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 : DREFCC1711-0282
2. Customer
   - Name : Bluebird Inc.
   - Address : (SEI tower 13~14F) 39, Eonju-ro 30-gil, Gangnam-gu, Seoul, Korea
3. Use of Report : FCC Verification Marking
4. Product Name / Model Name : Printer intergrated Tablet / PT550
5. Test Method Used : CAN/CSA CISPR 22-10
   ANSI C 63.4:2014
   ICES-003:2012
   FCC Part 15 Subpart B
   (Class A digital device)
6. Date of Test : 2017-07-28 ~ 2017-08-21
7. Testing Environment : Temperature (23 ~ 25) °C , Humidity (38 ~ 52) % R.H.
8. Test Result : Refer to the attached Test Result

Affirmation	Tested by	Technical Manager
	Name : JaeSeok Choi (Signature)	Name : MyungJin Song (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.

2017.11. 01.

DT&C Co., Ltd.

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

CONTENTS

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	Mark
Accreditation	Korea	KOLAS	393	ISO/IEC 17025
Site Filing	USA	FCC	KR0034 101842 678747, 596748, 804488, 165783	Accredited 2.948 Listed
	Canada	IC	5740A-1 5740A-2	Registered
	Japan	VCCI	C-1427 R-1364, R-3385, R-4076, R-4180, T-1442, G-10338, G-754, G-815	Registered
Certification	Korea	KC	KR0034	Designation
	Germany	TUV	CARAT 17 01 89112 004	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

Product Name	Printer intergrated Tablet
Model Name	PT550
Add Model Name	None
Serial No	None
Type of Sample Tested	Pre-Production
Supplied Power for Test	AC 120 V, 60 Hz
Rating	DC 9 V, 2 A
Operation Frequency	19.2MHZ
Applicant	Bluebird Inc. (SEI tower 13~14F) 39, Eonju-ro 30-gil, Gangnam-gu, Seoul, Korea
Manufacturer	Bluebird Inc. (SEI tower 13~14F) 39, Eonju-ro 30-gil, Gangnam-gu, Seoul, Korea
Factory	Bluebird Inc. (Sangdaewon-dong, 702~703/802~806 Ssangyong IT Twin TowerB-dong), 531, Dunchon-daero, Jungwon-gu, Seongnam-si, Gyeonggi-do, Korea

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

4. Test Summary

4.1 Applied standards and test results

Test Items	Applied Standards	Results
Conducted Disturbance	ANSI C63.4:2014 CAN/CSA CISPR 22-10	C
Radiated Disturbance	ANSI C63.4:2014 CAN/CSA CISPR 22-10	C
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.

4.2 Test environment and conditions

Test Items	Test date (YYYY-MM-DD)	Temp (℃)	Humidity (% R.H.)
Conducted Disturbance	2017-07-31	25	50
Radiated Disturbance	2017-07-28 2017-08-21	23 23	38 52

5. Test Set-up and operation mode

5.1 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.

5.2 Test Operation Mode

- Data transfer : Data Communication : Product Charging and Communication (Notebook -> EUT Data Transfer) ; 100% loss was not allowed for the manufacture's request.
- PRINT + MP4 : Continuous printing status, The status of playing the audio file of the MP4 file.
- GPS: GPS reception status
- Data transfer, PRINT + MP4, GPS mode test.

5.3 Support Equipment Used

Unit	Model No.	Serial No.	Manufacturer	CABLE				Back shell	FCC ID
				Connect type	Length (m)	shield	With Ferrite		
AC Adapter #1(EUT)	THX-090300KC	N/A	SHENZHEN TIANHANGXING ELECTRONICS CO.,LTD.	POWER	1.2	Non-shield	X	Plastic	-
Notebook	HSTNN-Q95C	5CD6256M2G	HP	DC IN USB LAN	1.6 1.0 3.0	Non-shield Shield Non-shield	X X X	Plastic Plastic Plastic	-
AC Adapter #2(Notebook)	HSTNN-CA40	N/A	CHICONY POWER	POWER	1.0	Non-shield	X	Plastic	-

NOTE
- See "APPENDIX 2 Photographs" for actual system test setup

6. Test Results : Emission

6.1 Conducted Disturbance

6.1.1 Measurement Procedure

In the range of 0.15 MHz to 30 MHz, the conducted disturbance was measured and set-up was made accordance with **ANSI C63.4 and CAN/CSA CISPR 22.**

If the EUT is table top equipment, it was placed on a wooden table with a height of 0.8 m above the reference ground plane and 0.4 m from the conducting wall of the shielded room.

Also if the EUT is floor-standing equipment, it was placed on a non-conducted support with a height up to 0.15 m above the reference ground plane.

Connect the EUT's power source lines to the appropriate power mains / peripherals through the LISN. All the other peripherals are connected to the 2nd LISN, if any.

Unused measuring port of the LISN was resistively terminated by 50 ohm terminator.

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 Average detector.

By varying the configuration of the test sample and the cable routing it was attempted to maximize the emission.

For further description of the configuration refer to the picture of the test set-up.

6.1.2 Limit for Conducted Disturbance

(1) Conducted disturbance at mains ports.

Frequency range (MHz)	Limits dB(μV)			
	Quasi-peak		Average	
	Class A	Class B	Class A	Class B
0.15 to 0.50	79	66 to 56	66	56 to 46
0.50 to 5	73	56	60	46
5 to 30		60		50
Note 1 The lower limit shall apply at the transition frequencies. Note 2 The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.				

Note) 1. Emission Level = Reading Value + Correction Factor.

2. Correction Factor = Cable Loss + Insertion Loss of LISN

3. Margin = Limit - Emission level

Test Result

< Data transfer : Data Communication MODE >

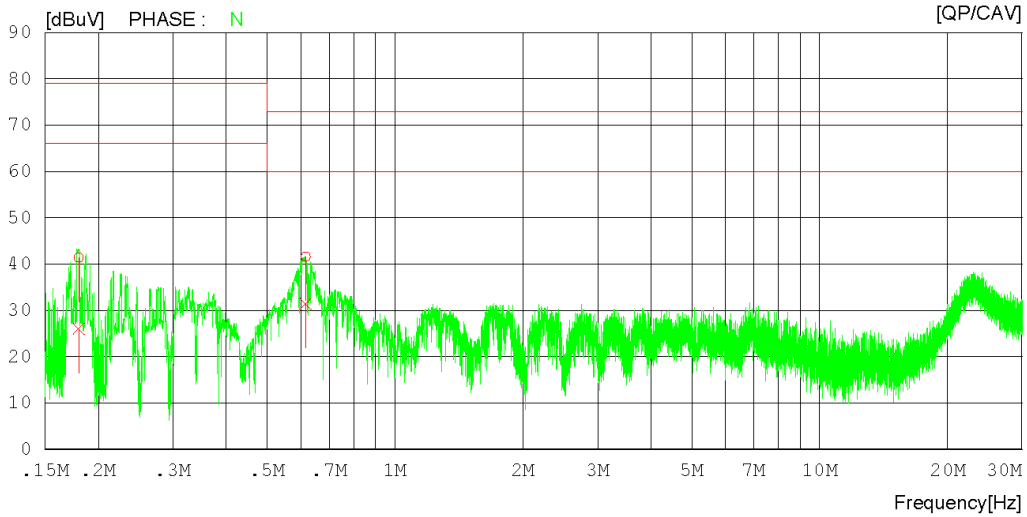
Results of Conducted Emission

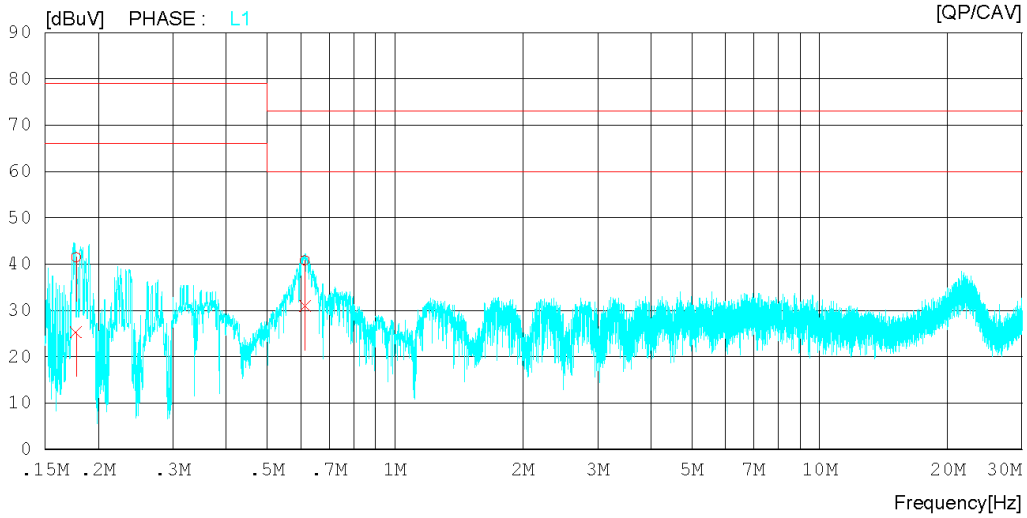
DT&C

Date 2017-07-31

Order No.	DTNC1707-05300 05301
Power Supply	120 V 60 Hz
Temp/Humi/Atm	25 'C 50 % R.H. 99.0
Test Condition	Data Transfer

LIMIT : CISPR22_A QP
CISPR22_A AV





Results of Conducted Emission

DT&C Date 2017-07-31

Order No.	DTNC1707-05300 05301
Power Supply	120 V 60 Hz
Temp/Humi/Atm	25 'C 50 % R.H. 99.0
Test Condition	Data Transfer

LIMIT : CISPR22_A QP
CISPR22_A AV

NO	FREQ	READING QP	READING CAV	C.FACTOR	RESULT QP	RESULT CAV	LIMIT QP	LIMIT CAV	MARGIN QP	MARGIN CAV	PHASE
	[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	
1	0.17982	41.12	25.79	0.21	41.33	26.00	79.00	66.00	37.67	40.00	N
2	0.61635	41.37	31.17	0.22	41.59	31.39	73.00	60.00	31.41	28.61	N
3	0.17739	41.31	25.02	0.18	41.49	25.20	79.00	66.00	37.51	40.80	L1
4	0.61343	40.54	30.72	0.21	40.75	30.93	73.00	60.00	32.25	29.07	L1

