

FCC Test Report

Report No.: RF170814C07

FCC ID: K7SF7U027

Test Model: F7U027

Received Date: Aug. 14, 2017

Test Date: Aug. 20 ~ Aug. 23, 2017

Issued Date: Aug. 23, 2017

Applicant: Belkin International., Inc

Address: 12045 East Waterfront Drive, Playa Vista, CA 90094

Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

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Test Location: No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN (R.O.C.)



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Release Control Record

Issue No.	Description	Date Issued
RF170814C07	Original release	Aug. 23, 2017

1 Certificate of Conformity

Product: Boostup Wireless Charging Pad

Brand: belkin

Model No.: F7U027

Sample Status: Engineering sample

Applicant: Belkin International., Inc

Test Date: Aug. 20 ~ Aug. 23, 2017

Standards: 47 CFR FCC Part 15, Subpart C (Section 15.209)
ANSI C63.10: 2013

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

Prepared by : Celine Chou , **Date:** Aug. 23, 2017
Celine Chou / Specialist

Approved by : Ken Liu , **Date:** Aug. 23, 2017
Ken Liu / Senior Manager

2 Summary of Test Results

47 CFR FCC Part 15, Subpart C (Section 15.209)			
FCC Clause	Test Item	Result	Remarks
15.207	AC Power Conducted Emission	Pass	Meet the requirement of limit. Minimum passing margin is -11.47dB at 0.39654MHz.
15.209	Radiated Emission Test	Pass	Meet the requirement of limit. Minimum passing margin is -6.6dB at 49.34MHz.

2.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement	Frequency	Expanded Uncertainty (k=2) (\pm)
Conducted Emissions at mains ports	150kHz ~ 30MHz	2.94 dB
Radiated Emissions up to 1 GHz	30MHz ~ 200MHz	3.86 dB
	200MHz ~ 1000MHz	3.87 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	Boostup Wireless Charging Pad
Test Model	F7U027
Sample Status	Engineering sample
Power Supply Rating	15Vdc (adapter)
Modulation Type	FSK
Operating Frequency	127.8 kHz
Antenna Type	Coil antenna
Accessory Device	Adapter
Data Cable Supplied	NA

Note:

1. The EUT uses following adapter.

Brand	belkin
Model	ADS-26FSG-12 15023EPCU
Input Power	100-240Vac, 50/60Hz, Max 0.7A
Output Power	15Vdc, 1.5A
Power Line	1.45m non-shielded DC cable without core attached on adapter

2. The EUT has WPC (Wireless Power Consortium) technology.

3.2 Description of Test Modes

1 channel is provided to this EUT

Channel	Freq. (kHz)
1	127.8

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT CONFIGURE MODE	APPLICABLE TO		DESCRIPTION
	RE<1G	PLC	
A	√	√	Charging Mode
B	√	√	Standby Mode

Where **RE<1G**: Radiated Emission below 1GHz **PLC**: Power Line Conducted Emission

Radiated Emission Test (Below 1GHz):

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Available Channel	Tested Channel
A, B	1	1

Power Line Conducted Emission Test:

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Available Channel	Tested Channel
A, B	1	1

Test Condition:

Applicable To	Environmental Conditions	Input Power	Tested by
RE<1G	22 deg. C, 68% RH	120Vac, 60Hz	Willy Cheng Jones Chang
PLC	25 deg. C, 75% RH	120Vac, 60Hz	Willy Cheng

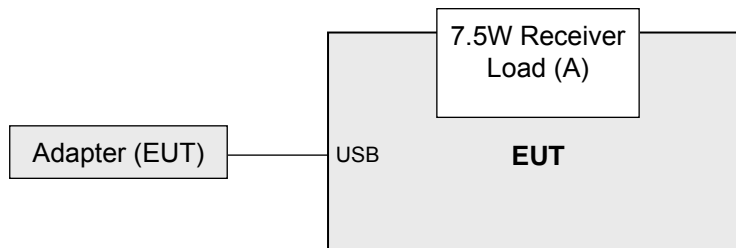
3.3 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

