CMA Testing and Certification Laboratories
廠商會檢定中心

TEST REPORT

Report No. : AW0060334(5) Date : 02 Jan 2019

Application No. : LW030345(4)

Applicant : KODA ELECTRONICS (HK) CO., LTD.
2/F MANDARIN COMMERCIAL HOUSE,
38 MORRISON HILL ROAD, WANCHAI, HONG KONG

Buyer / Brand name : NONSTOP

Sample Description : One(1) item of submitted sample stated to be

Sample description	Model No
Dual USB and Qi Wireless Charging Station (Grey/Fabric), US ver	Station C-Grey/Fabric
Dual USB and Qi Wireless Charging Station (White/Wood), US ver	Station C-White /Wood

Sample registration No. : RW032462-001
Radio Frequency : 146.7kHz
Supply voltage : AC100-240 50/60Hz
No. of submitted sample : (One) set(s)

Date Received : 11 Sep 2018.

Test Period : 11 Sep 2018 to 18 Sep 2018.

Test Requested : FCC Part 15 Certification

Test Method : 47 CFR Part 15 (02 Nov 2017)
ANSI C63.10 – 2013

Test Engineer : Mr. Leung Shu Kan, Ken

Test Result : See attached sheet(s) from page 2 to 17.

Conclusion : The submitted sample was found complied with requirement of FCC Part 15 Subpart C.

Remark : All Two models are the same in circuitry and components; and therefore model Station C-White/Wood color was chosen to be the representative of the test sample. The difference(s) between the tested model and the declared model(s) is/are: decoration color.

For and on behalf of
CMA Industrial Development Foundation Limited

Authorized Signature : _____

Mr. WONG Lap-pong, Andrew
Manager

FCC ID: 2ADLI-NSC-GF-WW

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2 General Information

2.1 General Description

The Station C is a Wireless and USB due charging. It was powered by AC100-240V with maximum current 0.5A. The adaptor is permanently attached to the charging pad.

Two USB charging ports at the top of upper case provide 1A charging current for symbol “+”, and symbol “++” provides 2.4A charging current. The maximum power of wireless charging pad is 10W. No data communication for both USB ports and wireless charging pad for portable devices.

The brief circuit description is listed as follows:

- U3(N76E003AT20) and its associated circuit act as MCU control.
- U4(7150) and its associated circuit act as MCU power control.
- U1(LM324)and its associated circuit act as Code control for MCU.
- U101(SP1231F) and its associated circuit act as voltage controller for USB.
- U102(RH7502) and its associated circuit act as USB charging control.
- Q6A-B, Q7A-B, Q8A-B, Q10-13, IC U5(CD4069) and wireless charging pad and its associated circuit act as wireless charging control.

2.2 Related Submittal Grants

Not applicable.

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2.3 Location of the test site

FCC Accredited Lab Designation Number : HK0004
Address : Room 1302, Yan Hing Centre, 9 - 13 Wong Chuk Yeung Street, Fo Tan, NT, Hong Kong

Radiated emissions measurements are investigated and taken pursuant to the procedures of ANSI C63.4 – 2014 and ANSI C63.10 – 2013. A Semi-Anechoic Chamber Testing Site is set up for investigation and located at:

Ground Floor, Yan Hing Centre,
9 – 13 Wong Chuk Yeung Street,
Fo Tan, Shatin,
New Territories,
Hong Kong.

Conducted emissions measurements are investigated and also taken pursuant to the procedures of ANSI C63.4 – 2014 and ANSI C63.10 – 2013. A shielded room is located at :

Ground Floor, Yan Hing Centre,
9 – 13 Wong Chuk Yeung Street,
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2.4 List of measuring equipment

Measurement equipment:

Equipment	Manufacturer	Model No.	Serial No.	Last Calibration Date	Calibration Due Date	Calibration Period
EMI Test Receiver	Rohde & Schwarz	ESCI	100152	06 Dec 2017	07 Dec 2018	1Year
Spectrum Analyzer	Rohde & Schwarz	FSP30	100628	26 Mar 2018	27 Mar 2019	1Year
Loop Antenna	EMCO	6502	00056620	30 Dec 2017	31 Dec 2018	1Year
Biconical Antenna	Rohde & Schwarz	HK116	837414/004	18 Sep 2016	19 Sep 2018	2Years
Log Periodic Antenna	Teseq	UPA6109	43666	28 Sep 2016	29 Sep 2018	2Years
Coaxial Cable	Schaffner	RG 213/U	N/A	09 May 2018	10 May 2019	1Year
Coaxial Cable	Suhner	RG 214/U	N/A	09 May 2018	10 May 2019	1Year
LISN	Rohde & Schwarz	ENV216	101232	20 Nov 2017	21 Nov 2018	1Year
Coaxial Cable	Tyco Electronics	RG58C/U	NA	23 Oct 2017	24 Oct 2018	1Year

Supporting equipment:

1) USB dummy loading 1A (submitted by applicant)
2) USB dummy loading 2.4A (submitted by applicant)
3) Wirelss dummy loading 10W (submitted by applicant)

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2.5 Measurement Uncertainty

The reported uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2, providing a level of confidence of approximately 95%.

Radiated emissions

Frequency	Uncertainty (U_{lab})
30MHz ~ 200MHz (Horizontal)	4.59dB
30MHz ~ 200MHz (Vertical)	4.49dB
200MHz ~1000MHz (Horizontal)	4.94dB
200MHz ~1000MHz (Vertical)	4.97dB
1GHz ~6GHz	4.52dB
6GHz ~18GHz	4.58dB

Line-conducted emissions

Frequency	Uncertainty (U_{lab})
150kHz~30MHz	2.80dB

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3 Description of the emission test

3.1 Test Procedure

Radiated emissions measurements are investigated and taken pursuant to the procedures of ANSI C63.10 – 2013.

The equipment under test (EUT) was placed on a non-conductive turntable with dimensions of 1.5m x 0.4m and 0.8m high above the ground for below 1GHz measurement and 1.5m high above the ground for above 1GHz measurement. 3m from the EUT, a broadband antenna mounting on the mast received the signal strength. The turntable was rotated to maximize the emission level. The antenna was then moving along the mast from 1m up to 4m until no more higher value was found. Both horizontal and vertical polarization of the antenna were placed and investigated.

For below 30MHz, a loop antenna with its vertical plane is placed 3m from the EUT and rotated about its vertical axis for maximum response at each azimuth about the EUT. And the centre of the loop shall be 1 m above the ground.

For 30MHz to 200MHz, biconical antenna with its vertical and horizontal plane is placed 3m from the EUT and rotated about its vertical and horizontal axis for maximum response at each azimuth about the EUT. And the reference point of antenna shall be 1 m above the ground. Same procedure for frequency 200MHz to 1000MHz but Log-periodic antenna is used for final measurements.

For above 1GHz, horn antenna with its vertical and horizontal plane is placed 3m from the EUT and rotated about its vertical and horizontal axis for maximum response at each azimuth about the EUT.

The device was rotated through three orthogonal axes to determine which attitude and configuration produce the highest emission during measurement.

The Radio Frequencies from fundamental up to the tenth harmonics were investigated, and emissions more 20dB below limit were not reported.

A dummy wireless and USB loading were used for measurements.

Test Result:

It was found that the EUT meet the FCC requirement.

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3.2 Radiated Emission Measurement Data

Measurement Data

Radiated emission

pursuant to

the requirement of FCC Part 15 section 15.209

Mode: Wireless and USB charging

Environmental conditions
Ambient temperature : 26.2
Relative humidity : 63.4%
Frequency range : Below 30MHz

Frequency (kHz)	Antenna Polarity (H/V)	Reading at 3m (dBμV)	Antenna Factor and Cable Loss (dB/m)	Peak Field Strength at 3m (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)	Detector
146.734	H	62.4	11.5	73.9	104.4	-30.5	PK
290.468	H	49.0	11.4	60.4	98.3	-37.9	PK
435.702	H	35.5	11.4	46.9	94.8	-47.9	PK
580.936	H	30.4	11.4	41.8	52.3	-10.5	PK
726.170	H	30.5	11.5	41.9	50.4	-8.5	PK
871.404	H	31.3	11.5	42.8	48.8	-6.0	PK
1016.638	H	25.7	11.5	37.2	47.5	-10.3	PK
1161.872	H	24.8	11.5	36.3	46.3	-10.0	PK
1307.106	H	25.8	11.5	37.3	45.3	-8.0	PK
1452.340	V	23.4	11.5	34.9	44.4	-9.5	PK

