

Issue Date: Ref. Report No.

November 13, 2020 ISL-20LE888V

Product Name	:	SWITCHING POWER SUPPLY
Model(s)	:	HWU18A-120 N
Brand	:	poconex
Applicant	:	Poconex Electronics Corp.
Address	:	9F-10, No.12, Fuxing 4th Rd., Qianzhen Dist., Kaohsiung City 806, Taiwan

We, International Standards Laboratory Corp., hereby certify that:

The device bearing the trade name and model specified above has been shown to comply with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified. (refer to Test Report if any modifications were made for compliance). And Our laboratories is the accredited laboratories and are approved according to ISO/IEC 17025.

Standards:

VCCI-CISPR 32:2016

Class B

I attest to the accuracy of data and all measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

The determination of the test results is determined by customer agreement, regulations or standard document specifications.

The Laboratory evaluates measurement inaccuracies based on regulatory or standard document specifications and is listed in the report for reference. The quantitative project part judges the conformity of the test results based on the evaluation results of the standard cited uncertainty, and the qualitative project does not temporarily evaluate the measurement uncertainty.

Angus Onu

Angus Chu / Director



International Standards Laboratory Corp. LT Lab.:
No. 120, Lane 180, Hsin Ho Rd., Lung-Tan Dist., Tao Yuan City 325, Taiwan
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$\begin{array}{c} \textbf{TEST} \quad \textbf{REPORT} \\ \textbf{VCCI} \quad \overset{\text{of}}{\textbf{CLASS}} \quad \textbf{B} \end{array}$

Product: SWITCHING POWER SUPPLY

Model(s): HWU18A-120 N

Brand: poconex

Applicant: Poconex Electronics Corp.

Address: 9F-10, No.12, Fuxing 4th Rd., Qianzhen Dist., Kaohsiung City 806, Taiwan

Test Performed by: International Standards Laboratory Corp. VCCI Member No.:243 <LT Lab.> *Address: No. 120, Lane 180, Hsin Ho Rd., Lung-Tan Dist., Tao Yuan City 325, Taiwan *Tel: 886-3-407-1718; Fax: 886-3-407-1738

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This report totally contains 29 pages including this cover page and contents page.

Test results given in this report apply only to the specific sample(s) tested and are traceable to national or international standard through calibration of the equipment and evaluating measurement uncertainty herein.

The uncertainty of the measurement does not include in consideration of the test result unless the customer required the determination of uncertainty via the agreement, regulation or standard document specification.

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1. General

1.1 Certification of Accuracy of Test Data

Standards:	VCCI-CISPR 32:2016
	Class B
Equipment Tested:	SWITCHING POWER SUPPLY
Model:	HWU18A-120 N
Brand:	poconex
Applicant:	Poconex Electronics Corp.
Sample received Date:	October 30, 2020
Final test Date:	refer to the date of test data
Test Site:	Chamber 12(R-12598); Conduction 03(C-12845)
Test Distance:	10m
Temperature:	refer to each site test data
Atmospheric Pressure:	86 kPa to 106 kPa
Humidity:	refer to each site test data
Input power:	Conduction input power: AC 100 V / 50 Hz
	Radiation input power: AC 100 V / 50 Hz
Test Result:	PASS
Report Engineer:	Cheryl Tung

Martin Lin.

Martin PM Lin

Approved By:

Test Engineer:

Benson Chen

Benson Chen / Associate Director



1.2 Test Performed Item

Performed Item	Test Performed	Deviation	Result
Conducted emissions from the AC mains power ports	Yes	No	PASS
Telecommunication Port Conducted Emissions (asymmetric mode)	N/A	N/A	N/A
Radiated emissions at frequencies below 1 GHz	Yes	No	PASS
Radiated emissions at frequencies above 1 GHz	N/A	N/A	N/A
Radiated emissions from FM receivers	N/A	N/A	N/A
Voltage Disturbance Emissions at Antenna Terminals	N/A	N/A	N/A
Differential voltage emissions	N/A N/A		N/A
Outdoor units of home satellite receiving systems	N/A	N/A	N/A



1.3 Description of EUT

EUT

Description	SWITCHING POWER SUPPLY			
Condition	Pre-Production			
Model	HWU18A-120 N			
Serial Number	N/A			
Highest working frequency	<108MHz			
The radiation test should be tested till 1GHz				

Output and input features:

Model Name	Input / Output
HWU18A-120 N	Input: 100-240 Vac, 50-60 Hz, 0.5A
11W018A-120 N	Output: 12Vdc, 1.5A

Test configurations:

Configuration	Model	Input voltage	Mode	
1	HWU18A-120 N	AC 100V/50Hz	Full load	

EMI Noise Source:

Refer to the photo	Factory	Model	Point
EUT-7	SUZHOU YANG-CHI ELECTRONICS CO., LTD. JET SIGNAL INDUSTRIES CO., LTD.	JS20SW217	T1

EMI Solution: NA



1.4 Description of Support Equipment

No	Unit	Model/Serial No.	Brand	Power Cord	FCC ID
1	Load	N/A S/N:N/A	N/A	N/A	N/A

1.5 I/O Cable Condition of EUT and Support Units

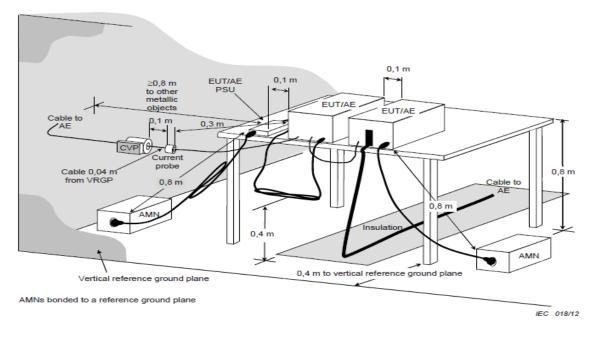
Description	Path	Length	Shielding	Core	Remark
DC Power Cable	EUT DC output cable to load	1.2m	No	No	No



2. Power Main Port Conducted Emissions

2.1 Test Setup and Procedure

2.1.1 Test Setup



2.1.2 Test Procedure

The measurements are performed in a shielded room test site. The EUT was placed on non-conduction 1.0m x 1.5m table, which is 0.8 meters above an earth-grounded.

Power to the EUT was provided through the LISN which has the Impedance (500hm/50uH) vs. Frequency Characteristic in accordance with the standard. Power to the LISNs were filtered to eliminate ambient signal interference and these filters were bonded to the ground plane. Peripheral equipment required to provide a functional system (support equipment) for EUT testing was powered from the second LISN through a ganged, metal power outlet box which is bonded to the ground plane at the LISN.

The interconnecting cables were arranged and moved to get the maximum measurement. Both the line of power cord, live and neutral, were measured. All of the interface cables were manipulated according to VCCI-CISPR 32:2016 requirements.

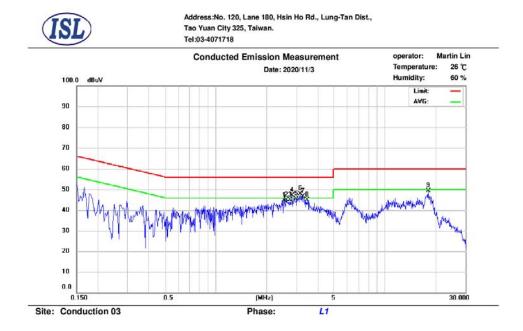
The highest emissions were analyzed in details by operating the spectrum analyzer in fixed tuned mode to determine the nature of the emissions and to provide information which could be useful in reducing their amplitude.

2.1.3 EMI Receiver/Spectrum Analyzer Configuration (for the frequencies tested)

Frequency Range:	150kHz30MHz
Detector Function:	Quasi-Peak / Average Mode
Resolution Bandwidth:	9kHz



2.2 Conduction Test Data: Configuration 1 -Live



No.	Frequency (MHz)	QP_R (dBuV)	AVG_R (dBuV)	Correct Factor (dB)	QP Emission (dBuV)	QP Limit (dBuV)	QP Margin (dB)	AVG Emission (dBuV)	AVG Limit (dBuV)	AVG Margin (dB)
1	2.542	29.79	18.94	9.70	39.49	56.00	-16.51	28.64	46.00	-17.36
2	2.610	30.43	19.27	9.70	40.13	56.00	-15.87	28.97	46.00	-17.03
3	2.750	30.59	20.42	9.70	40.29	56.00	-15.71	30.12	46.00	-15.88
4	2.830	31.57	20.23	9.71	41.28	56.00	-14.72	29.94	46.00	-16.06
5	2.978	31.36	20.11	9.71	41.07	56.00	-14.93	29.82	46.00	-16.18
6	3.166	31.58	19.88	9.71	41.29	56.00	-14.71	29.59	46.00	-16.41
7	3.282	31.07	20.56	9.72	40.79	56.00	-15.21	30.28	46.00	-15.72
8	3.458	30.23	19.96	9.72	39.95	56.00	-16.05	29.68	46.00	-16.32
9	18.062	32.00	25.49	9.94	41.94	60.00	-18.06	35.43	50.00	-14.57

Note:

Margin = QP/AVG Emission - Limit

QP/AVG Emission = QP_R/AVG_R + Correct Factor

Correct Factor = LISN Loss + Cable Loss

A margin of -8dB means that the emission is 8dB below the limit

The frequency spectrum graph is for final peak graph, and the attached table is for QP/AVG test result.

