TEST REPORT

1. Applicant		
Name	:	Shinan Information Communication
Address	:	7-3, Dangsan-ro 148beon-gil, Gunpo-si, Gyeonggi-do, Korea
FCC ID	:	2AG84DOTWACBTX15001
2. Products		
Name	:	Wireless air charging battery pad
Model No.	:	DOTWACBTX15001
Variant Model No.	:	N/A
Manufacturer		Shinan Information Communication
Address	:	7-3, Dangsan-ro 148beon-gil, Gunpo-si, Gyeonggi-do, Korea
3. Test Standard	:	CFR 47 FCC PART 15 SUBPART C section 15.207 CFR 47 FCC PART 15 SUBPART C section 15.209
4. Test Result	:	PASS
5. Dates of Test	:	January 07, 2015 to January 20, 2015
6. Date of Issue	:	January 22, 2015
7. Test Laboratory	:	Standard Engineering Co. Ltd. FCC Designation Number : 624439

Tested by	Approved by
	
SoonHo, Kim / Test Engineer	SeongSeok, Seo / Compliance Engineer

Standard Engineering Co. Ltd.
377-11, Sinjang-ri, Eumam-myeon, Seosan-si,
ChoongNam 356-844, South Korea
Tel.: +82-41-663-9436, Fax :+82-41-663-9434
www.stdeng.com

1. Test Summary

ELECTROMAGNETIC INTERFERENCE (EMI)			
Test	**Test Requirement**	**Test method**	**Result**
Radiated Emission (9 kHz to30MHz)	47 CFR Part 15, Subpart C Section 15.209	ANSI C 63.10: Clause 6.4	PASS
Radiated Emission (30MHz to 1GHz)	47 CFR Part 15, Subpart C Section 15.209	ANSI C 63.10: Clause 6.4	PASS
Conducted Emission (150 KHz to 30 MHz)	47 CFR Part 15, Subpart C Section 15.207	ANSI C63.10: Clause 6.2	PASS

Remark:

EUT: In this whole report EUT means Equipment Under Test.

N/A: not applicable. Refer to the relative section for the details.

Tx: In this whole report Tx (or tx) means Transmitter.

Rx: In this whole report Rx (or rx) means Receiver.

RF: In this whole report RF means Radio Frequency.

2. TABLE OF CONTENTS

3. General Information

3.1. Client Information

Applicant	:	Shinan Information Communication
Address of Applicant	:	7-3, Dangsan-ro 148beon-gil, Gunpo-si, Gyeonggi-do, Korea
Manufacturer	:	Shinan Information Communication
Address of Manufacturer	:	7-3, Dangsan-ro 148beon-gil, Gunpo-si, Gyeonggi-do, Korea

3.2. General Description of E.U.T.

Product Name	:	Wireless air charging battery pad
Model No.	:	DOTWACBTX15001
Product Description	:	Low Power Transmitter

3.3. Details of E.U.T.

Power Supply	:	DC 5V (supplied by adaptor)
Test Voltage	:	Input: DC 5V, 1.5A Output: DC 5V, 1A

3.4. Description of Support Units

The EUT has been tested with simulate receiver, resistor and adapter provided by applicant.

Adapter details Model : A1205
Input : AC 100-240 50/60 Hz 0.15A
Output : DC 5V 1.0A

3.5. Abnormalities from Standard Conditions

None.

3.6. Other Information Requested by the Customer

None.

3.7. Test Location

377-11, Sinjang-ri, Eumam-myeon, Seosan-si, ChoongNam 356-844, South Korea
(FCC Designation Number : 624439)

This test site is in compliance with ISO/IEC 17025 for general requirements for the competence of testing and calibration laboratories.

4. Equipment Used during Test

No.	Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date (MM-DD-YY)	Next Cal. Data (MM-DD-YY)
1	EMI Test Receiver	LIG	ER-265	L1009B016	03/04/2015	03/04/2016
2	EMI Test Receiver	Rhode & Schwarz	ESIB7	3311	02/11/2015	02/11/2016
2	Bi-log Antenna	Schwarzbeck	VULB9163	164	09/15/2014	09/15/2016
5	Loop Antenna	EMCO	6502	9206-2769	02/13/2014	02/13/2016
6	Spectrum Analyzer	Agilent	E4440A	US45303130	02/04/2015	02/04/2016
8	Frequency Counter	HP	5347A	3009A02742	02/04/2015	02/04/2016
13	Attenuator	Agilent	8495B	3308A22485	02/04/2015	02/04/2016
15	Power Meter	Agilent	E4418B	MY405111655	02/04/2015	02/04/2016
16	Power Sensor	HP	8485A	2347A02746	02/04/2015	02/04/2016
18	RF Cable	Gigalane	SMS102-MF14 1-SMS102-1.0M	PB1252301285	N/A	N/A
20	Signal Generator	HP	83630A	3420A00728	02/04/2015	02/04/2016
21	Oscilloscope	HP	54815A	US38380122	02/04/2015	02/04/2016
23	Pre Amplifier	Agilent	8449B	3008A02105	02/04/2015	02/04/2016
25	Signal Generator	Rhode & Schwarz	SML03	102330	01/23/2015	02/04/2016
26	POWER DIVIDER	Agilent	11636B	50309	02/04/2015	02/04/2016
27	Power Sensor	Agilent	8482B	3318A05111	02/04/2015	02/04/2016
29	DC Power Supply	HP	6032A	US35420383	02/04/2015	02/04/2016
30	Slidacs	Sunchang Electrics	5KV	N/A	02/04/2015	02/04/2016
32	Bandreject Filter	K&L Microwave	50140	555	02/04/2015	02/04/2016
33	Horn Antenna	SCHWARZBECK	BBHA9120A	346	01/27/2014	01/27/2016
34	Horn Antenna	A.H. SYSTEMS	SAS-572	269	08/07/2015	08/07/2017
35	DC Power Supply	Provice	PWS-5005D	205050	02/04/2015	02/04/2016
36	LISN	Rhode & Schwarz	ESH2-Z5	100164	01/27/2015	01/27/2016
38	Pulse Limiter	Rhode & Schwarz	ESH3-Z2	100137	11/13/2015	11/13/2016

5. Emission Test Results

5.1. Radiated Emissions

Standard requirement: 47 CFR Part 15C Section 15.209

Test Requirement: FCC Part15 C

Test Method: ANSI C63.10:2009

Frequency Range: 9 kHz to 1GHz

Measurement Distance: 3 m

Detector: peak and average for pre-scan

Class / Limit:

Frequency (MHz)	Field strength (microvolt/meter)	Measurement distance (m)
0.009MHz-0.490MHz	2400/F(kHz)	300
0.490MHz-1.705MHz	24000/F(kHz)	30
1.705MHz-30MHz	30	30
30MHz-88MHz	100	3
88MHz-216MHz	150	3
216MHz-960MHz	200	3
960MHz-1GHz	500	3
Above 1GHz	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., Sections 15.231 and 15.241

Radiated Emissions

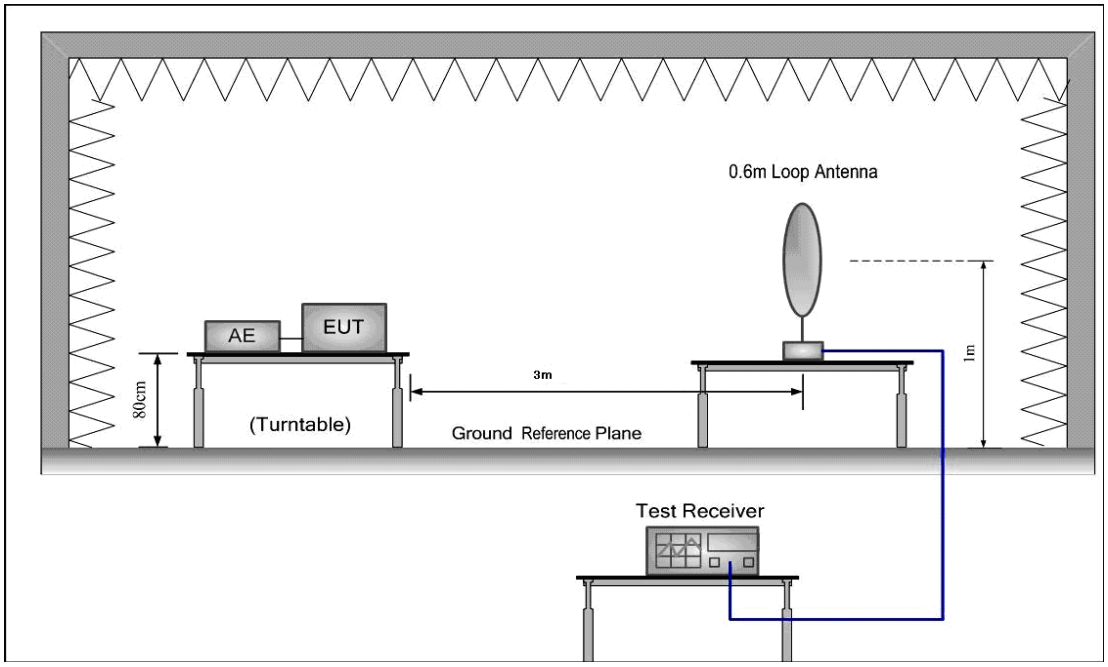
Operating Environment:

Temperature: 7.5 °C Humidity: 41 %RH Atmospheric Pressure: 1102 mbar

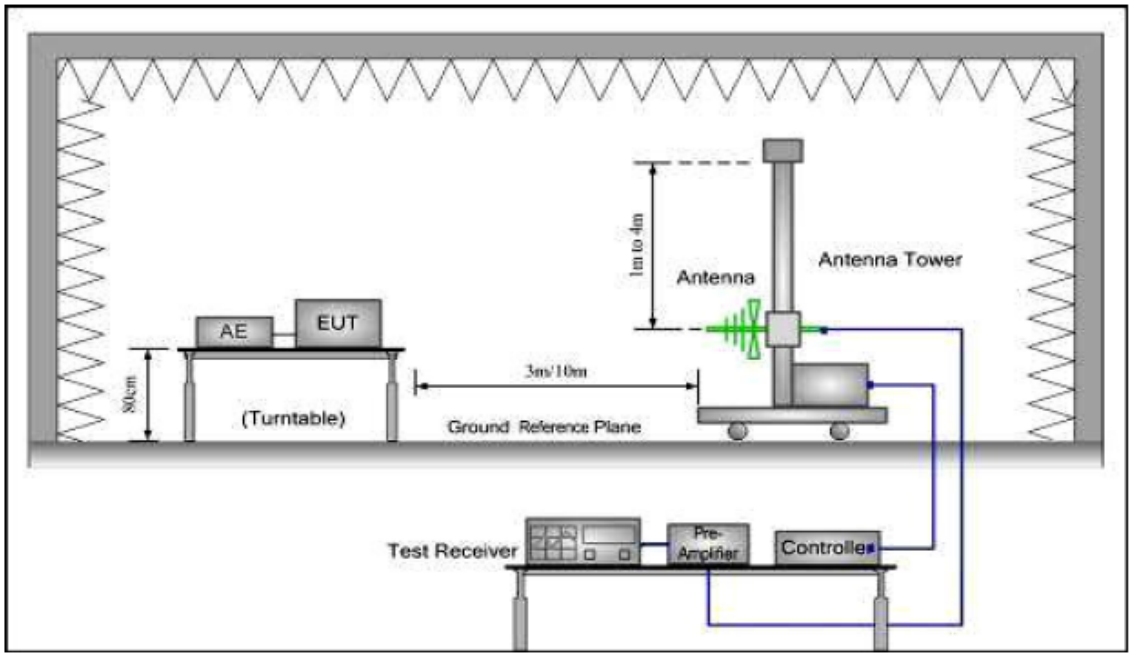
EUT Operation: Test the EUT in charging & standby mode.

