

FCC Test Report

Report No.: RF180731C26

FCC ID: K7SF8J234

Test Model: F8J234

Received Date: Jul. 31, 2018

Test Date: Aug. 06 ~ Aug. 07, 2018

Issued Date: Aug. 21, 2018

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

Lab Address: No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan, R.O.C.

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

FCC Registration / 788550 / TW0003
Designation Number:



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Release Control Record

Issue No.	Description	Date Issued
RF180731C26	Original release	Aug. 21, 2018

1 Certificate of Conformity

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

Brand: belkin

Model No.: F8J234

Sample Status: Engineering sample

Applicant: Belkin International, Inc.

Test Date: Aug. 06 ~ Aug. 07, 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 : Pettie Chen, **Date:** Aug. 21, 2018
Pettie Chen / Senior Specialist

Approved by : Bruce Chen, **Date:** Aug. 21, 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 -15.00dB at 0.35407MHz.
15.209	Radiated Emission Test	Pass	Meet the requirement of limit. Minimum passing margin is -6.6dB at 68.790MHz.

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	F8J234
Sample Status	Engineering sample
Power Supply Rating	15Vdc (adapter)
Modulation Type	FSK
Operating Frequency	127.8 kHz 326.5 kHz
Antenna Type	Coil antenna
Field Strength	127.8 kHz: 69.2dBuV/m 326.5 kHz: 53.8dBuV/m
Dimension for iPhone charging coil	16.26cm ² (diameter = 45.5mm)
Dimension for Apple watch charging coil	7.95cm ² (diameter = 31.82mm)
Accessory Device	Adapter
Data Cable Supplied	NA
Maximum Power Output for Phone charging coil	7.5W
Maximum Power Output for Apple watch charging coil	5W

Note:

1. The EUT uses following adapter.

Brand	belkin
Model	2ADL045H NJ
Input Power	100-240Vac, 50/60Hz, 1.3A
Output Power	15Vdc, 3.0A
Power Line	1.8m 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
C	√	√	127.8kHz+326.5kHz

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

Note:

1. The EUT is designed to be positioned on the X-plane only.
2. “-” means no effect.

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.

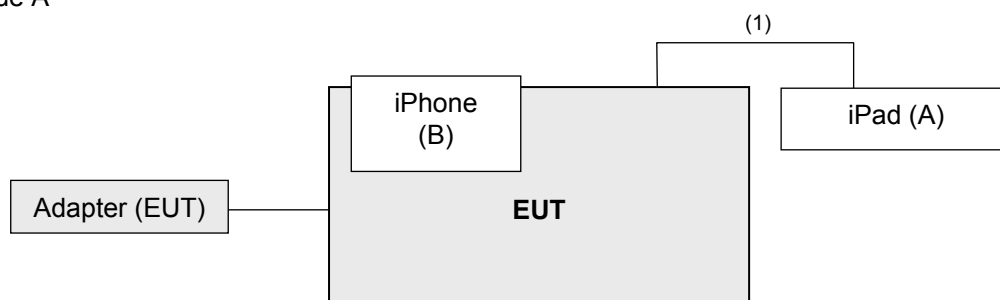
ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	iPad	Apple	A1430	DYTHR47KDVGL	NA	-
B.	iPhone X	Apple	A1901	NA	NA	-
C.	Apple Watch	Apple	A1553	NA	NA	-

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

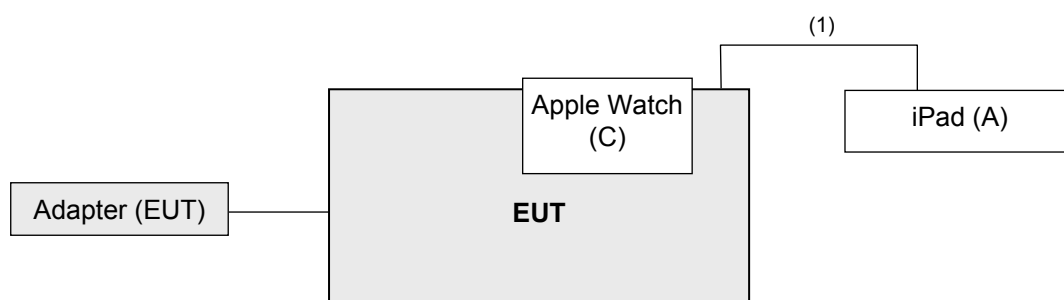
3.3.1 Configuration of System under Test

Charging Mode:

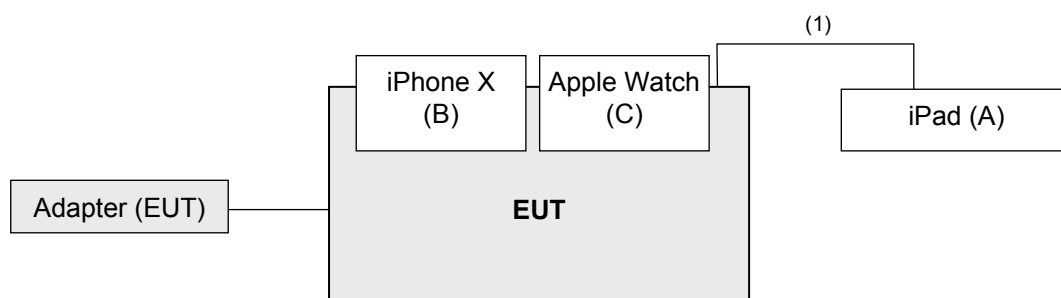
Test Mode A



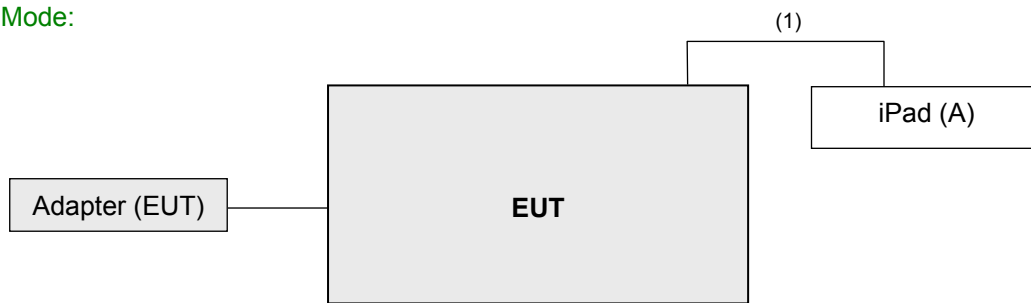
Test Mode B



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 EMCI	EM-6879	269	Aug. 11, 2017	Aug. 10, 2018
Preamplifier Agilent (Below 1GHz)	8447D	2944A10738	Aug. 21, 2017	Aug. 20, 2018
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, 2017	Aug. 20, 2018
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:

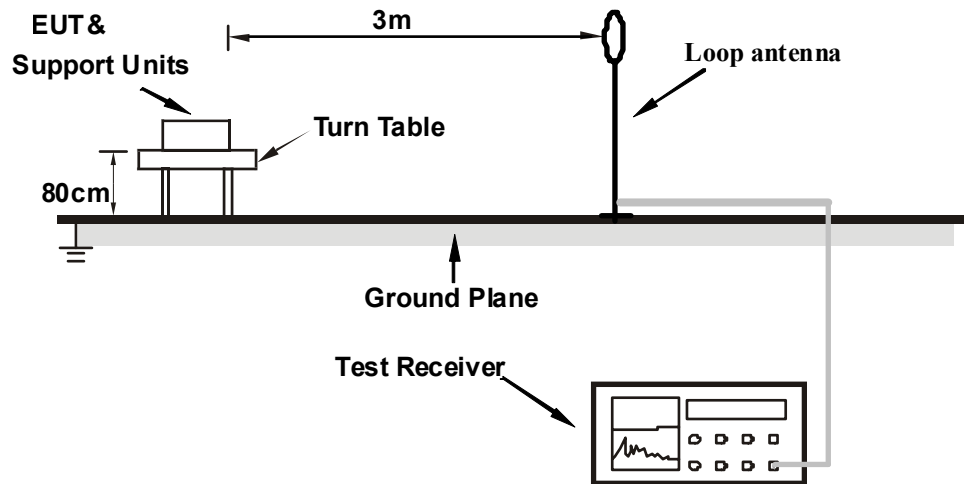
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
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

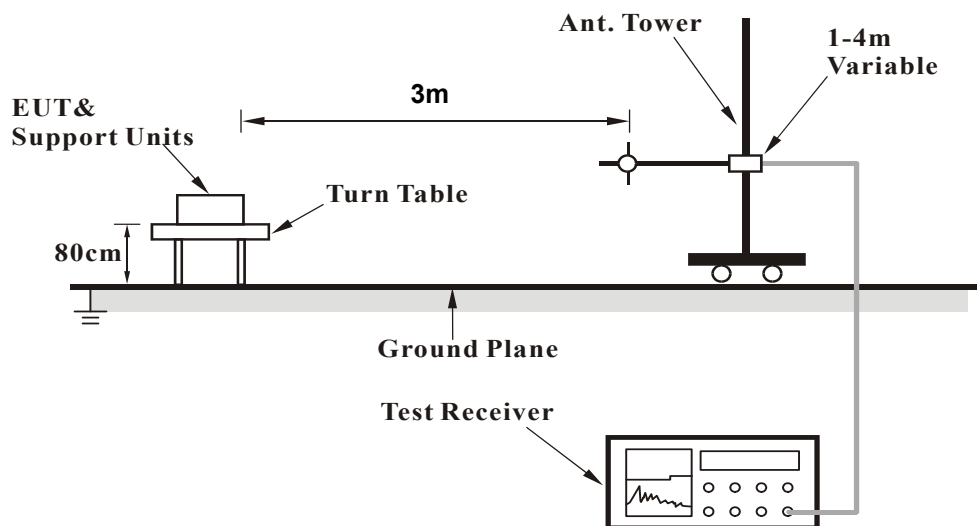
No deviation.

