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File Number **24/36401945**

TEST REPORT
Electromagnetic Compatibility

Petitioner's Reference:	SCHNEIDER ELECTRIC ESPAÑA, S.A			
Company Address:	C/ Charles Darwin S/N, Edificio Bogaris, Isla de la Cartuja, 41092 Seville, SPAIN			
Represented by:	Pedro Tito Macías Roselló			
Equipment:	PowerLogic™ T300			
Brand:	Schneider electric España, s.a		PMN:	HU250: EMS59000 ZigBee: EMS59156 GPS/4G Modem: EMS59154
Sample #1:	HU250	EMS59000+01+2122120097	Applus Id:	23515-00001
	ZigBee	EMS59156+00+2121221035		
	GPS/4G Modem:	EMS59154+01+RN17030032		
Result:	**complies**			
It has been tested and complies with the applicable standard. See test result summary section.				
Applicable Standard:				
EMC standard/s:	**FCC 47 CFR Part 15 Subpart B (October 2023)**			
Dates and Test Site:	Applus Barcelona, Bellaterra			
Equipment Reception Date	November 14, 2023			
Test Initial Date:	November 14, 2023			
Test Final Date:	November 16, 2023			

Test Manager: Alejandro Sáez
Date of issue: Bellaterra, April 9, 2025

JOSE MANUEL SUAREZ ROMAN
Firmado digitalmente por JOSE MANUEL SUAREZ ROMAN
Fecha: 2025.04.09 12:47:51 +02'00'

Jose Manuel Suárez
Technical Manager
Electrical and Electronics

ENSAYO ISO 17025 Nº9 / LE894

The results refer only and exclusively to the sample, product or material delivered for testing, and tested under conditions stipulated in this document. The equipment has been tested under conditions stipulated by standard(s) quoted in this document. This document will not be reproduced otherwise than in full.
This is the first page of the document, which consists of 28 pages.

1 TEST RESULTS SUMMARY

Test Description	Sample #	DUT Test Modes	Req. Criteria	Results	Criteria Note
RADIO-FREQUENCY RADIATED EMISSIONS (FCC Part 15.109, ICES-003 Issue 7 (3.2.2))	#1	Mode 1	CLASS B	PASS	CN4
POWER LINE CONDUCTED EMISSIONS (FCC Part 15.107, ICES-003 Issue 7 (3.2.1))	#1	Mode 1	CLASS B	PASS	CN4

The test results are shown in detail on the following pages.

The criteria to give conformity in those cases where it is not implicit in the standard or specification will be, for EMC emissions tests, a non-simple binary decision rule will be followed with a safety zone equal to the value of the uncertainty (w = U).

In this case, the upper limit of the value of the probability of false acceptance, according to ILAC G8, is 2.5 % and the criteria notes are:
CN1: The measured results are above the upper limit, even considering the uncertainty interval.
CN2: The measured results are above the specified limits, but within the uncertainty interval. It is therefore not possible to state compliance based on the 95% level of confidence. However, the results indicate that non-compliance is more probable than compliance.
CN3: The measured results are below the specified limits, but within the uncertainty interval. It is therefore not possible to state compliance based on the 95% level of confidence. However, the results indicate that compliance is more probable than non-compliance.
CN4: The measured results are within the limits, including the uncertainty interval.

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3 GENERAL DESCRIPTION OF TEST ITEMS

3.1 EQUIPMENT DESCRIPTION

This information has been provided by the customer and it is not covered by the accreditation. LGAI does not assume any responsibility from it.

EQUIPMENT DESCRIPTION						
Description	Wireless modules of the PowerLogic™ T300 platform					
EUT Version	**FVIN**			**HVIN**		
	HU250: 2.9.1 ZigBee: 002.002.055 GPS/4G Modem: 03.017			HU250: 14.1 ZigBee: 01.1 GPS/4G Modem: 03.1		
Power supply	DC	+/-		12 - 48 V	- Hz	
Applicability	**Fixed Equipment**		**Vehicular Equipment**		**Portable Equipment**	
	☒		☐		☐	
Equipment Size	**Length**		**Width**		**Height**	
	140 mm		140 mm		90 mm	
Maximum internal frequency	2483.5 MHz					

Table 1: Equipment description

I/O CABLES						
	Port #	**Name**	**Type**	**Cable length**	**Cable Shielded**	**Comments**
Description	1	Mains	DC	< 3 m	No	Provided by customer
	2	Communications	ETH	< 3 m	Yes	Provided by Applus

Table 2: Input/output ports description

RF FEATURES					
	Communication Technology	**Radio Chipset**	**Brand**	**Module Model**	**Antenna Peak Gain**
Description	Wi-Fi 2.4 GHz	WL1805MOD	TI	WL1805MOD	N/A
	Cellular	PLS8-X Rel 3 Module	Telit Cinterion	L30960-N3460-A300	3 dBi
	GNSS Module	PLS8-X Rel 3 Module	Telit Cinterion	L30960-N3460-A300	3 dBi
	ZigBee Module	CC2538SF53RTQR	TI	CC2538SF53RTQR	2.2 dBi

Table 3: RF Features

3.1.1 Auxiliary Equipment

	Port #	**Name**	**Type**	**Comments**
Description	0	CMW500	Radio communicator	Provided by Applus
	1	Zigbee tag	Radio communicator	Provided by customer

Table 4: Auxiliary equipment #1 description

3.1.2 DUT Modifications performed

No modifications have been performed.

3.2 DUT TEST MODES

DUT Operation Modes		
Mode #	**Description**	**Set-up**
1	During the emissions test, the equipment was configured to transmit in its worst case: • WiFi: 11b low channel (2462 MHz centered) • LTE: modulation Band 5 and Band 2 • Zigbee: channel 26	Table top

Table 5: DUT test modes

3.3 CONTROL AND MONITORING

During the test, the auxiliary equipment 1 (Base Station) is used to configure the LTE communication.
For Zigbee communication, the auxiliary equipment 2 is used to configure the channel and establish the connection.

3.4 PHOTOGRAPHS

Photographs identifying the equipment under test and its auxiliaries, as well as assembly photographs for radiated and conducted tests, can be found in the document: 25/36401541_FCC_Test Report_Photos.

3.5 ACCEPTANCE CRITERIA

According to standard **FCC 47 CFR Part 15 Subpart B.**

3.6 TEST FACILITIES ID

TEST FACILITIES ID	
FCC Test Firm Registration Number:	507478
ISED Assigned Code:	5766A

Table 6: Test facilities ID

3.7 COMPETENCES AND GUARANTEES

LGAI Technological Center, S.A. is a testing laboratory accredited by the National Accreditation Body (ENAC -Entidad Nacional de Acreditación), to perform the tests indicated in the Certificate No. 9/LE894.
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4 TEST RESULTS

4.1 RADIO-FREQUENCY RADIATED EMISSIONS

4.1.1 Test Setup Required

According to standard ANSI C63.4:2014

4.1.1.1 Tabletop equipment

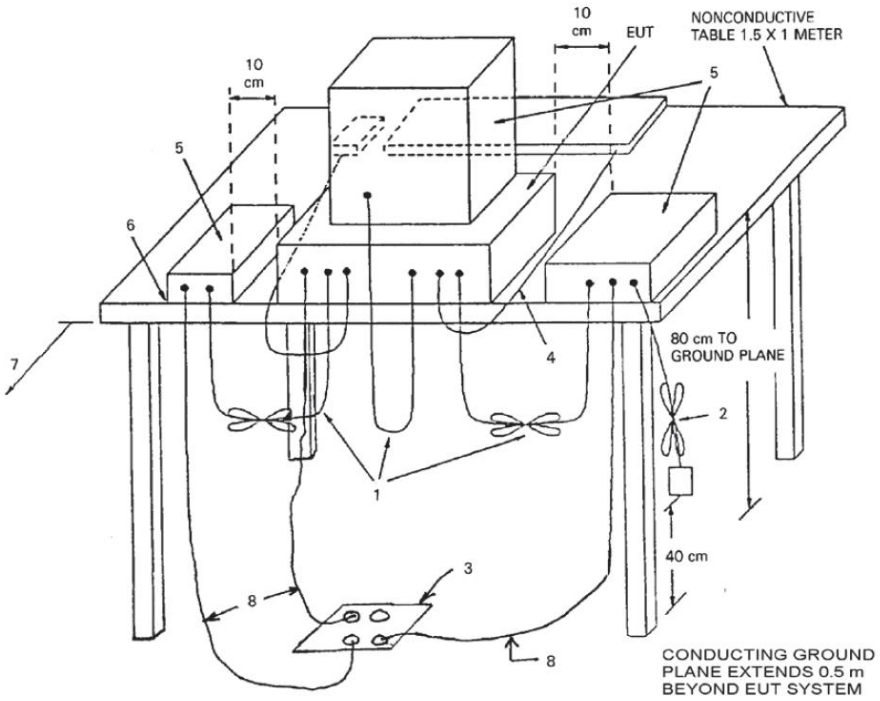


Fig. 1: Radio-frequency radiated emissions setup of table top equipment.

