

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. : DREFCC2004-0118(1)
2. Client / Applicant
 - Name : LG Electronics Inc.
 - Address : 1000 Sylvan Avenue, Englewood Cliffs NJ 07632 United States
3. Use of Report : Grant of Certification
4. Product Name / Model Name / FCC ID : Mobile Phone / LM-G900EM / ZNFG900EM
5. Test Standard : ANSI C 63.4 : 2014
FCC Part 15 Subpart B
(Class B personal computers and peripherals)
6. Date of Test : Apr. 04. 2020 ~ Apr. 27. 2020
7. Testing Environment : Temperature (20 ~ 23) °C , Humidity (40 ~ 46) % R.H.
8. Test Result : Refer to the attached Test Result

Affirmation	Tested by	Reviewed by
	Name : JunSeo Park (Signature)	Name : KyoungHwan Bae (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. This test report shall not be reproduced except in full, without the written approval of DT&C Co., Ltd.

May. 04. 2020

DT&C Co., Ltd.

'This test report is not related to 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-4076, R-4180, R-4496, T-1442, G-10338, G-754, 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. 1000 Sylvan Avenue, Englewood Cliffs NJ 07632 United States
Manufacturer	LG Electronics Inc. 1000 Sylvan Avenue, Englewood Cliffs NJ 07632 United States
Product Name	Mobile Phone
Model Name	LM-G900EM
Add Model Name	LMG900EM, G900EM, LM-G900GM, LMG900GM, G900GM
FCC ID	ZNFG900EM
Rated Power	DC 3.87 V
Remarks	None

* Accessory

Equipment	No.	Manufacturer	Model Name	Product Number
Earphone	1	CRESYN	EMB-LGE53STKKB	EAB63728251
Cable	1	Ningbo	DC15WB-G	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 ' , 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	LG	KB25C	N/A
AE	MOUSE	Logitech	G100S	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	1.3	Non shield	Plastic	NOTEBOOK
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	
HDMI(MONITOR)	I/O	1.8	shield	Plastic	
AUX(EAR MIC)	I/O	1.8	Non shield	Plastic	
DC IN(ADAPTOR)	DC	1.8	Non shield	Plastic	
DC OUT	DC	1.8	Non shield	Plastic	NOTEBOOK
POEPOWER	AC	-	Non shield	Plastic	ADAPTOR
*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
POEPOWER	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 POEPOWER	DC AC	1.5 -	Non shield -	Plastic -	WIRELESS CHARGER ADAPTOR
*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]
0.41123	N	40.03	Cispr - Average	47.62	7.59

-Radiated Disturbance

Frequency [MHz]	Pol.	Result [dB μ V/m]	Detector	Limit [dB μ V/m]	Margin [dB]
40.064	V	35.93	Quasi - Peak	40.00	4.07

6. Test Environment

Test Items	Test date (YYYY-MM-DD)	Temp. (°C)	Humidity (% R.H.)	Pressure (kPa)
Conducted Disturbance	2020-04-04	23	44	-
	2020-04-27	23	40	
Radiated Disturbance	2020-04-04	20	46	
	2020-04-20	23	44	

7. Test Results : Emission

7.1 Conducted Disturbance

ANSI C63.4	Mains terminal disturbance voltage		Result
<u>Method:</u> 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.			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, 2, 4, 5	
	EUT Operation mode	1, 2, 4, 5	
Limits – Class A			
Frequency (MHz)	Limit dBµV		
	Quasi-Peak	Average	
0.15 to 0.50	79	66	
0.50 to 30	73	60	
Limits – Class B			
Frequency (MHz)	Limit dBµV		
	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	
Expended 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

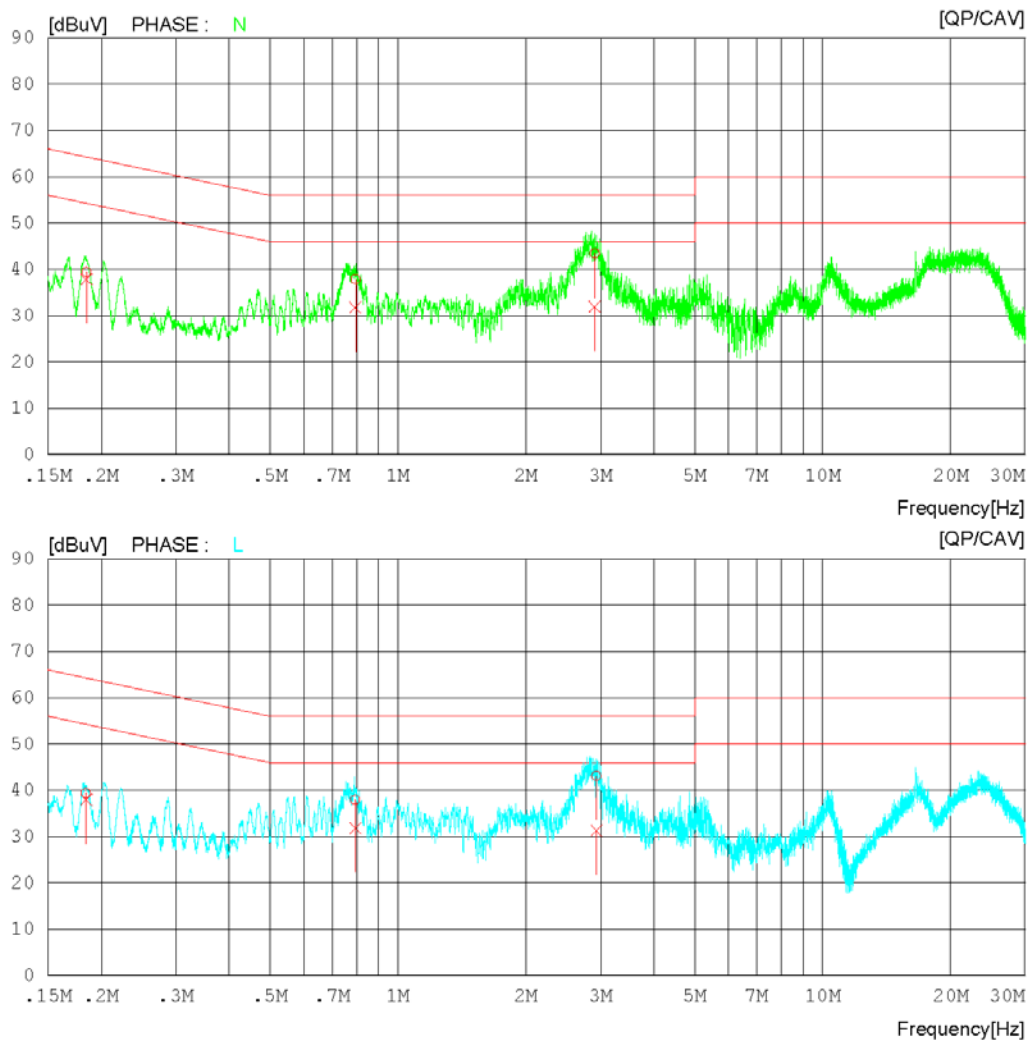
Results of Conducted Emission

DTNC

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi/Atm. 23 'C 44 % R.H.
Test Condition DATA COMMUNICAITON

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



Results of Conducted Emission

DTNC

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi/Atm. 23'C 44 % R.H.
Test Condition DATA COMMUNICAION

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	0.18446	29.40	27.83	10.02	39.42	37.85	64.28	54.28	24.86	16.43	N
2	0.79486	27.74	21.70	10.06	37.80	31.76	56.00	46.00	18.20	14.24	N
3	2.90390	33.23	21.81	10.15	43.38	31.96	56.00	46.00	12.62	14.04	N
4	0.18435	29.41	27.82	10.01	39.42	37.83	64.29	54.29	24.87	16.46	L
5	0.79351	27.85	21.80	10.06	37.91	31.86	56.00	46.00	18.09	14.14	L
6	2.93467	32.88	21.10	10.15	43.03	31.25	56.00	46.00	12.97	14.75	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

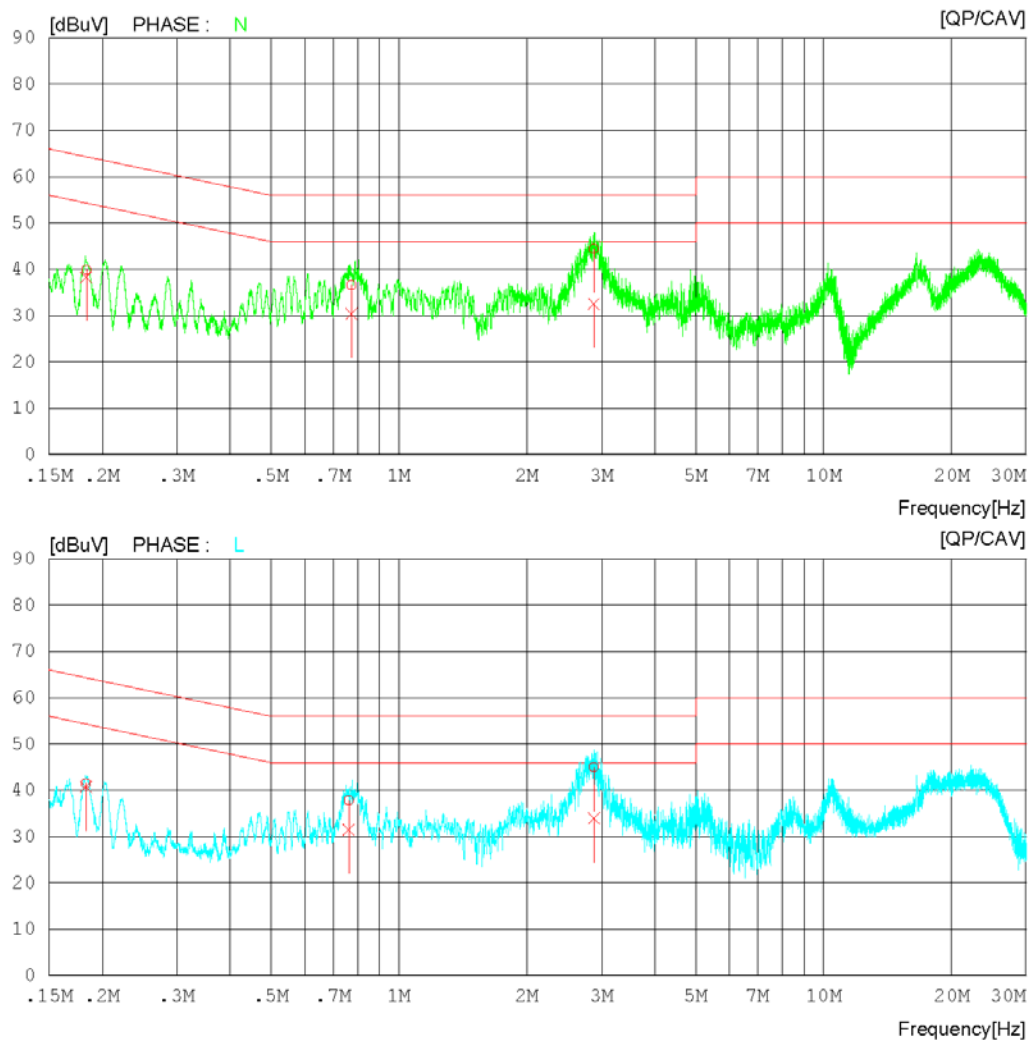
DTNC

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi/Atm. 23 'C 44 % R.H.
Test Condition DATA COMMUNICAITON

DS

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



Results of Conducted Emission

DTNC

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi/Atm. 23'C 44 % R.H.
Test Condition DATA COMMUNICAION

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	CAV		QP	CAV	QP	CAV	QP	CAV	
		[dBuV]	[dBuV]		[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	
1	0.18369	29.91	28.29	10.02	39.93	38.31	64.32	54.32	24.39	16.01	N
2	0.77340	26.59	20.32	10.06	36.65	30.38	56.00	46.00	19.35	15.62	N
3	2.87531	34.31	22.40	10.15	44.46	32.55	56.00	46.00	11.54	13.45	N
4	0.18328	31.49	30.65	10.01	41.50	40.66	64.34	54.34	22.84	13.68	L
5	0.76079	27.71	21.43	10.05	37.76	31.48	56.00	46.00	18.24	14.52	L
6	2.87656	34.81	23.85	10.15	44.96	34.00	56.00	46.00	11.04	12.00	L

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

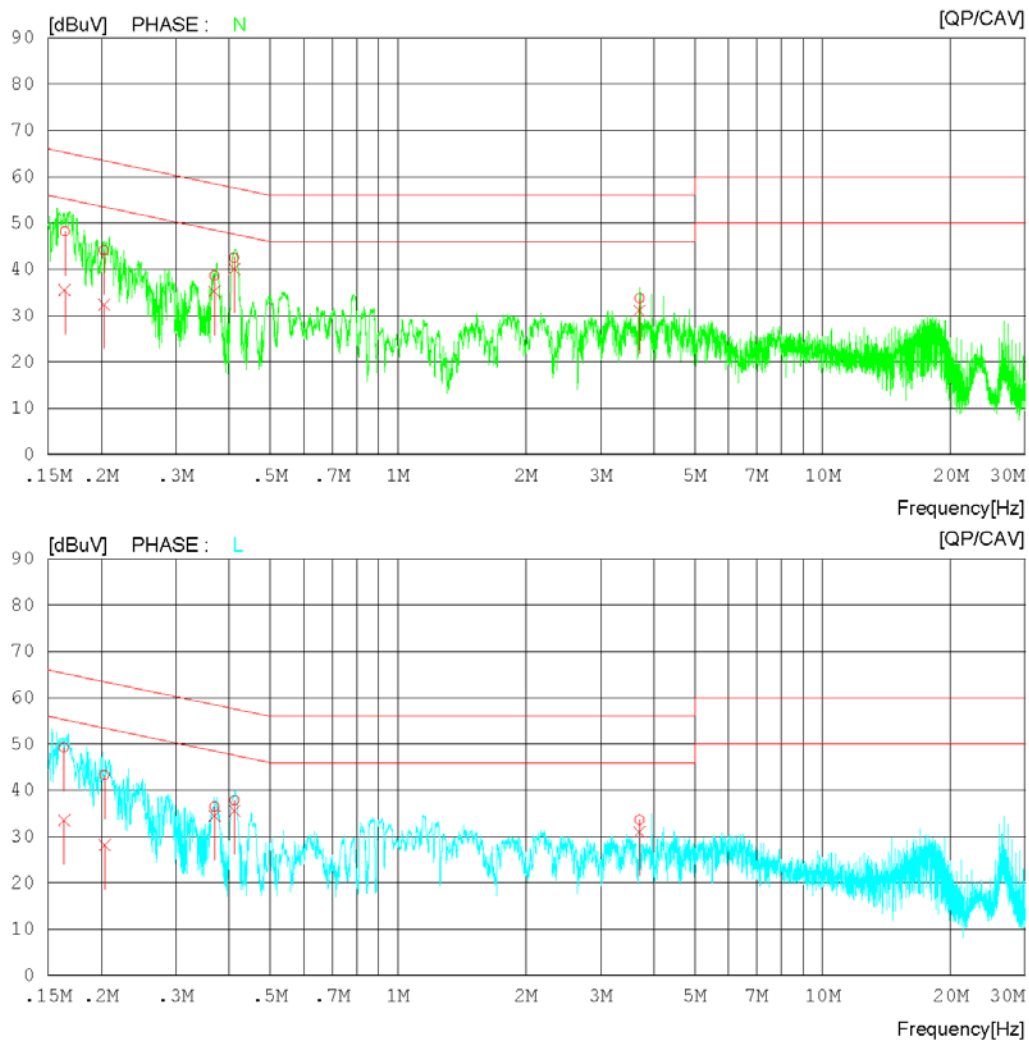
Results of Conducted Emission

DTNC

Date 2020-04-27

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi/Atm. 23 'C 40 %R.H. 100.26 kPa
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 2020-04-27

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi/Atm. 23 °C 40 %R.H. 100.26 kPa
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	CAV		QP	CAV	QP	CAV	QP	CAV	
		[dBuV]	[dBuV]		[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	
1	0.16420	38.13	25.47	10.02	48.15	35.49	65.25	55.25	17.10	19.76	N
2	0.20315	34.03	22.36	10.02	44.05	32.38	63.48	53.48	19.43	21.10	N
3	0.36962	28.67	25.20	10.04	38.71	35.24	58.51	48.51	19.80	13.27	N
4	0.41123	32.39	29.97	10.06	42.45	40.03	57.62	47.62	15.17	7.59	N
5	3.70287	23.63	20.97	10.17	33.80	31.14	56.00	46.00	22.20	14.86	N
6	0.16363	39.21	23.38	10.01	49.22	33.39	65.28	55.28	16.06	21.89	L
7	0.20371	33.28	18.16	10.02	43.30	28.18	63.46	53.46	20.16	25.28	L
8	0.37001	26.44	24.34	10.04	36.48	34.38	58.50	48.50	22.02	14.12	L
9	0.41213	27.73	25.48	10.04	37.77	35.52	57.61	47.61	19.84	12.09	L
10	3.70351	23.44	20.82	10.17	33.61	30.99	56.00	46.00	22.39	15.01	L

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

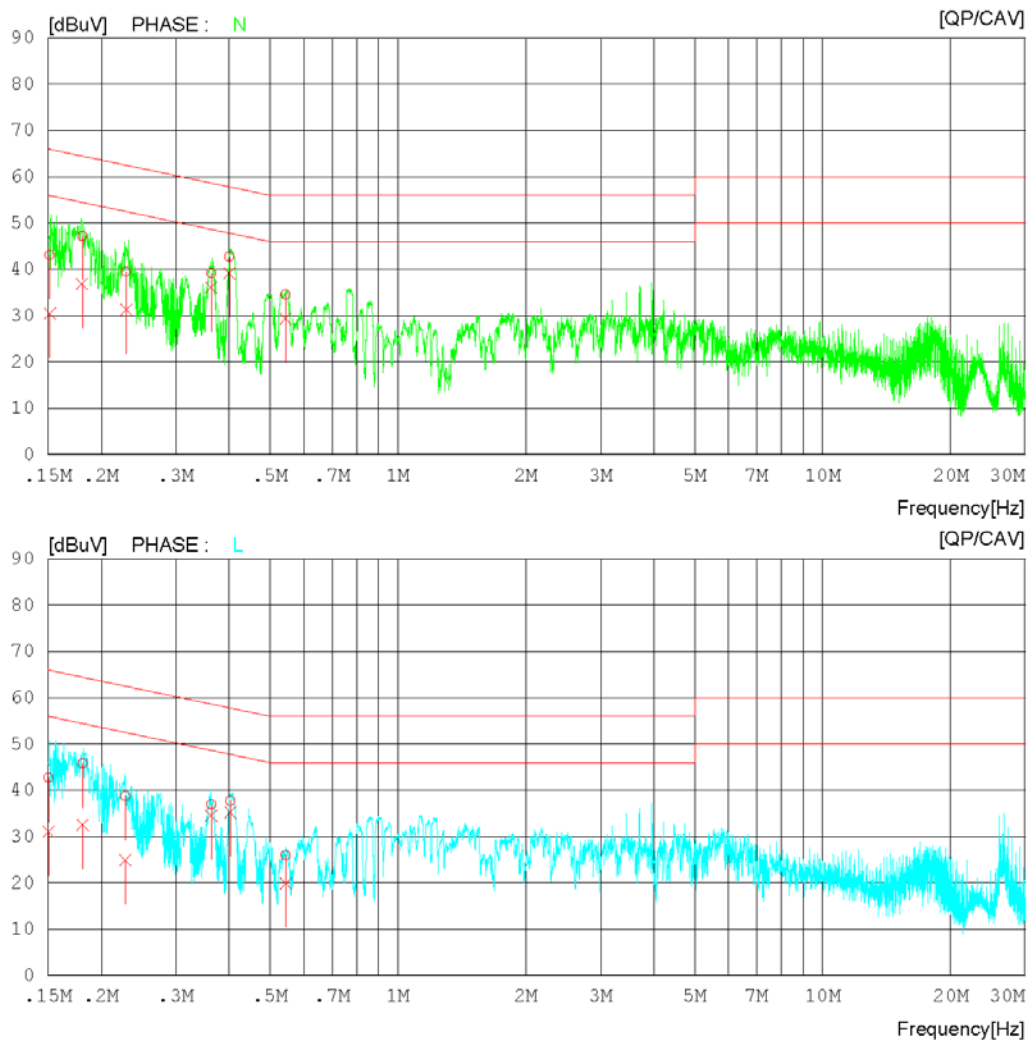
Results of Conducted Emission

DTNC

Date 2020-04-27

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi/Atm. 23 'C 40 %R.H. 100.26 kPa
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 2020-04-27

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi/Atm. 23 °C 40 %R.H. 100.26 kPa
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	CAV		QP	CAV	QP	CAV	QP	CAV	
		[dBuV]	[dBuV]		[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	
1	0.15131	33.12	20.39	10.00	43.12	30.39	65.93	55.93	22.81	25.54	N
2	0.18037	37.15	26.86	10.02	47.17	36.88	64.47	54.47	17.30	17.59	N
3	0.22896	29.49	21.31	10.02	39.51	31.33	62.49	52.49	22.98	21.16	N
4	0.36335	29.21	26.05	10.04	39.25	36.09	58.65	48.65	19.40	12.56	N
5	0.40113	32.69	29.13	10.06	42.75	39.19	57.83	47.83	15.08	8.64	N
6	0.54422	24.53	19.35	10.06	34.59	29.41	56.00	46.00	21.41	16.59	N
7	0.15065	32.64	20.98	10.01	42.65	30.99	65.96	55.96	23.31	24.97	L
8	0.18088	35.70	22.50	10.01	45.71	32.51	64.45	54.45	18.74	21.94	L
9	0.22812	28.66	14.89	10.01	38.67	24.90	62.52	52.52	23.85	27.62	L
10	0.36347	26.91	24.47	10.04	36.95	34.51	58.65	48.65	21.70	14.14	L
11	0.40309	27.64	25.21	10.04	37.68	35.25	57.79	47.79	20.11	12.54	L
12	0.54439	15.89	9.87	10.06	25.95	19.93	56.00	46.00	30.05	26.07	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)			4.84 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

