

**FCC- TEST REPORT**

Report Number : **709502115361-00** Date of Issue: January 07, 2021

Model : CM-40

Product Type : Tubular motor

Applicant : Coulisse B.V.

Address : Vonderweg 48, 7468 DC Enter, THE NETHERLANDS

Production Facility : Ningbo Dooya Mechanical & Electronic Technology Co., Ltd.

Address : No.168 Shengguang Road, Luotuo, Zhenhai 315202 Ningbo, Zhejiang  
province, People's Republic of China

Test Result : **n Positive** **o Negative**

Total pages including  
Appendices : 20

*TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch is a subcontractor to TÜV SÜD Product Service GmbH according to the principles outlined in ISO 17025.*

*TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch reports apply only to the specific samples tested under stated test conditions. Construction of the actual test samples has been documented. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. The manufacturer/importer is responsible to the Competent Authorities in Europe for any modifications made to the production units which result in non-compliance to the relevant regulations. TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch shall have no liability for any deductions, inferences or generalizations drawn by the client or others from TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch issued reports.*

*This report is the confidential property of the client. As a mutual protection to our clients, the public and ourselves, extracts from the test report shall not be reproduced except in full without our written approval.*



**1 Table of Contents**

1 Table of Contents .....2

2 Details about the Test Laboratory.....3

3 Description of the Equipment Under Test.....4

4 Summary of Test Standards .....5

5 Summary of Test Results .....6

6 General Remarks .....7

7 Systems test configuration .....8

8 Test Setups .....9

9 Test Methodology.....10

9.1 Conducted Emission.....10

9.2 Radiated Emission.....13

9.3 Bandwidth Measurement .....17

9.4 Deactivation Time.....18

10 Test Equipment List.....19

11 System Measurement Uncertainty.....20

## 2 Details about the Test Laboratory

### Details about the Test Laboratory

#### Test Site 1

Company name: TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch  
No.16 Lane, 1951 Du Hui Road,  
Shanghai 201108,  
P.R. China

Test Firm FCC Registration  
Number: 820234

Telephone: +86 21 6141 0123  
Fax: +86 21 6140 8600

### 3 Description of the Equipment Under Test

#### Description of the Equipment Under Test

|                            |                                                                                                                                                                                              |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product:                   | Tubular motor                                                                                                                                                                                |
| Model no.:                 | CM-40                                                                                                                                                                                        |
| FCC ID:                    | ZY4CM40B                                                                                                                                                                                     |
| IC:                        | N/A                                                                                                                                                                                          |
| Rating:                    | 12VDC                                                                                                                                                                                        |
| RF Transmission Frequency: | 433.92MHz<br>2402~2480 MHz(BLE 5.0)                                                                                                                                                          |
| Modulation:                | For 433.92MHz: FSK<br>For 2.4GHz BLE: GFSK                                                                                                                                                   |
| Antenna Type:              | For 433.92MHz: line Antenna<br>For 2.4GHz BLE: line Antenna                                                                                                                                  |
| Antenna Gain:              | For 433.92MHz: -7.16dBi<br>For 2.4GHz BLE: 0dBi                                                                                                                                              |
| Description of the EUT:    | The Equipment Under Test (EUT) is a Tubular motor which transmitted at 433.92MHz and support 2.4GHz BLE5.0 (support 1Mbps data rate). we tested it and listed the worst data in this report. |
| Test sample no.:           | SHA-612194-1                                                                                                                                                                                 |

## 4 Summary of Test Standards

| Test Standards             |                                                                        |
|----------------------------|------------------------------------------------------------------------|
| FCC Part 15 Subpart C:2020 | PART 15 - RADIO FREQUENCY DEVICES<br>Subpart C - Intentional Radiators |

All the test methods were according to ANSI C63.10-2013.

## 5 Summary of Test Results

| Technical Requirements                |                                   |       |                |             |
|---------------------------------------|-----------------------------------|-------|----------------|-------------|
| FCC Part 15 Subpart C                 |                                   |       |                |             |
| Test Condition                        |                                   | Pages | Test Site      | Test Result |
| §15.207                               | Conducted emission AC power port  | 10-12 | Shielding room | Pass        |
| §15.205, §15.209, 15.35 (c)§15.231(b) | Radiated Emission, 9kHz to 4.5GHz | 13-16 | 3m chamber     | Pass        |
| §15.231(c)                            | Bandwidth Measurement             | 17    | Shielding room | Pass        |
| §15.231(a)(1)                         | Deactivation Time                 | 18    | Shielding room | Pass        |
| §15.203                               | Antenna requirement               | --    | See Note 1     | Pass        |

Note 1: The EUT uses a line antenna which gain is -7.16dBi for 433.92MHz and a line Antenna which gain is 0dBi for BLE. In accordance to §15.203, It is considered sufficiently to comply with the provisions of this section.

## 6 General Remarks

### Remarks

This submittal(s) (test report) is intended for FCC ID: ZY4CM40B complies with Section 15.207, 15.205, 15.209, 15.231 of the FCC Part 15, Subpart C Rules.

