



# EMI – TEST REPORT

- FCC Part 15.209, RSS-GEN -

**Type / Model Name** : G1170A

**Product Description** : Valve Drive

**Applicant** : Agilent Technologies Deutschland GmbH

**Address** : Hewlett-Packard-Strasse 8

76337 Waldbronn, Baden-Württemberg

GERMANY

**Manufacturer** : Agilent Technologies Singapore (International) Pte. Ltd.

**Address** : No. 1 Yishun Ave 7

SINGAPORE 768923

SINGAPORE

**Test Result** according to the standards  
listed in clause 1 test standards:

**POSITIVE**

**Test Report No. :** 80192407-00 Rev\_1

15. October 2024

Date of issue



Deutsche  
Akkreditierungsstelle  
D-PL-12030-01-00

FCC ID: 2BGE529G1170X IC ID: 32551-29G1170X

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ATTACHMENT A to ATTACHMENT C as separate supplement

The test report merely corresponds to the test sample. It is not permitted to copy extracts of these test results without the written permission of the test laboratory.

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## **1   TEST STANDARDS**

The tests were performed according to following standards:

### **FCC Rules and Regulations Part 15, Subpart A - General (January 2024)**

#### **FCC Rules and Regulations Part 15, Subpart C - Intentional Radiators (January 2024)**

Part 15, Subpart C, Section 15.207                      Conducted limits

Part 15, Subpart C, Section 15.209                      Radiated emission limits, general requirements

### **RSS Rules and Regulations**

RSS-Gen, Issue 5, March 2018                      General Requirements and Information for the Certification of  
Amendment 1 (March 2019)                      Radiocommunication Equipment  
Amendment 2 (February 2021)

RSS-210, Issue 11, June 2024                      Licence-Exempt Radio Apparatus: Category I Equipment

ANSI C63.10: 2013                      Testing Unlicensed Wireless Devices

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## 2 EQUIPMENT UNDER TEST

### 2.1 Information provided by the Client

Please note, we do not take any responsibility for information provided by the client or his representative which may have an influence on the validity of the test results.

### 2.2 Sampling

The customer is responsible for the choice of sample. Sample configuration, start-up and operation is carried out by the customer or according his/her instructions.

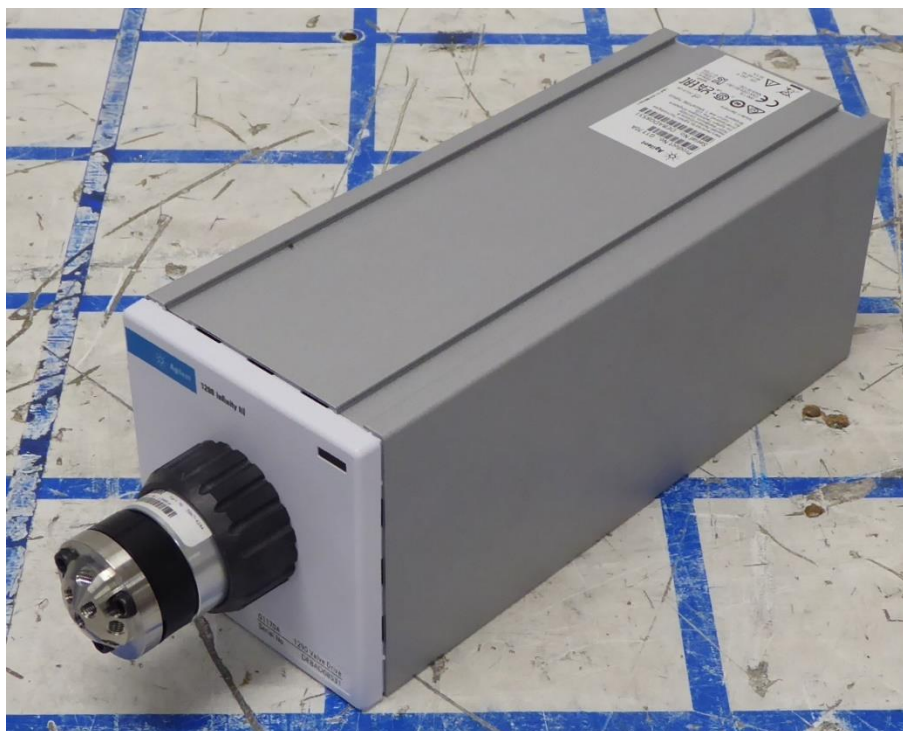
### 2.3 Photo documentation of the EUT

Detailed photos see ATTACHMENT A and ATTACHMENT C

ATTACHMENT A: External views

ATTACHMENT B: Internal views

ATTACHMENT C: Test setup



### 2.4 Short description of the equipment under test (EUT)

The EUT is a tool for multiple column selection, sample enrichment and sample cleanup, alternating column regeneration and solvent selection.

The device has one internal 125kHz antenna. The TAG reader continuously reads the antenna and the TAG.

Number of tested samples: 1  
Serial number: DEBAD08531

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## 2.5 Variants of the EUT

There are no other variants.

## 2.6 EUT operation mode

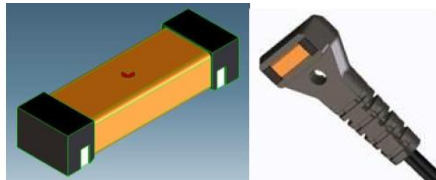
The equipment under test was operated during the measurement under the following conditions:

- Cont. TAG reading at 125 kHz (all antennas are read sequentially)

## 2.7 Antenna

Antenna: 125KHz

9140-5210 PCB Mountable Part • IND-FXD 900uH 5% 10mA 3.6X11.8mm SMT (Premo P/N SDTR1103-0090)



## 2.8 EUT configuration

The following peripheral devices and interface cables were connected during the measurements:

- |                         |  |
|-------------------------|--|
| - 5 Port Gigabit Switch | Model : Netgear – GS105 v4                           |
| - Measurement Laptop    | Model : HP – EliteBook 840 (CSA No.:01-01/01-15-019) |
| -                       | Model :  |

## 2.9 Power supply system utilised

Power supply voltage : 100 – 240 V AC, 50 or 60 Hz

All tests were carried out with a supply voltage of 120 V, 60 Hz unless otherwise stated. Exceptions are described in the detailed test conditions.

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### **3    TEST RESULT SUMMARY**

FCC Rule Part	RSS Rule Part	Description	Result
15.207	RSS-Gen, 8.8 RSS-210, 7	AC power line conducted emissions	passed
15.209	RSS-Gen, 8.9 RSS-210, 7	Field strength of fundamental	passed
15.209	RSS-Gen, 8.9 RSS-210, 7	Spurious emissions	passed
15.215	RSS-Gen, 6.7 RSS-210, 7	Occupied bandwidth	passed

#### **3.1    Revision history of test report**

Test report No	Rev.	Issue Date	Changes
80192407-00	0	25 September 2024	Initial test report
80192407-00	1	15 October 2024	Changes in point 2.5 (Variants of the EUT)

The test report with the highest revision number replaces the previous test reports.

#### **3.2    FINAL ASSESSMENT**

The equipment under test fulfills the EMI requirements cited in clause 1 test standards.

