

TEST REPORT



DT&C Co., Ltd.

42, Yurim-ro, 154beon-gil, Cheoin-gu, Yongin-si, Gyeonggi-do, Korea 17042
Tel : 031-321-2664, Fax : 031-321-1664

1. Report No. : DREFCC1904-0116(1)
2. Client / Applicant
 - Name : LG Electronics USA, Inc.
 - Address : 1000 Sylvan Avenue Englewood Cliffs, New Jersey, United States 07632
3. Use of Report : Grant of Certification
4. Product Name / Model Name / FCC ID : Mobile Phone / LM-X525EAW / ZNFX525EAW
5. Test Standard : ANSI C 63.4 : 2014
FCC Part 15 Subpart B
(Class B personal computers and peripherals)
6. Date of Test : Mar. 12. 2019
7. Testing Environment : Temperature (19 ~ 21) °C , Humidity (42 ~ 45) % R.H.
8. Test Result : Refer to the attached Test Result

Affirmation	Tested by	Reviewed by
	Name : ChanGeun Lee (Signature)	Name : DaeHwa Eun (Signature)

The test results presented in this test report are limited only to the sample supplied by applicant and the use of this test report is inhibited other than its purpose.

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Apr. 25. 2019

DT&C Co., Ltd.

If this report is required to confirmation of authenticity, please contact to report@dtnc.net

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1. General Remarks

This report contains the result of tests performed by :

DT&C Co., Ltd.

42, Yurim-ro, 154beon-gil, Cheoin-gu, Yongin-si, Gyeonggi-do, Korea 17042

<http://www.dtnc.net>

Tel: +82-31-321-2664 Fax: +82-31-321-1664

2. Test Laboratory

DT&C Co., Ltd. has been accredited / filed / authorized by the agencies listed in the following table;

Certificate	Nation	Agency	Code	Remark
Accreditation	Korea	KOLAS	393	ISO/IEC 17025
	South Africa	SABS	0006	ISO/IEC 17025
	Ghana	NCA	NCA agreement 23rd,Oct,2018	-
Site Filing	USA	FCC	KR0034 101842 678747, 596748, 804488, 165783	Accredited 2.948 Listed
	Canada	IC	5740A-3 5740A-4	Registered
	Japan	VCCI	C-1427 R-1364, R-3385, R-4076, R-4180, R-4496, T-1442, G-10338, G-754, G-10815	Registered
Certification	Korea	KC	KR0034	Designation
	Germany	TUV	CARAT 089112 0006 Rev.00	ISO/IEC 17025
	Russia	RMRS	17.10189.296	ISO/IEC 17025

Quality control in the testing laboratory is implemented as per ISO/IEC 17025 which is the "General requirements for the competent of calibration and testing laboratory".

3. General Information of EUT

Applicant	LG Electronics USA, Inc. 1000 Sylvan Avenue Englewood Cliffs, New Jersey, United States 07632
Manufacturer	LG Electronics USA, Inc. 1000 Sylvan Avenue Englewood Cliffs, New Jersey, United States 07632
Factory	LG Electronics USA, Inc. 1000 Sylvan Avenue Englewood Cliffs, New Jersey, United States 07632
Product Name	Mobile Phone
Model Name	LM-X525EAW
Add Model Name	LMX525EAW, X525EAW, LM-X520EMW, LMX520EMW, X520EMW
FCC ID	ZNFX525EAW
Rated Power	DC 4 V
Remarks	Earphone 1. Manufacturer : CRESYN 2. P/N : EAB64468444 USB Cable 1. Manufacturer : NINGBO 2. P/N : EAD62377927

Related Submittal(s) / Grant(s)
Original submittal only

4. EUT Operations and Test Configurations

4.1 Principle of Configuration Selection

Emission :

The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the instructions for use. For each testing mode different configurations were used, Refer to the individual tests.

4.2 EUT Operation Mode

No.	Mode	Description
1	'READ' & 'WRITE' & 'DELETE'	The EUT is reading, writing, and erasing internal storage

4.3 Test Configuration Mode

No.	Mode	Description
1	PC LINK	EUT was connected PC by USB cable and continuously operated

4.4 Supported Equipment

Used*	Product Type	Manufacturer	Model	Remarks
AE	KEYBOARD	Microsoft	1406	20076223340
AE	MOUSE	LG	SM-9023	58Q02801
AE	LCD MONITOR	DELL	UP2414Qt	CN-OJJRX2-74261-67B-4P4U-A00
AE	PC	DELL	DCNE	N/A
AE	SSD 3.0	SAMSUNG	MU-PT250B	S2WKNAAH32059X
AE	PRINTER	Bixelon	SRP-770	N/A
AE	Headset	SAMSUNG	SHS-150V/M	N/A

*Abbreviations:

AE - Auxiliary/Associated Equipment, or
SIM - Simulator

4.5 EUT In/Output Port

Name	Type*	Cable Max. >3 m	Cable Shielded	Cable Back shell	Remarks
USB	I/O	1.7	Shield	Plastic	KEYBOARD
USB	I/O	1.7	Shield	Plastic	MOUSE
POWER IN	AC	1.8	Non-Shield	Plastic	LCD MONITOR
DSUB OUT	I/O	1.8	Shield	Plastic	
POWER IN	AC	1.8	Non-Shield	Plastic	PC
DSUB IN	I/O	1.8	Shield	Plastic	
PARALLEL IN	I/O	2.0	Shield	Plastic	
SERIAL IN	I/O	1.9	Shield	Plastic	
USB	I/O	1.7	Shield	Plastic	
USB	I/O	1.7	Shield	Plastic	
USB	I/O	1.0	Shield	Plastic	
USB	I/O	1.0	Shield	Plastic	
STEREO IN/OUT	I/O	2.0	Non-Shield	Plastic	
USB	I/O	1.0	Shield	Plastic	SSD 3.0
PARALLEL OUT	I/O	2.0	Shield	Plastic	PRINTER
SERIAL OUT	I/O	1.9	Shield	Plastic	
STEREO IN/OUT	I/O	2.0	Non-Shield	Plastic	Headset
AUX	I/O	1.8	Non-Shield	Plastic	EUT
USB	I/O	1.0	Non-Shield	Plastic	
*Abbreviations: AC = AC Power Port DC = DC Power Port N/E = Non-Electrical I/O = Signal Input or Output Port TP = Telecommunication Ports					

