TEST REPORT

Dt&C

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 : DREFCC2011-0266(1)
2. Customer
   - Name : MOTREX CO., LTD.
   - Address : Seoyoung Bldg., 25, Hwangsaeul-ro 258beon-gil, Bundang-gu, Seongnam-si, Gyeonggi-do, Korea
3. Use of Report : Grant of Certification
4. Product Name / Model Name : Rear Seat Entertainment / MTXRSE150A
   (FCC ID : BP9-MTXRSE150)
5. Test Method Used : ANSI C63.4:2014
   FCC Part 15 Subpart B
   (Other Class B digital devices)
6. Date of Test : Nov. 03. 2020 ~ Nov. 06. 2020
7. Location of Test : ☒ Permanent Testing Lab ☐ On Site Testing
8. Testing Environment : Temperature (20 ~ 22) °C , Humidity 47 % 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	Technical Manager
	Name : Hun Lee (Signature)	Name : HyungJun Kim (Signature)

Nov. 26. 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

CONTENTS

1. General Remarks 3

2. Test Laboratory 3

3. General Information of EUT 4

4. EUT Operations and Test Configurations 5
4.1 Principle of Configuration Selection 5
4.2 EUT Operation Mode 5
4.3 Test Configuration Mode 5
4.4 Supported Equipment 6
4.5 EUT In/Output Port 6
4.6 Test Voltage and Frequency 6

5. Test Summary 7

6. Test Environment 7

7. Test Results : Emission 8
7.1 Conducted Disturbance 8
7.2 Radiated Disturbance 10
7.3 Antenna Power Conduction 54

8. Revision History 56

1. General Remarks

This report contains the result of tests performed by :

DT&C Co., Ltd.
42, Yurim-ro, 154beon-gil, Cheoin-gu, Yongin-si, Gyeonggi-do, Korea 17042
http://www.dtnc.net
Tel: +82-31-321-2664 Fax: +82-31-321-1664

2. Test Laboratory

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

Certificate	Nation	Agency	Code	Remark
Accreditation	Korea	KOLAS	393	ISO/IEC 17025
	South Africa	SABS	0006	ISO/IEC 17025
	Ghana	NCA	NCA agreement 23rd,Oct,2018	-
Site Filing	USA	FCC	KR0034 101842 678747, 596748, 804488, 165783	Accredited 2.948 Listed
	Canada	IC	5740A-3 5740A-4	Registered
	Japan	VCCI	C-1427, R-3385, R-14076, R-14180, R-4496, T-11442, 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	MOTREX CO., LTD. Seoyoung Bldg., 25, Hwangsaeul-ro 258beon-gil, Bundang-gu, Seongnam-si, Gyeonggi-do, Korea
Manufacturer	MOTREX CO., LTD. Seoyoung Bldg., 25, Hwangsaeul-ro 258beon-gil, Bundang-gu, Seongnam-si, Gyeonggi-do, Korea
Factory	MOTREX CO., LTD. Seoyoung Bldg., 25, Hwangsaeul-ro 258beon-gil, Bundang-gu, Seongnam-si, Gyeonggi-do, Korea
Product Name	Rear Seat Entertainment
Model Name	MTXRSE150A
Add Model Name	None
Maximum Internal Frequency	1 000 MHz
Software Version	Rev 0.1
Hardware Version	Rev 0.1
Rated Power	DC 12 V
FCC ID	BP9-MTXRSE150
Remarks	

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	USB	The EUT is connected to USB memory to play BT.471-1 Moving Color bar Pattern & 1 KHz sound. The EUT is wirelessly connected to the router and continuously sends and receives data. (WIFI2.4G)
2	HDMI	The EUT is connected to Disk Player to play BT.471-1 Moving Color bar Pattern & 1 KHz sound. The EUT is wirelessly connected to the router and continuously sends and receives data. (WIFI5G) The EUT is wirelessly connected to the BT Speaker and continuously sends and receives data. (Bluetooth)
3	AV	The EUT is connected to Disk Player to play BT.471-1 Moving Color bar Pattern & 1 KHz sound. The EUT is wirelessly connected to the router and continuously sends and receives data. (WIFI5.8G)

4.3 Test Configuration Mode

No.	Mode	Description
1	USB	EUT is connected to DC power EUT is connected to USB memory EUT is wirelessly connected to the router
2	HDMI	EUT is connected to DC power EUT is connected to Disk Player EUT is wirelessly connected to the router EUT is wirelessly connected to the BT Speaker
3	AV	EUT is connected to DC power EUT is connected to Disk Player EUT is wirelessly connected to the router

4.4 Supported Equipment

Used*	Product Type	Manufacturer	Model	Remarks
AE	USB MEMORY	Sandisk	ULTRA FLAIR 3.0	N/A
AE	Disk Player	LG Electronics	BD570	N/A
AE	Headset	DONGGUAN REIN ELECTRONIC CO.,LTD	SHS150V/W	N/A
AE	ROUTER	RoHS	NEXT-7004N	N/A
AE	BT Speaker	DIVOOM LAB (HONGKONG) INTERNATIONAL CO. LTD.	AuraBox	N/A

*Abbreviations:
AE - Auxiliary/Associated Equipment, or
SIM - Simulator

4.5 EUT In/Output Port

Name	Type*	Cable Max. >3m	Cable Shielded	Cable Back shell	Remarks
DC IN	DC	1.8	Non shield	Plastic	None
USB	I/O	-	Shield	Metal	None
Headset	I/O	2.0	Non shield	Plastic	None
HDMI	I/O	2.0	Shield	Plastic	None
AV IN	I/O	1.8	Non shield	Plastic	None

*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	DC 12 V	-	-	None

5. Test Summary

Test Items	Applied Standards	Results
Conducted Disturbance	ANSI C63.4 : 2014	**N/A (Note 1)**
Radiated Disturbance	ANSI C63.4 : 2014	**C**
Antenna Power Conduction	ANSI C63.4 : 2014	**N/A**
Note 1) The EUT is not a device connected to the AC mains.		
C=Comply N/C=Not Comply N/T=Not Tested N/A=Not Applicable		

The data in this test report are traceable to the national or international standards.

-Conducted Disturbance

Frequency [MHz]	Phase	Result [dBµV]	Detector	Limit [dBµV]	Margin [dB]
-	-	-	-	-	-

-Radiated Disturbance

Frequency [MHz]	Pol.	Result [dBµV/m]	Detector	Limit [dBµV/m]	Margin [dB]
370.912	H	42.58	QP	46.00	3.42

-Antenna Power Conduction

Frequency [MHz]	Result [dBµV/m]	Detector	Limit [dBµV/m]	Margin [dB]
-	-	-	-	-

6. Test Environment

Test Items	Test date (YYYY-MM-DD)	Temp. (℃)	Humidity (% R.H.)	Pressure (kPa)
Radiated Disturbance	2020-11-03 2020-11-06	20 22	47 47	-

7. Test Results : Emission

7.1 Conducted Disturbance

ANSI C63.4	Mains terminal disturbance voltage	Result
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.		**Not Applicable**

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**	**N/A**
	EUT Operation mode	**N/A**

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 Instrument					
Description	**Model**	**Manufacturer**	**Identifier**	**Cal. Date**	**Cal. Due**
-	-	-	-	-	-

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)

Mains terminal disturbance voltage _Measurement data			
Test configuration mode	**N/A**	**EUT Operation mode**	**N/A**
Test voltage (V)	**N/A**	**Test Frequency (Hz)**	**N/A**

7.2 Radiated Disturbance

ANSI C63.4 BETS-7	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**
	EUT Operation mode	**1, 2, 3**

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(CISPR), Pub. 22 shown as below.

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	5th harmonic of the highest frequency or 40 GHz, whichever is lower

Measurement Instrument					
Description	**Model**	**Manufacturer**	**Identifier**	**Cal. Date**	**Cal. Due**
MEASUREMENT SOFTWARE	EMI-R VER. 2.00.0177	TSJ	N/A	N/A	N/A
EMI TEST RECEIVER	ESU40	ROHDE & SCHWARZ	100525	2019.12.20	2020.12.20
TRILOG BROADBAND TEST-ANTENNA WITH 6DB ATT	VULB9160	SCHWARZBECK	9160-3339	2020.10.05	2022.10.05
	2708A	HP	18403	2020.10.05	2022.10.05
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
HORN ANTENNA	EM-6969	ELECTRO-METRICS	156	2019.02.13	2021.02.13
PREAMPLIFIER	MLA-0618-B03-34	TSJ	1785642	2019.12.31	2020.12.31
HORN ANTENNA WITH	3116C	ETS-LINDGREN	00213177	2019.12.12	2021.12.12
PREAMPLIFIER	JS44-18004000-35-8P	L3 NARDA-MITEQ	2046884	2020.11.05	2021.11.05
PRE AMPLIFIER	8449B	H.P	3008A00887	2020.08.31	2021.08.31
(NOTE : THE MEASUREMENT ANTENNAS WERE CALIBRATED IN ACCORDANCE TO THE REQUIREMENTS OF C63.5-2017.)					

Calculation

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

Radiated disturbance at (30 ~ 1000) MHz _Measurement data			
Test configuration mode	**1**	**EUT Operation mode**	**1**
Test voltage (V)	**DC 12 V**	**Test Frequency (Hz)**	**-**

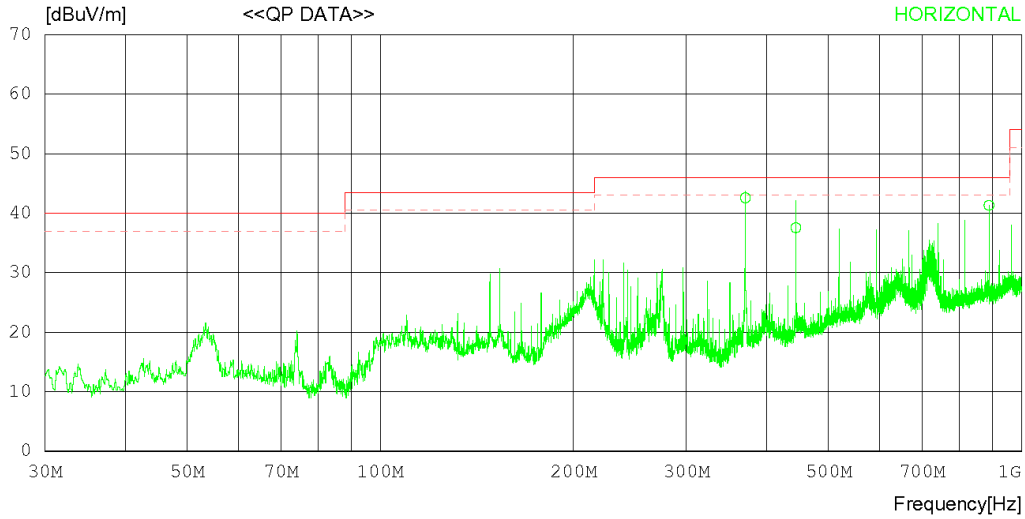
RADIATED EMISSION

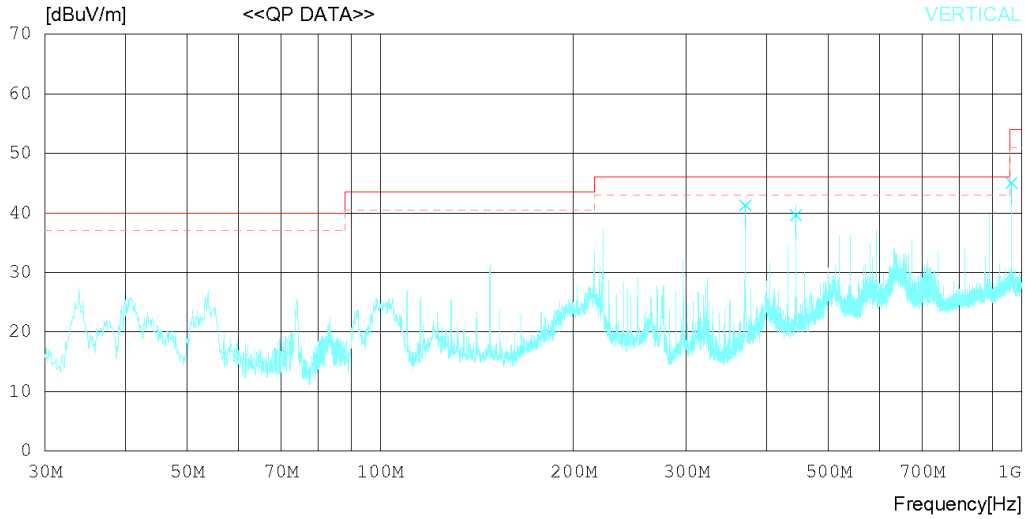
Date 2020-11-03

Order No. DTNC2010-08267
Power Supply DC 12 V
Temp/Humi 20 'C 47 % R.H.
Test Condition USB

Memo

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





RADIATED EMISSION

Date 2020-11-03

Order No. DTNC2010-08267
Power Supply DC 12 V
Temp/Humi 20 'C 47 % R.H.
Test Condition USB

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	370.912	45.60	21.22	2.21	26.45	42.58	46.00	3.42	134	312
2	444.903	38.20	23.10	2.56	26.32	37.54	46.00	8.46	112	37
3	890.087	34.80	29.40	3.61	26.50	41.31	46.00	4.69	106	151
----- Vertical ------										
4	370.867	44.30	21.22	2.21	26.45	41.28	46.00	4.72	137	45
5	444.968	40.30	23.10	2.56	26.32	39.64	46.00	6.36	124	275
6	964.236	37.40	30.58	3.82	26.76	45.04	54.00	8.96	163	67

Radiated disturbance at (1 ~ 6) GHz _Peak measurement data			
Test configuration mode	**1**	**EUT Operation mode**	**1**
Test voltage (V)	**DC 12 V**	**Test Frequency (Hz)**	**-**

