EMI – TEST REPORT

- FCC 15.223 -

Type / Model Name	:	EVOLVE Family (TR7240 Rev04)
Family Variations	:	See General Remarks
Product Description	:	Electronic Article Surveillance Detection System
Applicant	:	Checkpoint Systems, Inc.
Address	:	101 Wolf Drive, Thorofare
		New Jersey, USA 08086
Manufacturer	:	Sidep Electronics (Shanghai) Co., Ltd
Address	:	No 1695 Xin Tanwa Rd, Pudong District
		Shanghai 201321 China
Licence holder	:	Checkpoint Systems, Inc.
Address	:	101 Wolf Drive, Thorofare
		New Jersey, USA 08086

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

Test Report No. : T41363-00-02HU	08. February 2017 Date of issue

Deutsche Akkreditierungsstelle
D-PL-12030-01-01
D-PL-12030-01-02

FCC ID: DO4TR7240R

Contents

1 TEST STANDARDS

The tests were performed according to following standards:

FCC Rules and Regulations Part 15, Subpart A - General (October, 2016)

Part 15, Subpart A, Section 15.31	Measurement standards
Part 15, Subpart A, Section 15.33	Frequency range of radiated measurements
Part 15, Subpart A, Section 15.35	Measurement detector functions and bandwidths
Part 15, Subpart A, Section 15.38	Incorporation by reference

FCC Rules and Regulations Part 15, Subpart C - Intentional Radiators (October, 2016)

Part 15, Subpart C, Section 15.203	Antenna requirement
Part 15, Subpart C, Section 15.204	External radio frequency power amplifiers and antenna modifications
Part 15, Subpart C, Section 15.205	Restricted bands of operation
Part 15, Subpart C, Section 15.207	Conducted limits
Part 15, Subpart C, Section 15.209	Radiated emission limits, general requirements
Part 15, Subpart C, Section 15.215	Additional provisions to the general radiated emission limitations
Part 15, Subpart C, Section 15.223	Operation in the band 1.705-10 MHz §15.223(a) Radiated emissions, Fundamental & Harmonics

FCC Rules and Regulations Part 1, Subpart I - Procedures Implementing the National Environmental Policy Act of 1969

Part 1, Subpart I, Section 1.1310	Radiofrequency radiation exposure limits
Part 1, Subpart 2, Section 2.1093	Radiofrequency radiation exposure evaluation: portable device

OET Bulletin 65, 65A, 65B, 65C Edition 97-01, August 1997 – Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields.

ANSI C63.10: 2013	Testing Unlicensed Wireless Devices
ANSI C95.1:2005	IEEE Standard for Safety Levels with respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz
CISPR 16-4-2: 2003	Uncertainty in EMC measurement

2 SUMMARY

GENERAL REMARKS:

The EVOLVE 3 TR7240/TR4240 ELECTRONIC Family consists of different versions:

- ⇨ EVOLVE P10 iRange
- ⇨ EVOLVE P10 iRange w/RFID upgrade kit
- ⇨ EVOLVE P10 iRange w/Hyperguard
- ⇨ EVOLVE G10 iRange
- ⇨ EVOLVE G35 iRange
- ⇨ EVOLVE E10 2.0 iRange
- ⇨ EVOLVE E10 2.0 iRange w/RFID upgrade kit
- ⇨ EVOLVE E10 2.0 iRange w/Hyperguard
- ⇨ EVOLVE G30 iRange

All versions are technically identical except the following items:

- ⇨ different type of antenna frames

This test report covers complete testing with:

- ⇨ EVOLVE P10 iRange
- ⇨ EVOLVE G10 iRange
- ⇨ EVOLVE G35 iRange
- ⇨ EVOLVE E10 2.0 iRange
- ⇨ EVOLVE G30 iRange

For detailed information about the different models and the antennas please refer to the user manual and the technical documentation from Checkpoint Systems, Inc.

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 : 07. November 2016

Testing concluded on : 17. November 2016

Checked by:

Klaus Gegenfurtner 2017.02.08 15:59:14 +01'00'

Klaus Gegenfurtner
Teamleader Radio

Tested by:

Markus Huber I'm the author of this document 2017.02.08 15:56:13 +01'00'

Huber Markus

3 EQUIPMENT UNDER TEST

3.1 Photo documentation of the EuT – Detailed photos see Attachment C

3.2 Ferrite Locations – See Attachment D

3.3 Power supply system utilised

Power supply voltage	:	Primary:	115 V / 60 Hz / 1ϕ
		Secondary:	24 V / DC

3.4 Short description of the Equipment under Test (EuT)

The Evolve Antennas with TR7240 Rev04 are an Electronic Article Surveillance System (EAS). The system detects target tags attached to merchandise. The tags resonate around the frequency of 8.2 MHz. The tags on a purchased article can be deactivated. In this case the tags will not resonate in a defined magnetic field which covers an area 3-feet on either side of the antenna in the 7.0 to 10.0 MHz range and triggers an alarm when a non-deactivated target is detected.

