TEST REPORT

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1. Client

- Name : Starnex Co., Ltd.
- Address : #201, Kolon Digital Tower Aston, 212, Gasan Digital 1-ro, Geumcheon-gu, Seoul, South Korea
- Date of Receipt : 2019-07-17

2. Use of Report : -

3. Name of Product and Model : Wearable digital communicator / DOMINO S1

4. Manufacturer and Country of Origin : Starnex Co., Ltd. / Korea

5. FCC ID : TN9DOMINOS1

6. Date of Test : 2019-08-26 to 2019-08-27

7. Test Standards : FCC Part 15 Subpart C, 15.247

8. Test Results : Refer to the test result in the test report

Affirmation	Tested by	Technical Manager
	Name : Seonjun Yun (Signature)	Name : Jaehyong Lee (Signature)

2019-09-24

KCTL Inc.

Report revision history

Date	Revision	Page No
2019-09-24	Initial report	-

CONTENTS

1. General information

Client	:	Starnex Co., Ltd.
Address	:	#201, Kolon Digital Tower Aston, 212, Gasan Digital 1-ro, Geumcheon-gu, Seoul, South Korea
Manufacturer	:	Starnex Co., Ltd
Address	:	#201, Kolon Digital Tower Aston, 212, Gasan Digital 1-ro, Geumcheon-gu, Seoul, South Korea
Laboratory	:	KCTL Inc.
Address	:	65, Sinwon-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Korea
Accreditations	:	FCC Site Designation No: KR0040, FCC Site Registration No: 687132 VCCI Registration No. : R-3327, G-198, C-3706, T-1849 Industry Canada Registration No. : 8035A KOLAS No.: KT231

2. Device information

Equipment under test	:	Wearable digital communicator
Model	:	DOMINO S1
Frequency range	:	902.6 ㎒ ~ 927.5 ㎒ (Half mode) 903.0 ㎒ ~ 927.5 ㎒ (Hi-fi mode)
Modulation technique	:	GFSK (FHSS)
Number of channels	:	250 ch (Half mode), 50 ch (Hi-fi mode)
Power source	:	DC 3.7 V
Antenna specification	:	FPCB Antenna
Antenna gain	:	-1.26 dBi
Software version	:	01.02.25
Hardware version	:	01.02.25
Test device serial No.	:	Radiated : 247dbc0358450c95 Conducted: 24687c03566ec2d3
Operation temperature	:	23 ℃

2.1. Accessory information

Equipment	Manufacturer	Model	Serial No.	Power source
N/A	-	-	-	-

2.2. Frequency/channel operations

This device contains the following capabilities:

HG(1)		HG(2)		HG(3)		HG(4)		HG(5)	
Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel
902.6	1	902.7	2	902.8	3	902.9	4	903	5
903.1	6	903.2	7	903.3	8	903.4	9	903.5	10
903.6	11	903.7	12	903.8	13	903.9	14	904	15
904.1	16	904.2	17	904.3	18	904.4	19	904.5	20
904.6	21	904.7	22	904.8	23	904.9	24	905	25
905.1	26	905.2	27	905.3	28	905.4	29	905.5	30
905.6	31	905.7	32	905.8	33	905.9	34	906	35
906.1	36	906.2	37	906.3	38	906.4	39	906.5	40
906.6	41	906.7	42	906.8	43	906.9	44	907	45
907.1	46	907.2	47	907.3	48	907.4	49	907.5	50
907.6	51	907.7	52	907.8	53	907.9	54	908	55
908.1	56	908.2	57	908.3	58	908.4	59	908.5	60
908.6	61	908.7	62	908.8	63	908.9	64	909	65
909.1	66	909.2	67	909.3	68	909.4	69	909.5	70
909.6	71	909.7	72	909.8	73	909.9	74	910	75
910.1	76	910.2	77	910.3	78	910.4	79	910.5	80
910.6	81	910.7	82	910.8	83	910.9	84	911	85
911.1	86	911.2	87	911.3	88	911.4	89	911.5	90
911.6	91	911.7	92	911.8	93	911.9	94	912	95
912.1	96	912.2	97	912.3	98	912.4	99	912.5	100
912.6	101	912.7	102	912.8	103	912.9	104	913	105
913.1	106	913.2	107	913.3	108	913.4	109	913.5	110
913.6	111	913.7	112	913.8	113	913.9	114	914	115
914.1	116	914.2	117	914.3	118	914.4	119	914.5	120
914.6	121	914.7	122	914.8	123	914.9	124	915	125
915.1	126	915.2	127	915.3	128	915.4	129	915.5	130
915.6	131	915.7	132	915.8	133	915.9	134	916	135
916.1	136	916.2	137	916.3	138	916.4	139	916.5	140
916.6	141	916.7	142	916.8	143	916.9	144	917	145
917.1	146	917.2	147	917.3	148	917.4	149	917.5	150
917.6	151	917.7	152	917.8	153	917.9	154	918	155
918.1	156	918.2	157	918.3	158	918.4	159	918.5	160
918.6	161	918.7	162	918.8	163	918.9	164	919	165
919.1	166	919.2	167	919.3	168	919.4	169	919.5	170
919.6	171	919.7	172	919.8	173	919.9	174	920	175
920.1	176	920.2	177	920.3	178	920.4	179	920.5	180
920.6	181	920.7	182	920.8	183	920.9	184	921	185
921.1	186	921.2	187	921.3	188	921.4	189	921.5	190
921.6	191	921.7	192	921.8	193	921.9	194	922	195
922.1	196	922.2	197	922.3	198	922.4	199	922.5	200
922.6	201	922.7	202	922.8	203	922.9	204	923	205
923.1	206	923.2	207	923.3	208	923.4	209	923.5	210
923.6	211	923.7	212	923.8	213	923.9	214	924	215
924.1	216	924.2	217	924.3	218	924.4	219	924.5	220
924.6	221	924.7	222	924.8	223	924.9	224	925	225
925.1	226	925.2	227	925.3	228	925.4	229	925.5	230
925.6	231	925.7	232	925.8	233	925.9	234	926	235
926.1	236	926.2	237	926.3	238	926.4	239	926.5	240
926.6	241	926.7	242	926.8	243	926.9	244	927	245
927.1	246	927.2	247	927.3	248	927.4	249	927.5	250

- Note$_{1)}$: Half mode uses HG(1)~(5) and Hi-fi mode uses only HG(5)
- Note$_{2)}$: Half mode frequency_902.6 ㎒, 915.0 ㎒, 927.5 ㎒(Lowest, Middle, Highest)
  Hi-fi mode frequency_903.0 ㎒, 915.0 ㎒, 927.5 ㎒(Lowest, Middle, Highest)

2.3. Peak output power

PKPM1 Peak-reading power meter method

The maximum peak conducted output power may be measured using a broadband peak RF power meter. The power meter shall have a video bandwidth that is greater than or equal to the *DTS bandwidth* and shall utilize a fast-responding diode detector.