4.6 Test Voltage and Frequency

Case	Voltage (V)	Frequency (Hz)	Phases	Remarks
1	AC 120	60	Single	None

5. Test Summary

Test Items	Applied Standards	Results
Conducted Disturbance	ANSI C63.4 : 2014	C
Radiated Disturbance	ANSI C63.4 : 2014	C
C=Comply N/C=Not Comply N/T=Not Tested N/A=Not Applicable		

-Conducted Disturbance

Frequency [MHz]	Phase	Result [dB μ V]	Detector	Limit [dB μ V]	Margin [dB]
0.20271	N	49.53	CAV	53.50	3.97

-Radiated Disturbance

Frequency [MHz]	Pol.	Result [dB μ V/m]	Detector	Limit [dB μ V/m]	Margin [dB]
149.914	H	40.10	QP	43.50	3.40

6. Test Environment

Test Items	Test date (YYYY-MM-DD)	Temp. (°C)	Humidity (% R.H.)	Pressure (kPa)
Conducted Disturbance	2019-03-12	19	42	100.6
Radiated Disturbance	2019-03-12	21	43	-
	2019-03-12	20	44	
	2019-03-12	21	45	

7. Test Results : Emission

7.1 Conducted Disturbance

ANSI C63.4	Mains terminal disturbance voltage	Result
<p>Method: The AMN placed 0,8 m from the boundary of the unit under test and bonded to a ground reference plane. This distance was between the closest points of the AMN and the EUT. All other units of the EUT and associated equipment were at least 0,8 m from the AMN. All power was connected to the system through Artificial Mains Network (AMN). Conducted voltage measurements on mains lines were made at the output of the AMN. The measuring port of the LISN for EUT was connected to spectrum analyzer. Using conducted emission test software, the emissions were scanned with peak detector mode. After scanning over the frequency range, suspected emissions were selected to perform final measurement. When performing final measurement, the receiver was used which has Quasi-Peak detector and CISPR Average detector. For (0.15 ~ 30) MHz frequency range, Quasi-Peak detector with 10 kHz RBW and 30 kHz VBW was used. By varying the configuration of the test sample and the cable routing it was attempted to maximize the emission.</p>		Comply
Fully configured sample scanned over the following frequency range	Frequency range on each side of line	Measurement Point
	150 kHz to 30 MHz	Mains
EUT mode (Refer to clauses 4)	Test configuration mode	1
	EUT Operation mode	1
Limits – Class A		
Frequency (MHz)	Limit dB μ V	
	Quasi-Peak	Average
0.15 to 0.50	79	66
0.50 to 30	73	60
Limits – Class B		
Frequency (MHz)	Limit dB μ V	
	Quasi-Peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5	56	46
5 to 30	60	50

Measurement Instrument					
Description	Model	Manufacturer	Identifier	Cal. Date	Cal. Due
MEASUREMENT SOFTWARE	EMI-C VER. 2.00.0171	TSJ	N/A	N/A	N/A
EMI TEST RECEIVER	ESR7	ROHDE & SCHWARZ	101109	2018.10.29	2019.10.29
LISN	ENV216	ROHDE & SCHWARZ	101979	2018.12.06	2019.12.06
LISN	LISN1600	TTI	197204	2018.06.07	2019.06.07
TRANSIENT LIMITER	TL-B0930A	EMCIS	11002	2018.09.05	2019.09.05
50 OHM TERMINATOR	CT-01	TME	N/A	2018.12.19	2019.12.19

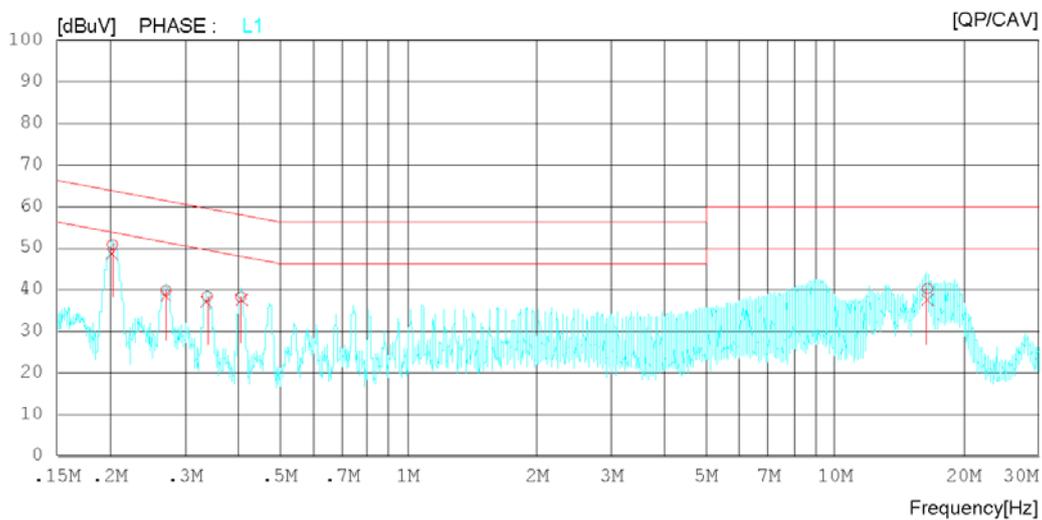
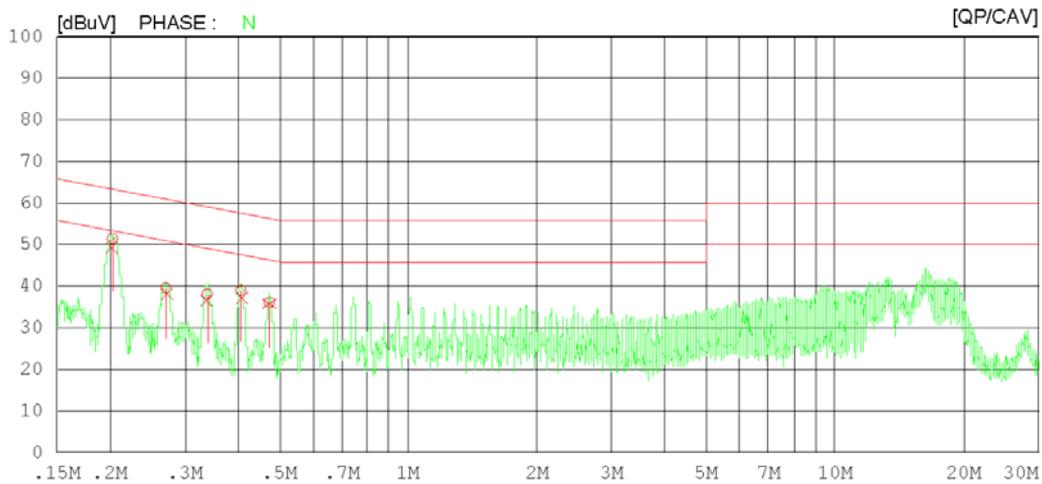
Mains terminal disturbance voltage _ Measurement data			
Test configuration mode	1	EUT Operation mode	1
Test voltage (V)	120	Test Frequency (Hz)	60

