TEST REPORT

KCTL Inc.
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Applicant	:	Samsung Electronics Co., Ltd. 19 Chapin Rd., Building D, Pine Brook, New Jersey, 07058, United States
Manufacturer	:	Samsung Electronics Co., Ltd. 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Rep of Korea
Type of equipment	:	Microwave Ovens
Model Name	:	MS14K6000AS
Date of Receipt	:	April 26, 2016
Date of Test	:	May 13 ~ May 16, 2016
Test method used	:	FCC part 18 & Part2
Classification:	:	Consumer ISM equipment
FCC ID	:	A3LCMO14G
Test Results	:	Complied

The device bearing the Trade Mark and FCC ID specified above has been shown to comply with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in MP-5:1986.

The above equipment was tested by KCTL Testing Laboratory for compliance with the requirements of FCC Rules and Regulations. The results of testing in this report apply to the product/system which was tested only. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Affirmation	Tested by Name: MIN, BYEONG-HWAN	Technical Manager Name: PARK, GUN-SU

2016. 05. 20

Contents

1. Applicant information

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2. Laboratory information

Address

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Telephone Number: 82 70 5008 1021

Facsimile Number: 82 505 299 8311

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

SITE MAP

3. Test system configuration

3.1 Operation environment

		Temperature	Humidity	Pressure
Chamber(10 m)	:	23.6 °C	42.5 % R.H.	-
Shielded room(CE)	:	23.9 °C	42.4 % R.H.	-

Test site

These testing items were performed following locations;

Test item	Test site
Radiation Hazard	Shielded Room
Frequency Measurements	10 m Chamber
Conducted Emission	Shielded Room
Radiated Emission	10 m Chamber

3.2 Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMC.
The factors contributing to uncertainties are test receiver, cable loss, antenna factor calibration, Antenna directivity, antenna factor variation with height, antenna phase center variation, antenna frequency interpolation, measurement distance variation, site imperfection, mismatch, and system repeatability. Based on CISPR 16-4-2, the measurement uncertainty level with a 95 % confidence level was applied.

Conducted emission measurement (C.L: Approx 95 %, *k* = 2)		
Shielded Room (CE#1)	9 ㎑ ~ 150 ㎑: ± 3.75 ㏈	
	150 ㎑ ~ 30 ㎒: ± 3.36 ㏈	
Shielded Room (CE#2)	9 ㎑ ~ 150 ㎑: ± 3.77 ㏈	
	150 ㎑ ~ 30 ㎒: ± 3.35 ㏈	
Radiated Emission measurement (C.L: Approx 95 %, *k* = 2)		
10 m Chamber (4F)	30 ㎒ ~ 300 ㎒	3 m: + 5.48 ㏈, - 5.93 ㏈ 10 m: + 5.47 ㏈, - 5.92 ㏈
	300 ㎒ ~ 1000 ㎒	3 m: + 5.60 ㏈, - 6.03 ㏈ 10 m: + 5.48 ㏈, - 5.93 ㏈
	1 ㎓ ~ 6 ㎓	3 m: + 5.99 ㏈, - 6.04 ㏈
	6 ㎓ ~ 18 ㎓	3 m: + 6.35 ㏈, - 6.54 ㏈
10 m Chamber (2F)	30 ㎒ ~ 300 ㎒	3 m: + 4.86 ㏈, - 4.98 ㏈
		10 m: + 4.85 ㏈, - 4.97 ㏈
	300 ㎒ ~ 1000 ㎒	3 m: + 4.99 ㏈, - 5.09 ㏈
		10 m: + 4.85 ㏈, - 4.97 ㏈
	1 ㎓ ~ 6 ㎓	3 m: + 6.03 ㏈, - 6.05 ㏈
	6 ㎓ ~ 18 ㎓	3 m: + 6.52 ㏈, - 6.70 ㏈

3.3 Measurement Program

These test items were performed by software programs;

Test item	Measurement Program
Conducted Emission	EP5CE_V 5.4.0(TOYO)
Radiated Emission	EP5RE_V 4.6.0(TOYO)

4. Description of E.U.T.

4.1 General information

- MS14K6000AS is a Microwave Ovens.

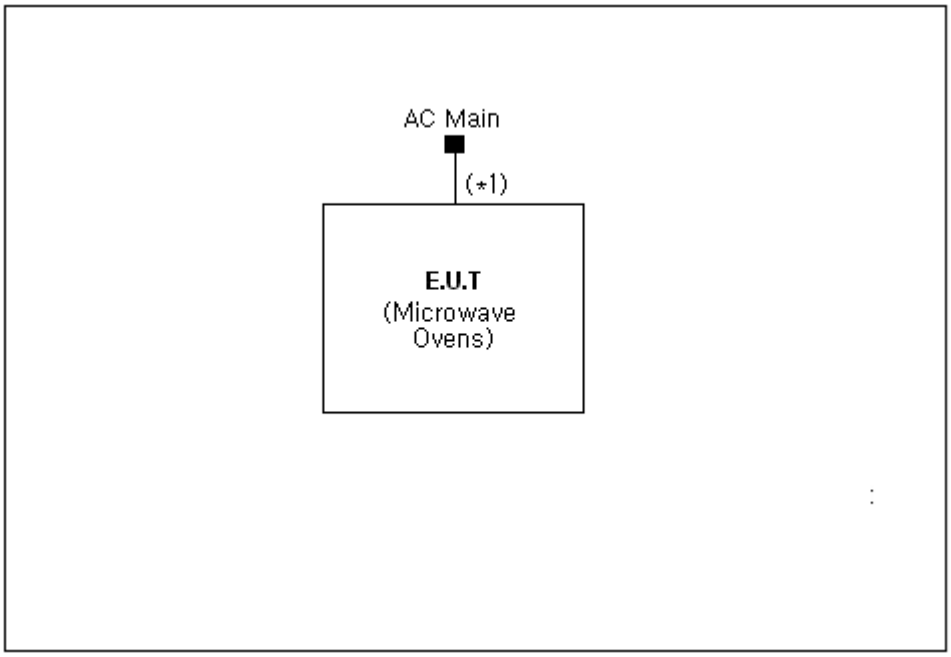
4.2 Product description

Type of product	Microwave Ovens
Model name (Basic)	MS14K6000AS
Model name (Variant)	-
Difference	-
FCC ID	A3LCMO14G
Trade name	-
Serial no	-
Testing voltage	120 V, 60 Hz
Input range	120 V, 60 Hz
Internal clock frequency	10 MHz
Note	-

4.3 Auxiliary equipments

Type	Model / Part #	Serial number	Manufacturer
-	-	-	-

4.4 Test configuration



Note	Start		End		Cable	
*	Name	I/O port	Name	I/O port	Length (m)	Spec.
1	**EUT** (Microwave Ovens)	Power	AC main	Power	1.0	Unshield

4.5 Operating conditions

The EUT was configured as normal intended use.

Test mode	Normal operating
1	Heating the water in the beaker, advancing test.

5. Summary of test results

In the above configuration tested, The EUT complied with the requirement of the specification

5.1 Summary of EMI emission test results

FCC Part 18 & Part 2

FCC/OST MP-5: 1986

Applied	Test items	Test method	Result
☒	Radiation Hazard	FCC/OST MP-5: 1986	Pass
☒	Input Power Measurement	FCC/OST MP-5: 1986	Pass
☒	Output Power Measurement	FCC/OST MP-5: 1986	Pass
☒	Frequency Measurements	FCC/OST MP-5: 1986	Pass
☒	Conducted Emission	FCC/OST MP-5: 1986	Pass
☒	Radiated Emission	FCC/OST MP-5: 1986	Pass

6. Test results

6.1 Radiation Hazard

Test specification	FCC Part 18 & Part 2		
Testing voltage	120 Ⅴ, 60 ㎐		
Test facility	Shielded Room (4F)		
Date	2016. 05. 13		
Temperature (°C)	24.4 °C	Humidity (% R.H.)	35.4 % R.H.
Remarks	Pass		

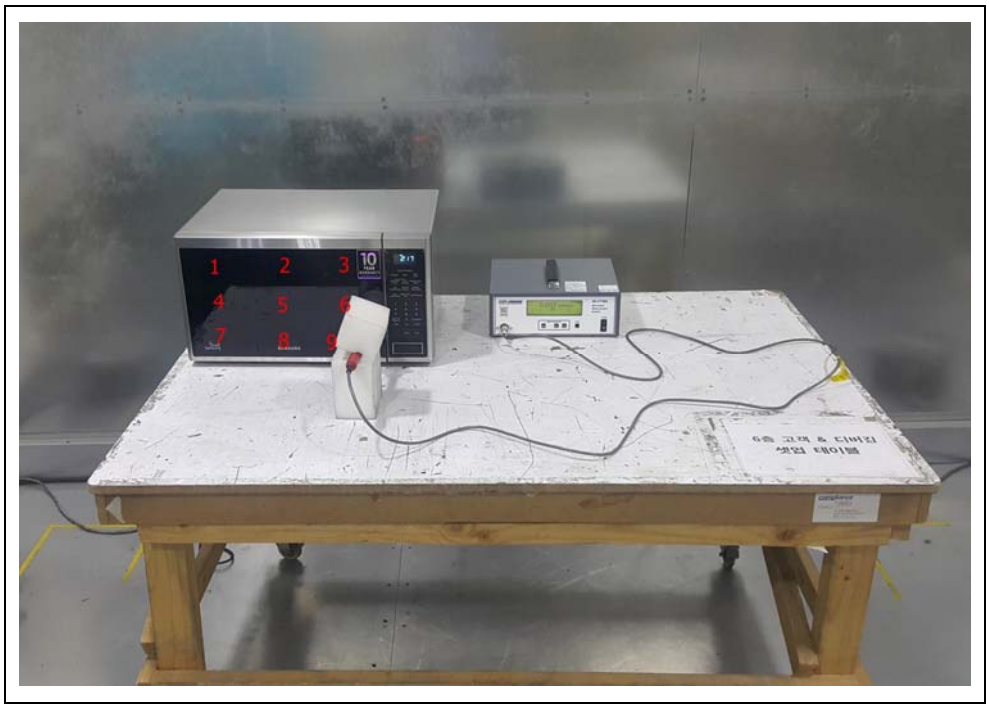
6.1.1 Measurement procedure

A 700 ㎖ water load was placed in the center of the oven.
The power setting was set to maximum power.
While the oven was operating, the Microwave Survey Meter probe was moved slowly around the door seams to check for leakage.

6.1.2 Used equipments

Equipment	Model	Serial No.	Makers	Next Cal. Date	Used
Microwave Measurement System	HI-1710A	00165484	-	2016.10.30	☒

6.1.3 Photographs of test setup



6.1.4 Measurement result

Probe Location	Maximum Leakage [mW/Cm2]	Limit [mW/Cm2]
2	0.027	1.0
6	0.017	1.0
All others	0.5	1.0

6.2 Input Power Measurement

A 700 ㎖ water load was placed in the center of the oven and the oven set to maximum power.

A 700 ㎖ water load was chosen for its compatibility.

Input power and current were measured using a Power Analyzer.

Manufacturers to determine their input ratings commonly use this procedure.

6.2.1 Measurement result

Input Voltage [Vac]	Input Current [amps]	Measured Input power [watts]	EUT Spec. Input power [watts]	Standby Power Consumption [watts]
120	13.3	1581	1600	0.6

6.3 Output Power Measurement

The Caloric Method was used to determine maximum output power.

The initial temperature of a 1000 ㎖ water load was measured. The water load was placed in the center of the oven. The oven was operated at maximum output power for 120 seconds. Then the temperature of the water re-measured.

