# TEST REPORT

| Eurofins KCTL Co.,Ltd.<br>65, Sinwon-ro, Yeongtong-gu,<br>Suwon-si, Gyeonggi-do, 16677, Korea<br>TEL: 82-70-4904-0113 FAX: 82-505-299-8311<br>www.kctl.co.kr | Report No.:<br>KR25-SRF0147-A<br>Page (1) of (20) | eurofins \| KCTL |
|---|---|---|

**1. Client**

- Name : WINNERCOM CO., LTD
- Address : 158-7, Golden root-ro, Juchon-myeon, Gimhae-si, Gyeongsangnam-do, KOREA
- Date of Receipt : 2025-07-14

**2. Use of Report** : Class II Permissive Change

**3. Name of Product / Model** : Touch door / SX2

**4. Manufacturer / Country of Origin** : WINNERCOM CO., LTD / Korea

**5. FCC ID** : 2AU37SX2

**6. Date of Test** : 2025-07-30 to 2025-07-31, 2025-08-20

**7. Location of Test** : ■ Permanent Testing Lab ☐ On Site Testing
(Address:65, Sinwon-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Korea)
(Address:42, Sinwon-ro 283beon-gil, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16676, Korea)

**8. Test method used** : FCC Part 15 Subpart C, 15.225

**9. Test Result** : Refer to the test result in the test report

| | Tested by | Technical Manager |
|---|---|---|
| Affirmation | Name : Seung Kim (Signature) | Name : Harim Lee (Signature) |

2025-08-21

**Eurofins KCTL Co.,Ltd.**

## REPORT REVISION HISTORY

| Date | Revision | Page No |
|---|---|---|
| 2025-08-11 | Originally issued | - |
| 2025-08-21 | Updated | 6~13, 20 |
| | | |
| | | |
| | | |



Note. The report No. KR25-SRF0147 is superseded by the report No. KR25-SRF0147-A.

## General remarks for test reports

**Statement concerning the uncertainty of the measurement systems used for the tests**

(may be required by the product standard or client)

☐ **Internal procedure used for type testing through which traceability of the measuring uncertainty has been established:**

**Procedure number, issue date and title:**

Calculations leading to the reported values are on file with the testing laboratory that conducted the testing.

☒ **Statement not required by the standard or client used for type testing**

# CONTENTS

## 1. General information

| | | |
|---|---|---|
| Client | : | WINNERCOM CO., LTD |
| Address | : | 158-7, Golden root-ro, Juchon-myeon, Gimhae-si, Gyeongsangnam-do, KOREA |
| Manufacturer | : | WINNERCOM CO., LTD |
| Address | : | 158-7, Golden root-ro, Juchon-myeon, Gimhae-si, Gyeongsangnam-do, KOREA |
| Laboratory | : | Eurofins KCTL Co.,Ltd. |
| Address 1 | : | 65, Sinwon-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Korea |
| Address 2 | : | 42, Sinwon-ro 283beon-gil, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16676, Korea |
| Accreditations | : | FCC Site Designation No: KR0040, FCC Site Registration No: 687132<br>VCCI Registration No. : R-20080, G-20078, C-20059, T-20056<br>CAB Identifier: KR0040, ISED Number: 8035A<br>KOLAS No.: KT231 |

## 2. Device information

| | | |
|---|---|---|
| Equipment under test | : | Touch door |
| Model | : | SX2 |
| Frequency range | : | 13.56 ㎒ (NFC) |
| Modulation technique | : | ASK |
| Number of channels | : | 1ch |
| Power source | : | DC 12 V |
| Antenna specification | : | PCB Loop antenna |
| Antenna gain | : | N/A |
| Software version | : | Ver 1.1 |
| Hardware version | : | Ver 1.1 |
| Test device serial No. | : | 2506056200A0152 |
| Operation temperature | : | -30 ℃ ~ 75 ℃ |

## 2.1. Frequency/channel operations

This device contains the following capabilities: NFC

| Frequency (㎒) |
|---|
| 13.56 |

Table 2.1.1. NFC mode

# 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 PCB Loop antenna (internal antenna) on board.

## 4. Summary of tests

| FCC Part section(s) | Parameter | Test Condition | Test results |
|---|---|---|---|
| 15.225(a) | In-band Fundamental Emission | Radiated | Pass |
| 15.225(b), (c) | In-band Spurious Emission | | Pass |
| 15.225(d)<br>15.209 | Out-of–band Spurious Emission | | Pass |
| 15.225(e) | Frequency Stability Tolerance | Conducted | Pass |
| 15.215(c) | 20 dB Bandwidth | | Pass |
| 15.207(a) | AC Conducted emissions | | N/A(note7) |

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

1. These test items were performed. Please refer to original report.
   - FCC ID: 2AU37SX2
   - Report No. KR22-SRF0145 issued on Oct. 7, 2022 by Eurofins KCTL Co.,Ltd.