Results of Conducted Emission

DT&C
Date 2019-03-12

Order No.	DTNC1902-01424
Power Supply	120 VAC 60 Hz
Temp/Humi/Atm	19 °C 42 % R.H. 100.6 kPa
Test Condition	PC Link

LIMIT : CISPR32_B QP
CISPR32_B AV



Results of Conducted Emission

DT&C
Date 2019-03-12

Order No. DTNC1902-01424
 Power Supply 120 VAC 60 Hz
 Temp/Humi/Atm 19 °C 42 % R.H. 100.6 kPa
 Test Condition PC Link

LIMIT : CISPR32_B QP
 CISPR32_B AV

NO	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dBuV]	CAV [dBuV]		QP [dBuV]	CAV [dBuV]	QP [dBuV]	CAV [dBuV]	QP [dBuV]	CAV [dBuV]	
1	0.20271	31.51	29.51	20.02	51.53	49.53	63.50	53.50	11.97	3.97	N
2	0.27046	19.80	18.34	19.80	39.60	38.14	61.10	51.10	21.50	12.96	N
3	0.33791	18.29	16.89	19.91	38.20	36.80	59.25	49.25	21.05	12.45	N
4	0.40546	18.96	17.32	20.03	38.99	37.35	57.74	47.74	18.75	10.39	N
5	0.47307	16.16	15.81	20.03	36.19	35.84	56.46	46.46	20.27	10.62	N
6	0.20275	30.67	28.68	20.02	50.69	48.70	63.50	53.50	12.81	4.80	L1
7	0.27033	19.86	18.54	19.80	39.66	38.34	61.11	51.11	21.45	12.77	L1
8	0.33789	18.37	17.10	19.91	38.28	37.01	59.26	49.26	20.98	12.25	L1
9	0.40551	18.13	17.47	20.03	38.16	37.50	57.74	47.74	19.58	10.24	L1
10	16.49174	19.12	16.21	21.02	40.14	37.23	60.00	50.00	19.86	12.77	L1

Calculation

N : Neutral phase, L1 : Live phase
C.FACTOR(dB) : Pulse Limiter(dB) + Cable loss(dB) + Insertion loss of LISN(dB)
Result(dBμV) : Reading Value(dBμV) + C.FACTOR(dB)
Margin(dB) : Limit(dBμV) - Result(dBμV)

7.2 Radiated Disturbance

ANSI C63.4	Radiated disturbance 30 MHz – 40 GHz			Result
Method: Preliminary (peak) measurements were performed at an antenna to EUT separation distance of 10 or 3 meter below 1GHz and 3 meter above 1GHz. The EUT was rotated 360° about its azimuth with the receive antenna located at various heights in horizontal and vertical polarities. Final measurements were then performed by rotating the EUT 360° and adjusting the receive antenna height from 1 to 4 m. All frequencies were investigated in both horizontal and vertical antenna polarity, where applicable. For final measurement below 1 GHz frequency range, Quasi-Peak detector with (RBW = 120 kHz Bandwidth) was used. For final measurement above 1 GHz frequency range, Peak detector with (RBW = 1 MHz Bandwidth) and CISPR Average detector with (RBW = 1 MHz Bandwidth) were used.				Comply
EUT mode (Refer to clauses 4)	Test configuration mode		1	
	EUT Operation mode		1	
Radiated Disturbance below 1 000 MHz				
Frequency range (MHz)	Quasi-peak limit dB μ V/m			
	Class A (10 m distance)		Class B (3 m distance)	
30 to 88	39.1		40	
88 to 216	43.5		43.5	
216 to 960	46.4		46	
960 to 1 000	49.5		54	
According to 15.109(g), as an alternative to the radiated emission limit shown above, digital devices may be shown to comply with the standards contained in Third Edition of the International Special Committee on Radio Interference (CISPR), Pub. 22 shown.				
Frequency range (MHz)	Quasi-peak limit dB μ V/m			
	Class A (10 m distance)		Class B (10 m distance)	
30 to 230	40		30	
230 to 1 000	47		37	
Radiated Disturbance for above 1 000 MHz at a measurement distance of 3 m				
Frequency range (GHz)	Peak limit dB μ V/m		Average limit dB μ V/m	
	Class A	Class B	Class A	Class B
1 to 40	80	74	60	54
The test frequency range of Radiated Disturbance measurements are listed below.				
Highest frequency generated or used in the device or on which the device operates or tunes (MHz)			Upper frequency of measurement range (MHz)	
Below 108			1 000	
108 – 500			2 000	
500 – 1 000			5 000	
Above 1 000			5 th harmonic of the highest frequency or 40 GHz, whichever is lower	

