TEST REPORT

KCTL Inc.
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Suwon-si, Gyeonggi-do, 16677, Korea
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KCTL

1. Client

- Name : Samsung Electronics Co., Ltd.
- Address : 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Rep. of Korea
- Date of Receipt : 2019-07-25

2. Use of Report : -

3. Name of Product and Model : Notebook PC / NP950QCG

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

5. FCC ID : A3LNP950QCG

6. Date of Test : 2019-08-24 to 2019-09-09

7. Test Standards : FCC Part 15 Subpart C, 15.209

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

Affirmation	Tested by Name : Kwonse Kim (Signature)	Technical Manager Name : Jaehyong Lee (Signature)

2019-10-24

KCTL Inc.

Report revision history

Date	Revision	Page No
2019-10-24	Initial report	-

CONTENTS

1. General information

Client	:	Samsung Electronics Co., Ltd.
Address	:	129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Rep. of Korea
Manufacturer	:	Samsung Electronics Co., Ltd.
Address	:	129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Rep. of Korea
Factory	:	SESC (Samsung Electronics Suzhou Computer)
Address	:	No. 198, Fangzhou Road, Suzhou Industrial Park, Jiangsu Province, 215021, China
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-20080, G-20078, C-20059, T-20056 Industry Canada Registration No. : 8035A KOLAS No.: KT231

2. Device information

Equipment under test	:	Notebook PC
Model	:	NP950QCG
Frequency range	:	110 ㎑ ~ 148 ㎑ (WPT), 530 ㎑ ~ 600 ㎑ (S-Pen)
Modulation technique	:	AM
Power source	:	AC 120 V (Output : 20V/3.25A, 15V/3A, 9V/3A, 5V/3A)
Antenna specification	:	Loop Coil Antenna_Flat type (WPT) FPCB Antenna_Coil type (S-Pen)
Software version	:	19H1
Hardware version	:	REV1.0
Test device serial No.	:	1BRR91ZM900131V, 1BRM91ZM900002J
Operation temperature	:	10 ℃ ~ 35 ℃

Note:

1. Certificated module is mounted in the EUT as following.

- Applicant : Intel Mobile Communications
- Contains FCC ID : PD9AX201D2
- Model : AX201D2W
- SAR test report number : KR19-SPF0029

2.1. Accessory information

Equipment	Manufacturer	Model	Serial No.	Power source	FCC ID
Stylus Pen	Samsung Electronics Co., Ltd.	EJ-PN970	933280BF0E52	-	A3LEJPN970
Smart Phone	Samsung Electronics Co., Ltd.	SM-G960N	R39JB06Z70	DC 3.85 V	A3LSMG960KOR

2.2. Frequency/channel operations

This device contains the following capabilities:
WPT, S-pen

Frequency (㎑)
110 ~ 148

Table 2.2.1 WPT

Frequency (㎑)
530 ~ 600

Table 2.2.2 S-Pen

2.3. Worst-case configuration and mode

Mode 1	Test case	Description
S-Pen charging mode	1	EUT position : Clamshell Charging from EUT to S-Pen
	2	EUT position : Clamshell Charging from AC Adaptor to EUT Charging from EUT to S-Pen
	3	EUT position : Tablet Charging from EUT to S-Pen
	4	EUT position : Tablet Charging from AC Adaptor to EUT Charging from EUT to S-Pen

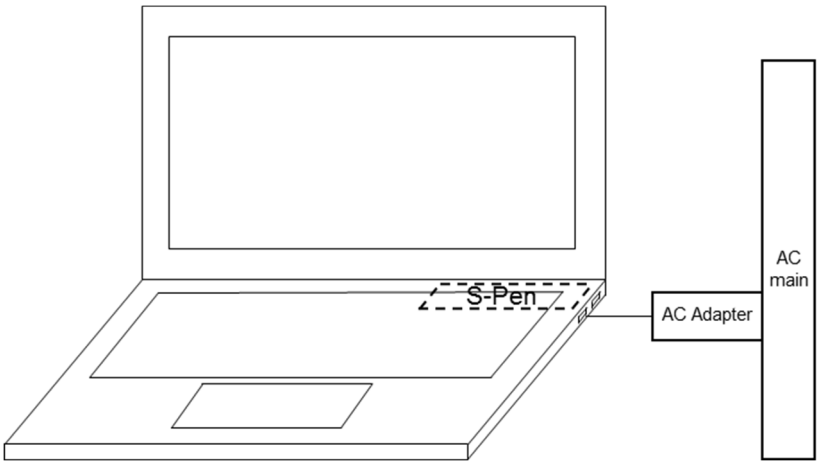
Mode 2	Test case	Description
Power sharing mode (S-Pen is fully charged condition)	5	EUT position : Clamshell Charging from EUT to Phone
	6	EUT position : Clamshell Charging from AC Adaptor to EUT Charging from EUT to Phone
	7	EUT position : Tablet Charging from EUT to Phone
	8	EUT position : Tablet Charging from AC Adaptor to EUT Charging from EUT to Phone

Mode 3	Test case	Description
Simultaneous charging mode(Power sharing and S-Pen charging)	9	EUT position : Clamshell Charging from EUT to Phone and S-Pen(Charging)
	10	EUT position : Clamshell Charging from EUT to Phone and S-Pen(LCD touch)
	11	EUT position : Clamshell Charging from EUT to Phone and S-Pen (Push button after touch of LCD)

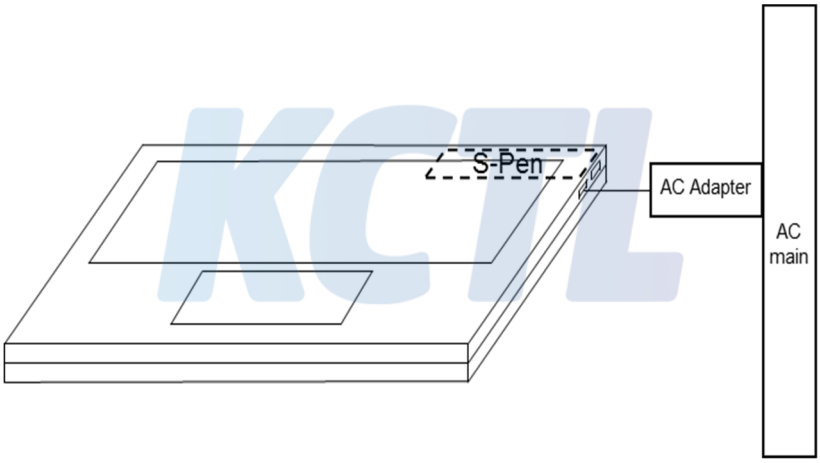
Note:

