

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. : DREFCC2005-0130

2. Client / Applicant

• Name : LG Electronics Inc.

• Address : 111 Sylvan Avenue, North Building Englewood Cliffs, NJ 07632

3. Use of Report : Grant of Certification

4. Product Name / Model Name : Mobile Phone / LM-G910HMW
(FCC ID : ZNFG910HMW)

5. Test Standard : ANSI C 63.4 : 2014
FCC Part 15 Subpart B
(Other Class B digital devices & peripherals)

6. Date of Test : May. 16. 2020 ~ May. 17. 2020

7. Location of Test : Permanent Testing Lab On Site Testing

8. Testing Environment : Temperature (22 ~ 23) °C , Humidity (40 ~ 44) % R.H.

9. Test Result : Refer to the attached Test Result

The results shown in this test report refer only to the sample(s) tested unless otherwise stated.

Affirmation	Tested by	Reviewed by
	Name : JunSeo Park 	Name : KyoungHwan Bae 

May. 25. 2020

DT&C Co., Ltd.

Not abided by KS Q ISO / IEC 17025 and KOLAS accreditation.

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.dtnet.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 23 rd , 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-3385, R-14076, R-4180, R-4496, T-1442, G-10338, G-10754, G-10815, G-20051	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 Inc. 111 Sylvan Avenue, North Building Englewood Cliffs, NJ 07632
Manufacturer	LG Electronics Inc. 111 Sylvan Avenue, North Building Englewood Cliffs, NJ 07632
Product Name	Mobile Phone
Model Name	LM-G910HMW
Add Model Name	LMG910HMW, G910HMW, LM-G910HM, LMG910HM, G910HM
Rated Power	DC 3.87 V
FCC ID	ZNFG910HMW
Remarks	None

* Accessory

Equipment	No.	Manufacturer	Model Name	Product Number
Earphone	1	CRESYN	EMB-LGE53	EAB63728251
Cable	1	Ningbo	LG0174	EAD64746101
Dual Screen	1	LG Electronics	Dual Screen	LM-G905N

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	DATA COMMUNICAITON	The EUT is reading, writing, internal storage
2	DATA COMMUNICAITON (DS)	The EUT is reading, writing, internal storage (As a result of measuring the angle of the dual screen at 0 ', 90 ', 180 ', and 360 ', 180 ' is the worst condition.)
3	DISPLAY	EUT Was with H letter output connected to monitor
4	WIRELESS CHARGING	The EUT on the wireless charging pad
5	WIRELESS CHARGING (DS)	The EUT on the wireless charging pad (As a result of measuring the angle of the dual screen at 0 ', 90 ', and 180 ', 180 ' is the worst condition.)

4.3 Test Configuration Mode

No.	Mode	Description
1	DATA COMMUNICAITON	EUT was connected PC by USB cable C type and continuously operated
2	DATA COMMUNICAITON (DS)	EUT was connected DualScreen, and PC by USB cable C type and continuously operated
3	DISPLAY	EUT was connected Monitor by USB cable C type to hdmi and continuously operated.
4	WIRELESS CHARGING	EUT was at high speed on the wireless charger
5	WIRELESS CHARGING (DS)	EUT was connected DualScreen, at high speed on the wireless charger

4.4 Supported Equipment

Used*	Product Type	Manufacturer	Model	Remarks
AE	PC	DELL INC	DCN3	J51ZBBX
AE	PRINTER	Bixolon	SRP-770	N/A
AE	SSD	SAMSUNG	MU-PT250B	S2WKNAAH32059X
AE	KEYBOARD	DELL INC	KB212-B	N/A
AE	MOUSE	LG	XM-1300	N/A
AE	LED MONITOR	SMASUNG	LT19B300	MQKHYBCA01133P
AE	Headset	DONGGUANENMEY	SHS-150V/W	N/A
AE	wireless charger	belkin	F7U050	26S10EH4840924
AE	wireless charger adaptor	belkin	ADS-26FSG12	N/A
AE	USIM CARD	N/A	N/A	N/A
AE	MICRO SD CARD	SANDISK	N/A	N/A
*Abbreviations: AE - Auxiliary/Associated Equipment, or SIM - Simulator				

4.5 EUT In/Output Port

(MODE 1,2)

Name	Type*	Cable Max. >3 m	Cable Shielded	Cable Back shell	Remarks
AUX	I/O	1.5	Non shield	Plastic	EUT
USB	I/O	1.5	Shield	Plastic	EUT
USB(EUT)	I/O	1.1	Non shield	Plastic	PC
USB(MOUSE)	I/O	1.8	Non shield	Plastic	
USB(KEYBOARD)	I/O	1.8	Non shield	Plastic	
USB(SSD)	I/O	1.0	Non shield	Plastic	
VGA(MONITOR)	I/O	1.8	shield	Plastic	
AUX(EAR MIC)	I/O	1.8	Non shield	Plastic	
AC IN(POWER)	AC	1.8	Non shield	Plastic	
RS232(Printer)	I/O	1.7	Non shield	Plastic	
Parallel(Printer)	I/O	1.9	Non shield	Plastic	
AC IN	AC	1.6	Non shield	Plastic	Monitor
*Abbreviations:					
AC = AC Power Port		DC = DC Power Port		N/E = Non-Electrical	
I/O = Signal Input or Output Port					
TP = Telecommunication Ports					

(MODE 3)

Name	Type*	Cable Max. >3 m	Cable Shielded	Cable Back shell	Remarks
HDMI	I/O	2.0	shield	Plastic	LCD MONITOR
POEWER	AC	1.8	Non shield	Plastic	
USB	I/O	1.5	Shield	Plastic	EUT
AUX	I/O	1.5	Non shield	Plastic	EUT
*Abbreviations:					
AC = AC Power Port		DC = DC Power Port		N/E = Non-Electrical	
I/O = Signal Input or Output Port					
TP = Telecommunication Ports					

(MODE 4,5)

Name	Type*	Cable Max. >3 m	Cable Shielded	Cable Back shell	Remarks
DC IN	DC	1.5	Non shield	Plastic	WIRELESS CHARGING PAD
DC OUT	DC	1.5	Non shield	Plastic	WIRELESS CHARGER ADAPTOR
POEWER	AC	-	-	-	
*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
2	DC 3.87	-	-	Battery

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]
16.50224	N	45.97	Cispr - Average	50.00	4.03

-Radiated Disturbance

Frequency [MHz]	Pol.	Result [dB μ V/m]	Detector	Limit [dB μ V/m]	Margin [dB]
43.580	V	34.95	Quasi - Peak	40.00	5.05

6. Test Environment

Test Items	Test date (YYYY-MM-DD)	Temp. (°C)	Humidity (% R.H.)	Pressure (kPa)
Conducted Disturbance	2020-05-17	22	40	-
Radiated Disturbance	2020-05-16	23	44	-
	2020-05-17	23	44	-

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
	EUT Operation mode	1, 2, 4, 5	
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 uncertainty	
Expanded uncertainty U (95 %, Confidence level, $k = 2$)	3.6 dB
The measurement uncertainties were calculated in accordance with requirements of ANSI C 63.4-2014.	

Measurement Instrument					
Description	Model	Manufacturer	Identifier	Cal. Date	Cal. Due
MEASUREMENT SOFTWARE	EMI-C VER. 2.00.0170	TSJ	N/A	N/A	N/A
EMI TEST RECEIVER	ESU	ROHDE&SCHWARZ	100538	2020.01.20	2021.01.20
PULSE LIMITER	ESH3-Z2	ROHDE&SCHWARZ	101333	2019.09.17	2020.09.17
LISN	NSLK 8128 RC	SCHWARZBECK	8128 RC-387	2019.11.04	2020.11.04
LISN	KNW-407	KYORITSU	8-317-8	2019.12.22	2020.12.22

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

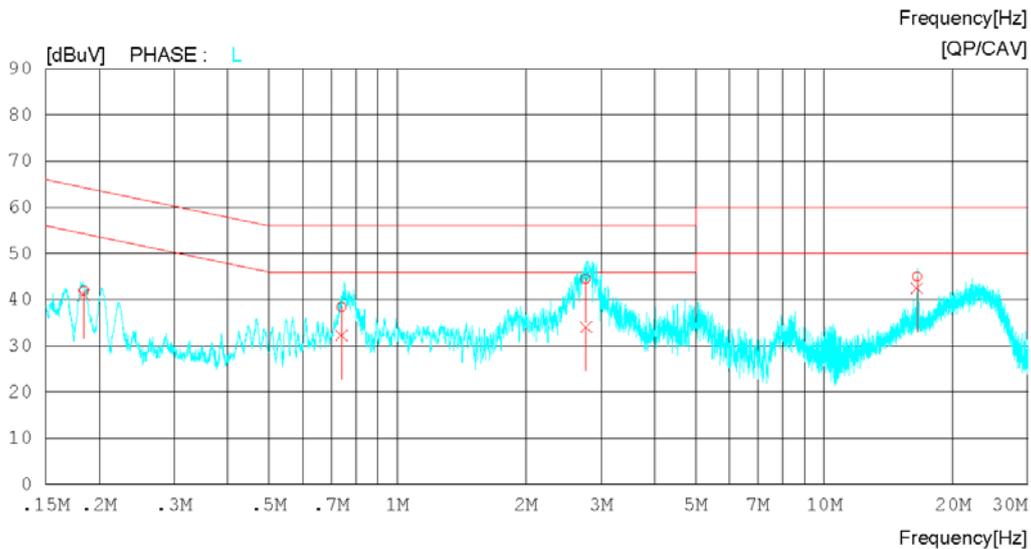
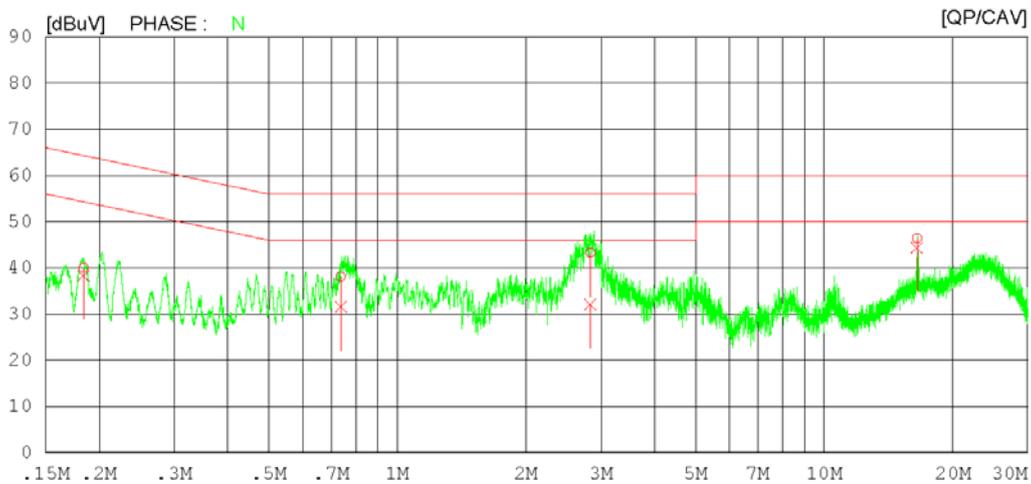
Results of Conducted Emission

DTNC

Date 2020-05-17

Order No. DTNC2004-03044
 Power Supply 120 V 60 Hz
 Temp/Humi/Atm. 22 'C 40 % R.H.
 Test Condition DATA COMMUNICATION

LIMIT : FCC Part15 Subpart.B Class B.QP
 FCC Part15 Subpart.B Class B.AV



Results of Conducted Emission

DTNC

Date 2020-05-17

Order No.	DTNC2004-03044
Power Supply	120 V 60 Hz
Temp/Humi/Atm.	22'C 40 % R.H.
Test Condition	DATA COMMUNICATION

LIMIT : FCC Part15 Subpart.B Class B.QP
 FCC Part15 Subpart.B Class 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	0.18410	30.02	28.27	10.02	40.04	38.29	64.30	54.30	24.26	16.01	N
2	0.73663	27.98	21.63	10.05	38.03	31.68	56.00	46.00	17.97	14.32	N
3	2.83072	33.12	21.92	10.15	43.27	32.07	56.00	46.00	12.73	13.93	N
4	16.50397	35.91	33.86	10.47	46.38	44.33	60.00	50.00	13.62	5.67	N
5	0.18403	31.90	31.02	10.01	41.91	41.03	64.30	54.30	22.39	13.27	L
6	0.73928	28.31	22.19	10.05	38.36	32.24	56.00	46.00	17.64	13.76	L
7	2.76501	34.37	23.90	10.15	44.52	34.05	56.00	46.00	11.48	11.95	L
8	16.50558	34.53	32.01	10.45	44.98	42.46	60.00	50.00	15.02	7.54	L

Mains terminal disturbance voltage _ Measurement data			
Test configuration mode	2	EUT Operation mode	2
Test voltage (V)	120	Test Frequency (Hz)	60

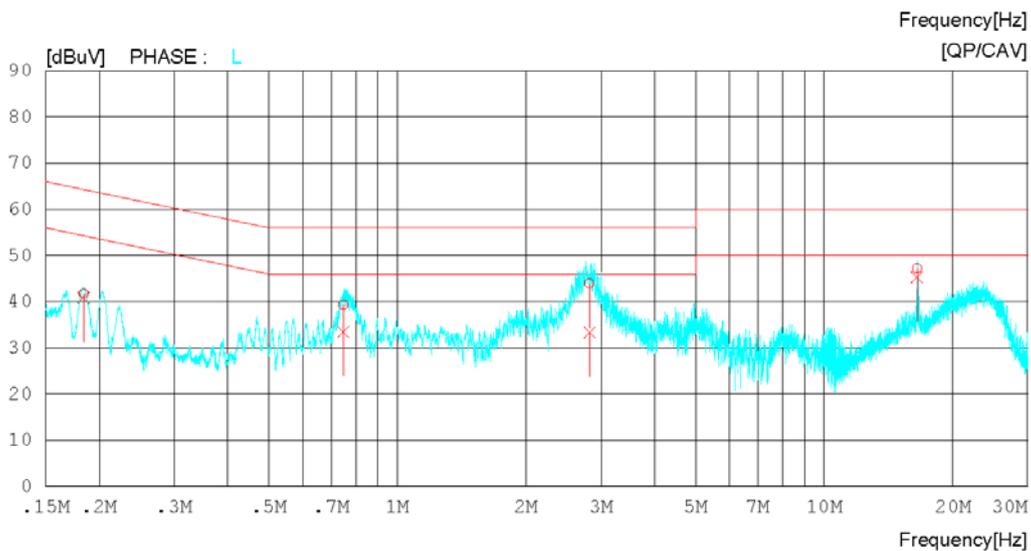
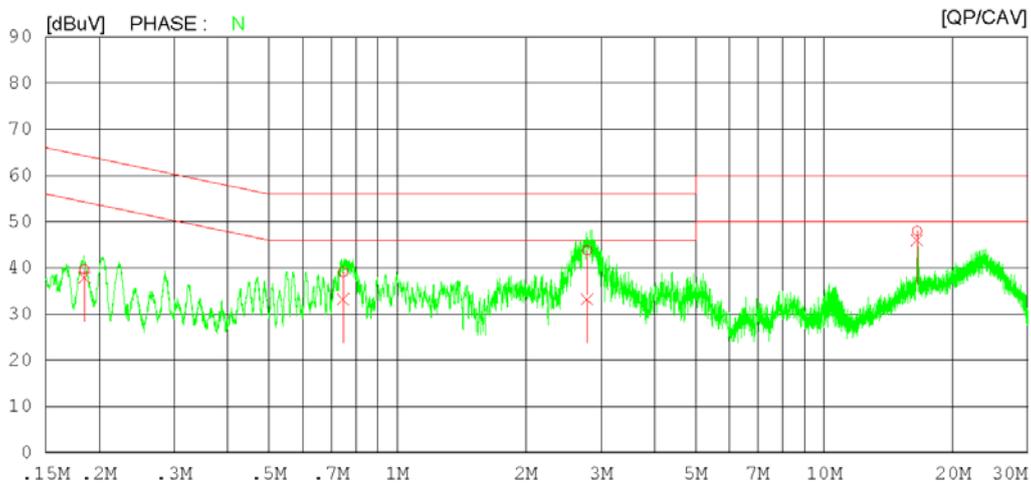
Results of Conducted Emission

DTNC

Date 2020-05-17

Order No. DTNC2004-03044
 Power Supply 120 V 60 Hz
 Temp/Humi/Atm. 22 °C 40 % R.H.
 Test Condition DATA COMMUNICATION + DS

LIMIT : FCC Part15 Subpart.B Class B.QP
 FCC Part15 Subpart.B Class B.AV



Results of Conducted Emission

DTNC

Date 2020-05-17

Order No. DTNC2004-03044
 Power Supply 120 V 60 Hz
 Temp/Humi/Atm. 22'C 40 % R.H.
 Test Condition DATA COMMUNICATION + DS

LIMIT : FCC Part15 Subpart.B Class B.QP
 FCC Part15 Subpart.B Class 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	0.18488	29.64	27.93	10.02	39.66	37.95	64.26	54.26	24.60	16.31	N
2	0.74664	29.09	23.14	10.05	39.14	33.19	56.00	46.00	16.86	12.81	N
3	2.78374	33.56	23.04	10.15	43.71	33.19	56.00	46.00	12.29	12.81	N
4	16.50224	37.47	35.50	10.47	47.94	45.97	60.00	50.00	12.06	4.03	N
5	0.18415	31.63	30.78	10.01	41.64	40.79	64.30	54.30	22.66	13.51	L
6	0.74698	29.24	23.36	10.05	39.29	33.41	56.00	46.00	16.71	12.59	L
7	2.82028	33.75	23.16	10.15	43.90	33.31	56.00	46.00	12.10	12.69	L
8	16.50417	36.74	34.80	10.45	47.19	45.25	60.00	50.00	12.81	4.75	L

Mains terminal disturbance voltage _ Measurement data			
Test configuration mode	4	EUT Operation mode	4
Test voltage (V)	120	Test Frequency (Hz)	60

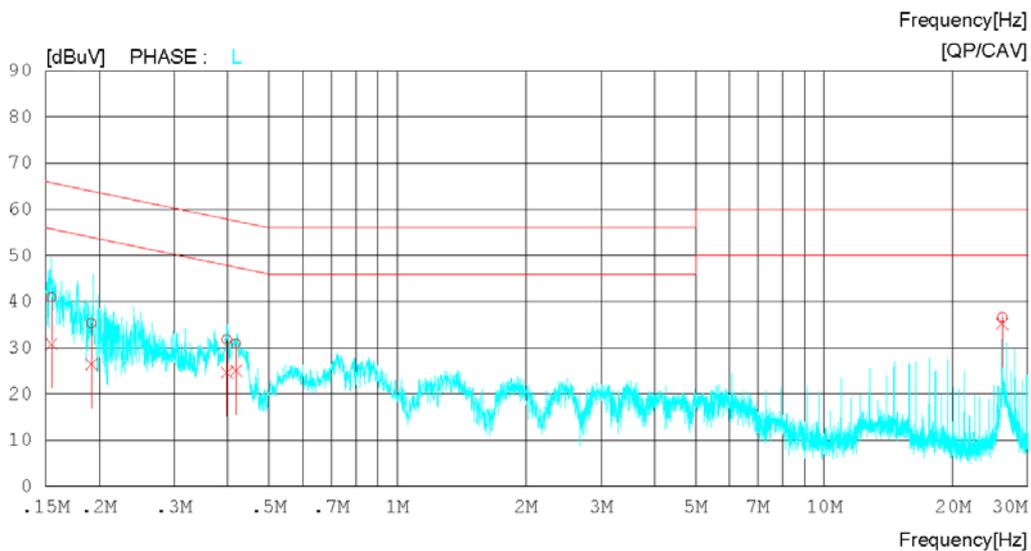
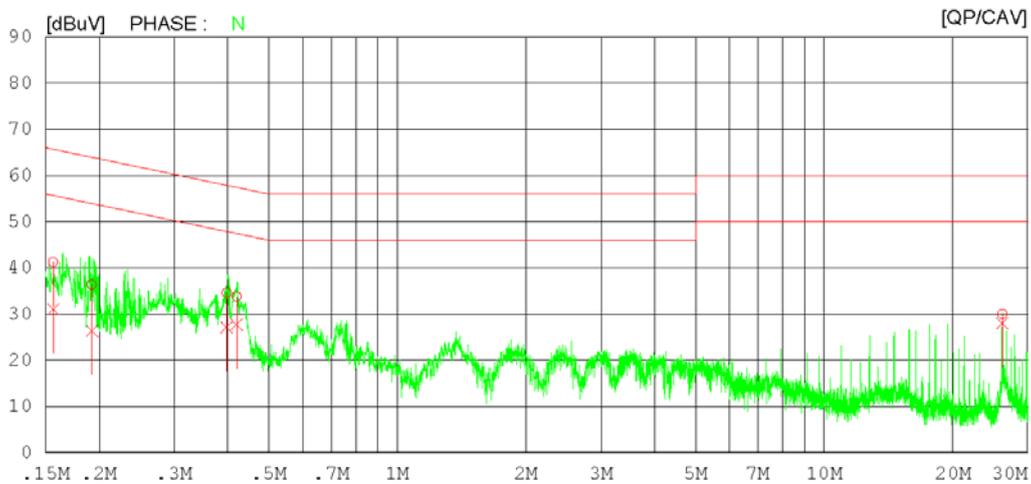
Results of Conducted Emission

DTNC

Date 2020-05-17

Order No. DTNC2004-03044
 Power Supply 120 V 60 Hz
 Temp/Humi/Atm. 22 °C 40 % R.H.
 Test Condition WIRELESS CHARGING

LIMIT : FCC Part15 Subpart.B Class B.QP
 FCC Part15 Subpart.B Class B.AV



Results of Conducted Emission

DTNC

Date 2020-05-17

Order No. DTNC2004-03044
 Power Supply 120 V 60 Hz
 Temp/Humi/Atm. 22'C 40 % R.H.
 Test Condition WIRELESS CHARGING

LIMIT : FCC Part15 Subpart.B Class B.QP
 FCC Part15 Subpart.B Class 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	0.15616	31.23	21.06	10.00	41.23	31.06	65.67	55.67	24.44	24.61	N
2	0.19241	26.40	16.41	10.02	36.42	26.43	63.93	53.93	27.51	27.50	N
3	0.39831	24.49	17.08	10.06	34.55	27.14	57.89	47.89	23.34	20.75	N
4	0.42050	23.75	17.60	10.06	33.81	27.66	57.44	47.44	23.63	19.78	N
5	26.13861	19.39	17.41	10.60	29.99	28.01	60.00	50.00	30.01	21.99	N
6	0.15476	30.88	20.76	10.01	40.89	30.77	65.74	55.74	24.85	24.97	L
7	0.19196	25.25	16.42	10.02	35.27	26.44	63.95	53.95	28.68	27.51	L
8	0.39871	21.79	14.57	10.04	31.83	24.61	57.88	47.88	26.05	23.27	L
9	0.41847	20.77	14.97	10.04	30.81	25.01	57.48	47.48	26.67	22.47	L
10	26.13701	26.01	24.65	10.55	36.56	35.20	60.00	50.00	23.44	14.80	L

Mains terminal disturbance voltage _ Measurement data			
Test configuration mode	5	EUT Operation mode	5
Test voltage (V)	120	Test Frequency (Hz)	60