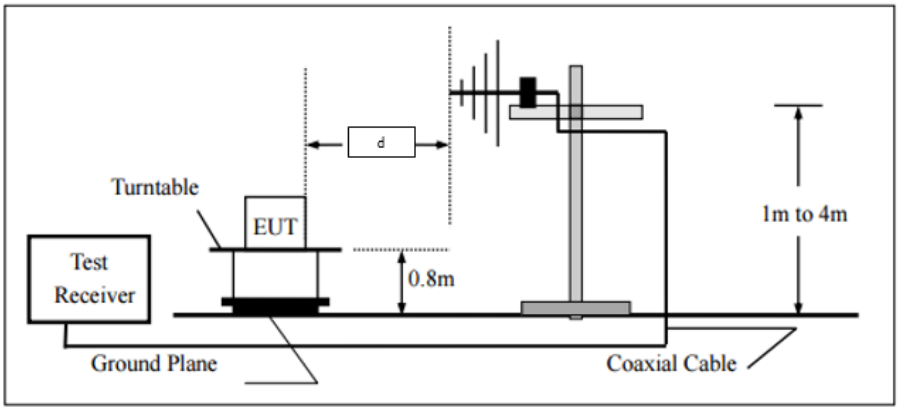


Fig. 2: Radio-frequency radiated emissions of table top equipment from 30 MHz to 1000 MHz

Distance "d" depends on test chamber.

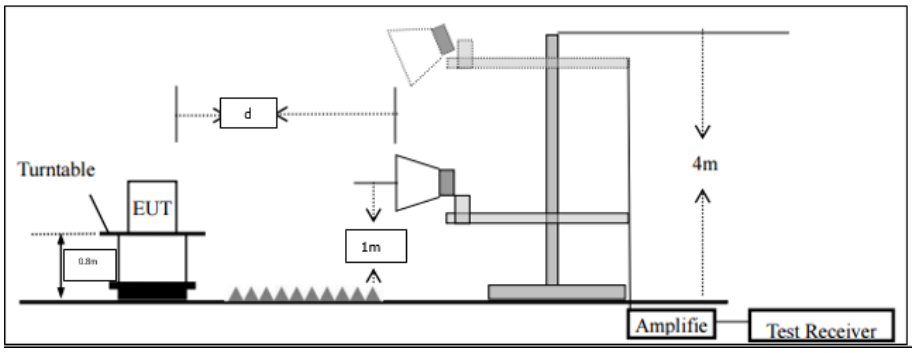


Fig. 3: Radio-frequency radiated emissions setup of table top equipment above 1 GHz

Distance "d" depends on test chamber.

4.1.1.2 Floor standing equipment

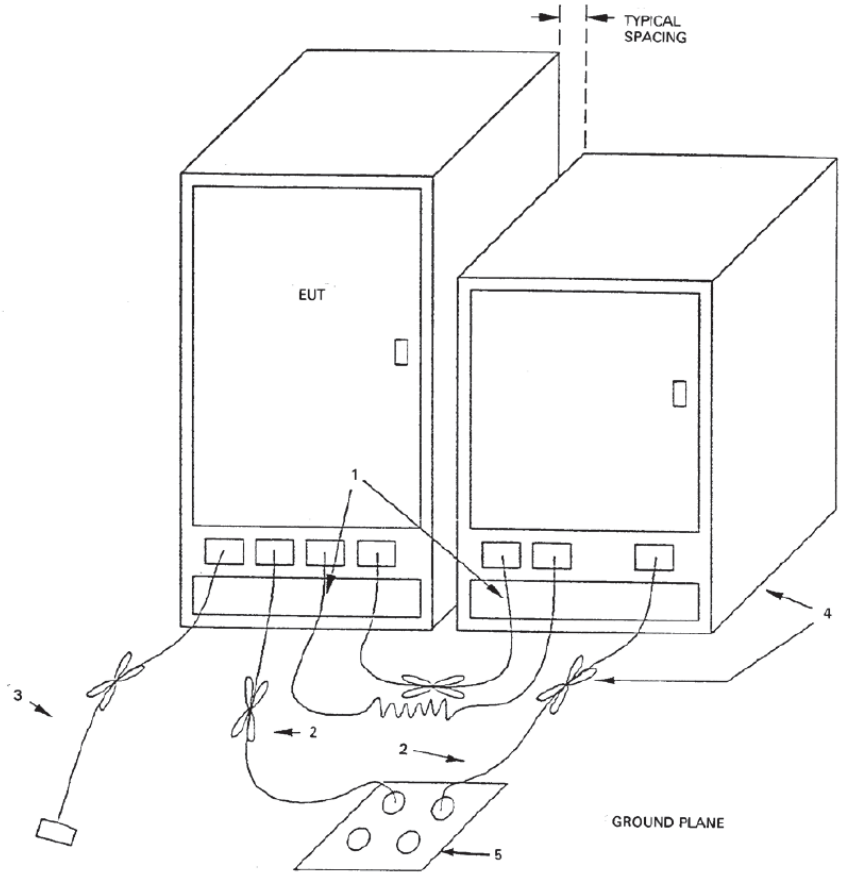


Fig. 4: Radio-frequency radiated emissions of floor-standing setup equipment.

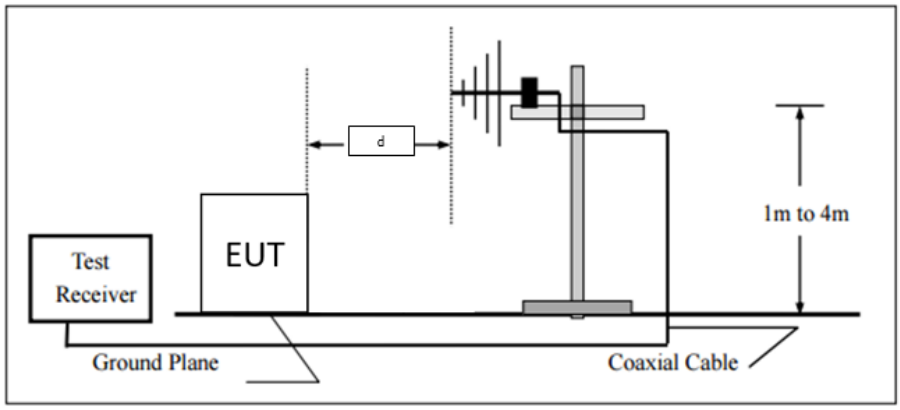


Fig. 5: Radio-frequency radiated emissions of floor-standing setup equipment from 30 MHz to 1000 MHz

Distance "d" depends on test chamber.

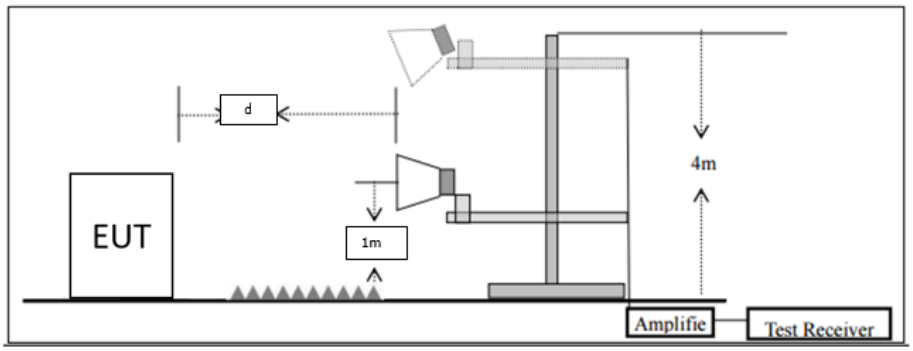


Fig. 6: Radio-frequency radiated emissions of floor-standing setup equipment above 1 GHz

Distance "d" depends on test chamber.

4.1.2 Test Procedure

The test site, 3 or 10 m semi-anechoic chamber, has met the requirement of NSA tolerance 4 dB according to the standards: ANSI C63.4-2014

The radiated measurements are performed in vertical and horizontal plane in the frequency range from 30 MHz to 1 GHz in semi-anechoic chambers. The receiving antennas are conform to specifications ANSI C63. These antennas can be moved over the height range between 1 m and 4 m in order to search for maximum field strength emitted from EUT. The measurement distances between EUT and receiving antennas are indicated in the test setups for the various frequency ranges. For each measurement, the EUT is rotated in all three axes until the maximum field strength is received.