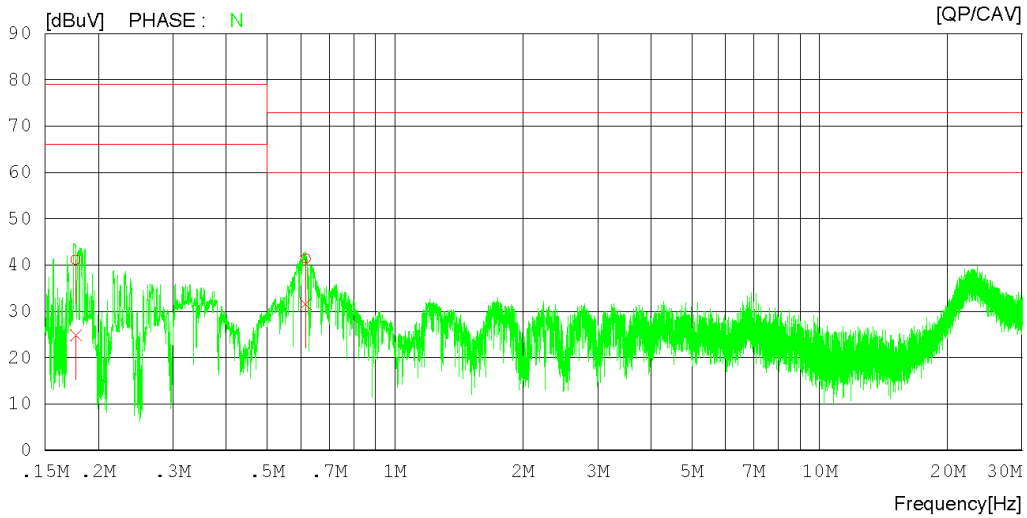
< PRINT + MP4 MODE >

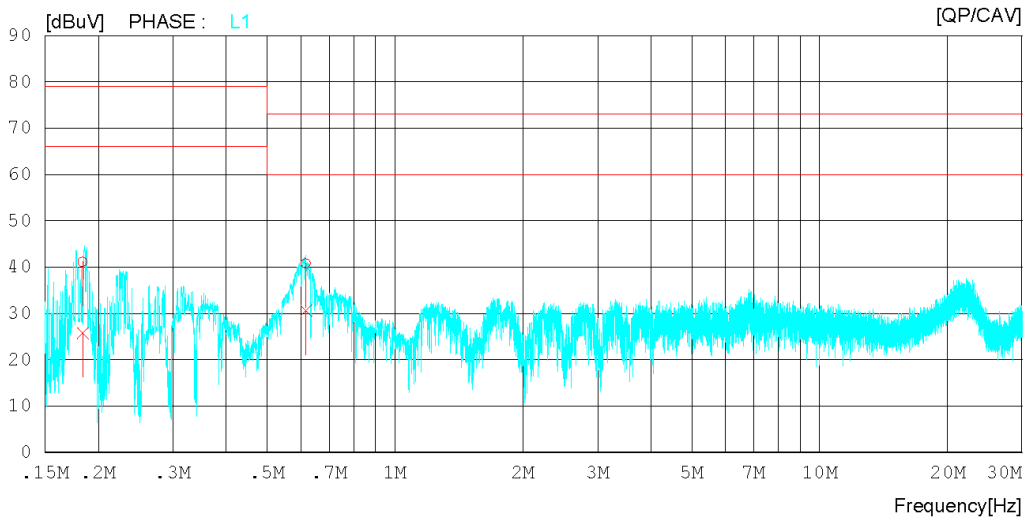
Results of Conducted Emission

DT&C Date 2017-07-31

Order No.	DTNC1707-05300 05301
Power Supply	120 V 60 Hz
Temp/Humi/Atm	25 'C 50 % R.H. 99.0
Test Condition	Print - MP4

LIMIT : CISPR22_A QP
CISPR22_A AV





Results of Conducted Emission

DT&C Date 2017-07-31

Order No.	DTNC1707-05300 05301
Power Supply	120 V 60 Hz
Temp/Humi/Atm	25 'C 50 % R.H. 99.0
Test Condition	Print - MP4

LIMIT : CISPR22_A QP
CISPR22_A AV

NO	FREQ	READING QP	READING CAV	C.FACTOR	RESULT QP	RESULT CAV	LIMIT QP	LIMIT CAV	MARGIN QP	MARGIN CAV	PHASE
	[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	
1	0.17716	40.97	24.61	0.21	41.18	24.82	79.00	66.00	37.82	41.18	N
2	0.61587	41.21	31.39	0.22	41.43	31.61	73.00	60.00	31.57	28.39	N
3	0.18390	40.89	25.50	0.18	41.07	25.68	79.00	66.00	37.93	40.32	L1
4	0.61698	40.57	30.38	0.21	40.78	30.59	73.00	60.00	32.22	29.41	L1

< GPS MODE >

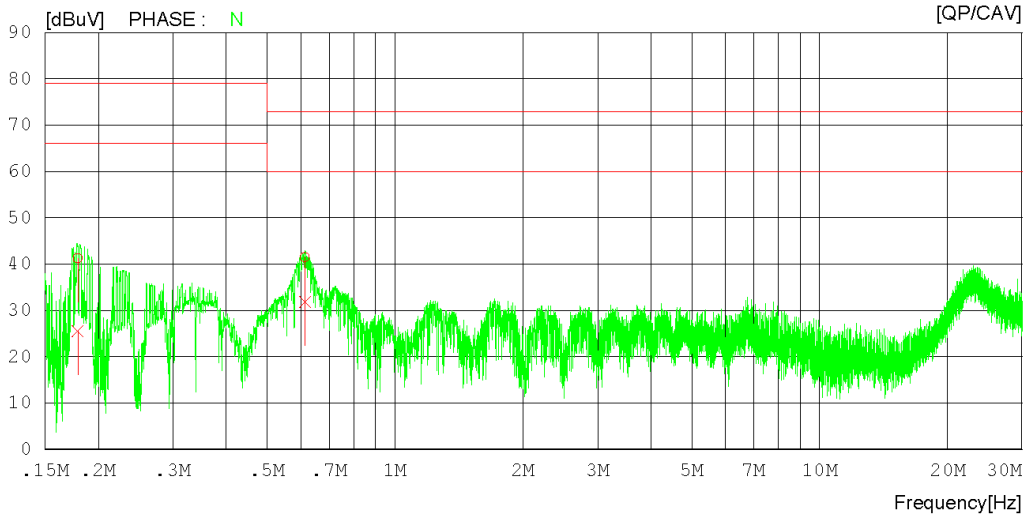
Results of Conducted Emission

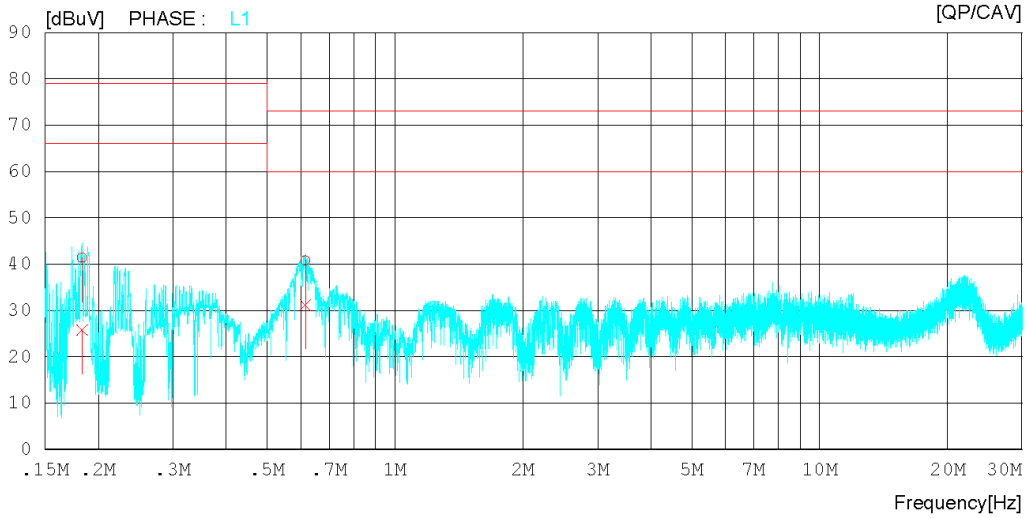
DT&C

Date 2017-07-31

Order No.	DTNC1707-05300 05301
Power Supply	120 V 60 Hz
Temp/Humi/Atm	25 'C 50 % R.H. 99.0
Test Condition	GPS

LIMIT : CISPR22_A QP
CISPR22_A AV





Results of Conducted Emission

DT&C Date 2017-07-31

Order No.	DTNC1707-05300 05301
Power Supply	120 V 60 Hz
Temp/Humi/Atm	25 'C 50 % R.H. 99.0
Test Condition	GPS

LIMIT : CISPR22_A QP
CISPR22_A AV

NO	FREQ	READING QP	READING CAV	C.FACTOR	RESULT QP	RESULT CAV	LIMIT QP	LIMIT CAV	MARGIN QP	MARGIN CAV	PHASE
	[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	
1	0.17898	41.06	25.35	0.21	41.27	25.56	79.00	66.00	37.73	40.44	N
2	0.61330	41.22	31.64	0.22	41.44	31.86	73.00	60.00	31.56	28.14	N
3	0.18346	41.12	25.57	0.18	41.30	25.75	79.00	66.00	37.70	40.25	L1
4	0.61506	40.58	30.96	0.21	40.79	31.17	73.00	60.00	32.21	28.83	L1

6.2 Radiated Disturbance

6.2.1 Measurement Procedure

The radiated disturbance was measured and set-up was made accordance with **ANSI C63.4 and CAN/CSA CISPR 22.**

If the EUT is tabletop equipment, it was placed on a wooden table with a height of 0.8 m above the reference ground plane and 3 m or 10 m away from the interference receiving antenna in the **10m semi-anechoic chamber.**

Also if the EUT is floor-standing equipment, it was placed on a non-conducted support with a height up to 0.15 m above the reference ground plane.

Rotate the EUT from (0 - 360)° and position the receiving antenna at heights from (1 - 4) m above the reference ground plane continuously to determine associated with higher emission levels and record them.

The measurement was made in both the vertical and horizontal polarization, and the maximum value is presented in the report.

For below 1 GHz frequency range, Quasi-Peak detector with 120 kHz RBW was used.

Also Peak and Average detector with 1 MHz RBW were used for above 1 GHz frequency range.

For further description of the configuration refer to the picture of the test set-up.