Test Configuration:

1) 9 kHz to 30 MHz emissions:



2) 30 MHz to 1 GHz emissions:



Test Procedure:

1) 9 kHz to 30 MHz emissions:

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 Detect Function and Specified Bandwidth with Maximum Hold Mode.

2) 30 MHz to 1 GHz emissions:

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. During performing radiated emission below 1 ㎓, the EUT was set 3 meters away from the interference receiving antenna, which was mounted on the top of a variable-height antenna tower. During performing radiated emission above 1 ㎓, the EUT was set 3 meter away from the interference-receiving antenna.

c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

f. If the emission level of the EUT in peak mode was 10 ㏈ lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10 ㏈ margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

5.1.1 Field Strength of Fundamental Test Result

The following table shows the highest levels of radiated emissions on both polarizations of horizontal and vertical. The field strength of spurious emission was measured in all orthogonal EUT position and worst orthogonal position was x-axis.

Frequency (MHz)	Reading (dBuV/m)	Correct (dB)	Actual (dBμV/m) at 3 m	Actual (dBμV/m) at 300 m	FCC Limit		Det. Mode
					Limit (dBμV/m) at 300 m	Margin (dB)	
Charging with max load mode							
0.110	41.60	10.86	52.46	-27.54	25.00	-52.54	AV
0.120	48.34	10.85	59.19	-20.81	25.00	-45.81	AV
0.147	43.96	10.82	54.78	-25.22	25.00	-50.22	AV
0.205	42.43	10.77	53.20	-26.80	25.00	-51.80	AV
Charging with mid load mode							
0.110	42.15	10.86	53.01	-26.99	25.00	-51.99	AV
0.120	48.22	10.85	59.07	-20.93	25.00	-45.93	AV
0.147	43.58	10.82	54.40	-25.60	25.00	-50.60	AV
0.205	43.31	10.77	54.08	-25.92	25.00	-50.92	AV
Charging with min load mode							
0.110	43.67	10.86	54.53	-25.47	25.00	-50.47	AV
0.120	47.22	10.85	58.07	-21.93	25.00	-46.93	AV
0.147	44.27	10.82	55.09	-24.91	25.00	-49.91	AV
0.205	41.72	10.77	52.49	-27.51	25.00	-52.51	AV

Note;

1. According to §15.31 (f)(2) 300 m Result(dBμV/m) = 3 m Result(dBμV/m) – 40log(300/3) (dBμV/m).
2. According to §15.209 (d), the measurements were tested by using Quasi peak detector except for the frequency bands 9 – 90 ㎑, 110 – 490 ㎑and above 1 ㎓in these three bands on measurements employing an average detector.
3. The limit above was calculated based on table of §15.209 (a).

5.1.2 Spurious Emission: below 30 MHz

Frequency (MHz)	Reading (dBuV/m)	Correct (dB)	Actual (dBμV/m) at 3 m	Actual (dBμV/m)	FCC Limit		Det. Mode
					Limit (dBμV/m)	Margin (dB)	
Charging with max load mode							
0.72	31.22	10.67	41.89	1.89	30.45	-28.56	QP
1.68	21.65	10.59	32.24	-7.76	23.09	-30.85	QP
4.59	12.36	10.63	22.99	-17.01	29.54	-46.55	QP
8.63	12.59	10.62	23.21	-16.79	29.54	-46.33	QP
25.45	13.57	8.16	21.73	-18.27	29.54	-47.81	QP
Charging with mid load mode							
0.63	31.12	10.66	41.78	1.78	31.61	-29.83	QP
3.65	21.65	10.34	31.99	-8.01	29.54	-37.55	QP
5.49	12.24	10.65	22.89	-17.11	29.54	-46.65	QP
12.41	12.65	10.55	23.20	-16.8	29.54	-46.34	QP
25.25	13.12	8.16	21.28	-18.72	29.54	-48.26	QP
Charging with min load mode							
0.66	32.34	10.66	43.00	3.00	31.21	-28.21	QP
4.25	21.65	10.63	32.28	-7.72	29.54	-37.26	QP
5.50	12.24	10.65	22.89	-17.11	29.54	-46.65	QP
10.25	12.65	10.53	23.18	-16.82	29.54	-46.36	QP
25.63	13.12	8.16	21.28	-18.72	29.54	-48.26	QP
Standby mode							
0.05	47.22	11.32	58.54	-21.46	33.62	-55.08	AV
0.95	26.34	10.83	37.17	-2.83	28.04	-30.87	QP
4.25	21.21	10.63	31.84	-8.16	29.54	-37.7	QP
8.39	13.32	10.62	23.94	-16.06	29.54	-45.6	QP
10.35	13.45	10.53	23.98	-16.02	29.54	-45.56	QP
22.51	13.62	9.14	22.76	-17.24	29.54	-46.78	QP

Note;

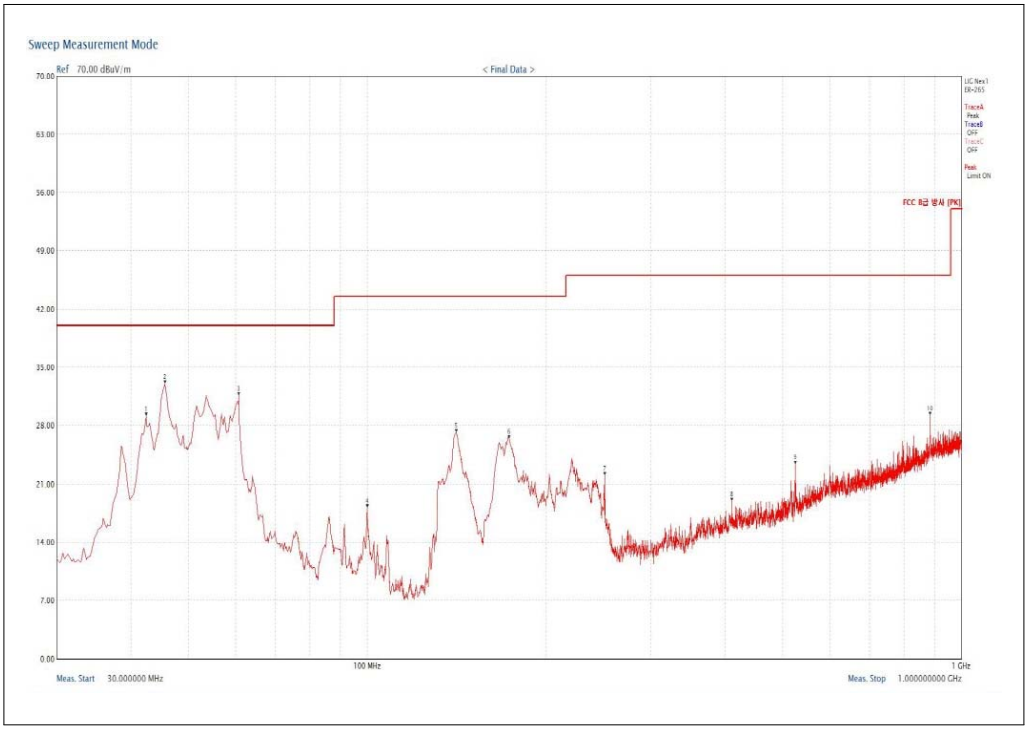
1. According to §15.31 (f)(2),
   - 300 m Result(dBμV/m) = 3 m Result(dBμV/m) – 40log(300/3) (dBμV/m)
   - 30 m Result(dBμV/m) = 3 m Result(dBμV/m) – 40log(30/3) (dBμV/m)
2. According to field strength table of general requirement in §15.209 (a), field strength limits below 1.705 ㎒ were calculated as below.
   - 9 ㎑ to 490 ㎑ : 20log(2 400 / F (㎑)) at 300 m (dBμV/m)
   - 490 ㎑ to 1 705 ㎑ : 20log(24 000 / F (㎑)) at 30 m (dBμV/m)
   - 1.705 ㎒ to 30 ㎒ : 30 at 30 m (dBμV/m)
3. According to §15.209 (d), the measurements were tested by using Quasi peak detector except for the frequency bands 9 – 90 ㎑, 110 – 490 ㎑and above 1 ㎓ in these three bands on measurements employing an average detector.