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	69.2	105.5	-36.3	1.00	303	49.5	19.7
2	3.229	43.1	69.5	-26.4	1.00	234	23.5	19.6
3	6.449	35.8	69.5	-33.7	1.00	354	14.9	20.9
4	13.322	40.0	69.5	-29.5	1.00	100	18.2	21.8
5	17.311	44.1	69.5	-25.4	1.00	9	22.3	21.8
6	22.743	44.7	69.5	-24.8	1.00	163	22.8	21.9
7	25.098	42.2	69.5	-27.3	1.00	271	20.2	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	64.7	105.5	-40.8	1.00	253	45.0	19.7
2	3.566	42.4	69.5	-27.1	1.00	154	22.6	19.8
3	7.987	32.6	69.5	-36.9	1.00	62	11.3	21.3
4	13.659	36.2	69.5	-33.3	1.00	11	14.4	21.8
5	18.369	40.0	69.5	-29.5	1.00	211	18.2	21.8
6	23.175	37.4	69.5	-32.1	1.00	309	15.4	22.0
7	24.857	37.8	69.5	-31.7	1.00	154	15.8	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	*0.1278	68.1	105.5	-37.4	1.00	205	48.4	19.7
2	3.758	42.4	69.5	-27.1	1.00	67	22.5	19.9
3	5.632	34.9	69.5	-34.6	1.00	252	14.2	20.7
4	12.938	35.6	69.5	-33.9	1.00	157	13.8	21.8
5	14.908	35.0	69.5	-34.5	1.00	295	13.2	21.8
6	21.108	37.7	69.5	-31.8	1.00	43	15.8	21.9
7	23.848	34.1	69.5	-35.4	1.00	228	12.1	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	53.8	97.3	-43.5	1.00	333	33.7	20.1
2	3.758	42.7	69.5	-26.8	1.00	36	22.8	19.9
3	7.170	36.2	69.5	-33.3	1.00	199	15.1	21.1
4	12.169	37.3	69.5	-32.2	1.00	158	15.5	21.8
5	15.581	43.5	69.5	-26.0	1.00	26	21.7	21.8
6	18.946	35.1	69.5	-34.4	1.00	52	13.3	21.8
7	22.743	47.8	69.5	-21.7	1.00	169	25.9	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	*0.3265	49.3	97.3	-48.0	1.00	301	29.2	20.1
2	3.518	37.8	69.5	-31.7	1.00	162	18.0	19.8
3	7.795	33.9	69.5	-35.6	1.00	93	12.7	21.2
4	12.938	37.2	69.5	-32.3	1.00	86	15.4	21.8
5	15.581	43.5	69.5	-26.0	1.00	26	21.7	21.8
6	21.108	43.4	69.5	-26.1	1.00	250	21.5	21.9
7	24.905	37.1	69.5	-32.4	1.00	311	15.1	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	46.3	97.3	-51.0	1.00	188	26.2	20.1
2	3.758	42.7	69.5	-26.8	1.00	36	22.8	19.9
3	7.795	33.9	69.5	-35.6	1.00	93	12.7	21.2
4	12.938	37.2	69.5	-32.3	1.00	86	15.4	21.8
5	17.311	42.6	69.5	-26.9	1.00	319	20.8	21.8
6	22.262	39.0	69.5	-30.5	1.00	82	17.1	21.9
7	23.944	35.0	69.5	-34.5	1.00	23	13.0	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

