

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. : DREFCC1807-0230(1)

2. Client / Applicant

• Name : Kidsoft

• Address : 406ho, 107, Gwanggyo-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do

3. Use of Report : Grant of Certification

4. Product Name / Model Name : Carrie watch / KS-W100S

5. Test Standard : ANSI C63.4:2014

FCC Part 15 Subpart B

(Class B personal computers and peripherals)

6. Date of Test : Jun. 21. 2018 ~ Jul. 17. 2018

7. Testing Environment : Temperature (23 ~ 25) °C , Humidity (44 ~ 53) % R.H.

8. Test Result : Refer to the attached Test Result

Affirmation	Tested by	Reviewed by
	Name : JunHo 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.

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Aug. 23. 2018

DT&C Co., Ltd.

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

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1. General Remarks

This report contains the result of tests performed by :

DT&C Co., Ltd.

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

<http://www.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
Site Filing	USA	FCC	KR0034 101842 678747, 596748, 804488, 165783	Accredited 2.948 Listed
	Canada	IC	5740A-3 5740A-4	Registered
	Japan	VCCI	C-1427 R-1364, R-3385, R-4076, R-4180, R-4496 T-1442, G-10338, G-754, G-10815	Registered
Certification	Korea	KC	KR0034	Designation
	Germany	TUV	CARAT 17 11 89112 005	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	Kidsoft 406ho, 107, Gwanggyo-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do
Manufacturer	ShenZhen Continental Wireless Co. Ltd. North 23F, Dongfang Technology Building, Keyuan Middle Road, Nanshan Science Park, Shenzhen
Product Name	Carrie watch
Model Name	KS-W100S
Add Model Name	None
Maximum Internal Frequency	26 MHz
Software Version	None
Hardware Version	None
FCC ID	2AQNY-KS-W100S
Rated Power	DC 3.7 V
Remarks	WLAN : 2412~2472 MHz, 2422~2462 MHz Bluetooth : 2402~2480 MHz

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	CHARGING MODE	The EUT is charged by adapter.
2	PC LINK MODE	The EUT communicates with Notebook by the USB cable.

4.3 Test Configuration Mode

No.	Mode	Description
1	CHARGING MODE	The EUT connects with adapter by the USB cable.
2	PC LINK MODE	The EUT connects with Notebook by the USB cable.

4.4 Supported Equipment

Used*	Product Type	Manufacturer	Model	Remarks
AE	Notebook	HP	HSTNN-Q95C	5CD6256M29
AE	AD/DC ADAPTER	CHICONY POWER	HSTNN-CA40	None
*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
I/O	USB	1.0	Shield	Metal	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	AC 120	60 Hz	Single	None

5. Test Summary

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

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

-Conducted Disturbance

Frequency [MHz]	Phase	Result [dB μ V]	Detector	Limit [dB μ V]	Margin [dB]
0.44650	N	27.13	QP	56.94	29.81

-Radiated Disturbance

Frequency [MHz]	Pol.	Result [dB μ V/m]	Detector	Limit [dB μ V/m]	Margin [dB]
58.979	Vertical	25.51	QP	30.00	4.49

6. Test Environment

Test Items	Test date (YYYY-MM-DD)	Temp. (°C)	Humidity (% R.H.)	Pressure (kPa)
Conducted Disturbance	2018-06-21	25	49	-
	2018-07-17	23	53	
Radiated Disturbance	2016-06-22	24	44	
	2016-06-28	25	47	
	2018-07-17	25	47	

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		
	EUT Operation mode	1, 2		
Limits – Class A				
Frequency (MHz)	Limit dB μ V			
	Quasi-Peak	Average		
0.15 to 0.50	79	66		
0.50 to 30	73	60		
Limits – Class B				
Frequency (MHz)	Limit dB μ V			
	Quasi-Peak	Average		
0.15 to 0.50	66 to 56	56 to 46		
0.50 to 5	56	46		
5 to 30	60	50		

Measurement uncertainty	
Expended uncertainty U (95 %, Confidence level, $k = 2$)	2.36 dB

Measurement Instrument					
Description	Model	Manufacturer	Identifier	Cal. Date	Cal. Due
MEASUREMENT SOFTWARE	EMI-C VER. 2.00.0171	TSJ	N/A	N/A	N/A
EMI TEST RECEIVER	ESR	ROHDE & SCHWARZ	101767	2017.12.26	2018.12.26
LISN	NNLK8121	SCHWARZBECK	NNLK8121-580	2018.07.09	2019.07.09
PULSE LIMITER	ESH3-Z2	ROHDE & SCHWARZ	101334	2017.12.26	2018.12.26

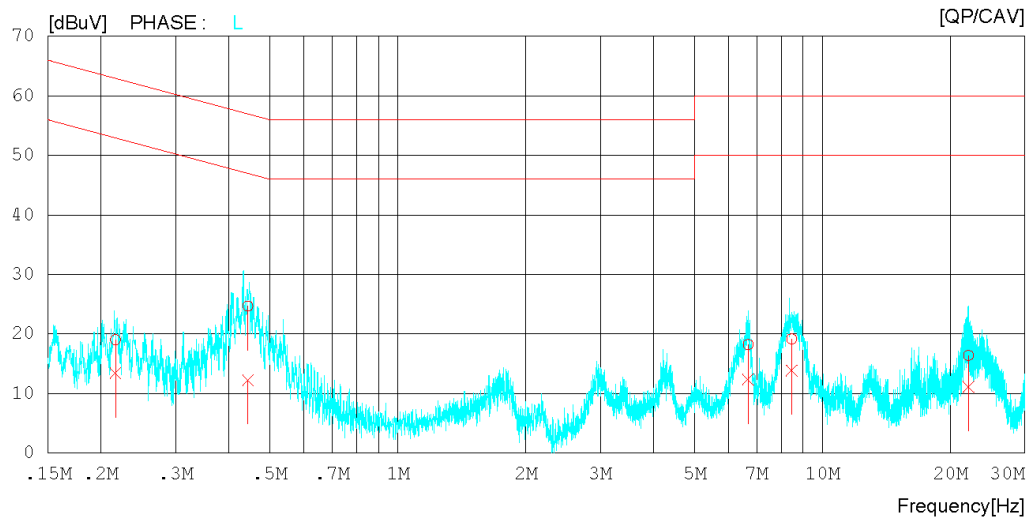
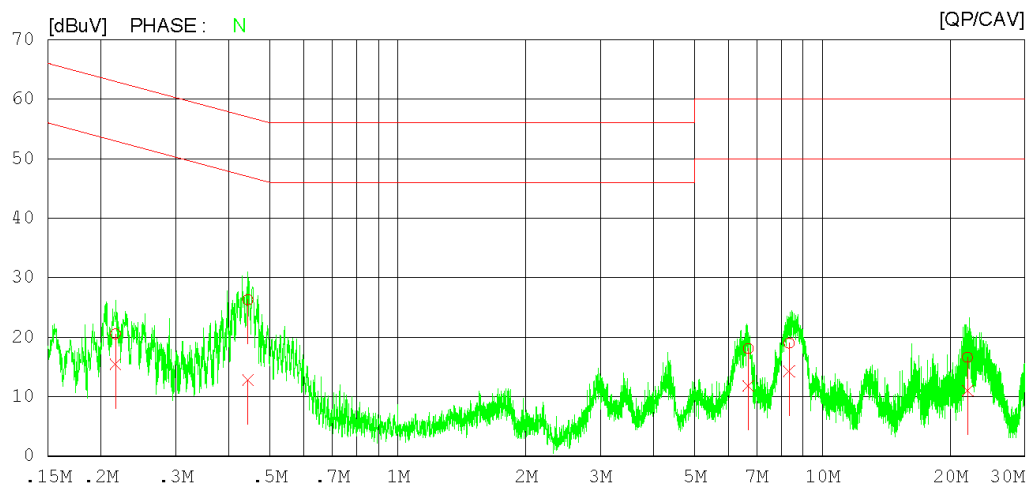
Mains terminal disturbance voltage _ Measurement data			
Test configuration mode	1	EUT Operation mode	1
Test voltage (V)	120	Test Frequency (Hz)	60