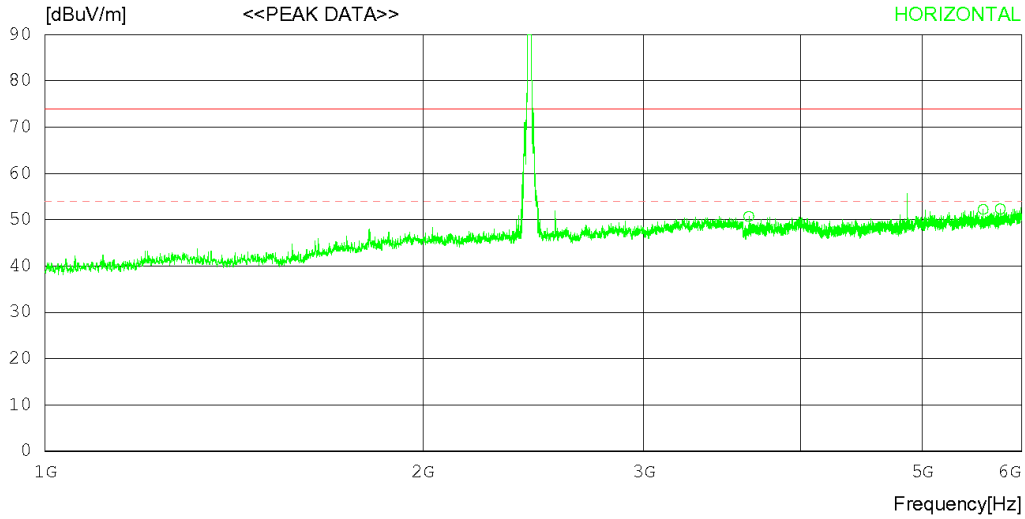
RADIATED EMISSION

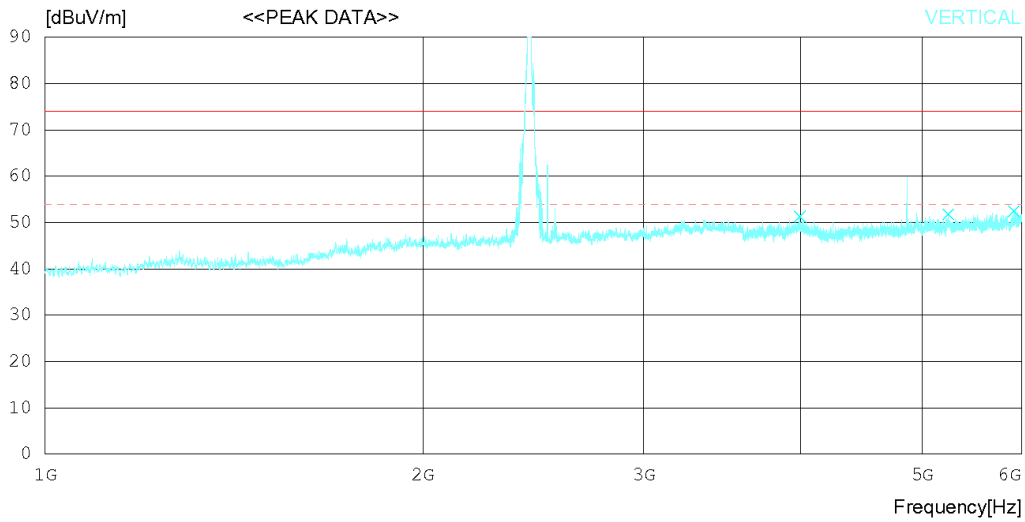
Date 2020-11-03

Order No. DTNC2010-08267
Power Supply DC 12 V
Temp/Humi 20 'C 47 % R.H.
Test Condition USB

Memo

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





*Remark : (2,412 ~ 2,472) MHz is WIFI 2.4 G frequency.

RADIATED EMISSION

Date 2020-11-03

Order No. DTNC2010-08267
Power Supply DC 12 V
Temp/Humi 20 'C 47 % R.H.
Test Condition USB

Memo

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

No.	FREQ [MHz]	READING PEAK [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	3638.125	43.80	33.40	8.40	34.88	50.72	74.0	23.28	211	0
2	5593.125	41.90	34.43	11.05	35.16	52.22	74.0	21.78	297	0
3	5771.875	41.70	34.74	11.08	35.18	52.34	74.0	21.66	258	0
----- Vertical ------										
4	3993.750	42.80	33.51	9.72	34.70	51.33	74.0	22.67	342	0
5	5243.750	42.20	34.38	10.34	35.12	51.80	74.0	22.2	395	118
6	5913.125	41.20	34.93	11.51	35.19	52.45	74.0	21.55	305	1

Radiated disturbance at (1 ~ 6) GHz _Average measurement data			
Test configuration mode	**1**	**EUT Operation mode**	**1**
Test voltage (V)	**DC 12 V**	**Test Frequency (Hz)**	**-**

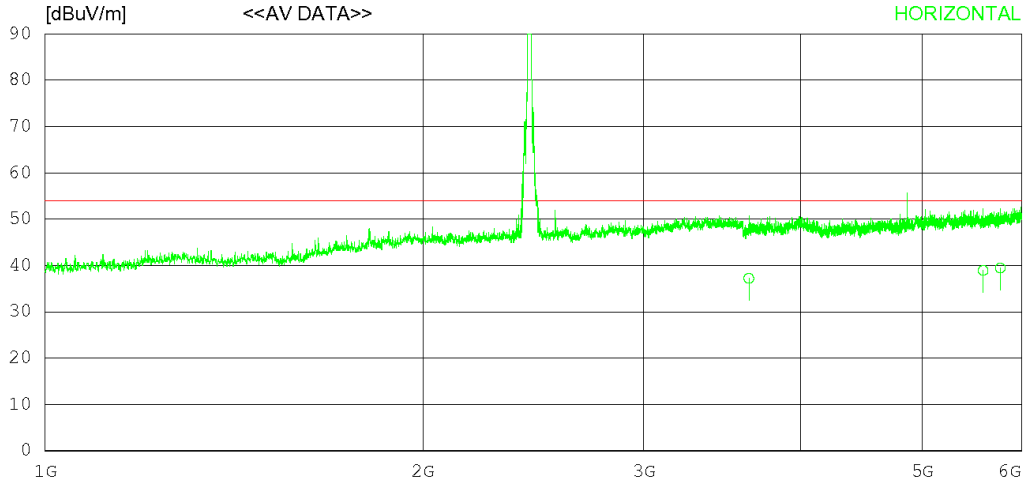
RADIATED EMISSION

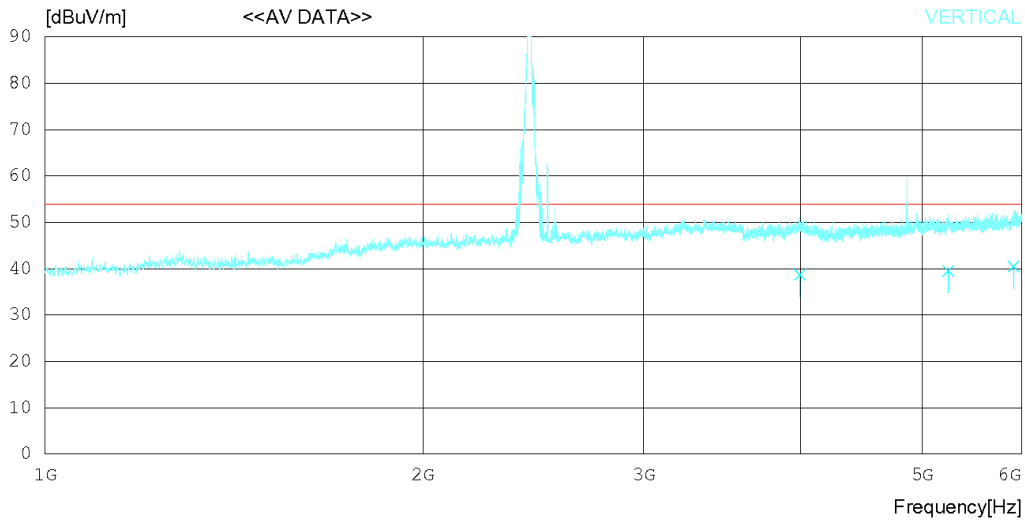
Date 2020-11-03

Order No. DTNC2010-08267
Power Supply DC 12 V
Temp/Humi 20 'C 47 % R.H.
Test Condition USB

Memo

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





*Remark : (2,412 ~ 2,472) MHz is WIFI 2.4 G frequency.

RADIATED EMISSION

Date 2020-11-03

Order No. DTNC2010-08267
Power Supply DC 12 V
Temp/Humi 20 'C 47 % R.H.
Test Condition USB

Memo

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

No.	FREQ [MHz]	READING CAV [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	3638.503	30.30	33.40	8.40	34.88	37.22	54.00	16.78	194	58
2	5593.475	28.60	34.43	11.06	35.16	38.93	54.00	15.07	375	104
3	5771.326	28.80	34.74	11.08	35.18	39.44	54.00	14.56	395	36
----- Vertical ------										
4	3993.676	30.20	33.51	9.72	34.70	38.73	54.00	15.27	297	103
5	5244.001	29.90	34.38	10.34	35.12	39.50	54.00	14.50	264	264
6	5913.031	29.20	34.93	11.51	35.19	40.45	54.00	13.55	312	53

Radiated disturbance at (6 ~ 18) GHz _Peak measurement data			
Test configuration mode	**1**	**EUT Operation mode**	**1**
Test voltage (V)	**DC 12 V**	**Test Frequency (Hz)**	**-**

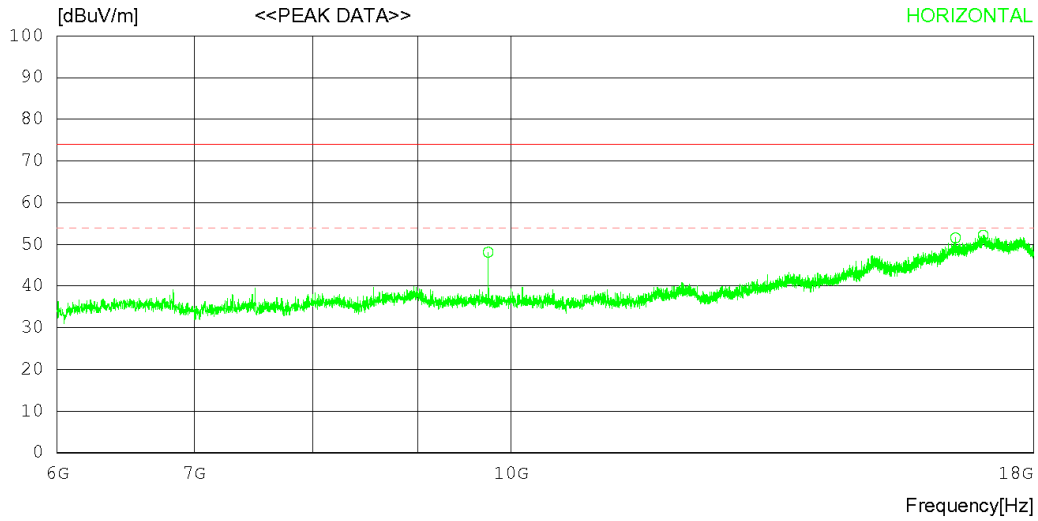
RADIATED EMISSION

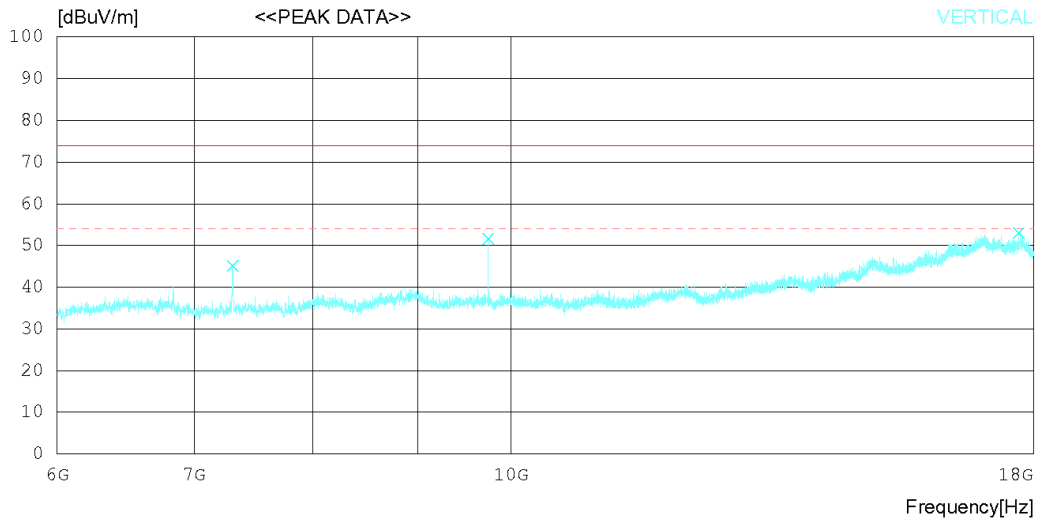
Date 2020-11-03

Order No. DTNC2010-08267
Power Supply DC 12 V
Temp/Humi 20 'C 47 % R.H.
Test Condition USB

Memo

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





RADIATED EMISSION

Date 2020-11-03

Order No. DTNC2010-08267
Power Supply DC 12 V
Temp/Humi 20 'C 47 % R.H.
Test Condition USB

Memo

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

No.	FREQ [MHz]	READING PEAK [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	9747.000	39.10	32.44	14.28	37.70	48.12	74.0	25.88	202	281
2	16488.000	28.80	36.97	21.88	36.11	51.54	74.0	22.46	154	89
3	17008.500	27.30	37.56	23.75	36.41	52.20	74.0	21.8	188	314
----- Vertical ------										
4	7311.000	39.70	31.40	12.23	38.14	45.19	74.0	28.81	302	356
5	9747.000	42.60	32.44	14.28	37.70	51.62	74.0	22.38	165	358
6	17704.500	29.60	38.09	22.64	37.33	53.00	74.0	21	285	358