5.1.3 Spurious Emission: above 30 MHz

Charging with max load mode

Vertical:

Level (dBμV/m)

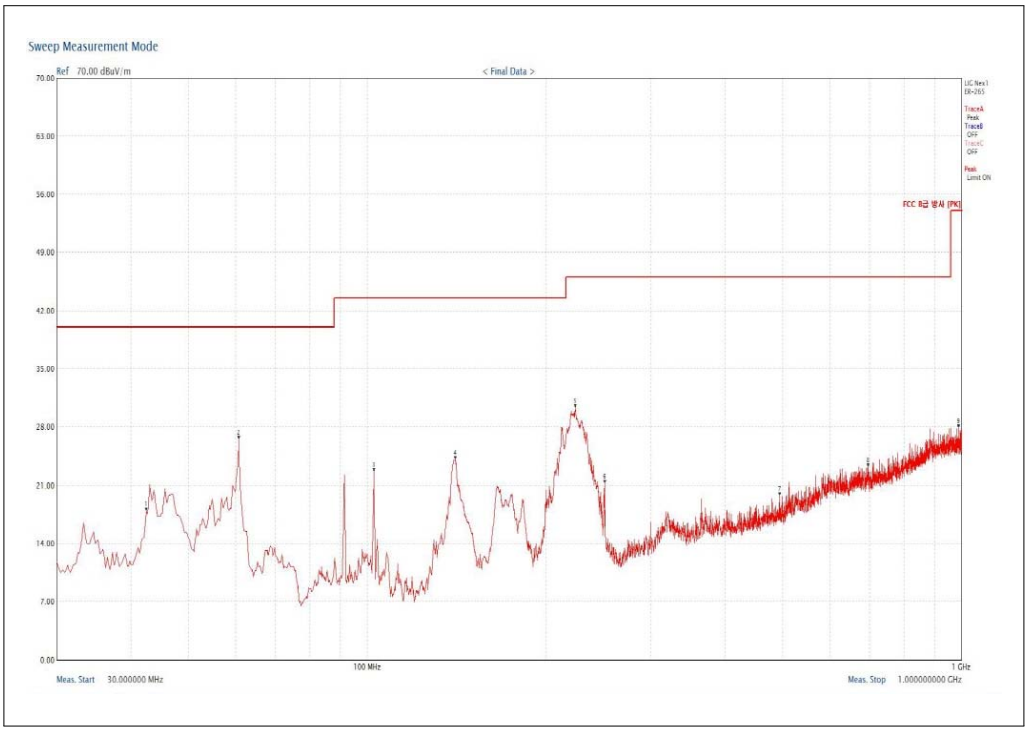


Quasi-peak measurement

Frequency (MHz)	Detect Mode	Polarization (V/H)	Measured Value (dBμV)	Antenna Factor + Cable Loss (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Magin (dB)
42.43	QP	V	29.16	15.76	13.4	40.0	10.84
45.63	QP	V	32.99	15.90	17.09	40.0	7.01
60.67	QP	V	31.61	13.88	17.73	40.0	8.39
141.08	QP	V	27.18	9.86	17.32	43.5	16.32
172.58	QP	V	26.65	10.60	16.05	43.5	16.85

Horizontal:

Level (dBμV/m)



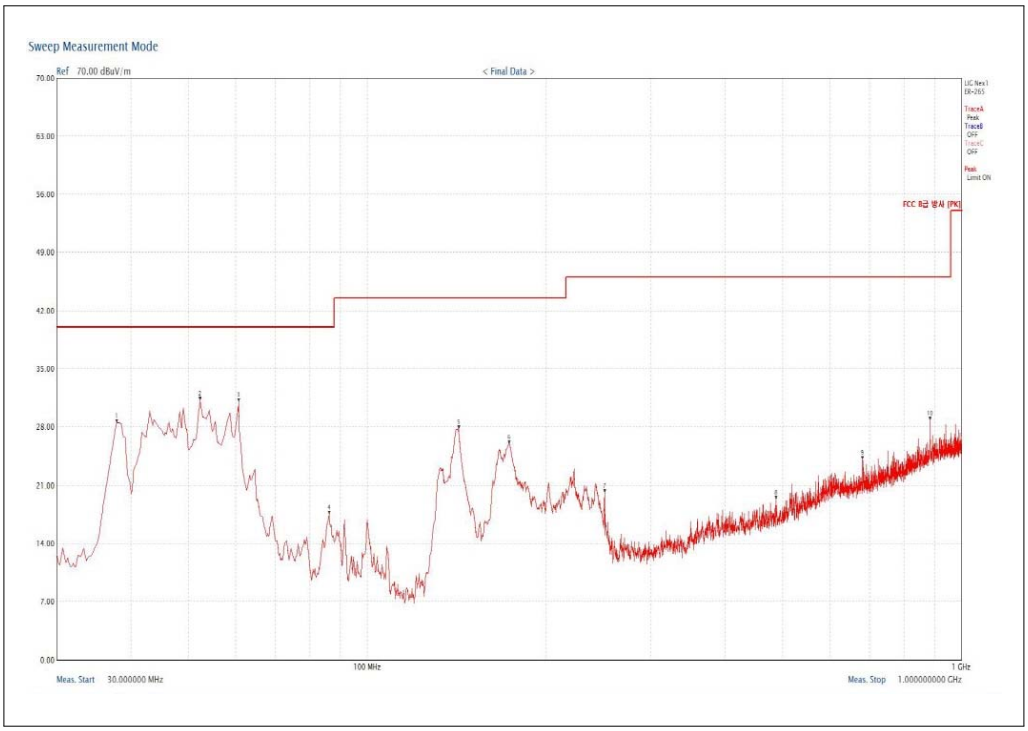
Quasi-peak measurement

Frequency (MHz)	Detect Mode	Polarization (V/H)	Measured Value (dBμV)	Antenna Factor + Cable Loss (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Magin (dB)
60.69	QP	H	26.54	13.88	12.66	40.0	13.46
102.59	QP	H	22.64	12.83	9.81	43.5	20.86
140.48	QP	H	24.03	9.85	14.18	43.5	19.47
223.97	QP	H	30.29	13.13	17.16	46.0	15.71

Charging with mid load mode

Vertical:

Level (dBμV/m)

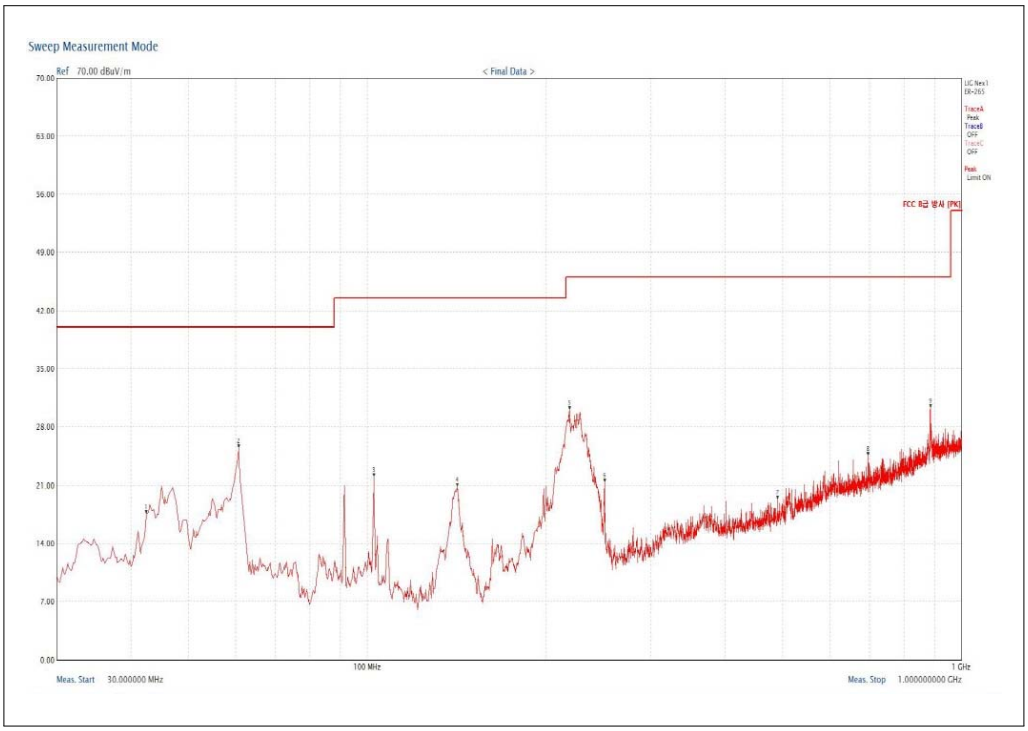


Quasi-peak measurement

Frequency (MHz)	Detect Mode	Polarization (V/H)	Measured Value (dBμV)	Antenna Factor + Cable Loss (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Magin (dB)
43.02	QP	V	29.91	15.81	14.10	40.0	10.09
52.26	QP	V	31.23	15.00	16.23	40.0	8.77
60.67	QP	V	31.02	13.88	17.14	40.0	8.98
142.38	QP	V	27.82	9.87	17.95	43.5	15.68
173.29	QP	V	25.99	10.63	15.36	43.5	17.51

Horizontal:

Level (dBμV/m)



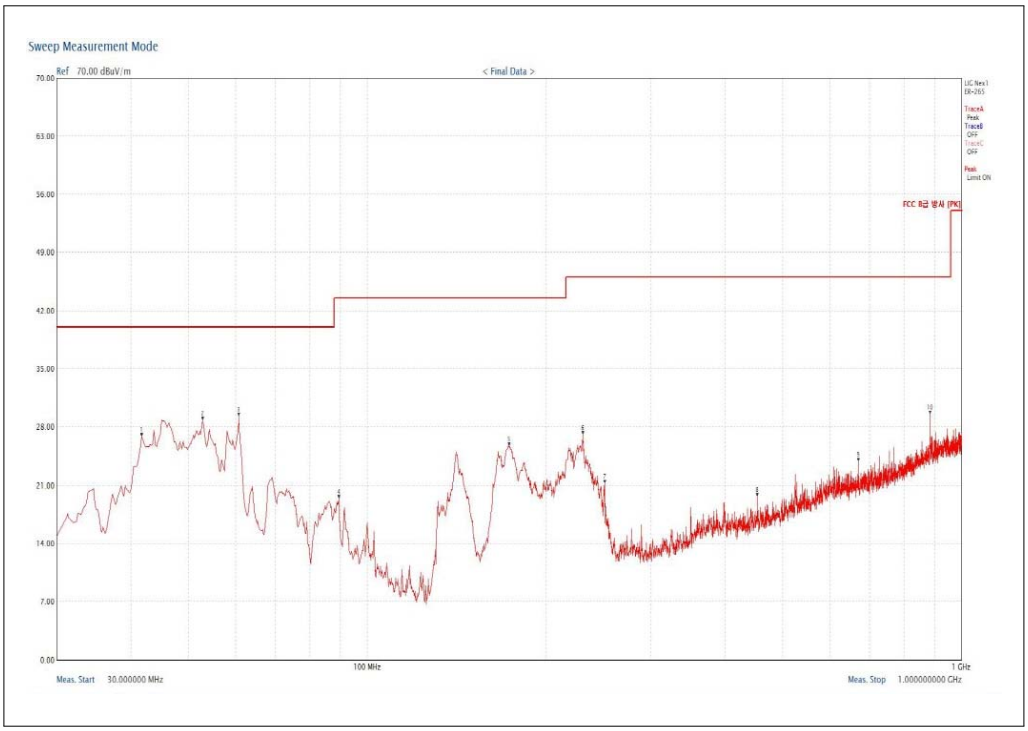
Quasi-peak measurement

Frequency (MHz)	Detect Mode	Polarization (V/H)	Measured Value (dBμV)	Antenna Factor + Cable Loss (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Magin (dB)
60.67	QP	H	25.51	13.88	11.63	40.0	14.49
91.46	QP	H	20.97	12.16	8.81	43.5	22.53
102.59	QP	H	22.03	12.83	9.20	43.5	21.47
141.79	QP	H	20.80	9.87	10.93	43.5	22.70
218.76	QP	H	30.08	12.90	17.18	46.0	15.92

