

EMC Test Report

Applicant: BOKE Drivers Co., Ltd.

Product: LED Driver

Model: BK-CTL042S-AHC1050ASW
(Other models refer to "1.4.1 Technical Description".)



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In accordance with EN IEC 55015, EN IEC 61000-3-2, EN 61000-3-3 and EN IEC 61547

Prepared for: BOKE Drivers Co., Ltd.
2nd and 3rd Floor, No.51, Xihuan 5th Road,
South District, 528455 Zhongshan City, Guangdong,
PEOPLE'S REPUBLIC OF CHINA

COMMERCIAL-IN-CONFIDENCE

Report Number: 65.740.24.057.01

RESPONSIBLE FOR	NAME	SIGNATURE	DATE
Approved by	Dawi Xu		2025-01-06
Prepared by	Dickson Feng		2025-01-06

Signatures in this approval box have checked this document in line with the requirements of TÜV SÜD Product Service control rules.

EXECUTIVE SUMMARY

The product was tested and found to be in compliance with EN IEC 55015:2019+A11:2020, EN IEC 61000-3-2:2019+A1:2021, EN 61000-3-3:2013+A1:2019+A2:2021 and EN IEC 61547:2023.

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TÜV SÜD Certification and Testing
(China) Co., Ltd. Shenzhen Branch

Building 12 & 13, Zhiheng
Wisdomland Business Park,
Guankou Erlu, Nantou, Nanshan
District, Shenzhen, 518052 China

Phone: +86 755 8828 6998
Fax: +86 755 8828 5299
www.tuvsud.cn



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1 Report Summary

1.1 Report Modification Record

Alterations and additions to this report will be issued to the holders of each copy in the form of a complete document.

Issue	Description of Change	Date of Issue
1	First Issue	2025-01-06

1.2 Introduction

The information contained in this report is intended to show verification of the EMC Qualification Approval Testing of the requirements of the standards for the tests listed in Section 1.3.

Applicant address	BOKE Drivers Co., Ltd. 2nd and 3rd Floor, No.51, Xihuan 5th Road, South District, 528455 Zhongshan City, Guangdong, PEOPLE'S REPUBLIC OF CHINA
Factory address	BOKE Drivers Co., Ltd. 2nd and 3rd Floor, No.51, Xihuan 5th Road, South District, 528455 Zhongshan City, Guangdong, PEOPLE'S REPUBLIC OF CHINA
Model Number(s)	BK-CTL042S-AHC1050ASW; BK-CTL042S-AHC1050ASB; BK-CTL042S-AHC1050ASG; BK-DSL042S-AHC1050ADNW; BK-DSL042S-AHC1050ADNB; BK-DSL042S-AHC1050ADNG; BK-DTL042S-AHC1050ADNW; BK-DTL042S-AHC1050ADNB; BK-DTL042S-AHC1050ADNG; BK-DSL042S-AHC1050ADPW; BK-DSL042S-AHC1050ADPB; BK-DSL042S-AHC1050ADPG; BK-DTL042S-AHC1050ADPW; BK-DTL042S-AHC1050ADPB; BK-DTL042S-AHC1050ADPG; BK-PTL030S-AHC0700ASW; BK-PTL030S-AHC0700ASB; BK-PTL030S-AHC0700ASG; BK-PTL042S-AHC1050ASW; BK-PTL042S-AHC1050ASB; BK-PTL042S-AHC1050ASG
Product Type	LED Driver
Trade Name	BOKE 
Test Specification	The product is compliance with following standards under EU and UK regulation: Directive 2014/30/EU and Electromagnetic Compatibility Regulations 2016. EN IEC 55015:2019+A11:2020, EN IEC 61000-3-2:2019+A1:2021, EN 61000-3-3:2013+A1:2019+A2:2021, EN IEC 61547:2023
Date of Receipt of EUT	2024-11-18
Start of Test	2024-11-18
Finish of Test	2024-12-31
Name of Engineer(s)	Dickson Feng

1.3 Brief Summary of Results

A brief summary of the tests carried out in accordance with EN IEC 55015, EN IEC 61000-3-2, EN 61000-3-3 and EN IEC 61547 is shown below.

Specification	Clause	Test Description	Result	Comments/Base Standard
EN IEC 55015:2019+A11:2020	4.3.1	Disturbance voltage at the electric power supply ports	Pass	N/A
EN IEC 55015:2019+A11:2020	4.3.2	Disturbance voltage at wired network ports	Pass	N/A
EN IEC 55015:2019+A11:2020	4.4	Disturbance Current at local wired ports	N/A	N/A
EN IEC 55015:2019+A11:2020	4.5.2	Radiated Disturbance (9KHz to 30MHz)	Pass	N/A
EN IEC 55015:2019+A11:2020	4.5.3	Radiated Disturbance (30MHz to 1000MHz)	Pass	N/A
EN IEC 61000-3-2:2019+A1:2021	7	Harmonic Current Emissions	Pass	N/A
EN 61000-3-3:2013+A1:2019+A2:2021	5	Flicker*	N/A	N/A
EN IEC 61547:2023	5.2	Electrostatic discharge immunity test	Pass	IEC 61000-4-2
EN IEC 61547:2023	5.3	Radiated, radio-frequency, electromagnetic field immunity test	Pass	IEC 61000-4-3
EN IEC 61547:2023	5.4	Power frequency magnetic field immunity test**	N/A	IEC 61000-4-8
EN IEC 61547:2023	5.5	Electrical fast transient /burst immunity test	Pass	IEC 61000-4-4
EN IEC 61547:2023	5.6	Immunity to conducted disturbances, induced by radio-frequency fields	Pass	IEC 61000-4-6
EN IEC 61547:2023	5.7	Surge immunity test	Pass	IEC 61000-4-5
EN IEC 61547:2023	5.8	Voltage dips, short interruptions and voltage variations immunity test	Pass	IEC 61000-4-11

Note:

“**” Limits are not specified when LED lamp luminaires with rating less than or equal to 600W (EN 61000-3-3:2013+A1:2019+A2:2021, Annex A (A.2))

“***” Only applied to equipment containing components susceptible to magnetic fields, such as Hall elements or magnetic field sensors.

1.4 Product Information

1.4.1 Technical Description

Model Number(s):	BK-CTL042S-AHC1050ASW; BK-CTL042S-AHC1050ASB; BK-CTL042S-AHC1050ASG; BK-DSL042S-AHC1050ADNW; BK-DSL042S-AHC1050ADNB; BK-DSL042S-AHC1050ADNG; BK-DTL042S-AHC1050ADNW; BK-DTL042S-AHC1050ADNB; BK-DTL042S-AHC1050ADNG; BK-DSL042S-AHC1050ADPW; BK-DSL042S-AHC1050ADPB; BK-DSL042S-AHC1050ADPG; BK-DTL042S-AHC1050ADPW; BK-DTL042S-AHC1050ADPB; BK-DTL042S-AHC1050ADPG; BK-PTL030S-AHC0700ASW; BK-PTL030S-AHC0700ASB; BK-PTL030S-AHC0700ASG; BK-PTL042S-AHC1050ASW; BK-PTL042S-AHC1050ASB; BK-PTL042S-AHC1050ASG
Rated Input Voltage:	200-240V AC/DC
Rated Frequency:	0/50/60Hz
Rated Input Current:	See "Model list" details
Rated Output:	See "Model list" details
Protection against Electric Shock:	Class II; SELV

General product information:

- These LED Drivers are suitable for operation with LED modules only.
- Model list:

Model	Rated Input Current (A) Max.	P _{rated} (W) Max.	Output Voltage (VDC)	I _{rated} (mA)	U _{out} (VDC)	Compatible Track
BK-CTL042S-AHC1050ASW; BK-CTL042S-AHC1050ASB; BK-CTL042S-AHC1050ASG	0.25	12.60	10-42	300	55	PRO-0410; 25-XX-Y; 26-XX-Y; 19-XX-Y; PRO-04XX-Y; PRO-R4XX-Y; JB4; XTS4200-2
		14.70	10-42	350		
		16.80	10-42	400		
		18.90	10-42	450		
		21.00	10-42	500		
		23.10	10-42	550		
		25.20	10-42	600		
		27.30	10-42	650		
		29.40	10-42	700		
		31.50	10-42	750		
		33.60	10-42	800		
		35.70	10-42	850		
		37.80	10-42	900		
		39.90	10-42	950		
		42.00	10-42	1000		
		42.00	10-40	1050		
BK-DSL042S-AHC1050ADNW; BK-DSL042S-AHC1050ADNB; BK-DSL042S-AHC1050ADNG;	0.25	42.00	10-42	150-1050	59	PRO-0410; 25-XX-Y;



BK-DTL042S-AHC1050ADNW; BK-DTL042S-AHC1050ADNB; BK-DTL042S-AHC1050ADNG						26-XX-Y; 19-XX-Y; PRO-04XX-Y; PRO-R4XX-Y; JB4; XTS4200-2
BK-DSL042S-AHC1050ADPW; BK-DSL042S-AHC1050ADPB; BK-DSL042S-AHC1050ADPG; BK-DTL042S-AHC1050ADPW; BK-DTL042S-AHC1050ADPB; BK-DTL042S-AHC1050ADPG	0.25	12.60 14.70 16.80 18.90 21.00 23.10 25.20 27.30 29.40 31.50 33.60 35.70 37.80 39.90 42.00 42.00	10-42 10-42 10-42 10-42 10-42 10-42 10-42 10-42 10-42 10-42 10-42 10-42 10-42 10-42 10-42 10-40	300 350 400 450 500 550 600 650 700 750 800 850 900 950 1000 1050	59	PRO-0610; PRO-06XX-Y; PRO-R6XX-Y; JB6; XTS6200-2
BK-PTL030S-AHC0700ASW; BK-PTL030S-AHC0700ASB; BK-PTL030S-AHC0700ASG	0.164	6.30 8.40 10.50 12.60 14.70 16.80 18.90 21.00 23.10 25.20 27.30 29.40	10-42 10-42 10-42 10-42 10-42 10-42 10-42 10-42 10-42 10-42 10-42 10-42	150 200 250 300 350 400 450 500 550 600 650 700	55	PRO-0410; 25-XX-Y; 26-XX-Y; 19-XX-Y; PRO-04XX-Y; PRO-R4XX-Y; JB4; XTS4200-2
BK-PTL042S-AHC1050ASW; BK-PTL042S-AHC1050ASB; BK-PTL042S-AHC1050ASG	0.25	12.60 14.70 16.80 18.90 21.00 23.10 25.20 27.30 29.40 31.50 33.60 35.70 37.80 39.90 42.00 42.00	10-42 10-42 10-42 10-42 10-42 10-42 10-42 10-42 10-42 10-42 10-42 10-42 10-42 10-42 10-42 10-40	300 350 400 450 500 550 600 650 700 750 800 850 900 950 1000 1050	55	PRO-0410; 25-XX-Y; 26-XX-Y; 19-XX-Y; PRO-04XX-Y; PRO-R4XX-Y; JB4; XTS4200-2

3. Model different description 1:

Series	Model No.	Size (L*W*H) (mm)	Weight (g)	Transformer (T1)	PCB code
1	BK-CTL042S-AHC1050ASW; BK-CTL042S-AHC1050ASB; BK-CTL042S-AHC1050ASG	172*42*31	125	BKT-EDR3810-003	CTL042S
2	BK-DSL042S-AHC1050ADNW; BK-DSL042S-AHC1050ADNB; BK-DSL042S-AHC1050ADNG; BK-DTL042S-AHC1050ADNW; BK-DTL042S-AHC1050ADNB; BK-DTL042S-AHC1050ADNG; BK-DSL042S-AHC1050ADPW; BK-DSL042S-AHC1050ADPB; BK-DSL042S-AHC1050ADPG; BK-DTL042S-AHC1050ADPW; BK-DTL042S-AHC1050ADPB; BK-DTL042S-AHC1050ADPG	235*42*31	160	BKT-EDR3810-003	DSL042S
3	BK-PTL030S-AHC0700ASW; BK-PTL030S-AHC0700ASB; BK-PTL030S-AHC0700ASG; BK-PTL042S-AHC1050ASW; BK-PTL042S-AHC1050ASB; BK-PTL042S-AHC1050ASG	158*42*31	130	BKT-EDR3810-004 BKT-EDR3810-003	PTL042S

4. Model different description 2:

Series	Model No.	DALI dimming	Output CCT switch	Output DIP switch	Others
1	BK-CTL042S-AHC1050ASW; BK-CTL042S-AHC1050ASB; BK-CTL042S-AHC1050ASG	No	Yes	Yes	--
2	BK-DSL042S-AHC1050ADNW; BK-DSL042S-AHC1050ADNB; BK-DSL042S-AHC1050ADNG; BK-DTL042S-AHC1050ADNW; BK-DTL042S-AHC1050ADNB; BK-DTL042S-AHC1050ADNG; BK-DSL042S-AHC1050ADPW; BK-DSL042S-AHC1050ADPB; BK-DSL042S-AHC1050ADPG; BK-DTL042S-AHC1050ADPW; BK-DTL042S-AHC1050ADPB; BK-DTL042S-AHC1050ADPG	Yes	No No No No	No No Yes Yes	Constant light output function (CLO): the rated output current is max. output to light source configured before delivery by manufacturer.
3	BK-PTL030S-AHC0700ASW; BK-PTL030S-AHC0700ASB; BK-PTL030S-AHC0700ASG; BK-PTL042S-AHC1050ASW; BK-PTL042S-AHC1050ASB; BK-PTL042S-AHC1050ASG	No	No	Yes	--

5. There are 3 kinds of PCB layout used for above series, the models in each series have the same circuit and layout, except that specifications of components are different.

6. Due to the similarities between models, EMC full tests were applied on models BK-DSL042S-AHC1050ADPW, BK-CTL042S-AHC1050ASW and BK-PTL042S-AHC1050ASW, other models are deemed to fulfill relevant EMC requirement without further testing.

1.4.2 EUT Port/Cable/Auxiliary Equipment Identification

Port	Max Cable Length specified	Usage	Type	Screened
AC/DC Power cable	/	/	/	/
Control lines	/	/	/	/
Load lines	<3m	/	/	/

Auxiliary Equipment	Brand, Model, Serial	Cable Description (List Length, Type & Purpose)	Remark
LED load	---	---	---
Dimmer	---	---	---

1.4.3 Test Configuration

Configuration	Description
AC or DC Powered	230VAC, 50Hz & 230VDC

1.4.4 Modes of Operation

Mode	Description
ON (Maximum power)	The LED Driver (EUT) was testing with LED load and change the dimming Settings, to get the status 'Maximum load'.
ON (Minimum power)	The LED Driver (EUT) was testing with LED load and change the dimming Settings, to get the status 'Minimum load'.
ON (Medium power)	The LED Driver (EUT) was testing with LED load and changing the dimming Settings, to get the status '50% load'.
ON (Maximum THC)	The LED Driver (EUT) was testing with LED load and change the dimming Settings, to get the status 'ON (Maximum THC)'.
Handling mode	During handling: Electrostatic discharges shall be applied to interconnecting pins, terminals or any metal parts of end-user replaceable modules which are accessible during installation and maintenance by the end-user. Tests shall be carried out without the host whereas the assessment of the performance of the module may be done inside the host configuration. (Only for ESD)
Remark: The worst case was list in the report.	



1.4.5 Performance Criteria

Performance 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.

Performance 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.

Performance 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.

1.5 Deviations from the Standard

No deviations from the applicable test standard were made during testing.

1.6 Test Location

Test Site 1:

Company name: TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch

Address: Building 12 & 13, Zhiheng Wisdomland Business Park, Guankou Erlu,
Nantou, Nanshan District, Shenzhen, 518052 China

Test Name	Name of Engineer(s)	Test site
Disturbance voltage at the electric power supply ports	Lillie Huang	1
Disturbance voltage at wired network ports	Lillie Huang	1
Disturbance Current at local wired ports	N/A	N/A
Radiated Disturbance (9KHz to 30MHz)	Lillie Huang	1
Radiated Disturbance (30MHz to 1000MHz)	Lillie Huang	1
Harmonic Current Emissions	Leo Wei	1
Flicker	N/A	N/A
Electrostatic discharge immunity test	Leo Wei	1
Radiated, radio-frequency, electromagnetic field immunity test	Adam Yang	1
Power frequency magnetic field immunity test	N/A	N/A
Electrical fast transient /burst immunity test	Reader Sang	1
Immunity to conducted disturbances, induced by radio-frequency fields	Reader Sang	1
Surge immunity test	Reader Sang	1
Voltage dips, short interruptions and voltage variations immunity test	Reader Sang	1

2 Test Details

2.1 Disturbance voltage at the electric power supply ports

2.1.1 Specification Reference

EN IEC 55015:2019+A11:2020, Clause 4.3.1

2.1.2 Equipment Under Test

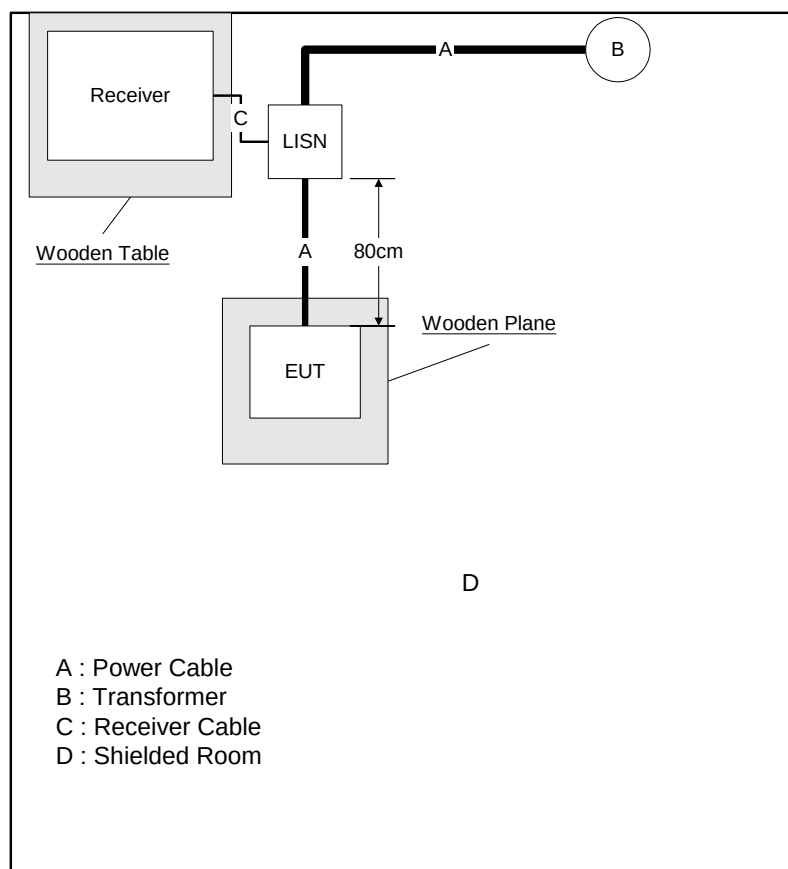
BK-DSL042S-AHC1050ADPW, BK-CTL042S-AHC1050ASW and BK-PTL042S-AHC1050ASW

2.1.3 Date of Test

2024-12-31

2.1.4 Test Method

The disturbance voltage shall be measured at the main terminals of the lighting equipment by means of the arrangement described in Figure 5 and 6 for the relevant type of equipment. The output terminals of the artificial mains network (AMN) and the terminals a-b shall be positioned $0,8\text{m} \pm 20\%$ apart and shall be connected by the two power conductors of a flexible three-core cable of 0,8m length.



2.1.5 Environmental Conditions

Ambient Temperature	22.1 °C
Relative Humidity	51.6 %
Atmospheric Pressure	1015.0 mbar

2.1.6 Specification Limits

Disturbance voltage limits at the electric power supply ports		
Frequency range	Limits dB(μV)	
	Quasi-peak	Average
9kHz to 50kHz	110	--
50kHz to 150kHz	90 to 80	--
150kHz to 0.5MHz	66 to 56	56 to 46
0.5MHz to 5.0MHz	56	46
5.0MHz to 30MHz	60	50

Remark:

Level=Reading Level + Correction Factor

Correction Factor=Cable Loss + LISN Factor

(The Reading Level is recorded by software which is not shown in the sheet)



2.1.7 Test Results

M/N: BK-DSL042S-AHC1050ADPW

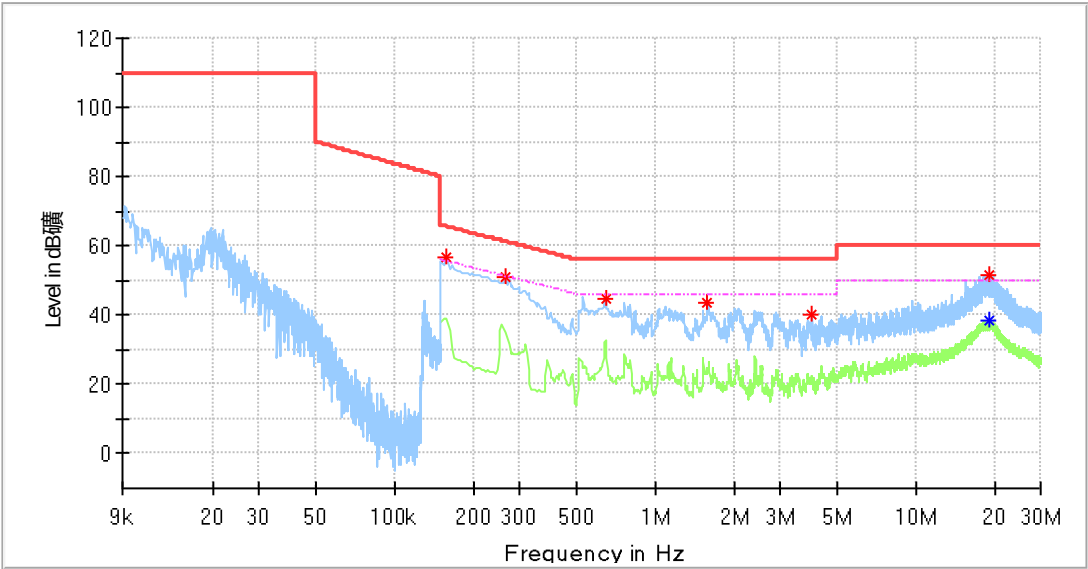
Op Cond.: ON (Maximum power)

Comment: AC 230V/50Hz

Line Under Test: Power Line, Live

Date of Test: 2024-12-31

Detailed results are shown below



Critical Freqs

Frequency (MHz)	MaxPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
0.158000	56.45	---	65.57	9.12	L1	10.30
0.266000	51.03	---	61.24	10.21	L1	10.30
0.646000	44.56	---	56.00	11.44	L1	10.32
1.582000	43.36	---	56.00	12.64	L1	10.35
3.998000	40.15	---	56.00	15.85	L1	10.43
18.942000	51.77	---	60.00	8.23	L1	11.85
18.974000	---	38.44	50.00	11.56	L1	11.86

Final Result

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
---	---	---	---	---		---



M/N: BK-DSL042S-AHC1050ADPW

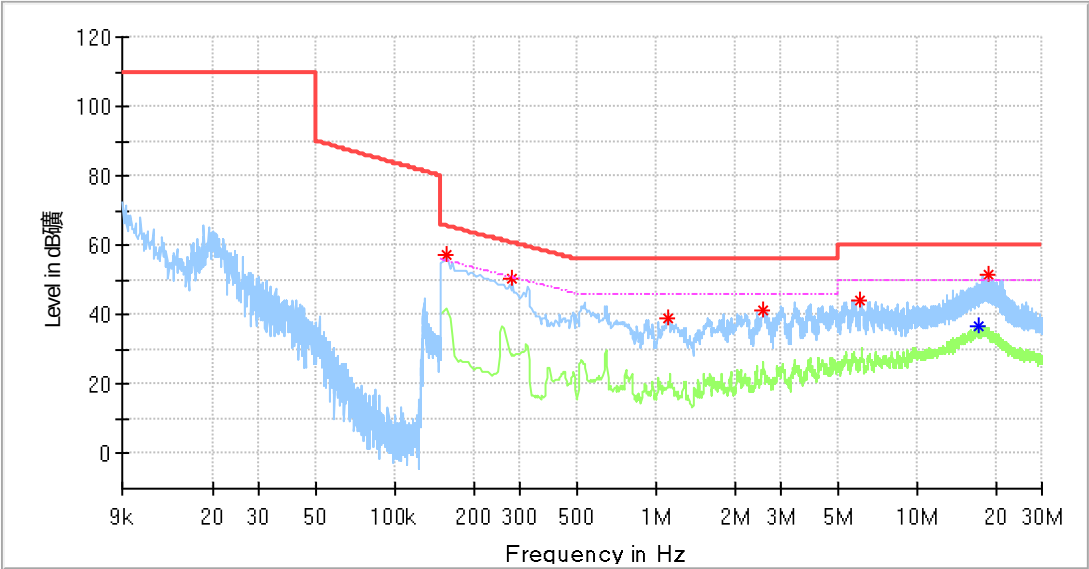
Op Cond.: ON (Maximum power)

Comment: AC 230V/50Hz

Line Under Test: Power Line, Neutral

Date of Test: 2024-12-31

Detailed results are shown below



Critical Freqs

Frequency (MHz)	MaxPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
0.158000	57.04	---	65.57	8.52	N	10.34
0.282000	50.42	---	60.76	10.34	N	10.33
1.102000	39.22	---	56.00	16.78	N	10.36
2.574000	41.58	---	56.00	14.42	N	10.43
6.078000	43.92	---	60.00	16.08	N	10.63
17.262000	---	37.02	50.00	12.98	N	11.56
18.770000	51.67	---	60.00	8.33	N	11.55

Final Result

Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
---	---	---	---	---		---



M/N: BK-DSL042S-AHC1050ADPW

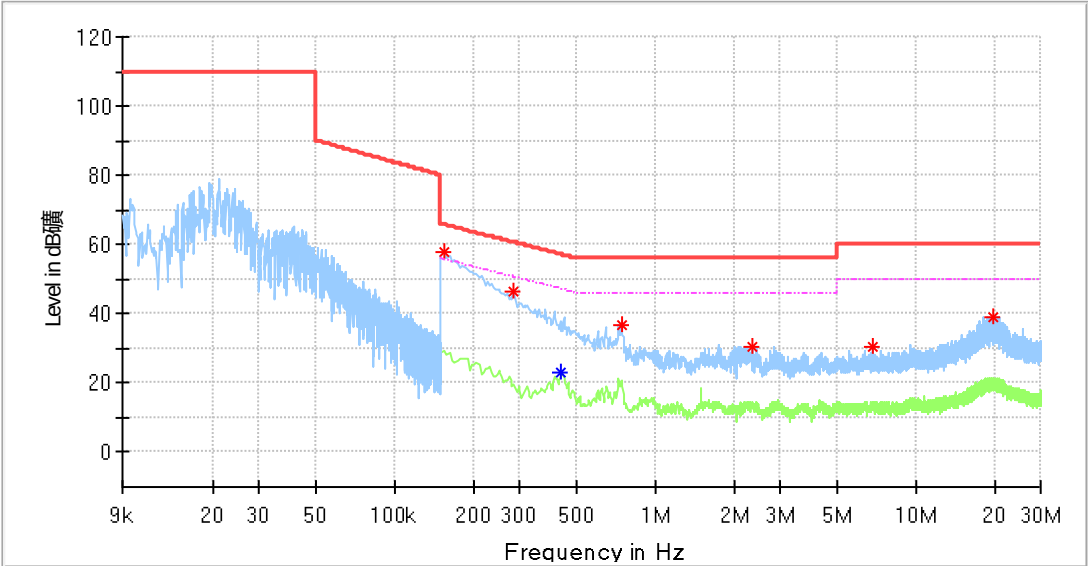
Op Cond.: ON (Minimum power)

Comment: AC 230V/50Hz

Line Under Test: Power Line, Live

Date of Test: 2024-12-31

Detailed results are shown below



Critical Freqs

Frequency (MHz)	MaxPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
0.154000	57.64	---	65.78	8.14	L1	10.30
0.286000	46.70	---	60.64	13.94	L1	10.30
0.434000	---	23.02	47.18	24.16	L1	10.30
0.738000	36.64	---	56.00	19.36	L1	10.32
2.358000	30.69	---	56.00	25.31	L1	10.38
6.846000	30.68	---	60.00	29.32	L1	10.54
19.826000	39.18	---	60.00	20.82	L1	12.07

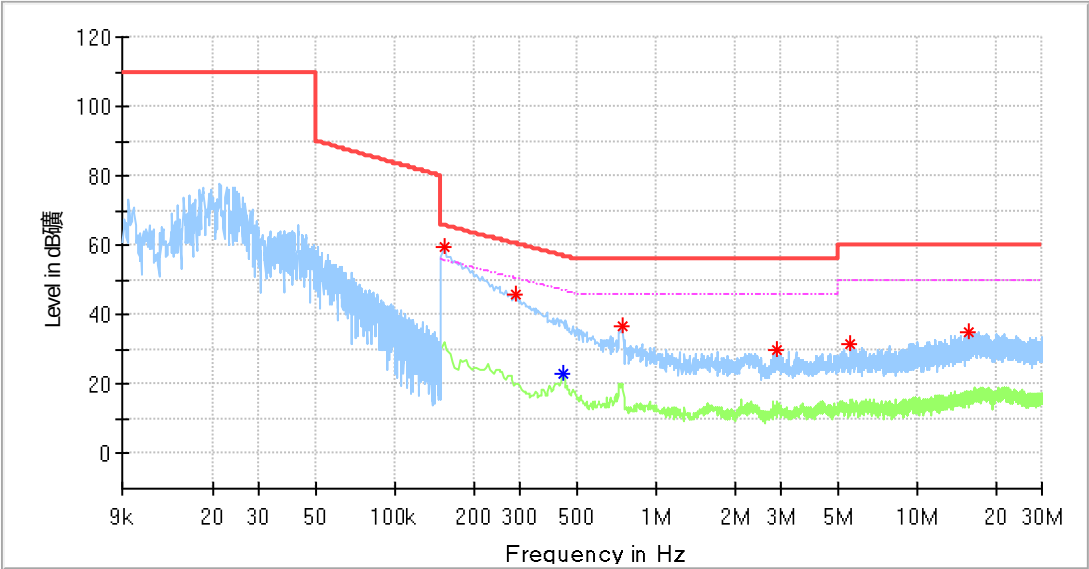
Final Result

Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
---	---	---	---	---		---



M/N:
Op Cond.:
Comment:
Line Under Test:
Date of Test:
Detailed results are shown below

BK-DSL042S-AHC1050ADPW
ON (Minimum power)
AC 230V/50Hz
Power Line, Neutral
2024-12-31



Critical Freqs

Frequency (MHz)	MaxPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
0.154000	59.37	---	65.78	6.41	N	10.34
0.290000	45.82	---	60.52	14.70	N	10.33
0.442000	---	23.28	47.02	23.75	N	10.34
0.738000	36.67	---	56.00	19.33	N	10.35
2.874000	29.81	---	56.00	26.19	N	10.44
5.570000	31.41	---	60.00	28.59	N	10.60
15.794000	34.84	---	60.00	25.16	N	11.56

Final Result

Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
---	---	---	---	---		---



M/N: BK-DSL042S-AHC1050ADPW

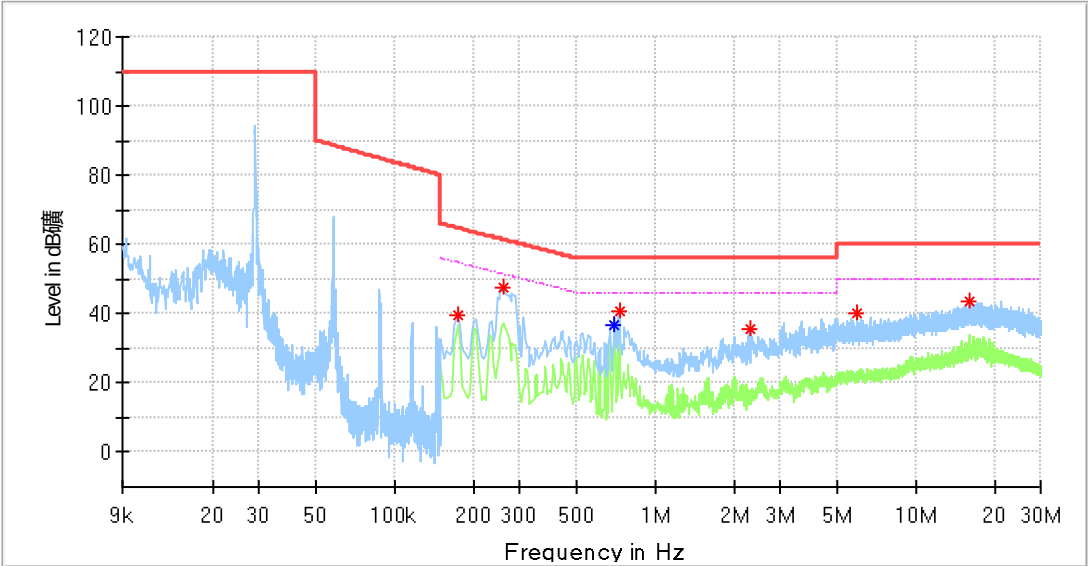
Op Cond.: ON (Maximum power)

Comment: DC 230V

Line Under Test: Power Line, Live

Date of Test: 2024-12-31

Detailed results are shown below



Critical Freqs

Frequency (MHz)	MaxPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
0.174000	39.62	---	64.77	25.15	L1	10.30
0.262000	47.40	---	61.37	13.96	L1	10.30
0.698000	---	36.90	46.00	9.10	L1	10.32
0.726000	40.51	---	56.00	15.49	L1	10.32
2.290000	35.60	---	56.00	20.40	L1	10.38
5.970000	40.10	---	60.00	19.90	L1	10.51
16.038000	43.84	---	60.00	16.16	L1	11.10

Final Result

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
---	---	---	---	---		---



M/N: BK-DSL042S-AHC1050ADPW

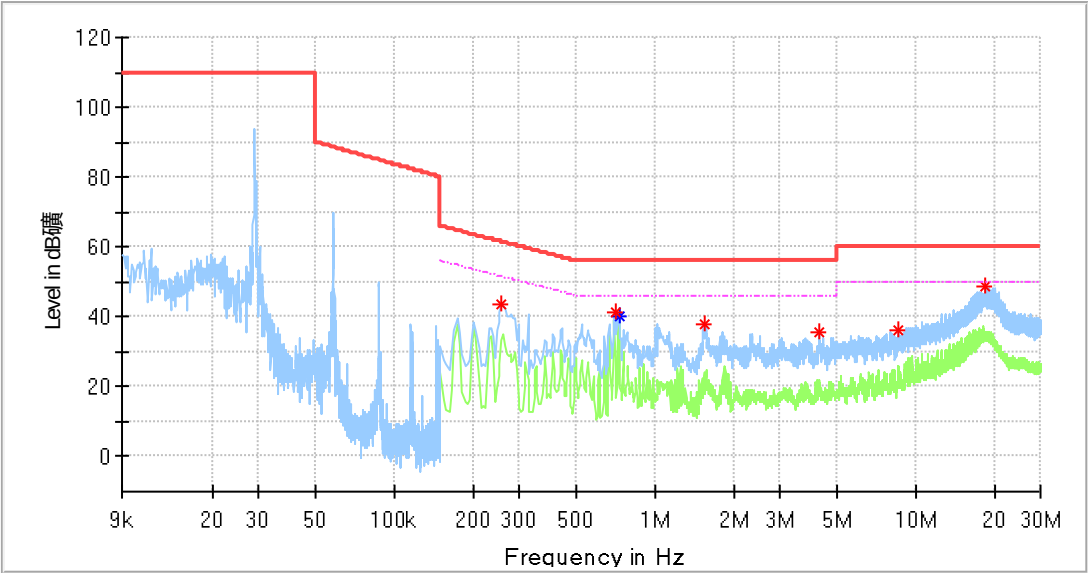
Op Cond.: ON (Maximum power)

Comment: DC 230V

Line Under Test: Power Line, Neutral

Date of Test: 2024-12-31

Detailed results are shown below



Critical_Freqs

Frequency (MHz)	MaxPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
0.258000	43.34	---	61.50	18.16	N	10.33
0.706000	41.05	---	56.00	14.95	N	10.34
0.726000	---	39.98	46.00	6.02	N	10.35
1.534000	38.17	---	56.00	17.83	N	10.39
4.234000	35.45	---	56.00	20.55	N	10.52
8.586000	36.14	---	60.00	23.86	N	10.80
18.434000	48.70	---	60.00	11.30	N	11.55

Final_Result

Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
---	---	---	---	---		---



M/N: BK-CTL042S-AHC1050ASW

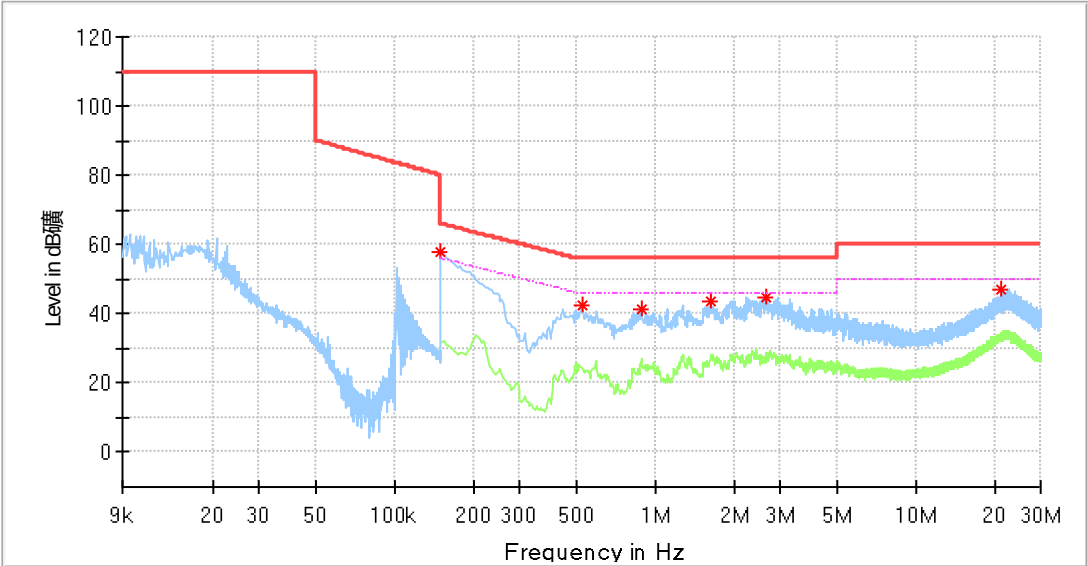
Op Cond.: ON (Maximum power)

Comment: AC 230V/50Hz

Line Under Test: Power Line, Live

Date of Test: 2024-12-31

Detailed results are shown below



Critical Freqs

Frequency (MHz)	MaxPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
0.150000	57.57	---	66.00	8.43	L1	10.29
0.522000	42.54	---	56.00	13.46	L1	10.31
0.878000	41.25	---	56.00	14.75	L1	10.32
1.618000	43.74	---	56.00	12.26	L1	10.35
2.638000	44.60	---	56.00	11.40	L1	10.38
21.306000	47.02	---	60.00	12.98	L1	12.12

Final Result

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
---	---	---	---	---		---



M/N: BK-CTL042S-AHC1050ASW

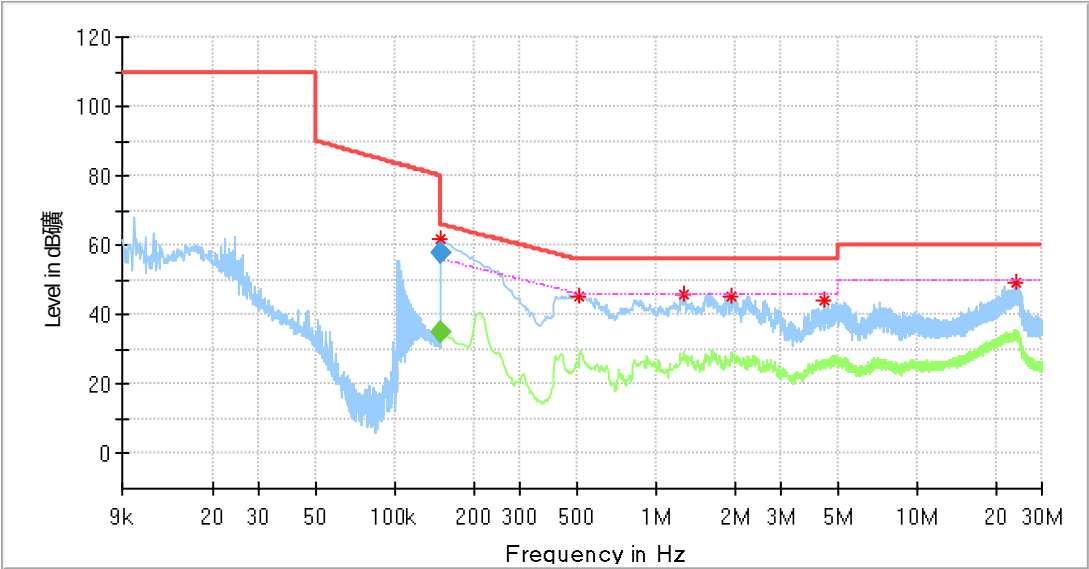
Op Cond.: ON (Maximum power)

Comment: AC 230V/50Hz

Line Under Test: Power Line, Neutral

Date of Test: 2024-12-31

Detailed results are shown below



Critical_Freqs

Frequency (MHz)	MaxPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
0.150000	61.64	---	66.00	4.36	N	10.28
0.506000	45.33	---	56.00	10.67	N	10.30
1.286000	45.85	---	56.00	10.15	N	10.33
1.942000	45.30	---	56.00	10.70	N	10.35
4.438000	43.91	---	56.00	12.09	N	10.45
23.834000	49.16	---	60.00	10.84	N	11.13

Final_Result

Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
0.150000	---	35.00	56.00	21.00	N	10.28
0.150000	57.98	---	80.00	8.02	N	10.28



