

TEST REPORT

Applicant: Autel Intelligent Tech. Corp., Ltd.

Address of Applicant: 7th-8th, 10th Floor, Bldg. B1, Zhiyuan, Xueyuan Rd. Xili, Nanshan, Shenzhen 518055, China

Manufacturer: Autel Intelligent Tech. Corp., Ltd.

Address of Manufacturer: 7th-8th, 10th Floor, Bldg. B1, Zhiyuan, Xueyuan Rd. Xili, Nanshan, Shenzhen 518055, China

Factory 1: Autel Intelligent Technology Corp., Ltd.

Address of Factory 1: 6th Floor, Building 1, Yanxiang Zhigu, NO.11 Gaoxin West Rd, Guangming New District, Shenzhen City, Guangdong Province, China.

Factory 2: AUTEL VIETNAM COMPANY LIMITED

Address of Factory 2: 4th Floor, Factory#6, Land#CN1, An Duong Industrial Zone, Hong Phong Township, An Duong County, Hai Phong, Viet Nam

Equipment Under Test (EUT)

Product Name: MaxiFlash VCMI

Model No.: MaxiFlash VCMI

Trade Mark: Autel

FCC ID: WQ8VCMI1911

Applicable standards: FCC CFR Title 47 Part 15 Subpart B

Date of sample receipt: September 25, 2019

Date of Test: September 25-29, 2019

Date of report issued: September 29, 2019

Test Result : Pass *

* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:



Robinson Lo


Laboratory Manager

This results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

2 Version

| Version No. | Date | Description |
|-------------|--------------------|-------------|
| 00 | September 29, 2019 | Original |
| | | |
| | | |
| | | |
| | | |

Prepared By:

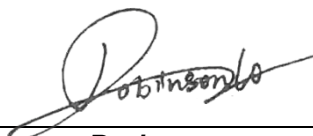


Date:

September 29, 2019

Project Engineer

Check By:



Date:

September 29, 2019

Reviewer

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4 Test Summary

| Test Item | Test Requirement | Test Method | Class / Severity | Result |
|--------------------|------------------|-------------|------------------|--------|
| Conducted Emission | FCC Part15.107 | ANSI C63.4 | Class B | Pass |
| Radiated Emissions | FCC Part15.109 | ANSI C63.4 | Class B | Pass |

Remark:

1. Pass: The EUT complies with the essential requirements in the standard.
2. # Refer to FCC Part 15.33 (b)(1) conditional testing procedure :

| The highest frequency generated or used in the EUT | Test frequency range of Radiated emission |
|--|--|
| <108MHz | 30MHz ~ 1GHz |
| 108MHz ~ 500MHz | 30MHz ~ 2GHz |
| 500MHz ~ 1GHz | 30MHz ~ 5GHz |
| >1GHz | 30MHz ~ 5th harmonic of the highest frequency or 40 GHz, whichever is lower. |

The highest frequency of the internal sources of the EUT is more than 108MHz.

5 General Information

5.1 General Description of EUT

| | |
|--------------------|---|
| Product Name: | MaxiFlash VCMI |
| Model No.: | MaxiFlash VCMI |
| Serial No.: | 123456789101112 |
| Hardware Version: | V6 |
| Software Version: | V1.00.10 |
| Test sample(s) ID: | GTS201909000203-2 |
| Sample(s) Status | Normal sample |
| Power Supply: | Adapter Model: A361-1203000DI Input: AC 100-240V, 50/60Hz, 1.5A Output: DC 12V, 3000mA Rechargeable battery: DC3.8V 3750mAh 14.25Wh |

5.2 Test mode and Test voltage

| | |
|-----------------------|--|
| Test mode: | |
| Oscilloscope mode | Keep the EUT in Oscilloscope mode. |
| Multimeter mode | Keep the EUT in Multimeter mode. |
| Signal generator mode | Keep the EUT in Signal generator mode. |
| OBD mode | Keep the EUT in OBD mode. |
| Test voltage: | |
| AC 120V/60Hz | |

5.3 Description of Support Units

| Manufacturer | Description | Model | Serial Number |
|--------------------|-----------------|---------------|---------------|
| Supplied by client | ECU (MED17.1.6) | N/A | N/A |
| AUTEL | DV1912 | Maxisys_Ultra | N/A |

5.4 Deviation from Standards

None.

5.5 Abnormalities from Standard Conditions

None.

5.6 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **FCC —Registration No.: 381383**

Global United Technology Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in files. Registration 381383.

- **IC —Registration No.: 9079A**

The 3m Semi-anechoic chamber of Global United Technology Services Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 9079A

- **NVLAP (LAB CODE:600179-0)**

Global United Technology Services Co., Ltd., is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP). LAB CODE:600179-0

5.7 Test Location

Tests were performed at:

Global United Technology Services Co., Ltd.

Address: No. 123-128, Tower A, Jinyuan Business Building, No.2, Laodong Industrial Zone, Xixiang Road, Baoan District, Shenzhen, Guangdong, China 518102

Tel: 0755-27798480

Fax: 0755-27798960

6 Test Instruments list

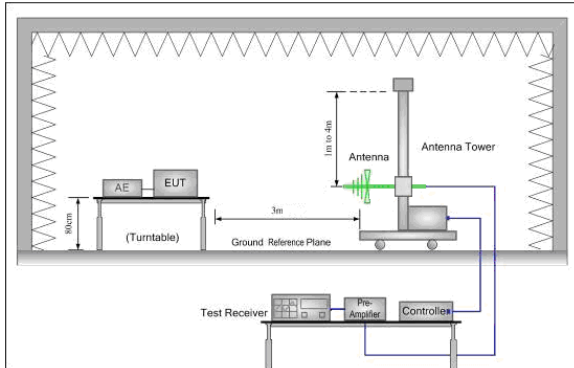
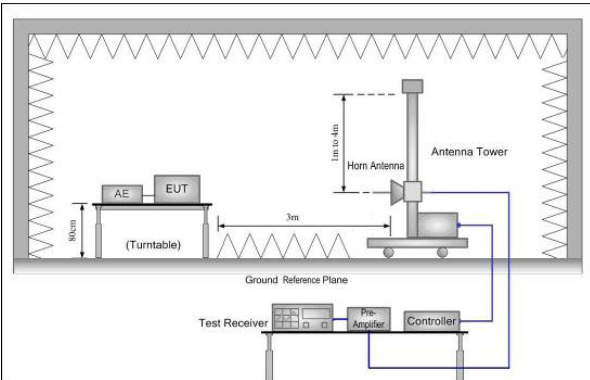
| Radiated Emission: | | | | | | |
|--------------------|-------------------------------------|--------------------------------|-----------------------------|---------------|---------------------|-------------------------|
| Item | Test Equipment | Manufacturer | Model No. | Inventory No. | Cal.Date (mm-dd-yy) | Cal.Due date (mm-dd-yy) |
| 1 | 3m Semi- Anechoic Chamber | ZhongYu Electron | 9.2(L)*6.2(W)* 6.4(H) | GTS250 | July. 03 2015 | July. 02 2020 |
| 2 | Control Room | ZhongYu Electron | 6.2(L)*2.5(W)* 2.4(H) | GTS251 | N/A | N/A |
| 3 | EMI Test Receiver | Rohde & Schwarz | ESU26 | GTS203 | June. 26 2019 | June. 25 2020 |
| 4 | BiConiLog Antenna | SCHWARZBECK MESS-ELEKTRONIK | VULB9163 | GTS214 | June. 26 2019 | June. 25 2020 |
| 5 | Double -ridged waveguide horn | SCHWARZBECK MESS-ELEKTRONIK | BBHA 9120 D | GTS208 | June. 26 2019 | June. 25 2020 |
| 6 | Horn Antenna | ETS-LINDGREN | 3160 | GTS217 | June. 26 2019 | June. 25 2020 |
| 7 | EMI Test Software | AUDIX | E3 | N/A | N/A | N/A |
| 8 | Coaxial Cable | GTS | N/A | GTS213 | June. 26 2019 | June. 25 2020 |
| 9 | Coaxial Cable | GTS | N/A | GTS211 | June. 26 2019 | June. 25 2020 |
| 10 | Coaxial cable | GTS | N/A | GTS210 | June. 26 2019 | June. 25 2020 |
| 11 | Coaxial Cable | GTS | N/A | GTS212 | June. 26 2019 | June. 25 2020 |
| 12 | Amplifier(100kHz-3GHz) | HP | 8347A | GTS204 | June. 26 2019 | June. 25 2020 |
| 13 | Amplifier(2GHz-20GHz) | HP | 84722A | GTS206 | June. 26 2019 | June. 25 2020 |
| 14 | Amplifier (18-26GHz) | Rohde & Schwarz | AFS33-18002 650-30-8P-44 | GTS218 | June. 26 2019 | June. 25 2020 |
| 15 | Band filter | Amindeon | 82346 | GTS219 | June. 26 2019 | June. 25 2020 |
| 16 | Power Meter | Anritsu | ML2495A | GTS540 | June. 26 2019 | June. 25 2020 |
| 17 | Power Sensor | Anritsu | MA2411B | GTS541 | June. 26 2019 | June. 25 2020 |
| 18 | Wideband Radio Communication Tester | Rohde & Schwarz | CMW500 | GTS575 | June. 26 2019 | June. 25 2020 |
| 19 | Splitter | Agilent | 11636B | GTS237 | June. 26 2019 | June. 25 2020 |
| 20 | Loop Antenna | ZHINAN | ZN30900A | GTS534 | June. 26 2019 | June. 25 2020 |
| 21 | Breitband hornantenne | SCHWARZBECK | BBHA 9170 | GTS579 | Oct. 20 2018 | Oct. 19 2019 |
| 22 | Amplifier | TDK | PA-02-02 | GTS574 | Oct. 20 2018 | Oct. 19 2019 |
| 23 | Amplifier | TDK | PA-02-03 | GTS576 | Oct. 20 2018 | Oct. 19 2019 |
| 24 | PSA Series Spectrum Analyzer | Rohde & Schwarz | FSP | GTS578 | June. 26 2019 | June. 25 2020 |

| Conducted Emission | | | | | | |
|--------------------|--------------------------|-------------------------|----------------------|---------------|---------------------|-------------------------|
| Item | Test Equipment | Manufacturer | Model No. | Inventory No. | Cal.Date (mm-dd-yy) | Cal.Due date (mm-dd-yy) |
| 1 | Shielding Room | ZhongYu Electron | 7.3(L)x3.1(W)x2.9(H) | GTS252 | May.15 2019 | May.14 2022 |
| 2 | EMI Test Receiver | R&S | ESCI 7 | GTS552 | June. 26 2019 | June. 25 2020 |
| 3 | Coaxial Switch | ANRITSU CORP | MP59B | GTS225 | June. 26 2019 | June. 25 2020 |
| 4 | Artificial Mains Network | SCHWARZBECK MESS | NSLK8127 | GTS226 | June. 26 2019 | June. 25 2020 |
| 5 | Coaxial Cable | GTS | N/A | GTS227 | N/A | N/A |
| 6 | EMI Test Software | AUDIX | E3 | N/A | N/A | N/A |
| 7 | Thermo meter | KTJ | TA328 | GTS233 | June. 26 2019 | June. 25 2020 |
| 8 | Absorbing clamp | Elektronik-Feinmechanik | MDS21 | GTS229 | June. 26 2019 | June. 25 2020 |
| 9 | ISN | SCHWARZBECK | NTFM 8158 | GTD565 | June. 26 2019 | June. 25 2020 |

| General used equipment: | | | | | | |
|-------------------------|---------------------------------|--------------|-----------|---------------|---------------------|-------------------------|
| Item | Test Equipment | Manufacturer | Model No. | Inventory No. | Cal.Date (mm-dd-yy) | Cal.Due date (mm-dd-yy) |
| 1 | Humidity/ Temperature Indicator | KTJ | TA328 | GTS243 | June. 26 2019 | June. 25 2020 |
| 2 | Barometer | ChangChun | DYM3 | GTS255 | June. 26 2019 | June. 25 2020 |