-Peak output power

Mode	Channel	Frequency [㎒]	Peak output power [dBm]
Half	Lowest	902.6	26.29
	Middle	915.0	26.49
	Highest	927.5	26.89
Hi-fi	Lowest	903.0	26.29
	Middle	915.0	26.59
	Highest	927.5	26.89

Note1) : The above peak output power were retested results.

3. Antenna requirement

Requirement of FCC part section 15.203:
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

- The transmitter has permanently attached FPCB Antenna.

4. Summary of tests

FCC Part section(s)	Parameter	Test results
15.247(b)(1), (4)	Maximum peak output power	N/T(Note1)
15.247(a)(1)	Carrier frequency separation	N/T(Note1)
15.247(a)(1)	20dB channel bandwidth	N/T(Note1)
15.247(a)(iii) 15.247(b)(1)	Number of hopping channel	N/T(Note1)
15.247(a) (iii)	Time of occupancy(dwell time)	N/T(Note1)
15.205(a), 15.209(a) 15.247(d),	Spurious emission	Pass
	Band-edge, restricted band	Pass
15.207(a)	Conducted Emissions	Pass

Notes: (N/T: Not Tested, N/A: Not Applicable)

1. These test item was performed. (Model Name: DOMINO S1, FCC ID: TN9DOMINOS1, Test Report No. KR16-SRF0024 issued on 11, October, 2016 by KCTL Inc.)
2. According to exploratory test no any obvious emission were detected from 9 ㎑ to 30 ㎒. Although these tests were performed other than open field site, adequate comparison measurements were confirmed against 30 m open field site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 414788.
3. The fundamental of the EUT was investigated in three orthogonal orientations X, Y and Z. It was determined that X orientation was worst-case orientation. Therefore, all final radiated testing was performed with the EUT in X orientation
4. The test procedure(s) in this report were performed in accordance as following.
   - ANSI C63.10-2013

5. Measurement uncertainty

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.10-2013.

All measurement uncertainty values are shown with a coverage factor of k=2 to indicated a 95 % level of confidence. The measurement data shown herein meets of exceeds the U_{CISPR} measurement uncertainty values specified in CISPR 16-4-2 and thus, can be compared directly to specified limits to determine compliance.

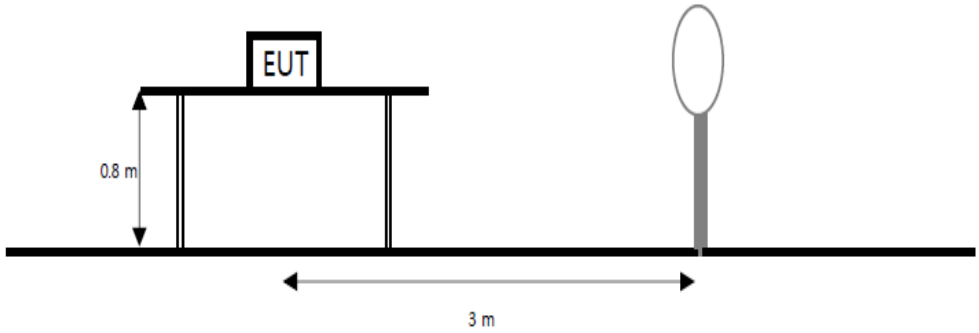
Parameter	Expanded uncertainty(±)	
Radiated spurious emissions	9 ㎑ ~ 30 ㎒:	2.28 ㏈
	30 ㎒ ~ 300 ㎒	4.98 ㏈
	300 ㎒ ~ 1 000 ㎒	5.14 ㏈
	1 ㎓ ~ 6 ㎓	6.70 ㏈
	Above 6 ㎓	6.60 ㏈
Conducted emissions	9 ㎑ ~ 150 ㎑	3.66 ㏈
	150 ㎑ ~ 30 ㎒	3.26 ㏈

6 Test results

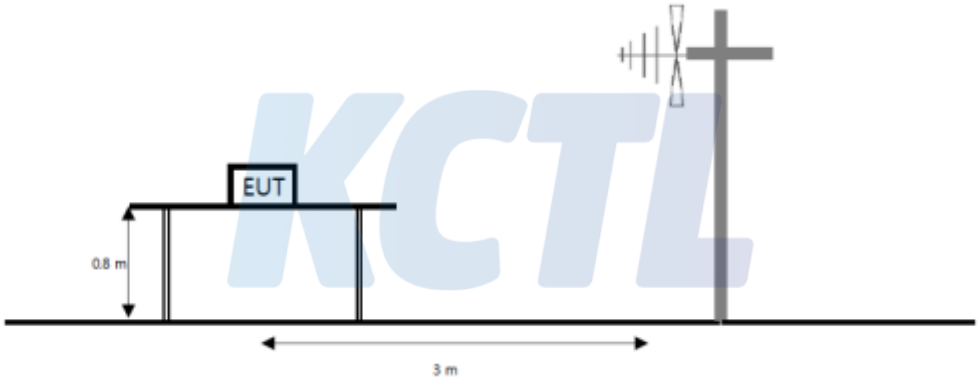
6.1. Radiated spurious emissions & band edge

Test setup

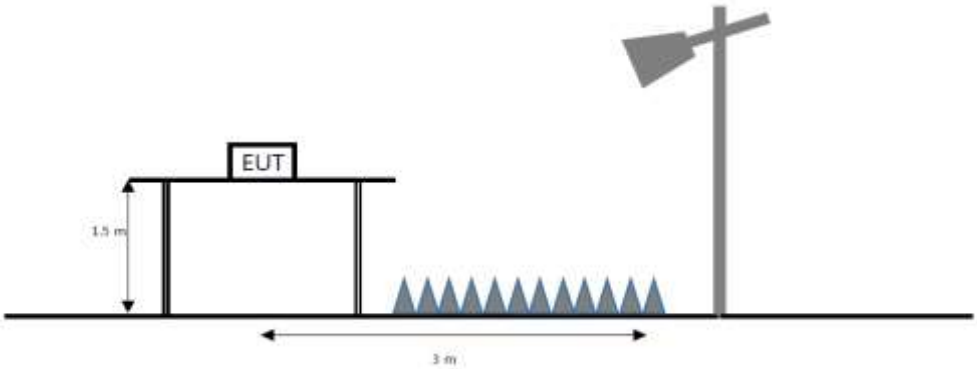
The diagram below shows the test setup that is utilized to make the measurements for emission from 9 ㎑ to 30 ㎒ Emissions



The diagram below shows the test setup that is utilized to make the measurements for emission from 30 ㎒ to 1 ㎓ emissions.



The diagram below shows the test setup that is utilized to make the measurements for emission from 1 ㎓ to the tenth harmonic of the highest fundamental frequency or to 40 ㎓ emissions, whichever is lower.



Limit

According to section 15.209(a), except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (㎒)	Field strength (㎶/m)	Measurement distance (m)
0.009 - 0.490	2 400/F(㎑)	300
0.490 - 1.705	24 000/F(㎑)	30
1.705 - 30	30	30
30 - 88	100**	3
88 - 216	150**	3
216 - 960	200**	3
Above 960	500	3

**Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54–72 ㎒, 76–88 ㎒, 174–216 ㎒ or 470–806 ㎒. However, operation within these frequency bands is permitted under other sections of this part, e.g., Section15.231 and 15.241.