6.2.2 Limit for Radiated Disturbance

- 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

(1) Limit for Radiated Emission below 1 000MHz

Frequency range (MHz)	Class A Equipment (10 m distance)	Class B Equipment (3 m distance)
	Quasi-peak (dBμV/m)	Quasi-peak (dBμV/m)
30 to 88	39.1	40
88 to 216	43.5	43.5
216 to 960	46.4	46
960 to 1 000	49.5	54

Note 1 The lower limit shall apply at the transition frequency.
Note 2 Additional provisions may be required for cases where interference occurs.
Note 3 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)	Class A Equipment (10 m distance)	Class B Equipment (10 m distance)
	Quasi-peak (dBμV/m)	Quasi-peak (dBμV/m)
30 to 230	40	30
230 to 1 000	47	37

(2) Limits for Radiated Emission above 1 000MHz at a measuring distance of 3 m

Frequency (GHz)	Class A Equipment		Class B Equipment	
	Peak (dBμV/m)	Average (dBμV/m)	Peak (dBμV/m)	Average (dBμV/m)
1 to 40	80	60	74	54

Note) 1. Emission Level = Reading Value + loss - gain + Ant Factor
2. Margin = Limit - Emission level
3. loss = Cable loss, gain = Amp gain, Ant Factor = Antenna Factor

Test Result

< 30 MHz ~ 1 GHz _ Data transfer : Data CommunicationMODE >

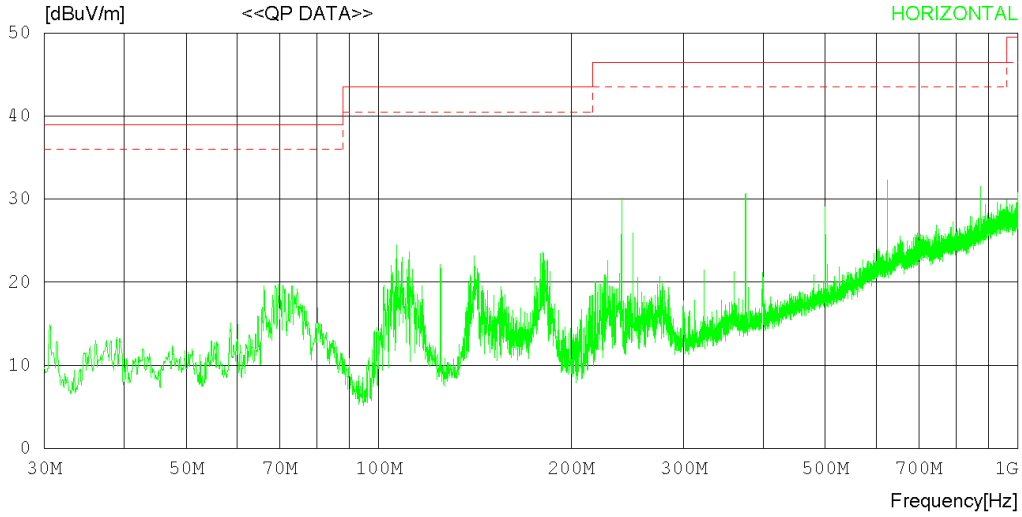
RADIATED EMISSION

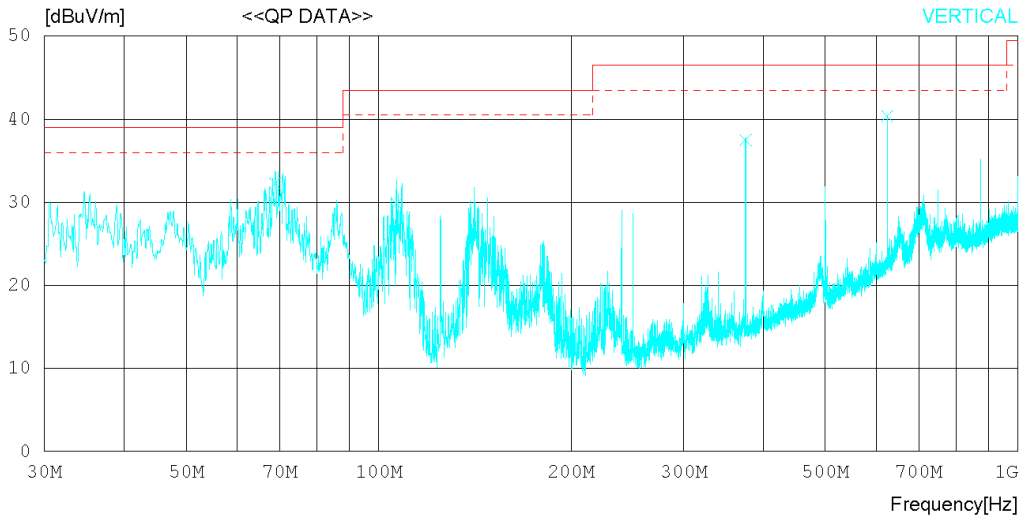
Date 2017-07-28

Model Name	DTNC1707-05300 5301
Power Supply	120 V 60 Hz
Temp/Humi	23 'C 38 % R.H.
Test Condition	Data Transfer

Memo

LIMIT : FCC Part15 Subpart.B Class A (10m)
MARGIN: 3 dB





RADIATED EMISSION

Date 2017-07-28

Model Name	DTNC1707-05300 5301
Power Supply	120 V 60 Hz
Temp/Humi	23 'C 38 % R.H.
Test Condition	Data Transfer

Memo

LIMIT : FCC Part15 Subpart B Class A (10m)
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]
----- Vertical ------										
1	68.921	49.80	10.47	2.41	30.42	32.26	39.00	6.74	300	358
2	106.750	46.80	10.28	2.97	30.23	29.82	43.50	13.68	100	235
3	375.068	46.50	15.15	5.50	29.69	37.46	46.50	9.04	100	206
4	625.107	42.40	20.30	7.10	29.43	40.37	46.50	6.13	100	310

< (1 ~ 6) GHz _ Peak _ Data transfer : Data Communication MODE >

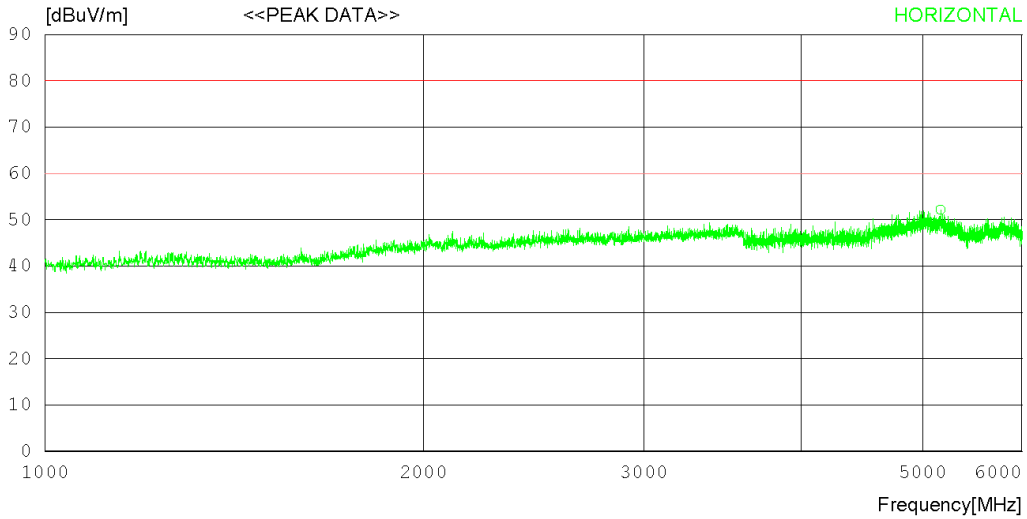
RADIATED EMISSION

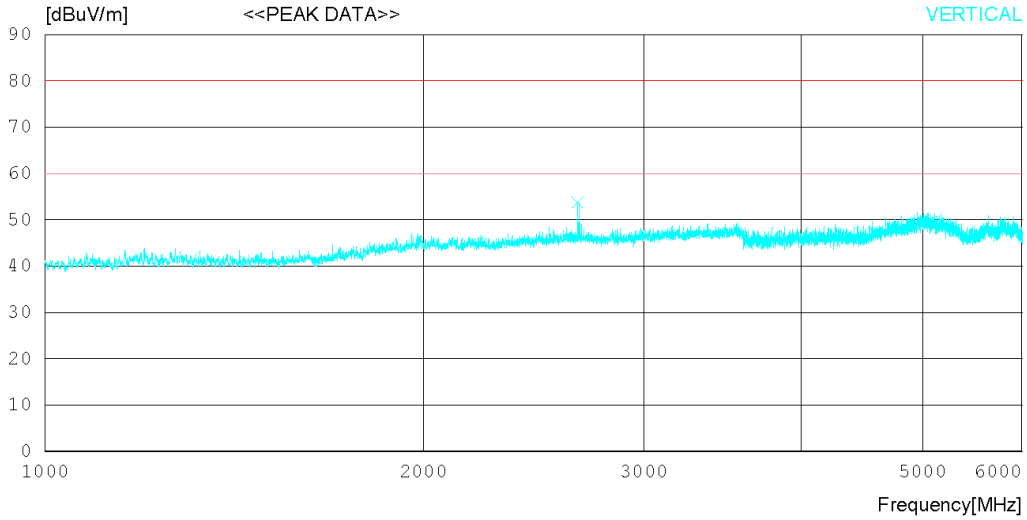
Date 2017-08-21

Order No.	DTNC1707-05300 5301
Power Supply	120 V 60 Hz
Temp/Humi	23 'C 52 % R.H.
Test Condition	Data Transfer

Memo

LIMIT : FCC Class A 1-8GHz_Peak
FCC Class A 1-8GHz_Average





RADIATED EMISSION

Date 2017-08-21

Order No. DTNC1707-05300 5301
Power Supply 120 V 60 Hz
Temp/Humi 23 'C 52 % R.H.
Test Condition Data Transfer

Memo

LIMIT : FCC Class A 1-8GHz_Peak
FCC Class A 1-8GHz_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	5165.000	45.30	34.10	8.95	36.15	52.20	80.0	27.8	100	353
----- Vertical ------										
2	2655.000	53.00	32.36	5.55	37.10	53.81	80.0	26.19	100	168