M/N: BK-CTL042S-AHC1050ASW

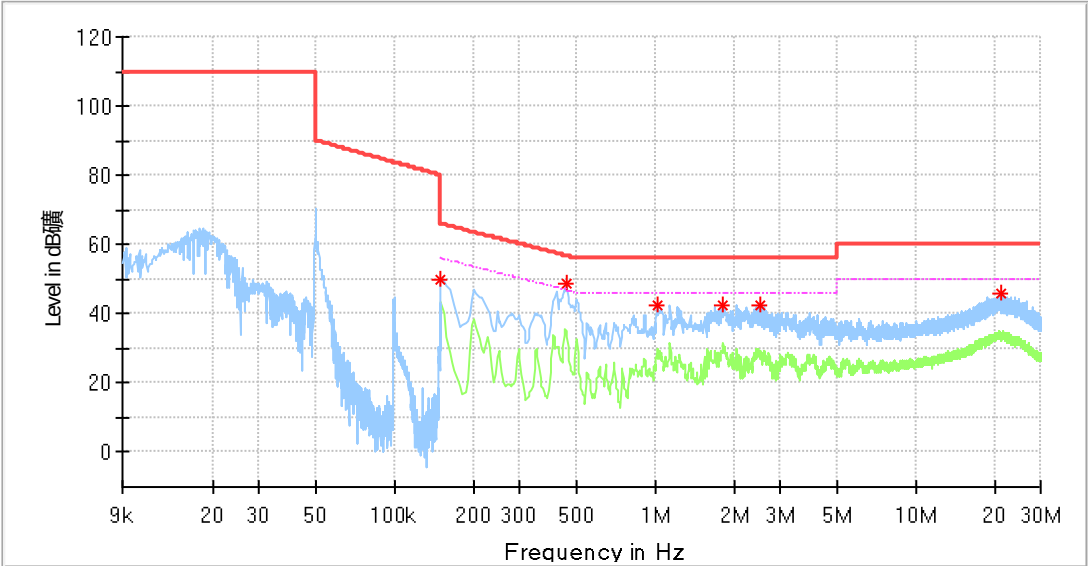
Op Cond.: ON (Minimum power)

Comment: AC 230V/50Hz

Line Under Test: Power Line, Live

Date of Test: 2024-12-31

Detailed results are shown below



Critical Freqs

Frequency (MHz)	MaxPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
0.150000	50.14	---	66.00	15.86	L1	10.29
0.454000	48.86	---	56.80	7.94	L1	10.31
1.014000	42.28	---	56.00	13.72	L1	10.32
1.814000	42.56	---	56.00	13.44	L1	10.36
2.526000	42.36	---	56.00	13.64	L1	10.38
21.090000	45.96	---	60.00	14.04	L1	12.11

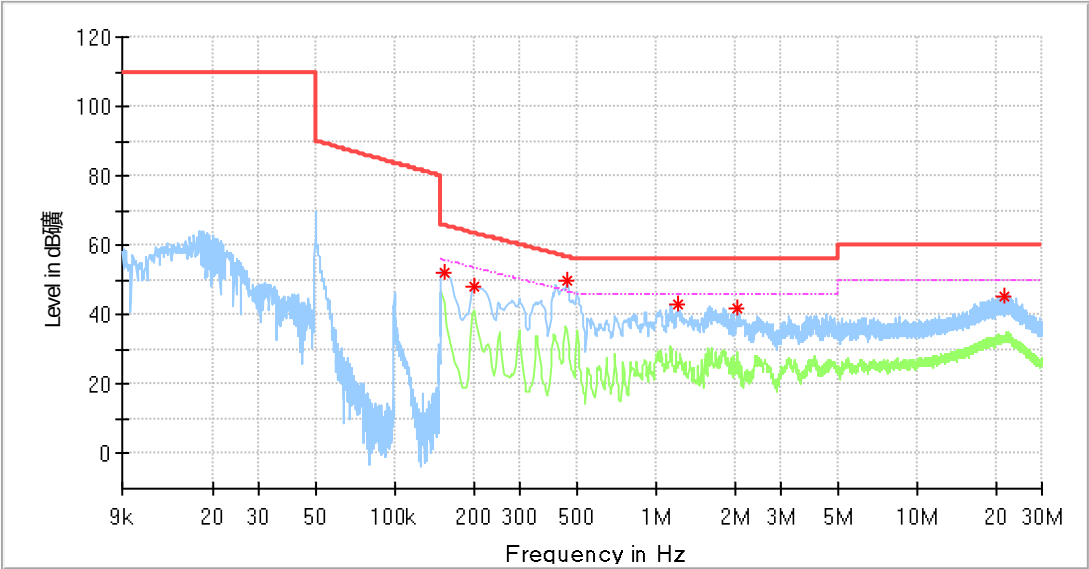
Final Result

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
---	---	---	---	---		---



M/N:
Op Cond.:
Comment:
Line Under Test:
Date of Test:
Detailed results are shown below

BK-CTL042S-AHC1050ASW
ON (Minimum power)
AC 230V/50Hz
Power Line, Neutral
2024-12-31



Critical_Freqs

Frequency (MHz)	MaxPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
0.154000	52.25	---	65.78	13.53	N	10.30
0.202000	48.43	---	63.53	15.10	N	10.30
0.454000	49.62	---	56.80	7.18	N	10.30
1.206000	42.90	---	56.00	13.10	N	10.32
2.030000	42.04	---	56.00	13.96	N	10.36
21.698000	45.57	---	60.00	14.43	N	11.07

Final_Result

Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
---	---	---	---	---		---



M/N: BK-CTL042S-AHC1050ASW

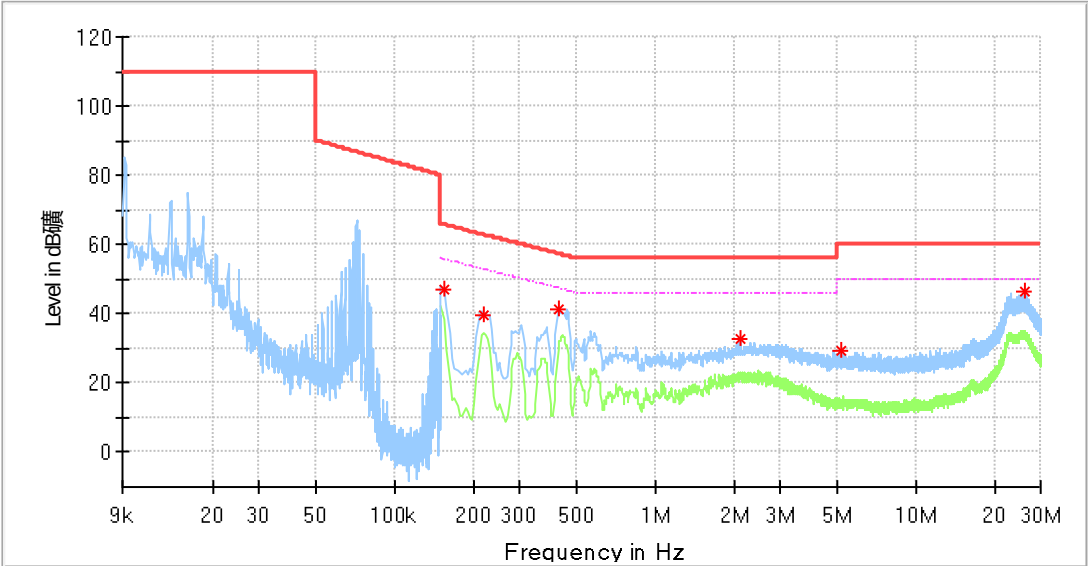
Op Cond.: ON (Maximum power)

Comment: DC 230V

Line Under Test: Power Line, Live

Date of Test: 2024-12-31

Detailed results are shown below



Critical Freqs

Frequency (MHz)	MaxPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
0.154000	47.22	---	65.78	18.56	L1	10.31
0.218000	39.76	---	62.89	23.13	L1	10.30
0.426000	41.37	---	57.33	15.96	L1	10.30
2.102000	32.64	---	56.00	23.36	L1	10.37
5.150000	29.28	---	60.00	30.72	L1	10.47
26.082000	46.32	---	60.00	13.68	L1	12.12

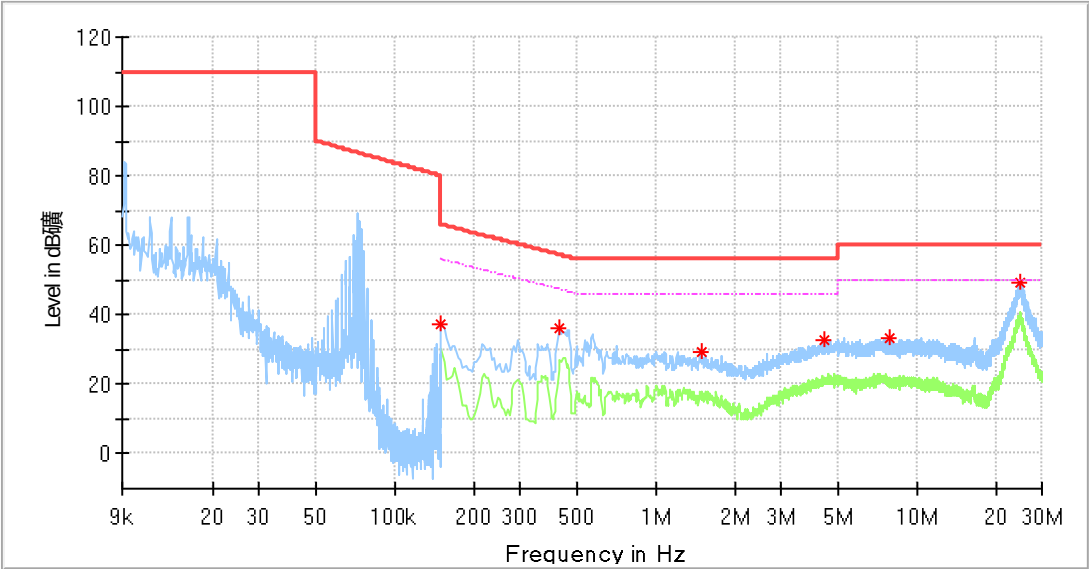
Final Result

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
---	---	---	---	---		---



M/N:
Op Cond.:
Comment:
Line Under Test:
Date of Test:
Detailed results are shown below

BK-CTL042S-AHC1050ASW
ON (Maximum power)
DC 230V
Power Line, Neutral
2024-12-31



Critical_Freqs

Frequency (MHz)	MaxPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
0.150000	37.27	---	66.00	28.73	N	10.28
0.426000	36.06	---	57.33	21.27	N	10.30
1.482000	29.29	---	56.00	26.71	N	10.34
4.394000	32.50	---	56.00	23.50	N	10.45
7.866000	33.56	---	60.00	26.44	N	10.60
24.622000	49.46	---	60.00	10.54	N	11.10

Final_Result

Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
---	---	---	---	---		---



M/N: BK-CTL042S-AHC1050ASW

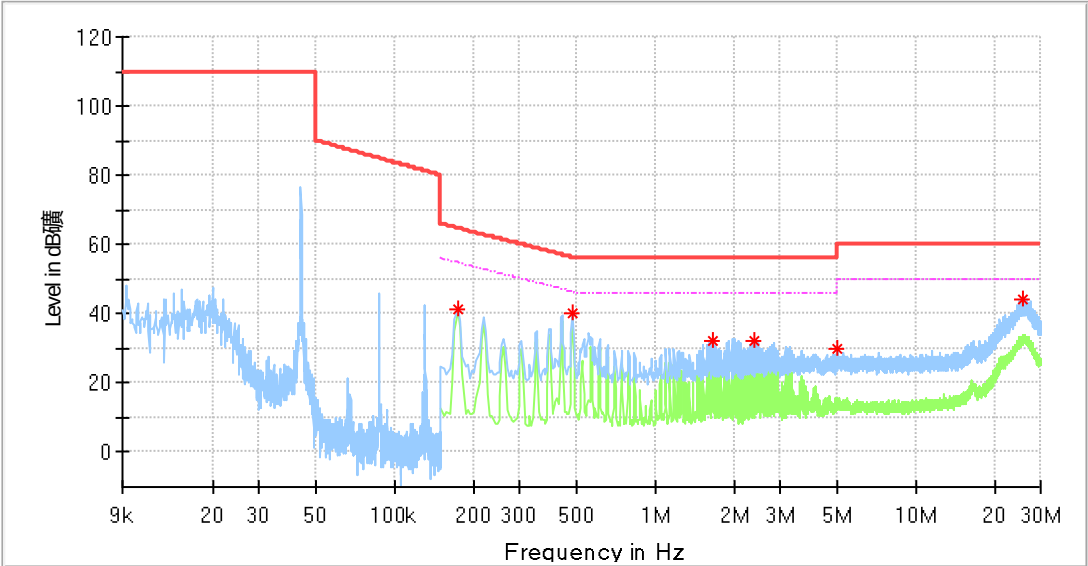
Op Cond.: ON (Minimum power)

Comment: AC 230V/50Hz

Line Under Test: Power Line, Live

Date of Test: 2024-12-31

Detailed results are shown below



Critical Freqs

Frequency (MHz)	MaxPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
0.174000	41.56	---	64.77	23.21	L1	10.31
0.478000	39.95	---	56.37	16.42	L1	10.31
1.654000	32.47	---	56.00	23.53	L1	10.35
2.398000	31.98	---	56.00	24.02	L1	10.38
5.014000	29.94	---	60.00	30.06	L1	10.46
25.578000	44.09	---	60.00	15.91	L1	12.11

Final Result

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
---	---	---	---	---		---



M/N: BK-CTL042S-AHC1050ASW

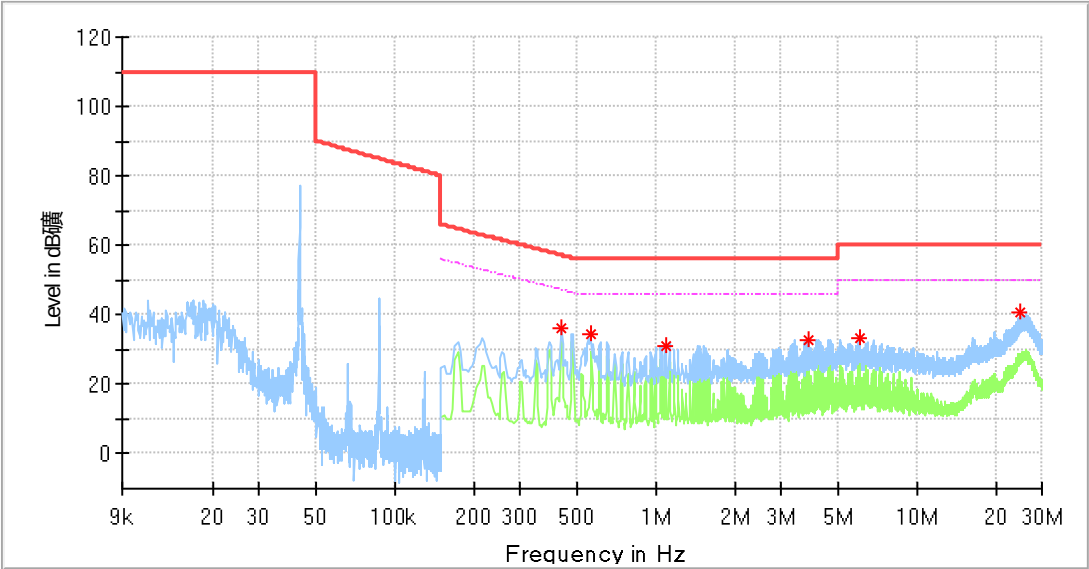
Op Cond.: ON (Minimum power)

Comment: AC 230V/50Hz

Line Under Test: Power Line, Neutral

Date of Test: 2024-12-31

Detailed results are shown below



Critical_Freqs

Frequency (MHz)	MaxPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
0.434000	36.40	---	57.18	20.78	N	10.30
0.562000	34.28	---	56.00	21.72	N	10.30
1.082000	31.23	---	56.00	24.77	N	10.32
3.810000	32.61	---	56.00	23.39	N	10.42
6.038000	33.21	---	60.00	26.79	N	10.52
24.730000	40.81	---	60.00	19.19	N	11.10

Final_Result

Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
---	---	---	---	---		---



M/N: BK-PTL042S-AHC1050ASW

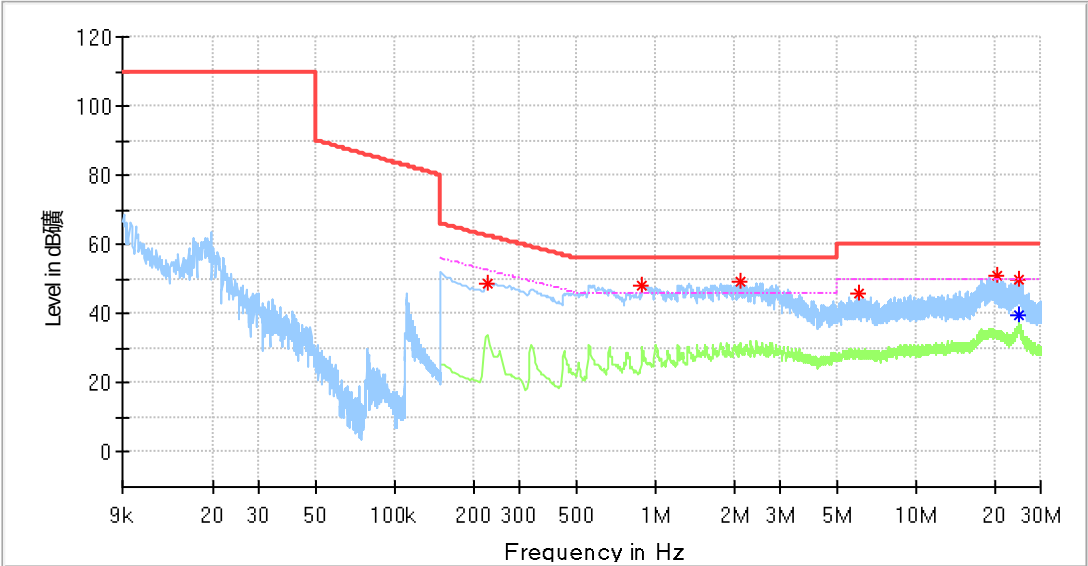
Op Cond.: ON (Maximum power)

Comment: AC 230V/50Hz

Line Under Test: Power Line, Live

Date of Test: 2024-12-31

Detailed results are shown below



Critical Freqs

Frequency (MHz)	MaxPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
0.226000	48.80	---	62.60	13.79	L1	10.30
0.890000	48.16	---	56.00	7.84	L1	10.32
2.134000	49.24	---	56.00	6.76	L1	10.37
6.002000	46.16	---	60.00	13.84	L1	10.51
20.378000	51.00	---	60.00	9.00	L1	12.12
24.698000	---	39.34	50.00	10.66	L1	12.12
24.698000	49.93	---	60.00	10.07	L1	12.12

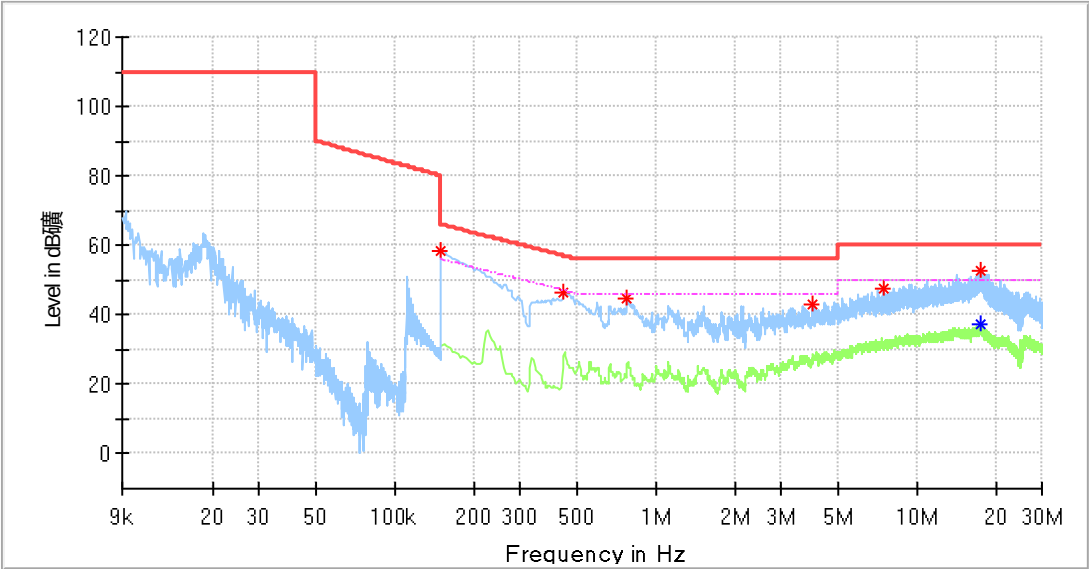
Final Result

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
---	---	---	---	---		---



M/N:
Op Cond.:
Comment:
Line Under Test:
Date of Test:
Detailed results are shown below

BK-PTL042S-AHC1050ASW
ON (Maximum power)
AC 230V/50Hz
Power Line, Neutral
2024-12-31



Critical Freqs

Frequency (MHz)	MaxPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
0.150000	58.56	---	66.00	7.44	N	10.34
0.442000	46.27	---	57.02	10.75	N	10.34
0.774000	44.59	---	56.00	11.41	N	10.35
3.994000	42.94	---	56.00	13.06	N	10.50
7.446000	47.54	---	60.00	12.46	N	10.72
17.490000	---	37.61	50.00	12.39	N	11.56
17.534000	52.50	---	60.00	7.50	N	11.56

Final Result

Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
---	---	---	---	---		---



M/N: BK-PTL042S-AHC1050ASW

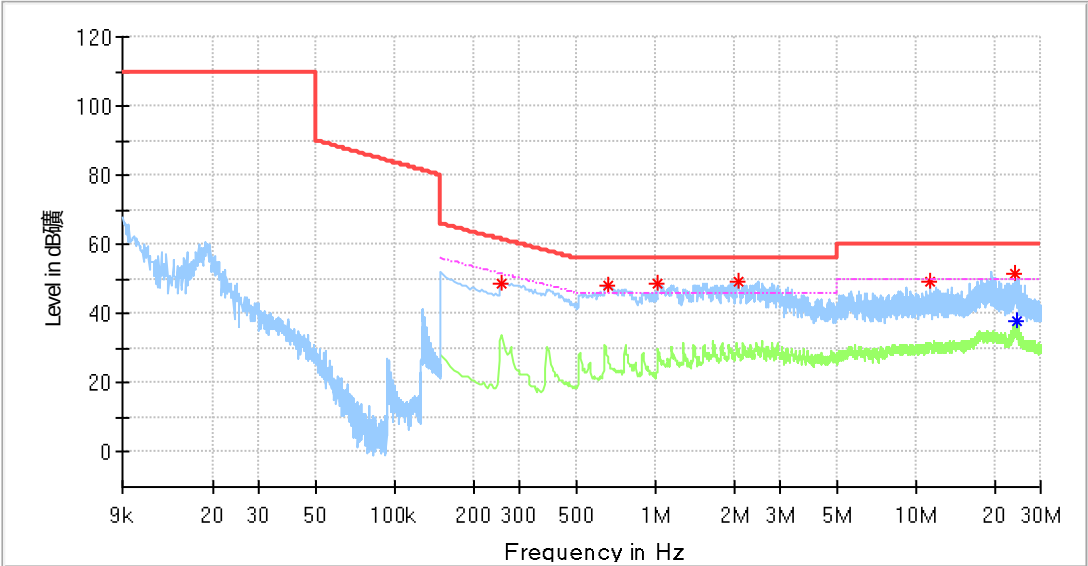
Op Cond.: ON (Minimum power)

Comment: AC 230V/50Hz

Line Under Test: Power Line, Live

Date of Test: 2024-12-31

Detailed results are shown below



Critical Freqs

Frequency (MHz)	MaxPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
0.258000	48.67	---	61.50	12.83	L1	10.30
0.654000	48.40	---	56.00	7.60	L1	10.32
1.026000	48.60	---	56.00	7.40	L1	10.32
2.090000	49.51	---	56.00	6.49	L1	10.37
11.314000	49.46	---	60.00	10.54	L1	10.69
23.926000	51.59	---	60.00	8.41	L1	12.12
24.190000	---	37.96	50.00	12.04	L1	12.12

Final Result

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
---	---	---	---	---		---



M/N: BK-PTL042S-AHC1050ASW

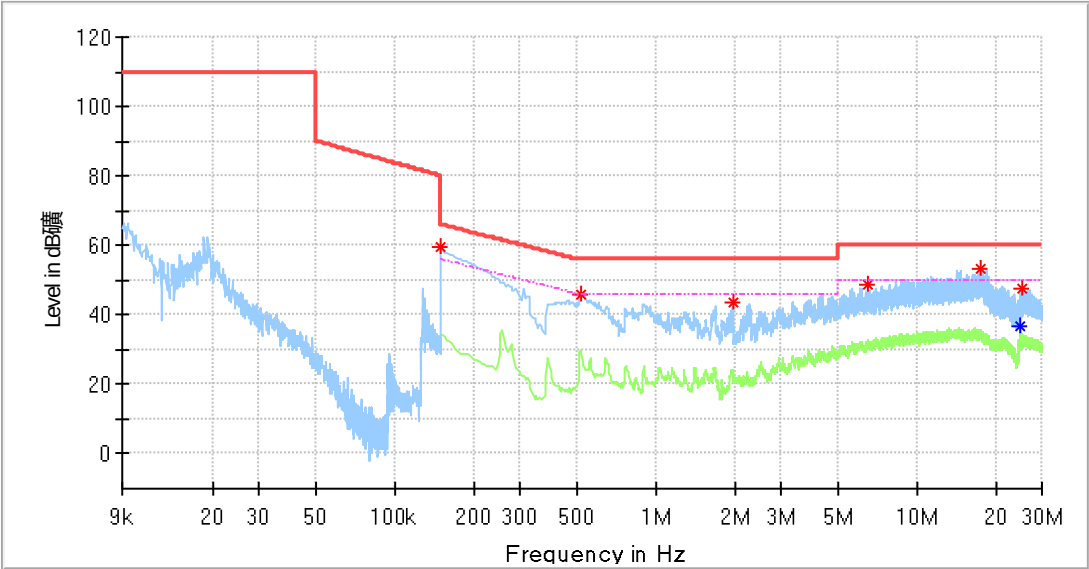
Op Cond.: ON (Minimum power)

Comment: AC 230V/50Hz

Line Under Test: Power Line, Neutral

Date of Test: 2024-12-31

Detailed results are shown below



Critical Freqs

Frequency (MHz)	MaxPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
0.150000	59.43	---	66.00	6.57	N	10.34
0.514000	46.11	---	56.00	9.89	N	10.34
1.958000	43.44	---	56.00	12.56	N	10.40
6.474000	48.74	---	60.00	11.26	N	10.66
17.558000	53.10	---	60.00	6.90	N	11.56
24.706000	---	36.91	50.00	13.09	N	11.97
25.234000	47.64	---	60.00	12.36	N	12.02

Final Result

Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
---	---	---	---	---		---



M/N: BK-PTL042S-AHC1050ASW

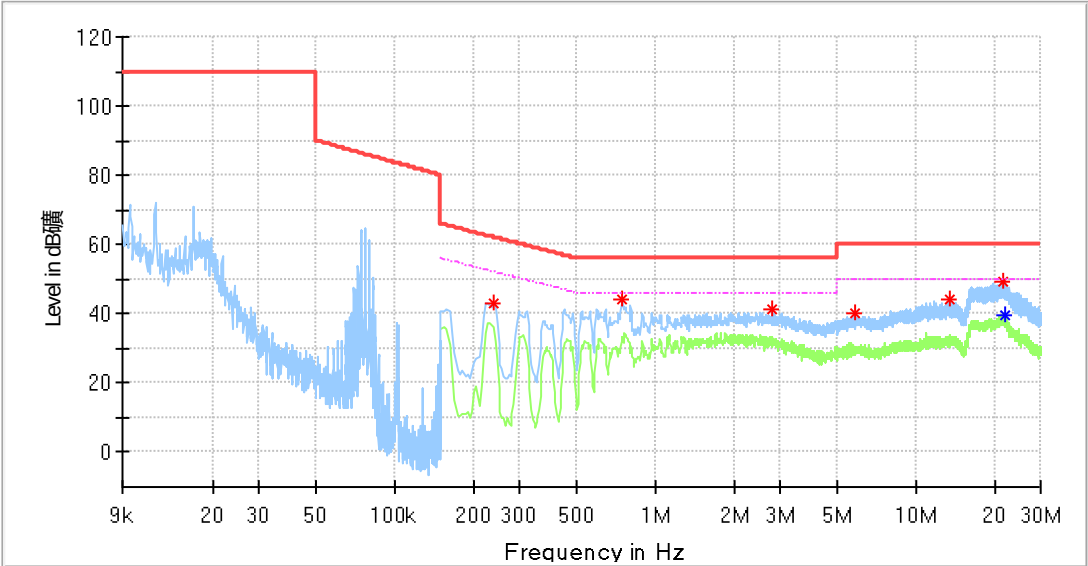
Op Cond.: ON (Maximum power)

Comment: DC 230V

Line Under Test: Power Line, Live

Date of Test: 2024-12-31

Detailed results are shown below



Critical Freqs

Frequency (MHz)	MaxPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
0.238000	42.90	---	62.17	19.27	L1	10.30
0.742000	44.18	---	56.00	11.82	L1	10.32
2.794000	41.26	---	56.00	14.74	L1	10.38
5.830000	39.90	---	60.00	20.10	L1	10.50
13.502000	44.43	---	60.00	15.57	L1	10.76
21.658000	49.36	---	60.00	10.64	L1	12.12
21.798000	---	39.57	50.00	10.43	L1	12.12

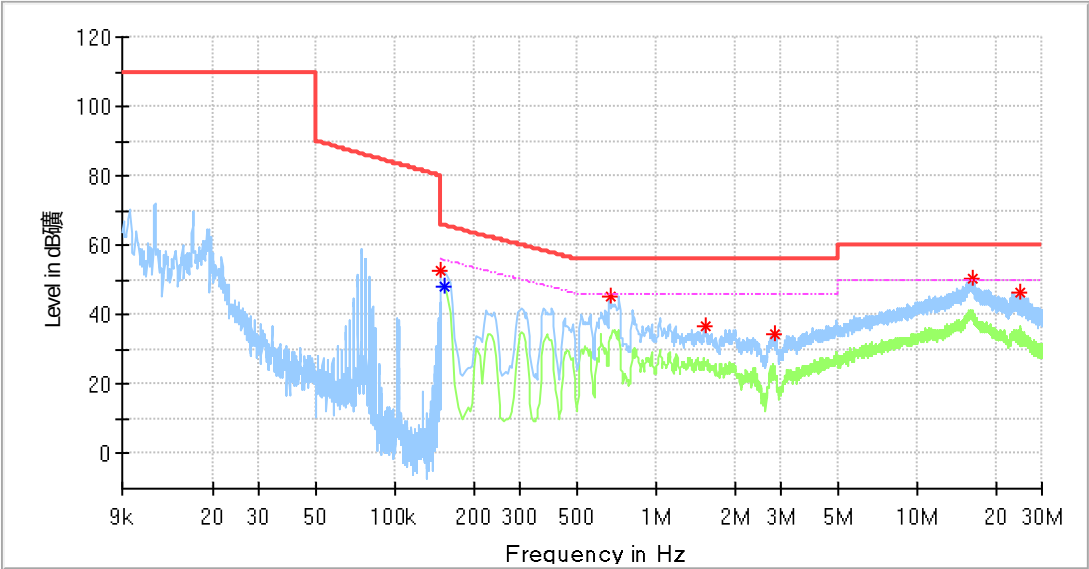
Final Result

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
---	---	---	---	---		---



M/N:
Op Cond.:
Comment:
Line Under Test:
Date of Test:
Detailed results are shown below

BK-PTL042S-AHC1050ASW
ON (Maximum power)
DC 230V
Power Line, Neutral
2024-12-31



Critical Freqs

Frequency (MHz)	MaxPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
0.150000	52.71	---	66.00	13.29	N	10.34
0.154000	---	47.94	55.78	7.84	N	10.34
0.666000	45.36	---	56.00	10.64	N	10.34
1.538000	36.77	---	56.00	19.23	N	10.39
2.826000	34.49	---	56.00	21.51	N	10.44
16.166000	50.66	---	60.00	9.34	N	11.56
24.726000	46.46	---	60.00	13.54	N	11.98

Final Result

Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
---	---	---	---	---		---



M/N: BK-PTL042S-AHC1050ASW

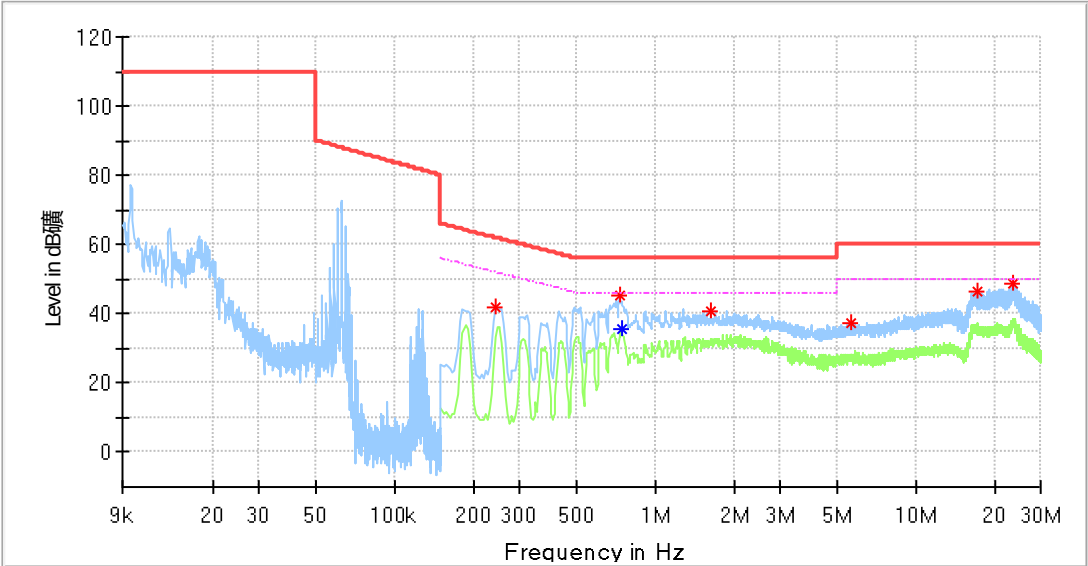
Op Cond.: ON (Minimum power)

Comment: DC 230V

Line Under Test: Power Line, Live

Date of Test: 2024-12-31

Detailed results are shown below



Critical Freqs

Frequency (MHz)	MaxPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
0.242000	41.94	---	62.03	20.09	L1	10.30
0.726000	45.49	---	56.00	10.51	L1	10.32
0.738000	---	35.78	46.00	10.22	L1	10.32
1.634000	40.64	---	56.00	15.36	L1	10.35
5.658000	37.43	---	60.00	22.57	L1	10.50
17.210000	46.37	---	60.00	13.63	L1	11.41
23.446000	48.76	---	60.00	11.24	L1	12.12

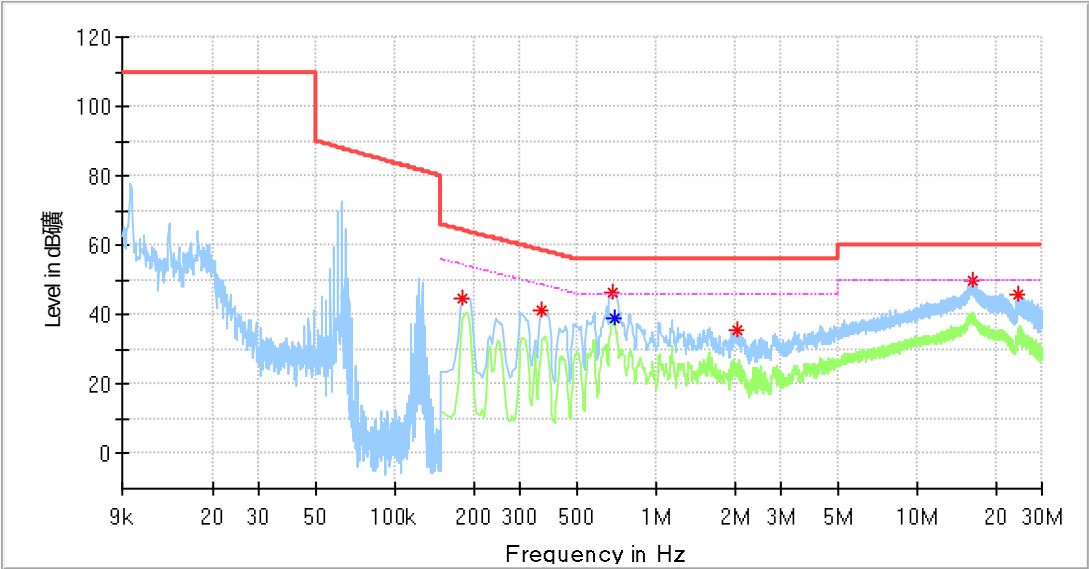
Final Result

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
---	---	---	---	---		---



M/N:
Op Cond.:
Comment:
Line Under Test:
Date of Test:
Detailed results are shown below

BK-PTL042S-AHC1050ASW
ON (Minimum power)
DC 230V
Power Line, Neutral
2024-12-31



Critical Freqs

Frequency (MHz)	MaxPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
0.182000	44.85	---	64.39	19.54	N	10.34
0.362000	41.09	---	58.68	17.59	N	10.34
0.686000	46.61	---	56.00	9.39	N	10.34
0.690000	---	38.84	46.00	7.16	N	10.34
2.058000	35.60	---	56.00	20.40	N	10.41
16.390000	50.01	---	60.00	9.99	N	11.56
24.378000	46.09	---	60.00	13.91	N	11.94

Final Result

Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
---	---	---	---	---		---



Test Setup

2.1.8 Test Location

This test was carried out in conducted emission shielded room.

2.2 Disturbance voltage at wired network interfaces

2.2.1 Specification Reference

EN IEC 55015:2019+A11:2020, Clause 4.3.2

2.2.2 Equipment Under Test

BK-DSL042S-AHC1050ADPW

2.2.3 Date of Test

2024-11-20

2.2.4 Test Method

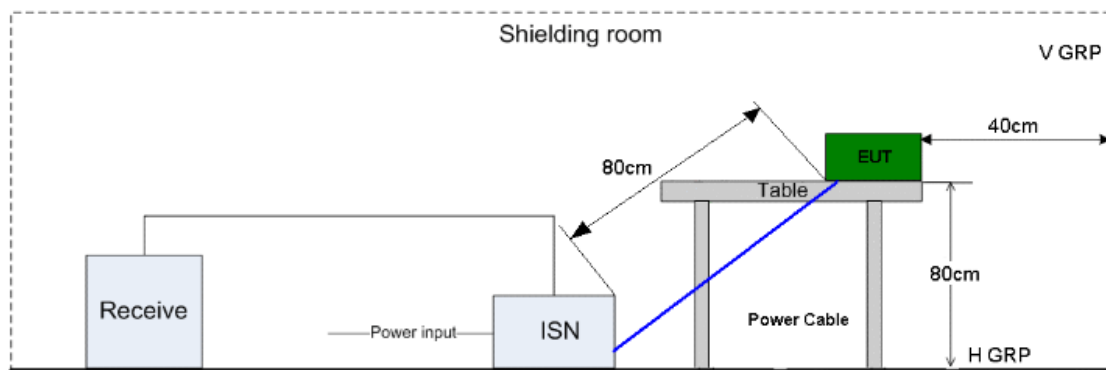
The limits specified in this subclause apply for wired network interfaces other than power supply that are directly connected to a network (Figure 4).

The disturbance voltage limits and measurement method of wired network interfaces other than power supply (e.g. for communication or data transfer) in the frequency range 150 kHz to 30 MHz are given in Table 2 for use with an artificial asymmetrical network (AAN). If no coupling network is available for the interface in question, then the current limits given in Table 3 shall be applied using the current measurement method given in 8.4.

EUTs that have interfaces, designated as network ports, to connect other than the electric power supply cables (see B.2.1) to AuxEq (e.g. DALI controller, LAN switch, power-over-Ethernet switch) shall be mounted on an insulating table in accordance with Figure B.1a, Figure B.2 and Figure B.3.

The cable length requirement is $(0,8 \pm 0,05)$ m and the cable is arranged in accordance with the applicable test method given in 8.4.

Voltage disturbance measurements at wired network interfaces other than power supply (e.g. for communication or data transfer) shall be carried out by means of an artificial asymmetrical network (AAN) as specified in CISPR 32. The AAN shall be bonded to reference-ground plane (see Annex B). The measurement method specified in CISPR 16-2-1 applies.