Pre-measurement

- The turntable rotates from 0° to 315° using 45° steps
- The antenna is polarized vertical and horizontal
- The antenna height changes from 1 m to 4 m
- At each turntable position, antenna polarization and height the receiver finds the maximum of all emissions

Final measurement

- The final measurement is performed for at least six highest peaks according to the requirements of the ANSI C63.4
- Based on antenna and turntable positions at which the peak values are measured the software maximize the peaks by changing turntable position 360 ° and antenna height between 1 m and 4 m
- The final measurement is done with quasi-peak detector (as described in ANSI C63.4) for 30 MHz to 1 GHz emissions test
- The final measurement is done in the position (azimuth, height and antenna polarization) causing the highest emissions with Peak and RMS detector (as described in ANSI C63.4) for 1 GHz to 18 GHz test
- Final levels, frequency, measuring time, bandwidth, antenna height, antenna polarization, turntable angle, correction factors, margin to the limit and limit are recorded. A plot with the graph of the premeasurement with marked maximum final results and the limit is shown

Correction Factor:

Emission Level = Read Level +Corrections (Antenna Factor + Cable Loss – Amplifier Gain (if applies) + Attenuator (if applies))

4.1.3 Test Parameters

4.1.3.1 Requirements

According to FCC Part 15.109:

Class A Equipment's						
Frequency Range [MHz]	**Quasi-peak detector (QP) [dBµV/m]**		**Peak detector (PK) [dBµV/m]**		**Average detector (AVG) [dBµV/m]**	
	10 m measuring distance	3 m measuring distance[1]	8.5 m measuring distance[2]	3 m measuring distance[3]	8.5 m measuring distance[2]	3 m measuring distance[3]
30 – 288	39.0	49.5	N/A	N/A	N/A	N/A
88 – 216	43.5	54	N/A	N/A	N/A	N/A
216 – 960	46.4	56.9	N/A	N/A	N/A	N/A
960 – 1000	49.5	60	N/A	N/A	N/A	N/A
Above 1000	N/A	N/A	70.95	80	50.95	60

Table 7: Radio-frequency radiated emissions requirements – Class A equipment's

Note 1: The limits have been modified according to the applicable standard applying the formula: $L_2 = L_1 - 20log(d_2/d_1)$*, where:*

L_2: New Limit.
L_1: Limit at 10 meters.
d_1: 10 meters (standard distance).
d_2: 3 meters (new measurement distance).

Note 2: The limits has been modified according to the applicable standard applying the formula: $L_2 = L_1 - 20log(d_2/d_1)$*, where:*
L_2: New Limit.
L_1: Limit at 10 meters.
d_1: 10 meters (standard distance).
d_2: 8.5 meters (new measurement distance).

Note 3: The limits has been modified according to the applicable standard applying the formula: $L_2 = L_1 - 20log(d_2/d_1)$*, where:*

L_2: New Limit.
L_1: Limit at 10 meters.
d_1: 10 meters (standard distance).
d_2: 3 meters (new measurement distance).

Class B Equipment's						
Frequency Range [MHz]	**Quasi-peak detector (QP) [dBµV/m]**		**Peak detector (PK) [dBµV/m]**		**Average detector (AVG) [dBµV/m]**	
	10 m measuring distance[1]	3 m measuring distance	8.5 m measuring distance[2]	3 m measuring distance	8.5 m measuring distance[2]	3 m measuring distance
30 – 88	29.5	40	N/A	N/A	N/A	N/A
88 – 216	33.0	43.5	N/A	N/A	N/A	N/A
216 – 960	35.5	46	N/A	N/A	N/A	N/A
960 – 1000	43.5	54	N/A	N/A	N/A	N/A
Above 1000	N/A	N/A	65	74	45	54

Table 8: Radio-frequency radiated emissions requirements – Class B equipment's

Note 1: The limits have been modified according to the applicable standard applying the formula: $L_2 = L_1 - 20log(d_2/d_1)$*, where:*

L_2: New Limit.
L_1: Limit at 3 meters.
d_1: 3 meters (standard distance).
d_2: 10 meters (new measurement distance).

Note 2: The limits have been modified according to the applicable standard applying the formula: $L_2 = L_1 - 20log(d_2/d_1)$*, where:*
L_2: New Limit.
L_1: Limit at 3 meters.
d_1: 3 meters (standard distance).
d_2: 8.5 meters (new measurement distance).

4.1.3.2 Receiver Parameters

According to standard ANSI C63.4:2014:

Frequency Range [MHz]	Detector	Resolution Bandwidth [MHz]	Video Bandwidth [MHz]
30 – 1000	Quasi-peak (QP)	0.12	0.30
Above 1000	Peak (PK)	1	3
	Average (AVG)	1	10·10-6

Table 9: Receiver parameters – Radio-frequency radiated emissions

4.1.4 Test Environmental Conditions

Test Date	Technician	Supervisor	Temperature [ºC]	Humidity [%]	Atm. Pressure [mbar]
14/11/2023	O. Merchán	--	20.2	48.3	999.2
15/11/2023	J.M. Llauradó	--	21.8	45.9	998.3

Table 10: Test environmental conditions – Radio-frequency radiated emissions

4.1.5 Summary Test Results

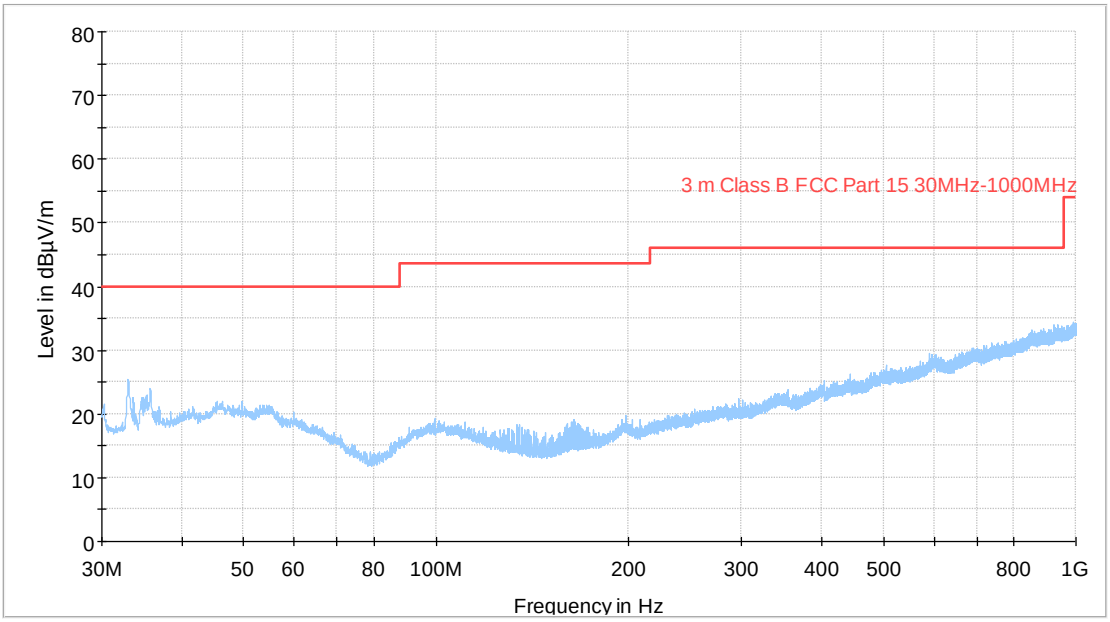
Frequency Range[1] [MHz]	Equipment Class	Test Area	Distance [m]	Emissions	Results
30 – 1000	B	SAC 1	3	QP < Limit - I	PASS
1000 – 6000	B	SAC 1	3	PK < Limit - I AVG < Limit - I	PASS
6000 – 13000	B	SAC 1	3	PK < Limit - I AVG < Limit - I	PASS

Table 11: Summary test results – Radio-frequency radiated emissions

Note: Upper limit according to the fifth harmonic of the maximum internal frequency declared by the manufacturer or to 40 GHz, whichever is lower.

