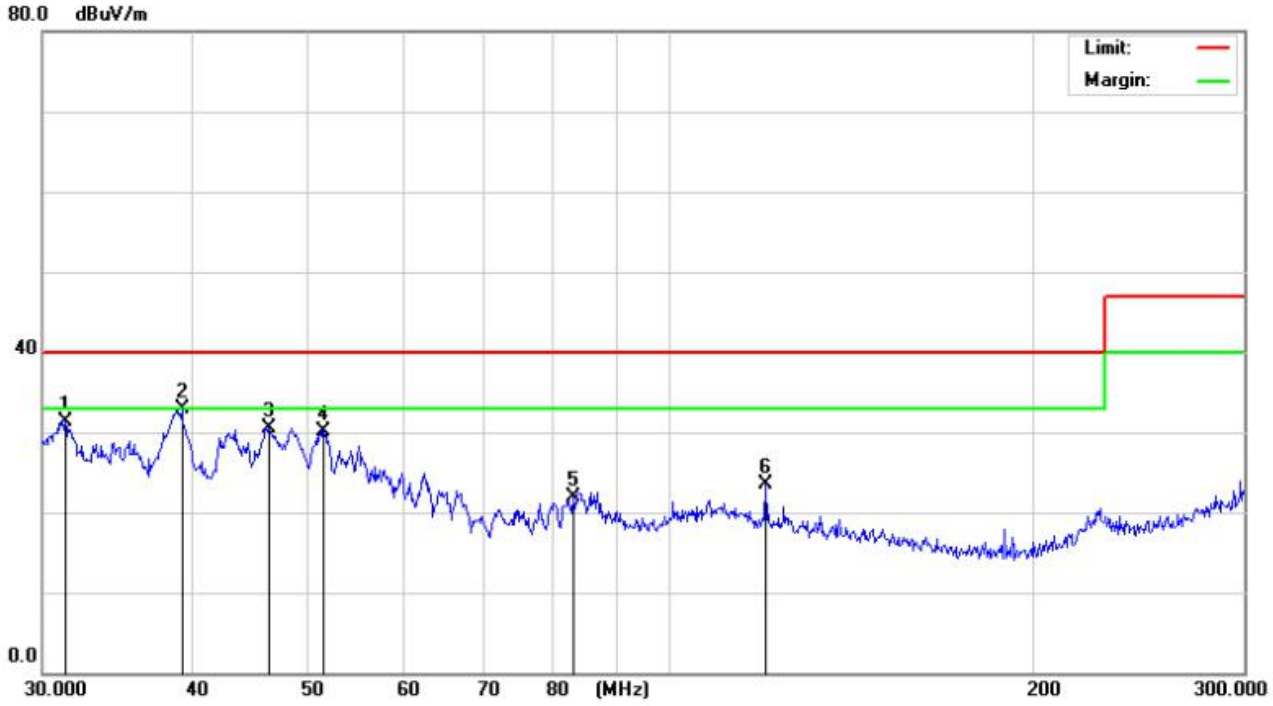
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		31.3416	24.49	4.27	28.76	40.00	-11.24	QP			
2	*	42.4738	30.58	-1.05	29.53	40.00	-10.47	QP			
3		56.7703	30.29	-5.83	24.46	40.00	-15.54	QP			
4		113.5328	24.55	-2.21	22.34	40.00	-17.66	QP			
5		189.7235	25.89	-7.19	18.70	40.00	-21.30	QP			
6		254.1682	28.37	-4.52	23.85	47.00	-23.15	QP			

Product	:	LED Strip	**Model/Type reference**	:	FEN19CS-P7-G2 28HZ9x28HZ9x 24V240S 1018L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Polarization	:	Horizontal			



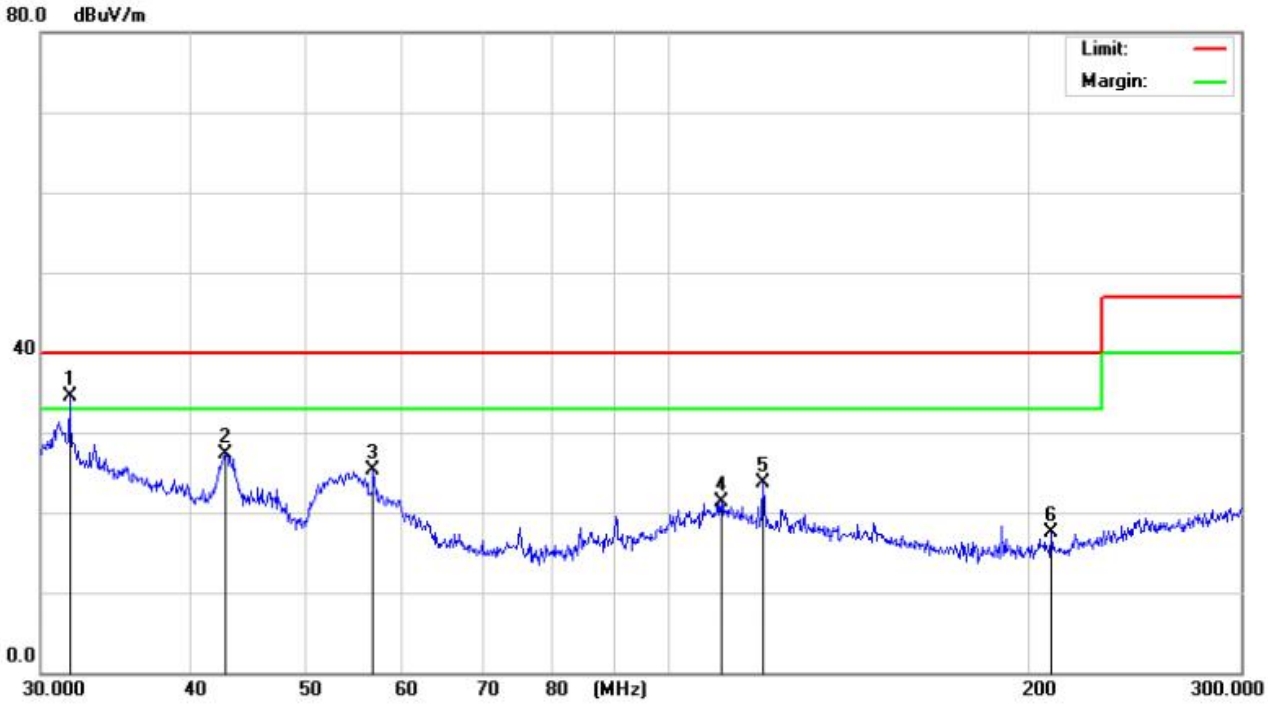
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	31.4139	25.34	4.25	29.59	40.00	-10.41	QP			
2		42.8668	30.04	-1.20	28.84	40.00	-11.16	QP			
3		52.0141	29.41	-5.26	24.15	40.00	-15.85	QP			
4		71.7995	25.63	-7.03	18.60	40.00	-21.40	QP			
5		104.2607	25.27	-2.99	22.28	40.00	-17.72	QP			
6		224.9683	31.93	-5.86	26.07	40.00	-13.93	QP			

Product	:	LED Strip	**Model/Type reference**	:	FEN19CS-P7-G2 28HZ9x28HZ9x 24V240S 1018L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Polarization	:	Vertical			



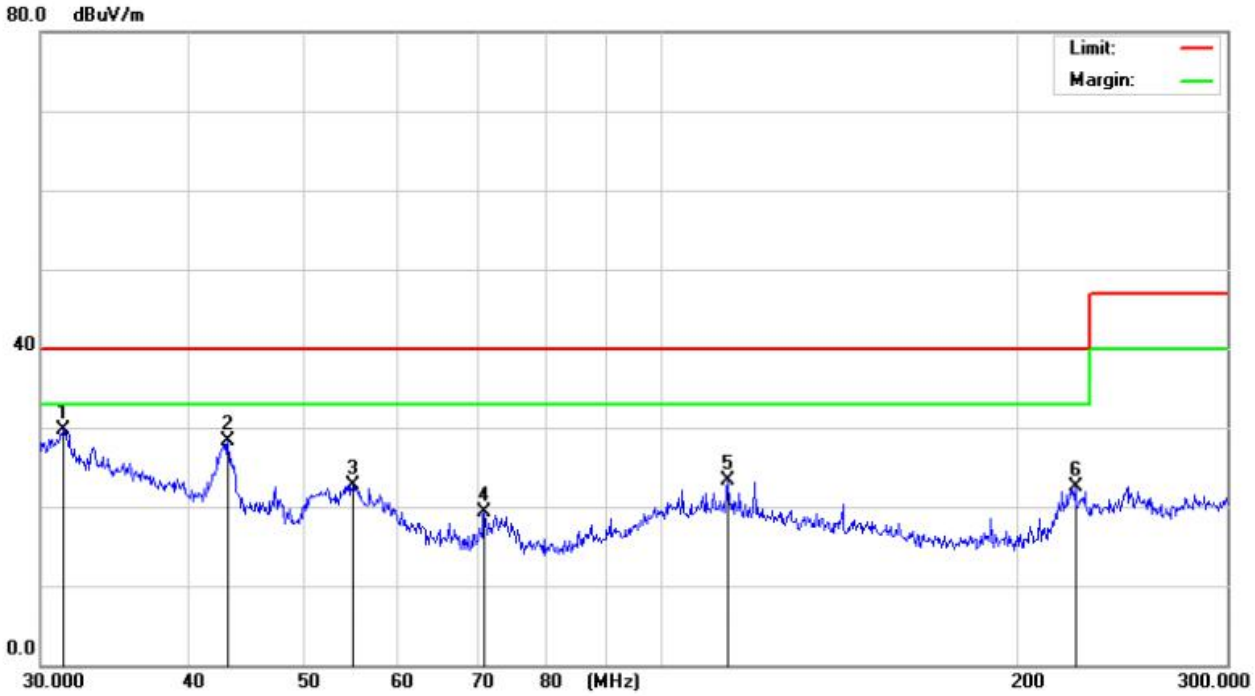
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		31.3416	27.13	4.27	31.40	40.00	-8.60	QP			
2	*	39.1851	32.54	0.40	32.94	40.00	-7.06	QP			
3		46.3576	33.41	-2.84	30.57	40.00	-9.43	QP			
4		51.4187	35.39	-5.19	30.20	40.00	-9.80	QP			
5		83.0082	28.62	-6.80	21.82	40.00	-18.18	QP			
6		119.9834	26.24	-2.83	23.41	40.00	-16.59	QP			

Product	:	LED Strip	**Model/Type reference**	:	FEN20D-Px-G1 50AXRGBW 24V24S 1222L10 x°
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Polarization	:	Horizontal			



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	31.7045	30.30	4.14	34.44	40.00	-5.56	QP			
2		42.7682	28.55	-1.16	27.39	40.00	-12.61	QP			
3		56.7703	31.05	-5.83	25.22	40.00	-14.78	QP			
4		110.6933	23.25	-1.94	21.31	40.00	-18.69	QP			
5		119.9834	26.62	-2.83	23.79	40.00	-16.21	QP			
6		208.5073	24.09	-6.61	17.48	40.00	-22.52	QP			

Product	:	LED Strip	**Model/Type reference**	:	FEN20D-Px-G1 50AXRGBW 24V24S 1222L10 x°
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%
Polarization	:	Vertical			



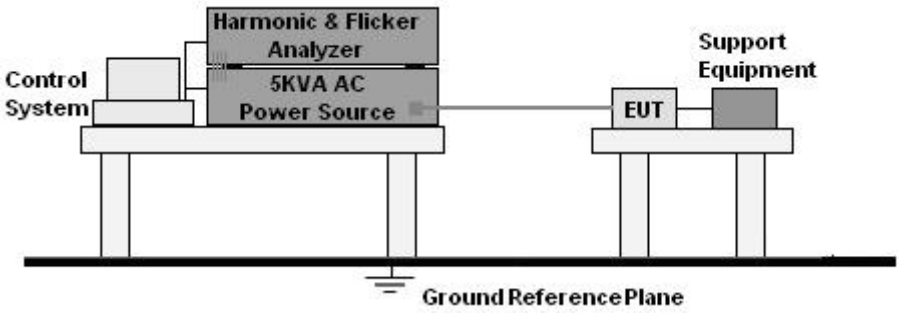
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	31.3416	25.50	4.27	29.77	40.00	-10.23	QP			
2		43.1640	29.63	-1.32	28.31	40.00	-11.69	QP			
3		54.9694	28.35	-5.61	22.74	40.00	-17.26	QP			
4		70.9775	26.30	-7.02	19.28	40.00	-20.72	QP			
5		113.7945	25.59	-2.23	23.36	40.00	-16.64	QP			
6		223.4196	28.40	-5.93	22.47	40.00	-17.53	QP			

8. ARMONIC CURRENT EMISSION (HARMONIC)

8.1 LIMITS

Please refer to EN 61000-3-2:2014 Clause 7.

8.2 TEST SETUP



8.3 TEST PROCEDURE

a. The Product was placed on the top of a non-conductive table above the ground and operated to produce the maximum harmonic components under normal operating conditions for each successive harmonic component in turn.

b. The correspondent test program of test instrument to measure the current harmonics emanated from Product was chosen. The measure time shall be not less than the time necessary for the Product to be exercised.

8.4 TEST RESULTS

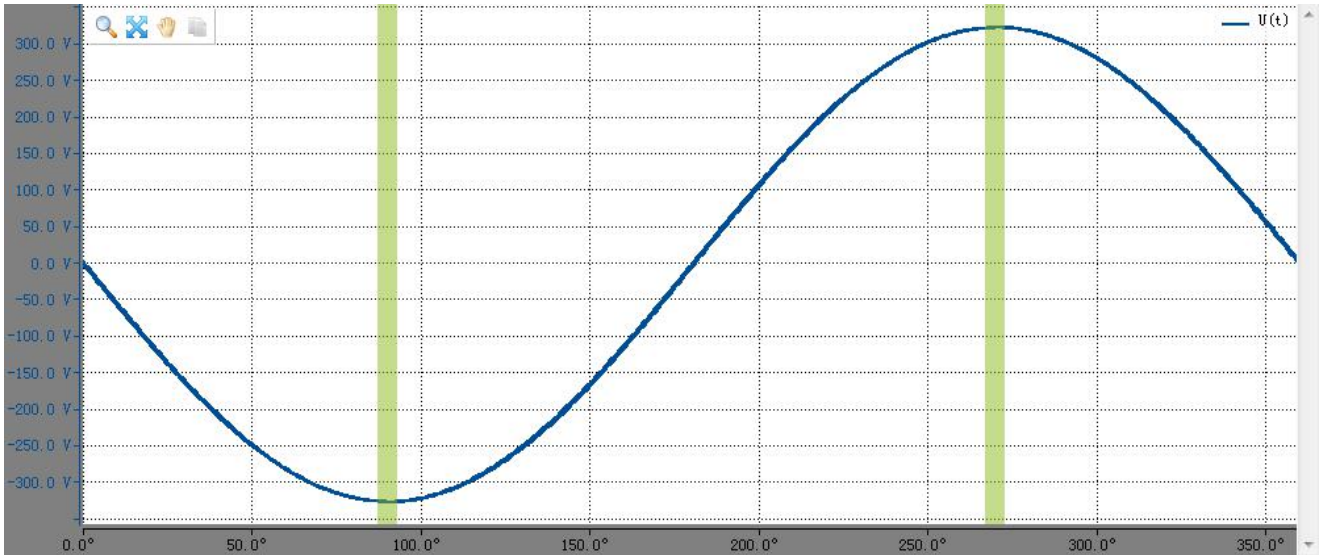
Product	:	LED Strip	**Model/Type reference**	:	FEN19WS-P7-G1 50ZRGB8X 24V60S 1018L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Pass.