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	69.1	105.5	-36.4	1.00	303	49.4	19.7
2	*0.3265	53.6	97.3	-43.7	1.00	333	33.5	20.1
3	3.566	43.5	69.5	-26.0	1.00	118	23.7	19.8
4	12.217	37.7	69.5	-31.8	1.00	348	15.9	21.8
5	15.149	42.0	69.5	-27.5	1.00	228	20.2	21.8
6	18.369	38.9	69.5	-30.6	1.00	250	17.1	21.8
7	21.637	43.3	69.5	-26.2	1.00	135	21.4	21.9
8	24.473	42.1	69.5	-27.4	1.00	79	20.1	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	253	44.7	19.7
2	*0.3265	49.2	97.3	-48.1	1.00	301	29.1	20.1
3	3.229	42.3	69.5	-27.2	1.00	226	22.7	19.6
4	6.017	34.8	69.5	-34.7	1.00	273	14.0	20.8
5	13.322	38.7	69.5	-30.8	1.00	219	16.9	21.8
6	17.311	42.1	69.5	-27.4	1.00	90	20.3	21.8
7	22.743	47.8	69.5	-21.7	1.00	289	25.9	21.9
8	25.098	42.5	69.5	-27.0	1.00	267	20.5	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	*0.1278	67.9	105.5	-37.6	1.00	205	48.2	19.7
2	*0.3265	46.2	97.3	-51.1	1.00	188	26.1	20.1
3	3.566	43.5	69.5	-26.0	1.00	118	23.7	19.8
4	8.852	33.4	69.5	-36.1	1.00	8	11.9	21.5
5	14.043	37.4	69.5	-32.1	1.00	219	15.6	21.8
6	19.474	37.6	69.5	-31.9	1.00	31	15.8	21.8
7	22.214	41.8	69.5	-27.7	1.00	135	19.9	21.9
8	24.857	36.9	69.5	-32.6	1.00	307	14.9	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	43.1	105.5	-62.4	1.00	341	23.4	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	40.7	105.5	-64.8	1.00	163	21.0	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	298	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	33.3	97.3	-64.0	1.00	199	13.2	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	31.2	97.3	-66.1	1.00	241	11.1	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	31.6	97.3	-65.7	1.00	305	11.5	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	43.0	105.5	-62.5	1.00	341	23.3	19.7
2	*0.3265	33.2	97.3	-64.1	1.00	199	13.1	20.1
3	0.255	45.5	99.5	-54.0	1.00	222	25.6	19.9
4	0.653	35.1	71.3	-36.2	1.00	11	14.9	20.2
5	3.229	43.5	69.5	-26.0	1.00	308	23.9	19.6
6	13.322	38.6	69.5	-30.9	1.00	2	16.8	21.8
7	20.532	37.1	69.5	-32.4	1.00	181	15.2	21.9
8	24.184	34.2	69.5	-35.3	1.00	141	12.2	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	40.4	105.5	-65.1	1.00	163	20.7	19.7
2	*0.3265	31.6	97.3	-65.7	1.00	241	11.5	20.1
3	0.255	43.7	99.5	-55.8	1.00	156	23.8	19.9
4	0.653	31.3	71.3	-40.0	1.00	29	11.1	20.2
5	3.854	36.1	69.5	-33.4	1.00	162	16.2	19.9
6	13.322	38.6	69.5	-30.9	1.00	2	16.8	21.8
7	20.532	37.1	69.5	-32.4	1.00	181	15.2	21.9
8	24.905	37.6	69.5	-31.9	1.00	227	15.6	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	*0.1278	40.2	105.5	-65.3	1.00	298	20.5	19.7
2	*0.3265	31.5	97.3	-65.8	1.00	305	11.4	20.1
3	0.255	42.4	99.5	-57.1	1.00	287	22.5	19.9
4	0.653	30.9	71.3	-40.4	1.00	56	10.7	20.2
5	3.470	37.8	69.5	-31.7	1.00	47	18.0	19.8
6	12.746	35.5	69.5	-34.0	1.00	277	13.7	21.8
7	15.774	35.4	69.5	-34.1	1.00	106	13.6	21.8
8	20.580	36.7	69.5	-32.8	1.00	181	14.8	21.9

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) – 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	70.73	28.3 QP	40.0	-11.7	1.99 H	129	39.6	-11.3
2	131.00	35.8 QP	43.5	-7.7	1.50 H	235	46.1	-10.3
3	239.88	25.8 QP	46.0	-20.2	1.00 H	197	35.4	-9.6
4	477.09	26.0 QP	46.0	-20.0	1.99 H	13	29.3	-3.3
5	527.64	28.1 QP	46.0	-17.9	1.50 H	315	30.6	-2.5
6	708.46	29.7 QP	46.0	-16.3	1.50 H	39	28.3	1.4
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	33.4 QP	40.0	-6.6	1.01 V	16	44.2	-10.8
2	138.78	26.1 QP	43.5	-17.4	2.00 V	16	35.8	-9.7
3	241.83	21.6 QP	46.0	-24.4	1.01 V	2	31.0	-9.4
4	473.20	25.3 QP	46.0	-20.7	1.01 V	9	28.7	-3.4
5	549.03	30.4 QP	46.0	-15.6	1.01 V	16	32.3	-1.9
6	790.12	31.6 QP	46.0	-14.4	2.00 V	243	28.5	3.1