Results of Conducted Emission

DT&C
Date : 2018-06-21

Order No. : DTNC1806-04618
Power Supply : 120 V 60 Hz
Temp/Humi : 25 °C 49 % R.H.
Test Condition : CHARGING

LIMIT : CISPR32_B QP
CISPR32_B AV



Results of Conducted Emission

DT&C
Date : 2018-06-21

Order No. : DTNC1806-04618
Power Supply : 120 V 60 Hz
Temp/Humi : 25 °C 49 % R.H.
Test Condition : CHARGING

LIMIT : CISPR32_B QP
CISPR32_B AV

NO	FREQ [MHz]	READING		C.FACTOR [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dBuV]	CAV [dBuV]		QP [dBuV]	CAV [dBuV]	QP [dBuV]	CAV [dBuV]	QP [dBuV]	CAV [dBuV]	
1	0.21620	10.45	5.32	10.10	20.55	15.42	62.96	52.96	42.41	37.54	N
2	0.44350	16.15	2.65	10.12	26.27	12.77	57.00	47.00	30.73	34.23	N
3	6.69000	7.72	1.46	10.35	18.07	11.81	60.00	50.00	41.93	38.19	N
4	8.34938	8.58	3.86	10.40	18.98	14.26	60.00	50.00	41.02	35.74	N
5	21.96827	5.88	0.27	10.74	16.62	11.01	60.00	50.00	43.38	38.99	N
6	0.21610	8.95	3.29	10.09	19.04	13.38	62.97	52.97	43.93	39.59	L
7	0.44350	14.60	2.13	10.11	24.71	12.24	57.00	47.00	32.29	34.76	L
8	6.68711	7.89	2.01	10.34	18.23	12.35	60.00	50.00	41.77	37.65	L
9	8.46197	8.79	3.47	10.39	19.18	13.86	60.00	50.00	40.82	36.14	L
10	22.08608	5.68	0.39	10.73	16.41	11.12	60.00	50.00	43.59	38.88	L

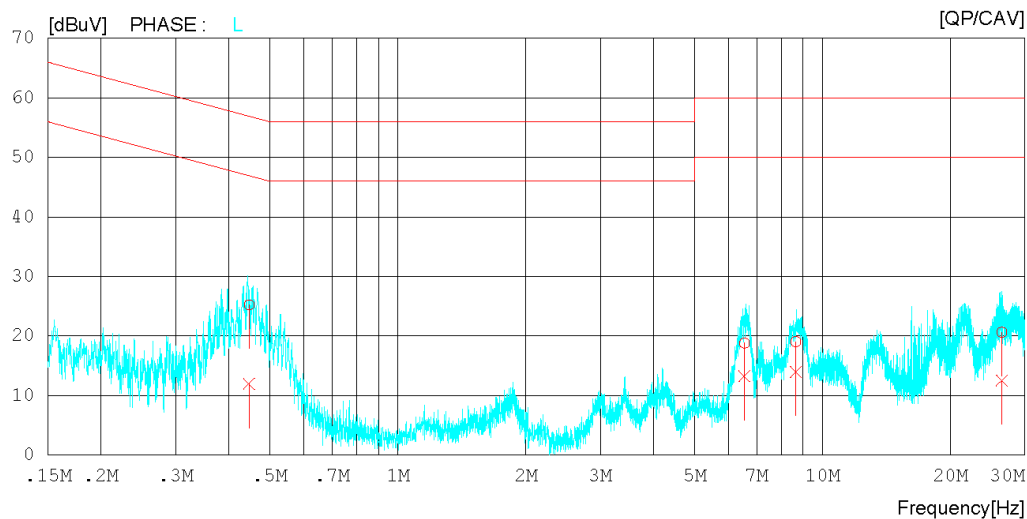
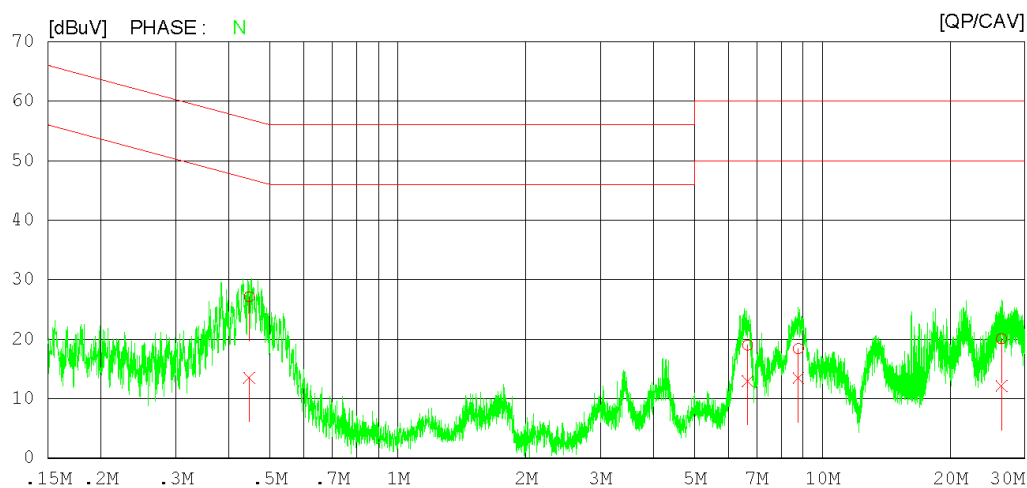
Mains terminal disturbance voltage _ Measurement data			
Test configuration mode	2	EUT Operation mode	2
Test voltage (V)	120	Test Frequency (Hz)	60

Results of Conducted Emission

DT&C
Date : 2018-07-17

Order No. : DTNC1806-04618
Power Supply : 120 V 60 Hz
Temp/Humi : 23 °C 53 % R.H.
Test Condition : PC LINK

LIMIT : CISPR32_B QP
CISPR32_B AV



Results of Conducted Emission

DT&C
Date : 2018-07-17

Order No. : DTNC1806-04618
Power Supply : 120 V 60 Hz
Temp/Humi : 23 °C 53 % R.H.
Test Condition : PC LINK

LIMIT : CISPR32_B QP
CISPR32_B AV

NO	FREQ [MHz]	READING		C.FACTOR [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dBuV]	CAV [dBuV]		QP [dBuV]	CAV [dBuV]	QP [dBuV]	CAV [dBuV]	QP [dBuV]	CAV [dBuV]	
1	0.44650	17.06	3.43	10.07	27.13	13.50	56.94	46.94	29.81	33.44	N
2	6.66842	8.68	2.66	10.30	18.98	12.96	60.00	50.00	41.02	37.04	N
3	8.78200	8.06	3.11	10.35	18.41	13.46	60.00	50.00	41.59	36.54	N
4	26.40714	9.29	1.35	10.77	20.06	12.12	60.00	50.00	39.94	37.88	N
5	0.44650	15.17	1.89	10.09	25.26	11.98	56.94	46.94	31.68	34.96	L
6	6.55669	8.47	2.93	10.34	18.81	13.27	60.00	50.00	41.19	36.73	L
7	8.66014	8.64	3.58	10.40	19.04	13.98	60.00	50.00	40.96	36.02	L
8	26.48037	9.79	1.68	10.84	20.63	12.52	60.00	50.00	39.37	37.48	L

Calculation

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

7.2 Radiated Disturbance

ANSI C63.4	Radiated disturbance 30 MHz – 18 GHz			Result
Method: Preliminary (peak) measurements were performed at an antenna to EUT separation distance of 10 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	
	EUT Operation mode		1, 2	
Radiated Disturbance below 1 000 MHz				
Frequency range (MHz)	Quasi-peak limit dBµV/m			
	Class A (10 m distance)		Class B (3 m distance)	
30 to 88	39.1		40	
88 to 216	43.5		43.5	
216 to 960	46.4		46	
960 to 1 000	49.5		54	
According to 15.109(g), as an alternative to the radiated emission limit shown above, digital devices may be shown to comply with the standards(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			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)			4.16 dB, (30 ~ 1 000) MHz 3.74 dB, (1 ~ 6) GHz	