7 Test Results and Measurement Data

7.1 Radiated Emission

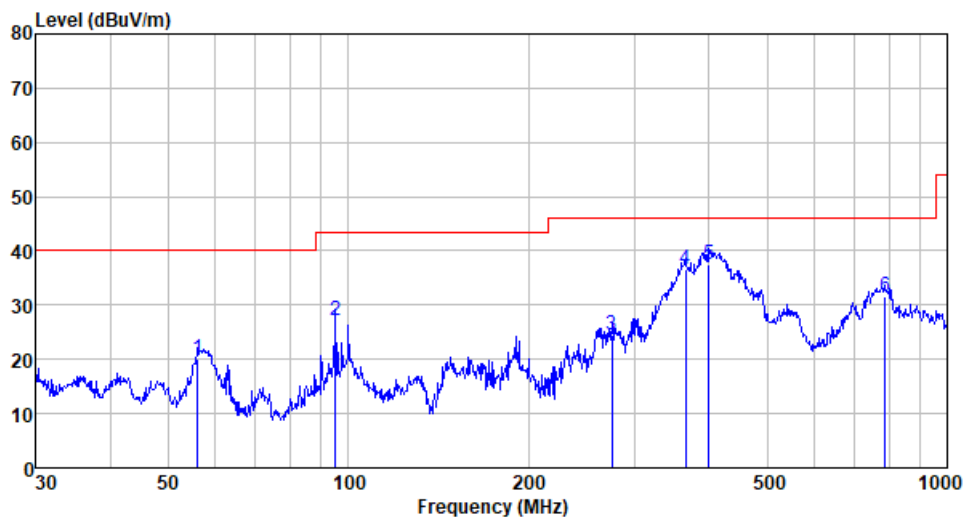
| | | | | | | | | | | | | | | | | | | | | | |
|-----------------------|--|------------|--------------------|------------|-------------|-------|------------|--------------|--------|------------|---------------|------------|------------|-------------|-------|------------|------------|-------|---------|---------|------|
| Test Requirement: | FCC Part15 B Section 15.109 | | | | | | | | | | | | | | | | | | | | |
| Test Method: | ANSI C63.4:2014 | | | | | | | | | | | | | | | | | | | | |
| Test Frequency Range: | 30MHz to 6GHz | | | | | | | | | | | | | | | | | | | | |
| Test site: | Measurement Distance: 3m (Semi-Anechoic Chamber) | | | | | | | | | | | | | | | | | | | | |
| Receiver setup: | <table><tr><td>Frequency</td><td>Detector</td><td>RBW</td><td>VBW</td><td>Value</td></tr><tr><td>30MHz-1GHz</td><td>Quasi-peak</td><td>120kHz</td><td>300kHz</td><td>Quasi-peak</td></tr><tr><td rowspan="2">Above 1GHz</td><td>Peak</td><td>1MHz</td><td>3MHz</td><td>Peak</td></tr><tr><td>Average</td><td>1MHz</td><td>3MHz</td><td>Average</td></tr></table> | Frequency | Detector | RBW | VBW | Value | 30MHz-1GHz | Quasi-peak | 120kHz | 300kHz | Quasi-peak | Above 1GHz | Peak | 1MHz | 3MHz | Peak | Average | 1MHz | 3MHz | Average | |
| Frequency | Detector | RBW | VBW | Value | | | | | | | | | | | | | | | | | |
| 30MHz-1GHz | Quasi-peak | 120kHz | 300kHz | Quasi-peak | | | | | | | | | | | | | | | | | |
| Above 1GHz | Peak | 1MHz | 3MHz | Peak | | | | | | | | | | | | | | | | | |
| | Average | 1MHz | 3MHz | Average | | | | | | | | | | | | | | | | | |
| Limit: | <table><tr><td>Frequency</td><td>Limit (dBμV/m @3m)</td><td>Value</td></tr><tr><td>30MHz-88MHz</td><td>40.00</td><td>Quasi-peak</td></tr><tr><td>88MHz-216MHz</td><td>43.50</td><td>Quasi-peak</td></tr><tr><td>216MHz-960MHz</td><td>46.00</td><td>Quasi-peak</td></tr><tr><td>960MHz-1GHz</td><td>54.00</td><td>Quasi-peak</td></tr><tr><td rowspan="2">Above 1GHz</td><td>54.00</td><td>Average</td></tr><tr><td>74.00</td><td>Peak</td></tr></table> | Frequency | Limit (dBμV/m @3m) | Value | 30MHz-88MHz | 40.00 | Quasi-peak | 88MHz-216MHz | 43.50 | Quasi-peak | 216MHz-960MHz | 46.00 | Quasi-peak | 960MHz-1GHz | 54.00 | Quasi-peak | Above 1GHz | 54.00 | Average | 74.00 | Peak |
| Frequency | Limit (dBμV/m @3m) | Value | | | | | | | | | | | | | | | | | | | |
| 30MHz-88MHz | 40.00 | Quasi-peak | | | | | | | | | | | | | | | | | | | |
| 88MHz-216MHz | 43.50 | Quasi-peak | | | | | | | | | | | | | | | | | | | |
| 216MHz-960MHz | 46.00 | Quasi-peak | | | | | | | | | | | | | | | | | | | |
| 960MHz-1GHz | 54.00 | Quasi-peak | | | | | | | | | | | | | | | | | | | |
| Above 1GHz | 54.00 | Average | | | | | | | | | | | | | | | | | | | |
| | 74.00 | Peak | | | | | | | | | | | | | | | | | | | |
| Test setup: | <div>Below 1GHz</div> <div></div> <div>Above 1GHz</div> <div></div> | | | | | | | | | | | | | | | | | | | | |
| Test Procedure: | 1. The EUT was placed on the top of a rotating table 0.8 meters above | | | | | | | | | | | | | | | | | | | | |

| | |
|-------------------|--|
| | <p>the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.</p> <ol style="list-style-type: none"> The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. 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. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet. |
| Test environment: | Temp.: 25 °C Humid.: 52% Press.: 1 012mbar |
| Test Instruments: | Refer to section 6 for details |
| Test mode: | Refer to section 5.2 for details ,and only show the worst mode |
| Test results: | Pass |

Measurement Data

Below 1GHz

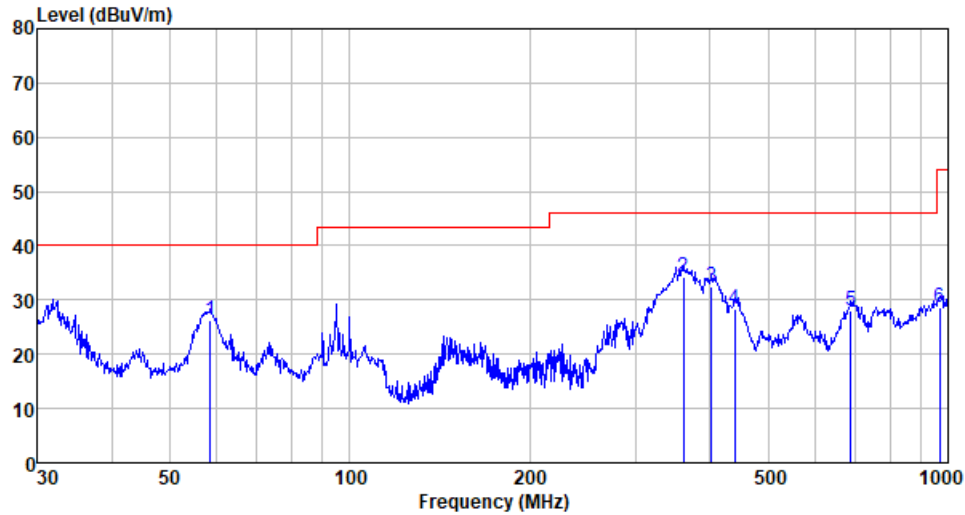
| | | | |
|------------|------------|-------------------|------------|
| Test mode: | Multimeter | Antenna Polarity: | Horizontal |
|------------|------------|-------------------|------------|



| Freq MHz | Reading level dBuV | Antenna factor dB/m | Cable loss dB | Preamp factor dB | level dBuV | Limit level dBuV/m | Over limit dB | Remark |
|-------------|--------------------------|---------------------------|---------------------|------------------------|---------------|--------------------------|---------------------|--------|
| 56.001 | 43.93 | 11.68 | 0.83 | 36.27 | 20.17 | 40.00 | -19.83 | QP |
| 95.093 | 51.10 | 11.52 | 1.15 | 36.68 | 27.09 | 43.50 | -16.41 | QP |
| 275.157 | 46.79 | 12.91 | 2.25 | 37.40 | 24.55 | 46.00 | -21.45 | QP |
| 365.539 | 56.64 | 14.78 | 2.69 | 37.49 | 36.62 | 46.00 | -9.38 | QP |
| 400.432 | 56.79 | 15.34 | 2.85 | 37.52 | 37.46 | 46.00 | -8.54 | QP |
| 787.851 | 43.57 | 21.21 | 4.41 | 37.62 | 31.57 | 46.00 | -14.43 | QP |