This report is only for the 433.92MHz test report, for the 2.4GHz BLE test report please refer to 709502115324-00.

### SUMMARY:

All tests according to the regulations cited on page 5 were

n - Performed

o - **Not** Performed

The Equipment Under Test

n - **Fulfills** the general approval requirements.

o - **Does not** fulfill the general approval requirements.

Sample Received Date: November 26, 2021

Testing Start Date: November 26, 2021

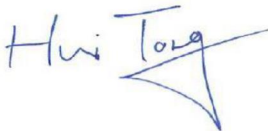
Testing End Date: December 22, 2021

TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch

Reviewed by:

Prepared by:

Tested by:



Hui TONG  
EMC Section Manager



Jiaxi XU  
EMC Project Engineer



Yiquan WANG  
EMC Test Engineer

## 7 Systems test configuration

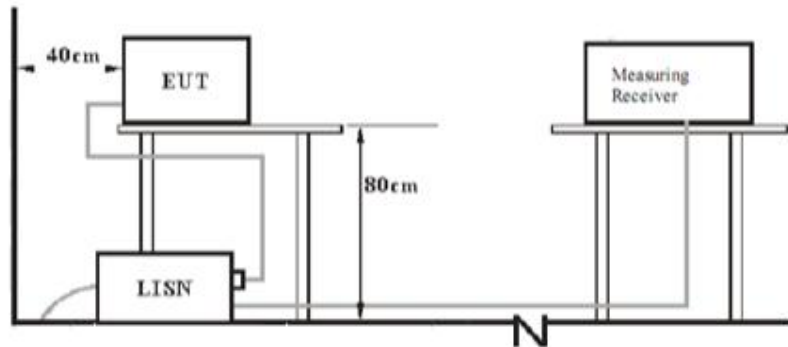
Auxiliary Equipment Used during Test:

| DESCRIPTION | MANUFACTURER | MODEL NO.(SHIELD) | S/N(LENGTH) |
|-------------|--------------|-------------------|-------------|
| Adapter     | I.T.E        | XSD-1201500NEUD   | --          |



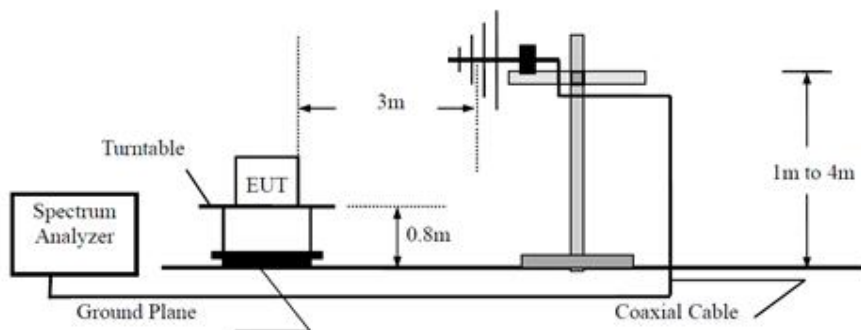
## 8 Test Setups

### 8.1 AC Power Line Conducted Emission test setups

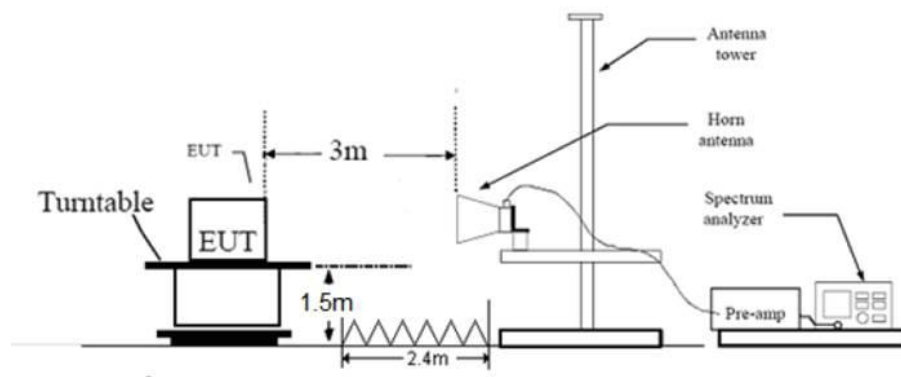


### 8.2 Radiated test setups

Below 1GHz



Above 1GHz



## 9 Test Methodology

### 9.1 Conducted Emission

#### Test Method

1. The EUT was placed on a table, which is 0.8m above ground plane
2. The power line of the EUT is connected to the AC mains through an Artificial Mains Network (A.M.N.).
3. Maximum procedure was performed to ensure EUT compliance
4. A EMI test receiver is used to test the emissions from both sides of AC line