6.3.1 Measurement result

Magnetron type	OM-75P	Test 1	Test 2	Test 3
Mw : Mass of the water, in grams		1000	1000	1000
Mc : Mass of the container, in grams		394	394	394
T2 : Final temperature of the water, in °C		20.1	20.2	20.2
T1 : Initial temperature of the water, in °C		10	10	10
T0 : Ambient temperature, in °C		20	22.5	22
t : Heating time in seconds, excluding the magnetron filament heat-up time.		42	42	42

$$\text{Power[W]} = \frac{(4.187) * Mw * (T2-T1) + 0.55*Mc*(T2- T0)}{t}$$

	Test 1	Test 2	Test 3	Average
Power[W] =	1007	1005	1008	1007

6.4 Frequency Measurements

Test specification	FCC Part 18 & Part 2		
Testing voltage	120 Ⅴ, 60 ㎐		
Test facility	10 ㎙ Chamber		
Date	2016. 05. 16		
Temperature (°C)	18.7 °C	Humidity (% R.H.)	44.2 % R.H.
Remarks	Pass		

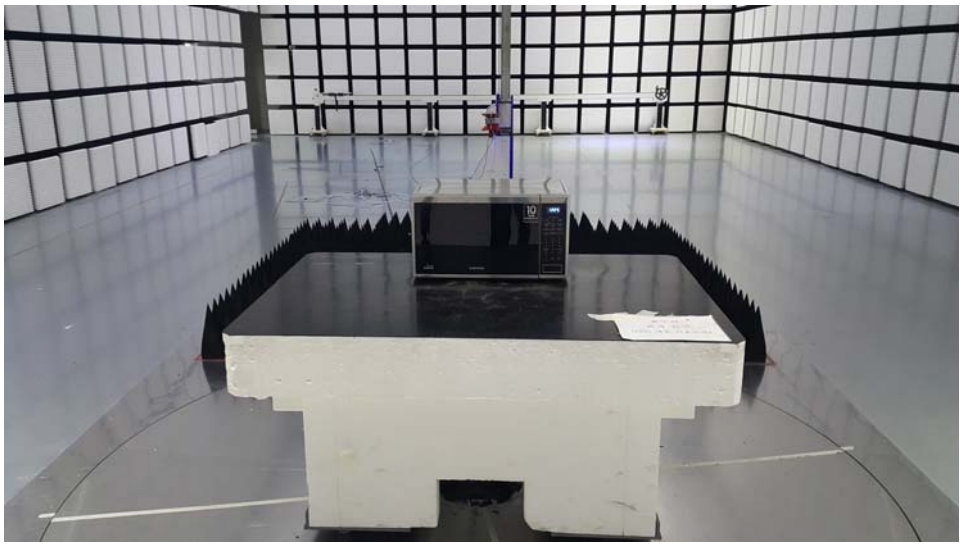
6.4.1 Measurement procedure

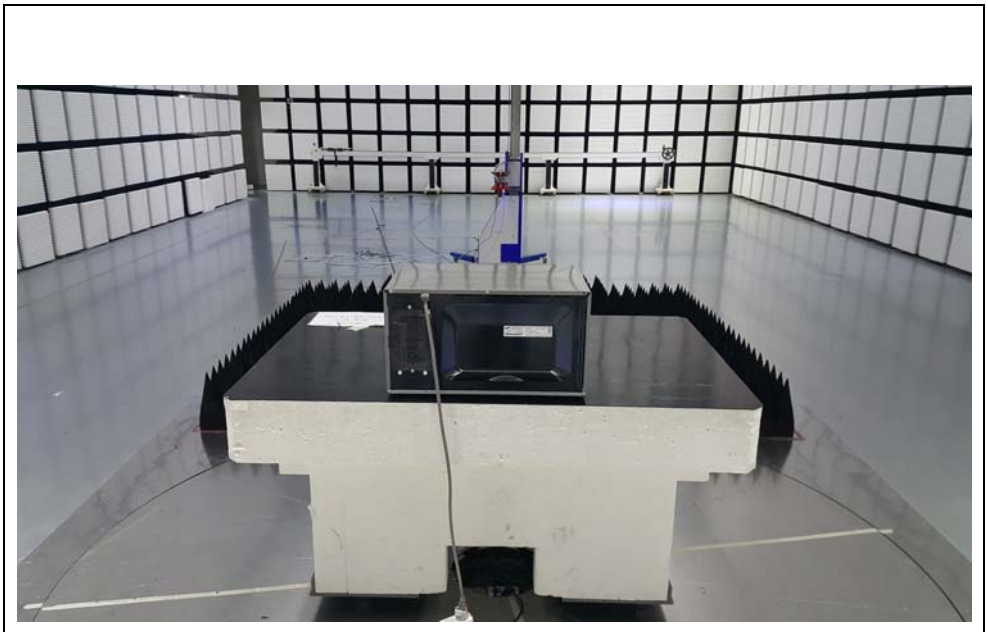
Following the above test, after operating the oven long enough to assure that stable operating termperature were obtained, the operating frequency was monitored as the input voltage was varied between 80 percent to 125 percent of the nominal rating.
And the load quantity was reduced by evaporation to approximately 20 % of the original quantity with nominal rating.

6.4.2 Used equipments

Equipment	Model	Serial No.	Makers	Next Cal. Date	Used
Signal Analyzer	FSV40	100988	R&S	2017.01.07	☒
DOUBLE RIDGED HORN ANTENNA	3117-PA	00161083	ETS-LINDGREN	2016.11.12	☒

6.4.3 Photographs of test setup





6.4.4 Measurement result

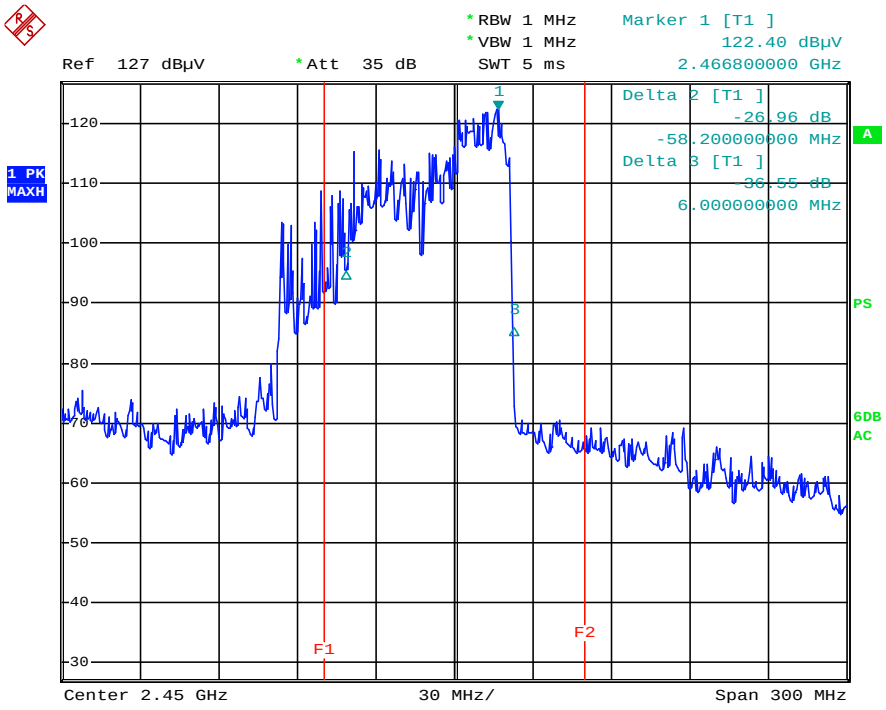
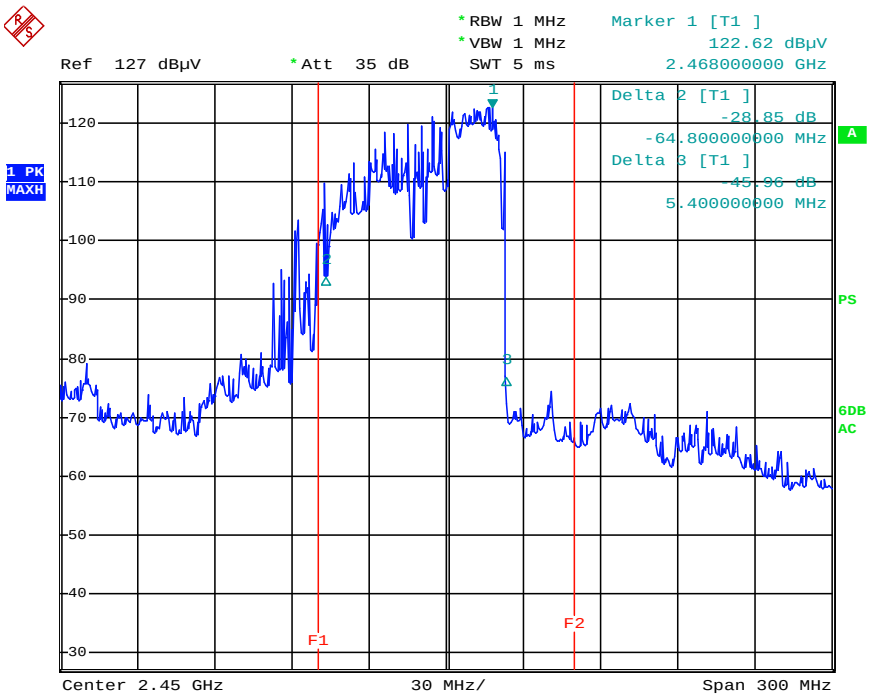
* Frequency vs Line Voltage Variation Test

Line Voltage Variation (a.c. V)	*)Pole	Frequency [㎒]	Allowed Tolerance for the ISM Band
96	H	Lower : 2408.6	Lower: 2400 ㎒ Upper: 2500 ㎒
	H	Upper : 2472.8	
	V	Lower : 2403.2	
	V	Upper : 2473.4	
108	H	Lower : 2429.0	
	H	Upper : 2479.4	
	V	Lower : 2403.2	
	V	Upper : 2478.8	
120	H	Lower : 2405.0	
	H	Upper : 2476.4	
	V	Lower : 2406.2	
	V	Upper : 2477.6	
132	H	Lower : 2415.2	
	H	Upper : 2476.4	
	V	Lower : 2411.0	
	V	Upper : 2475.8	
150	H	Lower : 2423.6	
	H	Upper : 2478.8	
	V	Lower : 2426.2	
	V	Upper : 2477.6	

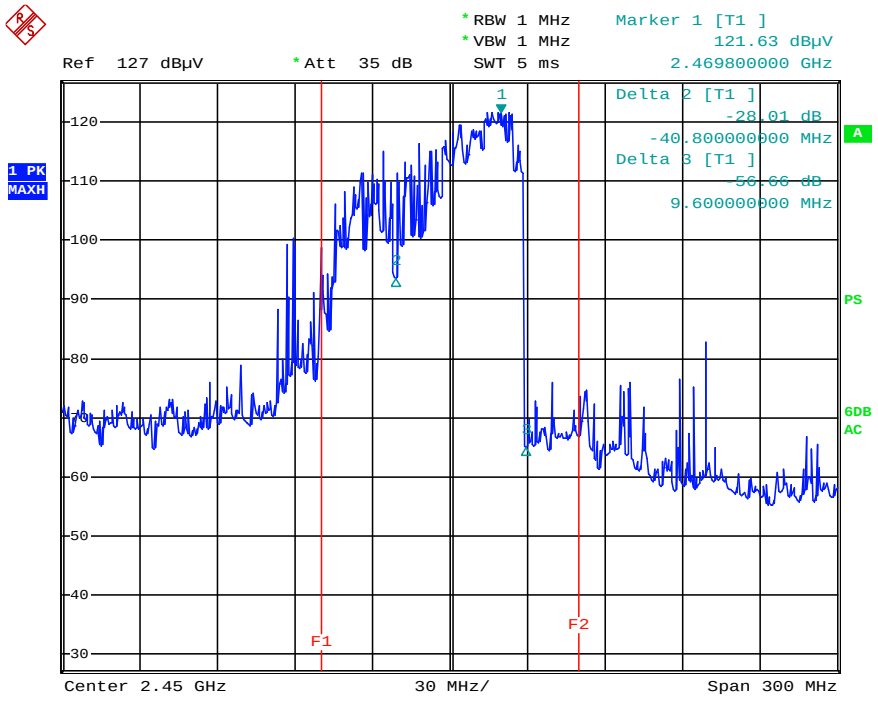
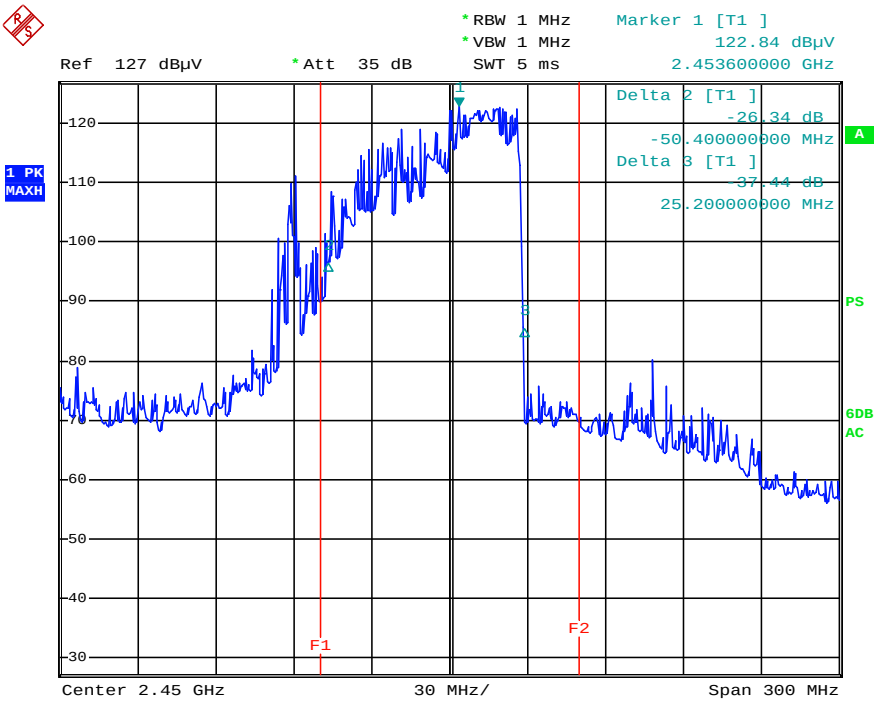
*Note:
1. *Pol. H = Horizontal, V = Vertical
2. Initial load: 1 000 ㎖ of water in the beaker.
3. Line voltage varied from a.c. 96 Ⅴ to a.c. 150 Ⅴ.
4. ISM Frequency: 2 450 ㎒, Tolerance: ± 50 ㎒