Charging with min load mode

Vertical:

Level (dBμV/m)

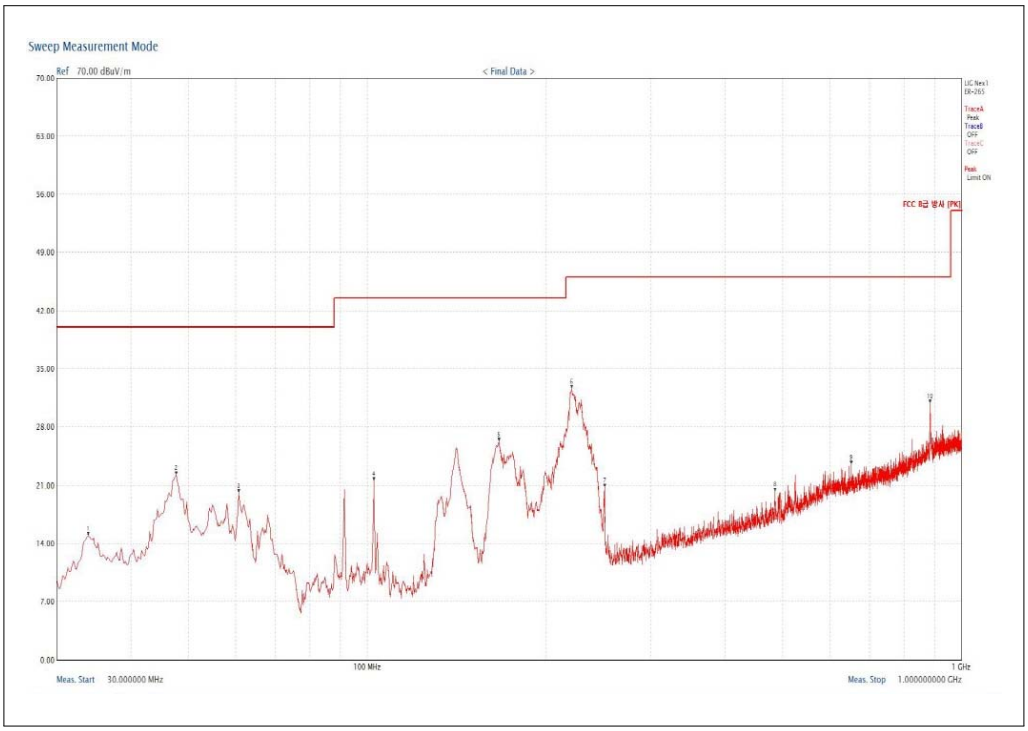


Quasi-peak measurement

Frequency (MHz)	Detect Mode	Polarization (V/H)	Measured Value (dBμV)	Antenna Factor + Cable Loss (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Magin (dB)
45.03	QP	V	28.79	15.98	12.81	40.0	11.21
52.85	QP	V	29.64	14.93	14.71	40.0	10.36
60.67	QP	V	29.30	13.88	15.42	40.0	10.70
141.08	QP	V	24.95	9.86	15.09	43.5	18.55
173.72	QP	V	25.72	10.62	15.10	43.5	17.78
230.48	QP	V	27.09	13.43	13.66	46.0	18.91

Horizontal:

Level (dBμV/m)



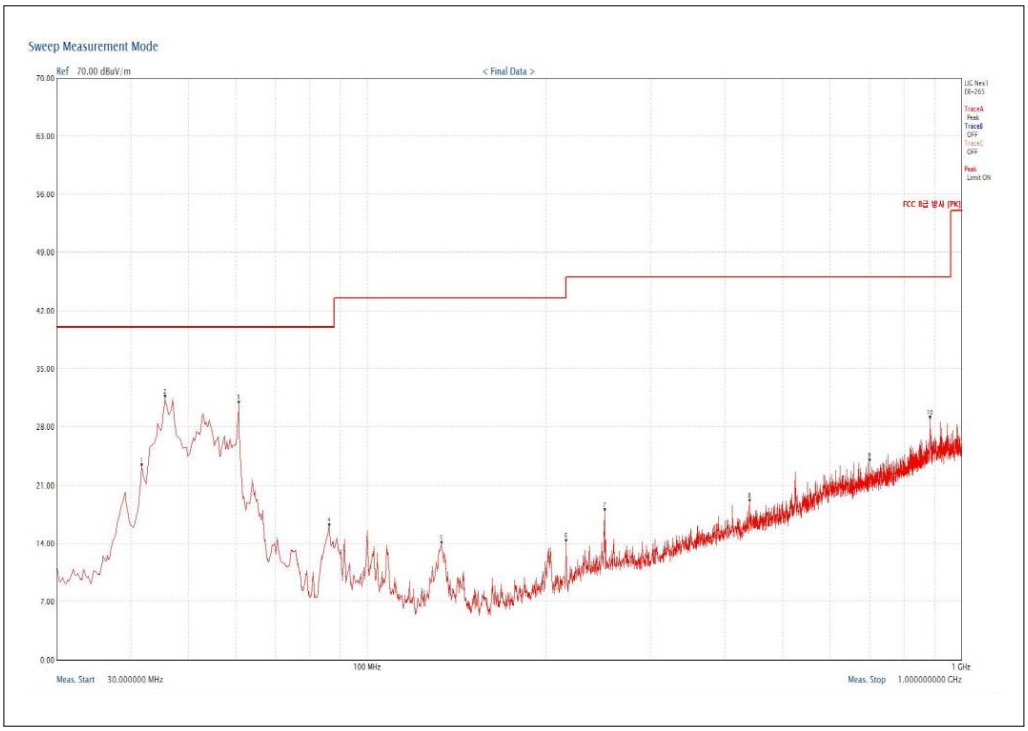
Quasi-peak measurement

Frequency (MHz)	Detect Mode	Polarization (V/H)	Measured Value (dBμV)	Antenna Factor + Cable Loss (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Magin (dB)
47.64	QP	H	22.20	15.61	6.59	40.0	17.80
102.59	QP	H	21.53	12.83	8.70	43.5	21.97
141.08	QP	H	25.51	9.86	15.65	43.5	17.99
166.15	QP	H	26.29	10.34	15.95	43.5	17.21
220.66	QP	H	32.64	12.98	19.66	46.0	13.36

Standby mode:

Vertical:

Level (dBμV/m)

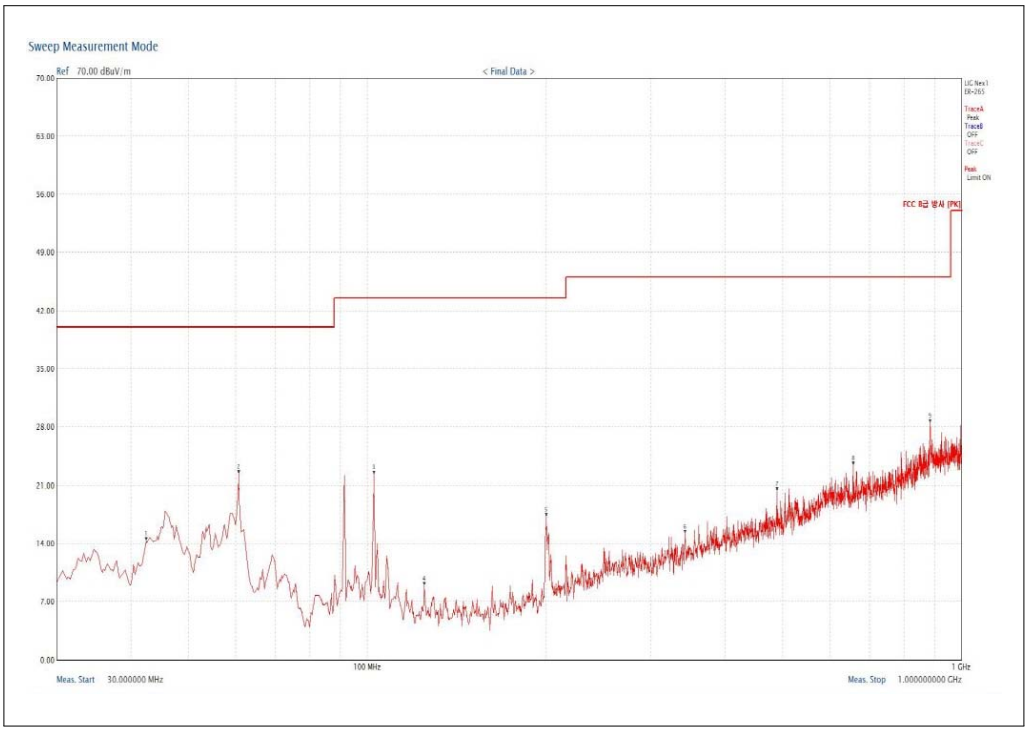


Quasi-peak measurement

Frequency (MHz)	Detect Mode	Polarization (V/H)	Measured Value (dBμV)	Antenna Factor + Cable Loss (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Magin (dB)
45.63	QP	V	31.40	15.90	15.50	40.0	8.6
47.05	QP	V	31.35	15.70	15.65	40.0	8.65
60.67	QP	V	30.68	13.88	16.80	40.0	9.32

Horizontal:

Level (dBμV/m)



Quasi-peak measurement

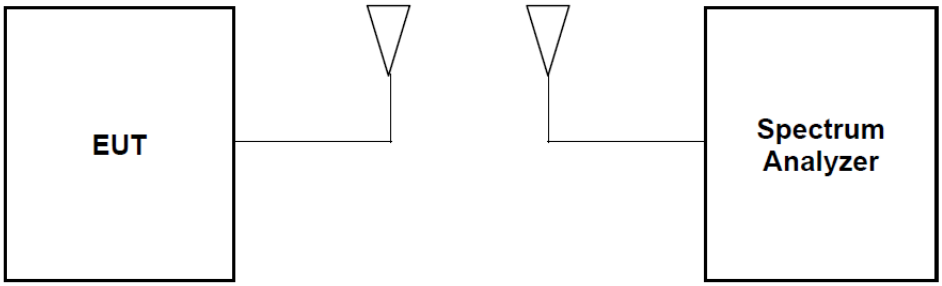
Frequency (MHz)	Detect Mode	Polarization (V/H)	Measured Value (dBμV)	Antenna Factor + Cable Loss (dB/m)	Emission Level (dBμV/m)	Limit (dBμV/m)	Magin (dB)
60.67	QP	H	24.70	13.88	10.82	40.0	15.3
91.46	QP	H	24.56	12.16	12.4	43.5	18.94
102.59	QP	H	22.26	12.83	9.43	43.5	21.24
888.48	QP	H	31.67	25.47	6.20	46.0	14.33

Note;

1. The worst case data were reported. And no other spurious and harmonic emissions were reported greater than listed emissions above table.
2. All measurements were recorded using a spectrum analyzer employing a Qusi-peak detector for above 30MHz.