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

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	27.6 QP	40.0	-12.4	2.00 H	203	37.1	-9.5
2	132.95	35.9 QP	43.5	-7.6	1.51 H	272	46.1	-10.2
3	224.33	24.7 QP	46.0	-21.3	1.51 H	5	35.6	-10.9
4	449.87	31.4 QP	46.0	-14.6	1.51 H	5	35.2	-3.8
5	646.24	28.6 QP	46.0	-17.4	2.00 H	223	28.3	0.3
6	747.34	34.2 QP	46.0	-11.8	1.01 H	16	31.7	2.5
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	70.73	33.3 QP	40.0	-6.7	1.50 V	2	44.6	-11.3
2	134.89	26.5 QP	43.5	-17.0	1.50 V	2	36.4	-9.9
3	267.10	19.7 QP	46.0	-26.3	1.00 V	163	28.0	-8.3
4	440.14	28.9 QP	46.0	-17.1	1.99 V	189	32.9	-4.0
5	626.80	29.2 QP	46.0	-16.8	1.50 V	89	29.1	0.1
6	766.79	31.0 QP	46.0	-15.0	1.50 V	2	28.2	2.8

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	70.73	28.6 QP	40.0	-11.4	1.49 H	148	39.9	-11.3
2	134.48	33.9 QP	43.5	-9.6	1.48 H	241	43.9	-10.0
3	239.88	29.3 QP	46.0	-16.7	1.00 H	207	38.9	-9.6
4	463.48	31.4 QP	46.0	-14.6	1.99 H	351	35.1	-3.7
5	710.40	29.4 QP	46.0	-16.6	1.49 H	75	28.0	1.4
6	832.89	32.1 QP	46.0	-13.9	1.49 H	256	28.1	4.0
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	70.07	31.8 QP	40.0	-8.2	1.00 V	165	42.9	-11.1
2	132.95	29.7 QP	43.5	-13.8	1.00 V	13	39.9	-10.2
3	235.99	24.0 QP	46.0	-22.0	1.00 V	153	34.2	-10.2
4	440.14	29.3 QP	46.0	-16.7	1.00 V	207	33.3	-4.0
5	745.40	33.8 QP	46.0	-12.2	2.00 V	7	31.3	2.5
6	908.72	33.7 QP	46.0	-12.3	1.49 V	61	28.2	5.5

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

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	27.3 QP	40.0	-12.7	2.00 H	234	36.8	-9.5
2	160.17	23.1 QP	43.5	-20.4	2.00 H	106	31.8	-8.7
3	339.04	21.2 QP	46.0	-24.8	1.00 H	27	27.5	-6.3
4	533.47	27.4 QP	46.0	-18.6	1.49 H	315	29.8	-2.4
5	681.24	29.6 QP	46.0	-16.4	2.00 H	16	28.8	0.8
6	871.78	33.1 QP	46.0	-12.9	1.00 H	18	28.3	4.8
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	41.57	24.1 QP	40.0	-15.9	1.01 V	221	33.8	-9.7
2	156.28	20.6 QP	43.5	-22.9	1.01 V	16	29.2	-8.6
3	366.26	22.2 QP	46.0	-23.8	2.00 V	253	28.0	-5.8
4	488.75	26.6 QP	46.0	-19.4	1.01 V	259	29.7	-3.1
5	689.01	28.9 QP	46.0	-17.1	1.51 V	132	27.9	1.0
6	817.34	32.2 QP	46.0	-13.8	1.01 V	14	28.3	3.9

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) – 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	ESR3	102412	Feb. 08, 2018	Feb. 07, 2019
RF signal cable (with 10dB PAD) Woken	5D-FB	Cable-cond2-01	Sep. 08, 2017	Sep. 07, 2018
LISN ROHDE & SCHWARZ (EUT)	ESH2-Z5	100100	Feb. 05, 2018	Feb. 04, 2019
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100311	Aug. 16, 2017	Aug. 15, 2018
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 2.

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

4.2.3 Test Procedures

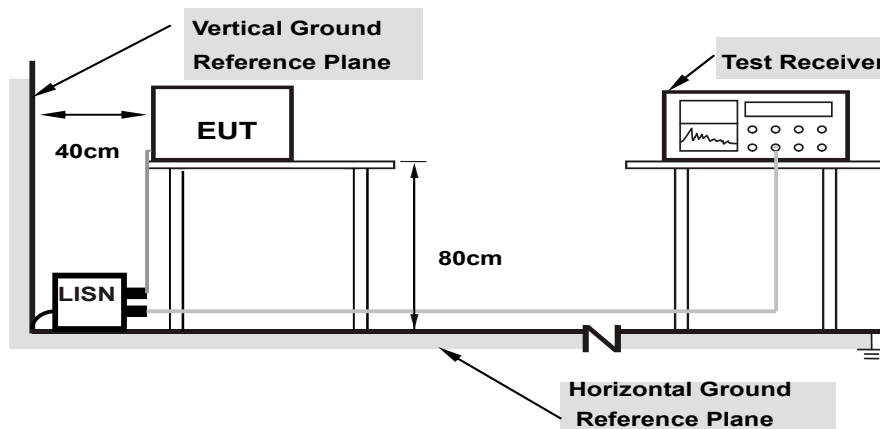
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance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