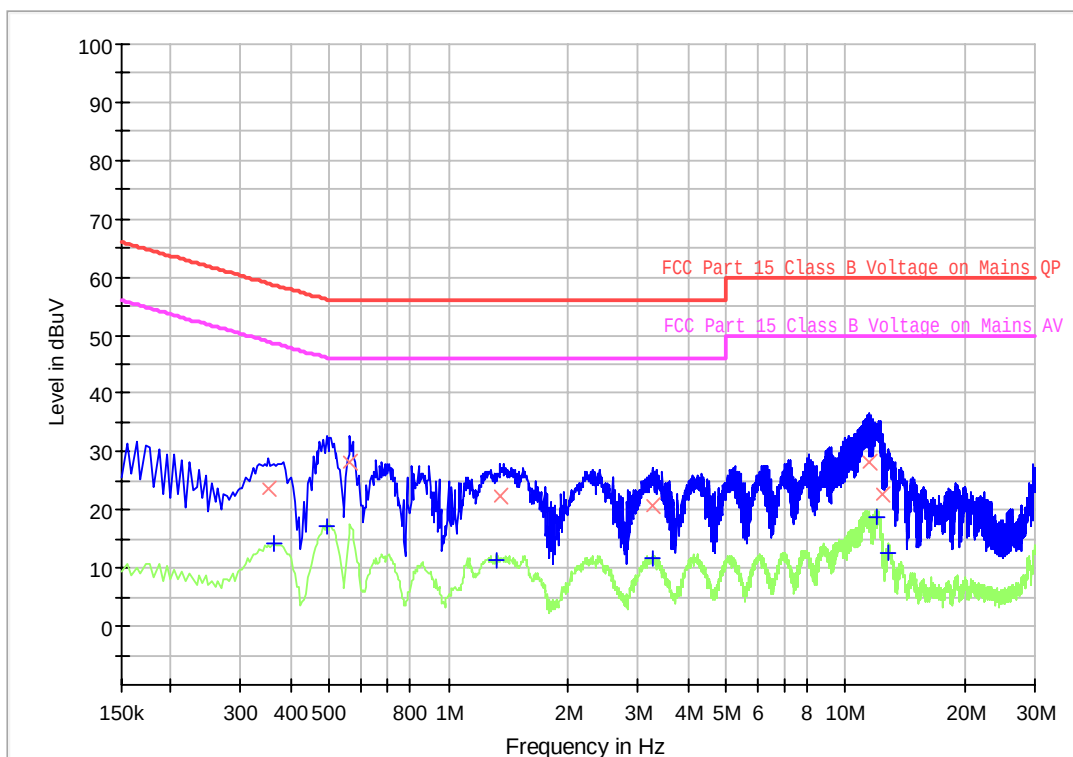
#### Limit

| Frequency<br>MHz | QP Limit<br>dB $\mu$ V | AV Limit<br>dB $\mu$ V |
|------------------|------------------------|------------------------|
| 0.150-0.500      | 66-56*                 | 56-46*                 |
| 0.500-5          | 56                     | 46                     |
| 5-30             | 60                     | 50                     |

Decreasing linearly with logarithm of the frequency

## Conducted Emission

Product Type : Tubular motor  
 M/N : CM-40  
 Operating Condition : Mode: Tx\_433.92MHz  
 Test Specification : L-line  
 Comment : AC 120V/60Hz