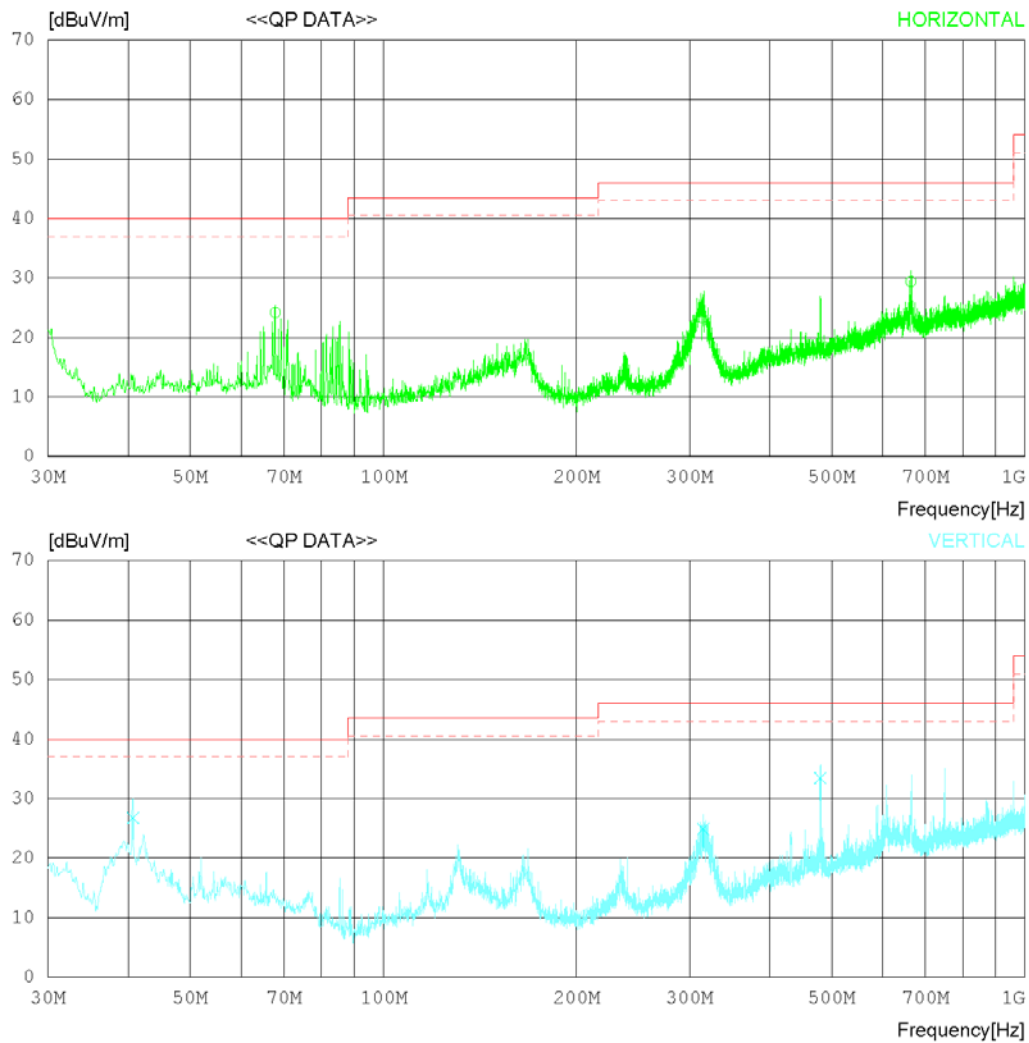
RADIATED EMISSION

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 'C 46 % R.H.
Test Condition DATA COMMUNICATION

Memo

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



RADIATED EMISSION

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 °C 46 % 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	67.830	33.22	16.85	0.81	26.70	24.18	40.00	15.82	322	78
2	313.475	28.60	19.53	1.72	26.54	23.31	46.00	22.69	121	112
3	663.551	25.62	27.34	2.63	26.22	29.37	46.00	16.63	352	305
----- Vertical -----										
4	40.670	35.55	17.14	0.67	26.57	26.79	40.00	13.21	120	78
5	315.294	30.22	19.55	1.72	26.54	24.95	46.00	21.05	223	112
6	479.946	34.12	23.40	2.23	26.32	33.43	46.00	12.57	213	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

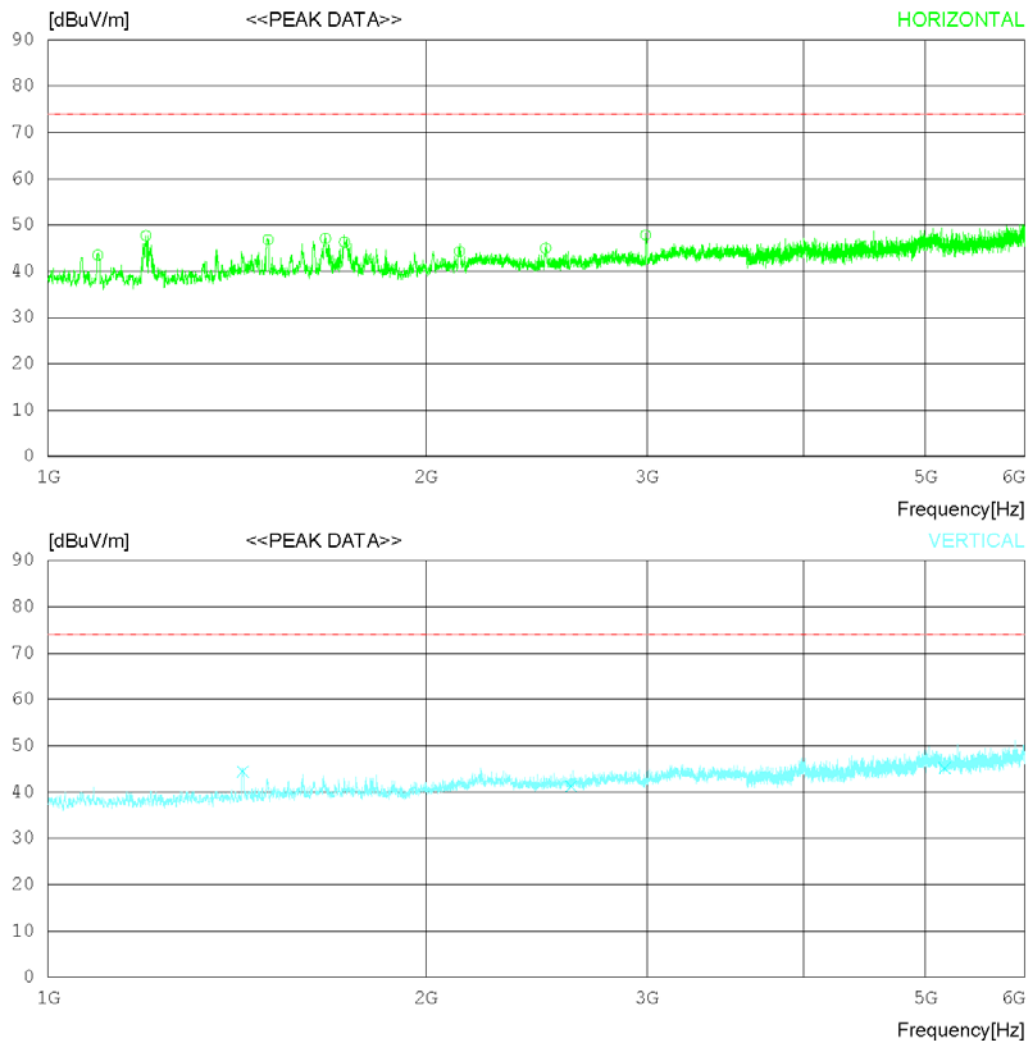
RADIATED EMISSION

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 °C 46 % 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 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 °C 46 % 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	1095.625	49.3	25.2	4.61	35.62	0	43.49	74	30.51	Hori	342	345
2	1196.875	52.8	25.59	4.77	35.47	0	47.69	74	26.31	Hori	131	358
3	1496.875	50	25.61	6.26	35.05	0	46.82	74	27.18	Hori	321	358
4	1663.125	49.7	25.17	7.05	34.81	0	47.11	74	26.89	Hori	122	201
5	1722.5	48.8	25.15	7.05	34.73	0	46.27	74	27.73	Hori	305	358
6	2126.875	44.5	27.37	6.81	34.41	0	44.27	74	29.73	Hori	124	358
7	2491.25	45	27.4	7.2	34.63	0	44.97	74	29.03	Hori	132	358
8	2993.125	46.9	28.5	7.39	34.93	0	47.86	74	26.14	Hori	122	318
9	1429.375	48	25.81	5.74	35.14	0	44.41	74	29.59	Vert	223	0
10	2610	41	27.54	7.4	34.7	0	41.24	74	32.76	Vert	323	78
11	5180	38.2	31.6	10.3	34.89	0	45.21	74	28.79	Vert	131	139

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

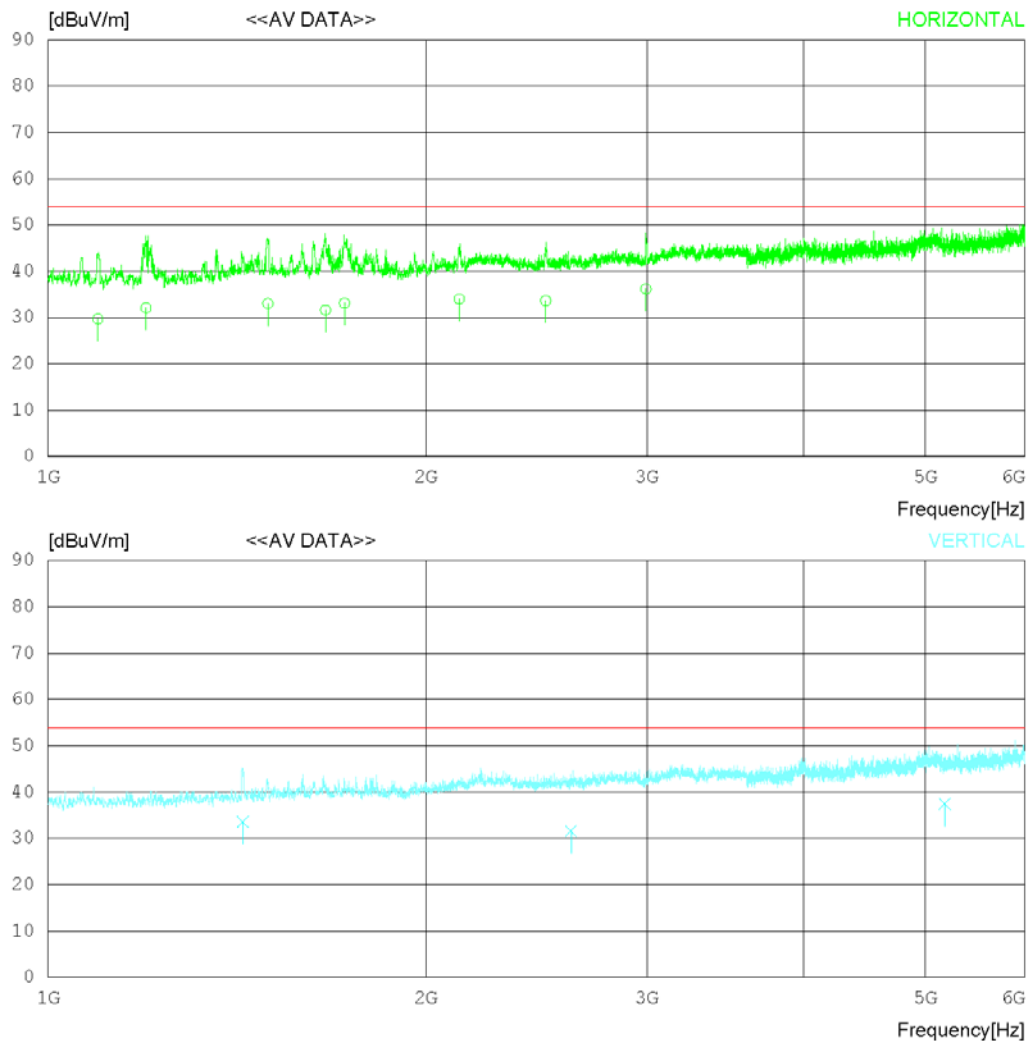
RADIATED EMISSION

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 °C 46 % 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 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 °C 46 % 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	1095.611	35.5	25.2	4.61	35.62	0	29.69	54	24.31	Hori	305	120
2	1196.812	37.21	25.59	4.77	35.47	0	32.1	54	21.9	Hori	133	223
3	1429.256	37.2	25.81	5.74	35.14	0	33.61	54	20.39	Vert	322	78
4	1496.832	36.22	25.61	6.26	35.05	0	33.04	54	20.96	Hori	214	358
5	1663.66	34.21	25.17	7.05	34.81	0	31.62	54	22.38	Hori	234	78
6	1722.512	35.66	25.15	7.05	34.73	0	33.13	54	20.87	Hori	121	112
7	2126.131	34.22	27.36	6.81	34.41	0	33.98	54	20.02	Hori	335	302
8	2491.122	33.67	27.4	7.2	34.63	0	33.64	54	20.36	Hori	121	123
9	2610.012	31.3	27.54	7.4	34.7	0	31.54	54	22.46	Vert	121	112
10	2993.66	35.21	28.5	7.39	34.93	0	36.17	54	17.83	Hori	342	22
11	5180.722	30.4	31.6	10.3	34.89	0	37.41	54	16.59	Vert	320	23

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

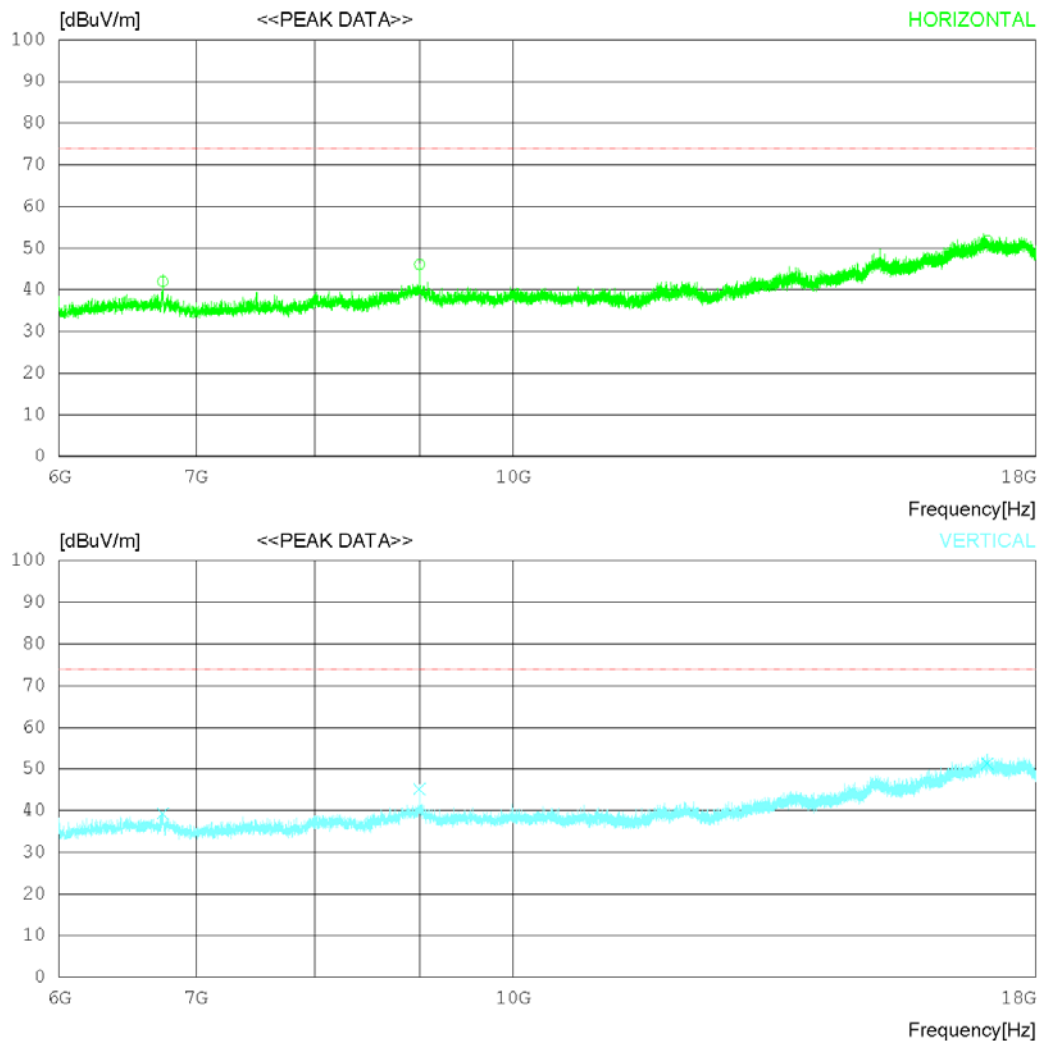
RADIATED EMISSION

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 °C 46 % 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 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 'C 46 % 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	6743.25	36.7	31.52	12.44	38.7	0	41.96	74	32.04	Hori	322	358
2	8999.25	35.9	32.1	15.54	37.5	0	46.04	74	27.96	Hori	342	248
3	17049.75	27.3	37.59	23.42	36.46	0	51.85	74	22.15	Hori	311	0
4	6743.25	34	31.52	12.44	38.7	0	39.26	74	34.74	Vert	121	358
5	8999.25	35	32.1	15.54	37.5	0	45.14	74	28.86	Vert	132	185
6	17049.75	26.7	37.59	23.42	36.46	0	51.25	74	22.75	Vert	223	52

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

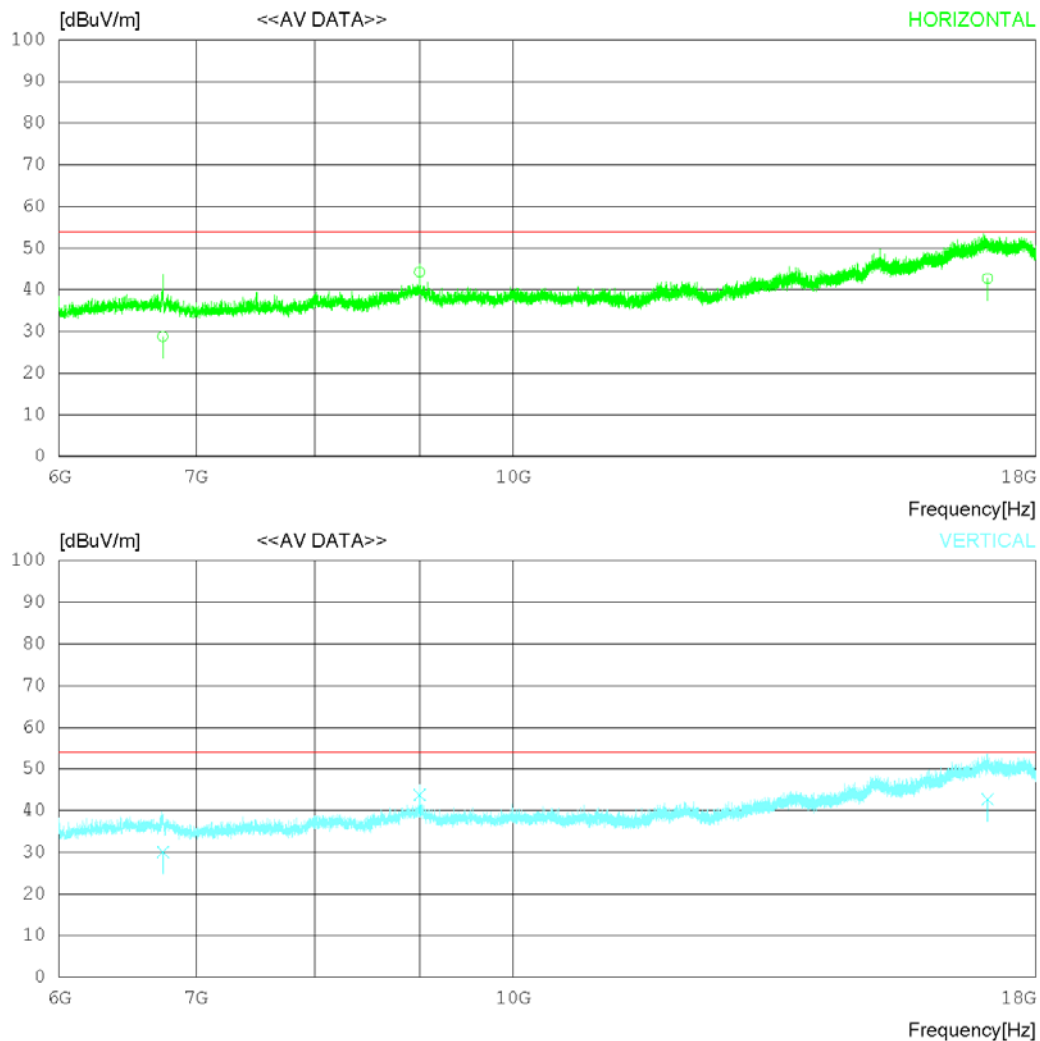
RADIATED EMISSION

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 °C 46 % 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 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 'C 46 % 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	6743.11	23.52	31.52	12.44	38.7	0	28.78	54	25.22	Hori	131	78
2	6743.211	24.8	31.52	12.44	38.7	0	30.06	54	23.94	Vert	322	78
3	8999.136	34.12	32.1	15.54	37.5	0	44.26	54	9.74	Hori	211	122
4	8999.112	33.6	32.1	15.54	37.5	0	43.74	54	10.26	Vert	212	185
5	17049.1	18.11	37.59	23.42	36.46	0	42.66	54	11.34	Vert	134	52
6	17049.71	18.22	37.59	23.42	36.46	0	42.77	54	11.23	Hori	322	305