According to section 15.205(a) and (b), only spurious emissions are permitted in any of the frequency bands listed below:

㎒	㎒	㎒	㎓
0.009 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
0.495 - 0.505	16.694 75 - 16.695 25	608 - 614	5.35 - 5.46
2.173 5 - 2.190 5	16.804 25 - 16.804 75	960 – 1 240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1 300 – 1 427	8.025 - 8.5
4.177 25 - 4.177 75	37.5 - 38.25	1 435 – 1 626.5	9.0 - 9.2
4.207 25 - 4.207 75	73 - 74.6	1 645.5 – 1 646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1 660 – 1 710	10.6 - 12.7
6.267 75 - 6.268 25	108 - 121.94	1 718.8 – 1 722.2	13.25 - 13.4
6.311 75 - 6.312 25	123 - 138	2 200 – 2 300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2 310 – 2 390	15.35 - 16.2
8.362 - 8.366	156.524 75 - 156.525 25	2 483.5 – 2 500	17.7 - 21.4
8.376 25 - 8.386 75	156.7 - 156.9	2 690 – 2 900	22.01 - 23.12
8.414 25 - 8.414 75	162.012 5 - 167.17	3 260 – 3 267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3 332 – 3 339	31.2 - 31.8
12.519 75 - 12.520 25	240 - 285	3 345.8 – 3 358	36.43 - 36.5
12.576 75 - 12.577 25	322 - 335.4	3 600 – 4 400	Above 38.6
13.36 - 13.41			

The field strength of emissions appearing within these frequency bands shall not exceed the limits shown in section 15.209. At frequencies equal to or less than 1 000 ㎒, compliance with the limits in section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1 000 ㎒, compliance with the emission limits in section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in section 15.35 apply to these measurements.

Test procedure
ANSI C63.10-2013

Test settings
Peak field strength measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = as specified in table
3. VBW ≥ (3×RBW)
4. Detector = peak
5. Sweep time = auto
6. Trace mode = max hold
7. Allow sweeps to continue until the trace stabilizes

Table. RBW as a function of frequency

Frequency	RBW
9 ㎑ to 150 ㎑	200 ㎐ to 300 ㎐
0.15 ㎒ to 30 ㎒	9 ㎑ to 10 ㎑
30 ㎒ to 1 000 ㎒	100 ㎑ to 120 ㎑
> 1 000 ㎒	1 ㎒

Average field strength measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1 ㎒
3. VBW = 1/T ≥ 1 ㎐
4. Averaging type was set to RMS to ensure that video filtering was applied in the power domain
5. Detector = peak
6. Sweep time = auto
7. Trace mode = max hold
8. Trace was allowed to run for at least 50 times(1/duty cycle) traces

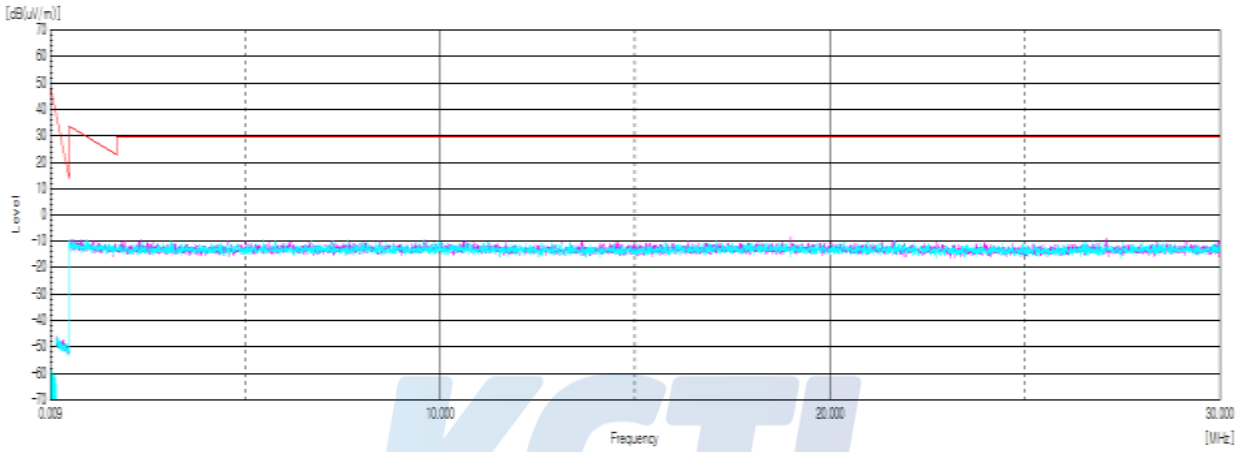
Notes:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 ㎒ for Peak detection and frequency above 1 ㎓. The resolution bandwidth of test receiver/spectrum analyzer is 1 ㎒ and the video bandwidth is 1 ㎑(≥1/T) for Average detection (AV) at frequency above 1 ㎓. (where T = pulse width)
2. *f* <30 ㎒, extrapolation factor of 40 ㏈/decade of distance. F_d = 40log(D_m/Ds)
   f ≥30 ㎒, extrapolation factor of 20 ㏈/decade of distance. F_d = 20log(D_m/Ds)
   Where:
   F_d= Distance factor in ㏈
   D_m= Measurement distance in meters
   D_s= Specification distance in meters
3. Factors(㏈) = Antenna factor(㏈/m) + Cable loss(㏈) + or Amp. gain(㏈) + or F_d(㏈)
4. The worst-case emissions are reported however emissions whose levels were not within 20 ㏈ of respective limits were not reported.
5. Average test would be performed if the peak result were greater than the average limit.
6. [1)] mean is restricted band.
7. According to part 15.31(f)(2), an extrapolation factor of 40 dB/decade is applied because measured distance of radiated emission is 3 m.

Test results (Below 30 ㎒) – Worst case: Half High frequency

Frequency	Pol.	Reading	Cable Loss	Amp Gain	Antenna Factor	DCCF	Result	Limit	Margin
[㎒]	[V/H]	[dB(μV)]	[dB]	[dB]	[dB]	[dB]	[dB(μV/m)]	[dB(μV/m)]	[dB]
No spurious emissions were detected within 20 ㏈ of the limit.									

