

FCC Test Report

Report No.: RF180815C09

FCC ID: K7SF8J235

Test Model: F8J235

Received Date: Aug. 15, 2018

Test Date: Aug. 28 ~ Aug. 29, 2018

Issued Date: Sep. 18, 2018

Applicant: Belkin International, Inc.

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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.)

**FCC Registration /
Designation Number:** 788550 / TW0003



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Release Control Record

Issue No.	Description	Date Issued
RF180815C09	Original release	Sep. 18, 2018

1 Certificate of Conformity

Product: BOOST↑UP™ Wireless Charging Dock for iPhone and Apple Watch

Brand: belkin

Model No.: F8J235

Sample Status: Engineering sample

Applicant: Belkin International, Inc.

Test Date: Aug. 28 ~ Aug. 29, 2018

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 RF characteristics under the conditions specified in this report.

Prepared by : Polly Chien , **Date:** Sep. 18, 2018
Polly Chien / Specialist

Approved by : Bruce Chen , **Date:** Sep. 18, 2018
Bruce Chen / Project Engineer

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 -18.30dB at 0.36719MHz.
15.209	Radiated Emission Test	Pass	Meet the requirement of limit. Minimum passing margin is -6.0dB at 127.11MHz.

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	BOOST↑UP™ Wireless Charging Dock for iPhone and Apple Watch
Test Model	F8J235
Sample Status	Engineering sample
Power Supply Rating	15Vdc (adapter)
Modulation Type	Amplitude modulation
Operating Frequency	127.8 kHz 326.5 kHz
Antenna Type	Coil antenna
Field Strength	127.8 kHz: 69.8dBuV/m 326.5 kHz: 54.1dBuV/m
Dimension for iPhone charging coil	13.53cm ² (diameter = 41.5mm)
Dimension for Apple watch inductive coil	7.95cm ² (diameter = 31.82mm)
Accessory Device	Adapter
Data Cable Supplied	NA
Maximum Power Output for Phone charging coil	10W
Maximum Power Output for Apple watch inductive coil	5W

Note:

1. The EUT uses following adapter.

Brand	belkin
Model	2ADL045H NJ
Input Power	100-240Vac, 50/60Hz, 1.3A Max
Output Power	15Vdc, 3.0A
Power Line	1.5m non-shielded DC cable without core attached on adapter

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

3. 326.5kHz mode is for Apple watch charging. Plastic band is the worst case for final tests after pretesting plastic band and metal band.

3.2 Description of Test Modes

2 channels are provided to this EUT

Channel	Freq. (kHz)
1	127.8
2	326.5

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT CONFIGURE MODE	APPLICABLE TO		DESCRIPTION
	RE<1G	PLC	
A	√	√	127.8kHz only
B	√	√	326.5kHz only (Plastic band)
C	√	√	127.8kHz+326.5kHz

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

Note: The EUT is designed to be positioned on the X-plane only.

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	1, 2	1
B	1, 2	2
C	1, 2	1, 2

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	1, 2	1
B	1, 2	2
C	1, 2	1, 2

Test Condition:

Applicable To	Environmental Conditions	Input Power	Tested by
RE<1G	22 deg. C, 66% RH	120Vac, 60Hz	Adair Peng
PLC	22 deg. C, 66% RH	120Vac, 60Hz	Adair Peng

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.

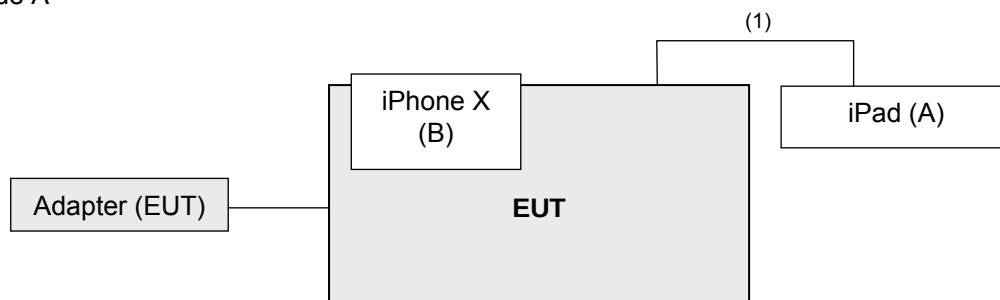
ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	iPad	Apple	A1430	DYTHR47KDVGL	NA	-
B.	iPhone X	Apple	A1901	NA	NA	-
C.	Apple Watch	Apple	A1553	NA	NA	-

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	USB cable	1	1.5	Y	0	-

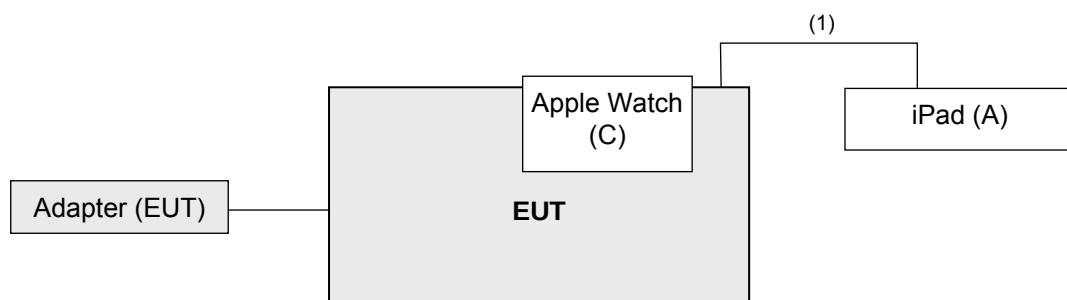
3.3.1 Configuration of System under Test