Measurement Instrument					
Description	Model	Manufacturer	Identifier	Cal. Date	Cal. Due
MEASUREMENT SOFTWARE	EMI-R VER. 2.00.0177	TSJ	N/A	N/A	N/A
EMI TEST RECEIVER	ESU	ROHDE & SCHWARZ	100014	2017.11.17	2018.11.17
TRILOG BROADBAND TEST-ANTENNA	VULB9160	SCHWARZBECK	9160-3363	2016.09.05	2018.09.05
LOW NOISE PRE AMPLIFIER	MLA-10K01-B01-27	TSJ	1760253	2018.05.09	2019.05.09
EMI TEST RECEIVER	ESR7	ROHDE & SCHWARZ	101061	2018.02.13	2019.02.13
TRILOG BROADBAND TEST-ANTENNA	VULB9168	SCHWARZBECK	798	2018.04.23	2020.04.23
LOW NOISE PRE AMPLIFIER	MLA-010K01-B01-27	TSJ	1844538	2018.02.27	2019.02.27
HORN ANTENNA WITH PREAMPLIFIER	EM-6969	ELECTRO-METRICS	156	2017.02.10	2019.02.10
	MLA-0618-B03-34	TSJ	1785642	2018.01.02	2019.01.02
PRE AMPLIFIER	8449B	H.P	3008A00887	2017.09.06	2018.09.06
HORN ANTENNA	3117	ETS-LINDGREN	00152093	2018.03.26	2020.03.26
(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

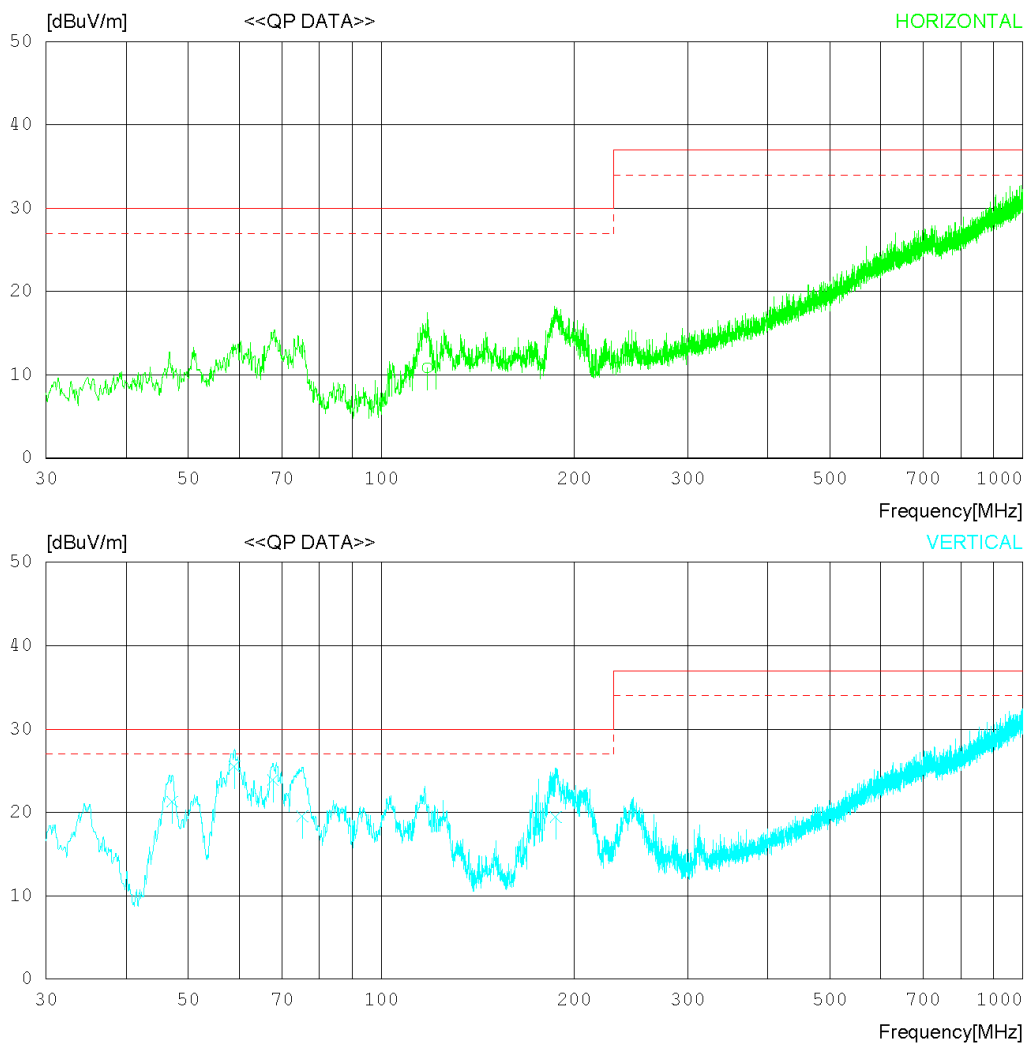
2018-06-22

RADIATED EMISSION

Date 2018-06-22

Order No. DTNC1806-04618
Power Supply 120 V 60 Hz
Temp/Humi 24 °C 44 % R.H.
Test Condition CHARGING

LIMIT : CISPR Pub.32 Class B (10m)
MARGIN: 3 dB



2018-06-22

RADIATED EMISSION

Date 2018-06-22

Order No. DTNC1806-04618
Power Supply 120 V 60 Hz
Temp/Humi 24 °C 44 % R.H.
Test Condition CHARGING

LIMIT : CISPR Pub.32 Class B (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]
----- Horizontal -----										
1	117.905	26.90	10.02	3.30	29.37	10.85	30.00	19.15	400	165
----- Vertical -----										
2	47.218	35.20	13.37	2.24	29.52	21.29	30.00	8.71	100	185
3	58.979	40.10	12.47	2.42	29.48	25.51	30.00	4.49	100	116
4	67.709	39.50	11.27	2.57	29.47	23.87	30.00	6.13	200	222
5	75.226	36.40	9.87	2.70	29.45	19.52	30.00	10.48	200	346
6	186.894	33.50	11.20	4.01	29.27	19.44	30.00	10.56	100	69

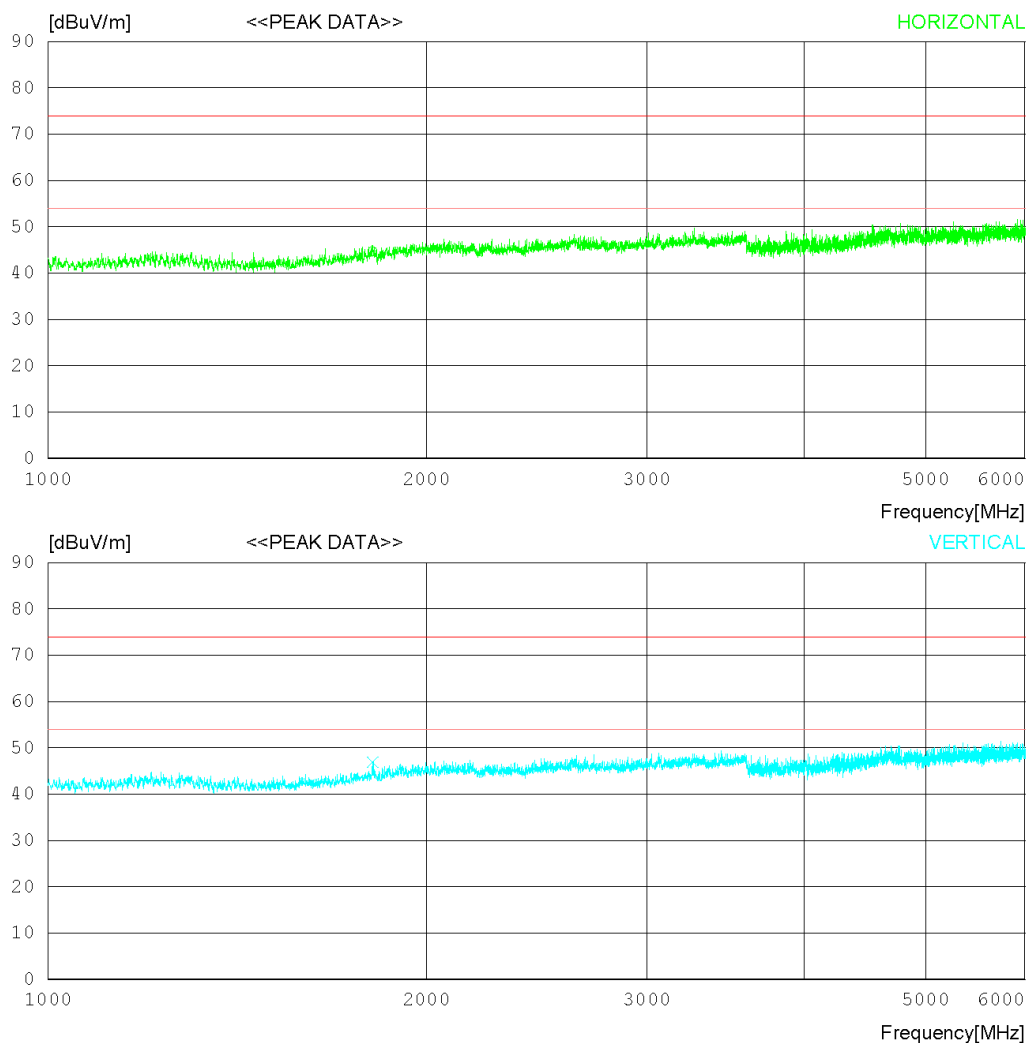
Radiated disturbance at (1 ~ 6) GHz _Peak measurement data			
Test configuration mode	1	EUT Operation mode	1
Test voltage (V)	120	Test Frequency (Hz)	60