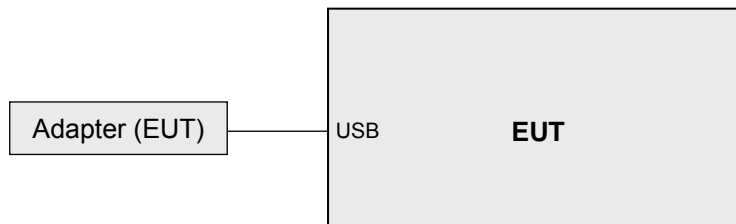
ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	7.5W Receiver Load	AVID	Qi Receiver Simulator	NA	NA	Provided by manufacturer

3.3.1 Configuration of System under Test

Test Mode A



Test Mode B



3.4 General Description of Applied Standards

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC Part 15, Subpart C (15.209)

ANSI C63.10-2013

All test items have been performed and recorded as per the above standards.

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

FOR FREQUENCY BELOW 30MHz

Frequency (MHz)	Field Strength (dBuV/m)		Measurement Distance (meters)
	uV/m	dBuV/m	
0.009 – 0.490	2400 / F (kHz)	48.52-13.80	300
0.490 – 1.705	24000 / F (kHz)	33.80-22.97	30
1.705 – 30.0	30	29.54	30

FOR FREQUENCY BETWEEN 30-1000MHz

Frequency (MHz)	Class A (at 10m)		Class B (at 3m)	
	uV/m	dBuV/m	uV/m	dBuV/m
30-88	90	39.1	100	40.0
88-216	150	43.5	150	43.5
216-960	210	46.4	200	46.0
Above 960	300	49.5	500	54.0

4.1.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESIB7	100187	May 02, 2017	May 01, 2018
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100041	Nov. 16, 2016	Nov. 15, 2017
BILOG Antenna SCHWARZBECK	VULB9168	9168-171	Dec. 28, 2016	Dec. 27, 2017
HORN Antenna SCHWARZBECK	9120D	209	Dec. 27, 2016	Dec. 26, 2017
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Dec. 14, 2016	Dec. 13, 2017
Loop Antenna	EM-6879	269	Aug. 11, 2017	Aug. 10, 2018
Preamplifier Agilent	8447D	2944A10738	Aug. 21, 2017	Aug. 20, 2018
Preamplifier Agilent	8449B	3008A01922	Sep. 18, 2016	Sep. 17, 2017
RF signal cable HUBER+SUHNER	SUCOFLEX 104	Cable-CH3-03 (223653/4)	Aug. 21, 2017	Aug. 20, 2018
RF signal cable HUBER+SUHNER	SUCOFLEX 106	Cable-CH3-03 (309224+12738)	Aug. 21, 2017	Aug. 20, 2018
Software BV ADT	ADT_Radiated_ V7.6.15.9.4	NA	NA	NA
Antenna Tower inn-co GmbH	MA 4000	013303	NA	NA
Antenna Tower Controller BV ADT	AT100	AT93021702	NA	NA
Turn Table BV ADT	TT100	TT93021702	NA	NA
Turn Table Controller BV ADT	SC100	SC93021702	NA	NA

- Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 2. The test was performed in HwaYa Chamber 3.
 3. The horn antenna and preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
 4. The IC Site Registration No. is IC 7450F-3.

4.1.3 Test Procedures

For Frequency range 9kHz~30MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter Semi-anechoic chamber room. The table was rotated 360 degrees to determine the position of the highest radiation. Then the Loop antenna was rotated 360 degrees to determine the position of the highest radiation.
- b. The antenna is a broadband loop antenna, which is fixed of a 1m height above the ground, and set away from 3m to the EUT to find the disturbance reading on each frequency.
- c. The test-receiver system was set to Quasi-peak detect function and specified bandwidth.