1. For the radiated test, test case 1/3/5/7/9/10/11, the EUT can operate power sharing mode when battery level is over 30%. The test results are not different between fully charged status and battery level 30% status (EUT), test were performed fully charged condition.
2. In case of client device, each battery status was investigated then middle condition is reported as a worst result.
   Battery status : 1% ~ 20%, 40% ~ 60%, 80% ~ 100%.
3. For the S-Pen test, both fully charged and non-fully charged condition were investigated, test case 1/2/3/4/9/10/11 were performed fully charged condition as worst case.
4. The EUT operates with the S-Pen in three different inductive coupling modes of S-Pen motion detection (Test case 9,10 and 11) and charging (Device to S-Pen wireless charging) operating in the range of 530 ~ 600 ㎑. The EUT was set to continuously transmit to the S-Pen in each of the three modes. S-Pen charging mode is also applicable during the device wireless charging condition. Data is additionally included for this condition.
5. For the S-Pen charging mode, test results of case 2 is worst case and power sharing mode, test results of case 6 is worst case, so this test report described test case 2,6,9,10 and 11.

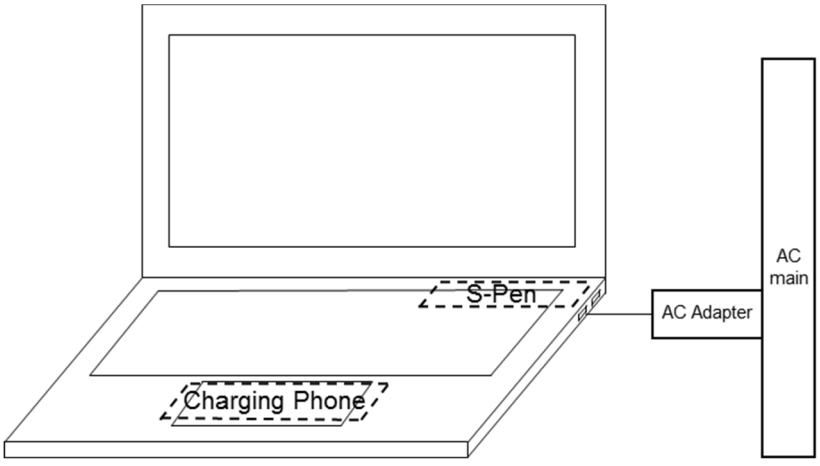
2.4. Test setup diagram



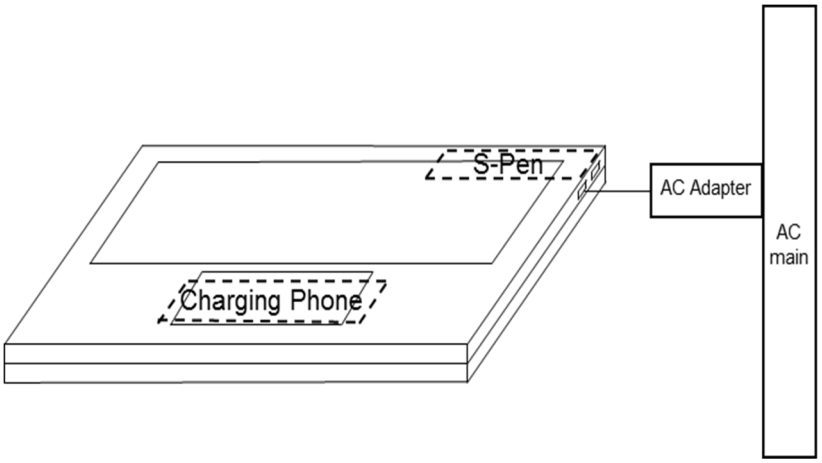
2.4.1 Test case 1 & 2_S-Pen Charging



2.4.2 Test case 3 & 4_S-Pen Charging



2.4.3 Test case 5 & 6_Charging Phone (S-Pen is built-in and fully charged condition)
Test case 9 & 10 & 11_Simultaneous charging (S-Pen charging and Power Sharing)



2.4.4 Test case 7 & 8_Charging Phone (S-Pen is built-in and fully charged condition)

Note:
Test case 1/3/5/7/9/10/11, EUT did not be connected to AC Adaptor in above setup diagram for the test.

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 Loop Coil antenna and FPCB antenna (Internal antenna) on board.

4. Summary of tests

FCC Part section(s)	Parameter	Test results
15.209(a)	Field Strength of Fundamental and Spurious Emission	Pass
2.1049	20dB Bandwidth	Pass
15.203	Antenna requirement	Pass
15.207(a)	Conducted Emission	Pass Note.1

Notes:

1. For the AC line conducted test, all test case was performed with the AC adaptor connected.
2. 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.
3. The test procedure(s) in this report were performed in accordance as following.
   - ANSI C63.10-2013
4. The measurement facility is compliant with the test site requirements specified in ANSI C63.4-2014.

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.

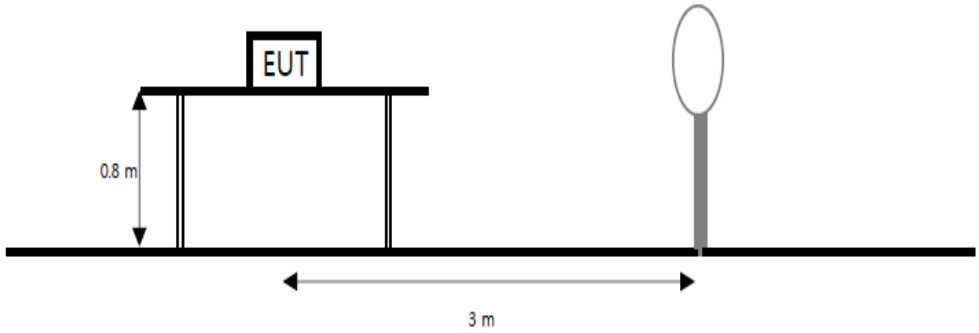
Parameter	Expanded uncertainty (±)	
Radiated spurious emissions	9 ㎑ ~ 30 ㎒	2.28 dB
Conducted emissions	9 ㎑ ~ 150 ㎑	3.66 dB
	150 ㎑ ~ 30 ㎒	3.26 dB

6. Test results

6.1. Field Strength of Fundamental and Spurious Emission

Test setup

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



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.