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

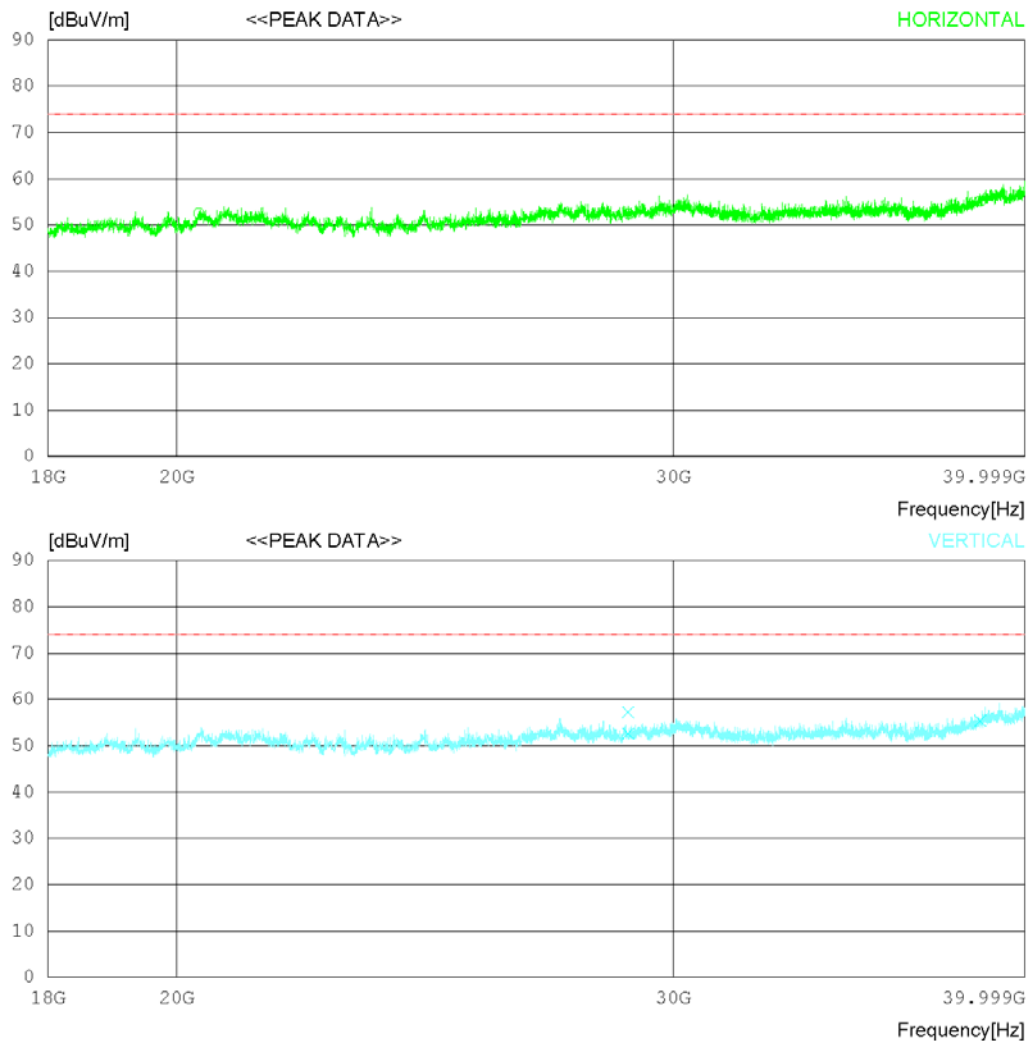
RADIATED EMISSION

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 'C 46 % 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 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 'C 46 % 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	20362.25	41.1	45.36	19.28	53.16	0	52.58	74	21.42	Hori	121	358
2	28920.25	36.4	46.8	21.79	52.55	0	52.44	74	21.56	Hori	100	172
3	38572.75	35.3	46.9	25.27	52.27	0	55.2	74	18.8	Hori	222	253
4	28920.25	41.2	46.8	21.79	52.55	0	57.24	74	16.76	Vert	232	0
5	28920.25	36.6	46.8	21.79	52.55	0	52.64	74	21.36	Vert	221	358
6	38572.75	35.5	46.9	25.27	52.27	0	55.4	74	18.6	Vert	305	270

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

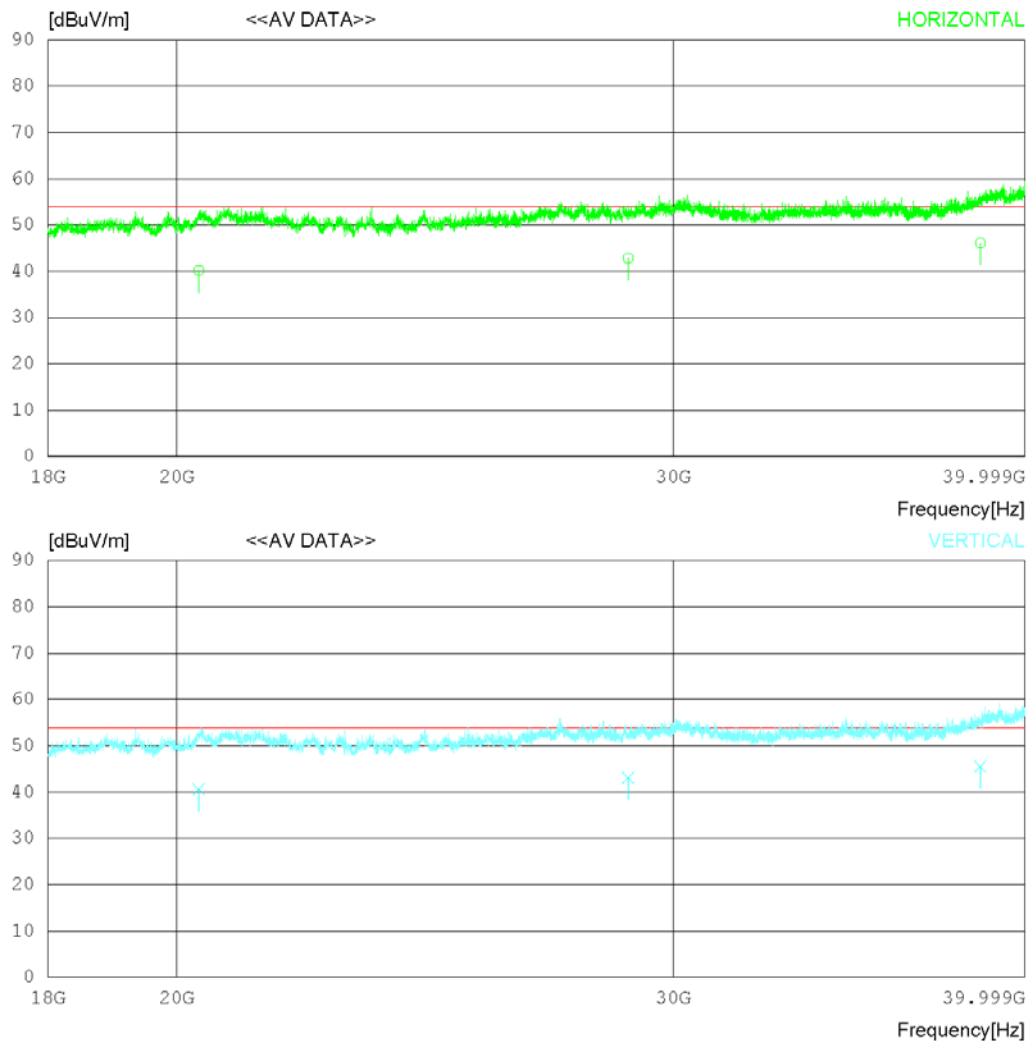
RADIATED EMISSION

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 'C 46 % 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 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 'C 46 % 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	20362.12	28.72	45.36	19.28	53.16	0	40.2	54	13.8	Hori	120	78
2	20362.12	29.1	45.36	19.28	53.16	0	40.58	54	13.42	Vert	305	120
3	28920.41	26.79	46.8	21.79	52.55	0	42.83	54	11.17	Hori	223	172
4	28920.15	27.11	46.8	21.79	52.55	0	43.15	54	10.85	Vert	223	223
5	38572.62	26.22	46.9	25.27	52.27	0	46.12	54	7.88	Hori	313	121
6	38572.11	25.62	46.9	25.27	52.27	0	45.52	54	8.48	Vert	213	121

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

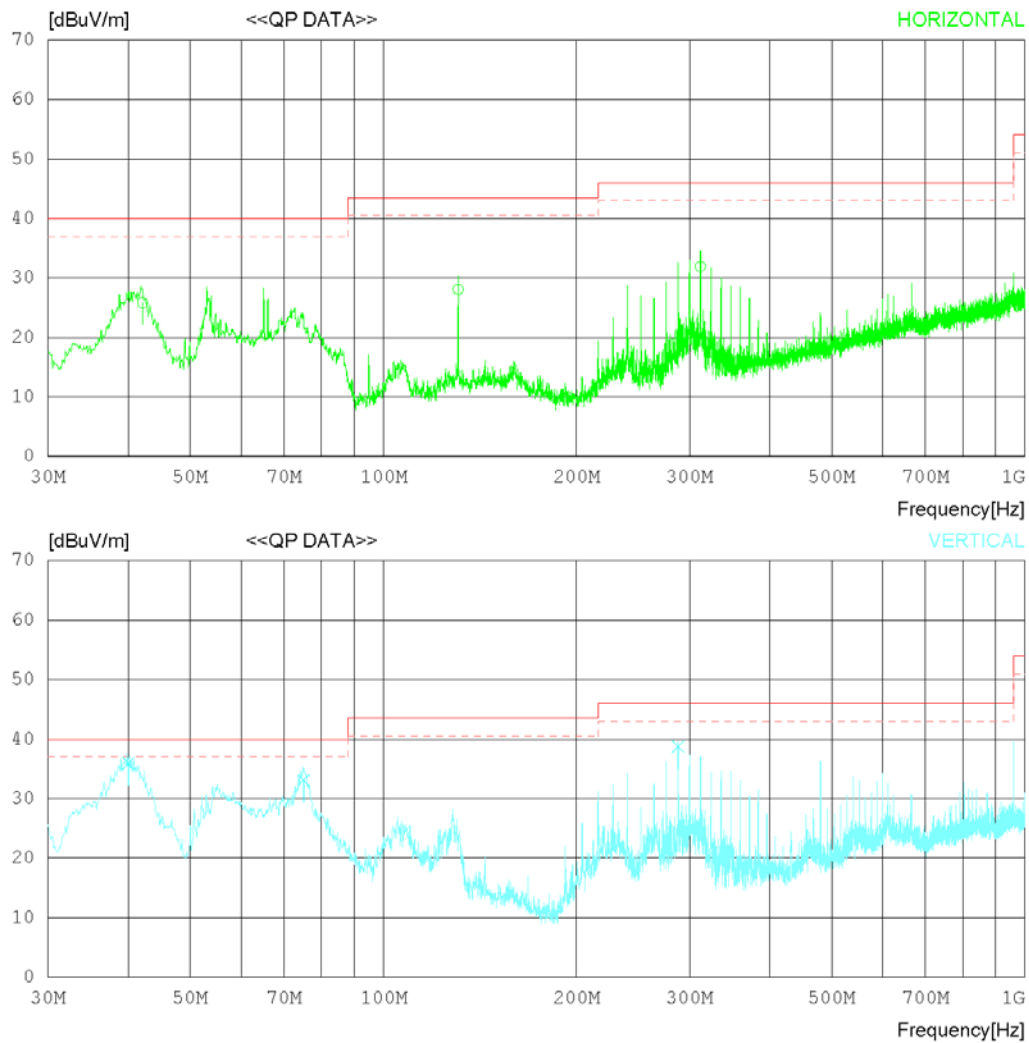
RADIATED EMISSION

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 'C 46 % R.H.
Test Condition DATA COMMUNICATION

Memo DS

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



RADIATED EMISSION

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20°C 46 % R.H.
Test Condition DATA COMMUNICATION

Memo DS

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	42.125	34.22	17.51	0.69	26.58	25.84	40.00	14.16	342	152
2	130.757	35.67	18.05	1.14	26.79	28.07	43.50	15.43	113	233
3	311.899	37.22	19.52	1.71	26.55	31.90	46.00	14.10	223	23
----- Vertical -----										
4	40.064	45.00	16.83	0.67	26.57	35.93	40.00	4.07	120	78
5	75.105	43.20	15.78	0.86	26.73	33.11	40.00	6.89	222	221
6	288.013	44.25	19.44	1.64	26.57	38.76	46.00	7.24	305	35

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

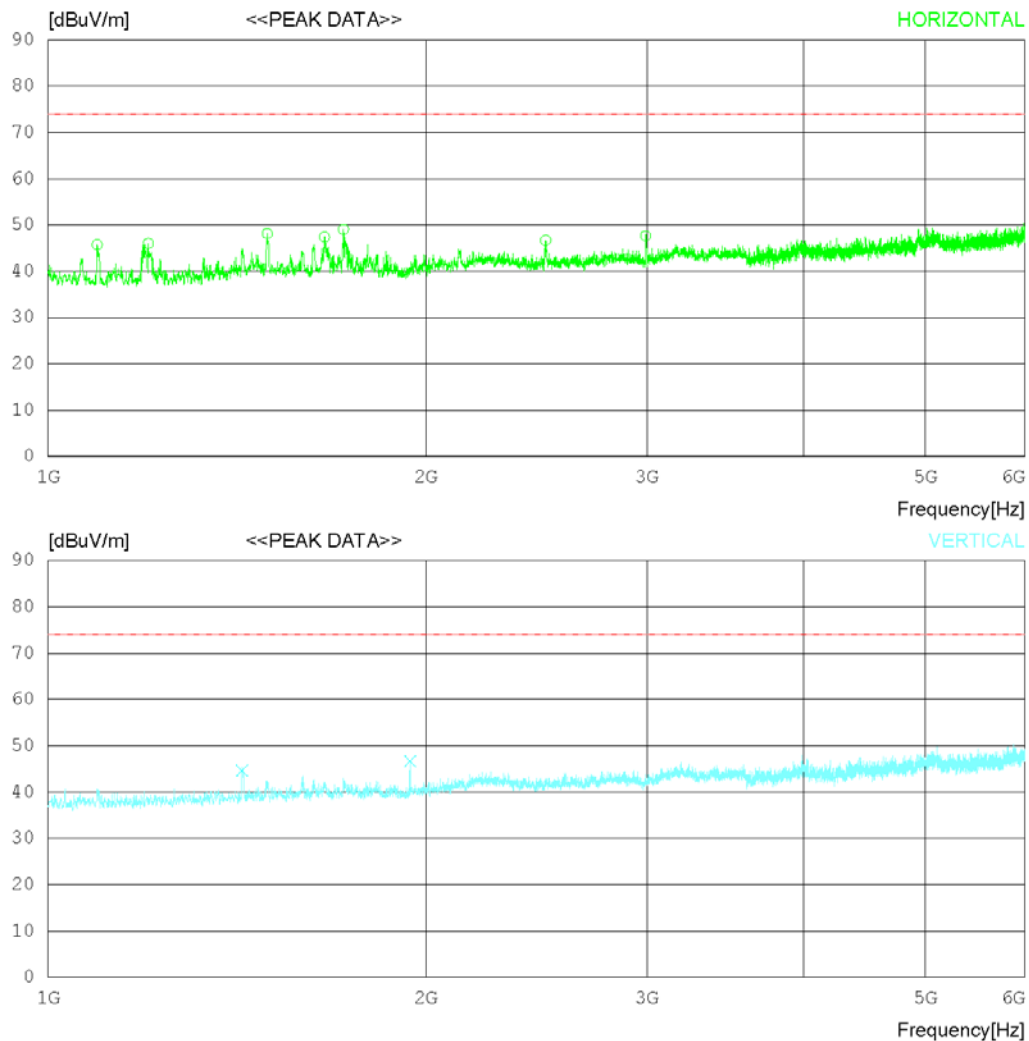
RADIATED EMISSION

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 °C 46 % R.H.
Test Condition DATA COMMUNICATION

Memo DS

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



RADIATED EMISSION

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 °C 46 % R.H.
Test Condition DATA COMMUNICATION

Memo DS

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	1094.375	51.5	25.21	4.61	35.62	0	45.7	74	28.3	Hori	312	0
2	1201.875	51.1	25.61	4.78	35.47	0	46.02	74	27.98	Hori	121	327
3	1495	51.3	25.62	6.25	35.05	0	48.12	74	25.88	Hori	321	226
4	1660.625	50	25.18	7.05	34.82	0	47.41	74	26.59	Hori	235	0
5	1719.375	51.6	25.14	7.05	34.74	0	49.05	74	24.95	Hori	113	216
6	2491.25	46.7	27.4	7.2	34.63	0	46.67	74	27.33	Hori	205	0
7	2992.5	46.7	28.5	7.39	34.93	0	47.66	74	26.34	Hori	113	0
8	1427.5	48.3	25.82	5.73	35.15	0	44.7	74	29.3	Vert	227	358
9	1942.5	48.5	25.81	6.8	34.42	0	46.69	74	27.31	Vert	322	309

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

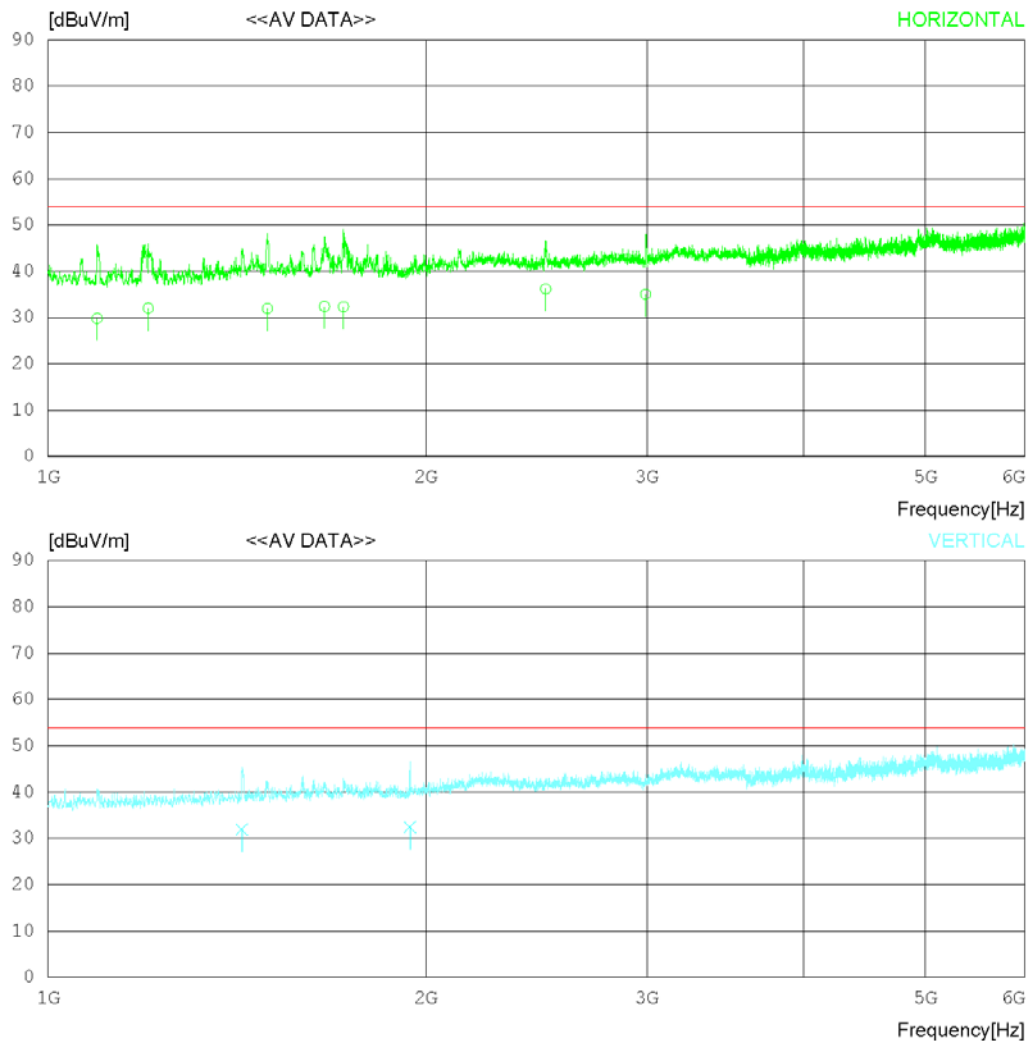
RADIATED EMISSION

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 °C 46 % R.H.
Test Condition DATA COMMUNICATION