* Line Voltage Variation

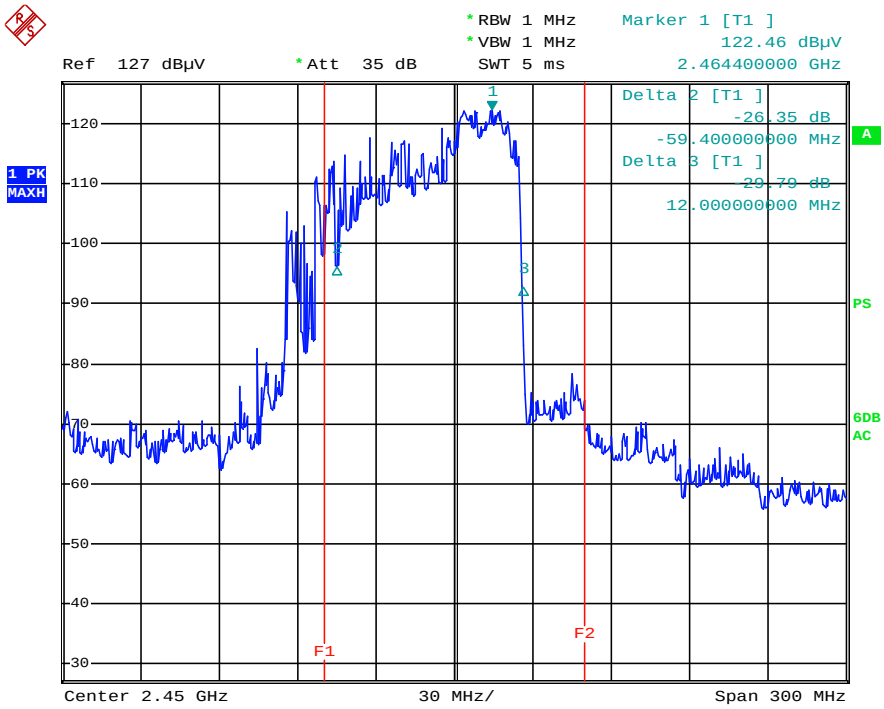
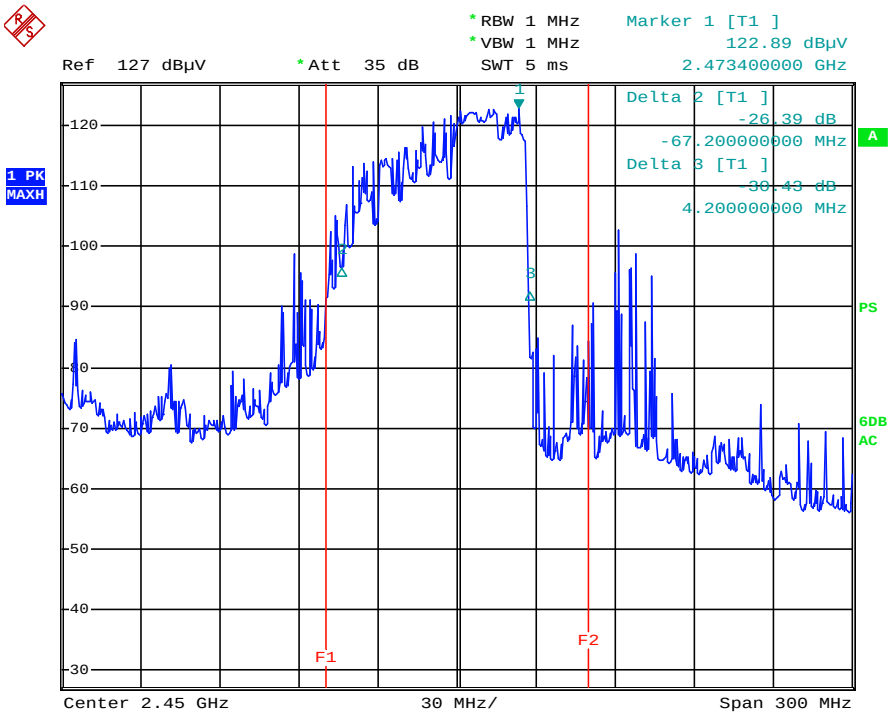
* 96 V

H	
V	

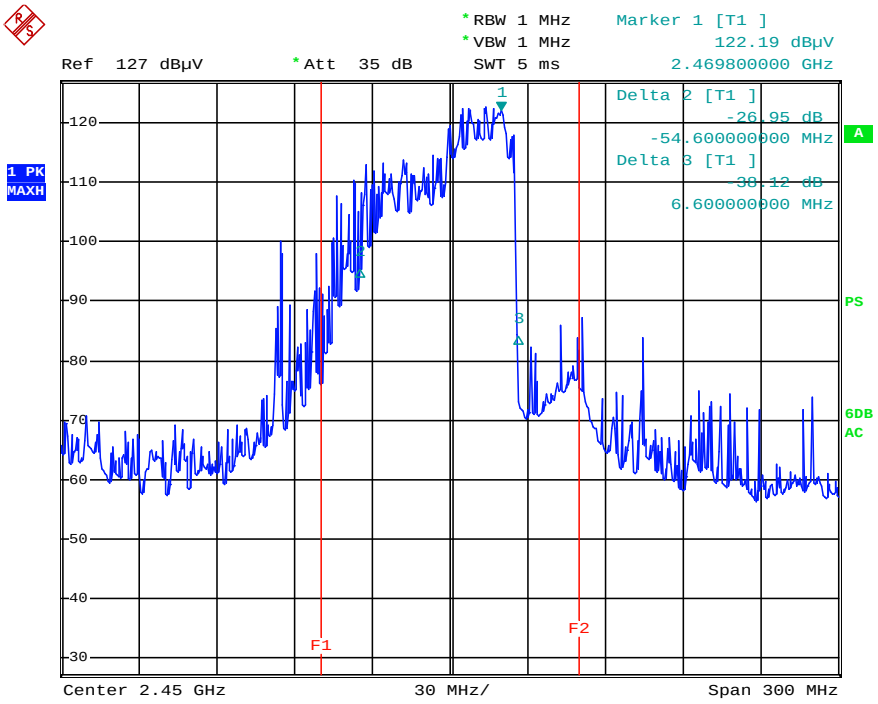
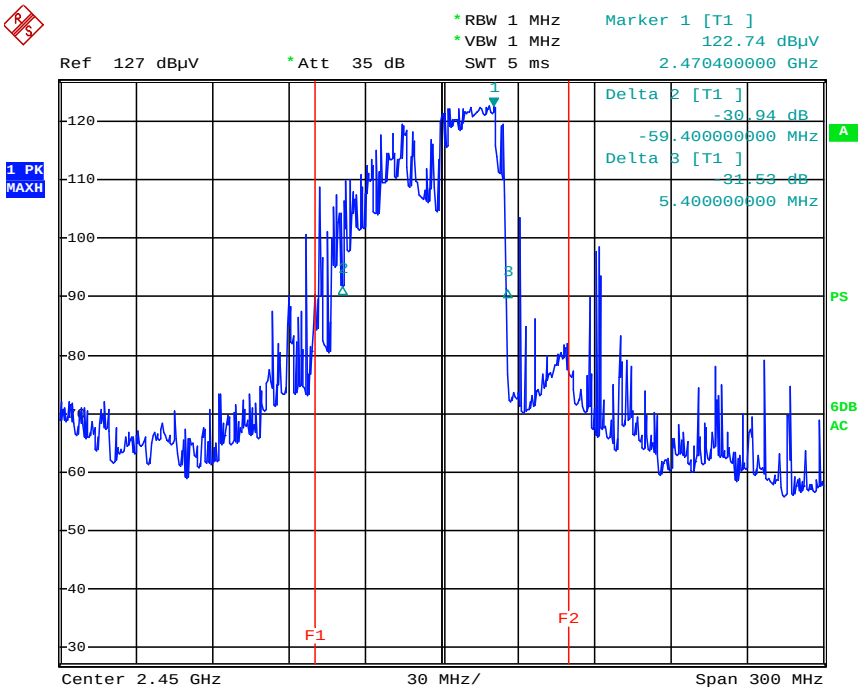
* 108 V

H	
V	

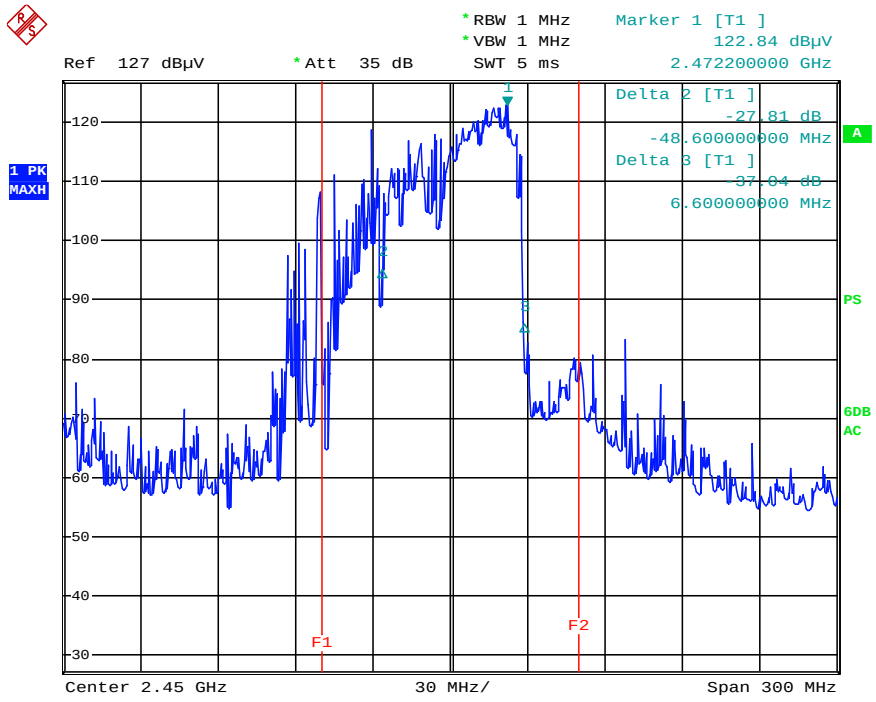
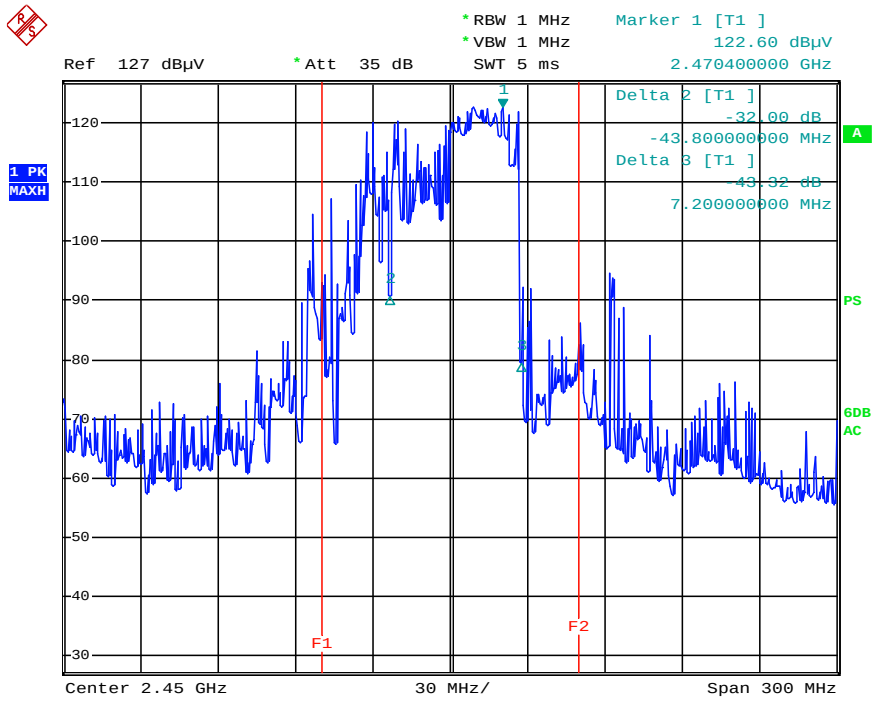
* 120 V