For Frequency range 30 ~ 1000MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters (for below 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
- f. The test-receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Note:

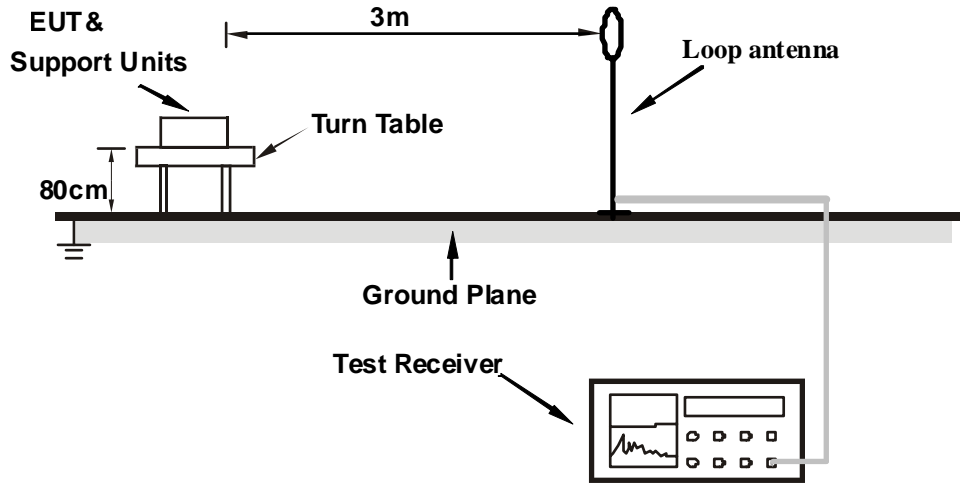
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

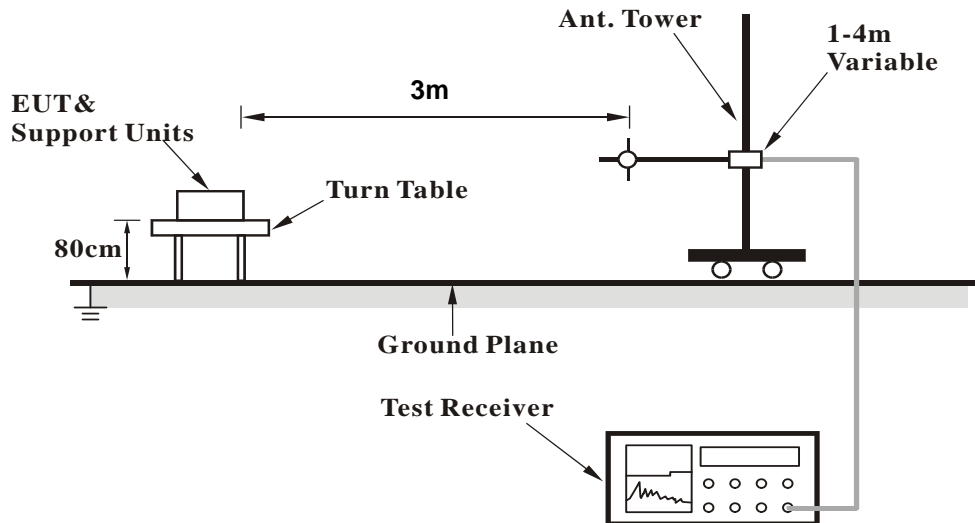
No deviation.

4.1.5 Test Set Up

For Frequency range 9kHz~30MHz



For Frequency range 30 ~ 1000MHz



For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.1.6 EUT Operating Conditions

Test Mode A

- The EUT powered by adapter.
- Put the load on the EUT (wireless charging) during the test.

Test Mode B

- The EUT powered by adapter.