2.2.5 Environmental Conditions

Ambient Temperature	22.1 °C
Relative Humidity	51.6 %
Atmospheric Pressure	1015.0 mbar

2.2.6 Specification Limits

Disturbance voltage limits at wired network interfaces other than power supply		
Frequency range	Limits dB(μV)	
	Quasi-peak	Average
0.15MHz to 0.50MHz	84 to 74	74 to 64
0.50MHz to 30MHz	74	64

Remark:

Level=Reading Level + Correction Factor

Correction Factor=Cable Loss + ISN Factor

(The Reading Level is recorded by software which is not shown in the sheet)



2.2.7 Test Results

M/N: BK-DSL042S-AHC1050ADPW

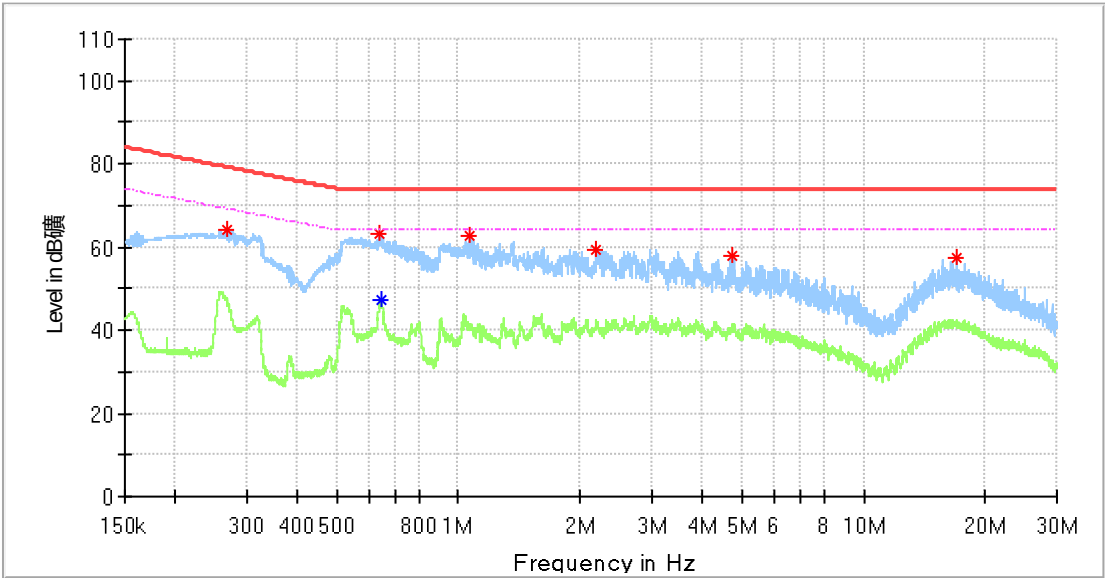
Op Cond.: ON (Maximum power)

Comment: AC 230V/50Hz

Line Under Test: Control line

Date of Test: 2024-11-20

Detailed results are shown below



Critical_Freqs

Frequency (MHz)	MaxPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Corr. (dB)
0.268096	64.14	---	79.18	15.04	9.96
0.637091	63.30	---	74.00	10.70	9.80
0.642205	---	47.30	64.00	16.70	9.79
1.068118	62.48	---	74.00	11.52	9.72
2.187021	59.34	---	74.00	14.66	9.64
4.745293	57.70	---	74.00	16.30	9.60
16.971171	57.22	---	74.00	16.78	9.63

Final_Result

Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Corr. (dB)
---	---	---	---	---	---



M/N: BK-DSL042S-AHC1050ADPW

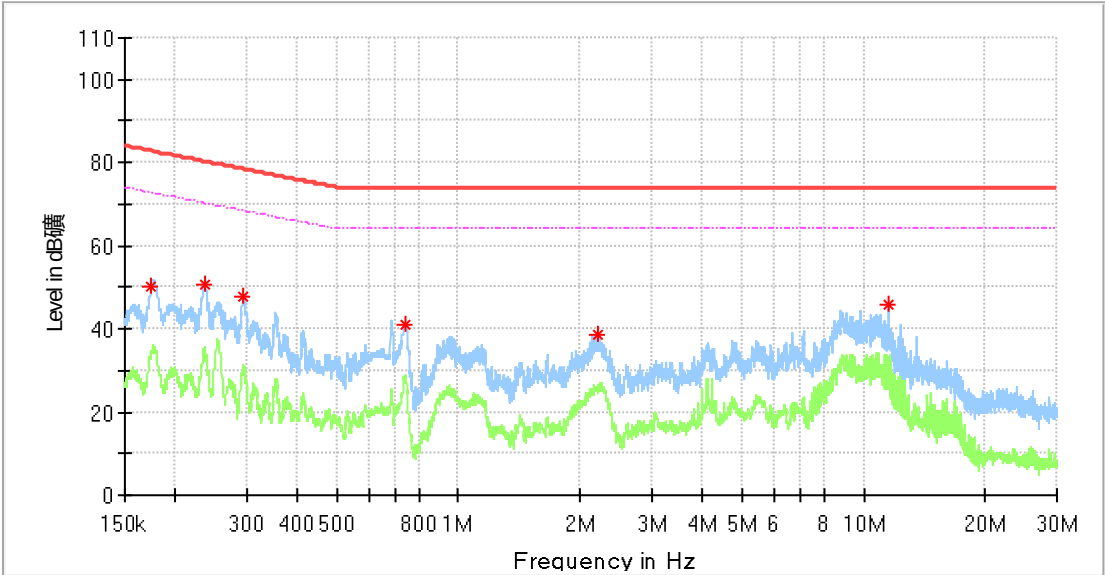
Op Cond.: ON (Minimum power)

Comment: AC 230V/50Hz

Line Under Test: Control line

Date of Test: 2024-11-20

Detailed results are shown below



Critical Freqs

Frequency (MHz)	MaxPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Corr. (dB)
0.174262	50.04	---	82.75	32.72	10.08
0.235665	50.67	---	80.25	29.57	10.00
0.294211	47.68	---	78.40	30.72	9.92
0.738660	41.25	---	74.00	32.75	9.78
2.197978	38.37	---	74.00	35.63	9.64
11.538727	45.83	---	74.00	28.17	9.61

Final Result

Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Corr. (dB)
---	---	---	---	---	---



Test Setup

2.2.8 Test Location

This test was carried out in conducted emission shielded room.

2.3 Radiated Disturbance (9KHz to 30MHz)

2.3.1 Specification Reference

EN IEC 55015:2019+A11:2020, Clause 4.5.2

2.3.2 Equipment Under Test

BK-DSL042S-AHC1050ADPW, BK-CTL042S-AHC1050ASW and BK-PTL042S-AHC1050ASW

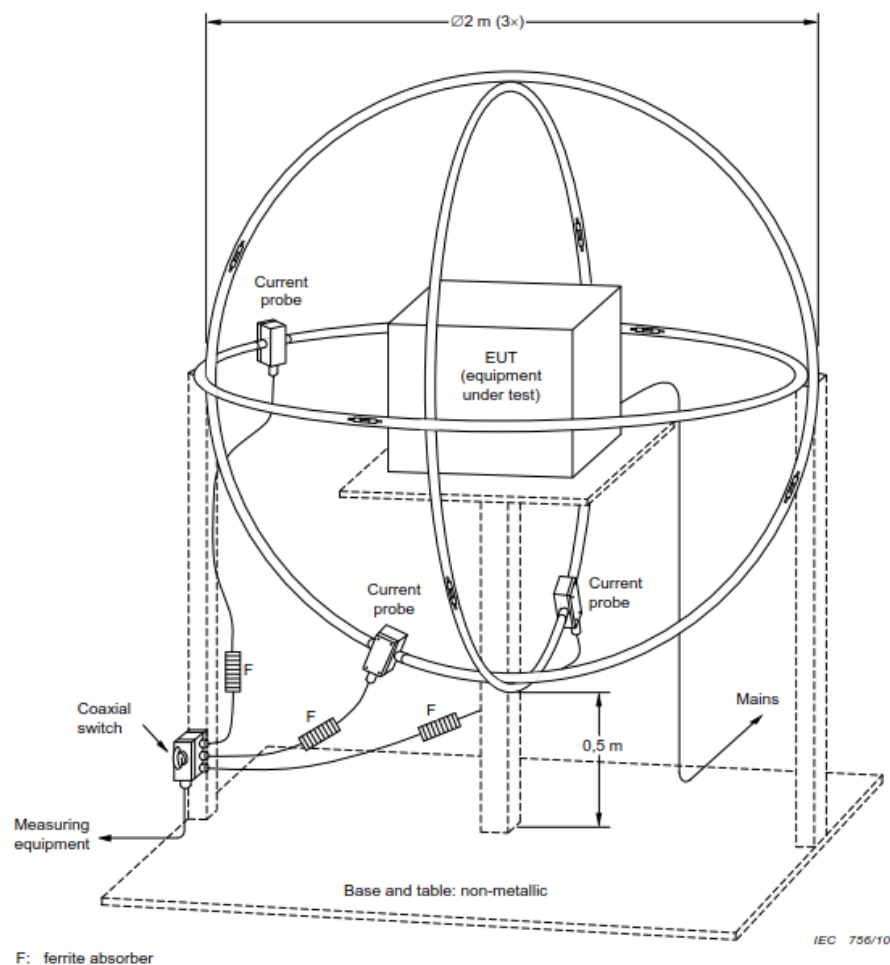
2.3.3 Date of Test

2024-11-19

2.3.4 Test Method

The magnetic component shall be measured by means of a loop antenna. The lighting equipment shall be placed in the center of the antenna.

The induced current in the loop antenna is measured by means of a current probe and the CISPR measuring receiver. By means of a coaxial switch, the three field directions can be measured in sequence.



2.3.5 Environmental Conditions

Ambient Temperature	21.5 °C
Relative Humidity	51.4 %
Atmospheric Pressure	1013.0 mbar

2.3.6 Specification Limits

Radiated disturbance limits in the frequency range 9kHz to 30MHz			
Frequency range	Limits dB(μA) for loop diameter		
	2 m	3 m	4 m
9kHz to 70kHz	88	81	75
70kHz to 150kHz	88 to 58	81 to 51	75 to 45
150kHz to 3.0MHz	58 to 22	51 to 15	45 to 9
3.0MHz to 30MHz	22	15 to 16	9 to 12

Remark:

For Below 30MHz:

Level=Reading Level + Correction Factor

Correction Factor=Antenna Factor + Cable Loss

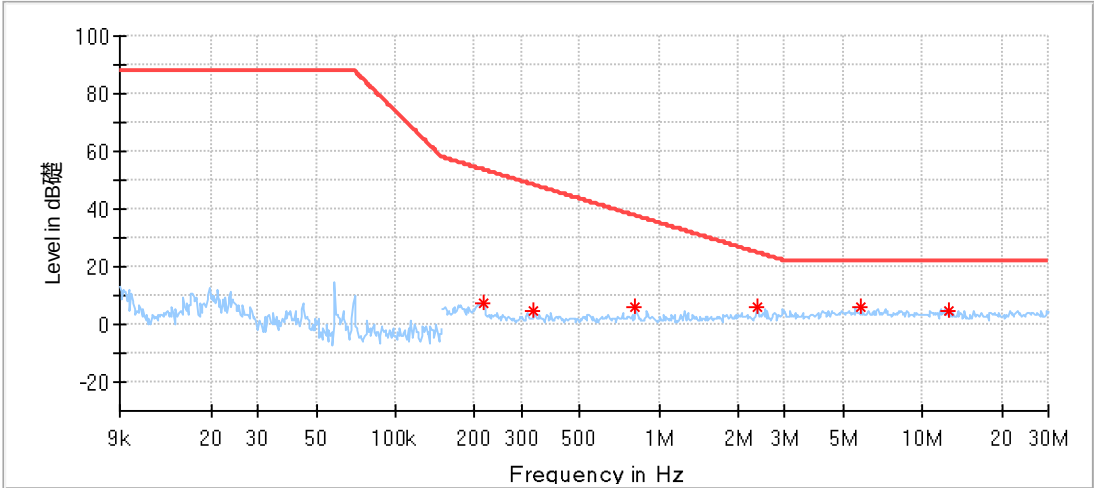
(The Reading Level is recorded by software which is not shown in the sheet)



2.3.7 Test Results

Remark: The worst case was list in the report.

M/N: BK-DSL042S-AHC1050ADPW
Op Cond.: ON (Maximum power)
Comment: AC 230V/50Hz
Test Spec.: X
Date of Test: 2024-11-19
Detailed results are shown below



Critical Freqs

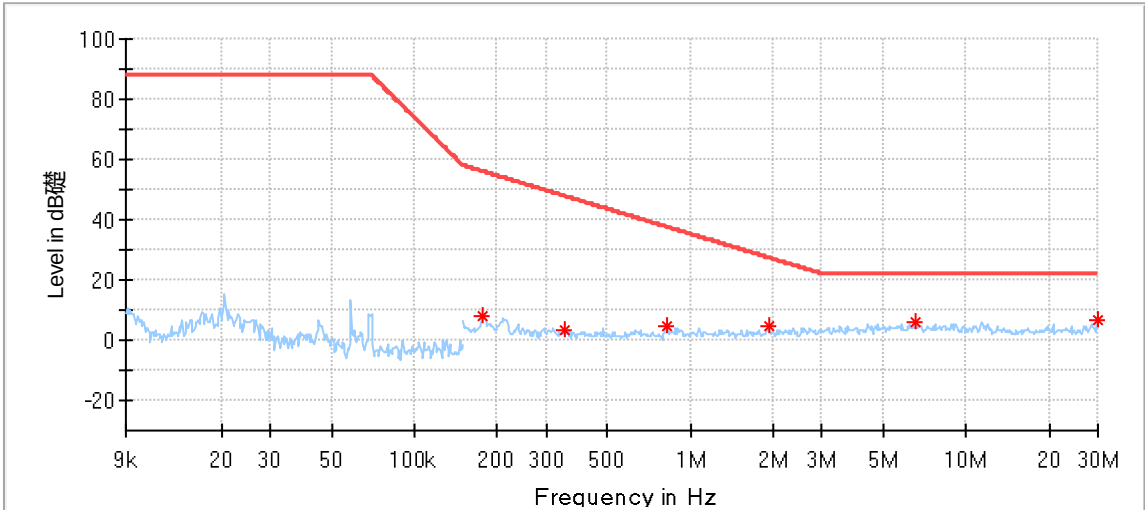
Frequency (MHz)	MaxPeak (dBµA)	Limit (dBµA)	Margin (dB)	Axis	Corr. (dB)
0.216762	7.32	53.58	46.26	X	6.06
0.335833	4.60	48.31	43.71	X	6.08
0.814189	5.77	37.67	31.91	X	6.11
2.361088	6.16	24.88	18.71	X	6.12
5.839250	6.32	22.00	15.68	X	6.24
12.563276	4.36	22.00	17.64	X	6.22

Final Result

Frequency (MHz)	QuasiPeak (dBµA)	Limit (dBµA)	Margin (dB)	Axis	Corr. (dB)
---	---	---	---		---



M/N: BK-DSL042S-AHC1050ADPW
Op Cond.: ON (Maximum power)
Comment: AC 230V/50Hz
Test Spec.: Y
Date of Test: 2024-11-19
Detailed results are shown below



Critical Freqs

Frequency (MHz)	MaxPeak (dBμA)	Limit (dBμA)	Margin (dB)	Axis	Corr. (dB)
0.175887	8.23	56.09	47.86	Y	6.05
0.352963	3.64	47.72	44.08	Y	6.08
0.822331	4.52	37.55	33.03	Y	6.11
1.915858	4.83	27.39	22.56	Y	6.12
6.514667	5.82	22.00	16.18	Y	6.23
29.858116	6.47	22.00	15.53	Y	6.27

Final Result

Frequency (MHz)	QuasiPeak (dBμA)	Limit (dBμA)	Margin (dB)	Axis	Corr. (dB)
---	---	---	---		---



M/N: BK-DSL042S-AHC1050ADPW

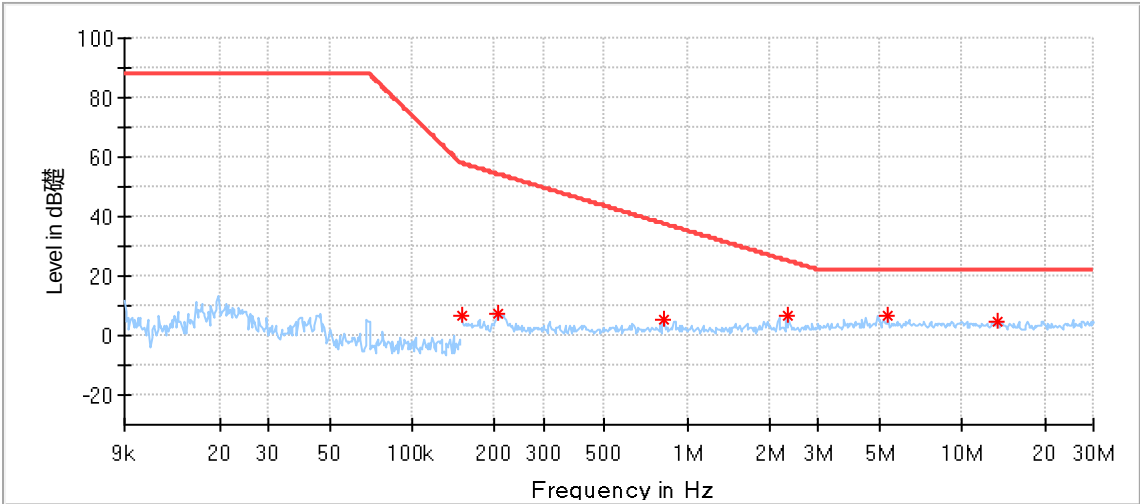
Op Cond.: ON (Maximum power)

Comment: AC 230V/50Hz

Test Spec.: Z

Date of Test: 2024-11-19

Detailed results are shown below



Critical_Freqs

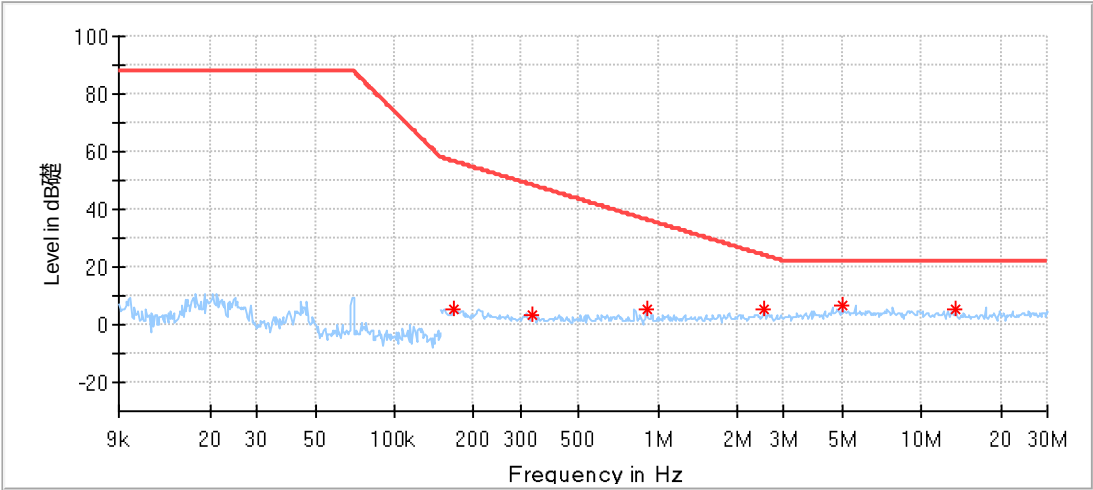
Frequency (MHz)	MaxPeak (dBµA)	Limit (dBµA)	Margin (dB)	Axis	Corr. (dB)
0.151500	6.49	57.88	51.39	Z	6.03
0.206241	7.12	54.17	47.05	Z	6.06
0.822331	5.12	37.55	32.44	Z	6.11
2.337710	6.35	25.00	18.65	Z	6.12
5.392450	6.42	22.00	15.58	Z	6.21
13.469532	4.85	22.00	17.15	Z	6.21

Final_Result

Frequency (MHz)	QuasiPeak (dBµA)	Limit (dBµA)	Margin (dB)	Axis	Corr. (dB)
---	---	---	---		---



M/N: BK-CTL042S-AHC1050ASW
Op Cond.: ON (Maximum power)
Comment: AC 230V/50Hz
Test Spec.: X
Date of Test: 2024-11-19
Detailed results are shown below



Critical Freqs

Frequency (MHz)	MaxPeak (dBµA)	Limit (dBµA)	Margin (dB)	Axis	Corr. (dB)
0.169024	5.64	56.57	50.92	X	6.05
0.335833	3.59	48.31	44.72	X	6.08
0.908365	5.41	36.36	30.95	X	6.12
2.531405	5.02	24.04	19.02	X	6.12
4.979837	6.55	22.00	15.45	X	6.19
13.469532	5.57	22.00	16.43	X	6.21

Final Result

Frequency (MHz)	QuasiPeak (dBµA)	Limit (dBµA)	Margin (dB)	Axis	Corr. (dB)
---	---	---	---		---



M/N: BK-CTL042S-AHC1050ASW

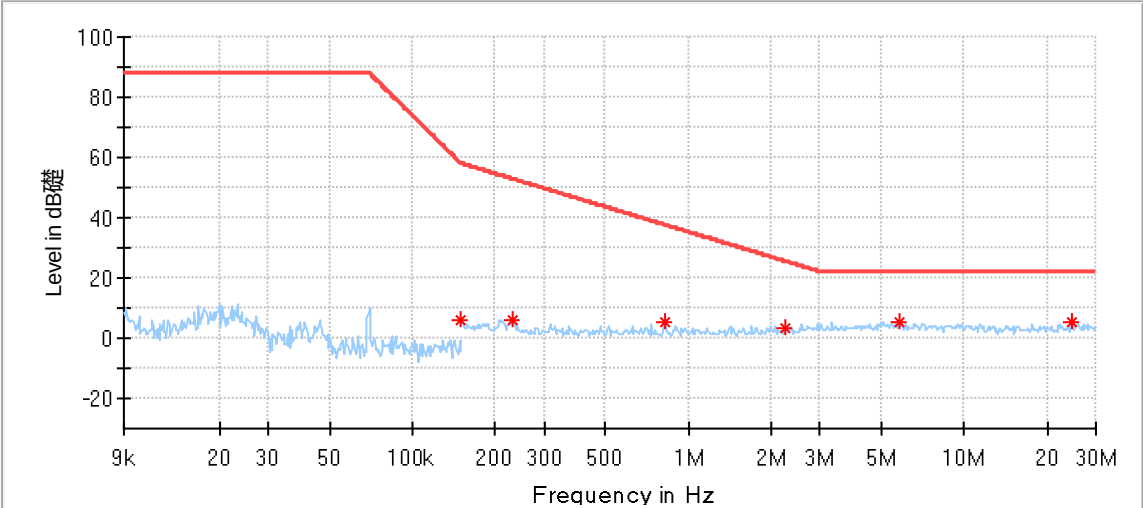
Op Cond.: ON (Maximum power)

Comment: AC 230V/50Hz

Test Spec.: Y

Date of Test: 2024-11-19

Detailed results are shown below



Critical Freqs

Frequency (MHz)	MaxPeak (dBμA)	Limit (dBμA)	Margin (dB)	Axis	Corr. (dB)
0.150000	6.32	58.00	51.68	Y	6.03
0.230097	6.01	52.86	46.85	Y	6.06
0.822331	5.24	37.55	32.32	Y	6.11
2.246494	3.34	25.48	22.14	Y	6.12
5.839250	5.14	22.00	16.86	Y	6.24
24.714754	5.59	22.00	16.41	Y	6.29

Final Result

Frequency (MHz)	QuasiPeak (dBμA)	Limit (dBμA)	Margin (dB)	Axis	Corr. (dB)
---	---	---	---		---



M/N: BK-CTL042S-AHC1050ASW

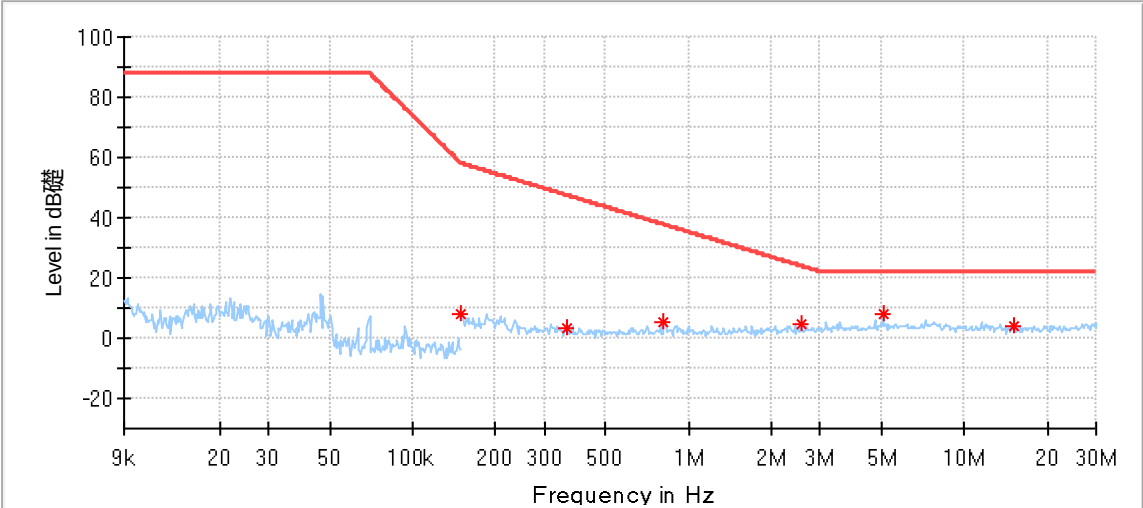
Op Cond.: ON (Maximum power)

Comment: AC 230V/50Hz

Test Spec.: Z

Date of Test: 2024-11-19

Detailed results are shown below



Critical Freqs

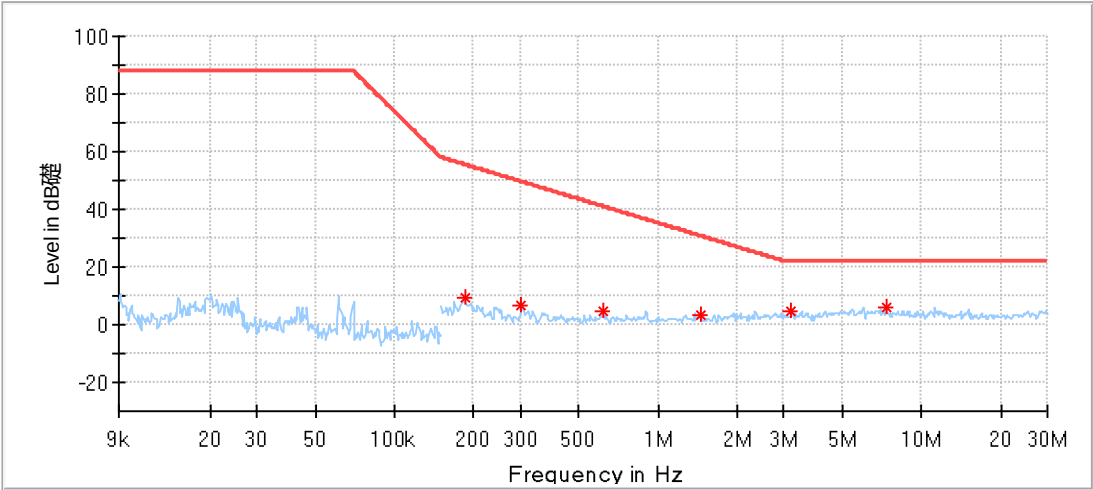
Frequency (MHz)	MaxPeak (dBμA)	Limit (dBμA)	Margin (dB)	Axis	Corr. (dB)
0.150000	7.91	58.00	50.09	Z	6.03
0.363659	3.38	47.36	43.98	Z	6.08
0.814189	5.42	37.67	32.25	Z	6.11
2.556720	4.42	23.92	19.50	Z	6.12
5.079932	7.80	22.00	14.20	Z	6.20
15.177806	4.16	22.00	17.84	Z	6.21

Final Result

Frequency (MHz)	QuasiPeak (dBμA)	Limit (dBμA)	Margin (dB)	Axis	Corr. (dB)
---	---	---	---		---



M/N: BK-PTL042S-AHC1050ASW
Op Cond.: ON (Maximum power)
Comment: AC 230V/50Hz
Test Spec.: X
Date of Test: 2024-11-19
Detailed results are shown below



Critical Freqs

Frequency (MHz)	MaxPeak (dBµA)	Limit (dBµA)	Margin (dB)	Axis	Corr. (dB)
0.184859	9.39	55.49	46.10	X	6.05
0.304025	6.69	49.51	42.82	X	6.07
0.616207	4.89	41.02	36.13	X	6.11
1.464489	3.28	30.62	27.34	X	6.12
3.214213	4.82	22.00	17.18	X	6.13
7.340890	5.86	22.00	16.14	X	6.20

Final Result

Frequency (MHz)	QuasiPeak (dBµA)	Limit (dBµA)	Margin (dB)	Axis	Corr. (dB)
---	---	---	---		---



M/N: BK-PTL042S-AHC1050ASW

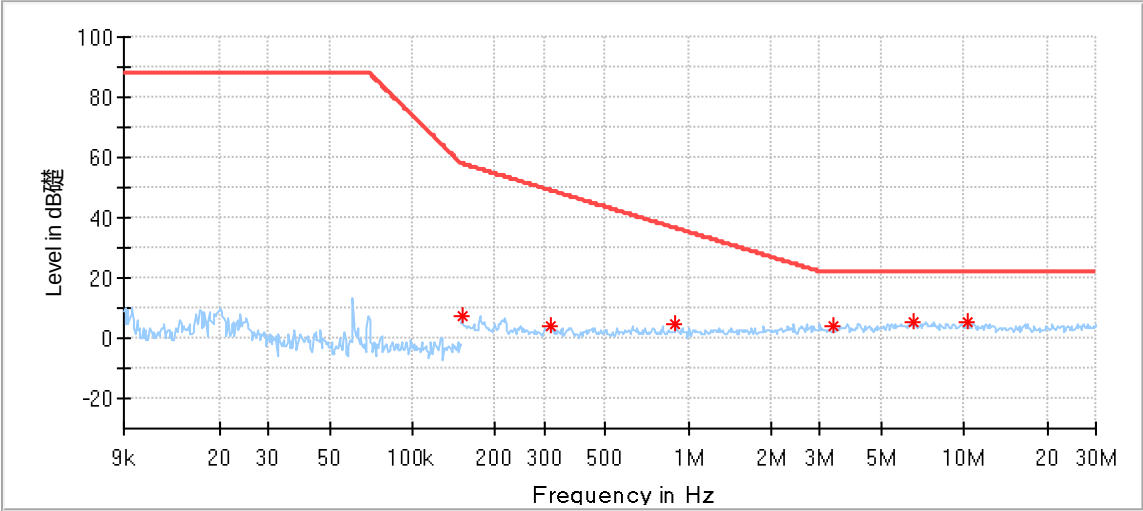
Op Cond.: ON (Maximum power)

Comment: AC 230V/50Hz

Test Spec.: Y

Date of Test: 2024-11-19

Detailed results are shown below



Critical Freqs

Frequency (MHz)	MaxPeak (dBμA)	Limit (dBμA)	Margin (dB)	Axis	Corr. (dB)
0.151500	7.18	57.88	50.70	Y	6.03
0.319533	3.81	48.91	45.10	Y	6.08
0.899371	4.83	36.48	31.64	Y	6.12
3.378170	4.14	22.00	17.86	Y	6.13
6.514667	5.46	22.00	16.54	Y	6.23
10.296163	5.37	22.00	16.63	Y	6.24

Final Result

Frequency (MHz)	QuasiPeak (dBμA)	Limit (dBμA)	Margin (dB)	Axis	Corr. (dB)
---	---	---	---		---



M/N: BK-PTL042S-AHC1050ASW

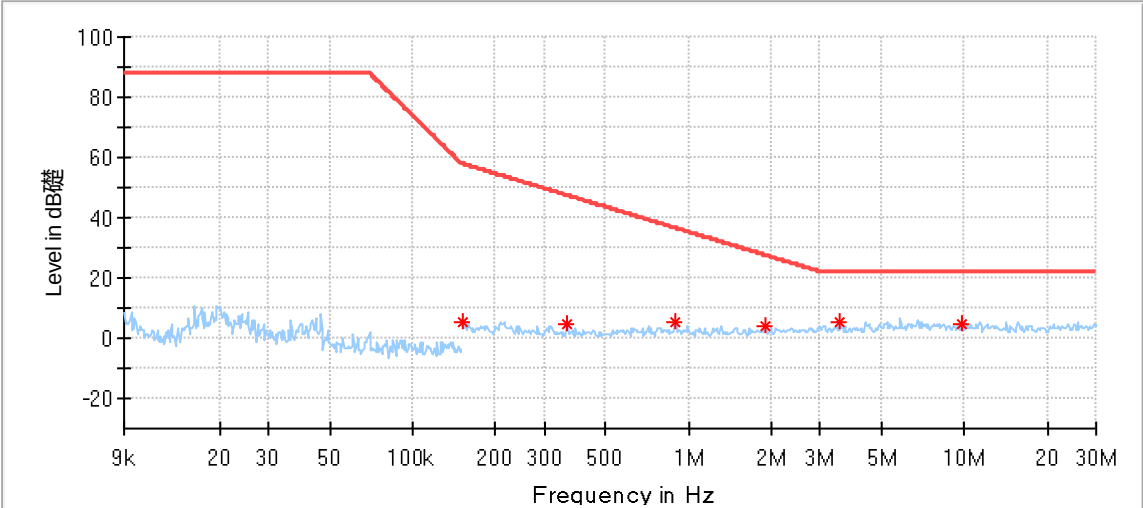
Op Cond.: ON (Maximum power)

Comment: AC 230V/50Hz

Test Spec.: Z

Date of Test: 2024-11-19

Detailed results are shown below

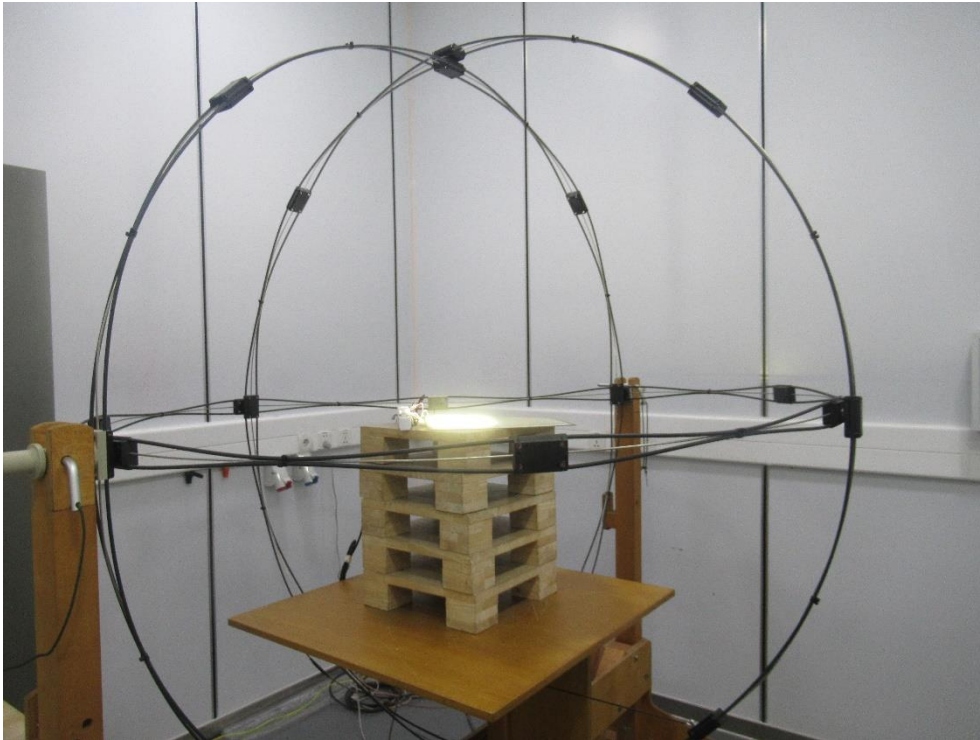


Critical Freqs

Frequency (MHz)	MaxPeak (dBμA)	Limit (dBμA)	Margin (dB)	Axis	Corr. (dB)
0.151500	5.41	57.88	52.47	Z	6.03
0.363659	4.53	47.36	42.83	Z	6.08
0.899371	5.07	36.48	31.40	Z	6.12
1.896889	3.85	27.51	23.65	Z	6.12
3.550491	5.20	22.00	16.80	Z	6.13
9.796446	4.61	22.00	17.39	Z	6.24

Final Result

Frequency (MHz)	QuasiPeak (dBμA)	Limit (dBμA)	Margin (dB)	Axis	Corr. (dB)
---	---	---	---		---



Test Setup

2.3.8 Test Location

This test was carried out in conducted emission shielded room.

2.4 Radiated Disturbance (30MHz to 1000MHz)

2.4.1 Specification Reference

EN IEC 55015:2019+A11:2020, Clause 4.5.3

2.4.2 Equipment Under Test

BK-DSL042S-AHC1050ADPW, BK-CTL042S-AHC1050ASW and BK-PTL042S-AHC1050ASW

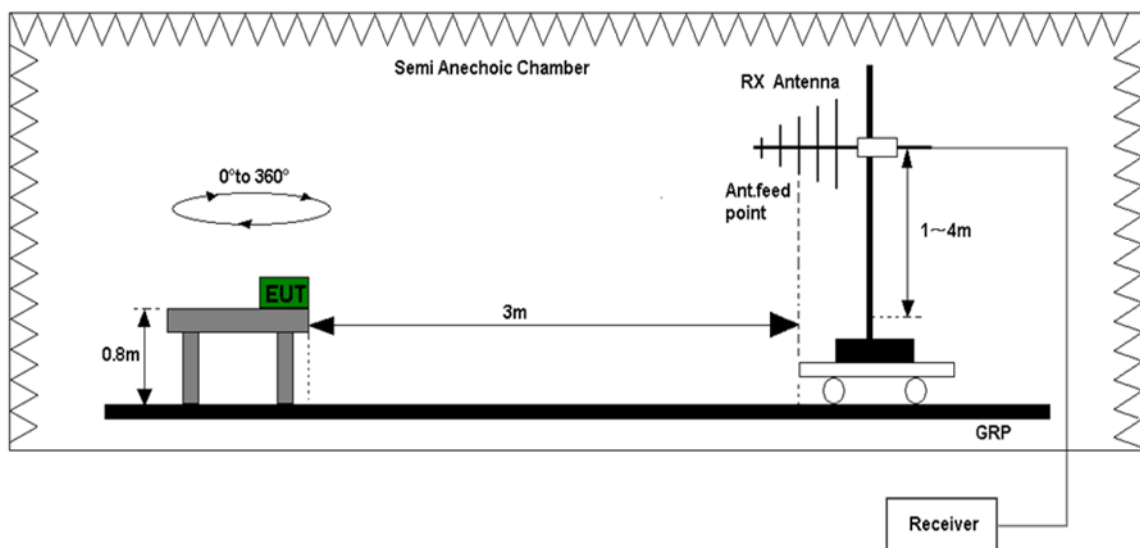
2.4.3 Date of Test

2024-12-28

2.4.4 Test Method

The EUT was set up in a semi-anechoic chamber on a remotely controlled turntable and placed on a non-conductive. Guidance on how to arrange the luminaire during the measurements can be found in Annex C.

A prescan of the EUT emissions profile was made while varying the antenna-to-EUT azimuth and antenna-to-EUT polarization using a peak detector; measurements were taken at a 3m distance. Using the prescan list of the highest emissions detected, their bearing and associated antenna polarization, the EUT was then formally measured using a Quasi-Peak detector. The readings were maximized by adjusting the antenna height, polarization and turntable azimuth, in accordance with the specification.