Date of receipt of test sample                   :   acc. to storage records

Testing commenced on                            :   10 January 2024

Testing concluded on                             :   06 February 2024

Checked by:

Tested by:

\_\_\_\_\_  
Klaus Gegenfurtner  
Teamleader Radio

\_\_\_\_\_  
Josef Knab  
Radio Team

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## 4 TEST ENVIRONMENT

### 4.1 Address of the test laboratory

**CSA Group Bayern GmbH**  
**Ohmstrasse 1-4**  
**94342 STRASSKIRCHEN**  
**GERMANY**

### 4.2 Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature: 15 - 35 ° C

Humidity: 30 - 60 %

Atmospheric pressure: 86 - 106 kPa

### 4.3 Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. It is noted that the expanded measurement uncertainty corresponds to the measurement results from the standard measurement uncertainty multiplied by the coverage factor  $k = 2$ . The true value is located in the corresponding interval with a probability of 95 %. The measurement uncertainty was calculated for all measurements listed in this test report on basis of the ETSI Technical Report TR 100 028 Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics; Part 1 and Part 2. The results are documented in the quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Measurement Type	Range	Confidence Level (%)	Calculated Uncertainty
AC Conducted Spurious Emissions	0.15 MHz to 30 MHz	95%	$\pm 3.29 \text{ dB}$
20 dB Bandwidth	Center frequency of EuT	95%	$\pm 2.5 \cdot 10^{-7}$
99% Occupied Bandwidth	Center frequency of EuT	95%	$\pm 2.5 \cdot 10^{-7}$
Radiated Spurious Emissions	9 kHz to 30 MHz	95%	$\pm 3.53 \text{ dB}$
Radiated Spurious Emissions	30 MHz to 1000 MHz	95%	$\pm 3.71 \text{ dB}$
Radiated Spurious Emissions	1000 MHz to 10000 MHz	95%	$\pm 2.34 \text{ dB}$
Peak conducted output power	902 MHz to 928 MHz	95%	$\pm 0.35 \text{ dB}$
Conducted Spurious Emissions	9 kHz to 10000 MHz	95%	$\pm 2.15 \text{ dB}$

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#### 4.4 Conformity Decision Rule

The applied conformity decision rule is based on ILAC G8:09/2019 clause 4.2.1 Binary Statement for Simple Acceptance Rule ( $w = 0$ ).

Details can be found in the procedure CSA\_B\_V50\_29.

#### 4.5 Measurement protocol for FCC and ISCED

##### 4.5.1 GENERAL INFORMATION

CSA Group Bayern GmbH is recognized as wireless testing laboratory under the CAB identifier:

FCC: DE 0011

ISED: DE0009

##### 4.5.2 General Standard information

The test methods used comply with ANSI C63.10 - "Testing Unlicensed Wireless Devices".

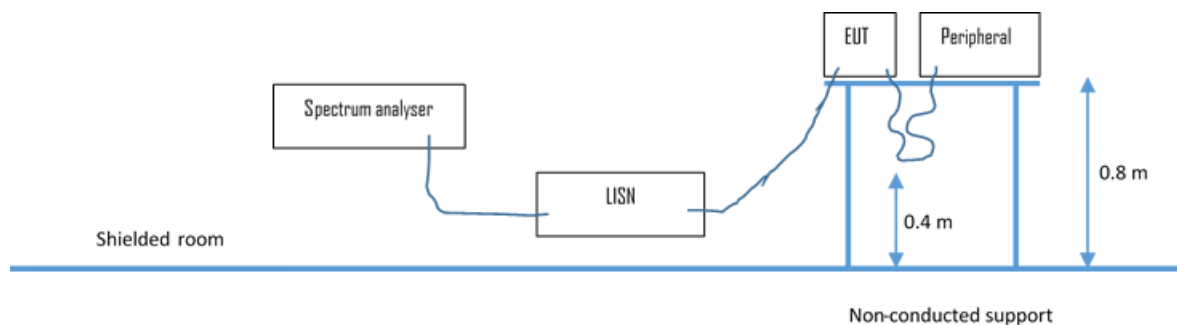
##### 4.5.2.1 Justification

The equipment under test (EUT) is configured in a typical user arrangement in accordance with the manufacturer's instructions.

##### 4.5.3 Details of test procedures

##### 4.5.3.1 Conducted emission

Test setup according ANSI C63.10



The final level, expressed in dB $\mu$ V, is arrived at by taking the reading directly from the Spectrum analyser. This level is compared to the limit.

To convert between dB $\mu$ V and  $\mu$ V, the following conversions apply:

$$\text{dB}\mu\text{V} = 20(\log \mu\text{V})$$

$$\mu\text{V} = \text{Inverse log}(\text{dB}\mu\text{V}/20)$$

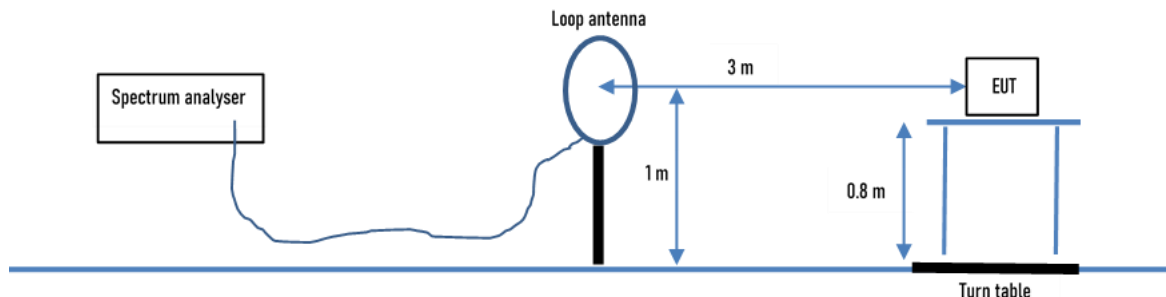
Conducted emissions on the 50 Hz and/or 60 Hz power interface of the EUT are measured in the frequency range of 150 kHz to 30 MHz. The measurements are performed using a receiver, which has CISPR characteristic bandwidth and quasi-peak detection and a Line Impedance Stabilization Network (LISN) with 50  $\Omega$  / 50  $\mu$ H (CISPR 16) characteristics. The receiver is protected by means of an impedance matched pulse limiter connected directly to the RF input. Table top equipment is placed on a non-conducting table 80 centimetres above the floor and is positioned 40 centimetres from the vertical ground plane (wall) of the screen room. If the minimum limit margin appears to be less than 20 dB with a peak mode measurement, the emission is re-measured using a tuned receiver with quasi-peak and average detection and recorded on the data sheets.

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4.5.3.2 Radiated emission

4.5.3.2.1 OATS1 test site (9 kHz - 30 MHz):

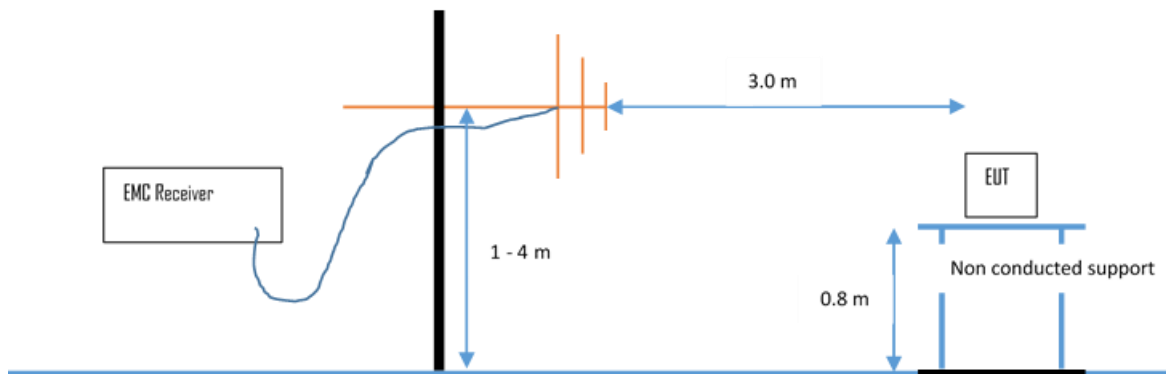
Test setup according ANSI C63.10



Emissions from the EUT are measured in the frequency range of 9 MHz to 30 MHz using a tuned receiver and a calibrated loop antenna. Table top equipment is placed on a 1.0 X 1.5 m non-conducting table 80 centimetres above the ground plane. Cables to simulators/testers (if used in this test) are routed through the center of the table and to a screened room located outside the test area. The antenna is positioned 3, 10 or 30 metres horizontally from the EUT and is repeated vertically. To locate maximum emissions from the test sample the antenna is varied along the site axis and the EUT is rotated 360 degrees.

4.5.3.2.2 OATS1 test site (30 MHz - 1 GHz):

Test setup according ANSI C63.10.