5.2. 20 dB Bandwidth

5.2.1 Test Setup



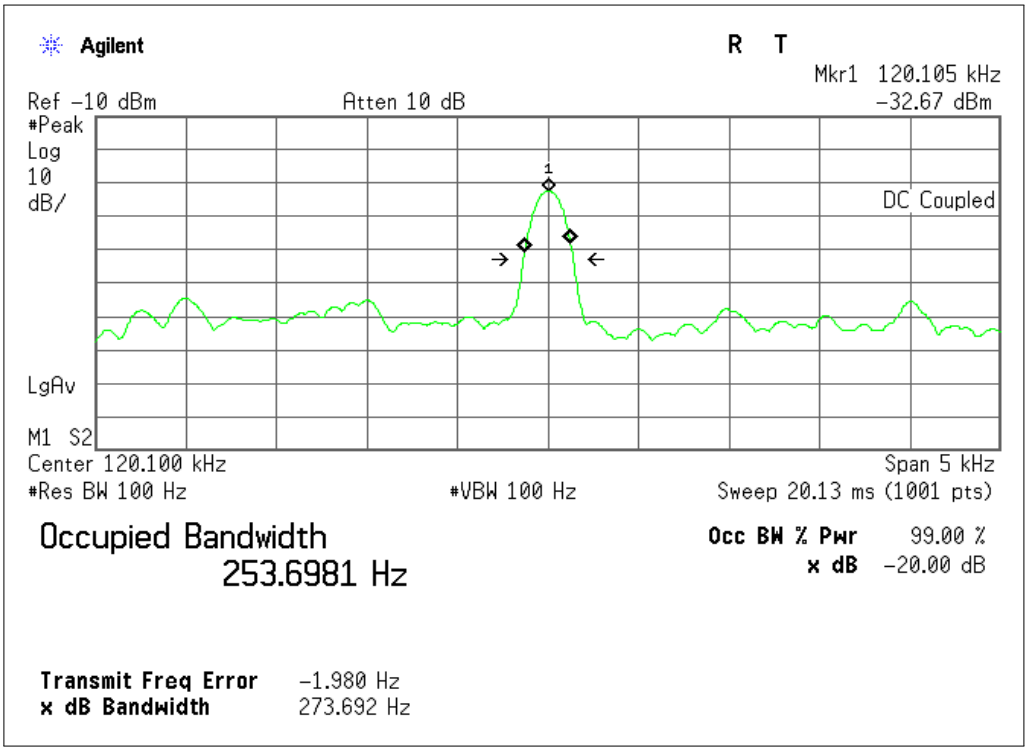
5.2.2 Test Procedure

20 dB Bandwidth a. Span = approximately 2 to 3 times the 20 dB bandwidth, RBW = greater than 1 % of the 20 dB bandwidth, VBW = RBW, Sweep = auto, Detector = peak, Trace = max hold. b. The marker-to-peak function to set the mark to the peak of the emission. Use the marker-delta function to measure 20 dB down one side of the emission. Reset the function, and move the marker to the other side of the emission, until it is (as close as possible to) even with the reference marker level. The marker-delta reading at this point is 20 dB bandwidth of the emission.

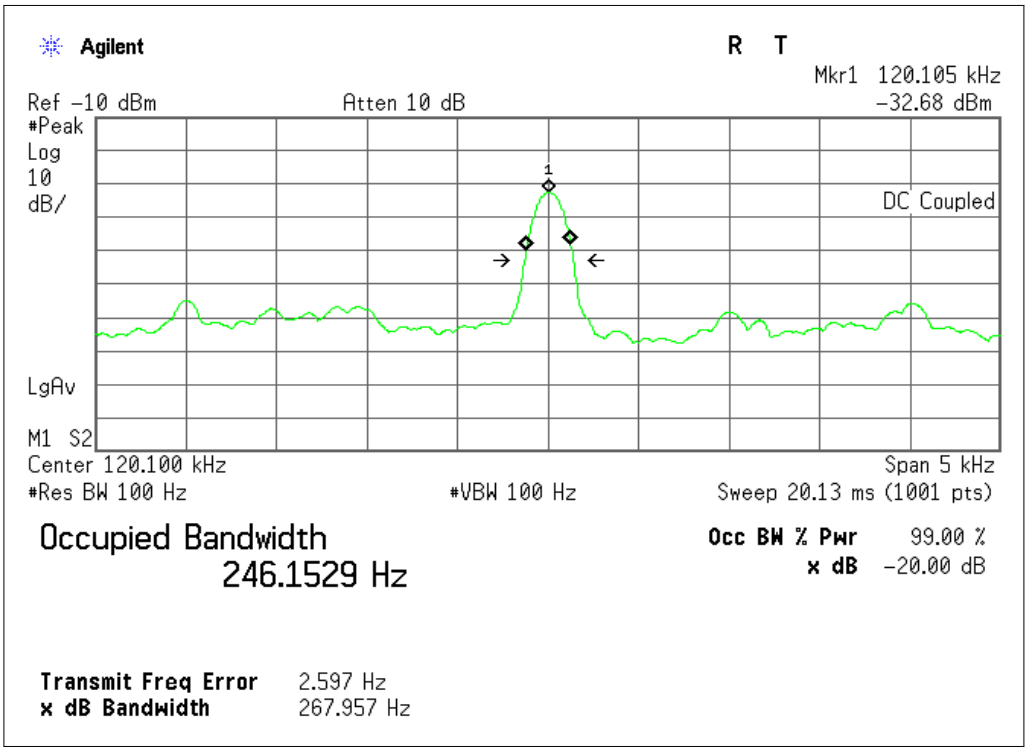
5.2.3 Test Result

EUT status	20 dB Bandwidth (㎑)	Limit
Charging with max load mode	273	Reporting proposed only
Charging with mid load mode	267	
Charging with min load mode	263	

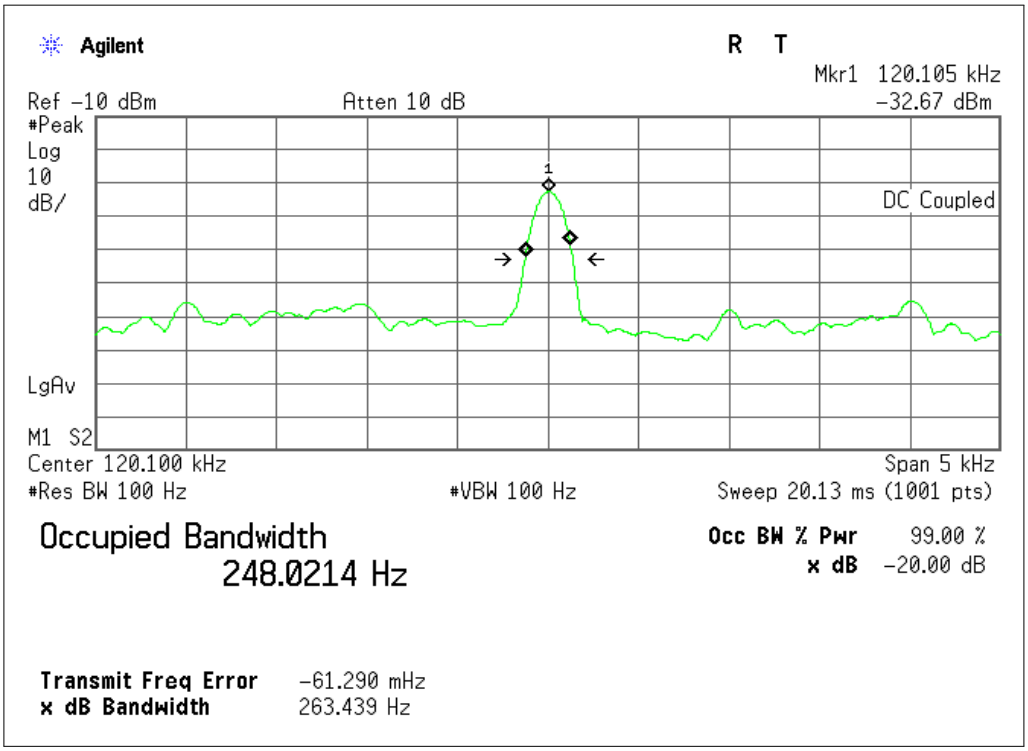
Charging with max load mode



Charging with mid load mode



Charging with min load mode



5.3. Conducted Emissions at Mains Terminals 150 kHz to 30 MHz

Test Requirement: FCC Part 15 C section 15.207
Test Method: ANSI C63.10: ANSI C63.10: 2009
Frequency Range: 150 kHz to 30 MHz
Detector: Peak for pre-scan (9 kHz Resolution Bandwidth)