Radiated disturbance at (6 ~ 18) GHz _Average measurement data			
Test configuration mode	**1**	**EUT Operation mode**	**1**
Test voltage (V)	**DC 12 V**	**Test Frequency (Hz)**	**-**

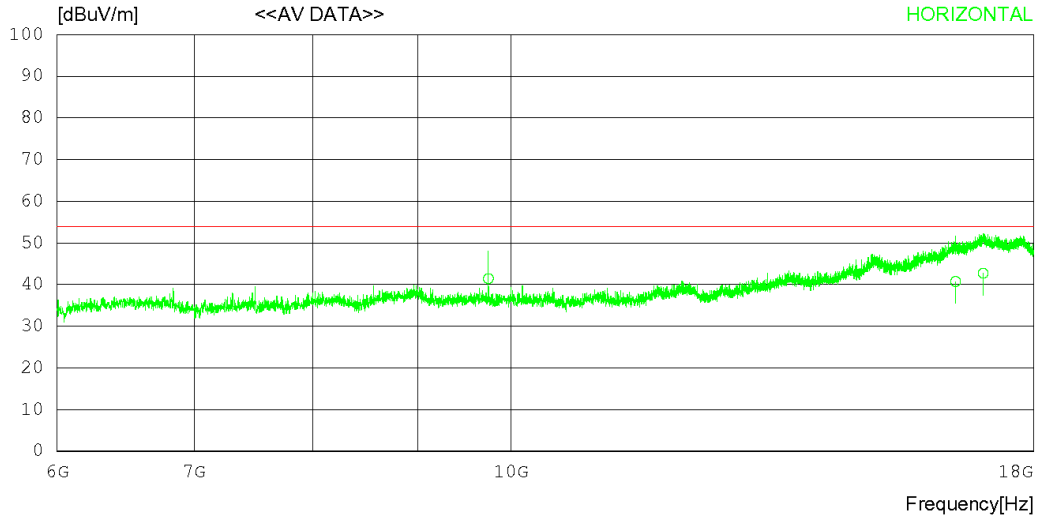
RADIATED EMISSION

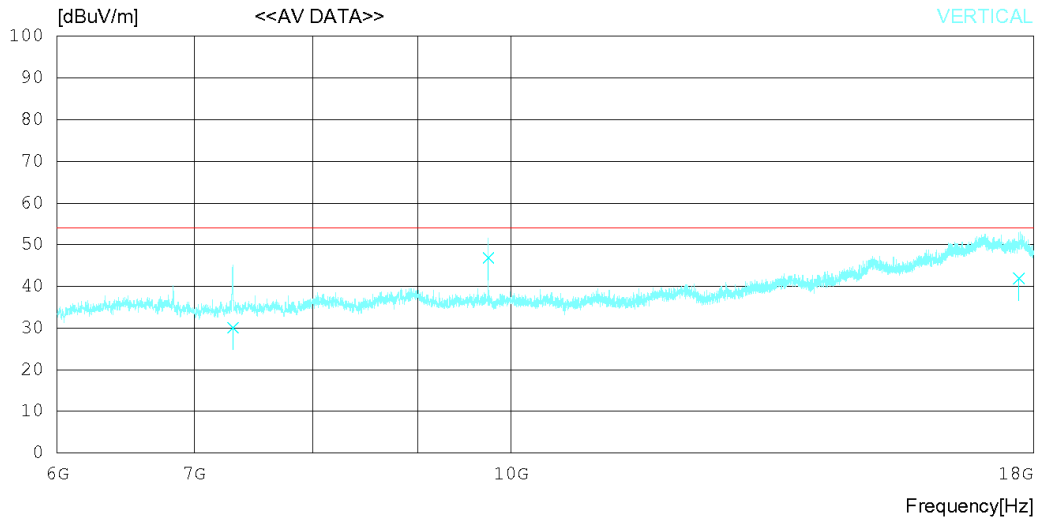
Date 2020-11-03

Order No. DTNC2010-08267
Power Supply DC 12 V
Temp/Humi 20 'C 47 % R.H.
Test Condition USB

Memo

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





RADIATED EMISSION

Date 2020-11-03

Order No. DTNC2010-08267
Power Supply DC 12 V
Temp/Humi 20 'C 47 % R.H.
Test Condition USB

Memo

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

No.	FREQ [MHz]	READING CAV [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	9747.631	32.40	32.44	14.28	37.70	41.42	54.00	12.58	107	296
2	16488.530	18.00	36.97	21.88	36.11	40.74	54.00	13.26	201	107
3	17008.950	17.80	37.56	23.74	36.41	42.69	54.00	11.31	137	302
----- Vertical ------										
4	7310.958	24.60	31.40	12.23	38.14	30.09	54.00	23.91	207	125
5	9747.445	37.80	32.44	14.28	37.70	46.82	54.00	7.18	104	263
6	17704.350	18.50	38.09	22.64	37.33	41.90	54.00	12.10	304	257

Radiated disturbance at (18 ~ 40) GHz _Peak measurement data			
Test configuration mode	**1**	**EUT Operation mode**	**1**
Test voltage (V)	**DC 12 V**	**Test Frequency (Hz)**	**-**

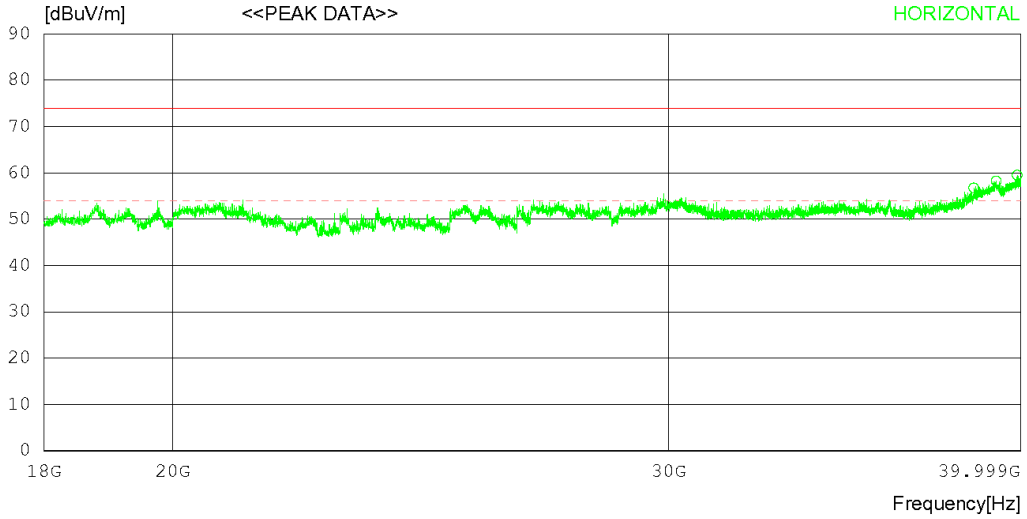
RADIATED EMISSION

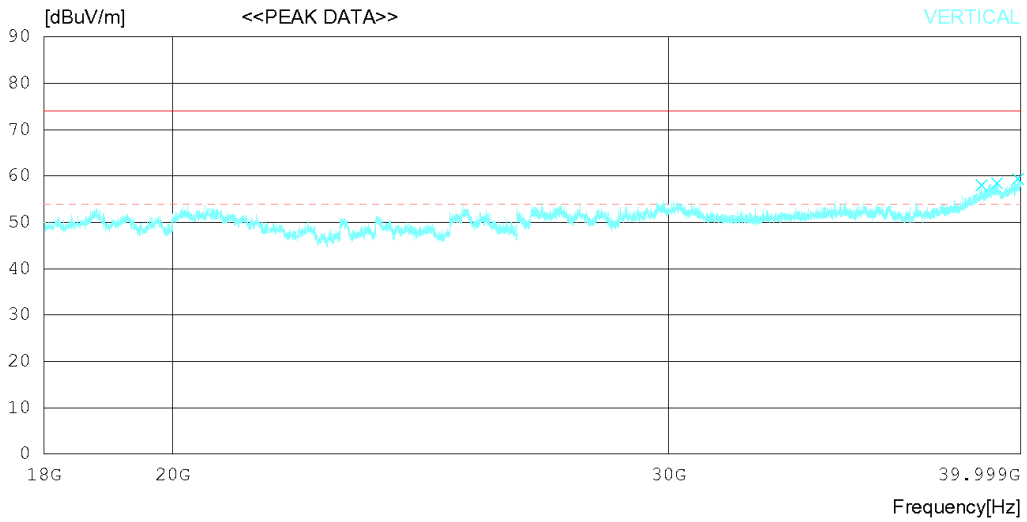
Date 2020-11-06

Order No. DTNC2010-08267
Power Supply DC 12 V
Temp/Humi 22 'C 47 % R.H.
Test Condition USB

Memo

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





RADIATED EMISSION

Date 2020-11-06

Order No. DTNC2010-08267
Power Supply DC 12 V
Temp/Humi 22 'C 47 % R.H.
Test Condition USB

Memo

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

No.	FREQ [MHz]	READING PEAK [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	38501.250	37.30	46.90	25.32	52.77	56.75	74.0	17.25	204	1
2	39210.750	37.10	47.91	25.83	52.60	58.24	74.0	15.76	157	1
3	39892.750	37.80	49.09	25.03	52.43	59.49	74.0	14.51	334	1
----- Vertical ------										
4	38737.750	37.80	47.24	25.68	52.72	58.00	74.0	16	192	265
5	39246.500	37.30	47.95	25.79	52.59	58.45	74.0	15.55	257	358
6	39920.250	37.70	49.14	25.00	52.42	59.42	74.0	14.58	109	1

Radiated disturbance at (18 ~ 40) GHz _Average measurement data			
Test configuration mode	**1**	**EUT Operation mode**	**1**
Test voltage (V)	**DC 12 V**	**Test Frequency (Hz)**	**-**

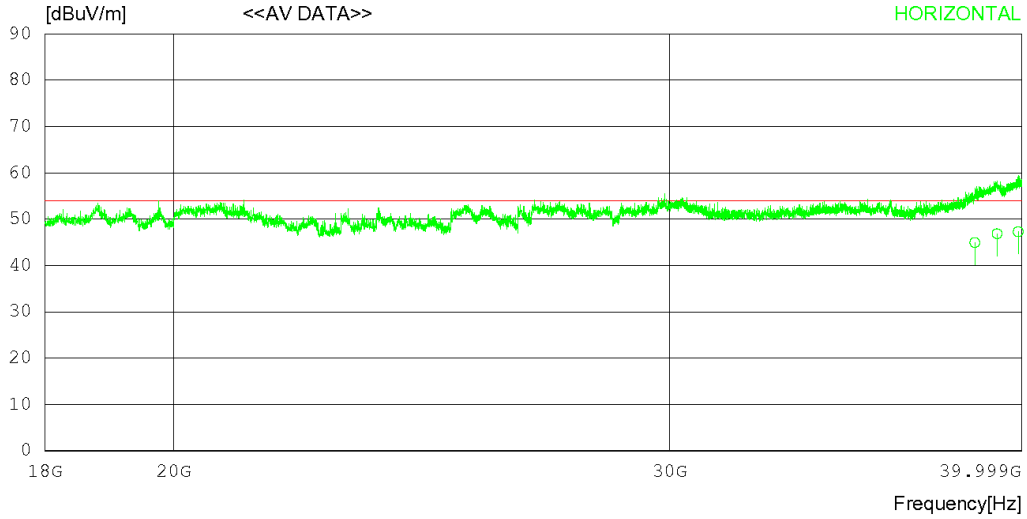
RADIATED EMISSION

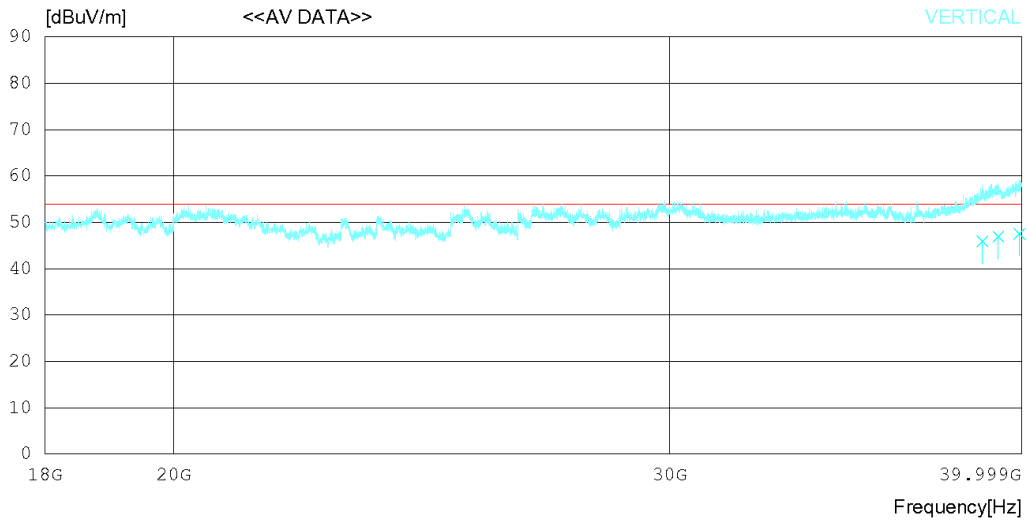
Date 2020-11-06

Order No. DTNC2010-08267
Power Supply DC 12 V
Temp/Humi 22 'C 47 % R.H.
Test Condition USB

Memo

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





RADIATED EMISSION

Date 2020-11-06

Order No. DTNC2010-08267
Power Supply DC 12 V
Temp/Humi 22 'C 47 % R.H.
Test Condition USB