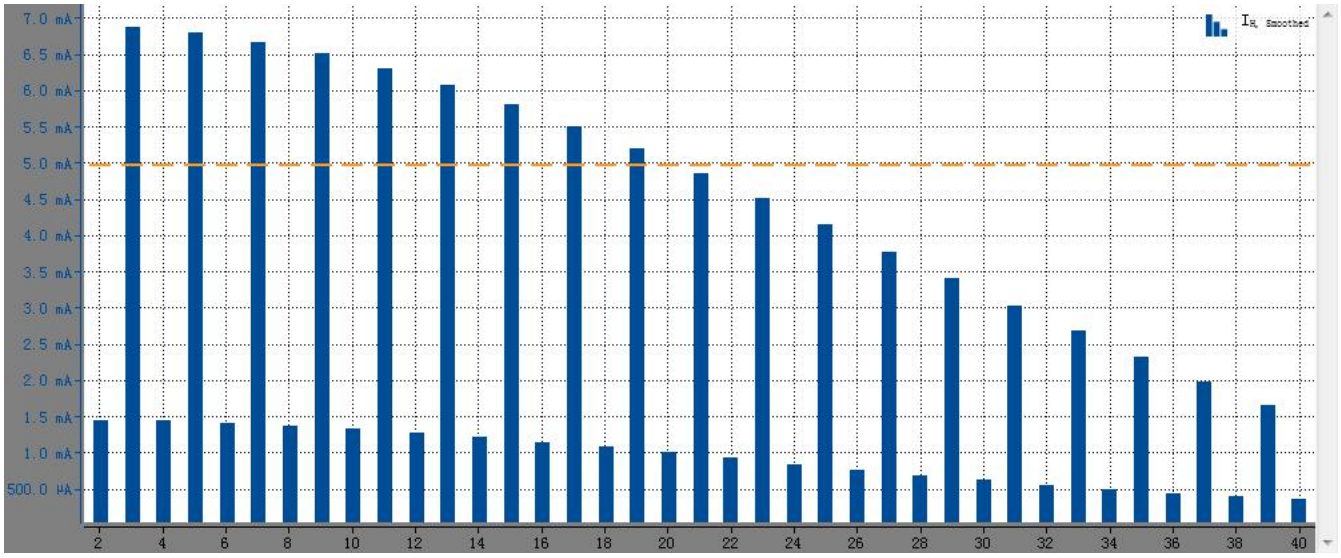
Harmonics – Class-C per Ed. 4.0 (2014)(Run time) incl. inter-harmonics

Test Result: Pass **Source qualification: Normal**

Current & voltage waveforms



Harmonics and Class C limit line **European Limits**



Test result: Pass **Worst harmonics H7-56.5% of 100% limit, H7-38.3% of 150% limit.**

Additional Measuran					
$U_{trms,L1}$	229.459 V	$U_{pp,L1}$	649.313 V	$U_{dc,L1}$	18.0344 mV
$U_{cf,L1}$	1.41502	$I_{trms,L1}$	22.7844 mA	$I_{pp,L1}$	283.093 mA
$I_{dc,L1}$	23.2043 µA	$I_{cf,L1}$	6.2585	P_{L1}	1.61908 W
Q_{L1}	4.97108 var	S_{L1}	5.2281 VA	PF_{L1}	0.30969
$f_{cycle,L1}$	49.9967 Hz				

Harm#	Harms(avg)	100% of Limit	% of Limit	Harms(max)	150% limit	% of Limit	Status
2	0.001	0.005	20.0	0.001	0.005	20.0	Pass
3	0.007	2.300	0.3	0.007	3.450	0.2	Pass
5	0.007	1.140	0.6	0.007	1.710	0.4	Pass
7	0.007	0.770	0.9	0.007	1.155	0.6	Pass
9	0.006	0.400	1.5	0.007	0.600	1.2	Pass
11	0.006	0.330	1.8	0.006	0.495	1.2	Pass
13	0.006	0.210	2.9	0.006	0.315	1.9	Pass
15	0.006	0.150	4.0	0.006	0.225	2.7	Pass
17	0.005	0.132	3.8	0.006	0.199	3.0	Pass
19	0.005	0.118	4.2	0.005	0.178	2.8	Pass
21	0.005	0.005	100.0	0.005	0.005	100.0	Pass
23	0.004	0.005	80.0	0.005	0.005	100.0	Pass
25	0.004	0.005	80.0	0.004	0.005	80.0	Pass
27	0.004	0.005	80.0	0.004	0.005	80.0	Pass
29	0.003	0.005	60.0	0.003	0.005	60.0	Pass
31	0.003	0.005	60.0	0.003	0.005	60.0	Pass
33	0.003	0.005	60.0	0.003	0.005	60.0	Pass
35	0.002	0.005	40.0	0.002	0.005	40.0	Pass
37	0.002	0.005	40.0	0.002	0.005	40.0	Pass
39	0.002	0.005	40.0	0.002	0.005	40.0	Pass

Test Result: Pass **Source qualification: Normal**

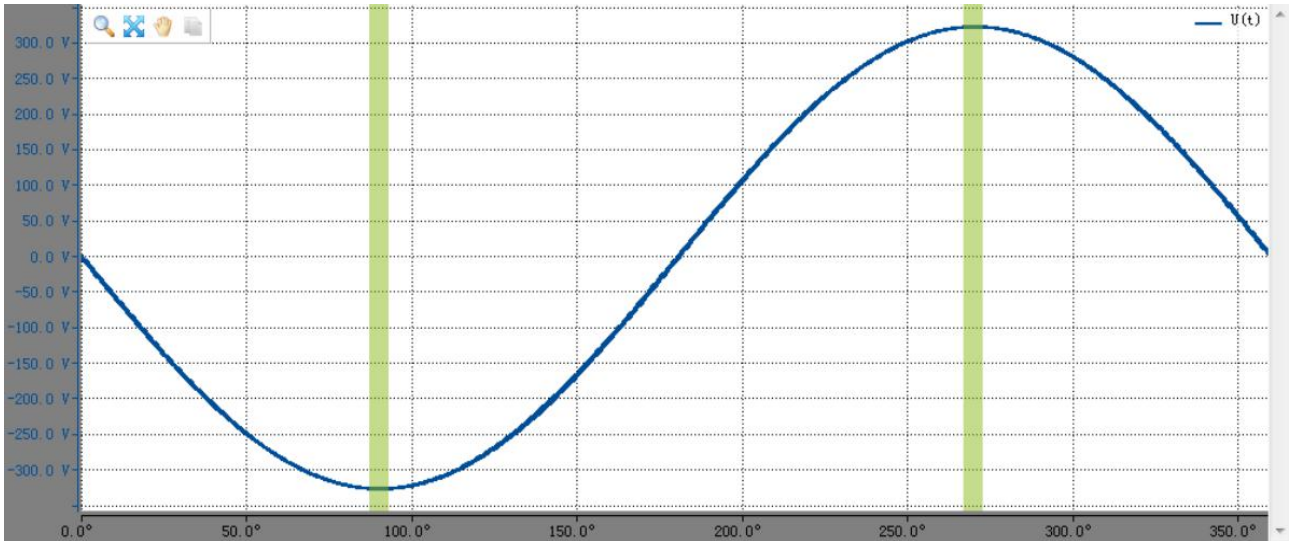
Product	:	LED Strip	**Model/Type reference**	:	FE14C-P8-G1 38XRGB 24V144S W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Pass.

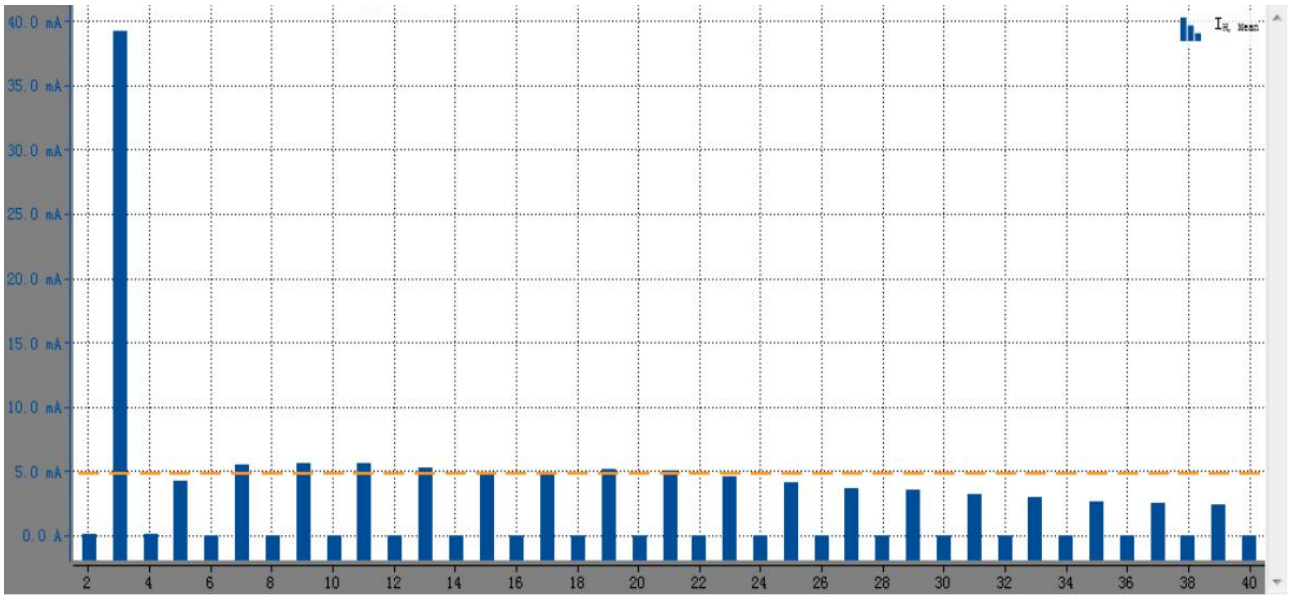
Harmonics – Class-C per Ed. 4.0 (2014)(Run time) incl. inter-harmonics

Test Result: Pass **Source qualification: Norma**

Current & voltage waveforms



Harmonics and Class C limit line **European Limits**



Test result: Pass Worst harmonics H7-56.5% of 100% limit, H7-38.3% of 150% limit.

Additional					
$U_{trms,L1}$	219.459 V	$U_{pp,L1}$	659.313 V	$U_{dc,L1}$	18.0344 mV
$U_{cf,L1}$	1.31502	$I_{trms,L1}$	22.7844 mA	$I_{pp,L1}$	243.093 mA
$I_{dc,L1}$	21.2043 µA	$I_{cf,L1}$	6.2585	P_{L1}	1.61908 W
Q_{L1}	4.97108 var	S_{L1}	5.2281 VA	PF_{L1}	0.30969
$f_{cycle,L1}$	41.4967 Hz				

Harm#	Harms(avg)	100% of Limit	% of Limit	Harms(max)	150% limit	% of Limit	Status
2	0.001	0.005	20.0	0.001	0.005	20.0	Pass
3	0.006	2.300	0.3	0.007	3.450	0.2	Pass
5	0.006	1.140	0.6	0.007	1.710	0.4	Pass
7	0.006	0.770	0.9	0.007	1.155	0.6	Pass
9	0.005	0.400	1.5	0.007	0.600	1.2	Pass
11	0.005	0.330	1.8	0.006	0.495	1.2	Pass
13	0.005	0.210	2.9	0.006	0.315	1.9	Pass
15	0.005	0.150	4.0	0.006	0.225	2.7	Pass
17	0.005	0.132	3.8	0.006	0.199	3.0	Pass
19	0.005	0.118	4.2	0.005	0.178	2.8	Pass
21	0.005	0.005	100.0	0.005	0.005	100.0	Pass
23	0.004	0.005	80.0	0.005	0.005	100.0	Pass
25	0.004	0.005	80.0	0.004	0.005	80.0	Pass
27	0.004	0.005	80.0	0.004	0.005	80.0	Pass
29	0.003	0.005	60.0	0.003	0.005	60.0	Pass
31	0.003	0.005	60.0	0.003	0.005	60.0	Pass
33	0.003	0.005	60.0	0.003	0.005	60.0	Pass
35	0.002	0.005	40.0	0.002	0.005	40.0	Pass
37	0.002	0.005	40.0	0.002	0.005	40.0	Pass
39	0.002	0.005	40.0	0.002	0.005	40.0	Pass

Test Result: Pass **Source qualification: Normal**

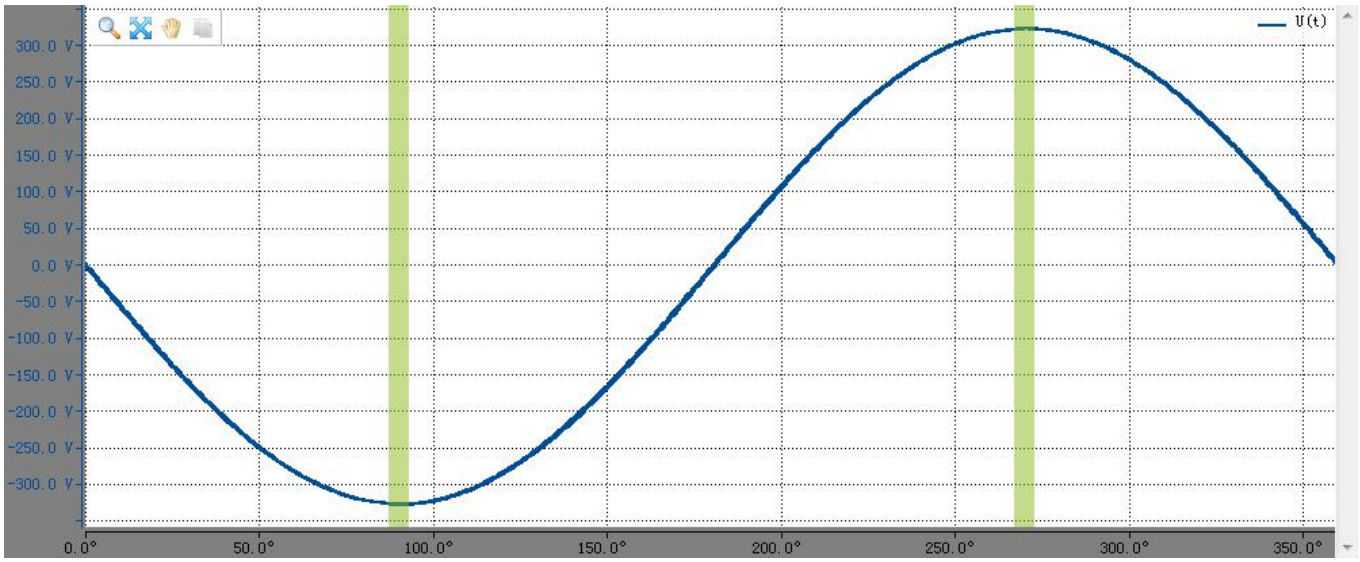
Product	:	LED Strip	**Model/Type reference**	:	FH14D-P5-G1 50B1RGB 5V60S W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Pass.

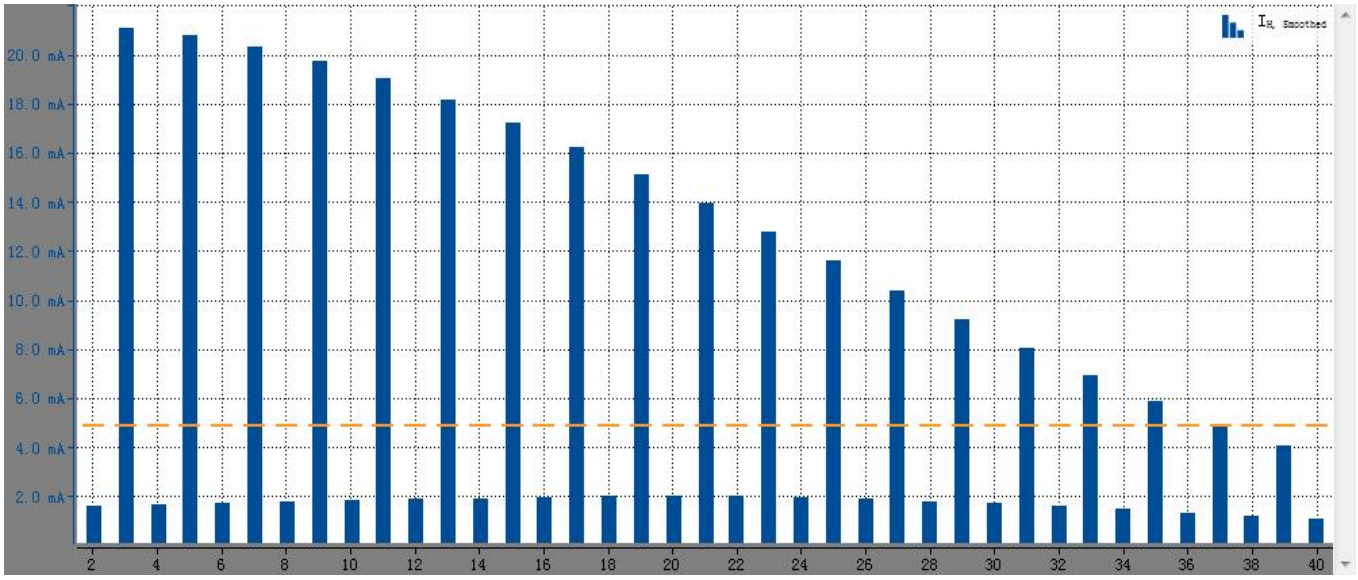
Harmonics – Class-C per Ed. 4.0 (2014)(Run time) incl. inter-harmonics

Test Result: Pass **Source qualification: Norma**

Current & voltage waveform



Harmonics and Class C limit line **European Limits**



Test result: Pass **Worst harmonics H7-56.5% of 100% limit, H7-38.3% of 150% limit.**

Additional Measurands					
U trms, L1	5.613 V	U pp, L1	650.336 V	U dc, L1	-11.1541 mV
U cf, L1	1.41638	I trms, L1	67.4197 mA	I pp, L1	814.608 mA
I dc, L1	455.9 µA	I cf, L1	6.15917	P L1	4.87407 W
Q L1	14.6931 var	S L1	15.4804 VA	PF L1	0.31485
f cycle, L1	49.9967 Hz				

Harm#	Harms(avg)	100% of Limit	% of Limit	Harms(max)	150% limit	% of Limit	Status
2	0.001	0.005	20.0	0.000	0.005	0.0	Pass
3	0.021	2.300	0.9	0.021	3.450	0.6	Pass
5	0.021	1.140	1.8	0.021	1.710	1.2	Pass
7	0.020	0.770	2.6	0.020	1.155	1.7	Pass
9	0.020	0.400	5.0	0.020	0.600	3.3	Pass
11	0.019	0.330	5.8	0.019	0.495	3.8	Pass
13	0.018	0.210	8.6	0.018	0.315	5.7	Pass
15	0.017	0.150	11.3	0.017	0.225	7.6	Pass
17	0.016	0.132	12.1	0.016	0.199	8.0	Pass
19	0.015	0.118	12.7	0.015	0.178	8.4	Pass
21	0.014	0.107	13.1	0.014	0.161	8.7	Pass
23	0.013	0.098	13.3	0.013	0.147	8.8	Pass
25	0.011	0.090	12.2	0.012	0.135	8.9	Pass
27	0.010	0.083	12.0	0.010	0.125	8.0	Pass
29	0.009	0.078	11.5	0.009	0.116	7.8	Pass
31	0.008	0.073	11.0	0.008	0.109	7.3	Pass
33	0.007	0.068	10.3	0.007	0.102	6.9	Pass
35	0.006	0.064	9.4	0.006	0.096	6.3	Pass
37	0.005	0.005	100.0	0.005	0.005	100.0	Pass
39	0.004	0.005	80.0	0.004	0.005	80.0	Pass

Test Result: Pass **Source qualification: Normal**

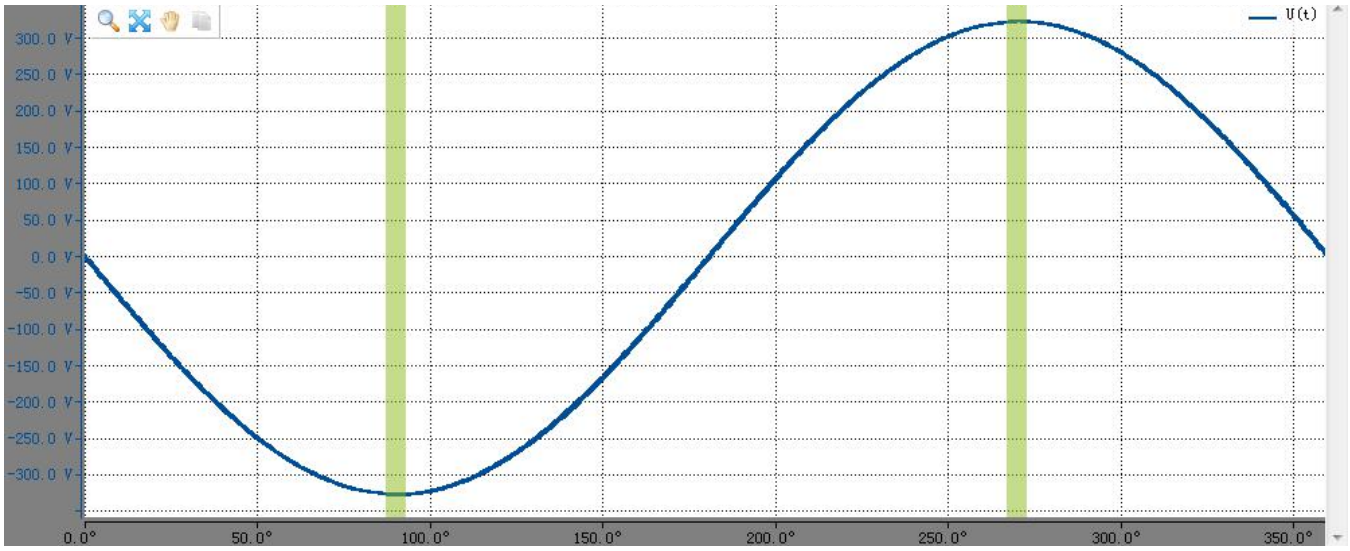
Product	:	LED Strip	**Model/Type reference**	:	FE18C-P5-G2 21X92721X960 24V560D W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Pass.