H	
V	

* 132 V

H	
V	

* 150 V

H	
V	

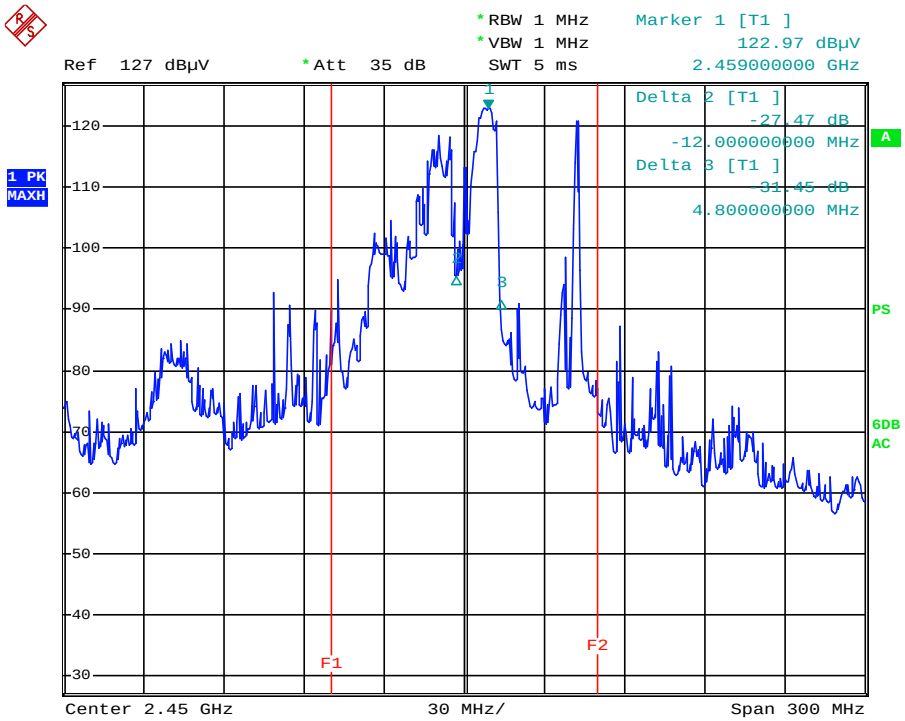
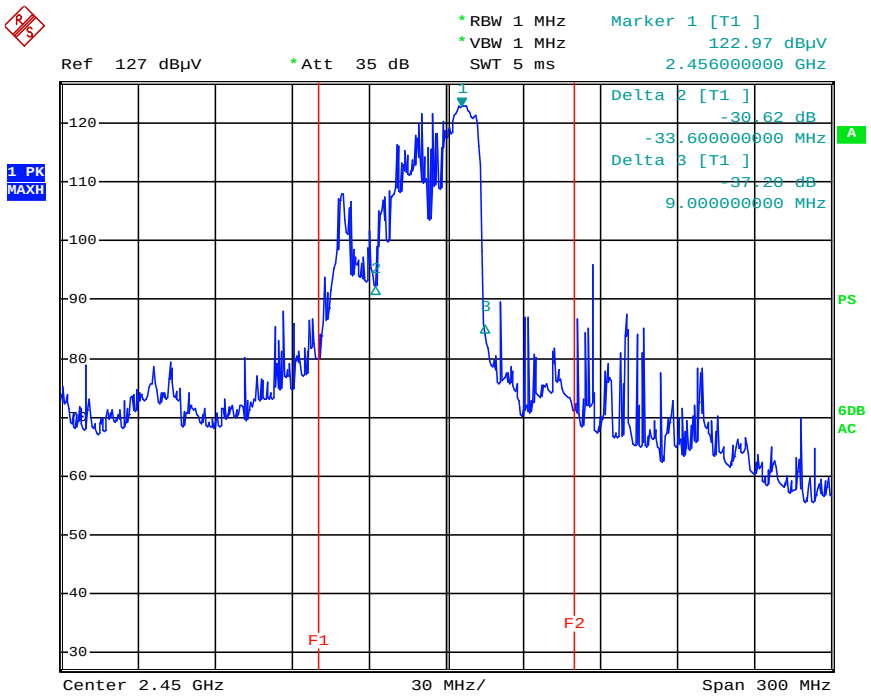
* Frequency vs Load Variation Test

Volume of water (㎖)	*)Pole	Frequency [㎒]	Allowed Tolerance for the ISM Band
200	H	Lower : 2447.0	Lower: 2400 ㎒ Upper: 2500 ㎒
	H	Upper : 2463.8	
	V	Lower : 2422.4	
	V	Upper : 2465.0	
400	H	Lower : 2417.6	
	H	Upper : 2466.8	
	V	Lower : 2415.2	
	V	Upper : 2467.4	
600	H	Lower : 2426.2	
	H	Upper : 2471.0	
	V	Lower : 2406.8	
	V	Upper : 2471.6	
800	H	Lower : 2433.8	
	H	Upper : 2473.4	
	V	Lower : 2405.6	
	V	Upper : 2472.2	
1000	H	Lower : 2405.0	
	H	Upper : 2479.4	
	V	Lower : 2409.8	
	V	Upper : 2485.4	

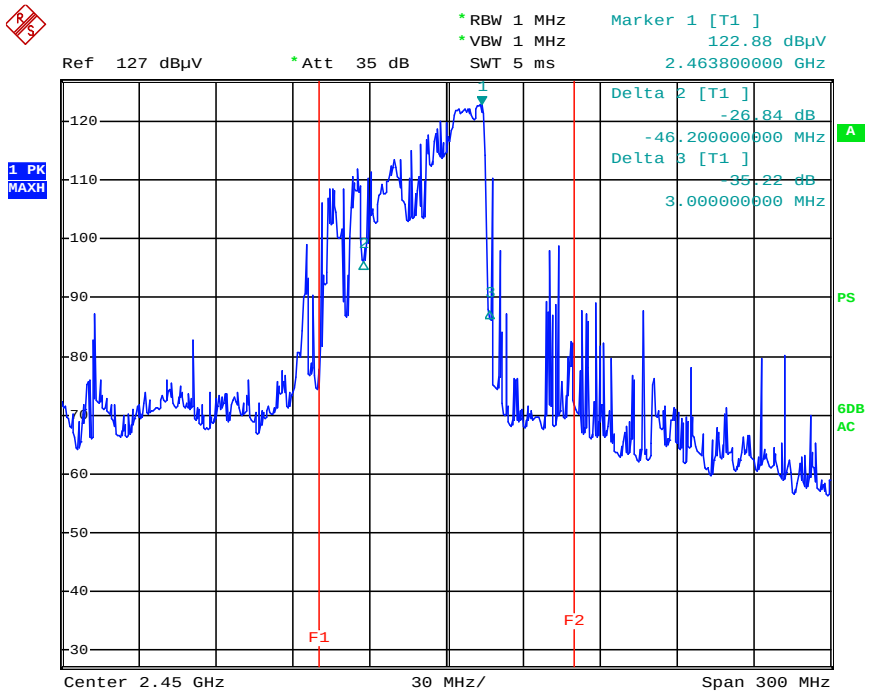
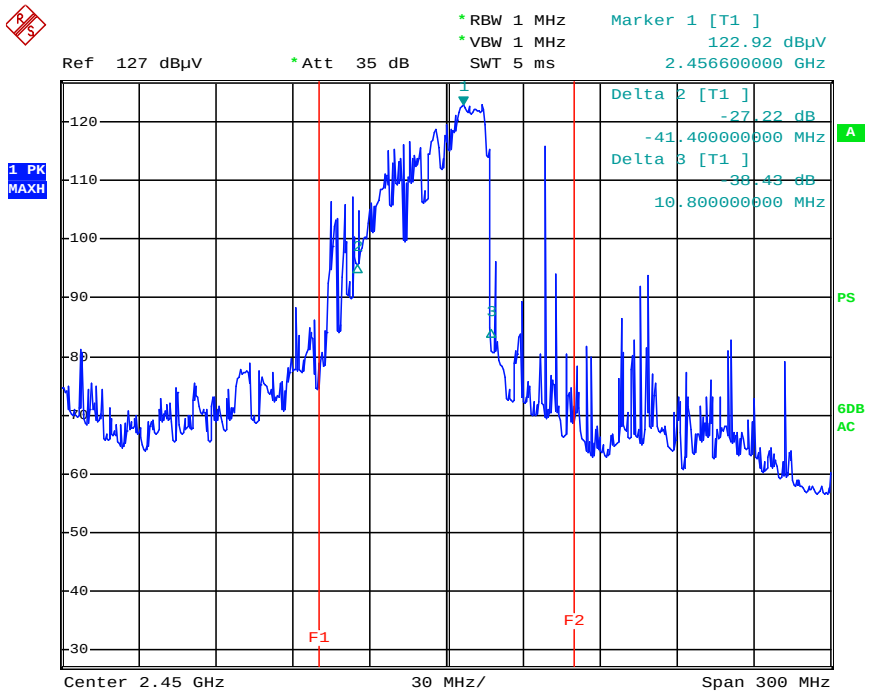
*Note:
1. *Pol. H = Horizontal, V = Vertical
2. The water load was varied between 200 ㎖ to 1 000㎖.
3. Frequency was measured by using nominal voltage (a.c. 120 Ⅴ)
4. ISM Frequency: 2 450 ㎒, Tolerance: ± 50 ㎒