4.1.7 Test Results

Below 30MHz Data:

Charging Mode

Channel	TX Channel 1	Detector Function	Quasi-Peak
Frequency Range	9 kHz ~ 30 MHz		
Test Mode	A		

ANTENNA POLARITY & TEST DISTANCE: LOOP ANTENNA OPEN AT 3m

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*0.128	71.0	105.5	-34.5	1.00	196	50.7	20.3
2	0.369	52.3	96.3	-44.0	1.00	133	32.0	20.3
3	1.269	44.9	65.5	-20.6	1.00	318	24.6	20.3
4	3.728	38.2	69.5	-31.3	1.00	38	17.8	20.4
5	11.226	36.5	69.5	-33.0	1.00	224	16.0	20.5
6	18.244	37.4	69.5	-32.1	1.00	284	16.9	20.5
7	22.622	36.3	69.5	-33.2	1.00	296	15.8	20.5

ANTENNA POLARITY & TEST DISTANCE: LOOP ANTENNA CLOSE AT 3m

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*0.128	65.9	105.5	-39.6	1.00	295	45.6	20.3
2	0.369	47.7	96.3	-48.6	1.00	269	27.4	20.3
3	1.329	45.7	65.1	-19.4	1.00	344	25.4	20.3
4	3.968	36.2	69.5	-33.3	1.00	49	15.8	20.4
5	9.486	37.3	69.5	-32.2	1.00	219	16.9	20.4
6	16.324	36.3	69.5	-33.2	1.00	232	15.7	20.6
7	27.361	38.6	69.5	-30.9	1.00	81	18.0	20.6

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. “ * “: Fundamental frequency.
6. Loop antenna was used for all radiated emission below 30MHz.
7. Limit @3m=Limit@300m+40log(300 / 3)=Limit@300m+80
8. Limit @3m=Limit@30m+40log(30 / 3)=Limit@30m+40

Standby Mode

Channel	TX Channel 1	Detector Function	Quasi-Peak
Frequency Range	9 kHz ~ 30 MHz		
Test Mode	B		

ANTENNA POLARITY & TEST DISTANCE: LOOP ANTENNA OPEN AT 3m

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	0.384	47.1	95.9	-48.8	1.00	7	26.8	20.3
2	3.128	43.9	69.5	-25.6	1.00	149	23.5	20.4
3	14.345	38.9	69.5	-30.6	1.00	66	18.4	20.5
4	16.444	37.7	69.5	-31.8	1.00	334	17.1	20.6
5	17.464	38.3	69.5	-31.2	1.00	36	17.8	20.5
6	22.922	39.7	69.5	-29.8	1.00	176	19.2	20.5

ANTENNA POLARITY & TEST DISTANCE: LOOP ANTENNA CLOSE AT 3m

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	0.383	37.1	95.9	-58.8	1.00	300	16.8	20.3
2	3.128	41.9	69.5	-27.6	1.00	137	21.5	20.4
3	3.548	40.9	69.5	-28.6	1.00	87	20.5	20.4
4	5.107	39.9	69.5	-29.6	1.00	355	19.4	20.5
5	15.784	41.4	69.5	-28.1	1.00	141	20.8	20.6
6	22.742	40.1	69.5	-29.4	1.00	351	19.6	20.5

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. “ * “: Fundamental frequency.
6. Loop antenna was used for all radiated emission below 30MHz.
7. Limit @3m=Limit@300m+40log(300 / 3)=Limit@300m+80
8. Limit @3m=Limit@30m+40log(30 / 3)=Limit@30m+40

Below 1GHz Data:

Charging Mode

Channel	TX Channel 1	Detector Function	Quasi-Peak
Frequency Range	30 MHz ~ 1GHz		
Test Mode	A		

Antenna Polarity & Test Distance: Horizontal At 3m

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	49.34	27.4 QP	40.0	-12.6	1.50 H	286	41.7	-14.3
2	84.34	22.6 QP	40.0	-17.4	1.50 H	319	42.0	-19.4
3	121.28	22.5 QP	43.5	-21.0	1.50 H	106	38.6	-16.1
4	197.11	27.4 QP	43.5	-16.1	1.50 H	283	44.0	-16.6
5	234.05	22.5 QP	46.0	-23.5	1.50 H	104	38.3	-15.8
6	875.67	27.3 QP	46.0	-18.7	1.50 H	10	30.8	-3.5