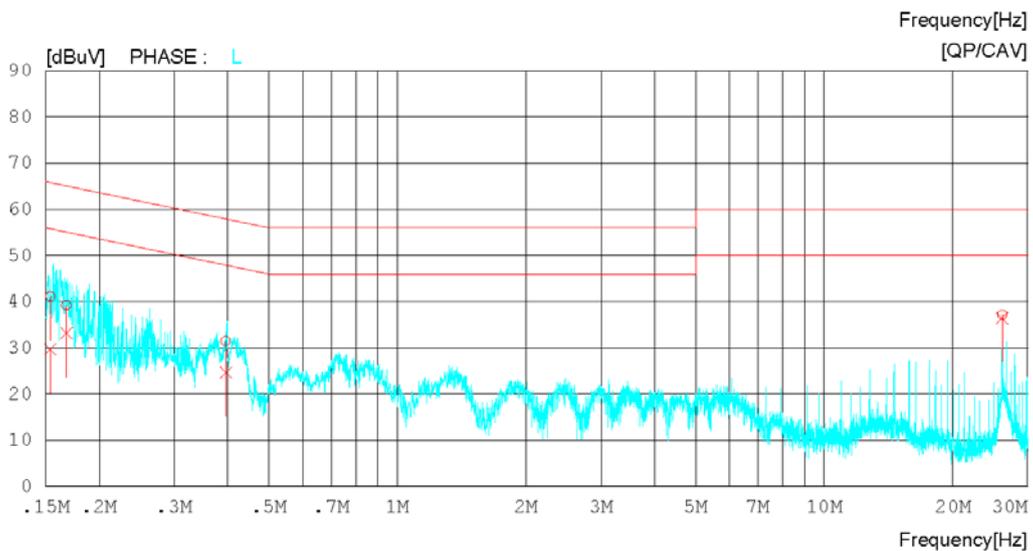
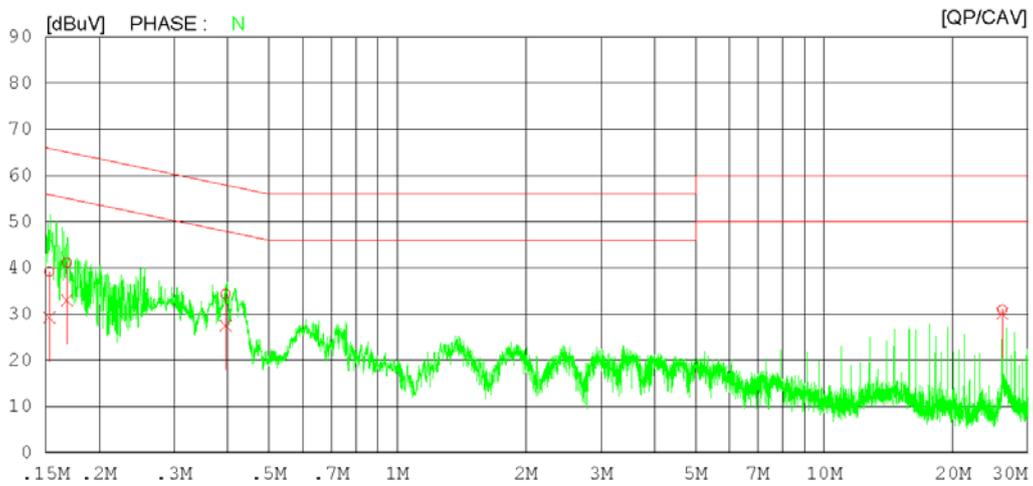
Results of Conducted Emission

DTNC

Date 2020-05-17

Order No. DTNC2004-03044
 Power Supply 120 V 60 Hz
 Temp/Humi/Atm. 22 °C 40 % R.H.
 Test Condition WIRELESS CHARGING+DS

LIMIT : FCC Part15 Subpart.B Class B.QP
 FCC Part15 Subpart.B Class B.AV



Results of Conducted Emission

DTNC

Date 2020-05-17

Order No.	DTNC2004-03044
Power Supply	120 V 60 Hz
Temp/Humi/Atm.	22 °C 40 % R.H.
Test Condition	WIRELESS CHARGING+DS

LIMIT : FCC Part15 Subpart.B Class B.QP
 FCC Part15 Subpart.B Class 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	0.15290	29.28	19.25	10.00	39.28	29.25	65.84	55.84	26.56	26.59	N
2	0.16815	31.13	23.04	10.02	41.15	33.06	65.05	55.05	23.90	21.99	N
3	0.39628	24.27	17.36	10.06	34.33	27.42	57.93	47.93	23.60	20.51	N
4	26.13755	20.31	19.46	10.60	30.91	30.06	60.00	50.00	29.09	19.94	N
5	0.15374	31.09	19.68	10.01	41.10	29.69	65.80	55.80	24.70	26.11	L
6	0.16771	29.11	23.06	10.01	39.12	33.07	65.07	55.07	25.95	22.00	L
7	0.39644	21.40	14.65	10.04	31.44	24.69	57.93	47.93	26.49	23.24	L
8	26.13627	26.60	25.87	10.55	37.15	36.42	60.00	50.00	22.85	13.58	L

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, 2, 3, 4, 5	
	EUT Operation mode		1, 2, 3, 4, 5	
Radiated Disturbance below 1 000 MHz				
Frequency range (MHz)	Quasi-peak limit dBμV/m			
	Class A		Class B	
	3 m distance	10 m distance	3 m distance	
30 to 88	49.1	39.1	40	
88 to 216	53.5	43.5	43.5	
216 to 960	56.4	46.4	46	
960 to 1 000	59.5	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 dBμV/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 dBμV/m		Average limit dBμV/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 uncertainty				
Expended uncertainty <i>U</i> (95 %, Confidence level, <i>k</i> = 2)			6.88 dB, (30 ~ 1 000) MHz 6.52 dB, (1 GHz Above)	
The measurement uncertainties were calculated in accordance with requirements of ANSI C 63.4-2014.				

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	ESU40	ROHDE&SCHWARZ	100525	2019.12.20	2020.12.20
TRILOG BROADBAND TEST-ANTENNA WITH 6DB ATT	VULB9160	SCHWARZBECK	9160-3339	2018.10.22	2020.10.22
	8491B	HP	18403	2018.10.22	2020.10.22
LOW NOISE PRE AMPLIFIER	MLA-100K01-B01-26	TSJ	1252741	2020.02.13	2021.02.13
HORN ANTENNA	3117	ETS-LINDGREN	00152093	2020.03.26	2021.03.26
PRE AMPLIFIER	8449B	H.P	3008A00887	2019.08.26	2020.08.26
HORN ANTENNA WITH PREAMPLIFIER	EM-6969	ELECTRO-METRICS	156	2019.02.13	2021.02.13
	MLA-0618-B03-34	TSJ	1785642	2019.12.31	2020.12.31
HORN ANTENNA WITH PREAMPLIFIER	SAS-574	A.H.SYSTEMS INC.	155	2019.07.03	2021.07.03
	MLA-1840-J02-45	TSJ	16966-10728	2019.06.27	2020.06.27

(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

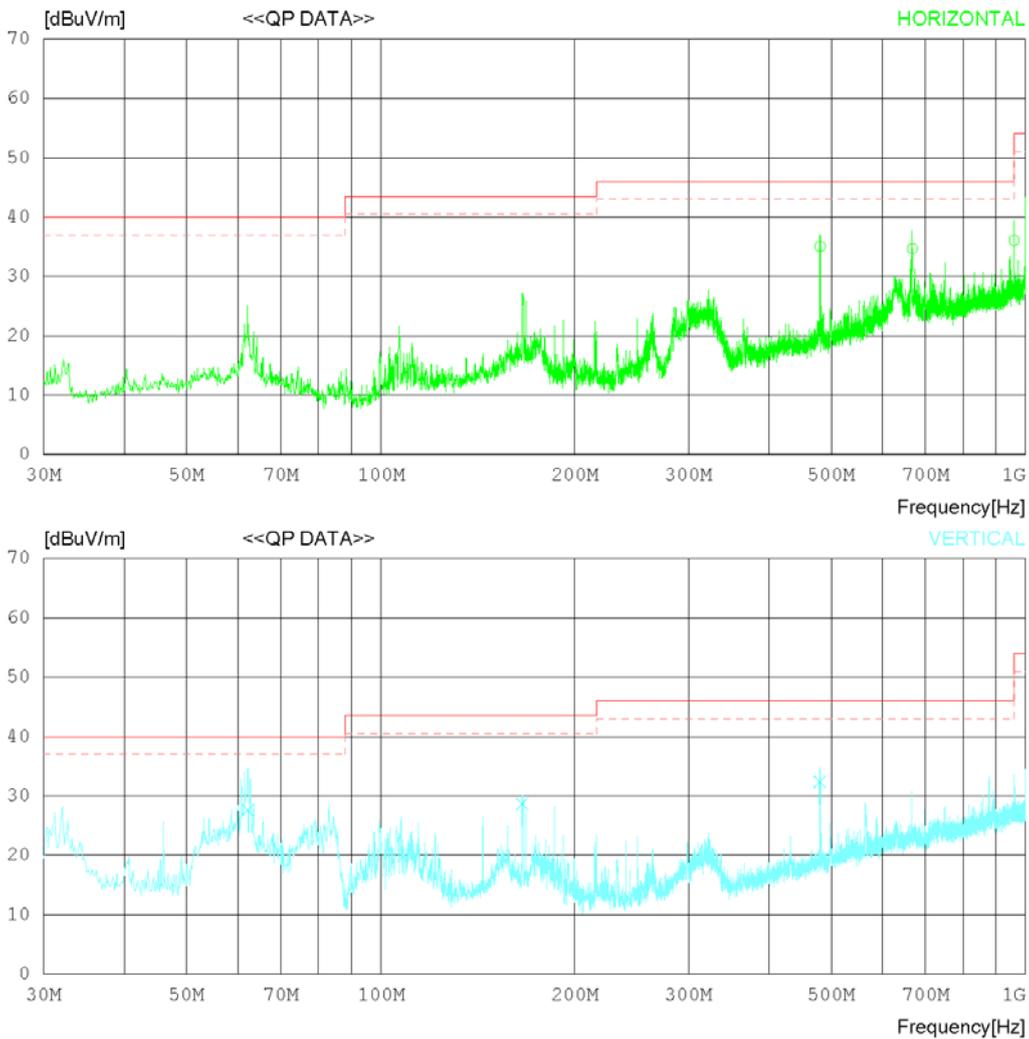
RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
 Power Supply 120 V 60 Hz
 Temp/Humi 23 'C 44 % R.H.
 Test Condition DATA COMMUNICATION

Memo

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



RADIATED EMISSION

Date 2020-05-16

Order No.	DTNC2004-03044
Power Supply	120 V 60 Hz
Temp/Humi	23 °C 44 % R.H.
Test Condition	DATA COMMUNICATION

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	480.068	35.25	23.40	2.71	26.32	35.04	46.00	10.96	120	78
2	667.554	30.65	27.38	2.86	26.22	34.67	46.00	11.33	322	205
3	960.195	28.62	30.40	3.80	26.75	36.07	54.00	17.93	225	123
----- Vertical -----										
4	62.253	35.60	17.87	0.84	26.67	27.64	40.00	12.36	120	78
5	165.797	35.62	18.44	1.35	26.72	28.69	43.50	14.81	322	112
6	479.946	32.56	23.40	2.71	26.32	32.35	46.00	13.65	325	305

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

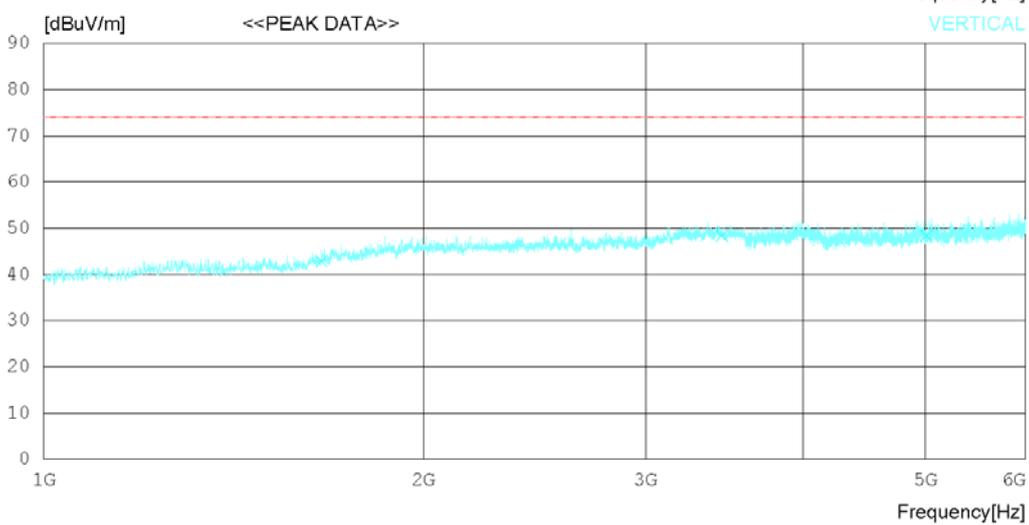
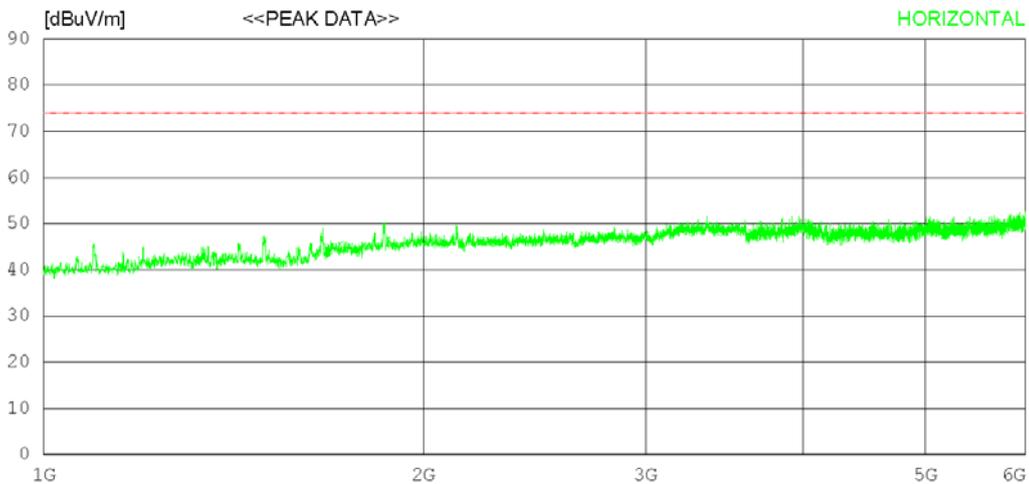
RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
 Power Supply 120 V 60 Hz
 Temp/Humi 23 °C 44 % R.H.
 Test Condition DATA COMMUNICATION

Memo

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



RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
Power Supply 120 V 60 Hz
Temp/Humi 23 °C 44 % R.H.
Test Condition DATA COMMUNICATION

Memo

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

No	Freq	Reading	Ant.Fac	Loss	Gain	Site.Fac	Result	Limit	Margin	Pola	Height	Angle
1	1728.75	43	29.64	7.06	34.72	0	44.98	74	29.02	Hori	121	358
2	3438.75	41	33.4	8.49	34.32	0	48.57	74	25.43	Hori	322	358
3	4310	38.7	33.6	9.21	33.95	0	47.56	74	26.44	Hori	123	358
4	1660.625	41.9	28.76	7.05	34.82	0	42.89	74	31.11	Vert	322	77
5	3448.75	40.8	33.4	8.48	34.31	0	48.37	74	25.63	Vert	352	0
6	5011.25	38.9	33.92	10.41	34.86	0	48.37	74	25.63	Vert	223	5

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

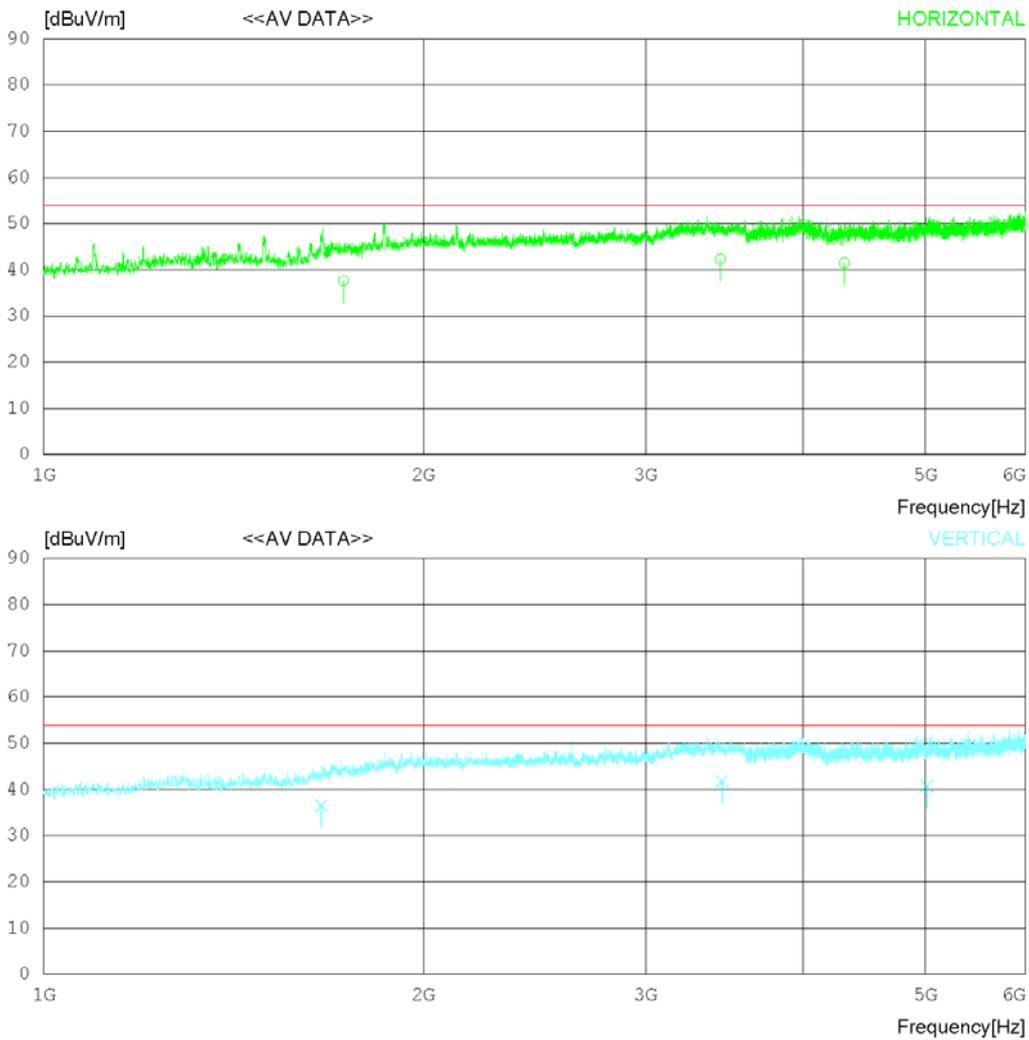
RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
 Power Supply 120 V 60 Hz
 Temp/Humi 23 °C 44 % R.H.
 Test Condition DATA COMMUNICATION

Memo

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



RADIATED EMISSION

Date 2020-05-16

Order No.	DTNC2004-03044
Power Supply	120 V 60 Hz
Temp/Humi	23 °C 44 % R.H.
Test Condition	DATA COMMUNICATION

Memo

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

No	Freq	Reading	Ant.Fac	Loss	Gain	Site.Fac	Result	Limit	Margin	Pola	Height	Angle
1	1660.611	35.6	28.75	7.05	34.82	0	36.58	54	17.42	Vert	120	78
2	1728.121	35.62	29.64	7.06	34.72	0	37.6	54	16.4	Hori	325	78
3	3438.717	34.72	33.4	8.49	34.32	0	42.29	54	11.71	Hori	113	11
4	3448.352	34.2	33.4	8.48	34.31	0	41.77	54	12.23	Vert	232	120
5	4310.652	32.65	33.6	9.21	33.95	0	41.51	54	12.49	Hori	235	305
6	5011.212	31.25	33.92	10.41	34.86	0	40.72	54	13.28	Vert	121	335

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

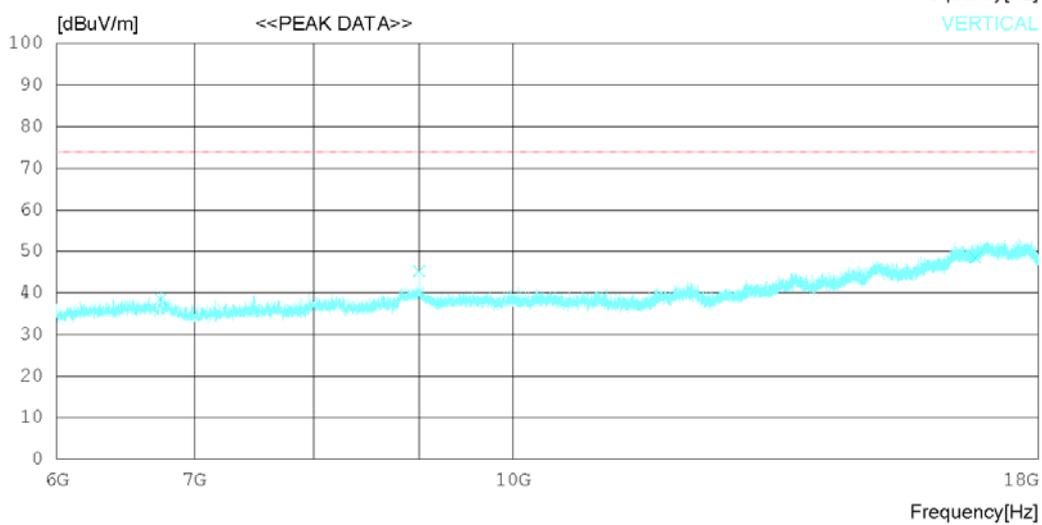
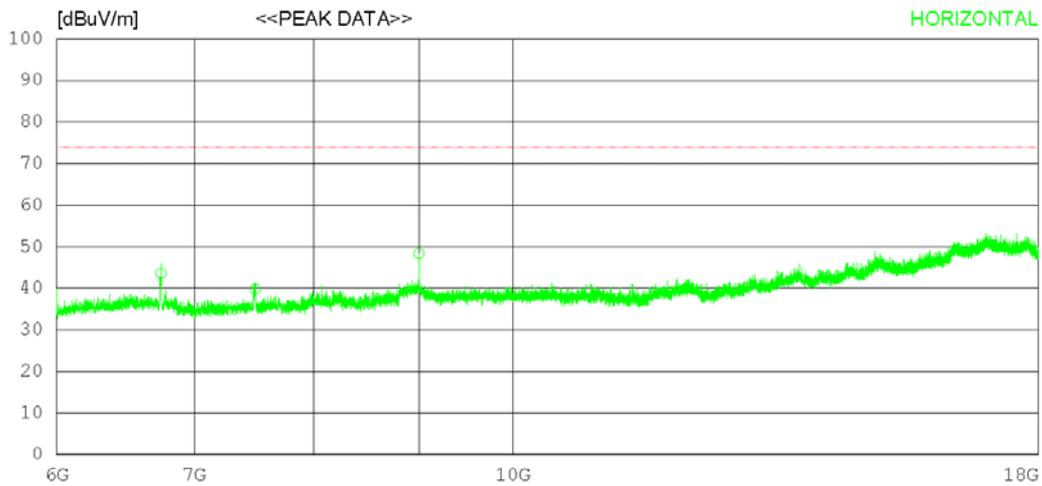
RADIATED EMISSION

Date 2020-05-17

Order No. DTNC2004-03044
 Power Supply 120 V 60 Hz
 Temp/Humi 23 °C 44 % R.H.
 Test Condition DATA COMMUNICATION

Memo

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



RADIATED EMISSION

Date 2020-05-17

Order No. DTNC2004-03044
Power Supply 120 V 60 Hz
Temp/Humi 23 °C 44 % R.H.
Test Condition DATA COMMUNICATION

Memo

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

No	Freq	Reading	Ant.Fac	Loss	Gain	Site.Fac	Result	Limit	Margin	Pola	Height	Angle
1	6741.75	38.4	31.52	12.43	38.7	0	43.65	74	30.35	Hori	323	358
2	7491.75	33.7	31.38	12.7	38.01	0	39.77	74	34.23	Hori	122	349
3	9000	38.2	32.1	15.54	37.5	0	48.34	74	25.66	Hori	313	358
4	6741.75	33.3	31.52	12.43	38.7	0	38.55	74	35.45	Vert	132	353
5	9000	35.1	32.1	15.54	37.5	0	45.24	74	28.76	Vert	253	310
6	16778.25	25.4	37.3	22.08	36.27	0	48.51	74	25.49	Vert	143	67