If peak data can pass, it will be shown in "QP/AVG Correct" column, if not, QP/AVG data will instead.

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- Neutral



No.	Frequency (MHz)	QP_R (dBuV)	AVG_R (dBuV)	Correct Factor (dB)	QP Emission (dBuV)	QP Limit (dBuV)	QP Margin (dB)	AVG Emission (dBuV)	AVG Limit (dBuV)	AVG Margin (dB)
1	2.386	29.78	18.94	9.72	39.50	56.00	-16.50	28.66	46.00	-17.34
2	2.638	30.90	19.30	9.73	40.63	56.00	-15.37	29.03	46.00	-16.97
3	2.830	31.47	19.82	9.74	41.21	56.00	-14.79	29.56	46.00	-16.44
4	3.014	31.91	20.81	9.74	41.65	56.00	-14.35	30.55	46.00	-15.45
5	3.202	31.96	21.53	9.74	41.70	56.00	-14.30	31.27	46.00	-14.73
6	3.262	32.31	21.38	9.75	42.06	56.00	-13.94	31.13	46.00	-14.87
7	3.458	30.14	19.68	9.75	39.89	56.00	-16.11	29.43	46.00	-16.57
8	18.042	32.62	25.49	10.08	42.70	60.00	-17.30	35.57	50.00	-14.43

Note:

Margin = QP/AVG Emission - Limit

QP/AVG Emission = QP_R/AVG_R + Correct Factor

Correct Factor = LISN Loss + Cable Loss

A margin of -8dB means that the emission is 8dB below the limit

The frequency spectrum graph is for final peak graph, and the attached table is for QP/AVG test result.

If peak data can pass, it will be shown in "QP/AVG Correct" column, if not, QP/AVG data will instead.



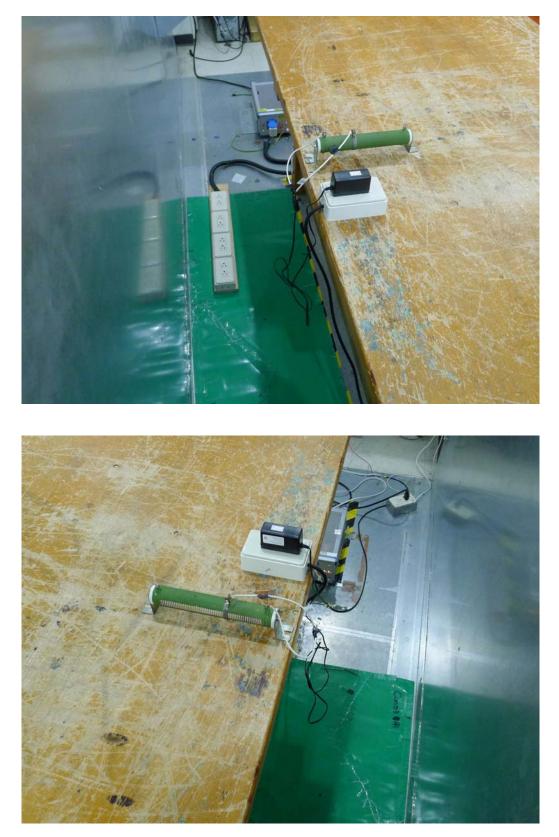
2.3 Test Setup Photo

Front View





Back View

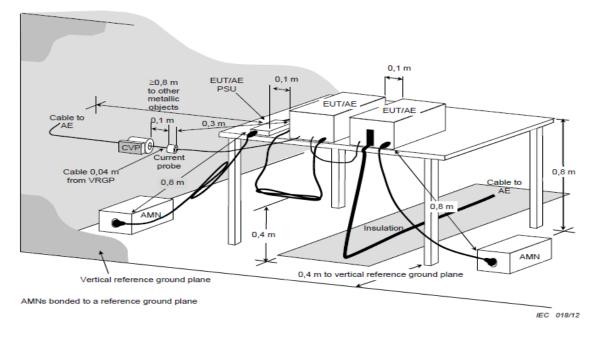




3. Telecommunication Port Conducted Emissions

3.1 Test Setup and Procedure

3.1.1 Test Setup



3.1.2 Test Procedure

The measurements are performed in a shielded room test site. The EUT was placed on non-conduction 1.0m x 1.5m table, which is 0.8 meters above an earth-grounded.