*Volume of water

* 200 ㎖

H	
V	

* 400 ㎖

H	
V	

* 600 ㎖

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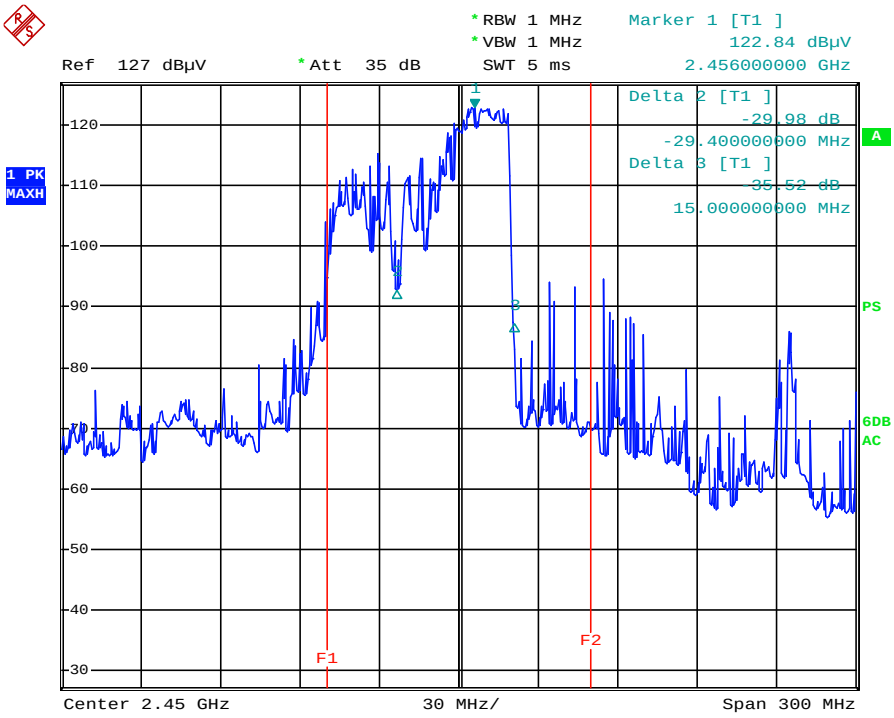

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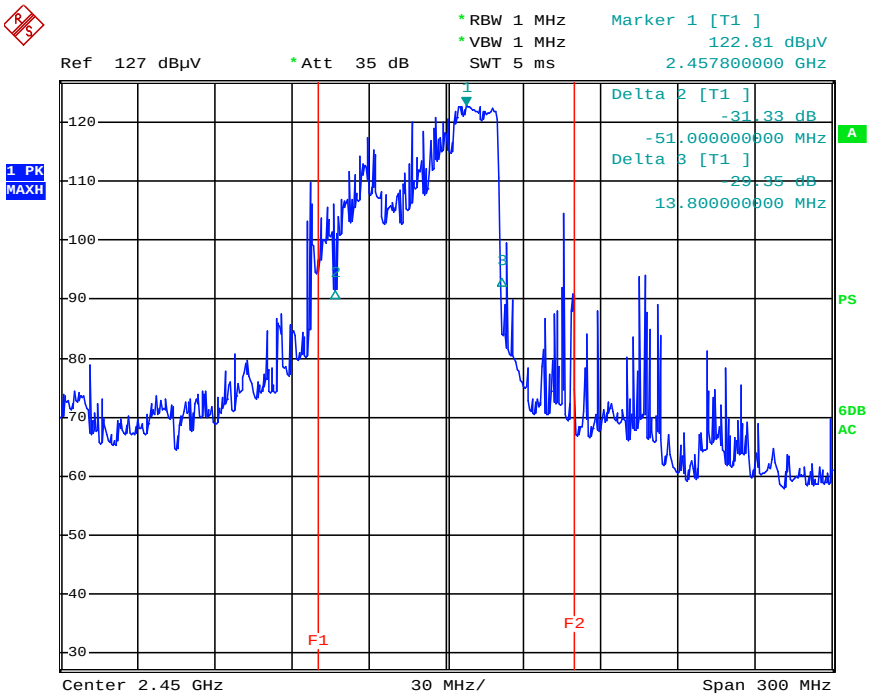
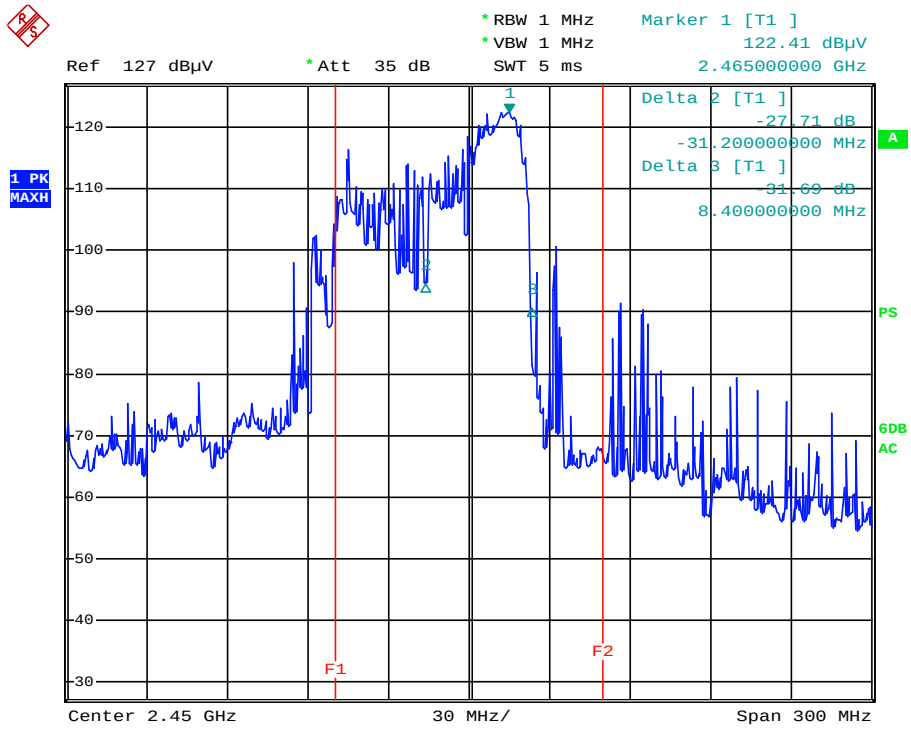
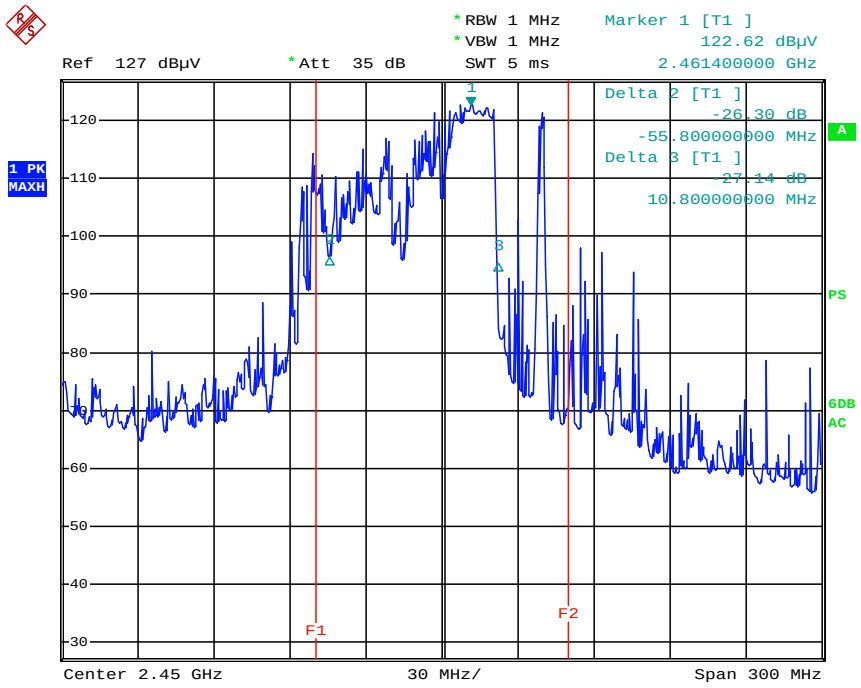
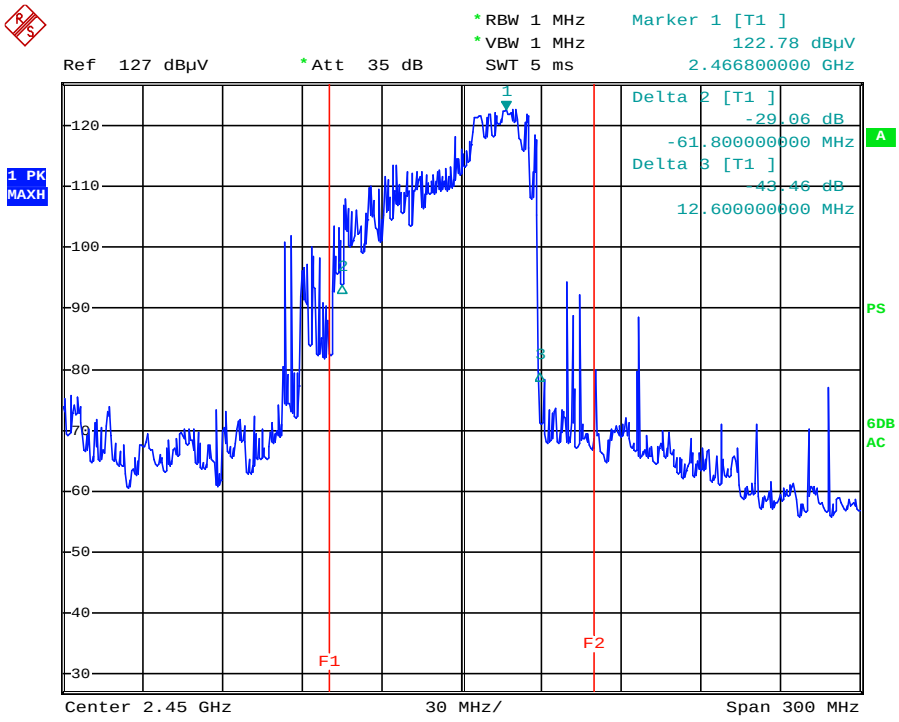
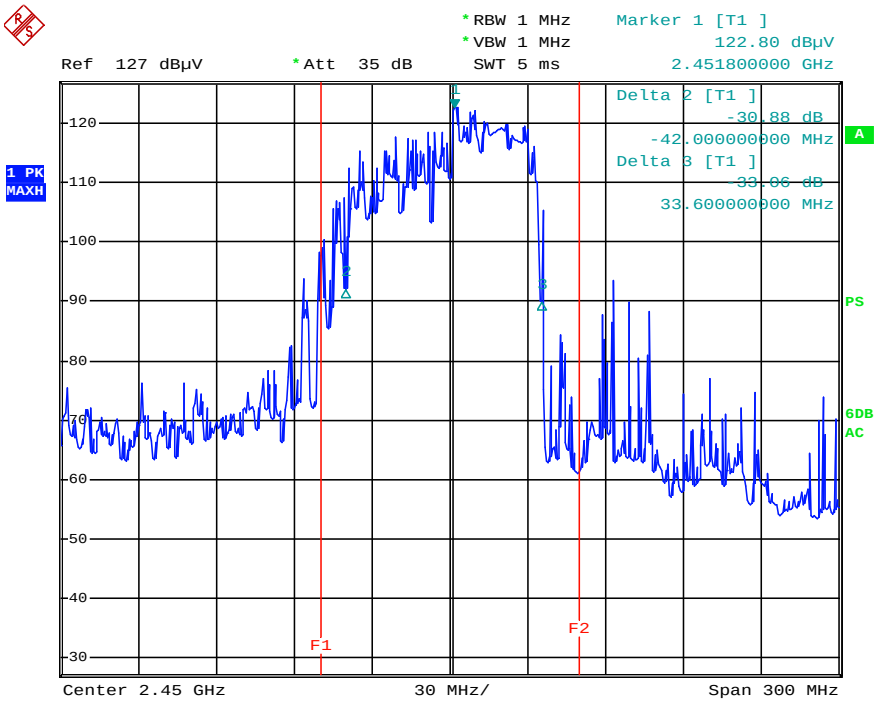


* 800 ㎖

H	
V	

* 1000 ㎖

H	
V	

6.5 Conducted Emission

Test specification	FCC Part section 18.307(b) & Part 2		
Testing voltage	120 Ⅴ, 60 ㎐		
Test facility	Shielded room (CE#2)		
Date	2016. 05. 13		
Temperature (°C)	23.9 °C	Humidity (% R.H.)	42.4 % R.H.
Remarks	Pass		

6.5.1 Limits of conducted emission measurement

Frequency [㎒]	Quasi-peak	Average
0.15 ~ 0.5	66 ~ 56 *	56 ~ 46*
0.5 ~ 5	56	46
5 ~ 30	60	50