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

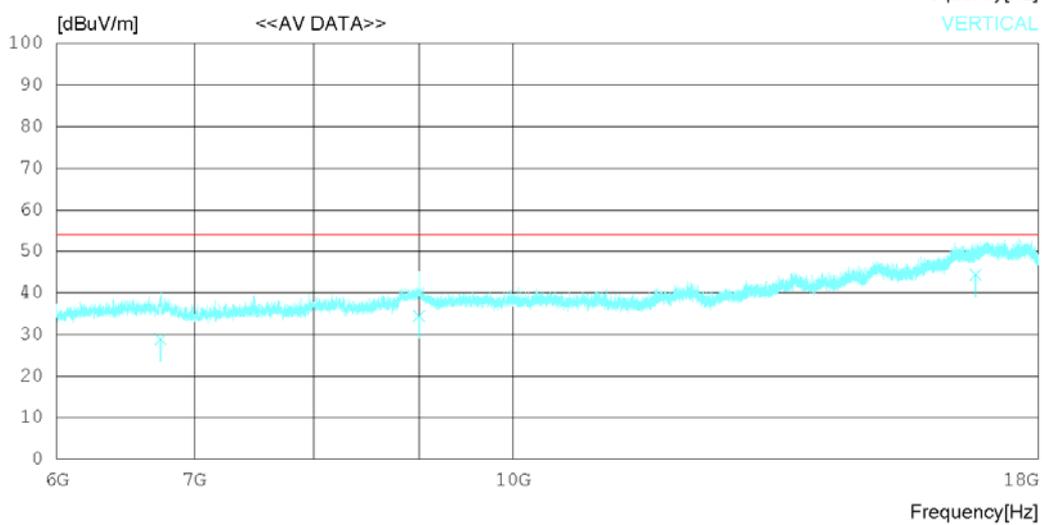
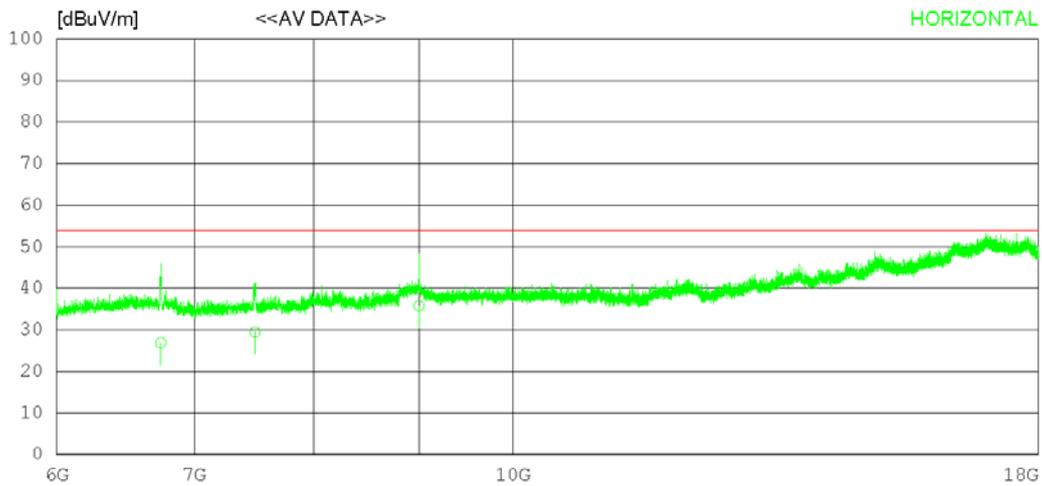
RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
 Power Supply 120 V 60 Hz
 Temp/Humi 23 °C 44 % R.H.
 Test Condition DATA COMMUNICATION

Memo

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



RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
Power Supply 120 V 60 Hz
Temp/Humi 23 °C 44 % R.H.
Test Condition DATA COMMUNICATION

Memo

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

No	Freq	Reading	Ant.Fac	Loss	Gain	Site.Fac	Result	Limit	Margin	Pola	Height	Angle
1	6741.112	21.62	31.52	12.43	38.7	0	26.87	54	27.13	Hori	335	120
2	6741.121	23.53	31.52	12.43	38.7	0	28.78	54	25.22	Vert	322	78
3	7491.623	23.42	31.38	12.7	38.01	0	29.49	54	24.51	Hori	223	223
4	9000.027	25.62	32.1	15.54	37.5	0	35.76	54	18.24	Hori	213	131
5	9000.035	24.26	32.1	15.54	37.5	0	34.4	54	19.6	Vert	223	120
6	16778.42	21.25	37.3	22.08	36.27	0	44.36	54	9.64	Vert	131	330

Radiated disturbance at (18 ~ 40) GHz _Peak measurement data			
Test configuration mode	1	EUT Operation mode	1
Test voltage (V)	120	Test Frequency (Hz)	60

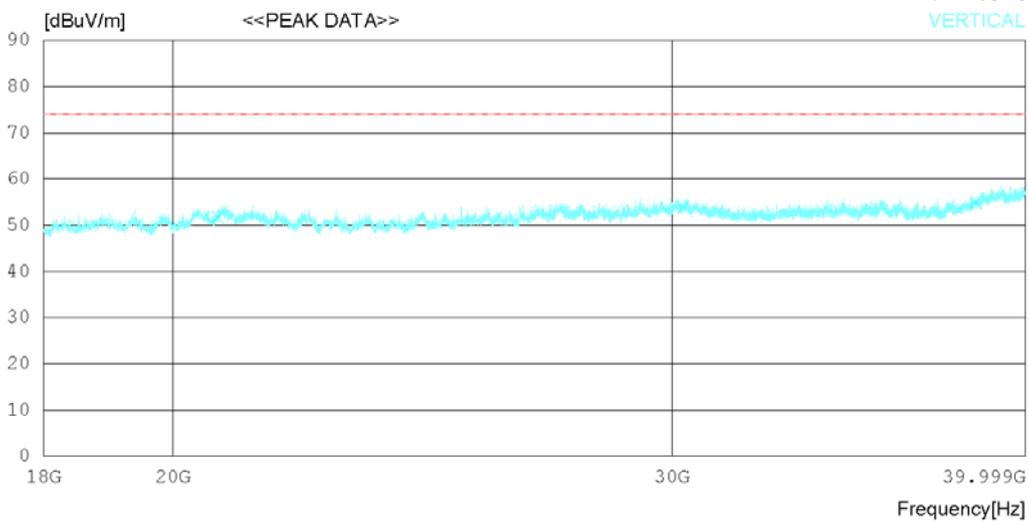
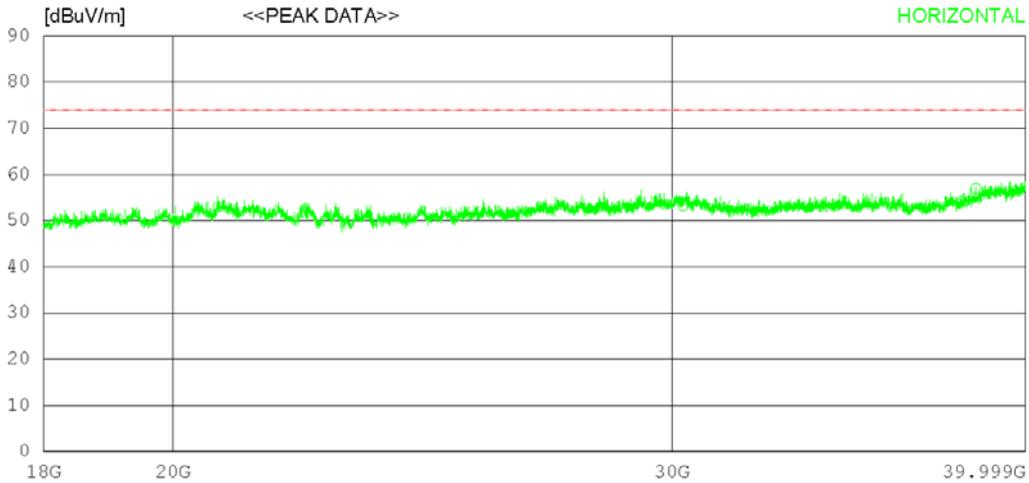
RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
 Power Supply 120 V 60 Hz
 Temp/Humi 23 °C 44 % R.H.
 Test Condition DATA COMMUNICATION

Memo

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



RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
Power Supply 120 V 60 Hz
Temp/Humi 23 °C 44 % R.H.
Test Condition DATA COMMUNICATION

Memo

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

No	Freq	Reading	Ant.Fac	Loss	Gain	Site.Fac	Result	Limit	Margin	Pola	Height	Angle
1	20741.75	40.7	45.54	20.02	53.33	0	52.93	74	21.07	Hori	235	356
2	30281.5	35.9	47.5	22.04	52.21	0	53.23	74	20.77	Hori	100	358
3	38416	37.5	46.65	25.08	52.28	0	56.95	74	17.05	Hori	233	223
4	20741.75	39.5	45.54	20.02	53.33	0	51.73	74	22.27	Vert	225	0
5	30281.5	36.6	47.5	22.04	52.21	0	53.93	74	20.07	Vert	172	120
6	38416	35.5	46.65	25.08	52.28	0	54.95	74	19.05	Vert	231	23

Radiated disturbance at (18 ~ 40) GHz _Average measurement data			
Test configuration mode	1	EUT Operation mode	1
Test voltage (V)	120	Test Frequency (Hz)	60

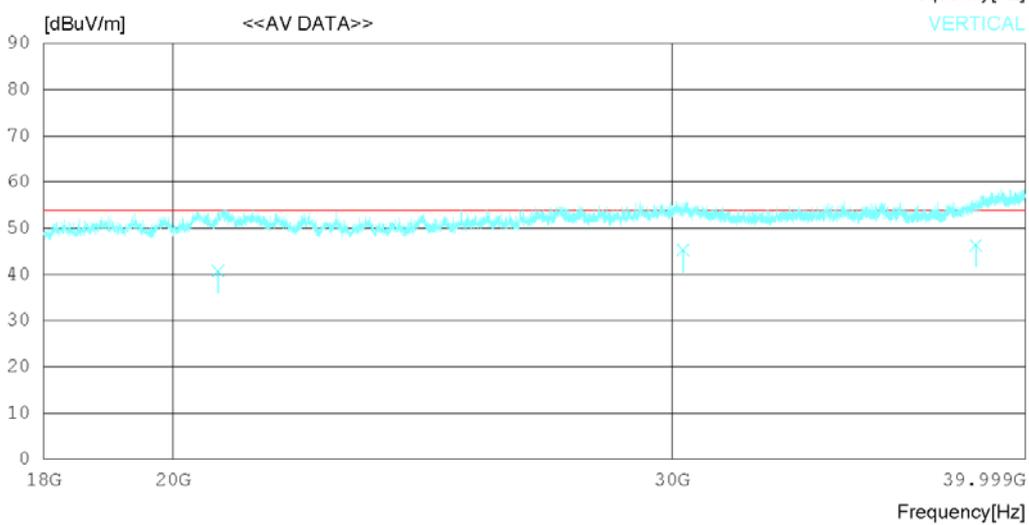
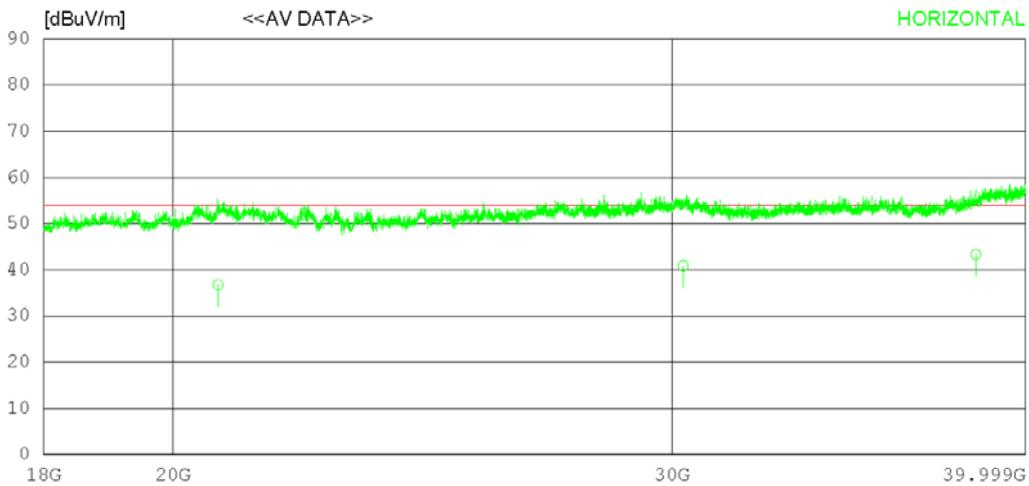
RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
 Power Supply 120 V 60 Hz
 Temp/Humi 23 °C 44 % R.H.
 Test Condition DATA COMMUNICATION

Memo

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



RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
Power Supply 120 V 60 Hz
Temp/Humi 23 °C 44 % R.H.
Test Condition DATA COMMUNICATION

Memo

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

No	Freq	Reading	Ant.Fac	Loss	Gain	Site.Fac	Result	Limit	Margin	Pola	Height	Angle
1	20741.64	24.56	45.54	20.02	53.33	0	36.79	54	17.21	Hori	233	78
2	20741.71	28.5	45.54	20.02	53.33	0	40.73	54	13.27	Vert	120	78
3	30281.51	23.57	47.5	22.04	52.21	0	40.9	54	13.1	Hori	223	223
4	30281.56	27.92	47.5	22.04	52.21	0	45.25	54	8.75	Vert	233	120
5	38416.42	23.87	46.65	25.08	52.28	0	43.32	54	10.68	Hori	134	305
6	38416.12	26.88	46.65	25.08	52.28	0	46.33	54	7.67	Vert	223	330

Radiated disturbance at (30 ~ 1000) MHz _Measurement data			
Test configuration mode	2	EUT Operation mode	2
Test voltage (V)	120	Test Frequency (Hz)	60

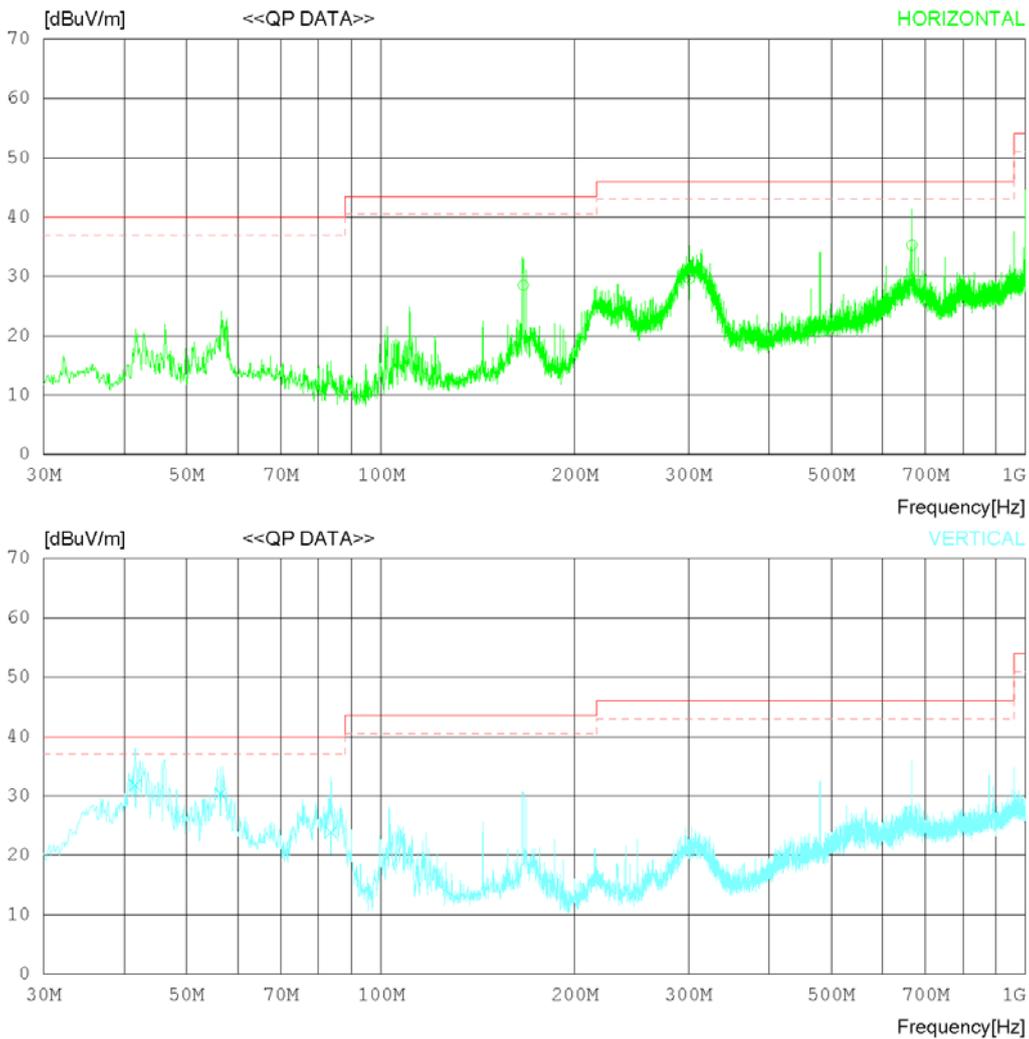
RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
 Power Supply 120 V 60 Hz
 Temp/Humi 23 °C 44 % R.H.
 Test Condition DATA COMMUNICATION+DS

Memo

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



RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
 Power Supply 120 V 60 Hz
 Temp/Humi 23 °C 44 % R.H.
 Test Condition DATA COMMUNICATION+DS

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	166.403	35.50	18.39	1.34	26.72	28.51	43.50	14.99	322	133
2	301.229	34.25	19.50	2.52	26.56	29.71	46.00	16.29	123	78
3	666.705	31.25	27.37	2.85	26.22	35.25	46.00	10.75	243	205
----- Vertical -----										
4	41.640	40.25	17.43	0.68	26.58	31.78	40.00	8.22	120	78
5	56.433	38.55	17.70	0.80	26.65	30.40	40.00	9.60	223	220
6	83.713	35.62	13.76	1.32	26.77	23.93	40.00	16.07	213	25

Radiated disturbance at (1 ~ 6) GHz _ Peak measurement data			
Test configuration mode	2	EUT Operation mode	2
Test voltage (V)	120	Test Frequency (Hz)	60

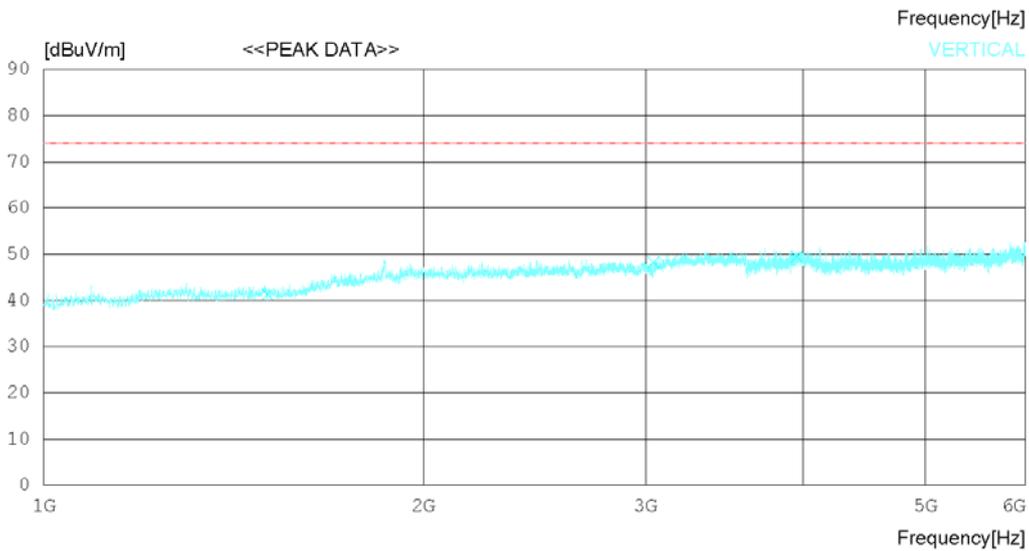
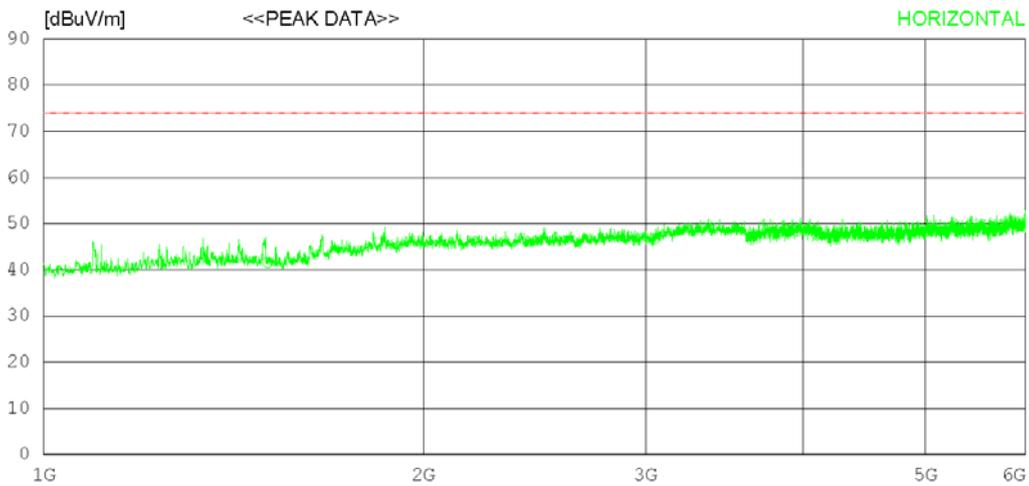
RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
 Power Supply 120 V 60 Hz
 Temp/Humi 23 °C 44 % R.H.
 Test Condition DATA COMMUNICATION+DS

Memo

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



RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
Power Supply 120 V 60 Hz
Temp/Humi 23 °C 44 % R.H.
Test Condition DATA COMMUNICATION+DS

Memo

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

No	Freq	Reading	Ant.Fac	Loss	Gain	Site.Fac	Result	Limit	Margin	Pola	Height	Angle
1	1505	42.2	28.14	6.32	35.04	0	41.62	74	32.38	Hori	120	358
2	3044.375	40.9	33	7.64	34.87	0	46.67	74	27.33	Hori	322	358
3	3953.75	38.8	33.59	9.59	33.6	0	48.38	74	25.62	Hori	242	97
4	1505	41.9	28.14	6.32	35.04	0	41.32	74	32.68	Vert	352	1
5	3044.375	42.5	33	7.64	34.87	0	48.27	74	25.73	Vert	113	1
6	3953.75	39.9	33.59	9.59	33.6	0	49.48	74	24.52	Vert	325	1

Radiated disturbance at (1 ~ 6) GHz _Average measurement data			
Test configuration mode	2	EUT Operation mode	2
Test voltage (V)	120	Test Frequency (Hz)	60