RADIATED EMISSION

Date 2018-06-28

Order No. DTNC1806-04618
Power Supply 120 V 60 Hz
Temp/Humi 25 'C 47 % R.H.
Test Condition CHARGING

LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Peak)
FCC Part15 Subpart.B Class B (3m) - 18G(Avg)



RADIATED EMISSION

Date 2018-06-28

Order No.	DTNC1806-04618
Power Supply	120 V 60 Hz
Temp/Humi	25 °C 47 % R.H.
Test Condition	CHARGING

LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Peak)
FCC Part15 Subpart.B Class B (3m) - 18G(Avg)

No.	FREQ	READING	ANT	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
	[MHz]	PEAK [dBuV]	FACTOR [dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[cm]	[DEG]
----- Horizontal -----										
1	1813.125	42.30	30.45	4.39	32.44	44.70	74.0	29.3	100	358
2	5686.875	39.10	34.60	8.00	32.70	49.00	74.0	25	100	358
----- Vertical -----										
3	1813.125	44.50	30.45	4.39	32.44	46.90	74.0	27.1	100	1
4	5686.875	38.90	34.60	8.00	32.70	48.80	74.0	25.2	100	322

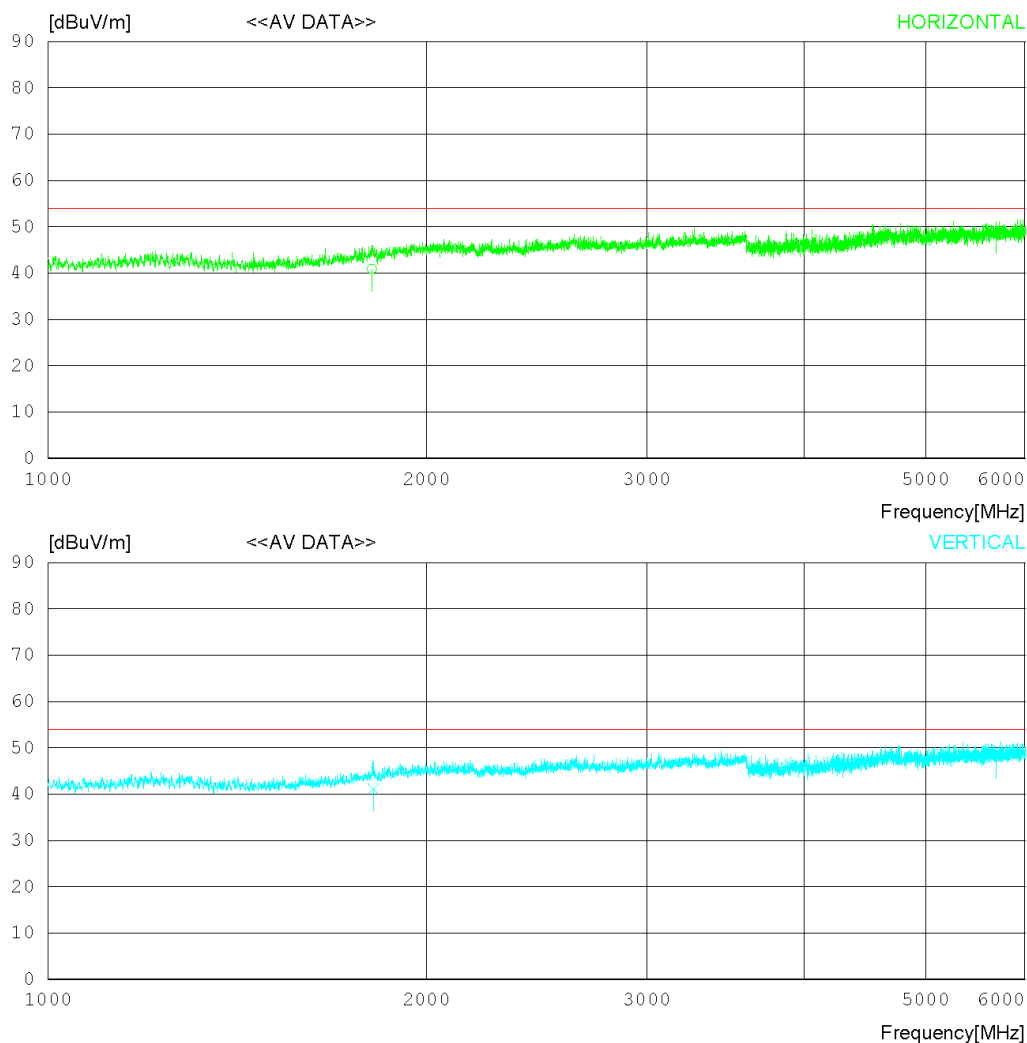
Radiated disturbance at (1 ~ 6) GHz _Average measurement data			
Test configuration mode	1	EUT Operation mode	1
Test voltage (V)	120	Test Frequency (Hz)	60

RADIATED EMISSION

Date 2018-06-28

Order No. DTNC1806-04618
Power Supply 120 V 60 Hz
Temp/Humi 25 'C 47 % R.H.
Test Condition CHARGING

LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Avg)
FCC Part15 Subpart.B Class B (3m) - 18G(Avg)



RADIATED EMISSION

Date 2018-06-28

Order No. DTNC1806-04618
Power Supply 120 V 60 Hz
Temp/Humi 25 °C 47 % R.H.
Test Condition CHARGING

LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Avg)
FCC Part15 Subpart.B Class B (3m) - 18G(Avg)

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	1810.577	38.50	30.44	4.39	32.44	40.89	54.00	13.11	100	10
2	5690.321	39.20	34.60	8.01	32.71	49.10	54.00	4.90	100	116
----- Vertical -----										
3	1815.214	38.60	30.46	4.39	32.44	41.01	54.00	12.99	100	112
4	5685.226	38.20	34.60	7.99	32.70	48.09	54.00	5.91	100	322