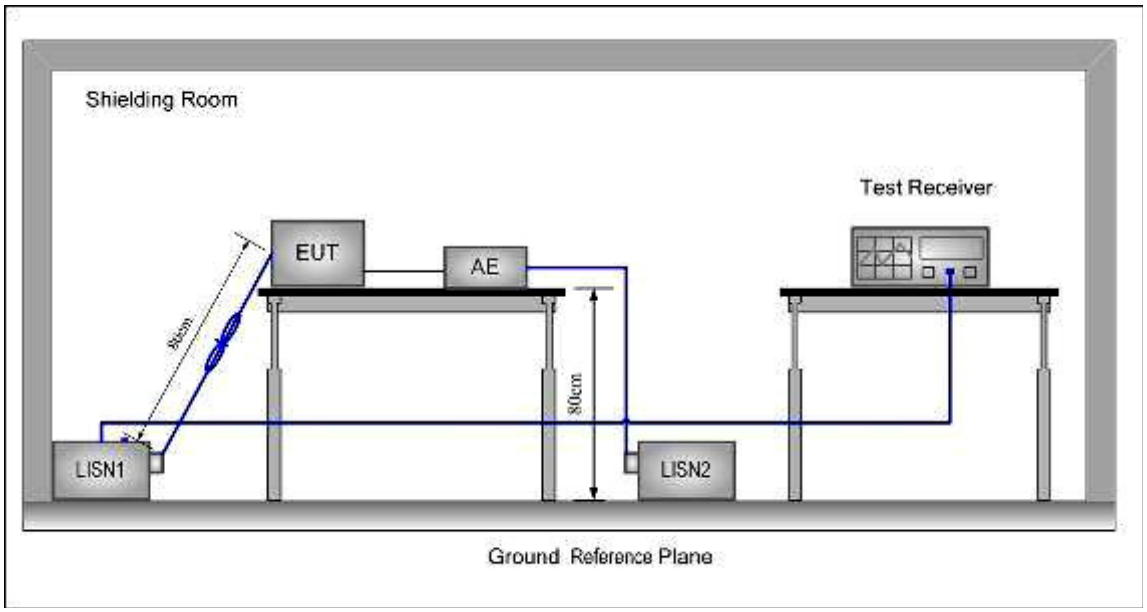
Test Limit

Limits for conducted disturbance at the mains ports of class B

Frequency Range (MHz)	Class B Limit dB(μV)	
	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
NOTE 1 The limit decreases linearly with the logarithm of the frequency in the range 0,15 MHz to 0,50 MHz.		

EUT Operation: Test in normal operating mode. For intentional radiators, measurements of the variation of the input power or the radiated signal level of the fundamental frequency component of the emission, as appropriate, shall be performed with the supply voltage varied between 85% and 115% of the nominal rated supply voltage.
Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

Test Configuration:



Test procedure:

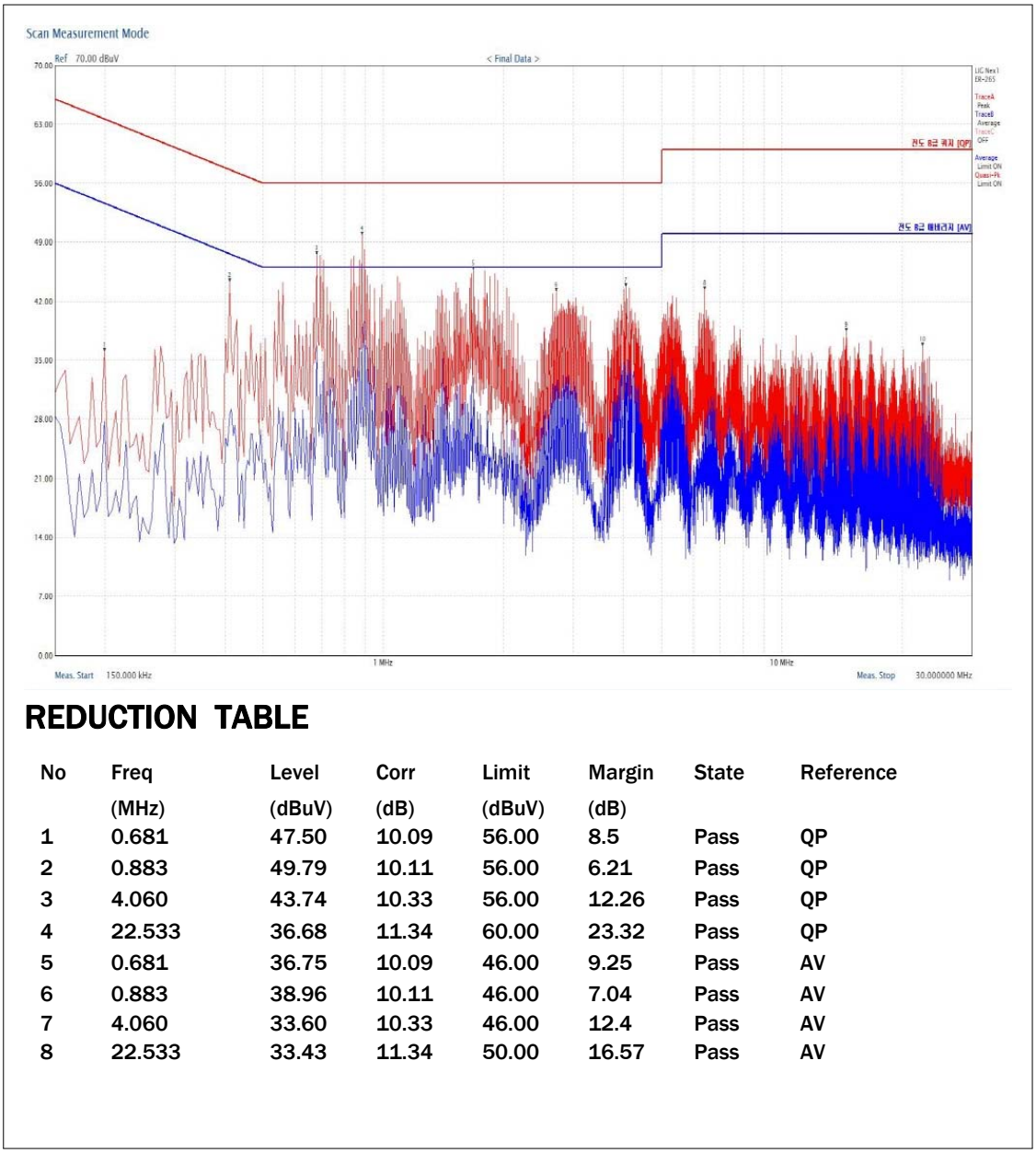
1. The mains terminal disturbance voltage test was conducted in a shielded room.
2. The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50/50μH + 5linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.
3. The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane, but separated from metallic contact with the ground reference plane by 0.1m of insulation.
4. The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0,4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0,8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0,8 m from the LISN 2.
5. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10: 2009 on conducted measurement.

5.3.1. Measurement Data

Pre-scan was performed with peak detected on all ports, Quasi-peak & average measurements were performed at the frequencies at which maximum peak emission level were detected. Please see the attached Quasi-peak and Average test results.

Charging with max load mode

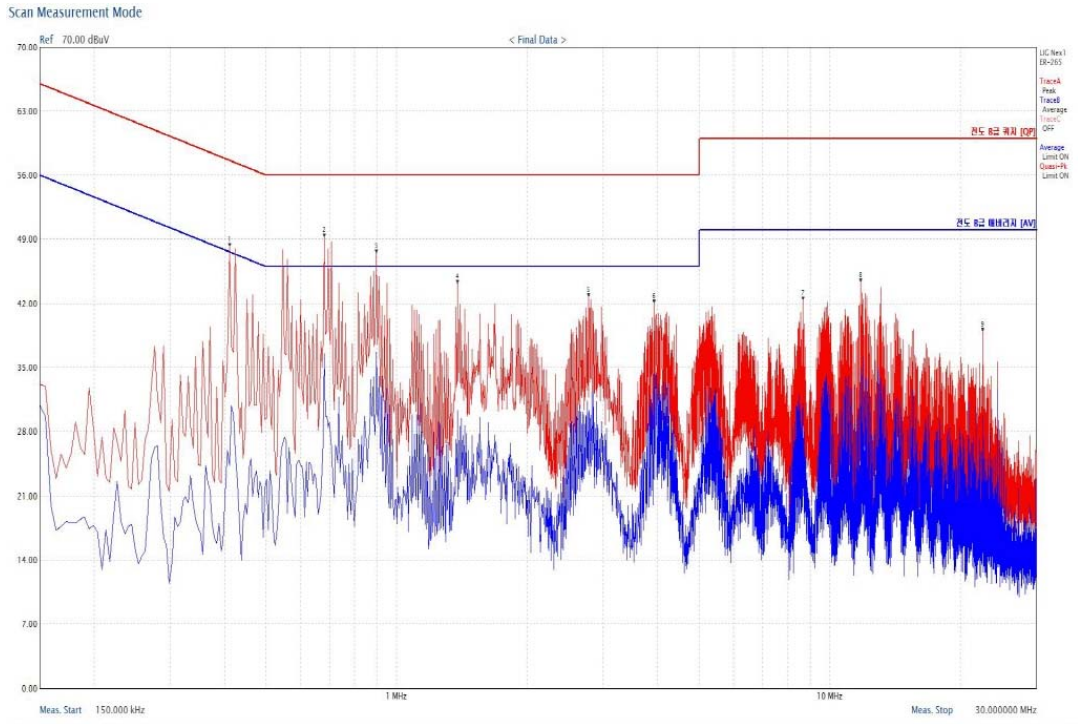
Line - PE(QusiPeak and Average detector used)



REDUCTION TABLE

No	Freq (MHz)	Level (dBuV)	Corr (dB)	Limit (dBuV)	Margin (dB)	State	Reference
1	0.681	47.50	10.09	56.00	8.5	Pass	QP
2	0.883	49.79	10.11	56.00	6.21	Pass	QP
3	4.060	43.74	10.33	56.00	12.26	Pass	QP
4	22.533	36.68	11.34	60.00	23.32	Pass	QP
5	0.681	36.75	10.09	46.00	9.25	Pass	AV
6	0.883	38.96	10.11	46.00	7.04	Pass	AV
7	4.060	33.60	10.33	46.00	12.4	Pass	AV
8	22.533	33.43	11.34	50.00	16.57	Pass	AV

Neutral – PE(QusiPeak and Average detector used)



REDUCTION TABLE

No	Freq (MHz)	Level (dBuV)	Corr (dB)	Limit (dBuV)	Margin (dB)	State	Reference
1	0.681	49.29	10.09	56.00	6.71	Pass	QP
2	0.897	47.45	10.11	56.00	8.55	Pass	QP
3	3.925	41.98	10.32	56.00	14.02	Pass	QP
4	11.769	44.25	10.78	60.00	15.75	Pass	QP
5	0.681	36.47	10.09	46.00	9.53	Pass	AV
6	0.897	36.63	10.11	46.00	9.37	Pass	AV
7	3.925	34.38	10.32	46.00	11.62	Pass	AV
8	11.769	36.11	10.78	50.00	13.89	Pass	AV