Measurement Instrument					
Description	Model	Manufacturer	Identifier	Cal. Date	Cal. Due
MEASUREMENT SOFTWARE	EMI-R VER. 2.00.0177	TSJ	N/A	N/A	N/A
EMI TEST RECEIVER	ESU	ROHDE&SCHWARZ	100469	2018.06.28	2019.06.28
TRILOG BROADBAND TEST-ANTENNA	VULB9160	SCHWARZBECK	9160-3339	2018.10.22	2020.10.22
6DB ATTENUATOR	8491B	HP	18403	2018.10.22	2020.10.22
LOW NOISE PRE AMPLIFIER	MLA-100K01-B01-26	TSJ	1252741	2019.02.18	2020.02.18
PRE AMPLIFIER	8449B	H.P	3008A00887	2018.08.31	2019.08.31
HORN ANTENNA	3117	ETS-LINDGREN	00152093	2018.03.26	2020.03.26
HORN ANTENNA WITH PREAMPLIFIER	EM-6969	ELECTRO-METRICS	156	2019.02.13	2021.02.13
	MLA-0618-B03-34	TSJ	1785642	2019.01.02	2020.01.02
HORN ANTENNA WITH PREAMPLIFIER	JS44-18004000-35-8P	L3 NARDA-MITEQ	2046884	2018.11.09	2019.11.09
	3116C	ETS-LINDGREN	00213177	2017.12.05	2019.12.05

(NOTE : THE MEASUREMENT ANTENNAS WERE CALIBRATED IN ACCORDANCE TO THE REQUIREMENTS OF C63.5-2017.)

Radiated disturbance at (30 ~ 1000) MHz _ Measurement data			
Test configuration mode	1	EUT Operation mode	1
Test voltage (V)	120	Test Frequency (Hz)	60

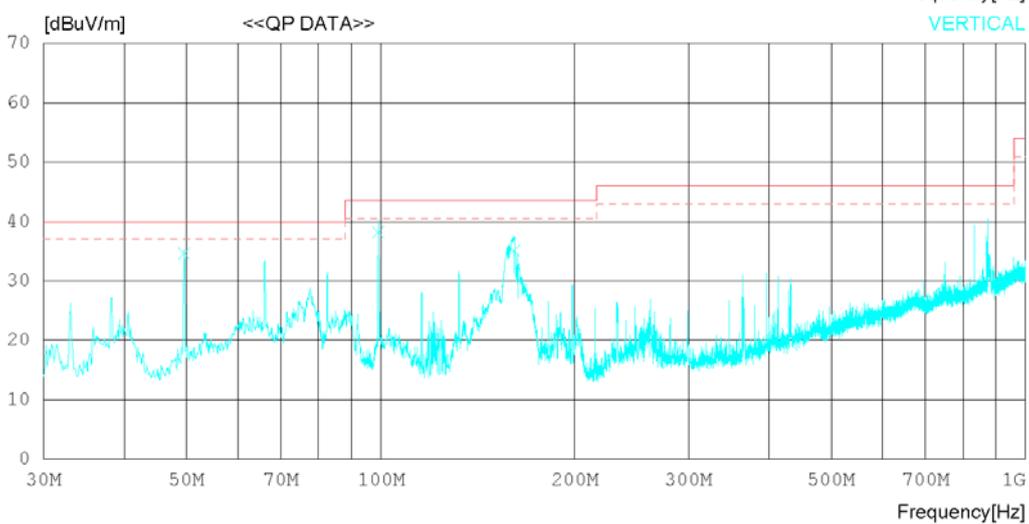
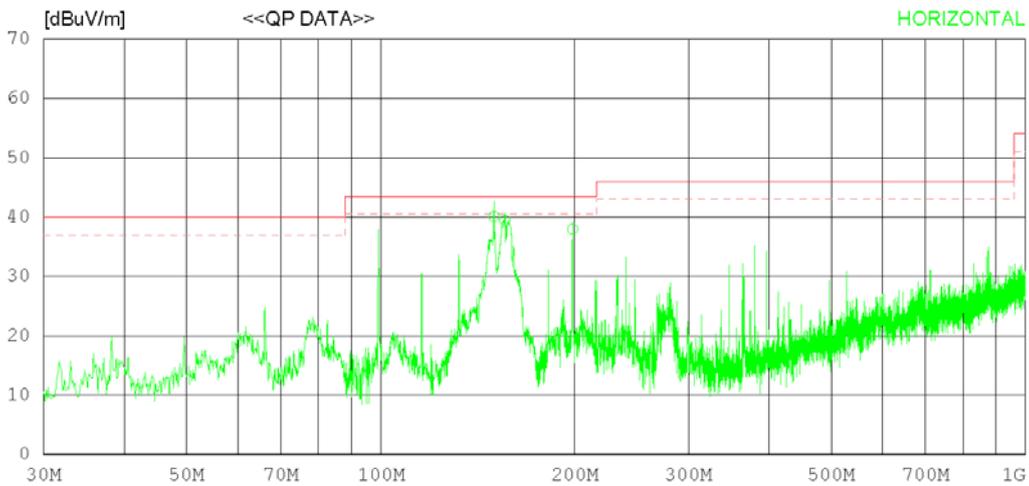
RADIATED EMISSION

Date 2019-03-12

Order No. DTNC1902-01424
 Power Supply 120 VAC 60 Hz
 Temp/Humi 21 °C 43 % R.H.
 Test Condition PC Link

Memo

LIMIT : FCC Part15 Subpart.B Class B (3m)
 MARGIN: 3 dB



RADIATED EMISSION

Date 2019-03-12

Order No. DTNC1902-01424
 Power Supply 120 VAC 60 Hz
 Temp/Humi 21 °C 43 % R.H.
 Test Condition PC Link