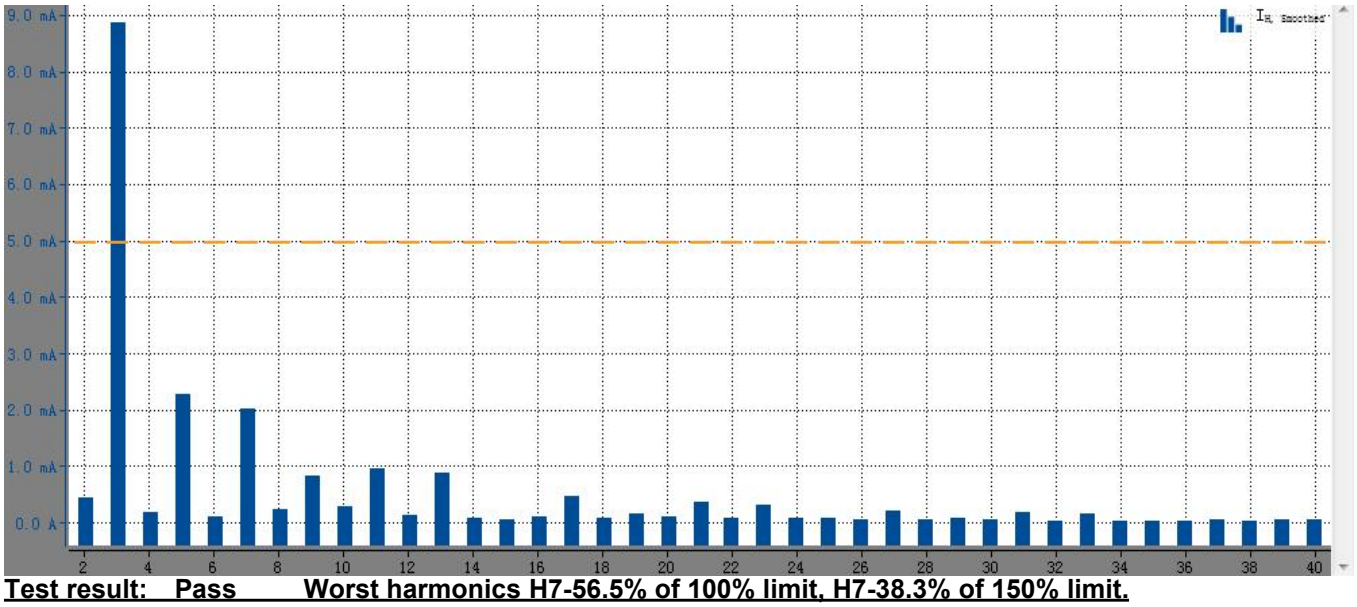
Harmonics – Class-C per Ed. 4.0 (2014)(Run time) incl. inter-harmonics

Test Result: Pass **Source qualification: Norma**

Current & voltage waveform



Harmonics and Class C limit line **European Limits**



Test result: Pass **Worst harmonics H7-56.5% of 100% limit, H7-38.3% of 150% limit.**

Additional Measurands					
U trms, L1	229.565 V	U pp, L1	649.677 V	U dc, L1	11.3729 mV
U cf, L1	1.41505	I trms, L1	209.036 mA	I pp, L1	611.24 mA
I dc, L1	-55.3658 µA	I cf, L1	1.46394	P L1	47.0343 W
Q L1	9.51621 var	S L1	47.9873 VA	PF L1	0.98014
f cycle, L1	49.9984 Hz				

Harm#	Harms(avg)	100% of Limit	% of Limit	Harms(max)	150% limit	% of Limit	Status
2	0.000	0.005	0.0	0.000	0.005	0.0	Pass
3	0.009	2.300	0.4	0.009	3.450	0.3	Pass
5	0.002	0.005	40.0	0.002	0.005	40.0	Pass
7	0.002	0.005	40.0	0.002	0.005	40.0	Pass
9	0.001	0.005	20.0	0.001	0.005	20.0	Pass
11	0.001	0.005	20.0	0.001	0.005	20.0	Pass
13	0.001	0.005	20.0	0.001	0.005	20.0	Pass
15	0.000	0.005	0.0	0.000	0.005	0.0	Pass
17	0.000	0.005	0.0	0.000	0.005	0.0	Pass
19	0.000	0.005	0.0	0.000	0.005	0.0	Pass
21	0.000	0.005	0.0	0.000	0.005	0.0	Pass
23	0.000	0.005	0.0	0.000	0.005	0.0	Pass
25	0.000	0.005	0.0	0.000	0.005	0.0	Pass
27	0.000	0.005	0.0	0.000	0.005	0.0	Pass
29	0.000	0.005	0.0	0.000	0.005	0.0	Pass
31	0.000	0.005	0.0	0.000	0.005	0.0	Pass
33	0.000	0.005	0.0	0.000	0.005	0.0	Pass
35	0.000	0.005	0.0	0.000	0.005	0.0	Pass
37	0.000	0.005	0.0	0.000	0.005	0.0	Pass
39	0.000	0.005	0.0	0.000	0.005	0.0	Pass

Test Result: Pass **Source qualification: Normal**

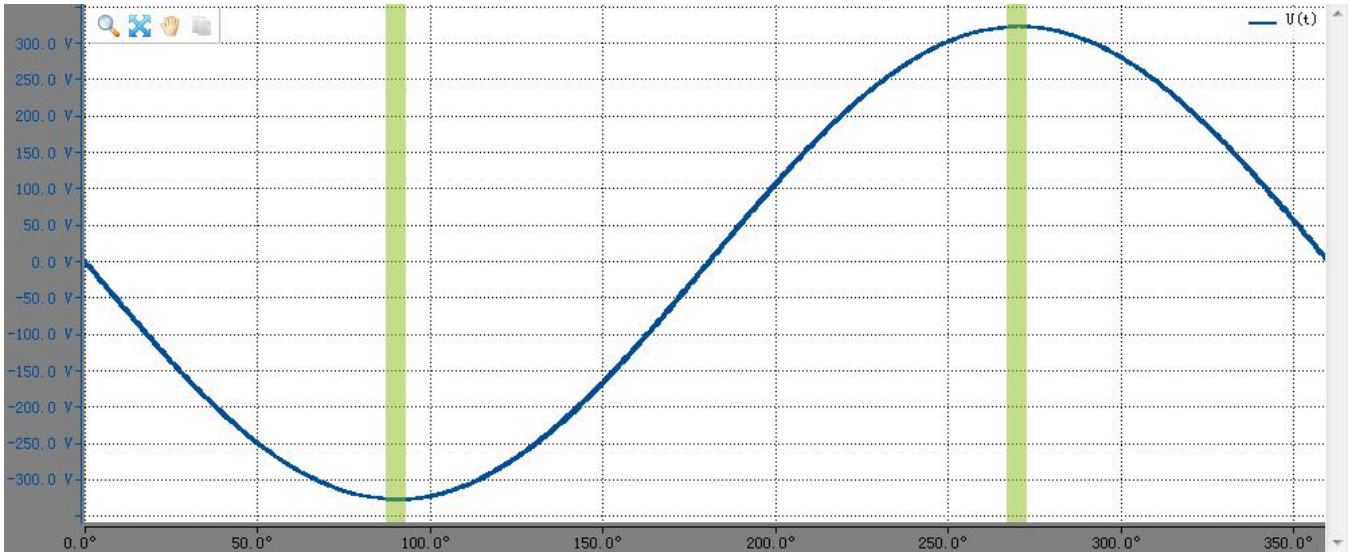
Product	:	LED Strip	**Model/Type reference**	:	FHN11WR-P5-G1 06LZY 24V360D 15L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Pass.

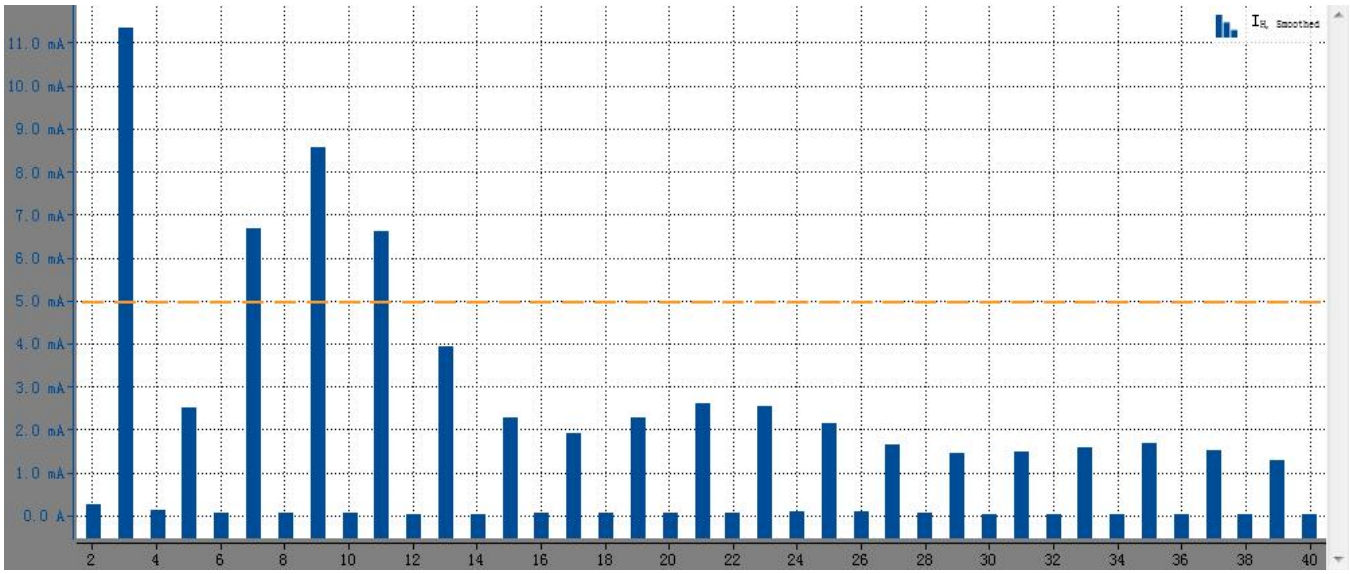
Harmonics – Class-C per Ed. 4.0 (2014)(Run time) incl. inter-harmonics

Test Result: Pass **Source qualification: Norma**

Current & voltage waveform



Harmonics and Class C limit line **European Limits**



Test result: Pass **Worst harmonics H7-56.5% of 100% limit, H7-38.3% of 150% limit.**

Additional Measurands					
U trms, L1	229.65 V	U pp, L1	649.883 V	U dc, L1	45.9987 mV
U cf, L1	1.41508	I trms, L1	255.652 mA	I pp, L1	746.771 mA
I dc, L1	69.4148 µA	I cf, L1	1.4606	P L1	57.6125 W
Q L1	11.3017 var	S L1	58.7105 VA	PF L1	0.9813
f cycle, L1	49.9967 Hz				

Harm#	Harms(avg)	100% of Limit	% of Limit	Harms(max)	150% limit	% of Limit	Status
2	0.000	0.005	0.0	0.000	0.005	0.0	Pass
3	0.011	2.300	0.5	0.011	3.450	0.3	Pass
5	0.003	0.005	60.0	0.003	0.005	60.0	Pass
7	0.007	0.770	0.9	0.007	1.155	0.6	Pass
9	0.009	0.400	2.3	0.009	0.600	1.5	Pass
11	0.007	0.330	2.1	0.007	0.495	1.4	Pass
13	0.004	0.005	80.0	0.004	0.005	80.0	Pass
15	0.002	0.005	40.0	0.002	0.005	40.0	Pass
17	0.002	0.005	40.0	0.002	0.005	40.0	Pass
19	0.002	0.005	40.0	0.002	0.005	40.0	Pass
21	0.003	0.005	60.0	0.003	0.005	60.0	Pass
23	0.003	0.005	60.0	0.003	0.005	60.0	Pass
25	0.002	0.005	40.0	0.002	0.005	40.0	Pass
27	0.002	0.005	40.0	0.002	0.005	40.0	Pass
29	0.001	0.005	20.0	0.001	0.005	20.0	Pass
31	0.002	0.005	40.0	0.002	0.005	40.0	Pass
33	0.002	0.005	40.0	0.002	0.005	40.0	Pass
35	0.002	0.005	40.0	0.002	0.005	40.0	Pass
37	0.002	0.005	40.0	0.002	0.005	40.0	Pass
39	0.001	0.005	20.0	0.001	0.005	20.0	Pass

Test Result: Pass **Source qualification: Normal**

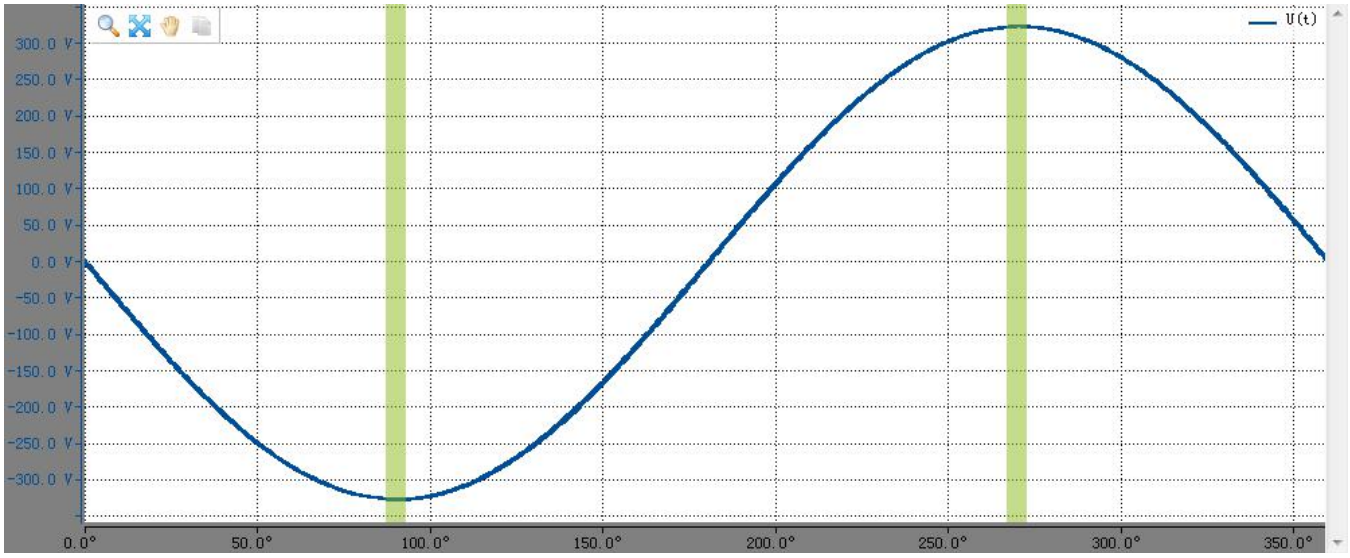
Product	:	LED Strip	**Model/Type reference**	:	FE18W-Px-G1 18X9x 24V350S W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Pass.

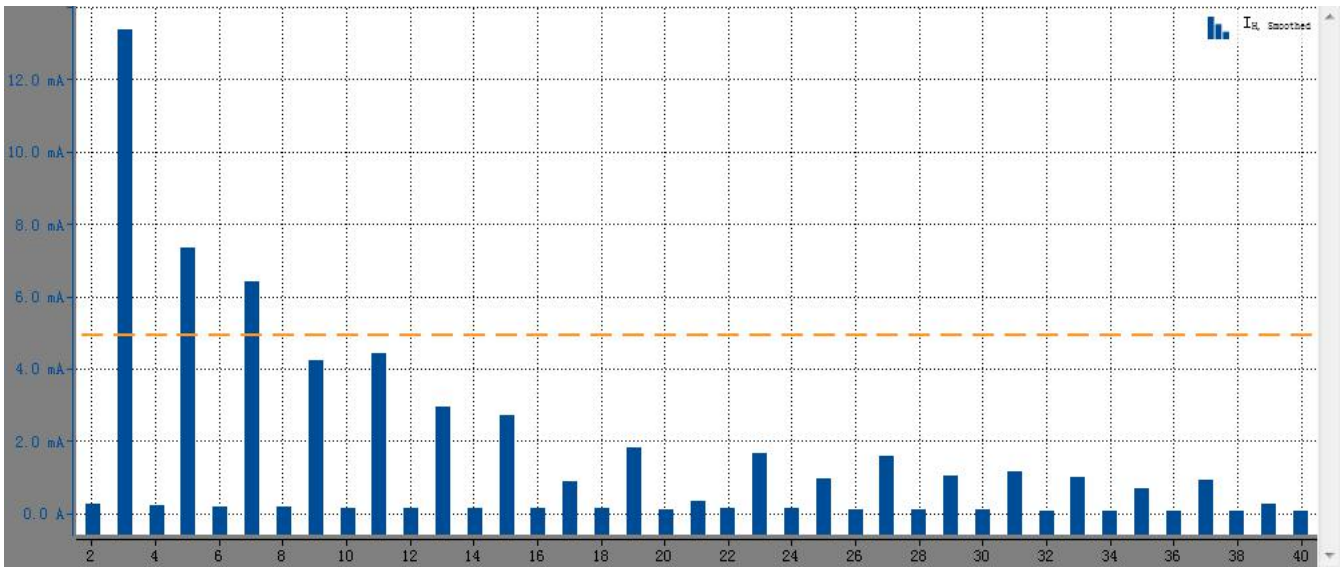
Harmonics – Class-C per Ed. 4.0 (2014)(Run time) incl. inter-harmonics

Test Result: Pass **Source qualification: Norma**

Current & voltage waveform



Harmonics and Class C limit line **European Limits**



Test result: Pass Worst harmonics H7-56.5% of 100% limit, H7-38.3% of 150% limit.

