# TEST REPORT

**This laboratory is accredited by Radio Research Agency**
The tests reported herein have been performed in accordance with its terms of accreditation.

| | |
|---|---|
| **Test Report No.** | CE2019-00181 |
| **Date of Receipt** | 02 December, 2019 |
| **Date of test** | 02 December, 2019 ~ 11 December, 2019 |
| **Issue Date** | 12 December, 2019 |
| **Applied Standard** | FCC part 18 |
| **Trade Name** | LG |
| **Equipment Name** | HOUSEHOLD DUAL FUEL RANGE |
| **Model Name** | SKSDR480SIS |
| **FCC ID** | BEJZ65143B |
| **FCC Grant type** | Class II Permissive Change (LCD Display circuit change) |
| **Applicant** | LG Electronics USA |
| **Address** | 1000 Sylvan Avenue Englewood Cliffs, New Jersey, United States |
| **Test Laboratory** | KTC (Korea Testing Certification) |
| **Address** | 22 Heungan-daero 27beon-gil, Gunpo-si, Gyeonggi-do, Korea |

Signature

Tested by : Byung Jin, Hyun Byung Jin, Hyun
Engineer

Approved by : Yong Sung, Kim Yong Sung, Kim
General Manager

This report details the results of the testing carried out only one sample, the results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. This report must not be used by the client to claim product certification, approval or endorsement by agency of the federal government.

# Table of contents

# 1. Report information

## 1.1 Revision history

| No. | Revised detailed information |
|---|---|
| Issue 0 | There are no revisions and this version is basic test report. |

## 1.2 Sample calculation

### 1.2.1 Conducted disturbance (at 10 MHz)

- Class B limit = 60 dBμV (Quasi-peak limit)
- Level (50 dBμV) = Meter Reading (40.2 dBμV) + factor ( 9.8 dB, AMN factor 9.7 dB + Cable loss 0.1 dB)
- Margin (10 dB) = Limit (60 dBμV) – Level (50 dBμV) = 10 dB below limit

### 1.2.2 Radiated disturbance (at 100 MHz)

- Class B limit = 40 dBμV/m at 3 m
- Level (30 dBμV/m)

  = Meter Reading (50 dBμV) + factor (- 20 dB (1/m), antenna factor + cable loss – amplifier gain)
- Margin (10 dB) = Limit (40 dBμV/m) – Level (30 dBμV/m) = 10 dB below limit

# 2. Summary of test results

## 2.1 Emission

The EUT has been tested according to the following specifications:

| Applied | Test type | Applied standard | Result |
|---|---|---|---|
| ☒ | Conducted emission | FCC Part 18 / MP-5:1986 | Complied |
| ☒ | Radiated emission | | Complied |

# 3. General Information

## 3.1 Test facility

**We are the accredited EMC laboratory by RRA (KOREA).**

**We certify that the above products had performed test on our laboratory and it was confirmed to comply with FCC requirement.**

**The sites are constructed in conformance with the requirements of CISPR publication 16/ANSI C63.4**

**The test was performed accordance to the procedures from FCC/OET MP-5.**

**Test data and results are issue on the EMC test report No. as follows.**

## 3.2 Equipment Under Test (E.U.T)

Name of E.U.T. : HOUSEHOLD DUAL FUEL RANGE
Model Name: SKSDR480SIS
Information of Variant model: None

## 3.3 Description of EUT

| | |
|---|---|
| **Oven Range Models** | SKSDR480SIS |
| **Description** | 48” Duel Fuel Pro Range |
| **Electrical Requirements** | 120/240 V : 13.5 kW, 120/208 V : 10.5 kW |
| **Exterior Dimensions** | 47 7/8" (W) x 35 1/4" (H) x 26 3/4" (D) (D with door closed)<br>121.6 cm (W) x 89.6 cm (H) x 67.9 cm (D) (D with door closed) |
| **Height to cooking surface** | 36” (91.4 cm) |
| **Net weight** | 529.1 lb (240 kg) |
| **Total capacity** | Right Oven : 5.2 cu.ft, Left Oven : 2.7 cu.ft. Total : 7.9 cu.ft |

## 3.4 Mode (Inductions Heating)

| | **Low Frequency** | **High Frequency** |
|---|---|---|
| Small Hob # 1 (Down) | 25 kHz | 75 kHz |
| Small Hob # 2 (Up) | 25 kHz | 75 kHz |

# 4. Test Setup configuration

## 4.1 Cable description

The type(s) of cables which were connected to the ports (of the EUT) are as follows:

| No. | From the port of EUT | To | Length[m] | Shielded[Y/N] |
|---|---|---|---|---|
| 1 | Power cable | AC power | 1.3 | N |
| 2 | Power cable | AC power | 1.1 | N |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |

## 4.2 EUT operating mode(s)

To achieve compliance applied standard specification, the following mode(s) were made during compliance testing: Induction Mode

## 4.3 Test Condition

The EUT was installed, arranged and operated in a manner that is most representative of equipment as typically used.
The measurements were carried out while varying operating modes and cable positions within typically arrangement to determine maximum emission level.
The representative and worst test mode(s) were noted in the test report.

◆ Test voltage / Frequency : AC 208 V, AC 240 V / 60 Hz

This device has been tested in the configurations of induction mode.
Induction mode : This device has been operated with an enameled steel vessel filled with tap water up to 80 % of it's maximum capacity.

# 5. Results of individual test

## 5.1 Disturbance voltage at the mains terminals

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm / 50 uH (50 ohm / 50 uH for RF lighting devices) coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50 ohm / 50 uH (50 ohm / 50 uH for RF lighting devices) coupling impedance with 50 ohm termination. (Please refer to the block diagram of the test setup and photographs.) Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface
cables must be changed according to FCC/OET MP-5: 1986 on conducted measurement.

**Limits of disturbance voltage at the mains terminals**

**(a)** All Induction cooking ranges and ultrasonic equipment:

| Frequency range Limits [MHz] | Limits [dB(μV)] | |
|---|---|---|
| | Quasi-peak | Average |
| 0.009 to 0.05 | 110 | - |
| 0.05 to 0.15 | 90 to 80 *) | - |
| 0.15 to 0.50 | 66 to 56 *) | 56 to 46 *) |
| 0.50 to 5 | 56 | 46 |
| 5 to 30 | 60 | 50 |
| *) Decreasing linearly with the logarithm of the frequency | | |

**(b)** All other part 18 customer devices :

| Frequency range Limits [MHz] | Limits [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 |
| *) Decreasing linearly with the logarithm of the frequency | | |

## 5.1.1 Test instrumentation

Test instrumentations which were used in the Conducted disturbance test are as follows;

| Test instrumentation | Model name | Manufacturer | Serial Number | Calibration | |
|---|---|---|---|---|---|
| | | | | Date | Interval (Month) |
| EMI Test Receiver | ESCI | Rohde & Schwarz | 100343 | 2020-05-15 | 12 |
| LISN | ENV216 | Rohde & Schwarz | 101339 | 2020-02-08 | 12 |
| - | - | - | - | - | - |
| - | - | - | - | - | - |
| - | - | - | - | - | - |

## 5.1.2 Temperature and humidity condition

| Test date | 02 December, 2019 | Test Engineer | Byung Jin, Hyun | |
|---|---|---|---|---|
| Climate condition | Ambient temperature | 21.2 ℃ | Relative humidity | 48 % |
| | Atmospheric pressure | 100.9 Kpa | - | |