The EUT, any support equipment, and any interconnecting cables were arranged and moved to get the maximum measurement. All of the interface cables were manipulated according to VCCI-CISPR 32:2016 requirements.

The port of the EUT was connected to the support equipment through the ISN and linked in normal condition.

AC input power for the EUT & the support equipment power outlets were obtained from the same filtered source that provided input power to the LISN.

The highest emissions were analyzed in details by operating the spectrum analyzer in fixed tuned mode to determine the nature of the emissions and to provide information could be useful in reducing their amplitude.

3.1.3 EMI Receiver/Spectrum Analyzer Configuration (for the frequencies tested)

Frequency Range:	150kHz30MHz
Detector Function:	Quasi-Peak / Average Mode
Resolution Bandwidth:	9kHz



3.1.4 Limit

Asymmetric mode conducted emissions from Class B equipment: Applicable to:

1. wired network ports.

- 2. optical fibre ports with metallic shield or tension members.
- 3. broadcast receiver tuner ports.

4. antenna ports.

Frequency range MHz	Coupling device	Detector type / bandwidth	Class B voltage limits dB(µV)	Class B current limits dB(µA)
0.15-0.5	AAN	Quasi Peak / 9 kHz	84-74	
0.5-30			74	n/a
0.15-0.5	AAN	Average / 0 1/1/2	74-64	11/ a
0.5-30	AAN	Average / 9 kHz	64	
0.15-0.5	CVP	Quari Daalt / 0 kUz	84-74	40-30
0.5-30	and current probe	Quasi Peak / 9 kHz	74	30
0.15-0.5	CVP		74-64	30-20
0.5-30	and current probe	Average / 9 kHz	64	20
0.15-0.5	Current Probe	Quari Daalt / 0 kUz		40-30
0.5-30	Current Probe	Quasi Peak / 9 kHz	<i>m</i> /a	30
0.15-0.5	Current Duch a		n/a	30-20
0.5-30	Current Probe	Average / 9 kHz		20

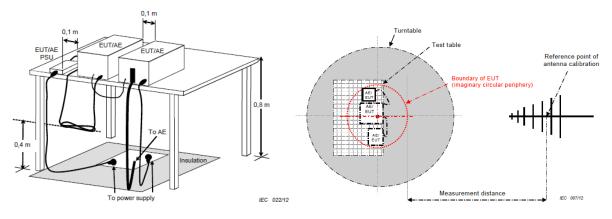
****Remarks:** It is not necessary to be tested on this item.

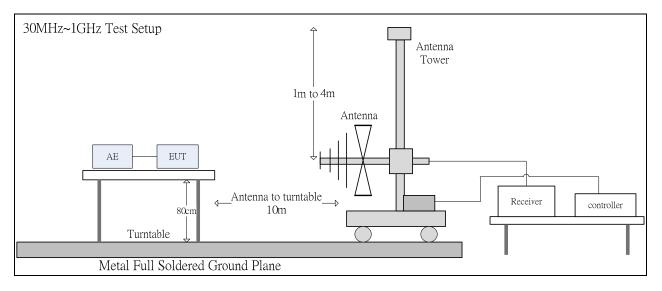


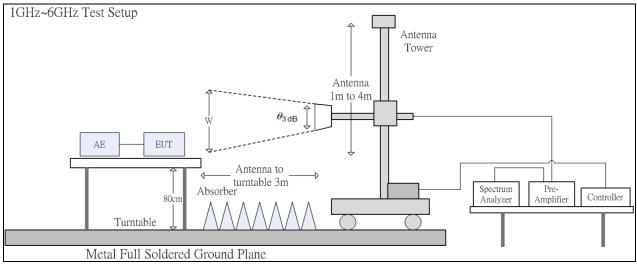
4. Radiated Emissions

4.1 Test Setup and Procedure

4.1.1 Test Setup









Frequency (CHz)	E plana	U plana		d= 3 m
Frequency (GHz)	E-plane	H-plane	$\theta_{3dB}(min)$	w (m)
1	88°	147°	88°	5.79
2	68°	119°	68°	4.04
3	73°	92°	73°	4.44
4	70°	89°	70°	4.20
5	55°	60°	55°	3.12
6	63°	62°	62°	3.60

The 3dB beam width of the horn antenna used for the test is as shown in the table below.

4.1.2 Test Procedure

The radiated emissions test will then be repeated on the chamber to measure the amplitudes accurately and without the multiple reflections existing in the shielded room. The EUT and support equipment are set up on the turntable of one of 10 meter chamber. Desktop EUT are set up on a FRP stand 0.8 meter above the ground or floor-standing arrangement shall be placed on the horizontal ground reference plane.