Additional Measurands					
U trms, L1	229.933 V	U pp, L1	650.79 V	U dc, L1	63.3616 mV
U cf, L1	1.4161	I trms, L1	173.159 mA	I pp, L1	517.384 mA
I dc, L1	-103.126 µA	I cf, L1	1.51037	P L1	38.5904 W
Q L1	9.79858 var	S L1	39.8149 VA	PF L1	0.96924
f cycle, L1	49.9984 Hz				

Harm#	Harms(avg)	100% of Limit	% of Limit	Harms(max)	150% limit	% of Limit	Status
2	0.000	0.005	0.0	0.000	0.005	0.0	Pass
3	0.013	2.300	0.6	0.013	3.450	0.4	Pass
5	0.007	1.140	0.6	0.007	1.710	0.4	Pass
7	0.006	0.770	0.8	0.006	1.155	0.5	Pass
9	0.004	0.005	80.0	0.004	0.005	80.0	Pass
11	0.004	0.005	80.0	0.004	0.005	80.0	Pass
13	0.003	0.005	60.0	0.003	0.005	60.0	Pass
15	0.003	0.005	60.0	0.003	0.005	60.0	Pass
17	0.001	0.005	20.0	0.001	0.005	20.0	Pass
19	0.002	0.005	40.0	0.002	0.005	40.0	Pass
21	0.000	0.005	0.0	0.000	0.005	0.0	Pass
23	0.002	0.005	40.0	0.002	0.005	40.0	Pass
25	0.001	0.005	20.0	0.001	0.005	20.0	Pass
27	0.002	0.005	40.0	0.002	0.005	40.0	Pass
29	0.001	0.005	20.0	0.001	0.005	20.0	Pass
31	0.001	0.005	20.0	0.001	0.005	20.0	Pass
33	0.001	0.005	20.0	0.001	0.005	20.0	Pass
35	0.001	0.005	20.0	0.001	0.005	20.0	Pass
37	0.001	0.005	20.0	0.001	0.005	20.0	Pass
39	0.000	0.005	0.0	0.000	0.005	0.0	Pass

Test Result: Pass Source qualification: Normal

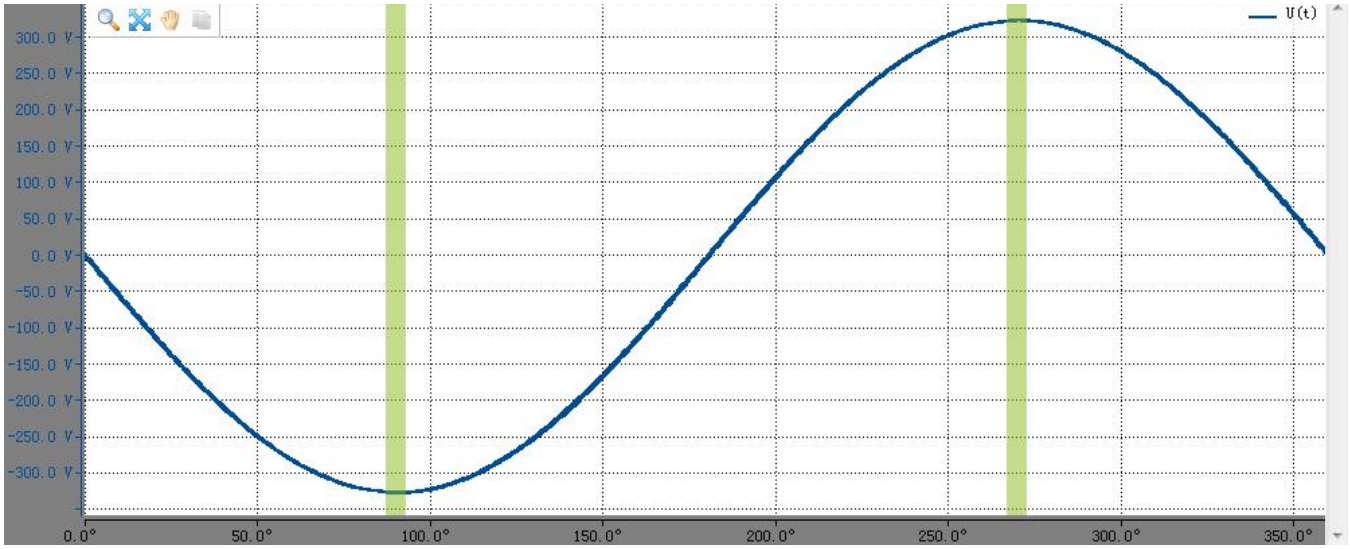
Product	:	LED Strip	**Model/Type reference**	:	FE18W-Px-G1 18X9x 24V350S W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Pass.

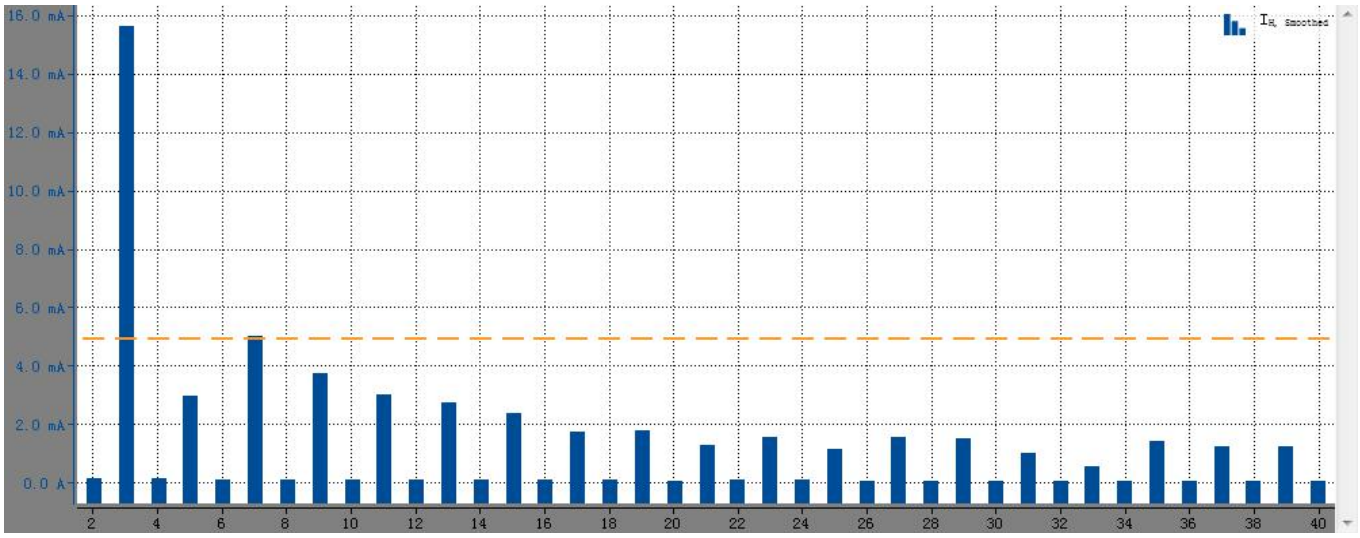
Harmonics – Class-C per Ed. 4.0 (2014)(Run time) incl. inter-harmonics

Test Result: Pass **Source qualification: Norma**

Current & voltage waveform



Harmonics and Class C limit line **European Limits**



Test result: Pass **Worst harmonics H7-56.5% of 100% limit, H7-38.3% of 150% limit.**

Additional					
$U_{trms, L1}$	229.685 V	$U_{pp, L1}$	650.039 V	$U_{dc, L1}$	60.1546 mV
$U_{cf, L1}$	1.41543	$I_{trms, L1}$	177.695 mA	$I_{pp, L1}$	477.548 mA
$I_{dc, L1}$	-197.133 µA	$I_{cf, L1}$	1.34438	P_{L1}	39.4447 W
Q_{L1}	10.4831 var	S_{L1}	40.8139 VA	PF_{L1}	0.96645
$f_{cycle, L1}$	49.9984 Hz				

Harm#	Harms(avg)	100% of Limit	% of Limit	Harms(max)	150% limit	% of Limit	Status
2	0.000	0.005	0.0	0.000	0.005	0.0	Pass
3	0.015	2.300	0.7	0.015	3.450	0.4	Pass
5	0.003	0.005	60.0	0.003	0.005	60.0	Pass
7	0.005	0.005	100.0	0.005	1.155	0.4	Pass
9	0.004	0.005	80.0	0.004	0.005	80.0	Pass
11	0.003	0.005	60.0	0.003	0.005	60.0	Pass
13	0.003	0.005	60.0	0.003	0.005	60.0	Pass
15	0.002	0.005	40.0	0.002	0.005	40.0	Pass
17	0.002	0.005	40.0	0.002	0.005	40.0	Pass
19	0.002	0.005	40.0	0.002	0.005	40.0	Pass
21	0.001	0.005	20.0	0.001	0.005	20.0	Pass
23	0.002	0.005	40.0	0.002	0.005	40.0	Pass
25	0.001	0.005	20.0	0.001	0.005	20.0	Pass
27	0.002	0.005	40.0	0.002	0.005	40.0	Pass
29	0.002	0.005	40.0	0.002	0.005	40.0	Pass
31	0.001	0.005	20.0	0.001	0.005	20.0	Pass
33	0.001	0.005	20.0	0.001	0.005	20.0	Pass
35	0.001	0.005	20.0	0.001	0.005	20.0	Pass
37	0.001	0.005	20.0	0.001	0.005	20.0	Pass
39	0.001	0.005	20.0	0.001	0.005	20.0	Pass

Test Result: Pass **Source qualification: Normal**

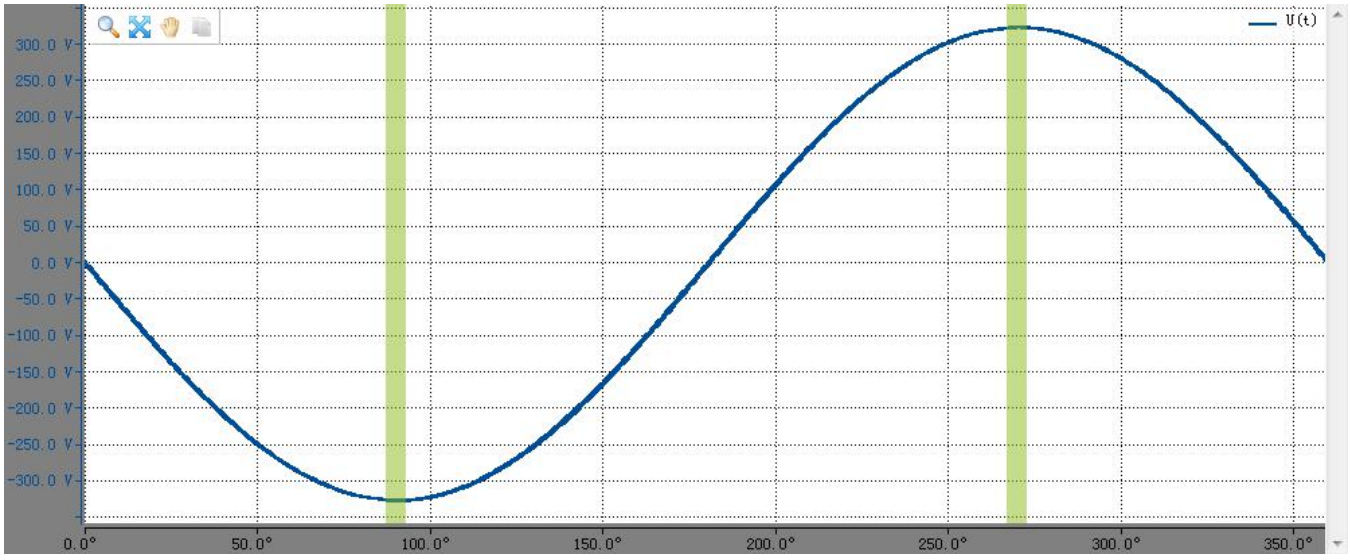
Product	:	LED Strip	**Model/Type reference**	:	FEN19CS-P7-G2 28HZ9x28HZ9x 24V240S 1018L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Pass.

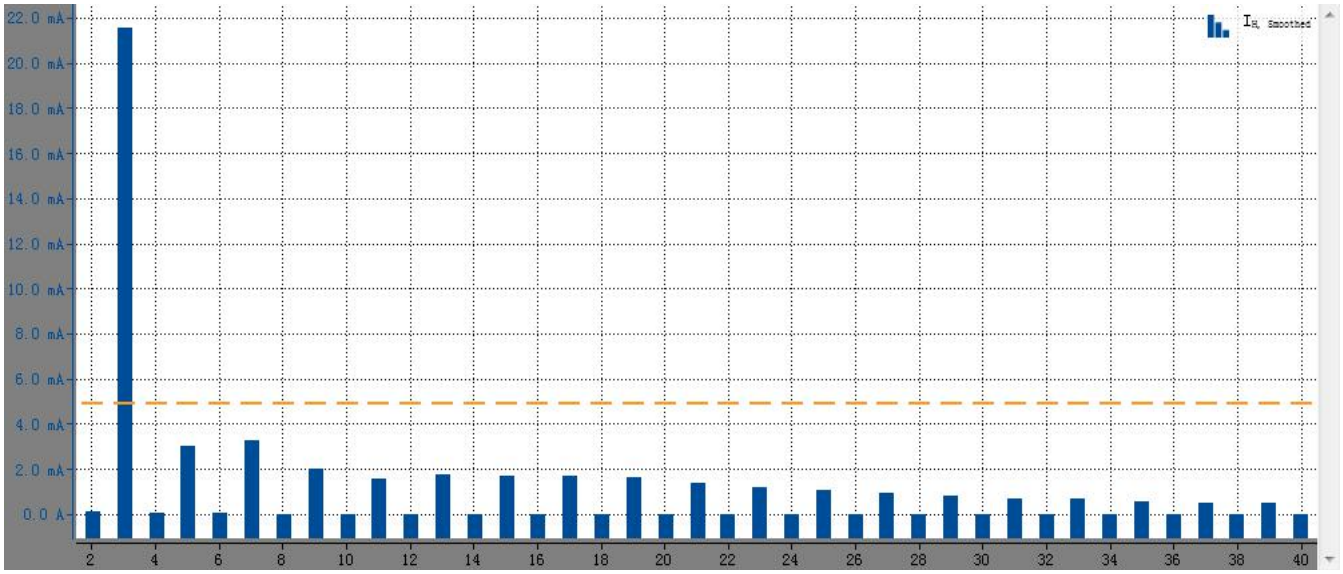
Harmonics – Class-C per Ed. 4.0 (2014)(Run time) incl. inter-harmonics

Test Result: Pass **Source qualification: Norma**

Current & voltage waveform



Harmonics and Class C limit line **European Limits**



Test result: Pass Worst harmonics H7-56.5% of 100% limit, H7-38.3% of 150% limit.