Spurious emissions from the EUT are measured in the frequency range of 30 MHz to 1000 MHz using a tuned receiver and appropriate broadband linearly polarised antennas. Measurements between 30 MHz and 1000 MHz are made with 120 kHz/6 dB bandwidth and quasi-peak detection. Table top equipment is placed on a 1.0 X 1.5 m non-conducting table 80 centimetres above the ground plane. Floor standing equipment is placed directly on the turntable/ground plane. Cables to simulators/testers (if used in this test) are routed through the center of the table and to a screened room located outside the test area. To locate maximum emissions from the test sample the antenna is varied in height from 1 to 4 metres and the EUT is rotated 360 degrees. The final level in dBµV/m is calculated by taking the reading from the EMI receiver (Level dBµV) and adding the correction factors and cable loss factor (dB). The FCC limit is subtracted from this result in order to provide the limit margin listed in the measurement protocol.

The resolution bandwidth setting:

30 MHz – 1000 MHz: RBW: 120 kHz

Example:

Frequency (MHz)	Level (dBµV)	+	Factor (dB)	=	Level (dBµV/m)	-	Limit (dBµV/m)	=	Delta (dB)
719.0	75.0	+	32.6	=	107.6	-	110.0	=	-2.4

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## 5 TEST CONDITIONS AND RESULTS

### 5.1 Conducted emissions

For test instruments and accessories used, see section 6 Part A 4.

#### 5.1.1 Description of the test location

Test location: Shielded Room S2

#### 5.1.2 Photo documentation of the test set-up

See ATTACHMENT C to this test report.

#### 5.1.3 Applicable standard

FCC Part 15, Section 15.207 / RSS-GEN, Section 8.8

#### 5.1.4 Description of Measurement

The radiated power of the spurious emission from the EUT is measured in a test setup following the procedures set out in ANSI C63.10.

#### 5.1.5 Test result

Frequency range: 0.15 MHz - 30 MHz

Min. limit margin >20 dB

Limit according to FCC Part 15, Section 15.207:

Limit according to RSS-GEN, Section 8.8:

Frequency of Emission (MHz)	Conducted Limit (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56 *	56 to 46 *
0.5-5	56	46
5-30	60	50

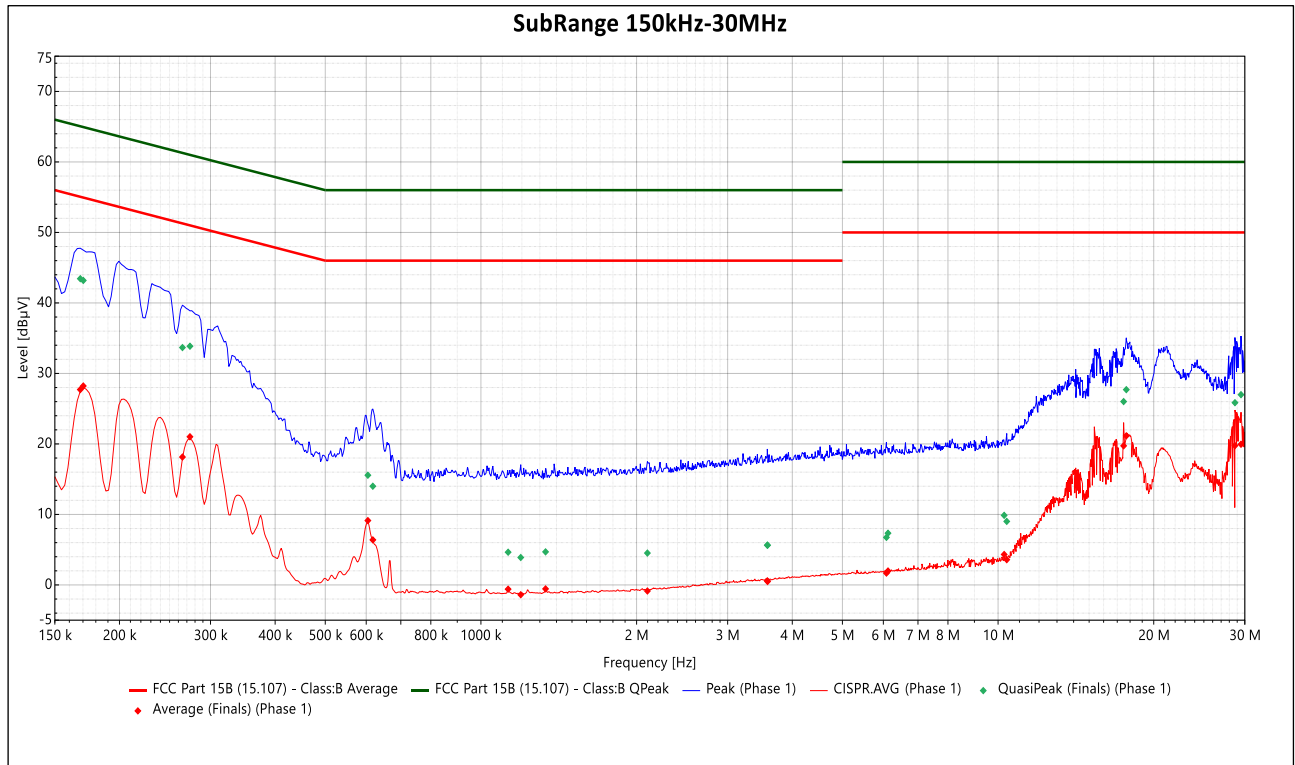
\* Decreases with the logarithm of the frequency

The requirements are **FULFILLED**.

**Remarks:** For detailed results, please see the following page(s).

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**5.1.6 Test protocol**

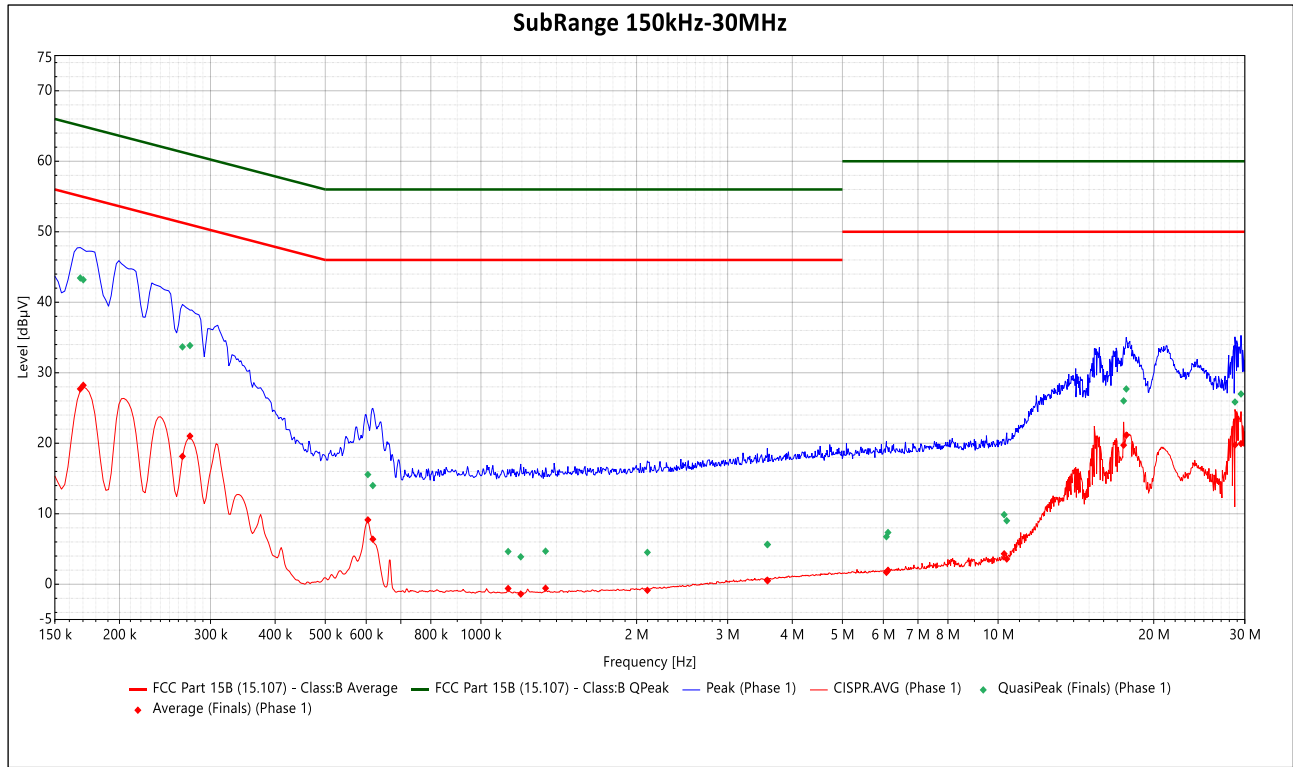
<b>File No.:</b>	80192407-00 Rev_1	<b>Result:</b>	<b>PASS</b>
<b>Operation mode:</b>	Cont. TAG reading at 125 kHz		
<b>Tested by:</b>	KJ	<b>Nexio Version:</b>	2022.0.32.0
<b>Location:</b>	S2	<b>Date:</b>	12.01.2024 10:21:30
<b>Remarks:</b>	Test point L1		