4.1.6 Test Results

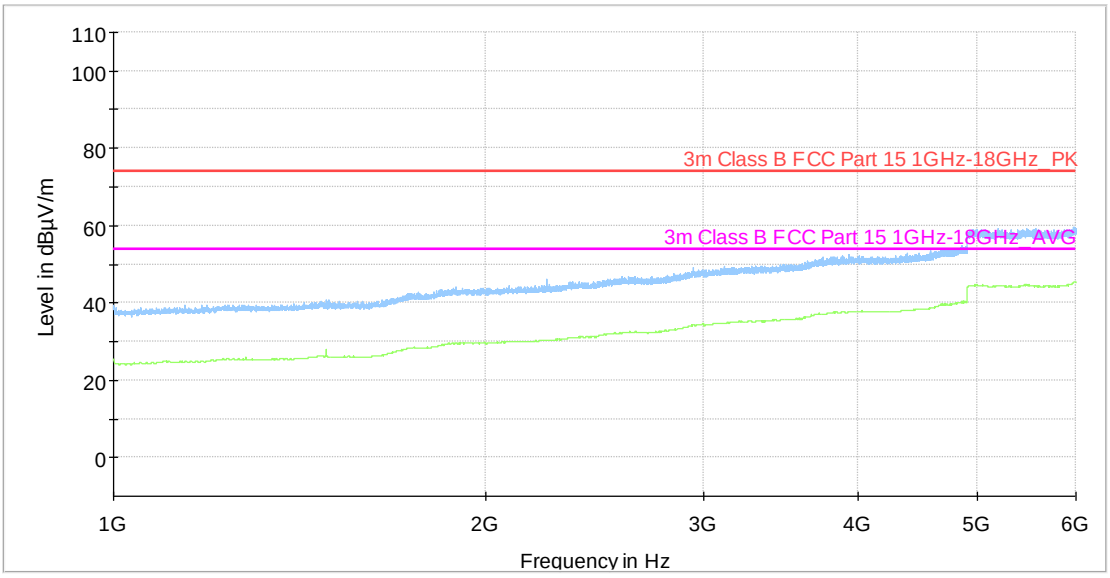
4.1.6.1 Ambient Levels. Frequency range: 30 MHz – 1 GHz



Preview Result 1-PK+ 3 m Class B FCC Part 15 30MHz-1000MHz Final_Result QPI

Fig. 7: Ambient level. Frequency range: 30 MHz – 1 GHz

4.1.6.2 Ambient Levels. Frequency range: 1 GHz – 6 GHz



Preview Result 2-AVG
3m Class B FCC Part 15 1GHz-18GHz_PK
Final_Result PK+
Preview Result 1-PK+
3m Class B FCC Part 15 1GHz-18GHz_AVG
Final_Result CAV

Fig. 8: Ambient level. Frequency range: 1 GHz – 6 GHz

4.1.6.3 Ambient Levels. Frequency range: 6 GHz – 13 GHz

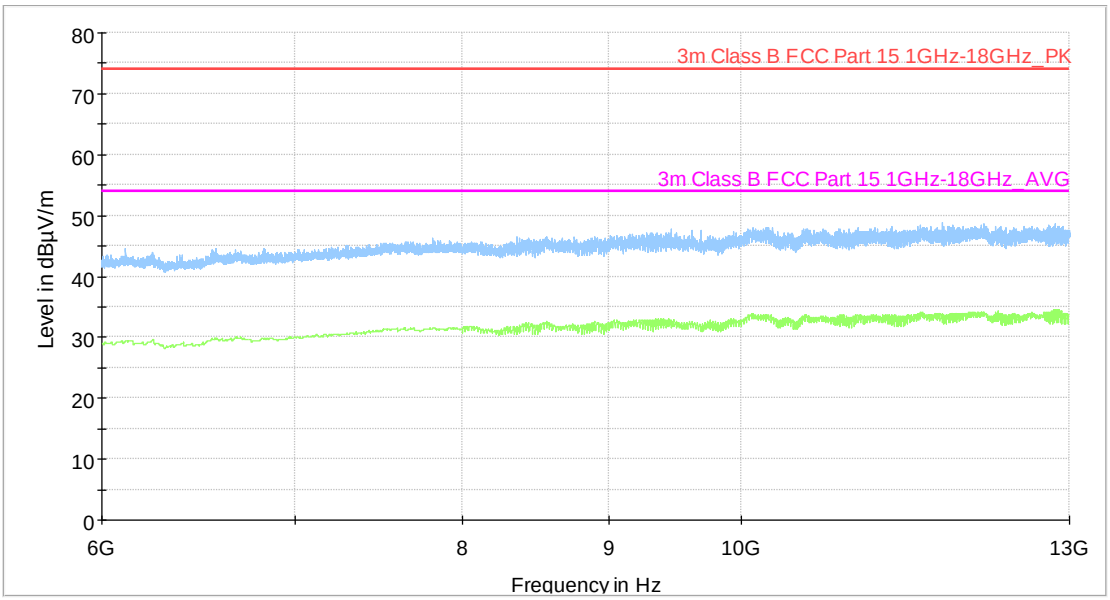


Fig. 9: Ambient level. Frequency range: 6 GHz – 13 GHz

4.1.6.4 Sample #1. Mode 1. Frequency range: 30 MHz – 1 GHz

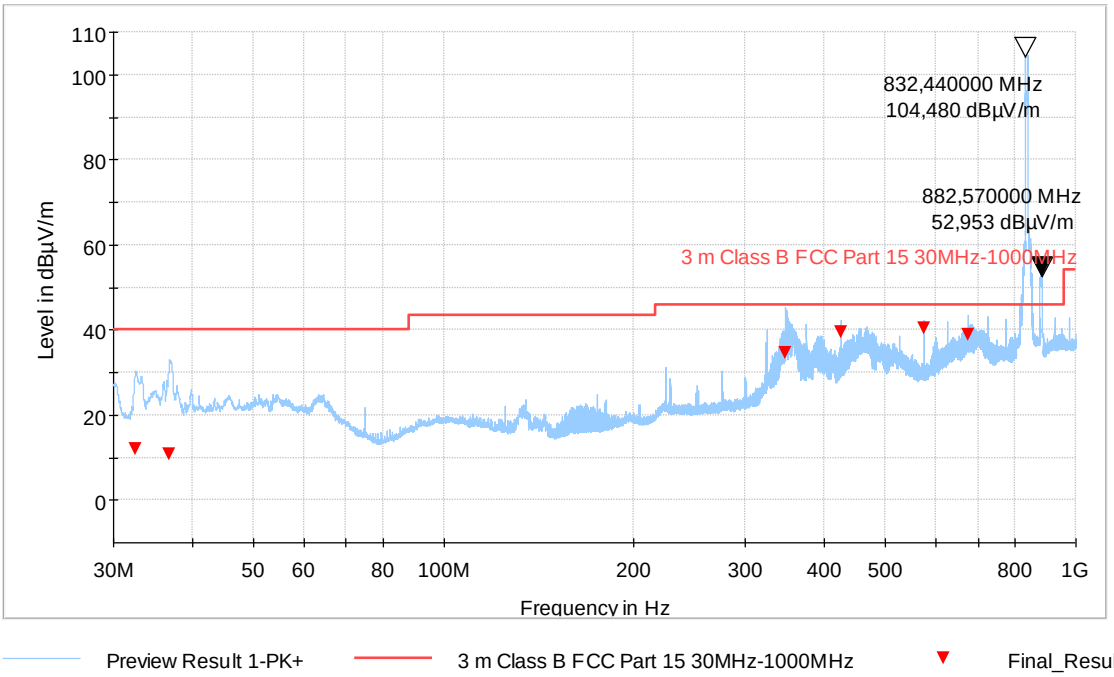


Fig. 10: Sample #1. Mode 1. Frequency range: 30 MHz – 1 GHz

Note 1: The 832 MHz and 882 MHz operating frequencies are intended for use, therefore, they are excluded for evaluation.

FINAL MEASUREMENTS

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
32.490	11.9	40.0	28.1	100.0	V	131.0	13.9
36.810	10.8	40.0	29.2	100.0	V	40.0	15.3
347.730	34.7	46.0	11.3	100.0	H	276.0	20.2
425.010	39.6	46.0	6.4	187.0	H	55.0	21.6
575.010	40.4	46.0	5.4	110.0	H	246.0	24.2
675.030	38.8	46.0	7.2	104.0	H	204.0	26.2