Memo DS

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



RADIATED EMISSION

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 °C 46 % R.H.
Test Condition DATA COMMUNICATION

Memo DS

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	1094.311	35.62	25.21	4.61	35.62	0	29.82	54	24.18	Hori	120	0
2	1201.622	37.11	25.61	4.78	35.47	0	32.03	54	21.97	Hori	223	327
3	1427.121	35.5	25.82	5.73	35.15	0	31.9	54	22.1	Vert	234	73
4	1495.213	35.12	25.61	6.25	35.05	0	31.93	54	22.07	Hori	232	226
5	1660.611	34.98	25.18	7.05	34.82	0	32.39	54	21.61	Hori	134	0
6	1719.362	34.88	25.14	7.05	34.74	0	32.33	54	21.67	Hori	123	216
7	1942.523	34.22	25.81	6.8	34.42	0	32.41	54	21.59	Vert	324	112
8	2491.112	36.2	27.4	7.2	34.63	0	36.17	54	17.83	Hori	332	0
9	2992.544	34.12	28.5	7.39	34.93	0	35.08	54	18.92	Hori	322	78

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

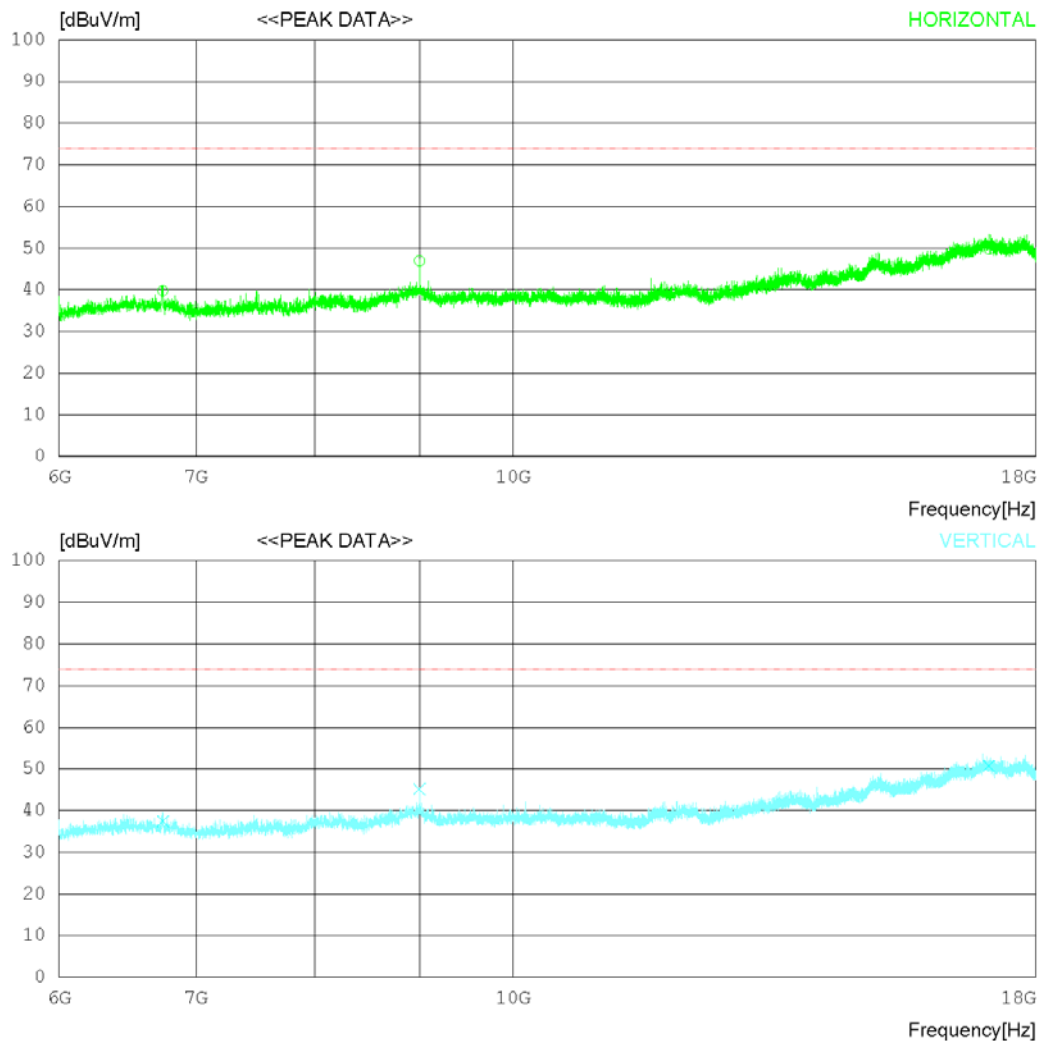
RADIATED EMISSION

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 °C 46 % R.H.
Test Condition DATA COMMUNICATION

Memo DS

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



RADIATED EMISSION

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 'C 46 % R.H.
Test Condition DATA COMMUNICATION

Memo DS

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	6742.5	34.5	31.52	12.44	38.7	0	39.76	74	34.24	Hori	121	358
2	8999.25	36.8	32.1	15.54	37.5	0	46.94	74	27.06	Hori	322	226
3	17078.25	25.5	37.61	23.19	36.49	0	49.81	74	24.19	Hori	211	0
4	6742.5	32.2	31.52	12.44	38.7	0	37.46	74	36.54	Vert	322	332
5	8999.25	35	32.1	15.54	37.5	0	45.14	74	28.86	Vert	243	358
6	17078.25	26.4	37.61	23.19	36.49	0	50.71	74	23.29	Vert	325	200

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

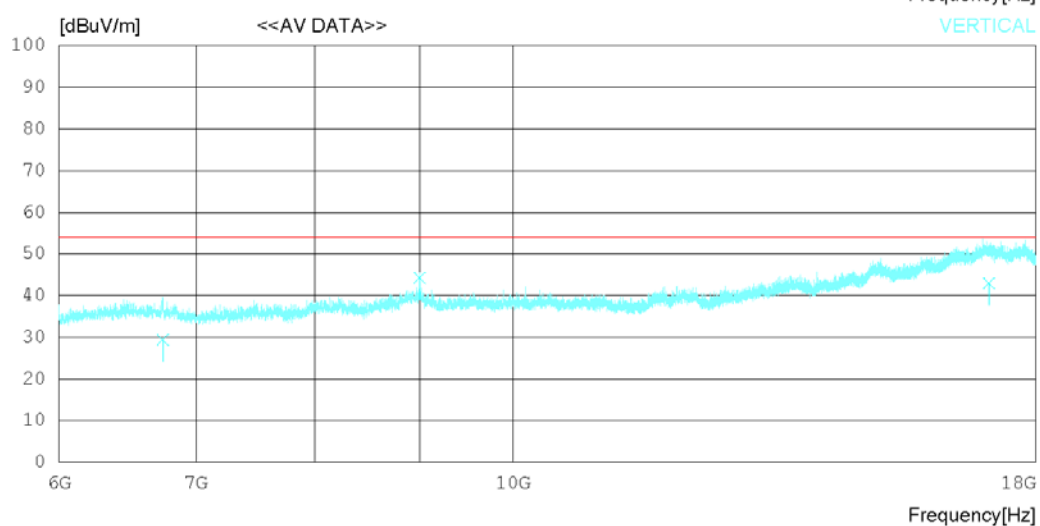
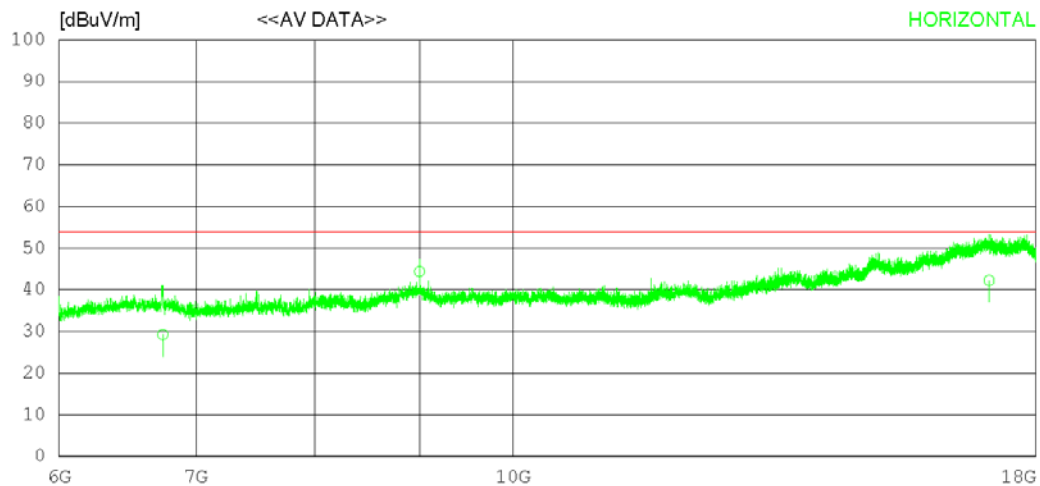
RADIATED EMISSION

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 °C 46 % R.H.
Test Condition DATA COMMUNICATION

Memo DS

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



RADIATED EMISSION

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 'C 46 % R.H.
Test Condition DATA COMMUNICATION

Memo DS

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	6742.12	23.97	31.52	12.43	38.7	0	29.22	54	24.78	Hori	132	72
2	6742.512	24.2	31.52	12.44	38.7	0	29.46	54	24.54	Vert	121	122
3	8999.222	34.22	32.1	15.54	37.5	0	44.36	54	9.64	Hori	232	45
4	8999.266	34.12	32.1	15.54	37.5	0	44.26	54	9.74	Vert	322	134
5	17078.63	17.92	37.61	23.19	36.49	0	42.23	54	11.77	Hori	121	212
6	17078.11	18.66	37.61	23.19	36.49	0	42.97	54	11.03	Vert	231	121

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

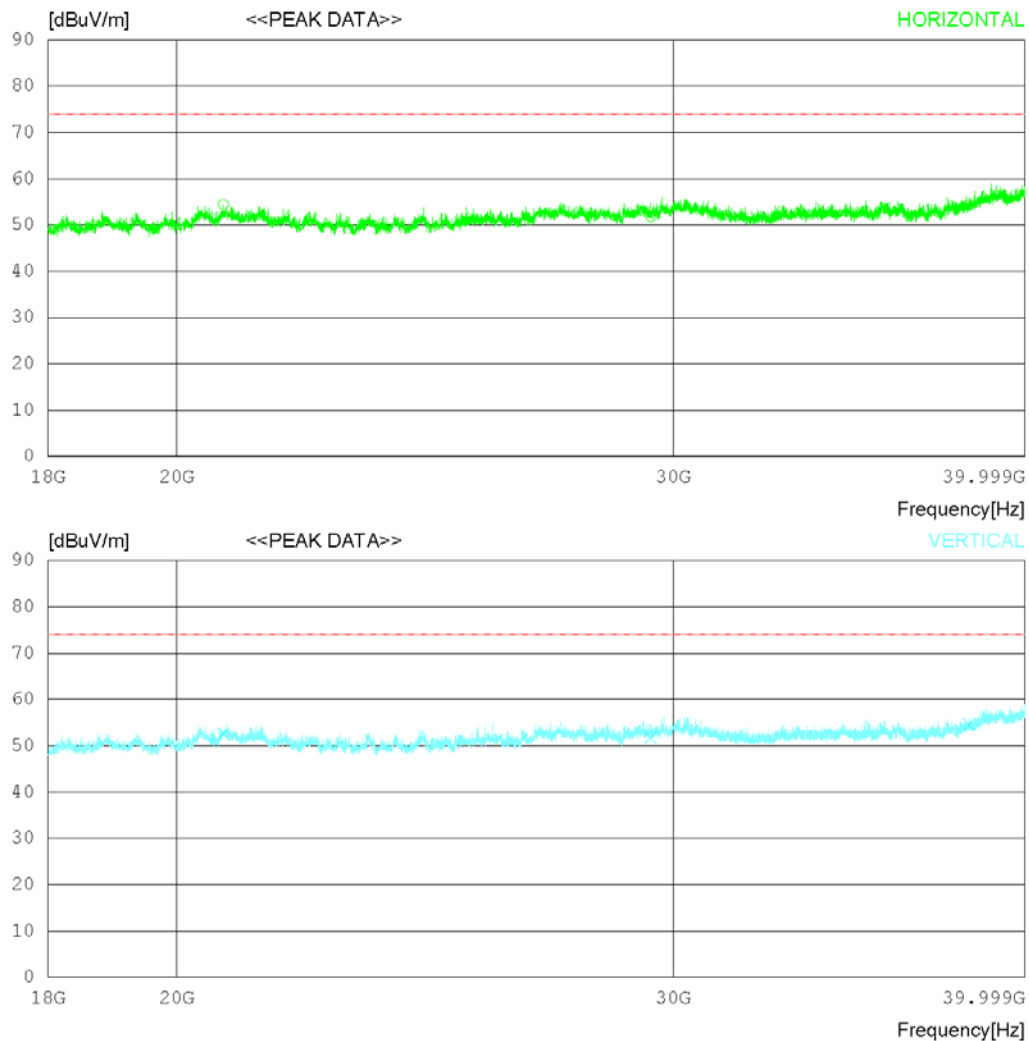
RADIATED EMISSION

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 'C 46 % R.H.
Test Condition DATA COMMUNICATION

Memo DS

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



RADIATED EMISSION

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 'C 46 % R.H.
Test Condition DATA COMMUNICATION

Memo DS

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	20774.75	42.1	45.57	20.09	53.35	0	54.41	74	19.59	Hori	231	155
2	29462	35	47.36	21.85	52.37	0	51.84	74	22.16	Hori	311	358
3	38220.75	35.4	46.44	24.84	52.29	0	54.39	74	19.61	Hori	305	352
4	20774.75	40.3	45.57	20.09	53.35	0	52.61	74	21.39	Vert	121	0
5	29462	34.9	47.36	21.85	52.37	0	51.74	74	22.26	Vert	223	214
6	38220.75	35.6	46.44	24.84	52.29	0	54.59	74	19.41	Vert	133	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

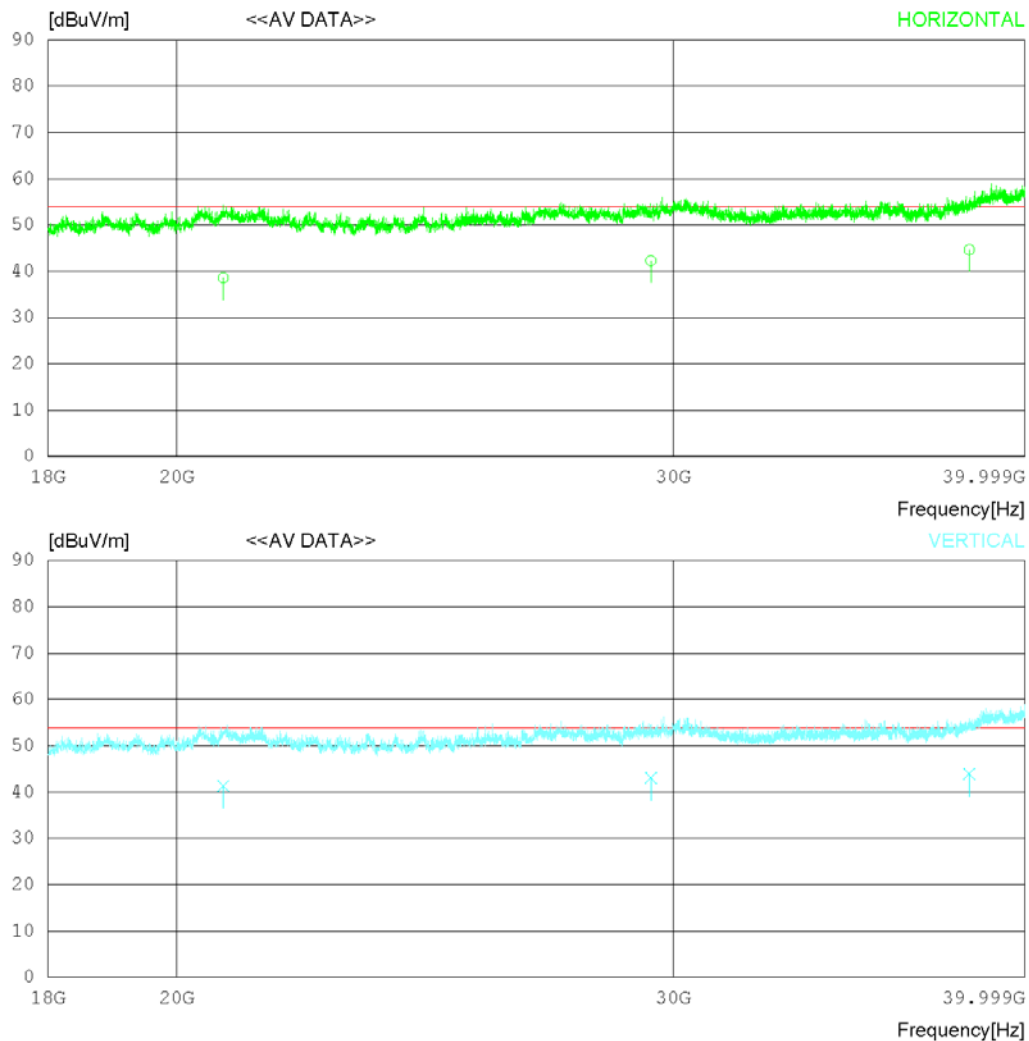
RADIATED EMISSION

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 'C 46 % R.H.
Test Condition DATA COMMUNICATION

Memo DS

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



RADIATED EMISSION

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 'C 46 % R.H.
Test Condition DATA COMMUNICATION

Memo DS

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	20774.13	26.27	45.57	20.09	53.35	0	38.58	54	15.42	Hori	322	78
2	20774.12	28.97	45.57	20.09	53.35	0	41.28	54	12.73	Vert	131	112
3	29462.72	25.44	47.36	21.85	52.37	0	42.28	54	11.72	Hori	121	122
4	29462.27	26.21	47.36	21.85	52.37	0	43.05	54	10.95	Vert	232	233
5	38220.32	25.67	46.44	24.85	52.29	0	44.67	54	9.33	Hori	311	302
6	38220.71	24.91	46.44	24.84	52.29	0	43.9	54	10.1	Vert	123	20

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

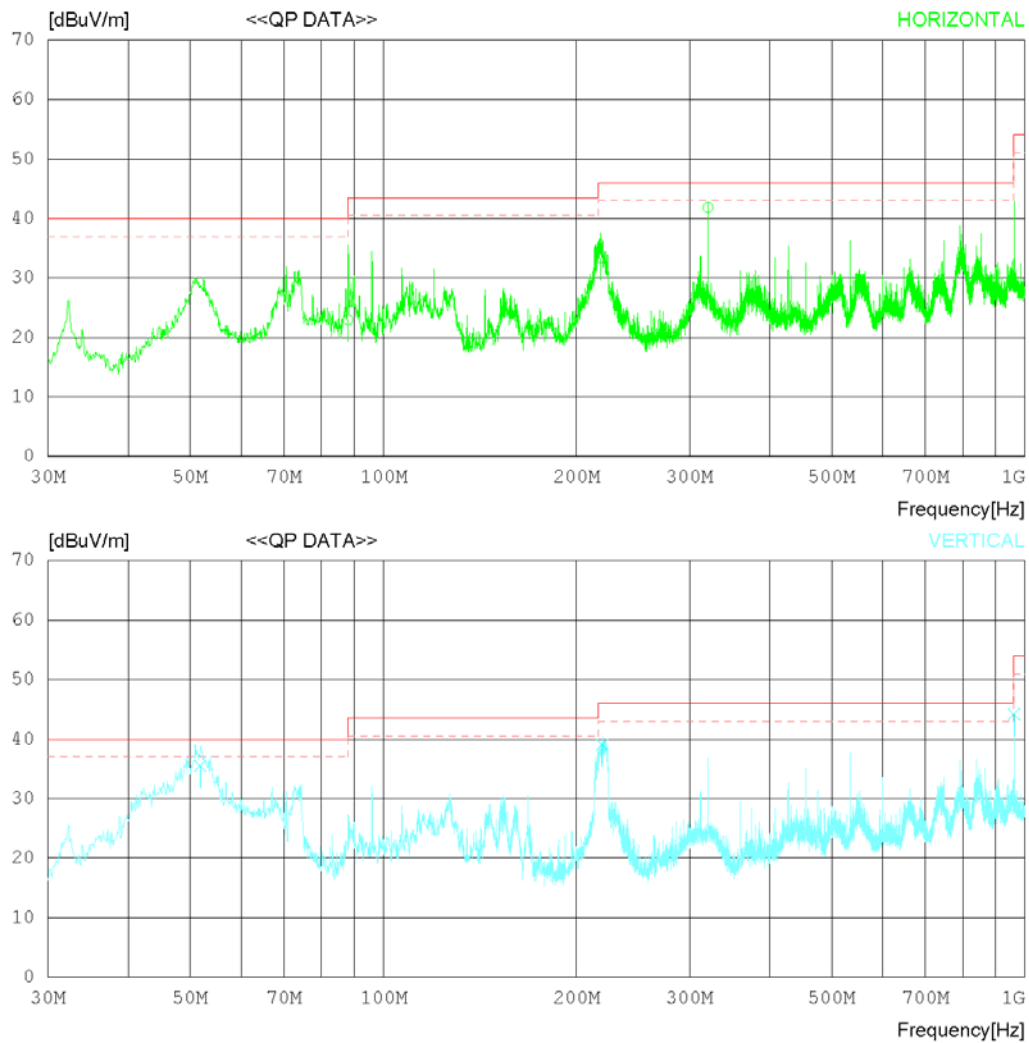
RADIATED EMISSION

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply Battery
Temp/Humi 20 'C 46 % R.H.
Test Condition DISPLAY