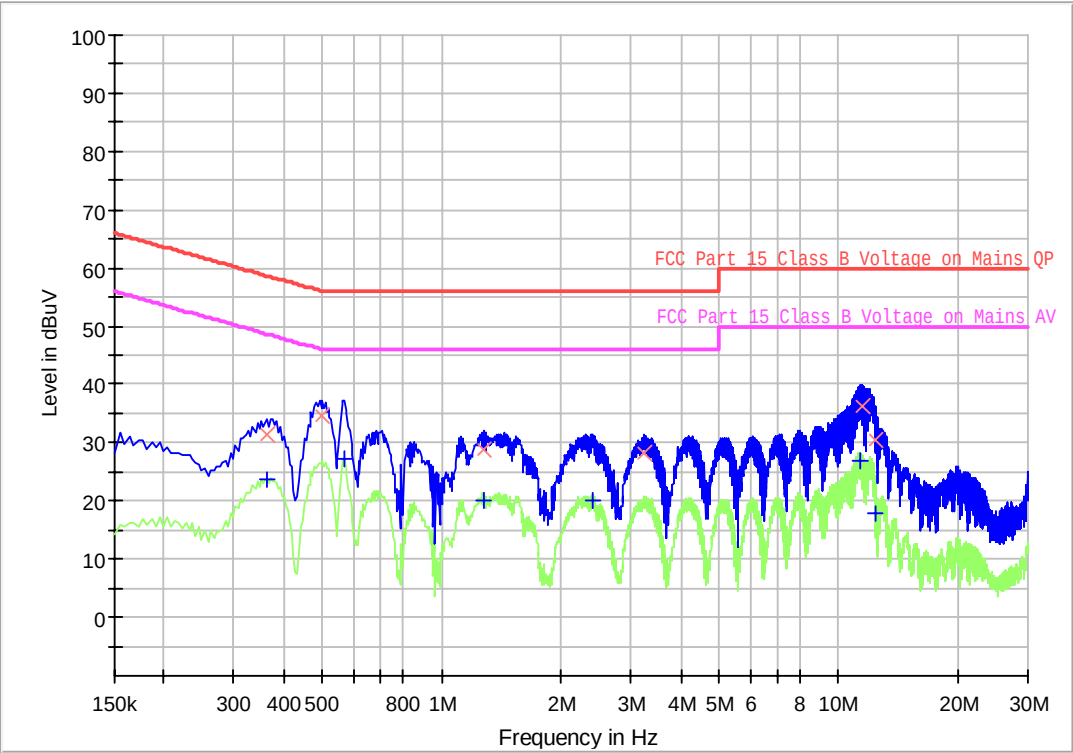
## Final Result

| Frequency (MHz) | QuasiPeak (dBuV) | CAverage (dBuV) | Limit (dBuV) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Line | Corr. (dB) |
|-----------------|------------------|-----------------|--------------|-------------|-----------------|-----------------|------|------------|
| 0.352500        | 23.67            | ---             | 58.90        | 35.23       | 1000.0          | 9.000           | L1   | 19.5       |
| 0.361500        | ---              | 14.16           | 48.69        | 34.53       | 1000.0          | 9.000           | L1   | 19.5       |
| 0.492000        | ---              | 17.14           | 46.13        | 28.99       | 1000.0          | 9.000           | L1   | 19.5       |
| 0.564000        | 28.16            | ---             | 56.00        | 27.84       | 1000.0          | 9.000           | L1   | 19.5       |
| 1.315500        | ---              | 11.21           | 46.00        | 34.79       | 1000.0          | 9.000           | L1   | 19.5       |
| 1.347000        | 22.20            | ---             | 56.00        | 33.80       | 1000.0          | 9.000           | L1   | 19.5       |
| 3.268500        | 20.72            | ---             | 56.00        | 35.28       | 1000.0          | 9.000           | L1   | 19.6       |
| 3.268500        | ---              | 11.55           | 46.00        | 34.45       | 1000.0          | 9.000           | L1   | 19.6       |
| 11.454000       | 28.02            | ---             | 60.00        | 31.98       | 1000.0          | 9.000           | L1   | 19.7       |
| 12.034500       | ---              | 18.88           | 50.00        | 31.12       | 1000.0          | 9.000           | L1   | 19.7       |
| 12.412500       | 22.83            | ---             | 60.00        | 37.17       | 1000.0          | 9.000           | L1   | 19.7       |
| 12.822000       | ---              | 12.67           | 50.00        | 37.33       | 1000.0          | 9.000           | L1   | 19.7       |

Note 1: Measure Level (dBuV/m)= Reading Level (dBuV) + Factor (dB)  
 Factor (dB) =Cable Loss (dB) + LISN Factor (dB) + 10dB Attenuator



Product Type : Tubular motor  
M/N : CM-40  
Operating Condition : Mode: Tx\_433.92MHz  
Test Specification : N-line  
Comment : AC 120V/60Hz



Final Result

| Frequency (MHz) | QuasiPeak (dBuV) | CAverage (dBuV) | Limit (dBuV) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Line | Corr. (dB) |
|-----------------|------------------|-----------------|--------------|-------------|-----------------|-----------------|------|------------|
| 0.361500        | ---              | 23.54           | 48.69        | 25.15       | 1000.0          | 9.000           | N    | 19.5       |
| 0.361500        | 31.41            | ---             | 58.69        | 27.28       | 1000.0          | 9.000           | N    | 19.5       |
| 0.501000        | 34.61            | ---             | 56.00        | 21.39       | 1000.0          | 9.000           | N    | 19.5       |
| 0.568500        | ---              | 27.17           | 46.00        | 18.83       | 1000.0          | 9.000           | N    | 19.5       |
| 1.275000        | 28.83            | ---             | 56.00        | 27.17       | 1000.0          | 9.000           | N    | 19.5       |
| 1.275000        | ---              | 20.24           | 46.00        | 25.76       | 1000.0          | 9.000           | N    | 19.5       |
| 2.413500        | ---              | 20.21           | 46.00        | 25.79       | 1000.0          | 9.000           | N    | 19.5       |
| 3.246000        | 28.02            | ---             | 56.00        | 27.98       | 1000.0          | 9.000           | N    | 19.5       |
| 11.355000       | ---              | 26.76           | 50.00        | 23.24       | 1000.0          | 9.000           | N    | 19.7       |
| 11.503500       | 36.24            | ---             | 60.00        | 23.76       | 1000.0          | 9.000           | N    | 19.7       |
| 12.408000       | 30.30            | ---             | 60.00        | 29.70       | 1000.0          | 9.000           | N    | 19.7       |
| 12.439500       | ---              | 17.85           | 50.00        | 32.15       | 1000.0          | 9.000           | N    | 19.7       |

Note 1: Measure Level (dBuV/m)= Reading Level (dBuV) + Factor (dB)  
Factor (dB) =Cable Loss (dB) + LISN Factor (dB) + 10dB Attenuator