2.4.5 Environmental Conditions

Ambient Temperature	21.5 °C
Relative Humidity	51.4 %
Atmospheric Pressure	1013.0 mbar

2.4.6 Specification Limits

Radiated disturbance limits in the frequency range 30MHz to 1000MHz at a measuring distance of 3 m	
Frequency range MHz	Quasi-peak limits dB(μ V/m)
30 to 230	40
230 to 1000	47

Remark:

For Below 1GHz:

Level=Reading Level + Correction Factor

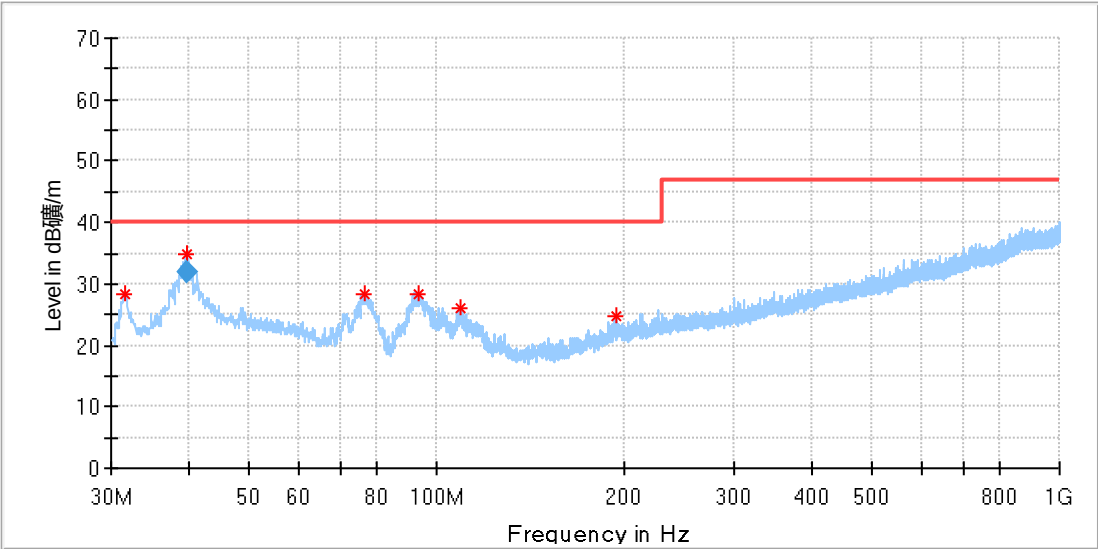
Correction Factor=Antenna Factor + Cable Loss

(The Reading Level is recorded by software which is not shown in the sheet)



2.4.7 Test Results

M/N: BK-DSL042S-AHC1050ADPW
Op Cond.: ON (Maximum power)
Comment: AC 230V/50Hz
Test Spec.: Horizontal
Date of Test: 2024-12-28
Detailed results are shown below



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
31.515625	28.18	40.00	11.82	100.0	H	251.0	16.77
39.578750	34.73	40.00	5.27	200.0	H	229.0	19.52
76.741875	28.46	40.00	11.54	200.0	H	0.0	13.97
93.231875	28.30	40.00	11.70	200.0	H	0.0	17.44
108.933750	26.13	40.00	13.87	200.0	H	0.0	18.32
194.657500	24.79	40.00	15.21	200.0	H	52.0	18.91

Final Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
39.578750	31.80	40.00	8.20	200.0	H	229.0	19.52



M/N: BK-DSL042S-AHC1050ADPW

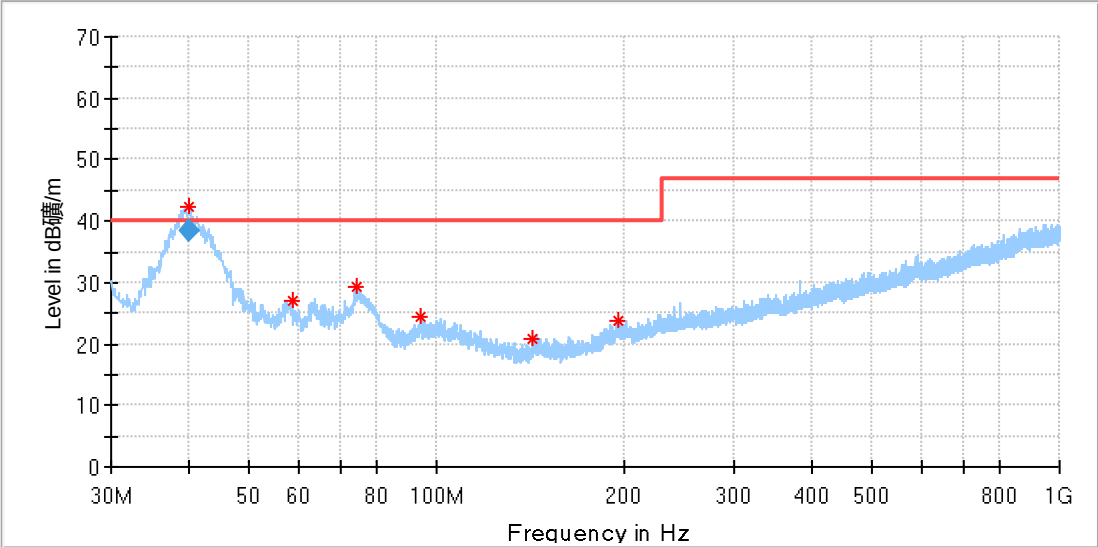
Op Cond.: ON (Maximum power)

Comment: AC 230V/50Hz

Test Spec.: Vertical

Date of Test: 2024-12-28

Detailed results are shown below



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
40.003125	42.35	40.00	-2.35	100.0	V	139.0	19.69
58.615000	27.08	40.00	12.92	100.0	V	281.0	19.94
74.256250	29.34	40.00	10.66	200.0	V	72.0	14.78
94.505000	24.42	40.00	15.58	200.0	V	278.0	17.63
142.580625	20.77	40.00	19.23	100.0	V	266.0	15.30
196.355000	23.65	40.00	16.35	100.0	V	109.0	19.19

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
40.003125	38.40	40.00	1.60	100.0	V	139.0	19.69



M/N: BK-DSL042S-AHC1050ADPW

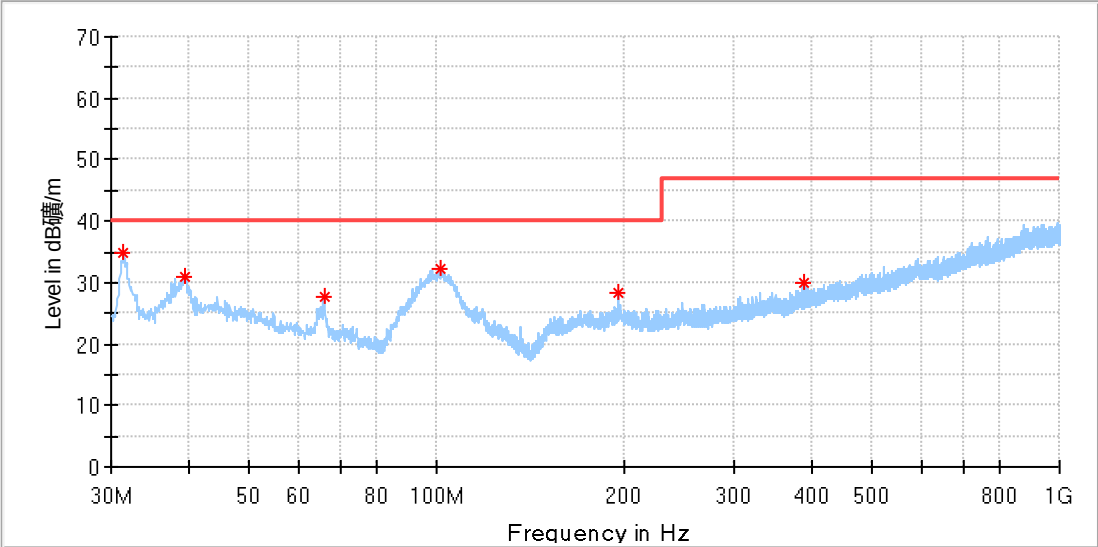
Op Cond.: ON (Minimum power)

Comment: AC 230V/50Hz

Test Spec.: Horizontal

Date of Test: 2024-12-28

Detailed results are shown below



Critical_Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
31.394375	34.88	40.00	5.12	100.0	H	65.0	16.76
39.396875	30.93	40.00	9.07	200.0	H	220.0	19.44
65.890000	27.63	40.00	12.37	200.0	H	197.0	17.85
101.598125	32.24	40.00	7.76	200.0	H	0.0	18.72
195.930625	28.29	40.00	11.71	200.0	H	43.0	19.18
387.626875	30.07	47.00	16.93	200.0	H	0.0	23.92

Final_Result

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---



M/N: BK-DSL042S-AHC1050ADPW

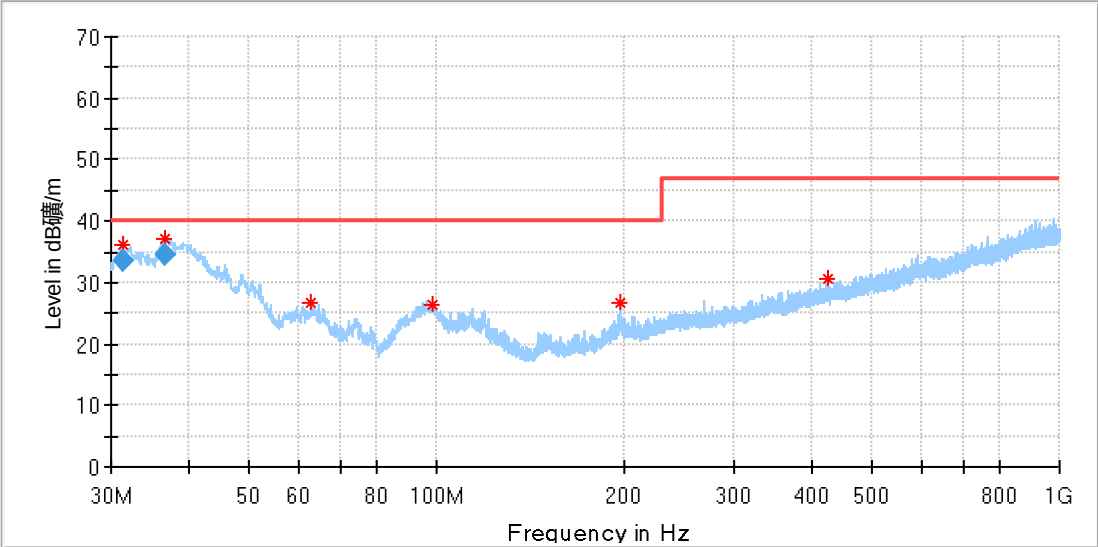
Op Cond.: ON (Minimum power)

Comment: AC 230V/50Hz

Test Spec.: Vertical

Date of Test: 2024-12-28

Detailed results are shown below



Critical_Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
31.273125	36.07	40.00	3.93	100.0	V	170.0	16.74
36.668750	37.19	40.00	2.81	100.0	V	170.0	18.47
62.919375	26.67	40.00	13.33	100.0	V	331.0	18.92
98.627500	26.28	40.00	13.72	100.0	V	0.0	18.40
197.082500	26.57	40.00	13.43	100.0	V	74.0	19.18
425.941875	30.50	47.00	16.50	200.0	V	102.0	24.71

Final_Result

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
31.273125	33.60	40.00	6.40	100.0	V	170.0	16.74
36.668750	34.40	40.00	5.60	100.0	V	170.0	18.47



M/N: BK-DSL042S-AHC1050ADPW

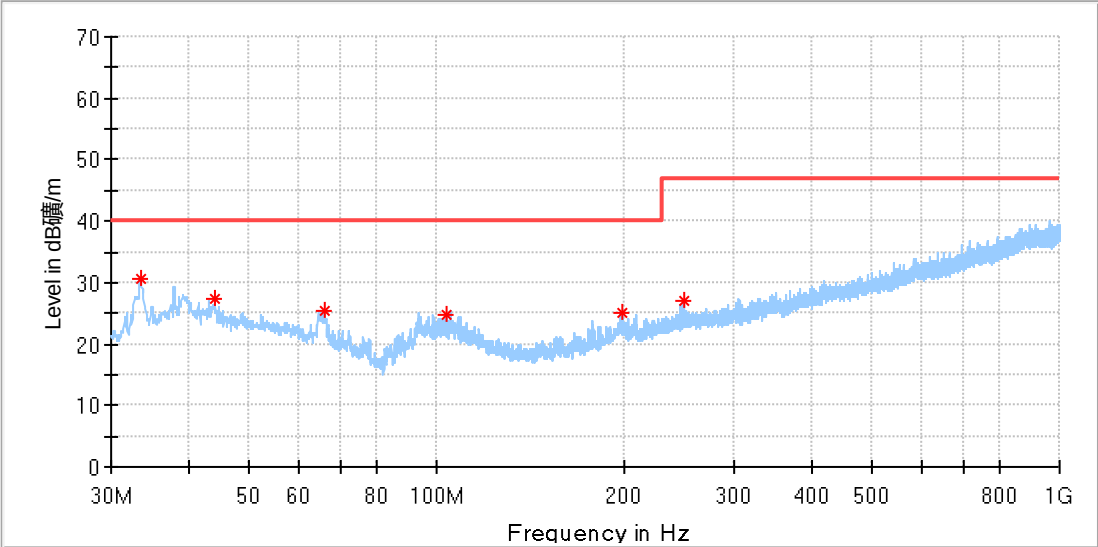
Op Cond.: ON (Maximum power)

Comment: DC 230V

Test Spec.: Horizontal

Date of Test: 2024-12-28

Detailed results are shown below



Critical_Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
33.395000	30.75	40.00	9.25	100.0	H	0.0	17.15
44.125625	27.28	40.00	12.72	200.0	H	0.0	20.56
65.950625	25.30	40.00	14.70	200.0	H	273.0	17.83
103.659375	24.74	40.00	15.26	200.0	H	0.0	18.68
198.780000	25.10	40.00	14.90	100.0	H	281.0	18.85
248.735000	27.07	47.00	19.93	100.0	H	332.0	20.45

Final_Result

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
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M/N: BK-DSL042S-AHC1050ADPW

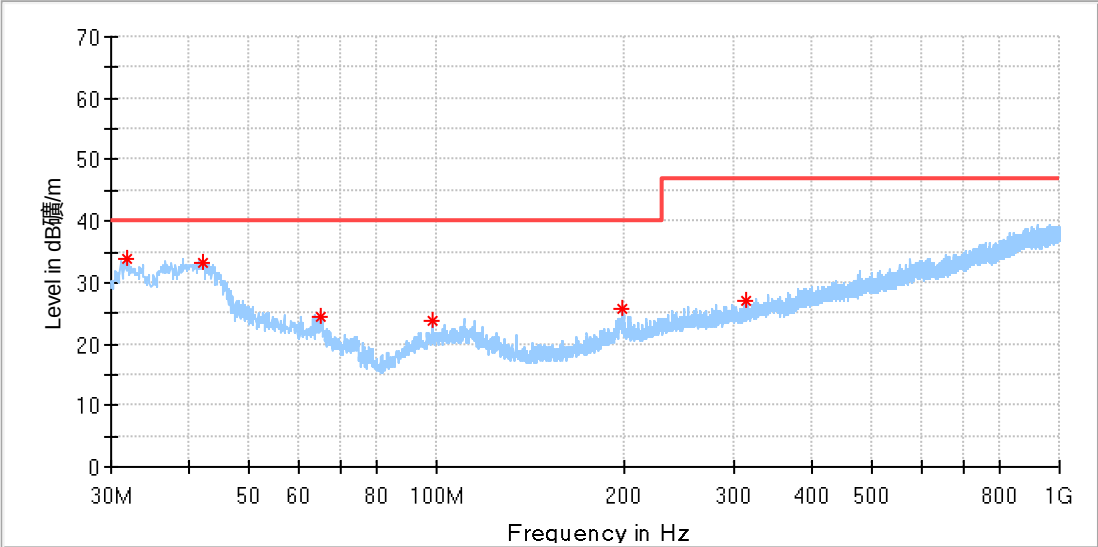
Op Cond.: ON (Maximum power)

Comment: DC 230V

Test Spec.: Vertical

Date of Test: 2024-12-28

Detailed results are shown below



Critical_Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
31.879375	34.00	40.00	6.00	100.0	V	0.0	16.81
42.185625	33.26	40.00	6.74	100.0	V	75.0	20.15
65.344375	24.41	40.00	15.59	100.0	V	21.0	18.00
98.203125	23.86	40.00	16.14	100.0	V	163.0	18.36
198.416250	25.81	40.00	14.19	100.0	V	90.0	18.92
312.815625	27.04	47.00	19.96	200.0	V	287.0	21.68

Final_Result

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
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M/N: BK-CTL042S-AHC1050ASW

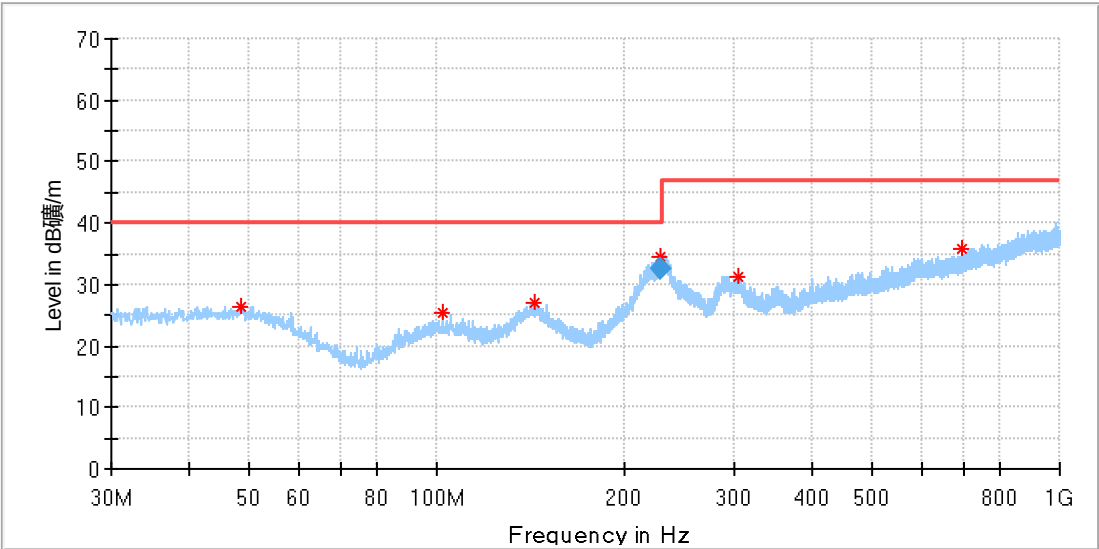
Op Cond.: ON (Maximum power)

Comment: AC 230V/50Hz

Test Spec.: Horizontal

Date of Test: 2024-12-28

Detailed results are shown below



Critical Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
48.369375	26.23	40.00	13.77	100.0	H	0.0	21.23
102.386250	25.28	40.00	14.72	200.0	H	9.0	19.89
143.853750	27.18	40.00	12.82	200.0	H	192.0	15.74
229.031875	34.44	40.00	5.56	100.0	H	28.0	19.70
304.146250	31.40	47.00	15.60	100.0	H	0.0	21.68
697.178125	35.96	47.00	11.04	100.0	H	126.0	28.98

Final Result

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
229.031875	32.40	40.00	7.60	100.0	H	28.0	19.70



M/N: BK-CTL042S-AHC1050ASW

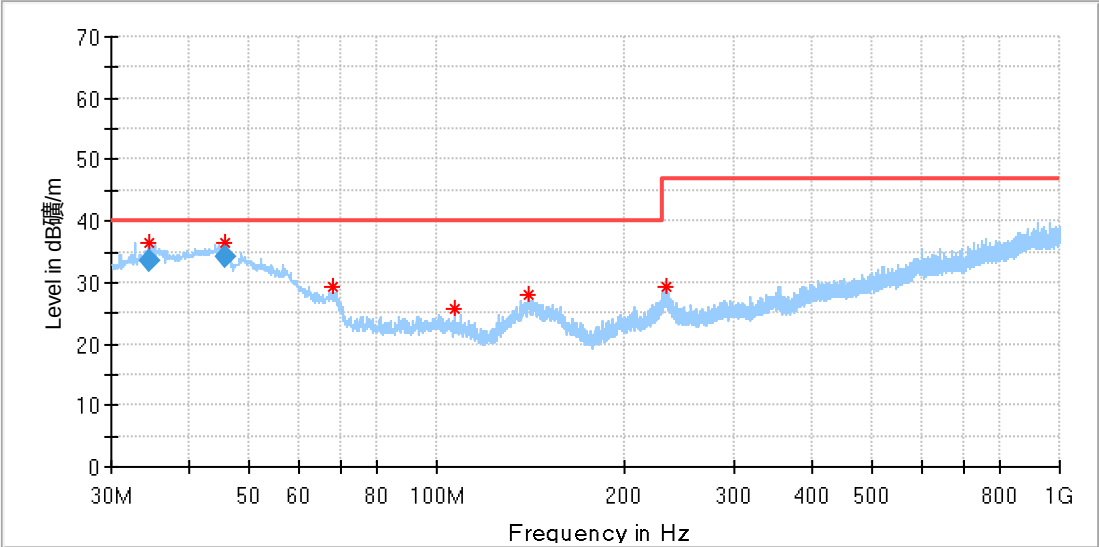
Op Cond.: ON (Maximum power)

Comment: AC 230V/50Hz

Test Spec.: Vertical

Date of Test: 2024-12-28

Detailed results are shown below



Critical_Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
34.425625	36.32	40.00	3.68	100.0	V	331.0	20.95
45.580625	36.61	40.00	3.39	100.0	V	331.0	21.28
68.011875	29.17	40.00	10.83	100.0	V	295.0	16.03
106.933125	25.63	40.00	14.37	100.0	V	94.0	19.52
139.973750	27.91	40.00	12.09	100.0	V	167.0	15.81
233.336250	29.14	47.00	17.86	200.0	V	102.0	19.92

Final_Result

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
34.425625	33.60	40.00	6.40	100.0	V	331.0	20.95
45.580625	34.20	40.00	5.80	100.0	V	331.0	21.28



M/N: BK-CTL042S-AHC1050ASW

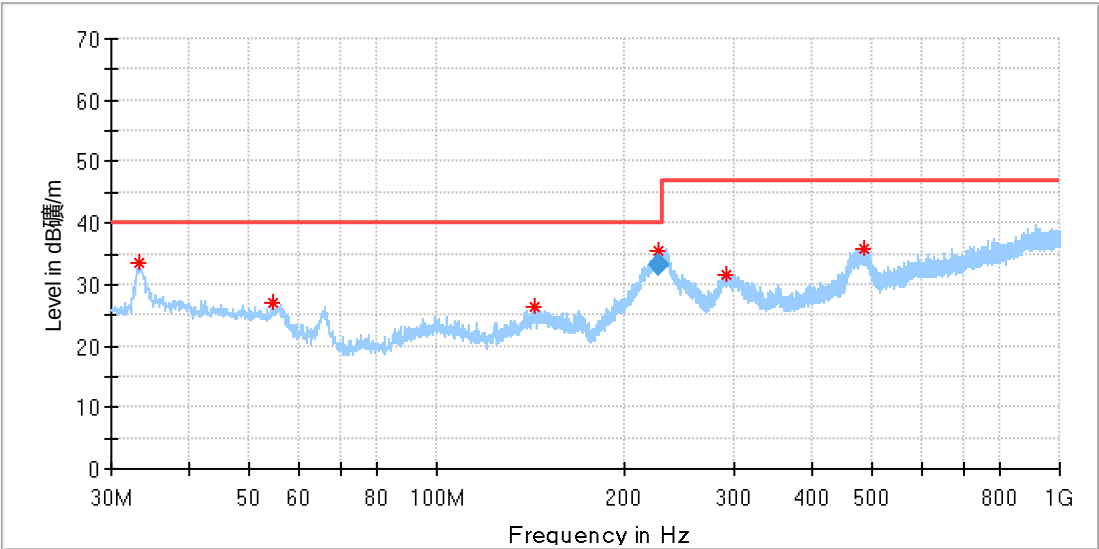
Op Cond.: ON (Minimum power)

Comment: AC 230V/50Hz

Test Spec.: Horizontal

Date of Test: 2024-12-28

Detailed results are shown below



Critical_Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
33.213125	33.55	40.00	6.45	100.0	H	258.0	21.02
54.371250	27.17	40.00	12.83	100.0	H	177.0	20.22
143.429375	26.30	40.00	13.70	200.0	H	36.0	15.73
226.243125	35.36	40.00	4.64	100.0	H	38.0	19.52
291.233125	31.54	47.00	15.46	100.0	H	45.0	21.45
484.869375	35.76	47.00	11.24	100.0	H	207.0	25.72

Final_Result

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
226.243125	33.30	40.00	6.70	100.0	H	38.0	19.52



M/N: BK-CTL042S-AHC1050ASW

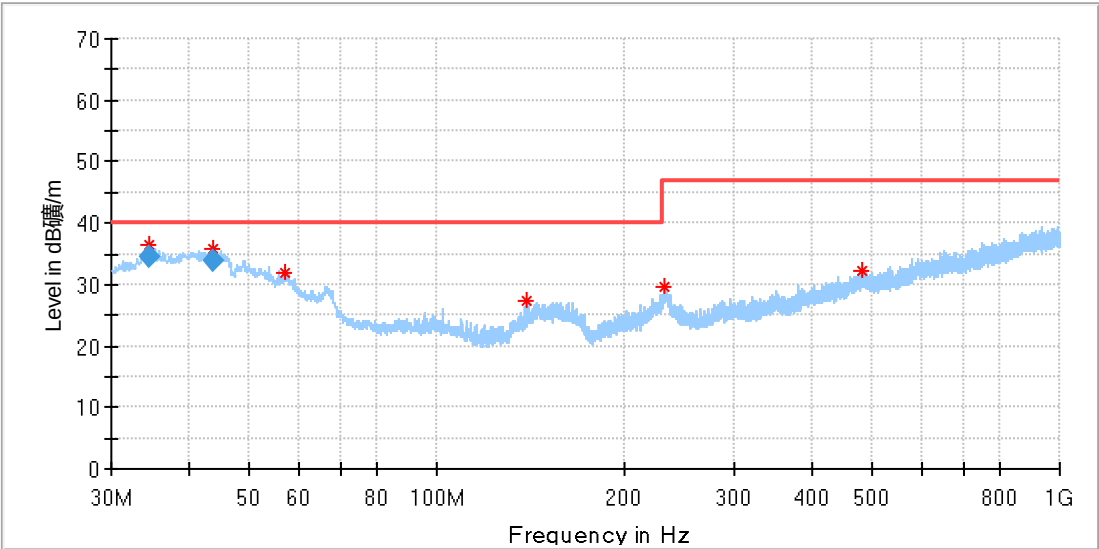
Op Cond.: ON (Minimum power)

Comment: AC 230V/50Hz

Test Spec.: Vertical

Date of Test: 2024-12-28

Detailed results are shown below



Critical Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
34.607500	36.50	40.00	3.50	100.0	V	331.0	20.95
43.701250	35.94	40.00	4.06	100.0	V	309.0	21.38
56.917500	31.91	40.00	8.09	100.0	V	273.0	19.77
138.943125	27.35	40.00	12.65	100.0	V	148.0	15.80
231.820625	29.58	47.00	17.42	200.0	V	102.0	19.85
480.443750	32.38	47.00	14.62	200.0	V	244.0	25.61

Final Result

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
34.607500	34.50	40.00	5.50	100.0	V	331.0	20.95
43.701250	33.70	40.00	6.30	100.0	V	309.0	21.38



M/N: BK-CTL042S-AHC1050ASW

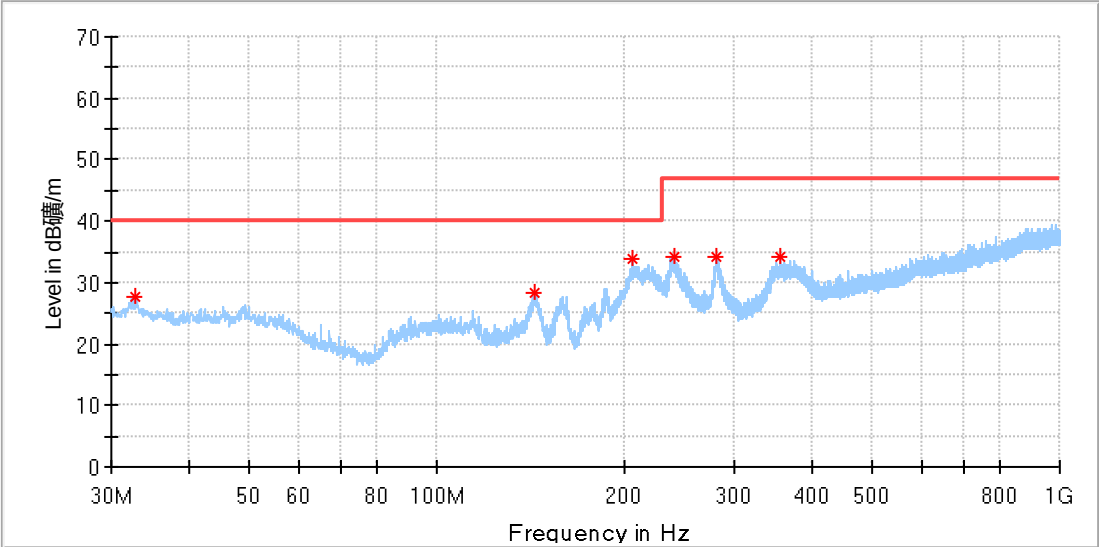
Op Cond.: ON (Maximum power)

Comment: DC 230V

Test Spec.: Horizontal

Date of Test: 2024-12-28

Detailed results are shown below



Critical Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
32.849375	27.55	40.00	12.45	100.0	H	302.0	21.05
143.914375	28.16	40.00	11.84	200.0	H	41.0	15.74
206.479375	33.70	40.00	6.30	200.0	H	236.0	18.56
240.429375	34.16	47.00	12.84	100.0	H	229.0	20.21
280.320625	34.15	47.00	12.85	100.0	H	177.0	21.09
355.677500	34.11	47.00	12.89	100.0	H	0.0	23.43

Final Result

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
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M/N: BK-CTL042S-AHC1050ASW

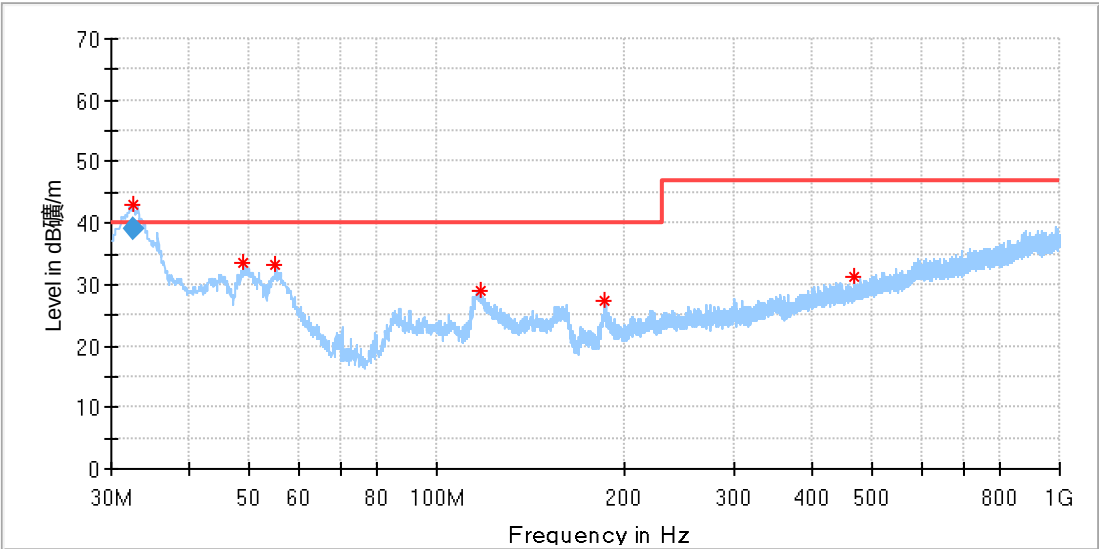
Op Cond.: ON (Maximum power)

Comment: DC 230V

Test Spec.: Vertical

Date of Test: 2024-12-28

Detailed results are shown below



Critical Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
32.557188	42.93	40.00	-2.93	100.0	V	-33.0	21.03
48.733125	33.57	40.00	6.43	100.0	V	221.0	21.20
54.916875	33.27	40.00	6.73	100.0	V	229.0	20.05
117.360625	28.87	40.00	11.13	100.0	V	0.0	17.87
186.473125	27.26	40.00	12.74	100.0	V	207.0	17.66
468.925000	31.33	47.00	15.67	100.0	V	163.0	25.24

Final Result

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
32.557188	39.09	40.00	0.91	100.0	V	-33.0	21.08



M/N: BK-CTL042S-AHC1050ASW

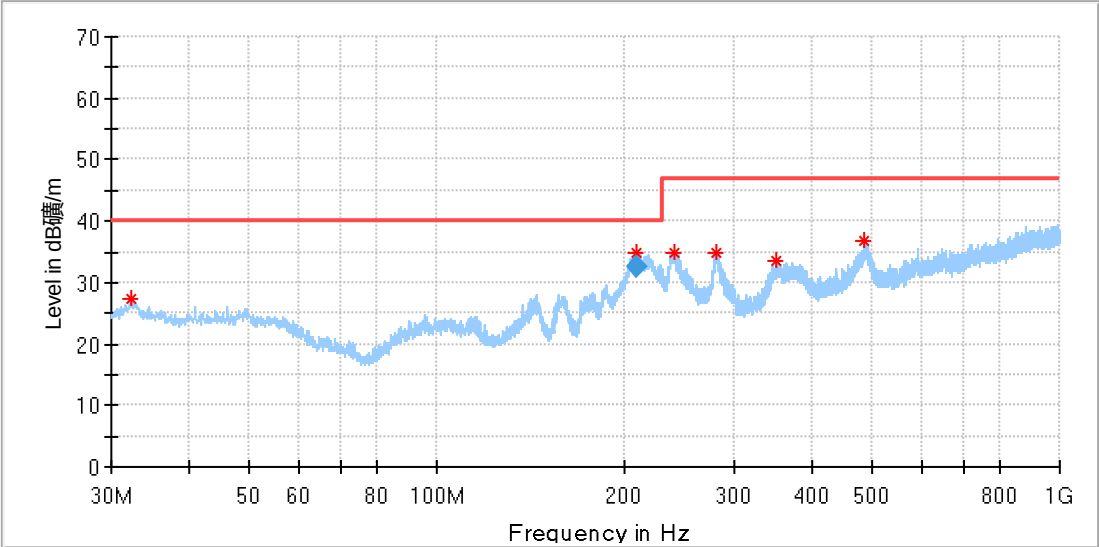
Op Cond.: ON (Minimum power)

Comment: DC 230V

Test Spec.: Horizontal

Date of Test: 2024-12-28

Detailed results are shown below



Critical Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
32.182500	27.33	40.00	12.67	100.0	H	229.0	21.12
209.450000	34.78	40.00	5.22	200.0	H	234.0	18.58
241.338750	34.79	47.00	12.21	100.0	H	236.0	20.21
280.684375	34.91	47.00	12.09	100.0	H	177.0	21.11
350.160625	33.61	47.00	13.39	100.0	H	1.0	23.57
486.142500	36.82	47.00	10.18	200.0	H	190.0	25.75

Final Result

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
209.450000	32.70	40.00	7.30	200.0	H	234.0	18.58



M/N: BK-CTL042S-AHC1050ASW

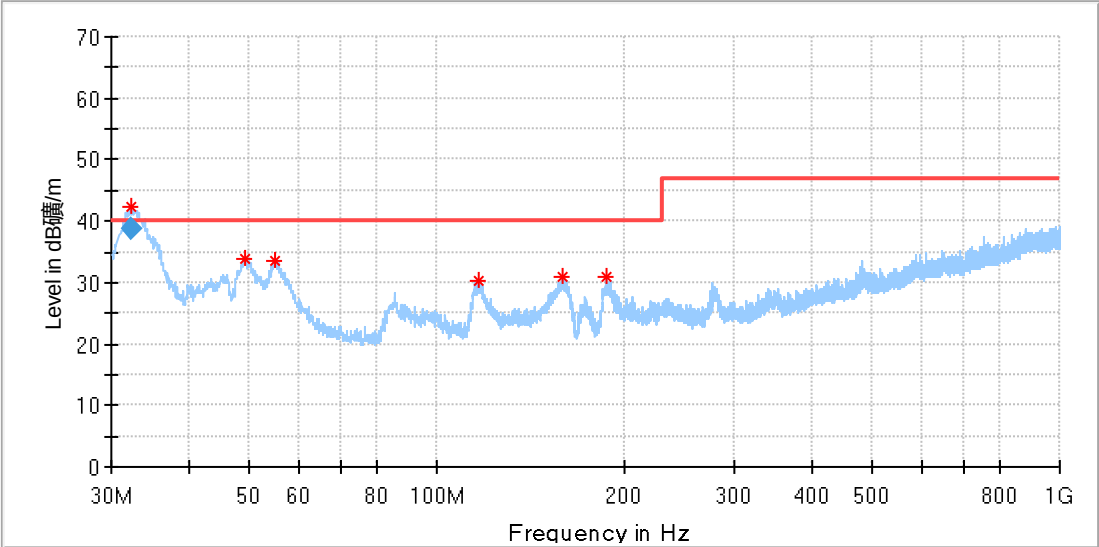
Op Cond.: ON (Minimum power)

Comment: DC 230V

Test Spec.: Vertical

Date of Test: 2024-12-28

Detailed results are shown below



Critical Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
32.243125	42.28	40.00	-2.28	100.0	V	273.0	21.11
49.278750	33.79	40.00	6.21	100.0	V	0.0	21.12
54.916875	33.45	40.00	6.55	100.0	V	280.0	20.05
116.754375	30.44	40.00	9.56	100.0	V	0.0	18.05
159.616250	30.89	40.00	9.11	100.0	V	96.0	16.04
187.382500	31.09	40.00	8.91	100.0	V	214.0	17.80

Final Result

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
32.243125	38.80	40.00	1.20	100.0	V	273.0	21.11



M/N: BK-PTL042S-AHC1050ASW

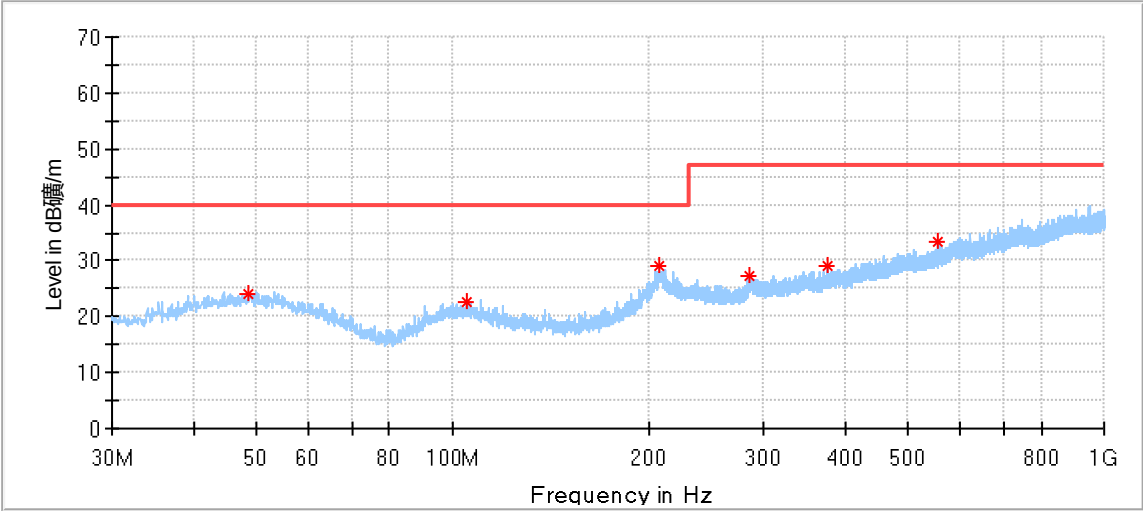
Op Cond.: ON (Maximum power)

Comment: AC 230V/50Hz

Test Spec.: Horizontal

Date of Test: 2024-12-28

Detailed results are shown below



Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
48.699444	24.22	40.00	15.78	200.0	H	144.0	18.20
104.905556	22.61	40.00	17.39	100.0	H	328.0	15.94
207.132778	29.08	40.00	10.92	100.0	H	144.0	15.58
286.403333	27.39	47.00	19.61	100.0	H	165.0	18.16
376.936667	29.04	47.00	17.96	200.0	H	291.0	20.54
554.285000	33.25	47.00	13.75	200.0	H	322.0	23.83

Final Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
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M/N: BK-PTL042S-AHC1050ASW

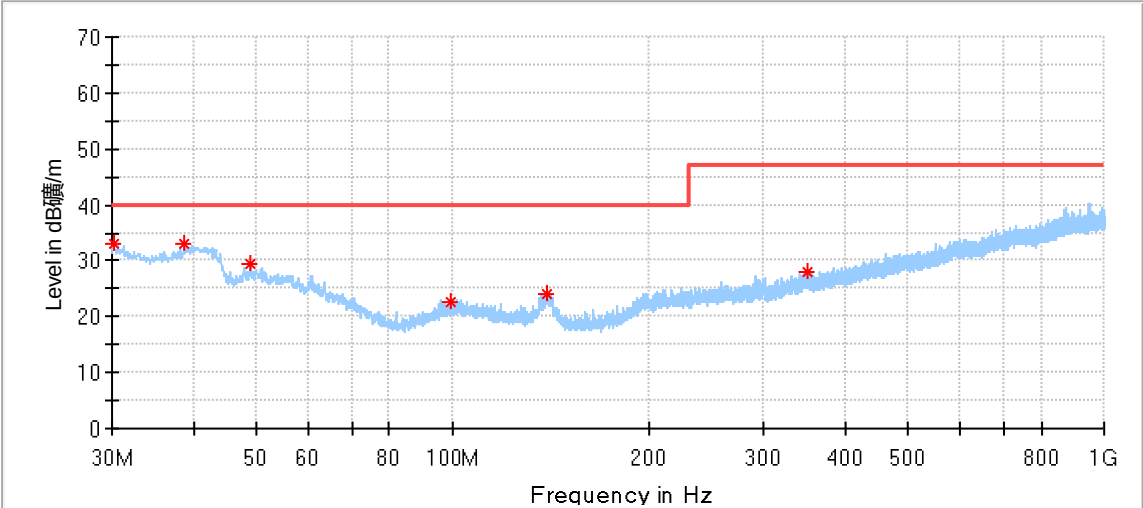
Op Cond.: ON (Maximum power)

Comment: AC 230V/50Hz

Test Spec.: Vertical

Date of Test: 2024-12-28

Detailed results are shown below



Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
30.107778	33.02	40.00	6.98	100.0	V	265.0	14.03
38.783889	33.17	40.00	6.83	100.0	V	249.0	16.43
49.022778	29.39	40.00	10.61	100.0	V	170.0	18.24
99.301111	22.70	40.00	17.30	200.0	V	309.0	15.74
139.071111	24.05	40.00	15.95	100.0	V	249.0	12.62
350.423333	28.04	47.00	18.96	100.0	V	202.0	20.18

Final Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
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M/N: BK-PTL042S-AHC1050ASW

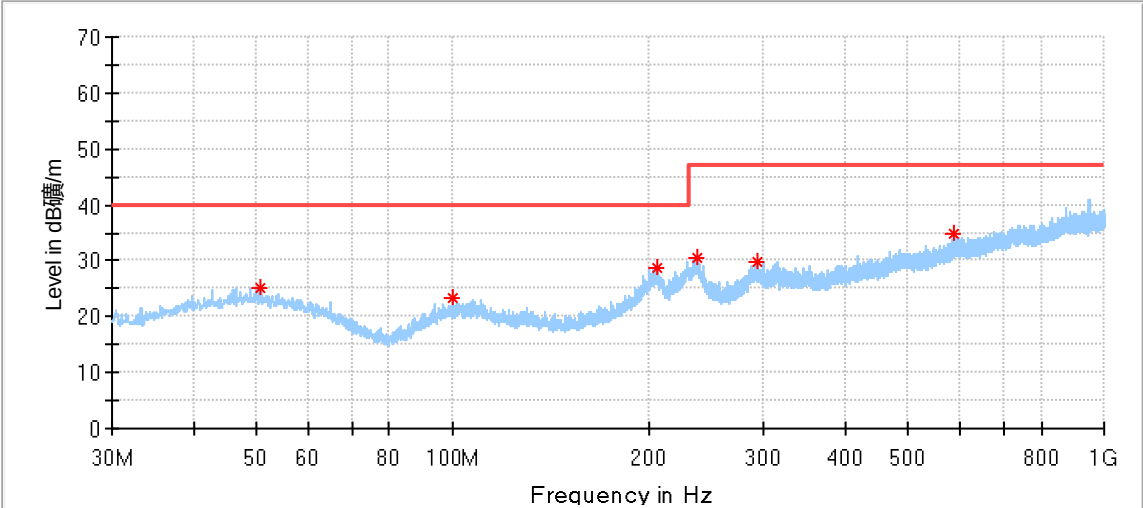
Op Cond.: ON (Minimum power)

Comment: AC 230V/50Hz

Test Spec.: Horizontal

Date of Test: 2024-12-28

Detailed results are shown below



Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Corr. (dB)
50.747222	25.23	40.00	14.77	100.0	H	5.0	18.17	---
100.109444	23.21	40.00	16.79	200.0	H	13.0	15.82	---
205.354444	28.88	40.00	11.12	200.0	H	175.0	15.54	---
237.256667	30.68	47.00	16.32	100.0	H	0.0	17.05	---
293.355000	29.69	47.00	17.31	100.0	H	0.0	18.31	---
586.241111	34.93	47.00	12.07	200.0	H	240.0	24.64	---

Final Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Corr. (dB)
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M/N: BK-PTL042S-AHC1050ASW

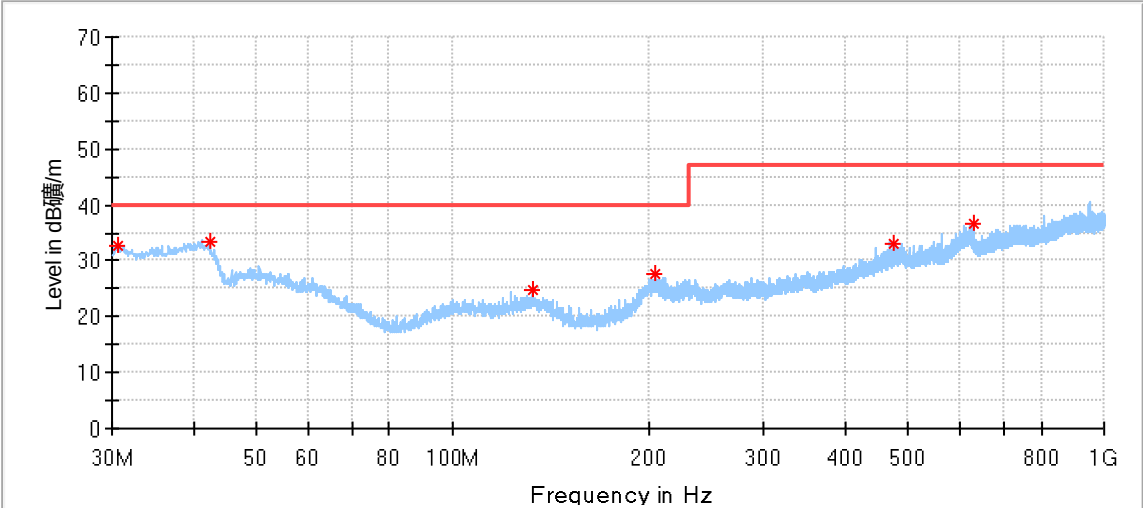
Op Cond.: ON (Minimum power)