Remarks: level = Reading level + Antenna factor + Cable loss - Preamp Factor

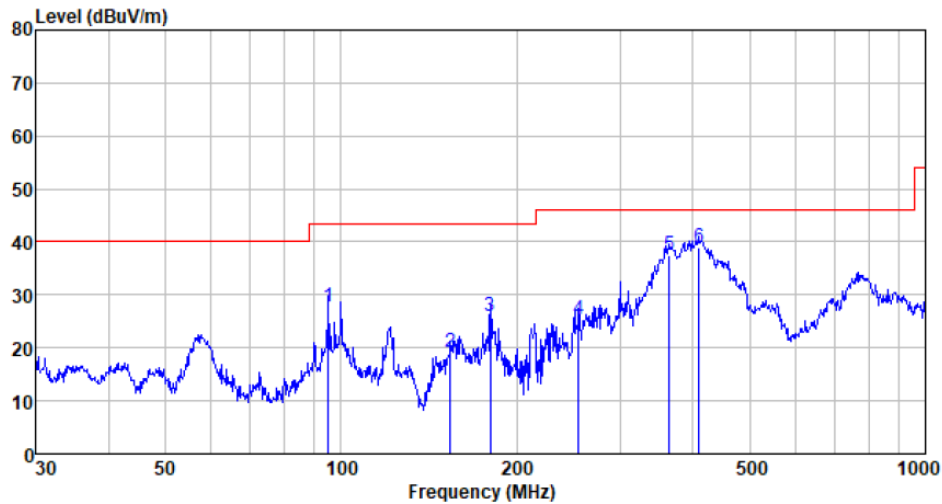
| | | | |
|------------|------------|-------------------|----------|
| Test mode: | Multimeter | Antenna Polarity: | Vertical |
|------------|------------|-------------------|----------|



| Freq MHz | Reading level dBuV | Antenna factor dB/m | Cable loss dB | Preamp factor dB | level dBuV | Limit level dBuV/m | Over limit dB | Remark |
|-------------|--------------------------|---------------------------|---------------------|------------------------|---------------|--------------------------|---------------------|--------|
| 58.407 | 50.32 | 11.45 | 0.85 | 36.30 | 26.32 | 40.00 | -13.68 | QP |
| 361.714 | 54.32 | 14.72 | 2.68 | 37.49 | 34.23 | 46.00 | -11.77 | QP |
| 401.839 | 51.87 | 15.34 | 2.86 | 37.52 | 32.55 | 46.00 | -13.45 | QP |
| 440.196 | 46.72 | 16.16 | 3.05 | 37.52 | 28.41 | 46.00 | -17.59 | QP |
| 687.151 | 41.93 | 19.59 | 4.05 | 37.62 | 27.95 | 46.00 | -18.05 | QP |
| 968.934 | 38.47 | 22.59 | 5.11 | 37.54 | 28.63 | 54.00 | -25.37 | QP |

Remarks: level = Reading level + Antenna factor + Cable loss - Preamp Factor

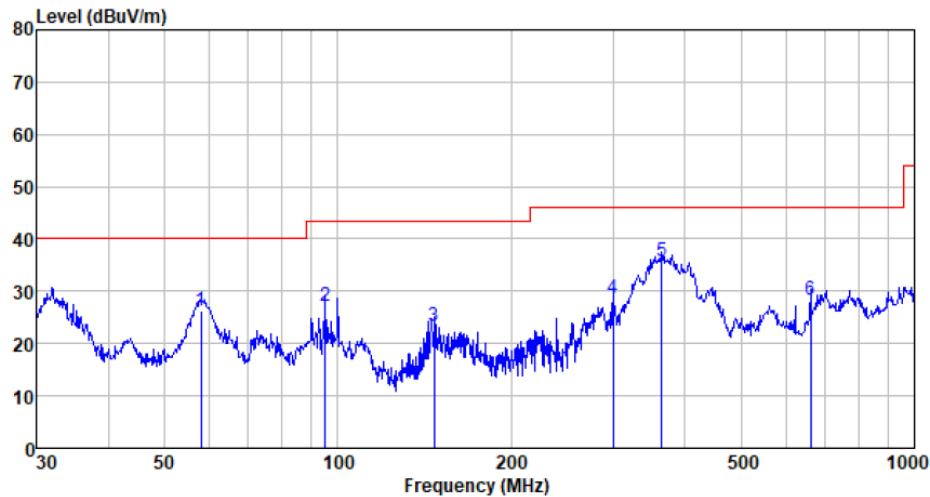
| | | | |
|------------|--------------|-------------------|------------|
| Test mode: | Oscilloscope | Antenna Polarity: | Horizontal |
|------------|--------------|-------------------|------------|



| Freq MHz | Reading level dBuV | Antenna factor dB/m | Cable loss dB | Preamp factor dB | level dBuV | Limit level dBuV/m | Over limit dB | Remark |
|-------------|--------------------------|---------------------------|---------------------|------------------------|---------------|--------------------------|---------------------|--------|
| 95.093 | 51.73 | 11.52 | 1.15 | 36.68 | 27.72 | 43.50 | -15.78 | QP |
| 153.739 | 46.73 | 7.90 | 1.59 | 37.10 | 19.12 | 43.50 | -24.38 | QP |
| 180.017 | 52.54 | 8.90 | 1.74 | 37.24 | 25.94 | 43.50 | -17.56 | QP |
| 254.728 | 48.34 | 12.29 | 2.15 | 37.38 | 25.40 | 46.00 | -20.60 | QP |
| 364.260 | 57.65 | 14.75 | 2.69 | 37.49 | 37.60 | 46.00 | -8.40 | QP |
| 410.383 | 58.08 | 15.54 | 2.91 | 37.52 | 39.01 | 46.00 | -6.99 | QP |

Remarks: level = Reading level + Antenna factor + Cable loss - Preamp Factor

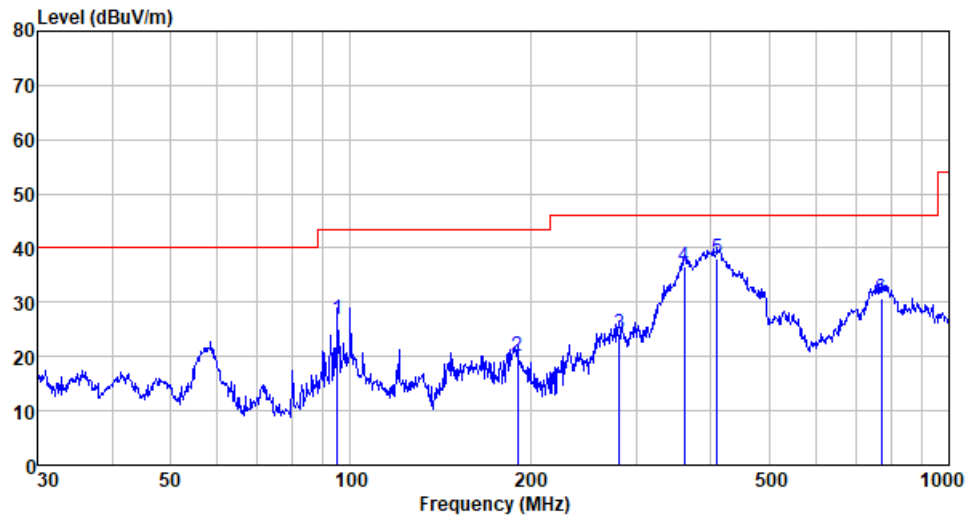
| | | | |
|------------|--------------|-------------------|----------|
| Test mode: | Oscilloscope | Antenna Polarity: | Vertical |
|------------|--------------|-------------------|----------|



| Freq MHz | Reading level dBuV | Antenna factor dB/m | Cable loss dB | Preamp factor dB | level dBuV | Limit level dBuV/m | Over limit dB | Remark |
|-------------|--------------------------|---------------------------|---------------------|------------------------|---------------|--------------------------|---------------------|--------|
| 57.999 | 50.33 | 11.50 | 0.84 | 36.30 | 26.37 | 40.00 | -13.63 | QP |
| 95.093 | 51.30 | 11.52 | 1.15 | 36.68 | 27.29 | 43.50 | -16.21 | QP |
| 146.888 | 51.18 | 7.54 | 1.55 | 37.06 | 23.21 | 43.50 | -20.29 | QP |
| 300.367 | 50.21 | 13.60 | 2.36 | 37.42 | 28.75 | 46.00 | -17.25 | QP |
| 364.260 | 55.66 | 14.75 | 2.69 | 37.49 | 35.61 | 46.00 | -10.39 | QP |
| 661.151 | 42.50 | 19.56 | 3.95 | 37.60 | 28.41 | 46.00 | -17.59 | QP |

Remarks: level = Reading level + Antenna factor + Cable loss - Preamp Factor

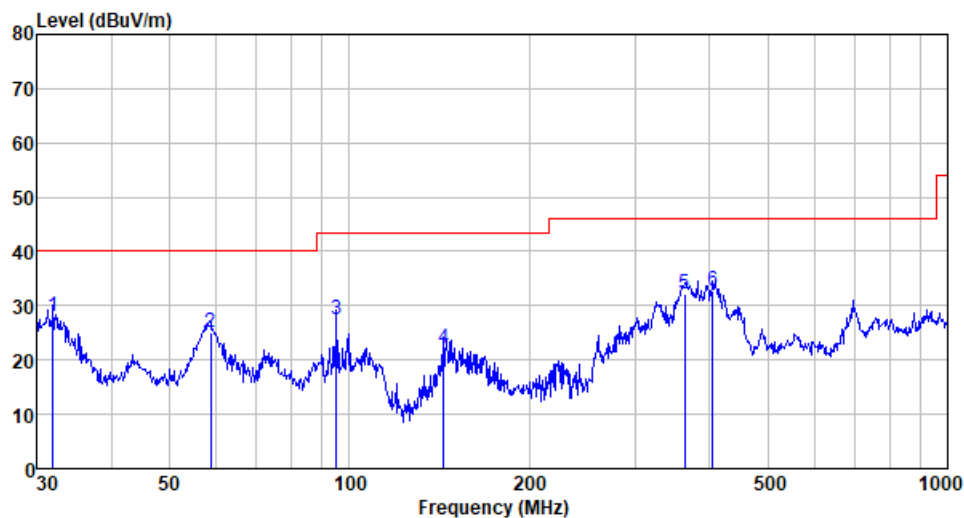
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|------------|------------------|-------------------|------------|
| Test mode: | Signal generator | Antenna Polarity: | Horizontal |
|------------|------------------|-------------------|------------|



| Freq MHz | Reading level dBuV | Antenna factor dB/m | Cable loss dB | Preamp factor dB | level dBuV | Limit level dBuV/m | Over limit dB | Remark |
|-------------|--------------------------|---------------------------|---------------------|------------------------|---------------|--------------------------|---------------------|--------|
| 95.093 | 50.86 | 11.52 | 1.15 | 36.68 | 26.85 | 43.50 | -16.65 | QP |
| 190.405 | 45.72 | 9.90 | 1.79 | 37.29 | 20.12 | 43.50 | -23.38 | QP |
| 281.008 | 46.35 | 13.09 | 2.27 | 37.41 | 24.30 | 46.00 | -21.70 | QP |
| 361.714 | 56.78 | 14.72 | 2.68 | 37.49 | 36.69 | 46.00 | -9.31 | QP |
| 410.383 | 57.24 | 15.54 | 2.91 | 37.52 | 38.17 | 46.00 | -7.83 | QP |
| 771.449 | 43.10 | 20.90 | 4.36 | 37.62 | 30.74 | 46.00 | -15.26 | QP |