   (Refer to the document '(STC)Internal photos_SX2' for reasons for changes between the original devices.)
2. All modes of operation and data rates were investigated. The test results shown in the following sections represent the worst case emissions.
3. These tests were performed other than open field site, adequate comparison measurements were confirmed against 30 m open field site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 414788.
4. The fundamental of the EUT was investigated in three orthogonal orientations X, Y, Z It was determined that **X** orientation was worst-case orientation. Therefore, all final radiated testing was performed with the EUT in **X** orientation
5. The test procedure(s) in this report were performed in accordance as following.
   - ANSI C63.10-2013
6. The radiated test was performed with and without passive tag. The test results shown in the following sections represent the worst case emissions.
   - Worst Case : Without passive tag
7. This test is not applicable because the EUT falls into the automotive device and it's not to be connected to the public utility (AC) power line

## 5. Measurement uncertainty

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

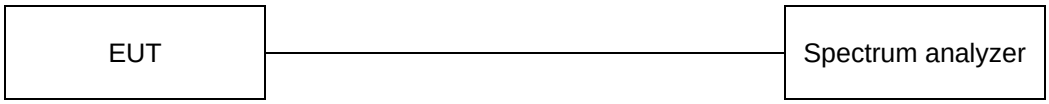
All measurement uncertainty values are shown with a coverage factor of $k$=2 to indicated a 95 % level of confidence. The measurement data shown herein meets of exceeds the $U_{CISPR}$ measurement uncertainty values specified in CISPR 16-4-2 and thus, can be compared directly to specified limits to determine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

| Parameter | Expanded uncertainty (±) | |
|---|---|---|
| Channel Bandwidth | 0.1 % | |
| Occupied Bandwidth | 0.1 % | |
| Radiated Emissions | Below 30 ㎒ | 2.3 ㏈ |
| | 30 ㎒ ~ 1 000 ㎒ | 2.6 ㏈ |
| | 1 000 ㎒ ~ 18 000 ㎒ | 4.8 ㏈ |
| | Above 18 000 ㎒ | 4.8 ㏈ |

# 6. Test results

## 6.1. 20 dB Bandwidth

**Test setup**




**Limit**

According to §15.215(c), Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§15.217 through 15.257 and in subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

**Test procedure**

ANSI C63.10 - Section 6.9.2

**Test settings**

The occupied bandwidth is measured as the width of the spectral envelope of the modulated signal, at an amplitude level reduced from a reference value by a specified ratio (or in decibels, a specified number of dB down from the reference value). Typical ratios, expressed in dB, are −6 dB, −20 dB, and −26 dB, corresponding to 6 dB BW, 20 dB BW, and 26 dB BW, respectively. In this subclause, the ratio is designated by "−xx dB." The reference value is either the level of the unmodulated carrier or the highest level of the spectral envelope of the modulated signal, as stated by the applicable requirement. Some requirements might specify a specific maximum or minimum value for the "−xx dB" bandwidth; other requirements might specify that the "−xx dB" bandwidth be entirely contained within the authorized or designated frequency band.

a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency.
b) Span: Two times and five times the OBW.
c) RBW = 1 % to 5 % of the OBW and VBW ≥ 3 x RBW
d) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation.
e) The dynamic range of the instrument at the selected RBW shall be more than 10 dB below the target "−xx dB down" requirement; that is, if the requirement calls for measuring the −20 dB OBW, the instrument noise floor at the selected RBW shall be at least 30 dB below the reference value.
f) Detector: peak
g) Trace mode: max hold.
h) Allow the trace to stabilize.
i) Determine the "−xx dB down amplitude" using ((reference value) − xx). Alternatively, this calculation may be made by using the marker-delta function of the instrument.
j) If the reference value is determined by an unmodulated carrier, then turn the EUT modulation ON, and either clear the existing trace or start a new trace on the spectrum analyzer and allow the new trace to stabilize. Otherwise, the trace from step g) shall be used for step j).
k) Place two markers, one at the lowest frequency and the other at the highest frequency of the envelope of the spectral display, such that each marker is at or slightly below the "−xx dB down amplitude" determined in step h). If a marker is below this "−xx dB down amplitude" value, then it shall be as close as possible to this value. The occupied bandwidth is the frequency difference between the two markers. Alternatively, set a marker at the lowest frequency of the envelope of the spectral display, such that the marker is at or slightly below the "−xx dB down amplitude" determined in step h). Reset the marker-delta function and move the marker to the other side of the emission until the delta marker amplitude is at the same level as the reference marker amplitude. The marker-delta frequency reading at this point is the specified emission bandwidth.