Comment: AC 230V/50Hz

Test Spec.: Vertical

Date of Test: 2024-12-28

Detailed results are shown below



Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Corr. (dB)
30.700556	32.82	40.00	7.18	100.0	V	203.0	13.95	---
42.340556	33.52	40.00	6.48	100.0	V	0.0	17.40	---
132.335000	24.76	40.00	15.24	100.0	V	29.0	13.05	---
204.923333	27.60	40.00	12.40	100.0	V	46.0	15.54	---
474.260000	33.10	47.00	13.90	100.0	V	38.0	22.41	---
631.831111	36.45	47.00	10.55	100.0	V	172.0	25.11	---

Final Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Corr. (dB)
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M/N: BK-PTL042S-AHC1050ASW

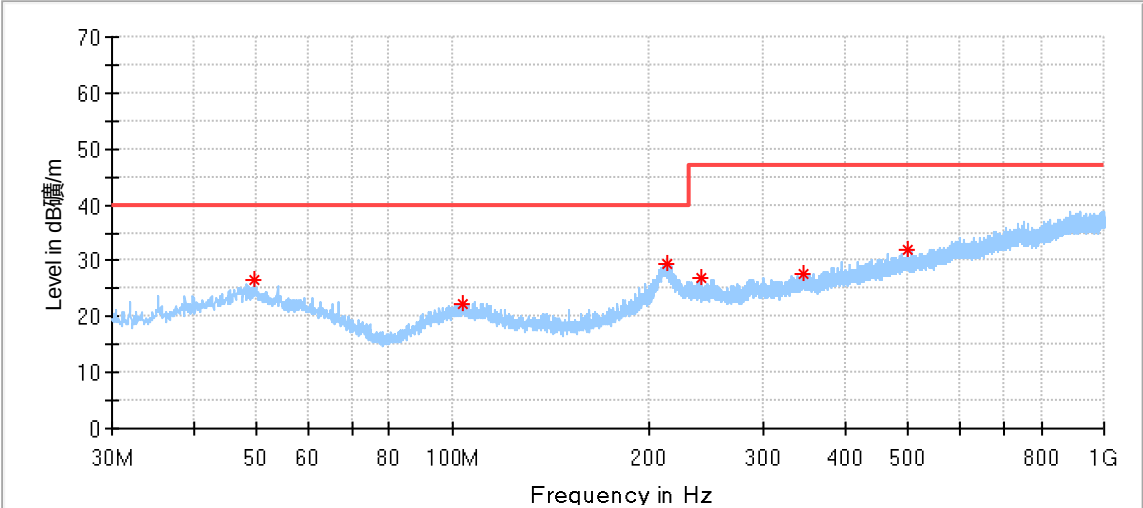
Op Cond.: ON (Maximum power)

Comment: DC 230V

Test Spec.: Horizontal

Date of Test: 2024-12-28

Detailed results are shown below



Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
49.723333	26.50	40.00	13.50	200.0	H	0.0	18.24
103.342778	22.42	40.00	17.58	200.0	H	127.0	15.93
213.060556	29.36	40.00	10.64	200.0	H	337.0	15.79
240.274444	26.94	47.00	20.06	100.0	H	340.0	17.18
346.543333	27.71	47.00	19.29	100.0	H	13.0	20.11
498.941111	31.96	47.00	15.04	100.0	H	63.0	22.98

Final Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
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M/N: BK-PTL042S-AHC1050ASW

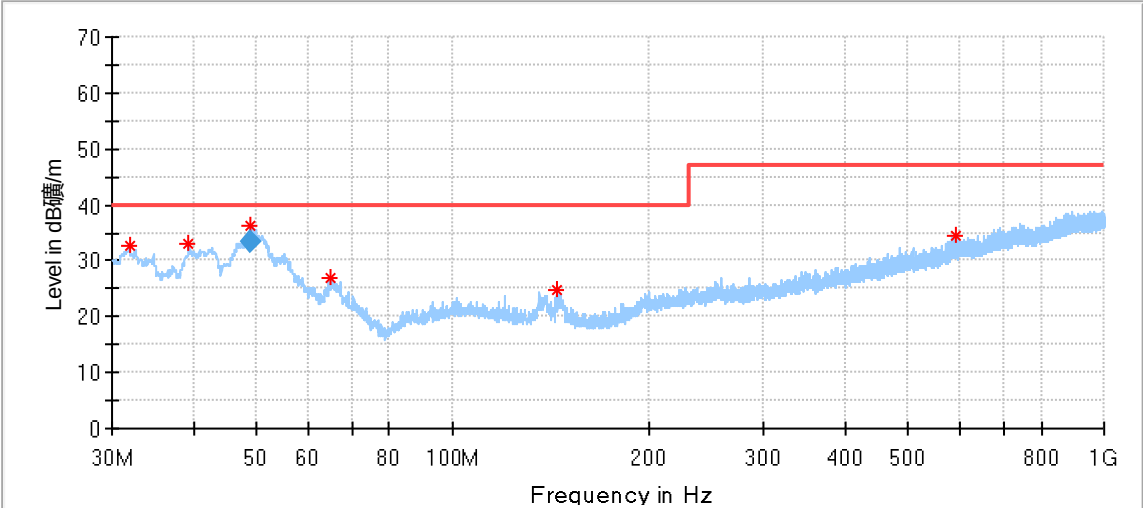
Op Cond.: ON (Maximum power)

Comment: DC 230V

Test Spec.: Vertical

Date of Test: 2024-12-28

Detailed results are shown below



Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
31.940000	32.80	40.00	7.20	100.0	V	292.0	14.03
39.322778	33.09	40.00	6.91	100.0	V	123.0	16.65
49.022778	36.18	40.00	3.82	100.0	V	194.0	18.24
64.704444	26.94	40.00	13.06	100.0	V	217.0	15.48
144.136667	24.87	40.00	15.13	100.0	V	0.0	12.54
591.037222	34.61	47.00	12.39	200.0	V	299.0	24.81

Final Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
49.022778	33.47	40.00	6.53	100.0	V	194.0	18.24



M/N: BK-PTL042S-AHC1050ASW

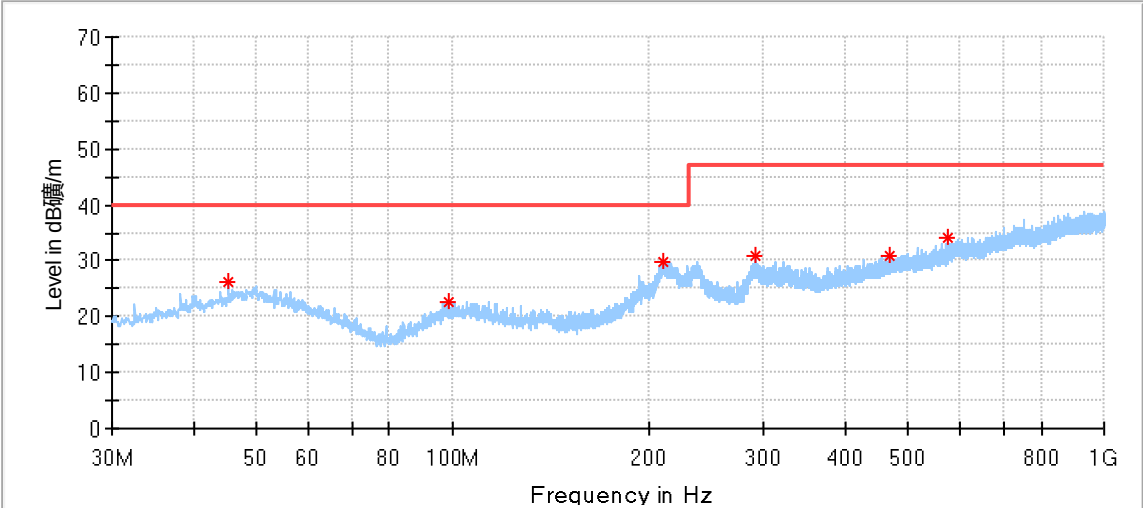
Op Cond.: ON (Minimum power)

Comment: DC 230V

Test Spec.: Horizontal

Date of Test: 2024-12-28

Detailed results are shown below



Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
45.250556	26.15	40.00	13.85	200.0	H	113.0	17.98
98.654444	22.76	40.00	17.24	100.0	H	246.0	15.67
210.527778	29.84	40.00	10.16	100.0	H	348.0	15.68
291.091667	30.78	47.00	16.22	100.0	H	330.0	18.26
468.709444	31.03	47.00	15.97	100.0	H	193.0	22.26
575.517222	34.19	47.00	12.81	200.0	H	207.0	24.00

Final Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---



M/N: BK-PTL042S-AHC1050ASW

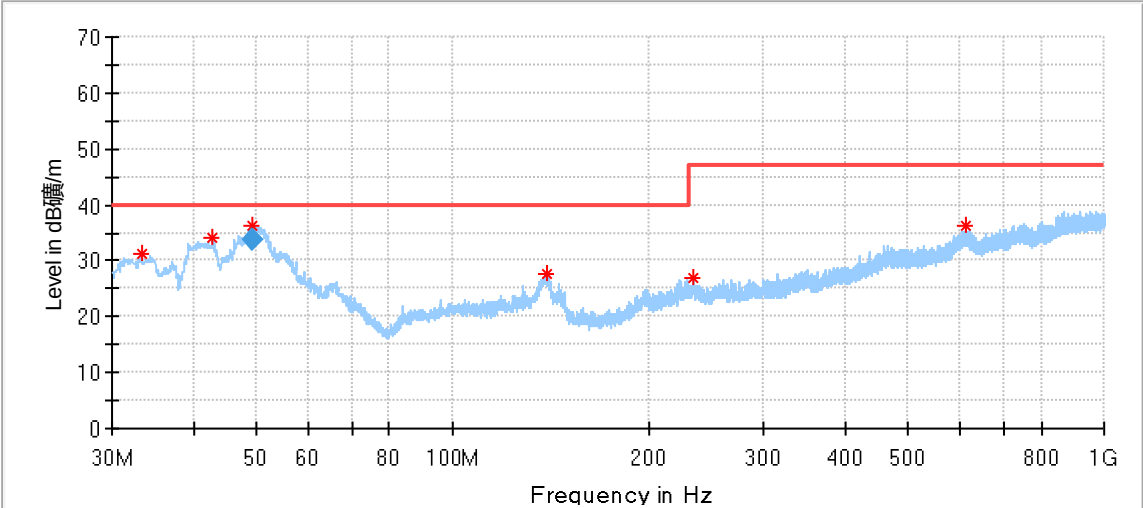
Op Cond.: ON (Minimum power)

Comment: DC 230V

Test Spec.: Vertical

Date of Test: 2024-12-28

Detailed results are shown below

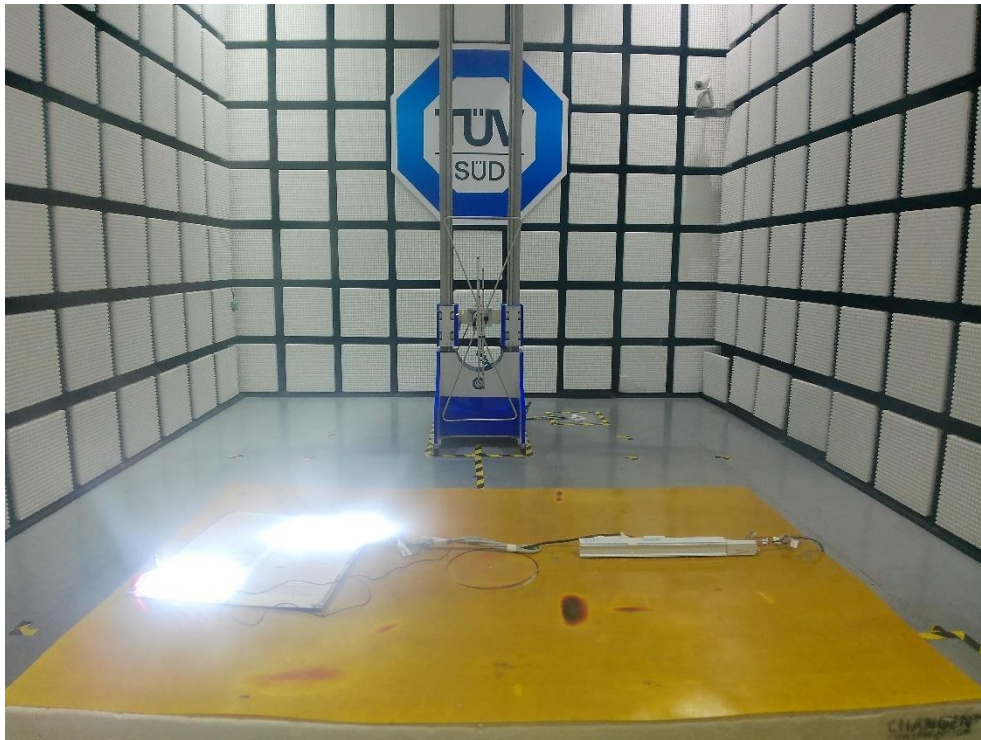


Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
33.341111	31.35	40.00	8.65	100.0	V	336.0	14.36
42.771667	33.96	40.00	6.04	100.0	V	257.0	17.49
49.238333	36.34	40.00	3.66	100.0	V	265.0	18.24
139.394444	27.61	40.00	12.39	100.0	V	328.0	12.62
233.969444	26.83	47.00	20.17	100.0	V	281.0	16.89
611.784444	36.18	47.00	10.82	100.0	V	202.0	25.08

Final Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
49.238333	33.80	40.00	6.20	100.0	V	265.0	18.24



Test Setup

2.4.8 Test Location

This test was carried out in 3m anechoic chamber.

2.5 Harmonic current emission

2.5.1 Specification Reference

EN IEC 61000-3-2:2019+A1:2021, Clause 7

2.5.2 Equipment Under Test

BK-DSL042S-AHC1050ADPW, BK-CTL042S-AHC1050ASW and BK-PTL042S-AHC1050ASW

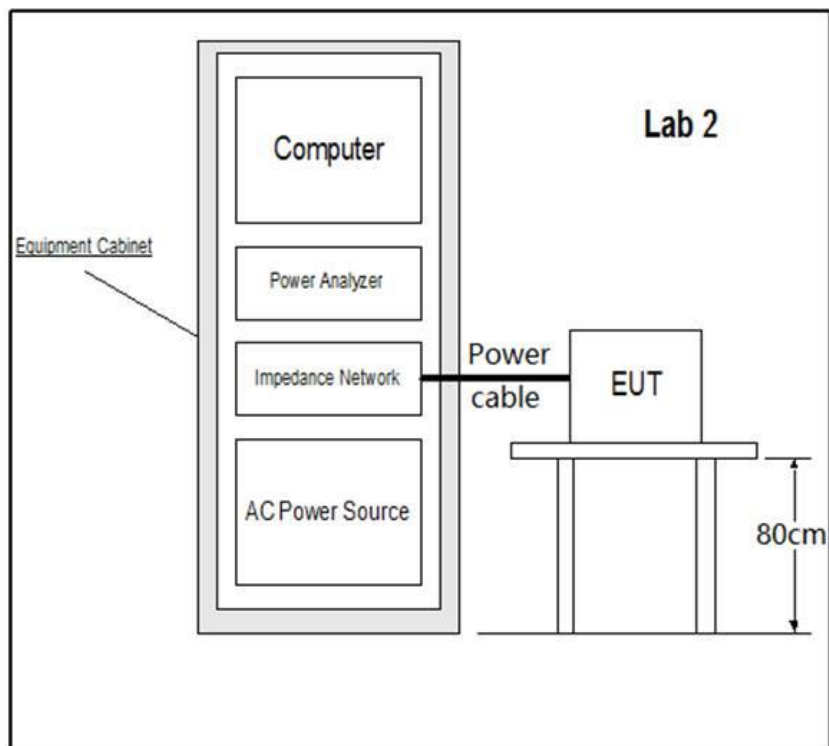
2.5.3 Date of Test

2024-11-27

2.5.4 Test Method

Harmonic current test should be conducted with the user's operation control or automatic programs set to the mode expected to produce the maximum total harmonic current under normal operating conditions.

Specific test conditions for the measurement of harmonic currents associated with some types of equipment are given in test equipment list.



2.5.5 Environmental Conditions

Ambient Temperature	22.3 °C
Relative Humidity	55.2 %
Atmospheric Pressure	1013 mbar

2.5.6 Specification Limits

Limits for class C Equipment active input power > 25W	
Harmonic order	Maximum permissible harmonic current expressed as a percentage of the input current at the fundamental frequency
h	%
2	2
3	27 ^b
5	10
7	7
9	5
$11 \leq h \leq 39$	3
(odd harmonics only)	
"b": The limit is determined based on the assumption of modern lighting technologies having power factors of 0,90 or higher.	

Limits for class C Equipment active input power $\geq 5W$ and $\leq 25W$	
Harmonic order	Maximum permissible harmonic current per watt mA/W
h	
3	3.4
5	1.9
7	1.0
9	0.5
11	0.35
$13 \leq h \leq 39$ (odd harmonic only)	3.85/h
Lighting equipment having a rated power greater than or equal to 5 W and less than or equal to 25 W shall comply with one of the following three sets of requirements: – the harmonic currents shall not exceed the power-related limits of Table 3, column 2; – the third harmonic current, expressed as a percentage of the fundamental current, shall not exceed 86 % and the fifth harmonic current shall not exceed 61 %. In addition, the waveform of the input current shall be such that it reaches the 5 % current threshold before or at 60°, has its peak value before or at 65° and does not fall below the 5 % current threshold before 90°, referenced to any zero crossing of the fundamental supply voltage. The current threshold is 5 % of the highest absolute peak value that occurs in the measurement window, and the phase angle measurements are made on the cycle that includes this absolute peak value (see Figure 2). Components of current with frequencies above 9 kHz shall not influence this evaluation (a filter similar to the one described in 5.3 of IEC 61000-4-7:2002 and IEC 61000-4-7:2002/AMD1:2008 may be used); – the THD shall not exceed 70 %. The third order harmonic current, expressed as a percentage of the fundamental current, shall not exceed 35 %, the fifth order current shall not exceed 25 %, the seventh order current shall not exceed 30 %, the ninth and eleventh order currents shall not exceed 20 % and the second order current shall not exceed 5 %	

2.5.7 Test Results

M/N: BK-DSL042S-AHC1050ADPW
 Op Cond.: ON (Maximum power)
 Comment: AC 230V/50Hz
 Date of Test: 2024-11-27
 Detailed results are shown below

Standard Group: Industry
 Standard Name: IEC 61000-3-2 (Edition 5.1)
 Limits for harmonic current emissions (equipment input current < 16 A per phase)
 Device Under Test: **PASS**
 Power Source: **PASS**
 Connection Type: L - N
 Main Line: 230 V, 50 Hz
 Classification: Class C (Rated power > 25 W, Table 2)
 Appli. of Limits: less than or equal to 150 % (Without POHC Enhancement)
 Test Duration: **2 min 30 s**

Check Harmonics 2..40			
<i>First detected harmonic order > 150 %</i>			
Line 1:	None		
<i>Harmonics orders > 150 %</i>			
Line 1:	None		
<i>Harmonics orders with average > 100 %</i>			
Line 1:	None		

Measured values			
<i>Fundamental Current</i>			
Line 1:	0.193 A		
<i>Active input Power</i>			
Line 1:	43.994 W *		
<i>Circuit power factor</i>			
Line 1:	0.983 *		

* Absolute value.

Prerequisite for simplified method fulfilled			
<i>First time window with THD(I) > 15 %</i>			
Line 1:	None		
<i>Time window with max THD(I) > 15 %</i>			
Line 1:	None		
<i>Current emission below 60 % of the applicable limits</i>			
Line 1:	No		
<i>Active Input Power</i>			

Line 1: 44 W *

* **Absolute value.****Current Test Result**

Average and Maximum harmonic current results									
Hn	Average				Maximum				Harmonic Result
	I _{eff} [%]	of Limit [%]	Limit [%]	Result	I _{eff} [%]	of Limit [%]	Limit [%]	Result	
1	99.232				99.886				
2	0.281	14.056	2.000	n/a	0.318	10.590	3.000	n/a	PASS
3	4.005	14.835	27.000	PASS	4.191	10.348	40.500	PASS	PASS
4	0.378				0.424				
5	2.804	28.041	10.000	PASS	2.930	19.533	15.000	PASS	PASS
6	0.329				0.364				
7	2.688	38.398	7.000	PASS	2.762	26.301	10.500	PASS	PASS
8	0.332				0.368				
9	2.151	43.017	5.000	n/a	2.212	29.494	7.500	n/a	PASS
10	0.426				0.463				
11	1.713	57.112	3.000	n/a	1.760	39.103	4.500	n/a	PASS
12	0.763				0.809				
13	1.348	44.926	3.000	n/a	1.448	32.172	4.500	n/a	PASS
14	0.483				0.525				
15	1.017	33.901	3.000	n/a	1.068	23.727	4.500	n/a	PASS
16	0.325				0.361				
17	0.833	27.780	3.000	n/a	0.897	19.922	4.500	n/a	PASS
18	0.301				0.338				
19	0.494	16.472	3.000	n/a	0.564	12.544	4.500	n/a	PASS
20	0.362				0.415				
21	0.630	20.998	3.000	n/a	0.703	15.623	4.500	n/a	PASS
22	0.466				0.523				
23	0.421	14.026	3.000	n/a	0.486	10.798	4.500	n/a	PASS
24	0.449				0.478				
25	0.634	21.149	3.000	n/a	0.682	15.155	4.500	n/a	PASS
26	0.377				0.417				
27	0.349	11.622	3.000	n/a	0.387	8.606	4.500	n/a	PASS
28	0.296				0.332				
29	0.522	17.414	3.000	n/a	0.568	12.622	4.500	n/a	PASS
30	0.304				0.337				
31	0.385	12.847	3.000	n/a	0.455	10.110	4.500	n/a	PASS
32	0.294				0.318				
33	0.498	16.615	3.000	n/a	0.555	12.330	4.500	n/a	PASS
34	0.284				0.316				
35	0.516	17.200	3.000	n/a	0.569	12.646	4.500	n/a	PASS
36	0.295				0.326				
37	0.506	16.864	3.000	n/a	0.548	12.171	4.500	n/a	PASS

38	0.289				0.335				
39	0.491	16.363	3.000	n/a	0.549	12.199	4.500	n/a	PASS
40	0.287				0.324				

Note: Harmonic currents less than 0.6 % of the input current measured under the test conditions, or less than 5 mA, whichever is greater, are disregarded.

Maximum / Average Values

Line 1

<i>Maximum Values</i>		
Frequency	50 Hz	
Voltage RMS	231.3 V	
Current RMS	0.1931 A	
Peak Current	0.2919 A	
Fundamental Current	0.1930 A	
Current Crest Factor	1.525	
Active Power P	44.00 W	
Power Factor	0.9836	
Total Harmonic Current (THC)	0.01368 A	
Instantaneous Partial Odd Harmonic Current (Inst. POHC)	3.405e-3 A	
Total Harmonic Distortion Current (THDC)	0.07088	
<i>Average Values</i>		
Total Harmonic Current (THC)	0.01336 A	
Instantaneous Partial Odd Harmonic Current (Inst. POHC)	3.091e-3 A	
Total Harmonic Distortion Current (THDC)	0.06926	

M/N: BK-CTL042S-AHC1050ASW
 Op Cond.: ON (Maximum THC)
 Comment: AC 230V/50Hz
 Date of Test: 2024-11-27
 Detailed results are shown below

Standard Group: Industry
 Standard Name: IEC 61000-3-2 (Edition 5.1)
 Limits for harmonic current emissions (equipment input current < 16 A per phase)
 Device Under Test: **PASS**
 Power Source: **PASS**
 Connection Type: L - N
 Main Line: 230 V, 50 Hz
 Classification: Class C (Rated power > 25 W, Table 2)
 Additional Modes: With means for control - maximal THC condition
 Appli. of Limits: less than or equal to 150 % (Without POHC Enhancement)

Test Duration: **2 min 30 s**

Check Harmonics 2..40			
<i>First detected harmonic order > 150 %</i>			
Line 1:	None		
<i>Harmonics orders > 150 %</i>			
Line 1:	None		
<i>Harmonics orders with average > 100 %</i>			
Line 1:	None		

Measured values			
<i>Fundamental Current</i>			
Line 1:	0.049 A	specified value: 0.193	specified value applies
<i>Active input Power</i>			
Line 1:	9.074 W *		
<i>Circuit power factor</i>			
Line 1:	0.768 *	specified value: 0.983	specified value applies

* Absolute value.

Prerequisite for simplified method fulfilled			
<i>First time window with THD(I) > 15 %</i>			
Line 1:	None		
<i>Time window with max THD(I) > 15 %</i>			
Line 1:	None		
<i>Current emission below 60 % of the applicable limits</i>			
Line 1:	No		
<i>Active Input Power</i>			
Line 1:	9 W *		

* Absolute value.

Current Test Result

Average and Maximum harmonic current results									
Hn	Average				Maximum				Harmonic Result
	I _{eff} [%]	of Limit [%]	Limit [%]	Result	I _{eff} [%]	of Limit [%]	Limit [%]	Result	
1	25.215				25.415				
2	0.316	15.800	2.000	n/a	0.367	12.245	3.000	n/a	PASS
3	5.572	20.639	27.000	PASS	5.776	14.261	40.500	PASS	PASS
4	0.431				0.484				
5	3.477	34.766	10.000	PASS	3.635	24.234	15.000	PASS	PASS
6	0.368				0.423				
7	1.614	23.053	7.000	n/a	1.682	16.015	10.500	n/a	PASS
8	0.346				0.392				
9	1.325	26.509	5.000	n/a	1.412	18.831	7.500	n/a	PASS
10	0.459				0.511				
11	1.656	55.211	3.000	n/a	1.717	38.154	4.500	n/a	PASS
12	0.737				0.817				
13	0.999	33.315	3.000	n/a	1.090	24.223	4.500	n/a	PASS
14	0.524				0.568				
15	0.631	21.035	3.000	n/a	0.697	15.484	4.500	n/a	PASS
16	0.367				0.401				
17	0.981	32.707	3.000	n/a	1.026	22.793	4.500	n/a	PASS
18	0.344				0.380				
19	0.673	22.423	3.000	n/a	0.727	16.153	4.500	n/a	PASS
20	0.378				0.420				
21	0.759	25.311	3.000	n/a	0.827	18.387	4.500	n/a	PASS
22	0.505				0.561				
23	0.745	24.835	3.000	n/a	0.834	18.526	4.500	n/a	PASS
24	0.448				0.495				
25	0.719	23.956	3.000	n/a	0.772	17.163	4.500	n/a	PASS
26	0.402				0.454				
27	0.476	15.867	3.000	n/a	0.546	12.143	4.500	n/a	PASS
28	0.318				0.348				
29	0.740	24.662	3.000	n/a	0.804	17.862	4.500	n/a	PASS
30	0.327				0.359				
31	0.485	16.171	3.000	n/a	0.527	11.708	4.500	n/a	PASS
32	0.290				0.319				
33	0.500	16.676	3.000	n/a	0.545	12.120	4.500	n/a	PASS
34	0.297				0.335				
35	0.447	14.894	3.000	n/a	0.496	11.023	4.500	n/a	PASS
36	0.303				0.347				
37	0.433	14.434	3.000	n/a	0.470	10.439	4.500	n/a	PASS
38	0.303				0.330				
39	0.455	15.170	3.000	n/a	0.518	11.512	4.500	n/a	PASS

40	0.284			0.320				
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Note: Harmonic currents less than 0.6 % of the input current measured under the test conditions, or less than 5 mA, whichever is greater, are disregarded.

Maximum / Average Values

		Line 1
<i>Maximum Values</i>		
Frequency		50 Hz
Voltage RMS		231.3 V
Current RMS		0.05080 A
Peak Current		0.09341 A
Fundamental Current		0.04938 A
Current Crest Factor		1.848
Active Power P		9.150 W
Power Factor		0.7716
Total Harmonic Current (THC)		0.01524 A
Instantaneous Partial Odd Harmonic Current (Inst. POHC)		4.019e-3 A
Total Harmonic Distortion Current (THDC)		0.07897
<i>Average Values</i>		
Total Harmonic Current (THC)		0.01493 A
Instantaneous Partial Odd Harmonic Current (Inst. POHC)		3.630e-3 A
Total Harmonic Distortion Current (THDC)		0.07734

M/N: BK-CTL042S-AHC1050ASW
 Op Cond.: ON (Maximum power)
 Comment: AC 230V/50Hz
 Date of Test: 2024-11-27
 Detailed results are shown below

Standard Group: Industry
 Standard Name: IEC 61000-3-2 (Edition 5.1)
 Limits for harmonic current emissions (equipment input current < 16 A per phase)
 Device Under Test: **PASS**
 Power Source: **PASS**
 Connection Type: L - N
 Main Line: 230 V, 50 Hz
 Classification: Class C (Rated power > 25 W, Table 2)
 Appli. of Limits: less than or equal to 150 % (Without POHC Enhancement)
 Test Duration: **2 min 30 s**

Check Harmonics 2..40			
<i>First detected harmonic order > 150 %</i>			
Line 1:	None		
<i>Harmonics orders > 150 %</i>			
Line 1:	None		
<i>Harmonics orders with average > 100 %</i>			
Line 1:	None		

Measured values			
<i>Fundamental Current</i>			
Line 1:	0.189 A		
<i>Active input Power</i>			
Line 1:	42.988 W *		
<i>Circuit power factor</i>			
Line 1:	0.983 *		

* Absolute value.

Prerequisite for simplified method fulfilled			
<i>First time window with THD(I) > 15 %</i>			
Line 1:	None		
<i>Time window with max THD(I) > 15 %</i>			
Line 1:	None		
<i>Current emission below 60 % of the applicable limits</i>			
Line 1:	No		
<i>Active Input Power</i>			
Line 1:	43 W *		

* Absolute value.

Current Test Result

Average and Maximum harmonic current results									
Hn	Average				Maximum				Harmonic Result
	I _{eff} [%]	of Limit [%]	Limit [%]	Result	I _{eff} [%]	of Limit [%]	Limit [%]	Result	
1	99.725				99.967				
2	0.286	14.324	2.000	n/a	0.319	10.634	3.000	n/a	PASS
3	3.264	12.090	27.000	PASS	3.480	8.594	40.500	PASS	PASS
4	0.384				0.444				
5	3.123	31.232	10.000	PASS	3.312	22.078	15.000	PASS	PASS
6	0.343				0.379				
7	2.436	34.797	7.000	n/a	2.520	24.004	10.500	n/a	PASS
8	0.331				0.373				
9	2.269	45.378	5.000	n/a	2.335	31.128	7.500	n/a	PASS
10	0.424				0.470				
11	1.632	54.412	3.000	n/a	1.769	39.303	4.500	n/a	PASS
12	0.990				1.063				
13	1.362	45.413	3.000	n/a	1.450	32.230	4.500	n/a	PASS
14	0.487				0.548				
15	1.073	35.780	3.000	n/a	1.133	25.189	4.500	n/a	PASS
16	0.343				0.396				
17	0.805	26.832	3.000	n/a	0.909	20.192	4.500	n/a	PASS
18	0.311				0.353				
19	0.477	15.905	3.000	n/a	0.546	12.124	4.500	n/a	PASS
20	0.358				0.402				
21	0.698	23.265	3.000	n/a	0.770	17.120	4.500	n/a	PASS
22	0.392				0.471				
23	0.488	16.279	3.000	n/a	0.530	11.780	4.500	n/a	PASS
24	0.446				0.478				
25	0.497	16.551	3.000	n/a	0.551	12.235	4.500	n/a	PASS
26	0.408				0.451				
27	0.457	15.232	3.000	n/a	0.528	11.725	4.500	n/a	PASS
28	0.309				0.342				
29	0.434	14.469	3.000	n/a	0.493	10.958	4.500	n/a	PASS
30	0.317				0.354				
31	0.365	12.155	3.000	n/a	0.423	9.403	4.500	n/a	PASS
32	0.296				0.323				
33	0.490	16.332	3.000	n/a	0.552	12.276	4.500	n/a	PASS
34	0.295				0.325				
35	0.563	18.770	3.000	n/a	0.611	13.568	4.500	n/a	PASS
36	0.299				0.340				
37	0.498	16.597	3.000	n/a	0.534	11.875	4.500	n/a	PASS
38	0.295				0.332				
39	0.444	14.802	3.000	n/a	0.526	11.686	4.500	n/a	PASS

40	0.293				0.329				
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Note: Harmonic currents less than 0.6 % of the input current measured under the test conditions, or less than 5 mA, whichever is greater, are disregarded.

Maximum / Average Values

		Line 1
<i>Maximum Values</i>		
	Frequency	50 Hz
	Voltage RMS	231.3 V
	Current RMS	0.1893 A
	Peak Current	0.2884 A
	Fundamental Current	0.1888 A
	Current Crest Factor	1.525
	Active Power P	43.03 W
	Power Factor	0.9836
	Total Harmonic Current (THC)	0.01280 A
	Instantaneous Partial Odd Harmonic Current (Inst. POHC)	3.377e-3 A
	Total Harmonic Distortion Current (THDC)	0.06785
<i>Average Values</i>		
	Total Harmonic Current (THC)	0.01250 A
	Instantaneous Partial Odd Harmonic Current (Inst. POHC)	3.005e-3 A
	Total Harmonic Distortion Current (THDC)	0.06628

M/N: BK-CTL042S-AHC1050ASW
 Op Cond.: ON (Minimum power)
 Comment: AC 230V/50Hz
 Date of Test: 2024-11-27
 Detailed results are shown below

Standard Group: Industry
 Standard Name: IEC 61000-3-2 (Edition 5.1)
 Limits for harmonic current emissions (equipment input current < 16 A per phase)
 Device Under Test: **PASS**
 Power Source: **PASS**
 Connection Type: L - N
 Main Line: 230 V, 50 Hz
 Classification: Class C (Rated power ≥ 5 W and ≤ 25 W, Power-related limits)
 Appli. of Limits: less than or equal to 150 % (Without POHC Enhancement)
 Test Duration: **2 min 30 s**

Check Harmonics 2..40			
<i>First detected harmonic order > 150 %</i>			
Line 1:	None		
<i>Harmonics orders > 150 %</i>			
Line 1:	None		
<i>Harmonics orders with average > 100 %</i>			
Line 1:	None		

Measured values			
<i>Fundamental Current</i>			
Line 1:	0.059 A		
<i>Active input Power</i>			
Line 1:	11.649 W *		
<i>Circuit power factor</i>			
Line 1:	0.832 *		

* Absolute value.

Prerequisite for simplified method unfulfilled			
<i>First time window with THD(I) > 15 %</i>			
Line 1:	None		
<i>Time window with max THD(I) > 15 %</i>			
Line 1:	None		
<i>Current emission below 60 % of the applicable limits</i>			
Line 1:	No		
<i>Active Input Power</i>			
Line 1:	12 W *		

* Absolute value.

Current Test Result

Average and Maximum harmonic current results									
Hn	Average				Maximum				Harmonic Result
	I _{eff} [A]	of Limit [%]	Limit [A]	Result	I _{eff} [A]	of Limit [%]	Limit [A]	Result	
1	0.059				0.059				
2	0.001				0.001				
3	0.009	21.834	0.040	PASS	0.009	15.383	0.059	PASS	PASS
4	0.001				0.001				
5	0.007	29.733	0.022	PASS	0.007	20.647	0.033	PASS	PASS
6	0.001				0.001				
7	0.004	35.160	0.012	n/a	0.004	24.402	0.017	n/a	PASS
8	0.001				0.001				
9	0.003	43.869	0.006	n/a	0.003	31.383	0.009	n/a	PASS
10	0.001				0.001				
11	0.003	61.551	0.004	n/a	0.003	47.600	0.006	n/a	PASS
12	0.002				0.002				
13	0.003	72.470	0.003	n/a	0.003	51.912	0.005	n/a	PASS
14	0.001				0.001				
15	0.002	60.329	0.003	n/a	0.002	42.526	0.004	n/a	PASS
16	0.001				0.001				
17	0.002	69.828	0.003	n/a	0.002	50.126	0.004	n/a	PASS
18	0.001				0.001				
19	0.001	44.655	0.002	n/a	0.001	33.463	0.004	n/a	PASS
20	0.001				0.001				
21	0.002	74.040	0.002	n/a	0.002	53.674	0.003	n/a	PASS
22	0.001				0.001				
23	0.001	58.179	0.002	n/a	0.001	44.081	0.003	n/a	PASS
24	0.001				0.001				
25	0.001	82.450	0.002	n/a	0.002	62.683	0.003	n/a	PASS
26	0.001				0.001				
27	0.001	53.528	0.002	n/a	0.001	41.349	0.002	n/a	PASS
28	0.001				0.001				
29	0.002	99.598	0.002	n/a	0.002	70.491	0.002	n/a	PASS
30	0.001				0.001				
31	0.001	47.387	0.001	n/a	0.001	36.585	0.002	n/a	PASS
32	0.001				0.001				
33	0.001	50.313	0.001	n/a	0.001	38.682	0.002	n/a	PASS
34	0.001				0.001				
35	0.001	82.242	0.001	n/a	0.001	59.760	0.002	n/a	PASS
36	0.001				0.001				
37	0.001	76.427	0.001	n/a	0.001	56.421	0.002	n/a	PASS
38	0.001				0.001				
39	0.001	92.192	0.001	n/a	0.001	68.293	0.002	n/a	PASS

40	0.001				0.001				
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Note: Harmonic currents less than 0.6 % of the input current measured under the test conditions, or less than 5 mA, whichever is greater, are disregarded.

Maximum / Average Values

		Line 1
<i>Maximum Values</i>		
	Frequency	50 Hz
	Voltage RMS	231.3 V
	Current RMS	0.06071 A
	Peak Current	0.1093 A
	Fundamental Current	0.05929 A
	Current Crest Factor	1.801
	Active Power P	11.71 W
	Power Factor	0.8357
	Total Harmonic Current (THC)	0.01412 A
	Instantaneous Partial Odd Harmonic Current (Inst. POHC)	4.086e-3 A
	Total Harmonic Distortion Current (THDC)	0.2388
<i>Average Values</i>		
	Total Harmonic Current (THC)	0.01379 A
	Instantaneous Partial Odd Harmonic Current (Inst. POHC)	3.661e-3 A
	Total Harmonic Distortion Current (THDC)	0.2333

M/N: BK-PTL042S-AHC1050ASW
 Op Cond.: ON (Maximum power)
 Comment: AC 230V/50Hz
 Date of Test: 2024-11-27
 Detailed results are shown below

Standard Group: Industry
 Standard Name: IEC 61000-3-2 (Edition 5.1)
 Limits for harmonic current emissions (equipment input current < 16 A per phase)
 Device Under Test: **PASS**
 Power Source: **PASS**
 Connection Type: L - N
 Main Line: 230 V, 50 Hz
 Classification: Class C (Rated power > 25 W, Table 2)
 Appli. of Limits: less than or equal to 150 % (Without POHC Enhancement)
 Test Duration: **2 min 30 s**

Check Harmonics 2..40			
<i>First detected harmonic order > 150 %</i>			
Line 1:	None		
<i>Harmonics orders > 150 %</i>			
Line 1:	None		
<i>Harmonics orders with average > 100 %</i>			
Line 1:	None		

Measured values			
<i>Fundamental Current</i>			
Line 1:	0.214 A		
<i>Active input Power</i>			
Line 1:	48.958 W *		
<i>Circuit power factor</i>			
Line 1:	0.987 *		

* Absolute value.

Prerequisite for simplified method fulfilled			
<i>First time window with THD(I) > 15 %</i>			
Line 1:	None		
<i>Time window with max THD(I) > 15 %</i>			
Line 1:	None		
<i>Current emission below 60 % of the applicable limits</i>			
Line 1:	No		
<i>Active Input Power</i>			
Line 1:	49 W *		

* Absolute value.

Current Test Result

Average and Maximum harmonic current results									
Hn	Average				Maximum				Harmonic Result
	I _{eff} [%]	of Limit [%]	Limit [%]	Result	I _{eff} [%]	of Limit [%]	Limit [%]	Result	
1	98.447				99.825				
2	0.248	12.414	2.000	n/a	0.289	9.622	3.000	n/a	PASS
3	3.035	11.242	27.000	PASS	3.227	7.968	40.500	PASS	PASS
4	0.316				0.356				
5	2.661	26.614	10.000	PASS	2.835	18.902	15.000	PASS	PASS
6	0.286				0.321				
7	2.048	29.262	7.000	n/a	2.170	20.671	10.500	n/a	PASS
8	0.271				0.300				
9	1.942	38.841	5.000	n/a	1.993	26.569	7.500	n/a	PASS
10	0.340				0.371				
11	1.427	47.578	3.000	n/a	1.524	33.856	4.500	n/a	PASS
12	0.871				0.952				
13	1.226	40.862	3.000	n/a	1.336	29.691	4.500	n/a	PASS
14	0.449				0.494				
15	1.055	35.179	3.000	n/a	1.115	24.773	4.500	n/a	PASS
16	0.281				0.320				
17	0.669	22.309	3.000	n/a	0.769	17.091	4.500	n/a	PASS
18	0.267				0.304				
19	0.716	23.883	3.000	n/a	0.755	16.774	4.500	n/a	PASS
20	0.318				0.355				
21	0.414	13.791	3.000	n/a	0.592	13.156	4.500	n/a	PASS
22	0.474				0.513				
23	0.486	16.196	3.000	n/a	0.596	13.248	4.500	n/a	PASS
24	0.389				0.435				
25	0.443	14.772	3.000	n/a	0.486	10.792	4.500	n/a	PASS
26	0.324				0.368				
27	0.352	11.729	3.000	n/a	0.407	9.040	4.500	n/a	PASS
28	0.273				0.315				
29	0.294	9.785	3.000	n/a	0.352	7.828	4.500	n/a	PASS
30	0.275				0.319				
31	0.472	15.746	3.000	n/a	0.545	12.120	4.500	n/a	PASS
32	0.256				0.298				
33	0.388	12.922	3.000	n/a	0.436	9.681	4.500	n/a	PASS
34	0.257				0.288				
35	0.405	13.502	3.000	n/a	0.463	10.298	4.500	n/a	PASS
36	0.262				0.300				
37	0.438	14.607	3.000	n/a	0.517	11.488	4.500	n/a	PASS
38	0.261				0.292				
39	0.458	15.259	3.000	n/a	0.519	11.542	4.500	n/a	PASS

40	0.253			0.285				
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Note: Harmonic currents less than 0.6 % of the input current measured under the test conditions, or less than 5 mA, whichever is greater, are disregarded.