Memo

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



RADIATED EMISSION

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply Battery
Temp/Humi 20 °C 46 % 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	88.078	35.50	13.30	0.96	26.79	22.97	43.50	20.53	200	275
2	218.175	41.72	16.83	1.43	26.62	33.36	46.00	12.64	214	78
3	320.609	47.00	19.61	1.75	26.54	41.82	46.00	4.18	232	113
----- Vertical -----										
4	51.825	43.00	18.38	0.77	26.63	35.52	40.00	4.48	233	229
5	219.164	47.40	16.87	1.44	26.62	39.09	46.00	6.91	220	270
6	961.887	37.40	30.42	3.19	26.76	44.25	54.00	9.75	124	358

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

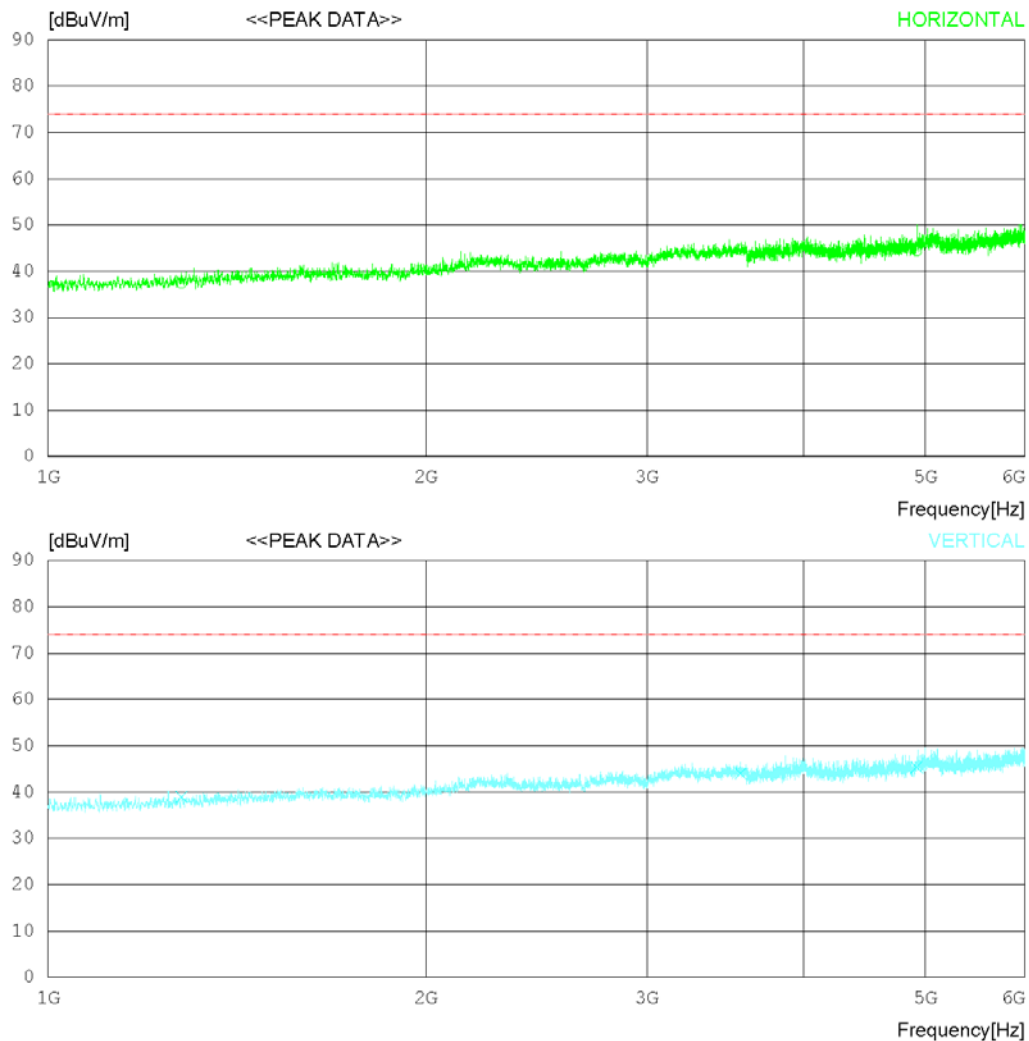
RADIATED EMISSION

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply Battery
Temp/Humi 20 °C 46 % 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 2020-04-04

Order No. DTNC2003-02462
Power Supply Battery
Temp/Humi 20 °C 46 % 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	1277.5	41.8	25.91	5.06	35.36	0	37.41	74	36.59	Hori	322	358
2	3563.125	41.2	29.29	8.3	34.15	0	44.64	74	29.36	Hori	131	358
3	4918.75	37.7	31.36	10.08	34.75	0	44.39	74	29.61	Hori	138	178
4	1277.5	43.3	25.91	5.06	35.36	0	38.91	74	35.09	Vert	321	1
5	3563.125	40.6	29.29	8.3	34.15	0	44.04	74	29.96	Vert	113	0
6	4918.75	38.7	31.36	10.08	34.75	0	45.39	74	28.61	Vert	106	41

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

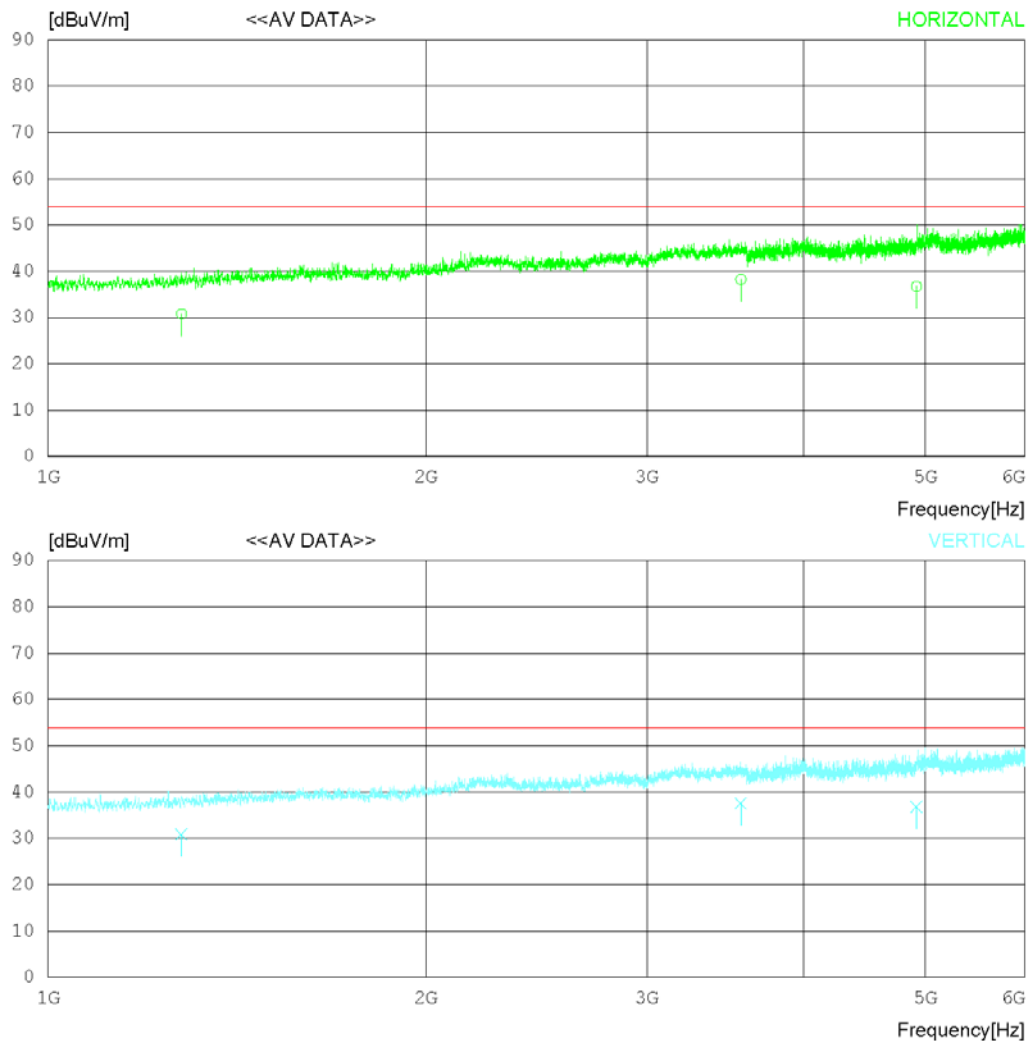
RADIATED EMISSION

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply Battery
Temp/Humi 20 °C 46 % 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 2020-04-04

Order No. DTNC2003-02462
Power Supply Battery
Temp/Humi 20 °C 46 % 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	1277.51	35.21	25.91	5.06	35.36	0	30.82	54	23.18	Hori	322	78
2	3593.621	34.78	29.29	8.3	34.15	0	38.22	54	15.78	Hori	121	120
3	4918.114	30.11	31.35	10.08	34.75	0	36.79	54	17.21	Hori	343	300
4	1277.11	35.22	25.91	5.06	35.36	0	30.83	54	23.17	Vert	120	78
5	3563.162	34.12	29.29	8.3	34.15	0	37.56	54	16.44	Vert	305	120
6	4918.41	30.12	31.36	10.08	34.75	0	36.81	54	17.19	Vert	113	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)	-

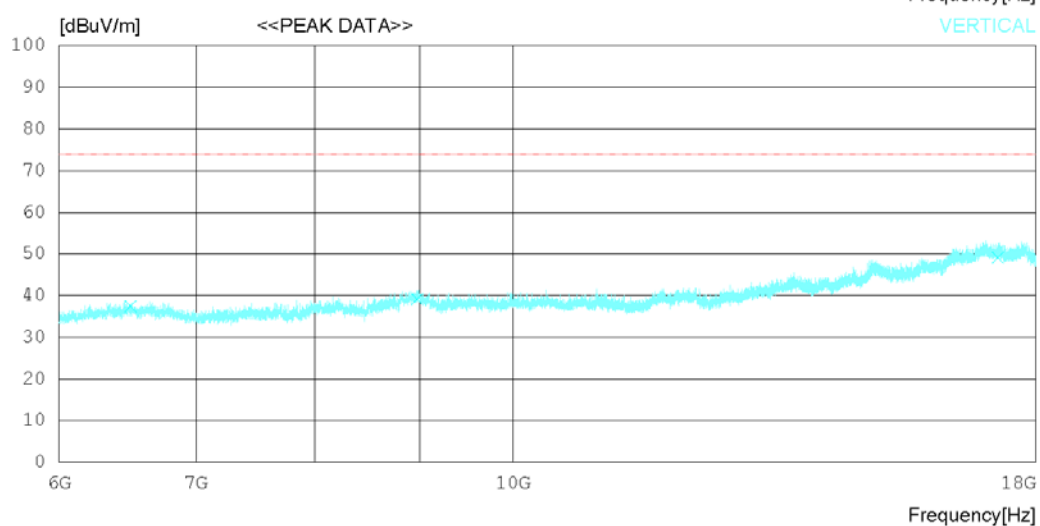
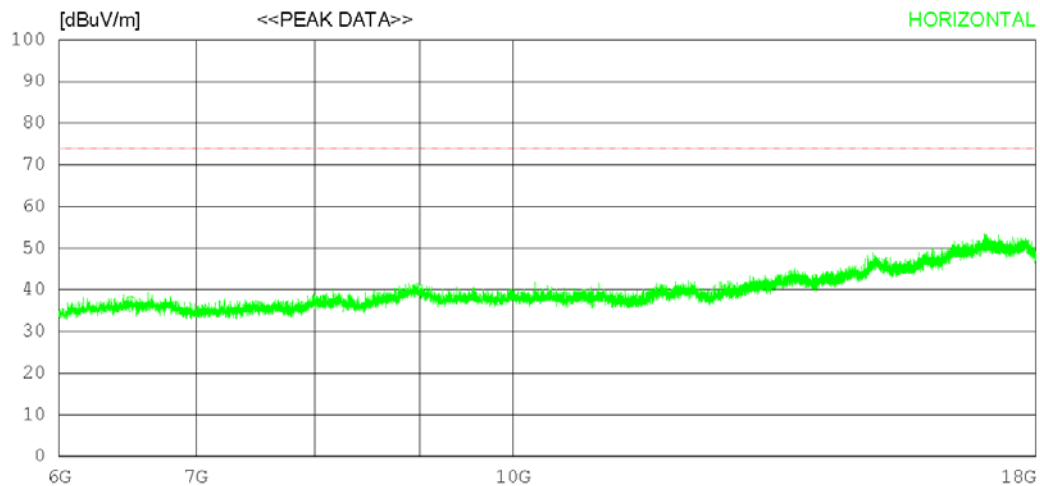
RADIATED EMISSION

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply Battery
Temp/Humi 20 'C 46 % R.H.
Test Condition DISPALY

Memo

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



RADIATED EMISSION

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply Battery
Temp/Humi 20 'C 46 % R.H.
Test Condition DISPALY

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	6504	32.9	31.58	11.43	38.8	0	37.11	74	36.89	Hori	235	122
2	8979	30.1	32.08	15.47	37.49	0	40.16	74	33.84	Hori	112	358
3	17246.25	27	37.74	22.17	36.7	0	50.21	74	23.79	Hori	352	208
4	6504	33.2	31.58	11.43	38.8	0	37.41	74	36.59	Vert	205	357
5	8979	29.1	32.08	15.47	37.49	0	39.16	74	34.84	Vert	113	357
6	17246.25	25.9	37.74	22.17	36.7	0	49.11	74	24.89	Vert	327	0

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

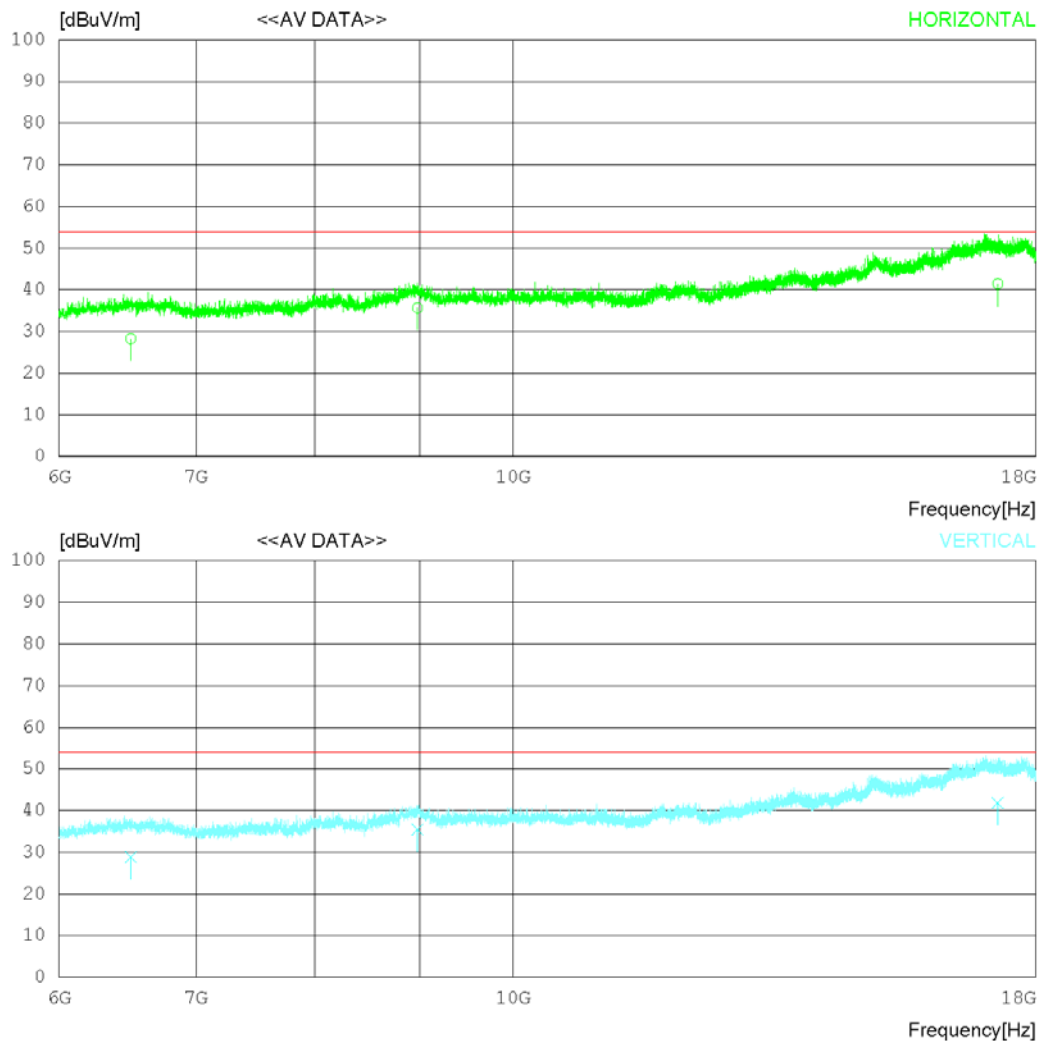
RADIATED EMISSION

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply Battery
Temp/Humi 20 'C 46 % R.H.
Test Condition DISPALY

Memo

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



RADIATED EMISSION

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply Battery
Temp/Humi 20 'C 46 % R.H.
Test Condition DISPALY

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	6504.121	24.01	31.58	11.43	38.8	0	28.22	54	25.78	Hori	321	78
2	6504.12	24.62	31.58	11.43	38.8	0	28.83	54	25.17	Vert	232	124
3	8979.112	25.61	32.08	15.47	37.49	0	35.67	54	18.33	Hori	242	122
4	8979.742	25.41	32.08	15.47	37.49	0	35.47	54	18.53	Vert	131	227
5	17246.26	18.25	37.74	22.17	36.7	0	41.46	54	12.54	Hori	321	305
6	17246.21	18.65	37.74	22.17	36.7	0	41.86	54	12.14	Vert	223	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)	-

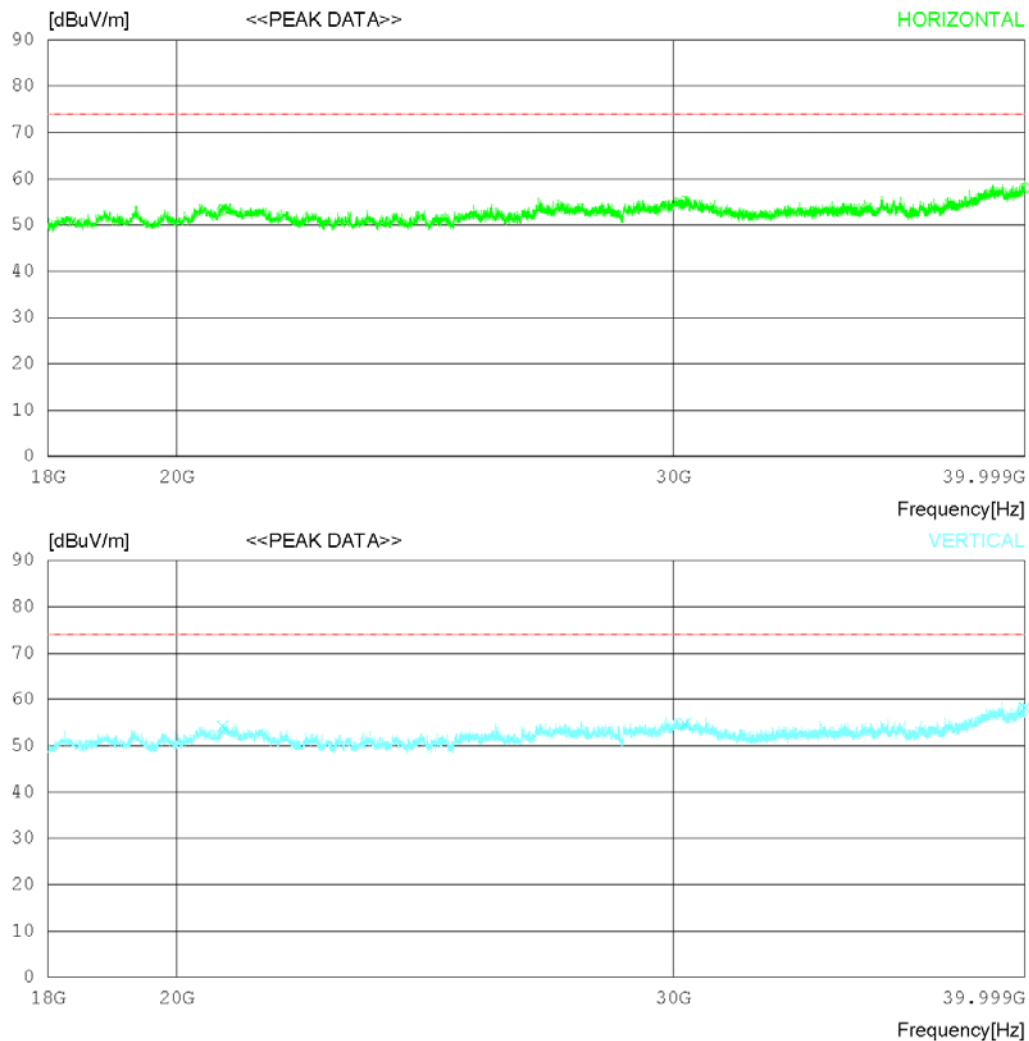
RADIATED EMISSION

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply Battery
Temp/Humi 20 'C 46 % 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 2020-04-04