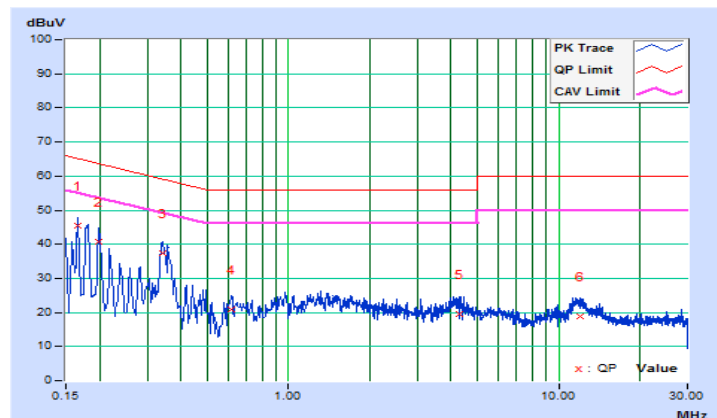
Charging Mode

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	0.16600	10.30	35.04	15.51	45.34	25.81	65.16	55.16	-19.82	-29.35
2	0.19800	10.32	30.42	14.72	40.74	25.04	63.69	53.69	-22.95	-28.65
3	0.34200	10.34	27.10	17.25	37.44	27.59	59.15	49.15	-21.71	-21.56
4	0.61407	10.36	10.47	3.20	20.83	13.56	56.00	46.00	-35.17	-32.44
5	4.29800	10.57	8.83	2.04	19.40	12.61	56.00	46.00	-36.60	-33.39
6	12.07800	10.98	7.87	3.75	18.85	14.73	60.00	50.00	-41.15	-35.27

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.

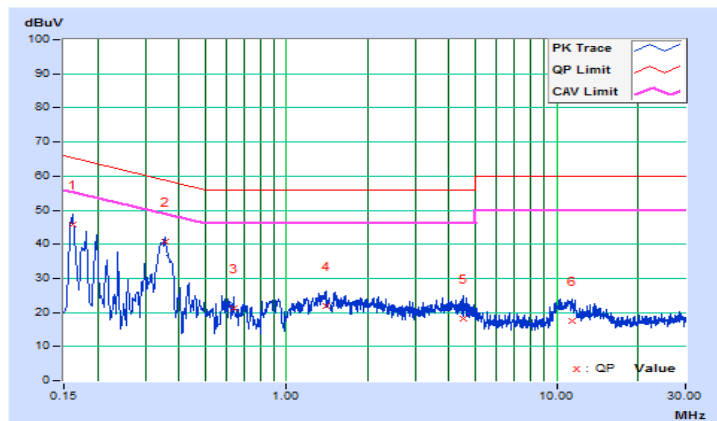


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	A		

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	0.16190	10.33	35.56	16.97	45.89	27.30	65.37	55.37	-19.48	-28.07
2	0.35407	10.30	30.29	23.57	40.59	33.87	58.87	48.87	-18.28	-15.00
3	0.63800	10.34	10.78	4.08	21.12	14.42	56.00	46.00	-34.88	-31.58
4	1.40200	10.42	11.51	5.29	21.93	15.71	56.00	46.00	-34.07	-30.29
5	4.51000	10.57	7.66	2.37	18.23	12.94	56.00	46.00	-37.77	-33.06
6	11.49400	10.85	6.75	1.95	17.60	12.80	60.00	50.00	-42.40	-37.20

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.

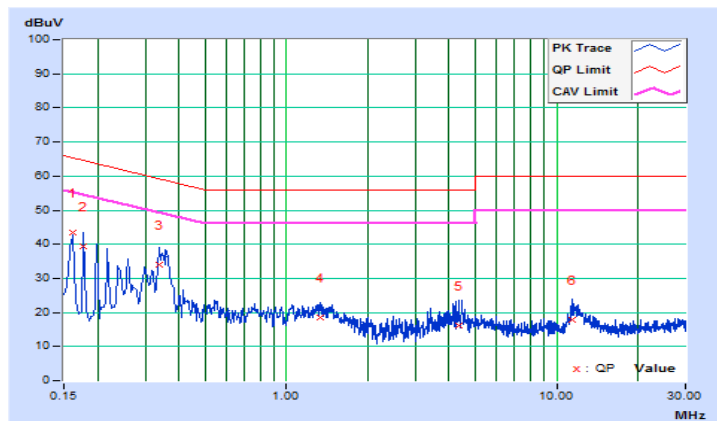


Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	B		

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	0.16148	10.30	33.09	15.12	43.39	25.42	65.39	55.39	-22.00	-29.97
2	0.17801	10.31	29.24	10.40	39.55	20.71	64.58	54.58	-25.03	-33.87
3	0.33800	10.34	23.54	13.42	33.88	23.76	59.25	49.25	-25.37	-25.49
4	1.33800	10.41	7.97	2.84	18.38	13.25	56.00	46.00	-37.62	-32.75
5	4.33800	10.57	5.66	1.11	16.23	11.68	56.00	46.00	-39.77	-34.32
6	11.46200	10.94	6.99	2.05	17.93	12.99	60.00	50.00	-42.07	-37.01

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.