Table 12: Sample #1. Mode 1. Frequency range: 30 MHz – 1 GHz

Sample #1. Mode 1. Frequency range: 1 GHz – 6 GHz

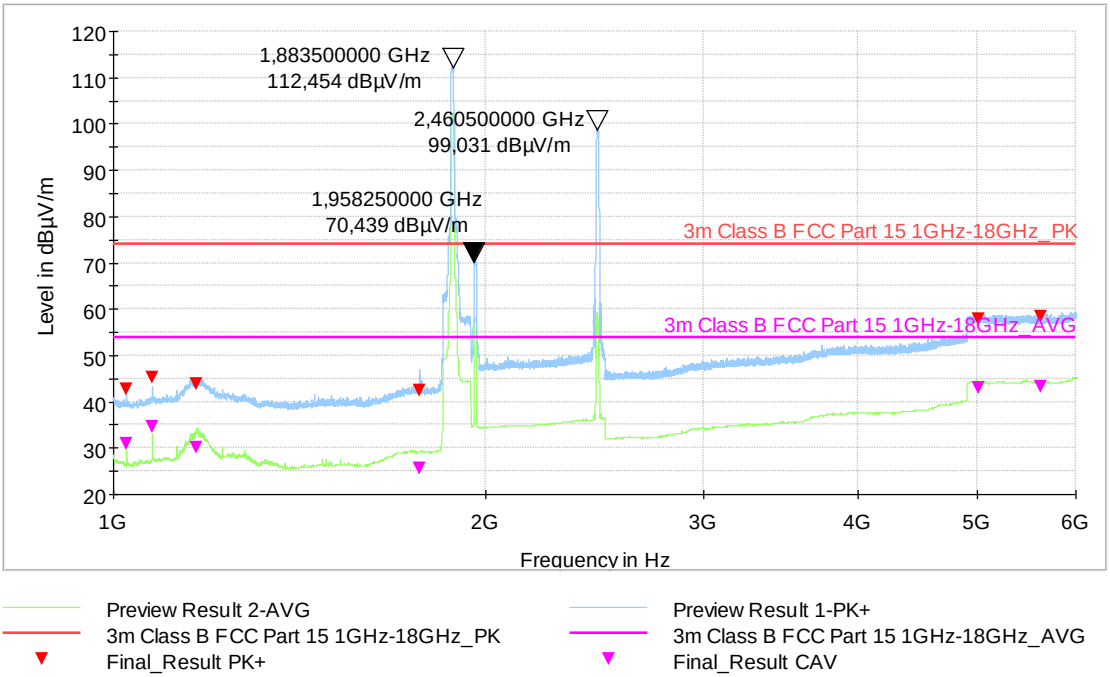


Fig. 11: Sample #1. Mode 1. Frequency range: 1 GHz – 6 GHz

Note 1: The 1.88 GHz, 1.95 GHz and 2.46 GHz operating frequencies are intended for use, therefore, they are excluded for evaluation.

FINAL MEASUREMENTS

Frequency (MHz)	MaxPeak (dBµV/m)	Limit PK (dBµV/m)	Margin PK	CAverage (dBµV/m)	Limit CAVG	Margin CAVG	Height (cm)	Pol	Azimuth (deg)
1025.000	42.6	74.0	31.4	31.0	54.0	23.0	138.0	H	76.0
1075.000	45.1	74.0	28.9	34.6	54.0	19.4	250.0	V	216.0
1167.750	43.7	74.0	30.3	30.0	54.0	24.0	137.0	H	89.0
1768.500	42.6	74.0	31.4	25.5	54.0	28.5	138.0	H	97.0
5003.750	58.0	74.0	16.0	43.0	54.0	11.9	100.0	H	241.0
5628.000	58.3	74.0	15.7	43.2	54.0	10.8	298.0	H	345.0

Table 13: Sample #1. Mode 1. Frequency range: 1 GHz – 6 GHz

4.1.6.5 Sample #1. Mode 1. Frequency range: 6 GHz – 13 GHz

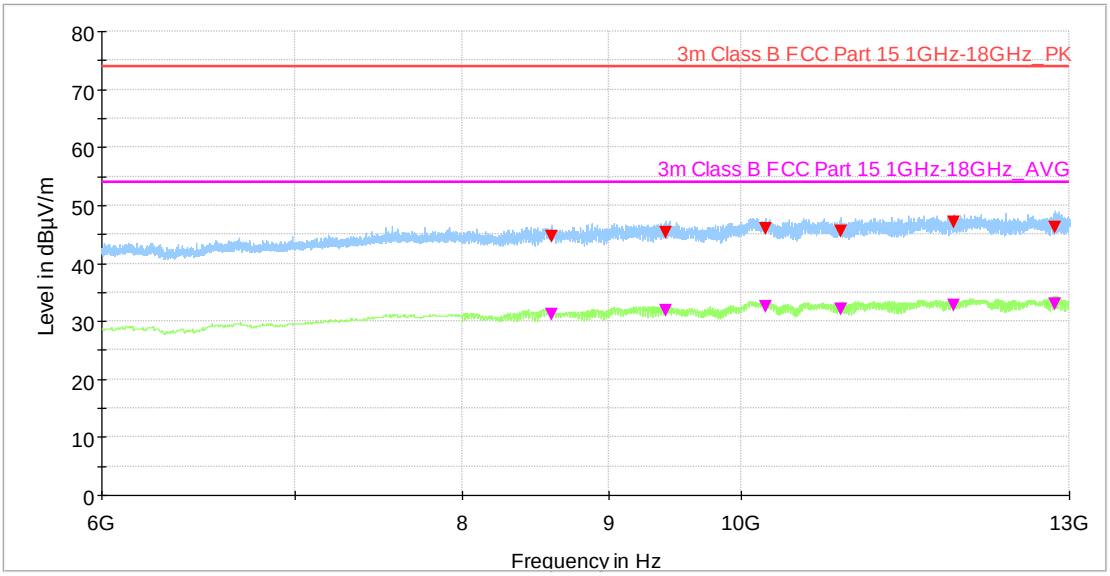


Fig. 12: Sample #1. Mode 1. Frequency range: 6 GHz – 13 GHz

FINAL MEASUREMENTS

Frequency (MHz)	MaxPeak (dBµV/m)	Limit PK (dBµV/m)	Margin PK	CAverage (dBµV/m)	Limit AVG (dBµV/m)	Margin AVG	Height (cm)	Pol	Azimuth (deg)
8593.000	44.7	74.0	29.3	31.2	54.0	22.8	100.0	V	0.0
9414.750	45.2	74.0	28.8	31.8	54.0	22.2	100.0	H	0.0
10198.750	46.0	74.0	28.0	32.4	54.0	21.6	100.0	H	353.0
10836.500	45.5	74.0	28.5	32.0	54.0	22.0	100.0	V	339.0
11857.000	47.1	74.0	26.9	32.8	54.0	21.2	100.0	V	354.0
12859.250	46.2	74.0	27.8	32.9	54.0	21.1	100.0	H	0.0

Table 14: Sample #1. Mode 1. Frequency range: 6 GHz – 12 GHz

4.1.7 Test Equipment Used

Equipment	Brand	Model	Applus Ref.	Last Calibration	Next Calibration
EMI RECEIVER	R&S	ESW 26	1041791	19/12/2022	19/12/2023
BILOG ANTENNA	SCHAWARZBECK	VULB 9162	1042229	14/02/2023	14/02/2024
HORN ANTENNA	EMCO	3115	05-ER-017	28/11/2022	28/11/2023
ATENUADOR 3 DB	HUBER&SUNNER	6803.17.B	1042021	25/05/2023	25/05/2024
RF PREAMPLIFIER	BONN ELEKTRONIK	BLMA 0118-M	1041733	12/05/2023	12/05/2024
CABLE	HUBER&SUHNER	SF126E	1042728	21/08/2023	21/08/2024
CABLE	HUBER+SUHNER	SF104/16N/11N/3000mm	1041964	22/06/2023	22/06/2024
RF CABLE (WALL PANEL),	--	--	1041502	09/10/2023	09/10/2024
SEMIANECHOIC CHAMBER SAC1	EUROSHIELD	TC1	104446	12/10/2022	12/10/2025
TEST SOFTWARE	ROHDE & SCHWARZ	EMC32 v.10.50.00	104624	--	--
MAST-TABLE CONTROLLER	MATURO	NCD/052/8931211	1042758	--	--

Table 15: Test Instruments – Radio-frequency radiated emissions

4.1.8 Uncertainty

Test Type	Test Description	Uncertainty
Emissions	RADIO-FREQUENCY RADIATED EMISSIONS 30 MHz – 1 GHz	± 5.3 dB
Emissions	RADIO-FREQUENCY RADIATED EMISSIONS 1 GHz – 6 GHz	± 5.3 dB
Emissions	RADIO-FREQUENCY RADIATED EMISSIONS 6 GHz – 18 GHz	± 5.5 dB

Table 16: Radio-frequency radiated emissions measuring Uncertainties

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by a coverage factor k=2, which for normal distribution corresponds to a coverage probability of approximately 95%.