Memo

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

No.	FREQ [MHz]	READING CAV [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	38501.060	25.50	46.90	25.32	52.77	44.95	54.00	9.05	335	345
2	39210.410	25.70	47.91	25.83	52.60	46.84	54.00	7.16	154	324
3	39893.000	25.60	49.09	25.02	52.43	47.28	54.00	6.72	357	275
----- Vertical ------										
4	38738.060	25.70	47.24	25.68	52.72	45.90	54.00	8.10	207	307
5	39246.320	25.80	47.95	25.79	52.59	46.95	54.00	7.05	312	285
6	39920.740	25.80	49.14	25.00	52.42	47.52	54.00	6.48	187	36

Radiated disturbance at (30 ~ 1000) MHz _Measurement data			
Test configuration mode	**2**	**EUT Operation mode**	**2**
Test voltage (V)	**DC 12 V**	**Test Frequency (Hz)**	**-**

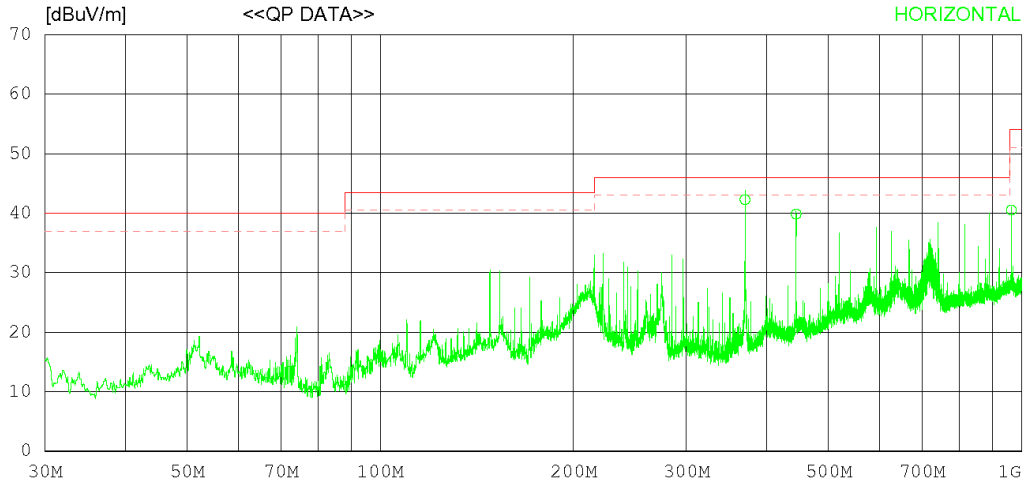
RADIATED EMISSION

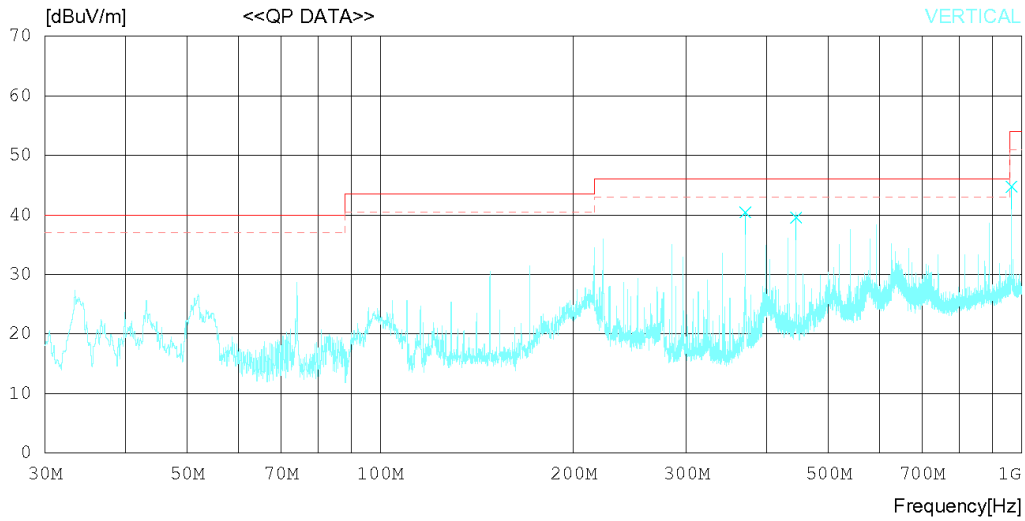
Date 2020-11-03

Order No. DTNC2010-08267
Power Supply DC 12 V
Temp/Humi 20 'C 47 % R.H.
Test Condition HDMI

Memo

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





RADIATED EMISSION

Date 2020-11-03

Order No. DTNC2010-08267
Power Supply DC 12 V
Temp/Humi 20 'C 47 % R.H.
Test Condition HDMI

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	370.567	45.30	21.21	2.20	26.45	42.26	46.00	3.74	107	162
2	445.123	40.50	23.10	2.56	26.32	39.84	46.00	6.16	305	0
3	964.385	32.90	30.59	3.82	26.76	40.55	54.00	13.45	100	320
----- Vertical ------										
4	370.861	43.50	21.22	2.21	26.45	40.48	46.00	5.52	134	304
5	445.048	40.20	23.10	2.56	26.32	39.54	46.00	6.46	107	237
6	964.295	37.10	30.59	3.82	26.76	44.75	54.00	9.25	123	275

Radiated disturbance at (1 ~ 6) GHz _Peak measurement data			
Test configuration mode	**2**	**EUT Operation mode**	**2**
Test voltage (V)	**DC 12 V**	**Test Frequency (Hz)**	**-**

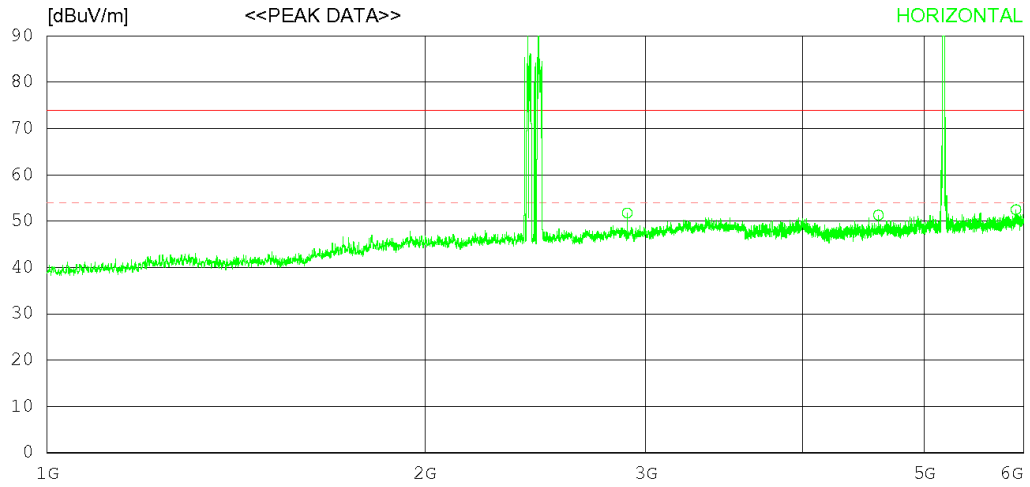
RADIATED EMISSION

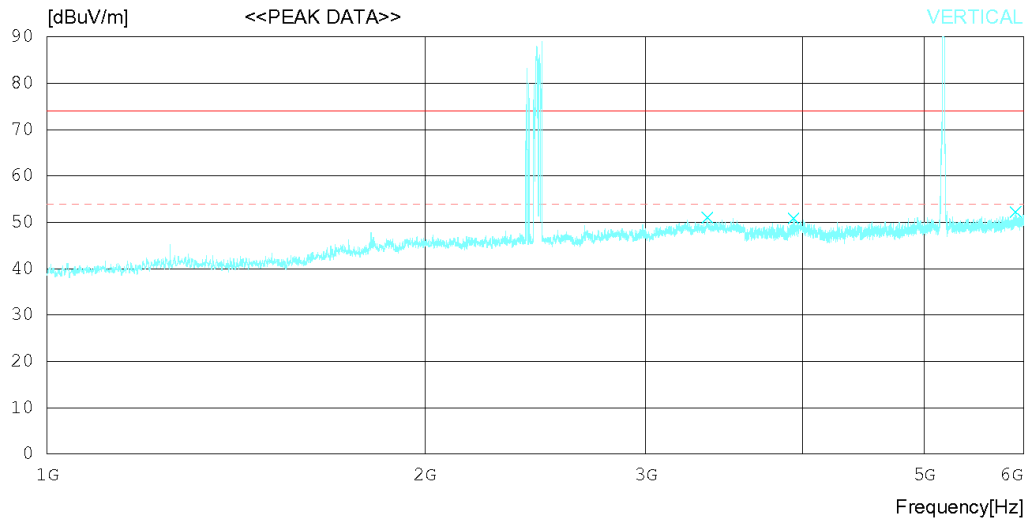
Date 2020-11-03

Order No. DTNC2010-08267
Power Supply DC 12 V
Temp/Humi 20 'C 47 % R.H.
Test Condition HDMI

Memo

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





*Remark : (2,402 ~ 2,480) MHz is BT frequency.
(5,150 ~ 5,350) MHz is WIFI 5 G frequency.

RADIATED EMISSION

Date 2020-11-03

Order No. DTNC2010-08267
Power Supply DC 12 V
Temp/Humi 20 'C 47 % R.H.
Test Condition HDMI

Memo

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

No.	FREQ [MHz]	READING PEAK [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	2900.000	46.80	32.60	7.53	35.19	51.74	74.0	22.26	385	359
2	4598.750	42.50	34.00	9.75	34.94	51.31	74.0	22.69	245	359
3	5918.125	41.20	34.94	11.54	35.19	52.49	74.0	21.51	117	359
----- Vertical ------										
4	3357.500	44.10	33.40	8.56	35.02	51.04	74.0	22.96	355	36
5	3933.750	42.50	33.57	9.52	34.73	50.86	74.0	23.14	396	359
6	5913.125	41.00	34.93	11.51	35.19	52.25	74.0	21.75	285	283

Radiated disturbance at (1 ~ 6) GHz _Average measurement data			
Test configuration mode	**2**	**EUT Operation mode**	**2**
Test voltage (V)	**DC 12 V**	**Test Frequency (Hz)**	**-**

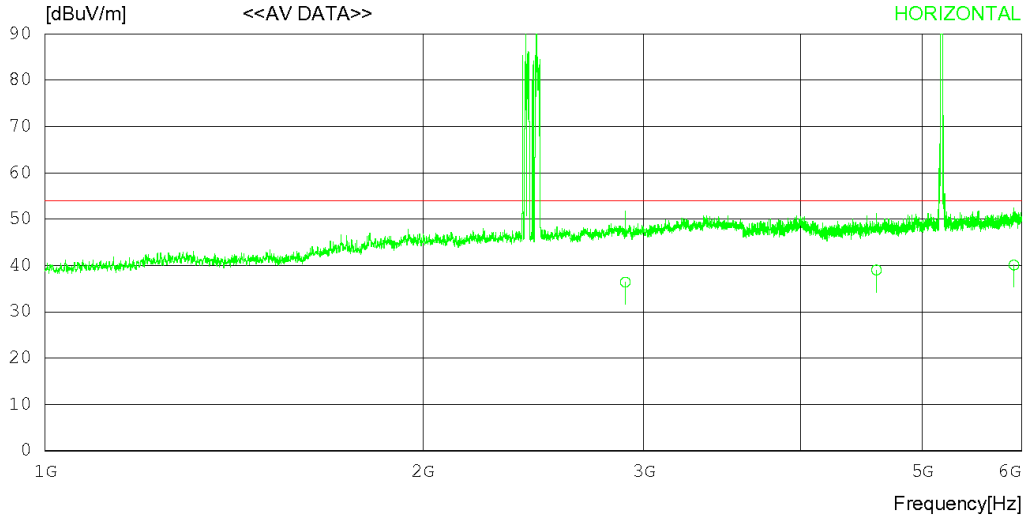
RADIATED EMISSION

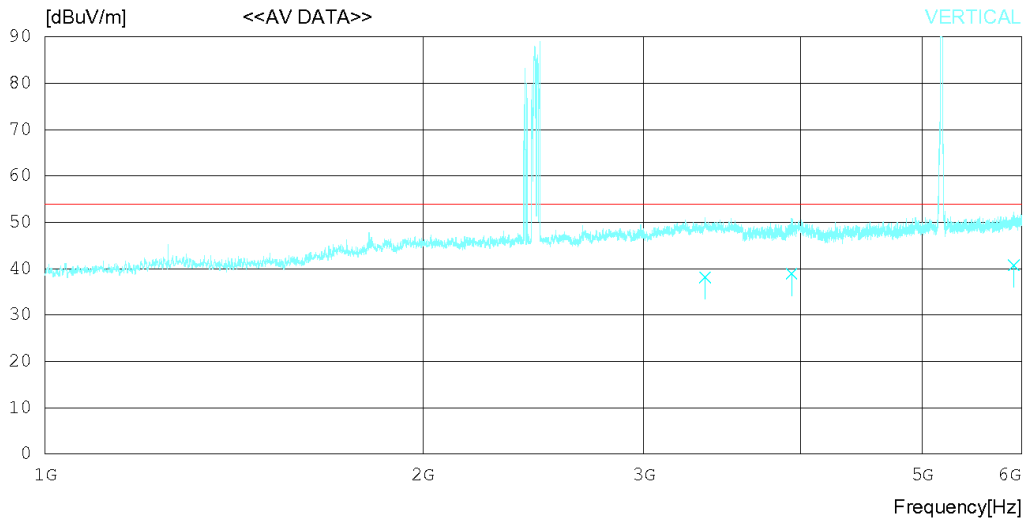
Date 2020-11-03

Order No. DTNC2010-08267
Power Supply DC 12 V
Temp/Humi 20 'C 47 % R.H.
Test Condition HDMI

Memo

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





*Remark : (2,402 ~ 2,480) MHz is BT frequency.
(5,150 ~ 5,350) MHz is WIFI 5 G frequency.