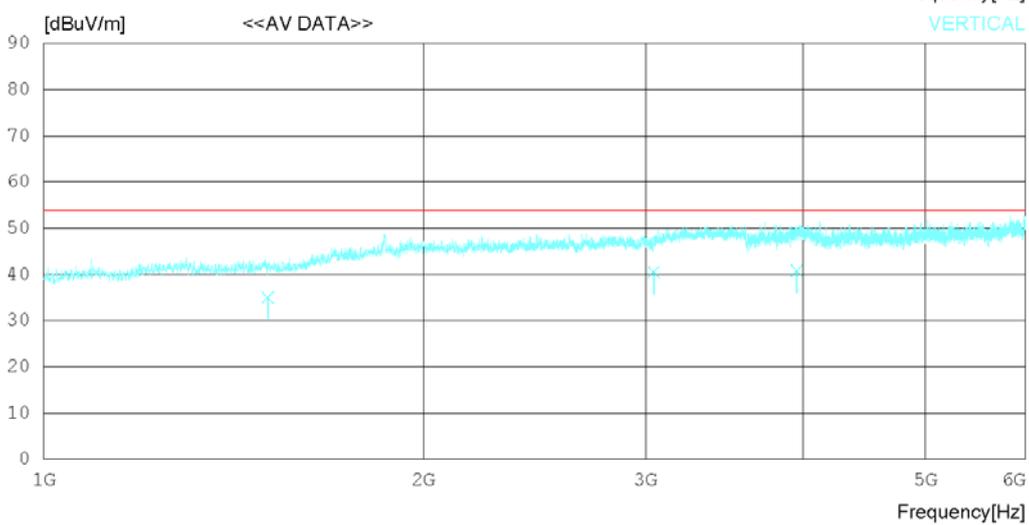
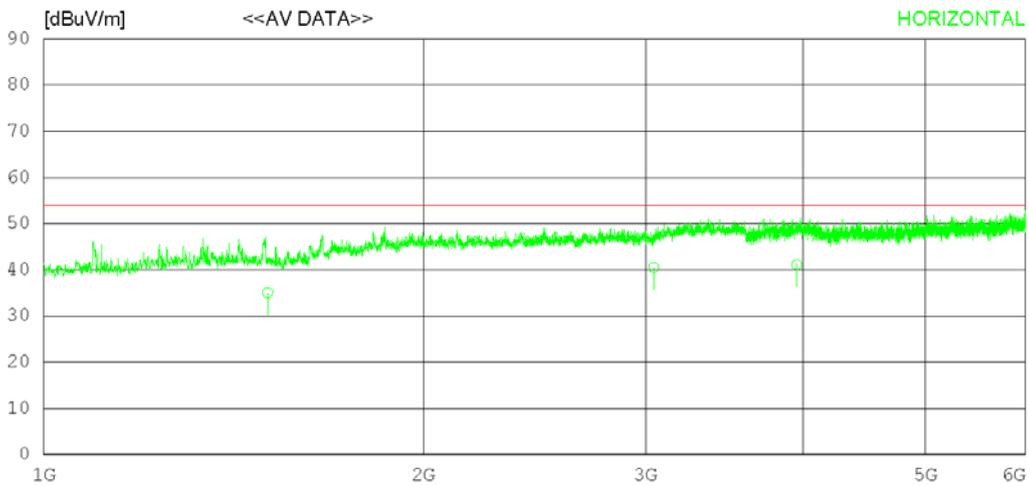
RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
 Power Supply 120 V 60 Hz
 Temp/Humi 23 °C 44 % R.H.
 Test Condition DATA COMMUNICATION+DS

Memo

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



RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
Power Supply 120 V 60 Hz
Temp/Humi 23 °C 44 % R.H.
Test Condition DATA COMMUNICATION+DS

Memo

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

No	Freq	Reading	Ant.Fac	Loss	Gain	Site.Fac	Result	Limit	Margin	Pola	Height	Angle
1	1505.12	35.62	28.14	6.32	35.04	0	35.04	54	18.96	Hori	322	81
2	1505.012	35.62	28.14	6.32	35.04	0	35.04	54	18.96	Vert	223	72
3	3044.362	34.72	33	7.64	34.87	0	40.49	54	13.51	Hori	131	223
4	3044.622	34.72	33	7.64	34.87	0	40.49	54	13.51	Vert	323	233
5	3953.112	31.55	33.59	9.59	33.61	0	41.12	54	12.88	Hori	243	97
6	3953.711	31.25	33.59	9.59	33.6	0	40.83	54	13.17	Vert	123	305

Radiated disturbance at (6 ~ 18) GHz _Peak measurement data			
Test configuration mode	2	EUT Operation mode	2
Test voltage (V)	120	Test Frequency (Hz)	60

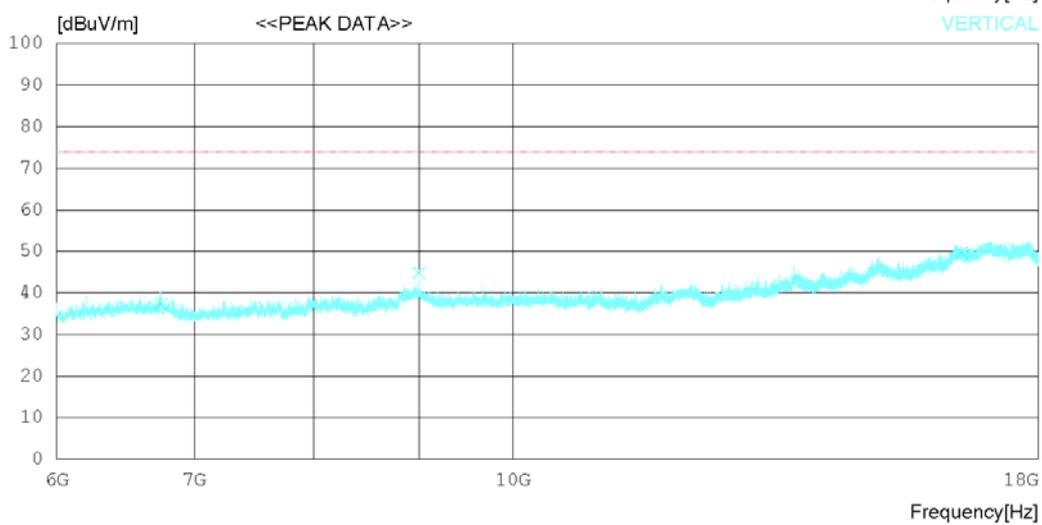
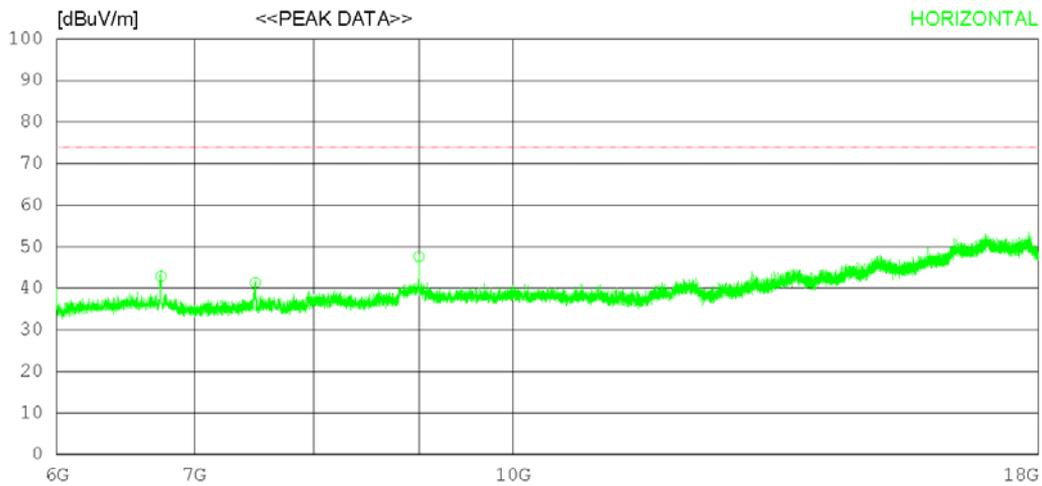
RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
 Power Supply 120 V 60 Hz
 Temp/Humi 23 °C 44 % R.H.
 Test Condition DATA COMMUNICATION+DS

Memo

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



RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
Power Supply 120 V 60 Hz
Temp/Humi 23 °C 44 % R.H.
Test Condition DATA COMMUNICATION+DS

Memo

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

No	Freq	Reading	Ant.Fac	Loss	Gain	Site.Fac	Result	Limit	Margin	Pola	Height	Angle
1	6744	37.6	31.52	12.44	38.7	0	42.86	74	31.14	Hori	223	334
2	7494	35.3	31.38	12.7	38.01	0	41.37	74	32.63	Hori	123	358
3	8999.25	37.5	32.1	15.54	37.5	0	47.64	74	26.36	Hori	224	324
4	6744	32.1	31.52	12.44	38.7	0	37.36	74	36.64	Vert	213	358
5	8999.25	34.7	32.1	15.54	37.5	0	44.84	74	29.16	Vert	305	358
6	16518.75	27	37.01	21.84	36.11	0	49.74	74	24.26	Vert	305	9

Radiated disturbance at (6 ~ 18) GHz _ Average measurement data			
Test configuration mode	2	EUT Operation mode	2
Test voltage (V)	120	Test Frequency (Hz)	60

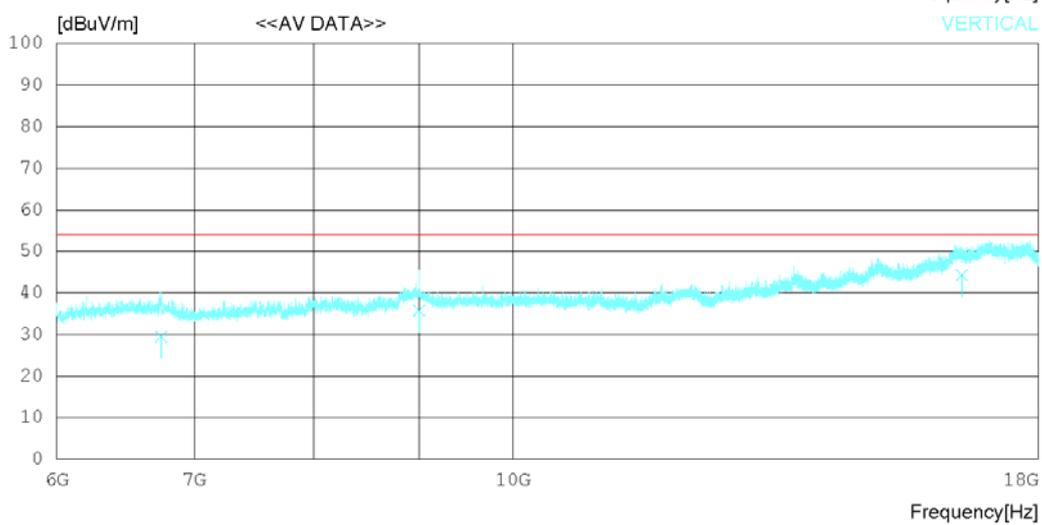
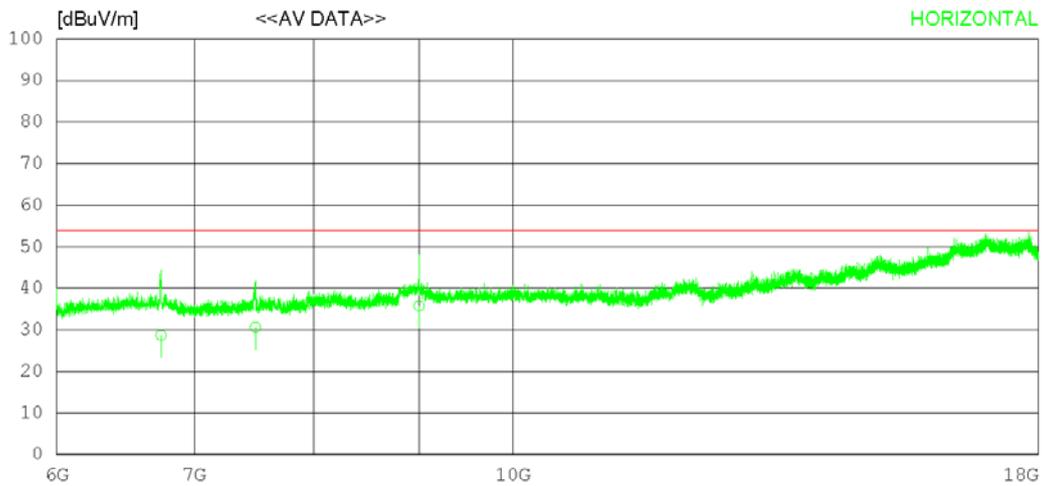
RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
 Power Supply 120 V 60 Hz
 Temp/Humi 23 °C 44 % R.H.
 Test Condition DATA COMMUNICATION+DS

Memo

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



RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
Power Supply 120 V 60 Hz
Temp/Humi 23 °C 44 % R.H.
Test Condition DATA COMMUNICATION+DS

Memo

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

No	Freq	Reading	Ant.Fac	Loss	Gain	Site.Fac	Result	Limit	Margin	Pola	Height	Angle
1	6744.012	23.46	31.52	12.44	38.7	0	28.72	54	25.28	Hori	233	334
2	6744.121	24.23	31.52	12.44	38.7	0	29.49	54	24.51	Vert	325	78
3	7494.066	24.51	31.38	12.7	38.01	0	30.58	54	23.42	Hori	213	24
4	8999.232	25.62	32.1	15.54	37.5	0	35.76	54	18.24	Vert	311	223
5	8999.211	25.6	32.1	15.54	37.5	0	35.74	54	18.26	Hori	113	305
6	16518.77	21.56	37.01	21.84	36.11	0	44.3	54	9.7	Vert	112	305

Radiated disturbance at (18 ~ 40) GHz _Peak measurement data			
Test configuration mode	2	EUT Operation mode	2
Test voltage (V)	120	Test Frequency (Hz)	60

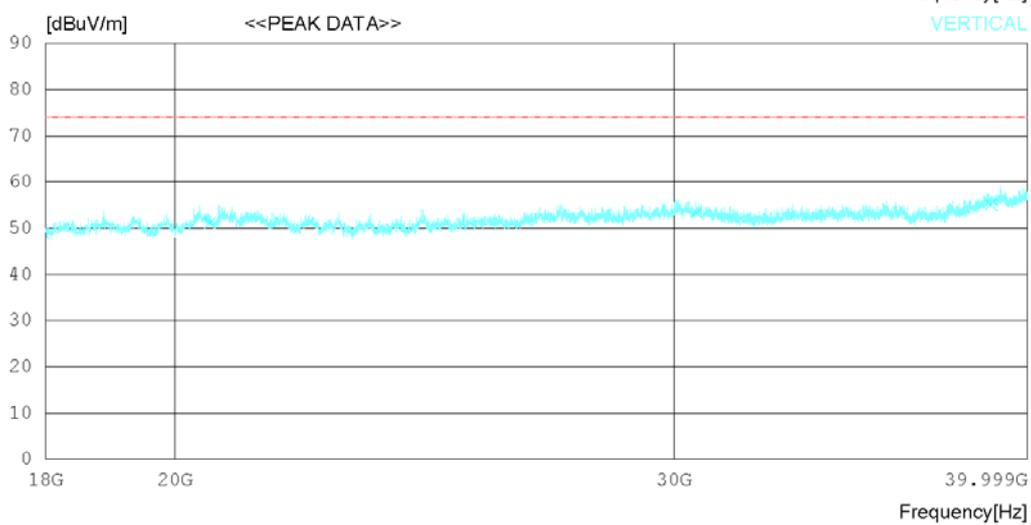
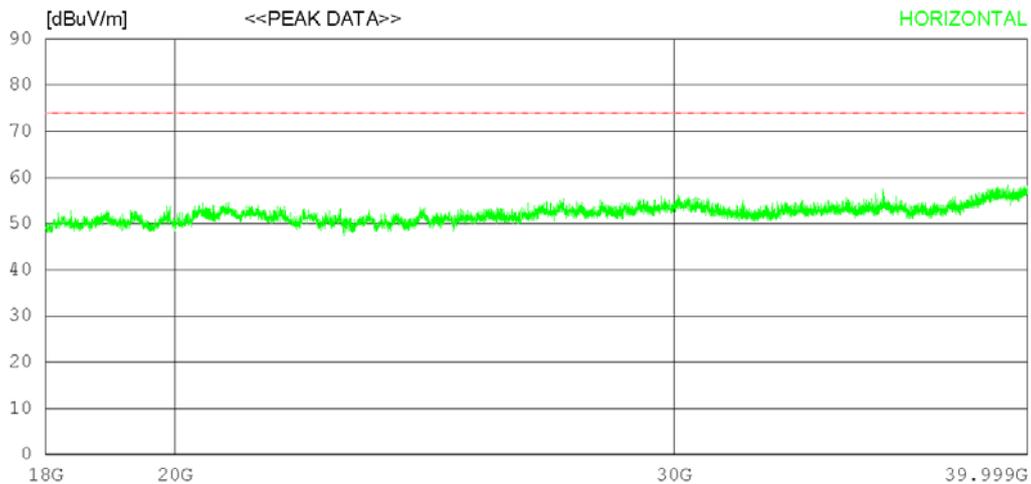
RADIATED EMISSION

Date 2020-05-17

Order No.	DTNC2004-03044
Power Supply	120 V 60 Hz
Temp/Humi	23 °C 44 % R.H.
Test Condition	DATA COMMUNICATION+DS

Memo

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



RADIATED EMISSION

Date 2020-05-17

Order No. DTNC2004-03044
Power Supply 120 V 60 Hz
Temp/Humi 23 °C 44 % R.H.
Test Condition DATA COMMUNICATION+DS

Memo

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

No	Freq	Reading	Ant.Fac	Loss	Gain	Site.Fac	Result	Limit	Margin	Pola	Height	Angle
1	20574	40.1	45.47	19.69	53.26	0	52	74	22	Hori	213	87
2	30562	37	47.4	22.2	52.23	0	54.37	74	19.63	Hori	123	87
3	38834	35.4	47.37	25.58	52.26	0	56.09	74	17.91	Hori	255	53
4	20574	39.3	45.47	19.69	53.26	0	51.2	74	22.8	Vert	232	0
5	30562	36	47.4	22.2	52.23	0	53.37	74	20.63	Vert	342	219
6	38834	34.4	47.37	25.58	52.26	0	55.09	74	18.91	Vert	235	0

Radiated disturbance at (18 ~ 40) GHz _Average measurement data			
Test configuration mode	2	EUT Operation mode	2
Test voltage (V)	120	Test Frequency (Hz)	60

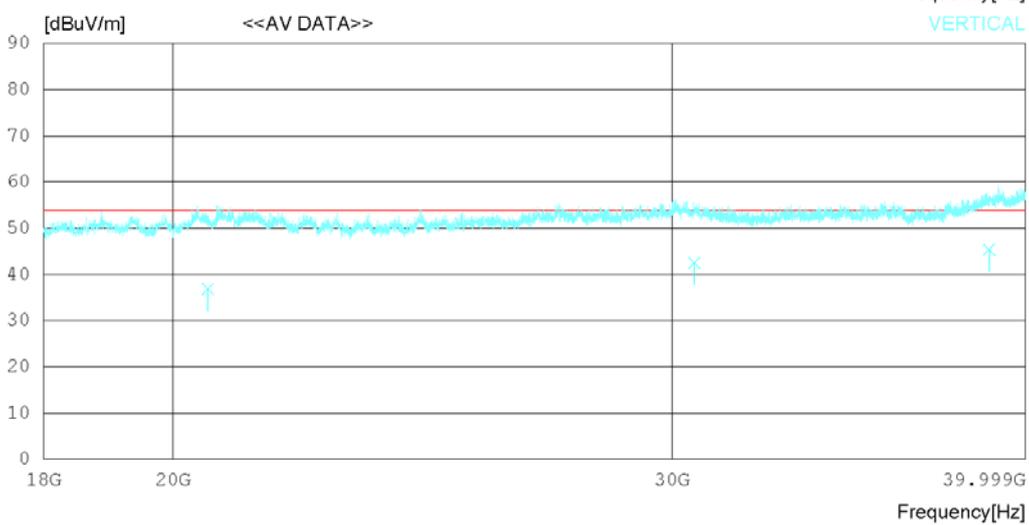
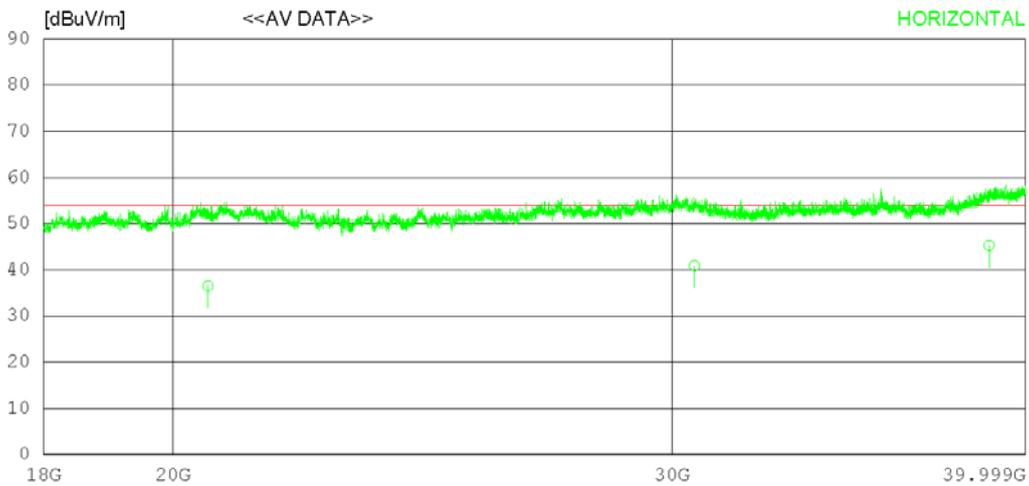
RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
 Power Supply 120 V 60 Hz
 Temp/Humi 23 °C 44 % R.H.
 Test Condition DATA COMMUNICATION+DS

Memo

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



RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
Power Supply 120 V 60 Hz
Temp/Humi 23 °C 44 % R.H.
Test Condition DATA COMMUNICATION+DS

Memo

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

No	Freq	Reading	Ant.Fac	Loss	Gain	Site.Fac	Result	Limit	Margin	Pola	Height	Angle
1	20574.12	24.62	45.47	19.69	53.26	0	36.52	54	17.48	Hori	322	124
2	20574.02	24.96	45.47	19.69	53.26	0	36.86	54	17.14	Vert	322	78
3	30562.03	23.55	47.4	22.2	52.23	0	40.92	54	13.08	Hori	113	36
4	30562.42	25.12	47.4	22.2	52.23	0	42.49	54	11.51	Vert	321	112
5	38834.35	24.62	47.37	25.58	52.26	0	45.31	54	8.69	Hori	235	64
6	38834.03	24.72	47.37	25.58	52.26	0	45.41	54	8.59	Vert	112	305

Radiated disturbance at (30 ~ 1000) MHz _ Measurement data			
Test configuration mode	3	EUT Operation mode	3
Test voltage (V)	Battery	Test Frequency (Hz)	-