Charging Mode:

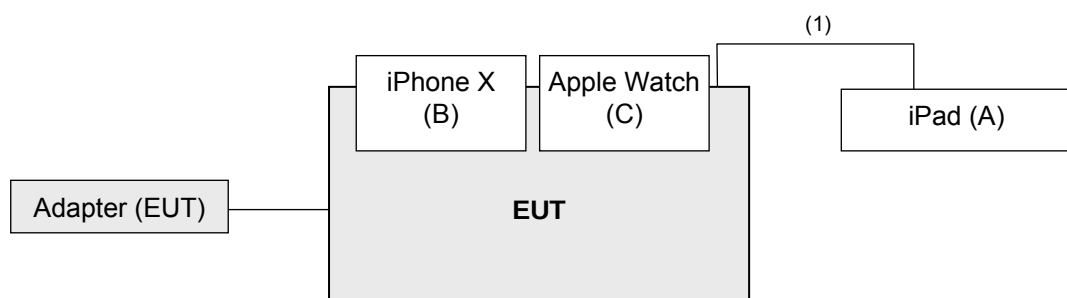
Test Mode A



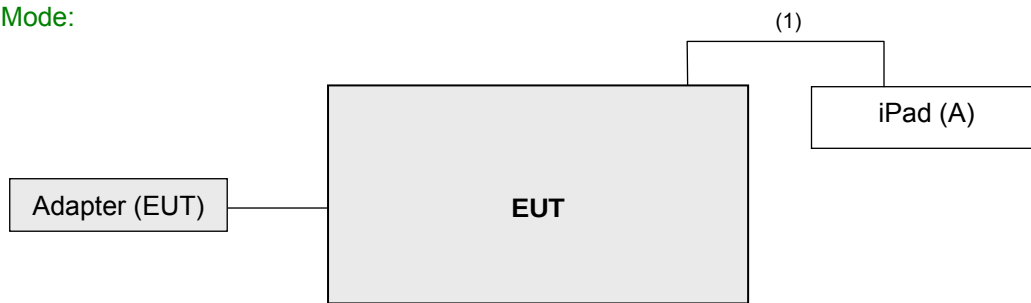
Test Mode B



Test Mode C



Standby Mode:



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	ESCI	100424	Oct. 17, 2017	Oct. 16, 2018
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100041	Dec. 12, 2017	Dec. 11, 2018
BILOG Antenna SCHWARZBECK	VULB9168	9168-171	Dec. 11, 2017	Dec. 10, 2018
HORN Antenna SCHWARZBECK	9120D	209	Dec. 13, 2017	Dec. 12, 2018
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Dec. 01, 2017	Nov. 30, 2018
Loop Antenna TESEQ	HLA 6121	45745	Jun. 14, 2018	Jun. 13, 2019
Preamplifier Agilent (Below 1GHz)	8447D	2944A10738	Aug. 21, 2018	Aug. 20, 2019
Preamplifier Agilent (Above 1GHz)	8449B	3008A02465	Apr. 03, 2018	Apr. 02, 2019
RF signal cable HUBER+SUHNER	SUCOFLEX 104	Cable-CH3-03 (223653/4)	Aug. 21, 2018	Aug. 20, 2019
RF signal cable HUBER+SUHNER& EMCI	SUCOFLEX 104&EMC104-SM-SM-8 000	Cable-CH3-03 (309224+170907)	Sep.11, 2017	Sep. 10, 2018
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	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
Boresight Antenna Fixture	FBA-01	FBA-SIP01	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 FCC Designation Number is TW0003. The number will be varied with the Lab location and scope as attached.
5. The IC Site Registration No. is IC 7450F-3.

4.1.3 Test Procedures

For Radiated emission below 30MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. 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. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case 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.

Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9kHz at frequency below 30MHz.

For Radiated emission above 30MHz

- 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:

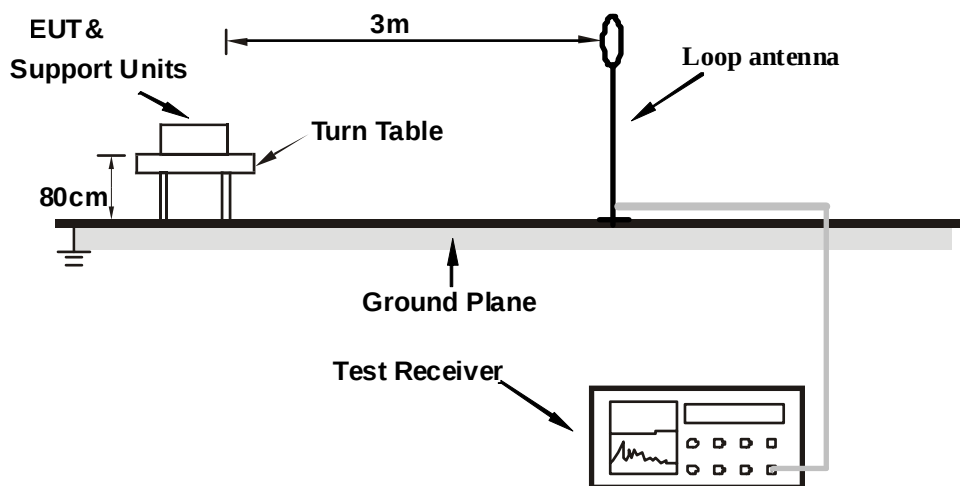
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is $\geq 1/T$ (Duty cycle $< 98\%$) or 10Hz (Duty cycle $\geq 98\%$) for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

