



INSTITUTE FOR TESTING AND CERTIFICATION, a. s.

Testing Laboratory of Electric Products
Sokolovska 573
686 01 Uherske Hradiste
Czech Republic

TESTING LABORATORY

Test Report No.: 414104316NE1

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TEST REPORT

ABOUT THE ELECTROMAGNETIC COMPATIBILITY TEST on the ZipTip III Rear module



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Test Engineer and Report Author:

Mr. Vlastimil Vaculík

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Head of Testing Laboratory:

Mr. Pavel Vávra

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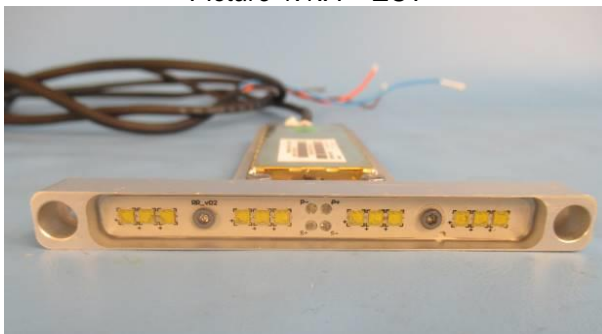
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The test results mentioned below relate solely to the Equipment under Test.

1 GENERAL SPECIFICATIONS

1.1 Equipment Under Test (EUT)

1 sample of ZipTip III Rear module AVE-ZTRSOW-D01, with serial number A00-1912-00001, was delivered 2019-12-04 for execution of the tests. The laboratory integrate the sample into the test schedule under the Job No. 414104316.

Picture 1.1.A – EUT



Picture 1.1.B – Marking label



1.2 Applicant

Aveo Engineering Group s.r.o.
Obory 98
263 01 Dobříš
Czech Republic

Company ID: 26739721
Tax ID: CZ26739721

Order No: 1992000042
as of 2019-12-10

1.3 Manufacturer

Aveo Engineering Group s.r.o.
Obory 98
263 01 Dobříš
Czech Republic

1.4 Test Period

Started on: 2019-12-04
Finished on: 2019-12-04

1.5 Test Condition

Ambient temperature (+15 up to +25) °C, (+59 up to +77) °F

Barometric pressure (86 up to 106) kPa

Relative humidity (25 up to 75) %

1.6 Specification of Used Regulations

| | |
|---|------------------|
| i | Used regulations |
| 1 | RTCA/DO-160G |

1.7 List of Used Instruments and Equipment

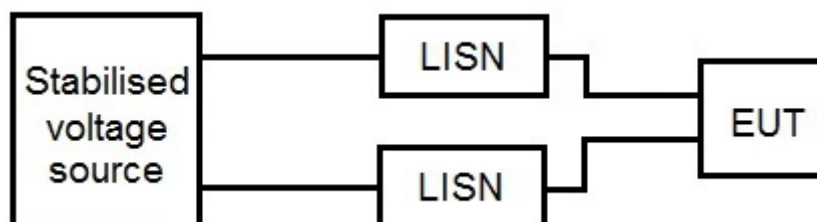
| i | Instrument / Equipment | Manufacturer | Type | Serial No | Calibration date | Calibration due |
|----|------------------------|-----------------|--------------|------------|----------------------------|-----------------|
| 1 | Test Receiver | Rohde & Schwarz | ESIB 7 | 100318 | 2017-02-10 | 2020-02-10 |
| 2 | Artificial Networks | Mesit | Z 773 | FD 002 | not subject to calibration | |
| 3 | Artificial Networks | Mesit | Z 773 | FD 003 | not subject to calibration | |
| 4 | Log-per Antenna | Frankonia | BTA-H | 97061002 | 2011-07-26 | 2021-07-23 |
| 5 | Horn Antenna | Rohde & Schwarz | HF906 | 359287/003 | 2013-08-28 | 2023-08-26 |
| 6 | Current Probe | SINGER | 91550 | 1208 | not subject to calibration | |
| 7 | Current Probe | SINGER | 94111-1 | 0176-04275 | not subject to calibration | |
| 8 | RF Amplifier | Frankonia | FLH-200B1 | 1055/1741 | not subject to calibration | |
| 9 | RF Amplifier | MILMEGA | AS0840-30-17 | 10140028 | not subject to calibration | |
| 10 | RF Amplifier | AR | 10W1000B | 21532 | not subject to calibration | |
| 11 | Coupling Clamp | MEB | KEMZ 801 | 14299 | not subject to calibration | |

All listed equipment subjected calibration has been duly calibrated and they passed a regular metrological inspection.