RADIATED EMISSION

Date 2020-11-03

Order No. DTNC2010-08267
Power Supply DC 12 V
Temp/Humi 20 'C 47 % R.H.
Test Condition HDMI

Memo

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

No.	FREQ [MHz]	READING CAV [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	2900.674	31.50	32.60	7.52	35.19	36.43	54.00	17.57	385	341
2	4598.354	30.20	34.00	9.75	34.94	39.01	54.00	14.99	399	302
3	5918.675	28.80	34.94	11.54	35.19	40.09	54.00	13.91	397	350
----- Vertical ------										
4	3357.254	31.20	33.40	8.56	35.02	38.14	54.00	15.86	211	57
5	3933.634	30.50	33.57	9.52	34.73	38.86	54.00	15.14	287	108
6	5913.674	29.50	34.93	11.51	35.19	40.75	54.00	13.25	113	207

Radiated disturbance at (6 ~ 18) GHz _Peak measurement data			
Test configuration mode	**2**	**EUT Operation mode**	**2**
Test voltage (V)	**DC 12 V**	**Test Frequency (Hz)**	**-**

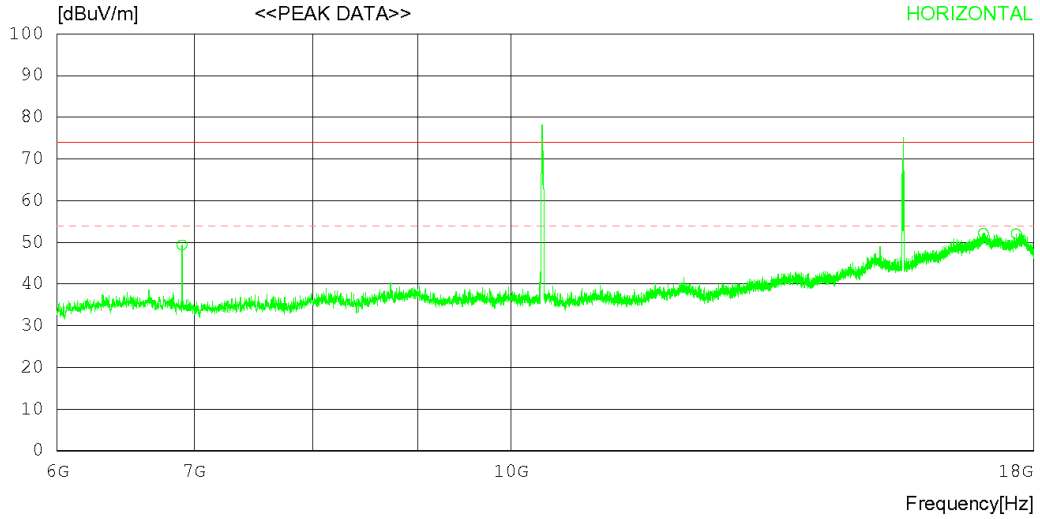
RADIATED EMISSION

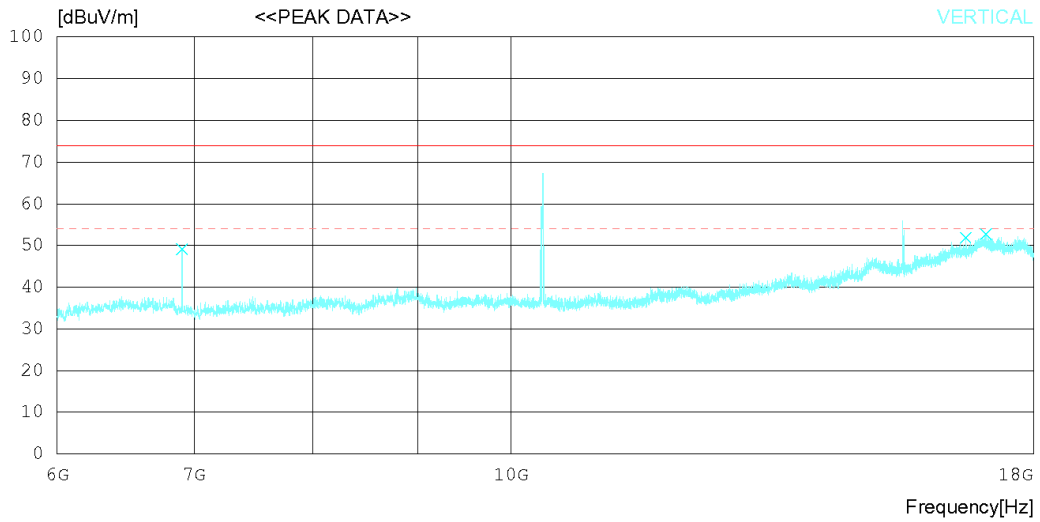
Date 2020-11-03

Order No. DTNC2010-08267
Power Supply DC 12 V
Temp/Humi 20 'C 47 % R.H.
Test Condition HDMI

Memo

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





*Remark : (10,300 ~ 10,700) MHz, (15,450 ~ 16,050) MHz are WIFI 5 G harmonics of fundamental.

RADIATED EMISSION

Date 2020-11-03

Order No. DTNC2010-08267
Power Supply DC 12 V
Temp/Humi 20 'C 47 % R.H.
Test Condition HDMI

Memo

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

No.	FREQ [MHz]	READING PEAK [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	6906.000	44.20	31.48	12.24	38.54	49.38	74.0	24.62	302	0
2	17016.000	27.30	37.56	23.68	36.42	52.12	74.0	21.88	201	0
3	17652.000	28.70	38.05	22.56	37.24	52.07	74.0	21.93	197	0
----- Vertical ------										
4	6906.000	43.90	31.48	12.24	38.54	49.08	74.0	24.92	274	46
5	16672.500	29.00	37.18	21.88	36.20	51.86	74.0	22.14	398	358
6	17062.500	28.30	37.60	23.31	36.48	52.73	74.0	21.27	165	358

Radiated disturbance at (6 ~ 18) GHz _Average measurement data			
Test configuration mode	**2**	**EUT Operation mode**	**2**
Test voltage (V)	**DC 12 V**	**Test Frequency (Hz)**	**-**

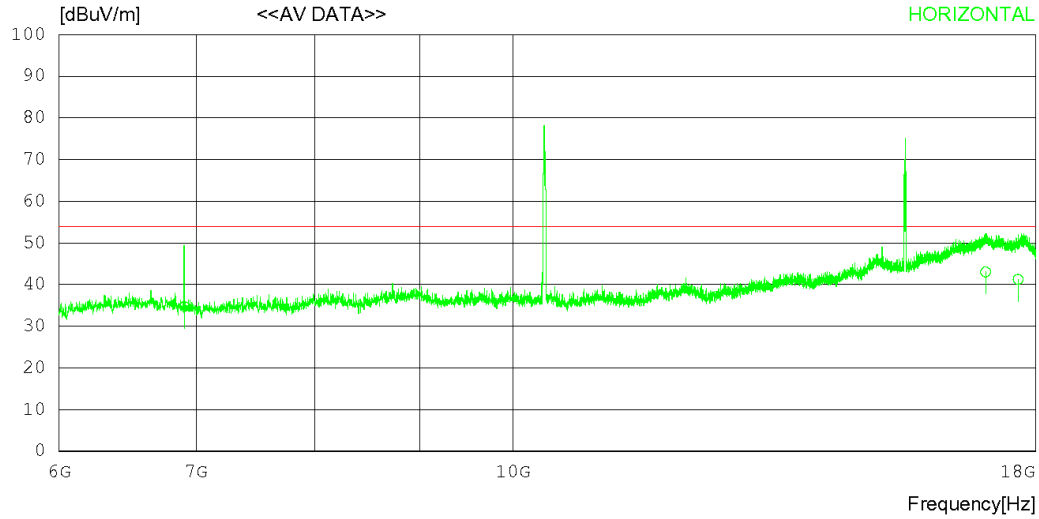
RADIATED EMISSION

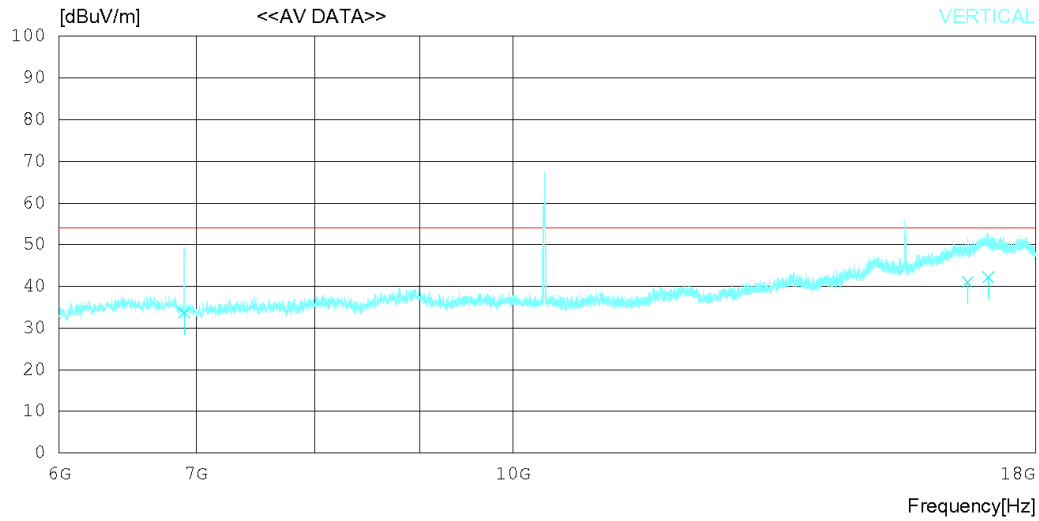
Date 2020-11-03

Order No. DTNC2010-08267
Power Supply DC 12 V
Temp/Humi 20 'C 47 % R.H.
Test Condition HDMI

Memo

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





*Remark : (10,300 ~ 10,700) MHz, (15,450 ~ 16,050) MHz are WIFI 5 G harmonics of fundamental.

RADIATED EMISSION

Date 2020-11-03

Order No. DTNC2010-08267
Power Supply DC 12 V
Temp/Humi 20 'C 47 % R.H.
Test Condition HDMI

Memo

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

No.	FREQ [MHz]	READING CAV [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	6909.374	29.60	31.47	12.22	38.54	34.75	54.00	19.25	374	102
2	17016.840	18.20	37.56	23.68	36.42	43.02	54.00	10.98	162	147
3	17652.960	17.90	38.05	22.56	37.24	41.27	54.00	12.73	208	36
----- Vertical ------										
4	6906.384	28.50	31.48	12.24	38.54	33.68	54.00	20.32	302	84
5	16672.850	18.20	37.18	21.88	36.20	41.06	54.00	12.94	285	301
6	17062.970	17.80	37.60	23.31	36.48	42.23	54.00	11.77	264	325

Radiated disturbance at (18 ~ 40) GHz _Peak measurement data			
Test configuration mode	**2**	**EUT Operation mode**	**2**
Test voltage (V)	**DC 12 V**	**Test Frequency (Hz)**	**-**

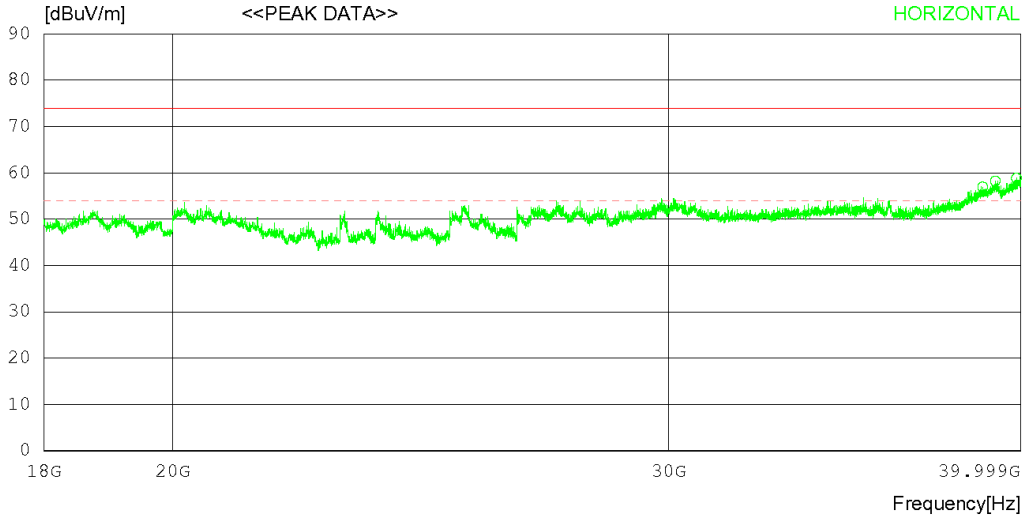
RADIATED EMISSION

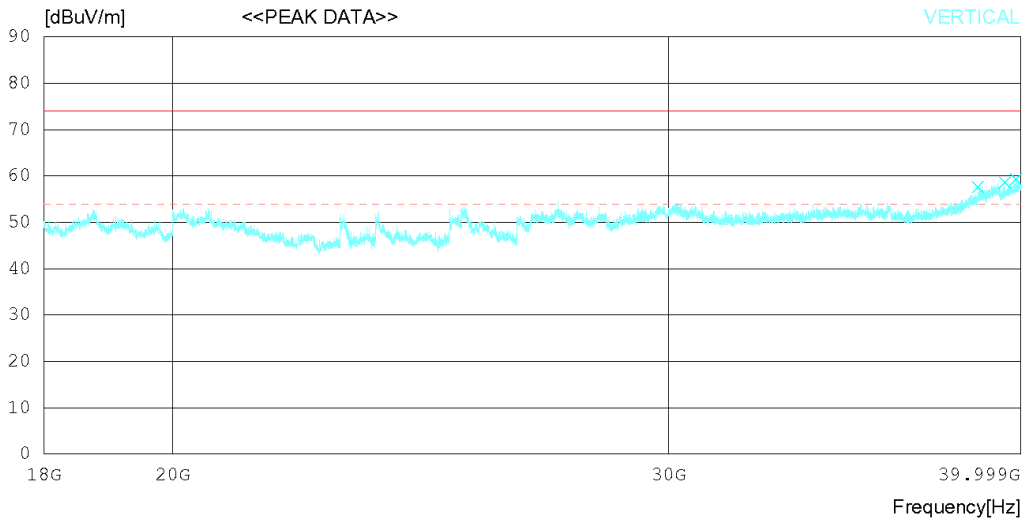
Date 2020-11-06

Order No. DTNC2010-08267
Power Supply DC 12 V
Temp/Humi 22 'C 47 % R.H.
Test Condition HDMI