For the initial measurements, the receiving antenna is varied from 1-4 meter height and is changed in the vertical plane from vertical to horizontal polarization at each frequency. The highest emissions between 30 MHz to 1000 MHz were analyzed in details by operating the spectrum analyzer and/or EMI receiver in quasi-peak mode to determine the precise amplitude of the emissions. The highest emissions between 1 GHz to 6 GHz were analyzed in details by operating the spectrum analyzer in peak and average mode to determine the precise amplitude of the emissions. The test volume for a height of up to 30 cm may be obstructed by absorber placed on the ground plane.

At the highest amplitudes observed, the EUT is rotated in the horizontal plane while changing the antenna polarization in the vertical plane to maximize the reading. The interconnecting cables were arranged and moved to get the maximum measurement. Once the maximum reading is obtained, the antenna elevation and polarization will be varied between specified limits to maximize the readings. All of the interface cables were manipulated according to VCCI-CISPR 32:2016 requirements.

The highest internal source of an EUT is defined as the highest frequency generated or used within the EUT or on which the EUT operates or tunes.

If the highest frequency of the internal sources of the EUT is less than 108 MHz, the measurement shall only be made up to 1 GHz.

If the highest frequency of the internal sources of the EUT is between 108 MHz and 500 MHz, the measurement shall only be made up to 2 GHz.

If the highest frequency of the internal sources of the EUT is between 500 MHz and 1 GHz, the measurement shall only be made up to 5 GHz.

If the highest frequency of the internal sources of the EUT is above 1 GHz, the measurement shall be made up to 5 times the highest frequency or 6 GHz, whichever is less.



4.1.3 Spectrum Analyzer Configuration (for the frequencies tested)

Frequency Range:	30MHz1000MHz
Detector Function:	Quasi-Peak Mode
Resolution Bandwidth:	120kHz
Frequency Range:	Above 1 GHz to 6 GHz
Detector Function:	Peak/Average Mode
Resolution Bandwidth:	1MHz

4.2 Limit

Radiated emissions at frequencies up to 1 GHz for Class B equipment:

E	Measu	rement	Class B limits $dB(\mu V/m)$
Frequency range MHz	Distance m	Detector type / bandwidth	OATS/SAC
30-230	10		30
230-1000	10	Quasi Peak /	37
30-230	2	120 kHz	40
230-1000	3		47

Radiated emissions at frequencies above 1 GHz for Class B equipment:

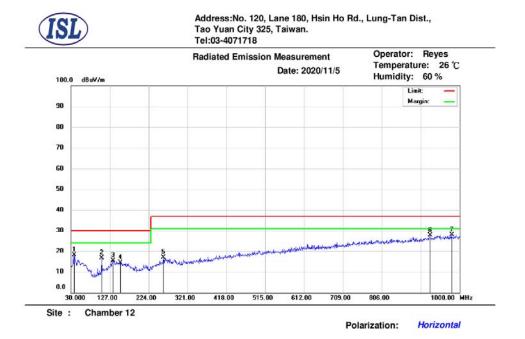
Energy of the sec	Measu	irement	Class B limits $dB(\mu V/m)$	
Frequency range MHz	Distance m	Detector type / bandwidth	FSOATS	
1000-3000		Average /	50	
3000-6000	2	1MHz	54	
1000-3000	3	Peak /	70	
3000-6000		1MHz	74	

Radiated emissions from FM receivers:

T	М	leasurement	Class B limits $dB(\mu V/m)$		
Frequency range	Distance	Detector type /	Fundamental	Harmonics	
MHz	m	bandwidth	OATS/SAC	OATS/SAC	
30-230				42	
230-300	10		50	42	
300-1000		Quasi Peak /		46	
30-230		120 kHz		52	
230-300	3		60	52	
300-1000				56	



4.3 Radiation Test Data: Configuration 1 - Radiated Emissions (Horizontal)



Mk.	Frequency (MHz)	RX_R (dBuV)	Correct Factor(dB/m)	Emission (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Ant.Pos (cm)	Tab.Pos (deg.)	Detector
1	38.73	35.33	-17.17	18.16	30.00	-11.84	400	12	peak
2	106.63	36.68	-20.06	16.62	30.00	-13.38	400	12	peak
3	135.73	32.22	-16.74	15.48	30.00	-14.52	400	249	peak
4	153.19	30.28	-15.80	14.48	30.00	-15.52	300	16	peak
5	260.86	32.72	-15.96	16.76	37.00	-20.24	300	52	peak
6	926.28	30.06	-2.52	27.54	37.00	-9.46	200	61	peak
7	980.60	29.82	-1.96	27.86	37.00	-9.14	100	218	peak

* Note:

Margin = Emission – Limit

Emission = Radiated Amplitude + Correct Factor

Correct Factor = Antenna Correction Factor + Cable Loss - Pre-Amplifier Gain

A margin of -8dB means that the emission is 8dB below the limit

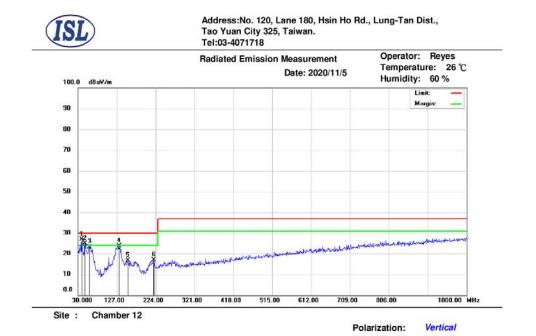
Antenna Distance: 10 meters

Below 1GHz test, if the peak measured value meets the QP limit, it is unnecessary to perform the QP measurement.

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- Radiated Emissions (Vertical)

Mk.	Frequency (MHz)	RX_R (dBuV)	Correct Factor(dB/m)	Emission (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Ant.Pos (cm)	Tab.Pos (deg.)	Detector
1	39.70	44.07	-17.25	26.82	30.00	-3.18	100	309	peak
2	47.46	41.59	-16.75	24.84	30.00	-5.16	100	332	peak
3	59.10	40.31	-17.24	23.07	30.00	-6.93	200	358	peak
4	132.82	40.61	-17.01	23.60	30.00	-6.40	200	276	peak
5	154.16	32.13	-15.62	16.51	30.00	-13.49	100	132	peak
6	219.15	35.22	-18.35	16.87	30.00	-13.13	100	277	peak

* Note:

Margin = Emission – Limit

Emission = Radiated Amplitude + Correct Factor

Correct Factor = Antenna Correction Factor + Cable Loss - Pre-Amplifier Gain

A margin of -8dB means that the emission is 8dB below the limit

Antenna Distance: 10 meters

Below 1GHz test, if the peak measured value meets the QP limit, it is unnecessary to perform the QP measurement.





4.4 Test Setup Photo

Front View (30MHz~1GHz)



Back View (30MHz~1GHz)

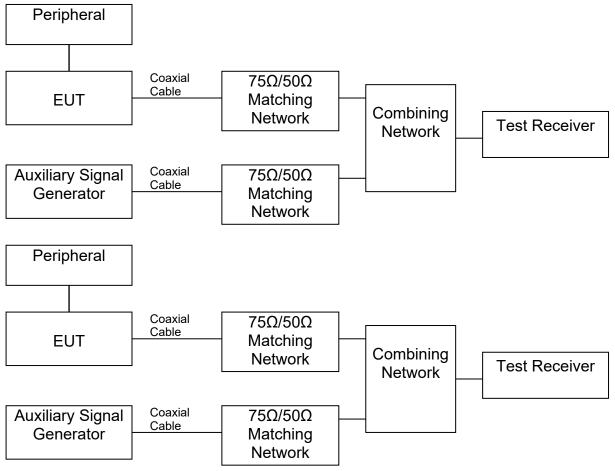




5. Voltage Disturbance Emissions at Antenna Terminals

5.1 Test Setup and Procedure

5.1.1 Test Setup



5.1.2 Test Procedure

The output level of the auxiliary signal generator was set to 70dBuV at the EUT antenna terminal with 75 ohms impedance with an un-modulated carrier.

The highest emissions were analyzed in details by operating the spectrum analyzer and/or EMI receiver in quasi-peak mode to determine the precise amplitude of the emissions. The power of EUT was switched off to make sure the emission was not contributed by the auxiliary signal generator. While doing so, the interconnecting cables and major parts of the system were moved around to maximize the emission.

5.1.3 EMI Receiver Configuration (for the frequencies tested)

Frequency Range:	30MHz-2150MHz
Detector Function:	Quasi-Peak Mode
Resolution Bandwidth:	120kHz



5.1.4 Limit

Applicable to:

- 1. TV broadcast receiver tuner ports with an accessible connector.
- 2. RF modulator output ports.