Memo

LIMIT : FCC Part15 Subpart.B Class B (3m)
 MARGIN: 3 dB

No.	FREQ [MHz]	READING QP [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal -----										
1	149.914	43.90	18.90	2.97	25.67	40.10	43.50	3.40	275	44
2	155.855	43.20	18.90	3.00	25.66	39.44	43.50	4.06	328	313
3	198.412	44.20	16.10	3.27	25.60	37.97	43.50	5.53	194	355
----- Vertical -----										
4	49.521	40.10	18.25	2.10	25.80	34.65	40.00	5.35	393	311
5	99.111	46.20	15.12	2.60	25.70	38.22	43.50	5.28	344	357
6	160.947	38.90	18.82	3.01	25.65	35.08	43.50	8.42	114	178

Radiated disturbance at (1 ~ 6) GHz _ Peak measurement data			
Test configuration mode	1	EUT Operation mode	1
Test voltage (V)	120	Test Frequency (Hz)	60

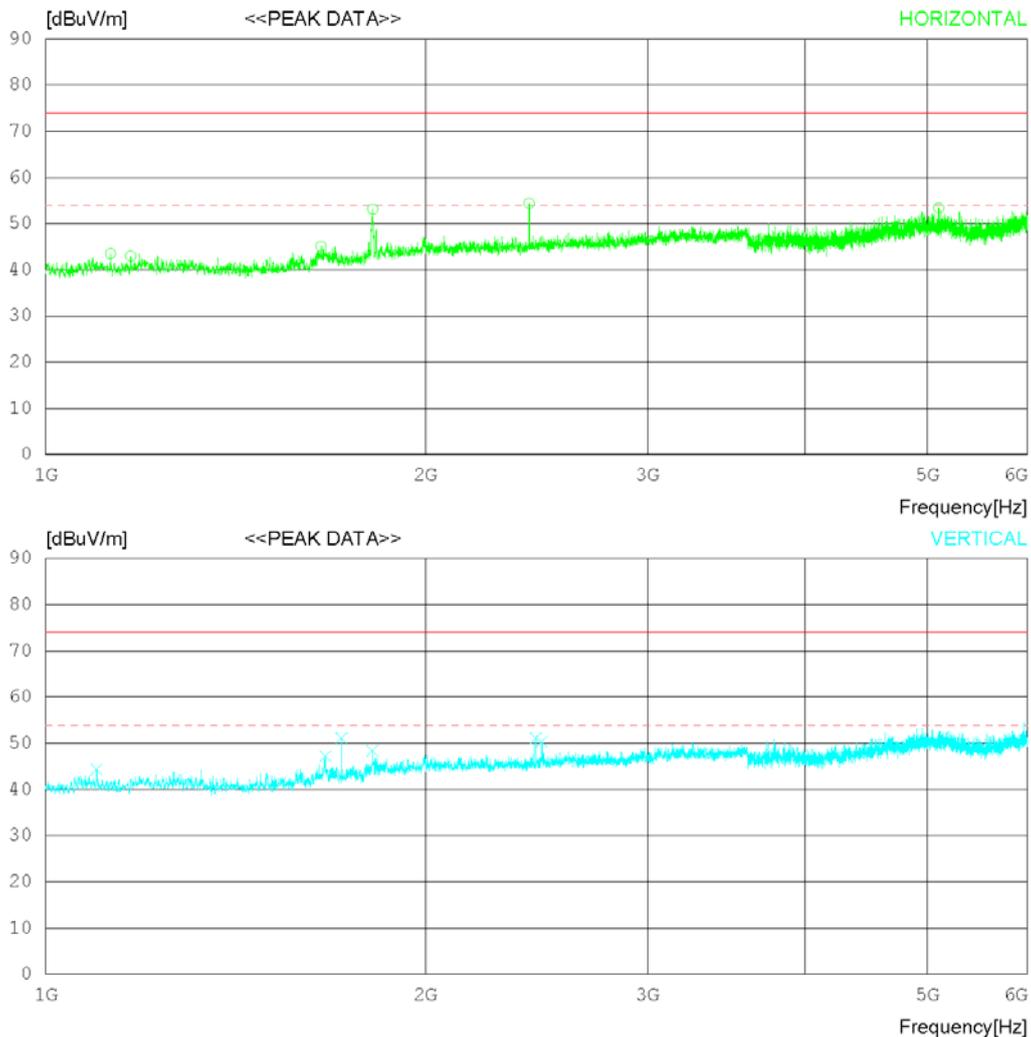
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Date 2019-03-12

Order No.	DTNC1902-01424
Power Supply	120 VAC 60 Hz
Temp/Humi	20 °C 44 % R.H.
Test Condition	PC Link

Memo

LIMIT : FCC Part15 Subpart.B Class B (3m) - GHz(Peak)
 FCC Part15 Subpart.B Class B (3m) - GHz(Average)



RADIATED EMISSION

Date 2019-03-12

Order No.	DTNC1902-01424
Power Supply	120 VAC 60 Hz
Temp/Humi	20 °C 44 % R.H.
Test Condition	PC Link

Memo

 LIMIT : FCC Part15 Subpart.B Class B (3m) - GHz(Peak)
 FCC Part15 Subpart.B Class B (3m) - GHz(Average)

No.	FREQ [MHz]	READING PEAK [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal -----										
1	1125.625	45.70	28.05	5.45	35.72	43.48	74.0	30.52	235	131
2	1168.125	44.80	28.35	5.50	35.68	42.97	74.0	31.03	196	131
3	1652.500	45.50	28.91	5.90	35.18	45.13	74.0	28.87	245	131
4	1816.250	51.50	30.47	6.18	35.01	53.14	74.0	20.86	108	131
5	2416.875	50.30	31.90	7.03	34.83	54.40	74.0	19.6	124	111
6	5103.125	42.90	34.11	11.04	34.65	53.40	74.0	20.6	356	97
----- Vertical -----										
7	1097.500	46.80	27.97	5.42	35.75	44.44	74.0	29.56	119	352
8	1666.250	47.50	28.93	5.93	35.16	47.20	74.0	26.8	129	352
9	1715.625	51.00	29.19	6.00	35.11	51.08	74.0	22.92	111	352
10	1815.625	46.80	30.46	6.18	35.01	48.43	74.0	25.57	174	352
11	2446.875	46.80	32.08	7.05	34.83	51.10	74.0	22.9	119	352
12	2473.125	45.90	32.19	7.08	34.83	50.34	74.0	23.66	278	98