Number of tested samples: 5
Serial number: see Photo documentation of the EuT under Point 3 / Equipment Under Test

EuT operation mode:

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

- Continuous sweep mode at 8.2 MHz Band

- Continuous sweep mode at 7.2 & 8.2 MHz Dual Band

- Continuous sweep mode at 9.5 MHz Band

EuT configuration:

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

- PSU (Power Supply Unit) EOS Model : LFZVC65SG24S92, S/N: E01-B-Q130-1853
- PSU (Power Supply Unit) GlobTek Model : GT-2S5024D-R-ES, GS-599ES, S/N: RoHS314194142/15
- Standard AC mains cable Model :
- Model :

- customer specific cables

- Unscreened power cables

4 TEST ENVIRONMENT

4.1 Address of the test laboratory

CSA Group Bayern GmbH
Ohmstrasse 1-4
94342 STRASSKIRCHEN
GERMANY

4.2 Statement regarding the usage of logos in test reports

The accreditation and notification body logos displayed in this test report are only valid for standards listed in the accreditation or notification scope of CSA Group Bayern GmbH.

4.3 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

4.4 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 acc. to CISPR 16-4-2 / 11.2003 „Uncertainties, statistics and limit modelling – Uncertainty in EMC measurements“ and is documented in the quality system acc. to DIN EN ISO/IEC 17025. For all measurements shown in this report, the measurement uncertainty of the test laboratory, CSA Group Bayern GmbH, is below the measurement uncertainty as defined by CISPR. Therefore, no special measures must be taken into consideration with regard to the limits according to CISPR. 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%	± 3.29 dB
6 dB Bandwidth	Center frequency of EuT	95%	± 2.5 x 10^{-7}
20 dB Bandwidth	Center frequency of EuT	95%	± 2.5 x 10^{-7}
99% Occupied Bandwidth	Center frequency of EuT	95%	± 2.5 x 10^{-7}
Radiated Spurious Emissions	9 kHz to 30 MHz	95%	± 3.53 dB
Radiated Spurious Emissions	30 MHz to 1000 MHz	95%	± 3.71 dB
Radiated Spurious Emissions	1000 MHz to 10000 MHz	95%	± 2.34 dB
Peak conducted output power	902 MHz to 928 MHz	95%	± 0.35 dB
Conducted Spurious Emissions	9 kHz to 10000 MHz	95%	± 2.15 dB

4.5 Measurement Protocol for FCC, VCCI and AUSTEL

4.5.1 GENERAL INFORMATION

4.5.1.1 Test Methodology

Conducted and radiated disturbance testing is performed according to the procedures in International Special Committee on Radio Interference (CISPR) Publication 22, European Standard EN 55022 as shown under section 1 of this report.

In compliance with 47 CFR Part 15 Subpart A Section 15.38 testing for FCC compliance may be done following the ANSI C63.4-2003 procedures and using the CISPR 22 Limits.

4.5.1.2 Justification

The Equipment Under Test (EUT) is configured in a typical user arrangement in accordance with the manufacturer's instructions. A cable is connected to each available port and either terminated with a peripheral using the appropriate impedance characteristic or left unterminated. Where appropriate, cables are manually manipulated with respect to each other thus obtaining maximum disturbances from the unit.

4.5.2 DETAILS OF TEST PROCEDURES

General Standard Information

The test methods used comply with CISPR Publication 22, EN 55022 - " Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement" and with ANSI C63.4-2003 - "Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz."