## Test results

| Frequency [㎒] | 20 ㏈ Bandwidth [㎒] | | Limit [㎒] | 20 ㏈ Bandwidth [㎑] |
|---|---|---|---|---|
| 13.56 | Lowest Frequency | 13.560 0 | 13.110 0 | 0.33 |
| | Highest Frequency | 13.560 3 | 14.010 0 | |

**20㏈ Bandwidth**


**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

## 6.2. Frequency tolerance

**Test setup**


**Limit**

According to 15.225 (e), The frequency tolerance of the carrier signal shall be maintained within ±0.01 % of the operating frequency over a temperature variation of −20 degrees to +50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85 % to 115 % of the rated supply voltage at a temperature of 20 degrees C. For battery operated equipment, the equipment tests shall be performed using a new battery.

**Test procedure**

ANSI C63.10-2013 - Section 6.8.1

## Test results

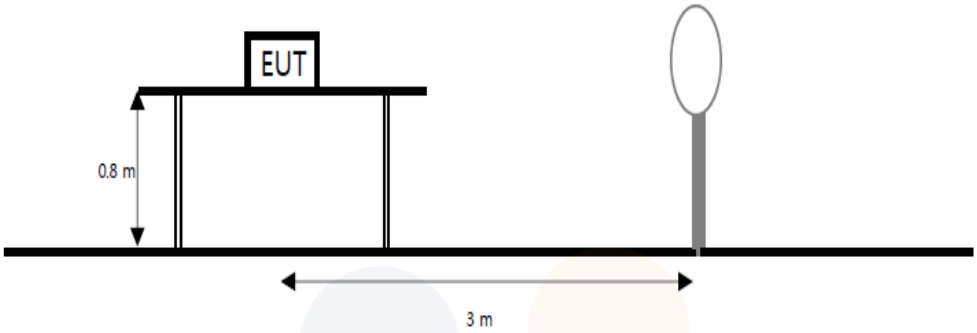
| Voltage | Voltage | TEMP | Maintaining time | Measure frequency | Frequency deviation | Deviation |
|---|---|---|---|---|---|---|
| [%] | [V] | [℃] | | [㎐] | [㎐] | [%] |
| 100 | 12.00 | -30 | Startup | 13 560 130 | -130.0 | 0.000 96 |
| | | | 2 minutes | 13 560 143 | -143.0 | 0.001 06 |
| | | | 5 minutes | 13 560 145 | -145.0 | 0.001 07 |
| | | | 10 minutes | 13 560 131 | -131.0 | 0.000 97 |
| | | -20 | Startup | 13 560 143 | -143.0 | 0.001 06 |
| | | | 2 minutes | 13 560 133 | -133.0 | 0.000 98 |
| | | | 5 minutes | 13 560 147 | -147.0 | 0.001 08 |
| | | | 10 minutes | 13 560 130 | -130.0 | 0.000 96 |
| | | -10 | Startup | 13 560 139 | -139.0 | 0.001 03 |
| | | | 2 minutes | 13 560 130 | -130.0 | 0.000 96 |
| | | | 5 minutes | 13 560 145 | -145.0 | 0.001 07 |
| | | | 10 minutes | 13 560 150 | -150.0 | 0.001 11 |
| | | 0 | Startup | 13 560 148 | -148.0 | 0.001 09 |
| | | | 2 minutes | 13 560 152 | -152.0 | 0.001 12 |
| | | | 5 minutes | 13 560 132 | -132.0 | 0.000 97 |
| | | | 10 minutes | 13 560 137 | -137.0 | 0.001 01 |
| | | 10 | Startup | 13 560 132 | -132.0 | 0.000 97 |
| | | | 2 minutes | 13 560 150 | -150.0 | 0.001 11 |
| | | | 5 minutes | 13 560 140 | -140.0 | 0.001 03 |
| | | | 10 minutes | 13 560 146 | -146.0 | 0.001 08 |
| | | 20(Ref.) | Startup | 13 560 148 | -148.0 | 0.001 09 |
| | | | 2 minutes | 13 560 139 | -139.0 | 0.001 03 |
| | | | 5 minutes | 13 560 150 | -150.0 | 0.001 11 |
| | | | 10 minutes | 13 560 148 | -148.0 | 0.001 09 |
| | | 30 | Startup | 13 560 148 | -148.0 | 0.001 09 |
| | | | 2 minutes | 13 560 148 | -148.0 | 0.001 09 |
| | | | 5 minutes | 13 560 141 | -141.0 | 0.001 04 |
| | | | 10 minutes | 13 560 145 | -145.0 | 0.001 07 |
| | | 40 | Startup | 13 560 154 | -154.0 | 0.001 14 |
| | | | 2 minutes | 13 560 152 | -152.0 | 0.001 12 |
| | | | 5 minutes | 13 560 146 | -146.0 | 0.001 08 |
| | | | 10 minutes | 13 560 137 | -137.0 | 0.001 01 |
| | | 50 | Startup | 13 560 130 | -130.0 | 0.000 96 |
| | | | 2 minutes | 13 560 143 | -143.0 | 0.001 06 |
| | | | 5 minutes | 13 560 140 | -140.0 | 0.001 03 |
| | | | 10 minutes | 13 560 152 | -152.0 | 0.001 12 |
| | | 60 | Startup | 13 560 147 | -147.0 | 0.001 08 |
| | | | 2 minutes | 13 560 130 | -130.0 | 0.000 96 |
| | | | 5 minutes | 13 560 129 | -129.0 | 0.000 95 |
| | | | 10 minutes | 13 560 148 | -148.0 | 0.001 09 |
| | | 70 | Startup | 13 560 144 | -144.0 | 0.001 06 |
| | | | 2 minutes | 13 560 154 | -154.0 | 0.001 14 |
| | | | 5 minutes | 13 560 134 | -134.0 | 0.000 99 |
| | | | 10 minutes | 13 560 131 | -131.0 | 0.000 97 |
| | | 75 | Startup | 13 560 150 | -150.0 | 0.001 11 |
| | | | 2 minutes | 13 560 142 | -142.0 | 0.001 05 |
| | | | 5 minutes | 13 560 150 | -150.0 | 0.001 11 |
| | | | 10 minutes | 13 560 144 | -144.0 | 0.001 06 |