Radiated disturbance at (1 ~ 6) GHz _Average measurement data			
Test configuration mode	1	EUT Operation mode	1
Test voltage (V)	120	Test Frequency (Hz)	60

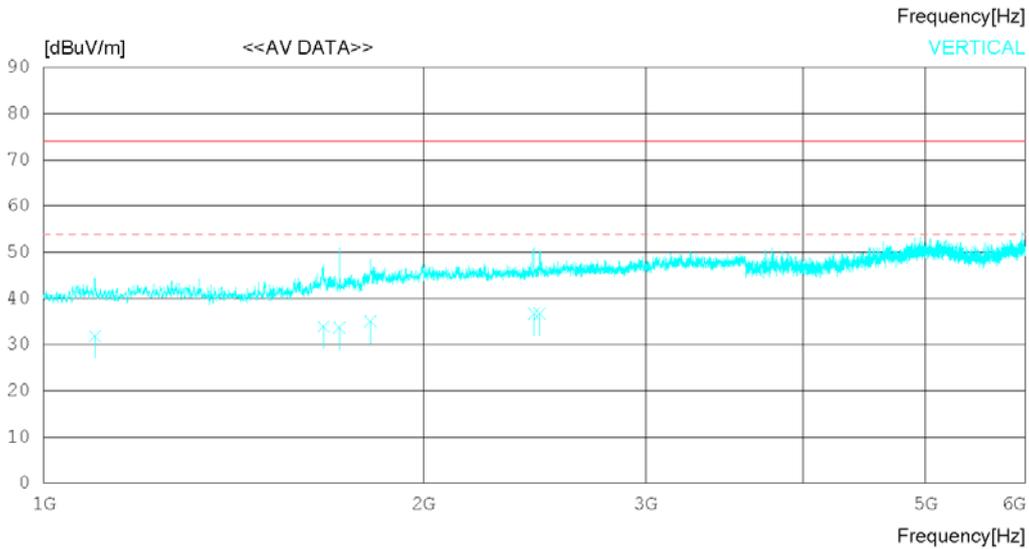
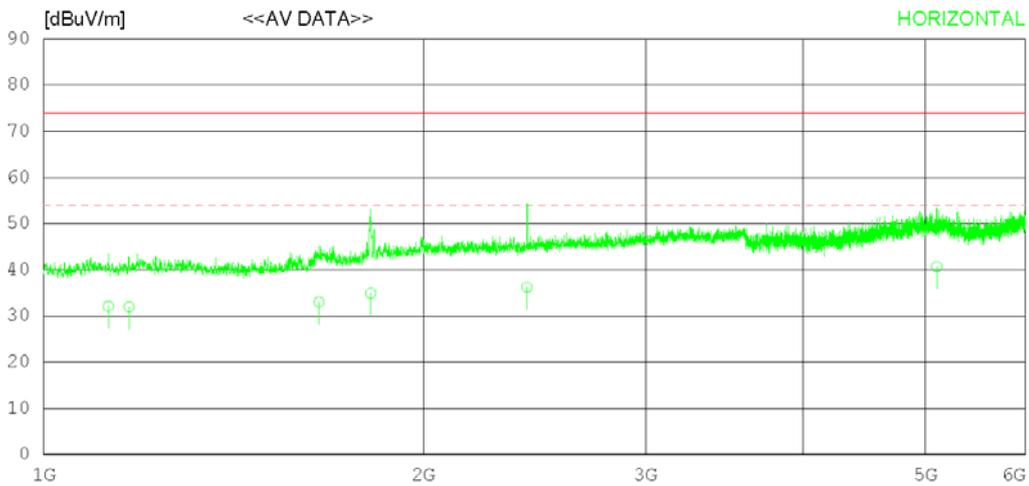
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 Power Supply 120 VAC 60 Hz
 Temp/Humi 20 °C 44 % R.H.
 Test Condition PC Link

Memo

LIMIT : FCC Part15 Subpart.B Class B (3m) - GHz(Average)
 FCC Part15 Subpart.B Class B (3m) - GHz(Peak)



RADIATED EMISSION

Date 2019-03-12

Order No.	DTNC1902-01424
Power Supply	120 VAC 60 Hz
Temp/Humi	20 °C 44 % R.H.
Test Condition	PC Link

Memo

 LIMIT : FCC Part15 Subpart.B Class B (3m) - GHz(Average)
 FCC Part15 Subpart.B Class B (3m) - GHz(Peak)

No.	FREQ [MHz]	READING CAV [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal -----										
1	1125.155	34.30	28.05	5.45	35.72	32.08	54.00	21.92	235	150
2	1168.625	33.80	28.36	5.50	35.68	31.98	54.00	22.02	197	121
3	1652.950	33.40	28.91	5.90	35.18	33.03	54.00	20.97	244	89
4	1816.370	33.30	30.47	6.18	35.01	34.94	54.00	19.06	108	127
5	2416.155	32.10	31.90	7.03	34.83	36.20	54.00	17.80	124	171
6	5103.845	30.20	34.11	11.04	34.65	40.70	54.00	13.30	356	110
----- Vertical -----										
7	1097.710	34.20	27.97	5.42	35.75	31.84	54.00	22.16	119	353
8	1666.290	34.20	28.93	5.93	35.16	33.90	54.00	20.10	129	354
9	1715.915	33.60	29.19	6.00	35.11	33.68	54.00	20.32	112	342
10	1815.215	33.40	30.46	6.18	35.01	35.03	54.00	18.97	175	356
11	2446.955	32.40	32.08	7.05	34.83	36.70	54.00	17.30	121	354
12	2473.215	32.30	32.19	7.08	34.83	36.74	54.00	17.26	278	110

Radiated disturbance at (6 ~ 18) GHz _Peak measurement data			
Test configuration mode	1	EUT Operation mode	1
Test voltage (V)	120	Test Frequency (Hz)	60