1.8 EUT installation

The EUT was supplied by stabilised DC voltage source of 14V. EUT was connected to LISNs using non-shielded conductors length of 1 m (3.3 ft.). The conductors was on the non-conductive support 50 mm above the ground plane. The cable was 10 cm (4 in.) from the front of the test bench. EUT was in the operational mode during the test.

Picture 1.8.A – Block diagram of test setup



2 RESULTS OF INDIVIDUAL TESTS AND EVALUATION

E: - Evaluation of test discipline

R: - Requirement

2.1 Emissions of RF Energy (RTCA/DO-160G, Section 21)

R: To comply with RTCA/DO-160G, Section 21, Item 21.4 Category H, Item 21.5 Category H.

2.1.1 Conducted emissions

The EUT was setup according to RTCA/DO-160G, section 21, figure 21-6 during the test.

Levels of spurious currents on the power leads of the EUT were measured using the current probe according to the RTCA/DO-160G, Item 21.4.

The EUT was tested in the operating mode.

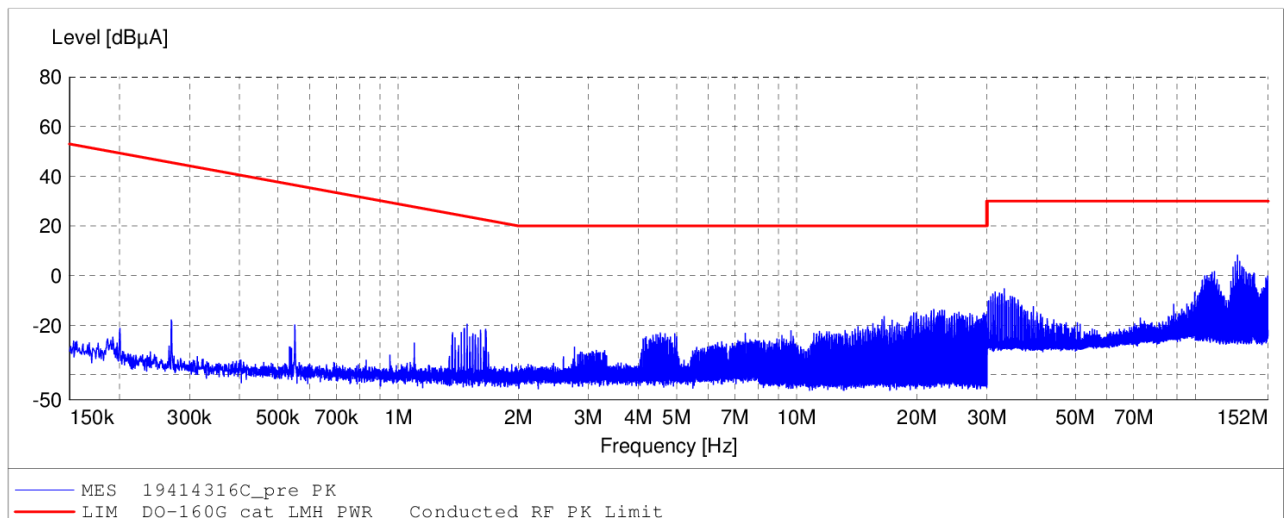
Picture 2.1.1.A – EUT during conducted emission measurement – power lead



Graph 2.1.1.A – power cable

Conducted RF Emission

EUT: ZIPTIPIII
Manufacturer: Aveo Engineering Group s.r.o.
Operating Condition:
Test Site:
Operator: V.Vaculik
Test Specification: power cable
Comment:
Start of Test: 4.12.2019 / 9:23:19



E: Pass

2.1.2 Radiated RF Interference

The EUT was setup according to RTCA/DO-160G, section 21, figure 21-11 during the test. Levels of radiated interference in the frequency band of 100 up to 1000 MHz were measured using the log-periodical antenna according to RTCA/DO-160G, Item 21.5. Levels of radiated interference in the frequency band of 1 up to 6 GHz were measured using the horn antenna according to RTCA/DO-160G, Item 21.5. The EUT was tested in the operating mode.