Antenna Polarity & Test Distance: Vertical At 3m

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	30.54	29.6 QP	40.0	-10.4	1.50 V	339	46.0	-16.4
2	49.34	33.4 QP	40.0	-6.6	1.00 V	239	47.7	-14.3
3	84.34	27.6 QP	40.0	-12.4	1.00 V	356	47.0	-19.4
4	138.78	24.1 QP	43.5	-19.4	1.00 V	244	38.6	-14.5
5	440.15	22.1 QP	46.0	-23.9	1.00 V	291	32.4	-10.3
6	935.94	28.7 QP	46.0	-17.3	1.00 V	118	31.3	-2.6

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

Standby Mode

Channel	TX Channel 1	Detector Function	Quasi-Peak
Frequency Range	30 MHz ~ 1GHz		
Test Mode	B		

Antenna Polarity & Test Distance: Horizontal At 3m								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	30.00	25.7 QP	40.0	-14.3	1.00 H	302	42.1	-16.4
2	49.34	29.3 QP	40.0	-10.7	1.99 H	321	43.6	-14.3
3	74.62	31.2 QP	40.0	-8.8	1.99 H	269	48.4	-17.2
4	103.78	22.0 QP	43.5	-21.5	1.99 H	33	40.0	-18.0
5	140.72	21.5 QP	43.5	-22.0	1.99 H	241	35.8	-14.3
6	187.39	28.1 QP	43.5	-15.4	1.50 H	77	43.8	-15.7
Antenna Polarity & Test Distance: Vertical At 3m								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	30.55	29.9 QP	40.0	-10.1	1.00 V	216	46.3	-16.4
2	50.41	32.9 QP	40.0	-7.1	1.00 V	267	47.3	-14.4
3	84.34	29.0 QP	40.0	-11.0	1.50 V	13	48.4	-19.4
4	103.78	25.1 QP	43.5	-18.4	1.00 V	121	43.1	-18.0
5	131.00	24.8 QP	43.5	-18.7	1.00 V	144	40.2	-15.4
6	158.22	24.2 QP	43.5	-19.3	1.00 V	119	37.8	-13.6
7	840.67	37.1 QP	46.0	-8.9	1.00 V	146	38.0	-0.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

4.2 Conducted Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

Frequency (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15 - 0.5	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30.0	60	50

Note: 1. The lower limit shall apply at the transition frequencies.

2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

4.2.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESCS 30	100288	Aug. 18, 2017	Aug. 17, 2018
RF signal cable (with 10dB PAD) Woken	5D-FB	Cable-cond2-01	Dec. 22, 2016	Dec. 21, 2017
LISN ROHDE & SCHWARZ (EUT)	ESH2-Z5	100100	Jan. 17, 2017	Jan. 16, 2018
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100312	Aug. 02, 2017	Aug. 01, 2018
Software ADT	BV ADT_Cond_ V7.3.7.3	NA	NA	NA

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

2. The test was performed in HwaYa Shielded Room 2.

3. The VCCI Site Registration No. is C-2047.

4.2.3 Test Procedures

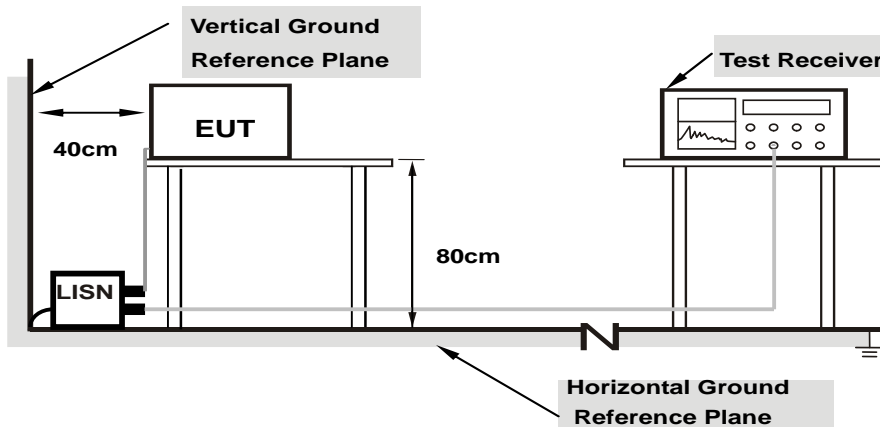
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) were not recorded.