< (1 ~ 6) GHz _ Average _ Data transfer : Data Communication MODE >

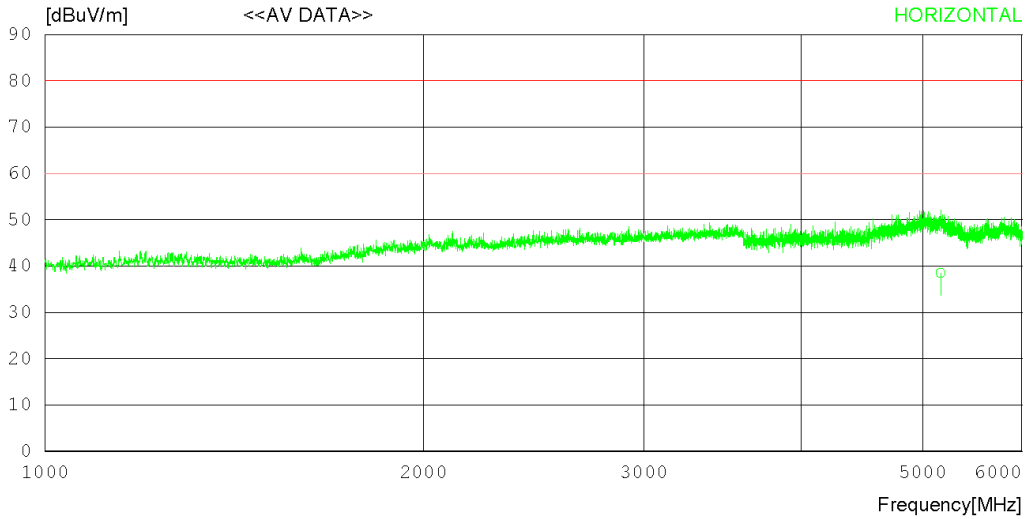
RADIATED EMISSION

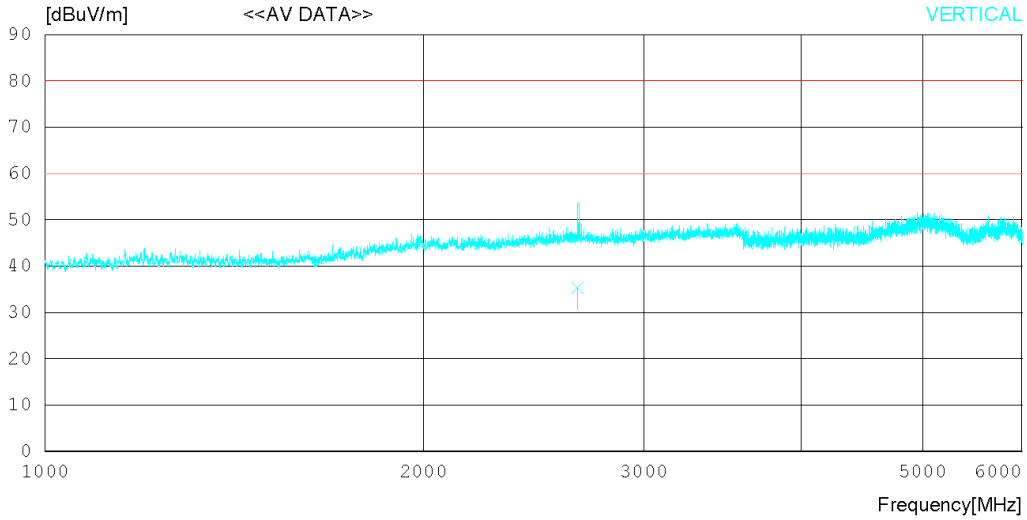
Date 2017-08-21

Order No.	DTNC1707-05300 5301
Power Supply	120 V 60 Hz
Temp/Humi	23 'C 52 % R.H.
Test Condition	Data Transfer

Memo

LIMIT : FCC Class A 1-8GHz_Average
FCC Class A 1-8GHz_Peak





RADIATED EMISSION

Date 2017-08-21

Order No. DTNC1707-05300 5301
Power Supply 120 V 60 Hz
Temp/Humi 23 'C 52 % R.H.
Test Condition Data Transfer

Memo

LIMIT : FCC Class A 1-8GHz_Average
FCC Class A 1-8GHz_Peak

No.	FREQ [MHz]	READING CAV [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	5165.000	31.60	34.10	8.95	36.15	38.50	60.00	21.50	100	360
----- Vertical ------										
2	2655.000	34.50	32.36	5.55	37.10	35.31	60.00	24.69	100	155

< (6 ~ 18) GHz _ Peak _ Data transfer : Data Communication MODE >

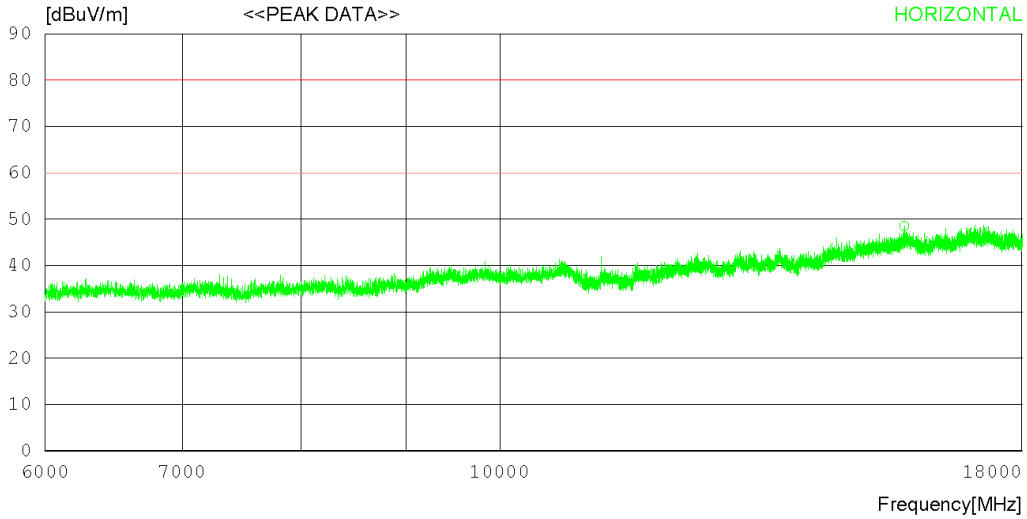
RADIATED EMISSION

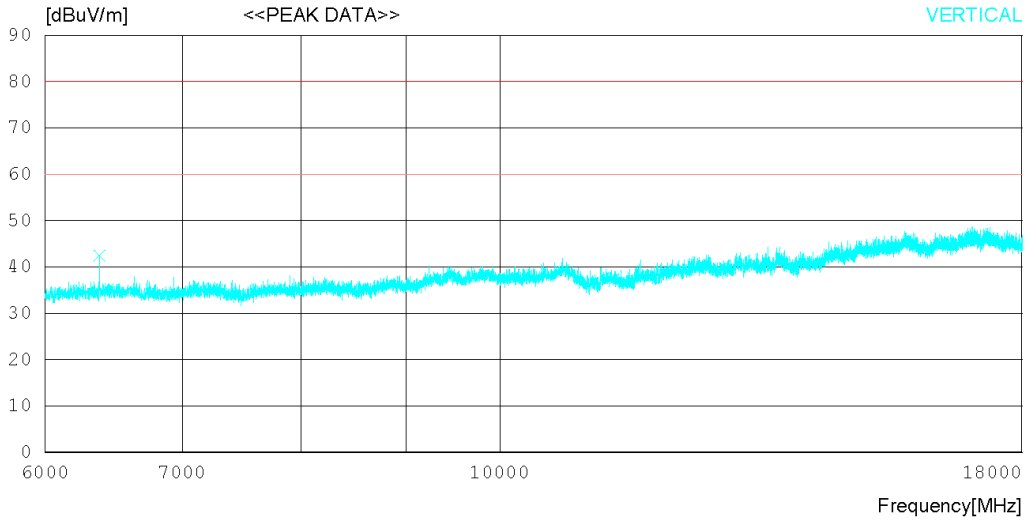
Date 2017-08-21

Order No.	DTNC1707-05300 5301
Power Supply	120 V 60 Hz
Temp/Humi	23 'C 52 % R.H.
Test Condition	Data trans

Memo

LIMIT : FCC_CLASS A__PK_1-18G
FCC_CLASS A_AV_1-18G





RADIATED EMISSION

Date 2017-08-21

Order No. DTNC1707-05300 5301
Power Supply 120 V 60 Hz
Temp/Humi 23 'C 52 % R.H.
Test Condition Data trans

Memo

LIMIT : FCC_CLASS A__PK_1-18G
FCC_CLASS A_AV_1-18G

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	15760.500	33.10	-1.39	16.79	0.00	48.50	80.0	31.5	100	1
----- Vertical ------										
2	6378.750	42.10	-8.55	8.86	0.00	42.41	80.0	37.59	100	358

< (6 ~ 18) GHz _ Average _ Data transfer : Data Communication MODE >

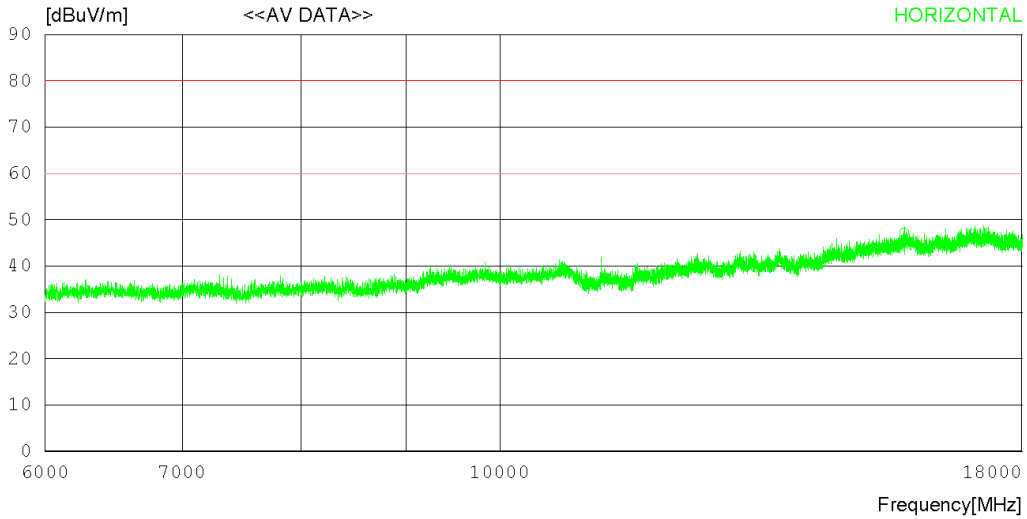
RADIATED EMISSION

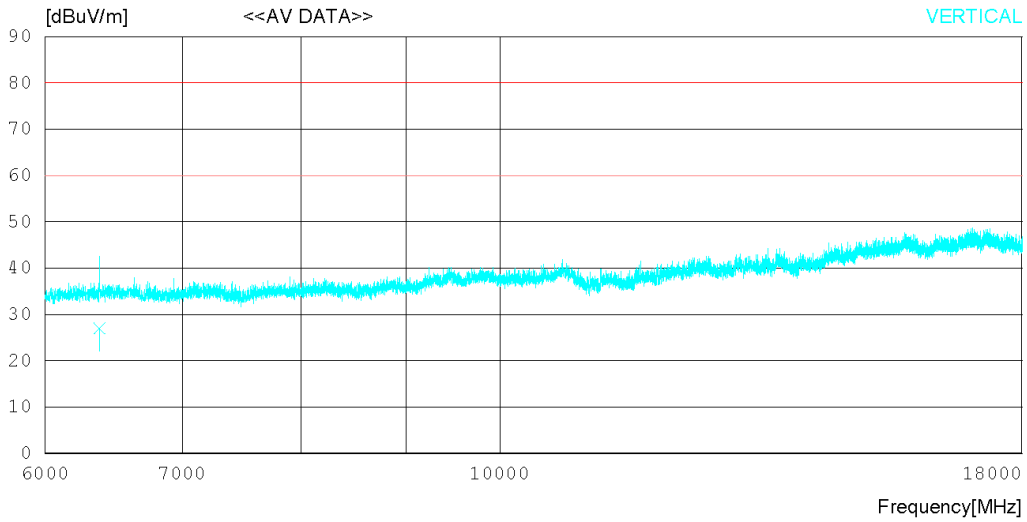
Date 2017-08-21

Order No.	DTNC1707-05300 5301
Power Supply	120 V 60 Hz
Temp/Humi	23 'C 52 % R.H.
Test Condition	Data trans

Memo

LIMIT : FCC_CLASS A_AV_1-18G
FCC_CLASS A__PK_1-18G





RADIATED EMISSION

Date 2017-08-21

Order No. DTNC1707-05300 5301
Power Supply 120 V 60 Hz
Temp/Humi 23 'C 52 % R.H.
Test Condition Data trans