Horizontal/Vertical



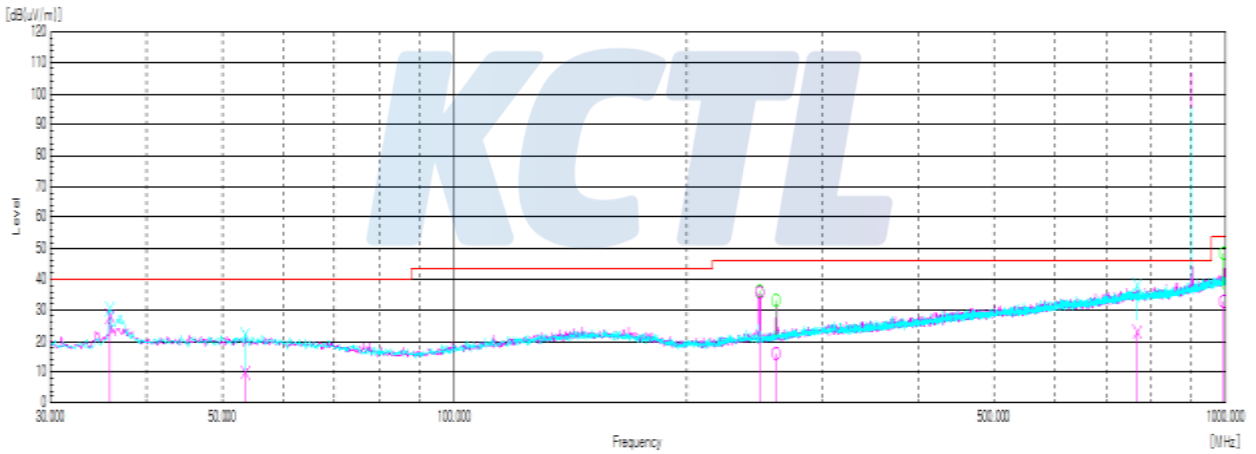
Test results (Below 1 000 ㎒)

Half mode

Low frequency

Frequency	Pol.	Reading	Ant. Factor	Amp. + Cable	DCCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Quasi peak data								
35.82	V	41.50	17.56	-30.87	-	28.19	40.00	11.81
53.64	V	21.70	18.33	-30.48	-	9.55	40.00	30.45
249.10	H	46.60	17.58	-28.59	-	35.59	46.00	10.41
261.10	H	26.10	18.07	-28.49	-	15.68	46.00	30.32
766.84	V	20.10	28.03	-25.55	-	22.58	46.00	23.42
993.70	H	25.30	30.14	-23.43	-	32.01	54.00	21.99

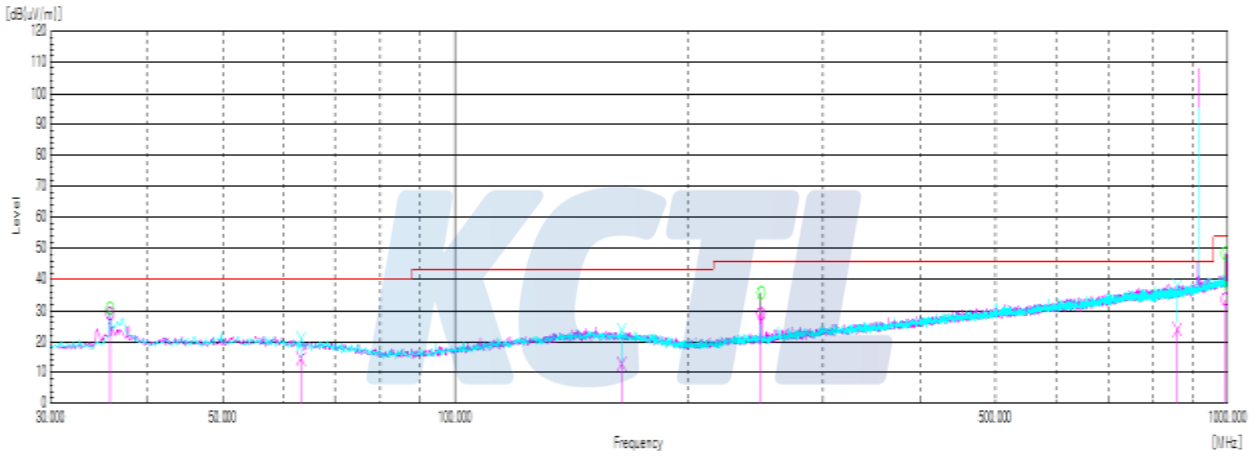
Horizontal/Vertical



Middle frequency

Frequency	Pol.	Reading	Ant. Factor	Amp. + Cable	DCCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Quasi peak data								
35.82	H	42.20	17.56	-30.87	-	28.89	40.00	11.11
63.10	V	27.40	17.40	-30.36	-	14.44	40.00	25.56
163.98	V	22.90	18.74	-29.23	-	12.41	43.50	31.09
249.10	H	39.70	17.58	-28.59	-	28.69	46.00	17.31
859.96	V	19.90	28.90	-24.82	-	23.98	46.00	22.02
993.45	H	26.20	30.13	-23.43	-	32.90	54.00	21.10

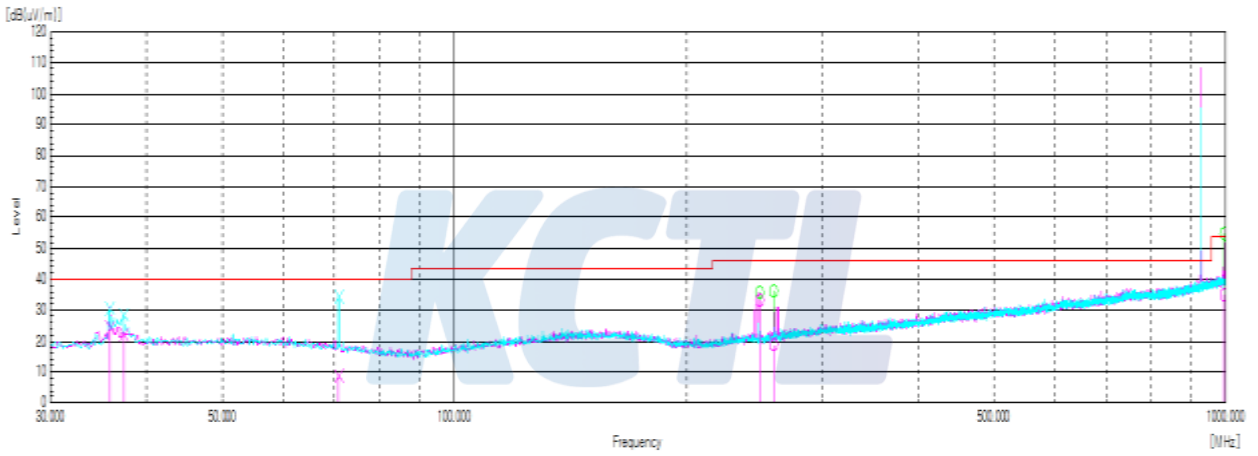
Horizontal/Vertical



High frequency

Frequency	Pol.	Reading	Ant. Factor	Amp. + Cable	DCCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Quasi peak data								
35.82	V	37.50	17.56	-30.87	-	24.19	40.00	15.81
37.28	V	35.20	17.86	-30.85	-	22.21	40.00	17.79
70.86	V	22.50	16.23	-30.31	-	8.42	40.00	31.58
248.98	H	43.80	17.58	-28.59	-	32.79	46.00	13.21
259.65	H	29.30	17.99	-28.50	-	18.79	46.00	27.21
996.12	H	27.40	30.16	-23.40	-	34.16	54.00	19.84