Maximum / Average Values

		Line 1
<i>Maximum Values</i>		
Frequency		50 Hz
Voltage RMS		231.3 V
Current RMS		0.2145 A
Peak Current		0.3165 A
Fundamental Current		0.2142 A
Current Crest Factor		1.486
Active Power P		48.96 W
Power Factor		0.9870
Total Harmonic Current (THC)		0.01285 A
Instantaneous Partial Odd Harmonic Current (Inst. POHC)		3.207e-3 A
Total Harmonic Distortion Current (THDC)		0.05999
<i>Average Values</i>		
Total Harmonic Current (THC)		0.01254 A
Instantaneous Partial Odd Harmonic Current (Inst. POHC)		2.865e-3 A
Total Harmonic Distortion Current (THDC)		0.05855

M/N: BK-PTL042S-AHC1050ASW
 Op Cond.: ON (Minimum THC)
 Comment: AC 230V/50Hz
 Date of Test: 2024-11-27
 Detailed results are shown below

Standard Group: Industry
 Standard Name: IEC 61000-3-2 (Edition 5.1)
 Limits for harmonic current emissions (equipment input current < 16 A per phase)
 Device Under Test: **PASS**
 Power Source: **PASS**
 Connection Type: L - N
 Main Line: 230 V, 50 Hz
 Classification: Class C (Rated power ≥ 5 W and ≤ 25 W, Power-related limits)
 Appli. of Limits: less than or equal to 150 % (Without POHC Enhancement)
 Test Duration: **2 min 30 s**

Check Harmonics 2..40			
<i>First detected harmonic order > 150 %</i>			
Line 1:	None		
<i>Harmonics orders > 150 %</i>			
Line 1:	None		
<i>Harmonics orders with average > 100 %</i>			
Line 1:	None		

Measured values			
<i>Fundamental Current</i>			
Line 1:	0.059 A		
<i>Active input Power</i>			
Line 1:	12.284 W *		
<i>Circuit power factor</i>			
Line 1:	0.886 *		

* Absolute value.

Prerequisite for simplified method unfulfilled			
<i>First time window with THD(I) > 15 %</i>			
Line 1:	None		
<i>Time window with max THD(I) > 15 %</i>			
Line 1:	None		
<i>Current emission below 60 % of the applicable limits</i>			
Line 1:	No		
<i>Active Input Power</i>			
Line 1:	12 W *		

* Absolute value.

Current Test Result

Average and Maximum harmonic current results									
Hn	Average				Maximum				Harmonic Result
	I _{eff} [A]	of Limit [%]	Limit [A]	Result	I _{eff} [A]	of Limit [%]	Limit [A]	Result	
1	0.059				0.059				
2	0.001				0.001				
3	0.002	5.021	0.042	n/a	0.002	3.845	0.063	n/a	PASS
4	0.001				0.001				
5	0.003	11.660	0.023	n/a	0.003	8.457	0.035	n/a	PASS
6	0.001				0.001				
7	0.002	20.301	0.012	n/a	0.003	14.213	0.018	n/a	PASS
8	0.001				0.001				
9	0.003	49.875	0.006	n/a	0.003	34.777	0.009	n/a	PASS
10	0.001				0.001				
11	0.003	61.365	0.004	n/a	0.003	42.661	0.006	n/a	PASS
12	0.002				0.002				
13	0.003	68.986	0.004	n/a	0.003	48.808	0.005	n/a	PASS
14	0.001				0.001				
15	0.002	68.931	0.003	n/a	0.002	48.097	0.005	n/a	PASS
16	0.001				0.001				
17	0.001	50.767	0.003	n/a	0.002	37.532	0.004	n/a	PASS
18	0.001				0.001				
19	0.002	66.632	0.002	n/a	0.002	47.875	0.004	n/a	PASS
20	0.001				0.001				
21	0.001	56.390	0.002	n/a	0.001	41.945	0.003	n/a	PASS
22	0.001				0.001				
23	0.001	71.045	0.002	n/a	0.002	52.725	0.003	n/a	PASS
24	0.001				0.001				
25	0.002	96.215	0.002	n/a	0.002	68.924	0.003	n/a	PASS
26	0.001				0.001				
27	0.001	60.411	0.002	n/a	0.001	45.426	0.003	n/a	PASS
28	0.001				0.001				
29	0.001	63.742	0.002	n/a	0.001	46.728	0.002	n/a	PASS
30	0.001				0.001				
31	0.001	79.923	0.002	n/a	0.001	56.820	0.002	n/a	PASS
32	0.001				0.001				
33	0.001	72.377	0.001	n/a	0.001	51.872	0.002	n/a	PASS
34	0.001				0.001				
35	0.001	72.084	0.001	n/a	0.001	50.776	0.002	n/a	PASS
36	0.001				0.001				
37	0.001	77.624	0.001	n/a	0.001	56.513	0.002	n/a	PASS
38	0.001				0.001				
39	0.001	89.299	0.001	n/a	0.001	64.754	0.002	n/a	PASS

40	0.001			0.001				
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Note: Harmonic currents less than 0.6 % of the input current measured under the test conditions, or less than 5 mA, whichever is greater, are disregarded.

Maximum / Average Values

		Line 1
<i>Maximum Values</i>		
Frequency		50 Hz
Voltage RMS		231.3 V
Current RMS		0.06038 A
Peak Current		0.09701 A
Fundamental Current		0.05954 A
Current Crest Factor		1.618
Active Power P		12.32 W
Power Factor		0.8882
Total Harmonic Current (THC)		8.934e-3 A
Instantaneous Partial Odd Harmonic Current (Inst. POHC)		4.248e-3 A
Total Harmonic Distortion Current (THDC)		0.1506
<i>Average Values</i>		
Total Harmonic Current (THC)		8.726e-3 A
Instantaneous Partial Odd Harmonic Current (Inst. POHC)		3.878e-3 A
Total Harmonic Distortion Current (THDC)		0.1471



Test Setup

2.5.8 Test Location

This test was carried out in Harmonic Flicker Test area.

2.6 Electrostatic discharge immunity test

2.6.1 Specification Reference

EN IEC 61547:2023, Clause 5.2

2.6.2 Equipment Under Test

BK-DSL042S-AHC1050ADPW, BK-CTL042S-AHC1050ASW and BK-PTL042S-AHC1050ASW

2.6.3 Date of Test

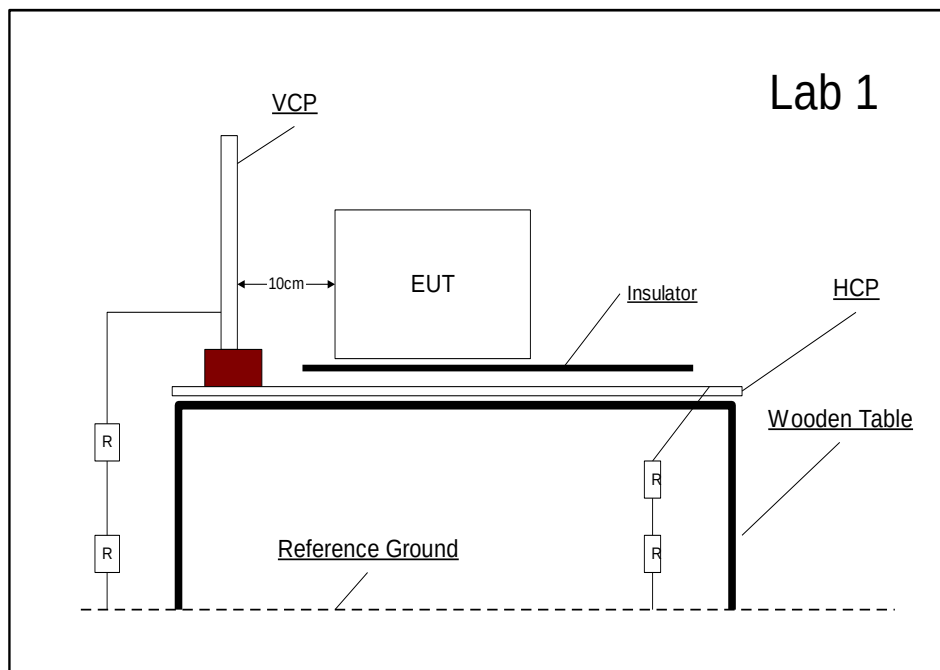
2024-11-29

2.6.4 Test Method

The equipment under test including associated cabling was configured on but insulated from, using a 0.5mm isolator, a horizontal coupling plane fitted to the top of a 0.8m non-conductive table for table-top equipment; and on a 0.1m insulated support for floor standing equipment; above a ground reference plane all within a test laboratory.

Using the air discharge method for non-metallic parts, contact discharge method for metallic parts with both vertical and horizontal couple plane discharge methods for the sides of the equipment under test, the required electrostatic discharge voltage levels in both voltage polarities were applied at the detailed pulse repartition rate.

During this testing any anomalies in the equipment under tests performance was recorded.



VCP: Vertical Coupling Plane 0.5 x 0.5 m

HCP: Horizontal Coupling Plane 0.95 x 1.6 m

R. Ground : 2 x 2 m

R : 470 K Ω

2.6.5 Environmental Conditions

Ambient Temperature	22.5 °C
Relative Humidity	54.1 %
Atmospheric Pressure	1012 mbar

2.6.6 Specification Limits

Required Test Levels				Performance Criteria
Discharge type	Discharge Level (kV)		Number of discharges per location (each polarity)	
	Positive	Negative		
Air – Direct	2, 4 and 8	2, 4 and 8	<10>	B
Contact – Direct	2 and 4	2 and 4	<10>	B
Contact – Indirect	2 and 4	2 and 4	<10>	B
Note1: Road and street lighting equipment shall be tested for air discharge at ±15 kV and for contact discharge at ±8 kV.				
Note2: Criterion C applies to lighting equipment (and/or modules) for road and street lighting.				

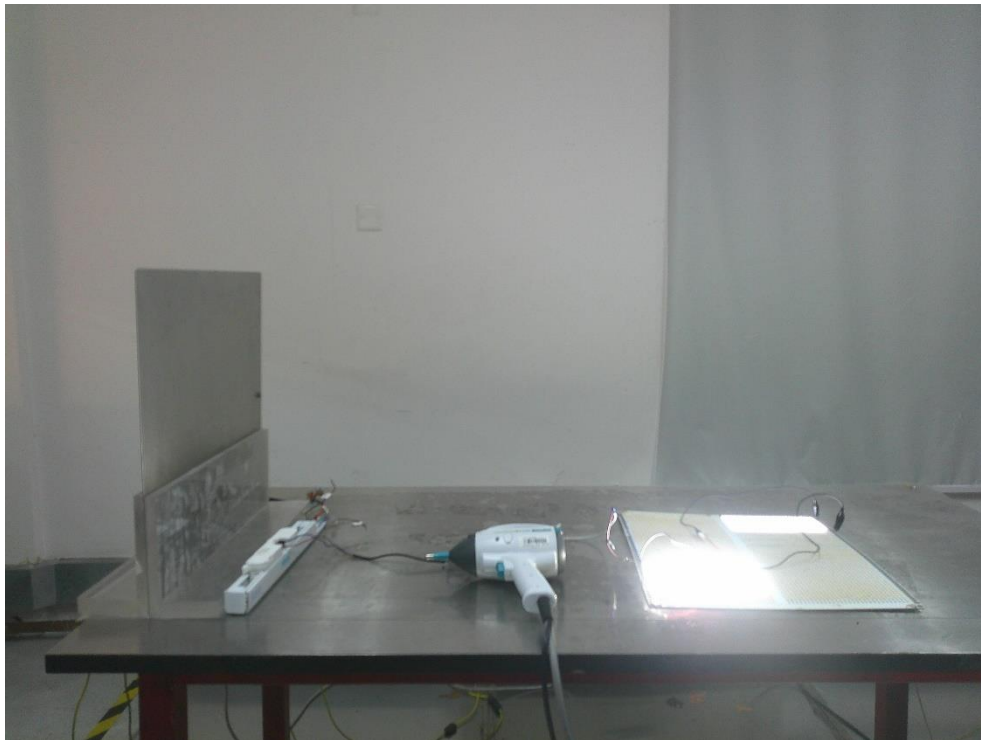
2.6.7 Test Results

Results for Configuration and Mode: AC 230V/50Hz or DC 230V; ON (Medium power), Handling mode.

Performance assessment of the EUT made during this test: Pass.

Detailed results are shown below.

ID	Test Point	Discharge	Results									
			2kV		4kV		6kV		8kV		15kV	
			+	-	+	-	+	-	+	-	+	-
	HCP	Contact	✓	✓	✓	✓	N/A	N/A	N/A	N/A	N/A	N/A
	VCP	Contact	✓	✓	✓	✓	N/A	N/A	N/A	N/A	N/A	N/A
	Each conductive location touchable by hand	Contact	✓	✓	✓	✓	N/A	N/A	N/A	N/A	N/A	N/A
	Each nonconductive location touchable by hand	Air	✓	✓	✓	✓	N/A	N/A	✓	✓	N/A	N/A
Key to Results												
✓		The EUTs performance was not impacted when the ESD pulse was applied.										
N/A		Not Applicable										



Test Setup

2.6.8 Test Location

This test was carried out in ESD room.



2.7 Radiated, radio-frequency, electromagnetic field immunity test

2.7.1 Specification Reference

EN IEC 61547:2023, Clause 5.3

2.7.2 Equipment Under Test

BK-DSL042S-AHC1050ADPW, BK-CTL042S-AHC1050ASW and BK-PTL042S-AHC1050ASW

2.7.3 Date of Test

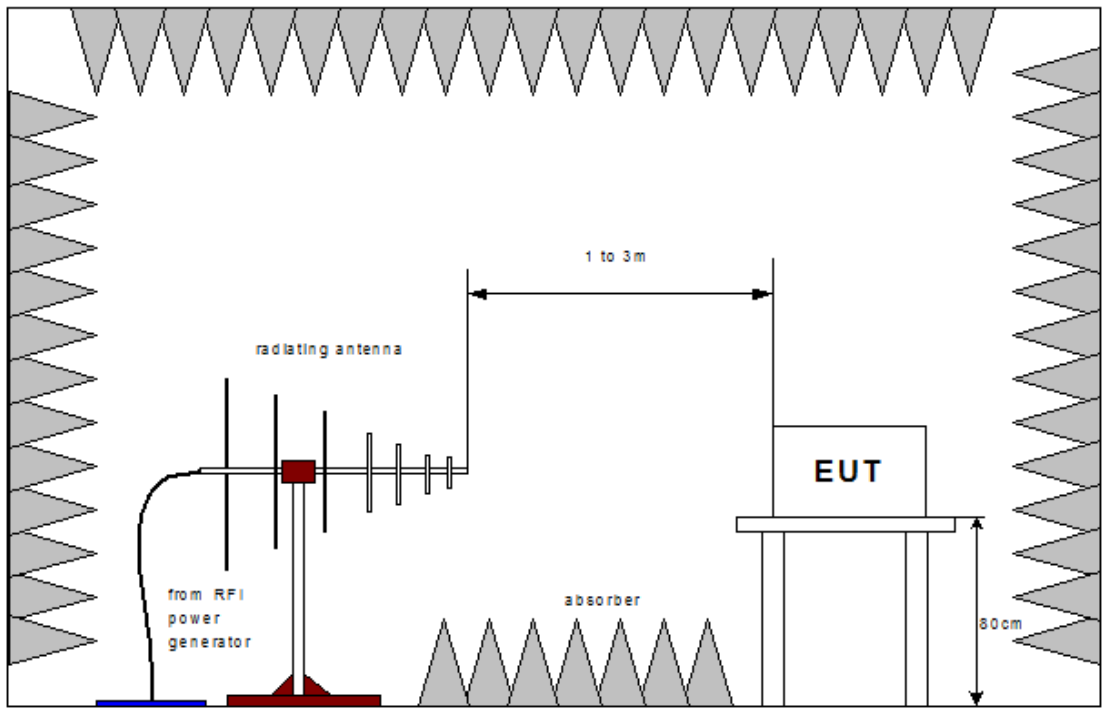
2024-11-28

2.7.4 Test Method

The equipment under test including associated cabling was configured, on a 0.8 m non-conductive table for table-top equipment and on a 0.1 m insulated support for floor standing equipment; with a pre-calibrated semi anechoic chamber.

All four side of the equipment under test were subjected to the required RF field strength, modulated as described, swept over the frequency range of test with the antenna positioned in both horizontal and vertical polarizations.

During this testing any anomalies in the equipment under tests performance was recorded.



2.7.5 Environmental Conditions

Ambient Temperature	22.5 °C
Relative Humidity	54.1 %
Atmospheric Pressure	1012 mbar

2.7.6 Specification Limits

Required Test Levels					Performance Criteria
Frequency Range (MHz)	Level (V/m)	Modulation	Step Size (%)	Dwell (s)	
80 to 1000	3	AM (80 %,1 kHz, sine wave)	1	≥1	A
Note 1. EUT powered at one of the Nominal input voltages and frequencies					

2.7.7 Test Results

Results for Configuration and Mode: AC 230V/50Hz or DC 230V; ON (Medium power)

Performance assessment of the EUT made during this test: Pass.

Detailed results are shown below.

Tabulated Results for RF Electromagnetic Field 80 - 1000 MHz				
Side of the equipment under test	Antenna polarization	Test Level	Dwell Time	Result
All sides	horizontal	3 V/m	1 s	A
All sides	vertical	3 V/m	1 s	A



Test Setup

2.7.8 Test Location

This test was carried out in 3m anechoic chamber.



2.8 Electrical fast transient /burst immunity test

2.8.1 Specification Reference

EN IEC 61547:2023, Clause 5.5

2.8.2 Equipment Under Test

BK-DSL042S-AHC1050ADPW, BK-CTL042S-AHC1050ASW and BK-PTL042S-AHC1050ASW

2.8.3 Date of Test

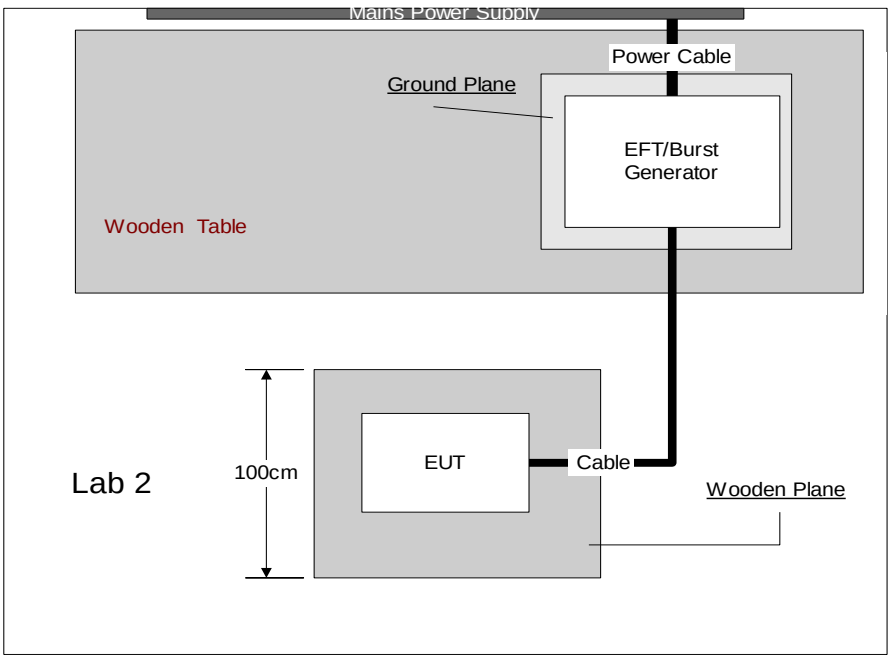
2024-11-27

2.8.4 Test Method

The equipment under test including associated cabling was configured on but insulated from, using a 0.1 m isolator, a horizontal coupling plane fitted to the top of a 0.8 m non-conductive table for table-top equipment; and on a 0.1 m insulated support for floor standing equipment; above a ground reference plane all within a test laboratory.

Using a CDN for power ports, capacitive coupling clamp for signal and control ports and a 33nF coupling capacitor for earth ports, the required fast transient burst voltage levels in both voltage polarities were applied at the detailed pulse repartition rate and duration of test.

During this testing any anomalies in the equipment under tests performance was recorded.



2.8.5 Environmental Conditions

Ambient Temperature	24.6 °C
Relative Humidity	55.4 %
Atmospheric Pressure	1011 mbar

2.8.6 Specification Limits

Required Test Levels at input and output a.c. power port					Performance Criteria
Line Under Test	Voltage peak (kV)	Repetition Rate (kHz)	Test Duration	Coupling Method	
AC Power Port	± 1	5 kHz	2 min per polarity	Direct	B
Note 1. EUT powered at one of the Nominal input voltages and frequencies					

Required Test Levels at input and output d.c. power ports					Performance Criteria
Line Under Test	Voltage peak (kV)	Repetition Rate (kHz)	Test Duration	Coupling Method	
DC Power Port	± 0.5	5 kHz	1 min per polarity	Direct	B
Note Not applicable to equipment not connected to the mains while in use.					

Required Test Levels at ports for signal/control lines and load ports					Performance Criteria
Line Under Test	Voltage peak (kV)	Repetition Rate (kHz)	Test Duration	Coupling Method	
Signal/control lines and load ports	± 0.5	5 kHz	1 min per polarity	Capacitive coupling clamp	B
Note 1. Only applicable to ports interfacing with cables whose total length, according to the manufacturer's specification, may exceed 3m.					
Note 2 Change of state commands are not applied during the test.					

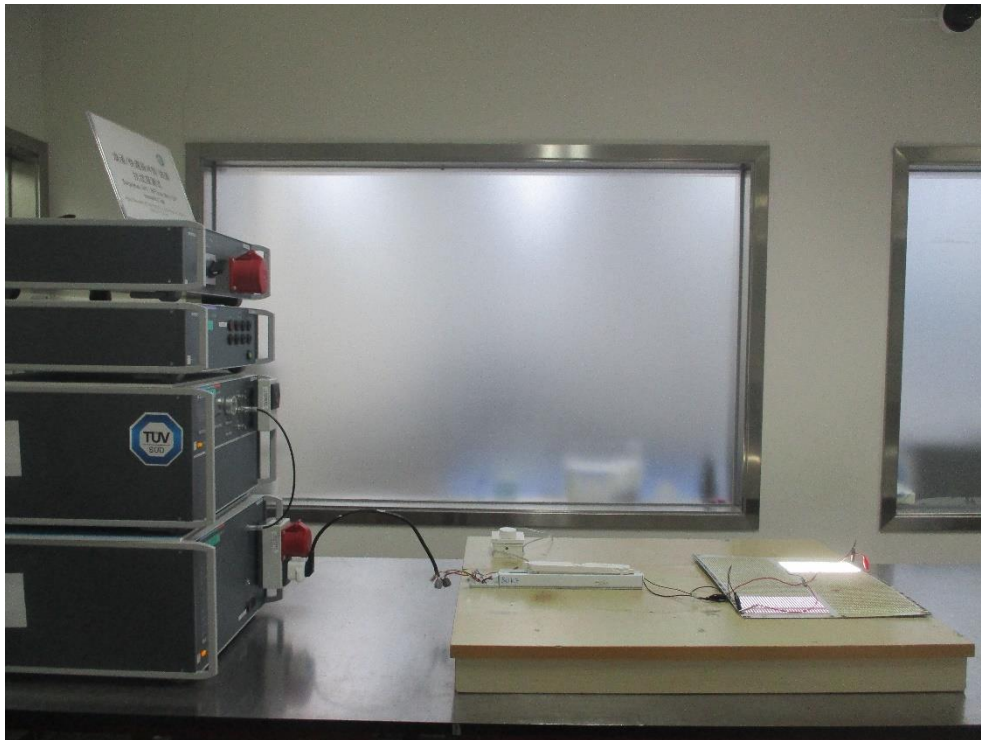
2.8.7 Test Results

Results for Configuration and Mode: AC 230V/50Hz or DC 230V; ON (Medium power)

Performance assessment of the EUT made during this test: Pass.

Detailed results are shown below.

Tabulated Results for Fast Transient Burst Immunity (power port)					
Line under test	Test Voltage peak	Repetition Rate	Test Duration	Coupling Method	Result
power line (AC)	± 1.0 kV	5 kHz	2 min	CDN	A
power line (DC)	± 0.5 kV	5 kHz	2 min	CDN	A
control lines	± 0.5 kV	5 kHz	2 min	Capacitive coupling clamp	A



Test Setup

2.8.8 Test Location

This test was carried out in EMS Test Location.

2.9 Immunity to conducted disturbances, induced by radio-frequency fields

2.9.1 Specification Reference

EN IEC 61547:2023, Clause 5.6

2.9.2 Equipment Under Test

BK-DSL042S-AHC1050ADPW, BK-CTL042S-AHC1050ASW and BK-PTL042S-AHC1050ASW

2.9.3 Date of Test

2024-11-28

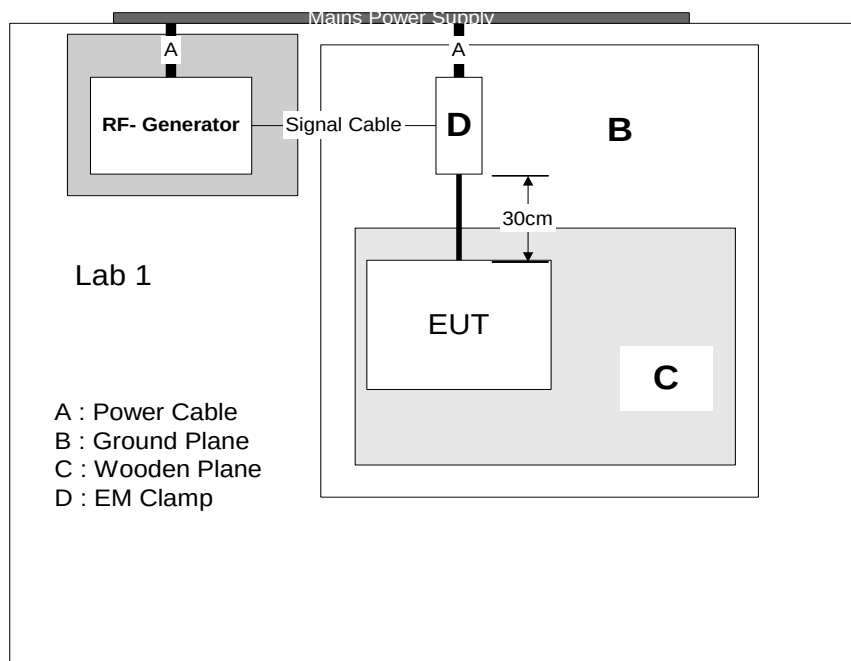
2.9.4 Test Method

The equipment under test was configured, on but insulated from, using a 0.1 m isolator, a horizontal coupling plane fitted to the bottom of a 0.1 m non-conductive table for test equipment, above a ground reference plane all within a test laboratory.

All associated cabling was configured, on but insulated from, using a 50 mm isolator, the same horizontal coupling plane as the equipment under test.

Using CDNs, EM Clamps or current clamps as appropriate, the power ports and applicable signal and control ports were subjected to the required, pre calibrated RF injected signal strength, modulated as described, swept over the frequency range of test.

During this testing any anomalies in the equipment under tests performance was recorded.



2.9.5 Environmental Conditions

Ambient Temperature	22.5 °C
Relative Humidity	54.1 %
Atmospheric Pressure	1012 mbar

2.9.6 Specification Limits

Required Test Levels at ports for signal and control lines						Performance Criteria
Line Under Test	Frequency Range (MHz)	Level (V)	Modulation	Step Size (%)	Dwell (s)	
Signal and control lines	0.15 to 80	3	AM (80 %, 1 kHz, sine wave)	1	≥1	A
Note Only applicable to ports interfacing with cables whose total length, according to the manufacturer's specification, may exceed 3m						

Required Test Levels at input and output d.c. power ports						Performance Criteria
Line Under Test	Frequency Range (MHz)	Level (V)	Modulation	Step Size (%)	Dwell (s)	
DC power ports	0.15 to 80	3	AM (80 %, 1 kHz, sine wave)	1	≥1	A
Note Only applicable to equipment that is connected to the mains while in use.						

Required Test Levels at input and output a.c. power ports						Performance Criteria
Line Under Test	Frequency Range (MHz)	Level (V)	Modulation	Step Size (%)	Dwell (s)	
AC power ports	0.15 to 80	3	AM (80 %, 1 kHz, sine wave)	1	≥1	A
Note Only applicable to ports interfacing with cables whose total length, according to the manufacturer's specification, may exceed 3m						

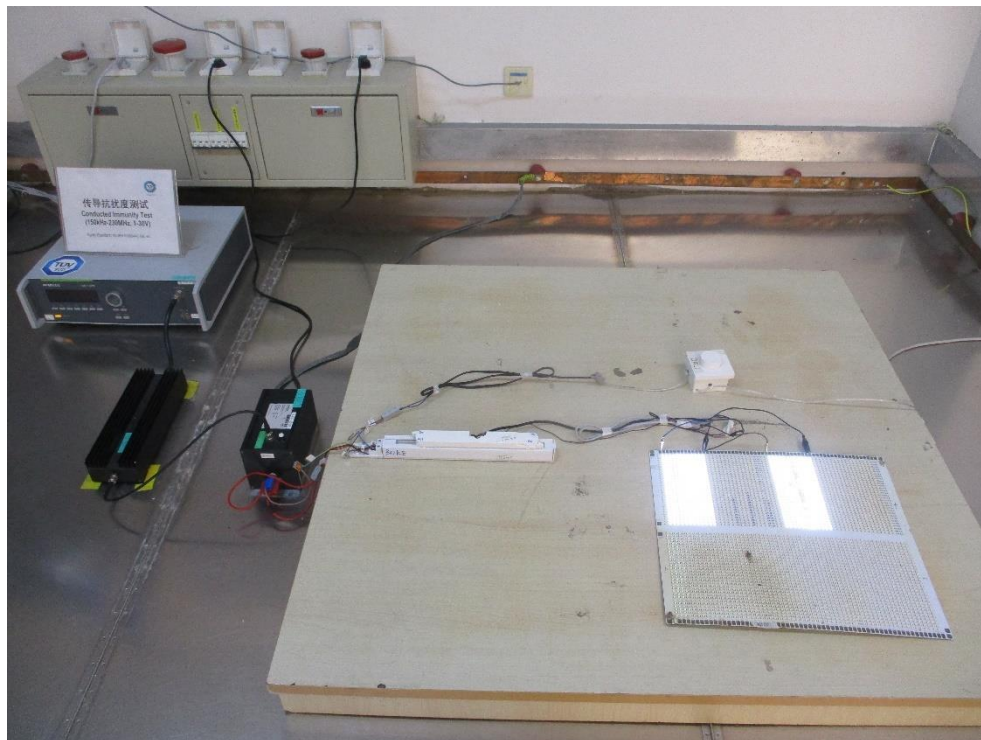
2.9.7 Test Results

Results for Configuration and Mode: AC 230V/50Hz or DC 230V; ON (Medium power)

Performance assessment of the EUT made during this test: Pass.

Detailed results are shown below.

Tabulated Results for Injected current						
Line under test	Test Level	Step	Dwell Time	Coupling Method	Modulation	Result
power line (AC)	3V	1%	1 s	CDN	1KHZ 80%	A
power line (DC)	3V	1%	1 s	CDN	1KHZ 80%	A
control lines	3V	1%	1 s	EM CLAMP	1KHZ 80%	A



Test Setup

2.9.8 Test Location

This test was carried out in EMS Test Location.



2.10 Surge immunity test

2.10.1 Specification Reference

EN IEC 61547:2023, Clause 5.7

2.10.2 Equipment Under Test

BK-DSL042S-AHC1050ADPW, BK-CTL042S-AHC1050ASW and BK-PTL042S-AHC1050ASW

2.10.3 Date of Test

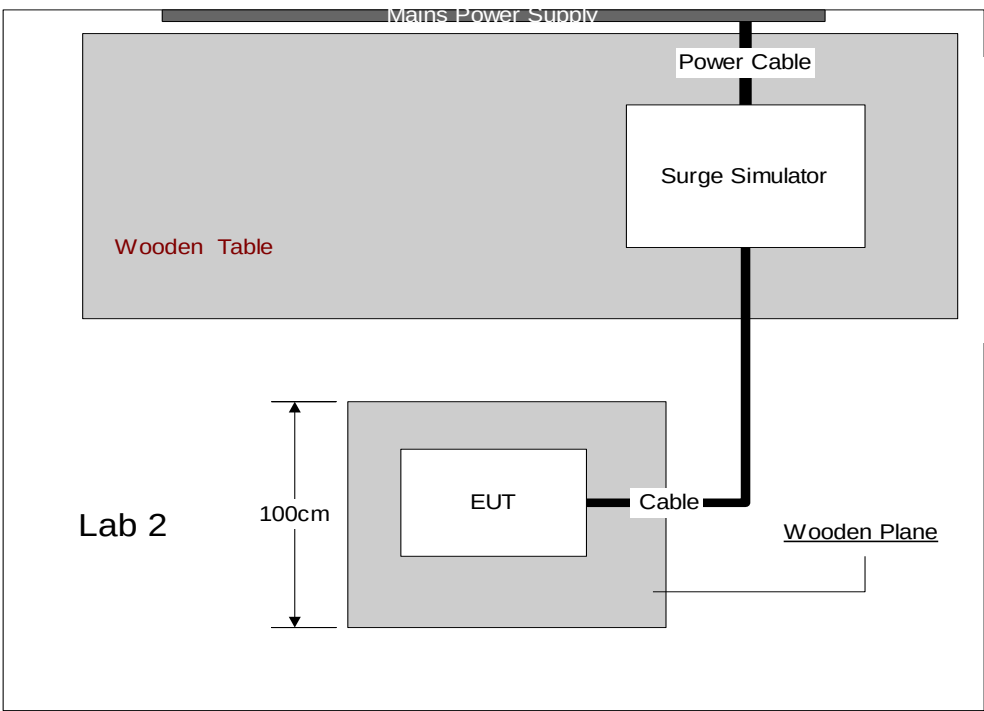
2024-11-29

2.10.4 Test Method

The equipment under test including associated cabling was configured, on a 0.8 m non-conductive table for table-top equipment and on a 0.1 m insulated support for floor standing equipment above a ground reference plane all within a test laboratory.

Using CDNs for power ports and appropriate coupling methods for applicable signal and control ports, the required number of surges was applied for each surge voltage level using both positive and negative surge voltage polarities. Surges were applied at the power line frequency phase angles and repartition rates detailed.

During this testing any anomalies in the equipment under tests performance was recorded.



2.10.5 Environmental Conditions

Ambient Temperature	22.5 °C
Relative Humidity	54.1 %
Atmospheric Pressure	1012 mbar

2.10.6 Specification Limits

Characteristics	Test Levels		Performance Criteria
	Device		
	Self-ballasted lamps ≤ 25 W	Lighting equipment (except self-ballasted lamps ≤ 25 W)	
Wave- shape data	1.2/50 μs	1.2/50 μs	C
Test levels line to line	± 0.5 kV	±1.0 kV	Emergency
line to ground	N/A	±2.0 kV	Light: B
Note 1: In addition to the specified test level, all lower levels as detailed in IEC 61000-4-5 should also be satisfied.			
Note 2: Road and street lighting equipment shall comply with ±2.0 kV line to line and ±4.0 kV line to ground voltages.			
Note 3: For emergency lighting equipment designed to operate in high-risk task areas, after the test, the luminous intensity shall be restored to its initial value within 0.5 s.			

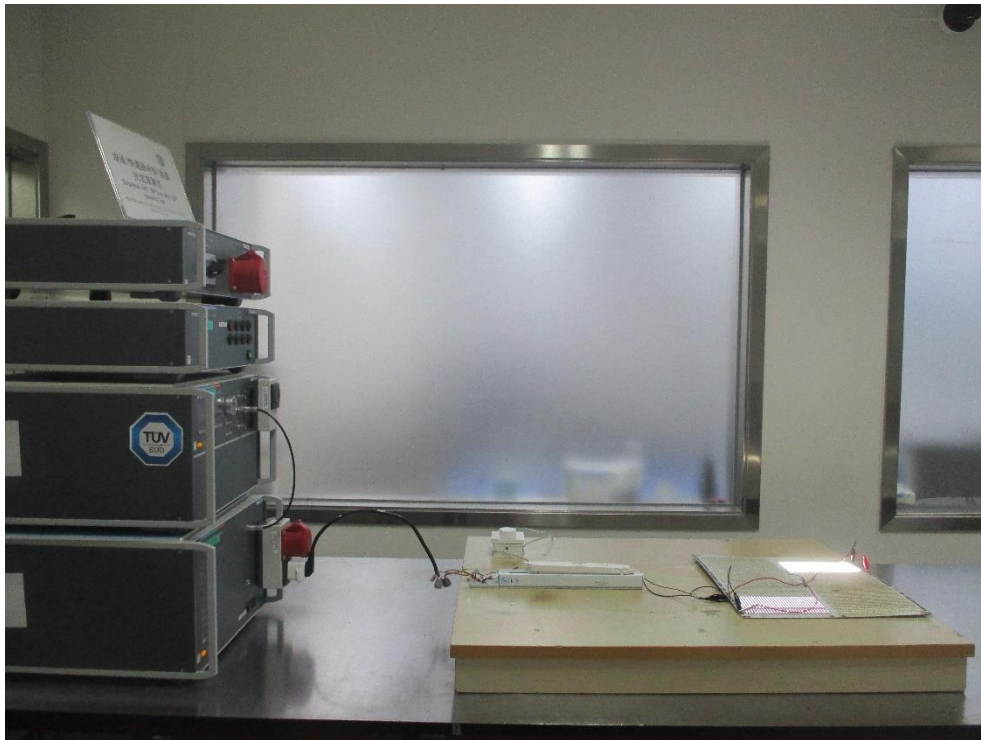
2.10.7 Test Results

Results for Configuration and Mode: AC 230V/50Hz; ON (Medium power).

Performance assessment of the EUT made during this test: Pass.

Detailed results are shown below.

Tabulated Results for Surge Immunity (Power Ports)							
Line Name	Coupling	Level	Polarity	Phase Angle	No of Pulses	Repetition Rate	Result
power line	Live to Neutral	1kV & 0.5kV	NEGATIVE	270 deg	5	60 sec	A
power line	Live to Neutral	1kV & 0.5kV	POSITIVE	90 deg	5	60 sec	A



Test Setup

2.10.8 Test Location

This test was carried out in EMS Test Location.



2.11 Voltage dips, short interruptions and voltage variations immunity test

2.11.1 Specification Reference

EN IEC 61547:2023, Clause 5.8

2.11.2 Equipment Under Test

BK-DSL042S-AHC1050ADPW, BK-CTL042S-AHC1050ASW and BK-PTL042S-AHC1050ASW

2.11.3 Date of Test

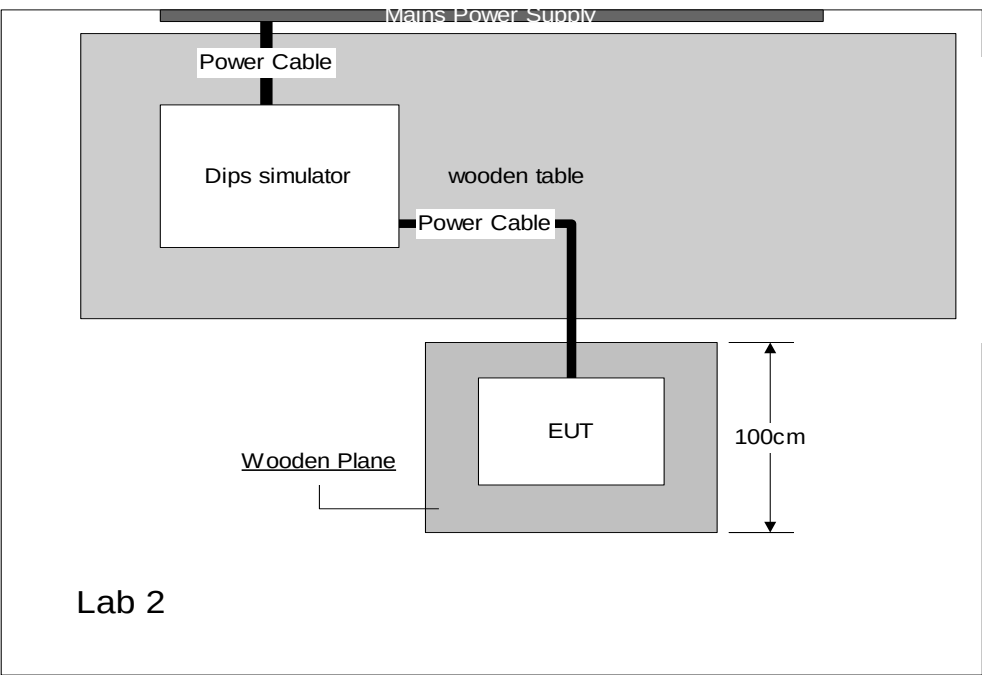
2024-11-28

2.11.4 Test Method

The equipment under test including associated cabling was configured, on a 0.8 m non-conductive table for table-top equipment and on a 0.1 m insulated support for floor standing equipment above a ground reference plane all within a test laboratory.

Using a programmable power supply the equipment under test was subjected to the detailed supply voltage dips and interruptions. The required supply phase synchronization and test repetition rate, detailed, was controlled by the programmable power supply.

During this testing any anomalies in the equipment under tests performance was recorded.



2.11.5 Environmental Conditions

Ambient Temperature	24.6 °C
Relative Humidity	55.4 %
Atmospheric Pressure	1011 mbar

2.11.6 Specification Limits

Required Test Levels			Performance Criteria
Test	Test Level	Duration	
Voltage Dip	0 % of Vnom	½ cycle	B
Voltage Dip	70 % of Vnom	10 cycles	B ^a

Note: EUT powered at one of the Nominal input voltages and frequencies.

Note a: For lighting equipment where the light source is not able to restart within 1 min, due to the physical constraints of the light source, performance criterion C applies.

2.11.7 Test Results

Results for Configuration and Mode: AC 230V/50Hz; ON (Medium power).