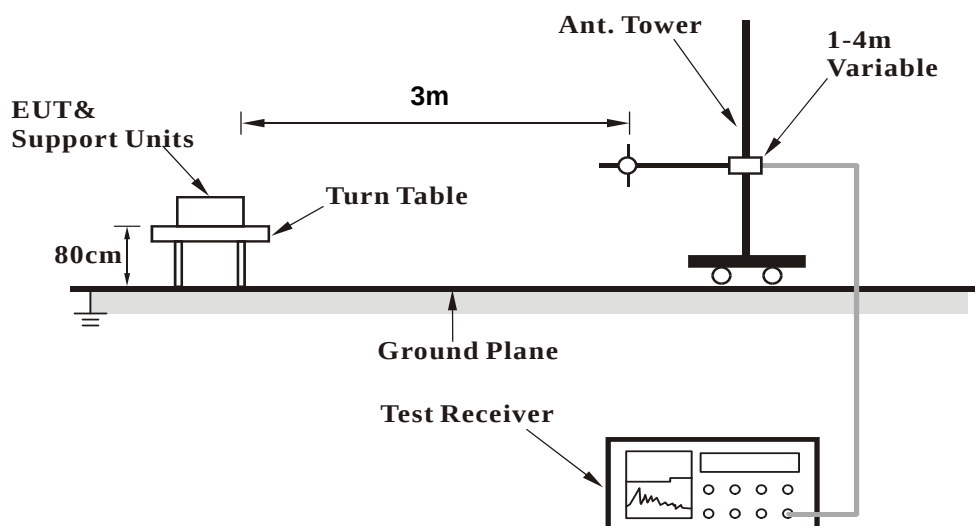
No deviation.

4.1.5 Test Set Up

For Radiated emission below 30MHz



For Radiated emission 30MHz to 1GHz



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

4.1.6 EUT Operating Conditions

Charging Mode:

Test Mode A

- a. The EUT powered by adapter.
- b. Put the iPhone on the EUT (wireless charging) during the test.
- c. The iPad was charging by EUT via USB cable.

Test Mode B

- a. The EUT powered by adapter.
- b. Put the Apple Watch on the EUT (wireless charging) during the test.
- c. The iPad was charging by EUT via USB cable.

Test Mode C

- a. The EUT powered by adapter.
- b. Put the iPhone and Apple Watch on the EUT (wireless charging) during the test.
- c. The iPad was charging by EUT via USB cable.

Standby Mode:

- a. The EUT powered by adapter.
- b. The iPad was connected with EUT via USB cable.

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	*0.1278	69.8	105.5	-35.7	1.00	340	50.1	19.7
2	1.066	35.3	67.0	-31.7	1.00	225	15.3	20.0
3	3.758	37.8	69.5	-31.7	1.00	298	17.9	19.9
4	7.555	33.9	69.5	-35.6	1.00	315	12.7	21.2
5	15.149	37.0	69.5	-32.5	1.00	248	15.2	21.8
6	17.792	45.0	69.5	-24.5	1.00	83	23.2	21.8
7	23.367	45.9	69.5	-23.6	1.00	241	23.9	22.0
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	*0.1278	64.4	105.5	-41.1	1.00	65	44.7	19.7
2	1.451	35.2	64.4	-29.2	1.00	289	15.3	19.9
3	4.623	33.8	69.5	-35.7	1.00	54	13.5	20.3
4	7.170	33.6	69.5	-35.9	1.00	58	12.5	21.1
5	10.583	34.2	69.5	-35.3	1.00	258	12.4	21.8
6	16.687	33.0	69.5	-36.5	1.00	210	11.2	21.8
7	22.598	33.7	69.5	-35.8	1.00	151	11.8	21.9
ANTENNA POLARITY & TEST DISTANCE: LOOP ANTENNA GROUND-PARALLEL 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	*0.1278	66.3	105.5	-39.2	1.00	320	46.6	19.7
2	3.566	35.8	69.5	-33.7	1.00	3	16.0	19.8
3	7.411	34.5	69.5	-35.0	1.00	76	13.4	21.1
4	15.149	34.3	69.5	-35.2	1.00	90	12.5	21.8
5	19.474	38.0	69.5	-31.5	1.00	31	16.2	21.8
6	22.214	38.7	69.5	-30.8	1.00	196	16.8	21.9
7	24.473	44.8	69.5	-24.7	1.00	97	22.8	22.0