Test procedure
ANSI C63.10-2013

Test settings
Test Procedures for emission from 9 ㎑ to 30 ㎒

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter anechoic chamber test site. The table was rotated 360 degrees to determine the position of the highest radiation.
b. Then antenna is a loop antenna is fixed at one meter above the ground to determine the maximum value of the field strength. Both parallel and perpendicular of the antenna are set to make the measurement.
c. For each suspected emission, the EUT was arranged to its worst case and then the table was turned from 0 degrees to 360 degrees to find the maximum reading.
d. The test-receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode.
e. Below 30 ㎒ frequency range, all orientations about parallel, perpendicular, and ground-parallel were investigated then reported and the worse orientations of Face-on and Face-off were set for final test.
   - Face-on = Parallel, Face-off = Perpendicular

Notes:

1. *f* <30 ㎒, extrapolation factor of 40 ㏈/decade of distance. $F_d = 40\log(D_m/Ds)$
   Where:
   F_d = Distance factor in ㏈
   D_m = Measurement distance in meters
   D_s = Specification distance in meters
2. The test measurement distance is 3 meter
3. Limit (㏈(㎶/m)) = For 0.009 ㎒ - 0.490 ㎒, 20*log(2 400/F(㎑)) ㏈(㎶/m)
   For 0.490 ㎒ - 1.705 ㎒, 20*log(24 000/F(㎑)) ㏈(㎶/m)
   For 1.705 ㎒ - 30 ㎒, 20*log(30) = 29.54 ㏈(㎶/m)

Test results

Radiated Emissions Fundamental & 9 ㎑ to 30 ㎒ (S-Pen charging mode Test case 2)

[Face-on]

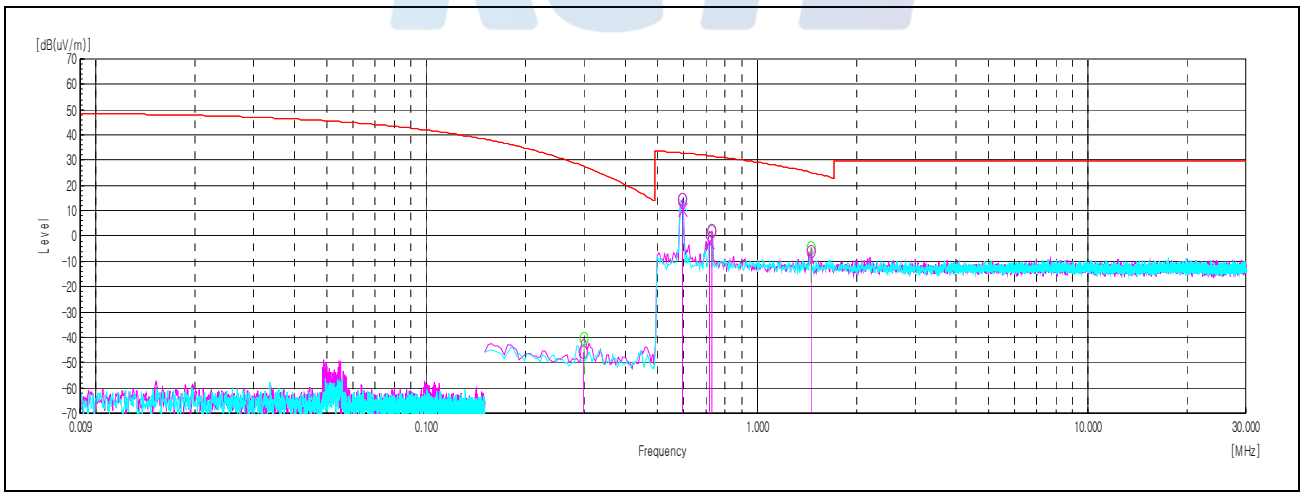
Frequency	Reading	Detector	Ant. Factor	Amp. + Cable	Distance factor	Factor	Result at 3m	Result at 30m or 300m	Limit at 30m or 300m	Margin
(㎒)	(dB(㎶))	Mode	(dB)	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB(㎶/m))	(dB)
0.594	66.60	QP	19.29	-31.29	-40.00	-52.00	54.60	14.60	32.13	17.53
0.299	46.50	AV	19.39	-31.69	-80.00	-92.30	34.20	-45.80	18.09	63.89
0.717	49.80	QP	19.34	-31.34	-40.00	-52.00	37.80	-2.20	30.49	32.69
0.728	54.20	QP	19.34	-31.34	-40.00	-52.00	42.20	2.20	30.36	28.16
1.460	45.70	QP	19.28	-31.18	-40.00	-51.90	33.80	-6.20	24.32	30.52

[Face-off]

Frequency	Reading	Detector	Ant. Factor	Amp. + Cable	Distance factor	Factor	Result at 3m	Result at 30m	Limit at 30m	Margin
(㎒)	(dB(㎶))	Mode	(dB)	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB(㎶/m))	(dB)
0.594	62.60	QP	19.29	-31.29	-40.00	-52.00	50.60	10.60	32.13	21.53

Note:

1. Factor(dB) = Antenna Factor + Amp. Gain + Cable Loss + distance factor(dB)
2. -80 dB is distance factor = 40*log(3/300), -40 dB is distance factor = 40*log(3/30)



Radiated Emissions Fundamental & 9 ㎑ to 30 ㎒ (Power sharing mode Test case 6)

[Face-on]