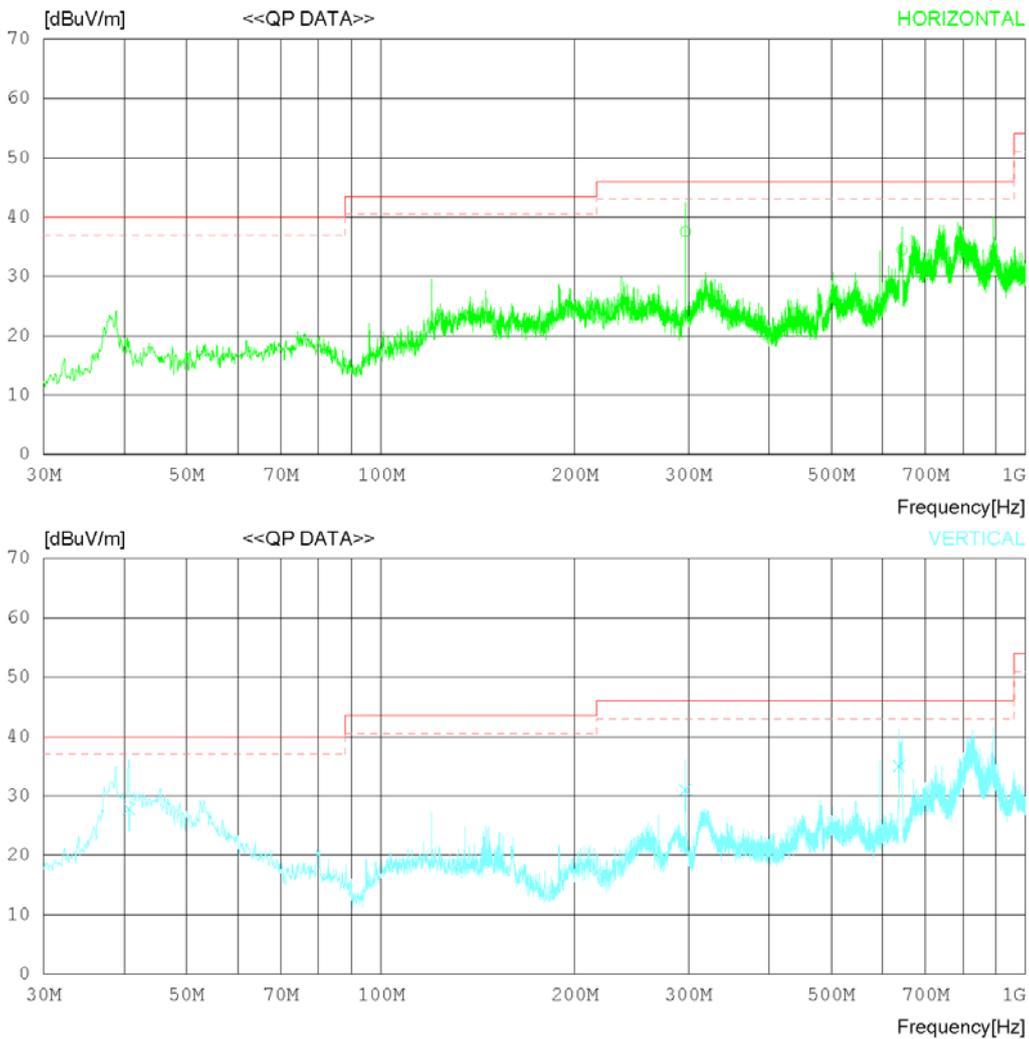
RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
 Power Supply Battery
 Temp/Humi 23 °C 44 % R.H.
 Test Condition DISPLAY

Memo

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



RADIATED EMISSION

Date 2020-05-16

Order No.	DTNC2004-03044
Power Supply	Battery
Temp/Humi	23 °C 44 % R.H.
Test Condition	DISPLAY

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	296.986	42.10	19.50	2.50	26.56	37.54	46.00	8.46	223	76
2	643.298	31.25	26.63	2.80	26.25	34.43	46.00	11.57	232	111
3	791.498	30.56	28.20	3.19	26.14	35.81	46.00	10.19	123	274
----- Vertical -----										
4	40.670	36.55	17.14	0.67	26.57	27.79	40.00	12.21	123	78
5	296.986	35.62	19.50	2.50	26.56	31.06	46.00	14.94	325	312
6	636.628	32.22	26.27	2.81	26.26	35.04	46.00	10.96	221	355

Radiated disturbance at (1 ~ 6) GHz _ Peak measurement data			
Test configuration mode	3	EUT Operation mode	3
Test voltage (V)	Battery	Test Frequency (Hz)	-

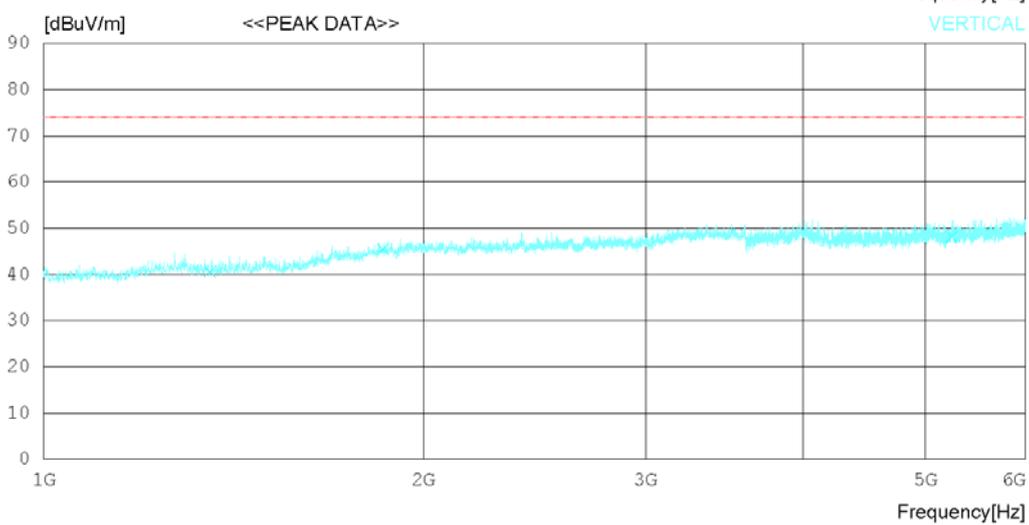
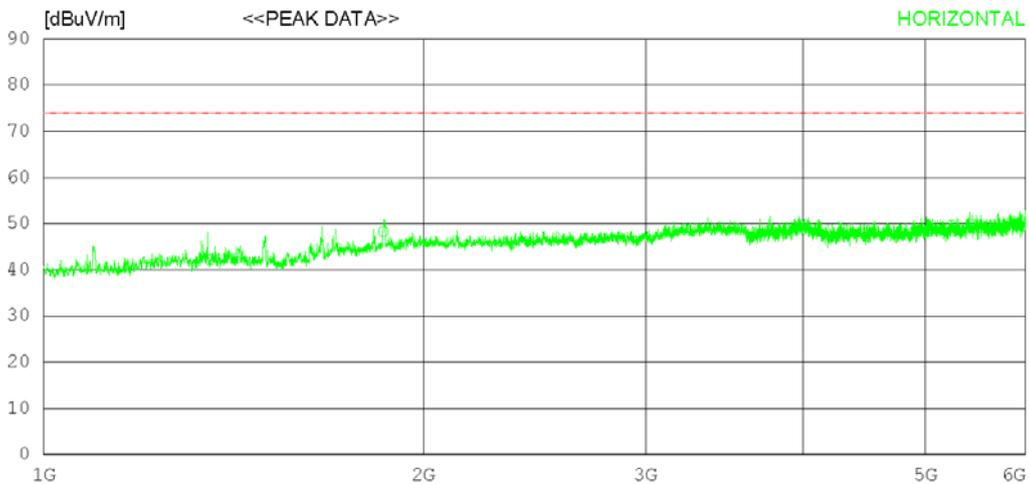
RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
 Power Supply Battery
 Temp/Humi 23 °C 44 % R.H.
 Test Condition DISPLAY

Memo

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



RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
Power Supply Battery
Temp/Humi 23 °C 44 % R.H.
Test Condition DISPLAY

Memo

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

No	Freq	Reading	Ant.Fac	Loss	Gain	Site.Fac	Result	Limit	Margin	Pola	Height	Angle
1	1354.375	43.5	28.57	5.35	35.25	0	42.17	74	31.83	Hori	120	358
2	1858.125	44.8	31.07	6.94	34.54	0	48.27	74	25.73	Hori	305	229
3	5243.125	39.9	34.37	10.34	34.89	0	49.72	74	24.28	Hori	305	328
4	1354.375	41.9	28.57	5.35	35.25	0	40.57	74	33.43	Vert	223	260
5	1858.125	42	31.07	6.94	34.54	0	45.47	74	28.53	Vert	223	0
6	5243.125	38.3	34.37	10.34	34.89	0	48.12	74	25.88	Vert	112	0

Radiated disturbance at (1 ~ 6) GHz _Average measurement data			
Test configuration mode	3	EUT Operation mode	3
Test voltage (V)	Battery	Test Frequency (Hz)	-

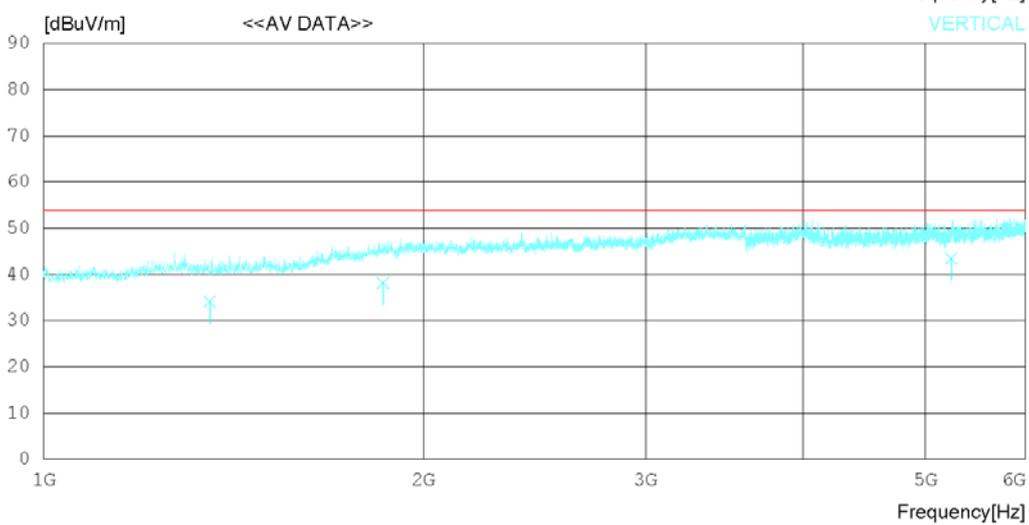
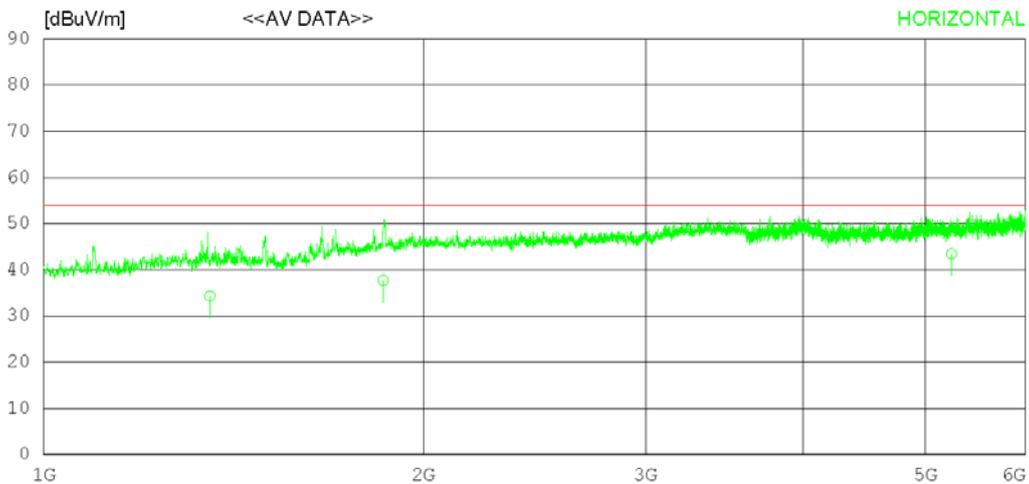
RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
 Power Supply Battery
 Temp/Humi 23 °C 44 % R.H.
 Test Condition DISPLAY

Memo

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



RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
Power Supply Battery
Temp/Humi 23 °C 44 % R.H.
Test Condition DISPLAY

Memo

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

No	Freq	Reading	Ant.Fac	Loss	Gain	Site.Fac	Result	Limit	Margin	Pola	Height	Angle
1	1354.311	35.62	28.57	5.35	35.25	0	34.29	54	19.71	Hori	123	78
2	1354.312	35.5	28.57	5.35	35.25	0	34.17	54	19.83	Vert	120	78
3	1858.162	34.21	31.07	6.94	34.54	0	37.68	54	16.32	Hori	120	112
4	1858.172	34.72	31.07	6.94	34.54	0	38.19	54	15.81	Vert	223	123
5	5243.421	33.65	34.37	10.34	34.89	0	43.47	54	10.53	Hori	233	305
6	5243.623	33.65	34.37	10.34	34.89	0	43.47	54	10.53	Vert	121	305

Radiated disturbance at (6 ~ 18) GHz _Peak measurement data			
Test configuration mode	3	EUT Operation mode	3
Test voltage (V)	Battery	Test Frequency (Hz)	-

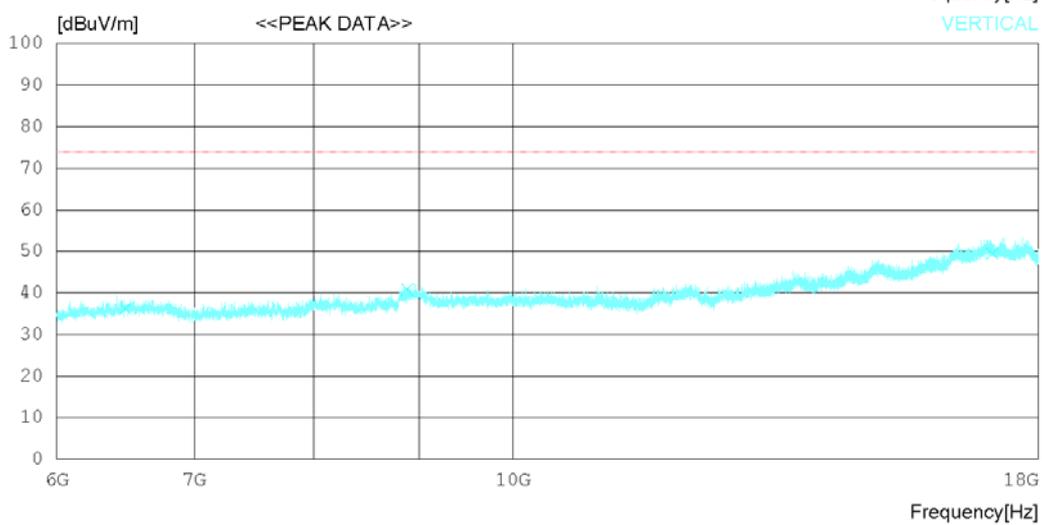
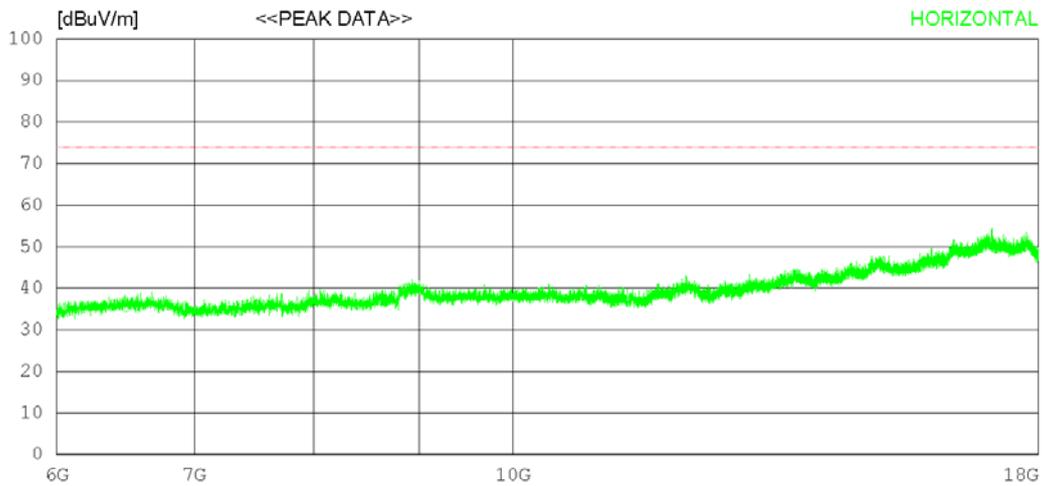
RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
 Power Supply Battery
 Temp/Humi 23 °C 44 % R.H.
 Test Condition DISPLAY

Memo

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



RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
Power Supply Battery
Temp/Humi 23 °C 44 % R.H.
Test Condition DISPLAY

Memo

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

No	Freq	Reading	Ant.Fac	Loss	Gain	Site.Fac	Result	Limit	Margin	Pola	Height	Angle
1	6483	31.5	31.59	11.36	38.82	0	35.63	74	38.37	Hori	127	358
2	8882.25	30.2	32.01	15.11	37.43	0	39.89	74	34.11	Hori	231	347
3	17094	26.4	37.62	23.06	36.51	0	50.57	74	23.43	Hori	330	180
4	6483	32.1	31.59	11.36	38.82	0	36.23	74	37.77	Vert	232	204
5	8882.25	31.1	32.01	15.11	37.43	0	40.79	74	33.21	Vert	213	358
6	17094	25.3	37.62	23.06	36.51	0	49.47	74	24.53	Vert	255	312

Radiated disturbance at (6 ~ 18) GHz _ Average measurement data			
Test configuration mode	3	EUT Operation mode	3
Test voltage (V)	Battery	Test Frequency (Hz)	-

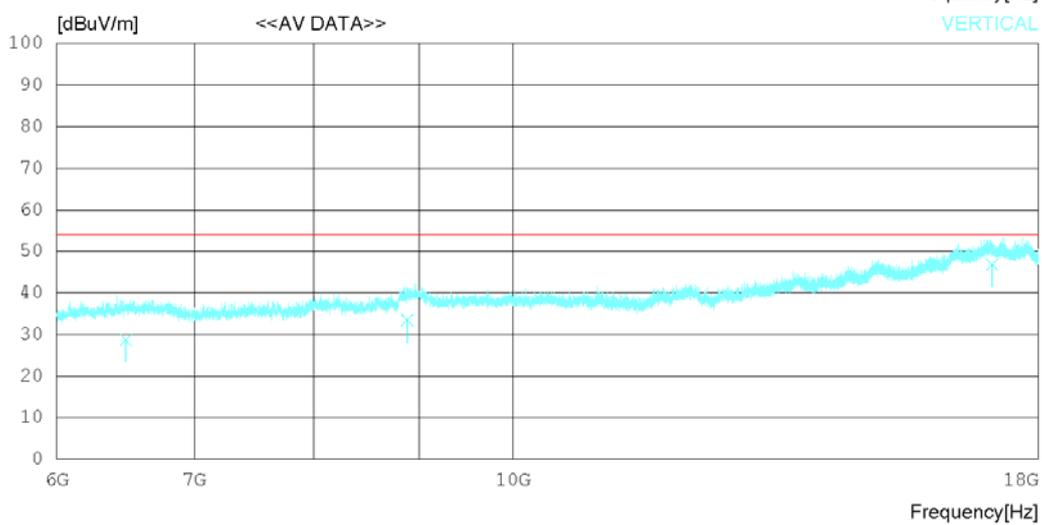
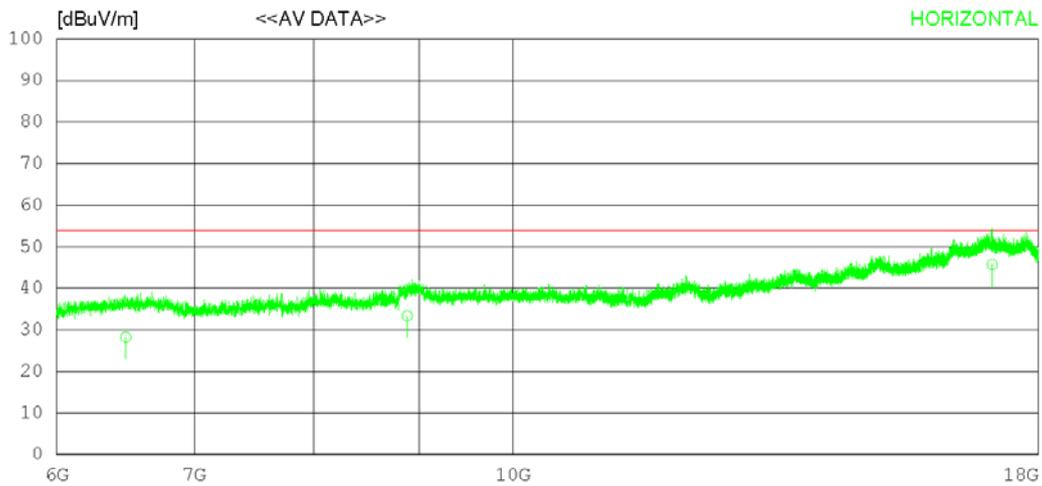
RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
 Power Supply Battery
 Temp/Humi 23 °C 44 % R.H.
 Test Condition DISPLAY

Memo

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



RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
Power Supply Battery
Temp/Humi 23 °C 44 % R.H.
Test Condition DISPLAY

Memo

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

No	Freq	Reading	Ant.Fac	Loss	Gain	Site.Fac	Result	Limit	Margin	Pola	Height	Angle
1	6483.121	24.11	31.59	11.36	38.82	0	28.24	54	25.76	Hori	232	78
2	6483.012	24.62	31.59	11.36	38.82	0	28.75	54	25.25	Vert	232	223
3	8882.222	23.66	32.01	15.11	37.43	0	33.35	54	20.65	Hori	133	223
4	8882.113	23.72	32.01	15.11	37.43	0	33.41	54	20.59	Vert	113	123
5	17094.06	21.57	37.62	23.06	36.51	0	45.74	54	8.26	Hori	123	223
6	17094.04	22.65	37.62	23.06	36.51	0	46.82	54	7.18	Vert	322	305

Radiated disturbance at (18 ~ 40) GHz _Peak measurement data			
Test configuration mode	3	EUT Operation mode	3
Test voltage (V)	Battery	Test Frequency (Hz)	-

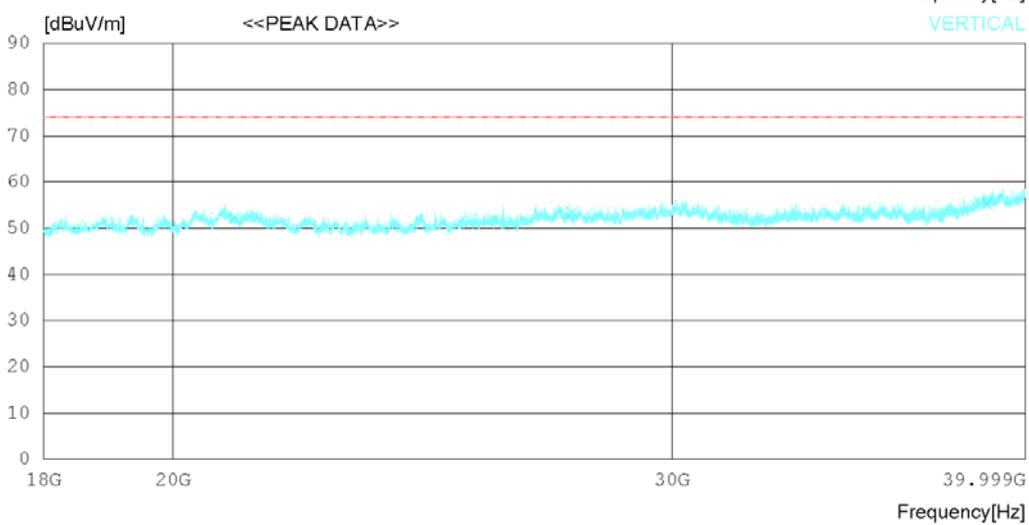
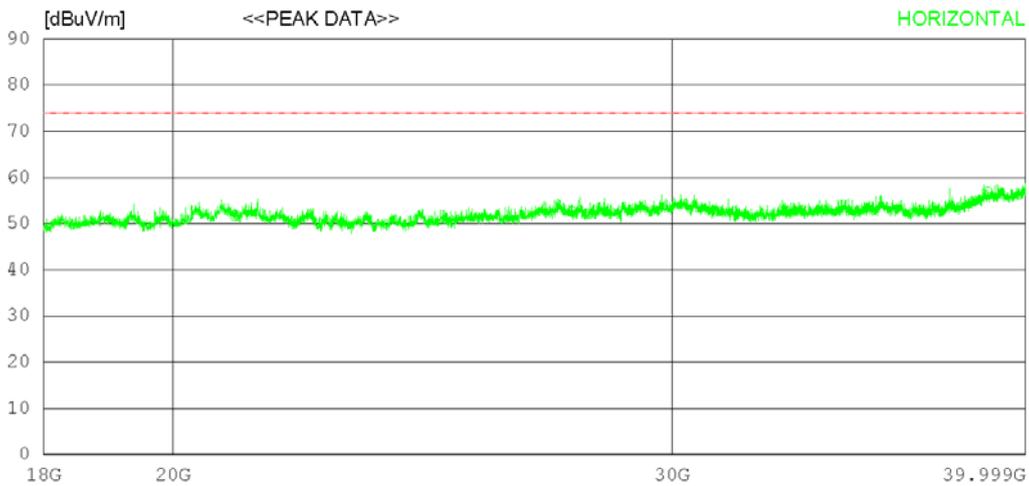
RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
 Power Supply Battery
 Temp/Humi 23 °C 44 % R.H.
 Test Condition DISPLAY