NOTE: The resolution bandwidth and video bandwidth of test receiver is 9kHz for quasi-peak detection (QP) and average detection (AV) at frequency 0.15MHz-30MHz.

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup



Note: 1.Support units were connected to second LISN.

For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.2.6 EUT Operating Conditions

Same as 4.1.6.

4.2.7 Test Results

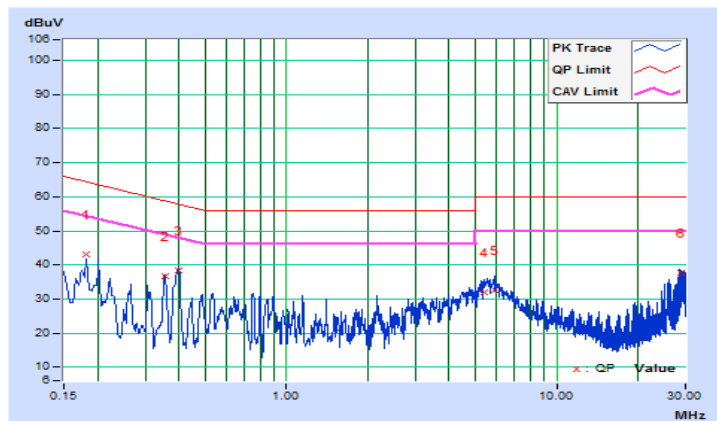
Charging Mode

Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	A		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.18037	10.21	32.73	23.21	42.94	33.42	64.47	54.47	-21.53	-21.05
2	0.35407	10.28	26.44	25.46	36.72	35.74	58.87	48.87	-22.15	-13.13
3	0.39654	10.30	28.01	26.16	38.31	36.46	57.93	47.93	-19.62	-11.47
4	5.36600	10.47	21.38	14.81	31.85	25.28	60.00	50.00	-28.15	-24.72
5	5.88200	10.49	22.29	14.32	32.78	24.81	60.00	50.00	-27.22	-25.19
6	28.75000	11.51	26.07	26.02	37.58	37.53	60.00	50.00	-22.42	-12.47

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

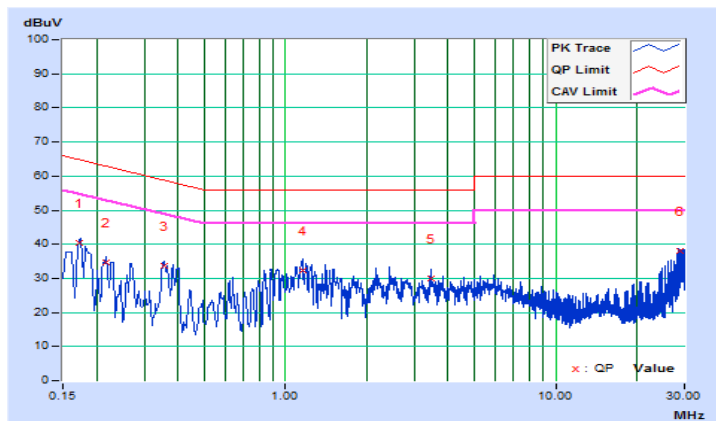


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	A		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
			1	0.17157	9.97	30.35	17.42	40.32	27.39	64.88
2	0.21576	9.98	24.56	12.44	34.54	22.42	62.98	52.98	-28.44	-30.56
3	0.35407	10.01	23.54	22.82	33.55	32.83	58.87	48.87	-25.32	-16.04
4	1.15564	10.05	22.16	16.20	32.21	26.25	56.00	46.00	-23.79	-19.75
5	3.44873	10.15	19.71	14.79	29.86	24.94	56.00	46.00	-26.14	-21.06
6	28.75000	11.02	27.02	26.82	38.04	37.84	60.00	50.00	-21.96	-12.16

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.