Additional Measuran					
$U_{trms, L1}$	229.554 V	$U_{pp, L1}$	649.521 V	$U_{dc, L1}$	33.7777 mV
$U_{cf, L1}$	1.41494	$I_{trms, L1}$	264.068 mA	$I_{pp, L1}$	805.772 mA
$I_{dc, L1}$	17.2264 µA	$I_{cf, L1}$	1.5259	P_{L1}	59.2115 W
Q_{L1}	12.982 var	S_{L1}	60.6179 VA	PF_{L1}	0.9768
$f_{cycle, L1}$	49.9984 Hz				

Harm#	Harms(avg)	100% of Limit	% of Limit	Harms(max)	150% limit	% of Limit	Status
2	0.000	0.005	0.0	0.000	0.005	0.0	Pass
3	0.021	2.300	0.9	0.022	3.450	0.6	Pass
5	0.003	0.005	60.0	0.003	0.005	60.0	Pass
7	0.003	0.005	60.0	0.003	0.005	60.0	Pass
9	0.002	0.005	40.0	0.002	0.005	40.0	Pass
11	0.002	0.005	40.0	0.002	0.005	40.0	Pass
13	0.002	0.005	40.0	0.002	0.005	40.0	Pass
15	0.002	0.005	40.0	0.002	0.005	40.0	Pass
17	0.002	0.005	40.0	0.002	0.005	40.0	Pass
19	0.002	0.005	40.0	0.002	0.005	40.0	Pass
21	0.001	0.005	20.0	0.001	0.005	20.0	Pass
23	0.000	0.005	0.0	0.001	0.005	20.0	Pass
25	0.001	0.005	20.0	0.001	0.005	20.0	Pass
27	0.001	0.005	20.0	0.001	0.005	20.0	Pass
29	0.001	0.005	20.0	0.001	0.005	20.0	Pass
31	0.001	0.005	20.0	0.001	0.005	20.0	Pass
33	0.001	0.005	20.0	0.001	0.005	20.0	Pass
35	0.001	0.005	20.0	0.001	0.005	20.0	Pass
37	0.001	0.005	20.0	0.001	0.005	20.0	Pass
39	0.001	0.005	20.0	0.001	0.005	20.0	Pass

Test Result: Pass Source qualification: Normal

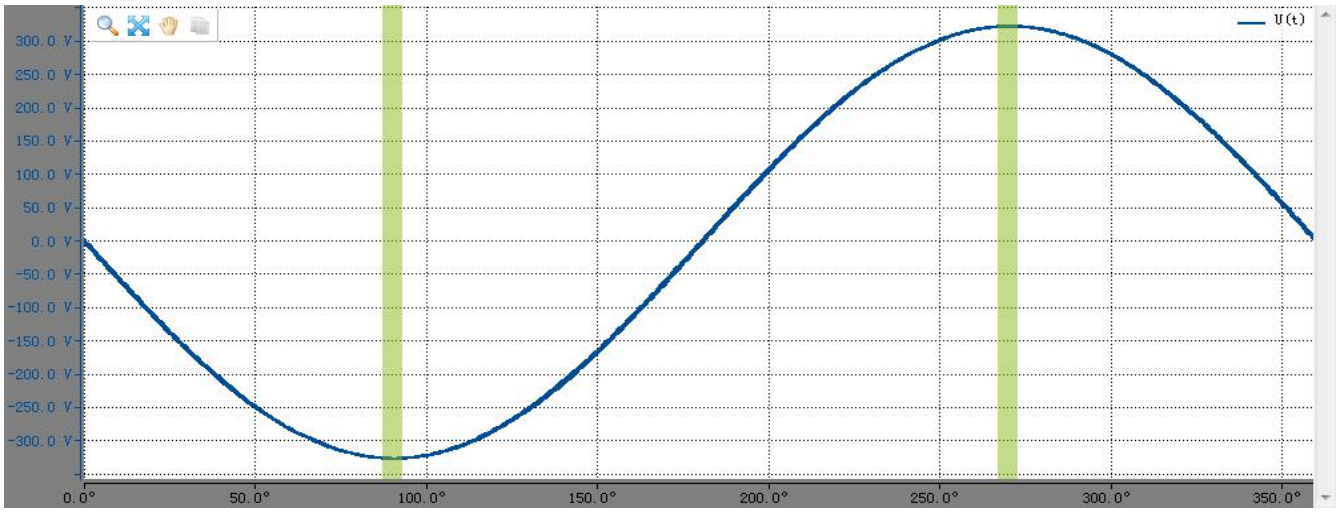
Product	:	LED Strip	**Model/Type reference**	:	FEN20D-Px-G1 50AXRGBW 24V24S 1222L10 x°
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Pass.

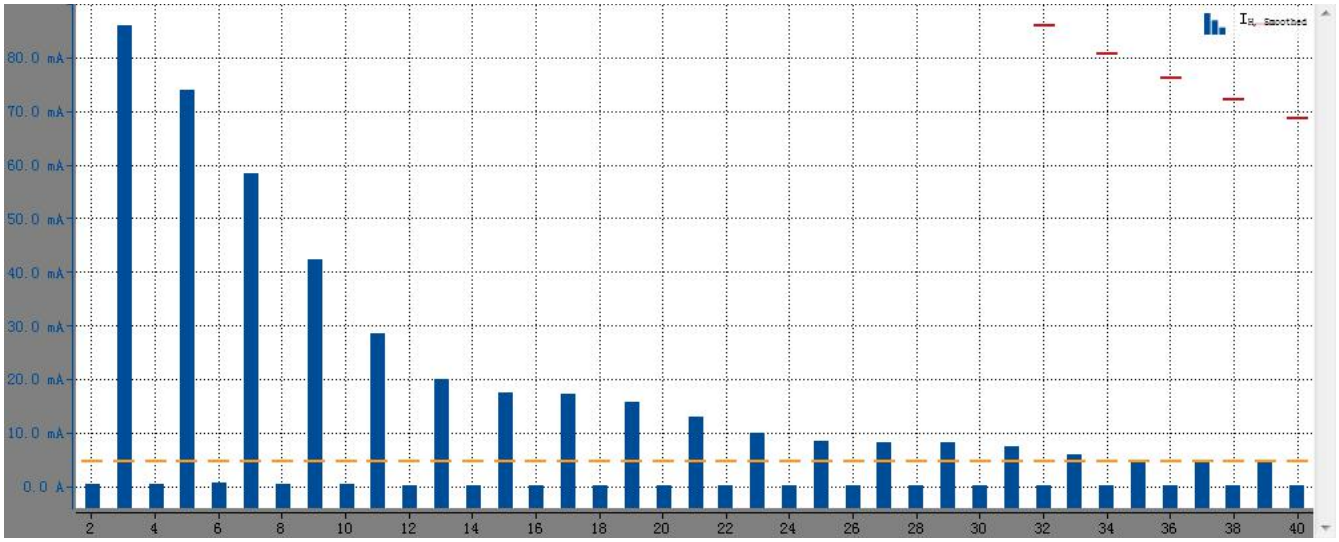
Harmonics – Class-C per Ed. 4.0 (2014)(Run time) incl. inter-harmonics

Test Result: Pass **Source qualification: Norma**

Current & voltage waveform



Harmonics and Class C limit line **European Limits**



Test result: Pass Worst harmonics H7-56.5% of 100% limit, H7-38.3% of 150% limit.

Additional Measuran					
$U_{trms, L1}$	229.485 V	$U_{pp, L1}$	649.52 V	$U_{dc, L1}$	13.9269 mV
$U_{cf, L1}$	1.41598	$I_{trms, L1}$	173.19 mA	$I_{pp, L1}$	1.23488 A
$I_{dc, L1}$	482.605 µA	$I_{cf, L1}$	3.59189	P_{L1}	20.706 W
Q_{L1}	33.9247 var	S_{L1}	39.7445 VA	PF_{L1}	0.52098
$f_{cycle, L1}$	49.9967 Hz				

Harm#	Harms(avg)	100% of Limit	% of Limit	Harms(max)	150% limit	% of Limit	Status
2	0.005	0.031	16.1	0.004	0.031	12.9	Pass
3	0.308	1.803	17.1	0.305	2.704	11.3	Pass
5	0.144	0.518	27.8	0.146	0.777	18.8	Pass
7	0.075	0.363	20.7	0.076	0.544	14.0	Pass
9	0.035	0.259	13.5	0.036	0.389	9.3	Pass
11	0.038	0.155	24.5	0.038	0.233	16.3	Pass
13	0.056	0.155	36.1	0.057	0.233	24.5	Pass
15	0.065	0.155	41.9	0.066	0.233	28.3	Pass
17	0.065	0.155	41.9	0.065	0.233	27.9	Pass
19	0.062	0.155	40.0	0.062	0.233	26.6	Pass
21	0.072	0.155	46.5	0.073	0.233	31.3	Pass
23	0.076	0.155	49.0	0.078	0.233	33.5	Pass
25	0.063	0.155	40.6	0.062	0.233	26.6	Pass
27	0.048	0.155	31.0	0.050	0.233	21.5	Pass
29	0.039	0.155	25.2	0.040	0.233	17.2	Pass
31	0.031	0.155	20.0	0.030	0.233	12.9	Pass
33	0.018	0.031	58.1	0.018	0.031	58.1	Pass
35	0.011	0.031	35.5	0.011	0.031	35.5	Pass
37	0.010	0.031	32.3	0.010	0.031	32.3	Pass
39	0.009	0.031	29.0	0.009	0.031	29.0	Pass

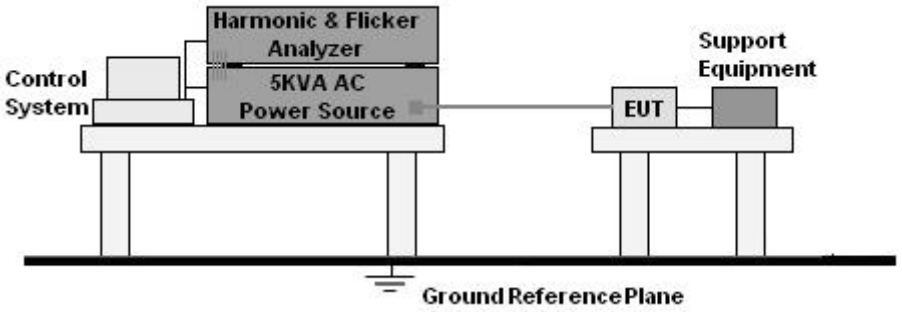
Test Result: Pass **Source qualification: Normal**

VOLTAGE FLUCTUATIONS & FLICKER TEST (FLICKER)

8.5 LIMITS

Please refer to EN 61000-3-3:2013 Clause 5.

8.6 TEST SETUP



8.7 TEST PROCEDURE

a. The Product was placed on the top of a non-conductive table above the ground and operated to produce the most unfavorable sequence of voltage changes under normal operating conditions.

b. During the flick test, the measure time shall include that part of whole operation cycle in which the Product produce the most unfavorable sequence of voltage changes. The observation period for short-term flicker indicator is 10 minutes and the observation period for long-term flicker indicator is 2 hours.

8.8 TEST RESULTS

Product	:	LED Strip	**Model/Type reference**	:	FEN19WS-P7-G1 50ZRGB8X 24V60S 1018L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Pass.

Flicker Test Summary per EN/IEC61000-3-3 (Run time)

Test Result: Pass **Status: Test Completed**

Test Settings

Test	
Measuring Standard	IEC 61000-4-15:2010 + COR1:2012
Limits	IEC 61000-3-3:2013 (+ A1:2017)
Test Date	24.03.2021
Test Time	23:07:55
Measurement Duration	00:10:00
EUT Classification	Class C
EUT / Measurement Setup	
Dmax limit	7%
Number of Pst intervals	10
Pst interval	00:01:00
Cooldown time after interval	00:00:00
Plt interval	00:10:00
Power Supply	
Nominal Voltage	230V
Nominal Frequency	50Hz

Pst_i and limit line **European Limits**

Additional Measuran					
U_{trms_L1}	229.495 V	U_{pp_L1}	649.404 V	U_{dc_L1}	14.9607 mV
U_{cf_L1}	1.41576	I_{trms_L1}	21.8578 mA	I_{pp_L1}	254.44 mA
I_{dc_L1}	984.505 µA	I_{cf_L1}	6.73691	P_{L1}	1.62363 W
Q_{L1}	4.74623 var	S_{L1}	5.01626 VA	PF_{L1}	0.32367
f_{cycle_L1}	49.9967 Hz	$P_{st\_L1}(1)$	0.08225	$P_{st\_L1}(2)$	0.08089
$P_{st\_L1}(3)$	0.08174	$P_{st\_L1}(4)$	0.08259	$P_{st\_L1}(5)$	0.08194
$P_{st\_L1}(6)$	0.08243	$P_{st\_L1}(7)$	0.08263	$P_{st\_L1}(8)$	0.08351
$P_{st, L1}(9)$	0.08323	$P_{st, L1}(10)$	0.08437	$P_{lt, L1}$	0.08257

Result Overview

Test Name	**Test Result**	**Limit Usage**	**Info**
Dc Test [L1]	OK	0.1%	0.0% ≤ 3.3%
Dmax Test [L1]	OK	0.0%	0.0% ≤ 7.0%
Pst Test [L1]	OK	8.4%	0.084 ≤ 1.000
Plt Test [L1]	OK	12.7%	0.083 ≤ 0.650
Tmax Test [L1]	OK		

Product	:	LED Strip	**Model/Type reference**	:	FE14C-P8-G1 38XRGB 24V144S W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Pass.

Flicker Test Summary per EN/IEC61000-3-3 (Run time)

Test Result: Pass

Test Settings

Test	
Measuring Standard	IEC 61000-4-15:2010 + COR1:2012
Limits	IEC 61000-3-3:2013 (+ A1:2017)
Test Date	24.03.2021
Test Time	24:08:55
Measurement Duration	00:10:00
EUT Classification	Class C
EUT / Measurement Setup	
Dmax limit	7%
Number of Pst intervals	10
Pst interval	00:01:00
Cooldown time after interval	00:00:00
Plt interval	00:10:00
Power Supply	
Nominal Voltage	230V
Nominal Frequency	50Hz

Pst_i and limit line **European Limits**

Additional Measuran					
$U_{trms, L1}$	229.419 V	$U_{pp, L1}$	651.23 V	$U_{dc, L1}$	14.3452 mV
$U_{cf, L1}$	1.41895	$I_{trms, L1}$	55.4043 mA	$I_{pp, L1}$	606.629 mA
$I_{dc, L1}$	90.4342 µA	$I_{cf, L1}$	5.48575	P_{L1}	4.35412 W
Q_{L1}	11.9459 var	S_{L1}	12.7147 VA	PF_{L1}	0.34245
$f_{cycle, L1}$	49.9984 Hz	$P_{st, L1}(1)$	0.08299	$P_{st, L1}(2)$	0.0831
$P_{st, L1}(3)$	0.08176	$P_{st, L1}(4)$	0.0833	$P_{st, L1}(5)$	0.08146
$P_{st, L1}(6)$	0.08381	$P_{st, L1}(7)$	0.08306	$P_{st, L1}(8)$	0.08241
$P_{st, L1}(9)$	0.08265	$P_{st, L1}(10)$	0.08235	$P_{lt, L1}$	0.08269

Result Overview

Test Name	Test Result	Limit Usage	Info
Dc Test [L1]	OK	0.1%	0.0% ≤ 3.3%
Dmax Test [L1]	OK	0.0%	0.0% ≤ 7.0%
Pst Test [L1]	OK	8.4%	0.084 ≤ 1.000
Plt Test [L1]	OK	12.7%	0.083 ≤ 0.650
Tmax Test [L1]	OK		

Product : LED Strip **Model/Type reference** : FH14D-P5-G1 50B1RGB 5V60S W10L05

Power supply : AC 230V/50Hz **Temperature** : 25°C

Mode : ON **Humidity** : 60%

Pass

Flicker Test Summary per EN/IEC61000-3-3 (Run time)

Test Result: Pass

Test Settings

Test	
Measuring Standard	IEC 61000-4-15:2010 + COR1:2012
Limits	IEC 61000-3-3:2013 (+ A1:2017)
Test Date	24.03.2021
Test Time	24:08:25
Measurement Duration	00:10:00
EUT Classification	Class C
EUT / Measurement Setup	
Dmax limit	7%
Number of Pst intervals	10
Pst interval	00:01:00
Cooldown time after interval	00:00:00
Plt interval	00:10:00
Power Supply	
Nominal Voltage	230V
Nominal Frequency	50Hz

Pst_i and limit line **European Limits**

Additional Measurands					
U trms, L1	229.597 V	U pp, L1	651.799 V	U dc, L1	15.7315 mV
U cf, L1	1.41964	I trms, L1	61.3497 mA	I pp, L1	665.17 mA
I dc, L1	97.7366 µA	I cf, L1	5.49381	P L1	4.85539 W
Q L1	13.2224 var	S L1	14.0857 VA	PF L1	0.3447
f cycle, L1	49.9967 Hz	P st, L1 (1)	0.08268	P st, L1 (2)	0.08286
P(3) st, L1	0.08323	P st, L1 (4)	0.0837	P st, L1 (5)	0.08361
P(6) st, L1	0.08332	P st, L1 (7)	0.08357	P st, L1 (8)	0.08191
P(9) st, L1	0.08164	P st, L1 (10)	0.08276	P lt, L1	0.08293

Result Overview

Test Name	Test Result	Limit Usage	Info
Dc Test [L1]	OK	1.9%	0.1% ≤ 3.3%
Dmax Test [L1]	OK	0.9%	0.1% ≤ 7.0%
Pst Test [L1]	OK	8.4%	0.084 ≤ 1.000
Plt Test [L1]	OK	12.8%	0.083 ≤ 0.650
Tmax Test [L1]	OK		

Product	:	LED Strip	**Model/Type reference**	:	FE18C-P5-G2 21X92721X960 24V560D W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Pass

Flicker Test Summary per EN/IEC61000-3-3 (Run time)

Test Result: Pass

Test Settings

Test	
Measuring Standard	IEC 61000-4-15:2010 + COR1:2012
Limits	IEC 61000-3-3:2013 (+ A1:2017)
Test Date	24.03.2021
Test Time	08:09:25
Measurement Duration	00:10:00
EUT Classification	Class C
EUT / Measurement Setup	
Dmax limit	7%
Number of Pst intervals	10
Pst interval	00:01:00
Cooldown time after interval	00:00:00
Plt interval	00:10:00
Power Supply	
Nominal Voltage	230V
Nominal Frequency	50Hz

Pst_i and limit line **European Limits**

Additional Measurands					
$U_{trms, L1}$	229.197 V	$U_{pp, L1}$	625.799 V	$U_{dc, L1}$	15.7315 mV
$U_{cf, L1}$	1.41764	$I_{trms, L1}$	61.3497 mA	$I_{pp, L1}$	665.17 mA
$I_{dc, L1}$	96.7366 µA	$I_{cf, L1}$	5.46381	P_{L1}	4.85539 W
Q_{L1}	13.2224 var	S_{L1}	14.0857 VA	PF_{L1}	0.3447
$f_{cycle, L1}$	44.9967 Hz	$P_{st, L1}$ (1)	0.08168	$P_{st, L1}$ (2)	0.08286
$P(3)_{st, L1}$	0.08323	$P_{st, L1}$ (4)	0.0837	$P_{st, L1}$ (5)	0.08361
$P(6)_{st, L1}$	0.08332	$P_{st, L1}$ (7)	0.08357	$P_{st, L1}$ (8)	0.08191
$P(9)_{st, L1}$	0.08164	$P_{st, L1}$ (10)	0.08276	$P_{lt, L1}$	0.08293

Result Overview

Test Name	Test Result	Limit Usage	Info
Dc Test [L1]	OK	1.9%	0.1% ≤ 3.3%
Dmax Test [L1]	OK	0.9%	0.1% ≤ 7.0%
Pst Test [L1]	OK	8.4%	0.084 ≤ 1.000
Plt Test [L1]	OK	12.8%	0.083 ≤ 0.650
Tmax Test [L1]	OK		

Product : LED Strip **Model/Type reference** : FHN11WR-P5-G1 06LZY 24V360D 15L05

Power supply : AC 230V/50Hz **Temperature** : 25°C

Mode : ON **Humidity** : 60%

Pass

Flicker Test Summary per EN/IEC61000-3-3 (Run time)