Remarks: level = Reading level + Antenna factor + Cable loss - Preamp Factor

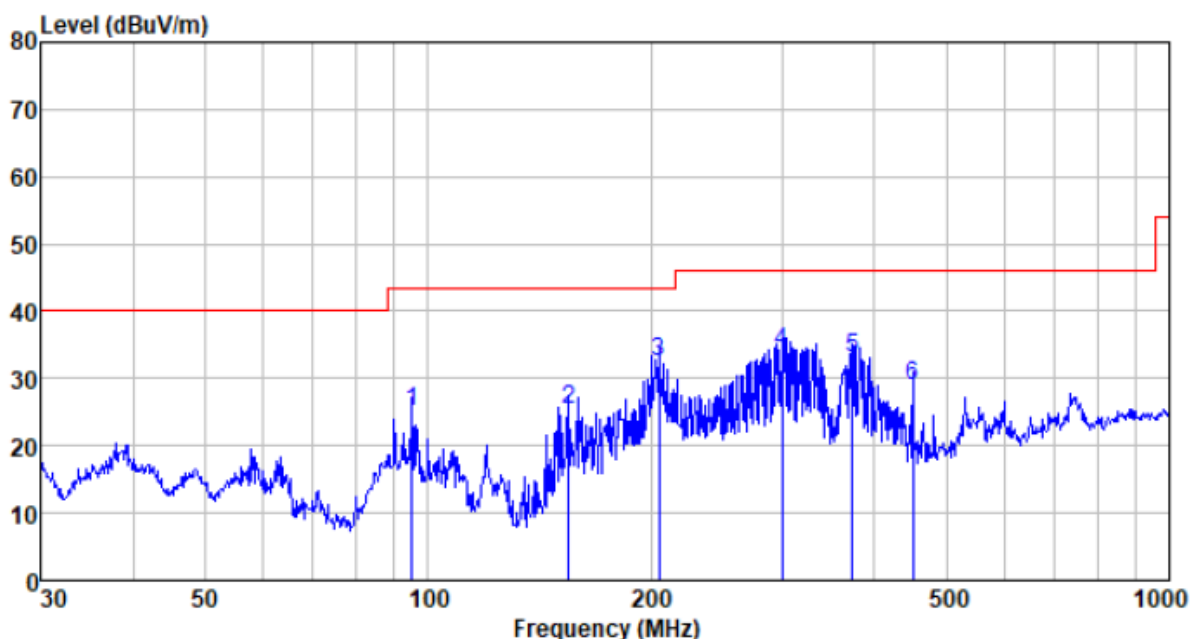
| | | | |
|------------|------------------|-------------------|----------|
| Test mode: | Signal generator | Antenna Polarity: | Vertical |
|------------|------------------|-------------------|----------|



| Freq MHz | Reading level dBuV | Antenna factor dB/m | Cable loss dB | Preamp factor dB | level dBuV | Limit level dBuV/m | Over limit dB | Remark |
|-------------|--------------------------|---------------------------|---------------------|------------------------|---------------|--------------------------|---------------------|--------|
| 31.955 | 51.41 | 11.24 | 0.57 | 35.15 | 28.07 | 40.00 | -11.93 | QP |
| 58.613 | 49.13 | 11.45 | 0.85 | 36.30 | 25.13 | 40.00 | -14.87 | QP |
| 95.093 | 51.32 | 11.52 | 1.15 | 36.68 | 27.31 | 43.50 | -16.19 | QP |
| 143.830 | 50.27 | 7.47 | 1.53 | 37.04 | 22.23 | 43.50 | -21.27 | QP |
| 362.985 | 52.27 | 14.72 | 2.68 | 37.49 | 32.18 | 46.00 | -13.82 | QP |
| 404.667 | 51.86 | 15.42 | 2.88 | 37.52 | 32.64 | 46.00 | -13.36 | QP |

Remarks: level = Reading level + Antenna factor + Cable loss - Preamp Factor

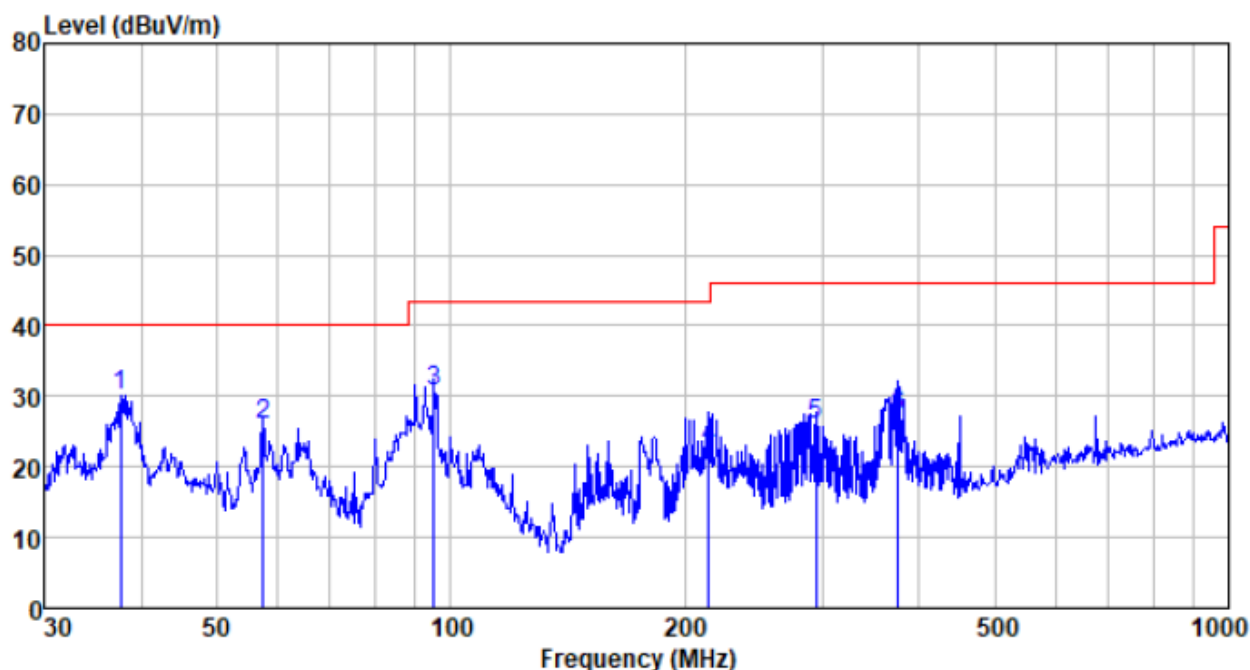
| | | | |
|------------|-----|-------------------|------------|
| Test mode: | OBD | Antenna Polarity: | Horizontal |
|------------|-----|-------------------|------------|



| Freq MHz | Reading level dBuV | Antenna factor dB/m | Cable loss dB | Preamp factor dB | level dBuV | Limit level dBuV/m | Over limit dB | Remark |
|-------------|--------------------------|---------------------------|---------------------|------------------------|---------------|--------------------------|---------------------|--------|
| 95.093 | 49.21 | 11.52 | 1.15 | 36.68 | 25.20 | 43.50 | -18.30 | QP |
| 154.821 | 52.94 | 7.95 | 1.60 | 37.10 | 25.39 | 43.50 | -18.11 | QP |
| 204.955 | 57.32 | 10.58 | 1.87 | 37.34 | 32.43 | 43.50 | -11.07 | QP |
| 300.367 | 55.54 | 13.60 | 2.36 | 37.42 | 34.08 | 46.00 | -11.92 | QP |
| 373.311 | 52.99 | 14.89 | 2.73 | 37.50 | 33.11 | 46.00 | -12.89 | QP |
| 451.135 | 47.10 | 16.40 | 3.09 | 37.51 | 29.08 | 46.00 | -16.92 | QP |

Remarks: level = Reading level + Antenna factor + Cable loss - Preamp Factor

| | | | |
|------------|-----|-------------------|----------|
| Test mode: | OBD | Antenna Polarity: | Vertical |
|------------|-----|-------------------|----------|

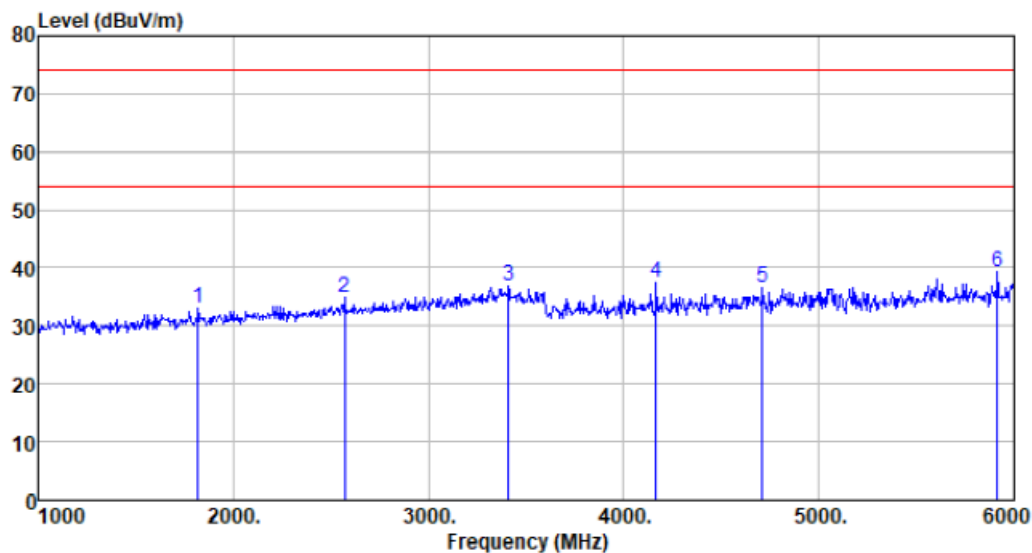


| Freq MHz | Reading level dBuV | Antenna factor dB/m | Cable loss dB | Preamp factor dB | level dBuV | Limit level dBuV/m | Over limit dB | Remark |
|-------------|--------------------------|---------------------------|---------------------|------------------------|---------------|--------------------------|---------------------|--------|
| 37.680 | 53.19 | 11.80 | 0.64 | 35.53 | 30.10 | 40.00 | -9.90 | QP |
| 57.392 | 49.84 | 11.55 | 0.84 | 36.29 | 25.94 | 40.00 | -14.06 | QP |
| 95.093 | 54.58 | 11.52 | 1.15 | 36.68 | 30.57 | 43.50 | -12.93 | QP |
| 214.514 | 47.13 | 10.95 | 1.93 | 37.35 | 22.66 | 43.50 | -20.84 | QP |
| 295.147 | 47.52 | 13.45 | 2.34 | 37.42 | 25.89 | 46.00 | -20.11 | QP |
| 375.939 | 47.08 | 14.94 | 2.75 | 37.50 | 27.27 | 46.00 | -18.73 | QP |