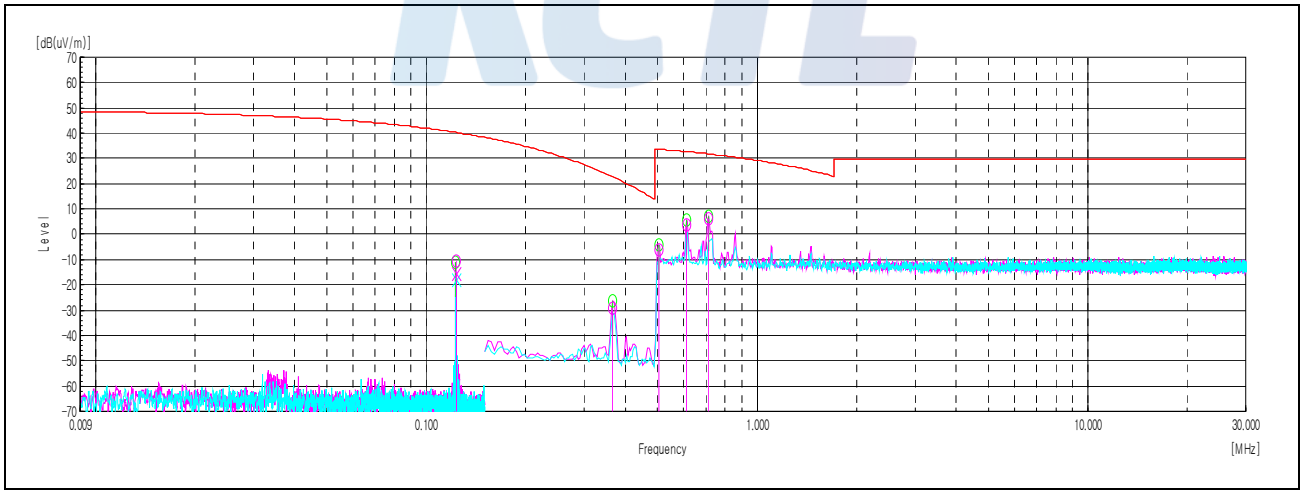
Frequency	Reading	Detector	Ant. Factor	Amp. + Cable	Distance factor	Factor	Result at 3m	Result at 30m or 300m	Limit at 30m or 300m	Margin
(㎒)	(dB(㎶))	Mode	(dB)	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB(㎶/m))	(dB)
0.123	81.70	AV	19.50	-31.70	-80.00	-92.20	69.50	-10.50	25.81	36.31
0.366	62.80	AV	19.36	-31.56	-80.00	-92.20	50.60	-29.40	16.33	45.73
0.504	45.80	QP	19.28	-31.28	-40.00	-52.00	33.80	-6.20	33.56	39.76
0.613	55.50	QP	19.29	-31.29	-40.00	-52.00	43.50	3.50	31.86	28.36
0.713	57.90	QP	19.34	-31.34	-40.00	-52.00	45.90	5.90	30.54	24.64

[Face-off]

Frequency	Reading	Detector	Ant. Factor	Amp. + Cable	Distance factor	Factor	Result at 3m	Result at 300m	Limit at 300m	Margin
(㎒)	(dB(㎶))	Mode	(dB)	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB(㎶/m))	(dB)
0.123	76.70	AV	19.50	-31.70	-80.00	-92.20	64.50	-15.50	25.81	41.31

Note:

1. Factor(dB) = Antenna Factor + Amp. Gain + Cable Loss + distance factor(dB)
2. -80 dB is distance factor = 40*log(3/300), -40 dB is distance factor = 40*log(3/30)



Radiated Emissions Fundamental & 9 ㎑ to 30 ㎒ (Simultaneous charging mode Test case 9)

[Face-on]

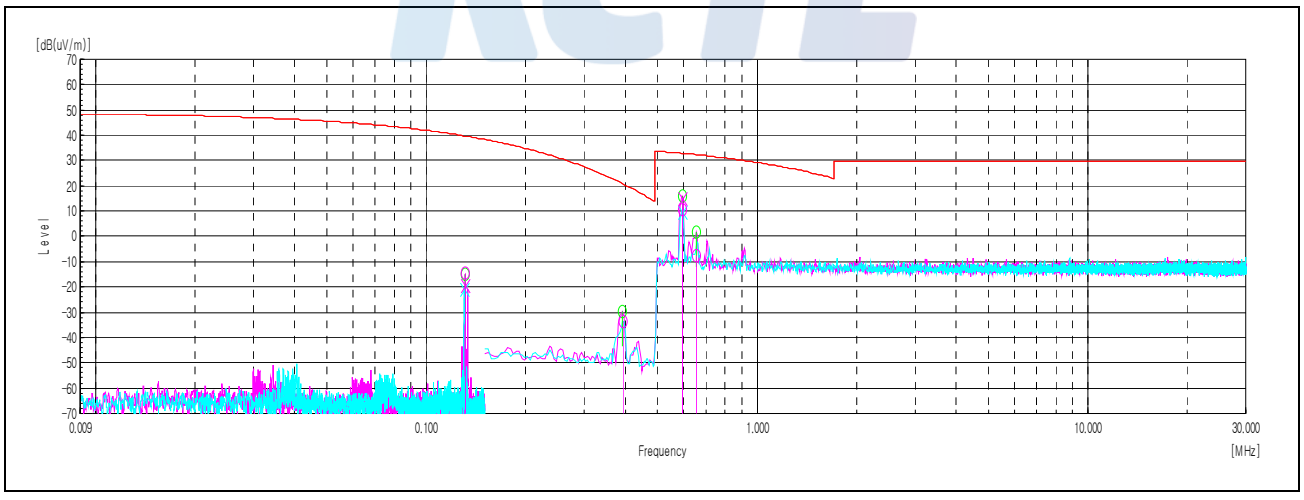
Frequency	Reading	Detector	Ant. Factor	Amp. + Cable	Distance factor	Factor	Result at 3m	Result at 30m or 300m	Limit at 30m or 300m	Margin
(㎒)	(dB(㎶))	Mode	(dB)	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB(㎶/m))	(dB)
0.131	77.90	AV	19.49	-31.69	-80.00	-92.20	65.70	-14.30	25.26	39.56
0.594	62.70	QP	19.29	-31.29	-40.00	-52.00	50.70	10.70	32.13	21.43
0.393	58.60	AV	19.32	-31.52	-80.00	-92.20	46.40	-33.60	15.72	49.32
0.654	44.40	QP	19.32	-31.32	-40.00	-52.00	32.40	-7.60	31.29	38.89