6.5.2 Measurement procedure

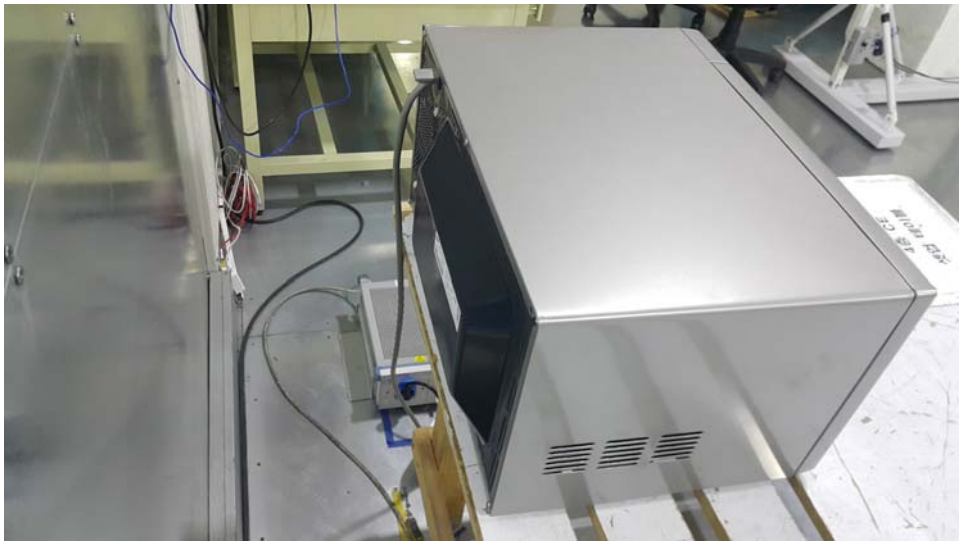
The measurements were performed in a shielded room. EUT was setup as shown in photograph and placed on a non-metallic table height of 0.8 ㎝ above the reference ground plane. The rear of table was located 0.4 ㎝ to the vertical conducted plane. EUT was power through the LISN, which was bonded to the ground plane. The LISN power was filtered. Each EUT power lead, except ground (safety) lead was individually connected through a LISN to input power source. EUT signal cables that hung closer than 0.4 ㎝ to the Horizontal metal ground 0.3 ㎝ ~ 0.4 ㎝ long. The power cord was bundles in the center. All peripheral equipment was powered from a sub LISN. The LISN and ISN were positioned 0.8 ㎝ from the EUT. Peak and Average detection were used in preliminary testing and Quasi-peak and Average detections were used at final measurement. Both lines of power cord, hot and neutral, were measured.

6.5.3 Used equipments

Equipment	Model	Serial No.	Makers	Next Cal. Date	Used
Test Receiver	ESCI	100710	R&S	2017.02.26	☒
TWO-LINE V-NETWORK	ENV216	101352	R&S	2016.09.02	☒
TWO-LINE V-NETWORK	NNLK8121	8121-472	SCHWARZBECK	2017.04.08	☐

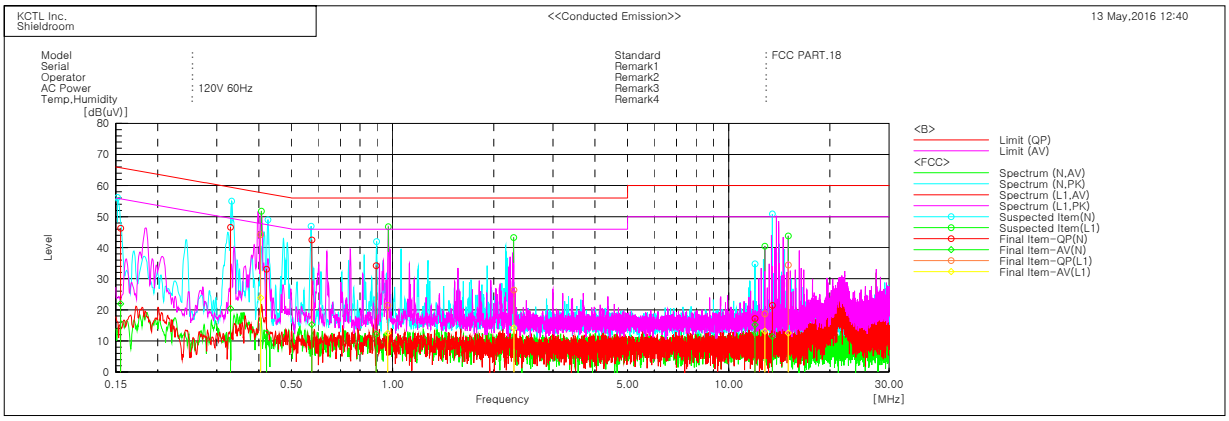
6.5.4 Photographs of test setup

* AC Main



6.5.5 Conducted emission measurement result

* AC Main (MS14K6000AS)



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	0.15507	36.5	12.3	9.7	46.2	22.0	65.7	55.7	19.5	33.7
2	0.32923	36.9	10.7	9.7	46.6	20.4	59.5	49.5	12.9	29.1
3	0.42177	23.2	2.6	9.9	33.1	12.5	57.4	47.4	24.3	34.9
4	0.57519	32.7	5.5	9.8	42.5	15.3	56.0	46.0	13.5	30.7
5	0.89346	24.4	2.4	9.8	34.2	12.2	56.0	46.0	21.8	33.8
6	11.97638	7.4	5.4	9.8	17.2	15.2	60.0	50.0	42.8	34.8
7	13.48539	11.6	1.6	9.8	21.4	11.4	60.0	50.0	38.6	38.6

--- 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	0.40477	34.3	14.0	9.9	44.2	23.9	57.8	47.8	13.6	23.9
2	0.96741	11.6	2.7	9.8	21.4	12.5	56.0	46.0	34.6	33.5
3	2.29603	16.7	4.5	9.7	26.4	14.2	56.0	46.0	29.6	31.8
4	12.8192	8.9	3.3	9.8	18.7	13.1	60.0	50.0	41.3	36.9
5	15.03749	24.7	2.7	9.8	34.5	12.5	60.0	50.0	25.5	37.5

6.6 Radiated Emission

Test specification	FCC Part section 18.305 & Part 2		
Testing voltage	120 V, 60 Hz		
Test facility	10 m Chamber (4F)		
Test distance	10 m, 3 m		
Date	2016. 05. 15		
Temperature (°C)	23.6 °C	Humidity (% R.H.)	42.5 % R.H.
Remarks	Pass		

6.6.1 Measurement procedure

The test was done at a 10 m chamber with a quasi-peak detector. EUT was placed on a non-metallic table height of 0.8 m above the reference ground plane. Cables were folded back and forth forming a bundle 0.3 m to 0.4 m long and were hanged at a 0.4 m height to the ground plane.
Cables connected to EUT were fixed to cause maximum emission. Test was made with the antenna positioned in both the horizontal and vertical planes of polarization. The measurement antenna was varied in height above the conducting ground plane to obtain the maximum signal strength.

6.6.2 Used equipments

Equipment	Model no.	Serial no.	Makers	Next Cal. Date	Used
Test Receiver	ESR	101078	R&S	2017.02.26	☒
Bi-Log Antenna	CBL 6112D	37876	TESEQ	2016.08.28	☒
Amplifier	310N	293004	SONOMA INSTRUMENT	2016.09.02	☒
Coaxial Fixed Attenuator	8491A	16861	HP	2017.04.07	☒
Antenna Mast	AM4.0	079/3440509	MATURO	-	☒
Turn Table	CO2000-SOFT	-	MATURO	-	☒
DOUBLE RIDGED HORN ANTENNA	3117-PA	00161083	ETS-LINDGREN	2016.11.12	☒
Spectrum Analyzer	FSV40	100988	R&S	2017.01.07	☒
HIGH PASS FILTER	WHKX3.0/18G-12SS	44	WAINWRIGHT	2017.02.01	☒
Loop ANT	HFH2-Z2	100355	R&S	2018.03.03	☒

6.6.3 Sample calculation

The field strength is calculated adding the antenna Factor, cable loss and, Antenna pad adding, subtracting the amplifier gain from the measured reading.

The sample calculation is as follow:

Result = M.R + C.F(A.F + C.L +3 dB Att – A.G)

M.R = Meter Reading

C.F = Correction Factor

A.F = Antenna Factor

C.L = Cable Loss

A.G= Amplifier Gain

3 dB Att = 3 dB Attenuator

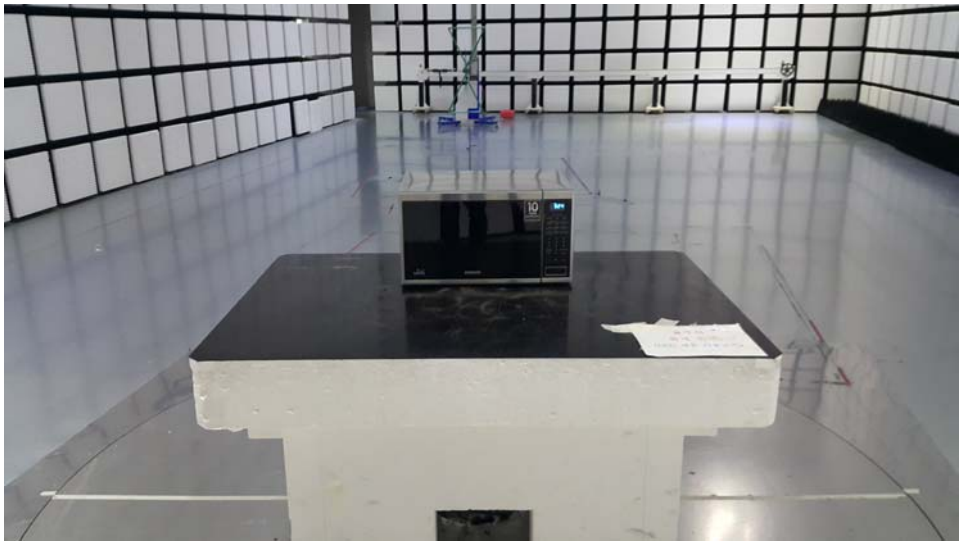
If M.R is 30 dB, A.F 12 dB, C.L 5 dB, 3 dB, A.G 35 dB

The result is 30 + 12 + 5 + 3 – 35 = 15 dB(μV/m)