Memo

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





RADIATED EMISSION

Date 2020-11-06

Order No. DTNC2010-08267
Power Supply DC 12 V
Temp/Humi 22 'C 47 % R.H.
Test Condition HDMI

Memo

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

No.	FREQ [MHz]	READING PEAK [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	38784.500	36.60	47.28	25.75	52.70	56.93	74.0	17.07	295	1
2	39183.250	37.10	47.87	25.86	52.60	58.23	74.0	15.77	357	152
3	39868.000	37.20	49.04	25.05	52.43	58.86	74.0	15.14	225	358
----- Vertical ------										
4	38630.500	37.90	46.99	25.51	52.74	57.66	74.0	16.34	302	7
5	39488.500	37.30	48.28	25.51	52.53	58.56	74.0	15.44	335	223
6	39851.500	37.70	49.00	25.07	52.44	59.33	74.0	14.67	105	358

Radiated disturbance at (18 ~ 40) GHz _Average measurement data			
Test configuration mode	**2**	**EUT Operation mode**	**2**
Test voltage (V)	**DC 12 V**	**Test Frequency (Hz)**	**-**

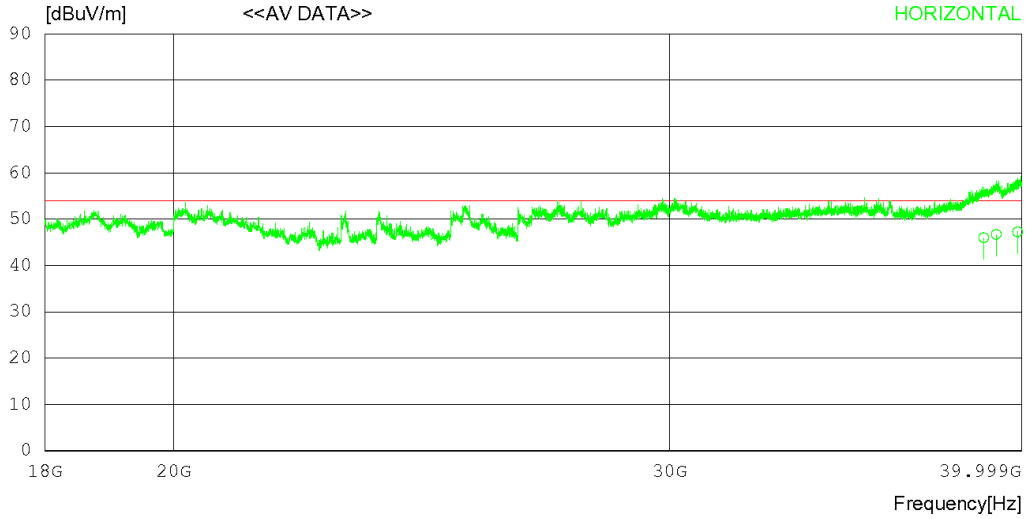
RADIATED EMISSION

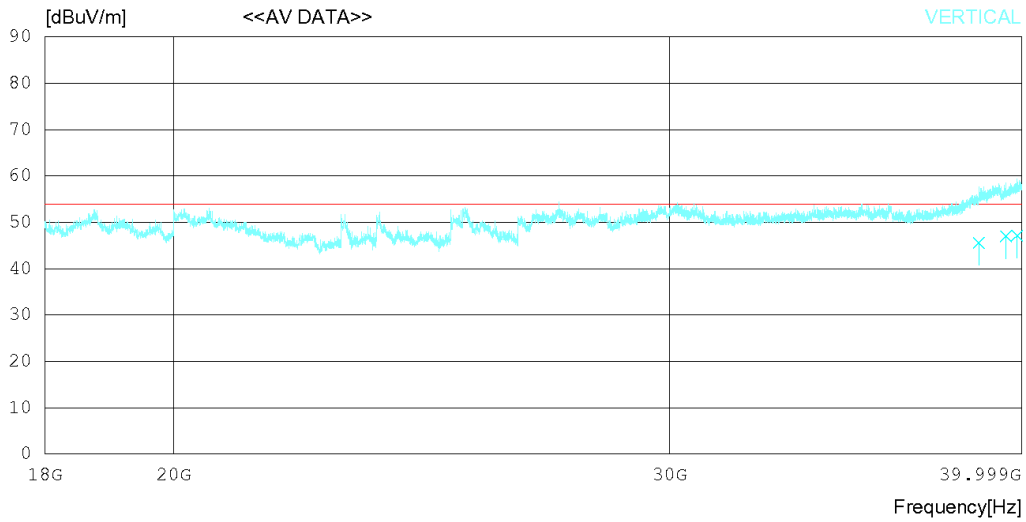
Date 2020-11-06

Order No. DTNC2010-08267
Power Supply DC 12 V
Temp/Humi 22 'C 47 % R.H.
Test Condition HDMI

Memo

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





RADIATED EMISSION

Date 2020-11-06

Order No. DTNC2010-08267
Power Supply DC 12 V
Temp/Humi 22 'C 47 % R.H.
Test Condition HDMI

Memo

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

No.	FREQ [MHz]	READING CAV [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	38784.650	25.70	47.28	25.75	52.70	46.03	54.00	7.97	265	57
2	39183.630	25.60	47.87	25.86	52.60	46.73	54.00	7.27	361	25
3	39868.360	25.60	49.04	25.05	52.43	47.26	54.00	6.74	335	305
----- Vertical ------										
4	38630.580	25.80	46.99	25.51	52.74	45.56	54.00	8.44	397	57
5	39488.640	25.70	48.28	25.51	52.53	46.96	54.00	7.04	208	258
6	39851.660	25.50	49.00	25.07	52.44	47.13	54.00	6.87	256	342

Radiated disturbance at (30 ~ 1000) MHz _Measurement data			
Test configuration mode	**3**	**EUT Operation mode**	**3**
Test voltage (V)	**DC 12 V**	**Test Frequency (Hz)**	**-**

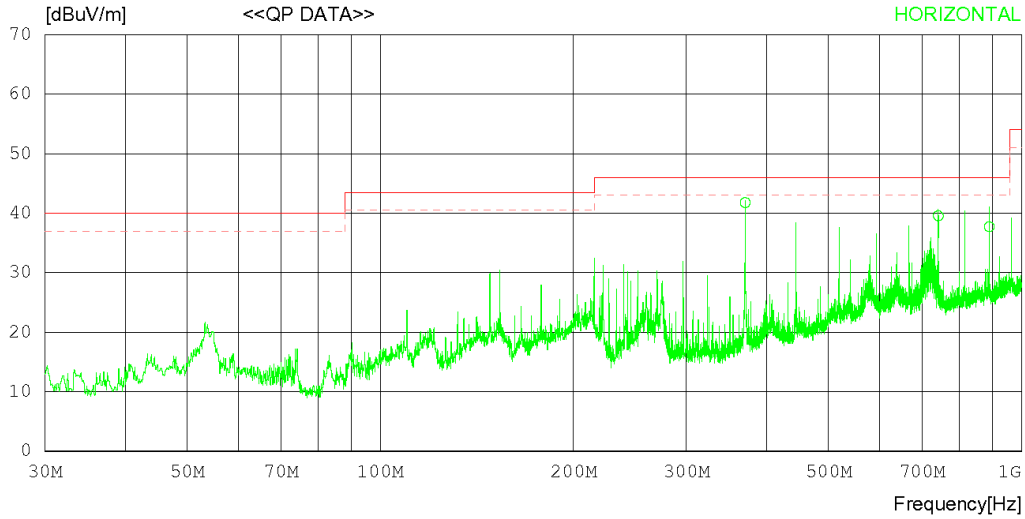
RADIATED EMISSION

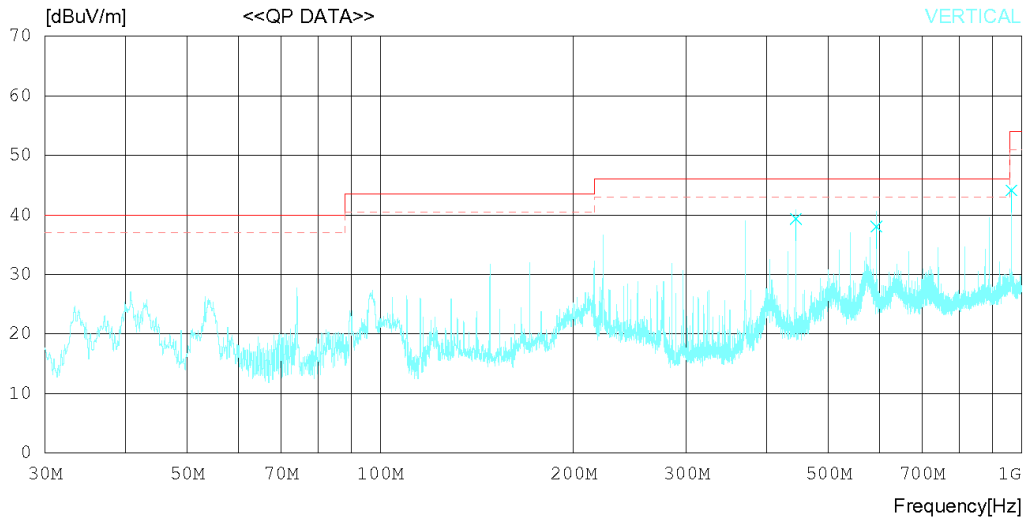
Date 2020-11-03

Order No. DTNC2010-08267
Power Supply DC 12 V
Temp/Humi 20 'C 47 % R.H.
Test Condition AV

Memo

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





RADIATED EMISSION

Date 2020-11-03

Order No. DTNC2010-08267
Power Supply DC 12 V
Temp/Humi 20 'C 47 % R.H.
Test Condition AV

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	370.836	44.80	21.22	2.21	26.45	41.78	46.00	4.22	134	151
2	741.742	34.50	27.93	3.25	26.14	39.54	46.00	6.46	112	161
3	890.634	31.20	29.40	3.61	26.50	37.71	46.00	8.29	197	65
----- Vertical ------										
4	445.068	40.00	23.10	2.56	26.32	39.34	46.00	6.66	167	342
5	593.367	35.50	26.03	2.85	26.32	38.06	46.00	7.94	112	38
6	964.121	36.50	30.58	3.82	26.76	44.14	54.00	9.86	134	221

Radiated disturbance at (1 ~ 6) GHz _Peak measurement data			
Test configuration mode	**3**	**EUT Operation mode**	**3**
Test voltage (V)	**DC 12 V**	**Test Frequency (Hz)**	**-**

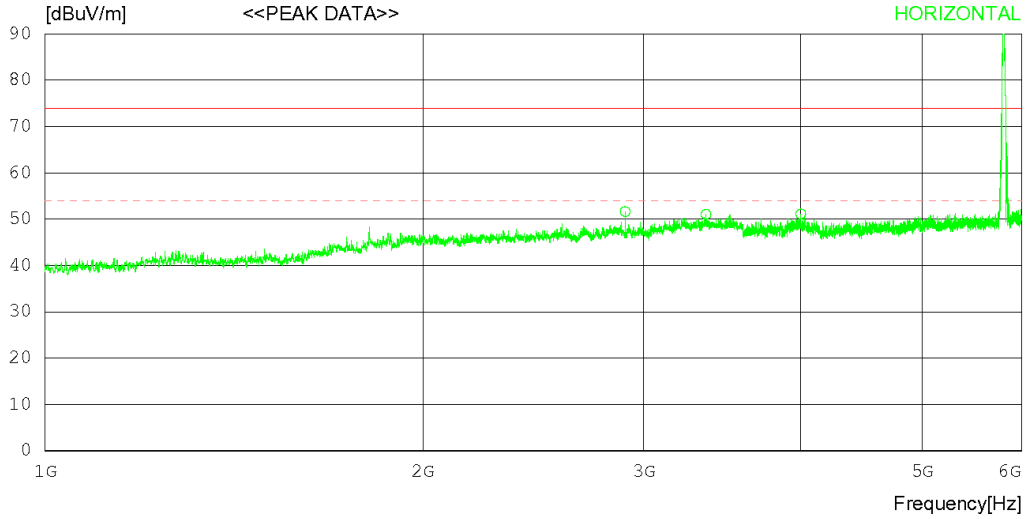
RADIATED EMISSION

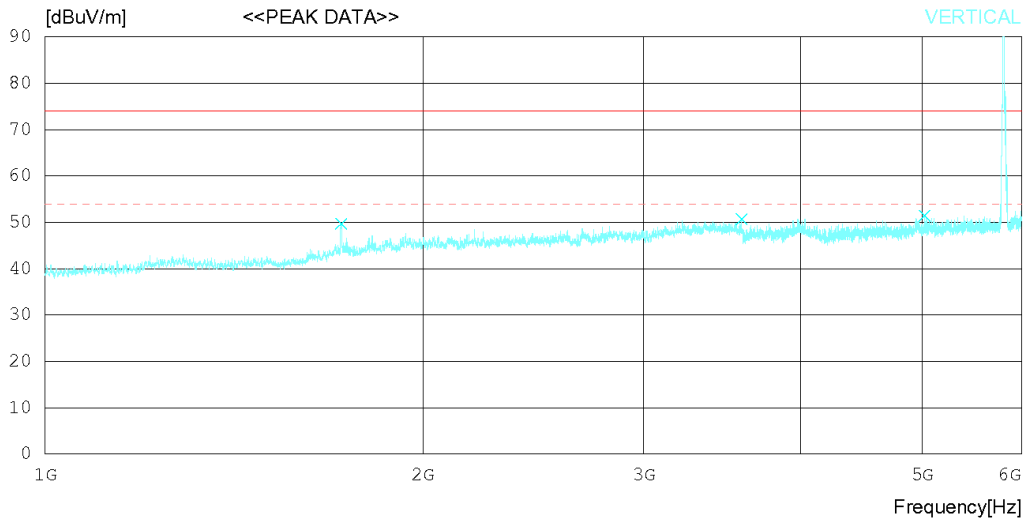
Date 2020-11-03

Order No. DTNC2010-08267
Power Supply DC 12 V
Temp/Humi 20 'C 47 % R.H.
Test Condition AV

Memo

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





* Remark : (5,725 ~ 5,815) MHz is WIFI 5.8 G frequency.