Frequency (Hz)	QuasiPeak (dBµV)	QP Margin	QP Limit (dBµV)	Average (dBµV)	AV Margin	AV Limit (dBµV)	Line	Correction (dB)
168 k	43.438	21.621	65.059	27.71	27.349	55.059	Phase 1	10.078
170.25 k	43.192	21.757	64.948	28.219	26.729	54.948	Phase 1	10.079
264.75 k	33.673	27.608	61.281	18.145	33.136	51.281	Phase 1	10.1
273.75 k	33.855	27.148	61.003	21.019	29.984	51.003	Phase 1	10.102
604.5 k	15.563	40.437	56	9.127	36.873	46	Phase 1	10.162
618 k	13.999	42.001	56	6.387	39.613	46	Phase 1	10.163
1.12875 M	4.643	51.357	56	-0.602	46.602	46	Phase 1	10.229
1.194 M	3.892	52.108	56	-1.393	47.393	46	Phase 1	10.237
1.3335 M	4.691	51.309	56	-0.558	46.558	46	Phase 1	10.254
2.0985 M	4.517	51.483	56	-0.862	46.862	46	Phase 1	10.275
3.579 M	5.636	50.364	56	0.585	45.415	46	Phase 1	10.34
3.5835 M	5.625	50.375	56	0.494	45.506	46	Phase 1	10.34
6.08325 M	6.744	53.256	60	1.679	48.321	50	Phase 1	10.533
6.126 M	7.341	52.659	60	1.983	48.017	50	Phase 1	10.538
10.275 M	9.866	50.134	60	4.32	45.68	50	Phase 1	10.675
10.39425 M	9.014	50.986	60	3.577	46.423	50	Phase 1	10.688
17.49075 M	26.006	33.994	60	19.73	30.27	50	Phase 1	11.142
17.7 M	27.697	32.303	60	21.151	28.849	50	Phase 1	11.146
28.71375 M	25.848	34.152	60	19.761	30.239	50	Phase 1	11.465
29.49675 M	26.99	33.01	60	19.954	30.046	50	Phase 1	11.479

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File No.:	80192407-00 Rev_1	Result:	PASS
Operation mode:	Cont. TAG reading at 125 kHz		
Tested by:	KJ	Nexio Version:	2022.0.32.0
Location:	S2	Date:	12.01.2024 10:21:30
Remarks:	Test point N		



Frequency (Hz)	QuasiPeak (dBµV)	QP Margin	QP Limit (dBµV)	Average (dBµV)	AV Margin	AV Limit (dBµV)	Line	Correction (dB)
165.75 k	42.483	22.687	65.171	25.713	29.457	55.171	Neutral	10.109
172.5 k	42.931	21.909	64.839	28.168	26.671	54.839	Neutral	10.111
264.75 k	33.632	27.649	61.281	18.239	33.042	51.281	Neutral	10.138
273.75 k	33.704	27.299	61.003	21.079	29.925	51.003	Neutral	10.141
604.5 k	15.8	40.2	56	9.409	36.591	46	Neutral	10.187
1.00275 M	4.079	51.921	56	-1.277	47.277	46	Neutral	10.224
1.0275 M	4.685	51.315	56	-0.617	46.617	46	Neutral	10.228
1.3335 M	4.891	51.109	56	-0.563	46.563	46	Neutral	10.271
1.44375 M	4.107	51.893	56	-1.057	47.057	46	Neutral	10.282
3.12225 M	5.55	50.45	56	0.276	45.724	46	Neutral	10.379
3.38775 M	6.142	49.858	56	0.866	45.134	46	Neutral	10.376
5.334 M	7.107	52.893	60	1.862	48.138	50	Neutral	10.471
5.82675 M	7.047	52.953	60	1.724	48.276	50	Neutral	10.505
8.9925 M	9.21	50.79	60	3.625	46.375	50	Neutral	10.634
10.275 M	9.816	50.184	60	4.277	45.723	50	Neutral	10.664
15.34875 M	27.146	32.854	60	20.165	29.835	50	Neutral	10.925
17.77425 M	28.005	31.995	60	21.476	28.524	50	Neutral	11.002
28.9185 M	26.91	33.09	60	20.579	29.421	50	Neutral	11.025

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## 5.2 Field strength of the fundamental wave

For test instruments and accessories used see section 6 Part CPR 1.

### 5.2.1 Description of the test location

Test location: OATS 1  
Test distance: 3 m

### 5.2.2 Photo documentation of the test set-up

See ATTACHMENT C to this test report.

### 5.2.3 Applicable standard

FCC Part 15, Section 15.209(a) / RSS-GEN, Section 8.9

### 5.2.4 Description of Measurement

The radiated power of the spurious emission from the EUT is measured in a test setup following the procedures set out in ANSI C63.10.

### 5.2.5 Test result accd. to FCC

- a) Result at a measurement distance of 3 m

Frequency (kHz)	Level (dB $\mu$ V)	Ant. factor (dB 1/m)	Field strength dB( $\mu$ V/m)
125.00	51.7	18.0	69.7

- b) Result extrapolated to a distance of 300 m

Frequency (kHz)	Field strength dB( $\mu$ V/m) @3m	Extrapolation factor (dB)	Field strength dB( $\mu$ V/m) @300m	Limit dB( $\mu$ V/m)	Delta (dB)
125.00	69.7	-80.0	-10.3	25.7	-36.0

Limit according to FCC Part 15, Section 15.209(a):

Frequency (kHz)	Field strength of fundamental wave		Measurement distance (metres)
	( $\mu$ V/m)	dB( $\mu$ V/m)	
125	19.2	25.7	300

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**5.2.6 Test result accd. to RSS**

- a) Result at a measurement distance of 3 m

Frequency (kHz)	Level (dB $\mu$ A)	Ant. factor (dB 1/m)	Field strength dB( $\mu$ A/m)
125.00	0.2	18.0	18.2

- b) Result extrapolated to a distance of 300 m

Frequency (kHz)	Field strength dB( $\mu$ A/m) @3m	Extrapolation factor (dB)	Field strength dB( $\mu$ A/m) @300m	Limit dB( $\mu$ A/m)	Delta (dB)
125.00	18.2	-80.0	-61.8	-25.9	-35.9

Limit according to RSS-GEN, Section 8.9:

Frequency (kHz)	Field strength of fundamental wave		Measurement distance (metres)
	( $\mu$ A/m)	dB( $\mu$ A/m)	
125	0.05096	-25.9	300

The requirements are **FULFILLED**.

**Remarks:**      None.

The test report merely corresponds to the test sample. It is not permitted to copy extracts of these test results without the written permission of the test laboratory.

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### **5.3 Spurious emissions**

For test instruments and accessories used see section 6 Part **SER 1**, **SER 2**.

#### **5.3.1 Description of the test location**

Test location:                OATS 1  
Test distance:                3 metres

#### **5.3.2 Photo documentation of the test set-up**

See ATTACHMENT C to this test report.

#### **5.3.3 Applicable standard**

FCC Part 15, Section 15.209 / RSS-GEN, Section 8.9

#### **5.3.4 Description of Measurement**

The radiated power of the spurious emission from the EUT is measured in a test setup following the procedures set out in ANSI C63.10.