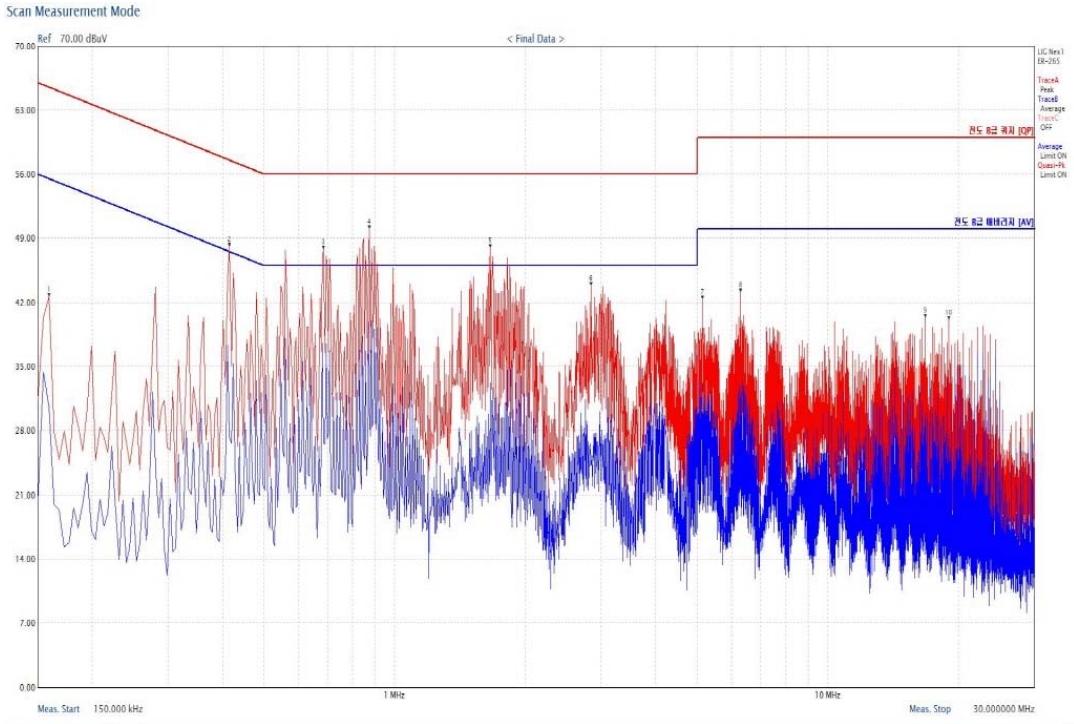
Measurement data:

* Detector function was set into Quasi-peak & Average mode.

* Corr = LISN Factor + Cable loss + Pulse Limiter

Charging with mid load mode

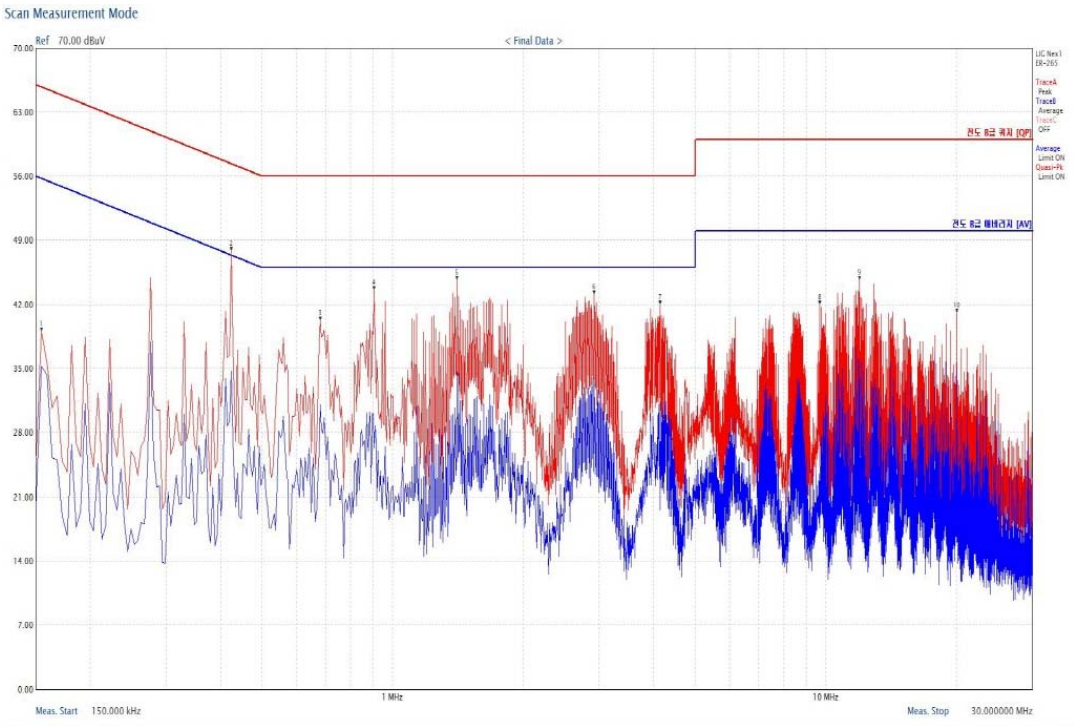
Line - PE(QusiPeak and Average detector used)



REDUCTION TABLE

No	Freq (MHz)	Level (dBuV)	Corr (dB)	Limit (dBuV)	Margin (dB)	State	Reference
1	0.415	48.05	10.08	57.65	9.6	Pass	QP
2	0.685	47.75	10.09	56.00	8.25	Pass	QP
3	0.874	49.99	10.11	56.00	6.01	Pass	QP
4	1.824	46.87	10.19	56.00	9.13	Pass	QP
5	6.283	43.09	10.48	60.00	16.91	Pass	QP
6	16.809	40.34	11.10	60.00	19.66	Pass	QP
7	0.415	37.30	10.08	47.65	10.35	Pass	AV
8	0.685	37.50	10.09	46.00	8.5	Pass	AV
9	0.874	39.97	10.11	46.00	6.03	Pass	AV
10	1.824	34.64	10.19	46.00	11.36	Pass	AV
11	6.283	33.43	10.48	50.00	16.57	Pass	AV
12	16.809	33.45	11.10	50.00	16.55	Pass	AV

Neutral – PE(QusiPeak and Average detector used)



REDUCTION TABLE

No	Freq (MHz)	Level (dBuV)	Corr (dB)	Limit (dBuV)	Margin (dB)	State	Reference
1	0.276	44.90	10.07	61.12	16.22	Pass	QP
2	0.424	47.82	10.08	57.45	9.63	Pass	QP
3	1.405	44.64	10.15	56.00	11.36	Pass	QP
4	2.913	43.12	10.25	56.00	12.88	Pass	QP
5	11.962	44.68	10.77	60.00	15.32	Pass	QP
6	0.276	37.95	10.07	51.12	13.17	Pass	AV
7	0.424	34.65	10.08	47.45	12.8	Pass	AV
8	1.405	34.61	10.15	46.00	11.39	Pass	AV
9	2.913	33.25	10.25	46.00	12.75	Pass	AV
10	11.962	37.26	10.77	50.00	12.74	Pass	AV

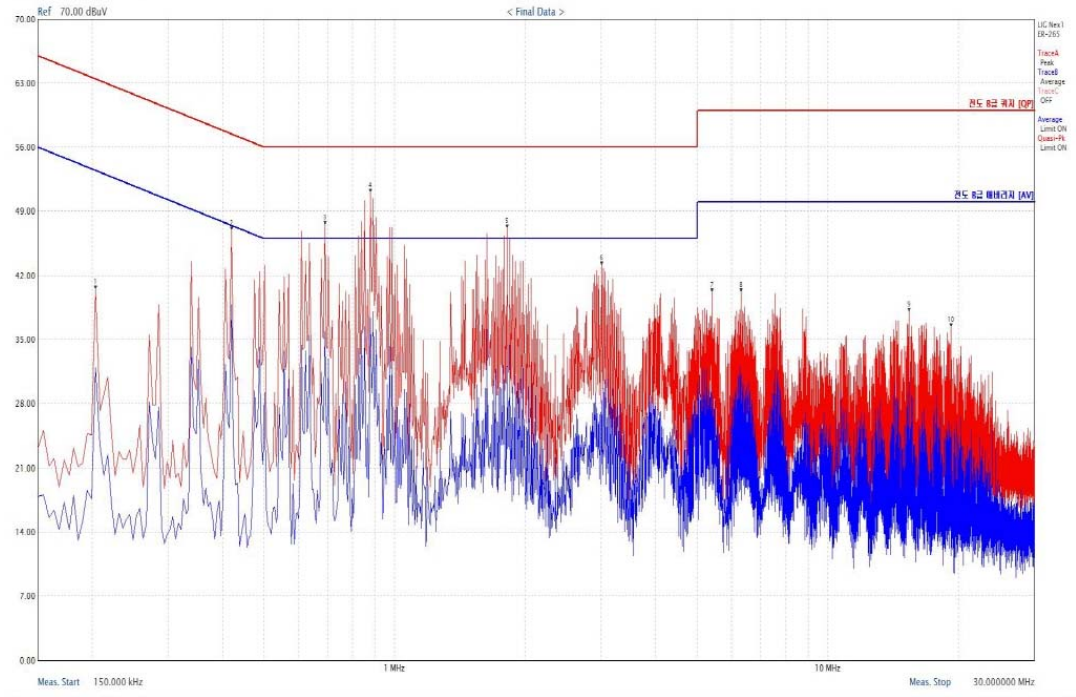
Measurement data:

* Detector function was set into Quasi-peak & Average mode.