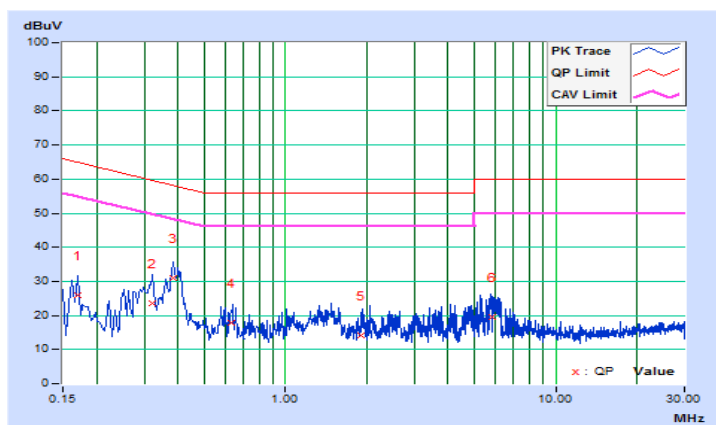
Standby Mode

Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	B		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
			1	0.16932	10.21	15.82	0.61	26.03	10.82	64.99
2	0.31949	10.26	13.34	2.41	23.60	12.67	59.72	49.72	-36.12	-37.05
3	0.38218	10.29	20.57	6.23	30.86	16.52	58.23	48.23	-27.37	-31.71
4	0.62715	10.28	7.54	-1.12	17.82	9.16	56.00	46.00	-38.18	-36.84
5	1.89640	10.29	3.98	-3.17	14.27	7.12	56.00	46.00	-41.73	-38.88
6	5.79000	10.48	9.17	-2.28	19.65	8.20	60.00	50.00	-40.35	-41.80

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

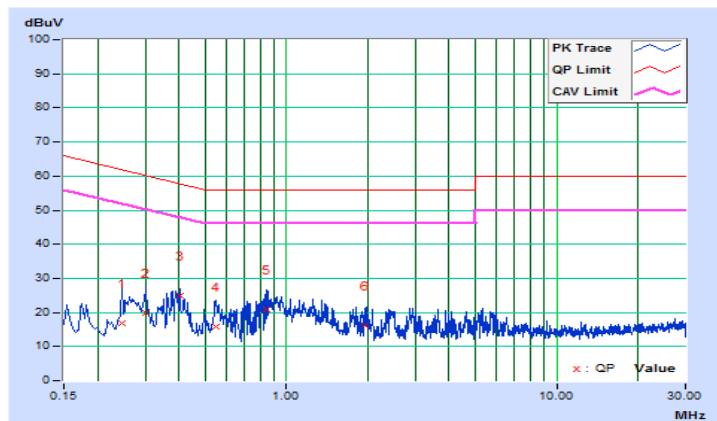


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	B		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
			1	0.24485	9.99	6.69	-1.29	16.68	8.70	61.93
2	0.29992	10.00	9.79	0.56	19.79	10.56	60.25	50.25	-40.46	-39.69
3	0.40179	10.02	14.89	3.99	24.91	14.01	57.82	47.82	-32.91	-33.81
4	0.54542	10.02	5.90	-2.62	15.92	7.40	56.00	46.00	-40.08	-38.60
5	0.84019	10.03	10.87	-1.94	20.90	8.09	56.00	46.00	-35.10	-37.91
6	1.94190	10.08	5.98	-2.36	16.06	7.72	56.00	46.00	-39.94	-38.28

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.



5 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo).

Appendix – Information on the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are FCC recognized accredited test firms and accredited and approved according to ISO/IEC 17025.

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The address and road map of all our labs can be found in our web site also.

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