Remarks: level = Reading level + Antenna factor + Cable loss - Preamp Factor

Above 1GHz

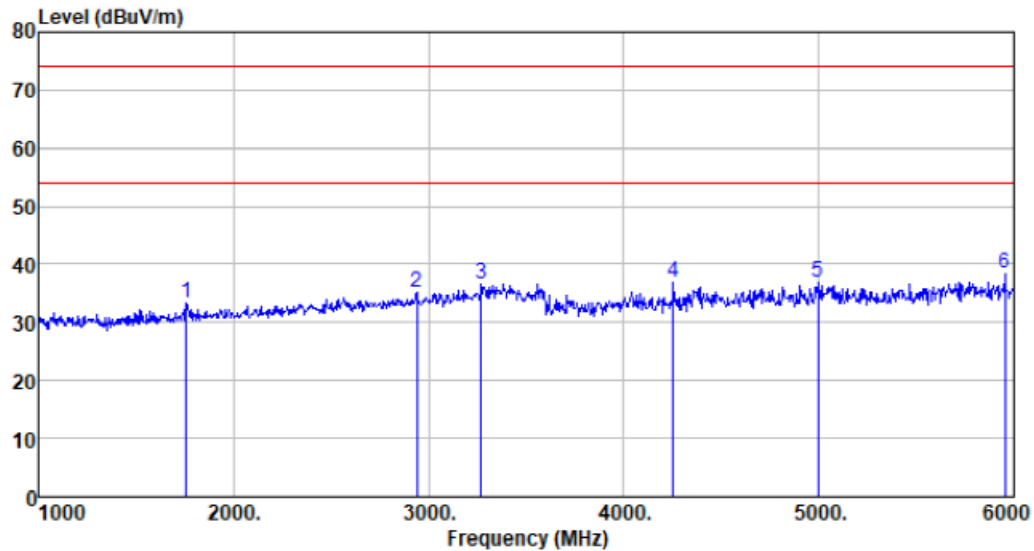
| | | | |
|------------|-----|-------------------|------------|
| Test mode: | OBD | Antenna Polarity: | Horizontal |
|------------|-----|-------------------|------------|



| Freq MHz | Reading level dBuV | Antenna factor dB/m | Cable loss dB | Preamplifier factor dB | level dBuV | Limit level dBuV/m | Over limit dB | Remark |
|-------------|--------------------------|---------------------------|---------------------|------------------------------|---------------|--------------------------|---------------------|--------|
| 1820.000 | 38.00 | 26.08 | 5.45 | 36.39 | 33.14 | 74.00 | -40.86 | Peak |
| 2570.000 | 37.35 | 27.83 | 6.58 | 37.00 | 34.76 | 74.00 | -39.24 | Peak |
| 3410.000 | 38.15 | 28.35 | 7.85 | 37.34 | 37.01 | 74.00 | -36.99 | Peak |
| 4165.000 | 36.02 | 30.00 | 8.86 | 37.47 | 37.41 | 74.00 | -36.59 | Peak |
| 4710.000 | 33.86 | 31.18 | 9.29 | 37.69 | 36.64 | 74.00 | -37.36 | Peak |
| 5915.000 | 32.87 | 32.60 | 10.22 | 36.51 | 39.18 | 74.00 | -34.82 | Peak |

Remarks: level = Reading level + Antenna factor + Cable loss - Preamp Factor

| | | | |
|------------|-----|-------------------|----------|
| Test mode: | OBD | Antenna Polarity: | Vertical |
|------------|-----|-------------------|----------|



| Freq MHz | Reading level dBuV | Antenna factor dB/m | Cable loss dB | Preamp factor dB | level dBuV | Limit level dBuV/m | Over limit dB | Remark |
|-------------|--------------------------|---------------------------|---------------------|------------------------|---------------|--------------------------|---------------------|--------|
| 1760.000 | 38.42 | 25.97 | 5.36 | 36.35 | 33.40 | 74.00 | -40.60 | Peak |
| 2940.000 | 36.85 | 28.49 | 7.14 | 37.26 | 35.22 | 74.00 | -38.78 | Peak |
| 3270.000 | 37.93 | 28.44 | 7.63 | 37.33 | 36.67 | 74.00 | -37.33 | Peak |
| 4255.000 | 35.38 | 30.21 | 8.93 | 37.51 | 37.01 | 74.00 | -36.99 | Peak |
| 4995.000 | 33.45 | 31.69 | 9.51 | 37.79 | 36.86 | 74.00 | -37.14 | Peak |
| 5955.000 | 32.01 | 32.69 | 10.25 | 36.47 | 38.48 | 74.00 | -35.52 | Peak |

Remarks: level = Reading level + Antenna factor + Cable loss - Preamp Factor

Note:

The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

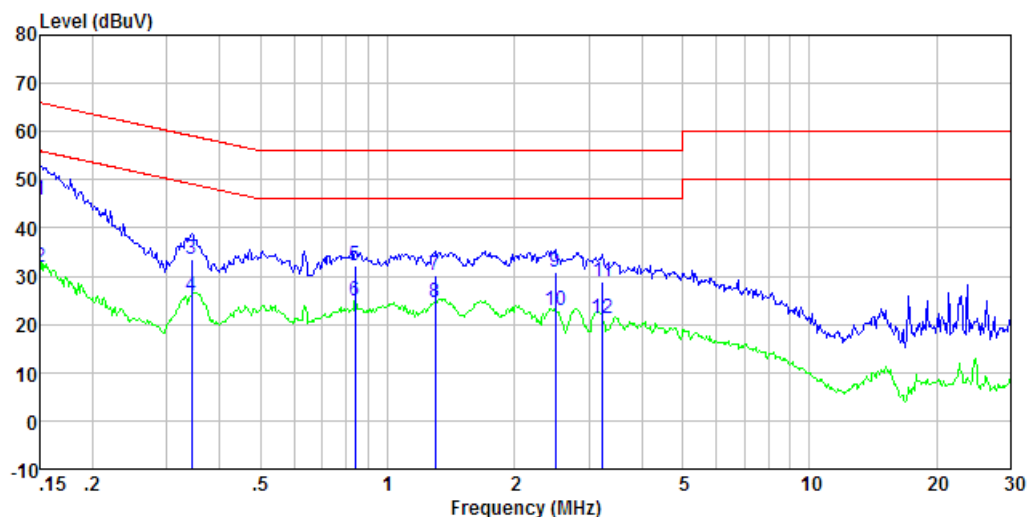
Final Test Level = Receiver Reading + Antenna Factor + Cable Factor - Preamplifier Factor

7.2 Conducted Emissions

| Test Requirement: | FCC Part15 B Section 15.107 | | | | | | | | | | | | | | | | | | |
|-----------------------|--|-----------|---------|-----|---------|-----------------------|--------------|--|------------|---------|----------|-----------|-----------|-------|----|----|--------|----|----|
| Test Method: | ANSI C63.4:2014 | | | | | | | | | | | | | | | | | | |
| Test Frequency Range: | 150kHz to 30MHz | | | | | | | | | | | | | | | | | | |
| Class / Severity: | Class B | | | | | | | | | | | | | | | | | | |
| Receiver setup: | RBW=9kHz, VBW=30kHz | | | | | | | | | | | | | | | | | | |
| Limit: | <table><tr><th rowspan="2">Frequency range (MHz)</th><th colspan="2">Limit (dBμV)</th></tr><tr><th>Quasi-peak</th><th>Average</th></tr><tr><td>0.15-0.5</td><td>66 to 56*</td><td>56 to 46*</td></tr><tr><td>0.5-5</td><td>56</td><td>46</td></tr><tr><td>0.5-30</td><td>60</td><td>50</td></tr></table> | | | | | Frequency range (MHz) | Limit (dBμV) | | Quasi-peak | Average | 0.15-0.5 | 66 to 56* | 56 to 46* | 0.5-5 | 56 | 46 | 0.5-30 | 60 | 50 |
| Frequency range (MHz) | Limit (dBμV) | | | | | | | | | | | | | | | | | | |
| | Quasi-peak | Average | | | | | | | | | | | | | | | | | |
| 0.15-0.5 | 66 to 56* | 56 to 46* | | | | | | | | | | | | | | | | | |
| 0.5-5 | 56 | 46 | | | | | | | | | | | | | | | | | |
| 0.5-30 | 60 | 50 | | | | | | | | | | | | | | | | | |
| Test setup: | <div><p style="text-align: center;">Reference Plane</p><p style="text-align: center;">Test table/Insulation plane</p><p><i>Remark</i> E.U.T: Equipment Under Test LISN: Line Impedance Stabilization Network Test table height=0.8m</p></div> | | | | | | | | | | | | | | | | | | |
| Test procedure | <div><div>1.</div><div>The E.U.T and simulators are connected to the main power through a line impedance stabilization network(L.I.S.N.). The provide a 50ohm/50uH coupling impedance for the measuring equipment.</div></div> <div><div>2.</div><div>The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs).</div></div> <div><div>3.</div><div>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 ANSI C63.4: 2009 on conducted measurement.</div></div> | | | | | | | | | | | | | | | | | | |
| Test environment: | Temp.: | 25 °C | Humid.: | 52% | Press.: | 1 012mbar | | | | | | | | | | | | | |
| Test Instruments: | Refer to section 6 for details | | | | | | | | | | | | | | | | | | |
| Test mode: | Refer to section 5.2 for details,and only shows the worst mode | | | | | | | | | | | | | | | | | | |
| Test results: | Pass | | | | | | | | | | | | | | | | | | |