Remark:
1) Peak Detector data was measured unless otherwise stated
2) Other emissions more than 20dB margin are not reported in this report.
3) The limit at specified distance
For 300m measurement distance = Limit + 80dB below 0.49 MHz
For 30m measurement distance = Limit + 40 dB between 0.49 MHz - 30 MHz

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Measurement Data

Radiated emission

pursuant to

the requirement of FCC Part 15 section 15.209

Mode: Wireless and USB charging

Environmental conditions
Ambient temperature : 26.2
Relative humidity : 63.4%
Frequency range : 30MHz – 1000MHz

Frequency (MHz)	Antenna Polarity (H/V)	Reading at 3m (dBμV)	Antenna Factor and Cable Loss (dB/m)	Peak Field Strength at 3m (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)	Detector
34.445	V	22.0	14.6	36.6	40.0	-3.4	PK
34.831	H	20.7	14.6	35.3	40.0	-4.7	PK
*118.671	H	25.5	11.4	36.9	43.5	-6.6	PK
*119.329	V	24.0	11.4	35.4	43.5	-8.1	PK
229.411	H	16.8	17.1	33.9	46.0	-12.1	PK
*273.305	V	12.2	19.2	31.4	46.0	-14.6	PK
*281.721	H	13.5	21.2	34.7	46.0	-11.3	PK

Remark:
1) * means emissions appearing within the restricted bands shall follow the requirement of section 15.205.
2) Peak Detector data was measured unless otherwise stated
3) Other emissions more than 20dB margin are not reported in this report.

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3.3 Average Factor

Not applicable

3.4 Transmission time

Not applicable

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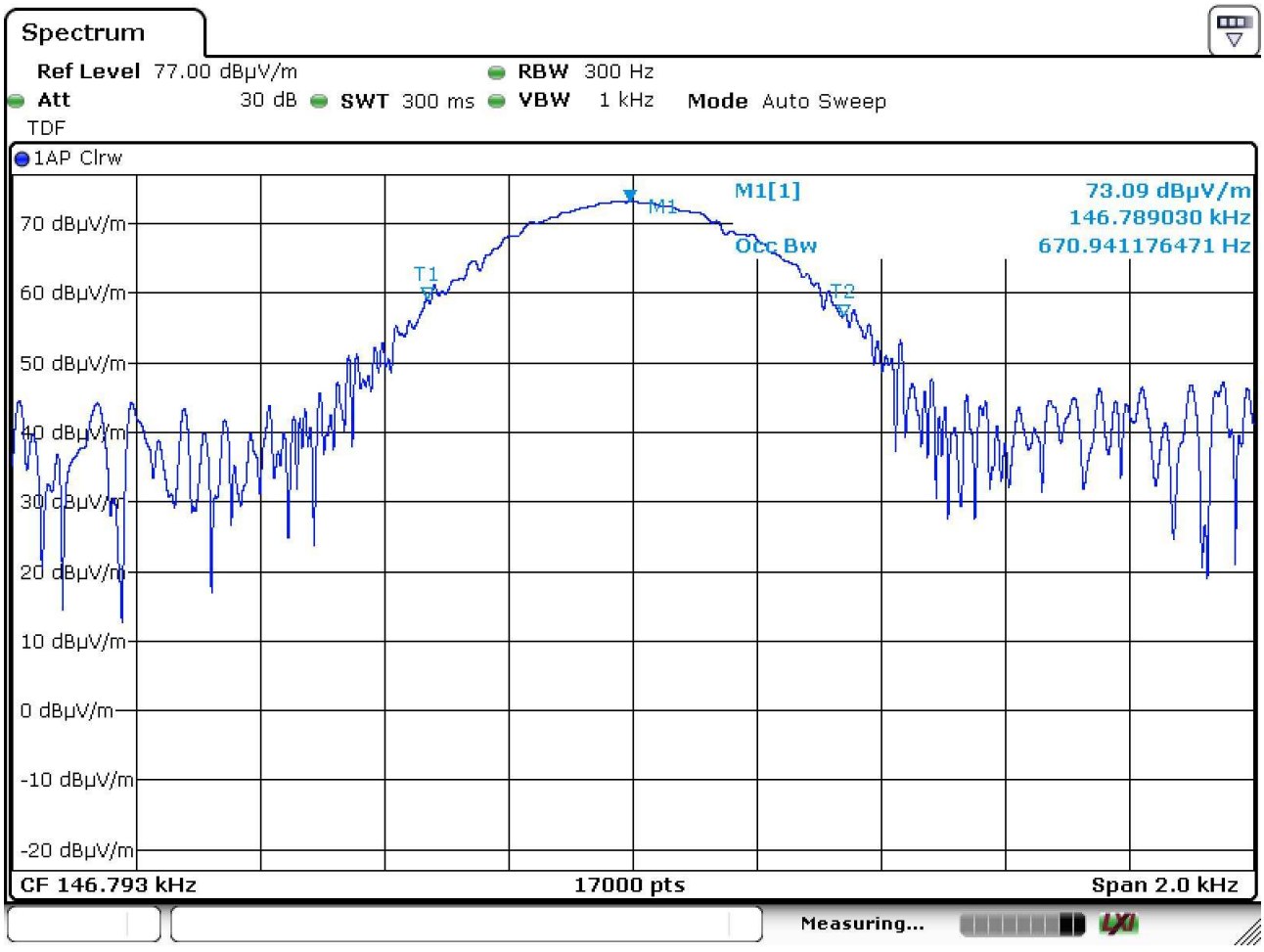
3.5 Occupied bandwidth – power bandwidth (99%)