Memo

LIMIT : FCC_CLASS A_AV_1-18G
FCC_CLASS A_PK_1-18G

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	15760.500	31.80	-1.39	16.79	0.00	47.20	60.00	12.80	100	1
----- Vertical ------										
2	6378.750	26.60	-8.55	8.86	0.00	26.91	60.00	33.09	100	358

< 30 MHz ~ 1 GHz _ PRINT + MP4 MODE >

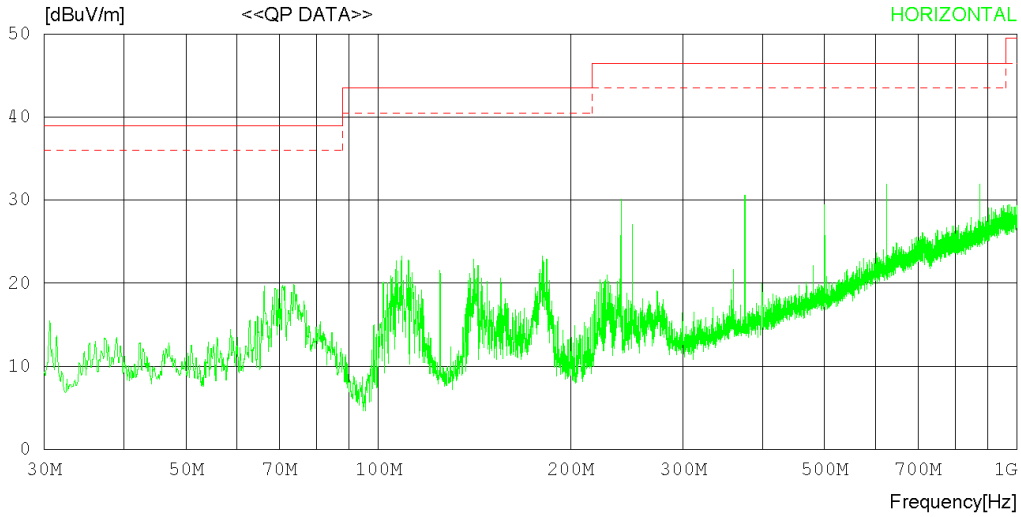
RADIATED EMISSION

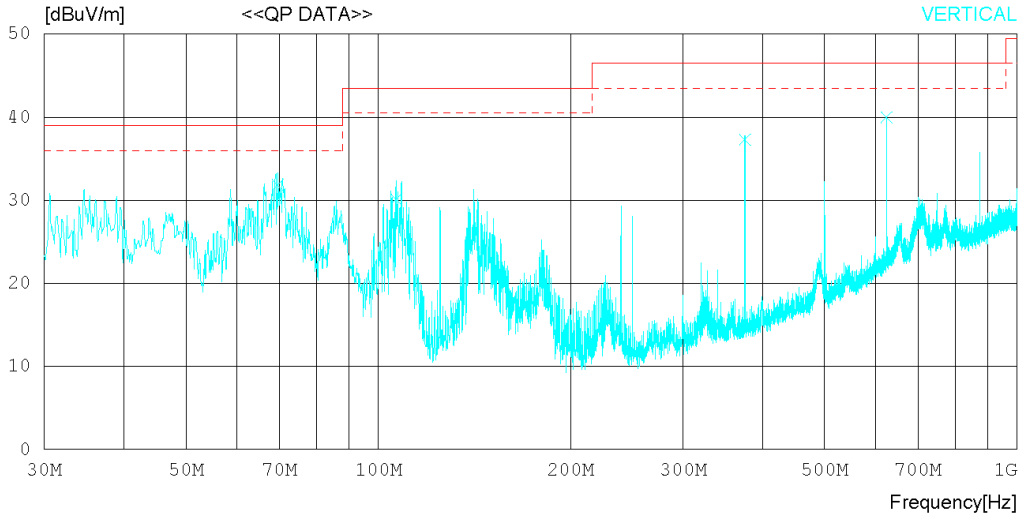
Date 2017-07-28

Model Name	DTNC1707-05300 5301
Power Supply	120 V 60 Hz
Temp/Humi	23 'C 38 % R.H.
Test Condition	PRINT + MP4

Memo

LIMIT : FCC Part15 Subpart.B Class A (10m)
MARGIN: 3 dB





RADIATED EMISSION

Date 2017-07-28

Model Name	DTNC1707-05300 5301
Power Supply	120 V 60 Hz
Temp/Humi	23 'C 38 % R.H.
Test Condition	PRINT + MP4

Memo

LIMIT : FCC Part15 Subpart B Class A (10m)
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]
----- Vertical ------										
1	69.649	49.50	10.36	2.42	30.42	31.86	39.00	7.14	200	1
2	106.750	47.10	10.28	2.97	30.23	30.12	43.50	13.38	100	358
3	375.068	46.30	15.15	5.50	29.69	37.26	46.50	9.24	100	358
4	625.107	42.00	20.30	7.10	29.43	39.97	46.50	6.53	100	358

< (1 ~ 6) GHz _ Peak _ PRINT + MP4 MODE >

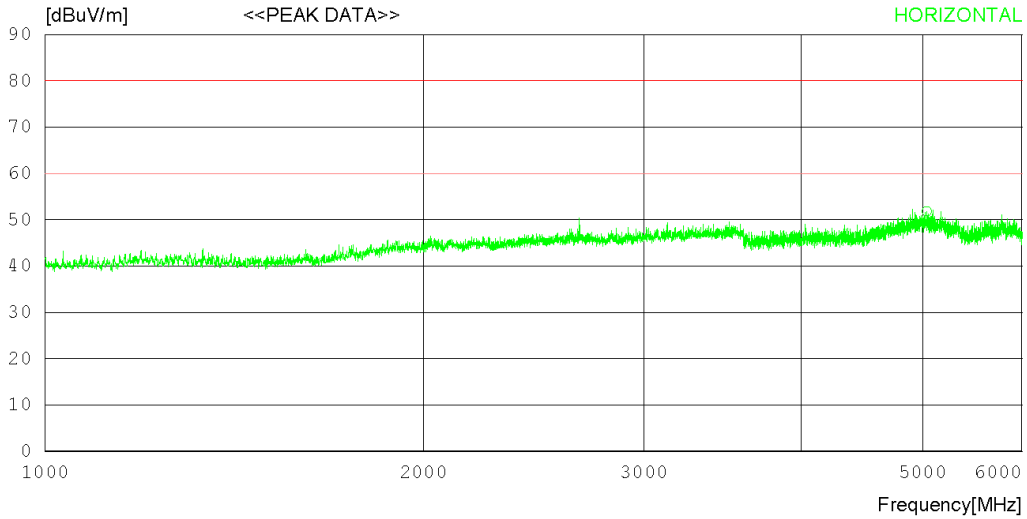
RADIATED EMISSION

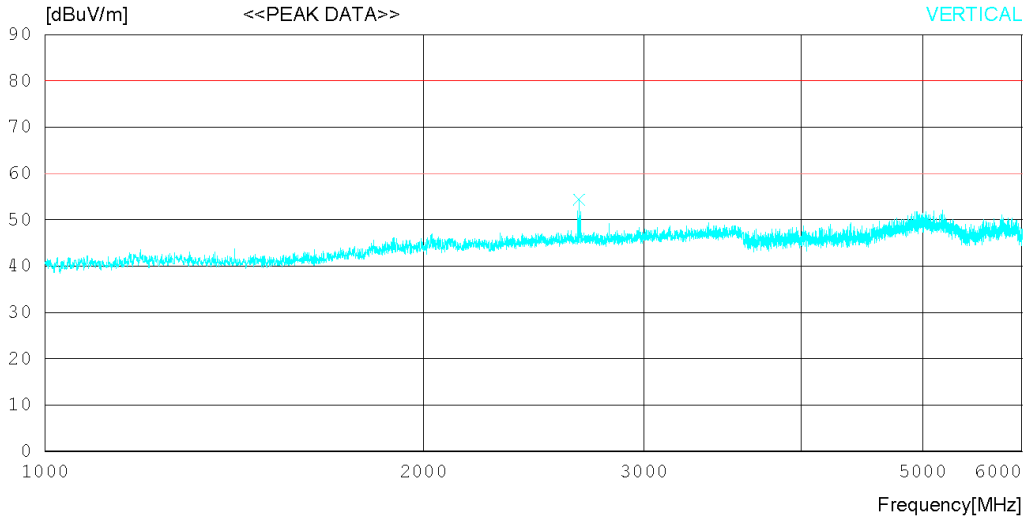
Date 2017-08-21

Order No.	DTNC1707-05300 5301
Power Supply	120 V 60 Hz
Temp/Humi	23 'C 52 % R.H.
Test Condition	PRINT + MP4

Memo

LIMIT : FCC Class A 1-8GHz_Peak
FCC Class A 1-8GHz_Average





RADIATED EMISSION

Date 2017-08-21

Order No. DTNC1707-05300 5301
Power Supply 120 V 60 Hz
Temp/Humi 23 'C 52 % R.H.
Test Condition PRINT + MP4

Memo

LIMIT : FCC Class A 1-8GHz_Peak
FCC Class A 1-8GHz_Average

No.	FREQ	READING PEAK	ANT FACTOR	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
	[MHz]	[dBuV]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[cm]	[DEG]
----- Horizontal ------										
1	5035.625	44.60	34.04	9.37	36.20	51.81	80.0	28.19	100	358
----- Vertical ------										
2	2661.875	53.50	32.36	5.55	37.10	54.31	80.0	25.69	100	1