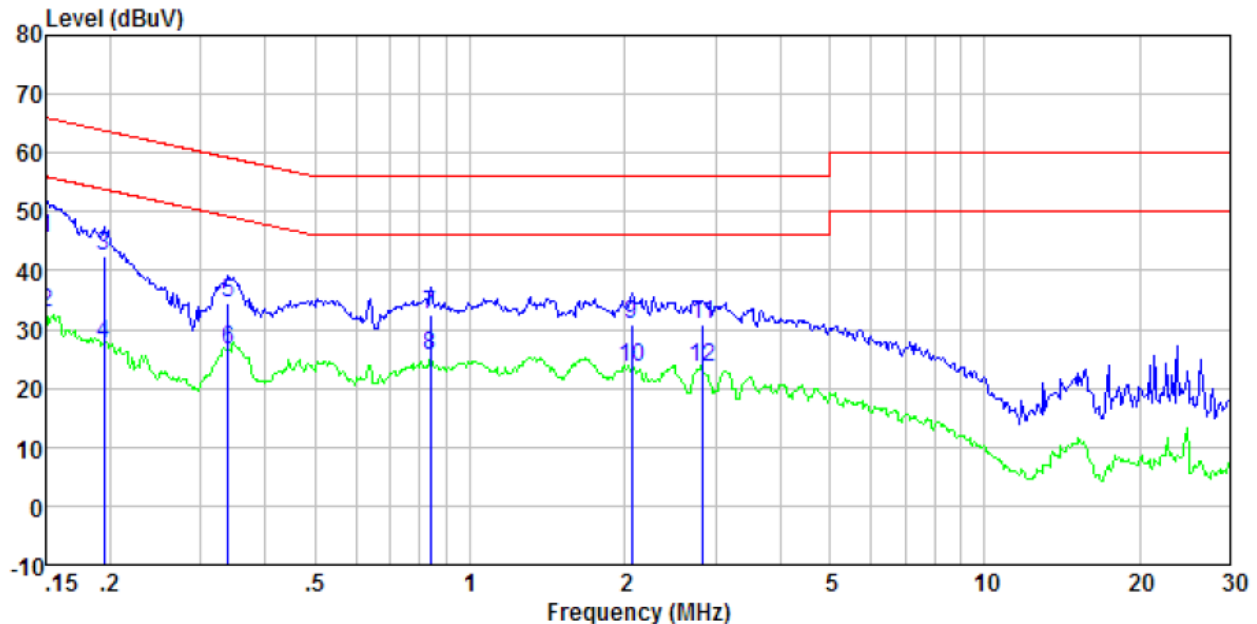
Measurement Data

| | | | |
|------------|------------|-----------------|------|
| Test mode: | Multimeter | Phase Polarity: | Line |
|------------|------------|-----------------|------|



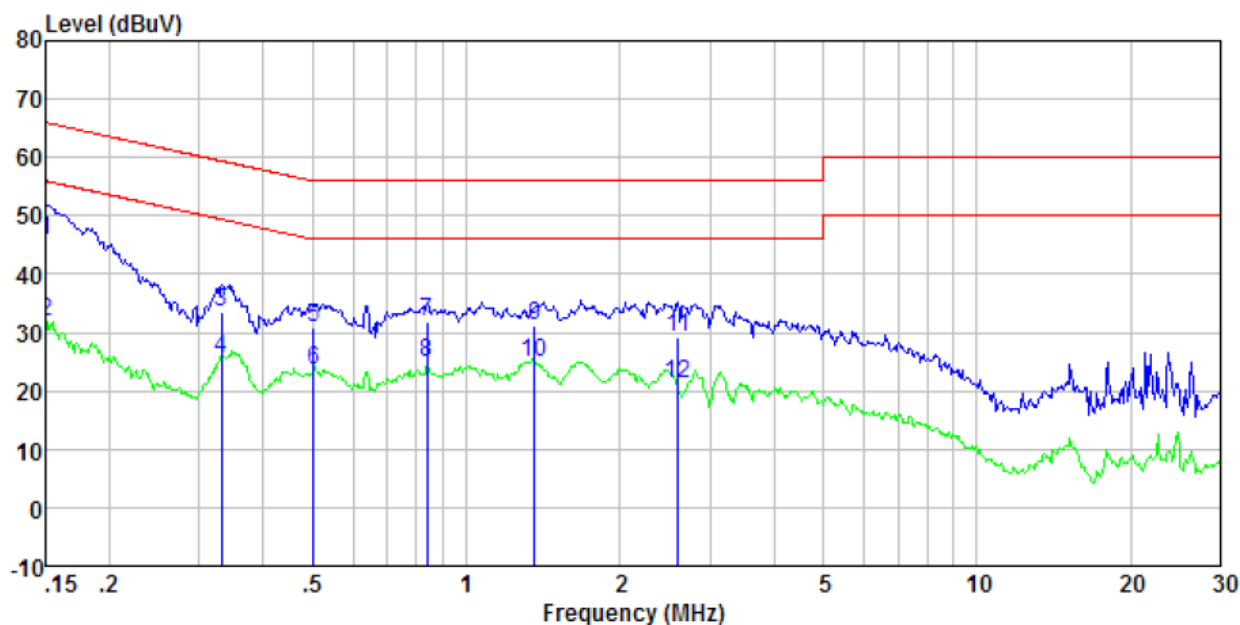
| Freq MHz | Reading level dBuV | LISN/ISN factor dB/m | Cable loss dB | Level dBuV | Limit level dBuV | Over limit dB | Remark |
|-------------|--------------------------|----------------------------|---------------------|---------------|------------------------|---------------------|---------|
| 0.15 | 45.41 | 0.40 | 0.07 | 45.88 | 66.00 | -20.12 | QP |
| 0.15 | 31.28 | 0.40 | 0.07 | 31.75 | 56.00 | -24.25 | Average |
| 0.34 | 33.15 | 0.38 | 0.10 | 33.63 | 59.13 | -25.50 | QP |
| 0.34 | 25.23 | 0.38 | 0.10 | 25.71 | 49.13 | -23.42 | Average |
| 0.84 | 31.65 | 0.23 | 0.14 | 32.02 | 56.00 | -23.98 | QP |
| 0.84 | 24.57 | 0.23 | 0.14 | 24.94 | 46.00 | -21.06 | Average |
| 1.30 | 29.84 | 0.20 | 0.16 | 30.20 | 56.00 | -25.80 | QP |
| 1.30 | 24.14 | 0.20 | 0.16 | 24.50 | 46.00 | -21.50 | Average |
| 2.50 | 30.48 | 0.20 | 0.18 | 30.86 | 56.00 | -25.14 | QP |
| 2.50 | 22.41 | 0.20 | 0.18 | 22.79 | 46.00 | -23.21 | Average |
| 3.24 | 28.55 | 0.20 | 0.19 | 28.94 | 56.00 | -27.06 | QP |
| 3.24 | 20.83 | 0.20 | 0.19 | 21.22 | 46.00 | -24.78 | Average |

| | | | |
|------------|------------|-----------------|---------|
| Test mode: | Multimeter | Phase Polarity: | Neutral |
|------------|------------|-----------------|---------|



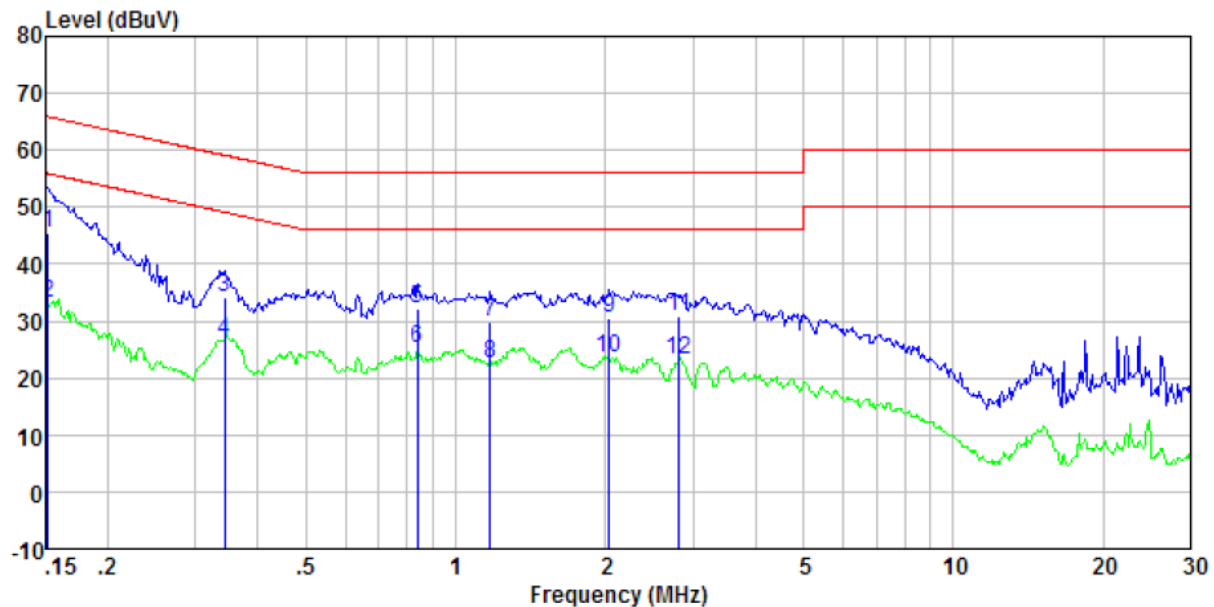
| Freq MHz | Reading level dBuV | LISM/ISN factor dB/m | Cable loss dB | Level dBuV | Limit level dBuV | Over limit dB | Remark |
|-------------|--------------------------|----------------------------|---------------------|---------------|------------------------|---------------------|---------|
| 0.15 | 45.12 | 0.40 | 0.07 | 45.59 | 66.00 | -20.41 | QP |
| 0.15 | 32.51 | 0.40 | 0.07 | 32.98 | 56.00 | -23.02 | Average |
| 0.19 | 41.87 | 0.40 | 0.11 | 42.38 | 63.84 | -21.46 | QP |
| 0.19 | 27.09 | 0.40 | 0.11 | 27.60 | 53.84 | -26.24 | Average |
| 0.34 | 34.15 | 0.38 | 0.10 | 34.63 | 59.22 | -24.59 | QP |
| 0.34 | 25.99 | 0.38 | 0.10 | 26.47 | 49.22 | -22.75 | Average |
| 0.84 | 32.26 | 0.23 | 0.14 | 32.63 | 56.00 | -23.37 | QP |
| 0.84 | 25.26 | 0.23 | 0.14 | 25.63 | 46.00 | -20.37 | Average |
| 2.07 | 30.56 | 0.20 | 0.18 | 30.94 | 56.00 | -25.06 | QP |
| 2.07 | 23.17 | 0.20 | 0.18 | 23.55 | 46.00 | -22.45 | Average |
| 2.84 | 30.60 | 0.20 | 0.19 | 30.99 | 56.00 | -25.01 | QP |
| 2.84 | 23.14 | 0.20 | 0.19 | 23.53 | 46.00 | -22.47 | Average |

| | | | |
|------------|--------------|-----------------|------|
| Test mode: | Oscilloscope | Phase Polarity: | Line |
|------------|--------------|-----------------|------|