| Voltage | Voltage | TEMP | Maintaining time | Measure frequency | Frequency deviation | Deviation |
|---|---|---|---|---|---|---|
| [%] | [V] | [℃] | | [㎐] | [㎐] | [%] |
| 85 | 10.20 | 20 | Startup | 13 560 136 | -136.0 | 0.001 00 |
| | | | 2 minutes | 13 560 135 | -135.0 | 0.001 00 |
| | | | 5 minutes | 13 560 130 | -130.0 | 0.000 96 |
| | | | 10 minutes | 13 560 143 | -143.0 | 0.001 06 |
| 115 | 13.80 | 20 | Startup | 13 560 137 | -137.0 | 0.001 01 |
| | | | 2 minutes | 13 560 154 | -154.0 | 0.001 14 |
| | | | 5 minutes | 13 560 135 | -135.0 | 0.001 00 |
| | | | 10 minutes | 13 560 149 | -149.0 | 0.001 10 |

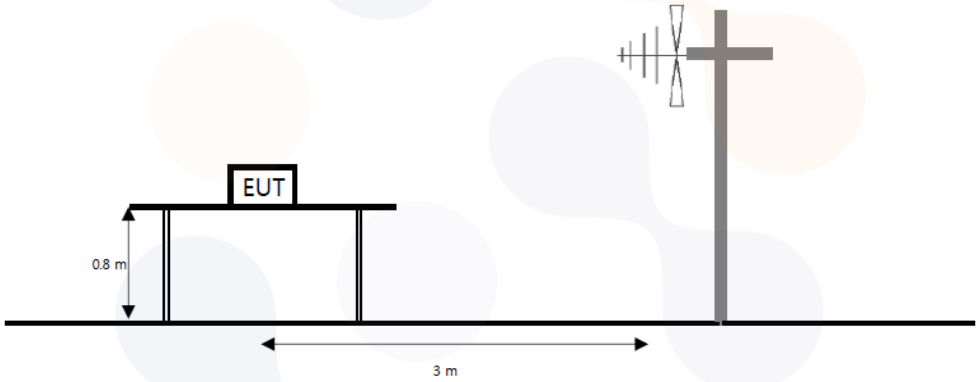
## 6.3. Radiated spurious emissions

**Test setup**

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




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




**Limit**

15.225 (a), The field strength of any emission within the band 13.553-13.567 ㎒ shall not exceed 15, 848 microvolts/meter at 30 meters.