Test Result: Pass

Test Settings

Test	
Measuring Standard	IEC 61000-4-7:2002 + A1:2008
Limits	IEC 61000-3-2:2014 (Table 1)
Test Date	24.03.2021
Test Time	02:00:29
Measurement Duration	00:02:30
EUT Classification	Class C
EUT / Measurement Setup	
Power Supply	
Nominal Voltage	230V
Nominal Frequency	50Hz

Pst_i and limit line **European Limits**

Additional Measurands					
U trms, L1	229.672 V	U pp, L1	649.961 V	U dc, L1	41.9226 mV
U cf, L1	1.41523	I trms, L1	257.638 mA	I pp, L1	750.907 mA
I dc, L1	53.9488 µA	I cf, L1	1.4575	P L1	58.0773 W
Q L1	11.3307 var	S L1	59.1723 VA	PF L1	0.9815
f cycle, L1	49.9967 Hz				

Result Overview

Test Name	Test Result	Limit Usage	Info
Dc Test [L1]	OK	1.9%	0.1% ≤ 3.3%
Dmax Test [L1]	OK	0.3%	0.1% ≤ 7.0%
Pst Test [L1]	OK	8.4%	0.084 ≤ 1.000
Plt Test [L1]	OK	12.8%	0.083 ≤ 0.650
Tmax Test [L1]	OK		

Product : LED Strip **Model/Type reference** : FE18W-Px-G1 18X9x 24V350S W10L05

Power supply : AC 230V/50Hz **Temperature** : 25°C

Mode : ON **Humidity** : 60%

Pass

Flicker Test Summary per EN/IEC61000-3-3 (Run time)

Test Result: Pass

Test Settings

Test	
Measuring Standard	IEC 61000-4-7:2002 + A1:2008
Limits	IEC 61000-3-2:2014 (Table 1)
Test Date	20.03.2021
Test Time	02:00:29
Measurement Duration	00:02:30
EUT Classification	Class C
EUT / Measurement Setup	
Power Supply	
Nominal Voltage	230V
Nominal Frequency	50HZ

Pst_i and limit line **European Limits**

Additional Measurands					
$U_{trms, L1}$	229.63 V	$U_{pp, L1}$	649.896 V	$U_{dc, L1}$	71.6309 mV
$U_{cf, L1}$	1.4156	$I_{trms, L1}$	170.98 mA	$I_{pp, L1}$	511.258 mA
$I_{dc, L1}$	-190.769 µA	$I_{cf, L1}$	1.49661	P_{L1}	38.0344 W
Q_{L1}	9.74186 var	S_{L1}	39.2621 VA	PF_{L1}	0.96873
$f_{cycle, L1}$	49.9967 Hz	$P_{st, L1}$ (1)	0.08289	$P_{st, L1}$ (2)	0.08529
$P_{st, L1}$ (3)	0.08312	$P_{st, L1}$ (4)	0.08361	$P_{st, L1}$ (5)	0.08297
$P_{st, L1}$ (6)	0.08425	$P_{st, L1}$ (7)	0.08452	$P_{st, L1}$ (8)	0.08391
$P_{st, L1}$ (9)	0.08295	$P_{st, L1}$ (10)	0.08237	$P_{lt, L1}$	0.0836

Result Overview

Test Name	Test Result	Limit Usage	Info
Dc Test [L1]	OK	1.9%	0.1% ≤ 3.3%
Dmax Test [L1]	OK	0.3%	0.1% ≤ 7.0%
Pst Test [L1]	OK	8.4%	0.084 ≤ 1.000
Plt Test [L1]	OK	12.8%	0.083 ≤ 0.650
Tmax Test [L1]	OK		

Product : LED Strip
Model/Type reference : FE15W-Px-G1 COB9x 24V480S W10L05
Power supply : AC 230V/50Hz
Temperature : 25°C
Mode : ON
Humidity : 60%

Pass

Flicker Test Summary per EN/IEC61000-3-3 (Run time)

Test Result: Pass

Test Settings

Test	
Measuring Standard	IEC 61000-4-15:2010 + COR1:2012
Limits	IEC 61000-3-3:2013 (+ A1:2017)
Test Date	21.03.2021
Test Time	07:28:48
Measurement Duration	00:10:00
EUT Classification	Class C
EUT / Measurement Setup	
Dmax limit	7%
Number of Pst intervals	10
Pst interval	00:01:00
Cooldown time after interval	00:00:00
Plt interval	00:10:00
Power Supply	
Nominal Voltage	230V
Nominal Frequency	50Hz

Pst_i and limit line **European Limits**

Additional					
$U_{trms,L1}$	229.686 V	$U_{pp,L1}$	650.039 V	$U_{dc,L1}$	70.6714 mV
$U_{cf,L1}$	1.41655	$I_{trms,L1}$	176.59 mA	$I_{pp,L1}$	475.557 mA
$I_{dc,L1}$	-75.2728 µA	$I_{cf,L1}$	1.35439	P_{L1}	39.2155 W
Q_{L1}	10.3577 var	S_{L1}	40.5603 VA	PF_{L1}	0.96684
$f_{cycle,L1}$	49.9967 Hz	$P_{st,L1}(1)$	0.08293	$P_{st,L1}(2)$	0.08367
$P_{st,L1}(3)$	0.08425	$P_{st,L1}(4)$	0.08294	$P_{st,L1}(5)$	0.08252
$P_{st,L1}(6)$	0.08287	$P_{st,L1}(7)$	0.0843	$P_{st,L1}(8)$	0.08189
$P_{st,L1}(9)$	0.08309	$P_{st,L1}(10)$	0.0832	$P_{lt,L1}$	0.08317

Result Overview

Test Name	Test Result	Limit Usage	Info
Dc Test [L1]	OK	0.7%	0.0% ≤ 3.3%
Dmax Test [L1]	OK	0.4%	0.0% ≤ 7.0%
Pst Test [L1]	OK	8.4%	0.084 ≤ 1.000
Plt Test [L1]	OK	12.8%	0.083 ≤ 0.650
Tmax Test [L1]	OK		

Product : LED Strip
Model/Type reference : FEN19CS-P7-G2 28HZ9x28HZ9x 24V240S 1018L05
Power supply : AC 230V/50Hz
Temperature : 25°C
Mode : ON
Humidity : 60%

Pass

Flicker Test Summary per EN/IEC61000-3-3 (Run time)

Test Result: Pass

Test Settings

Test	
Measuring Standard	IEC 61000-4-15:2010 + COR1:2012
Limits	IEC 61000-3-3:2013 (+ A1:2017)
Test Date	25.03.2021
Test Time	03:52:09
Measurement Duration	00:10:00
EUT Classification	Class C
EUT / Measurement Setup	
Dmax limit	7%
Number of Pst intervals	10
Pst interval	00:01:00
Cooldown time after interval	00:00:00
Plt interval	00:10:00
Power Supply	
Nominal Voltage	230V
Nominal Frequency	50Hz

Pst_l and limit line **European Limits**

Additional Measuran					
$U_{trms,\ L1}$	229.692 V	$U_{pp,\ L1}$	650.012 V	$U_{dc,\ L1}$	41.4965 mV
$U_{cf,\ L1}$	1.41522	$I_{trms,\ L1}$	263.428 mA	$I_{pp,\ L1}$	803.358 mA
$I_{dc,\ L1}$	-89.0121 µA	$I_{cf,\ L1}$	1.52518	P_{L1}	59.0907 W
Q_{L1}	13.0158 var	S_{L1}	60.5072 VA	PF_{L1}	0.97659
$f_{cycle,\ L1}$	49.9967 Hz	$P_{st,\ L1}(1)$	0.08412	$P_{st,\ L1}(2)$	0.08347
$P_{st,\ L1}(3)$	0.08382	$P_{st,\ L1}(4)$	0.08237	$P_{st,\ L1}(5)$	0.08267
$P_{st,\ L1}(6)$	0.08527	$P_{st,\ L1}(7)$	0.08428	$P_{st,\ L1}(8)$	0.08257
$P_{st,\ L1}(9)$	0.08354	$P_{st,\ L1}(10)$	0.08531	$P_{lt,\ L1}$	0.08376

Result Overview

Test Name	Test Result	Limit Usage	Info
Dc Test [L1]	OK	0.7%	0.0% ≤ 3.3%
Dmax Test [L1]	OK	0.4%	0.0% ≤ 7.0%
Pst Test [L1]	OK	8.4%	0.084 ≤ 1.000
Plt Test [L1]	OK	12.8%	0.083 ≤ 0.650
Tmax Test [L1]	OK		

Product	:	LED Strip	**Model/Type reference**	:	FEN20D-Px-G1 50AXRGBW 24V24S 1222L10 x°
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Pass

Flicker Test Summary per EN/IEC61000-3-3 (Run time)

Test Result: Pass

Test Settings

Test	
Measuring Standard	IEC 61000-4-15:2010 + COR1:2012
Limits	IEC 61000-3-3:2013 (+ A1:2017)
Test Date	23.03.2021
Test Time	09:10:09
Measurement Duration	00:10:00
EUT Classification	Class C
EUT / Measurement Setup	
Dmax limit	7%
Number of Pst intervals	10
Pst interval	00:01:00
Cooldown time after interval	00:00:00
Plt interval	00:10:00
Power Supply	
Nominal Voltage	230V
Nominal Frequency	50Hz

Pst_l and limit line **European Limits**

Additional Measuran					
$U_{trms,\ L1}$	229.792 V	$U_{pp,\ L1}$	550.012 V	$U_{dc,\ L1}$	41.4965 mV
$U_{cf,\ L1}$	1.41622	$I_{trms,\ L1}$	263.428 mA	$I_{pp,\ L1}$	803.358 mA
$I_{dc,\ L1}$	-89.0121 µA	$I_{cf,\ L1}$	1.52518	P_{L1}	59.0907 W
Q_{L1}	13.0158 var	S_{L1}	60.5072 VA	PF_{L1}	0.97659
$f_{cycle,\ L1}$	49.9967 Hz	$P_{st,\ L1}(1)$	0.08412	$P_{st,\ L1}(2)$	0.08347
$P_{st,\ L1}(3)$	0.08382	$P_{st,\ L1}(4)$	0.08237	$P_{st,\ L1}(5)$	0.08267
$P_{st,\ L1}(6)$	0.08527	$P_{st,\ L1}(7)$	0.08428	$P_{st,\ L1}(8)$	0.08257
$P_{st,\ L1}(9)$	0.08354	$P_{st,\ L1}(10)$	0.08531	$P_{lt,\ L1}$	0.08376

Result Overview

Test Name	Test Result	Limit Usage	Info
Dc Test [L1]	OK	0.7%	0.0% ≤ 3.3%
Dmax Test [L1]	OK	0.4%	0.0% ≤ 7.0%
Pst Test [L1]	OK	6.4%	0.084 ≤ 1.000
Plt Test [L1]	OK	11.8%	0.083 ≤ 0.650
Tmax Test [L1]	OK		

9. IMMUNITY TEST

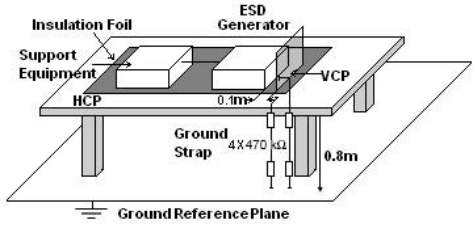
General Performance Criteria	
Product Standard	**EN 61547:2009**
CRITERION A	During the test no change of the luminous intensity shall be observed and the regulating control, if any, shall operate during the test as intended.
CRITERION B	During the test the luminous intensity may change to any value. After the test the luminous intensity shall be restored to its initial value within 1 min. Regulating controls need not function during the test, but after the test the mode of the control shall be the same as before the test provided that during the test no mode changing commands were given.
CRITERION C	During and after the test any change of the luminous intensity is allowed and the lamp(s) may be extinguished. After the test, within 30 min, all functions shall return to normal if necessary by temporary interruption of the mains supply and/or operating the regulating control. Additional requirement for lighting equipment incorporating a starting device: After the test the lighting equipment is switched off. After half an hour it is switched on again. The lighting equipment shall start and operate as intended.

9.1 ELECTROSTATIC DISCHARGE

10.1.1TEST SPECIFICATION

Basic Standard	:	EN 61547 & IEC 61000-4-2
Test Port	:	Enclosure port
Discharge Impedance	:	330 ohm / 150 pF
Discharge Mode	:	Single Discharge
Discharge Period	:	one second between each discharge

10.1.2 TEST SETUP



10.1.3 TEST PROCEDURE

The basic test procedure was in accordance with EN 61547 and IEC 61000-4-2:

a. Electrostatic discharges were applied only to those points and surfaces of the Product that are accessible to users during normal operation.

b. The test was performed with at least ten single discharges on the pre-selected points in the most sensitive polarity.

c. The time interval between two successive single discharges was at least 1 second.

d. The ESD generator was held perpendicularly to the surface to which the discharge was applied and the return cable was at least 0.2 meters from the Product.

e. Contact discharges were applied to the non-insulating coating, with the pointed tip of the generator penetrating the coating and contacting the conducting substrate.

f. Air discharges were applied with the round discharge tip of the discharge electrode approaching the Product as fast as possible (without causing mechanical damage) to touch the Product. After each discharge, the ESD generator was removed from the Product and re-triggered for a new single discharge. The test was repeated until all discharges were complete.

g. At least ten single discharges (in the most sensitive polarity) were applied to the Horizontal Coupling Plane at points on each side of the Product. The ESD generator was positioned vertically at a distance of 0.1 meters from the Product with the discharge electrode touching the HCP.

h. At least ten single discharges (in the most sensitive polarity) were applied to the center of one vertical edge of the Vertical Coupling Plane in sufficiently different positions that the four faces of the Product were completely illuminated. The VCP (dimensions 0.5m x 0.5m) was placed vertically to and 0.1 meters from the Product.

10.1.4 RESULT & PERFORMANCE

Product	:	LED Strip	**Model/Type reference**	:	FEN19WS-P7-G1 50ZRGB8X 24V60S 1018L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Discharge Method	Discharge Position	Voltage (±kV)	Min. No. of Discharge per polarity (Each Point)	Required Level	Performance Criterion
Contact Discharge	Conductive Surfaces	2,4	10	B	A
	Indirect Discharge HCP	2,4	10	B	A
	Indirect Discharge VCP	2,4	10	B	A
Air Discharge	Slots, Apertures, and Insulating Surfaces	2,4,8	10	B	A

☑ There was no observable degradation in performance.

TEST RESULT: PASS

Product	:	LED Strip	**Model/Type reference**	:	FE14C-P8-G1 38XRGB 24V144S W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Discharge Method	Discharge Position	Voltage (±kV)	Min. No. of Discharge per polarity (Each Point)	Required Level	Performance Criterion
Contact Discharge	Conductive Surfaces	2,4	10	B	A
	Indirect Discharge HCP	2,4	10	B	A
	Indirect Discharge VCP	2,4	10	B	A
Air Discharge	Slots, Apertures, and Insulating Surfaces	2,4,8	10	B	A

☑ There was no observable degradation in performance.

TEST RESULT: PASS

Product	:	LED Strip	**Model/Type reference**	:	FH14D-P5-G1 50B1RGB 5V60S W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Discharge Method	Discharge Position	Voltage (±kV)	Min. No. of Discharge per polarity (Each Point)	Required Level	Performance Criterion
Contact Discharge	Conductive Surfaces	2,4	10	B	A
	Indirect Discharge HCP	2,4	10	B	A
	Indirect Discharge VCP	2,4	10	B	A
Air Discharge	Slots, Apertures, and Insulating Surfaces	2,4,8	10	B	A

☑ There was no observable degradation in performance.

TEST RESULT: PASS

Product	:	LED Strip	**Model/Type reference**	:	FE18C-P5-G2 21X92721X960 24V560D W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Discharge Method	Discharge Position	Voltage (±kV)	Min. No. of Discharge per polarity (Each Point)	Required Level	Performance Criterion
Contact Discharge	Conductive Surfaces	2,4	10	B	A
	Indirect Discharge HCP	2,4	10	B	A
	Indirect Discharge VCP	2,4	10	B	A
Air Discharge	Slots, Apertures, and Insulating Surfaces	2,4,8	10	B	A

☑ There was no observable degradation in performance.

TEST RESULT: PASS

Product	:	LED Strip	**Model/Type reference**	:	FHN11WR-P5-G1 06LZY 24V360D 15L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Discharge Method	Discharge Position	Voltage (±kV)	Min. No. of Discharge per polarity (Each Point)	Required Level	Performance Criterion
Contact Discharge	Conductive Surfaces	2,4	10	B	A
	Indirect Discharge HCP	2,4	10	B	A
	Indirect Discharge VCP	2,4	10	B	A
Air Discharge	Slots, Apertures, and Insulating Surfaces	2,4,8	10	B	A

☑ There was no observable degradation in performance.

TEST RESULT: PASS

Product	:	LED Strip	**Model/Type reference**	:	FE18W-Px-G1 18X9x 24V350S W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Discharge Method	Discharge Position	Voltage (±kV)	Min. No. of Discharge per polarity (Each Point)	Required Level	Performance Criterion
Contact Discharge	Conductive Surfaces	2,4	10	B	A
	Indirect Discharge HCP	2,4	10	B	A
	Indirect Discharge VCP	2,4	10	B	A
Air Discharge	Slots, Apertures, and Insulating Surfaces	2,4,8	10	B	A

☑ There was no observable degradation in performance.

TEST RESULT: PASS

Product	:	LED Strip	**Model/Type reference**	:	FE15W-Px-G1 COB9x 24V480S W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Discharge Method	Discharge Position	Voltage (±kV)	Min. No. of Discharge per polarity (Each Point)	Required Level	Performance Criterion
Contact Discharge	Conductive Surfaces	2,4	10	B	A
	Indirect Discharge HCP	2,4	10	B	A
	Indirect Discharge VCP	2,4	10	B	A
Air Discharge	Slots, Apertures, and Insulating Surfaces	2,4,8	10	B	A

☑ There was no observable degradation in performance.