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

Channel	TX Channel 2	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	*0.3265	54.1	97.3	-43.2	1.00	266	34.0	20.1
2	3.566	38.7	69.5	-30.8	1.00	351	18.9	19.8
3	6.353	34.4	69.5	-35.1	1.00	99	13.5	20.9
4	9.477	33.6	69.5	-35.9	1.00	18	11.9	21.7
5	15.149	37.0	69.5	-32.5	1.00	248	15.2	21.8
6	18.898	39.0	69.5	-30.5	1.00	131	17.2	21.8
7	23.367	45.9	69.5	-23.6	1.00	241	23.9	22.0
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	*0.3265	49.6	97.3	-47.7	1.00	200	29.5	20.1
2	2.460	35.0	69.5	-34.5	1.00	234	15.3	19.7
3	4.623	33.8	69.5	-35.7	1.00	54	13.5	20.3
4	8.516	34.9	69.5	-34.6	1.00	302	13.5	21.4
5	13.803	33.6	69.5	-35.9	1.00	254	11.8	21.8
6	21.108	32.7	69.5	-36.8	1.00	130	10.8	21.9
7	23.367	34.5	69.5	-35.0	1.00	260	12.5	22.0
ANTENNA POLARITY & TEST DISTANCE: LOOP ANTENNA GROUND-PARALLEL 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	*0.3265	47.5	97.3	-49.8	1.00	299	27.4	20.1
2	3.710	36.4	69.5	-33.1	1.00	171	16.5	19.9
3	6.545	34.8	69.5	-34.7	1.00	241	13.9	20.9
4	10.535	33.9	69.5	-35.6	1.00	173	12.1	21.8
5	15.581	33.7	69.5	-35.8	1.00	182	11.9	21.8
6	20.532	36.0	69.5	-33.5	1.00	300	14.1	21.9
7	25.098	41.5	69.5	-28.0	1.00	18	19.5	22.0

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

Channel	TX Channel 1+2	Detector Function	Quasi-Peak
Frequency Range	9 kHz ~ 30 MHz		
Test Mode	C		

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	*0.1278	69.7	105.5	-35.8	1.00	350	50.0	19.7
2	*0.3265	53.9	97.3	-43.4	1.00	144	33.8	20.1
3	1.595	34.6	63.5	-28.9	1.00	146	14.7	19.9
4	6.353	34.4	69.5	-35.1	1.00	99	13.5	20.9
5	12.217	34.5	69.5	-35.0	1.00	357	12.7	21.8
6	15.149	37.0	69.5	-32.5	1.00	248	15.2	21.8
7	20.532	36.3	69.5	-33.2	1.00	323	14.4	21.9
8	25.098	39.4	69.5	-30.1	1.00	315	17.4	22.0

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	*0.1278	64.3	105.5	-41.2	1.00	222	44.6	19.7
2	*0.3265	49.4	97.3	-47.9	1.00	78	29.3	20.1
3	2.460	35.0	69.5	-34.5	1.00	234	15.3	19.7
4	5.921	33.8	69.5	-35.7	1.00	311	13.0	20.8
5	10.583	34.2	69.5	-35.3	1.00	258	12.4	21.8
6	15.341	33.8	69.5	-35.7	1.00	153	12.0	21.8
7	20.099	33.5	69.5	-36.0	1.00	326	11.6	21.9
8	22.695	38.9	69.5	-30.6	1.00	138	17.0	21.9

ANTENNA POLARITY & TEST DISTANCE: LOOP ANTENNA GROUND-PARALLEL 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	*0.1278	66.3	105.5	-39.2	1.00	222	46.6	19.7
2	*0.3265	47.4	97.3	-49.9	1.00	344	27.3	20.1
3	0.874	37.6	68.8	-31.2	1.00	28	17.5	20.1
4	3.710	36.4	69.5	-33.1	1.00	171	16.5	19.9
5	9.766	34.5	69.5	-35.0	1.00	125	12.8	21.7
6	15.149	34.3	69.5	-35.2	1.00	90	12.5	21.8
7	18.369	40.1	69.5	-29.4	1.00	134	18.3	21.8
8	23.367	50.3	69.5	-19.2	1.00	210	28.3	22.0

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	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	*0.1278	42.6	105.5	-62.9	1.00	322	22.9	19.7
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	*0.1278	38.9	105.5	-66.6	1.00	100	19.2	19.7
ANTENNA POLARITY & TEST DISTANCE: LOOP ANTENNA GROUND-PARALLEL 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	*0.1278	40.0	105.5	-65.5	1.00	311	20.3	19.7

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

Channel	TX Channel 2	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	*0.3265	34.1	97.3	-63.2	1.00	255	14.0	20.1
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	*0.3265	33.5	97.3	-63.8	1.00	299	13.4	20.1
ANTENNA POLARITY & TEST DISTANCE: LOOP ANTENNA GROUND-PARALLEL 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	*0.3265	33.5	97.3	-63.8	1.00	344	13.4	20.1

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

Channel	TX Channel 1+2	Detector Function	Quasi-Peak
Frequency Range	9 kHz ~ 30 MHz		
Test Mode	C		

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	*0.1278	42.5	105.5	-63.0	1.00	322	22.8	19.7
2	*0.3265	34.0	97.3	-63.3	1.00	254	13.9	20.1
3	0.256	34.2	99.4	-65.2	1.00	222	14.3	19.9
4	0.653	33.1	71.3	-38.2	1.00	27	12.9	20.2
5	3.566	39.6	69.5	-29.9	1.00	27	19.8	19.8
6	10.535	34.9	69.5	-34.6	1.00	197	13.1	21.8
7	17.792	43.5	69.5	-26.0	1.00	104	21.7	21.8
8	22.695	48.7	69.5	-20.8	1.00	12	26.8	21.9
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	*0.1278	38.8	105.5	-66.7	1.00	150	19.1	19.7
2	*0.3265	33.4	97.3	-63.9	1.00	269	13.3	20.1
3	0.256	32.8	99.4	-66.6	1.00	155	12.9	19.9
4	0.653	32.9	71.3	-38.4	1.00	224	12.7	20.2
5	4.719	33.8	69.5	-35.7	1.00	289	13.4	20.4
6	10.919	33.7	69.5	-35.8	1.00	347	11.9	21.8
7	16.494	33.6	69.5	-35.9	1.00	74	11.8	21.8
8	22.743	36.6	69.5	-32.9	1.00	106	14.7	21.9
ANTENNA POLARITY & TEST DISTANCE: LOOP ANTENNA GROUND-PARALLEL 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	*0.1278	39.8	105.5	-65.7	1.00	199	20.1	19.7
2	*0.3265	33.3	97.3	-64.0	1.00	344	13.2	20.1
3	0.256	34.1	99.4	-65.3	1.00	200	14.2	19.9
4	0.653	32.6	71.3	-38.7	1.00	325	12.4	20.2
5	3.758	36.2	69.5	-33.3	1.00	325	16.3	19.9
6	13.611	33.5	69.5	-36.0	1.00	301	11.7	21.8
7	18.369	41.1	69.5	-28.4	1.00	78	19.3	21.8
8	23.800	48.0	69.5	-21.5	1.00	234	26.0	22.0