Operation mode: Wireless charging with loading



Date: 24.JAN.2019 16:36:28

FCC ID: 2ADLI-NSC-GF-WW

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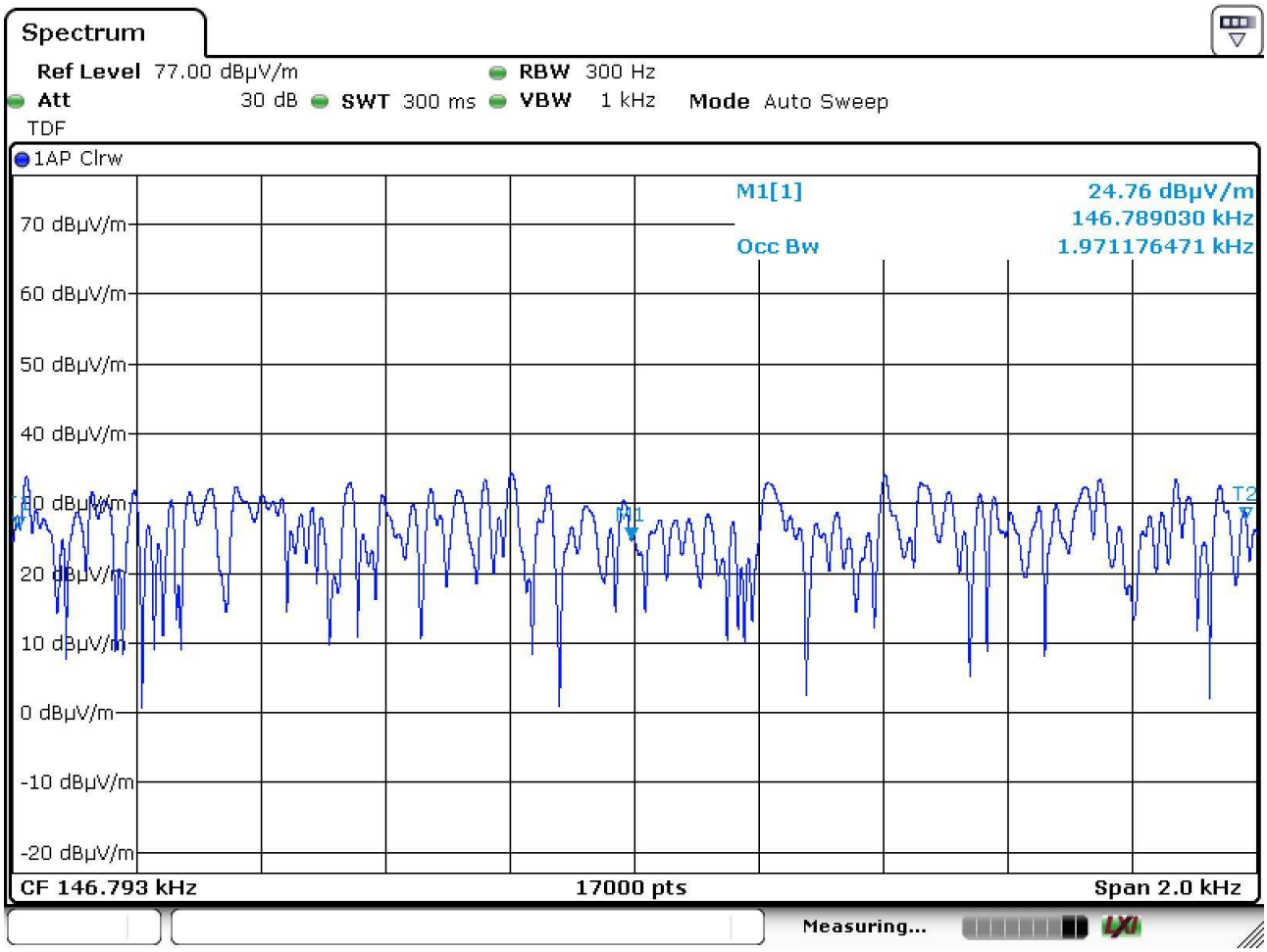
Operation mode: Standby without loading