4.2 POWER LINE CONDUCTED EMISSIONS

4.2.1 Test Setup Required

According to standard ANSI C63.4:2014

4.2.1.1 Tabletop equipment

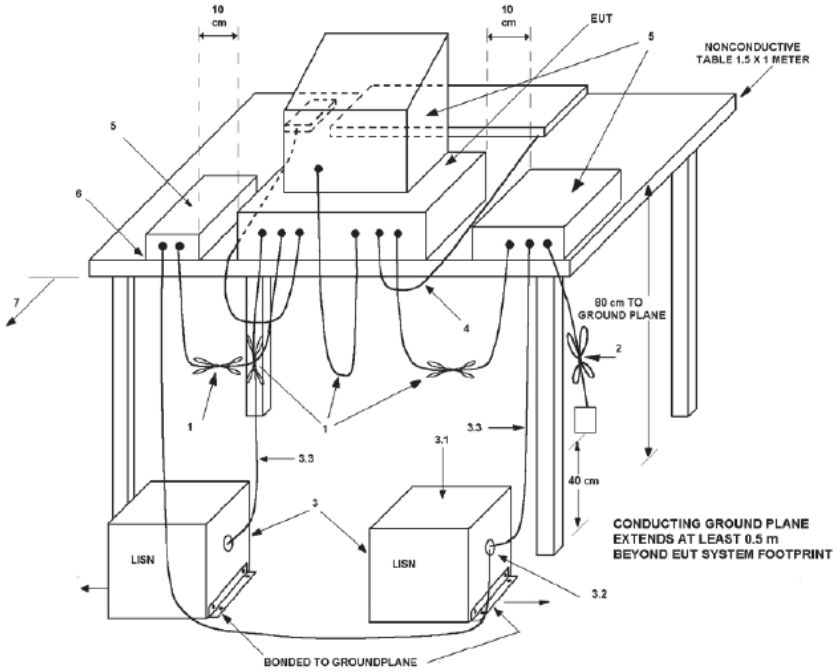


Fig. 13: Power line conducted emissions of table top equipment setup in shielded room

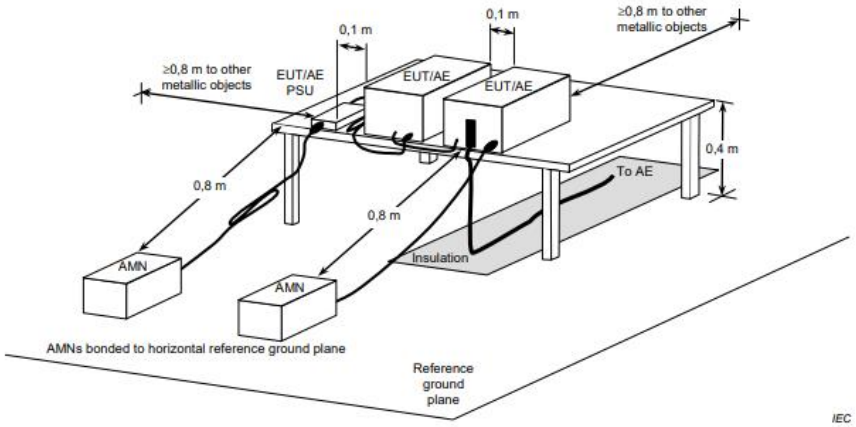


Fig. 14: Power line conducted emissions of table top equipment setup in semi anechoic chamber

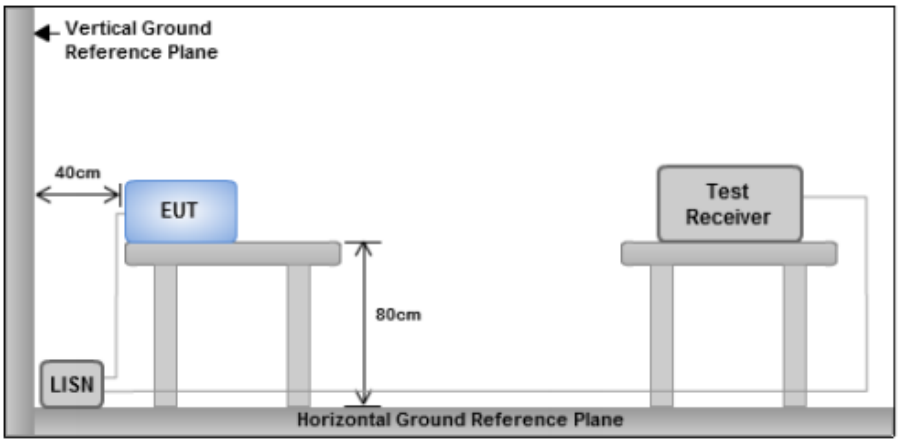


Fig. 15: Power line conducted emissions of table top equipment in shielded room

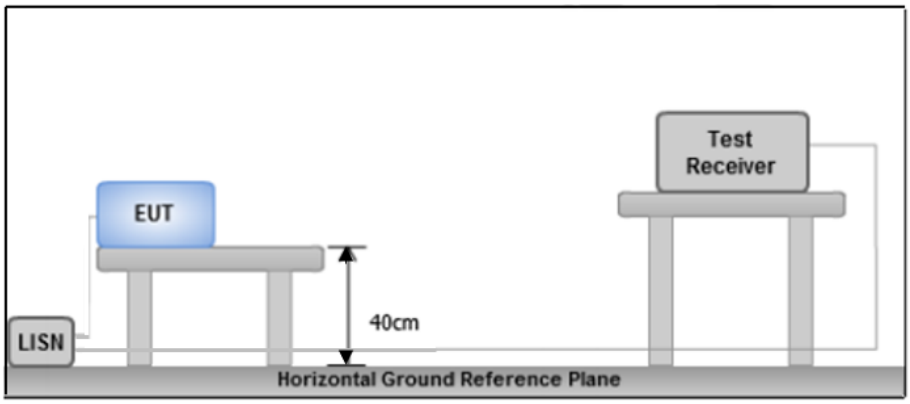


Fig. 16: Power line conducted emissions of table top equipment in in semi anechoic chamber

4.2.1.2 Floor standing equipment

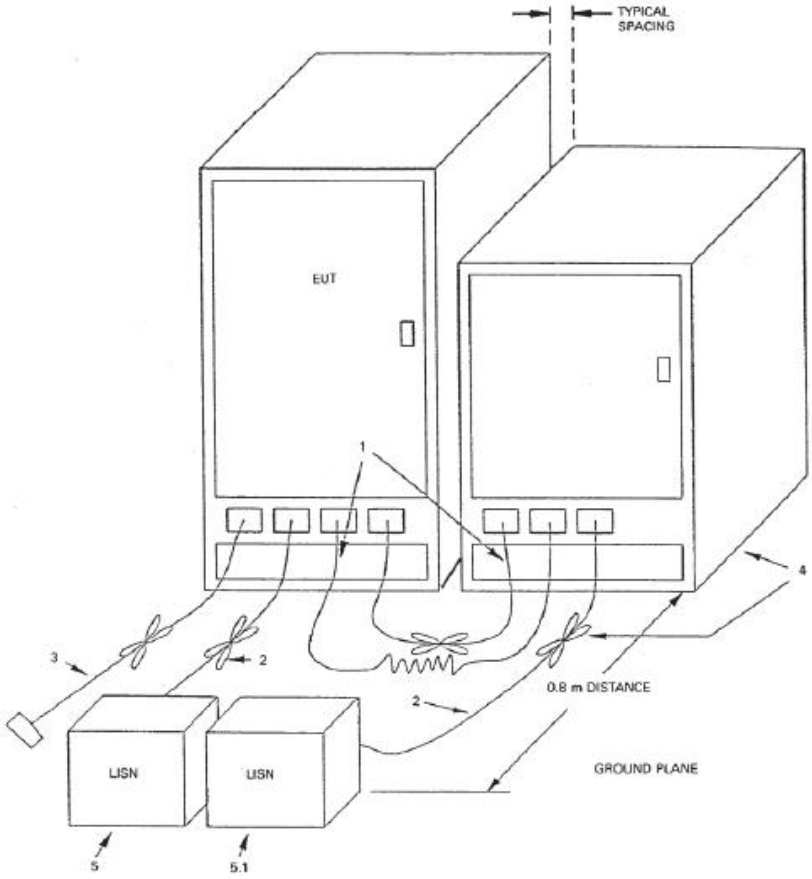


Fig. 17: Power line conducted emissions of floor-standing setup equipment

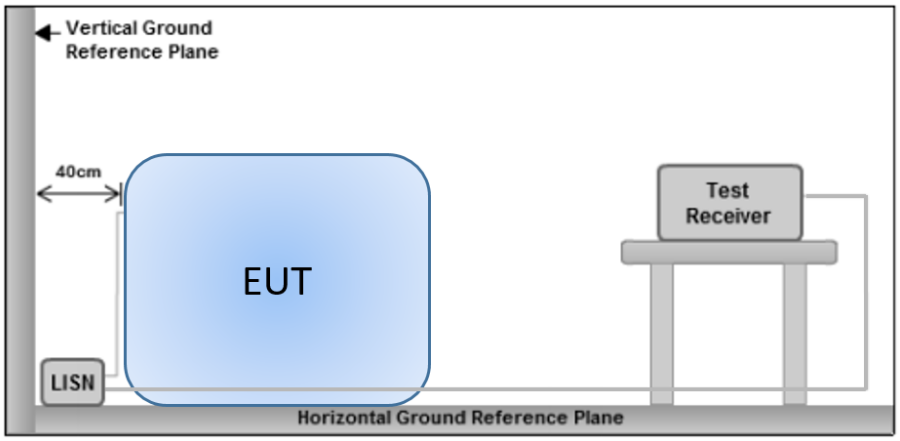


Fig. 18: Power line conducted emissions of floor-standing equipment in shielded room