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	68.79	30.6 QP	40.0	-9.4	1.50 H	161	41.50	-10.90
2	134.89	37.4 QP	43.5	-6.1	1.50 H	42	47.50	-10.10
3	183.50	29.5 QP	43.5	-14.0	1.50 H	217	40.10	-10.60
4	307.93	33.2 QP	46.0	-12.8	1.01 H	310	40.30	-7.10
5	550.97	28.6 QP	46.0	-17.4	1.50 H	306	31.20	-2.60
6	712.35	32.1 QP	46.0	-13.9	1.01 H	166	31.40	0.70
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	69.91	33.4 QP	40.0	-6.6	1.50 V	9	44.60	-11.20
2	132.95	32.8 QP	43.5	-10.7	1.00 V	42	43.20	-10.40
3	183.50	27.5 QP	43.5	-16.0	1.00 V	170	38.10	-10.60
4	307.93	31.0 QP	46.0	-15.0	1.00 V	182	38.10	-7.10
5	432.37	28.9 QP	46.0	-17.1	1.00 V	236	33.40	-4.50
6	679.29	27.8 QP	46.0	-18.2	1.00 V	9	27.70	0.10

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

Channel	TX Channel 2	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	57.12	25.4 QP	40.0	-14.6	1.50 H	333	35.00	-9.60
2	183.50	21.6 QP	43.5	-21.9	1.50 H	39	32.20	-10.60
3	210.72	28.3 QP	43.5	-15.2	1.50 H	245	40.00	-11.70
4	307.93	27.0 QP	46.0	-19.0	1.00 H	315	34.10	-7.10
5	459.59	28.2 QP	46.0	-17.8	1.50 H	191	32.40	-4.20
6	677.35	27.9 QP	46.0	-18.1	1.50 H	8	27.80	0.10
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	68.79	24.8 QP	40.0	-15.2	2.00 V	15	35.70	-10.90
2	183.50	21.3 QP	43.5	-22.2	1.00 V	161	31.90	-10.60
3	307.93	27.2 QP	46.0	-18.8	1.00 V	173	34.30	-7.10
4	484.86	28.5 QP	46.0	-17.5	1.50 V	220	32.40	-3.90
5	624.85	28.3 QP	46.0	-17.7	1.00 V	328	28.80	-0.50
6	817.34	31.0 QP	46.0	-15.0	1.00 V	167	28.20	2.80

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

Channel	TX Channel 1+2	Detector Function	Quasi-Peak
Frequency Range	30 MHz ~ 1GHz		
Test Mode	C		

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	68.79	30.9 QP	40.0	-9.1	1.99 H	149	41.80	-10.90
2	127.11	37.5 QP	43.5	-6.0	1.49 H	11	48.40	-10.90
3	136.55	28.9 QP	43.5	-14.6	2.00 H	69	38.90	-10.00
4	204.89	30.9 QP	43.5	-12.6	1.00 H	244	42.70	-11.80
5	459.59	29.8 QP	46.0	-16.2	1.99 H	179	34.00	-4.20
6	648.18	28.6 QP	46.0	-17.4	1.49 H	16	29.00	-0.40
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	69.63	32.4 QP	40.0	-7.6	1.49 V	18	43.50	-11.10
2	136.84	32.1 QP	43.5	-11.4	1.00 V	149	42.10	-10.00
3	206.83	29.3 QP	43.5	-14.2	1.00 V	193	41.00	-11.70
4	307.93	29.4 QP	46.0	-16.6	1.00 V	189	36.50	-7.10
5	432.37	30.9 QP	46.0	-15.1	1.00 V	229	35.40	-4.50
6	708.46	28.8 QP	46.0	-17.2	1.00 V	288	28.10	0.70

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

Standby Mode

Channel	TX Channel 1+2	Detector Function	Quasi-Peak
Frequency Range	30 MHz ~ 1GHz		
Test Mode	C		

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	57.12	25.9 QP	40.0	-14.1	1.50 H	38	35.50	-9.60
2	183.50	22.1 QP	43.5	-21.4	1.50 H	237	32.70	-10.60
3	307.93	29.4 QP	46.0	-16.6	1.01 H	100	36.50	-7.10
4	461.53	26.7 QP	46.0	-19.3	1.50 H	206	30.90	-4.20
5	626.80	28.1 QP	46.0	-17.9	1.01 H	273	28.60	-0.50
6	805.67	30.0 QP	46.0	-16.0	1.50 H	145	27.40	2.60
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	68.79	24.8 QP	40.0	-15.2	1.00 V	5	35.70	-10.90
2	183.50	22.0 QP	43.5	-21.5	1.00 V	183	32.60	-10.60
3	307.93	28.9 QP	46.0	-17.1	1.50 V	181	36.00	-7.10
4	444.03	26.6 QP	46.0	-19.4	1.50 V	343	30.90	-4.30
5	650.13	27.1 QP	46.0	-18.9	2.00 V	326	27.50	-0.40
6	795.95	30.8 QP	46.0	-15.2	1.50 V	14	28.50	2.30