3. FM broadcast receiver tuner ports with an accessible connector.

Table clause	Frequency range	Detector type/ bandwidth		Class B limits dB(μV) 75 Ω			
	MHz		Other	Local Oscillator Fundamental	Local Oscillator Harmonics		
A12.1	30 – 950	30 – 950		46	46	See a)	
	950 – 2 150	For frequencies ≤1 GHz	46	54	54		
A12.2	950 – 2 150	Quasi Peak/	46	54	54	See b)	
A12.3	30 – 300	120 kHz	46	54	50	See c)	
	300 – 1 000				52		
A12.4	30 – 300	For frequencies	46	66	59	See d)	
	300 – 1 000	≥1 GHz			52		
A12.5	30 – 950	Peak/ 1 MHz	46	76	46	See e)	
	950 – 2 150			n/a	54		

a) Television receivers (analogue or digital), video recorders and PC TV broadcast receiver tuner cards working in channels between 30 MHz and 1 GHz, and digital audio receivers.

b) Tuner units (not the LNB) for satellite signal reception.

c) Frequency modulation audio receivers and PC tuner cards.

d) Frequency modulation car radios.

e) Applicable to EUTs with RF modulator output ports (for example DVD equipment, video recorders, camcorders and decoders etc.) designed to connect to TV broadcast receiver tuner ports.

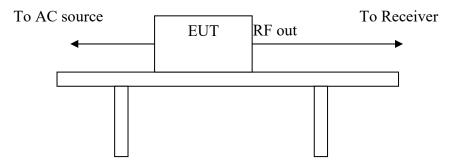
**Remarks: It is not necessary to be tested on this item.



6. Differential voltage emissions

6.1 Test Setup and Procedure

6.1.1 Test Setup



6.1.2 Test Procedure

The output level of the auxiliary signal generator was set to 70dBuV at the EUT antenna terminal with 75 ohms impedance with an un-modulated carrier.

The highest emissions were analyzed in details by operating the spectrum analyzer and/or EMI receiver in quasi-peak mode to determine the precise amplitude of the emissions. The power of EUT was switched off to make sure the emission was not contributed by the auxiliary signal generator. While doing so, the interconnecting cables and major parts of the system were moved around to maximize the emission.

6.1.3 EMI Receiver Configuration (for the frequencies tested)

Frequency Range:	30MHz-2150MHz
Detector Function:	Quasi-Peak Mode
Resolution Bandwidth:	120kHz



6.1.4 Limit

Applicable to:

- 1. TV broadcast receiver tuner ports with an accessible connector.
- 2. RF modulator output ports.

3. FM broadcast receiver tuner ports with an accessible connector.

Table clause	Frequency range			Class B limits dB(μV) 75 Ω		
	MHz		Other	Local Oscillator Fundamental	Local Oscillator Harmonics	
A12.1	30 – 950		46	46	46	See a)
	950 – 2 150	For frequencies ≤1 GHz	46	54	54	
A12.2	950 – 2 150	Quasi Peak/	46	54	54	See b)
A12.3	30 – 300	120 kHz	46	54	50	See c)
	300 – 1 000				52	
A12.4	30 – 300	For frequencies	46	66	59	See d)
	300 – 1 000	≥1 GHz			52	
A12.5	30 – 950	Peak/ 1 MHz	46	76	46	See e)
	950 – 2 150			n/a	54	

a) Television receivers (analogue or digital), video recorders and PC TV broadcast receiver tuner cards working in channels between 30 MHz and 1 GHz, and digital audio receivers.

b) Tuner units (not the LNB) for satellite signal reception.

c) Frequency modulation audio receivers and PC tuner cards.

d) Frequency modulation car radios.

e) Applicable to EUTs with RF modulator output ports (for example DVD equipment, video recorders, camcorders and decoders etc.) designed to connect to TV broadcast receiver tuner ports.

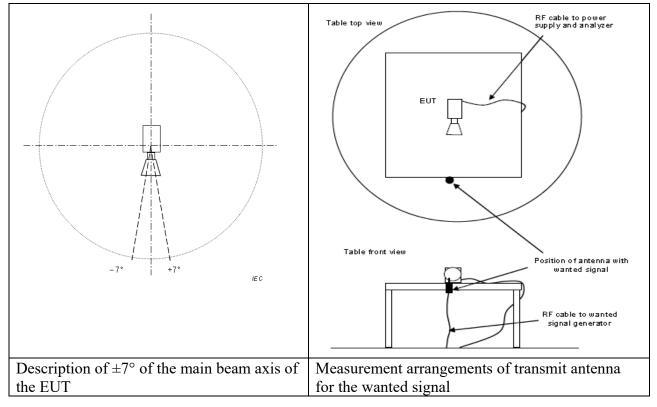
**Remarks: It is not necessary to be tested on this item.



7. Outdoor units of home satellite receiving systems

7.1 Test Setup and Procedure

7.1.1 Test Setup



7.1.2 Test Procedure

The input signal shall be adjusted to get the maximum rated output level from the EUT. For the measurement in the frequency range from 30 MHz to 18 GHz the input signal shall be adjusted so that the output frequency is within this frequency range. For the measurement in the frequency range above 1 GHz, the frequency of the input signal shall be adjusted in such a way that the EUT is measured, as a minimum, at the lowest, middle and highest rated output frequency within the measured frequency range.