TEST RESULT: PASS

Product	:	LED Strip	**Model/Type reference**	:	FEN19CS-P7-G2 28HZ9x28HZ9x 24V240S 1018L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Discharge Method	Discharge Position	Voltage (±kV)	Min. No. of Discharge per polarity (Each Point)	Required Level	Performance Criterion
Contact Discharge	Conductive Surfaces	2,4	10	B	A
	Indirect Discharge HCP	2,4	10	B	A
	Indirect Discharge VCP	2,4	10	B	A
Air Discharge	Slots, Apertures, and Insulating Surfaces	2,4,8	10	B	A

☑ There was no observable degradation in performance.

TEST RESULT: PASS

Product	:	LED Strip	**Model/Type reference**	:	FEN20D-Px-G1 50AXRGBW 24V24S 1222L10 x°
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Discharge Method	Discharge Position	Voltage (±kV)	Min. No. of Discharge per polarity (Each Point)	Required Level	Performance Criterion
Contact Discharge	Conductive Surfaces	2,4	10	B	A
	Indirect Discharge HCP	2,4	10	B	A
	Indirect Discharge VCP	2,4	10	B	A
Air Discharge	Slots, Apertures, and Insulating Surfaces	2,4,8	10	B	A

☑ There was no observable degradation in performance.

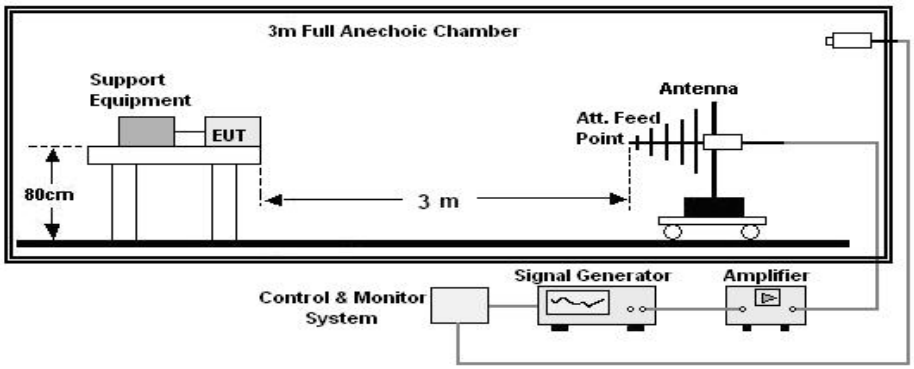
TEST RESULT: PASS

9.2 RADIO FREQUENCY ELECTROMAGNETIC FIELDS

10.2.1 TEST SPECIFICATION

Basic Standard	:	EN 61547 & IEC 61000-4-3
Test Port	:	Enclosure port
Step Size	:	1%
Modulation	:	1kHz, 80% AM
Dwell Time	:	1 second
Polarization	:	Horizontal & Vertical

10.2.2 TEST SETUP



10.2.3 TEST PROCEDURE

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

b. The frequency range is swept from 80MHz to 1000MHz, with the signal 80% amplitude modulated with a 1 kHz sine wave. The rate of sweep did not exceed 1.5x 10^{-3} decade/s. Where the frequency range is swept incrementally, the step size was 1%.

c. The test was performed with the Product exposed to both vertically and horizontally polarized fields on each of the four sides.

10.2.4 RESULT & PERFORMANCE

Product	:	LED Strip	**Model/Type reference**	:	FEN19WS-P7-G1 50ZRGB8X 24V60S 1018L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Frequency (MHz)	Position	Field Strength (V/m)	Required Level	Performance Criterion
80 - 1000	Front, Right, Back, Left	3	A	A

TEST RESULT: PASS

Product	:	LED Strip	**Model/Type reference**	:	FE14C-P8-G1 38XRGB 24V144S W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Frequency (MHz)	Position	Field Strength (V/m)	Required Level	Performance Criterion
80 - 1000	Front, Right, Back, Left	3	A	A

TEST RESULT: PASS

Product	:	LED Strip	**Model/Type reference**	:	FH14D-P5-G1 50B1RGB 5V60S W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Frequency (MHz)	Position	Field Strength (V/m)	Required Level	Performance Criterion
80 - 1000	Front, Right, Back, Left	3	A	A

TEST RESULT: PASS

Product	:	LED Strip	**Model/Type reference**	:	FE18C-P5-G2 21X92721X960 24V560D W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Frequency (MHz)	Position	Field Strength (V/m)	Required Level	Performance Criterion
80 - 1000	Front, Right, Back, Left	3	A	A

TEST RESULT: PASS

Product	:	LED Strip	**Model/Type reference**	:	FHN11WR-P5-G1 06LZY24V360D 15L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Frequency (MHz)	Position	Field Strength (V/m)	Required Level	Performance Criterion
80 - 1000	Front, Right, Back, Left	3	A	A

TEST RESULT: PASS

Product	:	LED Strip	**Model/Type reference**	:	FE18W-Px-G1 18X9x 24V350S W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Frequency (MHz)	Position	Field Strength (V/m)	Required Level	Performance Criterion
80 - 1000	Front, Right, Back, Left	3	A	A

TEST RESULT: PASS

Product	:	LED Strip	**Model/Type reference**	:	FE15W-Px-G1 COB9x 24V480S W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Frequency (MHz)	Position	Field Strength (V/m)	Required Level	Performance Criterion
80 - 1000	Front, Right, Back, Left	3	A	A

TEST RESULT: PASS

Product	:	LED Strip	**Model/Type reference**	:	FEN19CS-P7-G2 28HZ9x28HZ9x 24V240S 1018L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Frequency (MHz)	Position	Field Strength (V/m)	Required Level	Performance Criterion
80 - 1000	Front, Right, Back, Left	3	A	A

TEST RESULT: PASS

Product	:	LED Strip	**Model/Type reference**	:	FEN20D-Px-G1 50AXRGBW 24V24S 1222L10 x°
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Frequency (MHz)	Position	Field Strength (V/m)	Required Level	Performance Criterion
80 - 1000	Front, Right, Back, Left	3	A	A

TEST RESULT: PASS

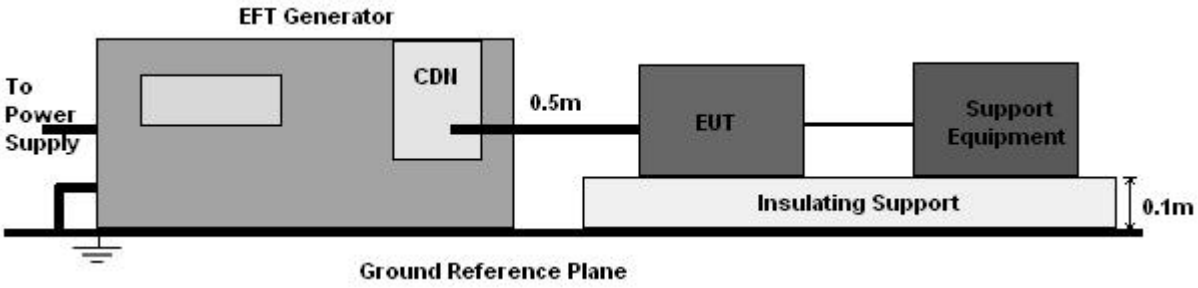
10.3 FAST TRANSIENTS

10.3.1 TEST SPECIFICATION

Basic Standard	:	EN 61547 & IEC 61000-4-4
Test Port	:	Input a.c. power port
Impulse Frequency	:	5 kHz
Impulse Wave-shape	:	5/50 ns
Burst Duration	:	15 ms
Burst Period	:	300 ms
Test Duration	:	2 minutes per polarity

10.3.2 TEST SETUP

For input a.c. power port:



10.3.3 TEST PROCEDURE

a. The Product and support units were located on a wooden table 0.1m away from ground reference plane.

b. A 0.5m-long power cord was attached to Product during the test, and then test voltage was injected to the Product ports from minimum to standard request.

10.3.4 RESULT & PERFORMANCE

Product	:	LED Strip	**Model/Type reference**	:	FEN19WS-P7-G1 50ZRGB8X 24V60S 1018L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Coupling	Voltage (kV)	Polarity	Required Level	Performance Criterion
L + N	0.5	±	B	A

TEST RESULT: PASS

Product	:	LED Strip	**Model/Type reference**	:	FE14C-P8-G1 38XRGB 24V144S W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Coupling	Voltage (kV)	Polarity	Required Level	Performance Criterion
L + N	0.5	±	B	A

TEST RESULT: PASS

Product	:	LED Strip	**Model/Type reference**	:	FH14D-P5-G1 50B1RGB 5V60S W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Coupling	Voltage (kV)	Polarity	Required Level	Performance Criterion
L + N	0.5	±	B	A

TEST RESULT: PASS

Product	:	LED Strip	**Model/Type reference**	:	FE18C-P5-G2 21X92721X960 24V560D W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Coupling	Voltage (kV)	Polarity	Required Level	Performance Criterion
L + N	0.5	±	B	A

TEST RESULT: PASS

Product	:	LED Strip	**Model/Type reference**	:	FHN11WR-P5-G1 06LZY 24V360D 15L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Coupling	Voltage (kV)	Polarity	Required Level	Performance Criterion
L + N	0.5	±	B	A

TEST RESULT: PASS

Product	:	LED Strip	**Model/Type reference**	:	FE18W-Px-G1 18X9x 24V350S W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Coupling	Voltage (kV)	Polarity	Required Level	Performance Criterion
L + N	0.5	±	B	A

TEST RESULT: PASS

Product	:	LED Strip	**Model/Type reference**	:	FE15W-Px-G1 COB9x 24V480S W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Coupling	Voltage (kV)	Polarity	Required Level	Performance Criterion
L + N	0.5	±	B	A

TEST RESULT: PASS

Product	:	LED Strip	**Model/Type reference**	:	FEN19CS-P7-G2 28HZ9x28HZ9x 24V240S 1018L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Coupling	Voltage (kV)	Polarity	Required Level	Performance Criterion
L + N	0.5	±	B	A

TEST RESULT: PASS

Product	:	LED Strip	**Model/Type reference**	:	FEN20D-Px-G1 50AXRGBW 24V24S 1222L10 x°
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Coupling	Voltage (kV)	Polarity	Required Level	Performance Criterion
L + N	0.5	±	B	A

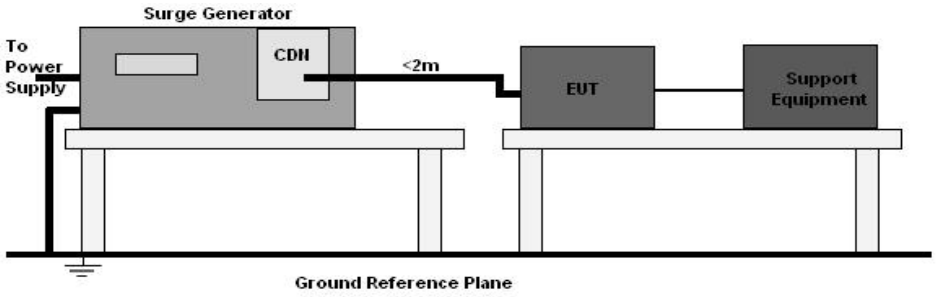
TEST RESULT: PASS

10.4 SURGES

10.4.1 TEST SPECIFICATION

Basic Standard	:	EN 61547 & IEC 61000-4-5
Test Port	:	Input a.c. power port
Wave-Shape	:	Open Circuit Voltage - 1.2 / 50 us Short Circuit Current - 8 / 20 us
Pulse Repetition Rate	:	1 pulse / min.
Test Events	:	Five positive polarity pulses at the 90º phase angel Five negative polarity pulses at the 270º phase angle

10.4.2 TEST SETUP



10.4.3 TEST PROCEDURE

a. The surge is to be applied to the Product power supply terminals via the capacitive coupling network. effects on equipment not under test that may be powered by the same lines, and to provide sufficient decoupling impedance to the surge wave.

b. The power cord between the Product and the coupling/decoupling networks shall be 2 meters in length.

10.4.4 RESULT & PERFORMANCE

Product	:	LED Strip	**Model/Type reference**	:	FEN19WS-P7-G1 50ZRGB8X 24V60S 1018L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Coupling Line	Voltage (kV)	Phase Angle	Required Level	Performance Criterion
L - N	-0.5, +0.5	90°	C	B*
	-0.5, +0.5	270°		
	-1, +1	270°		

Remark*: The product flickers during the test, but it can recover to normal by itself after testing.

TEST RESULT: PASS

Product	:	LED Strip	**Model/Type reference**	:	FE14C-P8-G1 38XRGB 24V144S W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Coupling Line	Voltage (kV)	Phase Angle	Required Level	Performance Criterion
L - N	-0.5, +0.5	90°	C	B*
	-0.5, +0.5	270°		
	-1, +1	270°		

Remark*: The product flickers during the test, but it can recover to normal by itself after testing.

TEST RESULT: PASS

Product	:	LED Strip	**Model/Type reference**	:	FH14D-P5-G1 50B1RGB 5V60S W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Coupling Line	Voltage (kV)	Phase Angle	Required Level	Performance Criterion
L - N	-0.5, +0.5	90°	C	B*
	-0.5, +0.5	270°		
	-1, +1	270°		

Remark*: The product flickers during the test, but it can recover to normal by itself after testing

TEST RESULT: PASS

Product	:	LED Strip	**Model/Type reference**	:	FE18C-P5-G2 21X92721X960 24V560D W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Coupling Line	Voltage (kV)	Phase Angle	Required Level	Performance Criterion
L - N	-0.5, +0.5	90°	C	B*
	-0.5, +0.5	270°		
	-1, +1	270°		

Remark*: The product flickers during the test, but it can recover to normal by itself after testing

TEST RESULT: PASS

Product	:	LED Strip	**Model/Type reference**	:	FHN11WR-P5-G1 06LZY 24V360D 15L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Coupling Line	Voltage (kV)	Phase Angle	Required Level	Performance Criterion
L - N	-0.5, +0.5	90°	C	B*
	-0.5, +0.5	270°		
	-1, +1	270°		

Remark*: The product flickers during the test, but it can recover to normal by itself after testing

TEST RESULT: PASS

Product	:	LED Strip	**Model/Type reference**	:	FE18W-Px-G1 18X9x 24V350S W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Coupling Line	Voltage (kV)	Phase Angle	Required Level	Performance Criterion
L - N	-0.5, +0.5	90°	C	B*
	-0.5, +0.5	270°		
	-1, +1	270°		

Remark*: The product flickers during the test, but it can recover to normal by itself after testing

TEST RESULT: PASS

Product	:	LED Strip	**Model/Type reference**	:	FE15W-Px-G1 COB9x 24V480S W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Coupling Line	Voltage (kV)	Phase Angle	Required Level	Performance Criterion
L - N	-0.5, +0.5	90°	C	B*
	-0.5, +0.5	270°		
	-1, +1	270°		

Remark*: The product flickers during the test, but it can recover to normal by itself after testing

TEST RESULT: PASS

Product	:	LED Strip	**Model/Type reference**	:	FEN19CS-P7-G2 28HZ9x28HZ9x 24V240S 1018L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Coupling Line	Voltage (kV)	Phase Angle	Required Level	Performance Criterion
L - N	-0.5, +0.5	90°	C	B*
	-0.5, +0.5	270°		
	-1, +1	270°		

Remark*: The product flickers during the test, but it can recover to normal by itself after testing

TEST RESULT: PASS

Product	:	LED Strip	**Model/Type reference**	:	FEN20D-Px-G1 50AXRGBW 24V24S 1222L10 x°
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Coupling Line	Voltage (kV)	Phase Angle	Required Level	Performance Criterion
L - N	-0.5, +0.5	90°	C	B*
	-0.5, +0.5	270°		
	-1, +1	270°		

Remark*: The product flickers during the test, but it can recover to normal by itself after testing

TEST RESULT: PASS

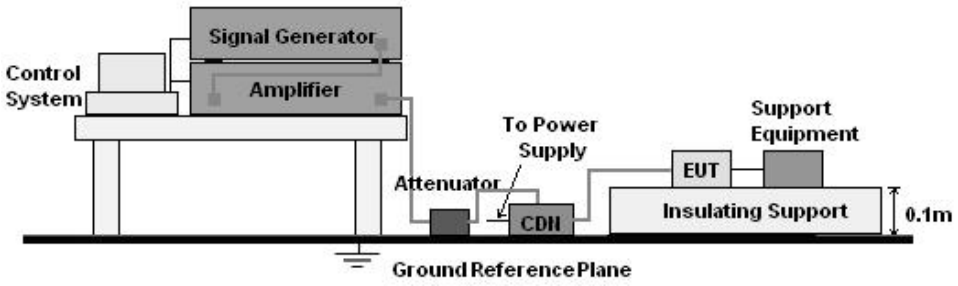
10.5 INJECTED CURRENTS

10.5.1 TEST SPECIFICATION

Basic Standard	:	EN 61547 & IEC 61000-4-6
Test Port	:	Input a.c. power port
Step Size	:	1%
Modulation	:	1kHz, 80% AM
Dwell Time	:	1 second

10.5.2 TEST SETUP

For input a.c. power port:



10.5.3 TEST PROCEDURE

For a.c. power port:

a. The Product and support units were located at a ground reference plane with the interposition of a 0.1 m thickness insulating support and the CDN was located on GRP directly.

b. The frequency range is swept from 150 kHz to 80MHz, with the signal 80% amplitude modulated with a 1 kHz sine wave.

c. The dwell time at each frequency shall be not less than the time necessary for the Product to be able to respond.