RADIATED EMISSION

Date 2020-11-03

Order No. DTNC2010-08267
Power Supply DC 12 V
Temp/Humi 20 'C 47 % R.H.
Test Condition AV

Memo

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

No.	FREQ [MHz]	READING PEAK [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	2900.000	46.70	32.60	7.53	35.19	51.64	74.0	22.36	205	359
2	3363.750	44.10	33.40	8.56	35.02	51.04	74.0	22.96	324	359
3	4002.500	42.60	33.50	9.74	34.70	51.14	74.0	22.86	234	0
----- Vertical ------										
4	1721.875	48.40	29.66	7.05	35.41	49.70	74.0	24.3	397	1
5	3589.375	43.90	33.40	8.26	34.91	50.65	74.0	23.35	157	349
6	5020.625	42.20	33.94	10.41	35.10	51.45	74.0	22.55	299	359

Radiated disturbance at (1 ~ 6) GHz _Average measurement data			
Test configuration mode	**3**	**EUT Operation mode**	**3**
Test voltage (V)	**DC 12 V**	**Test Frequency (Hz)**	**-**

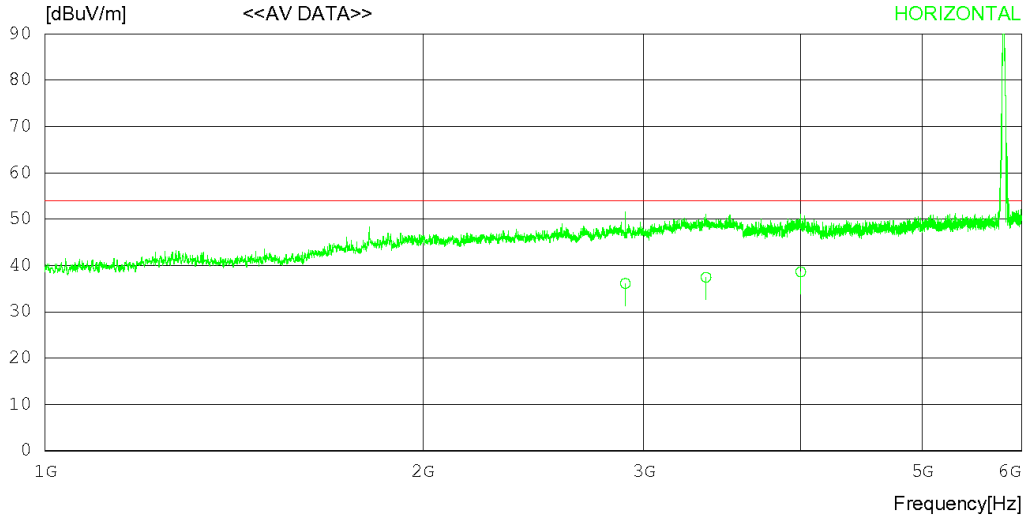
RADIATED EMISSION

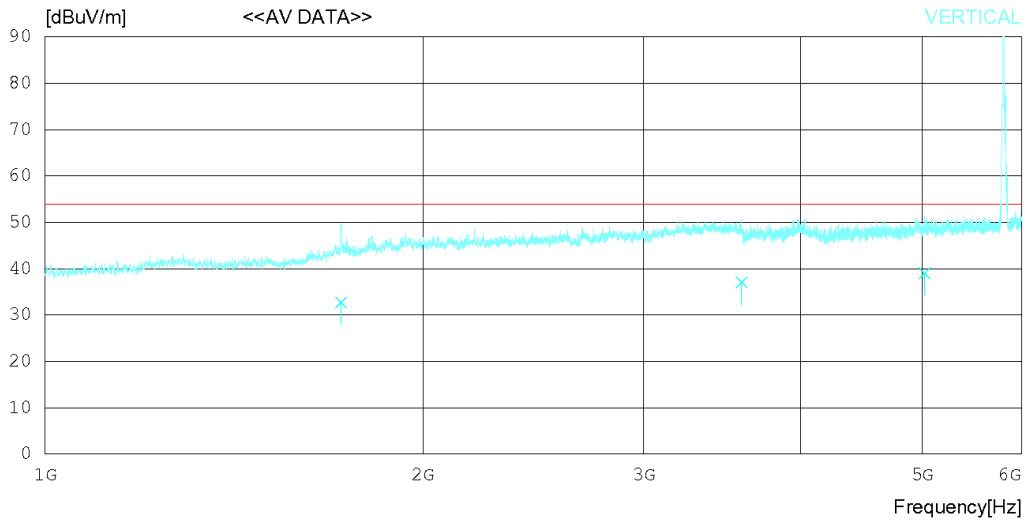
Date 2020-11-03

Order No. DTNC2010-08267
Power Supply DC 12 V
Temp/Humi 20 'C 47 % R.H.
Test Condition AV

Memo

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





* Remark : (5,725 ~ 5,815) MHz is WIFI 5.8 G frequency.

RADIATED EMISSION

Date 2020-11-03

Order No. DTNC2010-08267
Power Supply DC 12 V
Temp/Humi 20 'C 47 % R.H.
Test Condition AV

Memo

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

No.	FREQ [MHz]	READING CAV [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	2900.374	31.20	32.60	7.52	35.19	36.13	54.00	17.87	397	227
2	3363.854	30.50	33.40	8.56	35.02	37.44	54.00	16.56	245	302
3	4002.374	30.10	33.50	9.74	34.70	38.64	54.00	15.36	375	55
----- Vertical ------										
4	1721.405	31.40	29.66	7.05	35.41	32.70	54.00	21.30	113	54
5	3589.345	30.30	33.40	8.26	34.91	37.05	54.00	16.95	267	265
6	5020.745	29.80	33.94	10.41	35.10	39.05	54.00	14.95	305	272

Radiated disturbance at (6 ~ 18) GHz _Peak measurement data			
Test configuration mode	**3**	**EUT Operation mode**	**3**
Test voltage (V)	**DC 12 V**	**Test Frequency (Hz)**	**-**

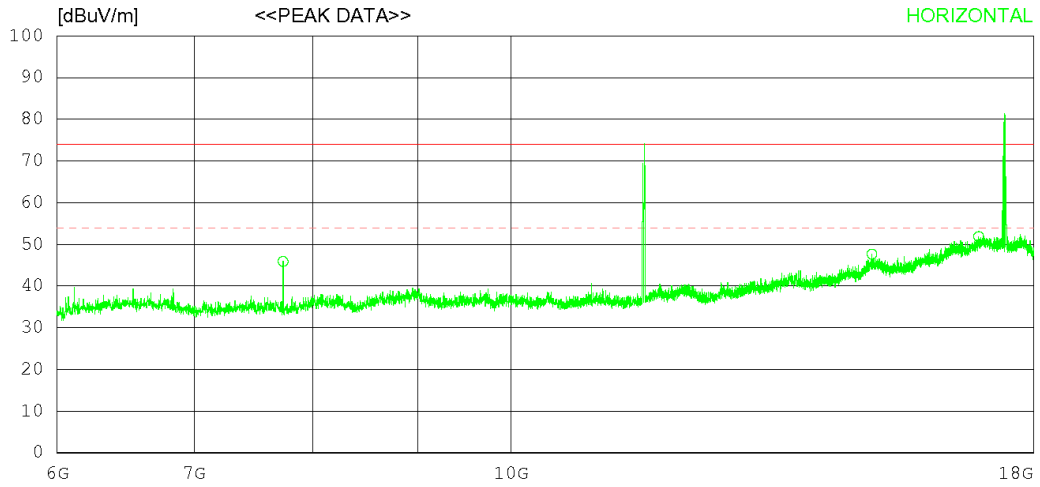
RADIATED EMISSION

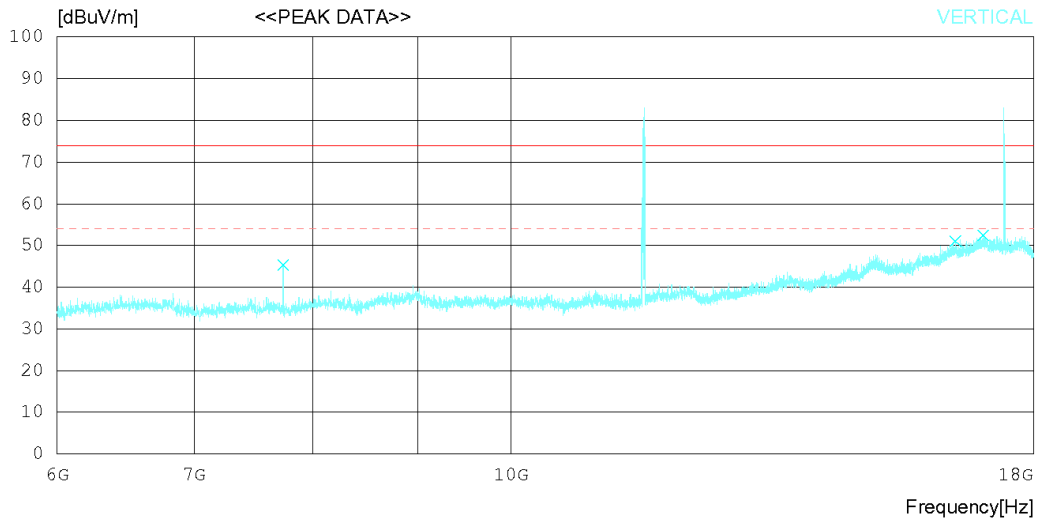
Date 2020-11-03

Order No. DTNC2010-08267
Power Supply DC 12 V
Temp/Humi 20 'C 47 % R.H.
Test Condition AV

Memo

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





* Remark : (11,450 ~ 11,630) MHz, (17,175 ~ 17,445) MHz are WIFI 5.8 G harmonics of fundamental.

RADIATED EMISSION

Date 2020-11-03

Order No. DTNC2010-08267
Power Supply DC 12 V
Temp/Humi 20 'C 47 % R.H.
Test Condition AV

Memo

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

No.	FREQ [MHz]	READING PEAK [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	7738.500	40.10	31.34	12.26	37.83	45.87	74.0	28.13	197	326
2	15009.000	28.50	35.46	20.70	36.99	47.67	74.0	26.33	302	15
3	16923.000	27.60	37.46	23.15	36.35	51.86	74.0	22.14	208	1
----- Vertical ------										
4	7738.500	39.50	31.34	12.26	37.83	45.27	74.0	28.73	245	358
5	16485.000	28.30	36.97	21.88	36.11	51.04	74.0	22.96	338	358
6	17013.000	27.60	37.56	23.71	36.42	52.45	74.0	21.55	167	224

Radiated disturbance at (6 ~ 18) GHz _Average measurement data			
Test configuration mode	**3**	**EUT Operation mode**	**3**
Test voltage (V)	**DC 12 V**	**Test Frequency (Hz)**	**-**

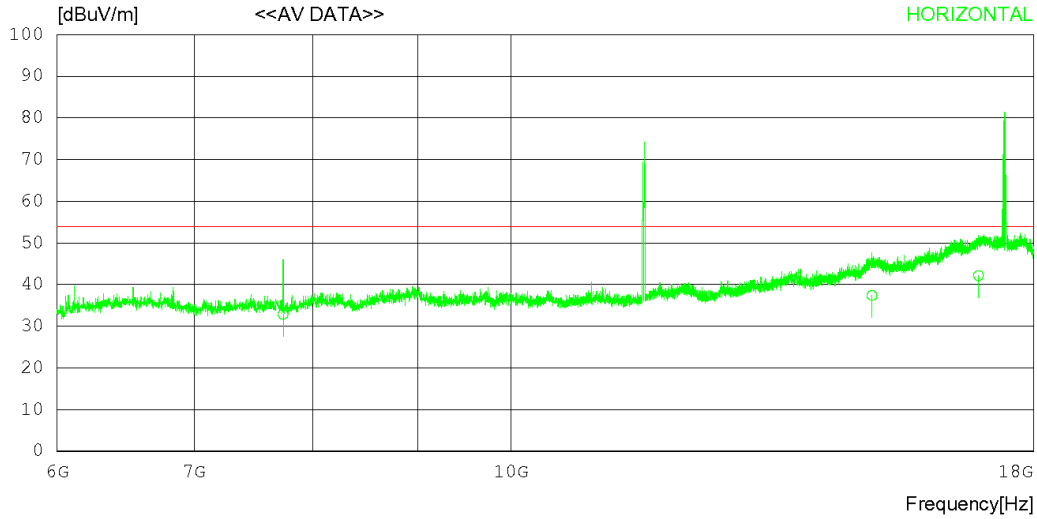
RADIATED EMISSION

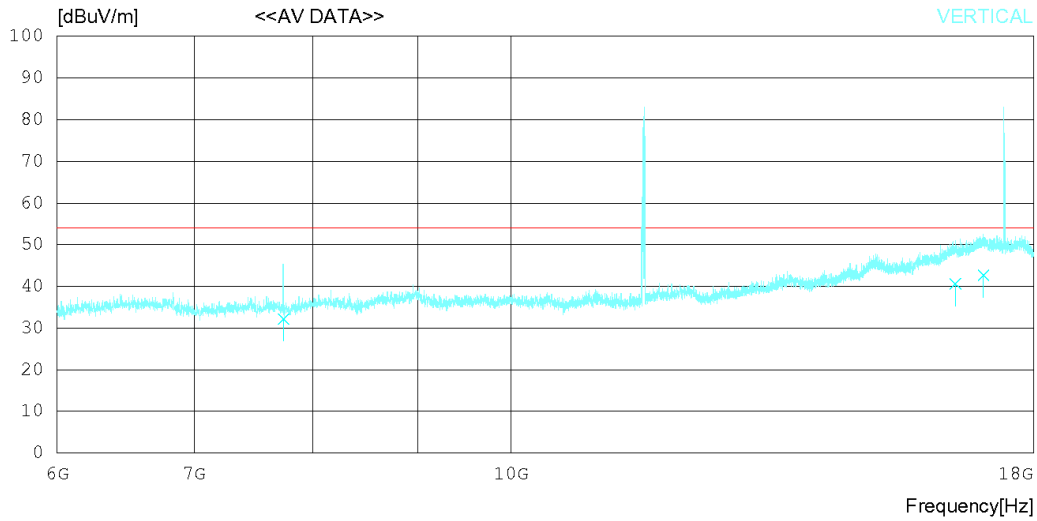
Date 2020-11-03

Order No. DTNC2010-08267
Power Supply DC 12 V
Temp/Humi 20 'C 47 % R.H.
Test Condition AV

Memo

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





* Remark : (11,450 ~ 11,630) MHz, (17,175 ~ 17,445) MHz are WIFI 5.8 G harmonics of fundamental.