The resolution bandwidth during the measurement is as follows:

9 kHz – 150 kHz:	RBW:	200 Hz
150 kHz – 30 MHz:	RBW:	9 kHz
30 MHz – 1000 MHz:	RBW:	120 kHz

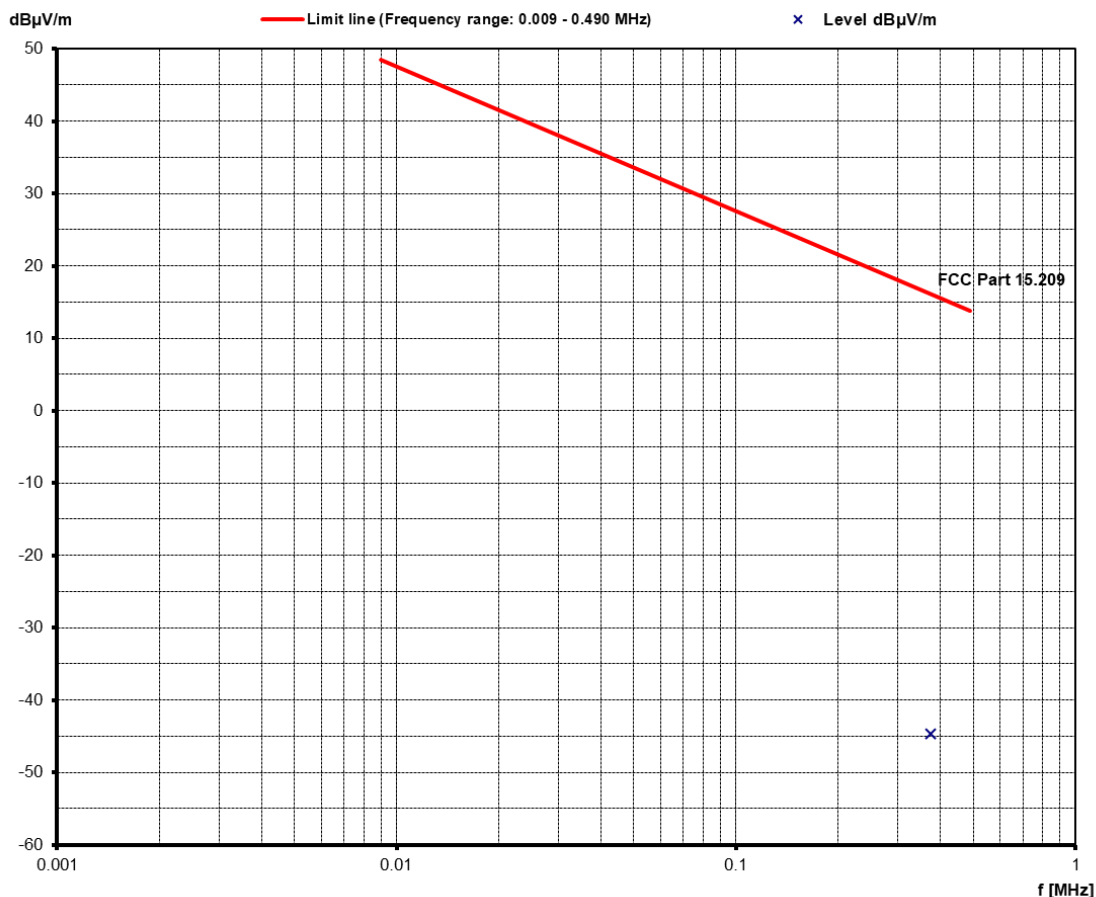
Detector: QP (In frequency range 9-90 kHz and 110-490 kHz a linear average detector is used)

The test report merely corresponds to the test sample. It is not permitted to copy extracts of these test results without the written permission of the test laboratory.

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5.3.5 Test result < 30MHz accd. to FCC

Frequency (kHz)	Level @3m (dBμV)	Ant. factor (dB 1/m)	Field strength @3m dB(μV/m)	Extrapolation factor @300m (dB)	Field strength level @300m dB(μV/m)	Limit dB(μV/m)	Delta (dB)
375.00	18.4	16.9	35.3	-80.0	-44.7	16.1	-60.8

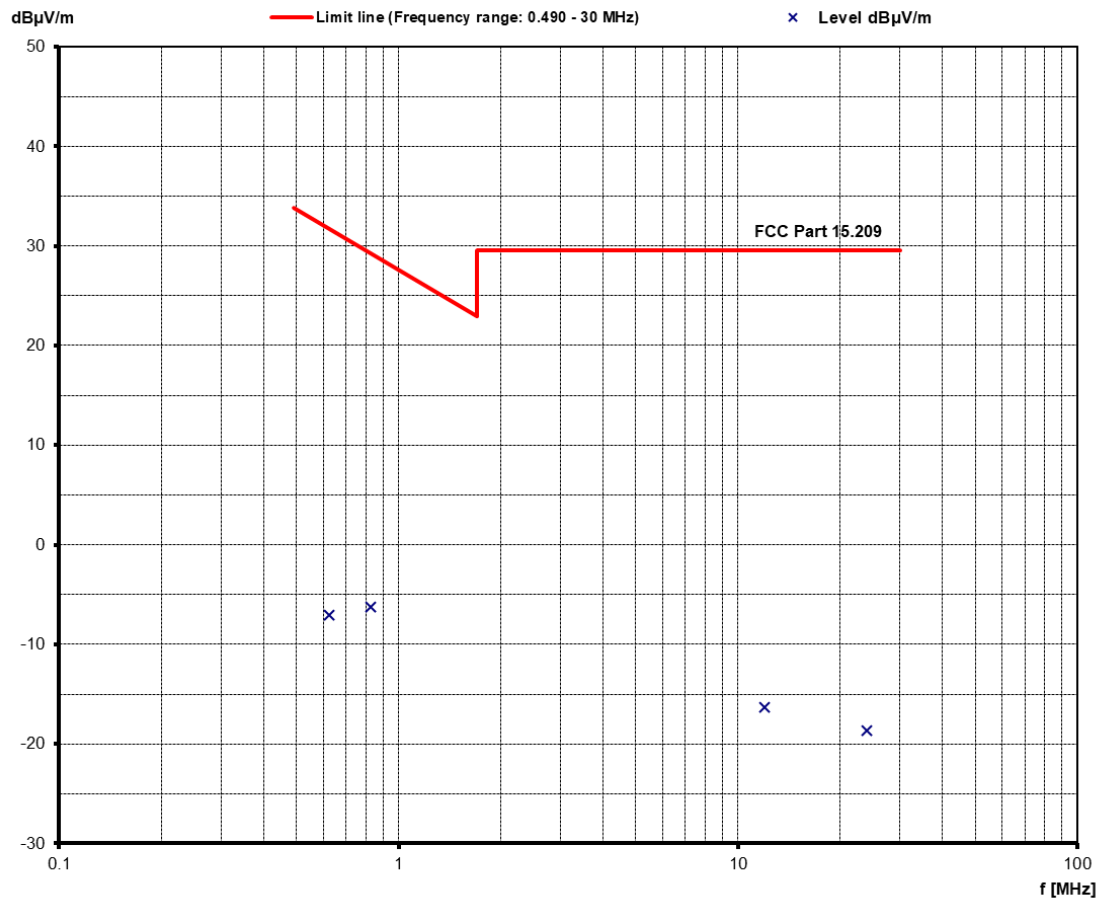


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Frequency (kHz)	Level @3m (dBμV)	Ant. factor (dB 1/m)	Field strength @3m dB(μV/m)	Extrapolation factor @30m (dB)	Field strength level @30m dB(μV/m)	Limit dB(μV/m)	Delta (dB)
625.07	14.4	18.5	32.9	-40.0	-7.1	31.7	-38.8
875.07	15.5	18.2	33.7	-40.0	-6.3	27.6	-33.9
12000*	6.1	17.6	23.7	-40.0	-16.3	29.5	-45.8
24000*	3.3	18.0	21.3	-40.0	-18.7	29.5	-48.2