15.225 (b), With in the bands 13.410-13.553 ㎒ and 13.567-13.710 ㎒, the field strength of any emissions shall not exceed 334 microvolts/meter at 30 meters.

15.225 (c), With in the bands 13.110-13.410 ㎒ and 13.710-14.010 ㎒, the field strength of any emissions shall not exceed 106 microvolts/meter at 30 meters.

15.225 (d), The Field Strength of any emissions appearing outside of the 13.110-14.010 ㎒ band shall not exceed the general radiated emission limits in 15.209.

| Frequency (㎒) | Field Strength (㎶/m) | Measurement distance (meters) |
|---|---|---|
| 0.009-0.490 | 2400/F(㎑) | 300 |
| 0.490-1.705 | 24000/F(㎑) | 30 |
| 1.705-30.0 | 30(29.54 ㏈㎶/m) | 30 |
| 30.0-88.0 | 100(40 ㏈㎶/m) | 3 |
| 88-216 | 150(43.5 ㏈㎶/m) | 3 |
| 216-960 | 200 (46 ㏈㎶/m) | 3 |
| Above 960 | 500 (53.98 ㏈㎶/m) | 3 |

**Test procedure**

ANSI C63.10-2013 - Section 6.4, 6.5

**Test settings**

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = as specified in table
3. VBW ≥ 3 x RBW
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

**Table. RBW as a function of frequency**

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

**Notes:**

1. *f* <30 ㎒, extrapolation factor of 40 ㏈/decade of distance. $F_d = 40\log(D_m/D_s)$
   *f* ≥30 ㎒, extrapolation factor of 20 ㏈/decade of distance. $F_d = 20\log(D_m/D_s)$
   Where:
   $F_d$= Distance factor in ㏈
   $D_m$= Measurement distance in meters
   $D_s$= Specification distance in meters
2. Measurements were performed at 3m and the data was extrapolated to the specified measurement distance of 30m using the square of an inverse linear distance extrapolation factor (40 ㏈/decade) as specified in § 15.31(f)(2). Extrapolation Factor = 40 log10(30/3) = 40 ㏈.
3. (㏈) = Antenna factor(㏈/m) + Cable loss(㏈) + or Amp. gain(㏈) - or $F_d$(㏈)
4. Result = Reading + Cable loss + Amp gain + Ant. factor - Distance factor
5. The worst-case emissions are reported however emissions whose levels were not within 20 ㏈ of respective limits were not reported.
6. All measurements were recorded using a spectrum analyzer employing a quasi-peak detector.
7. 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.
8. Face-on = Parallel, Face-off = Perpendicular
9. [1)] Means restricted band.

## Test results for fundamental

### 15.225 (a) 13.553-13.567 ㎒

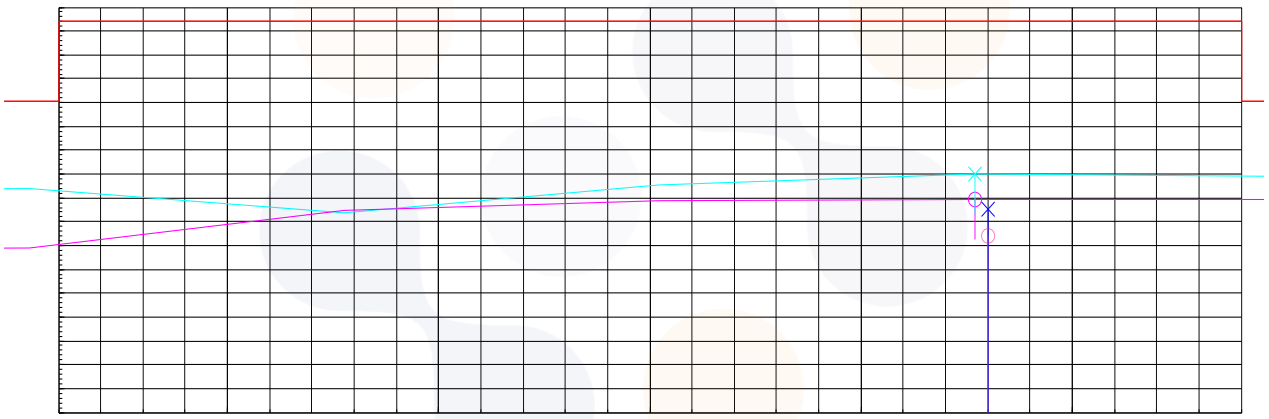
[Face-on]