Order No. DTNC2003-02462
Power Supply Battery
Temp/Humi 20 'C 46 % 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	20763.75	41	45.56	20.06	53.34	0	53.28	74	20.72	Hori	134	78
2	30300.75	37.8	47.5	22.05	52.22	0	55.13	74	18.87	Hori	243	223
3	39994.5	36.6	49.29	24.32	52.2	0	58.01	74	15.99	Hori	230	121
4	20763.75	42	45.56	20.06	53.34	0	54.28	74	19.72	Vert	131	45
5	30300.75	37.4	47.5	22.05	52.22	0	54.73	74	19.27	Vert	120	78
6	39994.5	36.8	49.29	24.32	52.2	0	58.21	74	15.79	Vert	113	305

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

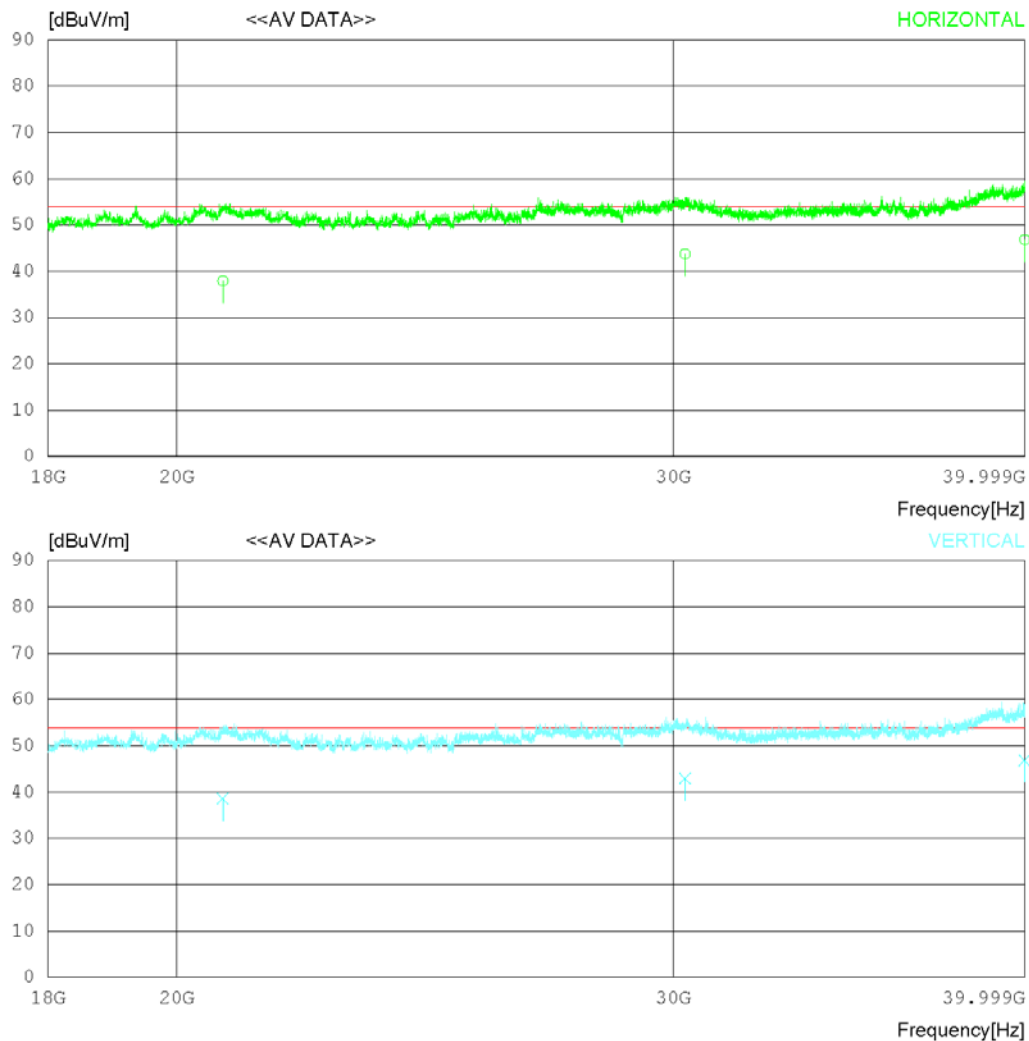
RADIATED EMISSION

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply Battery
Temp/Humi 20 'C 46 % 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 2020-04-04

Order No. DTNC2003-02462
Power Supply Battery
Temp/Humi 20 'C 46 % 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	20763.71	25.62	45.56	20.06	53.34	0	37.9	54	16.1	Hori	124	111
2	20763.75	26.25	45.56	20.06	53.34	0	38.53	54	15.47	Vert	231	78
3	30300.41	26.42	47.5	22.05	52.22	0	43.75	54	10.25	Hori	312	273
4	30300.75	25.61	47.5	22.05	52.22	0	42.94	54	11.06	Vert	121	113
5	39994.11	25.41	49.29	24.32	52.2	0	46.82	54	7.18	Hori	131	305
6	39994.5	25.41	49.29	24.32	52.2	0	46.82	54	7.18	Vert	331	230

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

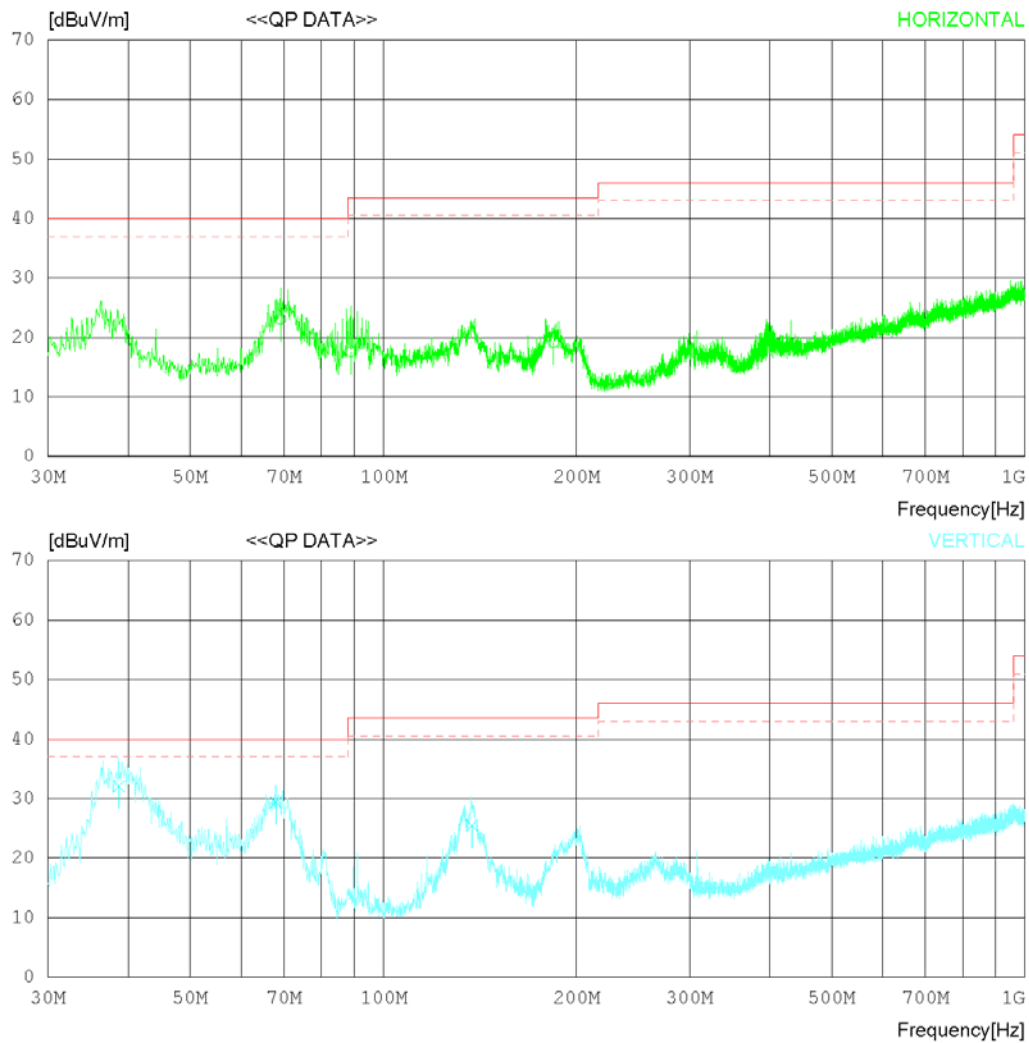
RADIATED EMISSION

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 'C 46 % R.H.
Test Condition Wireless charging

Memo

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



RADIATED EMISSION

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 °C 46 % 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	69.164	32.26	16.67	0.82	26.70	23.05	40.00	16.95	112	286
2	89.048	30.12	13.30	0.98	26.79	17.61	43.50	25.89	372	120
3	183.984	27.62	16.84	1.34	26.68	19.12	43.50	24.38	123	113
----- Vertical -----										
4	38.701	41.30	16.68	0.66	26.56	32.08	40.00	7.92	323	235
5	67.971	38.50	16.81	0.81	26.70	29.42	40.00	10.58	120	246
6	137.507	32.60	18.53	1.16	26.78	25.51	43.50	17.99	100	82

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

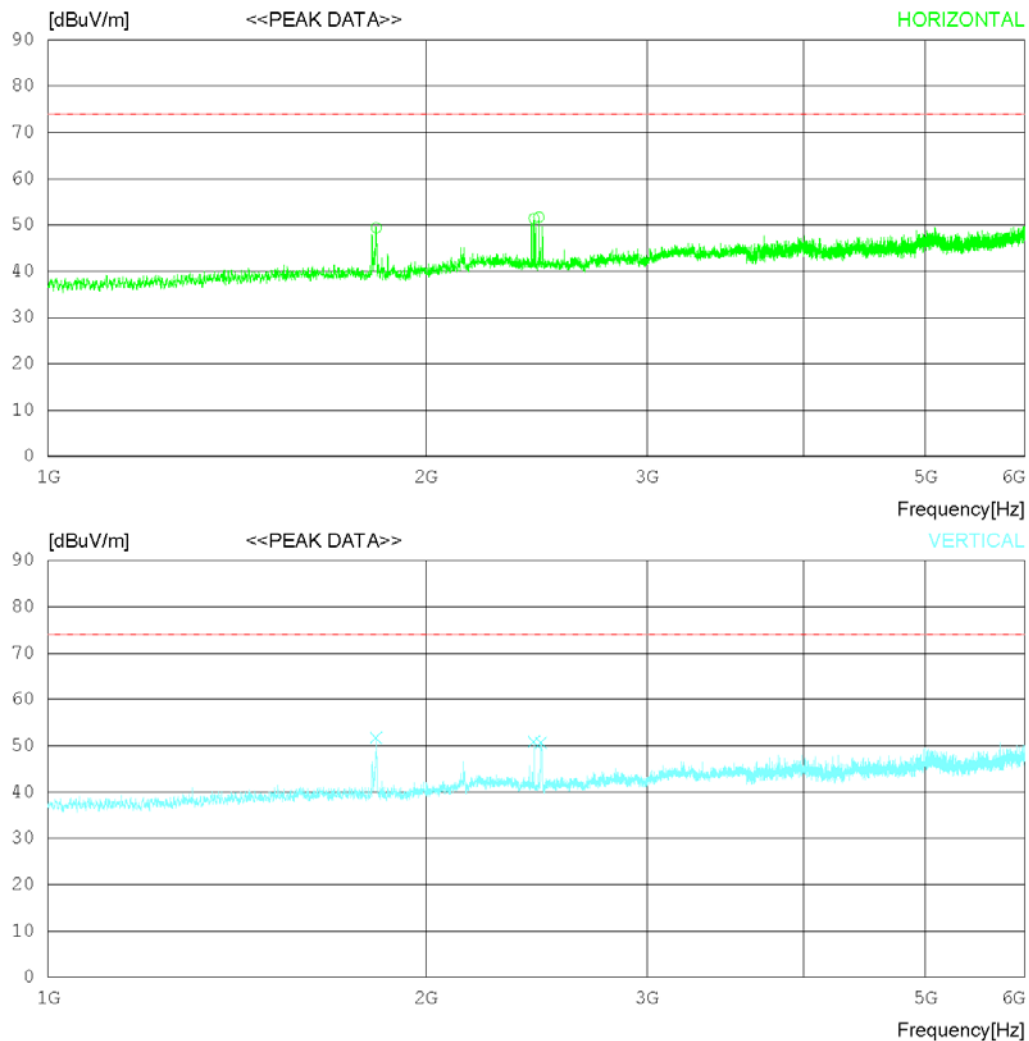
RADIATED EMISSION

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 °C 46 % 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 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 °C 46 % 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	1825.625	51.6	25.38	7.02	34.59	0	49.41	74	24.59	Hori	121	358
2	2438.75	51.5	27.4	7.12	34.6	0	51.42	74	22.58	Hori	100	358
3	2460	51.7	27.4	7.17	34.61	0	51.66	74	22.34	Hori	113	358
4	1825.625	53.9	25.38	7.02	34.59	0	51.71	74	22.29	Vert	232	137
5	2438.75	50.9	27.4	7.12	34.6	0	50.82	74	23.18	Vert	237	0
6	2470	50.8	27.4	7.18	34.62	0	50.76	74	23.24	Vert	305	197

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

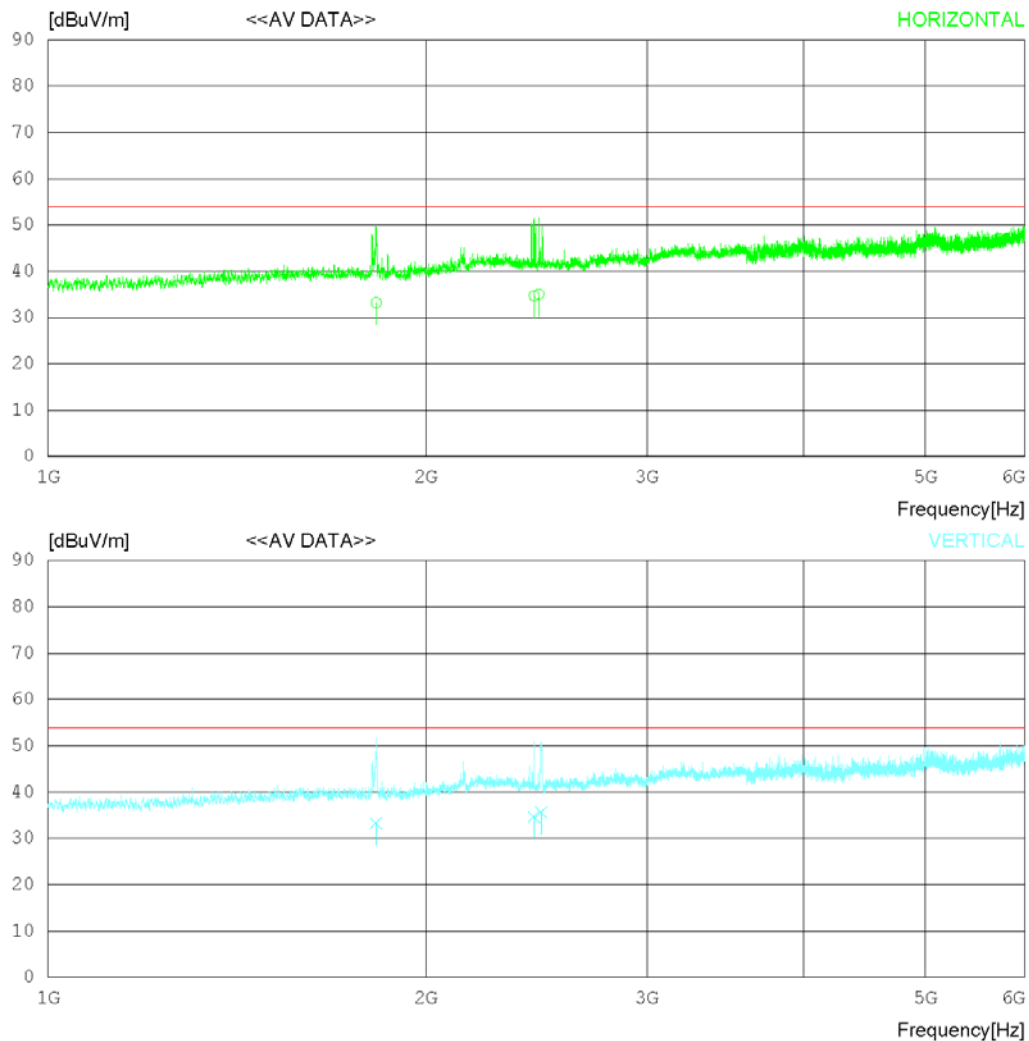
RADIATED EMISSION

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 °C 46 % 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 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 °C 46 % 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	1825.611	35.42	25.38	7.02	34.59	0	33.23	54	20.77	Hori	232	78
2	1825.12	35.5	25.38	7.02	34.59	0	33.31	54	20.69	Vert	134	322
3	2438.766	34.72	27.4	7.12	34.6	0	34.64	54	19.36	Vert	112	131
4	2438.615	34.77	27.4	7.12	34.6	0	34.69	54	19.31	Hori	131	111
5	2460.273	35.12	27.4	7.17	34.61	0	35.08	54	18.92	Hori	223	305
6	2470.077	35.66	27.4	7.18	34.62	0	35.62	54	18.38	Vert	305	211

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

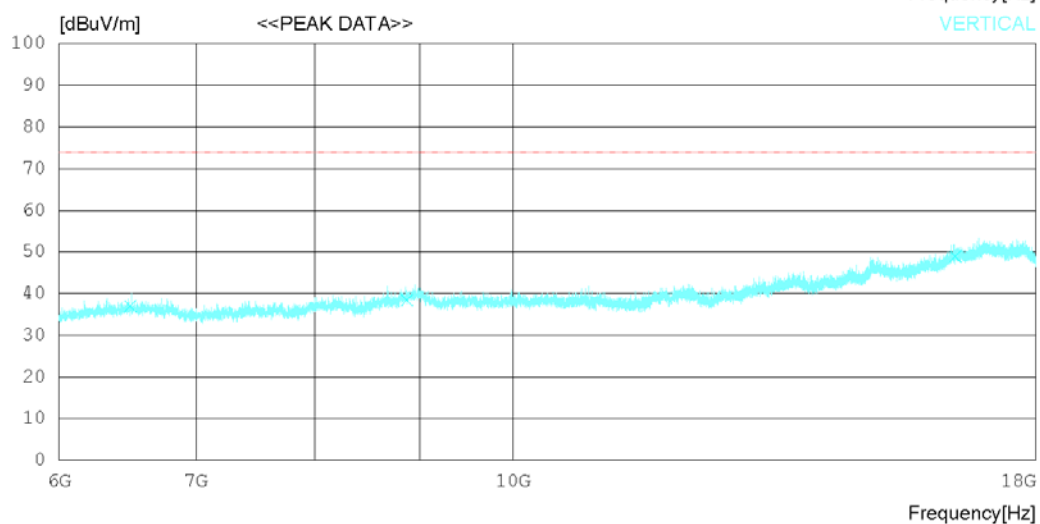
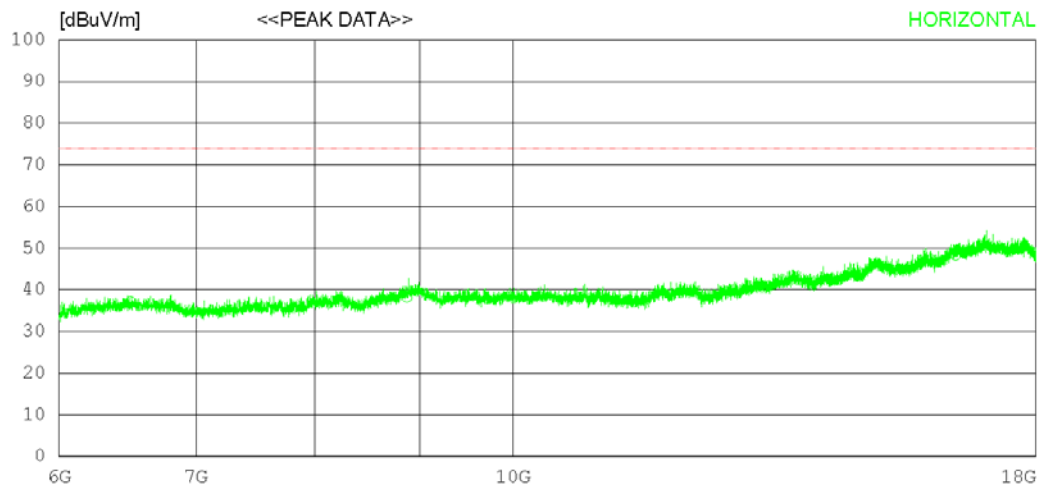
RADIATED EMISSION

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 °C 46 % 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 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 'C 46 % 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	6501.75	32.9	31.58	11.43	38.8	0	37.11	74	36.89	Hori	235	292
2	8874	28.6	32	15.08	37.42	0	38.26	74	35.74	Hori	322	81
3	16443.75	25.6	36.92	21.93	36.13	0	48.32	74	25.68	Hori	273	0
4	6501.75	32.8	31.58	11.43	38.8	0	37.01	74	36.99	Vert	132	358
5	8874	28.8	32	15.08	37.42	0	38.46	74	35.54	Vert	243	358
6	16443.75	26.2	36.92	21.93	36.13	0	48.92	74	25.08	Vert	305	0