[Face-off]

Frequency	Reading	Detector	Ant. Factor	Amp. + Cable	Distance factor	Factor	Result at 3m	Result at 30m or 300m	Limit at 30m or 300m	Margin
(㎒)	(dB(㎶))	Mode	(dB)	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB(㎶/m))	(dB)
0.131	72.60	AV	19.49	-31.69	-80.00	-92.20	60.40	-19.60	44.67	64.27
0.594	66.80	QP	19.29	-31.29	-40.00	-52.00	54.80	14.80	45.67	30.87

Note:

1. Factor(dB) = Antenna Factor + Amp. Gain + Cable Loss + distance factor(dB)
2. -80 dB is distance factor = 40*log(3/300), -40 dB is distance factor = 40*log(3/30)



Radiated Emissions Fundamental & 9 ㎑ to 30 ㎒ (Simultaneous charging mode Test case 10)

[Face-on]

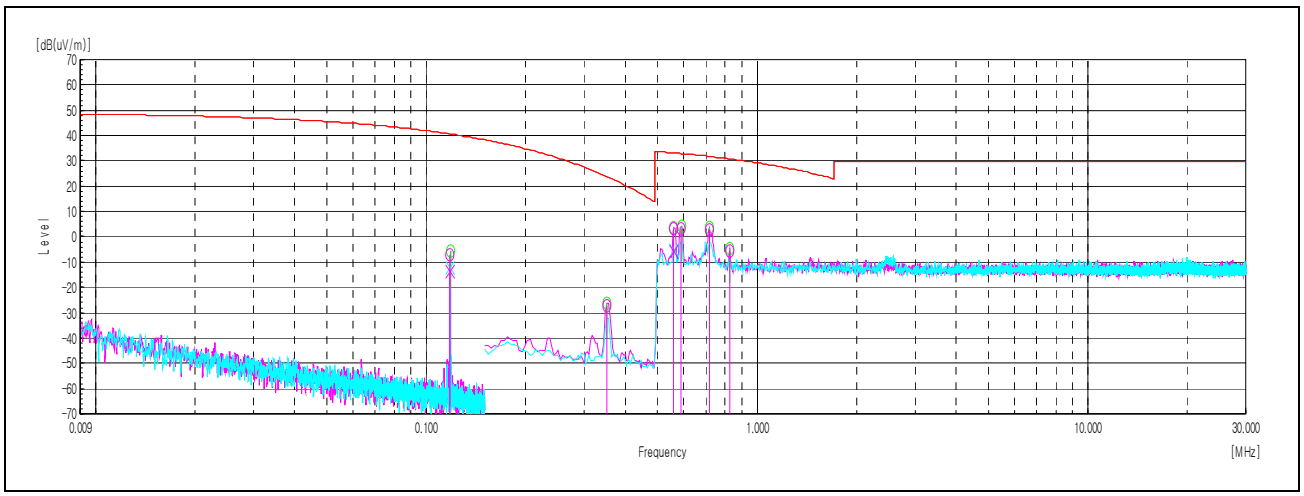
Frequency	Reading	Detector	Ant. Factor	Amp. + Cable	Distance factor	Factor	Result at 3m	Result at 30m or 300m	Limit at 30m or 300m	Margin
(㎒)	(dB(㎶))	Mode	(dB)	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB(㎶/m))	(dB)
0.118	85.30	AV	19.51	-31.71	-80.00	-92.20	73.1	-6.90	26.17	33.07
0.560	55.00	QP	19.29	-31.29	-40.00	-52.00	43.00	3.00	32.64	29.64
0.351	64.70	AV	19.35	-31.55	-80.00	-92.20	52.50	-27.50	16.70	44.20
0.590	55.40	QP	19.29	-31.29	-40.00	-52.00	43.40	3.40	32.19	28.79
0.717	54.90	QP	19.34	-31.34	-40.00	-52.00	42.90	2.90	30.49	27.59
0.825	46.20	QP	19.31	-31.31	-40.00	-52.00	34.20	-5.80	29.28	35.08

[Face-off]

Frequency	Reading	Detector	Ant. Factor	Amp. + Cable	Distance factor	Factor	Result at 3m	Result at 30m or 300m	Limit at 30m or 300m	Margin
(㎒)	(dB(㎶))	Mode	(dB)	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB(㎶/m))	(dB)
0.118	78.90	AV	19.51	-31.71	-80.00	-92.20	66.70	-13.30	26.17	39.47
0.560	46.50	QP	19.29	-31.29	-40.00	-52.00	34.50	-5.50	32.64	38.14

Note:

1. Factor(dB) = Antenna Factor + Amp. Gain + Cable Loss + distance factor(dB)
2. -80 dB is distance factor = 40*log(3/300), -40 dB is distance factor = 40*log(3/30)



Radiated Emissions Fundamental & 9 ㎑ to 30 ㎒ (Simultaneous charging mode Test case 11)

[Face-on]