## 5.1.3 Test results

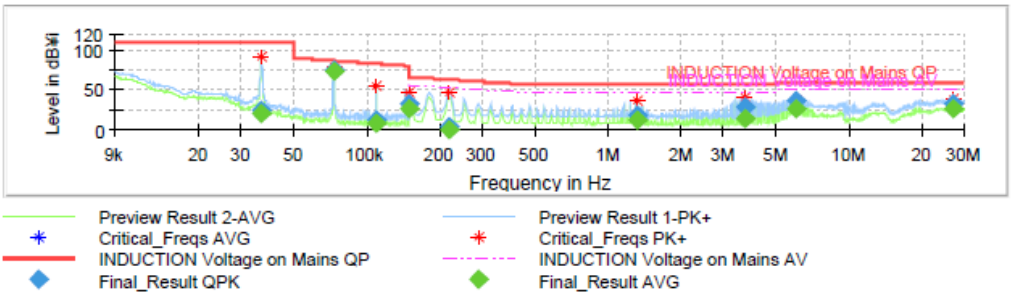
- **Cooking element #1 (AC 208 V / 60 Hz)**

CE_SKSDR480SIS_208 V_60 Hz_DOWN 1 / 1

# Test Report

## Common Information

Test Description: EMI SYSTEM Conducted Emission
Test Site: KTC EMC center
Operator Name: BJ HYUN




## Final_Result

| Frequency (MHz) | QuasiPeak (dB¥µ V) | Average (dB¥µ V) | Limit (dB¥µ V) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Line |
|---|---|---|---|---|---|---|---|
| 0.036440 | --- | 20.00 | --- | --- | 15000.0 | 0.200 | N |
| 0.036440 | 24.50 | --- | 110.00 | 85.50 | 15000.0 | 0.200 | N |
| 0.072680 | 75.98 | --- | 86.56 | 10.59 | 15000.0 | 0.200 | L1 |
| 0.072680 | --- | 74.12 | --- | --- | 15000.0 | 0.200 | L1 |
| 0.109000 | 11.34 | --- | 82.84 | 71.50 | 15000.0 | 0.200 | L1 |
| 0.109000 | --- | 8.38 | --- | --- | 15000.0 | 0.200 | L1 |
| 0.150000 | --- | 26.20 | 55.92 | 29.72 | 15000.0 | 9.000 | L1 |
| 0.150000 | 32.63 | --- | 65.92 | 33.29 | 15000.0 | 9.000 | L1 |
| 0.218000 | 4.73 | --- | 62.84 | 58.11 | 15000.0 | 9.000 | L1 |
| 0.218000 | --- | 0.17 | 52.84 | 52.67 | 15000.0 | 9.000 | L1 |
| 1.310000 | --- | 12.14 | 46.00 | 33.86 | 15000.0 | 9.000 | L1 |
| 1.310000 | 18.31 | --- | 56.00 | 37.69 | 15000.0 | 9.000 | L1 |
| 3.706000 | 28.04 | --- | 56.00 | 27.96 | 15000.0 | 9.000 | N |
| 3.706000 | --- | 14.18 | 46.00 | 31.82 | 15000.0 | 9.000 | N |
| 6.034000 | --- | 27.12 | 50.00 | 22.88 | 15000.0 | 9.000 | L1 |
| 6.034000 | 37.51 | --- | 60.00 | 22.49 | 15000.0 | 9.000 | L1 |
| 26.906000 | --- | 25.74 | 50.00 | 24.26 | 15000.0 | 9.000 | N |
| 26.906000 | 32.38 | --- | 60.00 | 27.62 | 15000.0 | 9.000 | N |

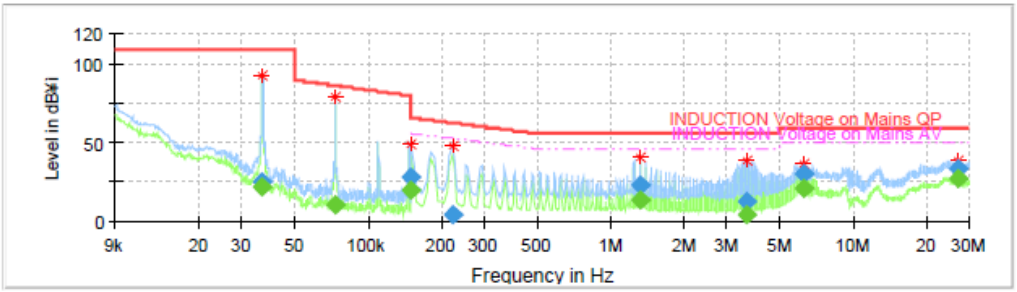
- **Cooking element #2 (AC 208 V / 60 Hz)**

CE_SKSDR480SIS_208 V_60 Hz_UP 1 / 1

# Test Report

## Common Information

| | |
|---|---|
| Test Description: | EMI SYSTEM Conducted Emission |
| Test Site: | KTC EMC center |
| Operator Name: | BJ HYUN |




## Final_Result

| Frequency (MHz) | QuasiPeak (dB¥i V) | Average (dB¥i V) | Limit (dB¥i V) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Line |
|---|---|---|---|---|---|---|---|
| 0.036600 | 25.34 | --- | 110.00 | 84.66 | 15000.0 | 0.200 | N |
| 0.036600 | --- | 21.40 | --- | --- | 15000.0 | 0.200 | N |
| 0.073000 | -11.75 | --- | 86.52 | 98.27 | 15000.0 | 0.200 | L1 |
| 0.073000 | --- | 10.32 | --- | --- | 15000.0 | 0.200 | L1 |
| 0.150000 | --- | 19.52 | 55.92 | 36.40 | 15000.0 | 9.000 | L1 |
| 0.150000 | 27.68 | --- | 65.92 | 38.23 | 15000.0 | 9.000 | L1 |
| 0.222000 | 3.83 | --- | 62.69 | 58.86 | 15000.0 | 9.000 | L1 |
| 0.222000 | --- | -0.30 | 52.69 | 52.98 | 15000.0 | 9.000 | L1 |
| 1.322000 | --- | 13.23 | 46.00 | 32.77 | 15000.0 | 9.000 | L1 |
| 1.322000 | 23.35 | --- | 56.00 | 32.65 | 15000.0 | 9.000 | L1 |
| 3.650000 | 12.48 | --- | 56.00 | 43.52 | 15000.0 | 9.000 | N |
| 3.650000 | --- | 4.68 | 46.00 | 41.32 | 15000.0 | 9.000 | N |
| 6.238000 | 29.81 | --- | 60.00 | 30.19 | 15000.0 | 9.000 | L1 |
| 6.238000 | --- | 20.39 | 50.00 | 29.61 | 15000.0 | 9.000 | L1 |
| 26.898000 | 32.88 | --- | 60.00 | 27.12 | 15000.0 | 9.000 | L1 |
| 26.898000 | --- | 26.72 | 50.00 | 23.28 | 15000.0 | 9.000 | L1 |

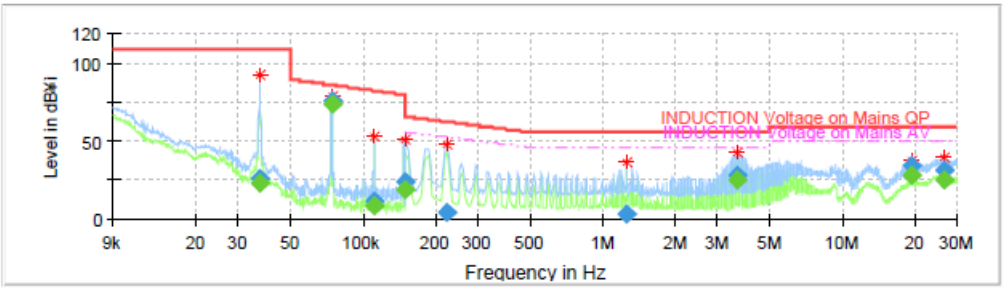
- **Cooking element #1 (AC 240 V / 60 Hz)**

CE_SKSDR480SIS_240 V_60 Hz_DOWN 1 / 1

# Test Report

## Common Information

| | |
|---|---|
| Test Description: | EMI SYSTEM Conducted Emission |
| Test Site: | KTC EMC center |
| Operator Name: | BJ HYUN |