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

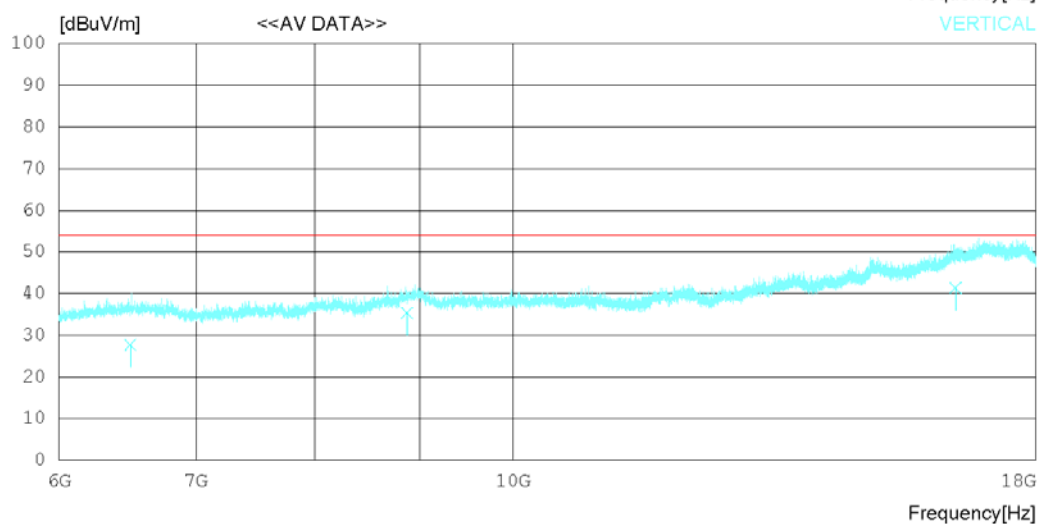
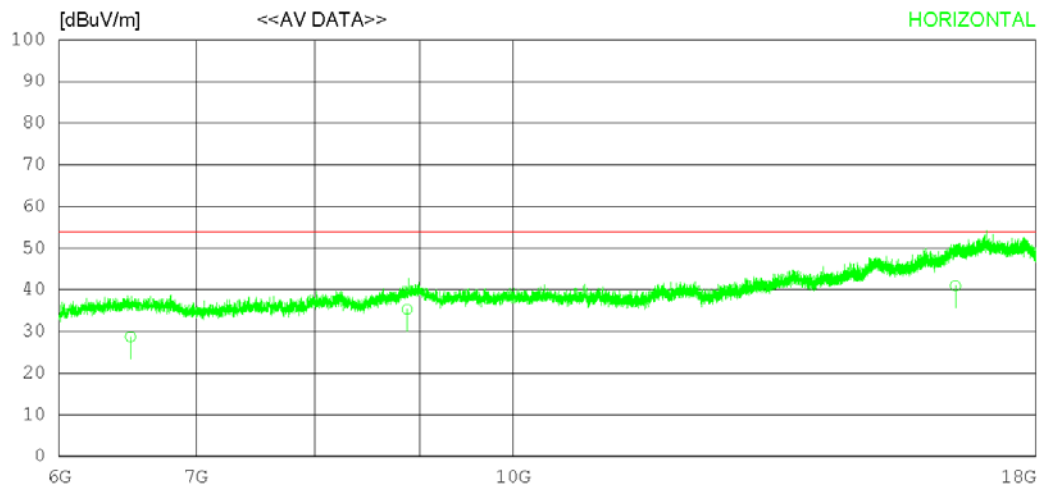
RADIATED EMISSION

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 °C 46 % 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 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 'C 46 % 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	6501.741	24.5	31.58	11.43	38.8	0	28.71	54	25.29	Hori	223	120
2	6501.142	23.42	31.58	11.42	38.8	0	27.62	54	26.38	Vert	121	120
3	8874.622	25.66	32	15.08	37.42	0	35.32	54	18.68	Hori	332	212
4	8874.014	25.62	32	15.08	37.42	0	35.28	54	18.72	Vert	232	78
5	16443.71	18.22	36.92	21.93	36.13	0	40.94	54	13.06	Hori	121	131
6	16443.41	18.62	36.92	21.93	36.13	0	41.34	54	12.66	Vert	221	133

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

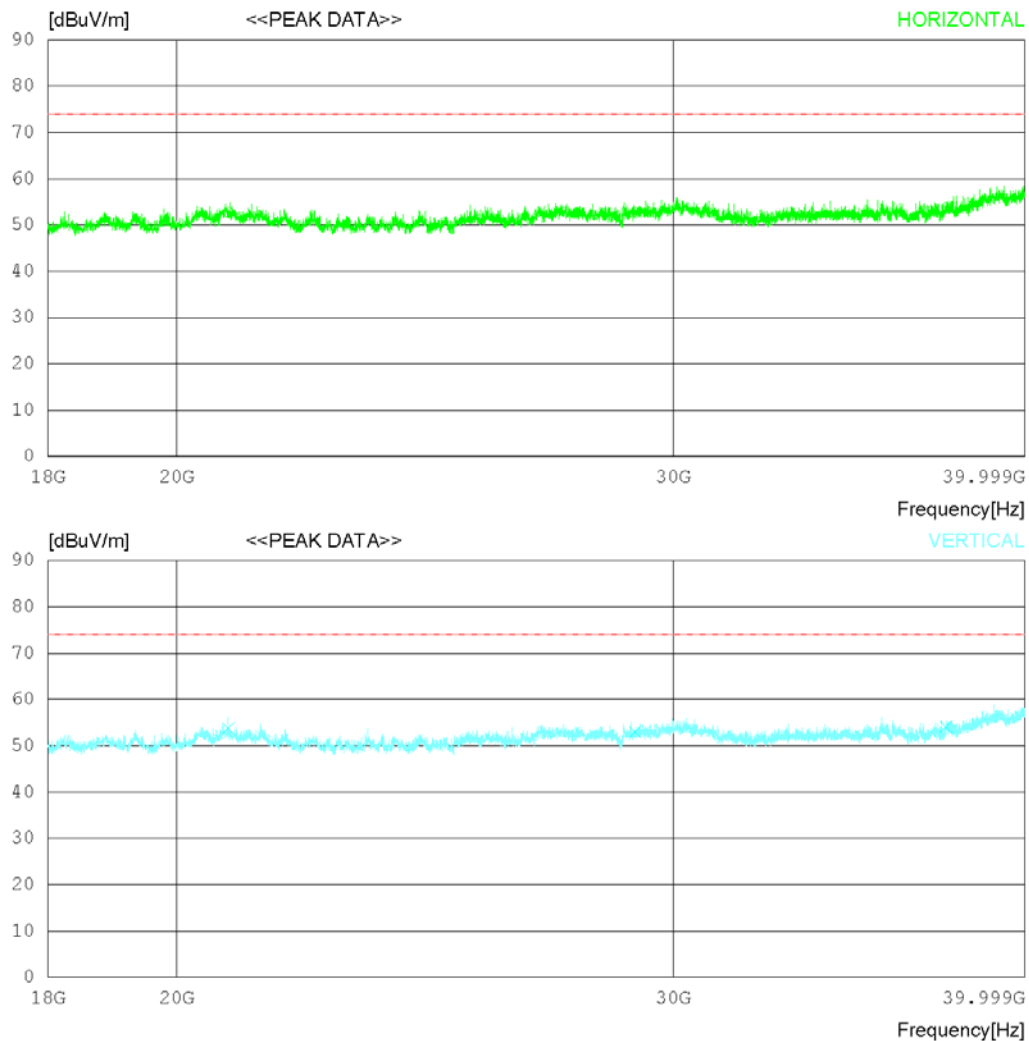
RADIATED EMISSION

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 'C 46 % 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 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 'C 46 % 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	20862.75	40.2	45.6	20.25	53.39	0	52.66	74	21.34	Hori	120	249
2	29090.75	36.4	46.89	21.85	52.5	0	52.64	74	21.36	Hori	223	359
3	37511.25	36	46.01	24.38	52.69	0	53.7	74	20.3	Hori	305	112
4	20862.75	41.3	45.6	20.25	53.39	0	53.76	74	20.24	Vert	235	0
5	29090.75	36.8	46.89	21.85	52.5	0	53.04	74	20.96	Vert	132	78
6	37511.25	36.4	46.01	24.38	52.69	0	54.1	74	19.9	Vert	112	302

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

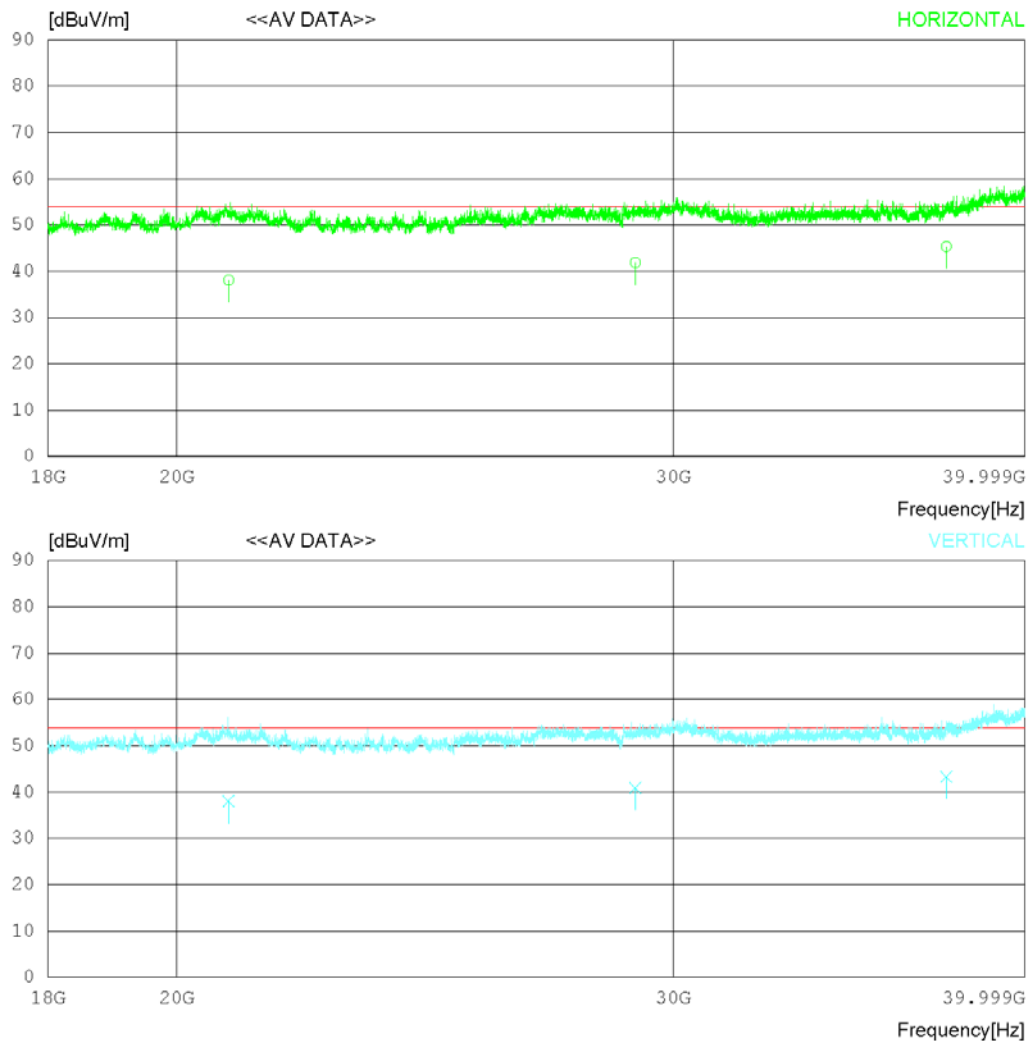
RADIATED EMISSION

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 °C 46 % 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 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 'C 46 % 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	20862.71	25.62	45.6	20.25	53.39	0	38.08	54	15.92	Hori	123	78
2	20862.12	25.6	45.6	20.25	53.39	0	38.06	54	15.94	Vert	120	78
3	29090.14	25.62	46.89	21.85	52.5	0	41.86	54	12.14	Hori	225	305
4	29090.72	24.72	46.89	21.85	52.5	0	40.96	54	13.04	Vert	124	113
5	37511.41	27.66	46.01	24.38	52.69	0	45.36	54	8.64	Hori	314	122
6	37511.12	25.62	46.01	24.38	52.69	0	43.32	54	10.68	Vert	320	320

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

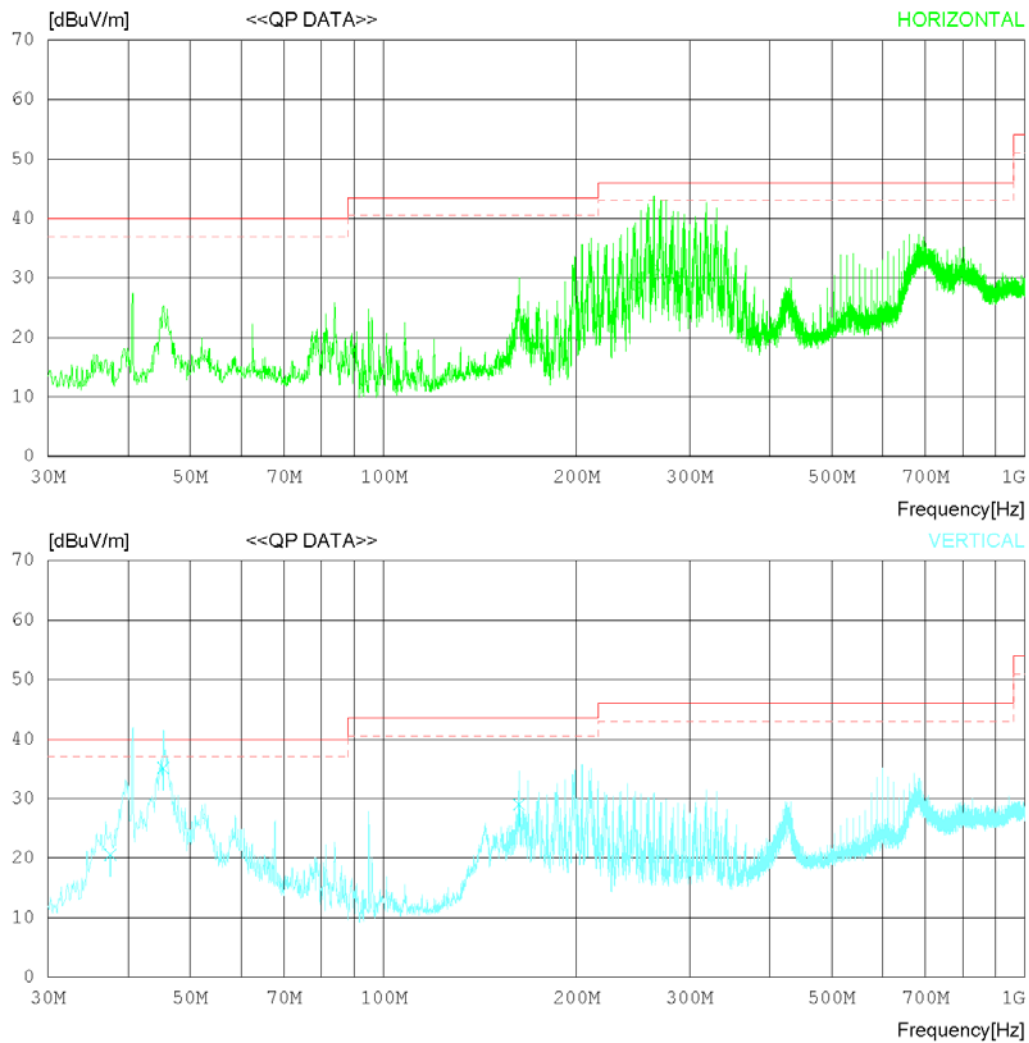
RADIATED EMISSION

Date 2020-04-20

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 23 'C 44 % R.H.
Test Condition Wirelss charging

Memo DS

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



*Remark : 40.68 MHz is NFC 3rd harmonic frequency.

RADIATED EMISSION

Date 2020-04-20

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 23 °C 44 % R.H.
Test Condition Wirelss charging

Memo DS

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	264.001	37.50	18.34	2.04	26.58	31.30	46.00	14.70	121	78
2	246.877	35.52	18.03	1.83	26.59	28.79	46.00	17.21	322	328
3	287.892	34.22	19.44	2.36	26.57	29.45	46.00	16.55	131	220
----- Vertical -----										
4	45.399	43.25	17.78	0.70	26.60	35.13	40.00	4.87	232	123
5	37.518	30.25	16.26	0.66	26.56	20.61	40.00	19.39	133	349
6	162.645	35.66	18.69	1.39	26.73	29.01	43.50	14.49	211	78

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

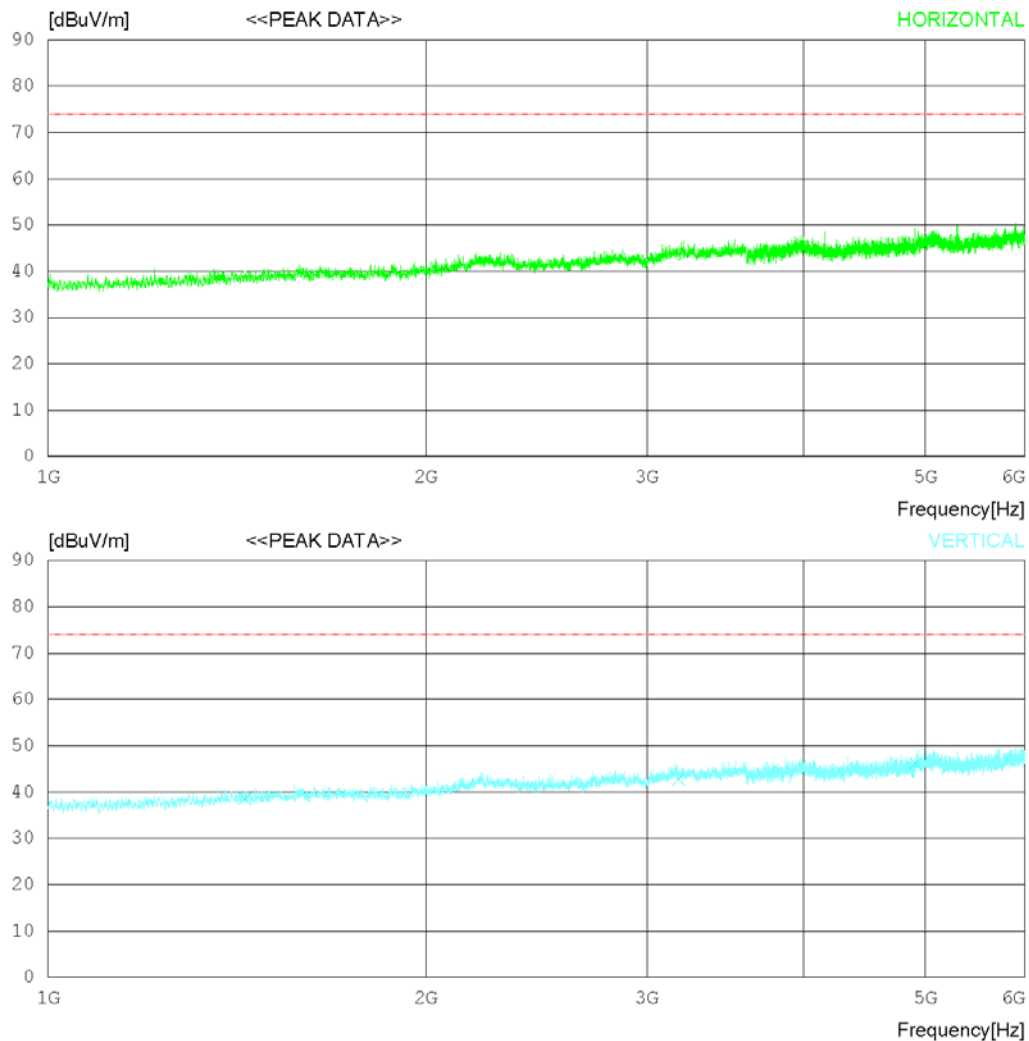
RADIATED EMISSION

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 °C 46 % R.H.
Test Condition Wireless charging

Memo DS

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



RADIATED EMISSION

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 °C 46 % R.H.
Test Condition Wireless charging

Memo DS

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	1435	42.4	25.8	5.78	35.14	0	38.84	74	35.16	Hori	213	358
2	3181.25	41	28.9	8.44	34.68	0	43.66	74	30.34	Hori	277	0
3	4912.5	38.2	31.34	10.06	34.74	0	44.86	74	29.14	Hori	308	200
4	1435	42.1	25.8	5.78	35.14	0	38.54	74	35.46	Vert	112	0
5	3181.25	40.1	28.9	8.44	34.68	0	42.76	74	31.24	Vert	232	0
6	4912.5	39.5	31.34	10.06	34.74	0	46.16	74	27.84	Vert	134	0