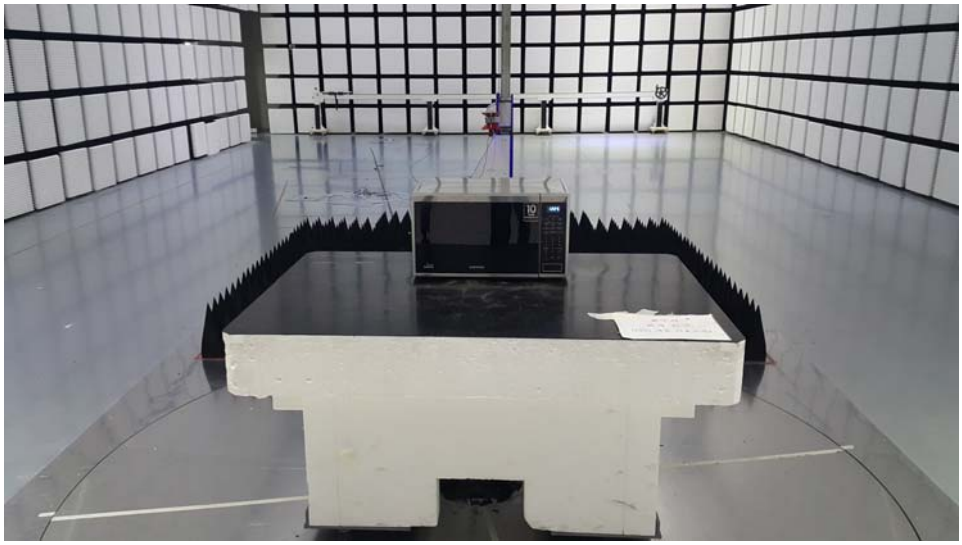
6.6.4 Photographs of test setup

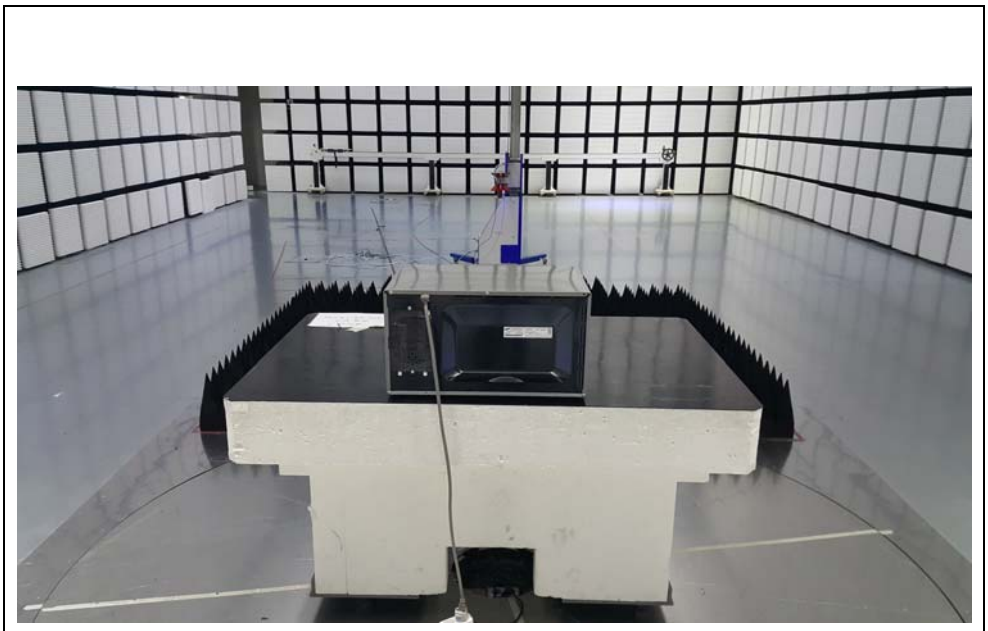
* 150 ㎑ ~ 30 ㎒

* 30 ㎒ ~ 1 ㎓



* 1 ㎓ ~ 18 ㎓

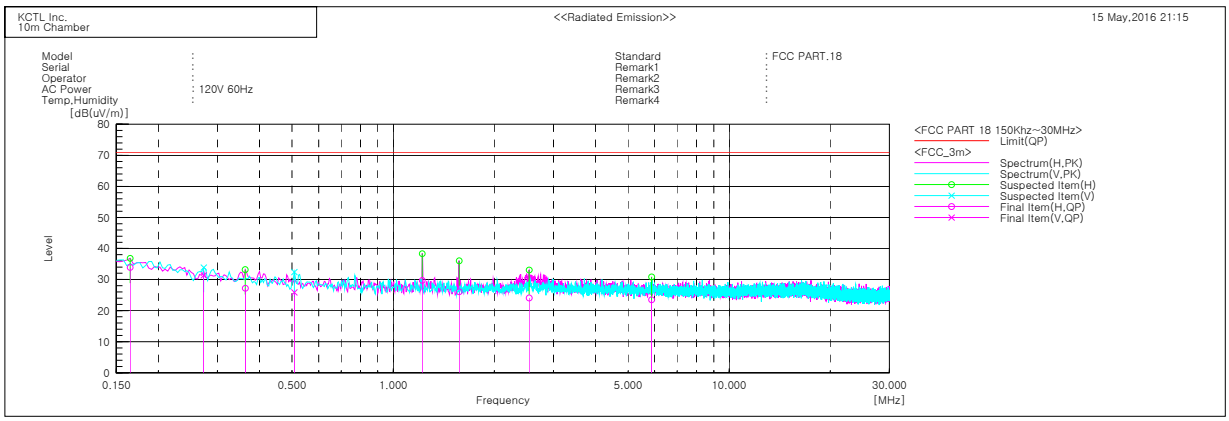




6.6.5 Radiated emission measurement result

*** Graph and Data**

* 150 ㎑ ~ 30 ㎒ (MS14K6000AS)

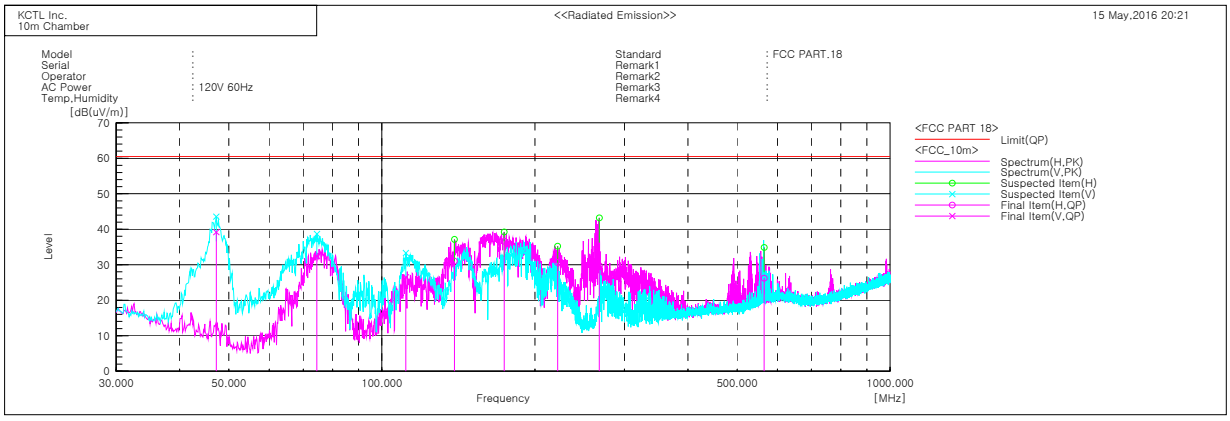


Final Result

No.	Frequency [MHz]	(P)	Reading QP [dB(uV)]	c.f [dB(1/m)]	Result QP [dB(uV/m)]	Limit QP [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]
1	0.165	H	46.7	-12.8	33.9	71.0	37.1	100.0	146.4
2	0.273	V	44.1	-12.7	31.4	71.0	39.6	100.0	50.9
3	0.363	H	39.9	-12.7	27.2	71.0	43.8	100.0	122.1
4	0.508	V	38.6	-12.7	25.9	71.0	45.1	100.0	102.8
5	1.221	H	42.2	-12.5	29.7	71.0	41.3	100.0	50.4
6	1.572	H	38.6	-12.5	26.1	71.0	44.9	100.0	80.9
7	2.542	H	36.4	-12.3	24.1	71.0	46.9	100.0	249.2
8	5.877	H	35.5	-12.0	23.5	71.0	47.5	100.0	269.8

* Notes
1. Result QP (Quasi-Peak) = Reading QP + c.f (Antenna Factor + Cable Loss +3dB att –Amp gain)
2. Margin QP (Quasi-Peak)= Limit – Result QP
3. Distance Correction factor: 20 * log (300 / 3) = 40 dBuV/m
4. The limit at 300 meters is 20 * log (25* SQRT (RF Power / 500))
5. All other emissions were measured while a 700 ㎖ load was placed in the center of the oven.

* 30 ㎒ ~ 1 ㎓ (MS14K6000AS)



Final Result

No.	Frequency [MHz]	(P)	Reading QP [dB(uV)]	c.f [dB(1/m)]	Result QP [dB(uV/m)]	Limit QP [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]
1	47.218	V	58.0	-18.8	39.2	60.5	21.3	100.0	18.1
2	74.499	V	53.0	-20.5	32.5	60.5	28.0	400.0	263.0
3	111.480	V	42.5	-16.0	26.5	60.5	34.0	198.0	8.8
4	138.883	H	46.5	-15.5	31.0	60.5	29.5	301.0	0.7
5	174.045	H	54.3	-17.7	36.6	60.5	23.9	400.0	172.9
6	221.696	H	47.3	-16.7	30.6	60.5	29.9	400.0	313.1
7	267.771	H	42.8	-13.1	29.7	60.5	30.8	202.0	199.6
8	565.319	H	31.8	-5.6	26.2	60.5	34.3	202.0	44.9

* Notes
1. Result QP (Quasi-Peak) = Reading QP + c.f (Antenna Factor + Cable Loss +3dB att –Amp gain)
2. Margin QP (Quasi-Peak)= Limit – Result QP
3. Distance Correction factor: 20 * log (300 / 10) = 29.5 dBuV/m
4. The limit at 300 meters is 20 * log (25* SQRT (RF Power / 500))
5. All other emissions were measured while a 700 ㎖ load was placed in the center of the oven.

* 1 ㎓ ~ 18 ㎓ (MS14K6000AS)

Frequency	Pol	Height	Angle	Reading AV	Factor	Level AV at 3m		K	Level AV at 300 m	Limit AV at 300 m	Magin AV at 300m
[MHz]	(P)	[cm]	[deg]	[dB(uV)]	[dB(1/m)]	[dB(uV/m)]	[uV/m]		[uV/m]	[uV/m]	[uV/m]
2194.084	H	100	207.5	64.1	-10.1	54	501.2	0.005	2.5	31.0	28.5
4924.375	V	100	208	64.8	-2.4	62.4	1318.3	0.01	13.2	31.0	17.8
7374.375	V	100	208	68.4	0.5	65.1	1798.9	0.01	18.0	31.0	13.0
9839.999	V	100	208	56.8	4.2	61	1122.0	0.01	11.2	31.0	19.8
14759.374	V	100	208	50.5	7.2	57.7	767.4	0.01	7.7	31.0	23.3

* Notes
1. c.f = Antenna factor + Cable loss – Amplifier gain + HFP
2. Field Strength (at 300 m) (uV/m) = K * $10^{[\text{Fieldstrength at 3 m (dBuV/m / 20]}}$
3. The limit at 300 meters is 25* SQRT (RF Power / 500)
4. Load for measurement of radiation on second and third harmonic: Two loads, one of 700 ㎖ and the other of 300 ㎖, of water were used. Each load was tested both with the beaker located in the center of the oven and with it in the corner.
5. The test was performed at peak detectormode with average.

7. E.U.T. photographs

Front View

Rear View

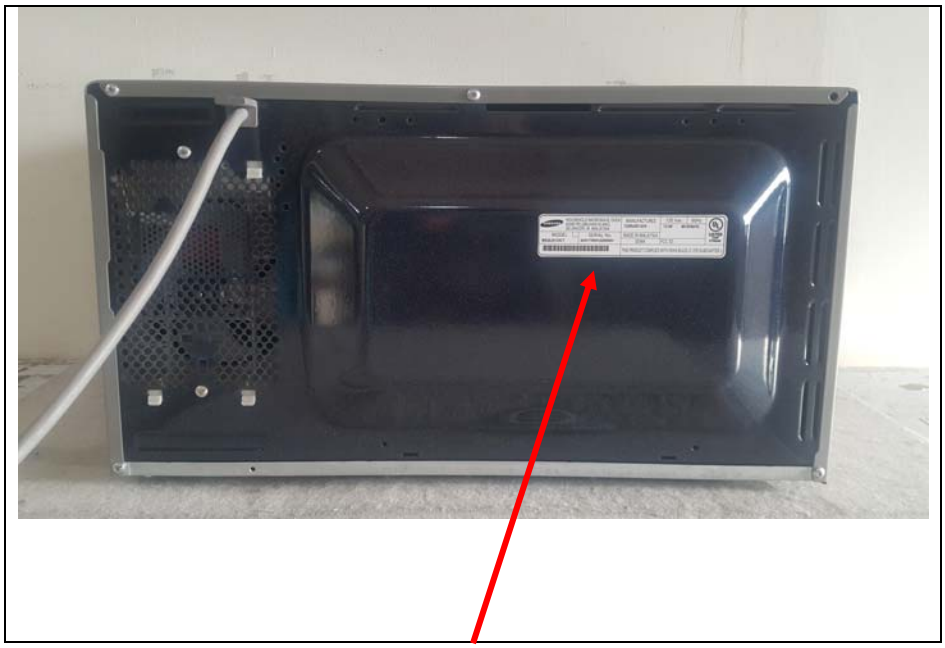
Left View

Right View

Top View

Bottom View

Label



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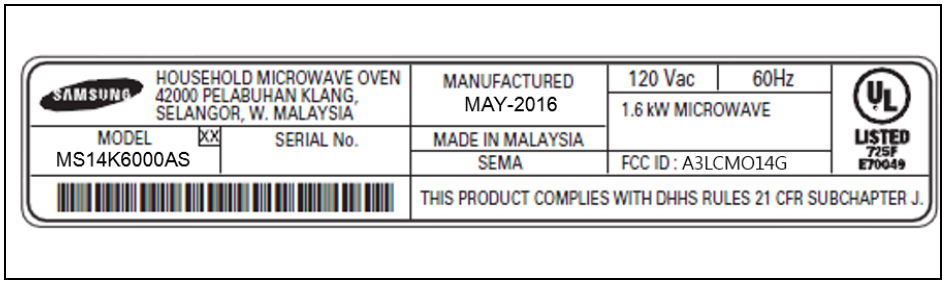