Memo

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



RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
Power Supply Battery
Temp/Humi 23 °C 44 % R.H.
Test Condition DISPLAY

Memo

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

No	Freq	Reading	Ant.Fac	Loss	Gain	Site.Fac	Result	Limit	Margin	Pola	Height	Angle
1	21027.75	39.1	45.6	20.5	53.46	0	51.74	74	22.26	Hori	123	359
2	27671.75	38.2	46.1	21.22	52.96	0	52.56	74	21.44	Hori	243	359
3	38779	36.3	47.28	25.52	52.26	0	56.84	74	17.16	Hori	305	359
4	21027.75	39.6	45.6	20.5	53.46	0	52.24	74	21.76	Vert	235	103
5	27671.75	39.1	46.1	21.22	52.96	0	53.46	74	20.54	Vert	113	2
6	38779	34.7	47.28	25.52	52.26	0	55.24	74	18.76	Vert	112	0

Radiated disturbance at (18 ~ 40) GHz _Average measurement data			
Test configuration mode	3	EUT Operation mode	3
Test voltage (V)	Battery	Test Frequency (Hz)	-

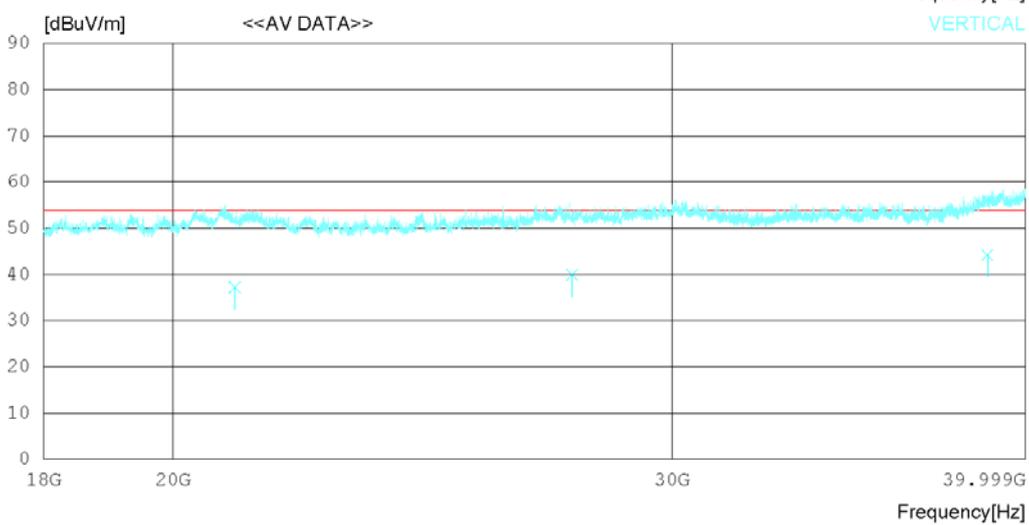
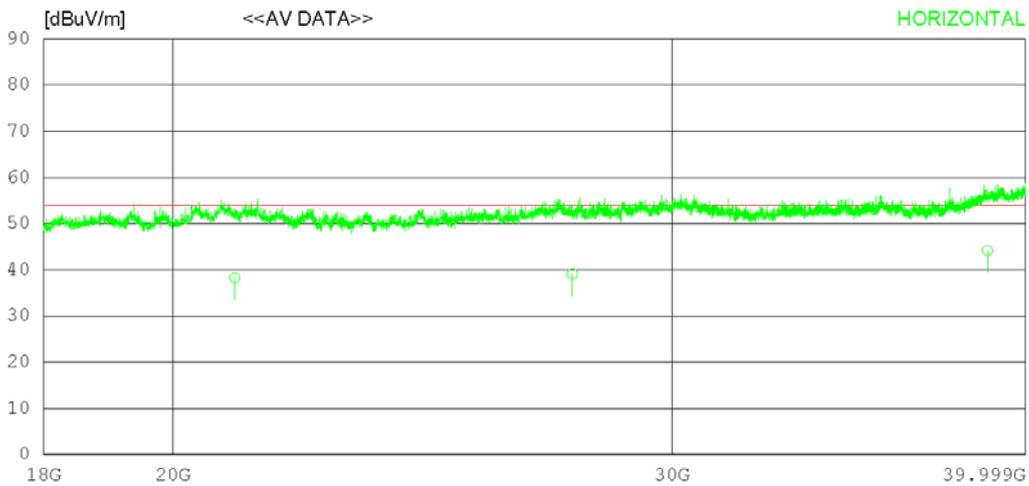
RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
 Power Supply Battery
 Temp/Humi 23 °C 44 % R.H.
 Test Condition DISPLAY

Memo

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



RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
Power Supply Battery
Temp/Humi 23 °C 44 % R.H.
Test Condition DISPLAY

Memo

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

No	Freq	Reading	Ant.Fac	Loss	Gain	Site.Fac	Result	Limit	Margin	Pola	Height	Angle
1	21027.95	25.63	45.6	20.5	53.46	0	38.27	54	15.73	Hori	232	78
2	21027.71	24.56	45.6	20.5	53.46	0	37.2	54	16.8	Vert	322	78
3	27671.77	24.75	46.1	21.22	52.96	0	39.11	54	14.89	Hori	113	223
4	27671.62	25.62	46.1	21.22	52.96	0	39.98	54	14.02	Vert	112	230
5	38779.04	23.63	47.28	25.52	52.26	0	44.17	54	9.83	Hori	312	305
6	38779.03	23.72	47.28	25.52	52.26	0	44.26	54	9.74	Vert	227	223

Radiated disturbance at (30 ~ 1000) MHz _Measurement data			
Test configuration mode	4	EUT Operation mode	4
Test voltage (V)	120	Test Frequency (Hz)	60

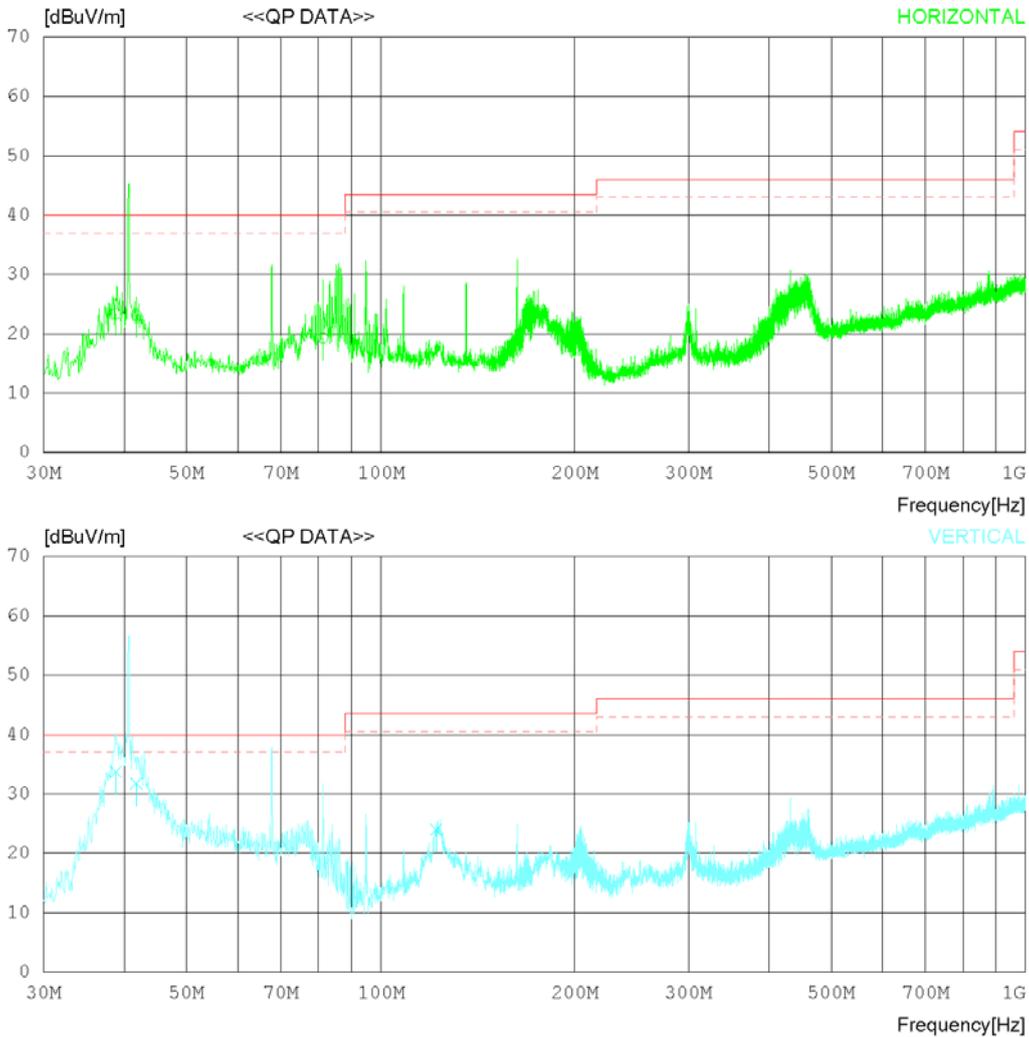
RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
 Power Supply 120 V 60 Hz
 Temp/Humi 23 °C 44 % R.H.
 Test Condition Wireless charging

Memo

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



*Remark : 40.68 MHz, 67.8 MHz is NFC 3rd, 5th harmonic frequency.

RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
 Power Supply 120 V 60 Hz
 Temp/Humi 23 °C 44 % R.H.
 Test Condition Wireless charging

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	38.851	32.50	16.74	0.67	26.56	23.35	40.00	16.65	342	78
2	41.761	31.57	17.45	0.68	26.58	23.12	40.00	16.88	132	112
3	81.288	30.50	14.14	1.40	26.76	19.28	40.00	20.72	335	305
----- Vertical -----										
4	38.851	42.90	16.74	0.67	26.56	33.75	40.00	6.25	311	120
5	41.761	40.20	17.45	0.68	26.58	31.75	40.00	8.25	213	322
6	121.959	32.56	17.12	1.12	26.80	24.00	43.50	19.50	305	142

Radiated disturbance at (1 ~ 6) GHz _ Peak measurement data			
Test configuration mode	4	EUT Operation mode	4
Test voltage (V)	120	Test Frequency (Hz)	60

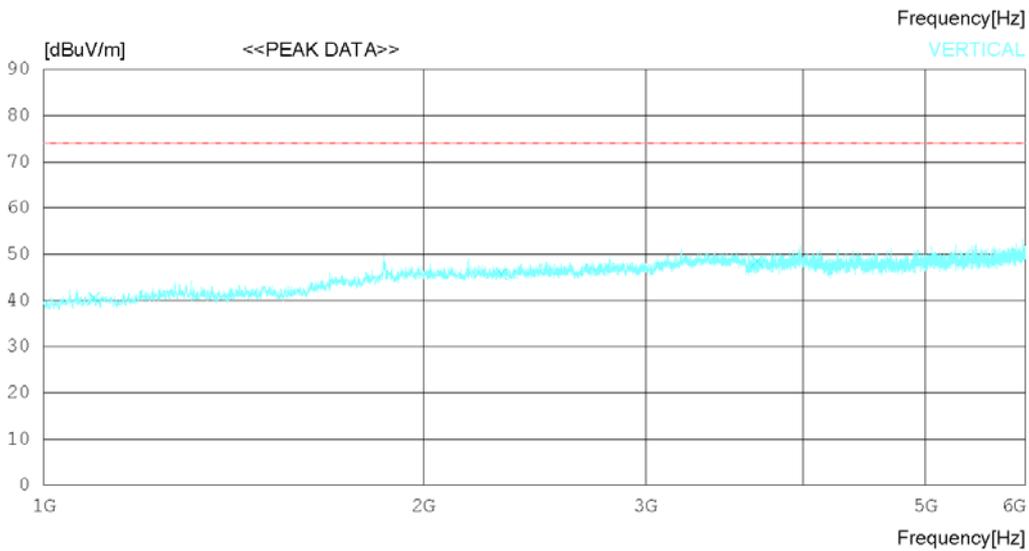
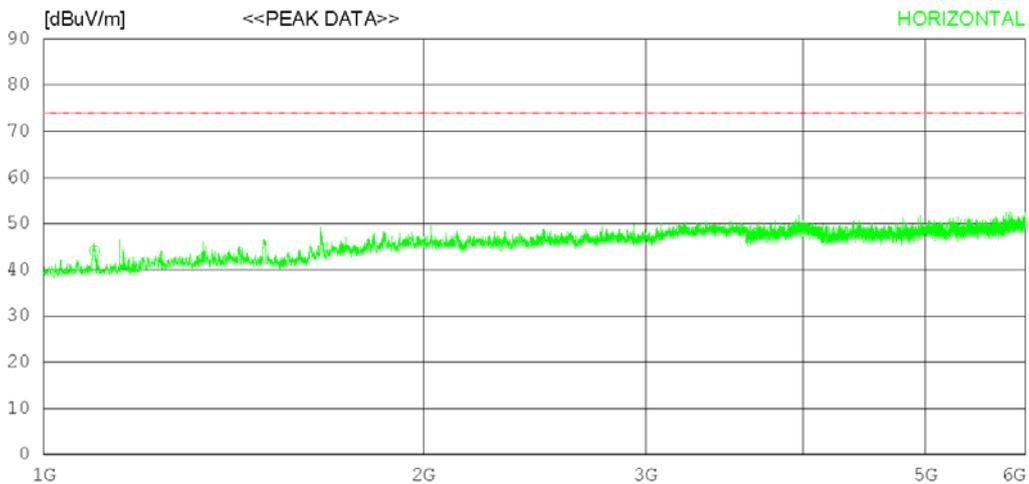
RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
 Power Supply 120 V 60 Hz
 Temp/Humi 23 °C 44 % R.H.
 Test Condition WIRELESS CHARGING

Memo

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



RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
Power Supply 120 V 60 Hz
Temp/Humi 23 °C 44 % R.H.
Test Condition WIRELESS CHARGING

Memo

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

No	Freq	Reading	Ant.Fac	Loss	Gain	Site.Fac	Result	Limit	Margin	Pola	Height	Angle
1	1096.875	47.1	27.96	4.62	35.61	0	44.07	74	29.93	Hori	205	358
2	2305	41.2	31.71	6.97	34.52	0	45.36	74	28.64	Hori	243	356
3	3675.625	40	33.4	8.56	33.99	0	47.97	74	26.03	Hori	305	267
4	1096.875	43.5	27.96	4.62	35.61	0	40.47	74	33.53	Vert	223	1
5	2305	41.6	31.71	6.97	34.52	0	45.76	74	28.24	Vert	113	268
6	3675.625	40.5	33.4	8.56	33.99	0	48.47	74	25.53	Vert	246	1

Radiated disturbance at (1 ~ 6) GHz _Average measurement data			
Test configuration mode	4	EUT Operation mode	4
Test voltage (V)	120	Test Frequency (Hz)	60

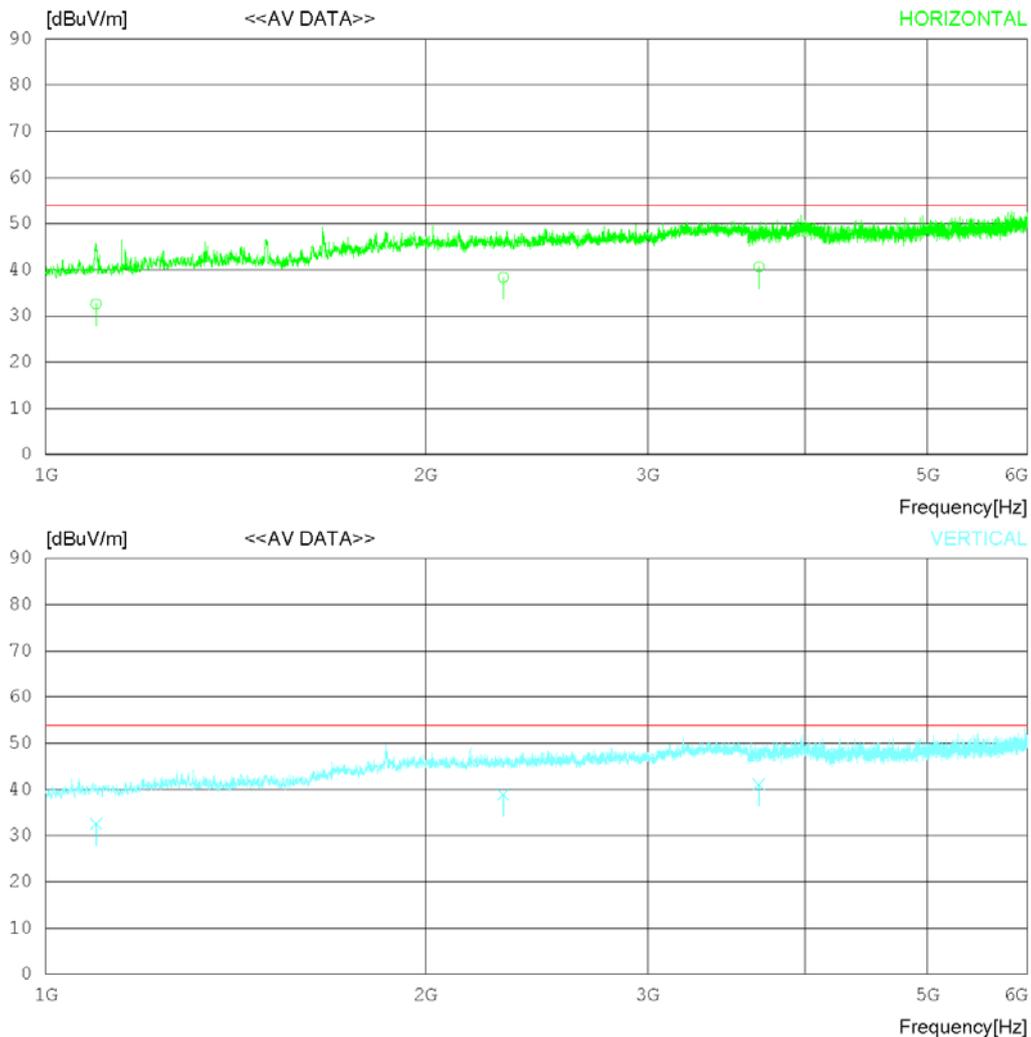
RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
 Power Supply 120 V 60 Hz
 Temp/Humi 23 °C 44 % R.H.
 Test Condition WIRELESS CHARGING

Memo

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



RADIATED EMISSION

Date 2020-05-16

Order No.	DTNC2004-03044
Power Supply	120 V 60 Hz
Temp/Humi	23 °C 44 % R.H.
Test Condition	WIRELESS CHARGING

Memo

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

No	Freq	Reading	Ant.Fac	Loss	Gain	Site.Fac	Result	Limit	Margin	Pola	Height	Angle
1	1096.122	35.62	27.95	4.62	35.61	0	32.58	54	21.42	Hori	132	78
2	1096.812	35.62	27.96	4.62	35.61	0	32.59	54	21.41	Vert	331	12
3	2305.352	34.22	31.71	6.97	34.52	0	38.38	54	15.62	Hori	335	112
4	2305.652	34.72	31.71	6.97	34.52	0	38.88	54	15.12	Vert	237	223
5	3675.644	32.67	33.4	8.56	33.99	0	40.64	54	13.36	Hori	223	305
6	3675.611	33.13	33.4	8.56	33.99	0	41.1	54	12.91	Vert	232	133

Radiated disturbance at (6 ~ 18) GHz _Peak measurement data			
Test configuration mode	4	EUT Operation mode	4
Test voltage (V)	120	Test Frequency (Hz)	60

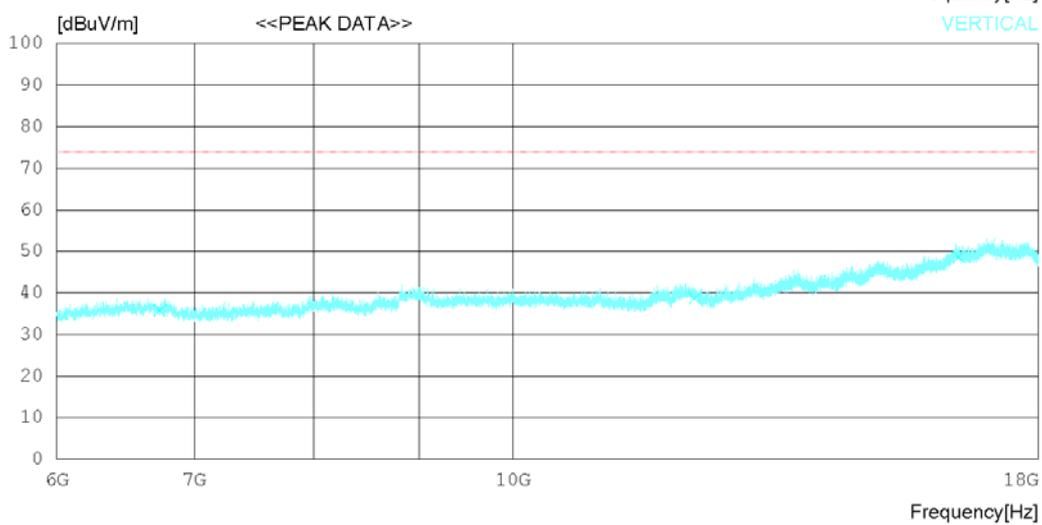
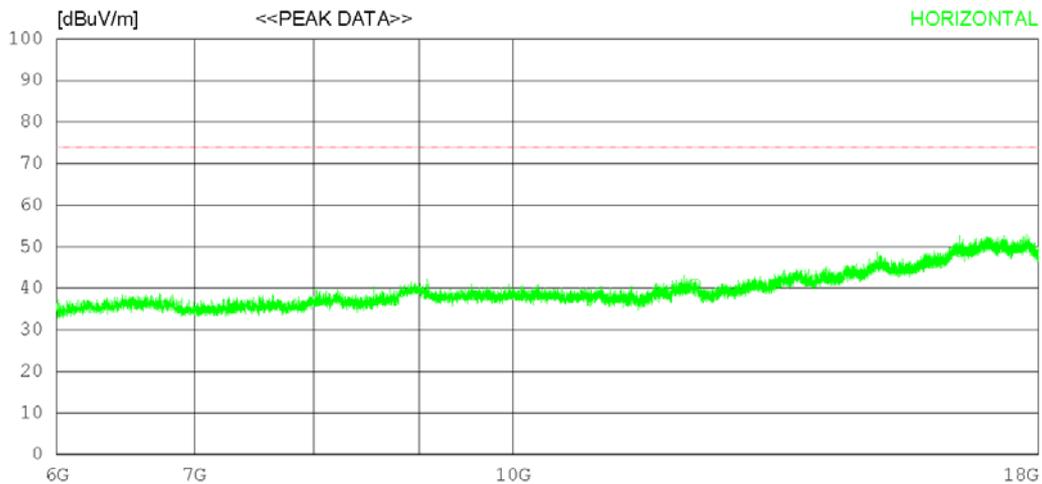
RADIATED EMISSION

Date 2020-05-17

Order No. DTNC2004-03044
 Power Supply 120 V 60 Hz
 Temp/Humi 23 °C 44 % R.H.
 Test Condition WIRELESS CHARGING