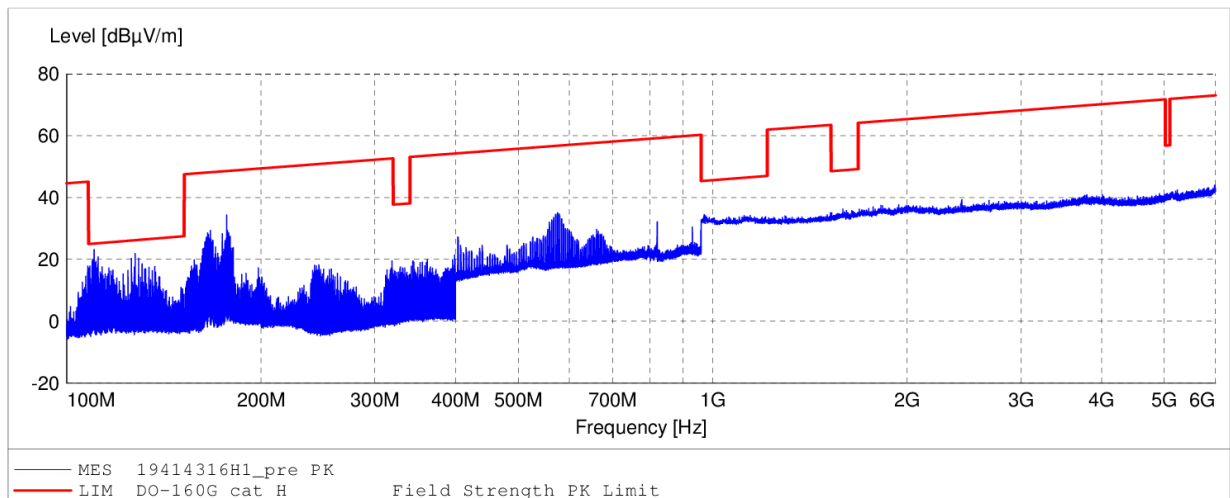
Picture 2.1.2.A – EUT during radiated emission measurement



Graph 2.1.2.A – horizontal

Emission of Radio Frequency Energy

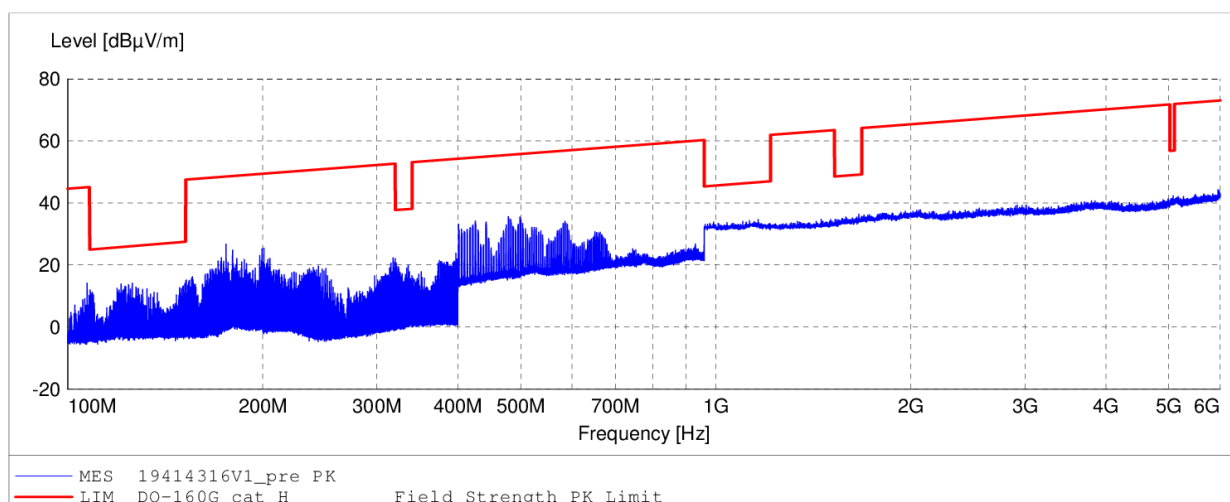
EUT: ZIPTIPIII
Manufacturer: Aveo Engineering Group s.r.o.
Operating Condition:
Test Site:
Operator: V.Vaculik
Test Specification: Horizontal
Comment: strobe, pozi
with TDK foil



Graph 2.1.2.B – vertical

Emission of Radio Frequency Energy

EUT: ZIPTIPIII
Manufacturer: Aveo Engineering Group s.r.o.
Operating Condition:
Test Site:
Operator: V.Vaculik
Test Specification: Vertical
Comment: strobe, pozi
with TDK foil



E: Pass



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3 CONCLUSION

ZipTip III Rear module AVE-ZTRSOW-D01 complies with requirements according to the RTCA/DO-160G, Section 21, paragraph 21.4, category H, paragraph 21.5, category H in the range of performed tests.

END OF THE REPORT