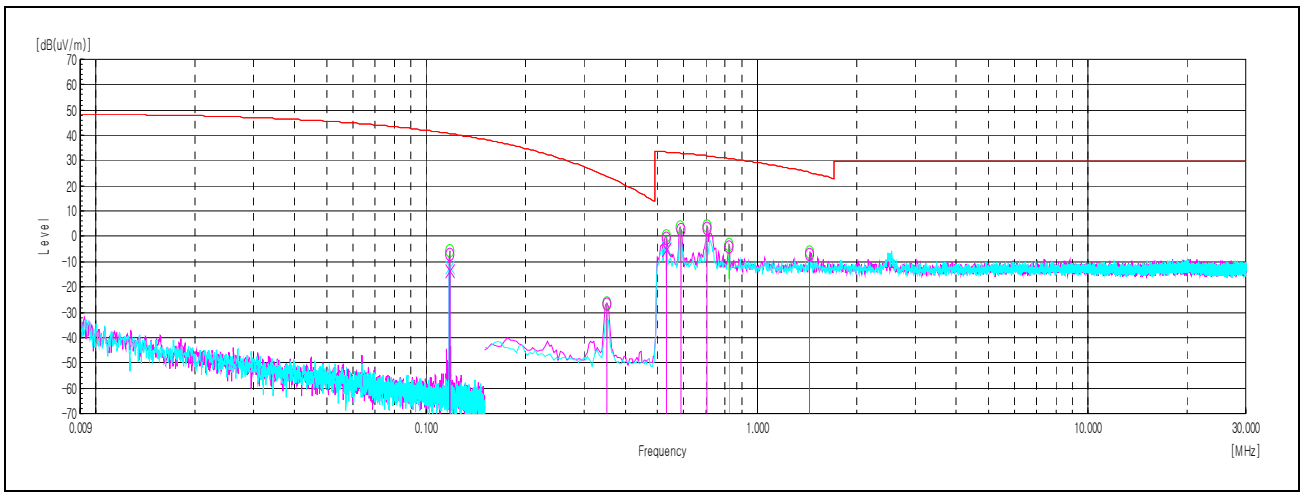
Frequency	Reading	Detector	Ant. Factor	Amp. + Cable	Distance factor	Factor	Result at 3m	Result at 30m or 300m	Limit at 30m or 300m	Margin
(㎒)	(dB(㎶))	Mode	(dB)	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB(㎶/m))	(dB)
0.118	84.90	AV	19.51	-31.71	-80.00	-92.20	72.70	-7.30	26.17	33.47
0.531	51.50	QP	19.28	-31.28	-40.00	-52.00	39.50	-0.50	33.10	33.60
0.351	65.20	AV	19.35	-31.55	-80.00	-92.20	53.00	-27.00	16.70	43.70
0.587	54.90	QP	19.29	-31.29	-40.00	-52.00	42.90	2.90	32.23	29.33
0.706	55.10	QP	19.34	-31.34	-40.00	-52.00	43.10	3.10	30.63	27.53
0.822	48.00	QP	19.31	-31.31	-40.00	-52.00	36.00	-4.00	29.31	33.31
1.441	45.00	QP	19.28	-31.18	-40.00	-51.90	33.10	-6.90	24.43	31.33

[Face-off]

Frequency	Reading	Detector	Ant. Factor	Amp. + Cable	Distance factor	Factor	Result at 3m	Result at 30m or 300m	Limit at 30m or 300m	Margin
(㎒)	(dB(㎶))	Mode	(dB)	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB(㎶/m))	(dB)
0.118	78.50	AV	19.51	-31.71	-80.00	-92.20	66.30	-13.70	26.17	39.87
0.531	46.90	QP	19.28	-31.28	-40.00	-52.00	34.90	-5.10	33.10	38.20

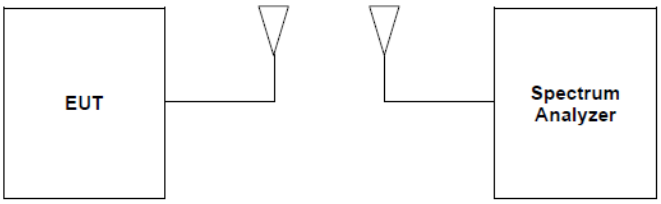
Note:

1. Factor(dB) = Antenna Factor + Amp. Gain + Cable Loss + distance factor(dB)
2. -80 dB is distance factor = 40*log(3/300), -40 dB is distance factor = 40*log(3/30)



6.2. 20dB Bandwidth

Test setup



Limit

For reporting purpose only

Test settings

- The transmitter shall be operated at its maximum carrier power measured under normal test conditions.
- The span of the analyzer shall be set to capture all products of the modulation process, including the emission skirts.
- The resolution bandwidth (RBW) shall be in the range of 1% to 5% of the occupied bandwidth (OBW) and video bandwidth (VBW) shall be approximately 3x RBW.

A peak, or peak hold, may be used in place of the sampling detector as this may produce a wider bandwidth than the actual bandwidth (worst-case measurement). Use of a peak hold may be necessary to determine the occupied bandwidth if the device is not transmitting continuously.

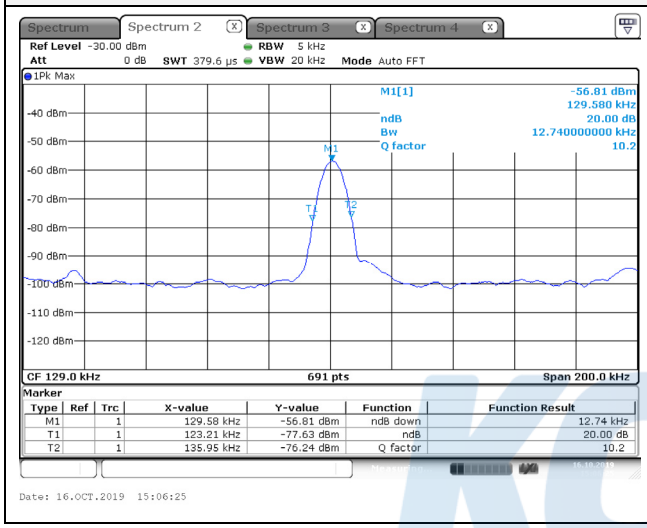
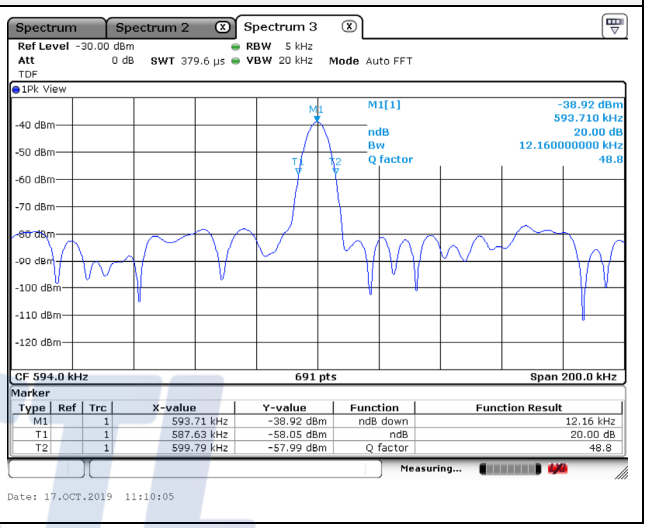
The trace data points are recovered and are directly summed in linear power level terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached and that frequency recorded. The process is repeated for the highest frequency data points (starting at the highest frequency, at the right side of the span, and going down in frequency). This frequency is then recorded.