Memo

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



RADIATED EMISSION

Date 2020-05-17

Order No. DTNC2004-03044
Power Supply 120 V 60 Hz
Temp/Humi 23 °C 44 % R.H.
Test Condition WIRELESS CHARGING

Memo

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

No	Freq	Reading	Ant.Fac	Loss	Gain	Site.Fac	Result	Limit	Margin	Pola	Height	Angle
1	6733.5	30.6	31.52	12.39	38.7	0	35.81	74	38.19	Hori	123	358
2	12258.75	29.9	33.48	15.7	38.06	0	41.02	74	32.98	Hori	305	247
3	16470.75	26.1	36.95	21.9	36.12	0	48.83	74	25.17	Hori	223	0
4	6733.5	30.6	31.52	12.39	38.7	0	35.81	74	38.19	Vert	112	358
5	12258.75	27.6	33.48	15.7	38.06	0	38.72	74	35.28	Vert	126	0
6	16470.75	25.9	36.95	21.9	36.12	0	48.63	74	25.37	Vert	308	1

Radiated disturbance at (6 ~ 18) GHz _ Average measurement data			
Test configuration mode	4	EUT Operation mode	4
Test voltage (V)	120	Test Frequency (Hz)	60

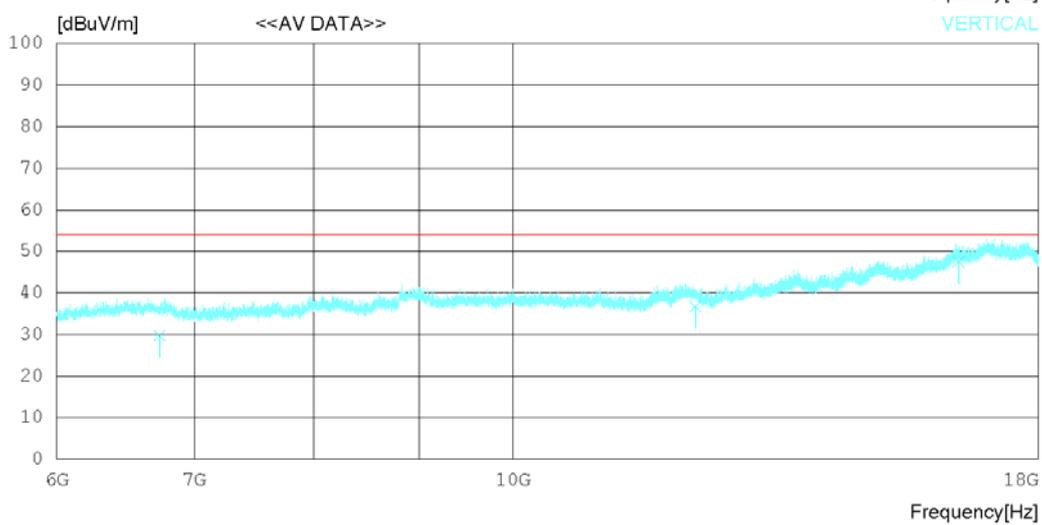
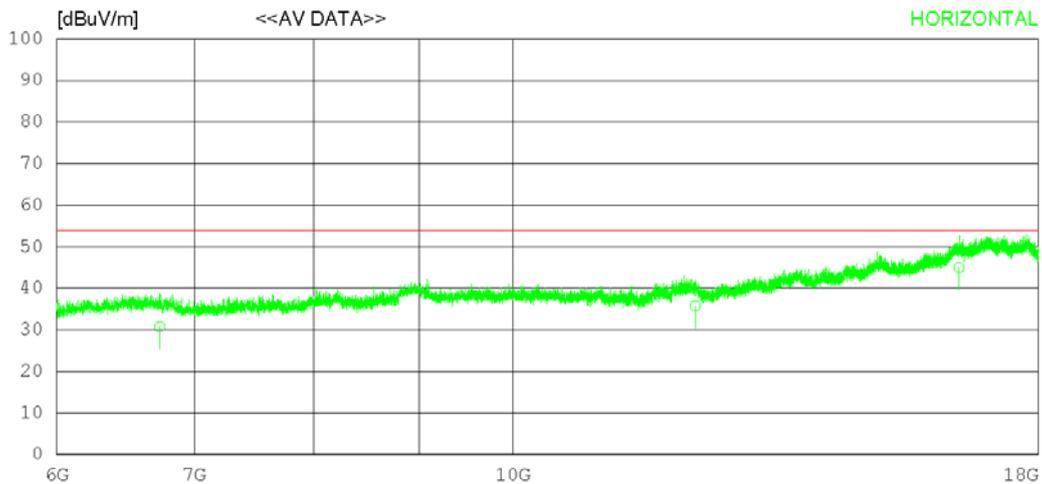
RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
 Power Supply 120 V 60 Hz
 Temp/Humi 23 °C 44 % R.H.
 Test Condition WIRELESS CHARGING

Memo

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



RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
Power Supply 120 V 60 Hz
Temp/Humi 23 °C 44 % R.H.
Test Condition WIRELESS CHARGING

Memo

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

No	Freq	Reading	Ant.Fac	Loss	Gain	Site.Fac	Result	Limit	Margin	Pola	Height	Angle
1	6733.121	25.54	31.52	12.39	38.7	0	30.75	54	23.25	Hori	232	78
2	6733.512	24.5	31.52	12.39	38.7	0	29.71	54	24.29	Vert	232	78
3	12258.72	24.62	33.48	15.7	38.06	0	35.74	54	18.26	Hori	243	172
4	12258.76	25.62	33.48	15.7	38.06	0	36.74	54	17.26	Vert	233	120
5	16470.66	22.21	36.95	21.9	36.12	0	44.94	54	9.06	Hori	332	235
6	16470.74	24.77	36.95	21.9	36.12	0	47.5	54	6.5	Vert	131	335

Radiated disturbance at (18 ~ 40) GHz _Peak measurement data			
Test configuration mode	4	EUT Operation mode	4
Test voltage (V)	120	Test Frequency (Hz)	60

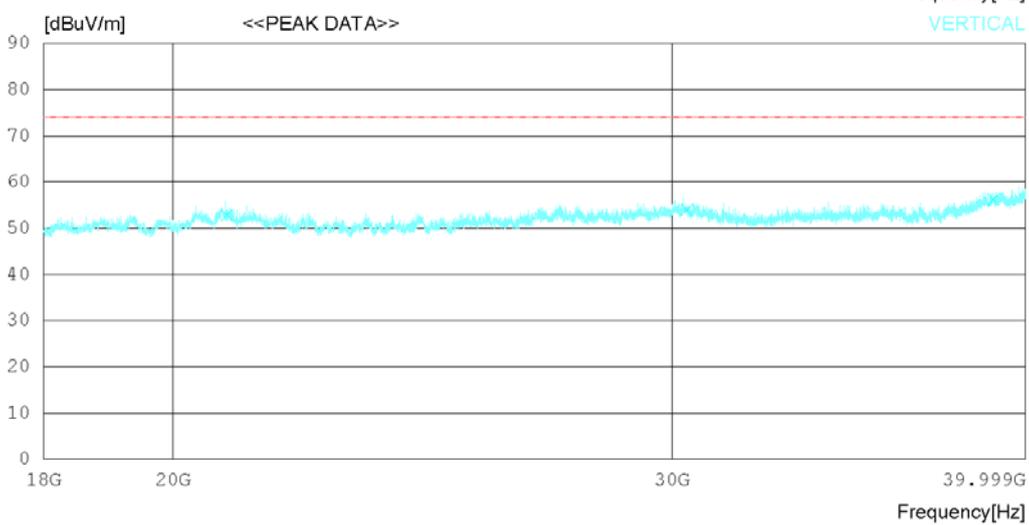
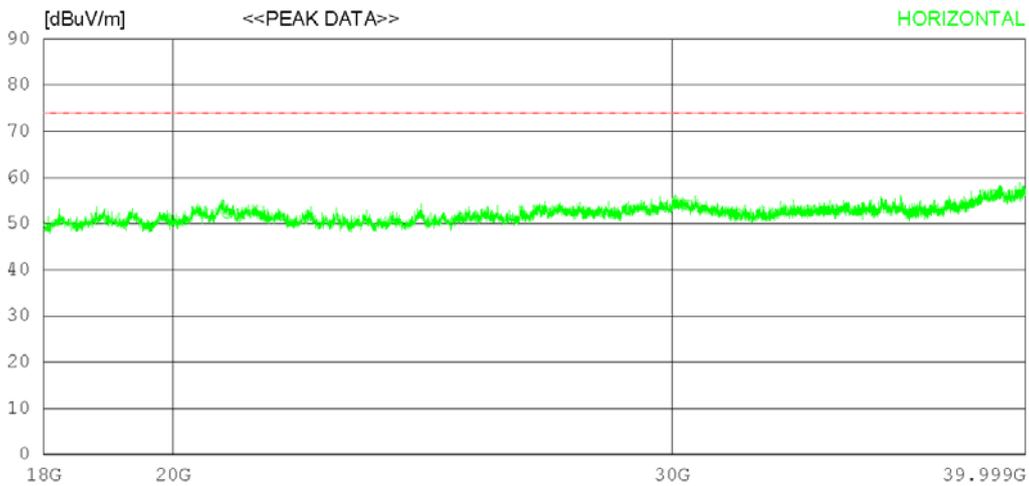
RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
 Power Supply 120 V 60 Hz
 Temp/Humi 23 °C 44 % R.H.
 Test Condition WIRELESS CHARGING

Memo

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



RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
Power Supply 120 V 60 Hz
Temp/Humi 23 °C 44 % R.H.
Test Condition WIRELESS CHARGING

Memo

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

No	Freq	Reading	Ant.Fac	Loss	Gain	Site.Fac	Result	Limit	Margin	Pola	Height	Angle
1	20895.75	39.8	45.6	20.32	53.4	0	52.32	74	21.68	HORI	235	358
2	30375	36.6	47.5	22.1	52.22	0	53.98	74	20.02	HORI	352	358
3	38971.5	35	47.57	25.75	52.25	0	56.07	74	17.93	HORI	235	211
4	20895.75	40.4	45.6	20.32	53.4	0	52.92	74	21.08	VERT	112	0
5	30375	36.6	47.5	22.1	52.22	0	53.98	74	20.02	VERT	112	0
6	38971.5	35.2	47.57	25.75	52.25	0	56.27	74	17.73	VERT	124	97

Radiated disturbance at (18 ~ 40) GHz _Average measurement data			
Test configuration mode	4	EUT Operation mode	4
Test voltage (V)	120	Test Frequency (Hz)	60

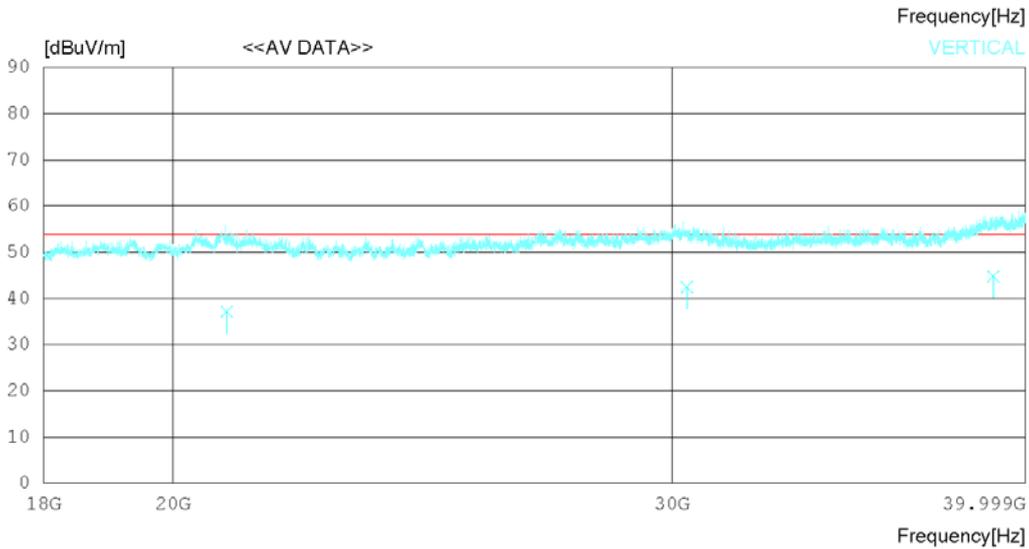
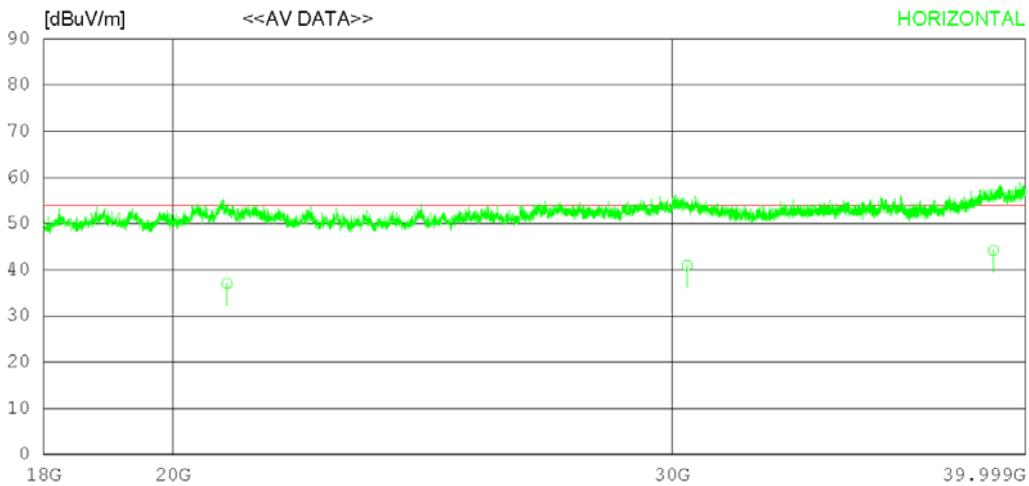
RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
 Power Supply 120 V 60 Hz
 Temp/Humi 23 °C 44 % R.H.
 Test Condition WIRELESS CHARGING

Memo

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



RADIATED EMISSION

Date 2020-05-16

Order No.	DTNC2004-03044
Power Supply	120 V 60 Hz
Temp/Humi	23 °C 44 % R.H.
Test Condition	WIRELESS CHARGING

Memo

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

No	Freq	Reading	Ant.Fac	Loss	Gain	Site.Fac	Result	Limit	Margin	Pola	Height	Angle
1	20895.12	24.52	45.6	20.32	53.4	0	37.04	54	16.96	Hori	123	78
2	20895.12	24.62	45.6	20.32	53.4	0	37.14	54	16.86	Vert	234	232
3	30375.02	23.57	47.5	22.1	52.22	0	40.95	54	13.05	Hori	322	223
4	30375.35	25.11	47.5	22.1	52.22	0	42.49	54	11.51	Vert	122	122
5	38971.36	23.12	47.57	25.75	52.25	0	44.19	54	9.81	Hori	131	211
6	38971.12	23.72	47.57	25.75	52.25	0	44.79	54	9.21	Vert	113	302

Radiated disturbance at (30 ~ 1000) MHz _ Measurement data			
Test configuration mode	5	EUT Operation mode	5
Test voltage (V)	120	Test Frequency (Hz)	60

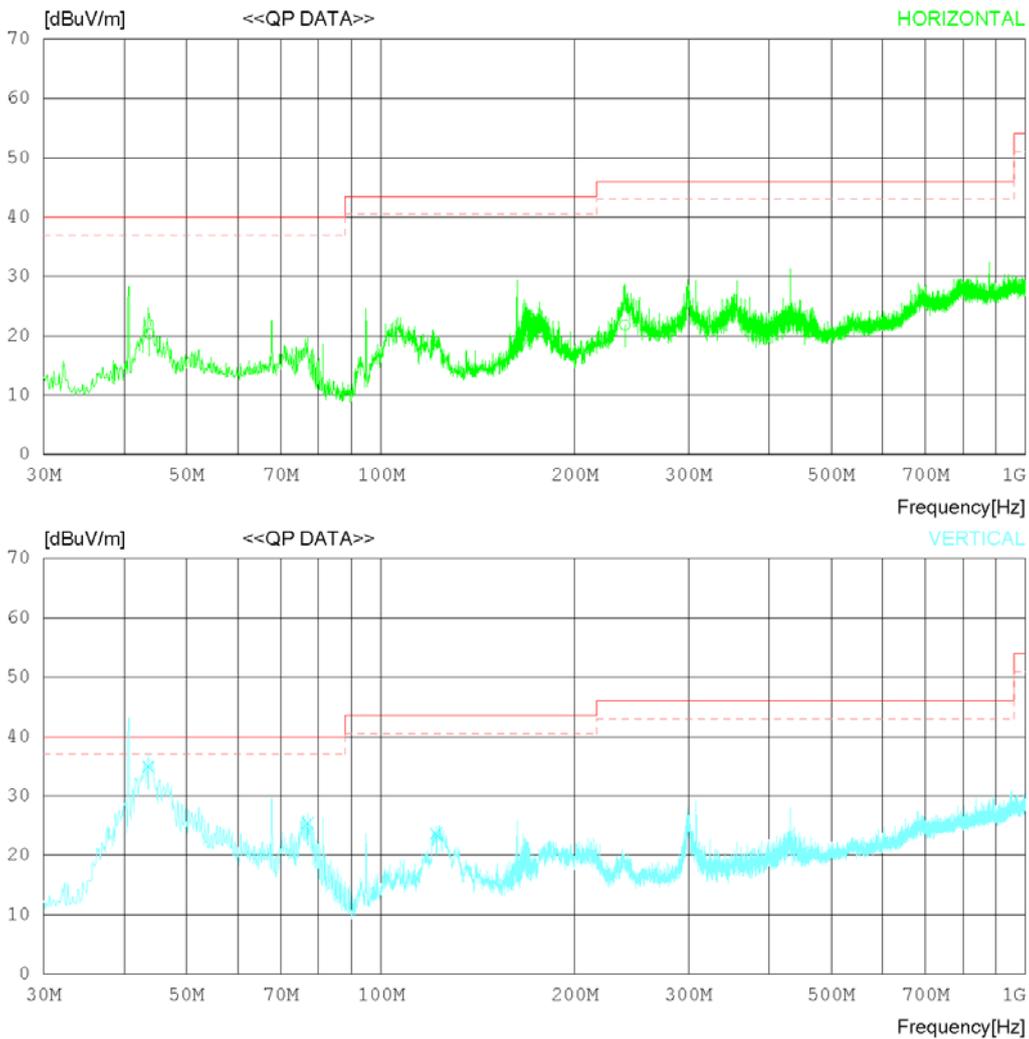
RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
 Power Supply 120 V 60 Hz
 Temp/Humi 23 °C 44 % R.H.
 Test Condition Wireless charging+DS 180

Memo

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



*Remark : 40.68 MHz, 67.8 MHz is NFC 3rd, 5th harmonic frequency.

RADIATED EMISSION

Date 2020-05-16

Order No.	DTNC2004-03044
Power Supply	120 V 60 Hz
Temp/Humi	23 °C 44 % R.H.
Test Condition	Wireless charging+DS 180

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	43.701	28.62	17.60	0.70	26.59	20.33	40.00	19.67	112	312
2	170.889	30.25	18.00	1.28	26.71	22.82	43.50	20.68	305	223
3	239.272	28.62	18.05	1.76	26.60	21.83	46.00	24.17	112	120
----- Vertical -----										
4	43.580	43.25	17.60	0.69	26.59	34.95	40.00	5.05	120	205
5	77.045	35.50	15.39	1.27	26.74	25.42	40.00	14.58	332	105
6	121.906	32.20	17.11	1.12	26.80	23.63	43.50	19.87	246	122

Radiated disturbance at (1 ~ 6) GHz _ Peak measurement data			
Test configuration mode	5	EUT Operation mode	5
Test voltage (V)	120	Test Frequency (Hz)	60

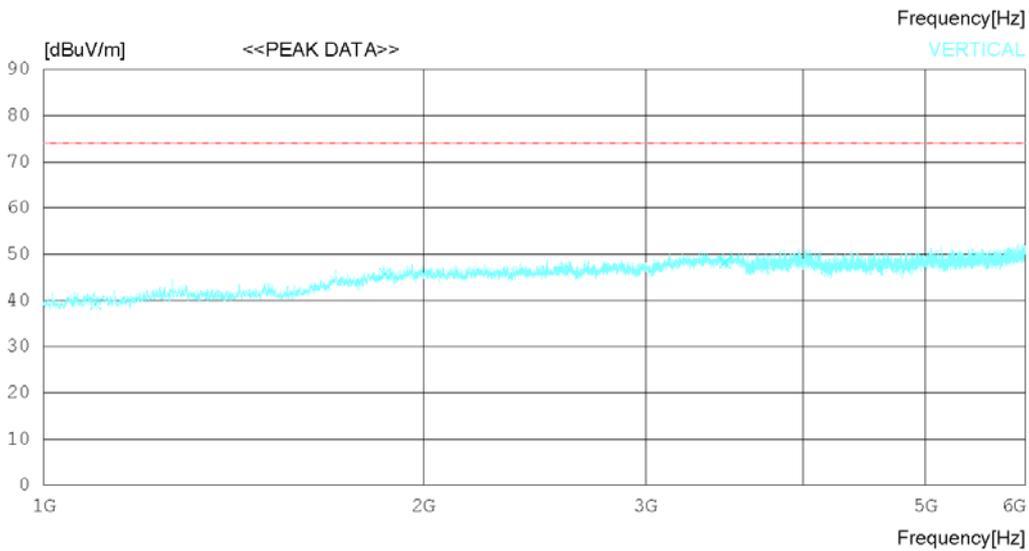
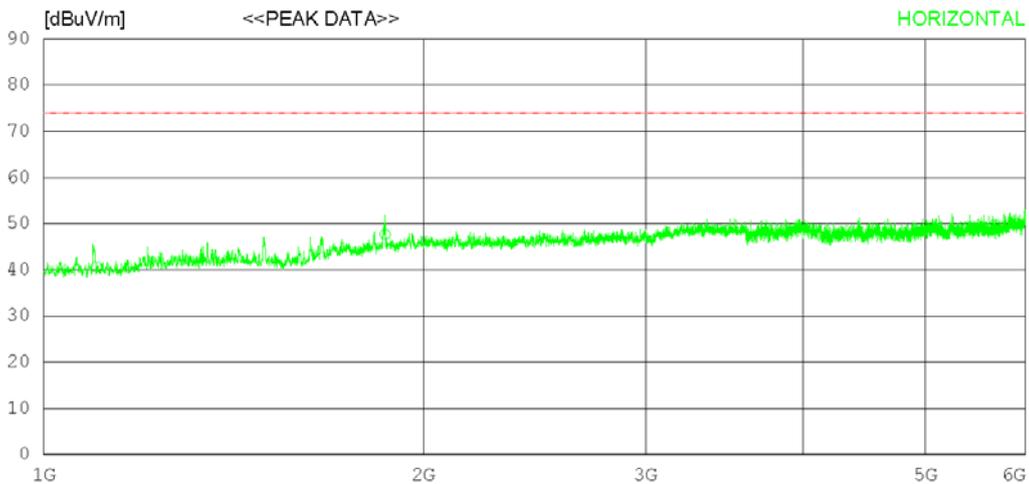
RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
 Power Supply 120 V 60 Hz
 Temp/Humi 23 °C 44 % R.H.
 Test Condition WIRELESS CHARGING+DS

Memo

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



RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
Power Supply 120 V 60 Hz
Temp/Humi 23 °C 44 % R.H.
Test Condition WIRELESS CHARGING+DS

Memo

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

No	Freq	Reading	Ant.Fac	Loss	Gain	Site.Fac	Result	Limit	Margin	Pola	Height	Angle
1	1100.625	43.7	28	4.61	35.61	0	40.7	74	33.3	Hori	278	120
2	1864.375	44.1	31.12	6.94	34.53	0	47.63	74	26.37	Hori	123	165
3	3468.75	40.9	33.4	8.45	34.28	0	48.47	74	25.53	Hori	235	358
4	1100.625	42.2	28	4.61	35.61	0	39.2	74	34.8	Vert	322	1
5	1864.375	42.2	31.12	6.94	34.53	0	45.73	74	28.27	Vert	100	1
6	3468.75	40.7	33.4	8.45	34.28	0	48.27	74	25.73	Vert	133	1