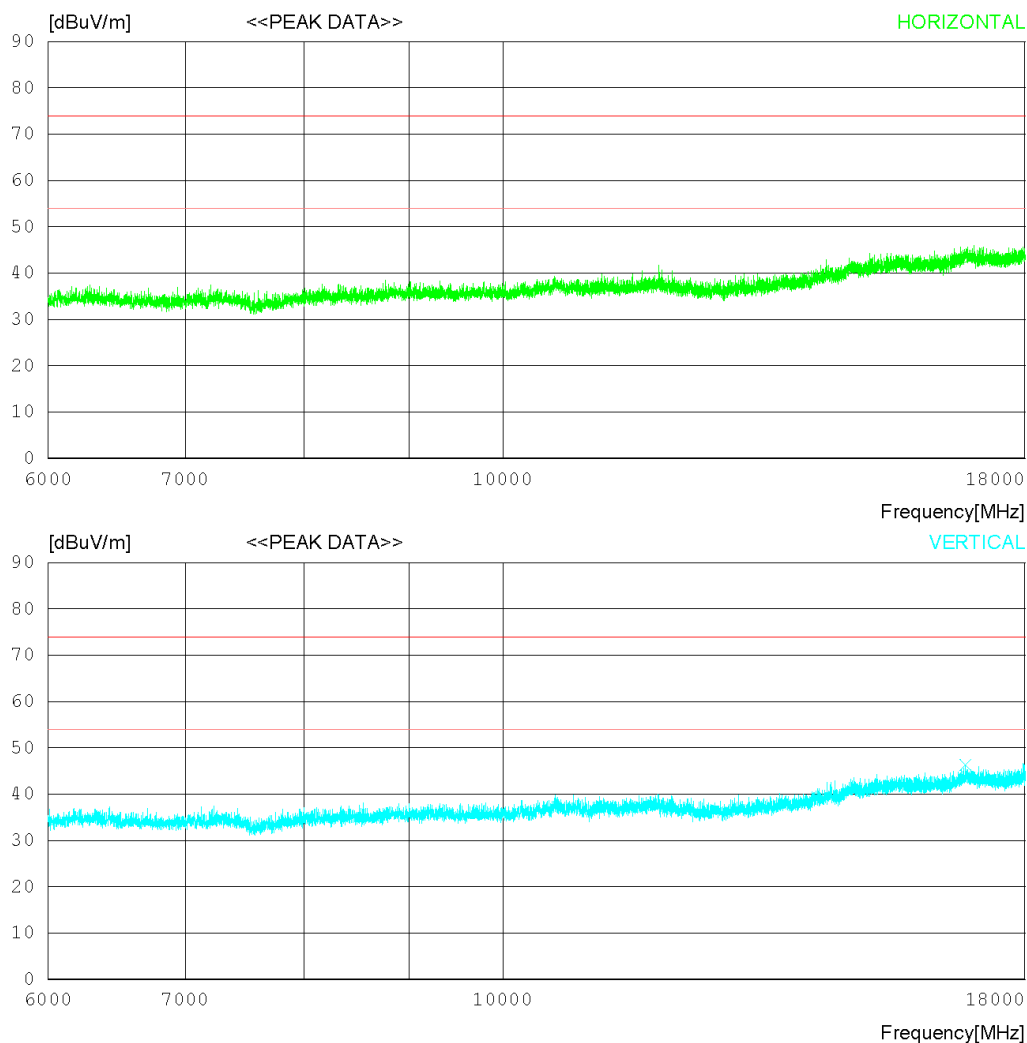
Radiated disturbance at (6 ~ 18) GHz _Peak measurement data			
Test configuration mode	1	EUT Operation mode	1
Test voltage (V)	120	Test Frequency (Hz)	60

RADIATED EMISSION

Date 2018-06-28

Order No. DTNC1806-04618
Power Supply 120 V 60 Hz
Temp/Humi 25 °C 47 % R.H.
Test Condition CHARGING

LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Peak)
FCC Part15 Subpart.B Class B (3m) - 18G(Avg)



RADIATED EMISSION

Date 2018-06-28

Order No.	DTNC1806-04618
Power Supply	120 V 60 Hz
Temp/Humi	25 °C 47 % R.H.
Test Condition	CHARGING

LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Peak)
FCC Part15 Subpart.B Class B (3m) - 18G(Avg)

No.	FREQ	READING	ANT	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
	[MHz]	PEAK [dBuV]	FACTOR [dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[cm]	[DEG]
----- Horizontal -----										
1	16829.250	27.30	37.25	14.98	36.18	43.35	74.0	30.65	100	358
----- Vertical -----										
2	16829.250	30.20	37.25	14.98	36.18	46.25	74.0	27.75	100	358

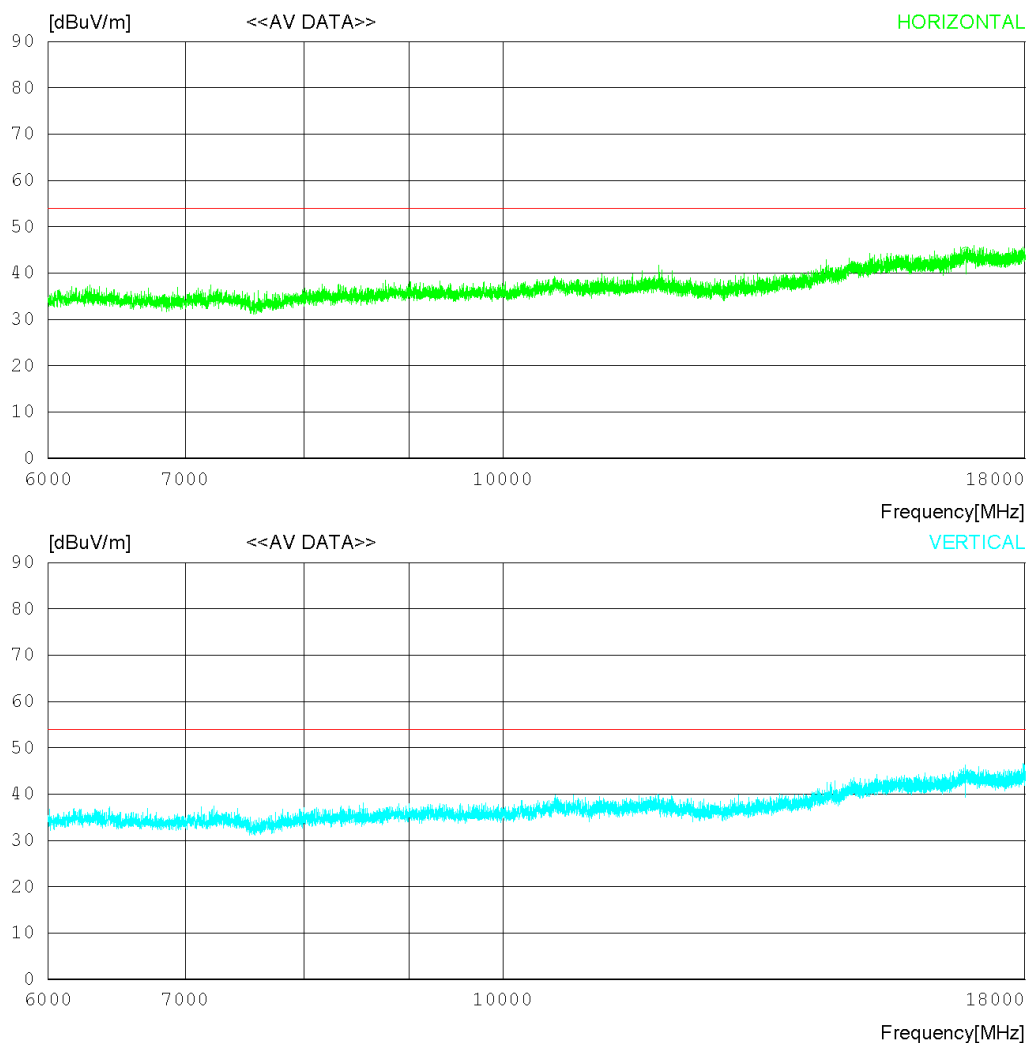
Radiated disturbance at (6 ~ 18) GHz _Average measurement data			
Test configuration mode	1	EUT Operation mode	1
Test voltage (V)	120	Test Frequency (Hz)	60

RADIATED EMISSION

Date 2018-06-28

Order No. DTNC1806-04618
Power Supply 120 V 60 Hz
Temp/Humi 25 °C 47 % R.H.
Test Condition CHARGING

LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Avg)
FCC Part15 Subpart.B Class B (3m) - 18G(Avg)



RADIATED EMISSION

Date 2018-06-28

Order No.	DTNC1806-04618
Power Supply	120 V 60 Hz
Temp/Humi	25 °C 47 % R.H.
Test Condition	CHARGING

LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Avg)
FCC Part15 Subpart.B Class B (3m) - 18G(Avg)

No.	FREQ	READING	ANT	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
	[MHz]	CAV [dBuV]	FACTOR [dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[cm]	[DEG]
----- Horizontal -----										
1	16832.510	28.50	37.25	14.97	36.18	44.54	54.00	9.46	100	116
----- Vertical -----										
2	16830.210	28.00	37.25	14.98	36.18	44.05	54.00	9.95	100	323

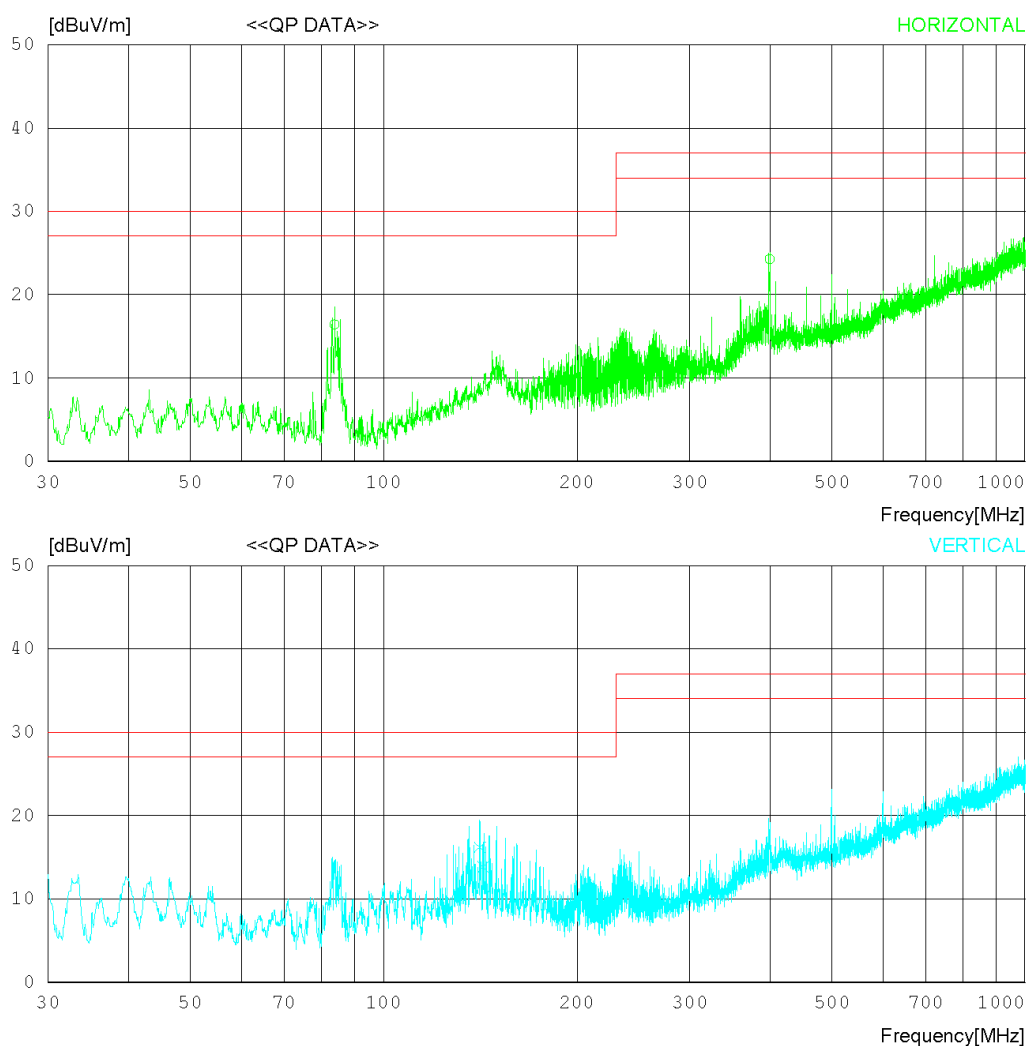
Radiated disturbance at (30 ~ 1000) MHz _Measurement data			
Test configuration mode	2	EUT Operation mode	2
Test voltage (V)	120	Test Frequency (Hz)	60

RADIATED EMISSION

Date 2018-07-17

Order No. DTNC1806-04618
Power Supply 120 V 60 Hz
Temp/Humi 23 °C 44 % R.H.
Test Condition PC LINK

LIMIT : 32 Class B (10m)
MARGIN: 3 dB



RADIATED EMISSION

Date 2018-07-17

Order No. DTNC1806-04618
Power Supply 120 V 60 Hz
Temp/Humi 23 °C 44 % R.H.
Test Condition PC LINK

LIMIT : 32 Class B (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]
----- Horizontal -----										
1	83.956	37.20	7.55	2.09	30.42	16.42	30.00	13.58	400	161
2	399.802	33.60	15.89	4.85	30.10	24.24	37.00	12.76	200	22
----- Vertical -----										
3	141.184	30.90	12.87	2.75	30.32	16.20	30.00	13.80	199	116
4	143.124	28.40	12.99	2.78	30.31	13.86	30.00	16.14	100	15

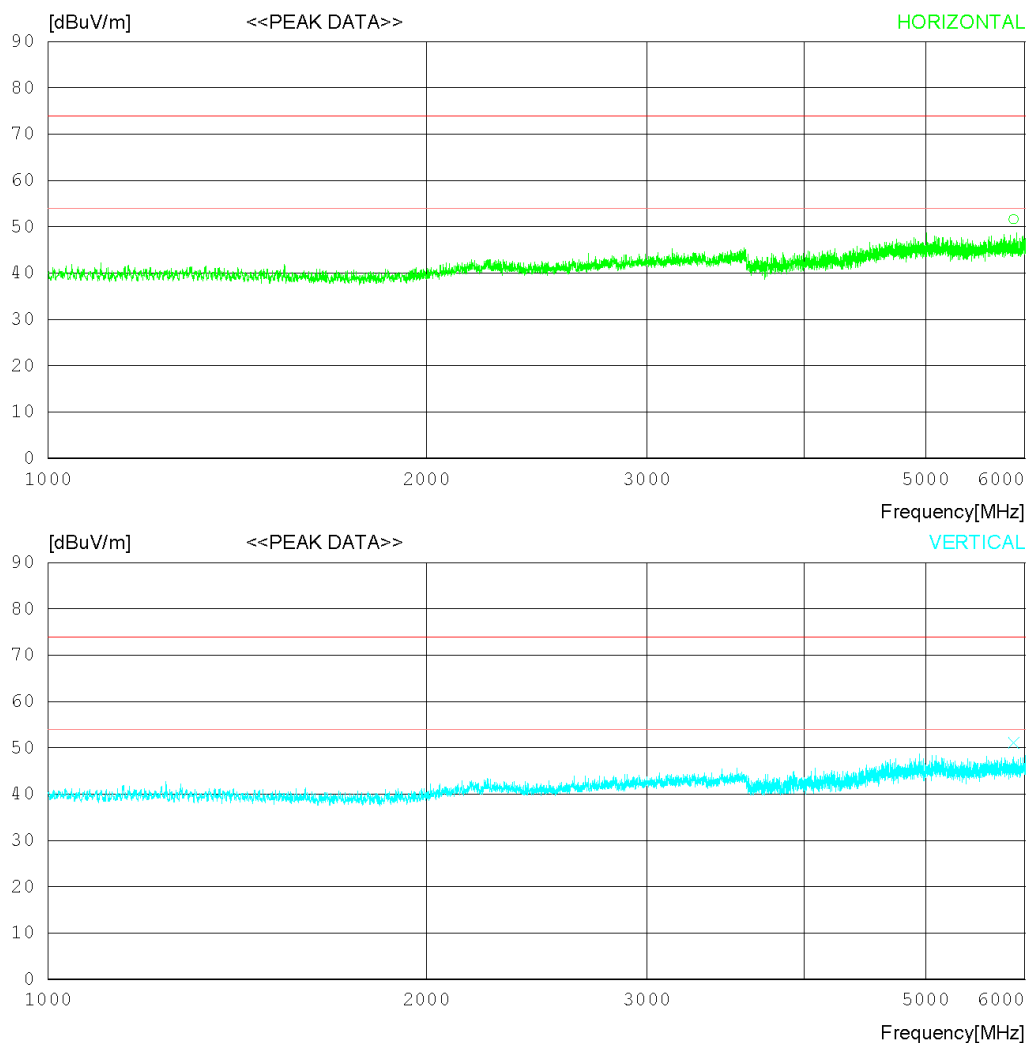
Radiated disturbance at (1 ~ 6) GHz _Peak measurement data			
Test configuration mode	2	EUT Operation mode	2
Test voltage (V)	120	Test Frequency (Hz)	60