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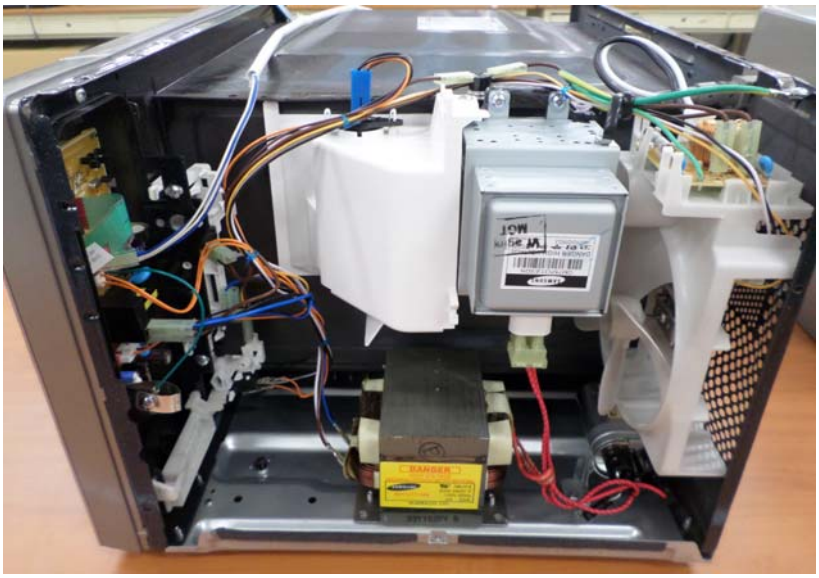
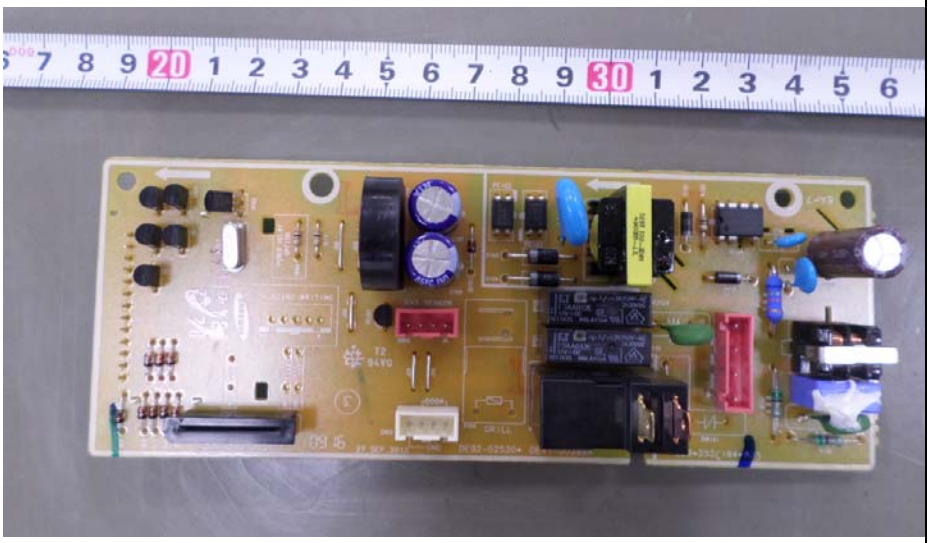
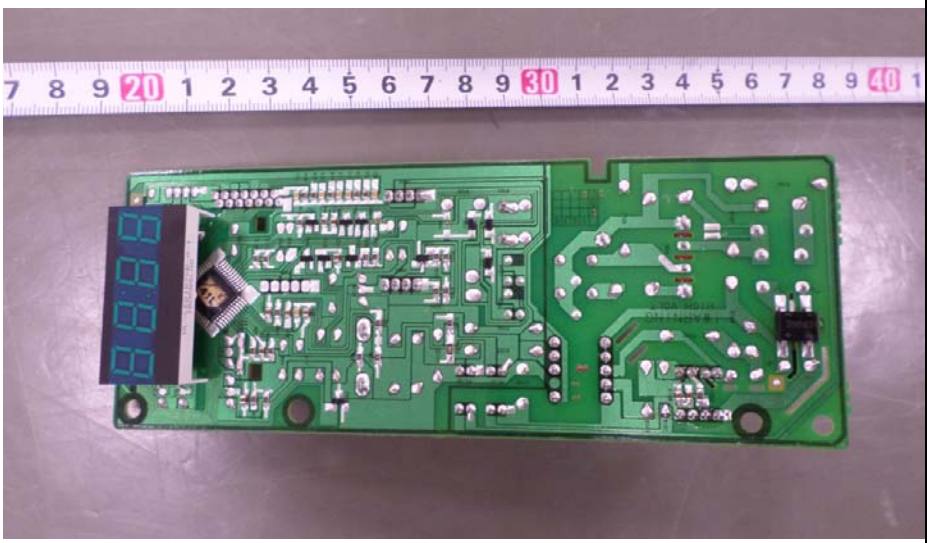
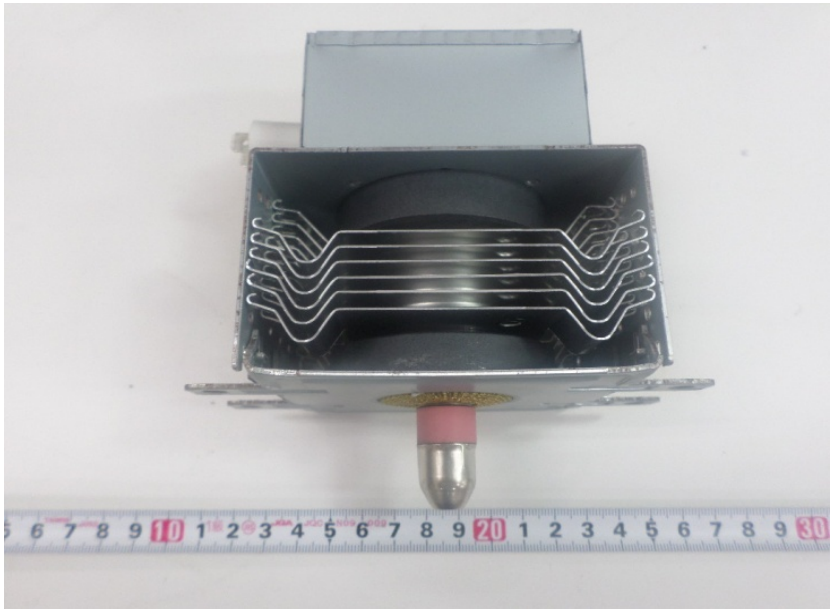


Main Board

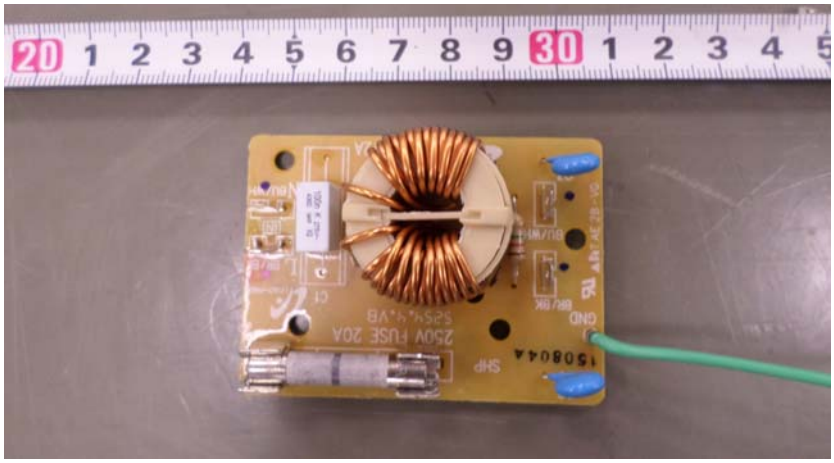




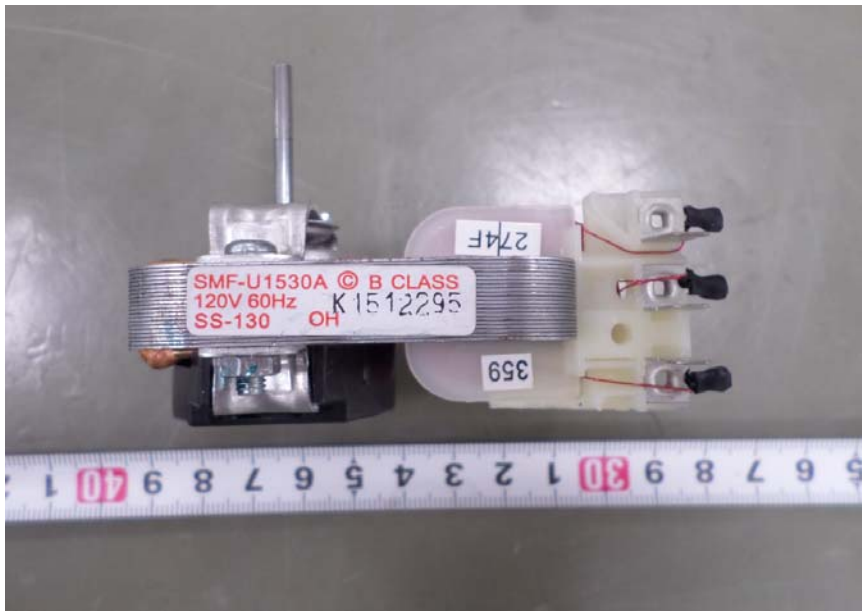
Magnetron

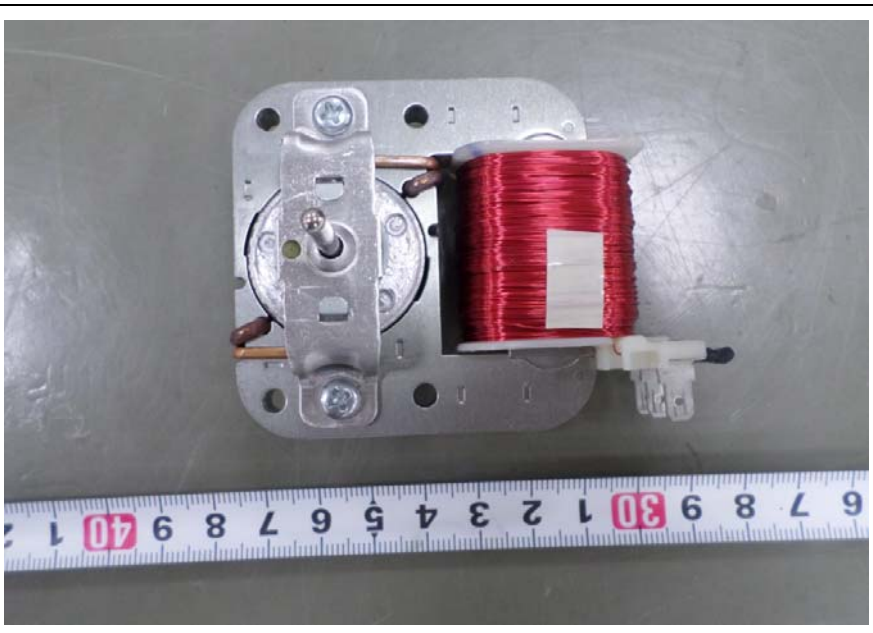


Noise Filter



Fan Motor





Turntable Motor

HVT