Radiated disturbance at (1 ~ 6) GHz _Average measurement data			
Test configuration mode	5	EUT Operation mode	5
Test voltage (V)	120	Test Frequency (Hz)	60

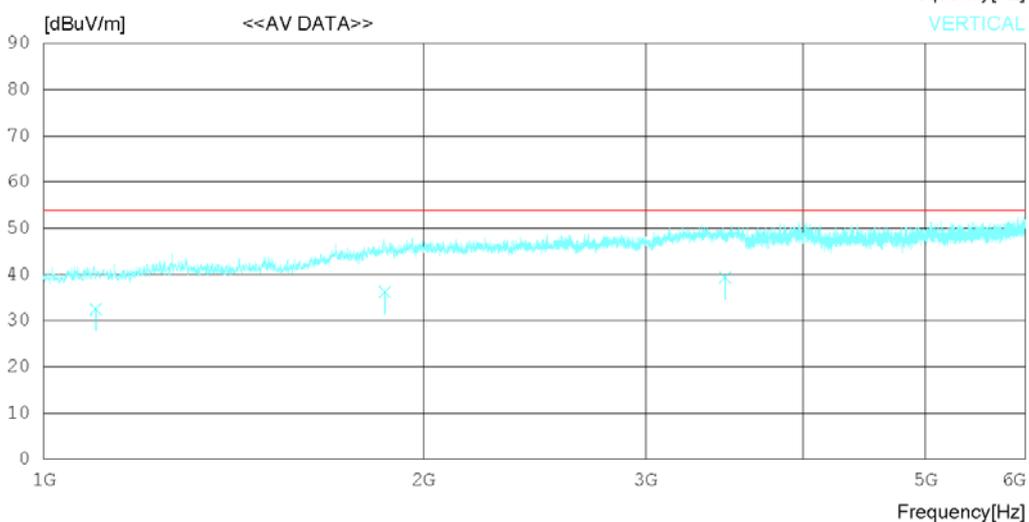
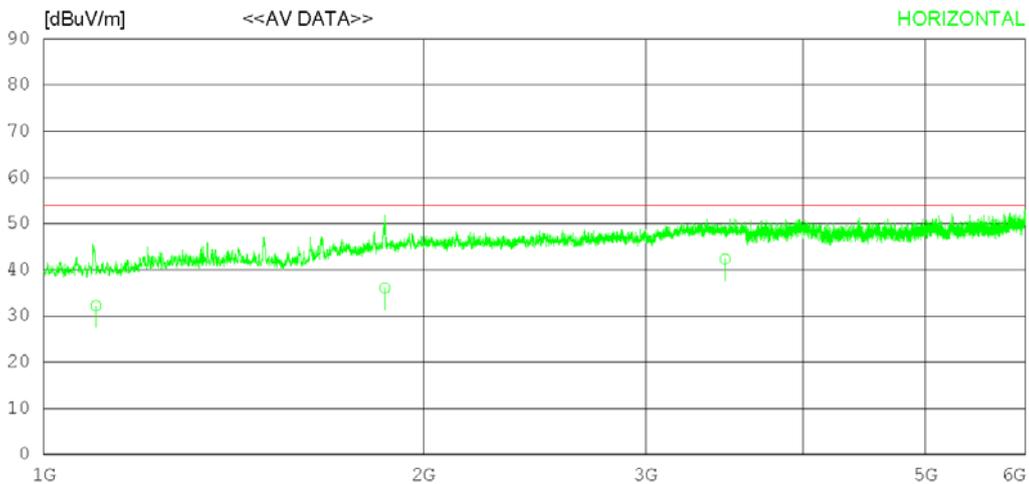
RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
 Power Supply 120 V 60 Hz
 Temp/Humi 23 °C 44 % R.H.
 Test Condition WIRELESS CHARGING+DS

Memo

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



RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
Power Supply 120 V 60 Hz
Temp/Humi 23 °C 44 % R.H.
Test Condition WIRELESS CHARGING+DS

Memo

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

No	Freq	Reading	Ant.Fac	Loss	Gain	Site.Fac	Result	Limit	Margin	Pola	Height	Angle
1	1100.12	35.2	28	4.61	35.61	0	32.2	54	21.8	Hori	232	78
2	1100.612	35.52	28	4.61	35.61	0	32.52	54	21.48	Vert	122	78
3	1864.311	32.5	31.11	6.94	34.53	0	36.02	54	17.98	Hori	113	123
4	1864.322	32.67	31.11	6.94	34.53	0	36.19	54	17.81	Vert	322	235
5	3468.415	34.72	33.4	8.45	34.28	0	42.29	54	11.71	Hori	223	350
6	3468.635	31.77	33.4	8.45	34.28	0	39.34	54	14.66	Vert	121	133

Radiated disturbance at (6 ~ 18) GHz _Peak measurement data			
Test configuration mode	5	EUT Operation mode	5
Test voltage (V)	120	Test Frequency (Hz)	60

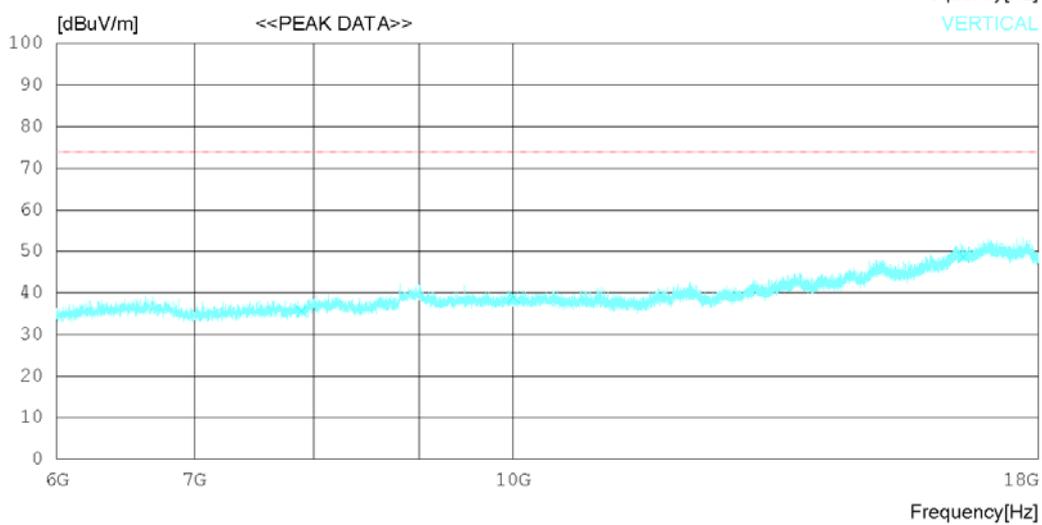
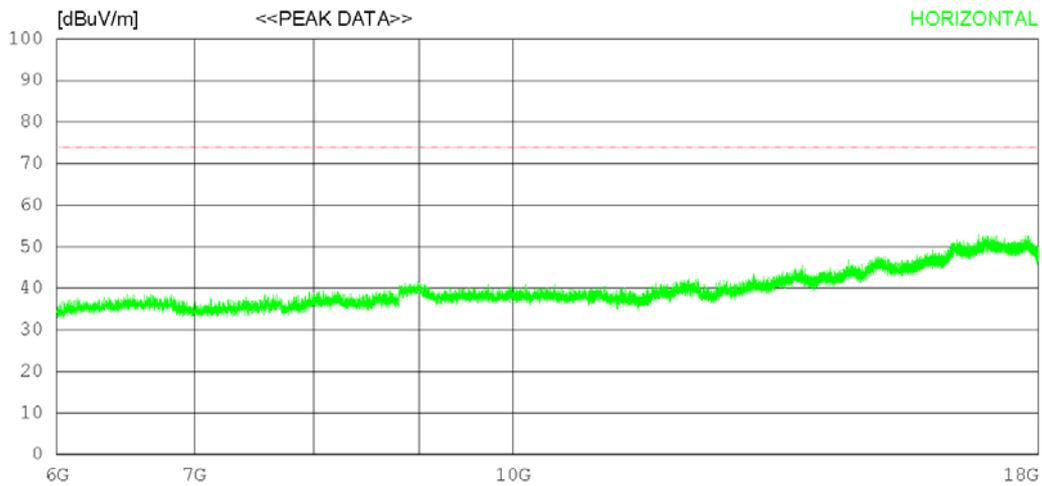
RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
 Power Supply 120 V 60 Hz
 Temp/Humi 23 °C 44 % R.H.
 Test Condition WIRELESS CHARGING+DS

Memo

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



RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
Power Supply 120 V 60 Hz
Temp/Humi 23 °C 44 % R.H.
Test Condition WIRELESS CHARGING+DS

Memo

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

No	Freq	Reading	Ant.Fac	Loss	Gain	Site.Fac	Result	Limit	Margin	Pola	Height	Angle
1	7894.5	29.3	31.32	12.43	37.66	0	35.39	74	38.61	Hori	235	358
2	10000.5	27.4	32.55	15.15	37.5	0	37.6	74	36.4	Hori	208	358
3	16551.75	26.2	37.04	21.8	36.13	0	48.91	74	25.09	Hori	323	350
4	7894.5	29.5	31.32	12.43	37.66	0	35.59	74	38.41	Vert	113	348
5	10000.5	28.8	32.55	15.15	37.5	0	39	74	35	Vert	231	358
6	16551.75	26	37.04	21.8	36.13	0	48.71	74	25.29	Vert	221	0

Radiated disturbance at (6 ~ 18) GHz _ Average measurement data			
Test configuration mode	5	EUT Operation mode	5
Test voltage (V)	120	Test Frequency (Hz)	60

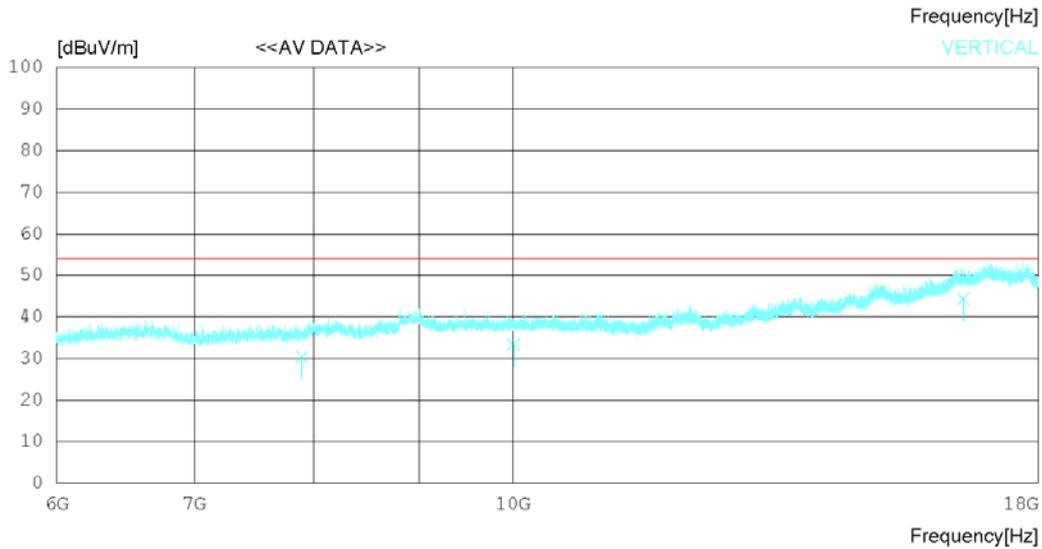
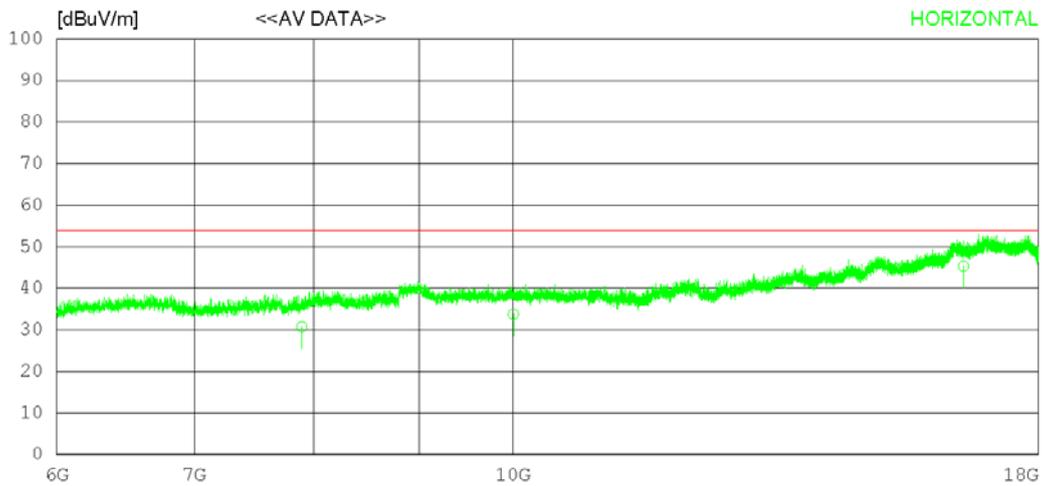
RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
 Power Supply 120 V 60 Hz
 Temp/Humi 23 °C 44 % R.H.
 Test Condition WIRELESS CHARGING+DS

Memo

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



RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
Power Supply 120 V 60 Hz
Temp/Humi 23 °C 44 % R.H.
Test Condition WIRELESS CHARGING+DS

Memo

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

No	Freq	Reading	Ant.Fac	Loss	Gain	Site.Fac	Result	Limit	Margin	Pola	Height	Angle
1	7894.512	24.63	31.32	12.43	37.66	0	30.72	54	23.28	Hori	231	121
2	7894.512	24.25	31.32	12.43	37.66	0	30.34	54	23.66	Vert	233	78
3	10000.56	23.54	32.55	15.15	37.5	0	33.74	54	20.26	Hori	121	232
4	10000.56	23.2	32.55	15.15	37.5	0	33.4	54	20.6	Vert	213	113
5	16551.71	22.61	37.04	21.8	36.13	0	45.32	54	8.68	Hori	130	122
6	16551.42	21.65	37.04	21.8	36.13	0	44.36	54	9.64	Vert	123	255

Radiated disturbance at (18 ~ 40) GHz _Peak measurement data			
Test configuration mode	5	EUT Operation mode	5
Test voltage (V)	120	Test Frequency (Hz)	60

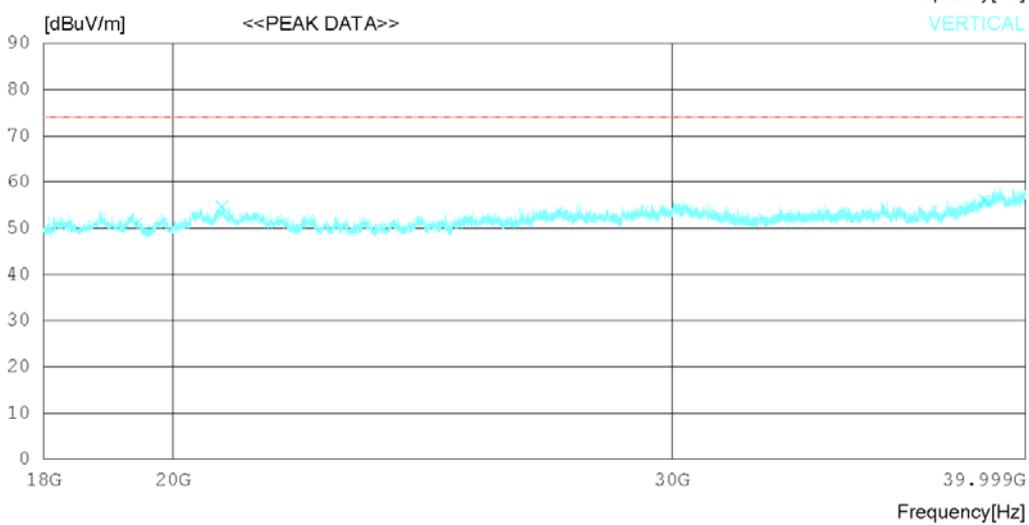
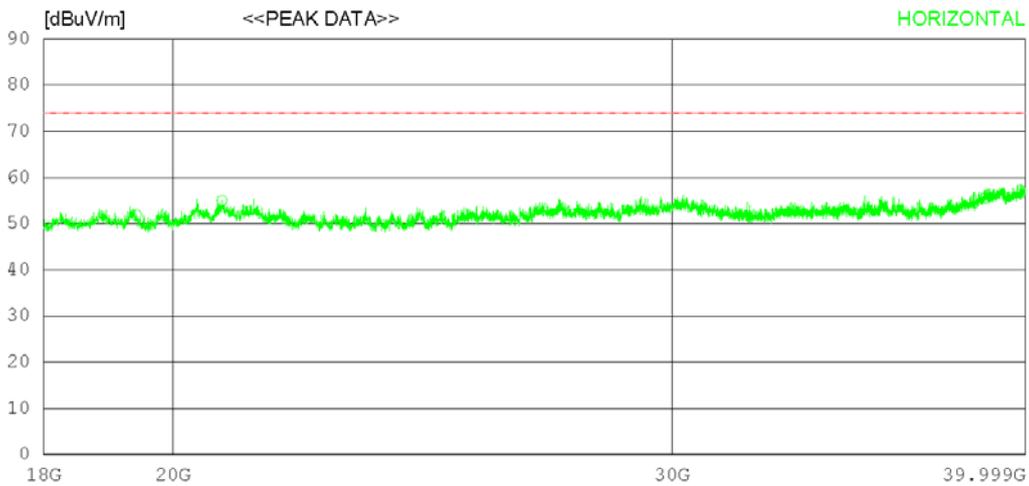
RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
 Power Supply 120 V 60 Hz
 Temp/Humi 23 °C 44 % R.H.
 Test Condition WIRELESS CHARGING+DS

Memo

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



RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
Power Supply 120 V 60 Hz
Temp/Humi 23 °C 44 % R.H.
Test Condition WIRELESS CHARGING+DS

Memo

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

No	Freq	Reading	Ant.Fac	Loss	Gain	Site.Fac	Result	Limit	Margin	Pola	Height	Angle
1	19402.5	40.8	45	18.54	52.46	0	51.88	74	22.12	Hori	124	228
2	20807.75	42.6	45.6	20.15	53.36	0	54.99	74	19.01	Hori	234	358
3	38696.5	35.2	47.19	25.41	52.27	0	55.53	74	18.47	Hori	112	358
4	19402.5	39.8	45	18.54	52.46	0	50.88	74	23.12	Vert	223	181
5	20807.75	42.3	45.6	20.15	53.36	0	54.69	74	19.31	Vert	113	0
6	38696.5	35.7	47.19	25.41	52.27	0	56.03	74	17.97	Vert	305	0

Radiated disturbance at (18 ~ 40) GHz _Average measurement data			
Test configuration mode	5	EUT Operation mode	5
Test voltage (V)	120	Test Frequency (Hz)	60

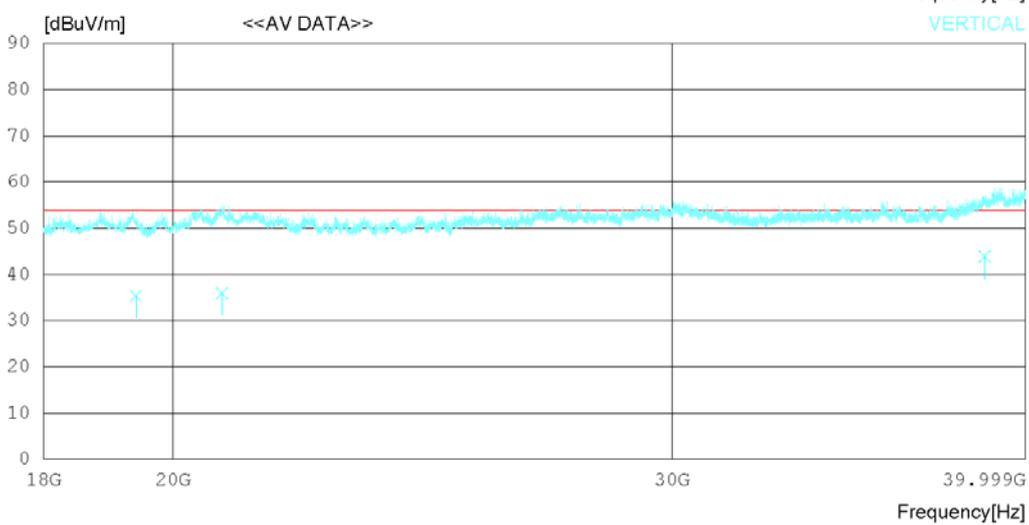
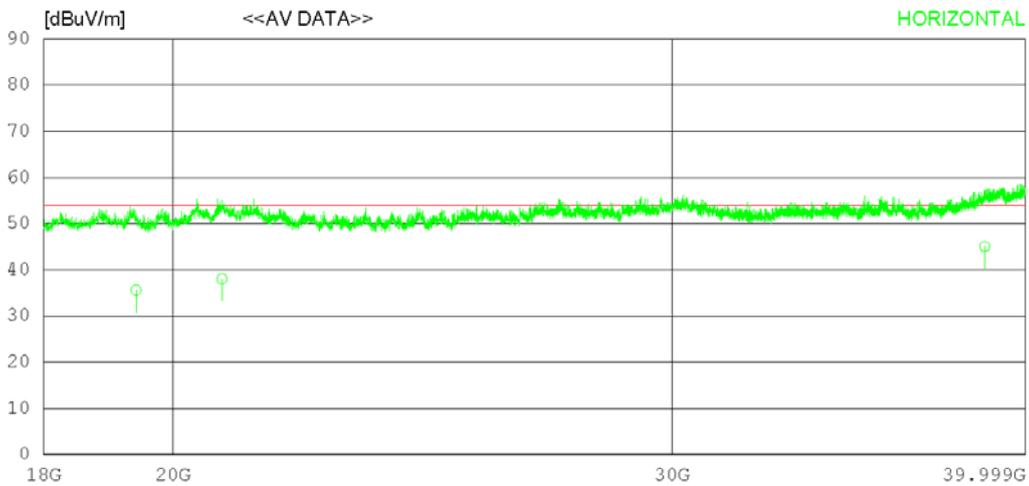
RADIATED EMISSION

Date 2020-05-16

Order No. DTNC2004-03044
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 Test Condition WIRELESS CHARGING+DS

Memo

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



RADIATED EMISSION

Date 2020-05-16

Order No.	DTNC2004-03044
Power Supply	120 V 60 Hz
Temp/Humi	23 °C 44 % R.H.
Test Condition	WIRELESS CHARGING+DS

Memo

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

No	Freq	Reading	Ant.Fac	Loss	Gain	Site.Fac	Result	Limit	Margin	Pola	Height	Angle
1	19402.51	24.52	45	18.54	52.46	0	35.6	54	18.4	Hori	223	122
2	19402.51	24.26	45	18.54	52.46	0	35.34	54	18.66	Vert	213	122
3	20807.77	25.62	45.6	20.15	53.36	0	38.01	54	15.99	Hori	121	322
4	20807.74	23.57	45.6	20.15	53.36	0	35.96	54	18.04	Vert	112	78
5	38696.63	23.55	47.19	25.41	52.27	0	43.88	54	10.12	Vert	302	330
6	38696.42	24.72	47.19	25.41	52.27	0	45.05	54	8.95	Hori	223	134

Calculation

Result(dBuV/m) : Reading Value(dBuV) + Cable loss(dB) - Pre amplifier gain(dB) + Ant. Factor(dB)
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Margin : Limit(dBuV/m) - Result(dBuV/m)

8. Revision History

Date	Description	Revised By	Reviewed By
May. 25. 2020	Initial report	JunSeo Park	KyoungHwan Bae

-End of test report-