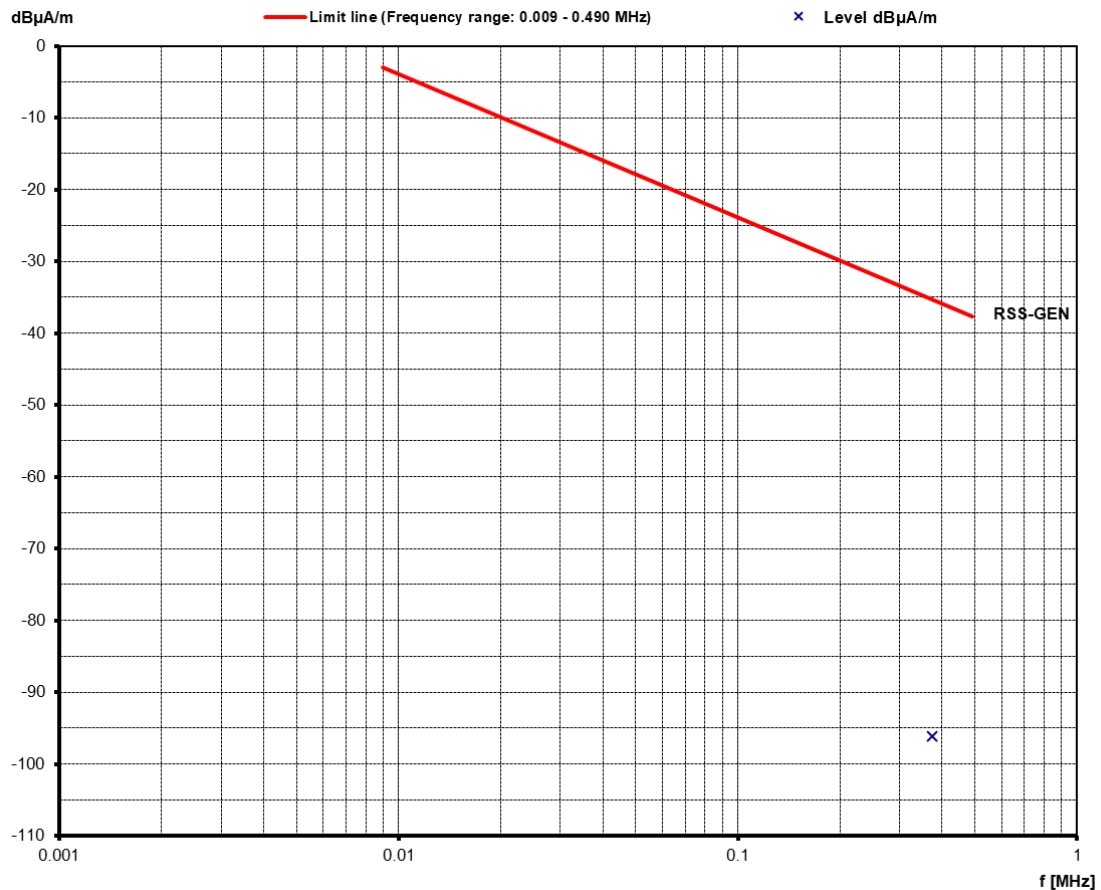
Note: \*) Ambient noise, no other spurious emissions could be detected



The test report merely corresponds to the test sample. It is not permitted to copy extracts of these test results without the written permission of the test laboratory.

**FCC ID: 2BGE529G1170X IC ID: 32551-29G1170X**
**5.3.6 Test result < 30MHz accd. to RSS**

Frequency (kHz)	Level @3m (dBμA)	Ant. factor (dB 1/m)	Field strength @3m dB(μA/m)	Extrapolation factor @300m (dB)	Field strength level @300m dB(μA/m)	Limit dB(μA/m)	Delta (dB)
375.00	-33.1	16.9	-16.2	-80.0	-96.2	-35.4	-60.8

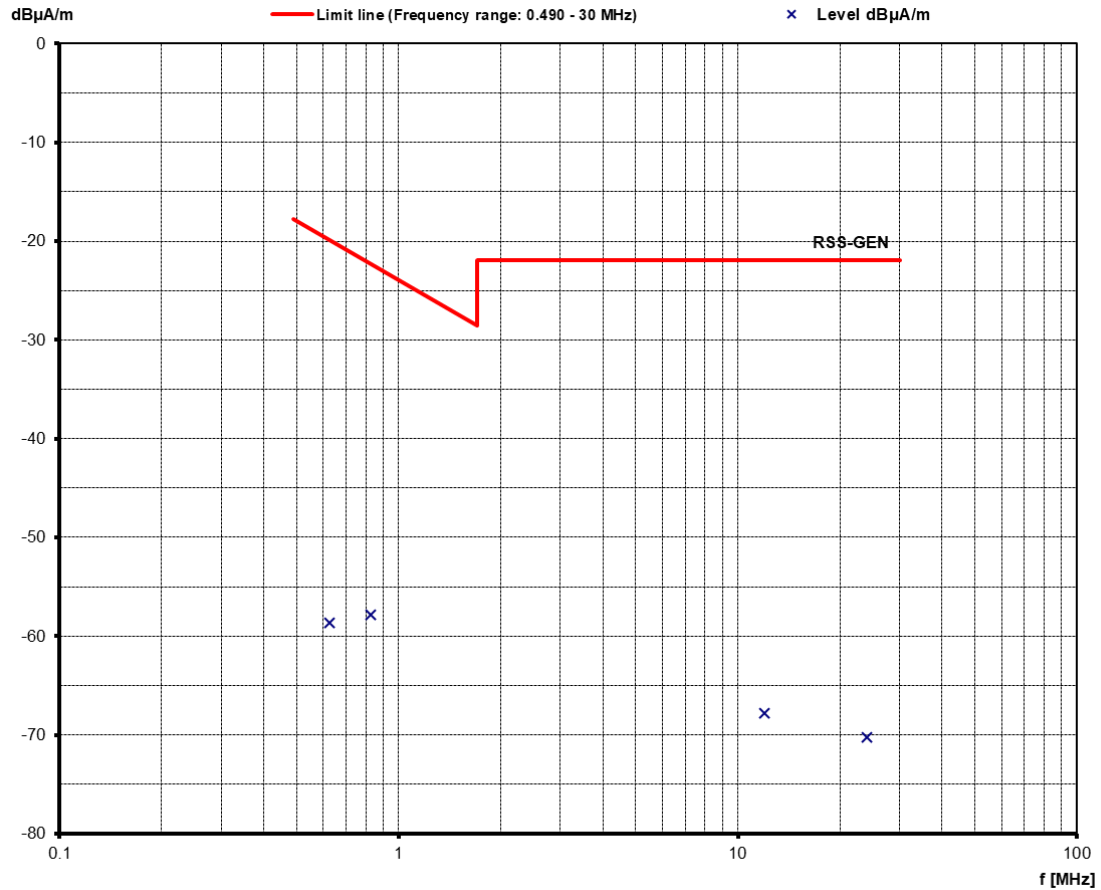


The test report merely corresponds to the test sample. It is not permitted to copy extracts of these test results without the written permission of the test laboratory.

**FCC ID: 2BGE529G1170X IC ID: 32551-29G1170X**

Frequency (kHz)	Level @3m (dBμA)	Ant. factor (dB 1/m)	Field strength @3m dB(μA/m)	Extrapolation factor @30m (dB)	Field strength level @30m dB(μA/m)	Limit dB(μA/m)	Delta (dB)
625.07	-37.1	18.5	-18.6	-40.0	-58.6	-19.8	-38.8
875.07	-36.0	18.2	-17.8	-40.0	-57.8	-22.8	-35.0
12000*	-45.4	17.6	-27.8	-40.0	-67.8	-21.9	-45.9
24000*	-48.2	18.0	-30.2	-40.0	-70.2	-21.9	-48.3

Note: \*) Ambient noise, no other spurious emissions could be detected.