< (1 ~ 6) GHz _ Average _ PRINT + MP4 MODE >

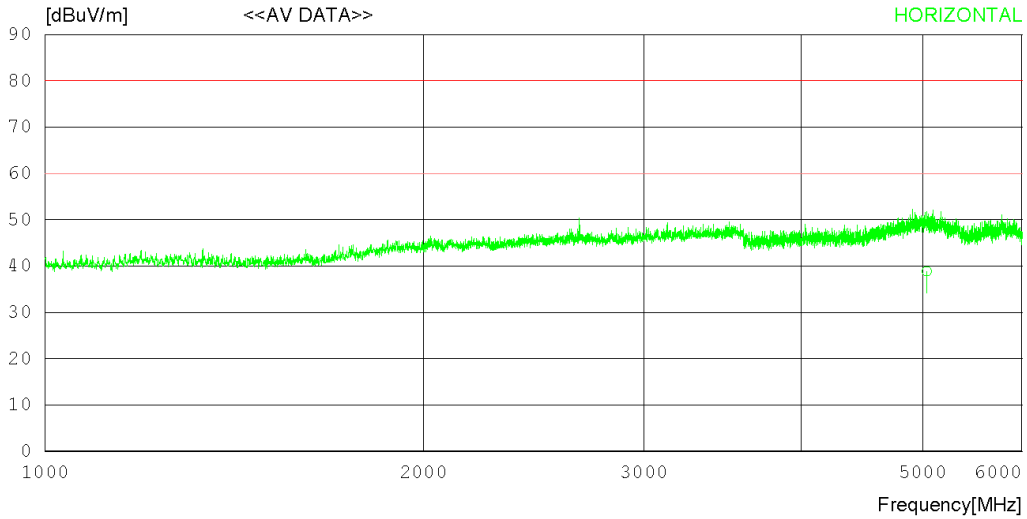
RADIATED EMISSION

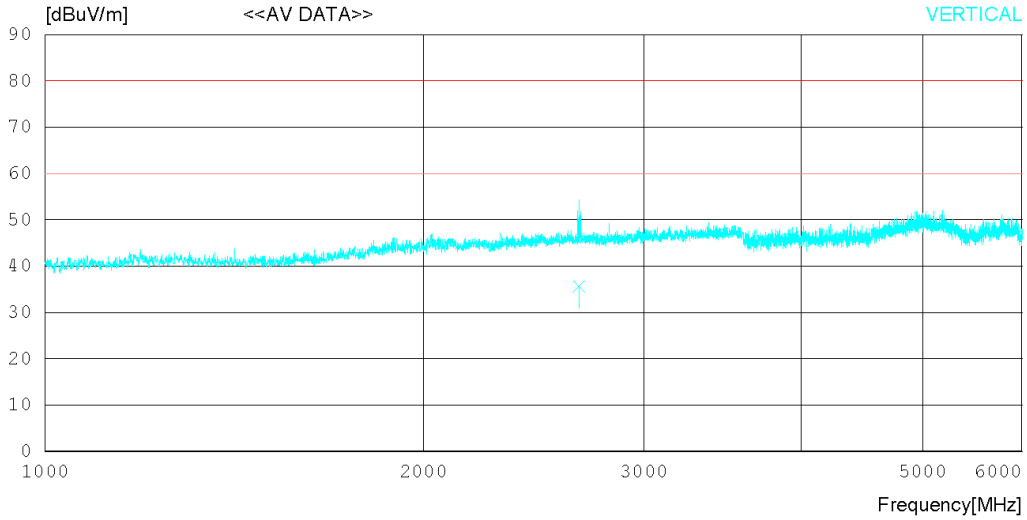
Date 2017-08-21

Order No.	DTNC1707-05300 5301
Power Supply	120 V 60 Hz
Temp/Humi	23 'C 52 % R.H.
Test Condition	PRINT + MP4

Memo

LIMIT : FCC Class A 1-8GHz_Average
FCC Class A 1-8GHz_Peak





RADIATED EMISSION

Date 2017-08-21

Order No. DTNC1707-05300 5301
Power Supply 120 V 60 Hz
Temp/Humi 23 'C 52 % R.H.
Test Condition PRINT + MP4

Memo

LIMIT : FCC Class A 1-8GHz_Average
FCC Class A 1-8GHz_Peak

No.	FREQ [MHz]	READING CAV [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	5035.625	31.70	34.04	9.37	36.20	38.91	60.00	21.09	100	0
----- Vertical ------										
2	2661.875	34.80	32.36	5.55	37.10	35.61	60.00	24.39	100	152

< (6 ~ 18) GHz _ Peak _ PRINT + MP4 MODE >

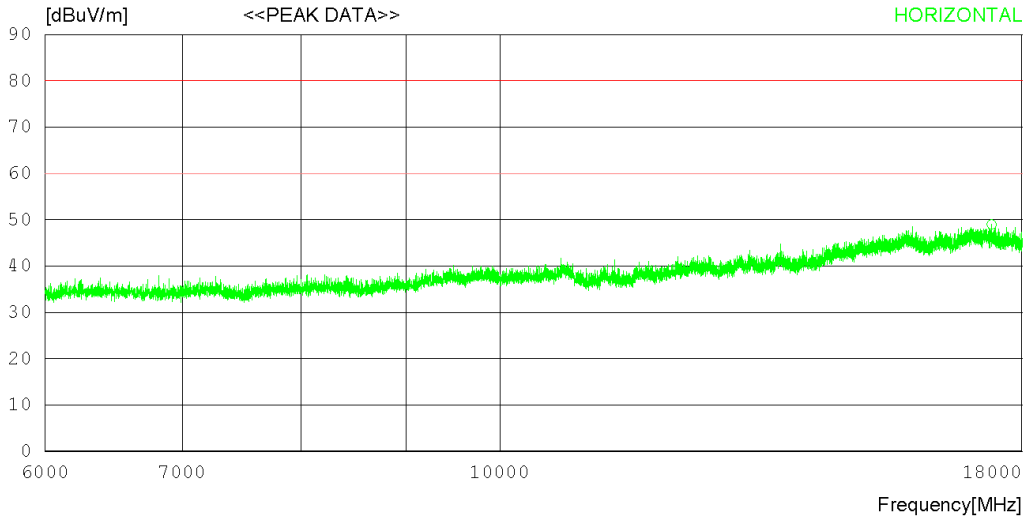
RADIATED EMISSION

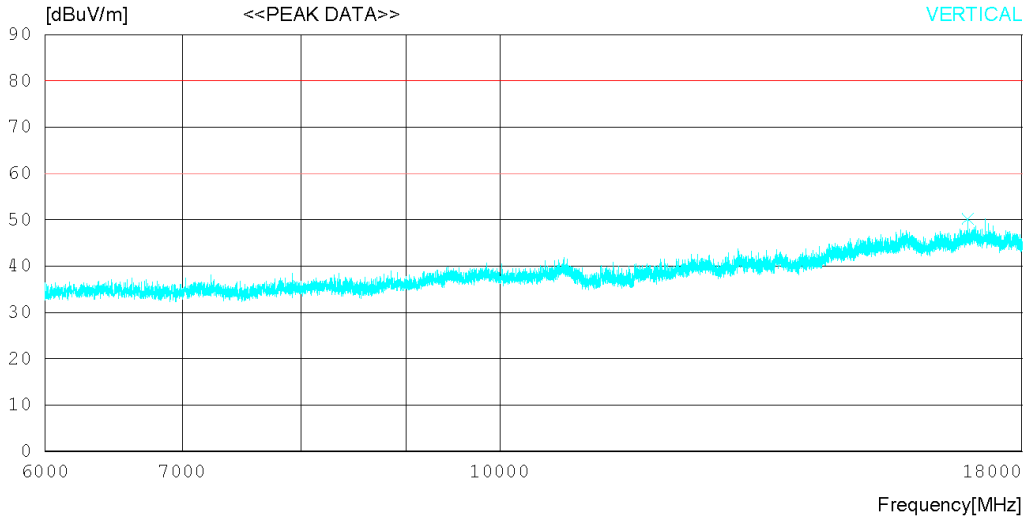
Date 2017-08-21

Order No.	DTNC1707-05300 5301
Power Supply	120 V 60 Hz
Temp/Humi	23 'C 52 % R.H.
Test Condition	PRINT + MP4

Memo

LIMIT : FCC_CLASS A__PK_1-18G
FCC_CLASS A_AV_1-18G





RADIATED EMISSION

Date 2017-08-21

Order No. DTNC1707-05300 5301
Power Supply 120 V 60 Hz
Temp/Humi 23 'C 52 % R.H.
Test Condition PRINT + MP4

Memo

LIMIT : FCC_CLASS A__PK_1-18G
FCC_CLASS A_AV_1-18G

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	17394.000	32.40	-0.14	16.75	0.00	49.01	80.0	30.99	100	239
----- Vertical ------										
2	16932.750	33.80	-0.17	16.56	0.00	50.19	80.0	29.81	100	288

< (6 ~ 18) GHz _ Average _ PRINT + MP4 MODE >

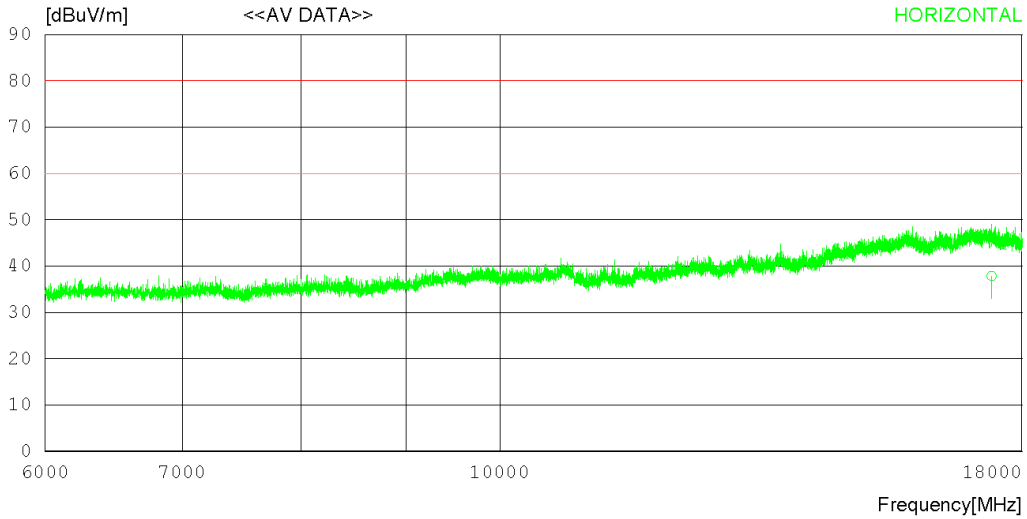
RADIATED EMISSION

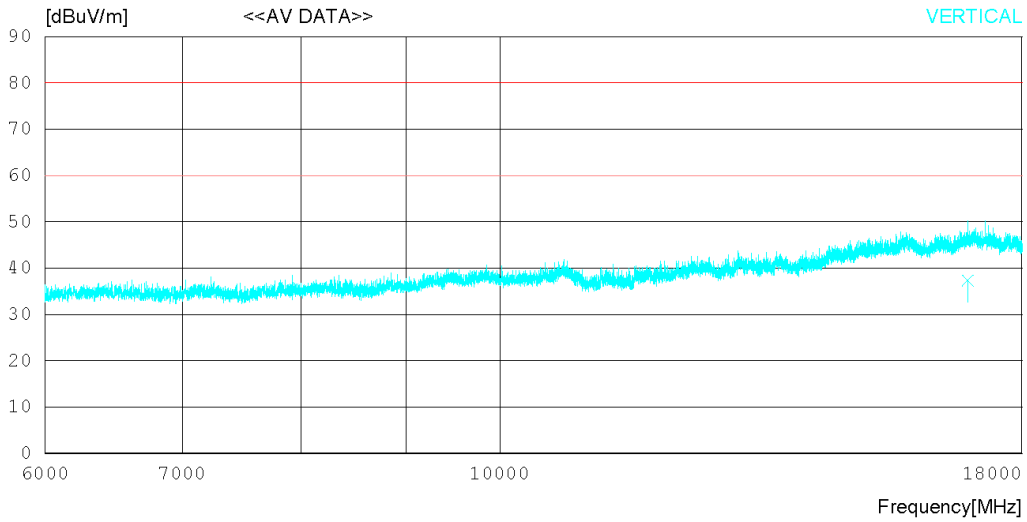
Date 2017-08-21

Order No.	DTNC1707-05300 5301
Power Supply	120 V 60 Hz
Temp/Humi	23 'C 52 % R.H.
Test Condition	PRINT + MP4

Memo

LIMIT : FCC_CLASS A_AV_1-18G
FCC_CLASS A__PK_1-18G





RADIATED EMISSION

Date 2017-08-21

Order No. DTNC1707-05300 5301
Power Supply 120 V 60 Hz
Temp/Humi 23 'C 52 % R.H.
Test Condition PRINT + MP4

Memo

LIMIT : FCC_CLASS A_AV_1-18G
FCC_CLASS A_PK_1-18G

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	17394.000	21.20	-0.14	16.75	0.00	37.81	60.00	22.19	100	360
----- Vertical ------										
2	16932.750	20.90	-0.17	16.56	0.00	37.29	60.00	22.71	100	359

Appendix 1

List of Test and Measurement Instruments

To facilitate inclusion on each page of the test equipment used for related tests, each item of test equipment is identified by the Test Laboratory.