Horizontal/Vertical

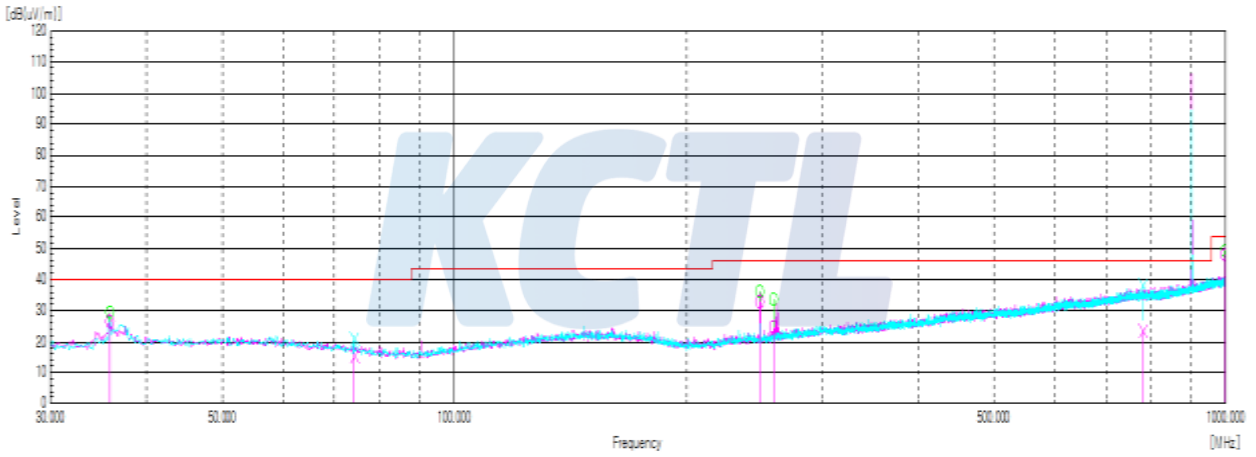


Hi-fi mode

Low frequency

Frequency	Pol.	Reading	Ant. Factor	Amp. + Cable	DCCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Quasi peak data								
35.82	H	39.60	17.56	-30.87	-	26.29	40.00	13.71
74.26	V	29.70	15.55	-30.25	-	15.00	40.00	25.00
249.10	H	43.60	17.58	-28.59	-	32.59	46.00	13.41
259.41	H	35.00	17.98	-28.51	-	24.47	46.00	21.53
781.51	V	20.30	28.20	-25.46	-	23.04	46.00	22.96
996.61	H	40.50	30.17	-23.40	-	47.27	54.00	6.73

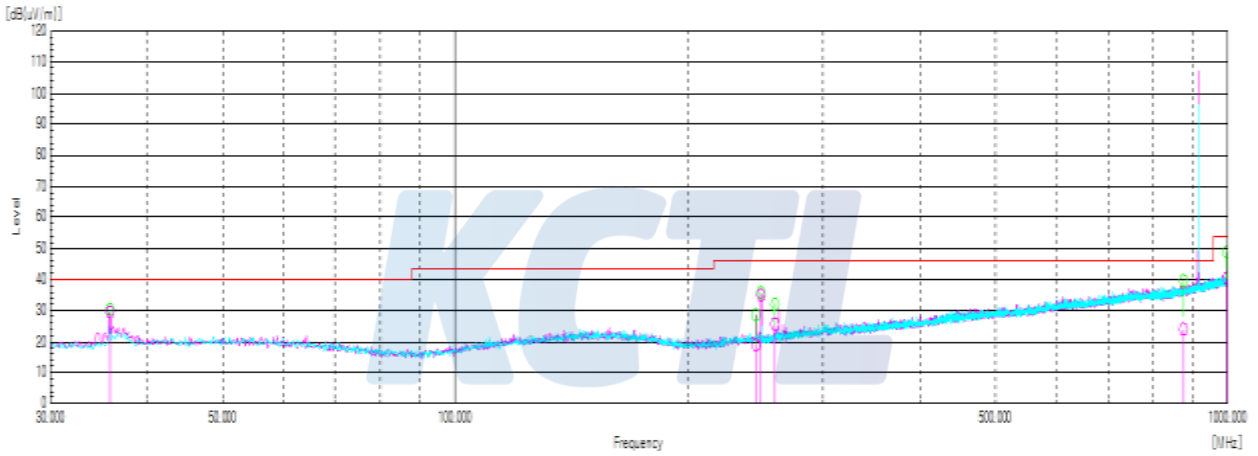
Horizontal/Vertical



Middle frequency

Frequency	Pol.	Reading	Ant. Factor	Amp. + Cable	DCCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Quasi peak data								
35.82	H	42.50	17.56	-30.87	-	29.19	40.00	10.81
245.46	H	29.70	17.51	-28.61	-	18.60	46.00	27.40
249.10	H	45.50	17.58	-28.59	-	34.49	46.00	11.51
259.53	H	36.00	17.98	-28.51	-	25.47	46.00	20.53
876.45	H	19.60	29.03	-24.68	-	23.95	46.00	22.05
996.73	H	33.00	30.17	-23.40	-	39.77	54.00	14.23

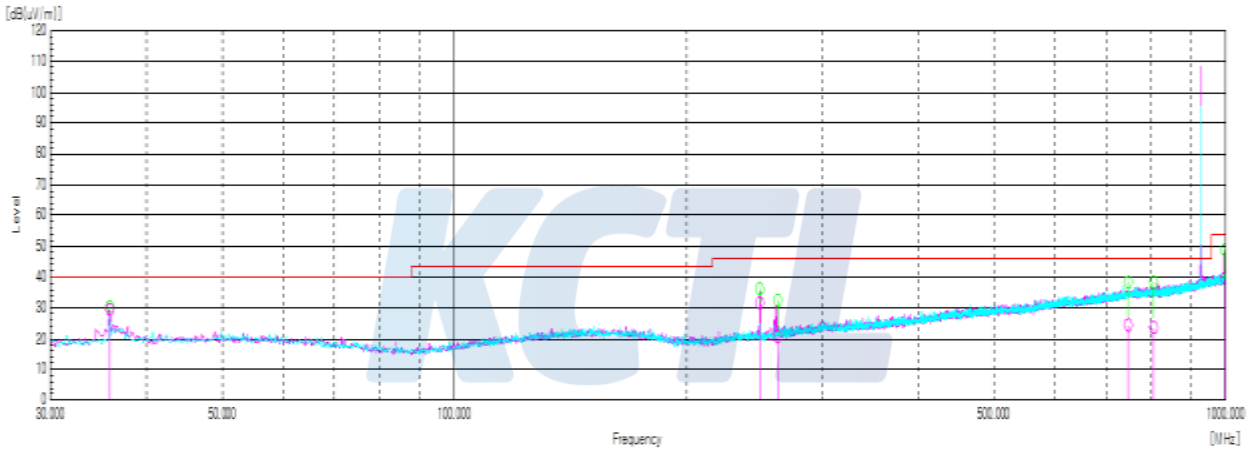
Horizontal/Vertical



High frequency

Frequency	Pol.	Reading	Ant. Factor	Amp. + Cable	DCCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Quasi peak data								
35.82	H	42.60	17.56	-30.87	-	29.29	40.00	10.71
249.10	H	42.20	17.58	-28.59	-	31.19	46.00	14.81
262.44	H	30.70	18.15	-28.48	-	20.37	46.00	25.63
747.32	H	21.60	27.95	-25.67	-	23.88	46.00	22.12
806.24	H	20.20	28.39	-25.30	-	23.29	46.00	22.71
996.36	H	32.10	30.16	-23.40	-	38.86	54.00	15.14