7.1.3 Spectrum Analyzer Configuration (for the frequencies tested)

Frequency Range:	30MHz1000MHz
Detector Function:	Quasi-Peak Mode
Resolution Bandwidth:	120kHz
Frequency Range:	Above 1000MHz
Detector Function:	Peak/Average Mode
Resolution Bandwidth:	1MHz



7.1.4 Limit

Table	Frequency	Measurement			Class B	Applicable to	
Clause	Range MHz	Facility (see Table A.1)	Distance m	Detector type / Bandwidth	Limits		
A7.1	30 to 1 000	SAC / OATS / FAR	See Table A.4	Quasi Peak / 120 kHz	See Table A.4		
A7.2	1 000 to 2 500	FSOATS	3	Average / 1 MHz	50 dB(μV/m)	LO leakage and spurious radiated	
	2 500 to 18 000				64 dB(μV/m)	emissions from the EUT, in the region outside ±7° of the main beam axis. See Figure H.1	
A7.3	1 000 to 18 000	FSOATS	3	Average / 1 MHz	37 dB(μV/m)	LO leakage from the EUT, in the region within ±7° of the main beam axis. See Figure H.1	
A7.4	1 000 to 18 000	Conducted (Clause H.4)	n/a	Average / 1 MHz	30 d BpVV		
For detai	Is of the EUT config	uration, see Annex	H.				
For radiated emissions measurements at frequencies up to 1 GHz, the requirements defined in Table A.4 shall be satisfied.							
Apply the appropriate limits across the entire frequency range.							

Apply the limits defined in table Clause A7.1 and A7.2. Also apply the limits defined in either table Clause A7.3 or A7.4.

****Remarks:** It is not necessary to be tested on this item.



8. Appendix

8.1 Appendix A: Label and Informations Requirements

8.1.1 Label Requirement

A Class B multimedia equipment shall carry label shown as below at a conspicuous location:



8.1.2 Instruction Manual Requirement

Instruction manual supplied to users of a Class B multimedia equipment shall contain the following information:

この装置は、クラスB機器です。この装置は、住宅環境で使用することを目的 としていますが、この装置がラジオやテレビジョン受信機に近接して使用され ると、受信障害を引き起こすことがあります。 取扱説明書に従って正しい取り扱いをして下さい。 VCCI-B



8.2 Appendix B: Test Equipment

8.2.1 Test Equipment List

Location Con03	Equipment Name	Brand	Model			Next Cal. Date
Conduction 03	EMI Receiver 15	ROHDE & SCHWARZ	ESCI	101166	07/29/2020	07/29/2021
Conduction 03	LISN 19	R&S	ENV216	101425	11/05/2019	11/05/2020
Conduction 03	LISN 22	R&S	ENV216	101478	08/10/2020	08/10/2021
Conduction 03	Conduction 04-3 Cable	WOKEN	CFD 300-NL	conduction 04-3	09/07/2020	09/07/2021

Location	Equipment Name	Brand	Model	S/N	Last Cal.	Next Cal.
Chmb12					Date	Date
Radiation (Chamber12)	BILOG Antenna 18	Schwarzbeck	Schwarzbeck VULB 9168+EMCI-N -6-05		02/18/2020	02/18/2021
Radiation (Chamber12)	Preamplifier 26	EMCI	EMC9135	980297	02/21/2020	02/21/2021
Radiation (Chamber12)	Coaxial Cable Chmb 12-10M-01	PEWC	CFD400-NL	Chmb 12-10M-01	10/14/2020	10/14/2021
Radiation (Chamber12)	EMI Receiver 19	ROHDE & SCHWARZ	ESR 3	102460	08/04/2020	08/04/2021

8.2.2 Software for Controlling Spectrum/Receiver and Calculating Test Data

Site	Filename	Version	Issue Date
Conduction/Radiation	EZ EMC	ISL-03A2	3/6/2013



8.3 Appendix C: Uncertainty of Measurement

The laboratory measurement uncertainty accordance with refers to CISPR 16-4-2. If Ulab is less than or equal to Ucispr in Table 1, then the test report may either state the value of Ulab or state that Ulab is less than Ucispr.

The coverage factor k = 2 yields approximately a 95 % level of confidence.

<Conduction 03> AMN: ±2.90dB

<Chamber 12 (10M)> Horizontal 30MHz~200MHz: ±4.14dB 200MHz~1000MHz: ±4.12dB Vertical 30MHz~200MHz: ±4.30dB 200MHz~1000MHz: ±4.45dB