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

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	ESCI	100613	Nov. 23, 2017	Nov. 22, 2018
RF signal cable Woken	5D-FB	Cable-cond1-01	Sep. 05, 2017	Sep. 04, 2018
LISN ROHDE & SCHWARZ (EUT)	ENV216	101826	Feb. 26, 2018	Feb. 25, 2019
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100311	Aug. 19, 2018	Aug. 18, 2019
Software ADT	BV ADT_Cond_ V7.3.7.4	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 1.

3. The VCCI Site Registration No. is C-2040.

4.2.3 Test Procedures

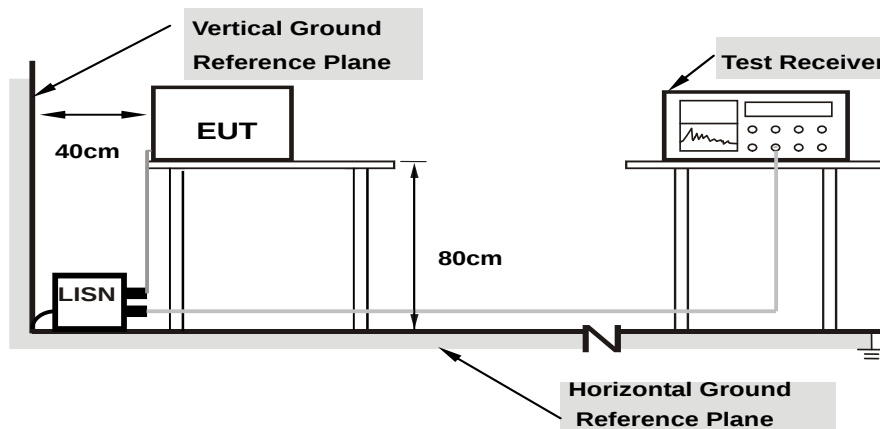
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance 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

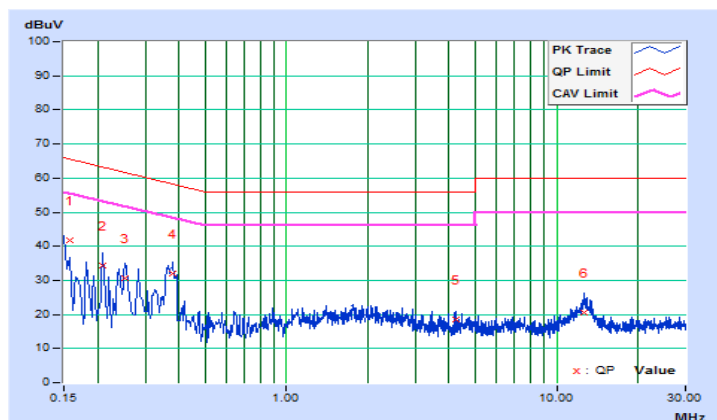
Charging Mode

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	0.15782	10.14	31.46	17.24	41.60	27.38	65.58	55.58	-23.98	-28.20
2	0.20865	10.16	24.28	10.96	34.44	21.12	63.26	53.26	-28.82	-32.14
3	0.25192	10.17	20.52	10.14	30.69	20.31	61.69	51.69	-31.00	-31.38
4	0.38069	10.17	21.92	14.31	32.09	24.48	58.26	48.26	-26.17	-23.78
5	4.21640	10.38	8.04	4.87	18.42	15.25	56.00	46.00	-37.58	-30.75
6	12.64245	10.84	9.55	3.84	20.39	14.68	60.00	50.00	-39.61	-35.32

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.

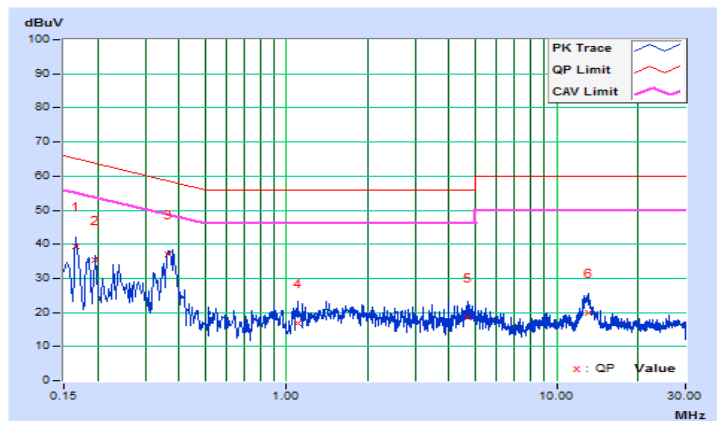


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	A		

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	0.16569	10.17	29.29	14.85	39.46	25.02	65.17	55.17	-25.71	-30.15
2	0.19692	10.14	25.19	9.84	35.33	19.98	63.74	53.74	-28.41	-33.76
3	0.36719	10.14	27.06	20.12	37.20	30.26	58.56	48.56	-21.36	-18.30
4	1.09622	10.22	6.49	2.01	16.71	12.23	56.00	46.00	-39.29	-33.77
5	4.72079	10.40	8.08	2.82	18.48	13.22	56.00	46.00	-37.52	-32.78
6	13.12729	10.75	9.26	3.66	20.01	14.41	60.00	50.00	-39.99	-35.59

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.