Test results

20dB Bandwidth

Frequency (㎒)	20dB Bandwidth (㎑)	Limit
110 ~ 148	12.74	Reporting purpose only
594	12.16	

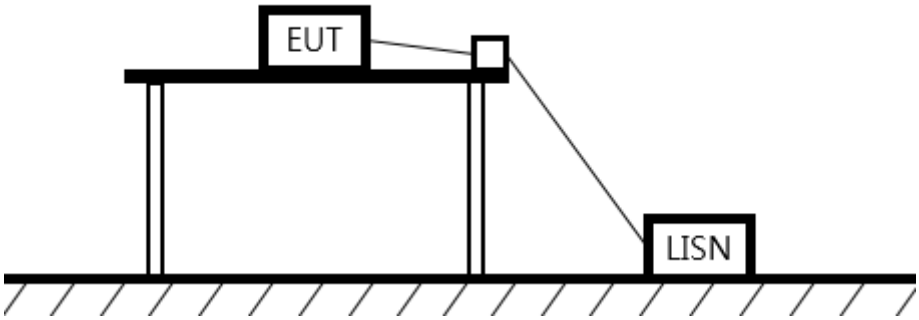
Test Plots

WPT	S-Pen
	

Note:
Because the measured signal is CW/CW-like, adjusting the RBW per C63.10 would not be practical since measured bandwidth will always follow the RBW and the result will be approximately twice the RBW.

6.3. 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.

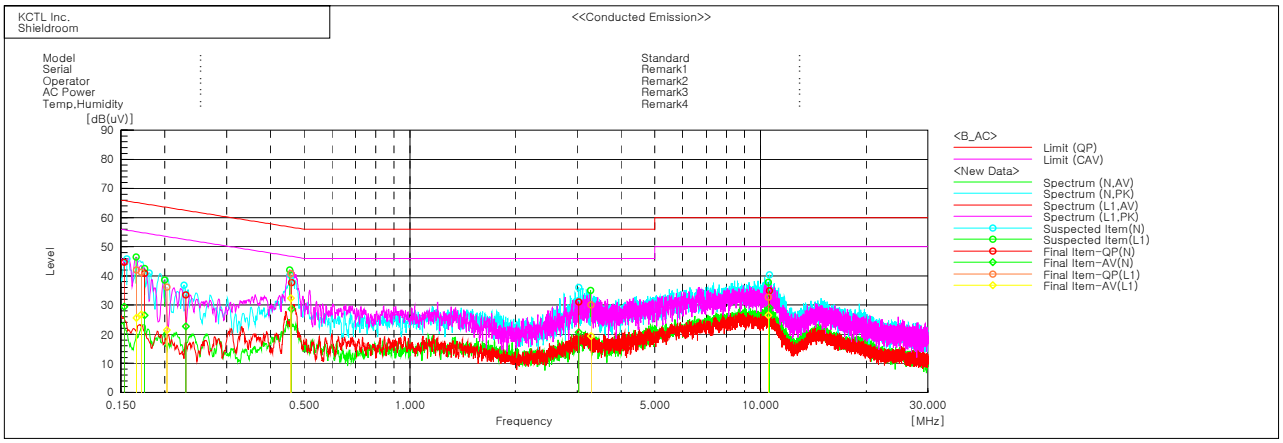
Frequency of Emission (㎒)	Conducted limit (dB㎶/m)	
	Quasi-peak	Average
0.15 – 0.50	66 - 56*	56 - 46*
0.50 – 5.00	56	46
5.00 – 30.0	60	50

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

S-Pen charging mode Test case 2



Final Result

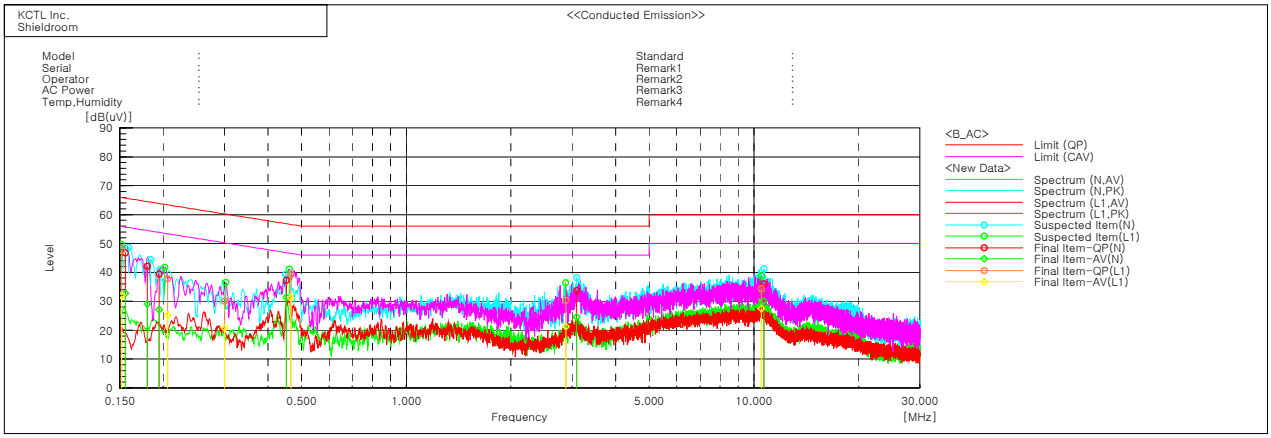
--- N Phase ---

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	0.15346	34.8	19.6	9.8	44.6	29.4	65.8	55.8	21.2	26.4
2	0.1755	30.8	16.4	10.1	40.9	26.5	64.7	54.7	23.8	28.2
3	0.230	23.7	13.0	9.7	33.4	22.7	62.4	52.4	29.0	29.7
4	0.45945	27.8	18.7	9.9	37.7	28.6	56.7	46.7	19.0	18.1
5	3.02786	21.3	10.9	9.7	31.0	20.6	56.0	46.0	25.0	25.4
6	10.5922	25.0	19.1	9.9	34.9	29.0	60.0	50.0	25.1	21.0