10.5.4 RESULT & PERFORMANCE

Product	:	LED Strip	**Model/Type reference**	:	FEN19WS-P7-G1 50ZRGB8X 24V60S 1018L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Inject Line	Frequency (MHz)	Voltage Level (Vr.m.s.)	Required Level	Performance Criterion
a.c. port	0.15 - 80	3	A	A

TEST RESULT: PASS

Product	:	LED Strip	**Model/Type reference**	:	FE14C-P8-G1 38XRGB 24V144S W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Inject Line	Frequency (MHz)	Voltage Level (Vr.m.s.)	Required Level	Performance Criterion
a.c. port	0.15 - 80	3	A	A

TEST RESULT: PASS

Product	:	LED Strip	**Model/Type reference**	:	FH14D-P5-G1 50B1RGB 5V60S W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Inject Line	Frequency (MHz)	Voltage Level (Vr.m.s.)	Required Level	Performance Criterion
a.c. port	0.15 - 80	3	A	A

TEST RESULT: PASS

Product	:	LED Strip	**Model/Type reference**	:	FE18C-P5-G2 21X92721X960 24V560D W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Inject Line	Frequency (MHz)	Voltage Level (Vr.m.s.)	Required Level	Performance Criterion
a.c. port	0.15 - 80	3	A	A

TEST RESULT: PASS

Product	:	LED Strip	**Model/Type reference**	:	FHN11WR-P5-G1 06LZY 24V360D 15L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Inject Line	Frequency (MHz)	Voltage Level (Vr.m.s.)	Required Level	Performance Criterion
a.c. port	0.15 - 80	3	A	A

TEST RESULT: PASS

Product	:	LED Strip	**Model/Type reference**	:	FE18W-Px-G1 18X9x 24V350S W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Inject Line	Frequency (MHz)	Voltage Level (Vr.m.s.)	Required Level	Performance Criterion
a.c. port	0.15 - 80	3	A	A

TEST RESULT: PASS

Product	:	LED Strip	**Model/Type reference**	:	FE15W-Px-G1 COB9x 24V480S W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Inject Line	Frequency (MHz)	Voltage Level (Vr.m.s.)	Required Level	Performance Criterion
a.c. port	0.15 - 80	3	A	A

TEST RESULT: PASS

Product	:	LED Strip	**Model/Type reference**	:	FEN19CS-P7-G2 28HZ9x28HZ9x 24V240S 1018L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Inject Line	Frequency (MHz)	Voltage Level (Vr.m.s.)	Required Level	Performance Criterion
a.c. port	0.15 - 80	3	A	A

TEST RESULT: PASS

Product	:	LED Strip	**Model/Type reference**	:	FEN20D-Px-G1 50AXRGBW 24V24S 1222L10 x°
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Inject Line	Frequency (MHz)	Voltage Level (Vr.m.s.)	Required Level	Performance Criterion
a.c. port	0.15 - 80	3	A	A

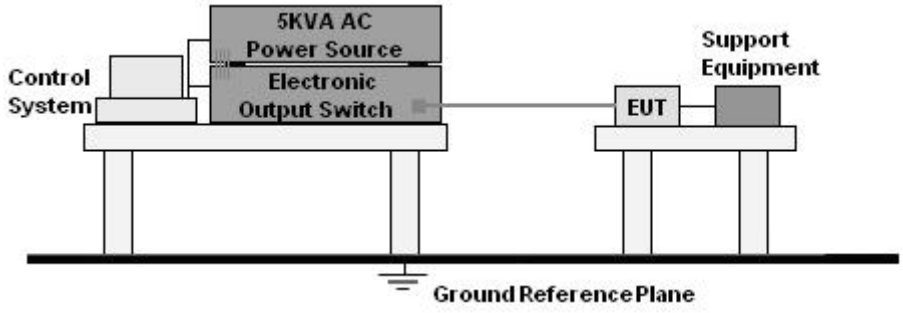
TEST RESULT: PASS

10.6 VOLTAGE DIPS AND INTERRUPTIONS

10.6.1 TEST SPECIFICATION

Basic Standard	:	EN 61547 & IEC 61000-4-11
Test Port	:	Input a.c. power ports
Phase Angle	:	0°, 180°

10.6.2 TEST SETUP



10.6.3 TEST PROCEDURE

a. The Product and support units were located on a wooden table above ground floor.

b. Set the parameter of tests and then perform the test software of test simulator.

c. Conditions changes to occur at 0 degree crossover point of the voltage waveform.

10.6.4 RESULT & PERFORMANCE

Product	:	LED Strip	**Model/Type reference**	:	FEN19WS-P7-G1 50ZRGB8X 24V60S 1018L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Voltage Dips:

Test Level % UT	Reduction (%)	Number of Periods	Required Level	Performance criteria
70	30	10	C	B*

Voltage Interruptions:

Test Level % UT	Reduction (%)	Number of Periods	Required Level	Performance criteria
0	100	0.5	B	B*

Remark*: The product flickers during the test, but it can recover to normal by itself after testing.

TEST RESULT: PASS

Product	:	LED Strip	**Model/Type reference**	:	FE14C-P8-G1 38XRGB 24V144S W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Voltage Dips:

Test Level % UT	Reduction (%)	Number of Periods	Required Level	Performance criteria
70	30	10	C	B*

Voltage Interruptions:

Test Level % UT	Reduction (%)	Number of Periods	Required Level	Performance criteria
0	100	0.5	B	B*

Remark*: The product flickers during the test, but it can recover to normal by itself after testing.

TEST RESULT: PASS

Product	:	LED Strip	**Model/Type reference**	:	FH14D-P5-G1 50B1RGB 5V60S W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Voltage Dips:

Test Level % UT	Reduction (%)	Number of Periods	Required Level	Performance criteria
70	30	10	C	B*

Voltage Interruptions:

Test Level % UT	Reduction (%)	Number of Periods	Required Level	Performance criteria
0	100	0.5	B	B*

Remark*: The product flickers during the test, but it can recover to normal by itself after testing.

TEST RESULT: PASS

Product	:	LED Strip	**Model/Type reference**	:	FE18C-P5-G2 21X92721X960 24V560D W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Voltage Dips:

Test Level % UT	Reduction (%)	Number of Periods	Required Level	Performance criteria
70	30	10	C	B*

Voltage Interruptions:

Test Level % UT	Reduction (%)	Number of Periods	Required Level	Performance criteria
0	100	0.5	B	B*

Remark*: The product flickers during the test, but it can recover to normal by itself after testing.

TEST RESULT: PASS

Product	:	LED Strip	**Model/Type reference**	:	FHN11WR-P5-G1 06LZY 24V360D 15L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Voltage Dips:

Test Level % UT	Reduction (%)	Number of Periods	Required Level	Performance criteria
70	30	10	C	B*

Voltage Interruptions:

Test Level % UT	Reduction (%)	Number of Periods	Required Level	Performance criteria
0	100	0.5	B	B*

Remark*: The product flickers during the test, but it can recover to normal by itself after testing.

TEST RESULT: PASS

Product	:	LED Strip	**Model/Type reference**	:	FE18W-Px-G1 18X9x 24V350S W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Voltage Dips:

Test Level % UT	Reduction (%)	Number of Periods	Required Level	Performance criteria
70	30	10	C	B*

Voltage Interruptions:

Test Level % UT	Reduction (%)	Number of Periods	Required Level	Performance criteria
0	100	0.5	B	B*

Remark*: The product flickers during the test, but it can recover to normal by itself after testing.

TEST RESULT: PASS

Product	:	LED Strip	**Model/Type reference**	:	FE15W-Px-G1 COB9x 24V480S W10L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Voltage Dips:

Test Level % UT	Reduction (%)	Number of Periods	Required Level	Performance criteria
70	30	10	C	B*

Voltage Interruptions:

Test Level % UT	Reduction (%)	Number of Periods	Required Level	Performance criteria
0	100	0.5	B	B*

Remark*: The product flickers during the test, but it can recover to normal by itself after testing.

TEST RESULT: PASS

Product	:	LED Strip	**Model/Type reference**	:	FEN19CS-P7-G2 28HZ9x28HZ9x 24V240S 1018L05
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Voltage Dips:

Test Level % UT	Reduction (%)	Number of Periods	Required Level	Performance criteria
70	30	10	C	B*

Voltage Interruptions:

Test Level % UT	Reduction (%)	Number of Periods	Required Level	Performance criteria
0	100	0.5	B	B*

Remark*: The product flickers during the test, but it can recover to normal by itself after testing.

TEST RESULT: PASS

Product	:	LED Strip	**Model/Type reference**	:	FEN20D-Px-G1 50AXRGBW 24V24S 1222L10 x°
Power supply	:	AC 230V/50Hz	**Temperature**	:	25°C
Mode	:	ON	**Humidity**	:	60%

Voltage Dips:

Test Level % UT	Reduction (%)	Number of Periods	Required Level	Performance criteria
70	30	10	C	B*

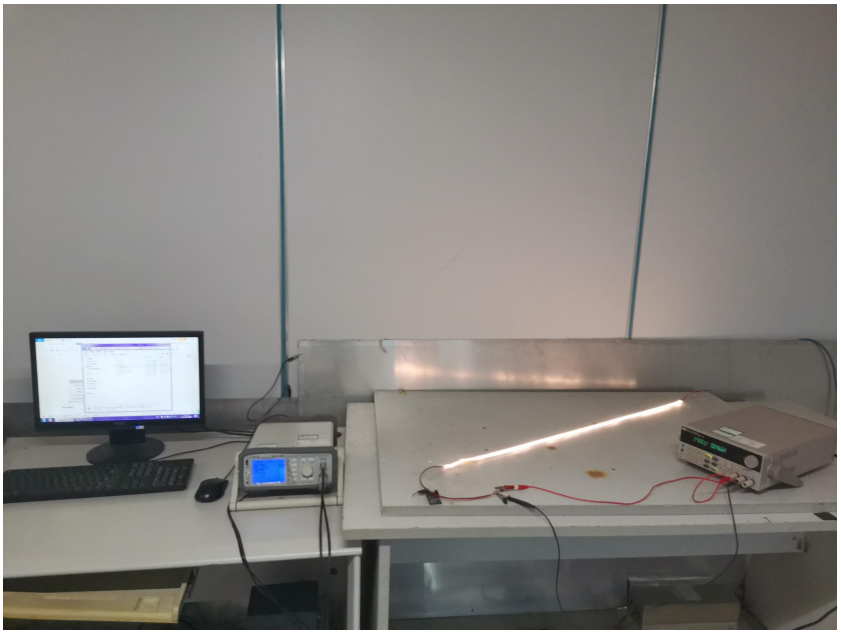
Voltage Interruptions:

Test Level % UT	Reduction (%)	Number of Periods	Required Level	Performance criteria
0	100	0.5	B	B*

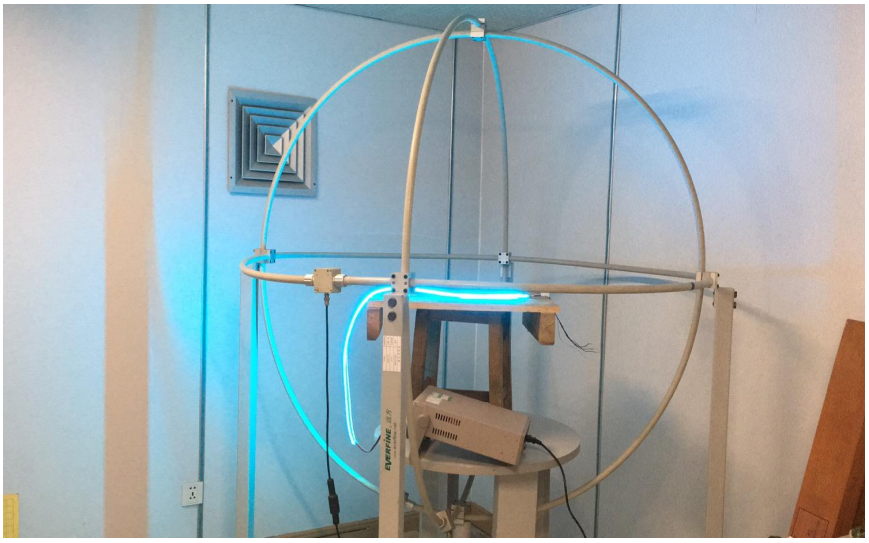
Remark*: The product flickers during the test, but it can recover to normal by itself after testing.

TEST RESULT: PASS

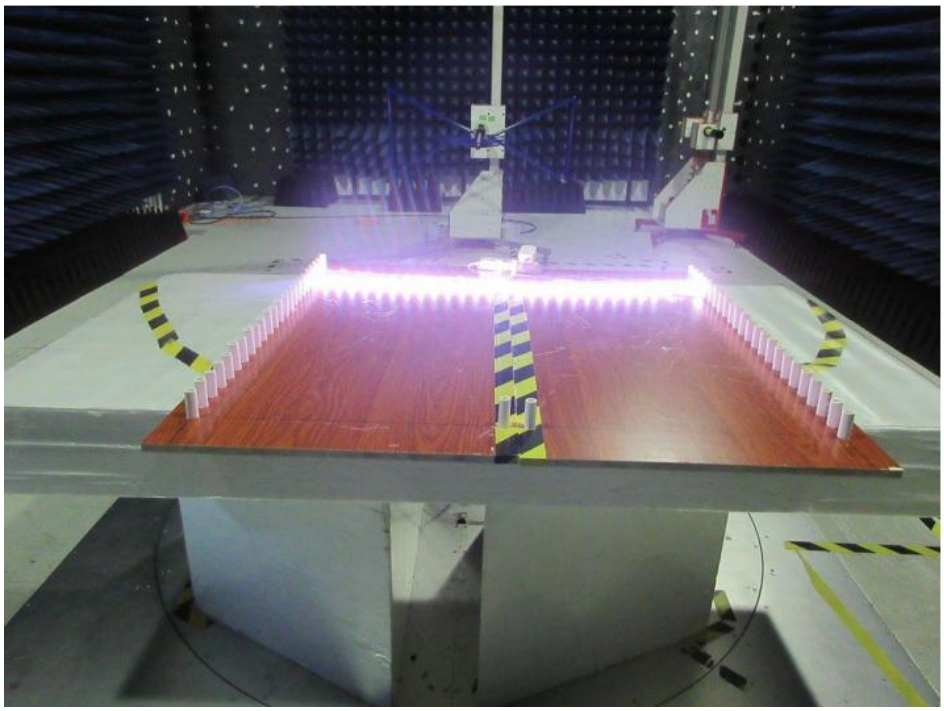
APPENDIX 1 PHOTOGRAPHS OF TEST SETUP



Disturbance Voltage Test Setup

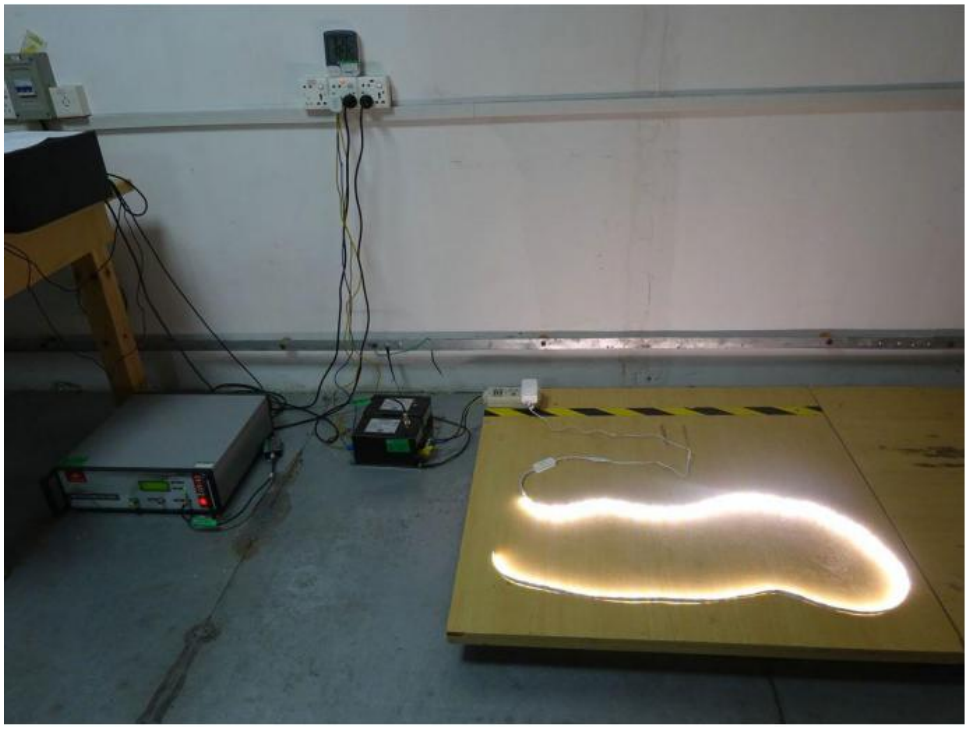


Radiated Electromagnetic Disturbances (Table 3a) Test Setup



Radiated Electromagnetic Disturbances (Table 3b) Test Setup

Harmonic&Flicker

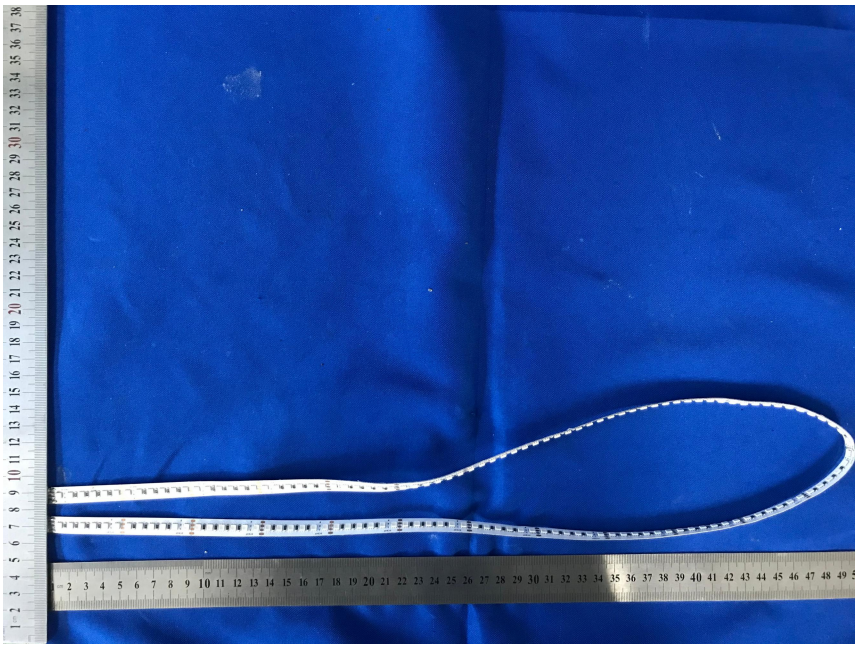


Injected currents Test Setup

Electrostatic Discharge Test Setup

Surge ,EFT,Dip Test Setup

APPENDIX 2 PHOTOGRAPHS OF PRODUCT



Appearance photograph of EUT

Appearance photograph of EUT

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