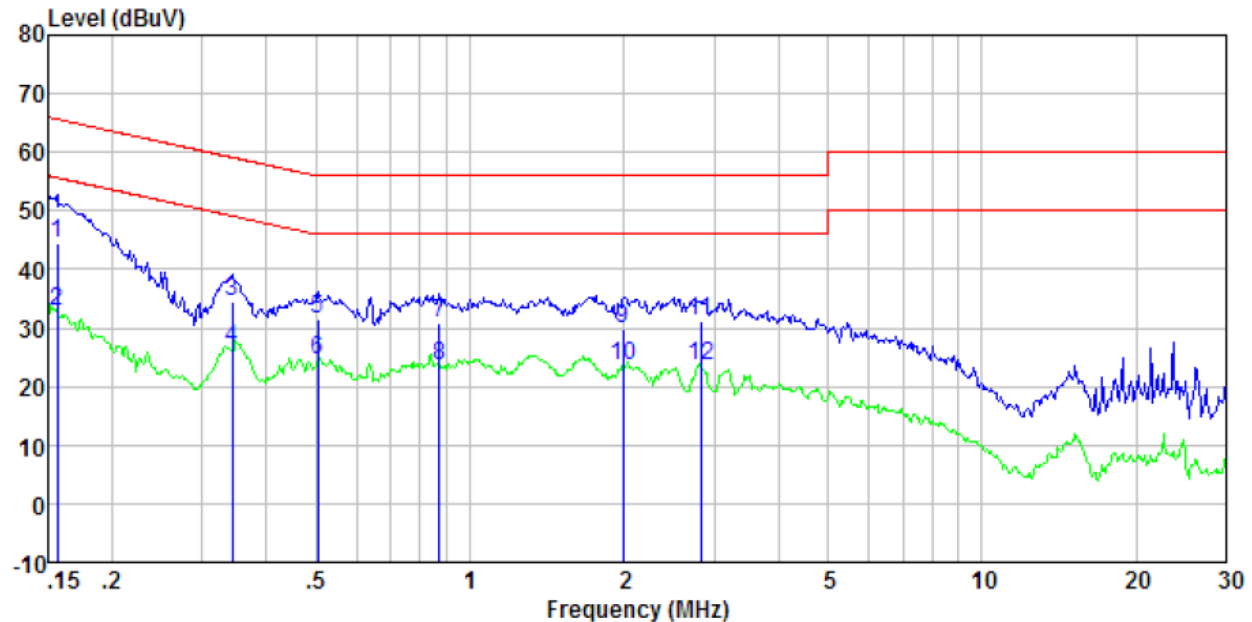
| Freq MHz | Reading level dBuV | LISM/ISN factor dB/m | Cable loss dB | Level dBuV | Limit level dBuV | Over limit dB | Remark |
|-------------|--------------------------|----------------------------|---------------------|---------------|------------------------|---------------------|---------|
| 0.15 | 45.34 | 0.40 | 0.07 | 45.81 | 66.00 | -20.19 | QP |
| 0.15 | 31.26 | 0.40 | 0.07 | 31.73 | 56.00 | -24.27 | Average |
| 0.33 | 33.11 | 0.38 | 0.10 | 33.59 | 59.40 | -25.81 | QP |
| 0.33 | 25.21 | 0.38 | 0.10 | 25.69 | 49.40 | -23.71 | Average |
| 0.50 | 30.43 | 0.31 | 0.11 | 30.85 | 56.00 | -25.15 | QP |
| 0.50 | 23.23 | 0.31 | 0.11 | 23.65 | 46.00 | -22.35 | Average |
| 0.84 | 31.57 | 0.23 | 0.14 | 31.94 | 56.00 | -24.06 | QP |
| 0.84 | 24.47 | 0.23 | 0.14 | 24.84 | 46.00 | -21.16 | Average |
| 1.36 | 30.88 | 0.20 | 0.16 | 31.24 | 56.00 | -24.76 | QP |
| 1.36 | 24.66 | 0.20 | 0.16 | 25.02 | 46.00 | -20.98 | Average |
| 2.59 | 28.69 | 0.20 | 0.18 | 29.07 | 56.00 | -26.93 | QP |
| 2.59 | 20.68 | 0.20 | 0.18 | 21.06 | 46.00 | -24.94 | Average |

| | | | |
|------------|--------------|-----------------|---------|
| Test mode: | Oscilloscope | Phase Polarity: | Neutral |
|------------|--------------|-----------------|---------|



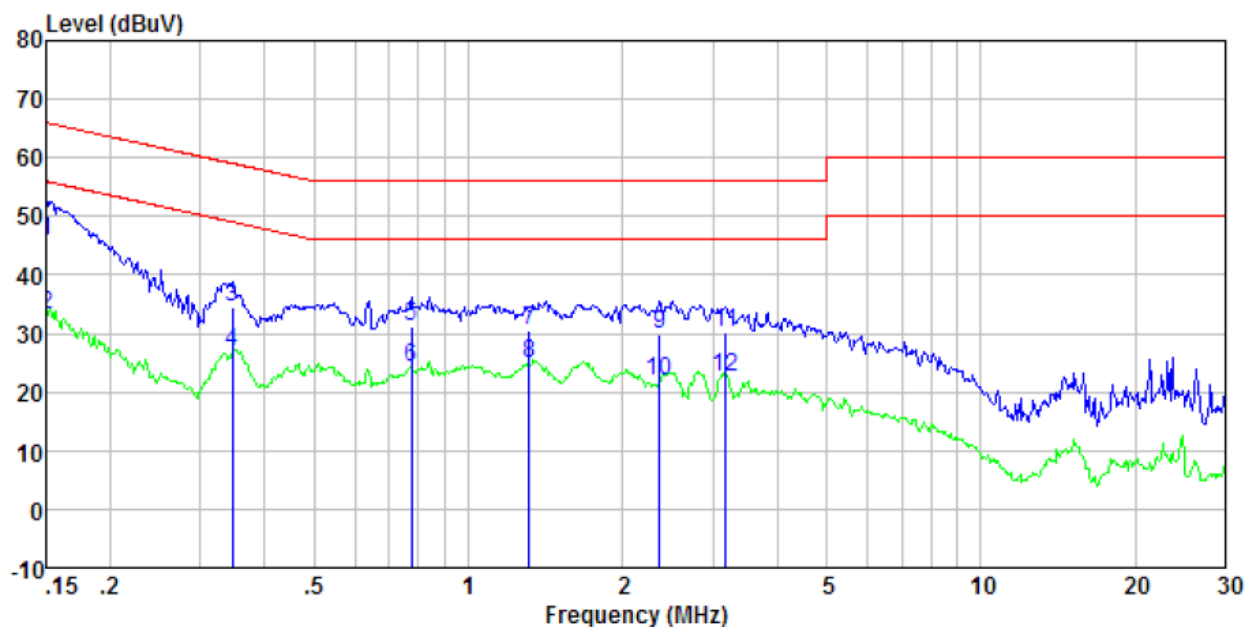
| Freq MHz | Reading level dBuV | LISN/ISN factor dB/m | Cable loss dB | Level dBuV | Limit level dBuV | Over limit dB | Remark |
|-------------|--------------------------|----------------------------|---------------------|---------------|------------------------|---------------------|---------|
| 0.15 | 45.08 | 0.40 | 0.07 | 45.55 | 65.91 | -20.36 | QP |
| 0.15 | 32.68 | 0.40 | 0.07 | 33.15 | 55.91 | -22.76 | Average |
| 0.34 | 33.72 | 0.38 | 0.10 | 34.20 | 59.13 | -24.93 | QP |
| 0.34 | 25.93 | 0.38 | 0.10 | 26.41 | 49.13 | -22.72 | Average |
| 0.84 | 31.72 | 0.23 | 0.14 | 32.09 | 56.00 | -23.91 | QP |
| 0.84 | 24.92 | 0.23 | 0.14 | 25.29 | 46.00 | -20.71 | Average |
| 1.17 | 29.40 | 0.20 | 0.16 | 29.76 | 56.00 | -26.24 | QP |
| 1.17 | 22.19 | 0.20 | 0.16 | 22.55 | 46.00 | -23.45 | Average |
| 2.03 | 30.19 | 0.20 | 0.18 | 30.57 | 56.00 | -25.43 | QP |
| 2.03 | 23.21 | 0.20 | 0.18 | 23.59 | 46.00 | -22.41 | Average |
| 2.81 | 30.36 | 0.20 | 0.19 | 30.75 | 56.00 | -25.25 | QP |
| 2.81 | 22.87 | 0.20 | 0.19 | 23.26 | 46.00 | -22.74 | Average |

| | | | |
|------------|------------------|-----------------|------|
| Test mode: | Signal generator | Phase Polarity: | Line |
|------------|------------------|-----------------|------|