## Final_Result

| Frequency (MHz) | QuasiPeak (dBµi V) | Average (dBµi V) | Limit (dBµi V) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Line |
|---|---|---|---|---|---|---|---|
| 0.037000 | --- | 22.80 | --- | --- | 15000.0 | 0.200 | N |
| 0.037000 | 26.43 | --- | 110.00 | 83.57 | 15000.0 | 0.200 | N |
| 0.073720 | 75.91 | --- | 86.43 | 10.52 | 15000.0 | 0.200 | L1 |
| 0.073720 | --- | 74.16 | --- | --- | 15000.0 | 0.200 | L1 |
| 0.110600 | 11.03 | --- | 82.71 | 71.68 | 15000.0 | 0.200 | L1 |
| 0.110600 | --- | 8.41 | --- | --- | 15000.0 | 0.200 | L1 |
| 0.150000 | --- | 19.30 | 55.92 | 36.62 | 15000.0 | 9.000 | L1 |
| 0.150000 | 24.43 | --- | 65.92 | 41.49 | 15000.0 | 9.000 | L1 |
| 0.222000 | 3.92 | --- | 62.69 | 58.77 | 15000.0 | 9.000 | L1 |
| 0.222000 | --- | -0.28 | 52.69 | 52.96 | 15000.0 | 9.000 | L1 |
| 1.254000 | --- | -1.02 | 46.00 | 47.02 | 15000.0 | 9.000 | L1 |
| 1.254000 | 3.40 | --- | 56.00 | 52.60 | 15000.0 | 9.000 | L1 |
| 3.630000 | 27.83 | --- | 56.00 | 28.17 | 15000.0 | 9.000 | N |
| 3.630000 | --- | 24.59 | 46.00 | 21.41 | 15000.0 | 9.000 | N |
| 19.314000 | 34.62 | --- | 60.00 | 25.38 | 15000.0 | 9.000 | N |
| 19.314000 | --- | 28.66 | 50.00 | 21.34 | 15000.0 | 9.000 | N |
| 26.462000 | 31.68 | --- | 60.00 | 28.32 | 15000.0 | 9.000 | L1 |
| 26.462000 | --- | 25.49 | 50.00 | 24.51 | 15000.0 | 9.000 | L1 |

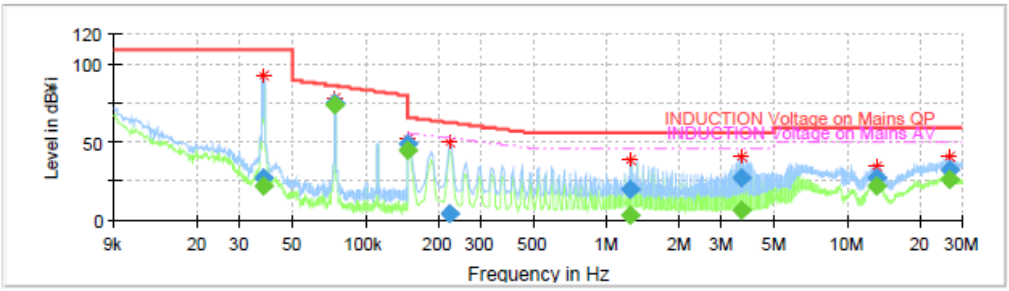
- **Cooking element #2 (AC 240 V / 60 Hz)**

CE_SKSDR480SIS_240 V_60 Hz_UP 1 / 1

# Test Report

## Common Information

| | |
|---|---|
| Test Description: | EMI SYSTEM Conducted Emission |
| Test Site: | KTC EMC center |
| Operator Name: | BJ HYUN |




## Final_Result

| Frequency (MHz) | QuasiPeak (dBµi V) | Average (dBµi V) | Limit (dBµi V) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Line |
|---|---|---|---|---|---|---|---|
| 0.037800 | 26.76 | --- | 110.00 | 83.24 | 15000.0 | 0.200 | N |
| 0.037800 | --- | 22.05 | --- | --- | 15000.0 | 0.200 | N |
| 0.074280 | 75.40 | --- | 86.36 | 10.96 | 15000.0 | 0.200 | L1 |
| 0.074280 | --- | 73.85 | --- | --- | 15000.0 | 0.200 | L1 |
| 0.148600 | --- | 44.53 | 55.99 | 11.46 | 15000.0 | 0.200 | L1 |
| 0.148600 | 48.92 | --- | 65.99 | 17.07 | 15000.0 | 0.200 | L1 |
| 0.222000 | 4.05 | --- | 62.69 | 58.64 | 15000.0 | 9.000 | L1 |
| 0.222000 | --- | -0.17 | 52.69 | 52.85 | 15000.0 | 9.000 | L1 |
| 1.262000 | --- | 2.98 | 46.00 | 43.02 | 15000.0 | 9.000 | L1 |
| 1.262000 | 19.42 | --- | 56.00 | 36.58 | 15000.0 | 9.000 | L1 |
| 3.650000 | 27.44 | --- | 56.00 | 28.56 | 15000.0 | 9.000 | N |
| 3.650000 | --- | 6.08 | 46.00 | 39.92 | 15000.0 | 9.000 | N |
| 13.246000 | 27.56 | --- | 60.00 | 32.44 | 15000.0 | 9.000 | N |
| 13.246000 | --- | 21.41 | 50.00 | 28.59 | 15000.0 | 9.000 | N |
| 26.494000 | 32.68 | --- | 60.00 | 27.32 | 15000.0 | 9.000 | L1 |
| 26.494000 | --- | 26.47 | 50.00 | 23.53 | 15000.0 | 9.000 | L1 |

## 5.2 Radiated disturbance (Field strength )

(a) According to exploratory test no any obvious emission were detected from 9 kHz to 30 MHz. Although these tests were performed other than open area test site, adequate comparison measurements were confirmed against 30 m open are test 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.

(b) ISM equipment operating on a frequency specified in §18.301 is permitted unlimited radiated energy in the band specified for that frequency.

(c) The field strength levels of emissions which lie outside the bands specified in §18.301, unless otherwise indicated, shall not exceed the following:

| Equipment | Operating frequency | RF Power generated by equipment watts) | Field strength limit (uV/m) | Distance (meters) |
|---|---|---|---|---|
| Any type unless otherwise specified (miscellaneous) | Any ISM frequency | Below 500<br>500 or more | 25<br>25 × SQRT(power/500) | 300<br>[1]300 |
| | Any non-ISM frequency | Below 500<br>500 or more | 15<br>15 × SQRT(power/500) | 300<br>[1]300 |
| Industrial heaters and RF stabilized arc welders | On or below 5 725 MHz<br>Above 5 725 MHz | Any<br>Any | 10<br>([2]) | 1,600<br>([2]) |
| Medical diathermy | Any ISM frequency<br>Any non-ISM frequency | Any<br>Any | 25<br>15 | 300<br>300 |
| Ultrasonic | Below 490 kHz | Below 500<br>500 or more | 2 400/F(kHz)<br>2 400/F(kHz) × SQRT(power/500) | 300<br>[3]300 |
| | 490 to 1 600 kHz<br>Above 1 600 kHz | Any<br>Any | 24 000/F(kHz)<br>15 | 30<br>30 |
| **Induction cooking ranges** | **Below 90 kHz**<br>On or above 90 kHz | **Any**<br>Any | **1 500**<br>300 | **[4]30**<br>[4]30 |

[1] Field strength may not exceed 10 μV/m at 1 600 meters. Consumer equipment operating below 1 000 MHz is not permitted the increase in field strength otherwise permitted here for power over 500 watts.

[2] Reduced to the greatest extent possible.

[3] Field strength may not exceed 10 μV/m at 1 600 meters. Consumer equipment is not permitted the increase in field strength otherwise permitted here for over 500 watts.

[4] Induction cooking ranges manufactured prior to February 1, 1980, shall be subject to the field strength limits for miscellaneous ISM equipment.