Date: 24.JAN.2019 16:37:19

FCC ID: 2ADLI-NSC-GF-WW

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4 Description of the Line-conducted Test

4.1 Test Procedure

Conducted emissions measurements are investigated and also taken pursuant to the procedures of ANSI C63.4 – 2014 and ANSI C63.10 – 2013. The EUT was setup as described in the procedures, and both lines were measured.

4.2 Test Result

Pass.

4.3 Graph and Table of Conducted Emission Measurement Data

Refer to next pages.

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Graph and table

of

Conducted emission measurement data

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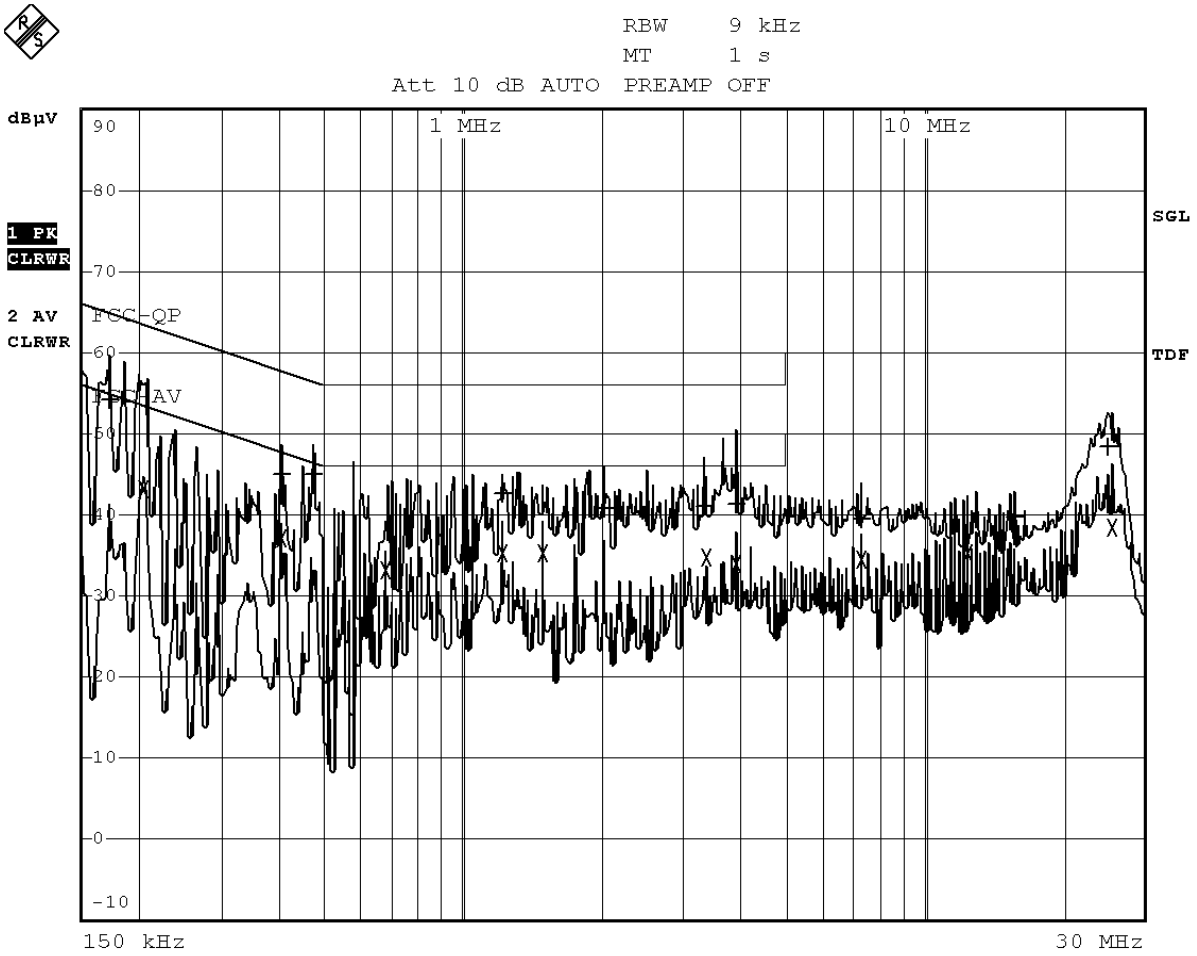
Measurement Data (Graph)