## 9.2 Radiated Emission

### Test Method

1. The EUT was placed on a turn table which is 1.5m above ground plane for above 1GHz and 0.8m above ground for below 1GHz at 3 meters chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
2. Set to the maximum power setting and enable the EUT transmit continuously
3. The EUT was set 3 meters away from the interference – receiving antenna, which was mounted on the top of a variable – height antenna tower.
4. The height of antenna 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.
5. 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 rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
6. Use the following spectrum analyzer settings According to C63.10:
  - (1) Span shall wide enough to fully capture the emission being measured;
  - (2) Set RBW=100 kHz for  $f < 1$  GHz; VBW RBW; Sweep = auto; Detector function = peak; Trace = max hold;
  - (3) Set RBW = 1 MHz, VBW= 3MHz for  $f \geq 1$  GHz for peak measurement.
 For average measurement:  
 VBW = 10 Hz, when duty cycle is no less than 98 percent.  
 VBW  $\geq 1/T$ , when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.
7. Repeat above procedures until all frequencies measured were complete.

### Limit

According to §15.231 (b), the field strength of emissions from intentional radiators operated under this section shall not exceed the following:

| Fundamental frequency (MHz) | Field Strength of Fundamental (Microvolts /meter) | Field Strength of spurious emissions ((Microvolts /meter) |
|-----------------------------|---------------------------------------------------|-----------------------------------------------------------|
| 40.66-40.70                 | 2,250                                             | 225                                                       |
| 70-130                      | 1,250                                             | 125                                                       |
| 130-174                     | 1,250 to 3,750 *                                  | 125 to 375 *                                              |
| 174-260                     | 3,750                                             | 375                                                       |
| 260-470                     | 3,750 to 12, 500*                                 | 375 to 1,250*                                             |
| Above 470                   | 12,500                                            | 1,250                                                     |

**Limits for 15.209 Radiated emission limits; general requirements**

| Frequency (MHz) | Field strength (microvolts/meter) | Measurement distance (meters) |
|-----------------|-----------------------------------|-------------------------------|
| 0.009-0.490     | 2400/F(kHz)                       | 300                           |
| 0.490-1.705     | 24000/F(kHz)                      | 30                            |
| 1.705-30.0      | 30                                | 30                            |
| 30-88           | 100                               | 3                             |
| 88-216          | 150                               | 3                             |
| 216-960         | 200                               | 3                             |
| Above 960       | 500                               | 3                             |

| Frequency             | Limit at 3m (dBuV/m)       |
|-----------------------|----------------------------|
| 0.009 MHz – 0.490 MHz | 128.5 to 93.8 <sup>1</sup> |
| 0.490 MHz – 1.705 MHz | 73.8 to 63 <sup>1</sup>    |
| 1.705 MHz – 30 MHz    | 69.5 <sup>1</sup>          |
| 30 MHz – 88 MHz       | 40.0 <sup>1</sup>          |
| 88 MHz – 216 MHz      | 43.5 <sup>1</sup>          |
| 216 MHz – 960 MHz     | 46.0 <sup>1</sup>          |
| Above 960 MHz         | 54.0 <sup>1</sup>          |
| Above 1000 MHz        | 54.0 <sup>2</sup>          |
| Above 1000 MHz        | 74.0 <sup>3</sup>          |

<sup>1</sup>Limit is with detector with bandwidths as defined in CISPR-16-1-1 except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz where an Average detector is used.

<sup>2</sup>Limit is with 1 MHz measurement bandwidth and using an Average detector

<sup>3</sup>Limit is with 1 MHz measurement bandwidth and using a Peak detector

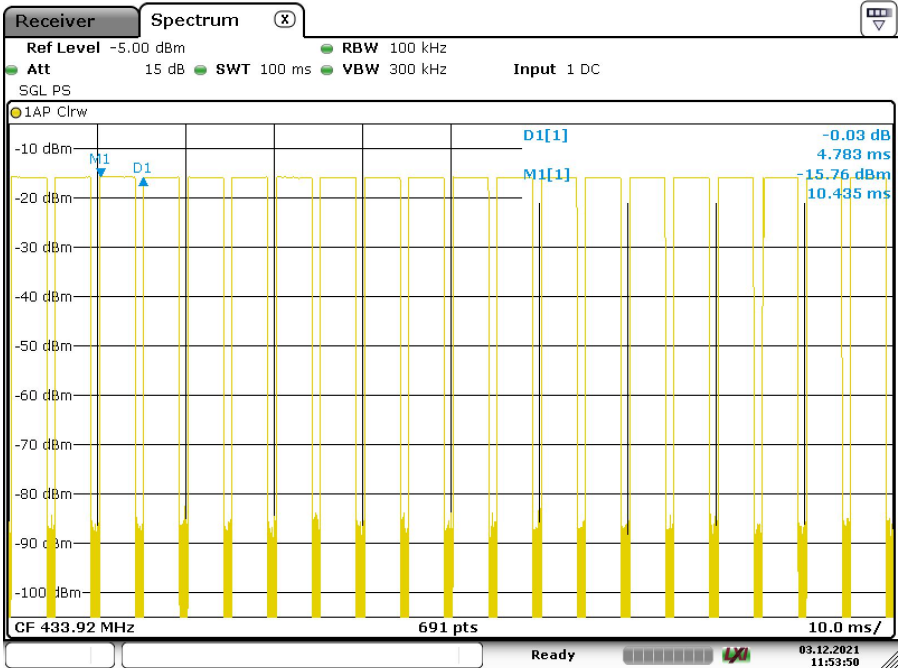
### Spurious radiated emissions for transmitter

According to C63.10, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement, so AV emission value did not show in below table if the peak value complies with average limit.