| Frequency | Reading | Antenna Factor | Amp. + Cable | Distance Factor | Result | Limit | Margin |
|---|---|---|---|---|---|---|---|
| (㎒) | (dB(㎶)) | (dB) | (dB) | (dB) | (dB(㎶/m)) | (dB(㎶/m)) | (dB) |
| Quasi peak data | | | | | | | |
| 13.56 | 46.30 | 20.31 | -32.54 | 40.00 | -5.93 | 84.00 | 89.93 |

[Face-off]

| Frequency | Reading | Antenna Factor | Amp. + Cable | Distance Factor | Result | Limit | Margin |
|---|---|---|---|---|---|---|---|
| (㎒) | (dB(㎶)) | (dB) | (dB) | (dB) | (dB(㎶/m)) | (dB(㎶/m)) | (dB) |
| Quasi peak data | | | | | | | |
| 13.56 | 57.10 | 20.31 | -32.54 | 40.00 | 4.87 | 84.00 | 79.13 |

**Face-on/Face-off**



## Test results for in-band & out-band (9 ㎑ to 30 ㎒)

### 15.225 (b,c) 13.110-14.010 ㎒

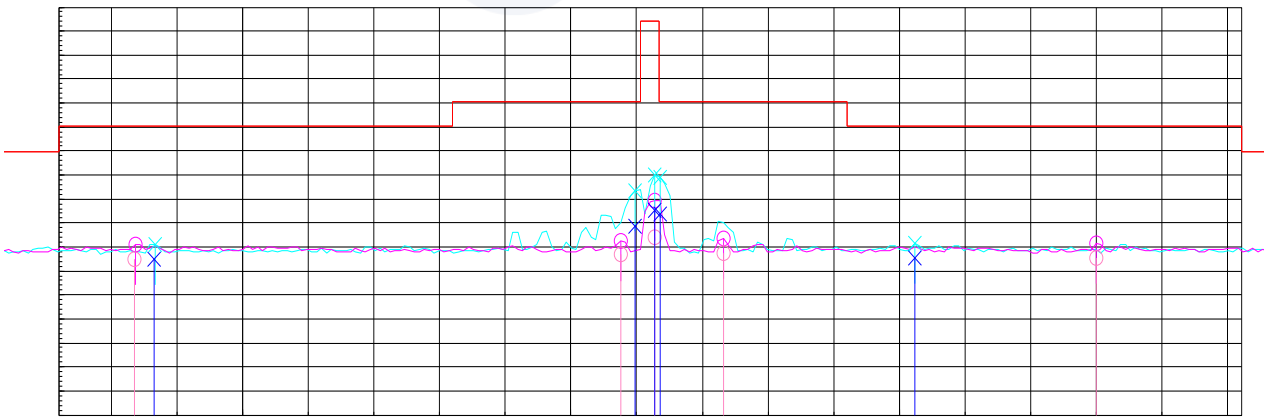
[Face-on]

| Frequency | Reading | Antenna Factor | Amp. + Cable | Distance Factor | Result | Limit | Margin |
|---|---|---|---|---|---|---|---|
| (㎒) | (dB(㎶)) | (dB) | (dB) | (dB) | (dB(㎶/m)) | (dB(㎶/m)) | (dB) |
| **Quasi peak data** | | | | | | | |
| 5.05 | 37.90 | 20.20 | -32.56 | 40.00 | -14.46 | 29.54 | 44.00 |
| 13.17 | 37.10 | 20.29 | -32.54 | 40.00 | -15.15 | 40.50 | 55.65 |
| 13.54 | 38.70 | 20.31 | -32.54 | 40.00 | -13.53 | 50.50 | 64.03 |
| 13.62 | 39.40 | 20.32 | -32.55 | 40.00 | -12.83 | 50.50 | 63.33 |
| 13.90 | 37.30 | 20.33 | -32.55 | 40.00 | -14.92 | 40.50 | 55.42 |
| 17.02 | 38.20 | 20.52 | -32.55 | 40.00 | -13.83 | 29.54 | 43.37 |