Horizontal/Vertical



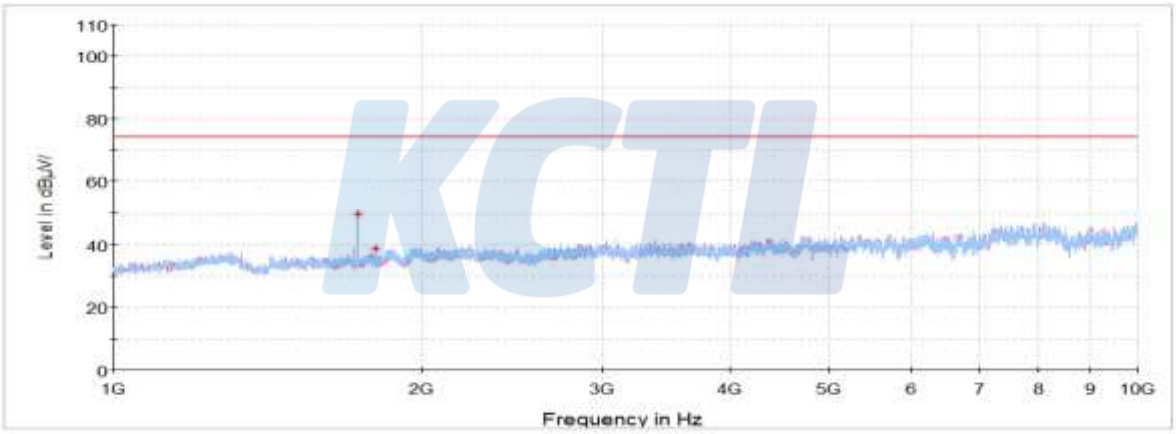
Test results (Above 1 000 ㎒)

Half mode

Low frequency

Frequency	Pol.	Reading	Ant. Factor	Amp. + Cable	DCCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
1 733.13	V	79.09	29.73	-59.19	-	49.63	74.00	24.37
1 805.91	H	67.50	30.26	-58.84		38.92	74.00	35.08
Average Data								
No spurious emissions were detected within 20 ㏈ of the limit.								

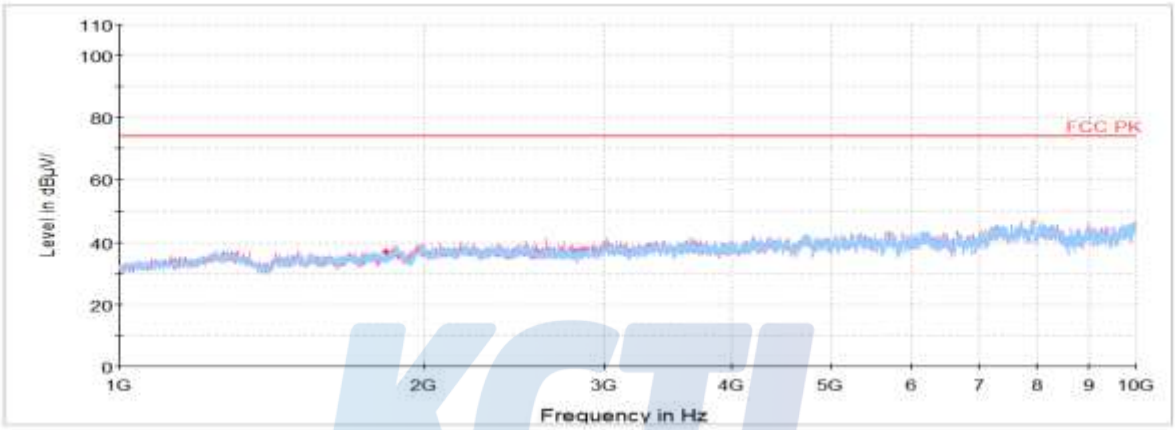
Horizontal/Vertical for 1 ㎓ ~ 10 ㎓



Middle frequency

Frequency	Pol.	Reading	Ant. Factor	Amp. + Cable	DCCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
1 829.81	H	65.17	30.44	-58.74	-	36.87	74.00	37.13
Average Data								
No spurious emissions were detected within 20 dB of the limit.								

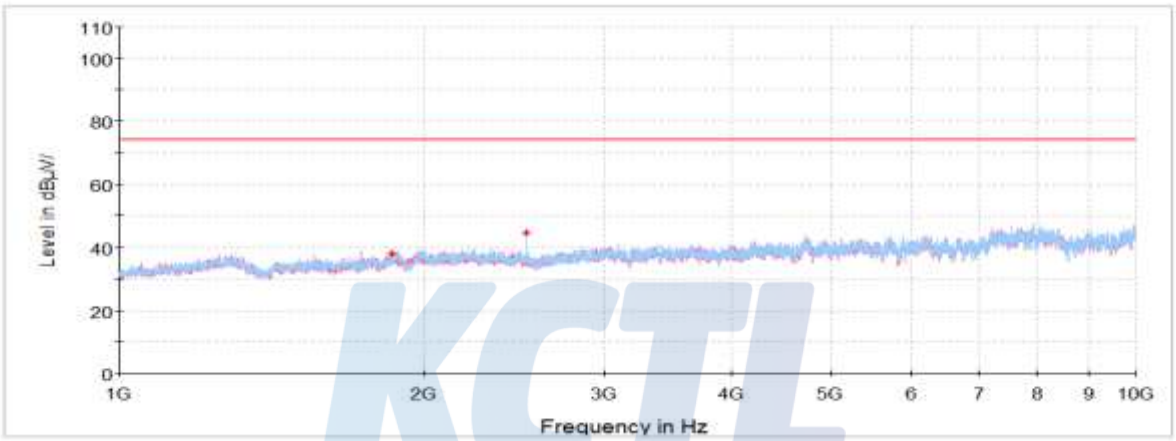
Horizontal/Vertical for 1 ㎓ ~ 10 ㎓



High frequency

Frequency	Pol.	Reading	Ant. Factor	Amp. + Cable	DCCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
1 854.78	H	66.20	30.63	-58.62	-	38.21	74.00	35.79
2 518.31	H	70.20	32.13	-57.68	-	44.65	74.00	29.35
Average Data								
No spurious emissions were detected within 20 dB of the limit.								