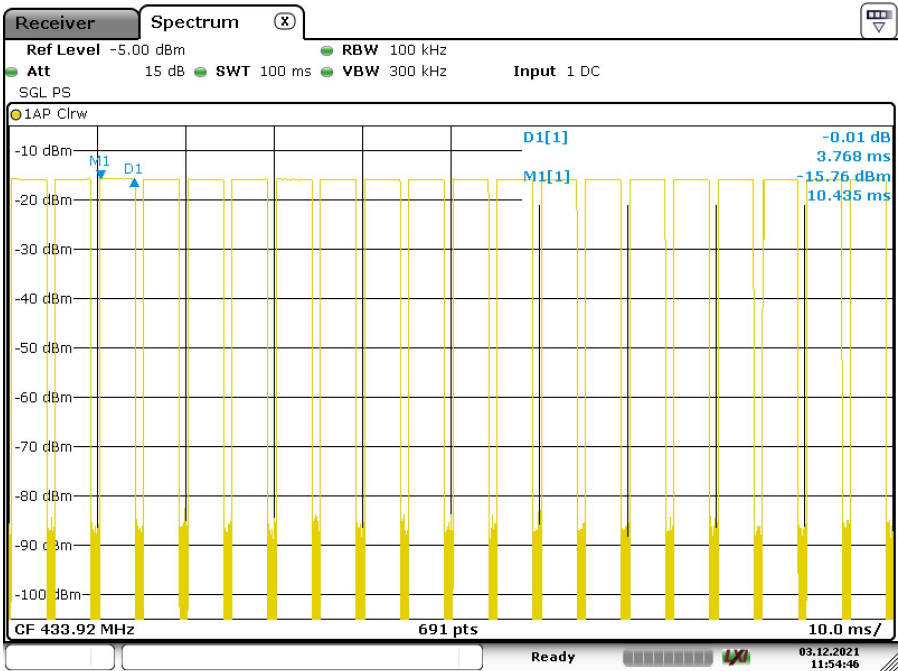
| Radiated Emission |           |          |                |         |                |        |        | Emission Type   |
|-------------------|-----------|----------|----------------|---------|----------------|--------|--------|-----------------|
| Value             | Emissions | E-Field  | Field          | Average | Net Field      | Limit  |        |                 |
|                   | Frequency | Polarity | Strength at 3m | Factor  | Strength at 3m |        | Margin |                 |
|                   | MHz       |          | dBμV/m         | dB      | dBμV/m         | dBμV/m | dB     |                 |
| PK                | 433.92    | H        | 77.13          | /       | 77.13          | 100.80 | 23.67  | Fundamental     |
| AV                | 433.92    | H        | 77.13          | -2.07   | 75.06          | 80.80  | 5.74   | Fundamental     |
| QP                | 126.72    | H        | 36.70          | /       | 36.70          | 43.50  | 6.80   | restricted band |
| QP                | 186.72    | H        | 38.60          | /       | 38.60          | 43.50  | 4.90   | Spurious        |
| QP                | 198.92    | H        | 38.10          | /       | 38.10          | 43.50  | 5.40   | Spurious        |
| PK                | 867.85    | H        | 36.12          | /       | 36.12          | 80.80  | 44.68  | Spurious        |
| PK                | 1301.83   | H        | 41.06          | /       | 41.06          | 74.00  | 32.94  | restricted band |
| PK                | 1751      | H        | 35.52          | /       | 35.52          | 80.80  | 45.28  | Spurious        |
| PK                | 2649.83   | H        | 38.23          | /       | 38.23          | 80.80  | 42.57  | Spurious        |
| PK                | 3495      | H        | 43.58          | /       | 43.58          | 80.80  | 37.22  | Spurious        |
| PK                | 433.92    | V        | 66.63          | /       | 66.63          | 100.80 | 34.17  | Fundamental     |
| AV                | 433.92    | V        | 66.53          | -2.07   | 64.46          | 80.80  | 16.34  | Fundamental     |
| QP                | 138.44    | V        | 37.7           | /       | 37.70          | 43.50  | 5.80   | Spurious        |
| PK                | 867.84    | V        | 35.98          | /       | 35.98          | 80.80  | 44.82  | Spurious        |
| PK                | 1301.83   | V        | 37.03          | /       | 37.03          | 74.00  | 36.97  | restricted band |
| PK                | 1751.5    | V        | 34.89          | /       | 34.89          | 80.80  | 45.91  | Spurious        |
| PK                | 2455.83   | V        | 38.28          | /       | 38.28          | 80.80  | 42.52  | Spurious        |