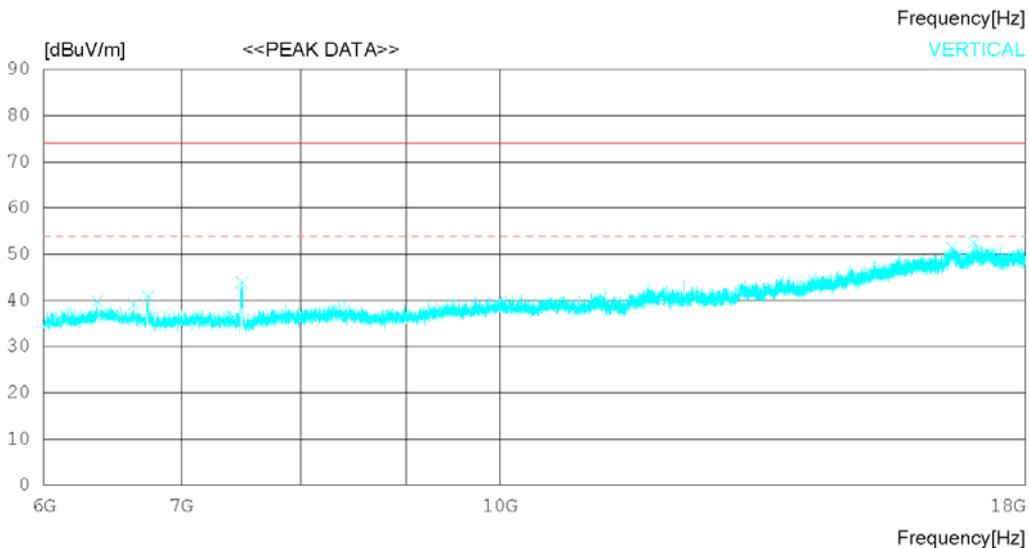
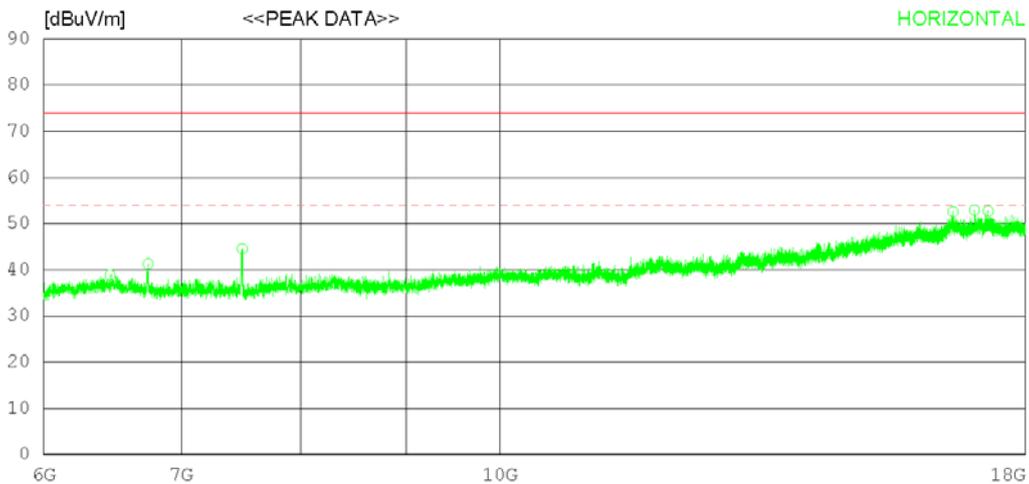
RADIATED EMISSION

Date 2019-03-12

Order No. DTNC1902-01424
 Power Supply 120 VAC 60 Hz
 Temp/Humi 21 °C 45 % R.H.
 Test Condition PC Link

Memo

LIMIT : FCC Part15 Subpart.B Class B (3m) - GHz(Peak)
 FCC Part15 Subpart.B Class B (3m) - GHz(Average)



* The measurement is performed above 18 GHz up to 40 GHz and not found emissions above 18 GHz.

RADIATED EMISSION

Date 2019-03-12

Order No.	DTNC1902-01424
Power Supply	120 VAC 60 Hz
Temp/Humi	21 °C 45 % R.H.
Test Condition	PC Link

Memo

 LIMIT : FCC Part15 Subpart.B Class B (3m) - GHz(Peak)
 FCC Part15 Subpart.B Class B (3m) - GHz(Average)

No.	FREQ [MHz]	READING PEAK [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal -----										
1	6462.750	34.70	31.60	11.19	38.57	38.92	74.0	35.08	109	0
2	6744.000	37.00	31.52	11.23	38.49	41.26	74.0	32.74	234	164
3	7493.250	39.60	31.38	11.87	38.33	44.52	74.0	29.48	108	358
4	16599.000	32.30	37.10	20.10	36.90	52.60	74.0	21.4	191	310
5	17001.750	32.40	37.55	20.21	37.26	52.90	74.0	21.1	163	267
6	17262.750	33.10	37.75	19.36	37.48	52.73	74.0	21.27	235	1
----- Vertical -----										
7	6374.250	35.80	31.62	11.13	38.68	39.87	74.0	34.13	111	291
8	6636.750	34.90	31.55	11.22	38.45	39.22	74.0	34.78	105	251
9	6742.500	36.60	31.52	11.23	38.49	40.86	74.0	33.14	201	358
10	7491.750	39.00	31.38	11.87	38.33	43.92	74.0	30.08	182	358
11	16583.250	31.20	37.08	20.01	36.88	51.41	74.0	22.59	139	1
12	16997.250	32.10	37.55	20.19	37.26	52.58	74.0	21.42	122	248

Radiated disturbance at (6 ~ 18) GHz _ Average measurement data			
Test configuration mode	1	EUT Operation mode	1
Test voltage (V)	120	Test Frequency (Hz)	60