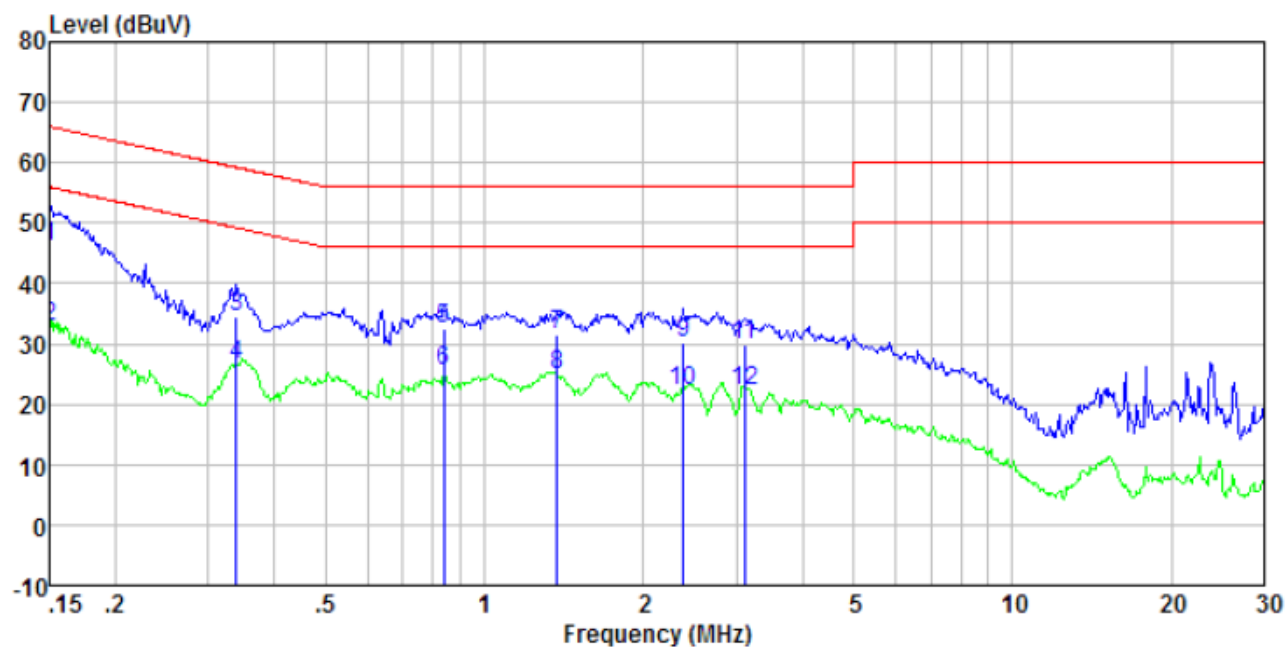
| Freq MHz | Reading level dBuV | LISN/ISN factor dB/m | Cable loss dB | Level dBuV | Limit level dBuV | Over limit dB | Remark |
|-------------|--------------------------|----------------------------|---------------------|---------------|------------------------|---------------------|---------|
| 0.16 | 44.05 | 0.40 | 0.08 | 44.53 | 65.65 | -21.12 | QP |
| 0.16 | 32.52 | 0.40 | 0.08 | 33.00 | 55.65 | -22.65 | Average |
| 0.34 | 33.88 | 0.38 | 0.10 | 34.36 | 59.13 | -24.77 | QP |
| 0.34 | 26.02 | 0.38 | 0.10 | 26.50 | 49.13 | -22.63 | Average |
| 0.50 | 31.15 | 0.31 | 0.11 | 31.57 | 56.00 | -24.43 | QP |
| 0.50 | 24.17 | 0.31 | 0.11 | 24.59 | 46.00 | -21.41 | Average |
| 0.87 | 30.36 | 0.22 | 0.14 | 30.72 | 56.00 | -25.28 | QP |
| 0.87 | 23.13 | 0.22 | 0.14 | 23.49 | 46.00 | -22.51 | Average |
| 1.99 | 29.43 | 0.20 | 0.18 | 29.81 | 56.00 | -26.19 | QP |
| 1.99 | 23.01 | 0.20 | 0.18 | 23.39 | 46.00 | -22.61 | Average |
| 2.82 | 30.69 | 0.20 | 0.19 | 31.08 | 56.00 | -24.92 | QP |
| 2.82 | 23.15 | 0.20 | 0.19 | 23.54 | 46.00 | -22.46 | Average |

| | | | |
|------------|------------------|-----------------|---------|
| Test mode: | Signal generator | Phase Polarity: | Neutral |
|------------|------------------|-----------------|---------|



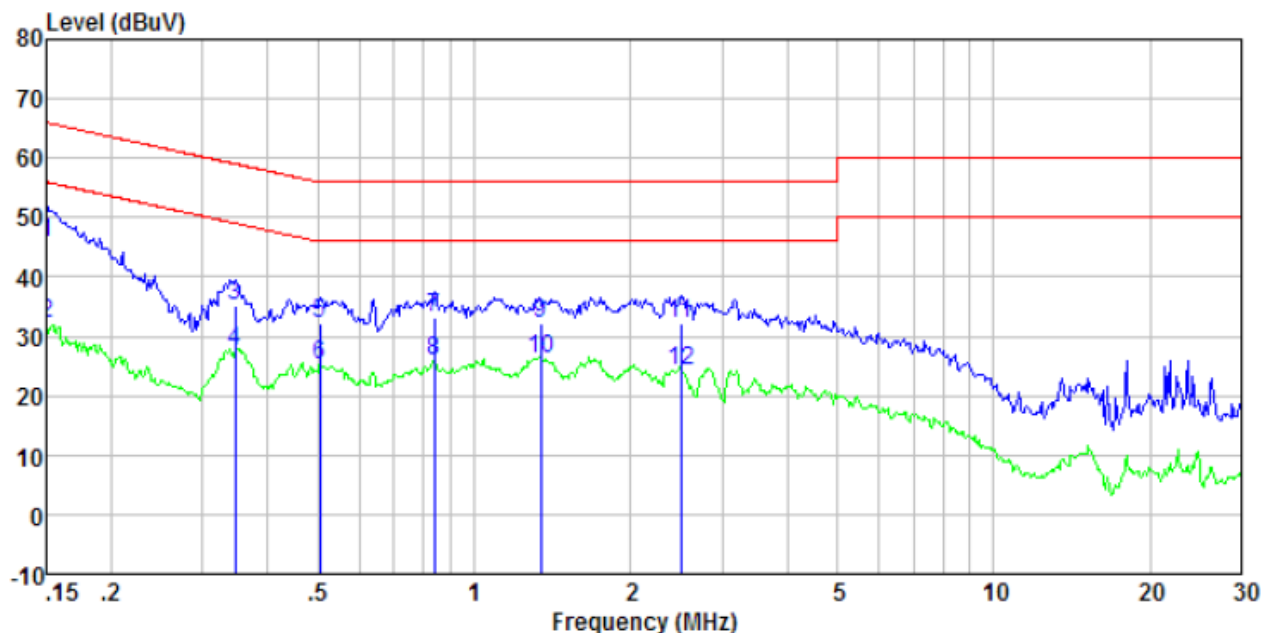
| Freq MHz | Reading level dBuV | LISN/ISN factor dB/m | Cable loss dB | Level dBuV | Limit level dBuV | Over limit dB | Remark |
|-------------|--------------------------|----------------------------|---------------------|---------------|------------------------|---------------------|---------|
| 0.15 | 45.48 | 0.40 | 0.07 | 45.95 | 66.00 | -20.05 | QP |
| 0.15 | 32.57 | 0.40 | 0.07 | 33.04 | 56.00 | -22.96 | Average |
| 0.35 | 33.93 | 0.38 | 0.10 | 34.41 | 59.05 | -24.64 | QP |
| 0.35 | 26.52 | 0.38 | 0.10 | 27.00 | 49.05 | -22.05 | Average |
| 0.78 | 30.88 | 0.24 | 0.14 | 31.26 | 56.00 | -24.74 | QP |
| 0.78 | 23.70 | 0.24 | 0.14 | 24.08 | 46.00 | -21.92 | Average |
| 1.32 | 30.31 | 0.20 | 0.16 | 30.67 | 56.00 | -25.33 | QP |
| 1.32 | 24.67 | 0.20 | 0.16 | 25.03 | 46.00 | -20.97 | Average |
| 2.36 | 29.55 | 0.20 | 0.18 | 29.93 | 56.00 | -26.07 | QP |
| 2.36 | 21.49 | 0.20 | 0.18 | 21.87 | 46.00 | -24.13 | Average |
| 3.17 | 29.91 | 0.20 | 0.19 | 30.30 | 56.00 | -25.70 | QP |
| 3.17 | 22.32 | 0.20 | 0.19 | 22.71 | 46.00 | -23.29 | Average |

| | | | |
|------------|-----|-----------------|------|
| Test mode: | OBD | Phase Polarity: | Line |
|------------|-----|-----------------|------|



| Freq MHz | Reading level dBUV | LISN/ISN factor dB/m | Cable loss dB | Level dBUV | Limit level dBUV | Over limit dB | Remark |
|-------------|--------------------------|----------------------------|---------------------|---------------|------------------------|---------------------|---------|
| 0.15 | 45.70 | 0.40 | 0.07 | 46.17 | 66.00 | -19.83 | QP |
| 0.15 | 32.50 | 0.40 | 0.07 | 32.97 | 56.00 | -23.03 | Average |
| 0.34 | 34.07 | 0.38 | 0.10 | 34.55 | 59.22 | -24.67 | QP |
| 0.34 | 25.96 | 0.38 | 0.10 | 26.44 | 49.22 | -22.78 | Average |
| 0.84 | 32.08 | 0.23 | 0.14 | 32.45 | 56.00 | -23.55 | QP |
| 0.84 | 25.05 | 0.23 | 0.14 | 25.42 | 46.00 | -20.58 | Average |
| 1.37 | 31.24 | 0.20 | 0.16 | 31.60 | 56.00 | -24.40 | QP |
| 1.37 | 24.61 | 0.20 | 0.16 | 24.97 | 46.00 | -21.03 | Average |
| 2.38 | 29.78 | 0.20 | 0.18 | 30.16 | 56.00 | -25.84 | QP |
| 2.38 | 21.89 | 0.20 | 0.18 | 22.27 | 46.00 | -23.73 | Average |
| 3.11 | 29.54 | 0.20 | 0.19 | 29.93 | 56.00 | -26.07 | QP |
| 3.11 | 21.77 | 0.20 | 0.19 | 22.16 | 46.00 | -23.84 | Average |

| | | | |
|------------|-----|-----------------|---------|
| Test mode: | OBD | Phase Polarity: | Neutral |
|------------|-----|-----------------|---------|



| Freq MHz | Reading level dBuV | LISN/ISN factor dB/m | Cable loss dB | Level dBuV | Limit level dBuV | Over limit dB | Remark |
|-------------|--------------------------|----------------------------|---------------------|---------------|------------------------|---------------------|---------|
| 0.15 | 45.19 | 0.40 | 0.07 | 45.66 | 66.00 | -20.34 | QP |
| 0.15 | 31.75 | 0.40 | 0.07 | 32.22 | 56.00 | -23.78 | Average |
| 0.35 | 34.55 | 0.38 | 0.10 | 35.03 | 59.05 | -24.02 | QP |
| 0.35 | 26.97 | 0.38 | 0.10 | 27.45 | 49.05 | -21.60 | Average |
| 0.50 | 31.75 | 0.31 | 0.11 | 32.17 | 56.00 | -23.83 | QP |
| 0.50 | 24.64 | 0.31 | 0.11 | 25.06 | 46.00 | -20.94 | Average |
| 0.84 | 32.73 | 0.23 | 0.14 | 33.10 | 56.00 | -22.90 | QP |
| 0.84 | 25.66 | 0.23 | 0.14 | 26.03 | 46.00 | -19.97 | Average |
| 1.34 | 31.77 | 0.20 | 0.16 | 32.13 | 56.00 | -23.87 | QP |
| 1.34 | 25.87 | 0.20 | 0.16 | 26.23 | 46.00 | -19.77 | Average |
| 2.50 | 31.74 | 0.20 | 0.18 | 32.12 | 56.00 | -23.88 | QP |
| 2.50 | 23.73 | 0.20 | 0.18 | 24.11 | 46.00 | -21.89 | Average |

Notes:

1. An initial pre-scan was performed on the live and neutral lines with peak detector.
2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3. Final Level = Receiver Read level + LISN Factor + Cable Loss

8 Test Setup Photo

Reference to the **appendix I** for details.

9 EUT Constructional Details

Reference to the **appendix II** for details.

-----End-----