Performance assessment of the EUT made during this test: Pass.

Detailed results are shown below.

Tabulated Results for Voltage Dip and Short Interruption					
Line under test	Vnom	Operating Frequency	Test Level	Duration	Result
power line	230 Vac	50 Hz	0% of Vnom	½ cycle	A
power line	230 Vac	50 Hz	70% of Vnom	10 cycles	A



Test Setup

2.11.8 Test Location

This test was carried out in EMS Test Location.

3 Test Equipment Information

General Test Equipment Used

Conducted Disturbance

DESCRIPTION	MANUFACTURER	MODEL NO.	EQUIPMENT ID	SERIAL NO.	CAL INTERVAL (YEAR)	CAL. DUE DATE
EMI Test Receiver	Rohde & Schwarz	ESR 3	68-4-74-14-001	101782	1	2025-5-13
LISN	Rohde & Schwarz	ENV4200	68-4-87-14-001	100249	1	2025-5-13
LISN	Rohde & Schwarz	ENV432	68-4-87-16-001	101318	1	2025-5-13
LISN	Rohde & Schwarz	ENV216	68-4-87-14-002	100326	1	2025-5-12
ISN	Rohde & Schwarz	ENY81	68-4-87-14-003	100177	1	2025-5-13
ISN	Rohde & Schwarz	ENY81-CA6	68-4-87-14-004	101664	1	2025-5-13
High Voltage Probe	Schwarzbeck	TK9420(VT94 20)	68-4-27-14-001	9420-584	1	2025-5-12
RF Current Probe	Rohde & Schwarz	EZ-17	68-4-27-14-002	100816	1	2025-5-13
Attenuator	Shanghai Huaxiang	TS2-26-3	68-4-81-16-003	080928189	1	2025-5-11
Cable	OUQIAO	RG142	68-4-90-19-004-A20	----	----	----
Test software	Rohde & Schwarz	EMC32	68-4-90-14-003-A10	Version9.15.00	N/A	N/A
Shielding Room	TDK	CSR #1	68-4-90-19-004	----	3	2025-10-15

Radiated Disturbance (9KHz to 30MHz)

DESCRIPTION	MANUFACTURER	MODEL NO.	EQUIPMENT ID	SERIAL NO.	CAL INTERVAL (YEAR)	CAL. DUE DATE
EMI Test Receiver	Rohde & Schwarz	ESR 7	68-4-74-19-001	102176	1	2025-5-13
Loop Antenna	Rohde & Schwarz	HFH2-Z2	68-4-80-14-006	100398	1	2025-7-24
Cable	HUBER-SUHNER	RG214	68-4-90-14-001-A21	----	----	----
3m Semi-anechoic chamber	TDK	9X6X6	68-4-90-14-001	----	3	2026-10-25

Radiated Disturbance (30MHz-1000MHz)

DESCRIPTION	MANUFACTURER	MODEL NO.	EQUIPMENT ID	SERIAL NO.	CAL INTERVAL (YEAR)	CAL. DUE DATE
EMI Test Receiver	Rohde & Schwarz	ESR 7	68-4-74-19-001	102176	1	2025-5-13
Trilog Super Broadband Test Antenna	Schwarzbeck	VULB 9163	68-4-80-14-002	707	1	2025-7-2
Horn Antenna	Rohde & Schwarz	HF907	68-4-80-14-005	102294	1	2025-5-27
Loop Antenna	Rohde & Schwarz	HFH2-Z2	68-4-80-14-006	100398	1	2025-7-24
Pre-amplifier	Rohde & Schwarz	SCU 18	68-4-29-14-001	102230	1	2025-5-11
Attenuator	Mini-circuits	UNAT-6+	68-4-81-21-001	15542	1	2025-5-11
Cable	HUBER-SUHNER	RG214	68-4-90-14-001-A20	----	----	----
Cable	HUBER-SUHNER	RG214	68-4-90-14-001-A21	----	----	----
Cable	JUNFLON	MWX221	68-4-90-14-001-A22	----	----	----
3m Semi-anechoic chamber	TDK	SAC-3 #1	68-4-90-14-001	----	3	2026-10-25
Test software	Rohde & Schwarz	EMC32	68-4-90-14-001-A10	Version10.3 5.02	N/A	N/A

Harmonic current emission Test and Flicker Test

DESCRIPTION	MANUFACTURER	MODEL NO.	EQUIPMENT ID	SERIAL NO.	CAL INTERVAL (YEAR)	CAL. DUE DATE
Three Phase Harmonic flicker test system	CI	MX45-3PI-400-413-CTSHL-LF-SNK	68-4-74-14-006	1424A00547	1	2025-5-13
Test software	Ametek	CTSMXL	68-4-74-14-006-A11	Version 2.26.0	N/A	N/A
Test software	Ametek	CTSMXH	68-4-74-14-006-A12	Version 2.24.0	N/A	N/A

Electrostatic Discharge Test

DESCRIPTION	MANUFACTURER	MODEL NO.	EQUIPMENT ID	SERIAL NO.	CAL INTERVAL (YEAR)	CAL. DUE DATE
Electrostatic Discharge Simulator	Noiseken	ESS-2002	68-4-75-14-007	ESS0615075	1	2025-6-2

Radiated Immunity Test

DESCRIPTION	MANUFACTURER	MODEL NO.	EQUIPMENT ID	SERIAL NO.	CAL INTERVAL (YEAR)	CAL. DUE DATE
Signal Generator	Rohde & Schwarz	SMB100A	68-4-48-14-002	177600	1	2025-5-11
Power Amplifier	Rohde & Schwarz	BBA100	68-4-28-14-001	101238	1	2025-5-12
Power Amplifier	Rohde & Schwarz	BBA150	68-4-28-14-002	101671	1	2025-5-12
Power Amplifier	Rohde & Schwarz	BBA150-E100	68-4-28-17-001	102640	1	2025-5-12
Log-Periodic Antenna	Rohde & Schwarz	HL046E	68-4-80-14-009	100160	N/A	N/A
Microwave Log-Periodic Antenna	Rohde & Schwarz	STLP 9149	68-4-80-17-001	9149-453	N/A	N/A
Power Meter	Rohde & Schwarz	NRP2	68-4-32-14-001	103497	1	2025-5-12
Average Power Sensor	Rohde & Schwarz	NRP-Z91	68-4-32-14-001-A01	102538	1	2025-5-12
Average Power Sensor	Rohde & Schwarz	NRP-Z91	68-4-32-14-001-A02	102539	1	2025-5-12
Starprobe Laser-Powered Probe	AMPLIFIER RESEARCH	FL7006/KIT	68-4-27-14-003	0433720	1	2025-7-22
Audio Analyzer	Rohde & Schwarz	UPV	68-4-74-18-001	104348	1	2025-5-11
Cable	OUQIAO	18DLB8	68-4-90-14-002-A20	----	----	----
Fully Anechoic Chamber	TDK	8X4X4	68-4-90-14-002	--	3	2027-8-18
Test software	Rohde & Schwarz	EMC32	68-4-90-14-002-A11	Version 9.15.03	N/A	N/A

Electrical Fast Transients Test

DESCRIPTION	MANUFACTURER	MODEL NO.	EQUIPMENT ID	SERIAL NO.	CAL INTERVAL (YEAR)	CAL. DUE DATE
Immunity simulator	EMTEST	UCS 500N7	68-4-75-14-001	P1313116005	1	2025-5-12
7kV Coupling network 3-phase	EMTEST	CNI 503B5	68-4-75-14-001-A07	P1425134991	1	2025-5-12
Capacitive Coupling Clamp	EMTEST	HFK	68-4-75-14-001-A01	P1426135389	1	2025-5-12
Test software	EMTEST	iec.control	68-4-75-14-001-A10	Version 5.3.1	N/A	N/A



Surges Test

DESCRIPTION	MANUFACTURER	MODEL NO.	EQUIPMENT ID	SERIAL NO.	CAL INTERVAL (YEAR)	CAL. DUE DATE
Immunity simulator	EMTEST	UCS 500N7	68-4-75-14-001	P1313116005	1	2025-5-12
7kV Coupling network 3-phase	EMTEST	CNI 503B5	68-4-75-14-001-A07	P1425134991	1	2025-5-12
Telecom Surge Module	EMTEST	Tsurge 7	68-4-75-14-001-A08	P1420134206	1	2025-5-13
4kV coupling/decoupling network	EMTEST	CNV 504 N1	68-4-75-14-001-A02	P1420134192	1	2025-5-12
4kV CDN for 8 telecom lines	EMTEST	CNV 508 S1	68-4-75-14-001-A03	P1431137565	1	2025-5-12
Test software	EMTEST	iec.control	68-4-75-14-001-A10	Version 5.3.1	N/A	N/A

Conducted Immunity Test

DESCRIPTION	MANUFACTURER	MODEL NO.	EQUIPMENT ID	SERIAL NO.	CAL INTERVAL (YEAR)	CAL. DUE DATE
Continuous Wave Simulator	EMTEST	CWS 500N1	68-4-75-14-002	P1420134224	1	2025-5-13
Attenuator	EMTEST	ATT6/80	68-4-75-14-002-A01	P1402129090	1	2025-5-11
CDN	EMTEST	CDN-M2/M3	68-4-75-14-002-A02	P1420134163	1	2025-5-13
CDN	EMTEST	CDN-M4	68-4-75-14-002-A03	P1346125919	1	2025-5-13
Electromagnetic Injection Clamp	EMTEST	EM101	68-4-75-14-002-A04	P1411132453	1	2025-5-12
Current injection probe	TESEQ	CIP 9136A	68-4-27-22-001	63664	1	2025-5-12
Test software	EMTEST	icd.control	68-4-75-14-002-A10	Version 5.2.9	N/A	N/A

Voltage Dips and Interruptions Test

DESCRIPTION	MANUFACTURER	MODEL NO.	EQUIPMENT ID	SERIAL NO.	CAL INTERVAL (YEAR)	CAL. DUE DATE
Immunity simulator	EMTEST	UCS 500N7	68-4-75-14-001	P1313116005	1	2025-5-12
Motorized Variac	EMTEST	MV2616	68-4-75-14-001-A04	P1401128623	1	2025-5-12
Switch-Box for phase by phase	EMTEST	PFLS 32N1	68-4-75-14-001-A09	P1251107106	N/A	N/A
Test software	EMTEST	iec.control	68-4-75-14-001-A10	Version 5.3.1	N/A	N/A

4 Measurement Uncertainty

For a 95% confidence level, the measurement expanded uncertainties for defined systems, in accordance with the recommendations of ISO 17025 were:

System Measurement Uncertainty	
Test Items	Extended Uncertainty
Uncertainty for Radiated Emission in new 3m chamber (68-4-90-19-006) 30MHz-1000MHz	Horizontal: 4.96dB; Vertical: 6.10dB
Uncertainty for Conducted Emission in shielding room (68-4-90-19-004) 9kHz-150KHz	3.67dB
Uncertainty for Conducted Emission in shielding room (68-4-90-19-004) 150kHz-30MHz (for test using AMN ENV432 or ENV4200)	3.26dB
Uncertainty for Conducted Emission 150kHz-30MHz in shielding room (68-4-90-19-004) (for test using ISN ENY81 or ENY81-CA6);	3.48 dB
Uncertainty for Radiated Electromagnetic Disturbance 9kHz-30MHz	3.19dB
Uncertainty for Harmonic test	1.25%
Uncertainty for Flicker test	3.68%
Uncertainty for RS test	1.78dB
Uncertainty for CS test	1.41dB (CDN), 3.23dB (EM Clamp) 3.41dB (Current Clamp)
Uncertainty for ESD test	The immunity measurement system uncertainty is within standard requirement and is based on a standard uncertainty multiplied by a coverage factor k=2, providing a level of confidence of approximately 95%.
Uncertainty for EFT test	
Uncertainty for Surges test	
Uncertainty for Voltage Dips, Voltage Variations and Short Interruptions Test	

Measurement Uncertainty Decision Rule

Determination of conformity with the specification limits is based on the decision rule according to IEC Guide 115: 2023, clause 4.3.3 and 4.3.4.

5 Photographs

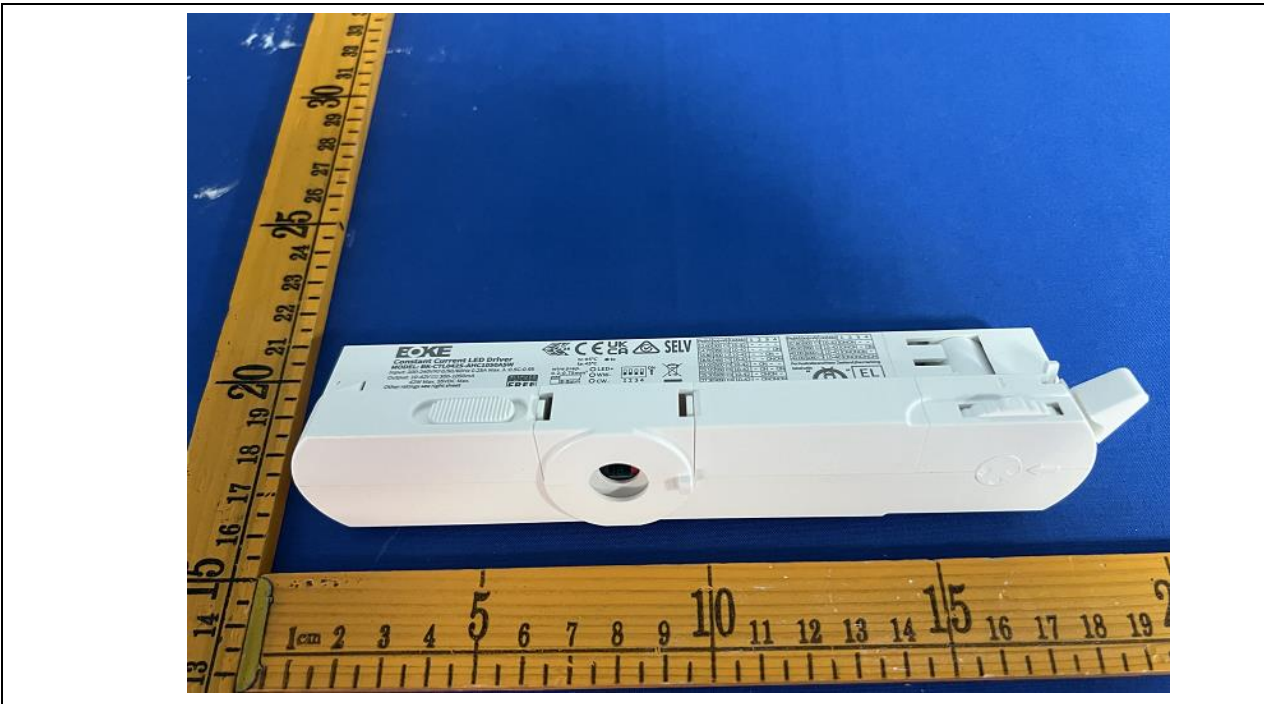
Details of: Overall view-1, for 1 series BK-CTL042S-AHC1050ASW



Details of: Overall view-2, for 1 series BK-CTL042S-AHC1050ASW



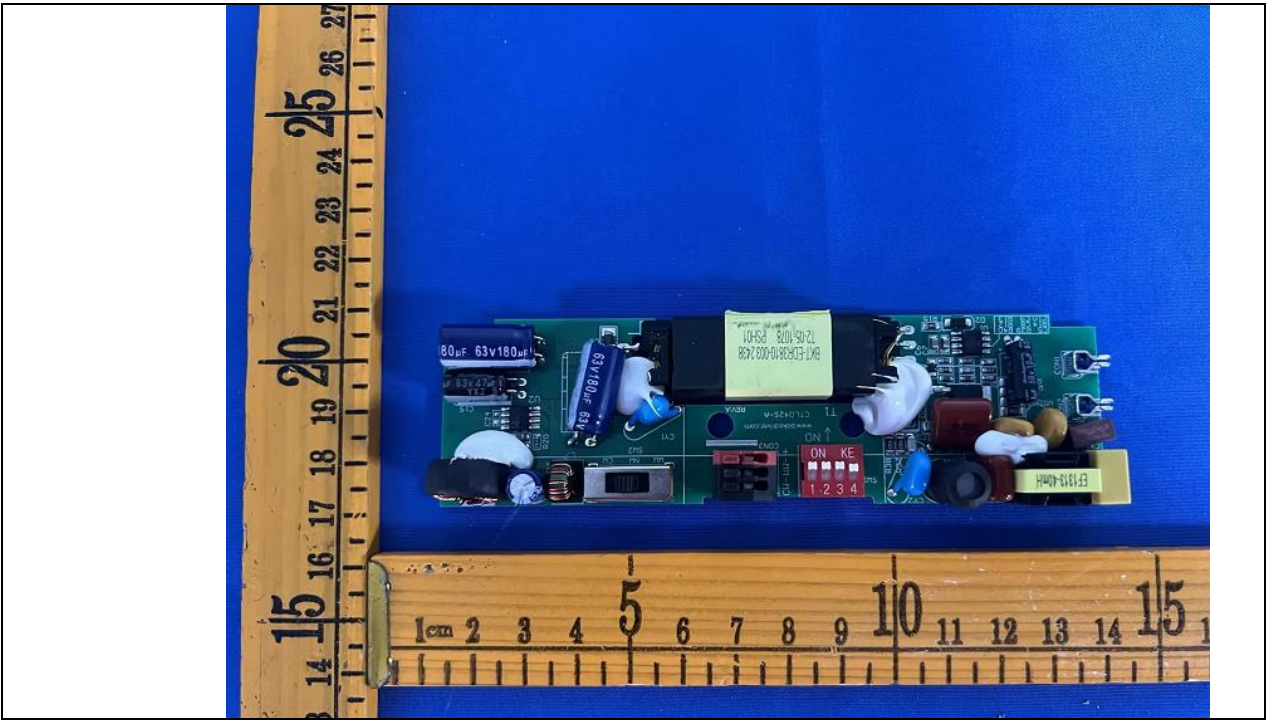
Details of: Overall view-3, for 1 series BK-CTL042S-AHC1050ASW



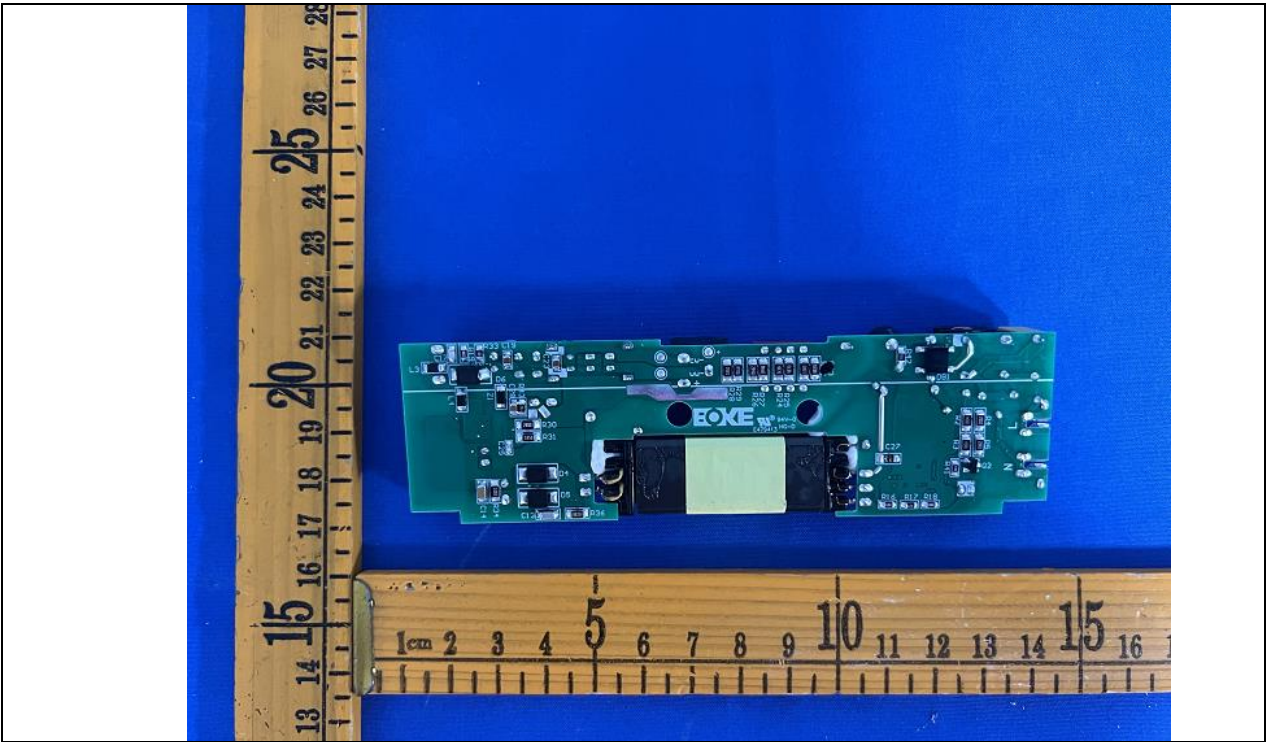
Details of: Internal view-1, for 1 series BK-CTL042S-AHC1050ASW



Details of: Components view, for 1 series BK-CTL042S-AHC1050ASW



Details of: PCB trace view, for 1 series BK-CTL042S-AHC1050ASW

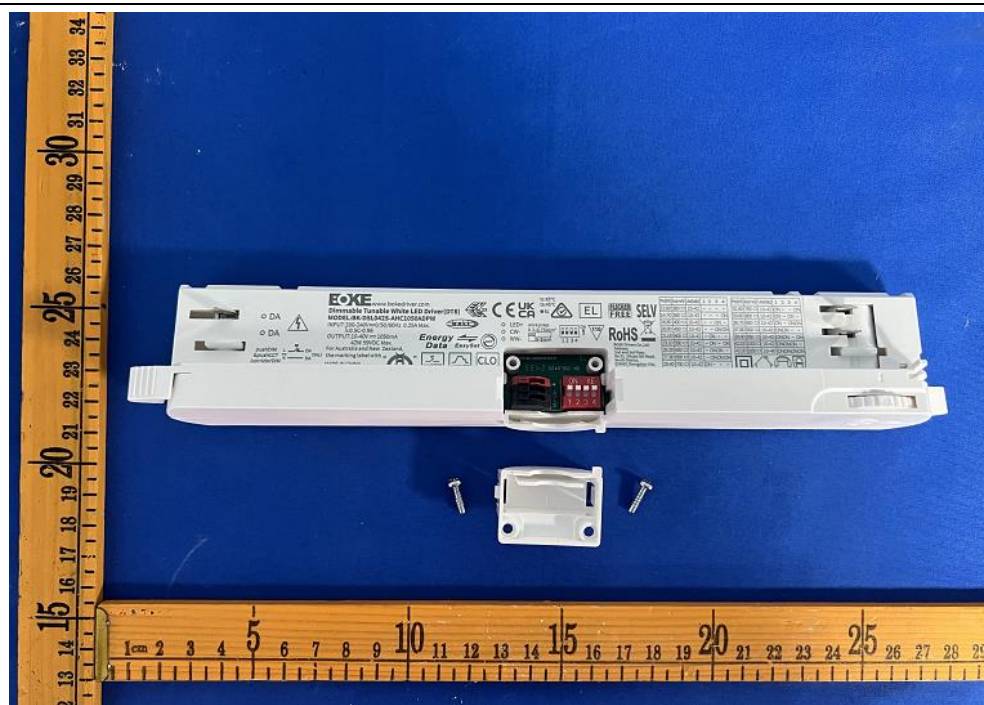
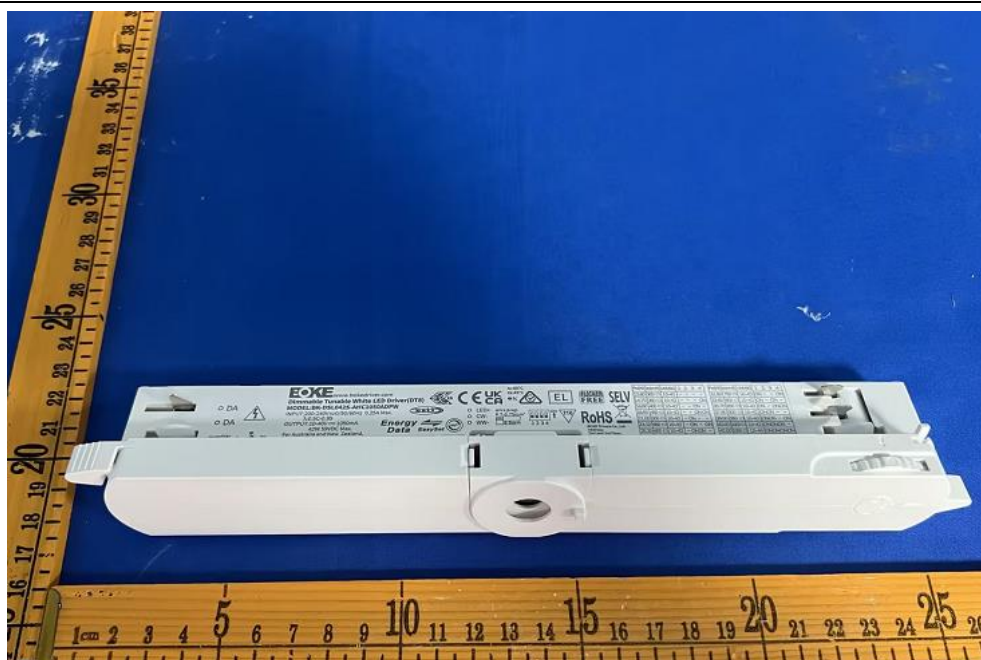


Details of: Overall view, for 2 series BK-DSL042S-AHC1050ADPW

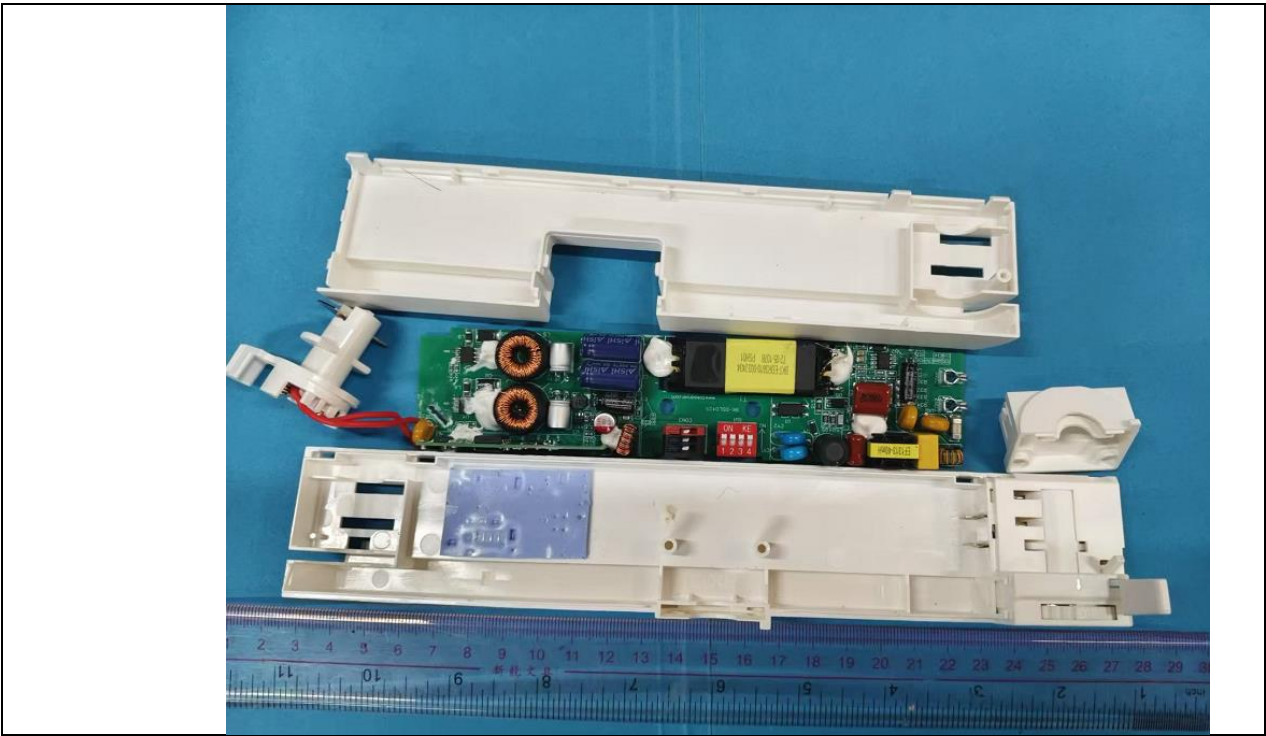


Details of: Overall view, for 2 series BK-DSL042S-AHC1050ADPW

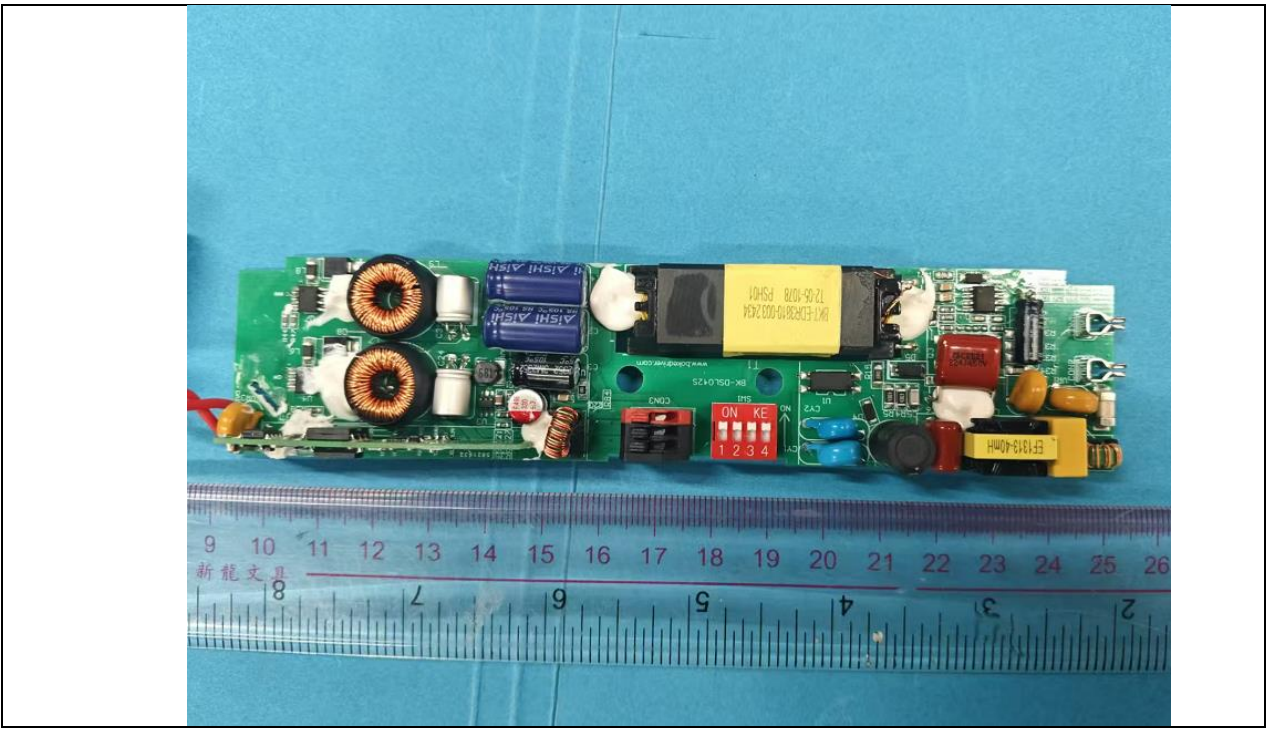




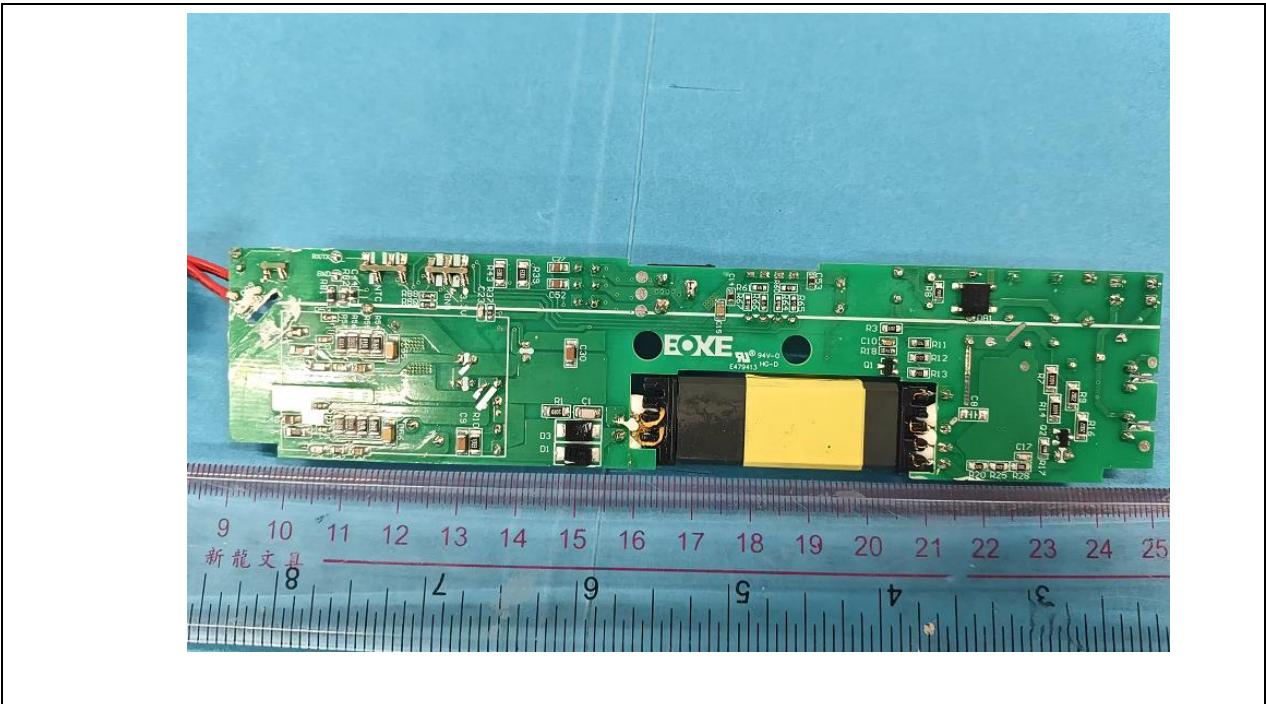
Details of: Internal view, for 2 series BK-DSL042S-AHC1050ADPW



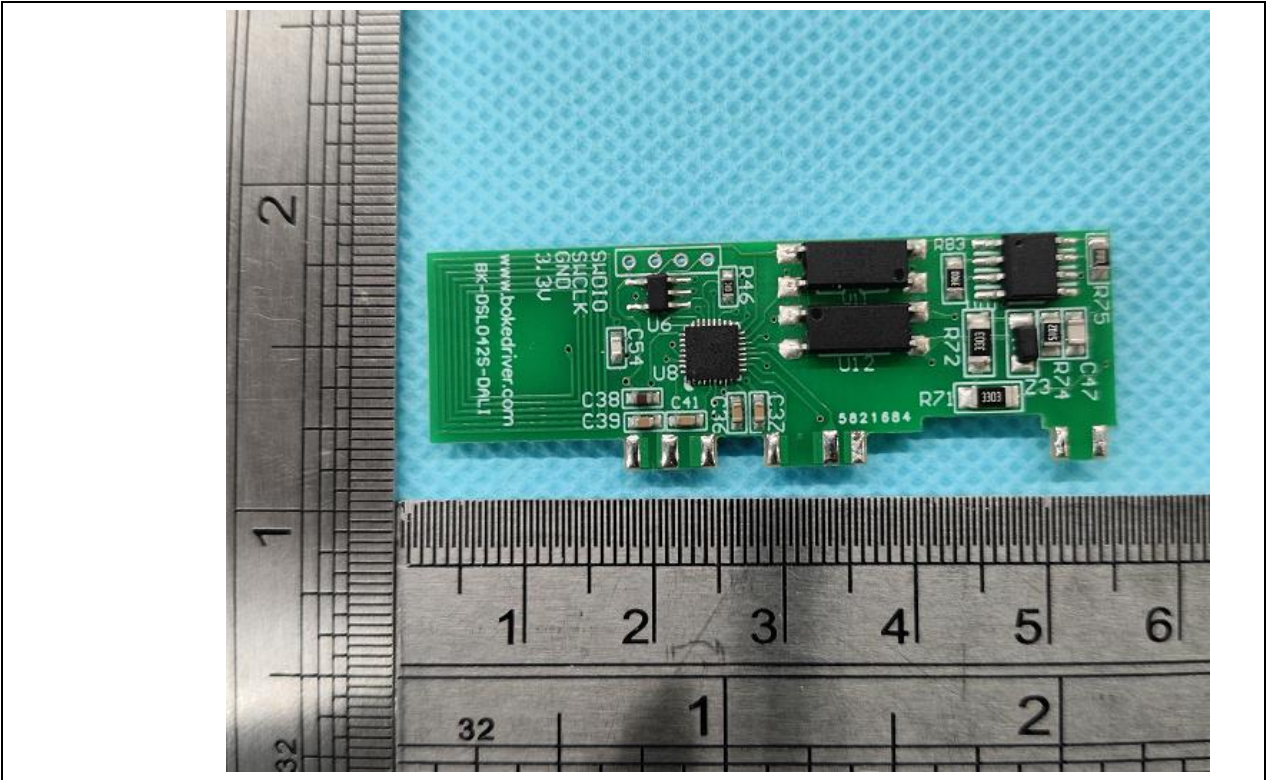
Details of: Components view for model BK-DSL042S-AHC1050ADPW



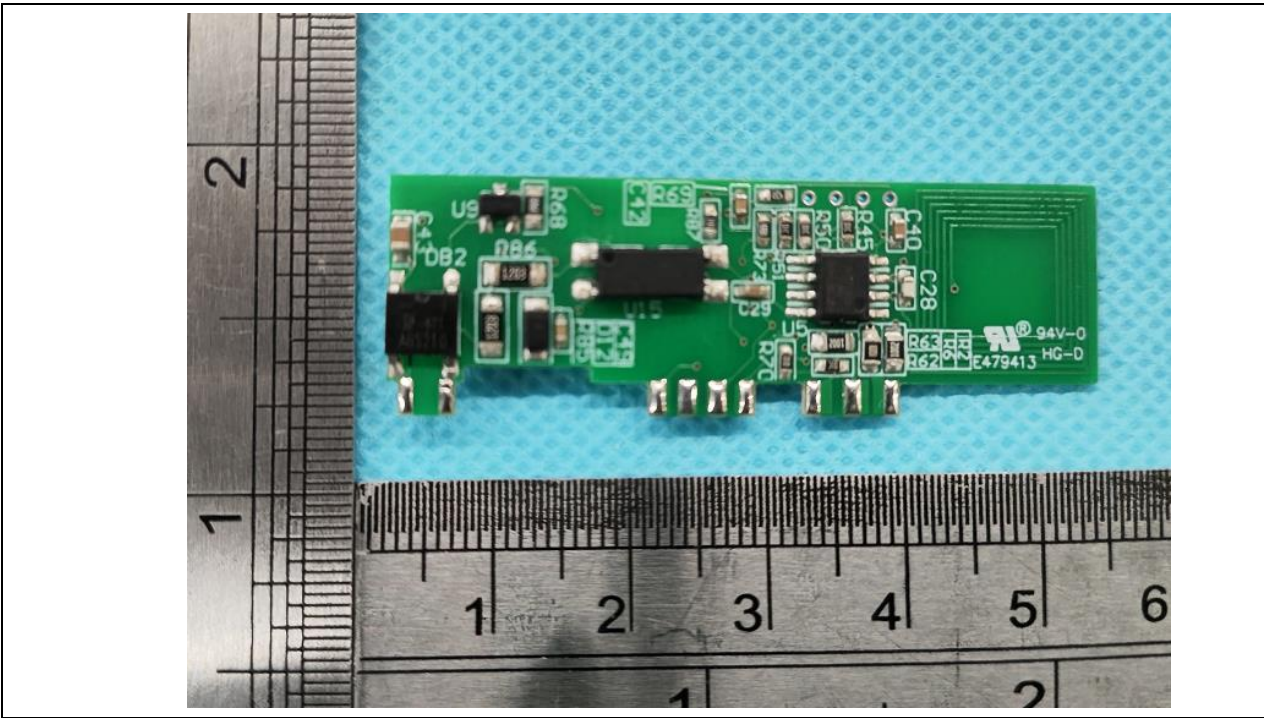
Details of: PCB trace view for model BK-DSL042S-AHC1050ADPW



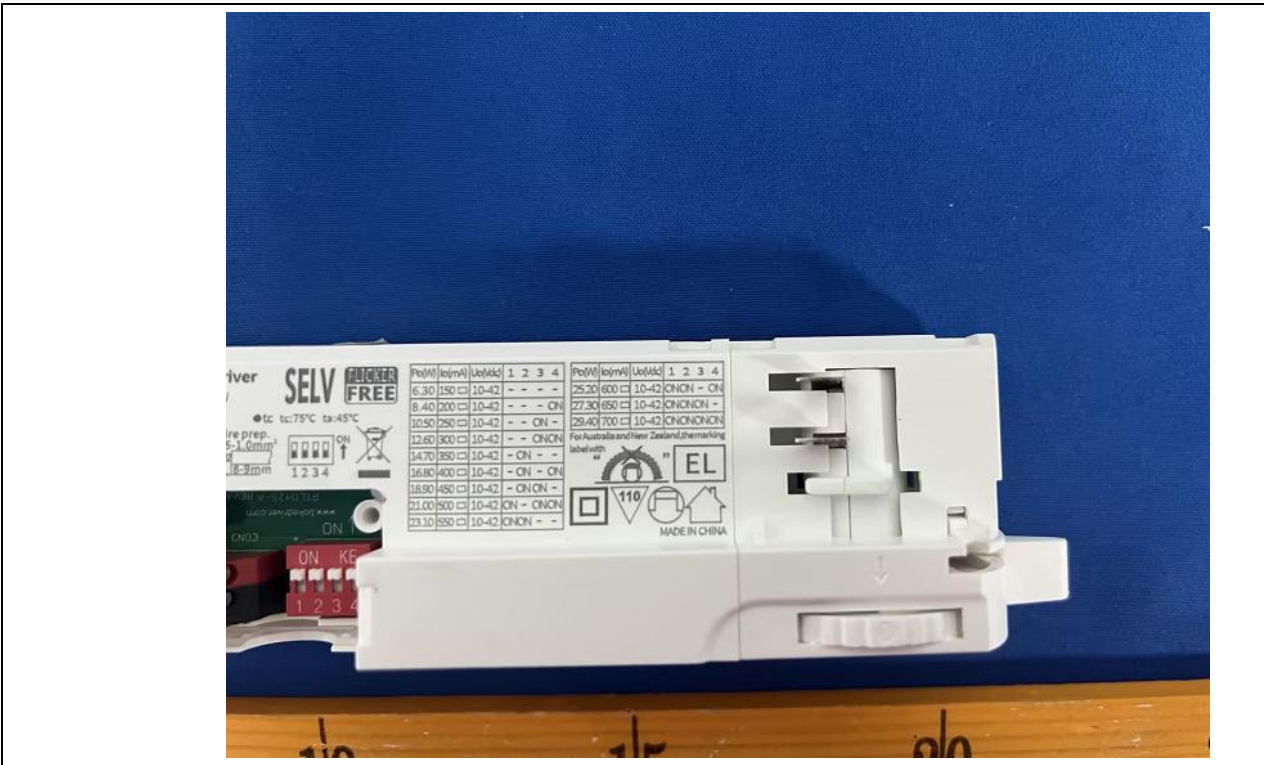
Details of: Dimming board view for model BK-DSL042S-AHC1050ADPW (DALI small board)