Horizontal/Vertical for Band-edge

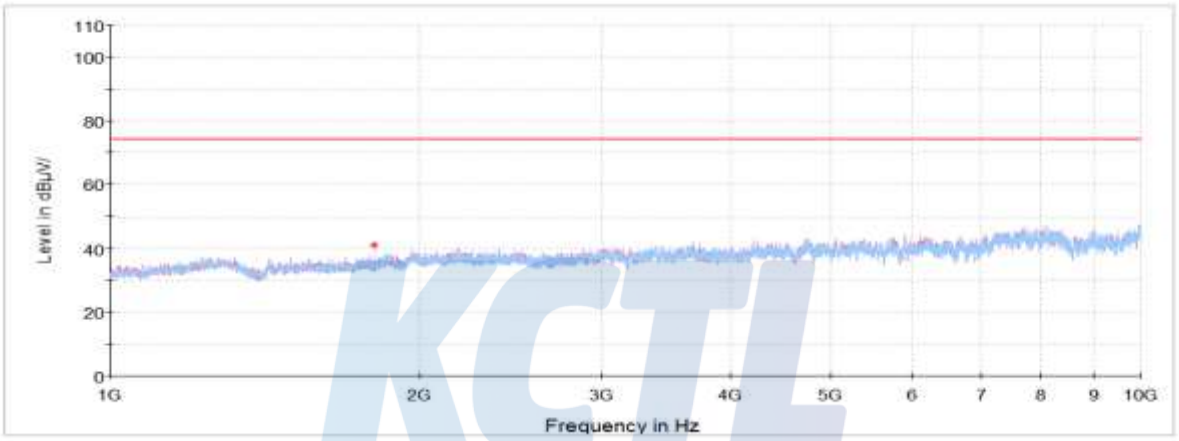


Hi-fi mode

Low frequency

Frequency	Pol.	Reading	Ant. Factor	Amp. + Cable	DCCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
1 804.84	H	69.60	30.26	-58.85	-	41.01	74.00	32.99
Average Data								
No spurious emissions were detected within 20 dB of the limit.								

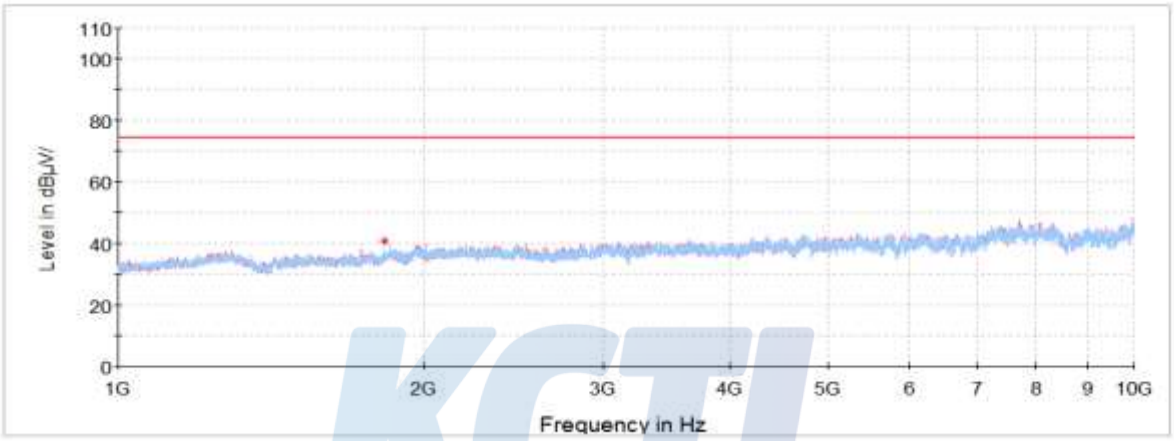
Horizontal/Vertical for Band-edge



Middle frequency

Frequency	Pol.	Reading	Ant. Factor	Amp. + Cable	DCCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
1 829.81	H	69.03	30.44	-58.74	-	43.59	74.00	30.41
Average Data								
No spurious emissions were detected within 20 dB of the limit.								

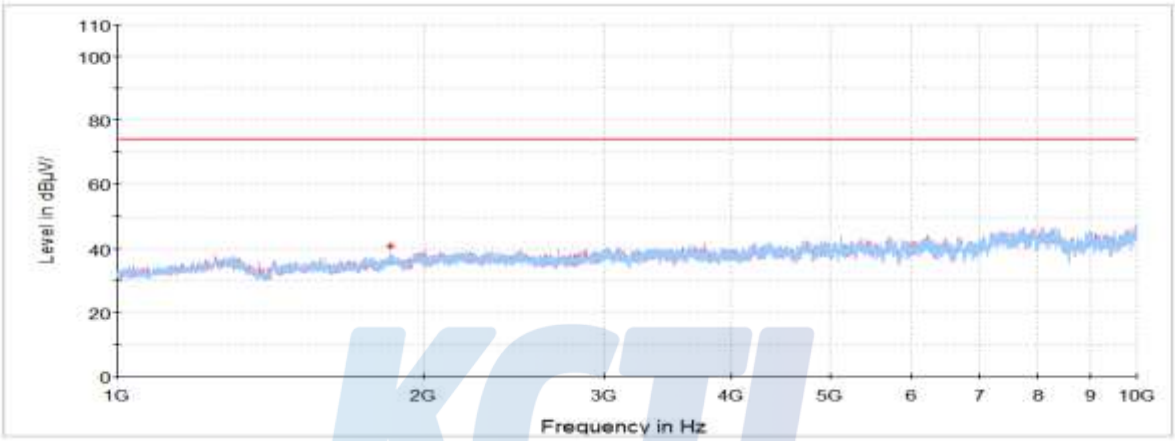
Horizontal/Vertical for Band-edge



High frequency

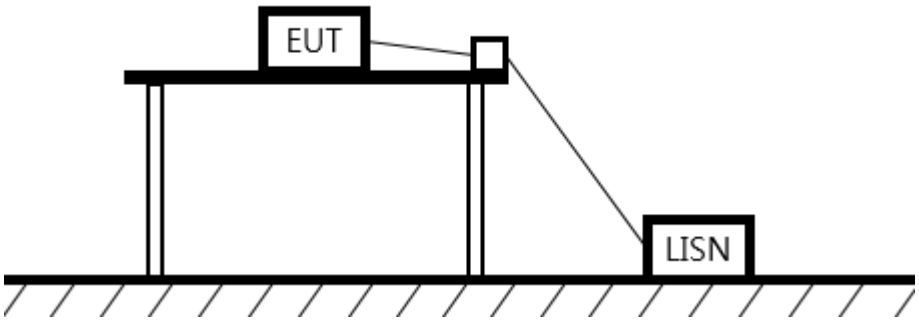
Frequency	Pol.	Reading	Ant. Factor	Amp. + Cable	DCCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
1 854.78	H	68.87	30.63	-58.62	-	40.88	74.00	33.12
Average Data								
No spurious emissions were detected within 20 dB of the limit.								