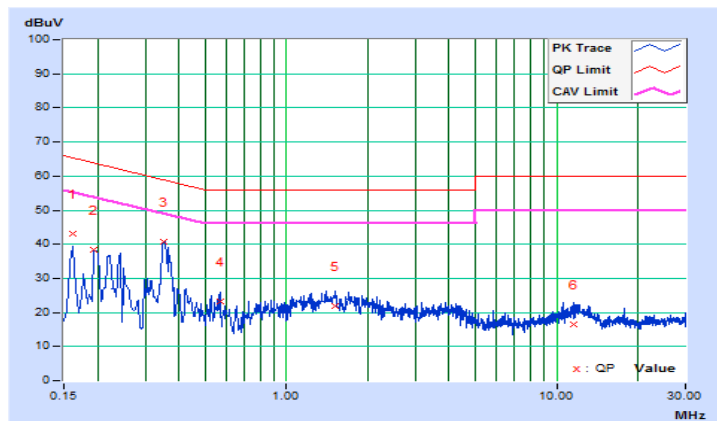


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	B		

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	0.16190	10.33	32.69	14.87	43.02	25.20	65.37	55.37	-22.35	-30.17
2	0.19418	10.30	27.98	10.27	38.28	20.57	63.86	53.86	-25.58	-33.29
3	0.35035	10.30	30.30	21.96	40.60	32.26	58.95	48.95	-18.35	-16.69
4	0.56591	10.33	12.75	4.88	23.08	15.21	56.00	46.00	-32.92	-30.79
5	1.51800	10.43	11.59	5.11	22.02	15.54	56.00	46.00	-33.98	-30.46
6	11.63000	10.85	5.51	2.13	16.36	12.98	60.00	50.00	-43.64	-37.02

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.

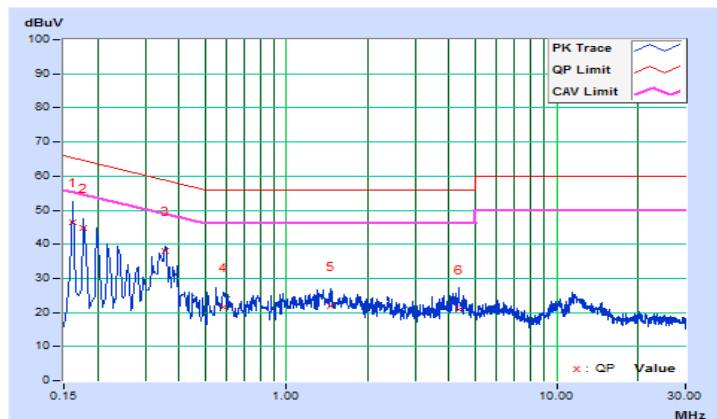


Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	C		

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	0.16200	10.30	36.07	18.00	46.37	28.30	65.36	55.36	-18.99	-27.06
2	0.17801	10.31	34.48	17.29	44.79	27.60	64.58	54.58	-19.79	-26.98
3	0.35800	10.34	27.59	20.87	37.93	31.21	58.77	48.77	-20.84	-17.56
4	0.58717	10.36	11.25	4.05	21.61	14.41	56.00	46.00	-34.39	-31.59
5	1.45800	10.41	11.62	6.57	22.03	16.98	56.00	46.00	-33.97	-29.02
6	4.33400	10.57	10.45	3.57	21.02	14.14	56.00	46.00	-34.98	-31.86

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.