[Face-off]

| Frequency | Reading | Antenna Factor | Amp. + Cable | Distance Factor | Result | Limit | Margin |
|---|---|---|---|---|---|---|---|
| (㎒) | (dB(㎶)) | (dB) | (dB) | (dB) | (dB(㎶/m)) | (dB(㎶/m)) | (dB) |
| **Quasi peak data** | | | | | | | |
| 7.20 | 37.50 | 20.16 | -32.52 | 40.00 | -14.86 | 29.54 | 44.40 |
| 13.18 | 37.10 | 20.29 | -32.54 | 40.00 | -15.15 | 40.50 | 55.65 |
| 13.55 | 50.60 | 20.31 | -32.54 | 40.00 | -1.63 | 50.50 | 52.13 |
| 13.57 | 55.90 | 20.31 | -32.54 | 40.00 | 3.67 | 50.50 | 46.83 |
| 13.76 | 37.30 | 20.33 | -32.55 | 40.00 | -14.92 | 40.50 | 55.42 |
| 16.11 | 37.70 | 20.47 | -32.56 | 40.00 | -14.39 | 29.54 | 43.93 |

**Face-on/Face-off**



## Test results (9 ㎑ to 30 ㎒)

### 15.225 (d) 0.009-30 ㎒

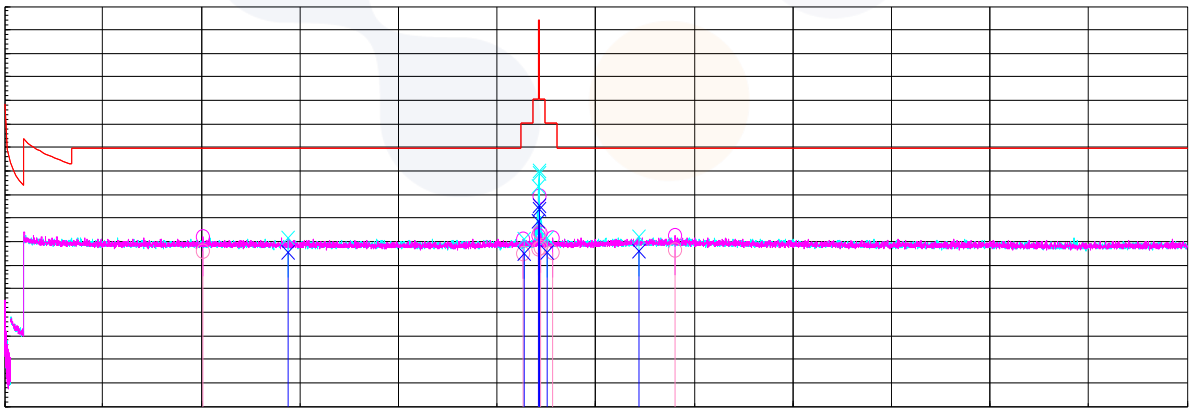
[Face-on]

| Frequency | Reading | Antenna Factor | Amp. + Cable | Distance Factor | Result | Limit | Margin |
|---|---|---|---|---|---|---|---|
| (㎒) | (dB(㎶)) | (dB) | (dB) | (dB) | (dB(㎶/m)) | (dB(㎶/m)) | (dB) |
| **Quasi peak data** | | | | | | | |
| 13.17 | 37.10 | 20.29 | -32.54 | 40.00 | -15.15 | 40.50 | 55.65 |
| 13.54 | 38.70 | 20.31 | -32.54 | 40.00 | -13.53 | 50.50 | 64.03 |
| 13.62 | 39.40 | 20.32 | -32.55 | 40.00 | -12.83 | 50.50 | 63.33 |
| 13.90 | 37.30 | 20.33 | -32.55 | 40.00 | -14.92 | 40.50 | 55.42 |

[Face-off]

| Frequency | Reading | Antenna Factor | Amp. + Cable | Distance Factor | Result | Limit | Margin |
|---|---|---|---|---|---|---|---|
| (㎒) | (dB(㎶)) | (dB) | (dB) | (dB) | (dB(㎶/m)) | (dB(㎶/m)) | (dB) |
| **Quasi peak data** | | | | | | | |
| 13.18 | 37.10 | 20.29 | -32.54 | 40.00 | -15.15 | 40.50 | 55.65 |
| 13.55 | 50.60 | 20.31 | -32.54 | 40.00 | -1.63 | 50.50 | 52.13 |
| 13.57 | 55.90 | 20.31 | -32.54 | 40.00 | 3.67 | 50.50 | 46.83 |
| 13.76 | 37.30 | 20.33 | -32.55 | 40.00 | -14.92 | 40.50 | 55.42 |