Horizontal/Vertical for Band-edge



6.2. AC Conducted emission

Test setup



Limit

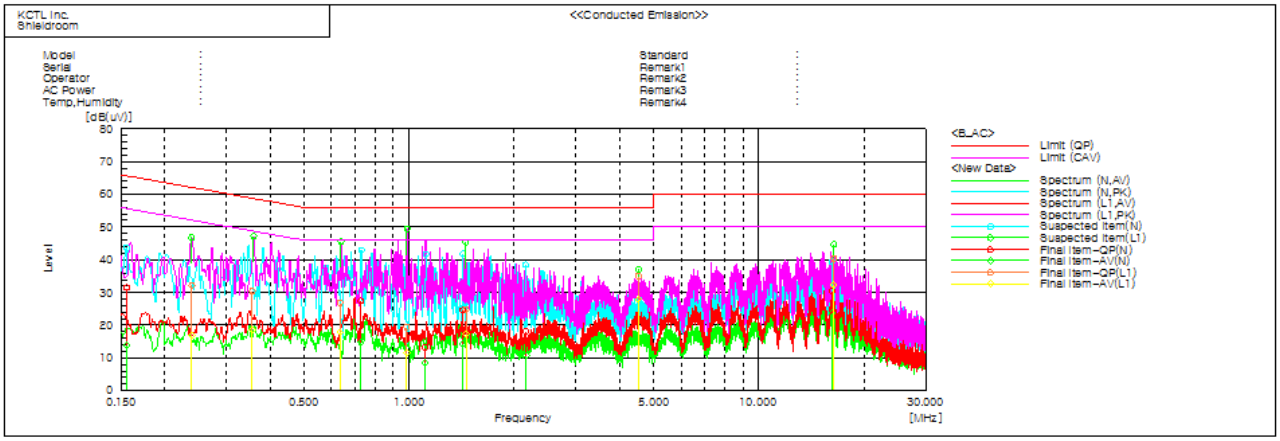
According to 15.207(a), for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 ㎑ to 30 ㎒, shall not exceed the limits in the following table, as measured using a 50uH/50 ohm line impedance stabilization network (LISN). Compliance with the provision of this paragraph shall on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower applies at the boundary between the frequencies ranges.

Frequency of Emission (㎒)	Conducted limit (dB㎶/m)	
	Quasi-peak	Average
0.15 – 0.50	66 - 56*	56 - 46*
0.50 – 5.00	56	46
5.00 – 30.0	60	50

Measurement procedure

1. The EUT was placed on a wooden table of size, 1 m by 1.5 m, raised 80 ㎝ in which is located 40 ㎝ away from the vertical wall and 1.5m away from the side wall of the shielded room.
2. Each current-carrying conductor of the EUT power cord was individually connected through a 50Ω/50μH LISN, which is an input transducer to a spectrum analyzer or an EMI/Field Intensity —Meter, to the input power source.
3. Exploratory measurements were made to identify the frequency of the emission that had the highest amplitude relative to the limit by operating the EUT in a range of typical modes of operation, cable position, and with a typical system equipment configuration and arrangement. Based on the exploratory tests of the EUT, the one EUT cable configuration and arrangement and mode of operation that had produced the emission with the highest amplitude relative to the limit was selected for the final measurement.
4. The final test on all current-carrying conductors of all of the power cords to the equipment that comprises the EUT (but not the cords associated with other non-EUT equipment is the system) was then performed over the frequency range of 0.15 ㎒ to 30 ㎒.
5. The measurements were made with the detector set to peak amplitude within a bandwidth of 10 ㎑ or to quasi-peak and average within a bandwidth of 9 ㎑. The EUT was in transmitting mode during the measurements.

Test results – Worst case: Hi-fi High frequency



Final Result

--- N Phase ---

No.	Frequency [MHz]	Reading QP [dB(uV)]	Reading CAV [dB(uV)]	c.f [dB]	Result QP [dB(uV)]	Result CAV [dB(uV)]	Limit QP [dB(uV)]	Limit AV [dB(uV)]	Margin QP [dB]	Margin CAV [dB]
1	0.1561	21.6	4.0	9.9	31.5	13.9	65.7	55.7	34.2	41.8
2	0.72819	17.6	4.9	9.8	27.4	14.7	56.0	46.0	28.6	31.3
3	1.11026	3.4	-1.3	9.8	13.2	8.5	56.0	46.0	42.8	37.5
4	1.42589	14.8	4.6	9.7	24.5	14.3	56.0	46.0	31.5	31.7
5	2.15881	8.5	1.0	9.7	18.2	10.7	56.0	46.0	37.8	35.3
6	16.19807	20.5	13.8	10.0	30.5	23.8	60.0	50.0	29.5	26.2

--- L1 Phase ---

No.	Frequency [MHz]	Reading QP [dB(uV)]	Reading CAV [dB(uV)]	c.f [dB]	Result QP [dB(uV)]	Result CAV [dB(uV)]	Limit QP [dB(uV)]	Limit AV [dB(uV)]	Margin QP [dB]	Margin CAV [dB]
1	0.23964	22.5	7.2	9.7	32.2	16.9	62.1	52.1	29.9	35.2
2	0.35582	20.6	8.7	9.9	30.5	18.6	58.8	48.8	28.3	30.2
3	0.63454	16.9	8.0	9.9	26.8	17.9	56.0	46.0	29.2	28.1
4	0.98298	9.7	1.8	9.8	19.5	11.6	56.0	46.0	36.5	34.4
5	1.45532	15.0	7.5	9.8	24.8	17.3	56.0	46.0	31.2	28.7
6	4.53612	25.4	18.3	9.7	35.1	28.0	56.0	46.0	20.9	18.0
7	16.40495	30.3	22.3	10.1	40.4	32.4	60.0	50.0	19.6	17.6

8. Measurement equipment

Equipment Name	Manufacturer	Model No.	Serial No.	Next Cal. Date
Spectrum Analyzer	R&S	FSV40	100988	20.01.04
Wideband Power Sensor	R&S	NRP-Z81	102398	20.01.25
Attenuator	API Inmet	40AH2W-10	12	20.05.15
Attenuator	HP	8491A	29738	20.01.04
Vector Signal Generator	R&S	SMBV100A	257566	20.01.04
Signal Generator	R&S	SMB100A	176206	20.01.25
EMI TEST RECEIVER	R&S	ESCI7	100732	20.08.22
EMI TEST RECEIVER	R&S	ESCI3	100001	20.08.22
High pass Filter	WT	WT-A1698-HS	WT160411001	20.05.14
TWO-LINE V - NETWORK	R&S	ENV216	101584	20.04.05
Bi-Log Antenna	SCHWARZBECK	VULB 9168	583	20.05.21
COAXIAL FIXED ATTENUATOR	Agilent	8491B-003	2708A18758	20.05.04
Horn antenna	ETS.lindgren	3116	00086635	20.05.09
Horn antenna	ETS.lindgren	3117	161225	20.05.22
Amplifier	SONOMA INSTRUMENT	310N	284608	20.08.22
Amplifier	L-3 Narda-MITEQ	AMF-7D-01001800 -22-10P	2031196	20.02.21
Amplifier	L-3 Narda-MITEQ	JS44-18004000-33 -8P	2000997	20.08.01
Loop Antenna	R&S	HFH2-Z2	100355	20.08.24
Antenna Mast	Innco Systems	MA4640-XP-ET	-	-
Antenna Mast	Innco Systems	MA4000-EP	303	-
Turn Table	Innco Systems	DT2000	79	-
Turn Table	Innco Systems	DT2000	79	-
Cable Assembly	RadiAll	2301761768000PJ	1724.659	-
Cable Assembly	gigalane	RG-400	-	-

End of test report