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

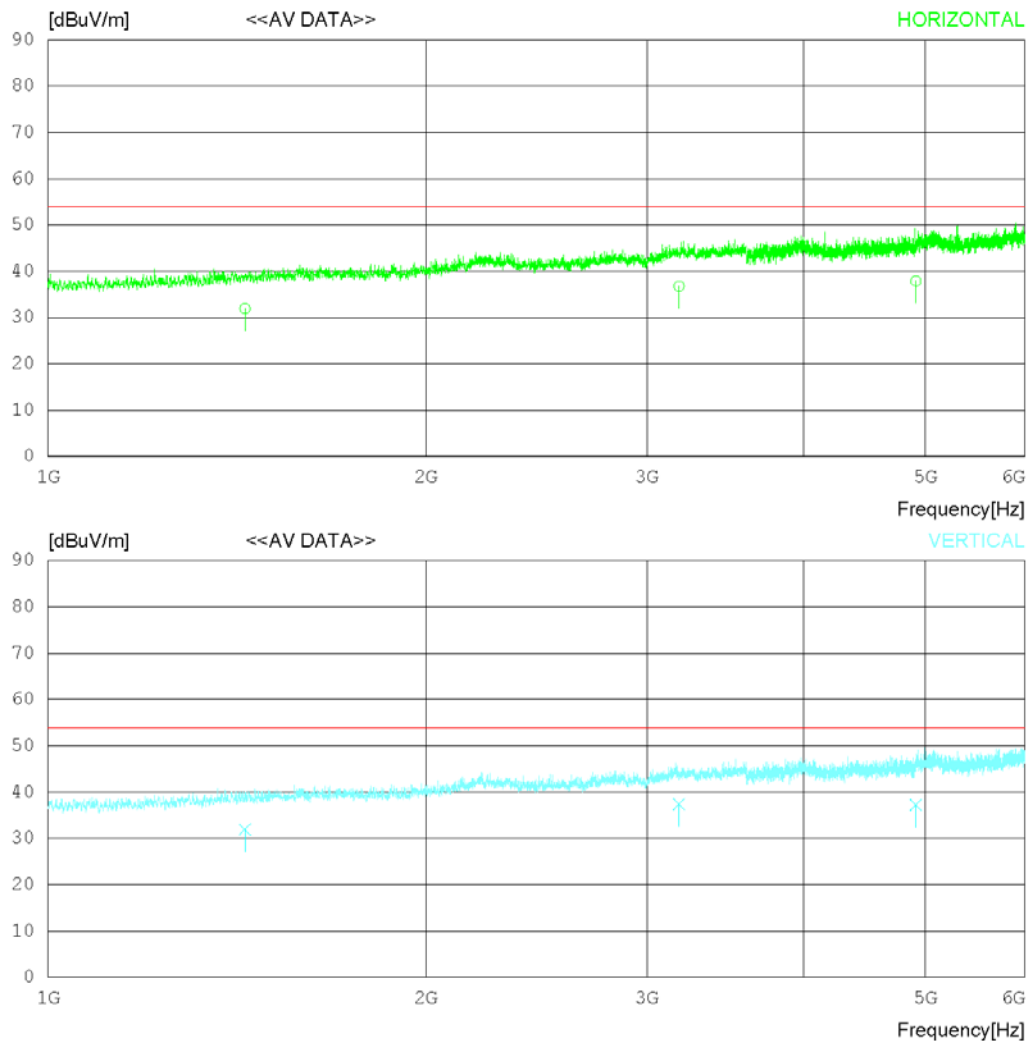
RADIATED EMISSION

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 °C 46 % R.H.
Test Condition Wireless charging

Memo DS

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



RADIATED EMISSION

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 °C 46 % R.H.
Test Condition Wireless charging

Memo DS

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	1435.122	35.5	25.79	5.78	35.14	0	31.93	54	22.07	Hori	322	78
2	1435.121	35.52	25.79	5.78	35.14	0	31.95	54	22.05	Vert	120	78
3	3181.211	34.12	28.9	8.44	34.68	0	36.78	54	17.22	Hori	231	203
4	3181.266	34.72	28.9	8.44	34.68	0	37.38	54	16.62	Vert	223	123
5	4912.562	31.2	31.34	10.06	34.74	0	37.86	54	16.14	Hori	116	11
6	4912.542	30.52	31.34	10.06	34.74	0	37.18	54	16.82	Vert	134	305

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

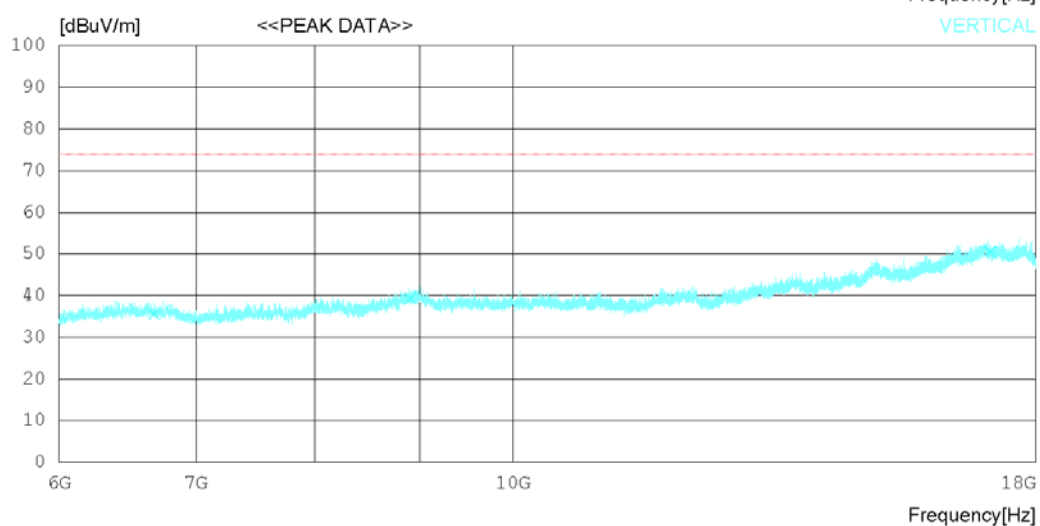
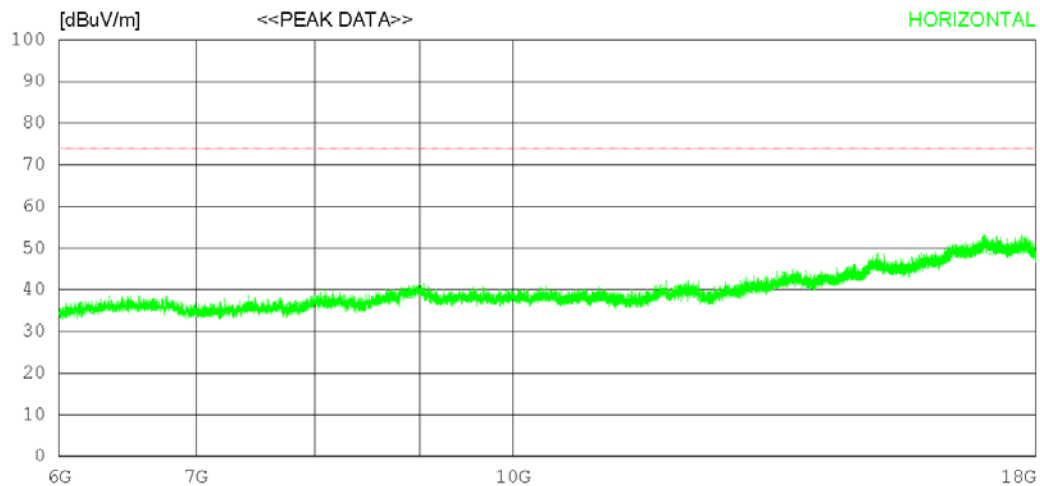
RADIATED EMISSION

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 °C 46 % R.H.
Test Condition Wireless charging

Memo DS

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



RADIATED EMISSION

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 'C 46 % R.H.
Test Condition Wireless charging

Memo DS

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	6678	31.3	31.54	12.14	38.7	0	36.28	74	37.72	Hori	323	358
2	8907	29.4	32.03	15.21	37.44	0	39.2	74	34.8	Hori	234	358
3	17108.25	25.6	37.63	22.95	36.53	0	49.65	74	24.35	Hori	131	1
4	6678	30.6	31.54	12.14	38.7	0	35.58	74	38.42	Vert	131	358
5	8907	29.5	32.03	15.21	37.44	0	39.3	74	34.7	Vert	323	47
6	17108.25	26.5	37.63	22.95	36.53	0	50.55	74	23.45	Vert	327	177

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

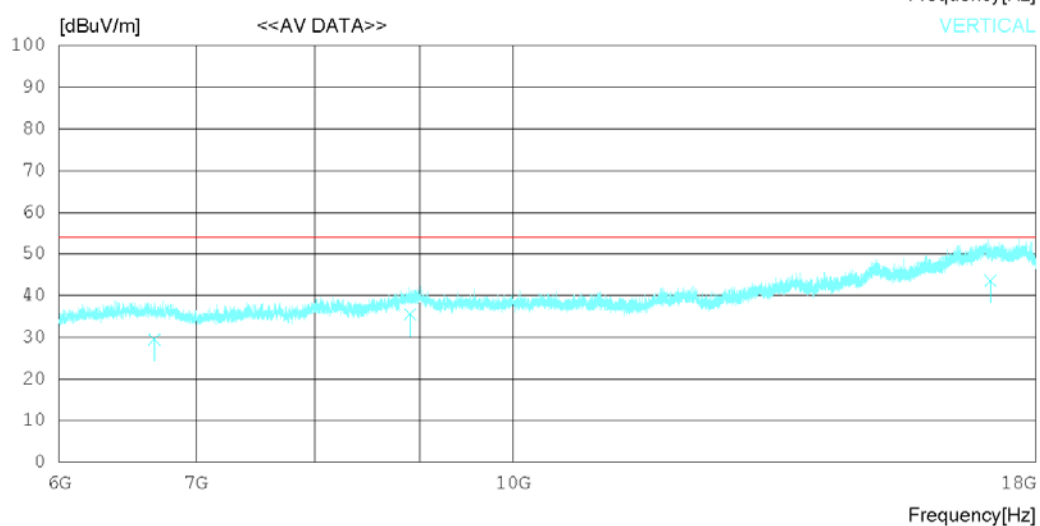
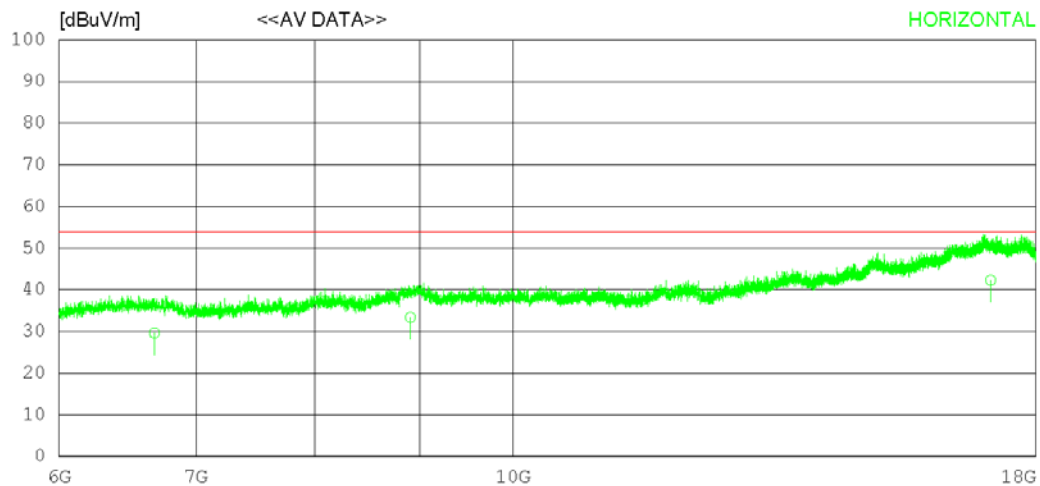
RADIATED EMISSION

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 °C 46 % R.H.
Test Condition Wireless charging

Memo DS

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



RADIATED EMISSION

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 'C 46 % R.H.
Test Condition Wireless charging

Memo DS

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	6678.714	24.62	31.54	12.14	38.7	0	29.6	54	24.4	Hori	232	78
2	6678.124	24.52	31.54	12.14	38.7	0	29.5	54	24.5	Vert	325	120
3	8907.62	23.57	32.03	15.21	37.44	0	33.37	54	20.63	Hori	121	112
4	8907.441	25.72	32.03	15.21	37.44	0	35.52	54	18.48	Vert	223	113
5	17108.21	18.22	37.63	22.95	36.53	0	42.27	54	11.73	Hori	322	305
6	17108.22	19.52	37.63	22.95	36.53	0	43.57	54	10.43	Vert	213	23

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

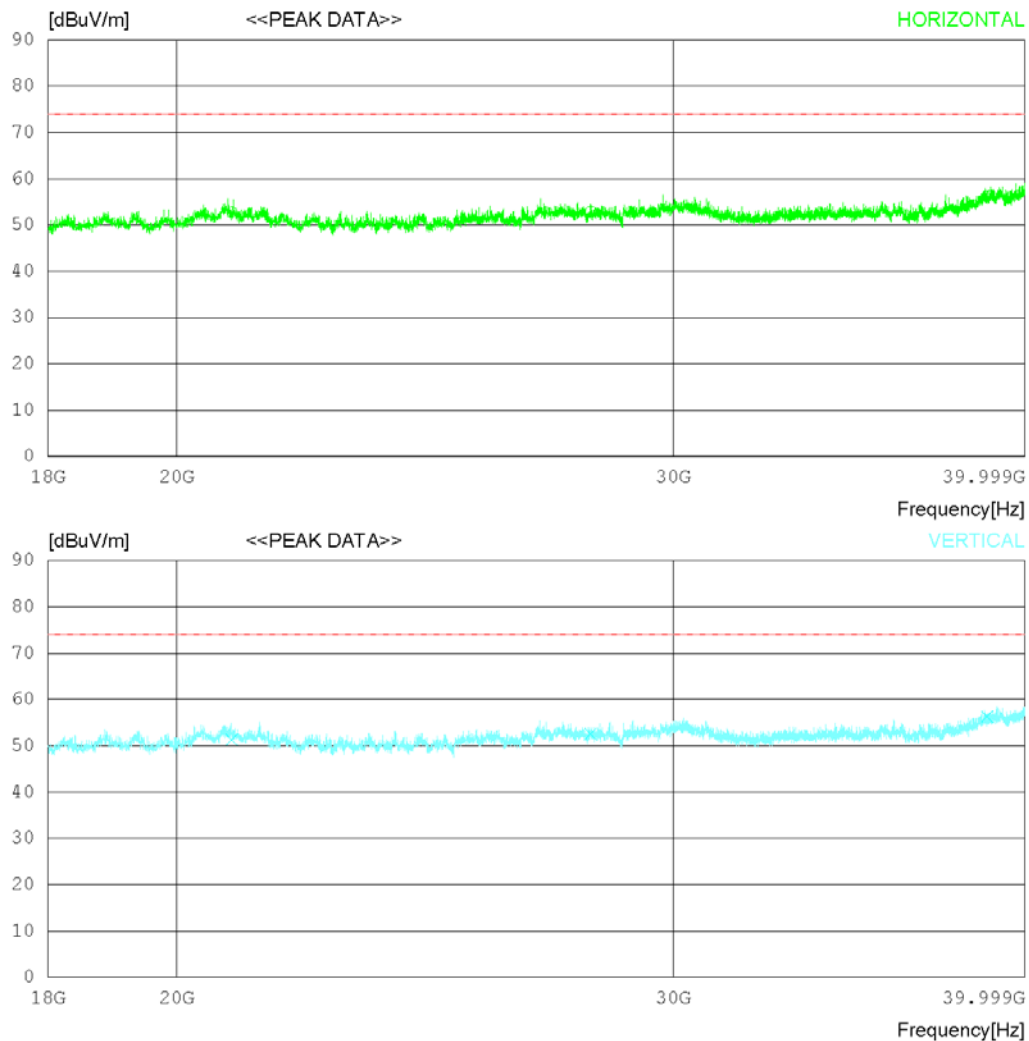
RADIATED EMISSION

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 'C 46 % R.H.
Test Condition Wireless charging

Memo DS

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



RADIATED EMISSION

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 'C 46 % R.H.
Test Condition Wireless charging

Memo DS

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	20917.75	40.3	45.6	20.36	53.41	0	52.85	74	21.15	Hori	223	358
2	28045.75	38.2	46.3	21.3	52.84	0	52.96	74	21.04	Hori	120	358
3	38787.25	35.8	47.29	25.52	52.26	0	56.35	74	17.65	Hori	305	256
4	20917.75	38.8	45.6	20.36	53.41	0	51.35	74	22.65	Vert	176	117
5	28045.75	37.8	46.3	21.3	52.84	0	52.56	74	21.44	Vert	120	112
6	38787.25	35.8	47.29	25.52	52.26	0	56.35	74	17.65	Vert	121	136

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

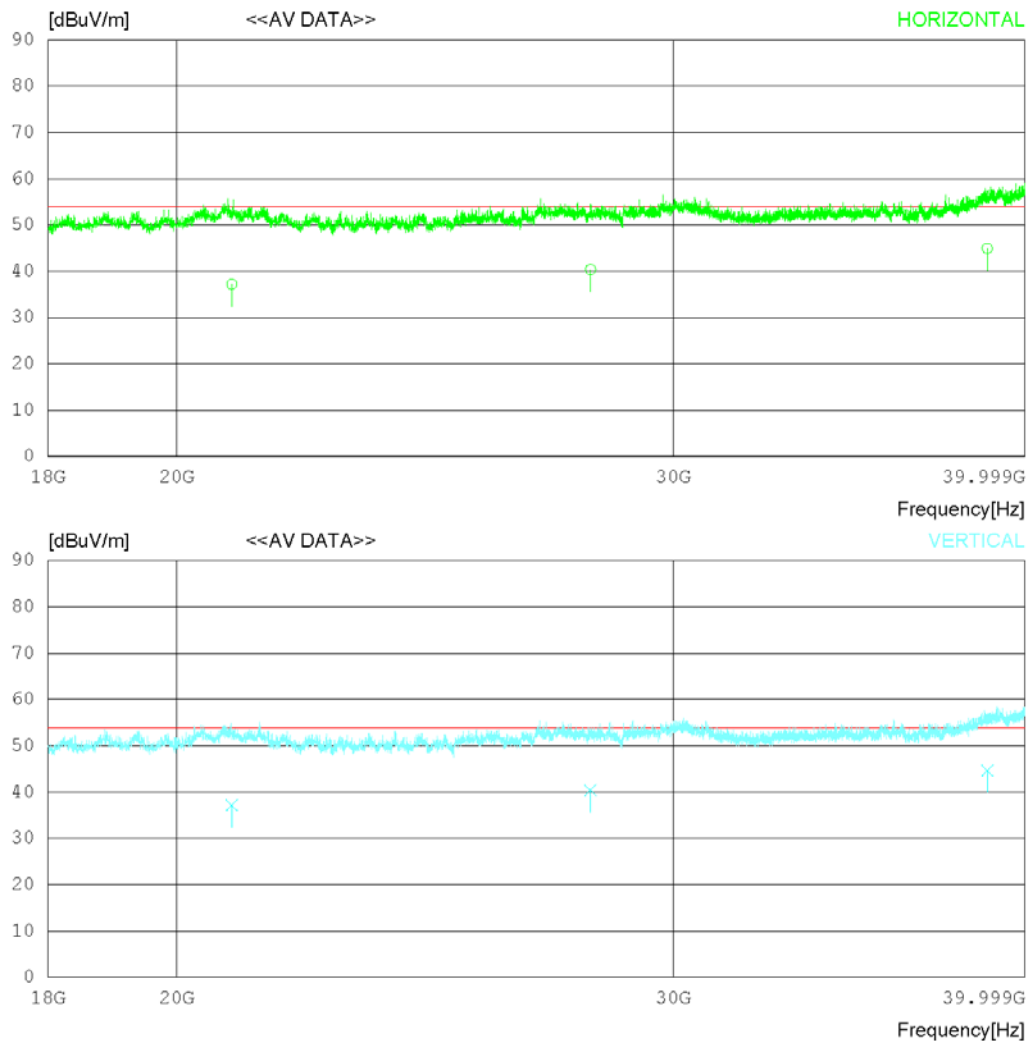
RADIATED EMISSION

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 'C 46 % R.H.
Test Condition Wireless charging

Memo DS

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



RADIATED EMISSION

Date 2020-04-04

Order No. DTNC2003-02462
Power Supply 120 V 60 Hz
Temp/Humi 20 'C 46 % R.H.
Test Condition Wireless charging

Memo DS

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	20917.12	24.65	45.6	20.36	53.41	0	37.2	54	16.8	Hori	232	78
2	20917.42	24.65	45.6	20.36	53.41	0	37.2	54	16.8	Vert	121	335
3	28045.74	25.62	46.3	21.3	52.84	0	40.38	54	13.62	Hori	121	220
4	28045.32	25.66	46.3	21.29	52.84	0	40.41	54	13.59	Vert	305	121
5	38787.62	24.4	47.29	25.52	52.26	0	44.95	54	9.05	Hori	131	305
6	38787.21	24.13	47.29	25.52	52.26	0	44.68	54	9.32	Vert	112	131

Calculation

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

8. Revision History

Date	Description	Revised By	Reviewed By
Apr. 29. 2020	Initial report	JunSeo Park	KyoungHwan Bae
May. 04. 2020	Changed Conducted Disturbance limit name (CISPR 32 > FCC Part15 subpart.B)	JunSeo Park	KyoungHwan Bae

-End of test report-