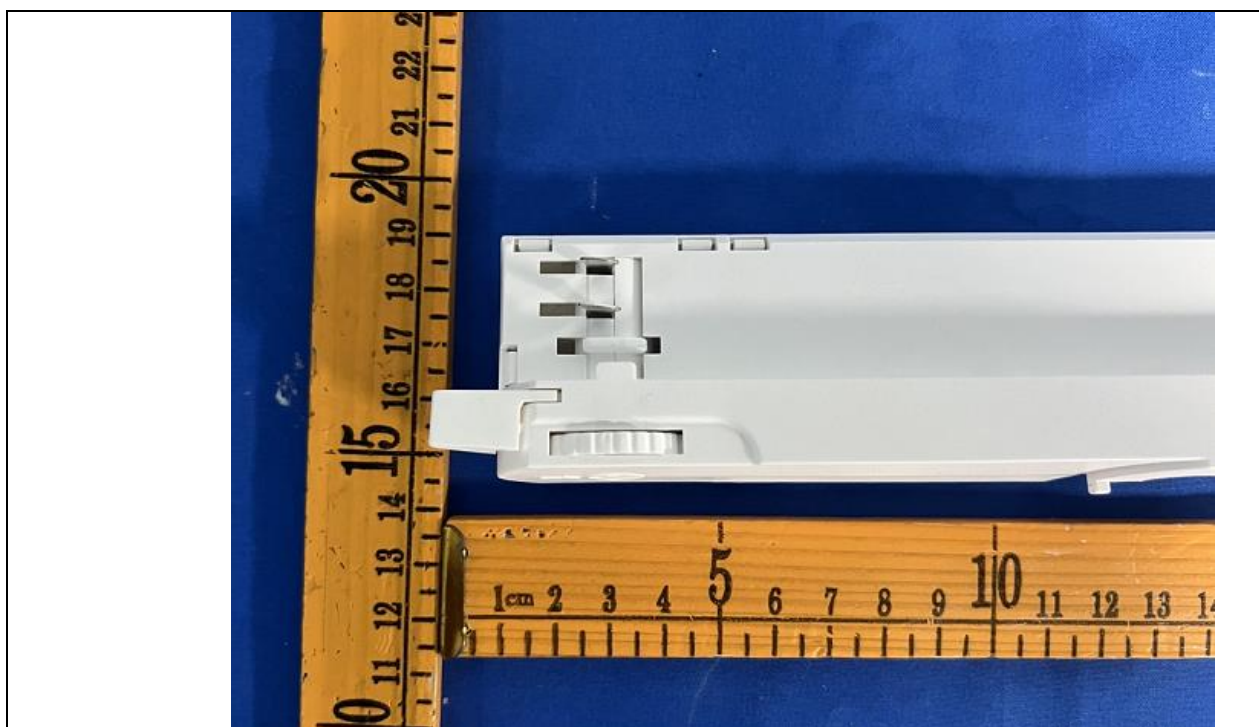
Details of: Dimming board view for model BK-DSL042S-AHC1050ADPW (DALI small board)



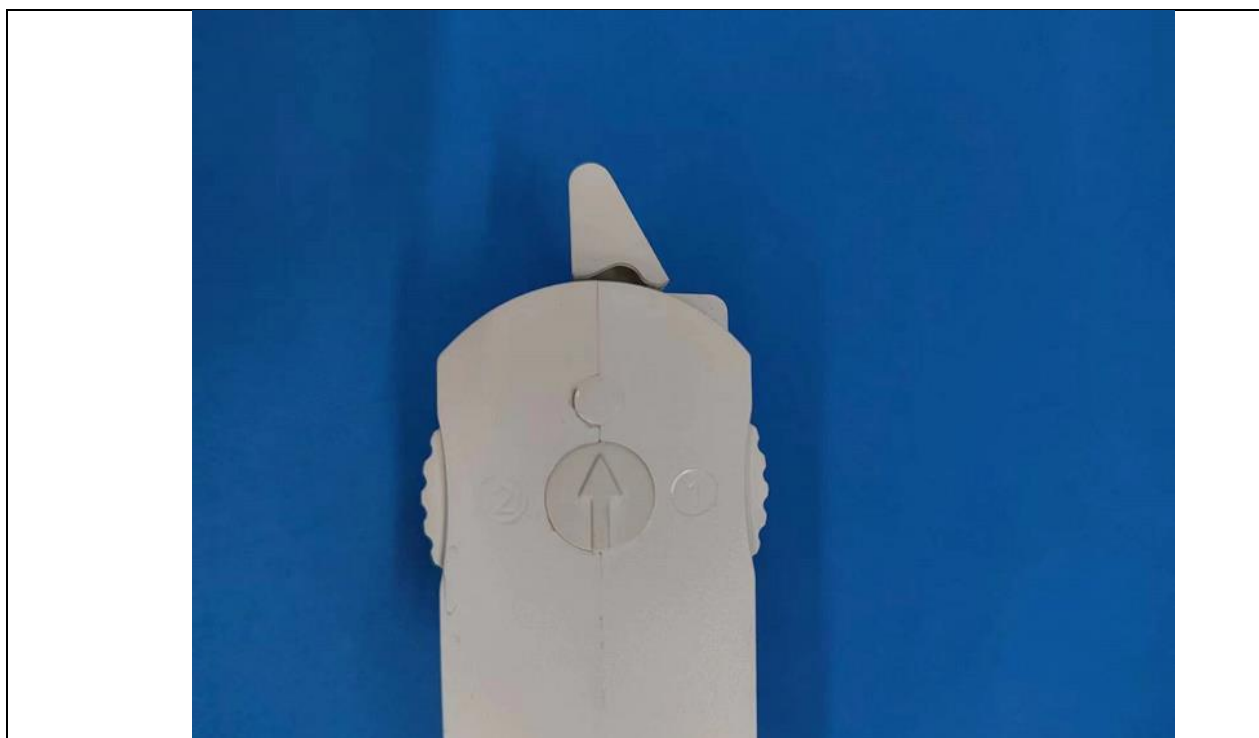
Details of: L/N pin view for all models



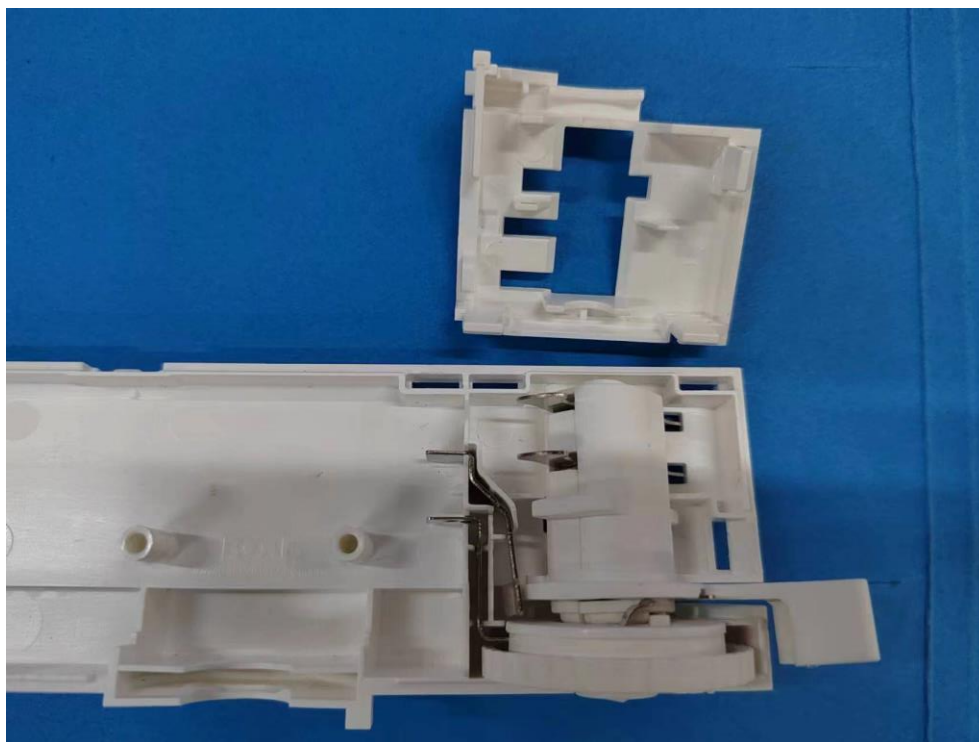
Details of: L/N pin view for all models



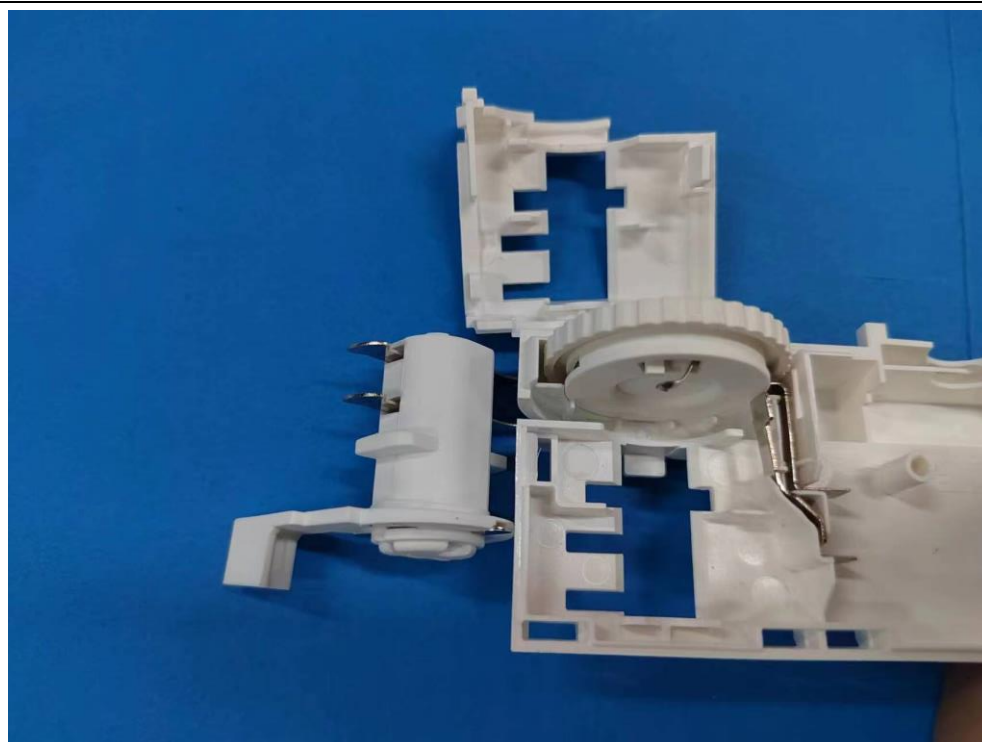
Details of: L/N pin view for all models, switch to L1, L2, L3 mark



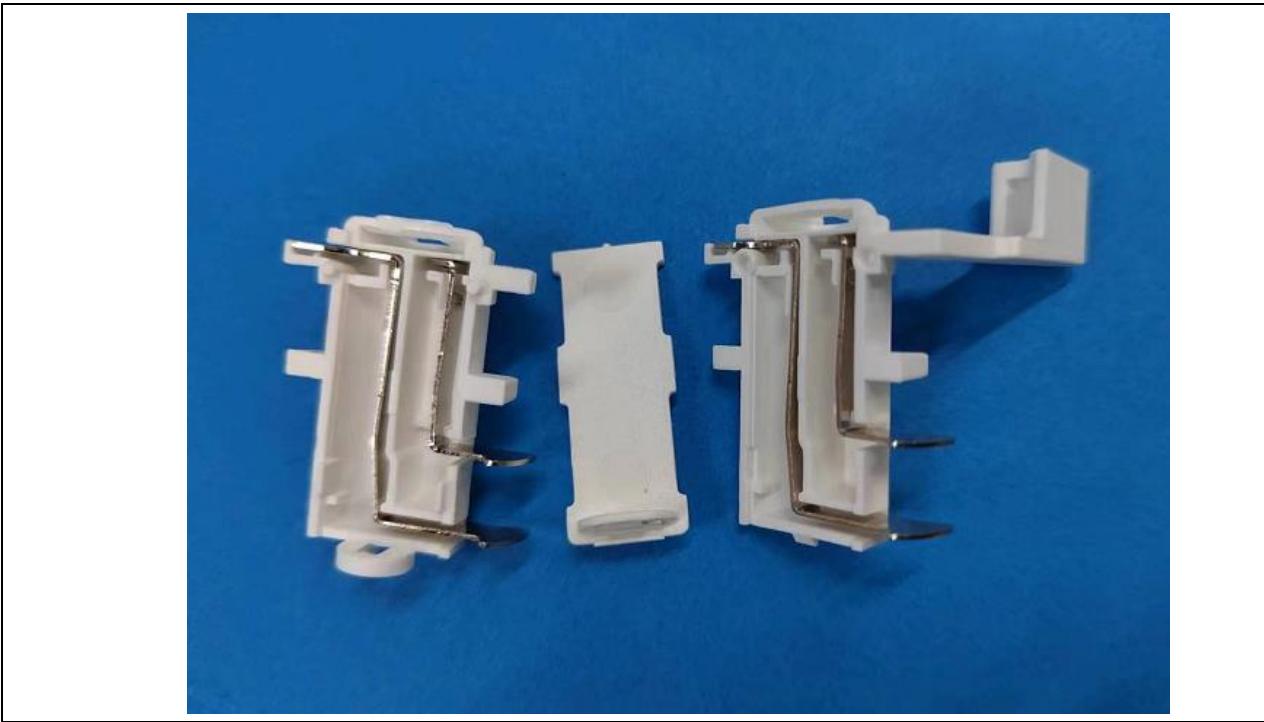
Details of: L/N pin internal view for all models



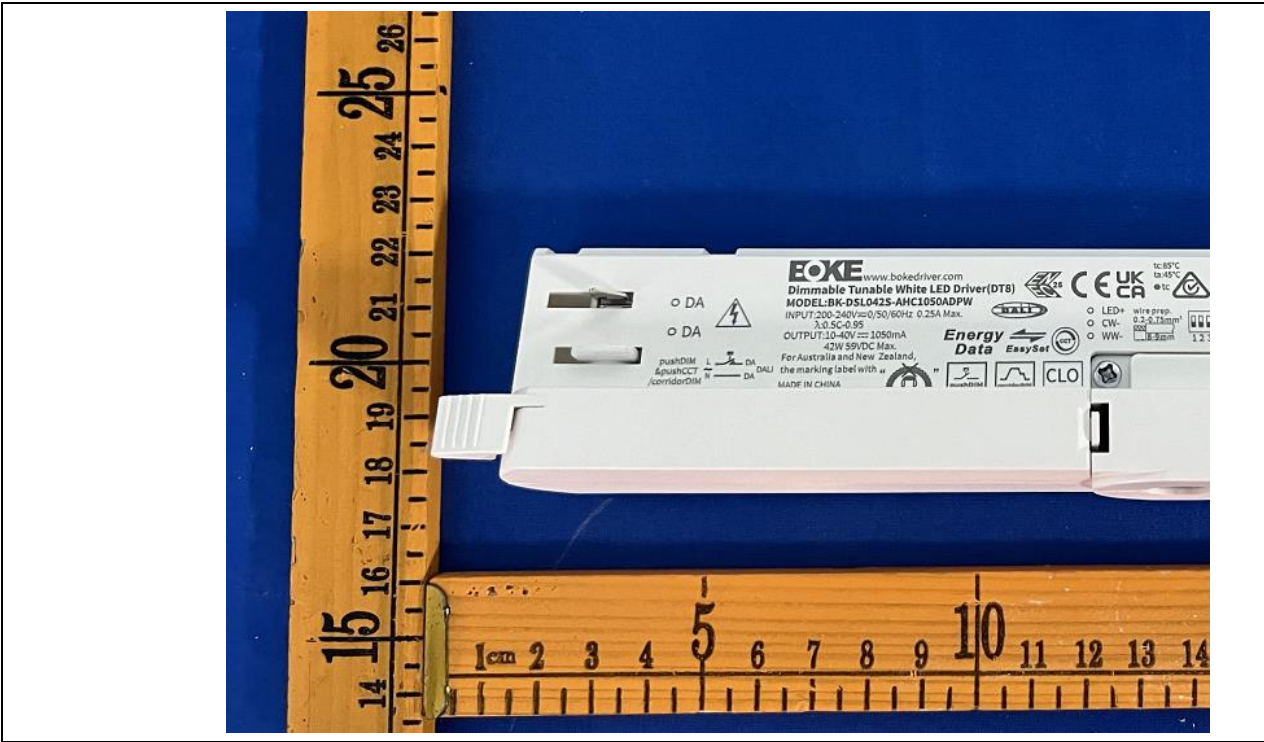
Details of: L/N pin internal view for all models



Details of: L/N pin internal view for all models



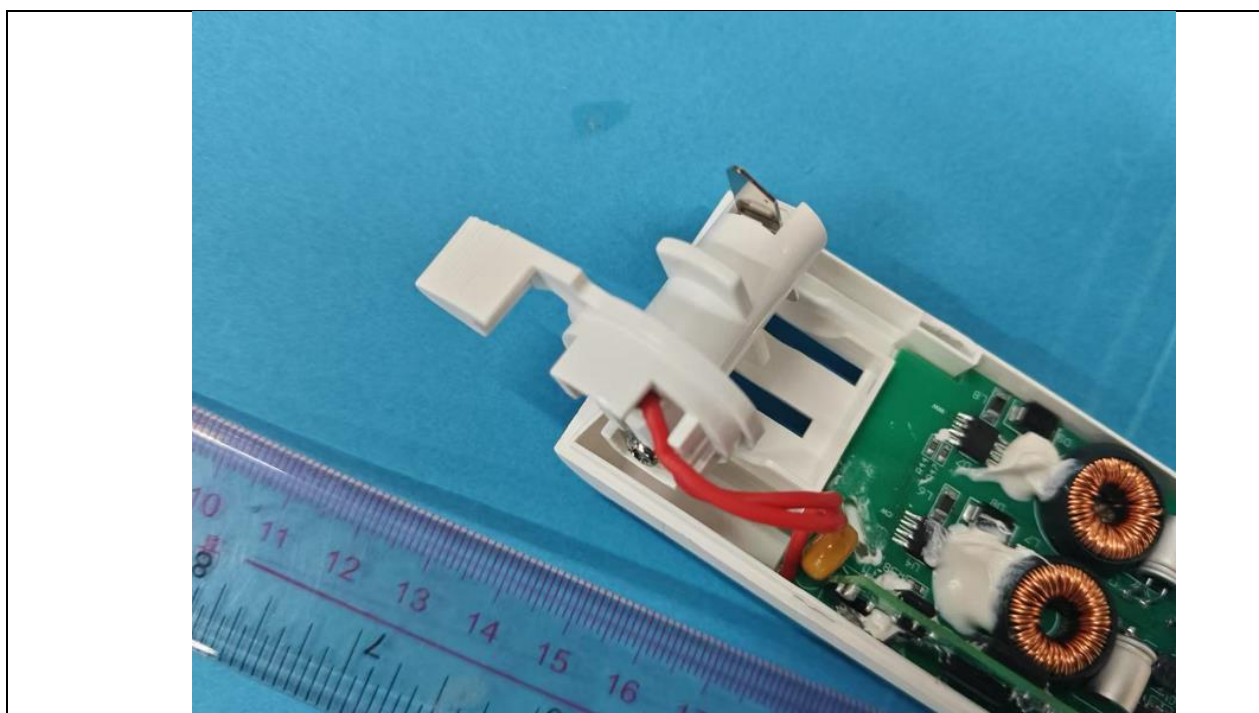
Details of: DALI input pin view for 2 series



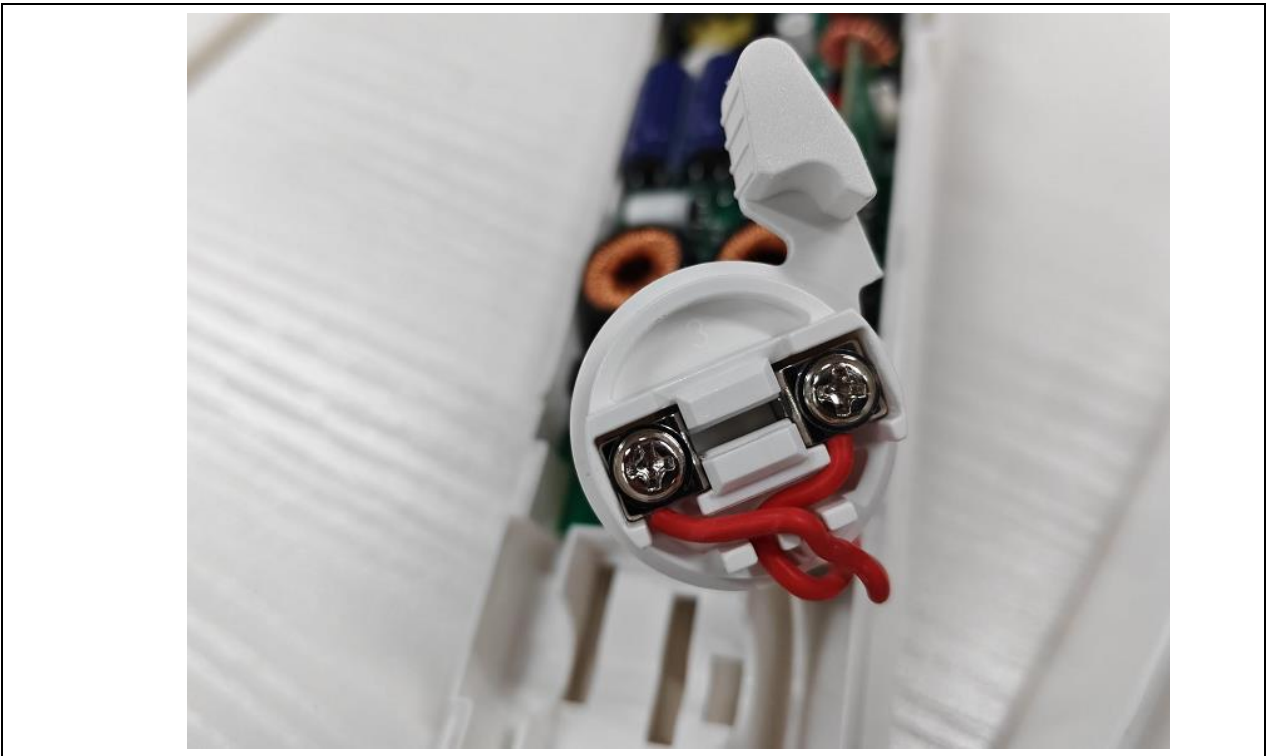
Details of: DALI input pin view for 2 series



Details of: DALI input pin internal view for 2 series



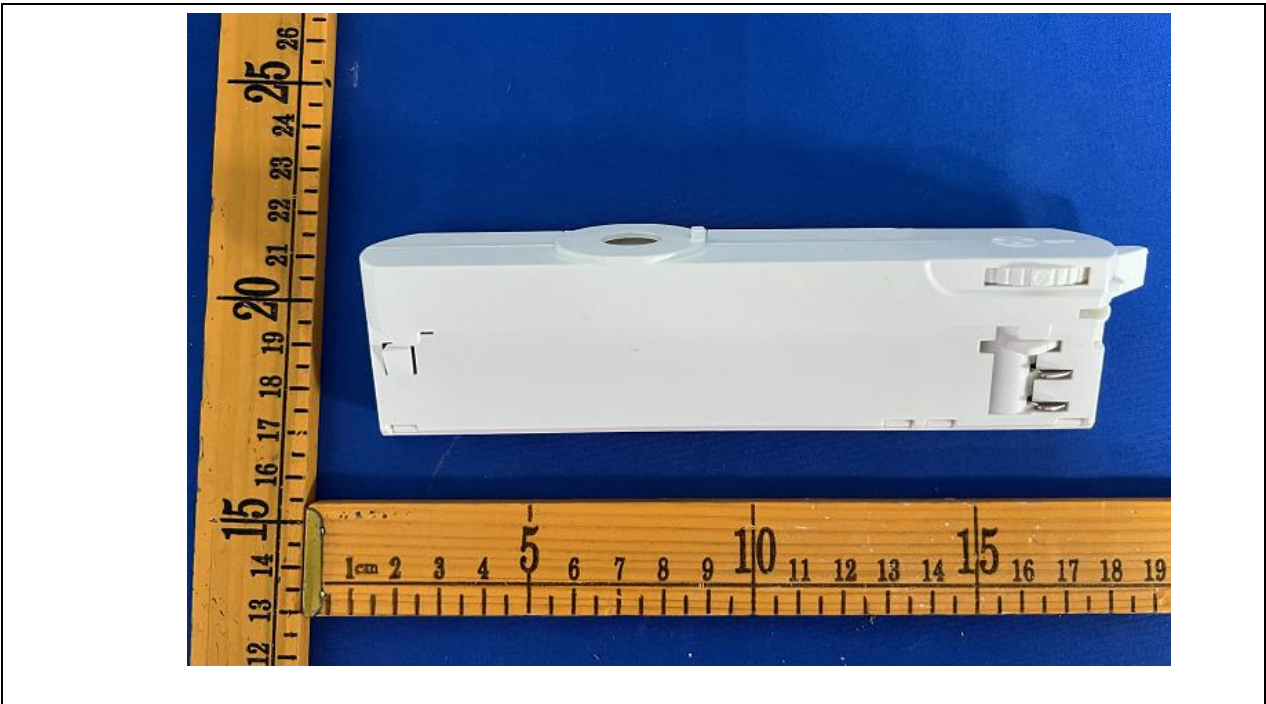
Details of: DALI input pin internal view for 2 series



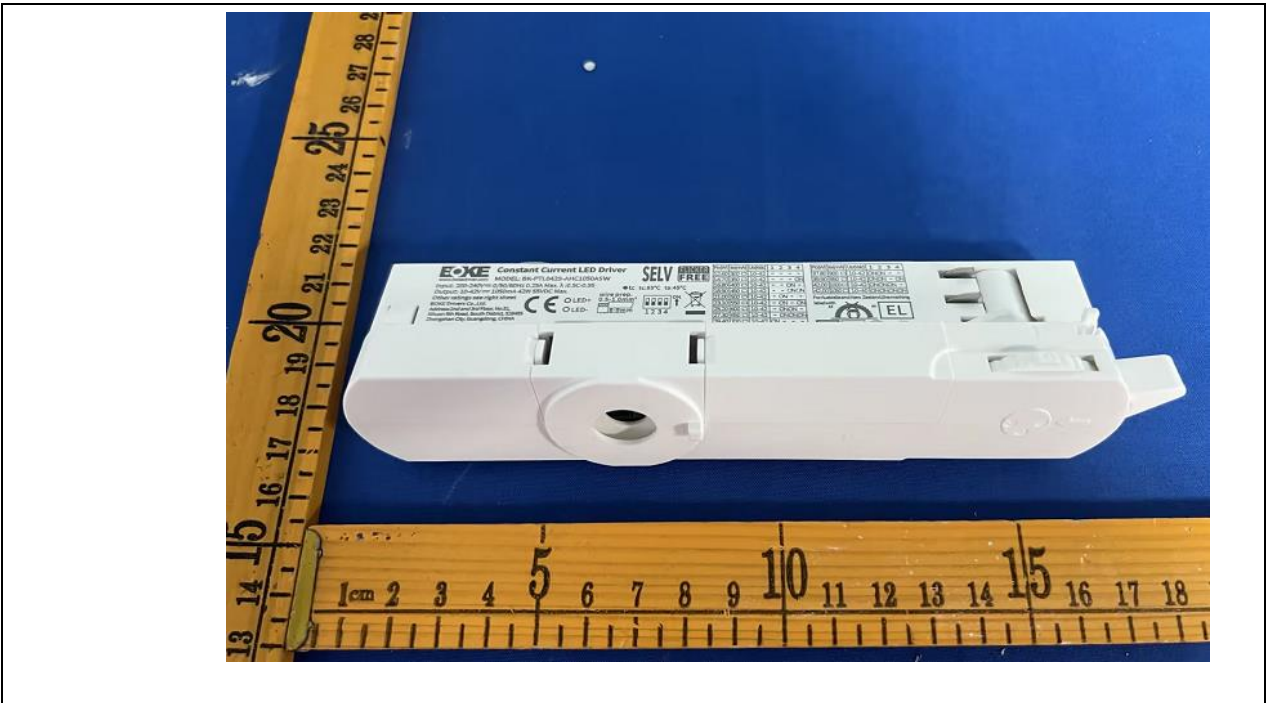
Details of: Overall view-1, for 3 series BK-PTL042S-AHC1050ASW



Details of: Overall view-2, for 3 series BK-PTL042S-AHC1050ASW



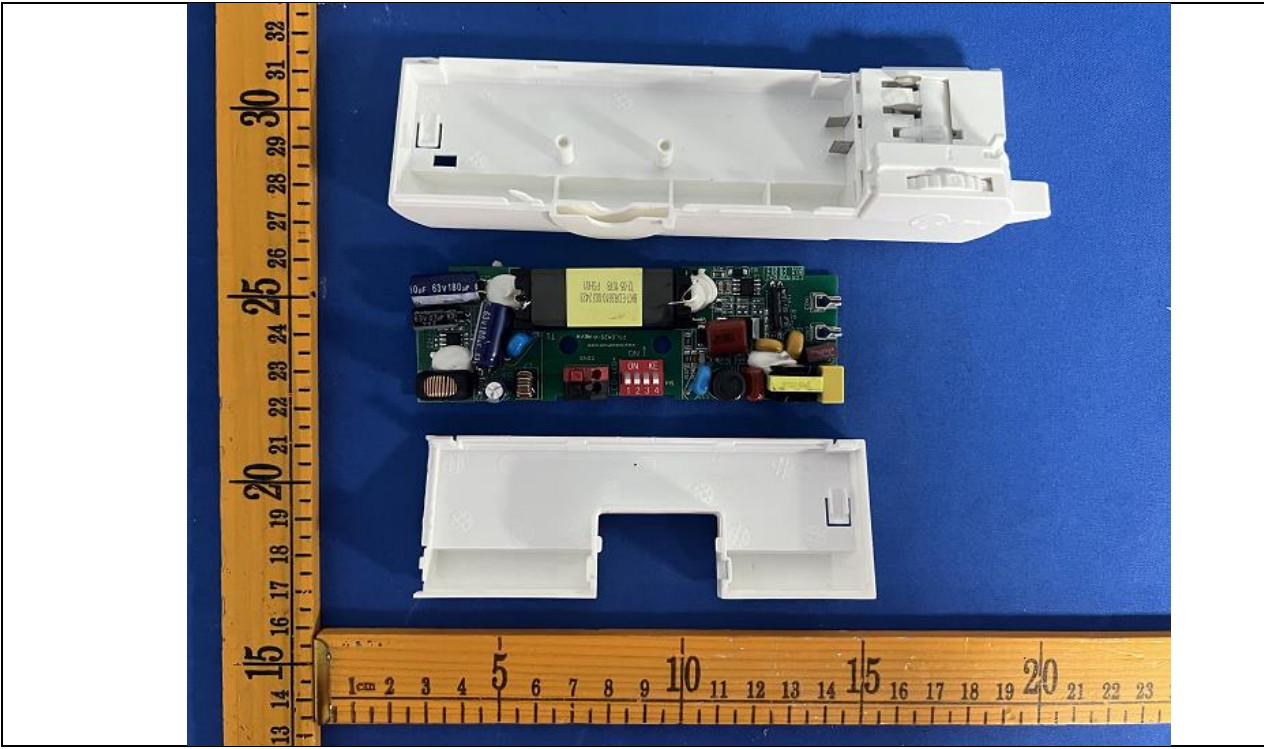
Details of: Overall view-3, for 3 series BK-PTL042S-AHC1050ASW



Details of: Internal view, for 3 series BK-PTL042S-AHC1050ASW



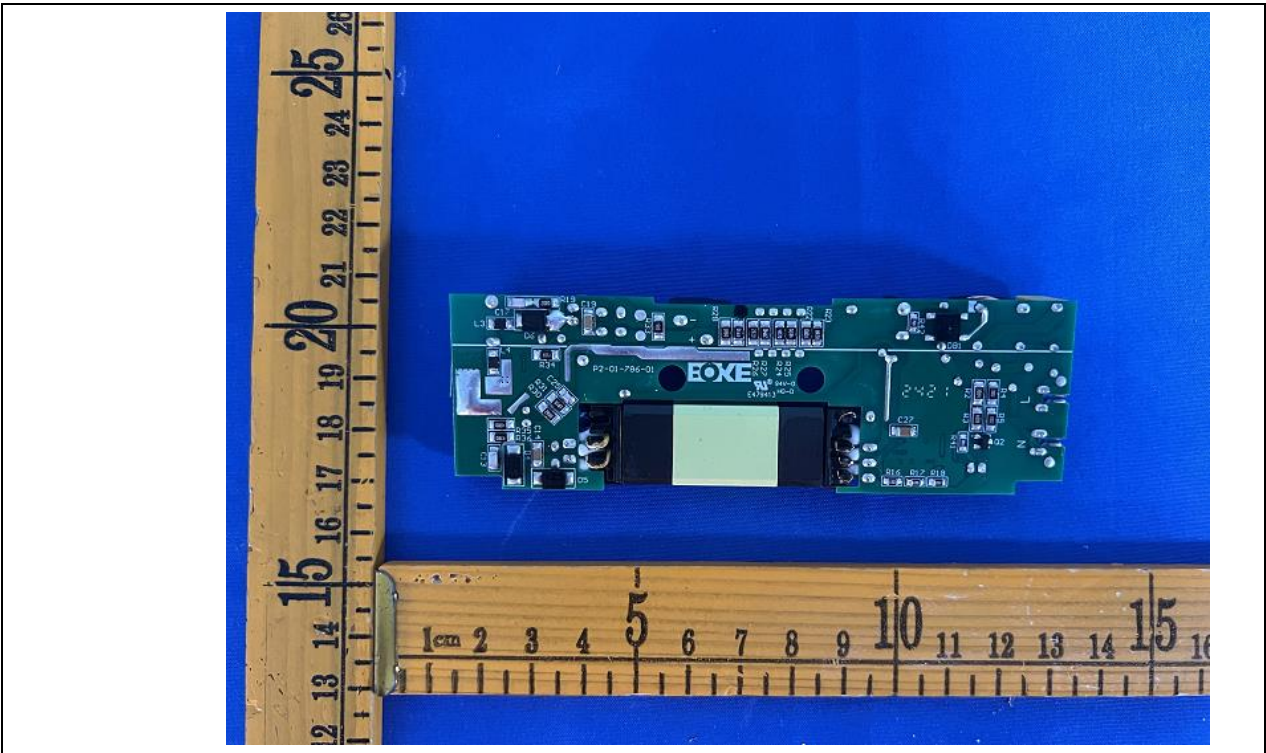
Details of: Internal view, for 3 series BK-PTL042S-AHC1050ASW



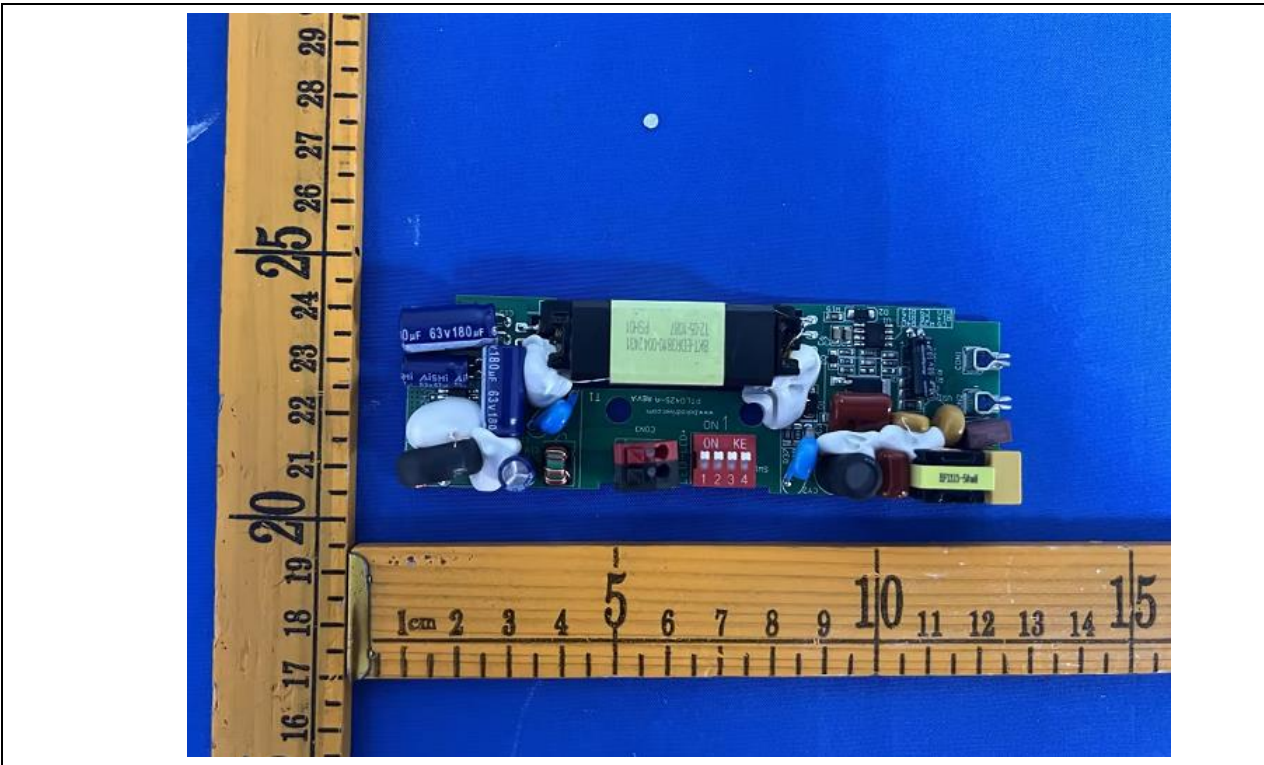
Details of: Components view for model BK-PTL042S-AHC1050ASW



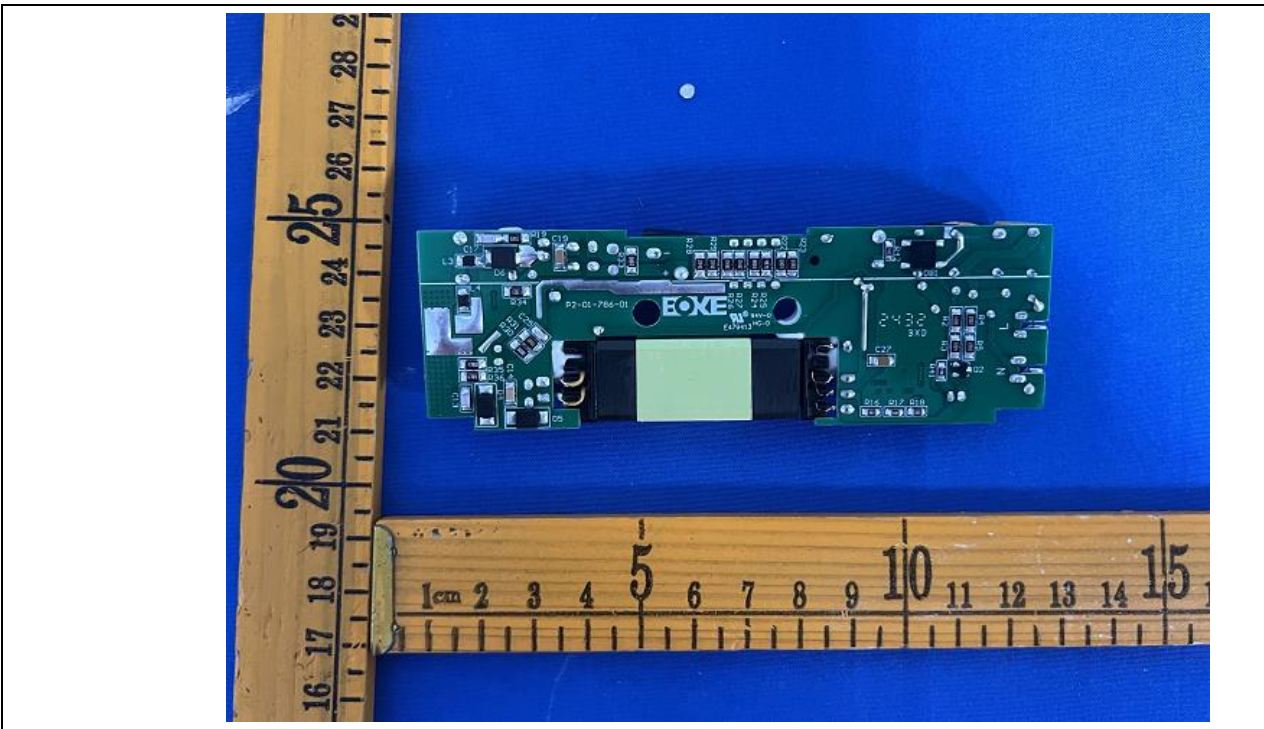
Details of: PCB trace view for model BK-PTL042S-AHC1050ASW series



Details of: Components view for model BK-PTL030S-AHC0700ASW



Details of: PCB trace view for model BK-PTL030S-AHC0700ASW



--- END OF TEST REPORT ---