(c) The field strength limits for RF lighting devices shall be the following:

| Frequency (MHz) | Field strength limit at 30 meters (μV/m) |
|---|---|
| **Non-consumer equipment** | **-** |
| 30 to 88 | 30 |
| 88 to 216 | 50 |
| 216 to 1 000 | 70 |
| **Consumer equipment:** | **-** |
| 30 to 88 | 10 |
| 88 to 216 | 15 |
| 216 to 1 000 | 20 |

NOTES

1. The tighter limit shall apply at the boundary between two frequency ranges.

2. Testing for compliance with these limits may be made at closer distances, provided a sufficient number of measurements are taken to plot the radiation pattern, to determine the major lobes of radiation, and to determine the expected field strength level at 30, 300, or 1600 meters. Alternatively, if measurements are made at only one closer fixed distance, then the permissible field strength limits shall be adjusted using 1/d as an attenuation factor.

**Limits for radiated disturbance of ITE at a measuring distance of 3 m**

| Frequency range Limits [MHz] | Class B Limits [dB(μV/m)] | |
|---|---|---|
| | Peak | Average |
| Above 1 000 | 74 | 54 |

## 5.2.1 Test instrumentation

Test instrumentations which were used in the Radiated disturbance test are as follows;

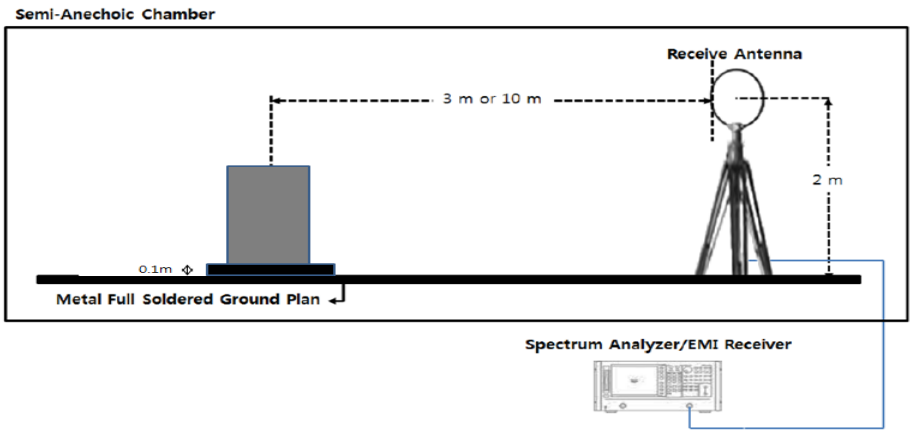
| Test instrumentation | Model name | Manufacturer | Serial Number | Calibration | |
|---|---|---|---|---|---|
| | | | | Date | Interval (Month) |
| EMI Test Receiver | ESU40 | Rohde & Schwarz | 100198 | 2020-05-15 | 12 |
| Loop Antenna | HFH2-Z2 | Rohde & Schwarz | 827945/007 | 2021-05-02 | 24 |
| Turn Table | DT3000-3t | Innco Systems | - | N/A | - |

## 5.2.2 Temperature and humidity condition

| Test date | 10 December, 2019 | Test engineer | Byung Jin, Hyun |
|---|---|---|---|
| Climate condition | Ambient temperature | 20.7 ℃ | Relative humidity 49 % |
| | Atmospheric pressure | 100.9 Kpa | |
| Test place | 10 m Semi-Anechoic Chamber | | |

## 5.2.3 Test Set-up

The Radiated emission measurements were conducted at the worst test conditions. The measurements of below 1 GHz were made at 3 m Semi Anechoic Chamber or 10 m Semi Anechoic Chamber that complies with CISPR 16/ANSI C63.4. The frequency range of 9 kHz to 30 MHz, the EUT was placed on a non-conductive turntable approximately 0.1 m above the ground plane. The turntable with EUT was rotated 360° and receive antenna was fixed 2.0 m on the ground plane.



## 5.2.4 Test results

Measurement Distance : 10 m
Note : Frequency range to be scanned up to 30 MHz, because the frequency band in which the EUT operates less than 1.705 MHz

- Measurement setting

| Frequency range | 9 kHz to 150 kHz | 0.15 MHz to 30 MHz |
|---|---|---|
| Detector mode | Peak | Peak |
| Resolution bandwidth | 200 Hz | 9 kHz |

- Measurement Data : Induction Mode (AC 208 V, 60 Hz)

| Distance [m] | Frequency [MHz] | ANT. Pol. | Reading [dBuV] | D.C.F | C.F [dB(1/m)] | Field Strength [dB(uV/m)] | Limits [dB(uV/m)] | Margin [dB] | Cooking element |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 0.040 | H | 61.2 | 23.8 | 20.0 | 57.4 | 63.5 | 6.12 | #1 |
| 10 | 0.081 | H | 42.3 | 9.5 | 19.9 | 52.7 | 63.5 | 10.82 | #1 |
| 10 | 0.121 | H | 42.8 | 9.5 | 19.9 | 53.2 | 63.5 | 10.32 | #1 |

| Distance [m] | Frequency [MHz] | ANT. Pol. | Reading [dBuV] | D.C.F | C.F [dB(1/m)] | Field Strength [dB(uV/m)] | Limits [dB(uV/m)] | Margin [dB] | Cooking element |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 0.040 | V | 59.6 | 23.8 | 20.0 | 55.8 | 63.5 | 7.72 | #1 |
| 10 | 0.081 | V | 39.3 | 9.5 | 19.9 | 49.7 | 63.5 | 13.82 | #1 |
| 10 | 0.121 | V | 40.2 | 9.5 | 19.9 | 50.6 | 63.5 | 12.92 | #1 |

| Distance [m] | Frequency [MHz] | ANT. Pol. | Reading [dBuV] | D.C.F | C.F [dB(1/m)] | Field Strength [dB(uV/m)] | Limits [dB(uV/m)] | Margin [dB] | Cooking element |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 0.041 | H | 61.5 | 23.8 | 20.0 | 57.7 | 63.5 | 5.82 | #2 |
| 10 | 0.081 | H | 41.4 | 9.5 | 19.9 | 51.8 | 63.5 | 11.72 | #2 |
| 10 | 0.122 | H | 45.9 | 9.5 | 19.9 | 56.3 | 63.5 | 7.22 | #2 |

| Distance [m] | Frequency [MHz] | ANT. Pol. | Reading [dBuV] | D.C.F | C.F [dB(1/m)] | Field Strength [dB(uV/m)] | Limits [dB(uV/m)] | Margin [dB] | Cooking element |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 0.041 | V | 59.8 | 23.8 | 20.0 | 56.0 | 63.5 | 7.52 | #2 |
| 10 | 0.081 | V | 39.7 | 9.5 | 19.9 | 50.1 | 63.5 | 13.42 | #2 |
| 10 | 0.122 | V | 43.3 | 9.5 | 19.9 | 53.7 | 63.5 | 9.82 | #2 |