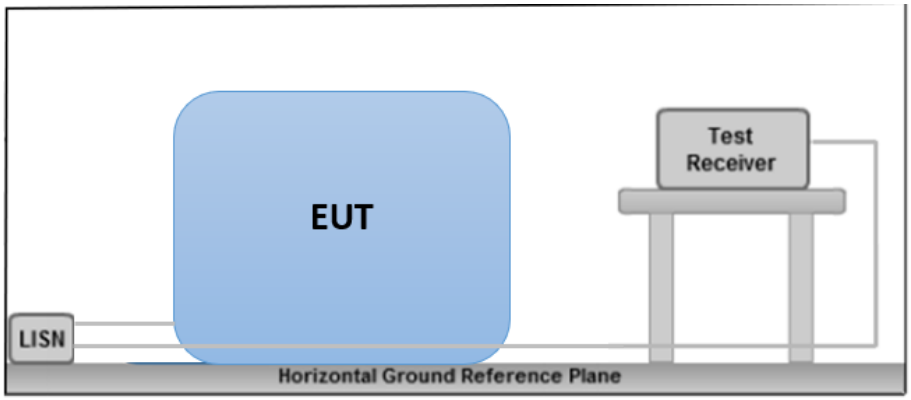


Fig. 19: Power line conducted emissions of floor-standing equipment in in semi anechoic chamber

4.2.2 Test Procedure

The device under test is arranged in table-top or floor-standing position depending on the kind of equipment and keeping the distance from the vertical or horizontal conducting plane located 40 cm to the rear or below of the device, in respective on the test chamber which is evaluated.

The device is connected to line impedance stabilization network (LISN), placed 80 cm far from the device under test and other accessories are connected to other LISN too. Measured levels of AC power line conducted emission are across the 50 Ω LISN port.

AC conducted emission measurements are made over frequency range from 150 kHz to 30 MHz.

Pre-measurement:

- Pre-scan measurement using a peak and average detector is performed in order to show the emissions of the device under test
- Each line of the power cord is evaluated to find the maximum emissions

Final measurement:

- The final measurement is performed for at least six highest peaks according to the requirements of the ANSI C63.4
- The final measurement is done with quasi-peak and average detector (as described in ANSI C63.4)
- Final levels, frequency, measuring time, bandwidth, correction factors, margin to the limit and limit are recorded. A plot with the graph of the premeasurement with marked maximum final results and the limit is shown

Correction Factor:

Emission Level = Read Level + Corrections (LISN factor + Cable Loss + Attenuator)

4.2.3 Test Parameters

4.2.3.1 Requirements

According to standard ANSI C63.4:2014

The conducted emissions shall not exceed the following levels:

AC main power ports of Class A Equipment's		
Frequency Range [MHz]	**Quasi-peak detector (QP) [dBµV]**	**Average detector (AVG) [dBµV]**
0.15 – 0.5	79	66
0.5 – 30	73	60

Table 17: Power line conducted emissions requirements – AC main power ports of Class A equipment's

AC main power ports of Class B Equipment's		
Frequency Range [MHz]	**Quasi-peak detector (QP) [dBµV]**	**Average detector (AVG) [dBµV]**
0.15 – 0.5	66 to 56[1]	56 to 46[1]
0.5 – 5	56	46
5 – 30	60	50

Table 18: Power line conducted emissions requirements – AC main power ports of Class B equipment's

Note 1: Decreases with the logarithm of the frequency.

4.2.3.2 Receiver Parameters

According to standard ANSI C63.4:2014

Frequency Range [MHz]	Detector	Resolution Bandwidth [kHz]
0.15 – 30	Peak (PK) Average (AV)	9
0.5 – 5		
5 – 30		

Table 19: Receiver parameters – Power line conducted emissions

4.2.4 Test Environmental Conditions

Test Date	Technician	Supervisor	Temperature [ºC]	Humidity [%]	Atm. Pressure [mbar]
16/11/2023	J.M. Llauradó	--	22.5	45.1	998.3

Table 20: Test environmental conditions – Power line conducted emissions

4.2.5 Summary Test Results

Frequency Range [MHz]	Ports	Equipment Class	Test Area	Results
0.15 – 30 MHz	DC Mains	B	SAC 1	PASS