* Corr = LISN Factor + Cable loss + Pulse Limiter

Charging with min load mode

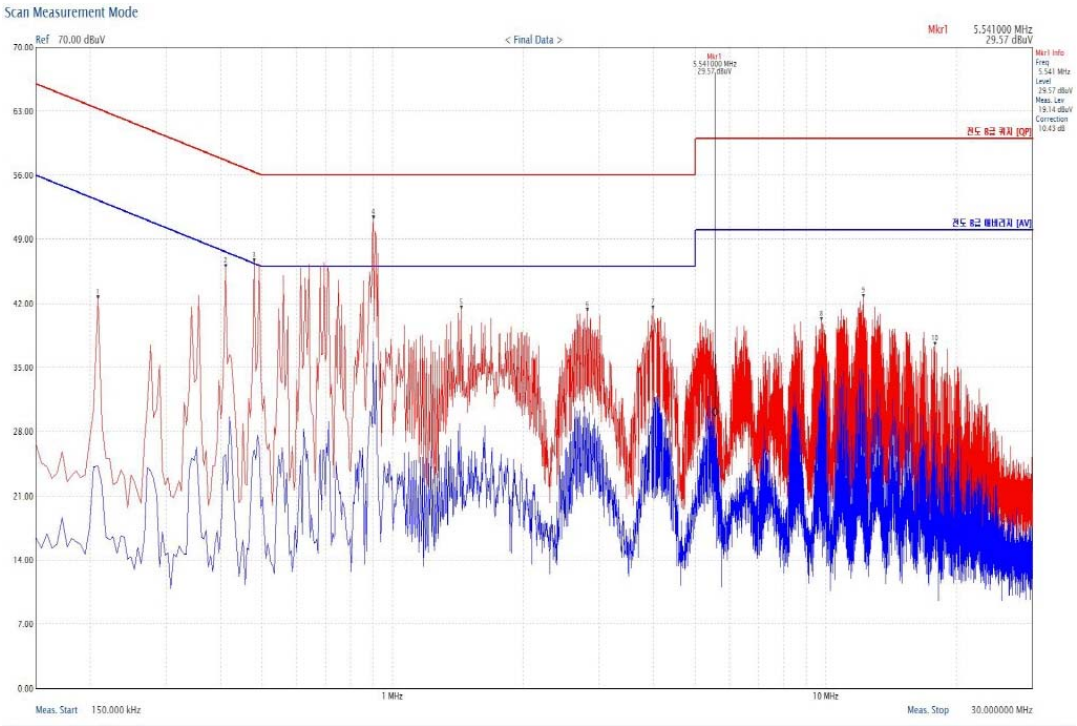
Line - PE(QusiPeak and Average detector used)



REDUCTION TABLE

No	Freq (MHz)	Level (dBuV)	Corr (dB)	Limit (dBuV)	Margin (dB)	State	Reference
1	0.411	46.21	10.08	57.65	11.44	Pass	QP
2	0.690	48.64	10.10	56.00	7.36	Pass	QP
3	0.879	52.13	10.11	56.00	3.87	Pass	QP
4	5.131	43.21	10.41	60.00	16.79	Pass	QP
5	0.411	27.08	10.08	47.65	20.57	Pass	AV
6	0.690	36.89	10.10	46.00	9.11	Pass	AV
7	0.879	39.84	10.11	46.00	6.16	Pass	AV
8	5.131	35.82	10.41	50.00	14.18	Pass	AV

Neutral – PE(QusiPeak and Average detector used)



REDUCTION TABLE

No	Freq (MHz)	Level (dBuV)	Corr (dB)	Limit (dBuV)	Margin (dB)	State	Reference
1	0.411	45.87	10.08	57.65	11.78	Pass	QP
2	0.901	51.16	10.11	56.00	4.84	Pass	QP
3	3.984	41.37	10.32	56.00	14.63	Pass	QP
4	12.201	42.61	10.80	60.00	17.39	Pass	QP
5	0.411	25.26	10.08	47.65	22.39	Pass	AV
6	0.901	37.61	10.11	46.00	8.39	Pass	AV
7	3.984	29.89	10.32	46.00	16.11	Pass	AV
8	12.201	32.94	10.80	50.00	17.06	Pass	AV

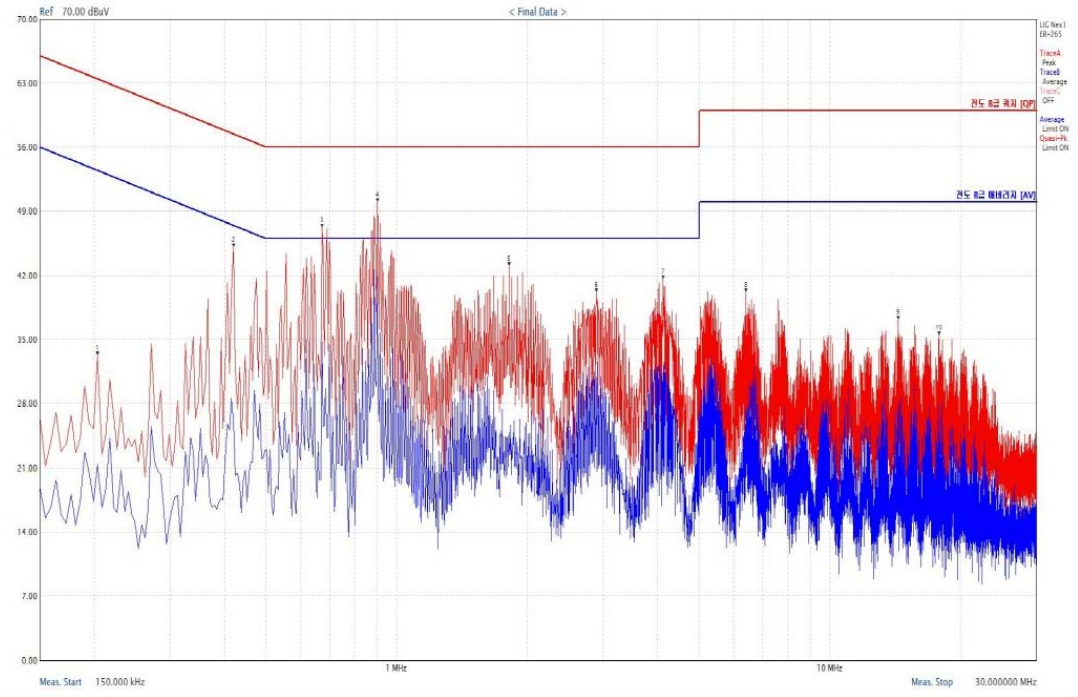
Measurement data:

* Detector function was set into Quasi-peak & Average mode.

* Corr = LISN Factor + Cable loss + Pulse Limiter

Standby mode:

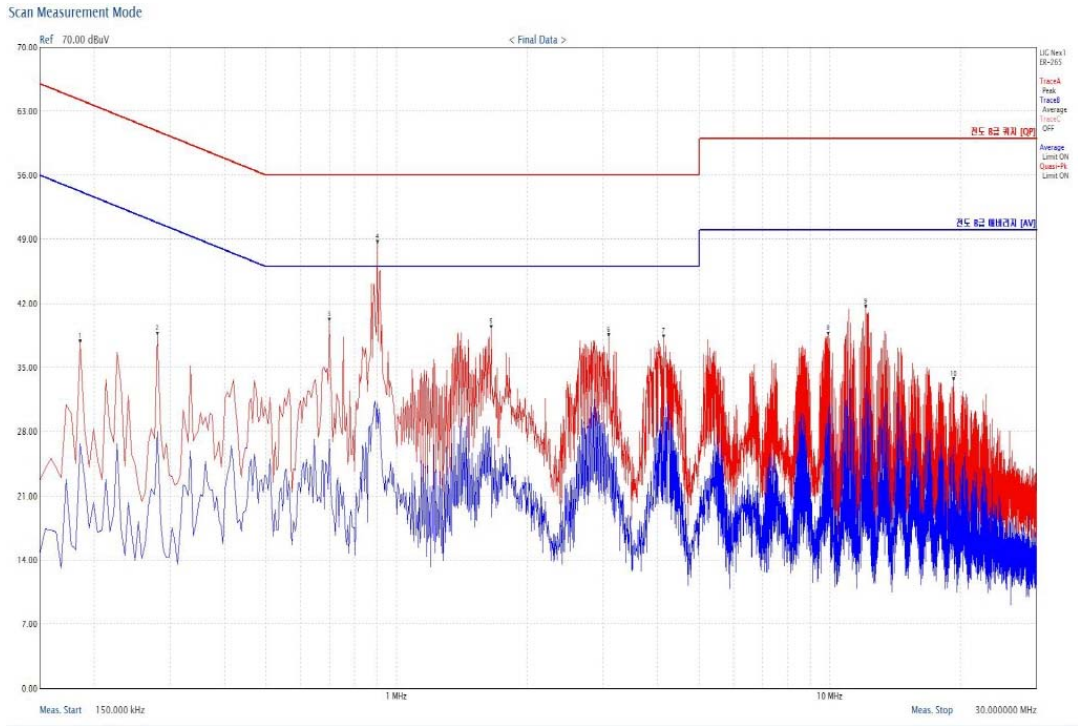
Line - PE(QusiPeak and Average detector used)



REDUCTION TABLE

No	Freq (MHz)	Level (dBuV)	Corr (dB)	Limit (dBuV)	Margin (dB)	State	Reference
1	0.420	45.08	10.08	57.45	12.37	Pass	QP
2	0.672	47.18	10.09	56.00	8.82	Pass	QP
3	0.901	49.95	10.11	56.00	6.05	Pass	QP
4	4.119	41.57	10.33	56.00	14.43	Pass	QP
5	6.702	38.90	10.51	60.00	21.10	Pass	QP
6	0.420	28.55	10.08	47.45	18.90	Pass	AV
7	0.672	34.71	10.09	46.00	11.29	Pass	AV
8	0.901	41.88	10.11	46.00	4.12	Pass	AV
9	4.119	32.53	10.33	46.00	13.47	Pass	AV
10	6.702	32.50	10.51	50.00	17.5	Pass	AV

Neutral – PE(QusiPeak and Average detector used)



REDUCTION TABLE

No	Freq (MHz)	Level (dBuV)	Corr (dB)	Limit (dBuV)	Margin (dB)	State	Reference
1	0.901	48.48	10.11	56.00	7.52	Pass	QP
2	2.863	37.90	10.25	56.00	18.1	Pass	QP
3	4.128	38.13	10.33	56.00	17.87	Pass	QP
4	12.084	41.41	10.79	60.00	18.59	Pass	QP
5	0.901	31.15	10.11	46.00	14.85	Pass	AV
6	2.863	31.49	10.25	46.00	14.51	Pass	AV
7	4.128	30.74	10.33	46.00	15.26	Pass	AV
8	12.084	33.91	10.79	50.00	16.09	Pass	AV

Measurement data:

* Detector function was set into Quasi-peak & Average mode.
* Corr = LISN Factor + Cable loss + Pulse Limiter
* The worst case data were reported. And no other spurious and harmonic emissions were reported greater than listed emissions above table.

APPENDIX

1. EUT photo