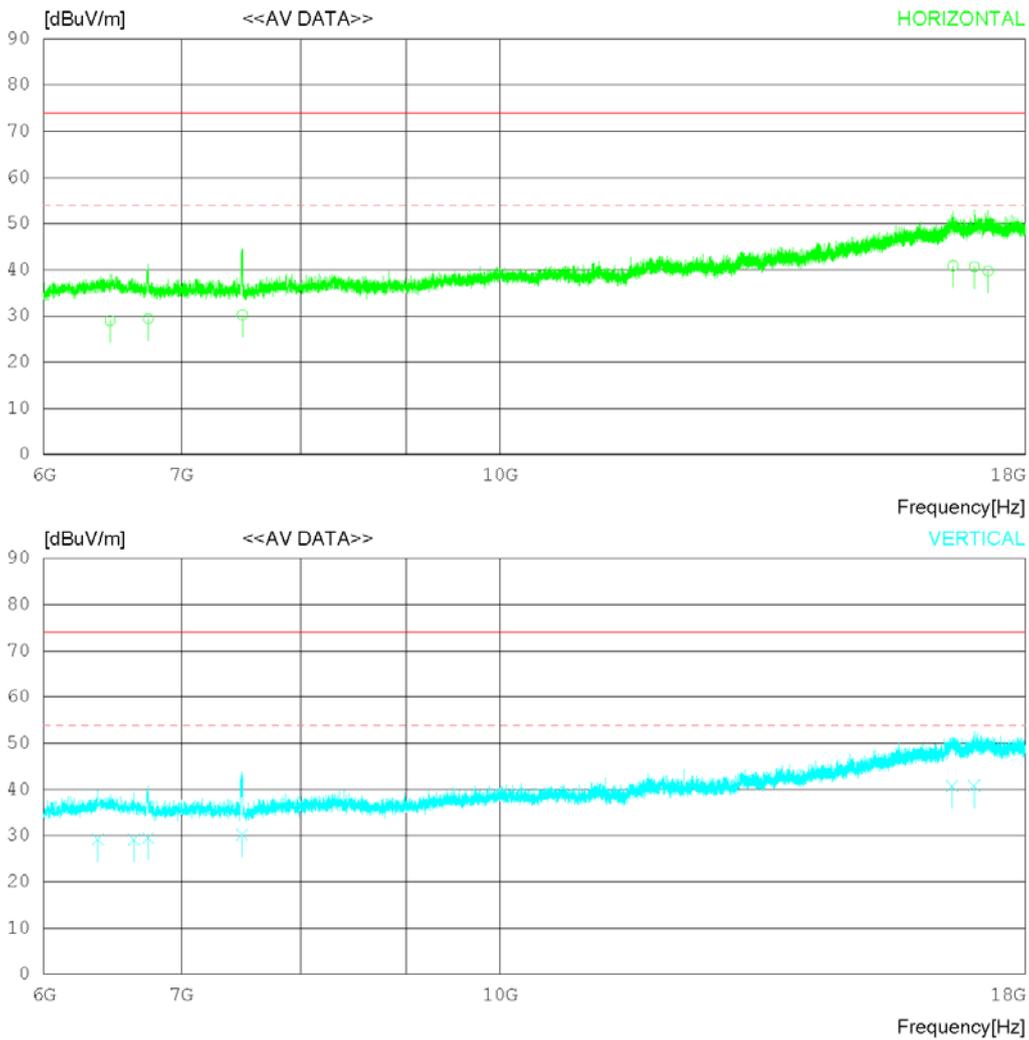
RADIATED EMISSION

Date 2019-03-12

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 Temp/Humi 21 °C 45 % R.H.
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Memo

LIMIT : FCC Part15 Subpart.B Class B (3m) - GHz(Average)
 FCC Part15 Subpart.B Class B (3m) - GHz(Peak)



* The measurement is performed above 18 GHz up to 40 GHz and not found emissions above 18 GHz.

RADIATED EMISSION

Date 2019-03-12

Order No.	DTNC1902-01424
Power Supply	120 VAC 60 Hz
Temp/Humi	21 °C 45 % R.H.
Test Condition	PC Link

Memo

 LIMIT : FCC Part15 Subpart.B Class B (3m) - GHz(Average)
 FCC Part15 Subpart.B Class B (3m) - GHz(Peak)

No.	FREQ [MHz]	READING CAV [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal -----										
1	6462.390	24.80	31.60	11.19	38.57	29.02	54.00	24.98	109	3
2	6744.990	25.20	31.52	11.23	38.50	29.45	54.00	24.55	233	170
3	7493.180	25.30	31.38	11.87	38.33	30.22	54.00	23.78	108	357
4	16599.380	20.60	37.10	20.10	36.90	40.90	54.00	13.10	192	311
5	17001.910	20.20	37.55	20.20	37.26	40.69	54.00	13.31	163	184
6	17262.120	20.10	37.75	19.36	37.48	39.73	54.00	14.27	235	4
----- Vertical -----										
7	6374.370	25.10	31.62	11.13	38.68	29.17	54.00	24.83	111	293
8	6636.210	24.80	31.55	11.22	38.45	29.12	54.00	24.88	104	266
9	6742.880	25.20	31.52	11.23	38.49	29.46	54.00	24.54	201	355
10	7491.390	25.30	31.38	11.86	38.33	30.21	54.00	23.79	182	335
11	16583.950	20.50	37.08	20.02	36.89	40.71	54.00	13.29	141	3
12	16997.150	20.30	37.55	20.19	37.26	40.78	54.00	13.22	122	355

Calculation

N : Neutral phase, L1 : Live phase
C.FACTOR(dB) : Pulse Limiter(dB) + Cable loss(dB) + Insertion loss of LISN(dB)
Result(dBμV) : Reading Value(dBμV) + C.FACTOR(dB)
Margin(dB) : Limit(dBμV) - Result(dBμV)

8. Revision History

Date	Description	Revised By	Reviewed By
Apr. 03. 2019	Initial report	ChanGeun Lee	DaeHwa Eun
Apr. 25. 2019	Clause 5. Test Summary text Deleted (The data in this test report are traceable to the national or international standards.)	ChanGeun Lee	DaeHwa Eun

-End of test report-