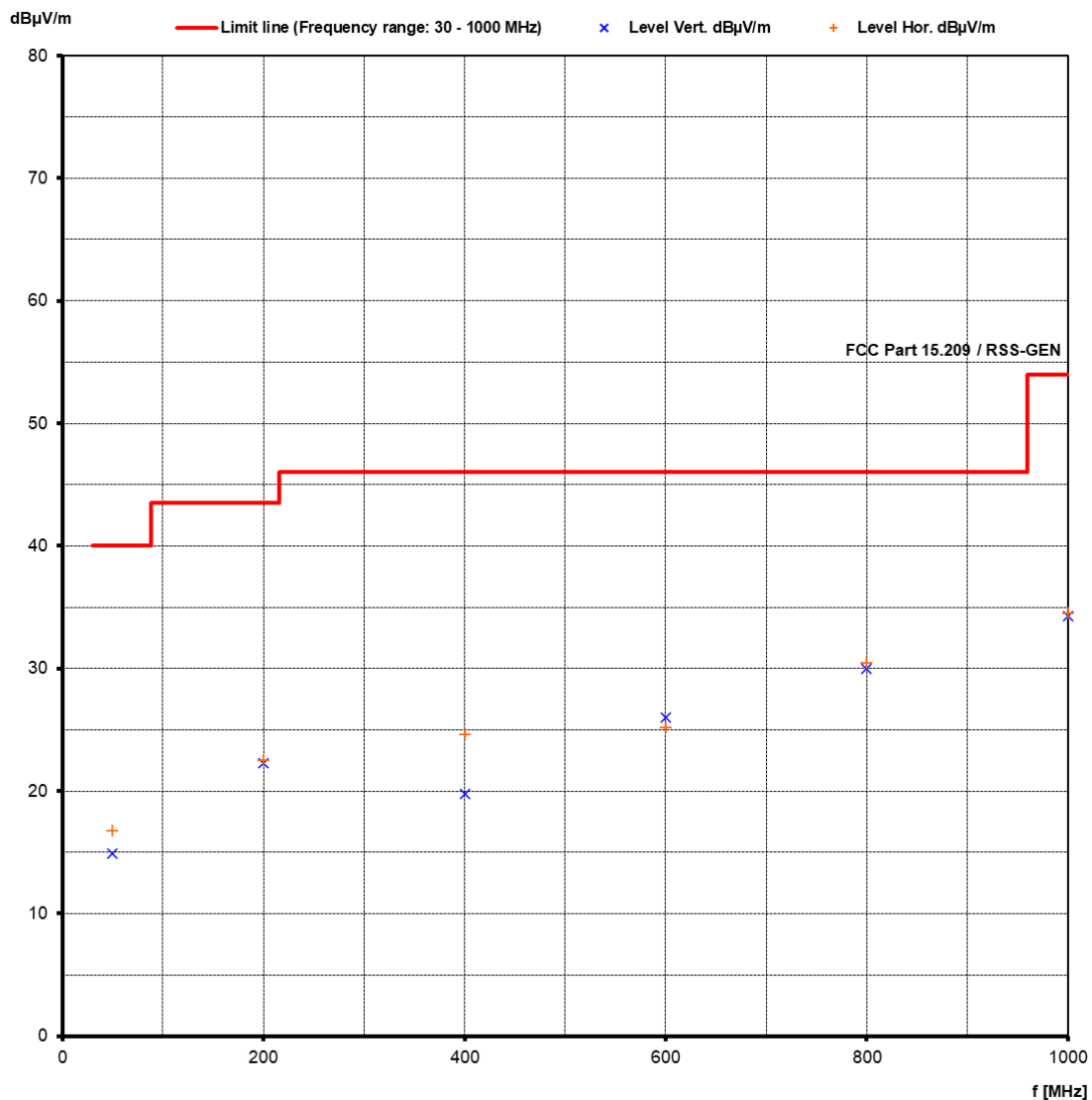
The test report merely corresponds to the test sample. It is not permitted to copy extracts of these test results without the written permission of the test laboratory.

**FCC ID: 2BGE529G1170X IC ID: 32551-29G1170X**
**5.3.7 Test result 30 MHz < f < 1 GHz**

Frequency (MHz)	Reading Vert. (dBµV)	Reading Hor. (dBµV)	Correct. Vert. (dB)	Correct. Hor. (dB)	Level Vert. (dBµV/m)	Level Hor. (dBµV/m)	Limit (dBµV/m)	Dlimit (dB)
50*	-2.7	-2.0	17.6	18.8	14.9	16.8	40.0	-23.2
200*	5.3	6.0	17.0	16.5	22.3	22.5	43.5	-21.0
400*	-3.5	1.0	23.3	23.6	19.8	24.6	46.0	-21.4
600*	-2.3	-3.4	28.3	28.6	26.0	25.2	46.0	-20.0
800*	-1.6	-1.4	31.6	31.9	30.0	30.5	46.0	-15.5
1000*	0.3	0.1	34.0	34.4	34.3	34.5	54.0	-19.5

Note: The correction factor includes cable loss and antenna factor.

Note: \*) Ambient noise, no other spurious emissions could be detected.



**FCC ID: 2BGE529G1170X IC ID: 32551-29G1170X**

Limit according to FCC Part 15, Section 15.209(a)

Frequency (MHz)	Field strength of spurious emissions		Measurement distance
	( $\mu\text{V/m}$ )	dB( $\mu\text{V/m}$ )	(metres)
0.009 - 0.490	2400/F(kHz)	--	300
0.490 - 1.705	24000/F (kHz)	--	30
1.705 - 30.0	30	29.5	30
30 - 88	100	40	3
88 - 216	150	43.5	3
216 - 960	200	46	3
Above 960	500	54	3

Limit according to RSS-Gen, Section 8.9

Frequency (MHz)	Field strength of spurious emissions		Measurement distance
	( $\mu\text{A/m}$ )	dB( $\mu\text{A/m}$ )	(metres)
0.009 - 0.490	6.37/F(kHz)	--	300 (Note 1)
0.490 - 1.705	63.7/F (kHz)	--	30
1.705 - 30.0	0.08	-22	30
Frequency (MHz)	Field strength of spurious emissions		Measurement distance
	( $\mu\text{V/m}$ )	dB( $\mu\text{V/m}$ )	(metres)
30 - 88	100	40	3
88 - 216	150	43.5	3
216 - 960	200	46	3
Above 960	500	54	3

Note 1: The emission limits for the ranges 9-90 kHz and 110-490 kHz are based on measurements employing a linear average detector.

The requirements are **FULFILLED**.

**Remarks:** Measurement has been performed up to 1000 MHz.

**FCC ID: 2BGE529G1170X    IC ID: 32551-29G1170X****5.4 Bandwidth**

For test instruments and accessories used see section 6 Part **MB**.

**5.4.1 Description of the test location**

Test location:                    AREA4

**5.4.2 Photo documentation of the test set-up**

See ATTACHMENT C to this test report.

**5.4.3 Applicable standard**

According to FCC Part 15, Section 15.215(c) / RSS-GEN, Section 6.7

**5.4.4 Test result**

Measured Bandwidth	result (kHz)	Limit (kHz)
20dB	11.117	--
99%	23.068	--

The requirements are **FULFILLED**.