- Measurement Data : Induction Mode (AC 240 V, 60 Hz)

| Distance [m] | Frequency [MHz] | ANT. Pol. | Reading [dBuV] | D.C.F | C.F [dB(1/m)] | Field Strength [dB(uV/m)] | Limits [dB(uV/m)] | Margin [dB] | Cooking element |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 0.037 | H | 64.6 | 22.9 | 20.0 | 61.7 | 63.5 | 1.82 | #1 |
| 10 | 0.075 | H | 45.6 | 9.5 | 19.9 | 56.0 | 63.5 | 7.52 | #1 |
| 10 | 0.113 | H | 42.4 | 9.5 | 19.9 | 52.8 | 63.5 | 10.72 | #1 |

| Distance [m] | Frequency [MHz] | ANT. Pol. | Reading [dBuV] | D.C.F | C.F [dB(1/m)] | Field Strength [dB(uV/m)] | Limits [dB(uV/m)] | Margin [dB] | Cooking element |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 0.038 | V | 63.1 | 22.9 | 20.0 | 60.2 | 63.5 | 3.32 | #1 |
| 10 | 0.075 | V | 42.5 | 9.5 | 19.9 | 52.9 | 63.5 | 10.62 | #1 |
| 10 | 0.113 | V | 38.6 | 9.5 | 19.9 | 49.0 | 63.5 | 14.52 | #1 |

| Distance [m] | Frequency [MHz] | ANT. Pol. | Reading [dBuV] | D.C.F | C.F [dB(1/m)] | Field Strength [dB(uV/m)] | Limits [dB(uV/m)] | Margin [dB] | Cooking element |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 0.042 | H | 62.2 | 22.9 | 20.0 | 59.3 | 63.5 | 4.22 | #2 |
| 10 | 0.085 | H | 42.0 | 9.5 | 19.9 | 52.4 | 63.5 | 11.12 | #2 |
| 10 | 0.127 | H | 45.4 | 9.5 | 19.9 | 55.8 | 63.5 | 7.72 | #2 |

| Distance [m] | Frequency [MHz] | ANT. Pol. | Reading [dBuV] | D.C.F | C.F [dB(1/m)] | Field Strength [dB(uV/m)] | Limits [dB(uV/m)] | Margin [dB] | Cooking element |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 0.042 | V | 59.4 | 22.9 | 20.0 | 56.5 | 63.5 | 7.02 | #2 |
| 10 | 0.085 | V | 38.2 | 9.5 | 19.9 | 48.6 | 63.5 | 14.92 | #2 |
| 10 | 0.127 | V | 44.2 | 9.5 | 19.9 | 54.6 | 63.5 | 8.92 | #2 |

Note.1 The worst case data were reported.
And no other spurious and harmonic emissions were reported greater than listed emission above table.
2. All measurements were recorded using a spectrum analyzer employing a peak detector for below 30 MHz
3. Correction Factor (C.F) : Cable loss + Antenna Factor
4. Distance Correction Factor (D.C.F) = X $Log_{10}$ (10 m / 30 m)
X = [$FS_{d1}$ – $FS_{d2}$] / log10(d1/d2) where:
d1 and d2 are the measurement distances (d2 > d1) in m
$FS_{d1}$ is the field strength at d1 in dBuV/m
$FS_{d2}$ is the field strength at d2 in dBuV/m
5. Sample calculation
Field Strength = Reading + D.C.F + C.F
Margin = Limit – Field Strength
Where D.C.F = Distance Correction Factor
6. “V” = Vertical / “H” = Horizontal
7. Cooking element “1” = Up, “2” = Down

**[ AC 208 V, 60 Hz ]**

| #1 of cooking element | | | | | |
|---|---|---|---|---|---|
| Distance [m] | ANT. Pol. | Frequency [MHz] | Meter reading [dBuV] | C.F [dB(1/m)] | Final reading [dB(uV/m)] |
| 3 | H | 0.040 | 87.9 | 20.0 | **107.9** |
| | V | 0.040 | 86.6 | 20.0 | 106.6 |
| 10 | H | 0.040 | 61.2 | 20.0 | **81.2** |
| | V | 0.040 | 59.6 | 20.0 | 79.6 |
| Extrapolation factor from 3 m to 10 m : -51.1 | | | | | |

| #2 of cooking element | | | | | |
|---|---|---|---|---|---|
| Distance [m] | ANT. Pol. | Frequency [MHz] | Meter reading [dBuV] | C.F [dB(1/m)] | Final reading [dB(uV/m)] |
| 3 | H | 0.040 | 87.6 | 20.0 | **107.6** |
| | V | 0.041 | 85.8 | 20.0 | 105.8 |
| 10 | H | 0.041 | 61.5 | 20.0 | **81.5** |
| | V | 0.041 | 59.8 | 20.0 | 79.8 |
| Extrapolation factor from 3 m to 10 m : **-49.9** | | | | | |

**D.C.F. (10 m to 30 m) = -49.9 $Log_{10}$ (10 m / 30 m) = 23.8 dB**

**[ AC 240 V, 60 Hz ]**

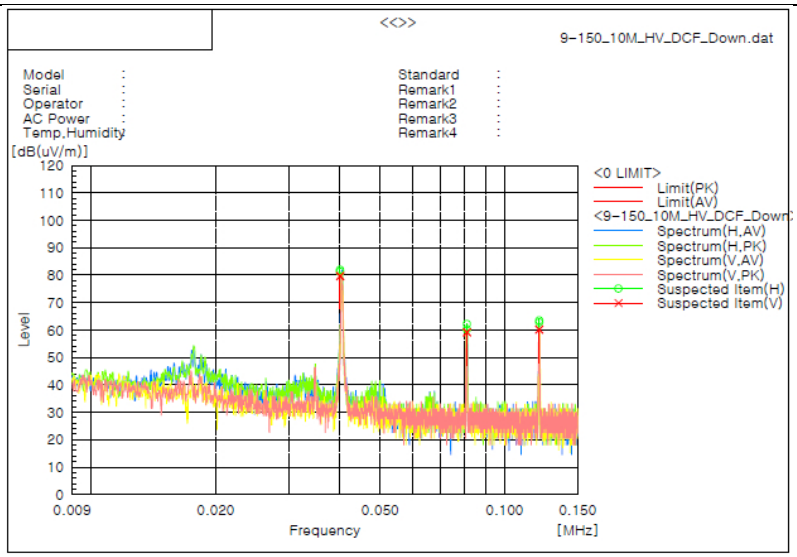
| #1 of cooking element | | | | | |
|---|---|---|---|---|---|
| Distance [m] | ANT. Pol. | Frequency [MHz] | Meter reading [dBuV] | C.F [dB(1/m)] | Final reading [dB(uV/m)] |
| 3 | H | 0.038 | 89.7 | 20.0 | **109.7** |
| | V | 0.038 | 87.6 | 20.0 | 107.6 |
| 10 | H | 0.037 | 64.6 | 20.0 | **84.6** |
| | V | 0.038 | 63.1 | 20.0 | 83.1 |
| Extrapolation factor from 3 m to 10 m : **-48.0** | | | | | |

| #2 of cooking element | | | | | |
|---|---|---|---|---|---|
| Distance [m] | ANT. Pol. | Frequency [MHz] | Meter reading [dBuV] | C.F [dB(1/m)] | Final reading [dB(uV/m)] |
| 3 | H | 0.042 | 89.2 | 20.0 | **109.2** |
| | V | 0.042 | 86.0 | 20.0 | 86.0 |
| 10 | H | 0.042 | 62.2 | 20.0 | **82.2** |
| | V | 0.042 | 59.4 | 20.0 | 79.4 |
| Extrapolation factor from 3 m to 10 m : -51.6 | | | | | |