1. Conducted Disturbance

Name of Instrument		Model No.	Manufacturer	Serial No.	Cal. Date	Next Cal. Date
☒	MEASUREMENT SOFTWARE	EMI-C VER. 2.00.0143	TSJ	N/A	N/A	N/A
☒	EMI TEST RECEIVER	ESCI	ROHDE & SCHWARZ	100364	2017.02.16	2018.02.16
☒	ARTIFICIAL MAINS NETWORK	ESH2-Z5	ROHDE & SCHWARZ	828739/006	2016.09.08	2017.09.08
☒	LISN	LISN1600	TTI	197204	2017.06.07	2018.06.07
☐	SINGLE-PHASE MASTER	4420	NF	3049354420023	2016.09.08	2017.09.08
☒	HIGH PASS FILTER	KFL-007D	KYORITSU	8-2259-4	N/A	N/A
☐	50 OHM TERMINATOR	CT-01	TME	N/A	2017.01.03	2018.01.03
☐	LISN (DC)	NNBM8125	SCHWARZBECK	8125-821	2016.09.08	2017.09.08
☐	LISN (DC)	NNBM8125	SCHWARZBECK	8125-1390	2016.09.08	2017.09.08

2. Radiated Disturbance

Name of Instrument		Model No.	Manufacturer	Serial No.	Cal. Date	Next Cal. Date
☒	MEASUREMENT SOFTWARE	EMI-R VER. 2.00.0121	TSJ	N/A	N/A	N/A
☒	EMI TEST RECEIVER	ESR7	ROHDE & SCHWARZ	101109	2016.10.18	2017.10.18
☒	TRILOG BROADBAND TEST-ANTENNA	VULB9160	SCHWARZBECK	9160-3362	2016.08.05	2018.08.05
☒	LOW NOISE PRE AMPLIFIER	MLA-010K01-B01-27	TSJ	1844538	2017.03.06	2018.03.06
☒	EMI TEST RECEIVER	ESU	ROHDE & SCHWARZ	100469	2017.07.06	2018.07.06
☒	PRE AMPLIFIER	8449B	AGILENT	3008A01590	2017.02.20	2018.02.20
☒	HORN ANTENNA	3117	ETS-LINDGREN	00152093	2016.02.26	2018.02.26
☒	HORN ANTENNA WITH PREAMPLIFIER	EM-6969	ELECTRO-METRICS	156	2017.01.19	2018.01.19
☒	HORN ANTENNA WITH PREAMPLIFIER	MLA-0618-B03-34	TSJ	1785642	2017.01.19	2018.01.19

* NOTE1)The measurement antennas were calibrated in accordance to the requirements of C63.5-2006.