Table 21: Summary test results – Power line conducted emissions

4.2.6 Test Results

4.2.6.1 Ambient Levels. DC Mains: Negative. Frequency range: 0.15 MHz – 30 MHz

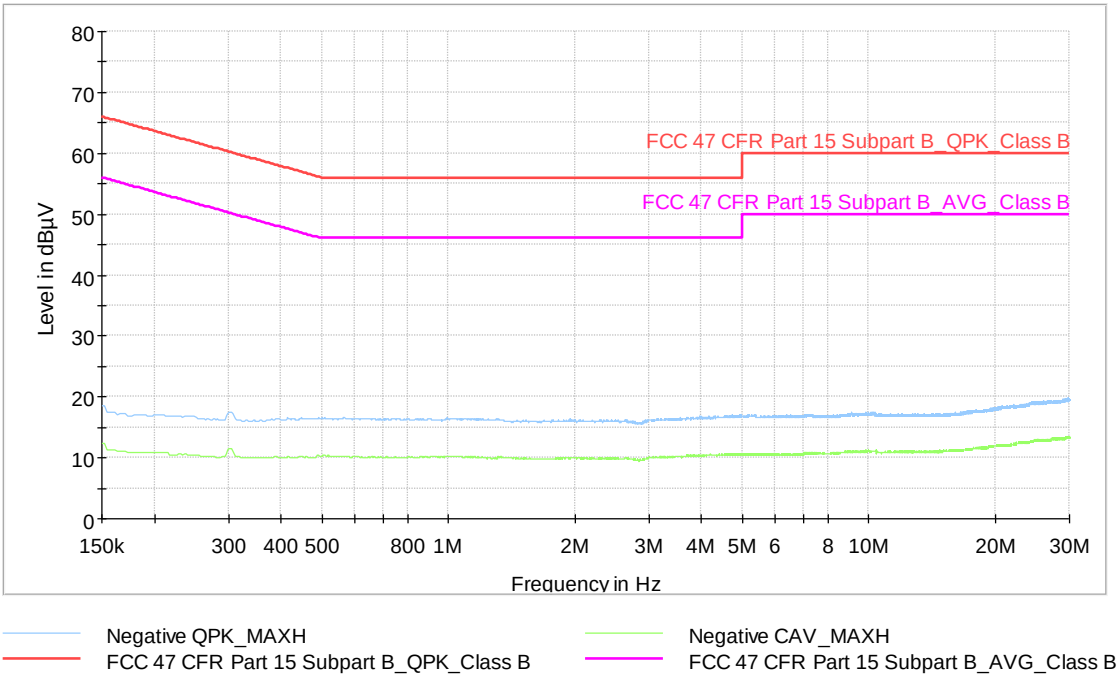


Fig. 20: Ambient level. AC Mains: Neutral. Frequency range: 0.15 MHz – 30 MHz

4.2.6.2 Ambient Levels. DC Mains: Positive. Frequency range: 0.15 MHz – 30 MHz

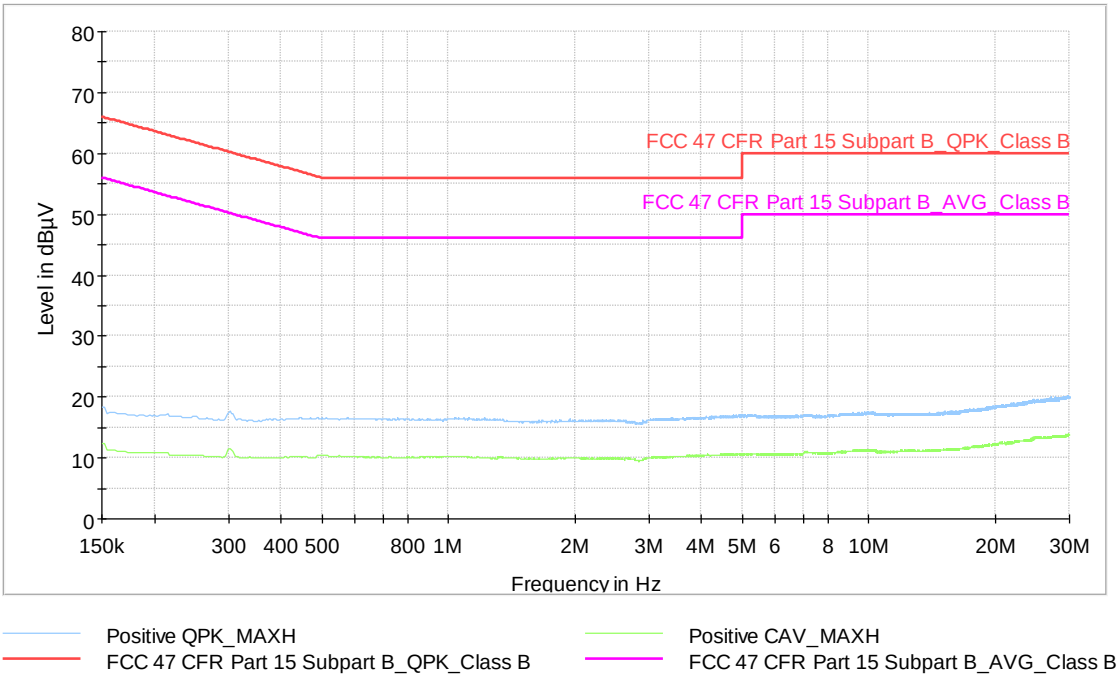
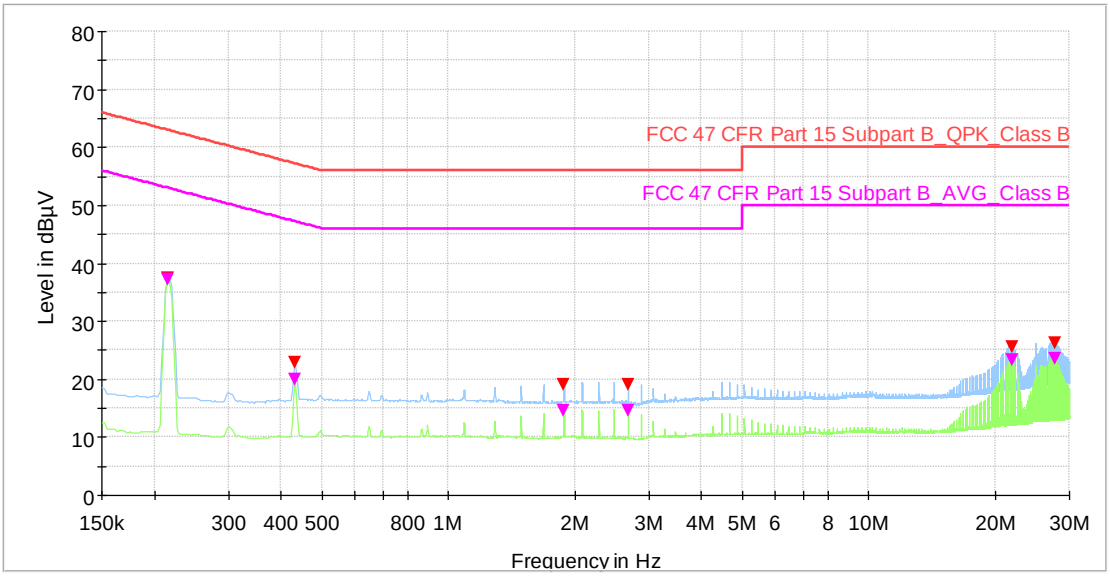


Fig. 21: Ambient level. AC Mains: Line 1. Frequency range: 0.15 MHz – 30 MHz

4.2.6.3 Sample #1. Mode 1. DC Mains: Negative. Frequency range: 0.15 MHz – 30 MHz



Negative QPK_MAXH
FCC 47 CFR Part 15 Subpart B_QPK_Class B
QuasiPeak-QPK (Single)

Negative CAV_MAXH
FCC 47 CFR Part 15 Subpart B_AVG_Class B
CAverage-CAV (Single)

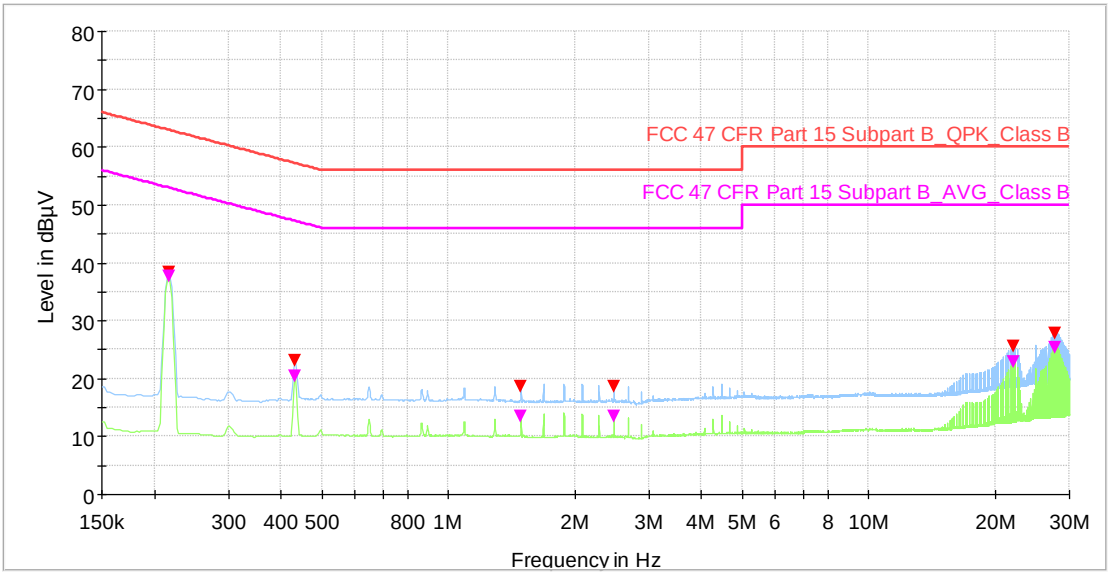
Fig. 22: Sample #1. Mode 1. DC Mains: Negative. Frequency range: 0.15 MHz – 30 MHz

FINAL MEASUREMENTS

Frequency (MHz)	QuasiPeak (dBµV)	Limit - QPK (dBµV)	Margin - QPK (dB)	CAverage (dBµV)	Limit - CAV (dBµV)	Margin - CAV (dB)	Line	Corr. (dB)
0.215	37.5	63.0	25.5	37.3	53.0	15.7	Neg.	10.2
0.433	22.8	57.2	34.4	20.0	47.2	27.2	Neg.	10.3
1.884	19.1	56.0	36.9	14.5	46.0	31.5	Neg.	10.5
2.679	19.0	56.0	37.0	14.5	46.0	31.5	Neg.	10.5
21.925	25.6	60.0	34.4	23.3	50.0	26.7	Neg.	12.0
27.681	26.2	60.0	33.8	23.5	50.0	26.5	Neg.	12.2

Table 22: Sample #1. Mode 1. DC Mains: Negative. Frequency range: 0.15 MHz – 30 MHz

4.2.6.4 Sample #1. Mode 1. DC Mains: Positive. Frequency range: 0.15 MHz – 30 MHz



Positive QPK_MAXH
FCC 47 CFR Part 15 Subpart B_QPK_Class B
QuasiPeak-QPK (Single)

Positive CAV_MAXH
FCC 47 CFR Part 15 Subpart B_AVG_Class B
CAverage-CAV (Single)

Fig. 23: Sample #1. Mode 1. DC Mains: Positive. Frequency range: 0.15 MHz – 30 MHz

FINAL MEASUREMENTS

Frequency (MHz)	QuasiPeak (dBµV)	Limit - QPK (dBµV)	Margin - QPK (dB)	CAverage (dBµV)	Limit - CAV (dBµV)	Margin - CAV (dB)	Line	Corr. (dB)
0.217	38.3	62.9	24.6	37.6	52.9	15.4	Pos.	10.3
0.431	23.0	57.2	34.2	20.4	47.2	26.8	Pos.	10.3
1.488	18.5	56.0	37.5	13.4	46.0	32.6	Pos.	10.4
2.481	18.7	56.0	37.3	13.5	46.0	32.5	Pos.	10.5
22.125	25.5	60.0	34.5	22.8	50.0	27.2	Pos.	12.3
27.681	27.7	60.0	32.3	25.3	50.0	24.7	Pos.	12.6

Table 23: Sample #1. Mode 1. DC Mains: Positive. Frequency range: 0.15 MHz – 30 MHz

4.2.7 Test Equipment Used

Equipment	Brand	Model	Applus Ref.	Last Calibration	Next Calibration
EMI RECEIVER	R&S	ESW 26	1041791	19/12/2022	19/12/2023
LISN	R&S	ESH3-Z5	05-ER-236	17/03/2023	17/03/2024
SEMIANECHOIC CHAMBER SAC1	EUROSHIELD	TC1	104446	12/10/2022	12/10/2025
TEST SOFTWARE	ROHDE & SCHWARZ	EMC32 v.10.50.00	104624	--	--
TRANSIENT LIMITER	R&S	ESH3.Z2	1041267	09/05/2023	09/05/2024

Table 24: Test Instruments – Power line conducted emissions

4.2.8 Uncertainty

Test Type	Test Description	Uncertainty
Emissions	POWER LINE CONDUCTED EMISSIONS	± 3.4 dB

Table 25: Radio-frequency radiated emissions measuring Uncertainties

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by a coverage factor k=2, which for normal distribution corresponds to a coverage probability of approximately 95%.