RADIATED EMISSION

Date 2020-11-03

Order No. DTNC2010-08267
Power Supply DC 12 V
Temp/Humi 20 'C 47 % R.H.
Test Condition AV

Memo

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

No.	FREQ [MHz]	READING CAV [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	7738.677	27.10	31.34	12.26	37.83	32.87	54.00	21.13	197	326
2	15009.670	18.20	35.46	20.69	36.99	37.36	54.00	16.64	108	57
3	16923.570	17.90	37.46	23.16	36.35	42.17	54.00	11.83	113	103
----- Vertical ------										
4	7738.954	26.40	31.34	12.26	37.83	32.17	54.00	21.83	204	345
5	16484.870	17.90	36.97	21.88	36.11	40.64	54.00	13.36	132	333
6	17013.290	17.80	37.56	23.71	36.42	42.65	54.00	11.35	197	207

Radiated disturbance at (18 ~ 40) GHz _Peak measurement data			
Test configuration mode	**3**	**EUT Operation mode**	**3**
Test voltage (V)	**DC 12 V**	**Test Frequency (Hz)**	**-**

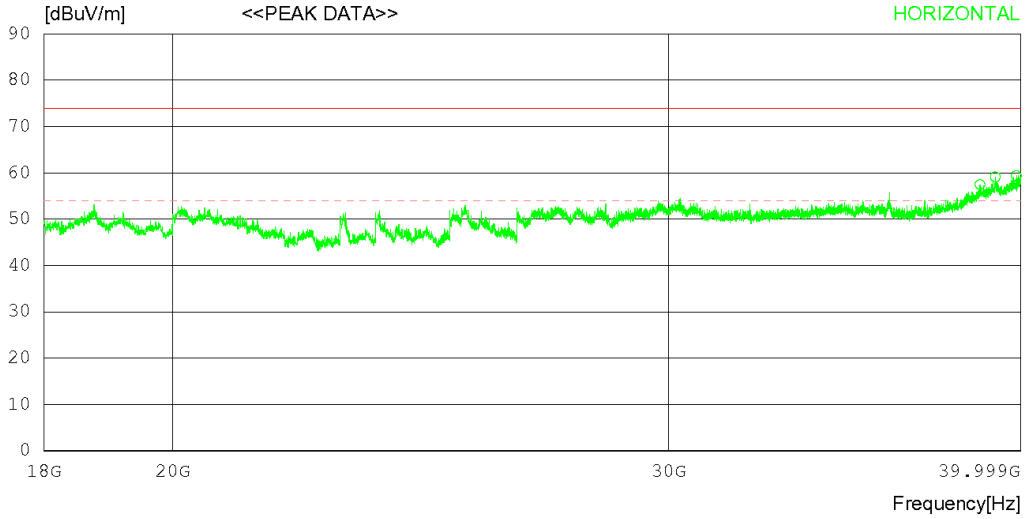
RADIATED EMISSION

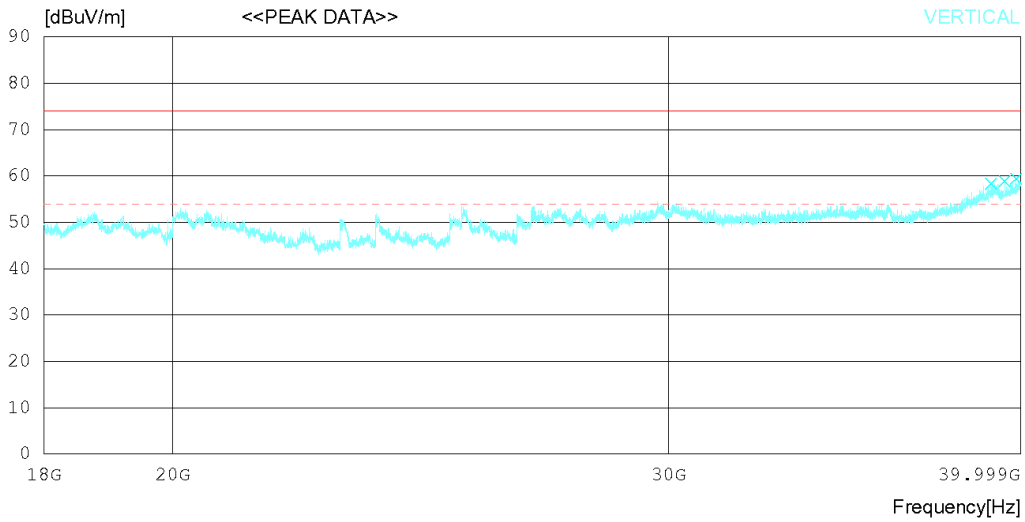
Date 2020-11-06

Order No. DTNC2010-08267
Power Supply DC 12 V
Temp/Humi 22 'C 47 % R.H.
Test Condition AV

Memo

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





RADIATED EMISSION

Date 2020-11-06

Order No. DTNC2010-08267
Power Supply DC 12 V
Temp/Humi 22 'C 47 % R.H.
Test Condition AV

Memo

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

No.	FREQ [MHz]	READING PEAK [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	38693.750	37.40	47.18	25.61	52.73	57.46	74.0	16.54	385	356
2	39186.000	38.00	47.87	25.86	52.60	59.13	74.0	14.87	335	112
3	39862.500	37.70	49.03	25.07	52.43	59.37	74.0	14.63	397	8
----- Vertical ------										
4	39040.250	37.30	47.64	26.03	52.64	58.33	74.0	15.67	265	52
5	39483.000	37.60	48.27	25.51	52.53	58.85	74.0	15.15	187	359
6	39851.500	37.80	49.00	25.07	52.44	59.43	74.0	14.57	105	49

Radiated disturbance at (18 ~ 40) GHz _Average measurement data			
Test configuration mode	**3**	**EUT Operation mode**	**3**
Test voltage (V)	**DC 12 V**	**Test Frequency (Hz)**	**-**

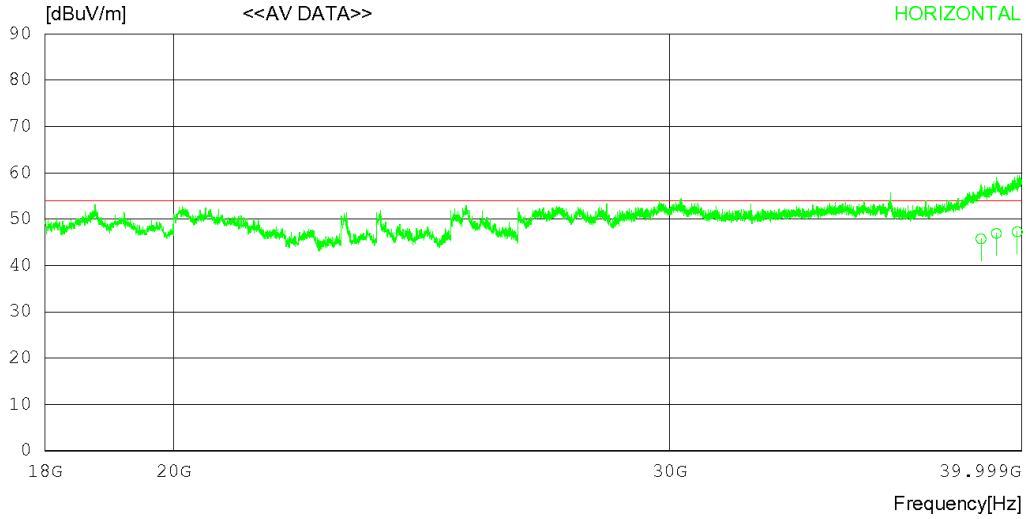
RADIATED EMISSION

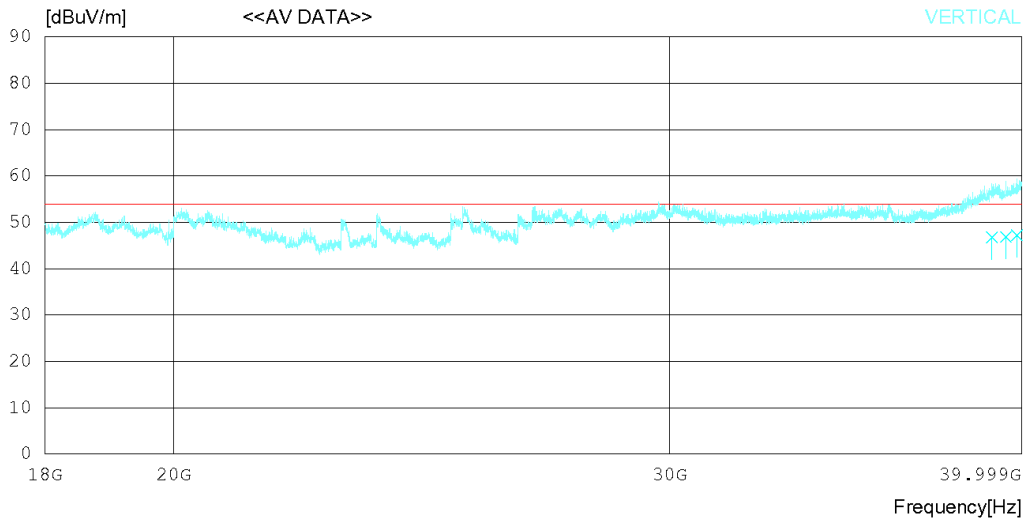
Date 2020-11-06

Order No. DTNC2010-08267
Power Supply DC 12 V
Temp/Humi 22 'C 47 % R.H.
Test Condition AV

Memo

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





RADIATED EMISSION

Date 2020-11-06

Order No. DTNC2010-08267
Power Supply DC 12 V
Temp/Humi 22 'C 47 % R.H.
Test Condition AV

Memo

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

No.	FREQ [MHz]	READING CAV [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	38693.510	25.70	47.18	25.61	52.73	45.76	54.00	8.24	394	341
2	39186.520	25.80	47.87	25.86	52.60	46.93	54.00	7.07	296	152
3	39862.680	25.60	49.03	25.07	52.43	47.27	54.00	6.73	325	56
----- Vertical ------										
4	39040.590	25.70	47.64	26.03	52.64	46.73	54.00	7.27	235	69
5	39483.530	25.60	48.27	25.51	52.53	46.85	54.00	7.15	164	325
6	39851.640	25.60	49.00	25.07	52.44	47.23	54.00	6.77	398	152

7.3 Antenna Power Conduction

ANSI C63.4	Antenna power conduction	Result
Method: Power on the receive antenna terminals was to be determined by measurement of the voltage present at these terminals. Antenna conducted power measurements was performed with the EUT antenna terminals connected directly to measuring instrument using a impedance-Matching network to connect the measurement Instrument to the antenna terminals of the EUT. The losses in decibels in impedance-matching network and cables was added to the measured values in dBμV. The measurements were repeated with the receiver tuned to a frequency until all of frequencies had been successively measured. Power in the receive antenna terminals in the ratio of V^2 /R, where V is the loss-corrected voltage measured at the antenna terminals, and R is the impedance of the measuring instrument		**Not Applicable**

Fully configured sample scanned over the following frequency range	**Frequency range on each side of line**	**Limit**
	30 MHz to 2 150 MHz	**2 nW (51.7 dBμV)**
	54 MHz to 300 MHz **300 MHz to 450 MHz** **450 MHz to 804 MHz**	**-26 dBmV (34 dBμV)** **-20 dBmV (40 dBμV)** **-15 dBmV (45 dBμV)**
Measurement Point	**Tuner port**	
EUT mode	**Test configuration mode**	**N/A**
(Refer to clauses 4)	**EUT Operation mode**	**N/A**

Measurement Instrument					
Description	**Model**	**Manufacturer**	**Identifier**	**Cal. Date**	**Cal. Due**
-	-	-	-	-	-

Antenna Power Conduction _Measurement data graph			
Test configuration mode	**N/A**	**EUT Operation mode**	**N/A**
Test voltage (V)	**N/A**	**Test Frequency (Hz)**	**N/A**
N/A			

8. Revision History

Date	Description	Revised By	Reviewed By
Nov. 13. 2020	Initial report	Hun Lee	KyoungHwan Bae
Nov. 26. 2020	Changed FCC ID) (BP9- MTXRSE150A → BP9-MTXRSE150)	Hun Lee	HyungJun Kim

-End of test report-