**D.C.F. (10 m to 30 m) = -48 $Log_{10}$ (10 m / 30 m) = 22.9 dB**

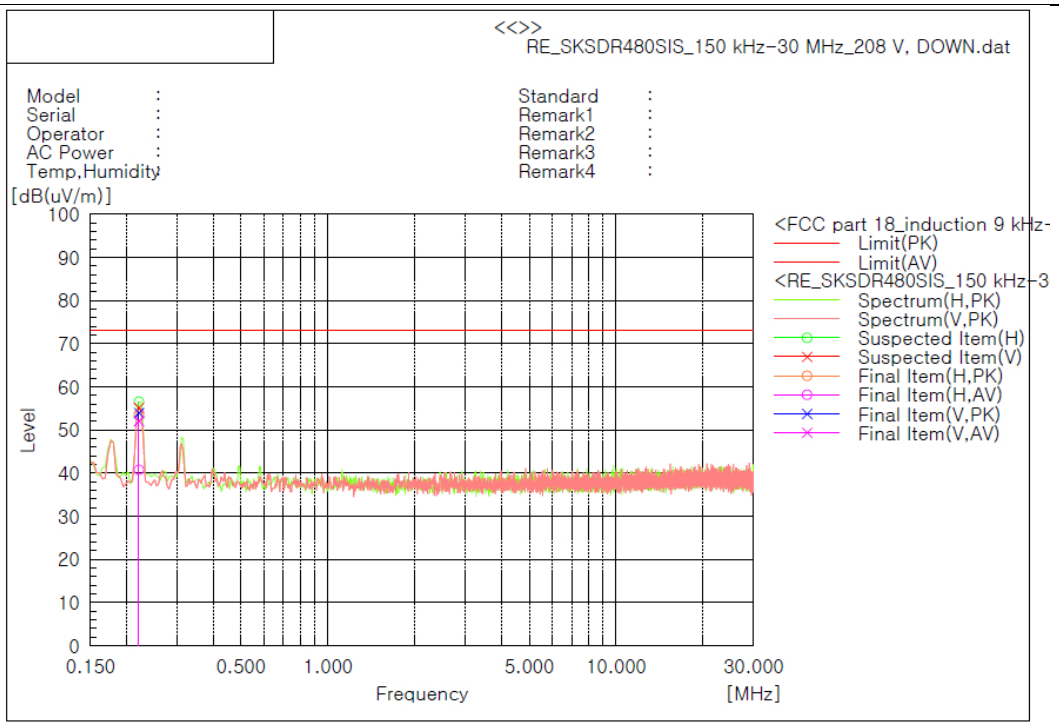
## 5.2.5 Test results

- **Cooking element #1 at 10 m (AC 208 V, 60 Hz)**




Spectrum Selection

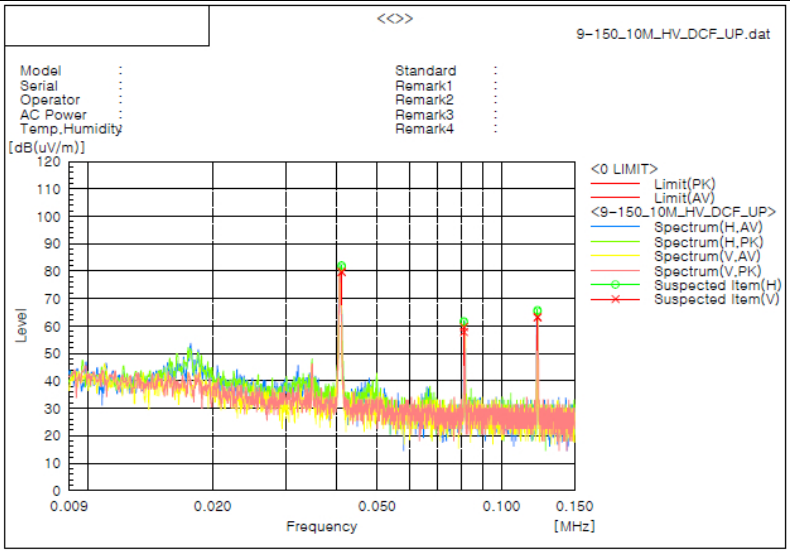
| No. | Frequency [MHz] | (P) | Reading [dB(uV)] | o.f [dB(1/m)] | Result PK [dB(uV/m)] | Result AV [dB(uV/m)] | Height [cm] | Angle [deg] | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.040 | V | 59.8 | 20.0 | ------ | 79.8 | 200.0 | 264.3 | |
| 2 | 0.040 | V | 59.6 | 20.0 | 79.6 | ------ | 200.0 | 238.4 | |
| 3 | 0.040 | H | 61.9 | 20.0 | ------ | 81.9 | 200.0 | 221.5 | |
| 4 | 0.040 | H | 61.2 | 20.0 | 81.2 | ------ | 200.0 | 238.2 | |
| 5 | 0.081 | H | 42.3 | 19.9 | 62.2 | ------ | 200.0 | 176.8 | |
| 6 | 0.081 | H | 40.4 | 19.9 | ------ | 60.3 | 200.0 | 181.8 | |
| 7 | 0.081 | V | 39.3 | 19.9 | 59.2 | ------ | 200.0 | 257.6 | |
| 8 | 0.081 | V | 39.3 | 19.9 | ------ | 59.2 | 200.0 | 282.4 | |
| 9 | 0.121 | H | 42.8 | 19.9 | 62.7 | ------ | 200.0 | 196.3 | |
| 10 | 0.121 | H | 43.6 | 19.9 | ------ | 63.5 | 200.0 | 240.9 | |
| 11 | 0.121 | V | 40.2 | 19.9 | 60.1 | ------ | 200.0 | 277.2 | |
| 12 | 0.121 | V | 40.3 | 19.9 | ------ | 60.2 | 200.0 | 345.4 | |




Final Result

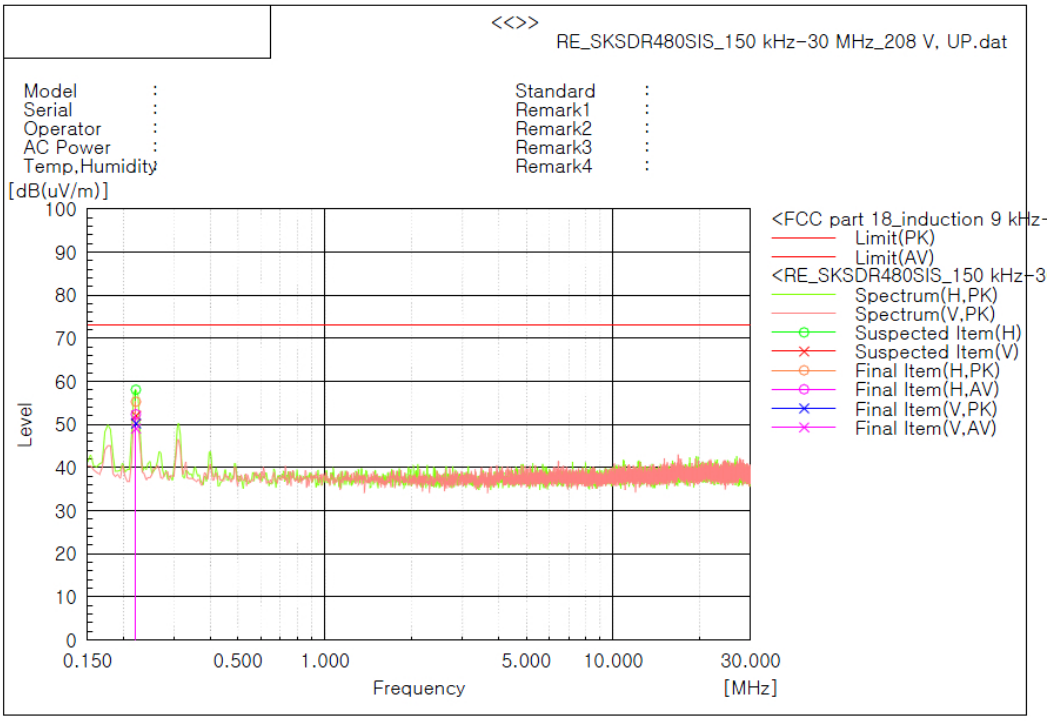
| No. | Frequency [MHz] | (P) | Reading PK [dB(uV)] | Reading AV [dB(uV)] | o.f [dB(1/m)] | Result PK [dB(uV/m)] | Result AV [dB(uV/m)] | Limit PK [dB(uV/m)] | Limit AV [dB(uV/m)] | Margin PK [dB] | Margin AV [dB] | Height [cm] | Angle [deg] | Remark |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.221 | H | 33.6 | 21.0 | 19.8 | 53.4 | 40.8 | 73.1 | 73.1 | 19.7 | 32.3 | 200.0 | 365.7 | |
| 2 | 0.221 | V | 34.2 | 32.3 | 19.8 | 54.0 | 52.1 | 73.1 | 73.1 | 19.1 | 21.0 | 200.0 | 231.9 | |