**Face-on/Face-off**

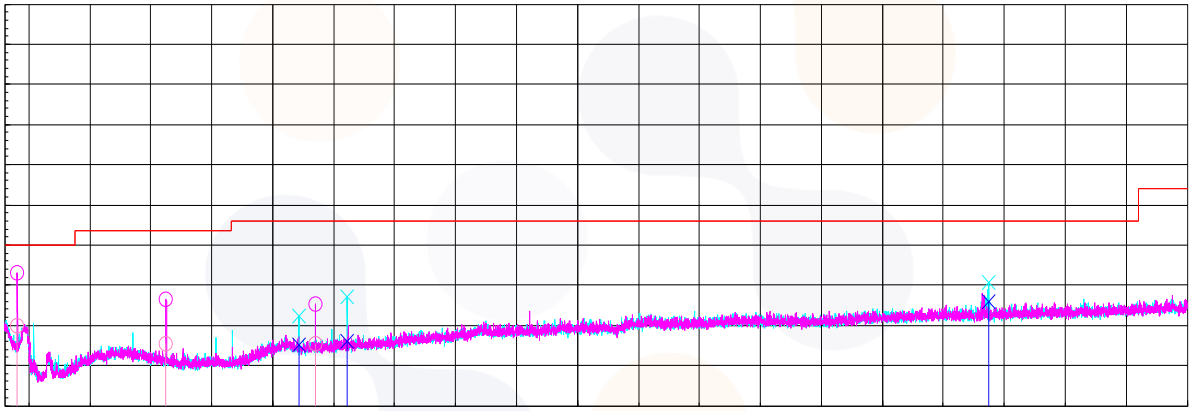


## Test results (Below 1 000 ㎒)

### 15.225 (d) 30-1 000 ㎒

| Frequency | Pol. | Reading | Antenna Factor | Amp. + Cable | Distance Factor | Result | Limit | Margin |
|---|---|---|---|---|---|---|---|---|
| (㎒) | (V/H) | (dB(㎶)) | (dB) | (dB) | (dB) | (dB(㎶/m)) | (dB(㎶/m)) | (dB) |
| **Quasi peak data** | | | | | | | | |
| 40.67 | H | 32.90 | 19.03 | -31.96 | - | 19.97 | 40.00 | 20.03 |
| 162.65[1)] | H | 31.00 | 15.84 | -31.46 | - | 15.38 | 43.50 | 28.12 |
| 271.17[1)] | V | 27.50 | 18.70 | -31.21 | - | 14.99 | 46.00 | 31.01 |
| 284.87[1)] | H | 27.70 | 18.80 | -31.15 | - | 15.35 | 46.00 | 30.65 |
| 311.30 | V | 27.90 | 19.37 | -31.16 | - | 16.11 | 46.00 | 29.89 |
| 837.40 | V | 29.70 | 25.90 | -29.83 | - | 25.77 | 46.00 | 20.23 |

**Horizontal/Vertical**



## 7. Measurement equipment

| Equipment Name | Manufacturer | Model No. | Serial No. | Next Cal. Date |
|---|---|---|---|---|
| Spectrum Analyzer | R&S | FSV40 | 100988 | 26.04.24 |
| Amplifier | SONOMA INSTRUMENT | 310N | 421910 | 25.10.11 |
| Bilog Antenna | Teseq GmbH | CBL 6112D | 61521 | 26.12.11 |
| Loop Antenna | R&S | HFH2-Z2 | 100355 | 26.06.25 |
| DC Power Supply | POWERCOM | DCP-50100A | 20220610-01 | 26.01.16 |
| Vector Signal Generator | R&S | SMBV100A | 257566 | 26.07.01 |
| Spectrum Analyzer | R&S | FSV40 | 100989 | 25.10.10 |
| Temp & Humid Chamber | Myeongseong R&P | CTHC-50P-DT | 20150824-3 | 26.01.16 |
| DC Power Supply | AGILENT | E3632A | MY40018781 | 26.04.23 |
| Signal Generator | R&S | SMB100A | 176206 | 26.01.17 |

**End of test report**