Conducted emission

pursuant to

the requirement of FCC Part 15

Mode: Wireless and USB charging



FCC ID: 2ADLI-NSC-GF-WW

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Measurement Data (Data)

Conducted emission

pursuant to

the requirement of FCC Part 15

Mode: Wireless and USB charging

EDIT PEAK LIST (Final Measurement Results)			
Trace1:	FCC-QP		
Trace2:	FCC-AV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
1 Quasi Peak	172.5 kHz	54.17 L1 gnd	-10.66
2 Average	204 kHz	43.25 L1 gnd	-10.19
1 Quasi Peak	406.5 kHz	44.93 L1 gnd	-12.78
2 Average	406.5 kHz	37.09 L1 gnd	-10.62
1 Quasi Peak	478.5 kHz	44.98 L1 gnd	-11.38
2 Average	680 kHz	33.21 L1 gnd	-12.78
1 Quasi Peak	1.22 MHz	42.58 L1 gnd	-13.41
2 Average	1.22 MHz	35.39 L1 gnd	-10.60
2 Average	1.49 MHz	35.28 L1 gnd	-10.71
1 Quasi Peak	2.0255 MHz	40.79 N gnd	-15.20
1 Quasi Peak	3.3575 MHz	41.13 L1 gnd	-14.86
2 Average	3.3845 MHz	34.82 L1 gnd	-11.17
1 Quasi Peak	3.929 MHz	41.23 L1 gnd	-14.76
2 Average	3.929 MHz	33.84 L1 gnd	-12.15
1 Quasi Peak	7.313 MHz	39.47 L1 gnd	-20.52
2 Average	7.313 MHz	34.39 L1 gnd	-15.60
2 Average	12.461 MHz	35.20 L1 gnd	-14.79
1 Quasi Peak	15.71 MHz	39.71 N gnd	-20.28
1 Quasi Peak	25.052 MHz	48.51 N gnd	-11.48
2 Average	25.592 MHz	38.54 L1 gnd	-11.46

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5 Photograph

5.1 Photographs of the Test Setup for Radiated Emission and Conducted Emission

For electronic filing, the photos are saved with filename 2ADLI-NSC-GF-WW Test Setup Photo.pdf.

5.2 Photographs of the External and Internal Configurations of the EUT

For electronic filing, the photos are saved with filename 2ADLI-NSC-GF-WW External Photo.pdf and 2ADLI-NSC-GF-WW Internal Photo.pdf.

5.3 Antenna requirement

The Internal Photo shows a coupling coil is permanently attached inside of EUT and cannot be changed. Therefore it fulfils the section 15.203 requirement.

***** End of Report *****

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