RADIATED EMISSION

Date 2018-07-17

Order No. DTNC1806-04618
Power Supply 120 V 60 Hz
Temp/Humi 25 °C 47 % R.H.
Test Condition PC LINK

LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Peak)
FCC Part15 Subpart.B Class B (3m) - 18G(Avg)



RADIATED EMISSION

Date 2018-07-17

Order No. DTNC1806-04618
Power Supply 120 V 60 Hz
Temp/Humi 25 °C 47 % R.H.
Test Condition PC LINK

LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Peak)
FCC Part15 Subpart.B Class B (3m) - 18G(Avg)

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	5873.750	41.30	34.95	8.22	32.83	51.64	74.0	22.36	100	86
----- Vertical -----										
2	5873.750	40.70	34.95	8.22	32.83	51.04	74.0	22.96	100	116

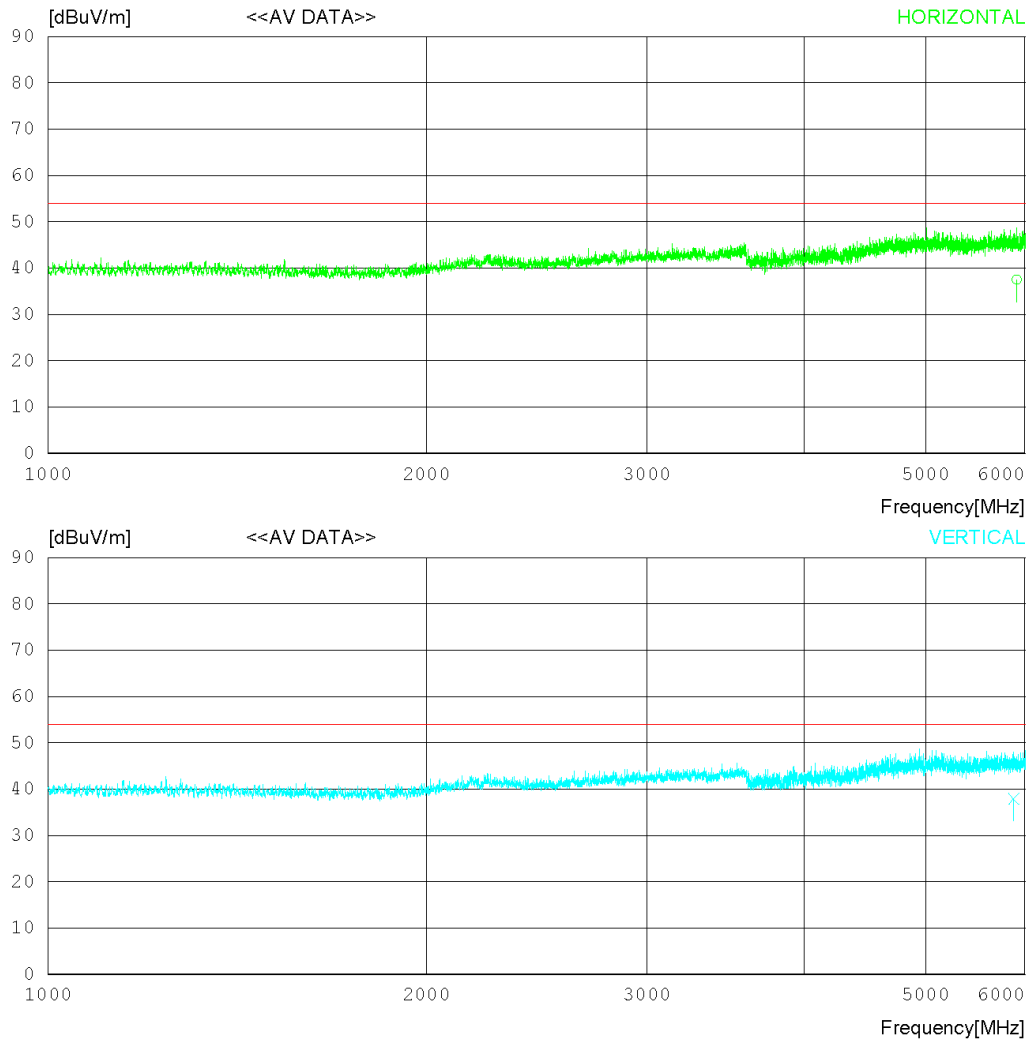
Radiated disturbance at (1 ~ 6) GHz _Average measurement data			
Test configuration mode	2	EUT Operation mode	2
Test voltage (V)	120	Test Frequency (Hz)	60

RADIATED EMISSION

Date 2018-07-17

Order No. DTNC1806-04618
Power Supply 120 V 60 Hz
Temp/Humi 25 'C 47 % R.H.
Test Condition PC LINK

LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Avg)
FCC Part15 Subpart.B Class B (3m) - 18G(Avg)



RADIATED EMISSION

Date 2018-07-17

Order No.	DTNC1806-04618
Power Supply	120 V 60 Hz
Temp/Humi	25 °C 47 % R.H.
Test Condition	PC LINK

LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Avg)
FCC Part15 Subpart.B Class B (3m) - 18G(Avg)

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	5908.750	30.10	32.02	8.23	32.86	37.49	54.00	16.51	100	86
----- Vertical -----										
2	5873.750	30.50	31.95	8.22	32.83	37.84	54.00	16.16	100	116