- **Cooking element #2 at 10 m (AC 208 V, 60 Hz)**




Spectrum Selection

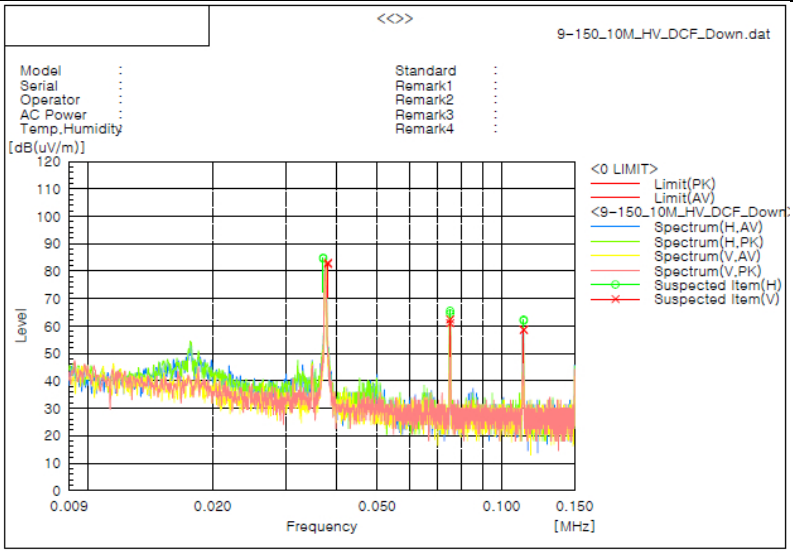
| No. | Frequency [MHz] | (P) | Reading [dB(uV)] | c.f [dB(1/m)] | Result PK [dB(uV/m)] | Result AV [dB(uV/m)] | Height [cm] | Angle [deg] | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.041 | V | 59.7 | 20.0 | ----- | 79.7 | 200.0 | 264.9 | |
| 2 | 0.041 | V | 59.8 | 20.0 | 79.8 | ----- | 200.0 | 237.4 | |
| 3 | 0.041 | H | 62.1 | 20.0 | ----- | 82.1 | 200.0 | 262.7 | |
| 4 | 0.041 | H | 61.5 | 20.0 | 81.5 | ----- | 200.0 | 178.0 | |
| 5 | 0.081 | V | 37.9 | 19.9 | ----- | 57.8 | 200.0 | 285.7 | |
| 6 | 0.081 | H | 41.4 | 19.9 | 61.3 | ----- | 200.0 | 178.0 | |
| 7 | 0.081 | H | 41.8 | 19.9 | ----- | 61.7 | 200.0 | 182.6 | |
| 8 | 0.081 | V | 39.7 | 19.9 | 59.6 | ----- | 200.0 | 258.2 | |
| 9 | 0.122 | H | 45.9 | 19.9 | 65.8 | ----- | 200.0 | 159.2 | |
| 10 | 0.122 | H | 45.4 | 19.9 | ----- | 65.3 | 200.0 | 160.1 | |
| 11 | 0.122 | V | 43.3 | 19.9 | 63.2 | ----- | 200.0 | 199.1 | |
| 12 | 0.122 | V | 43.2 | 19.9 | ----- | 63.1 | 200.0 | 245.0 | |




Final Result

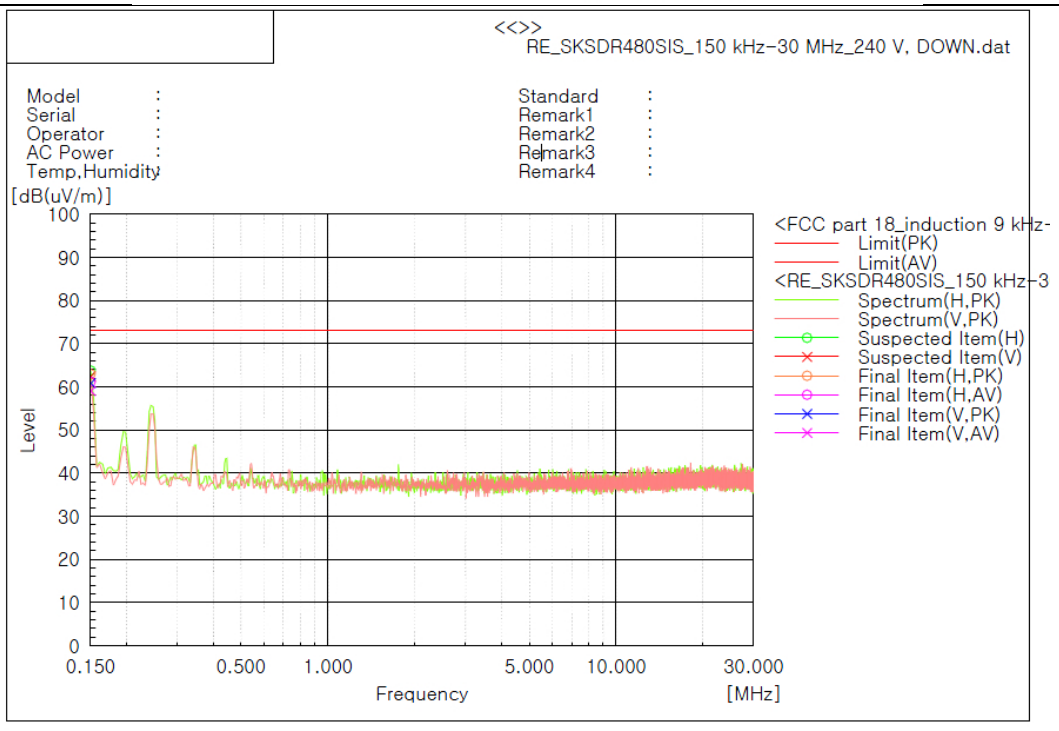
| No. | Frequency [MHz] | (P) | Reading PK [dB(uV)] | Reading AV [dB(uV)] | c.f [dB(1/m)] | Result PK [dB(uV/m)] | Result AV [dB(uV/m)] | Limit PK [dB(uV/m)] | Limit AV [dB(uV/m)] | Margin PK [dB] | Margin AV [dB] | Height [cm] | Angle [deg] | Remark |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.221 | H | 35.5 | 32.6 | 19.8 | 55.3 | 52.4 | 79.1 | 79.1 | 17.8 | 20.7 | 200.0 | 352.5 | |
| 2 | 0.221 | V | 30.5 | 29.3 | 19.8 | 50.3 | 49.1 | 79.1 | 79.1 | 22.8 | 24.0 | 200.0 | 127.2 | |