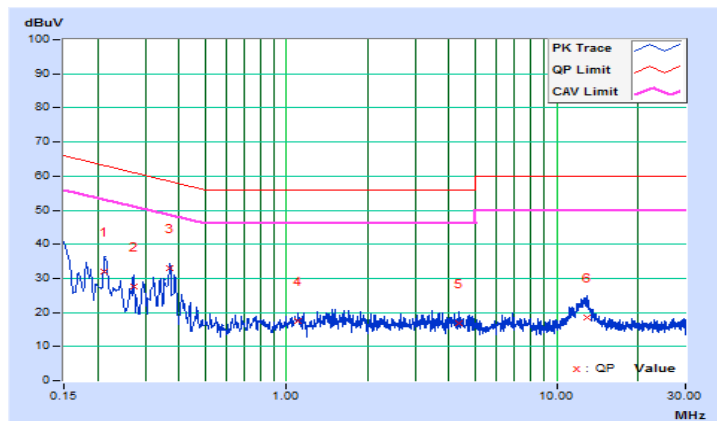


Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	B		

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	0.21256	10.16	21.84	7.38	32.00	17.54	63.10	53.10	-31.10	-35.56
2	0.27120	10.17	17.47	6.78	27.64	16.95	61.08	51.08	-33.44	-34.13
3	0.36896	10.17	22.67	14.03	32.84	24.20	58.52	48.52	-25.68	-24.32
4	1.10795	10.22	7.33	2.22	17.55	12.44	56.00	46.00	-38.45	-33.56
5	4.35325	10.38	6.54	2.03	16.92	12.41	56.00	46.00	-39.08	-33.59
6	12.89269	10.86	7.51	2.36	18.37	13.22	60.00	50.00	-41.63	-36.78

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.

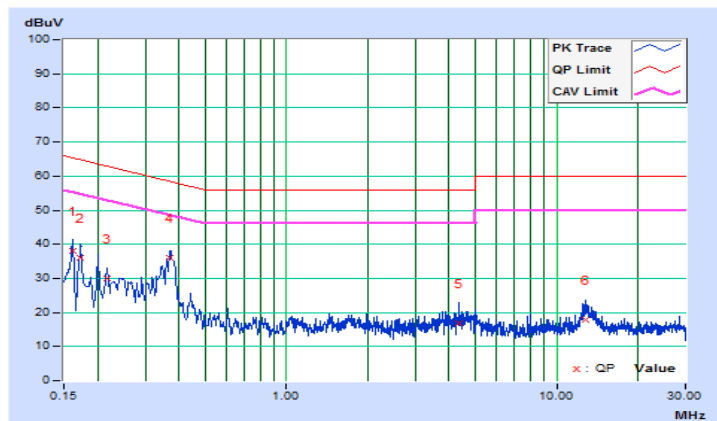


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	B		

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	0.16173	10.17	27.91	13.54	38.08	23.71	65.37	55.37	-27.29	-31.66
2	0.17346	10.16	25.91	10.40	36.07	20.56	64.79	54.79	-28.72	-34.23
3	0.21647	10.13	19.83	6.64	29.96	16.77	62.95	52.95	-32.99	-36.18
4	0.36913	10.14	26.02	16.96	36.16	27.10	58.52	48.52	-22.36	-21.42
5	4.34543	10.38	6.54	1.96	16.92	12.34	56.00	46.00	-39.08	-33.66
6	12.83013	10.74	7.12	2.33	17.86	13.07	60.00	50.00	-42.14	-36.93

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.

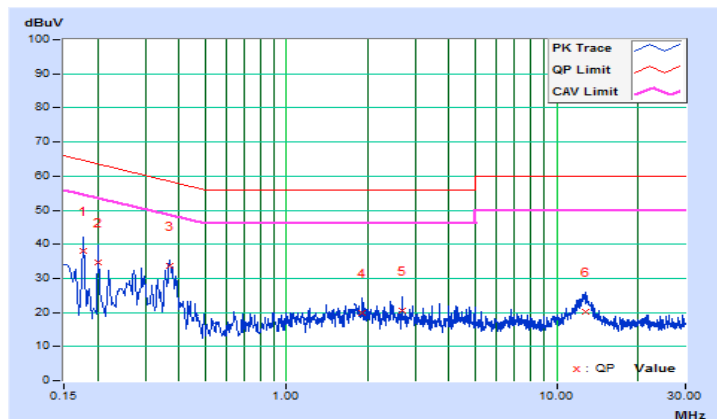


Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	C		

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	0.17737	10.15	27.92	13.44	38.07	23.59	64.61	54.61	-26.54	-31.02
2	0.20084	10.16	24.54	10.52	34.70	20.68	63.58	53.58	-28.88	-32.90
3	0.36896	10.17	23.36	15.39	33.53	25.56	58.52	48.52	-24.99	-22.96
4	1.91341	10.23	9.76	6.83	19.99	17.06	56.00	46.00	-36.01	-28.94
5	2.68368	10.28	10.38	7.20	20.66	17.48	56.00	46.00	-35.34	-28.52
6	12.79885	10.85	9.48	3.77	20.33	14.62	60.00	50.00	-39.67	-35.38

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.