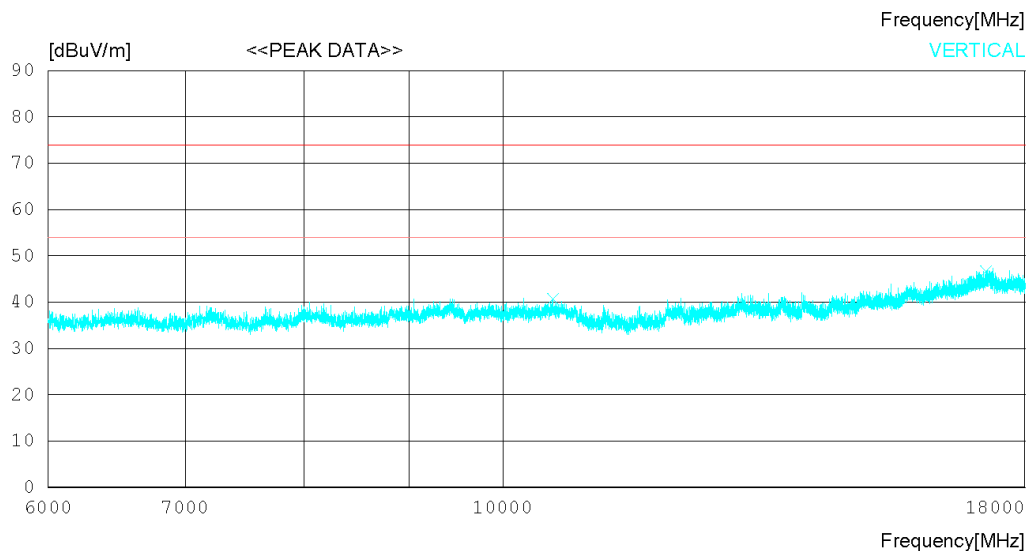
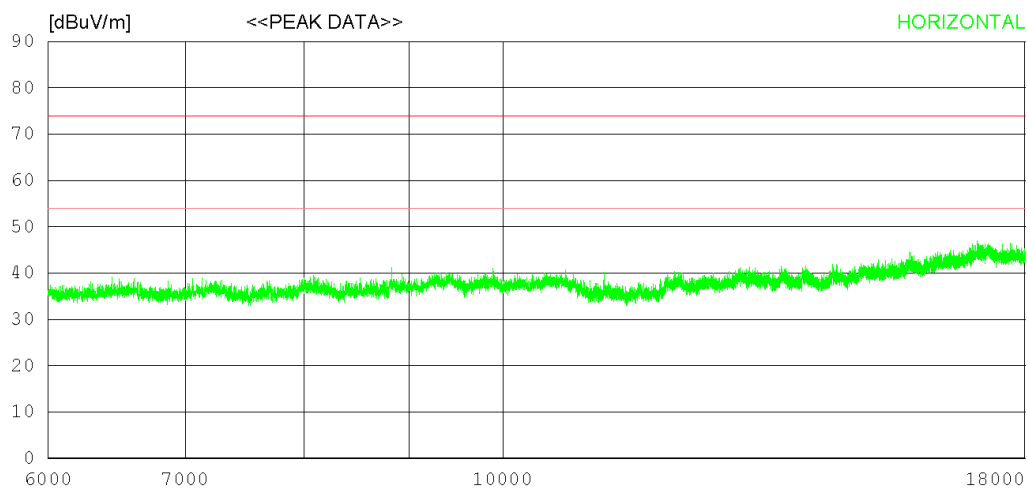
Radiated disturbance at (6 ~ 18) GHz _Peak measurement data			
Test configuration mode	2	EUT Operation mode	2
Test voltage (V)	120	Test Frequency (Hz)	60

RADIATED EMISSION

Date 2018-07-17

Order No. DTNC1806-04618
Power Supply 120 V 60 Hz
Temp/Humi 25 °C 47 % R.H.
Test Condition PC LINK

LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Peak)
FCC Part15 Subpart.B Class B (3m) - 18G(Avg)



RADIATED EMISSION

Date 2018-07-17

Order No. DTNC1806-04618
Power Supply 120 V 60 Hz
Temp/Humi 25 °C 47 % R.H.
Test Condition PC LINK

LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Peak)
FCC Part15 Subpart.B Class B (3m) - 18G(Avg)

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	17207.250	29.50	37.67	13.35	36.42	44.10	74.0	29.9	100	1
----- Vertical -----										
2	10583.250	34.50	32.49	11.40	37.70	40.69	74.0	33.31	100	358
3	17226.750	32.00	37.70	13.37	36.44	46.63	74.0	27.37	100	1

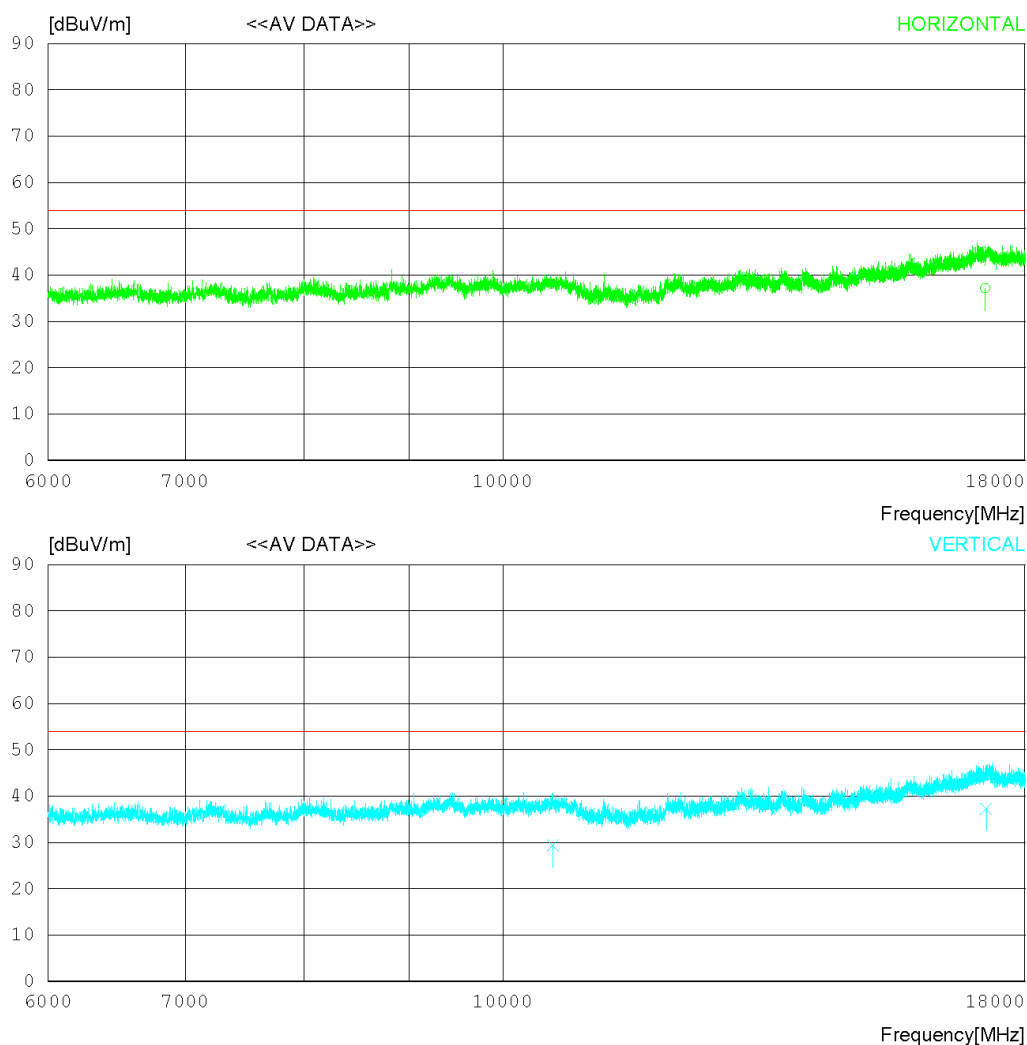
Radiated disturbance at (6 ~ 18) GHz _Average measurement data			
Test configuration mode	2	EUT Operation mode	2
Test voltage (V)	120	Test Frequency (Hz)	60

RADIATED EMISSION

Date 2018-07-17

Order No. DTNC1806-04618
Power Supply 120 V 60 Hz
Temp/Humi 25 °C 47 % R.H.
Test Condition PC LINK

LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Avg)
FCC Part15 Subpart.B Class B (3m) - 18G(Avg)



RADIATED EMISSION

Date 2018-07-17

Order No.	DTNC1806-04618
Power Supply	120 V 60 Hz
Temp/Humi	25 °C 47 % R.H.
Test Condition	PC LINK

LIMIT : FCC Part15 Subpart.B Class B (3m) - 18G(Avg)
FCC Part15 Subpart.B Class B (3m) - 18G(Avg)

No.	FREQ	READING	ANT	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
	[MHz]	CAV [dBuV]	FACTOR [dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[cm]	[DEG]
----- Horizontal -----										
1	17207.250	1.40	37.67	14.52	36.42	37.17	54.00	16.83	100	1
----- Vertical -----										
2	10583.250	3.30	32.49	11.29	37.70	29.38	54.00	24.62	100	358
3	17226.750	1.50	37.70	14.49	36.44	37.25	54.00	16.75	100	1

Calculation

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

8. Revision History

Date	Description	Revised By	Reviewed By
Jul. 24. 2018	Initial report	JunHo Park	KyoungHwan Bae
Aug. 23. 2018	This report is revised, because use of report was changed by manufacturer's request. (SDoC → CoC)	JunHo Park	KyoungHwan Bae

-End of test report-