- **Cooking element #1 at 10 m (AC 240 V, 60 Hz)**




Spectrum Selection

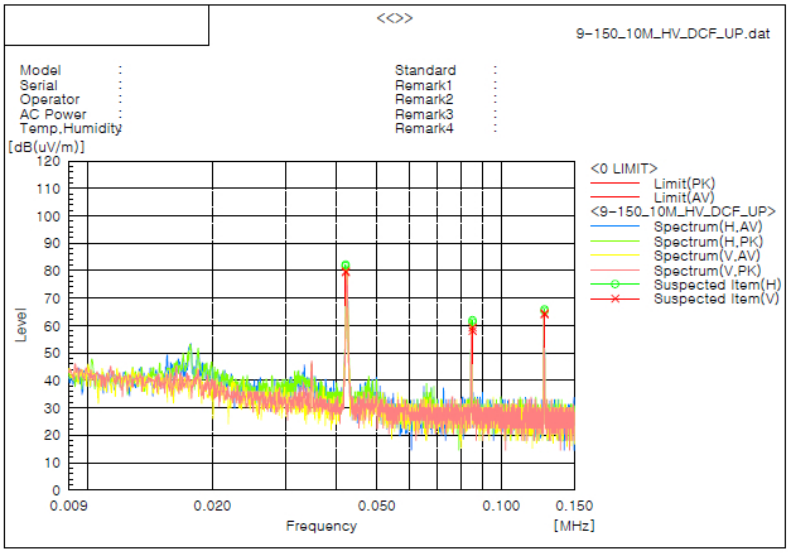
| No. | Frequency [MHz] | (P) | Reading [dB(uV)] | c.f [dB(1/m)] | Result PK [dB(uV/m)] | Result AV [dB(uV/m)] | Height [cm] | Angle [deg] | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.038 | V | 62.7 | 20.0 | ------ | 82.7 | 200.0 | 224.1 | |
| 2 | 0.038 | V | 63.1 | 20.0 | 83.1 | ------ | 200.0 | 237.1 | |
| 3 | 0.037 | H | 64.8 | 20.0 | ------ | 84.8 | 200.0 | 262.7 | |
| 4 | 0.037 | H | 64.6 | 20.0 | 84.6 | ------ | 200.0 | 278.7 | |
| 5 | 0.075 | H | 45.6 | 19.9 | 65.5 | ------ | 200.0 | 177.1 | |
| 6 | 0.075 | H | 44.7 | 19.9 | ------ | 64.6 | 200.0 | 183.0 | |
| 7 | 0.075 | V | 42.5 | 19.9 | 62.4 | ------ | 200.0 | 257.6 | |
| 8 | 0.075 | V | 41.2 | 19.9 | ------ | 61.1 | 200.0 | 283.7 | |
| 9 | 0.113 | H | 42.4 | 19.9 | 62.3 | ------ | 200.0 | 216.5 | |
| 10 | 0.113 | H | 42.0 | 19.9 | ------ | 61.9 | 200.0 | 242.9 | |
| 11 | 0.113 | V | 38.6 | 19.9 | 58.5 | ------ | 200.0 | 279.1 | |
| 12 | 0.113 | V | 38.8 | 19.9 | ------ | 58.7 | 200.0 | 204.8 | |




Final Result

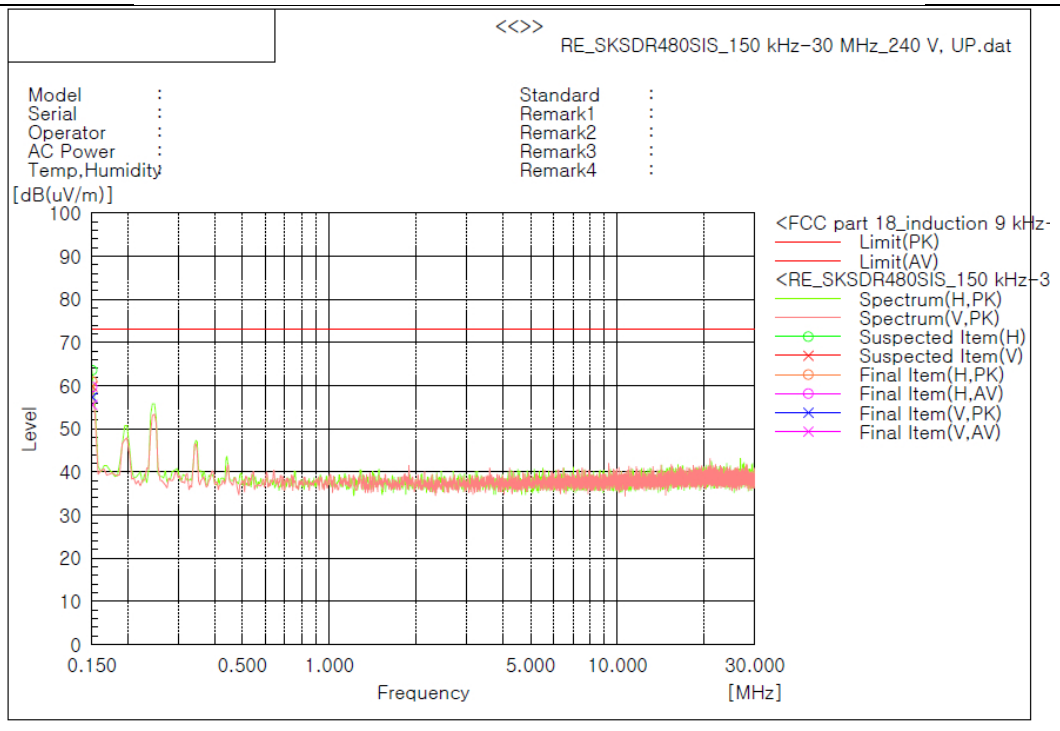
| No. | Frequency [MHz] | (P) | Reading PK [dB(uV)] | Reading AV [dB(uV)] | c.f [dB(1/m)] | Result PK [dB(uV/m)] | Result AV [dB(uV/m)] | Limit PK [dB(uV/m)] | Limit AV [dB(uV/m)] | Margin PK [dB] | Margin AV [dB] | Height [cm] | Angle [deg] | Remark |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.150 | H | 43.1 | 41.3 | 19.9 | 63.0 | 61.2 | 73.1 | 73.1 | 10.1 | 11.9 | 200.0 | 353.5 | |
| 2 | 0.150 | V | 41.0 | 39.2 | 19.9 | 60.9 | 59.1 | 73.1 | 73.1 | 12.2 | 14.0 | 200.0 | 0.0 | |

- **Cooking element #2 at 10 m (AC 240 V, 60 Hz)**




Spectrum Selection

| No. | Frequency [MHz] | (P) | Reading [dB(uV)] | o.f [dB(1/m)] | Result PK [dB(uV/m)] | Result AV [dB(uV/m)] | Height [cm] | Angle [deg] | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.042 | V | 59.8 | 20.0 | ------ | 79.8 | 200.0 | 323.3 | |
| 2 | 0.042 | V | 59.4 | 20.0 | 79.4 | ------ | 200.0 | 279.0 | |
| 3 | 0.042 | H | 61.7 | 20.0 | ------ | 81.7 | 200.0 | 226.6 | |
| 4 | 0.042 | H | 62.2 | 20.0 | 82.2 | ------ | 200.0 | 238.8 | |
| 5 | 0.085 | H | 42.0 | 19.9 | 61.9 | ------ | 200.0 | 178.2 | |
| 6 | 0.085 | H | 41.3 | 19.9 | ------ | 61.2 | 200.0 | 184.0 | |
| 7 | 0.085 | V | 38.2 | 19.9 | 58.1 | ------ | 200.0 | 216.5 | |
| 8 | 0.085 | V | 39.4 | 19.9 | ------ | 59.3 | 200.0 | 284.0 | |
| 9 | 0.127 | H | 45.4 | 19.9 | 65.3 | ------ | 200.0 | 278.4 | |
| 10 | 0.127 | H | 46.0 | 19.9 | ------ | 65.9 | 200.0 | 162.5 | |
| 11 | 0.127 | V | 44.2 | 19.9 | 64.1 | ------ | 200.0 | 194.7 | |
| 12 | 0.127 | V | 44.5 | 19.9 | ------ | 64.4 | 200.0 | 244.4 | |




Final Result

| No. | Frequency [MHz] | (P) | Reading PK [dB(uV)] | Reading AV [dB(uV)] | o.f [dB(1/m)] | Result PK [dB(uV/m)] | Result AV [dB(uV/m)] | Limit PK [dB(uV/m)] | Limit AV [dB(uV/m)] | Margin PK [dB] | Margin AV [dB] | Height [cm] | Angle [deg] | Remark |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.150 | H | 41.1 | 39.8 | 19.9 | 61.0 | 59.7 | 73.1 | 73.1 | 12.1 | 13.4 | 200.0 | 249.5 | |
| 2 | 0.150 | V | 37.5 | 35.7 | 19.9 | 57.4 | 55.6 | 73.1 | 73.1 | 15.7 | 17.5 | 200.0 | 269.1 | |

# End.