Remark:

- 1: AV Emission Level= PK Emission Level+20log(dutycycle)
- 2: Corrected Amplitude = Read level + Corrector factor  
Above 1GHz: Corrector factor = Antenna Factor + Cable Loss- Amplifier Gain  
Below 1GHz: Corrector factor = Antenna Factor + Cable Loss
- 3: Correct Factor = Antenna Factor + Cable Loss (+ Amplifier, for higher than 1GHz)
- 4: Corrected Reading = Original Receiver Reading + Correct Factor
- 5: Only the worst data listed in this report
- 6: Other frequency was 20dB below the limit  
Duty Cycle = 3.768ms/4.783 (ms) =78.77%  
Duty Cycle Factor =20log (Duty Cycle) = -2.07



Date: 3.DEC.2021 11:53:50



Date: 3.DEC.2021 11:54:47



### 9.3 Bandwidth Measurement

#### Test Method

1. The RF output of EUT was connected to the test receiver by RF cable. The path loss was compensated to the results for each measurement.
2. Set to the maximum power setting and enable the EUT transmit continuously.
3. Use the following test receiver settings:  
Span = approximately 5 times the 20dB bandwidth, centered on a hopping channel  
RBW = 1% to 5% of the 20dB bandwidth of the emission being measured, VBW ≥ RBW,  
Sweep = auto, Detector function = peak, Trace = max hold
4. Allow the trace to stabilize. Use the marker-to-peak function to set the marker to the peak of the emission. Measure the frequency difference of two frequencies that were attenuated 20 dB from the reference level. Record the frequency difference as the emission bandwidth. Record the results.
5. Repeat above procedures until all frequencies measured were complete.

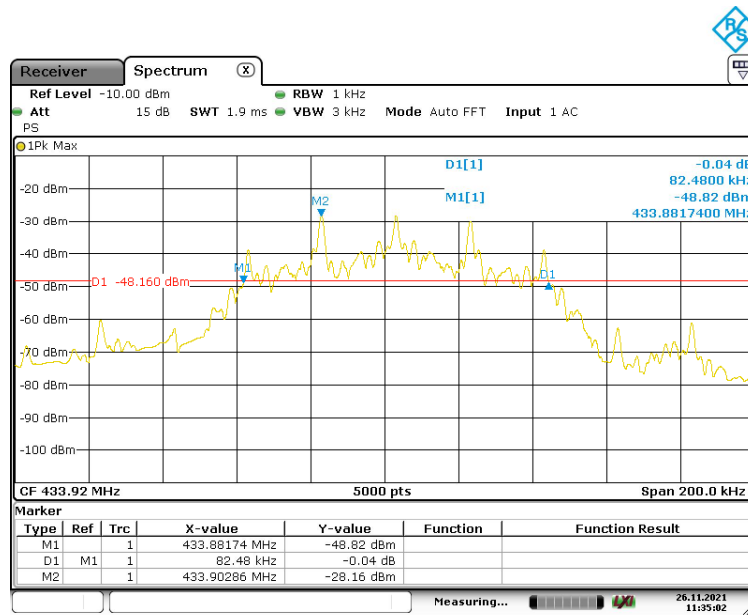
#### Limit

The bandwidth of the emission shall be no wider than 0.25% of the center frequency for devices operating above 70MHz and below 900MHz. For devices operating above 900MHz, the emission shall be no wider than 0.5% of the center frequency. Bandwidth is determined at the points 20dB down from the modulated carrier.

The limit for the EUT = 0.25% \* 433.92 MHz = 1084 kHz

#### Test Result

| Channel | 20dB Bandwidth (KHz) | Limit (KHz) |
|---------|----------------------|-------------|
| 1       | 82.48                | 1084        |



Date: 26.NOV.2021 11:35:02

## 9.4 Deactivation Time

### Test Method

1. Set to the maximum power setting and enable the EUT in transmitting mode.
2. Set center frequency of spectrum analyzer=operating frequency.
3. Set the spectrum analyzer as RBW=120 KHz, VBW=1MHz, Span=0Hz.
4. Repeat above procedures until all frequency measured was complete.

### Limit

According to FCC Part 15.231 (a), the transmitter shall be complied the following requirements:

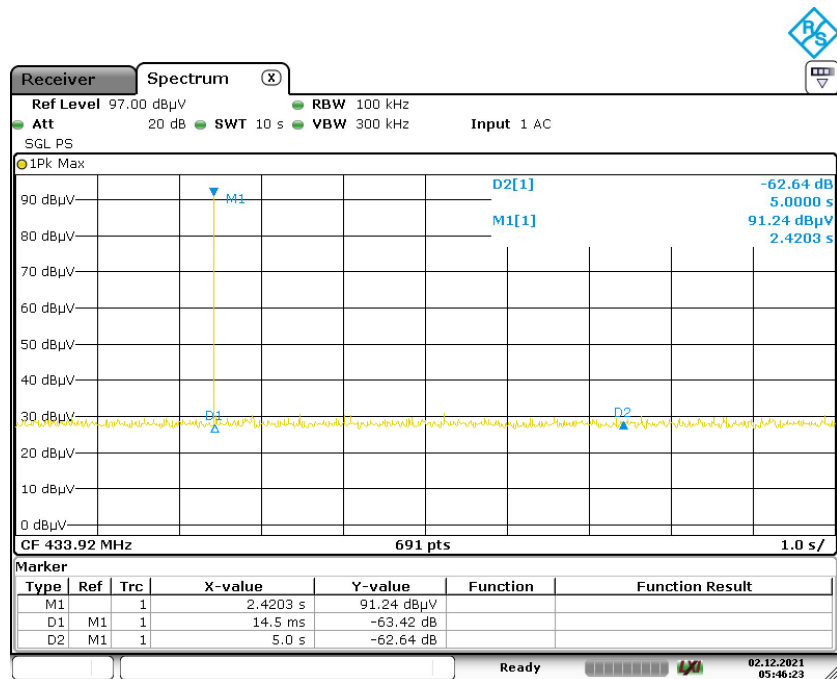
(√) (1) A manually operated transmitter shall employ a switch that will automatically deactivate the transmitter within not more than 5 seconds of being released.

(2) A transmitter activated automatically shall cease transmission within 5 seconds after activation.

(3) Periodic transmissions at regular predetermined intervals are not permitted. However, polling or supervision transmissions, including data, to determine system integrity of transmitters used in security or safety applications are allowed if the total duration of transmissions does not exceed more than two seconds per hour for each transmitter. There is no limit on the number of individual transmissions, provided the total transmission time does not exceed two seconds per hour.

### Test Result

| Channel | Frequency | Deactivation Time | Result |
|---------|-----------|-------------------|--------|
| 1       | 433.92MHz | 14.5ms            | Pass   |



Date: 2.DEC.2021 05:46:22

## 10 Test Equipment List

### List of Test Instruments

#### RF Test

| Description       | Manufacturer | Model no. | Equipment ID.   | Calibration Date | Calibration Due |
|-------------------|--------------|-----------|-----------------|------------------|-----------------|
| EMI test receiver | R&S          | ESR3      | S1503101-YQ-EMC | 2021-8-02        | 2022-8-01       |

#### Conducted Emission

| Description       | Manufacturer | Model no. | Equipment ID.   | Calibration Date | Calibration Due |
|-------------------|--------------|-----------|-----------------|------------------|-----------------|
| EMI test receiver | R&S          | ESR3      | S1503001-YQ-EMC | 2021-8-02        | 2022-8-01       |
| 2-Line V-network  | R&S          | ENV216    | S1503103-YQ-EMC | 2021-8-02        | 2022-8-01       |

#### Radiated Emission Test

| USED                                | Equipment Name                       | Model       | Manufacturer | Equipment ID.   | Calibration Date | Calibration Due |
|-------------------------------------|--------------------------------------|-------------|--------------|-----------------|------------------|-----------------|
| <input checked="" type="checkbox"/> | EMI test receiver                    | ESR3        | R&S          | S1503109-YQ-EMC | 2021-8-02        | 2022-8-01       |
| <input checked="" type="checkbox"/> | Trilog super broadband test antenna  | SCHWARZBECK | VULB9168     | S1808296-YQ-EMC | 2019-3-16        | 2022-3-15       |
| <input checked="" type="checkbox"/> | Double-ridged waveguide horn antenna | HF907       | R&S          | S1503009-YQ-EMC | 2021-4-13        | 2024-4-12       |
| <input checked="" type="checkbox"/> | Signal conditioning unit             | SCU-18D     | R&S          | S1503012-YQ-EMC | 2021-8-02        | 2022-8-01       |
| <input checked="" type="checkbox"/> | Signal and spectrum analyzer         | FSV40       | R&S          | S1503003-YQ-EMC | 2021-8-02        | 2022-8-01       |
| <input checked="" type="checkbox"/> | Loop antenna                         | HFH2-Z2     | R&S          | S1503013-YQ-EMC | 2021-5-21        | 2022-5-20       |

## 11 System Measurement Uncertainty

For a 95% confidence level, the measurement expanded uncertainties for defined systems, in accordance with the recommendations of ISO 17025 were:

| Items                | Extended Uncertainty                            |
|----------------------|-------------------------------------------------|
| Radiated Disturbance | 30MHz to 1GHz, $\pm 5.03\text{dB}$ (Horizontal) |
|                      | $\pm 5.11\text{dB}$ (Vertical)                  |
|                      | 1GHz to 18GHz, $\pm 5.15\text{dB}$ (Horizontal) |
|                      | $\pm 5.12\text{dB}$ (Vertical)                  |
|                      | 18GHz to 25GHz, $\pm 4.76\text{dB}$             |

Measurement Uncertainty Decision Rule:

Determination of conformity with the specification limits is based on the decision rule according to IEC Guide 115: 2007, clause 4.4.3 and 4.5.1.