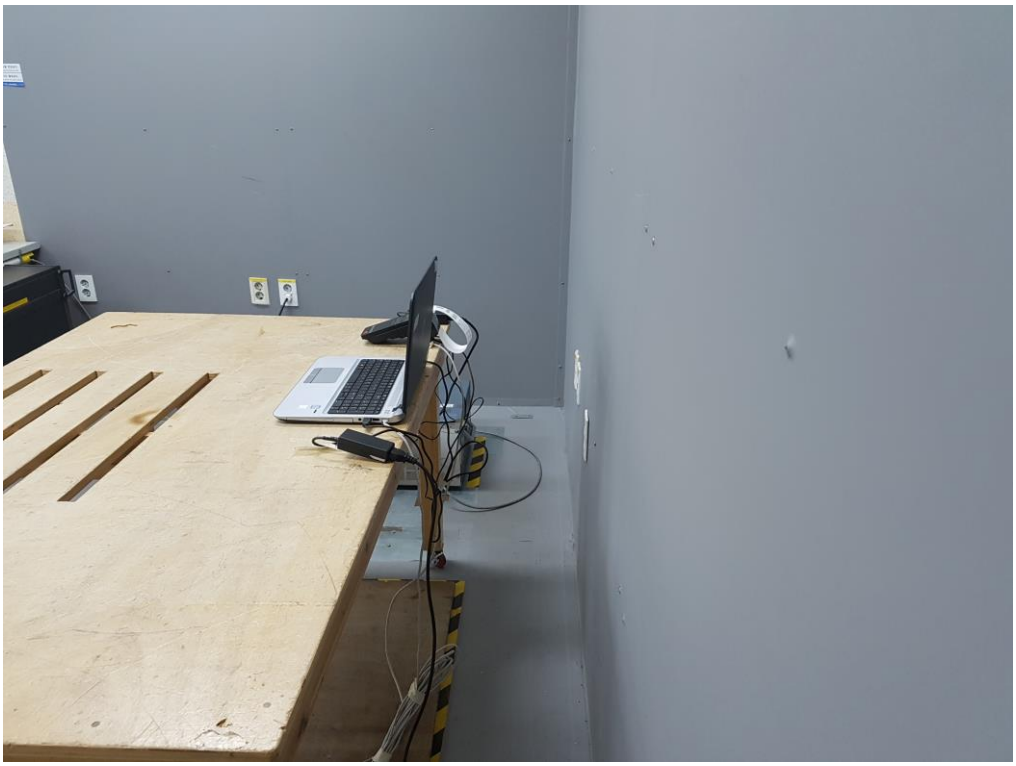
Appendix 2

Photographs of the Test Configurations

1. Conducted Disturbance

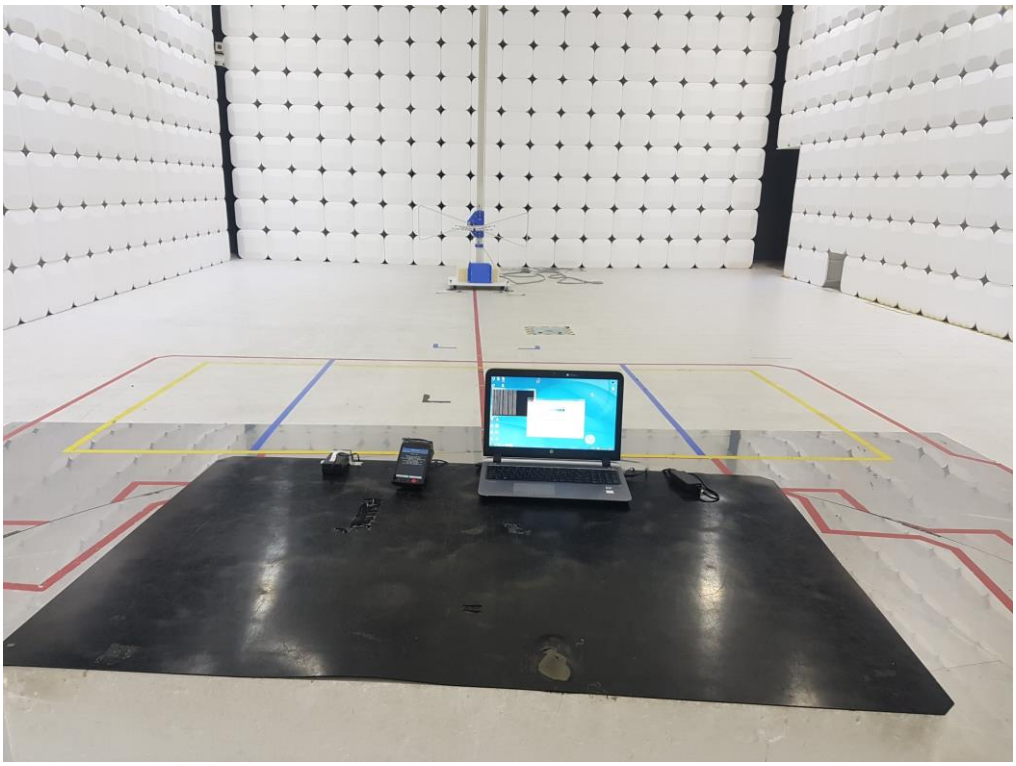
2. Radiated Disturbance

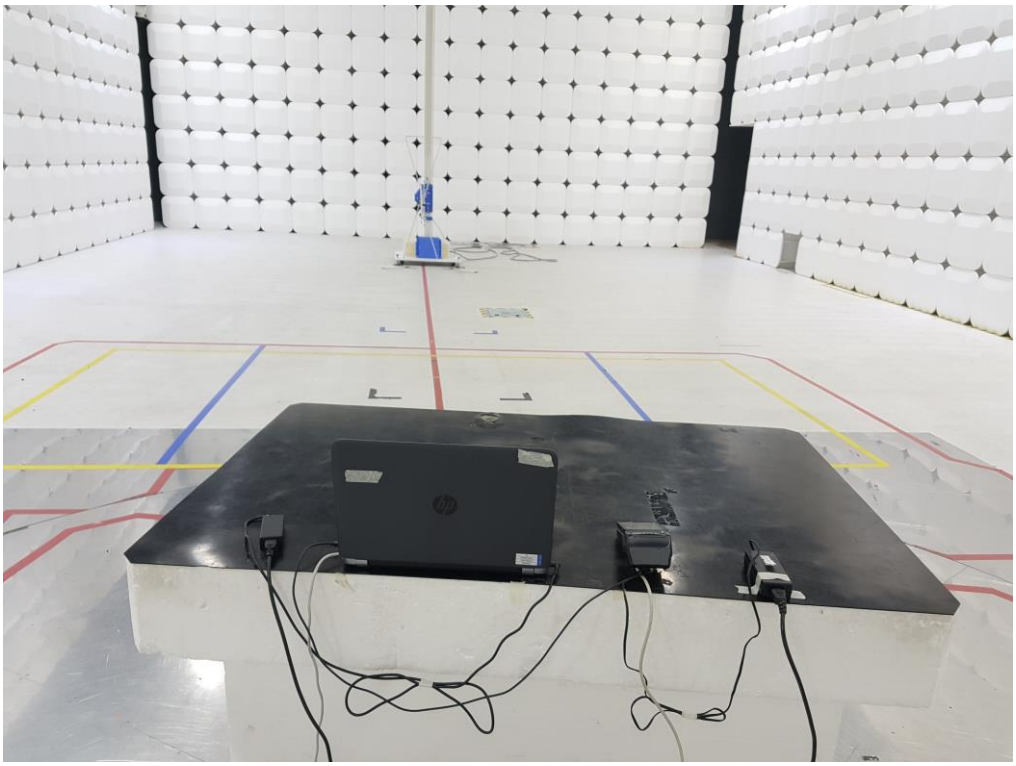
A2-1. Conducted Disturbance



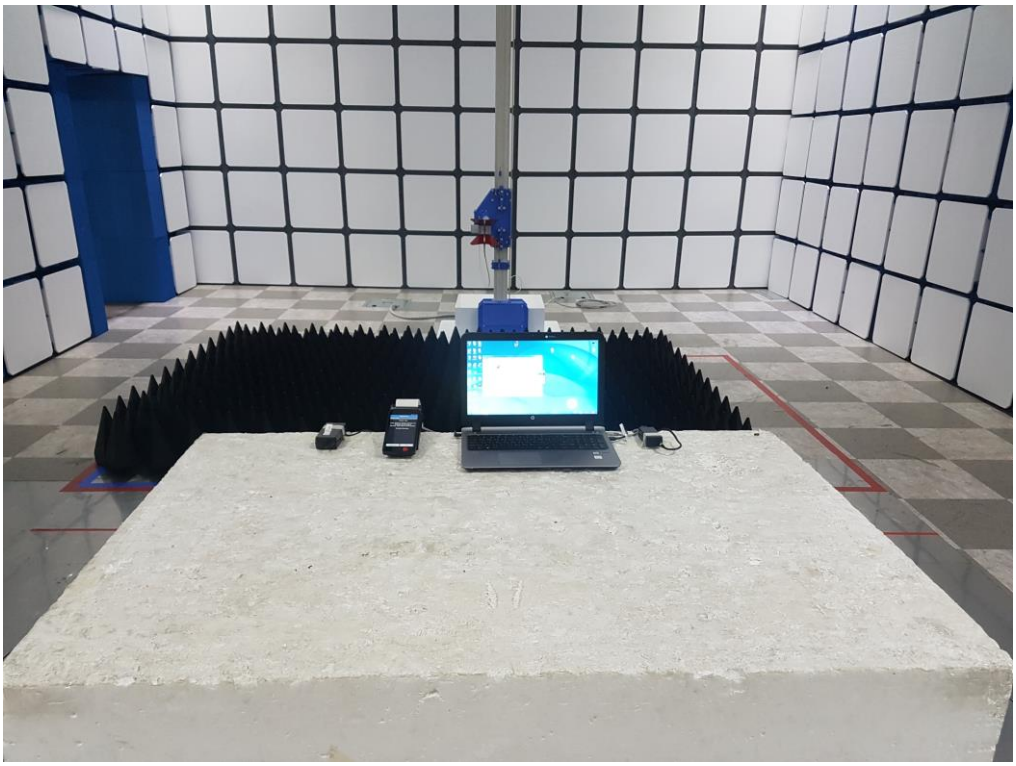
A2-2. Radiated Disturbance

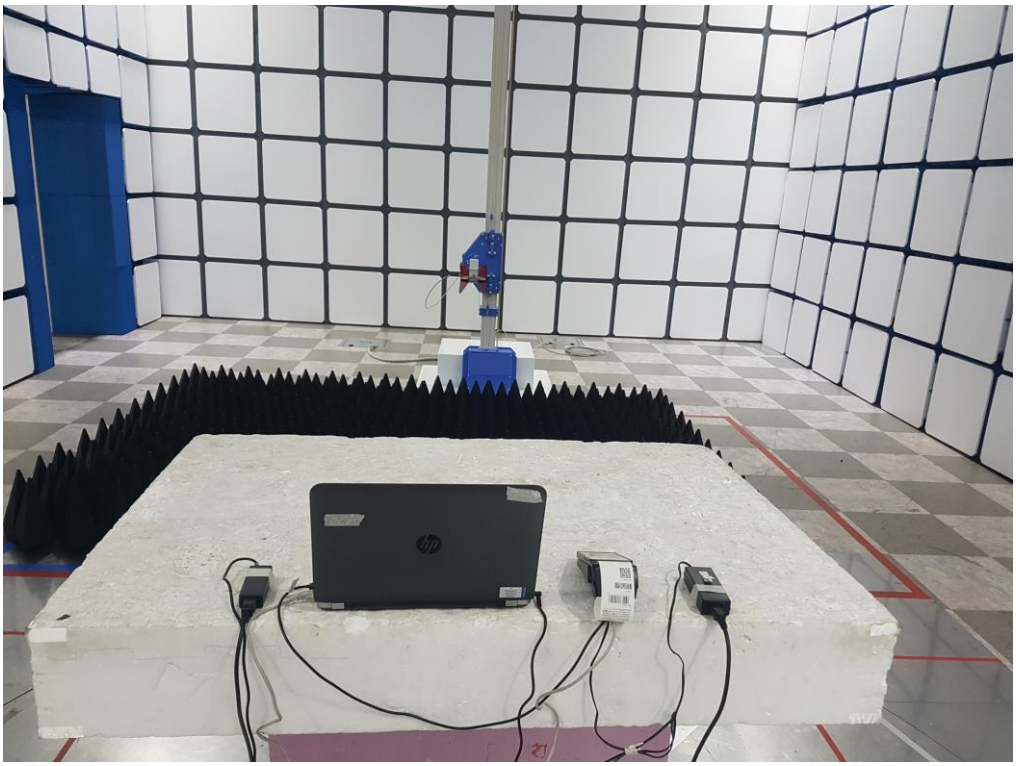
< 30 MHz ~ 1 GHz >



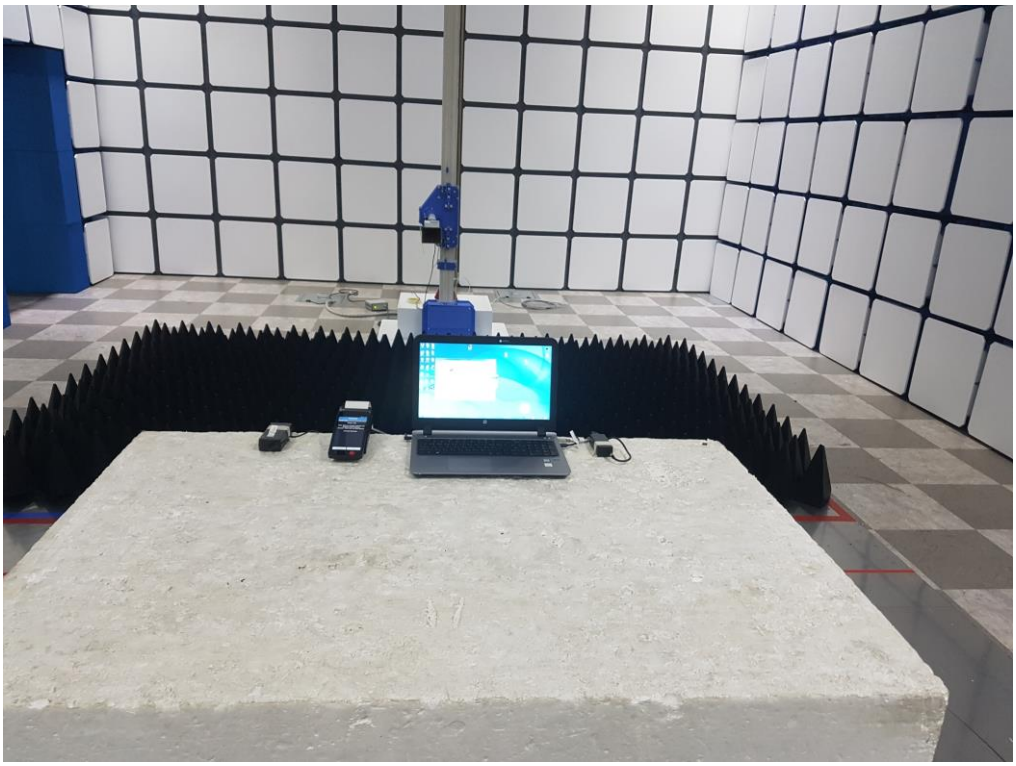


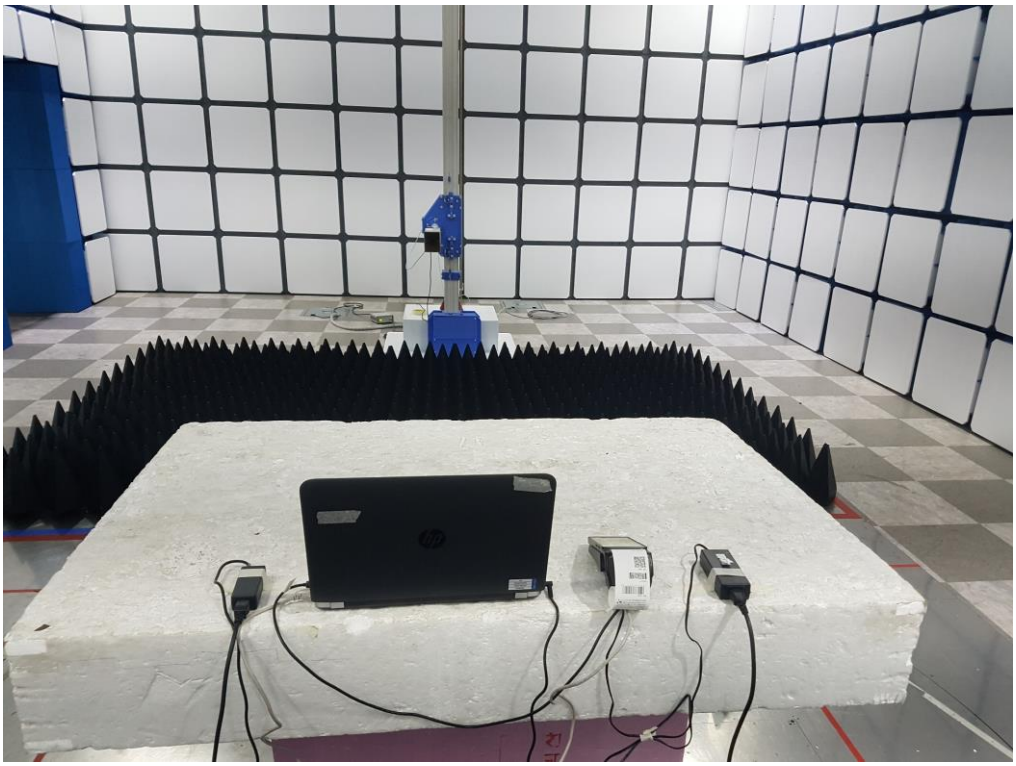
< (1 ~ 6) GHz >





< (6 ~ 18) GHz >





Appendix 3

Photographs of EUT

A3-1. EUT

1. Front View of Product

2. Rear View of Product

A3-1. EUT

3. Front View of Adapter

4. Rear View of Adapter

A3-1. EUT

5. Label View of Adapter

Appendix 4

Report Revision History

Revision Date	Description	Revised By	Revision Reviewed By
None	Original	N/A	N/A