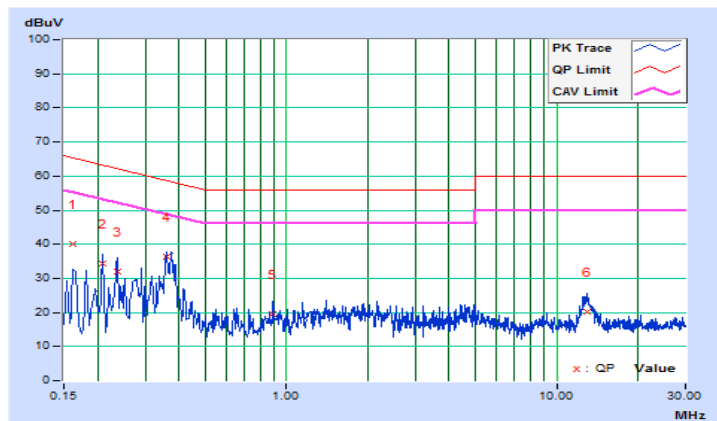


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	C		

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	0.16181	10.17	29.96	16.37	40.13	26.54	65.37	55.37	-25.24	-28.83
2	0.20865	10.13	24.25	11.64	34.38	21.77	63.26	53.26	-28.88	-31.49
3	0.23602	10.13	21.84	11.39	31.97	21.52	62.24	52.24	-30.27	-30.72
4	0.36114	10.14	26.17	20.03	36.31	30.17	58.70	48.70	-22.39	-18.53
5	0.89290	10.20	9.32	6.35	19.52	16.55	56.00	46.00	-36.48	-29.45
6	12.94352	10.74	9.58	3.98	20.32	14.72	60.00	50.00	-39.68	-35.28

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.



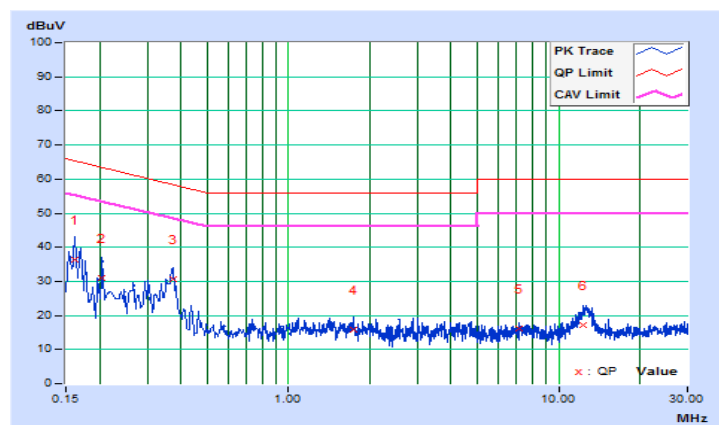
Standby Mode

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

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	0.16173	10.14	26.31	10.15	36.45	20.29	65.37	55.37	-28.92	-35.08
2	0.20474	10.16	20.97	5.47	31.13	15.63	63.42	53.42	-32.29	-37.79
3	0.37287	10.17	20.58	10.94	30.75	21.11	58.44	48.44	-27.69	-27.33
4	1.73746	10.23	5.55	1.54	15.78	11.77	56.00	46.00	-40.22	-34.23
5	7.15281	10.53	5.63	1.11	16.16	11.64	60.00	50.00	-43.84	-38.36
6	12.30228	10.82	6.26	2.33	17.08	13.15	60.00	50.00	-42.92	-36.85

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.

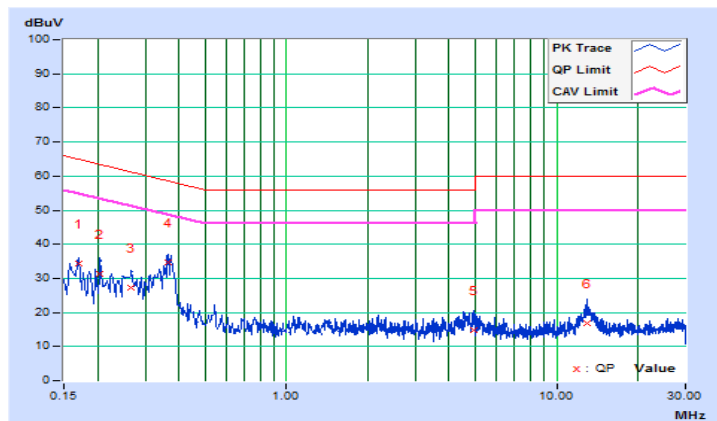


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	C		

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	0.16955	10.16	24.20	8.63	34.36	18.79	64.98	54.98	-30.62	-36.19
2	0.20474	10.13	21.08	6.43	31.21	16.56	63.42	53.42	-32.21	-36.86
3	0.26695	10.13	17.03	7.20	27.16	17.33	61.21	51.21	-34.05	-33.88
4	0.36505	10.14	24.46	13.85	34.60	23.99	58.61	48.61	-24.01	-24.62
5	4.92020	10.40	4.28	1.31	14.68	11.71	56.00	46.00	-41.32	-34.29
6	12.93570	10.74	6.26	1.55	17.00	12.29	60.00	50.00	-43.00	-37.71

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.

If you have any comments, please feel free to contact us at the following:

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Email: service.adt@tw.bureauveritas.com

Web Site: www.bureauveritas-adt.com

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

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