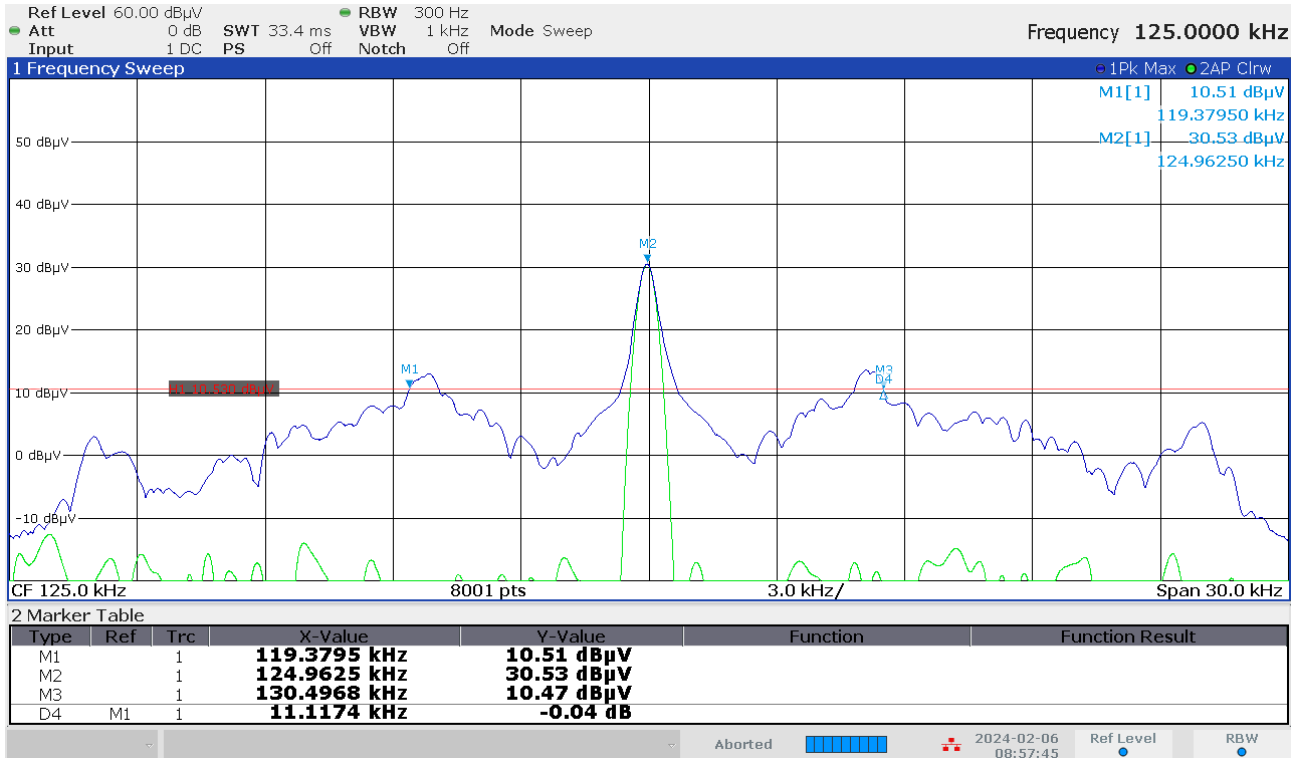
**Remarks:**            For detailed test result please refer to following test protocol.

\_\_\_\_\_

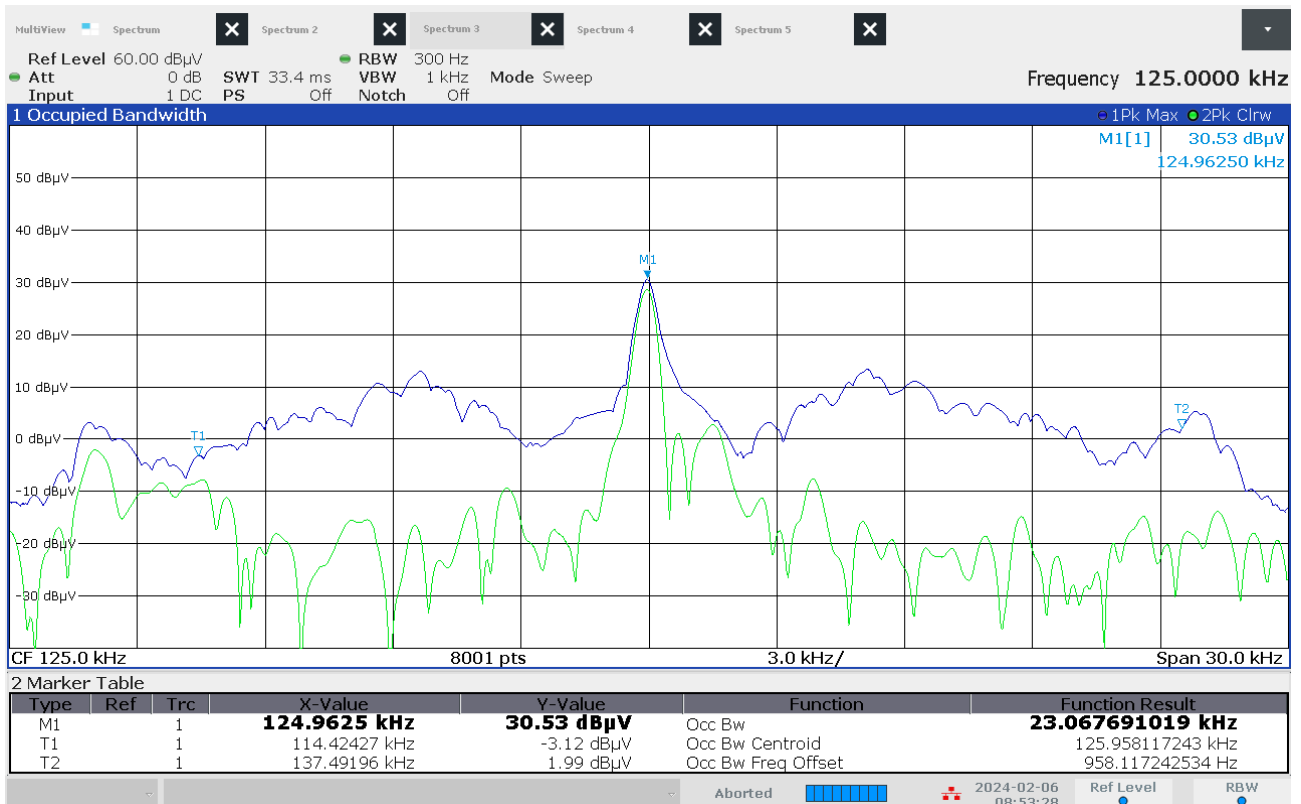
**FCC ID: 2BGE529G1170X IC ID: 32551-29G1170X**

### 5.4.5 Test protocol

#### 20 dB bandwidth



#### 99% Bandwidth



**FCC ID: 2BGE529G1170X IC ID: 32551-29G1170X**

## **6 USED TEST EQUIPMENT AND ACCESSORIES**

All test instruments used are calibrated and verified regularly. The calibration history is available on request.  
All listed measuring devices were calibrated at the time of use.

Test ID	Model Type	Equipment No.	Next Calib.	Last Calib.	Next Verif.	Last Verif.
A 4	BAT-EMC 2023.0.8.0	01-02/68-13-001				
	ESR 7	02-02/03-17-001	01/08/2024	01/08/2023		
	ESH 2 - Z 5	02-02/20-05-004	13/10/2025	13/10/2022	17/04/2024	17/04/2023
	N-4000-BNC	02-02/50-05-138				
	ESH 3 - Z 2	02-02/50-05-155	09/11/2025	09/11/2022	25/07/2024	25/07/2023
	6430	02-02/50-13-014				
CPR 1	ESW26	02-02/03-17-002	08/03/2024	08/03/2023		
	HFH 2 - Z 2	02-02/24-05-020	01/06/2025	01/06/2022	05/09/2024	05/09/2023
	KK-EF393-21N-16	02-02/50-05-033				
	NW-2000-NB	02-02/50-05-113				
	KK-EF393/U-16N-21N20 m	02-02/50-12-018				
	KK-SD_7/8-2X21N-33,0M	02-02/50-15-028				
MB	METRAHIT WORLD	02-02/32-15-001	22/11/2024	22/11/2023		
	WK-340/40	02-02/45-05-001	27/07/2024	27/07/2023		
	Type 5315.5	02-02/50-05-197				
	7405	02-02/50-05-235				
	ESW44	09-16/03-24-001	21/11/2024	21/11/2023		
SER 1	ESW26	02-02/03-17-002	08/03/2024	08/03/2023		
	HFH 2 - Z 2	02-02/24-05-020	01/06/2025	01/06/2022	05/09/2024	05/09/2023
	KK-EF393-21N-16	02-02/50-05-033				
	NW-2000-NB	02-02/50-05-113				
	KK-EF393/U-16N-21N20 m	02-02/50-12-018				
	KK-SD_7/8-2X21N-33,0M	02-02/50-15-028				
SER 2	ESVS 30	02-02/03-05-006	27/07/2024	27/07/2023		
	ESW26	02-02/03-17-002	08/03/2024	08/03/2023		
	VULB 9168	02-02/24-05-005	20/04/2024	20/04/2023	03/05/2024	03/05/2023
	NW-2000-NB	02-02/50-05-113				
	KK-EF393/U-16N-21N20 m	02-02/50-12-018				
	KK-SD_7/8-2X21N-33,0M	02-02/50-15-028				
	50F-003 N 3 dB	02-02/50-21-010				

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