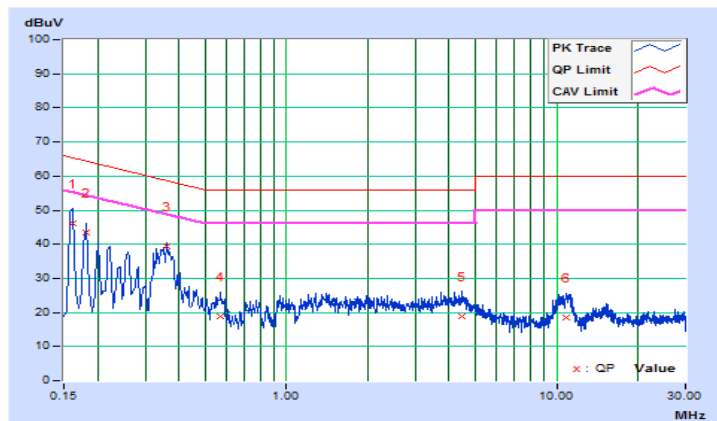


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	C		

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	0.16148	10.33	35.63	17.06	45.96	27.39	65.39	55.39	-19.43	-28.00
2	0.18200	10.31	33.24	16.26	43.55	26.57	64.39	54.39	-20.84	-27.82
3	0.36200	10.30	29.00	21.66	39.30	31.96	58.68	48.68	-19.38	-16.72
4	0.57000	10.33	8.41	1.54	18.74	11.87	56.00	46.00	-37.26	-34.13
5	4.44600	10.57	8.36	2.91	18.93	13.48	56.00	46.00	-37.07	-32.52
6	10.89400	10.82	7.75	3.38	18.57	14.20	60.00	50.00	-41.43	-35.80

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.



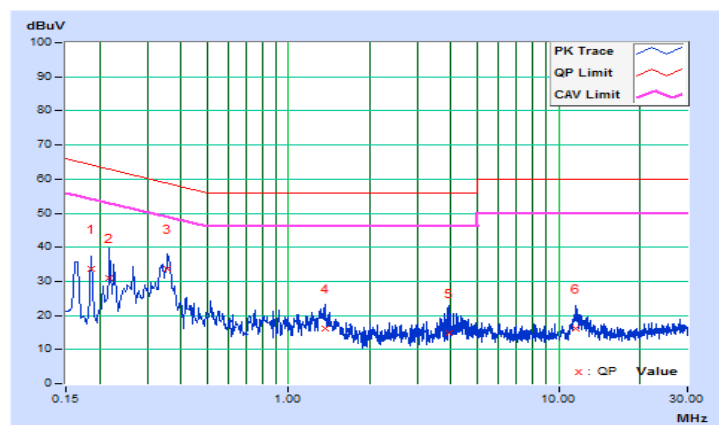
Standby Mode

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	0.18600	10.32	23.49	2.70	33.81	13.02	64.21	54.21	-30.40	-41.19
2	0.21800	10.33	20.78	9.33	31.11	19.66	62.89	52.89	-31.78	-33.23
3	0.35800	10.34	23.31	10.32	33.65	20.66	58.77	48.77	-25.12	-28.11
4	1.36200	10.41	5.71	1.54	16.12	11.95	56.00	46.00	-39.88	-34.05
5	3.93400	10.55	4.37	1.22	14.92	11.77	56.00	46.00	-41.08	-34.23
6	11.62200	10.95	5.13	1.63	16.08	12.58	60.00	50.00	-43.92	-37.42

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.

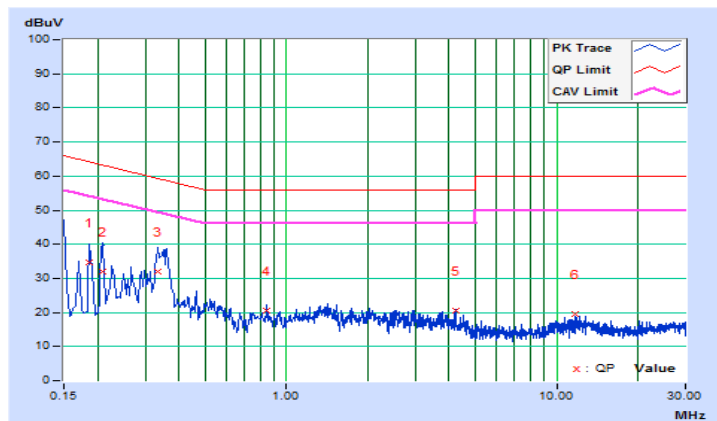


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	C		

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	0.18600	10.31	24.40	4.47	34.71	14.78	64.21	54.21	-29.50	-39.43
2	0.20850	10.29	21.58	2.61	31.87	12.90	63.26	53.26	-31.39	-40.36
3	0.33413	10.30	21.80	6.70	32.10	17.00	59.35	49.35	-27.25	-32.35
4	0.84600	10.37	10.33	4.51	20.70	14.88	56.00	46.00	-35.30	-31.12
5	4.25000	10.56	9.88	3.89	20.44	14.45	56.00	46.00	-35.56	-31.55
6	11.65800	10.86	8.54	3.11	19.40	13.97	60.00	50.00	-40.60	-36.03

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:

Linko EMC/RF Lab

Tel: 886-2-26052180

Fax: 886-2-26051924

Hsin Chu EMC/RF/Telecom Lab

Tel: 886-3-6668565

Fax: 886-3-6668323

Hwa Ya EMC/RF/Safety Lab

Tel: 886-3-3183232

Fax: 886-3-3270892

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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