--- 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	0.16605	31.8	15.4	10.2	42.0	25.6	65.2	55.2	23.2	29.6
2	0.17163	31.0	16.5	10.2	41.2	26.7	64.9	54.9	23.7	28.2
3	0.20298	26.2	11.4	10.0	36.2	21.4	63.5	53.5	27.3	32.1
4	0.45767	30.9	22.4	9.9	40.8	32.3	56.7	46.7	15.9	14.4
5	3.28283	20.4	9.7	9.7	30.1	19.4	56.0	46.0	25.9	26.6
6	10.52972	22.8	16.5	9.9	32.7	26.4	60.0	50.0	27.3	23.6

Power Sharing mode Test case 6



Final Result

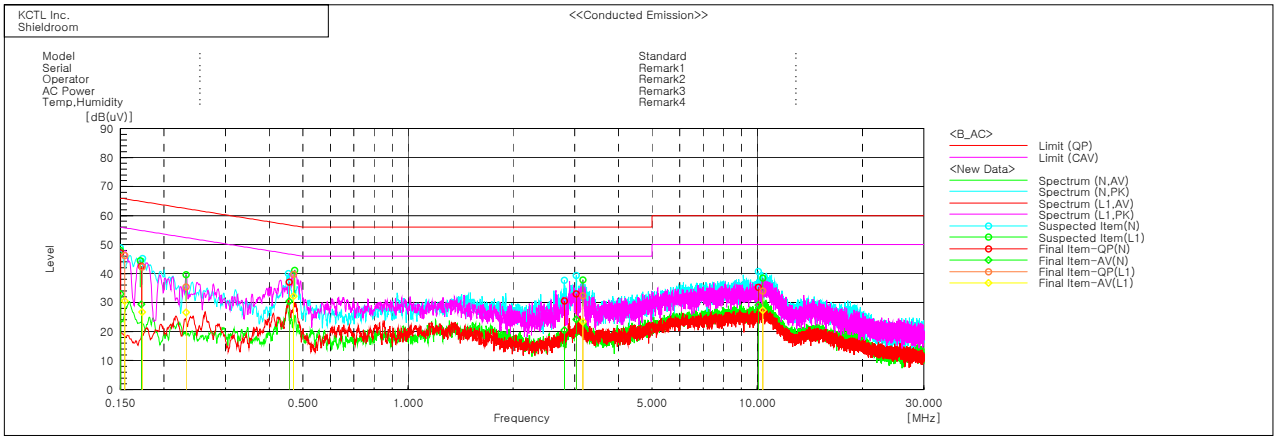
--- N Phase ---

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	0.15576	36.9	22.9	9.9	46.8	32.8	65.7	55.7	18.9	22.9
2	0.17989	32.0	19.0	10.1	42.1	29.1	64.5	54.5	22.4	25.4
3	0.1946	29.4	17.1	10.0	39.4	27.1	63.8	53.8	24.4	26.7
4	0.45169	27.4	21.5	9.9	37.3	31.4	56.8	46.8	19.5	15.4
5	3.08729	24.1	14.9	9.7	33.8	24.6	56.0	46.0	22.2	21.4
6	10.67531	26.1	20.1	9.9	36.0	30.0	60.0	50.0	24.0	20.0

--- 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	0.15173	37.7	22.0	9.9	47.6	31.9	65.9	55.9	18.3	24.0
2	0.2057	27.8	15.2	10.0	37.8	25.2	63.4	53.4	25.6	28.2
3	0.30058	20.2	11.0	9.8	30.0	20.8	60.2	50.2	30.2	29.4
4	0.46593	29.5	21.3	9.9	39.4	31.2	56.6	46.6	17.2	15.4
5	2.87872	20.6	11.6	9.7	30.3	21.3	56.0	46.0	25.7	24.7
6	10.51176	24.4	17.6	9.9	34.3	27.5	60.0	50.0	25.7	22.5

Simultaneous Charging mode Test case 9



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	0.15042	37.2	23.2	9.8	47.0	33.0	66.0	56.0	19.0	23.0
2	0.17233	32.5	19.3	10.1	42.6	29.4	64.8	54.8	22.2	25.4
3	0.45719	27.2	20.5	9.9	37.1	30.4	56.7	46.7	19.6	16.3
4	2.80679	20.9	10.9	9.7	30.6	20.6	56.0	46.0	25.4	25.4
5	3.03031	23.3	14.4	9.7	33.0	24.1	56.0	46.0	23.0	21.9
6	10.07879	25.3	19.3	9.9	35.2	29.2	60.0	50.0	24.8	20.8

--- 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	0.15432	36.3	20.6	9.9	46.2	30.5	65.8	55.8	19.6	25.3
2	0.17339	32.1	16.6	10.2	42.3	26.8	64.8	54.8	22.5	28.0
3	0.23118	25.5	16.8	9.8	35.3	26.6	62.4	52.4	27.1	25.8
4	0.47034	29.8	22.3	9.9	39.7	32.2	56.5	46.5	16.8	14.3
5	3.16317	22.6	13.7	9.7	32.3	23.4	56.0	46.0	23.7	22.6
6	10.36244	24.0	17.5	9.9	33.9	27.4	60.0	50.0	26.1	22.6

7. Measurement equipment

Equipment Name	Manufacturer	Model No.	Serial No.	Next Cal. Date
SIGNAL GENERATOR	R&S	SMR40	100007	20.05.13
VECTOR SIGNAL GENERATOR	R&S	SMBV100A	257566	20.07.16
Spectrum Analyzer	R&S	FSV40	100989	20.01.04
EMI TEST RECEIVER	R&S	ESCI7	100732	20.08.22
EMI TEST RECEIVER	R&S	ESCI3	100710	20.08.22
TWO-LINE V-NETWORK	R&S	ENV216	101584	20.04.05
LOOP Antenna	R&S	HFH2-Z2	892665/035	20.08.24
AMPLIFIER	SONOMA INSTRUMENT	310N	284608	20.08.22
Antenna Mast	MATURO	EAS 1.5	042/8941211	-
Antenna Mast	MATURO	EAS 1.5	043/8941211	-
Turn Table	MATURO	TT 0.8 PF	041/8941211	-
Cable Assembly	gigalane	RG-400	-	-

End of test report