4.6 Discovery of worst case measurement conditions

The EVOLVE 3 TR7240/TR4240 ELECTRONIC Family consists of different versions:

- ⇨ EVOLVE P10 iRange
- ⇨ EVOLVE P10 iRange w/RFID upgrade kit
- ⇨ EVOLVE P10 iRange w/Hyperguard
- ⇨ EVOLVE G10 iRange
- ⇨ EVOLVE G35 iRange
- ⇨ EVOLVE E10 2.0 iRange
- ⇨ EVOLVE E10 2.0 iRange w/RFID upgrade kit
- ⇨ EVOLVE E10 2.0 iRange w/Hyperguard
- ⇨ EVOLVE G30 iRange

All versions are technically identical except the following items:

- ⇨ different type of antenna frames
- ⇨ same type of power supply unit
- ⇨ For more detailed information see technical documentation set

To find out the worst case conditions for the complete measurements the following tests have been performed:

- ⇨ Measurement of the radiated field strength of the operating frequency of the 5 versions. This measurement has been performed in order to find out the transmitter (antenna) with the maximum field strength.
  - o Cont. sweep mode at 8.2 MHz Band => EVOLVE E10 2.0 iRange, G10 iRange
=> EVOLVE G30 iRange, G35 iRange
=> EVOLVE P10 iRange
  - o Cont. sweep mode at 7.2 & 8.2 MHz Dual Band => EVOLVE E10 2.0 iRange, G10 iRange
=> EVOLVE G30 iRange, G35 iRange
=> EVOLVE P10 iRange
  - o Cont. sweep mode at 9.5 MHz Band => EVOLVE E10 2.0 iRange, G10 iRange
=> EVOLVE G30 iRange, G35 iRange
=> EVOLVE P10 iRange
- ⇨ Measurement of the radiated spurious emissions of the 5 versions. This measurement have been performed in order to find out the maximum spurious emission of the transmitter (antenna).
Pre measurements in the chamber shows no essential differences on the different working frequency bands.
- ⇨ Pre measurement in Anechoic Chamber A1:
  - o Cont. sweep mode at 8.2 MHz Band => EVOLVE E10 2.0 iRange, G10 iRange
=> EVOLVE G30 iRange, G35 iRange
=> EVOLVE P10 iRange
  - o Cont. sweep mode at 7.2 & 8.2 MHz Dual Band => EVOLVE E10 2.0 iRange, G10 iRange
=> EVOLVE G30 iRange, G35 iRange
=> EVOLVE P10 iRange
  - o Cont. sweep mode at 9.5 MHz Band => EVOLVE E10 2.0 iRange, G10 iRange
=> EVOLVE G30 iRange, G35 iRange
=> EVOLVE P10 iRange

- ⇨ Final measurement in Open Area Test Site 1 (OATS1):
  - Cont. sweep mode at 8.2 MHz Band => EVOLVE E10 2.0 iRange, G10 iRange
    => EVOLVE G30 iRange, G35 iRange
    => EVOLVE P10 iRange

- ⇨ Measurement of the conducted emissions of the 5 versions. This measurement has been performed in order to find out the maximum spurious emissions of the transmitter (antenna).
  - With Power Supply GT-2S5024D-R-ES:
    - Cont. sweep mode at 8.2 MHz Dual Band => EVOLVE E10 2.0 iRange, G10 iRange
      => EVOLVE G30 iRange, G35 iRange
      => EVOLVE P10 iRange
  - With Power Supply LFZVC65SG24S92:
    - Cont. sweep mode at 8.2 MHz Dual Band => EVOLVE E10 2.0 iRange, G10 iRange
      => EVOLVE G30 iRange, G35 iRange
      => EVOLVE P10 iRange

Summarizing:

- ⇨ maximum conducted emission: with PSU GT-2S5024D-R-ES — EVOLVE E10 2.0 iRange
- ⇨ maximum conducted emission: with LFZVC65SG24S92 — Evolve G10 iRange
- ⇨ maximum field strength: — EVOLVE E10 2.0 iRange
- ⇨ maximum spurious emission: — Evolve G10
- ⇨ bandwidth plots: — no essential differences on the 5 versions

This test results are documented in the following sections of this test report.

4.7 Deviations or Exclusions from the Requirements and Standards

Measurement of the fundamental – 7.2 to 10.0 MHz – was perfomed by setting a spectrum analyzer to “max-hold”, peak detector, a 300 kHz bandwitdh and a span from 6.5 MHz to 10 MHz. A resolution bandwidth of 300 kHz was used in performing the “true peak” measurements, because increasing the bandwidth above 300 kHz did not increase the detected peak of the fundamental.

4.8 Connectable cables:

Name of the cable	Digital	Length/m	shielded
DC cable (Globtek)	O yes ■ no	4	O yes ■ no
DC cable (EOS)	O yes ■ no	1	O yes ■ no
DC cable (Intellquip AS/NZS)	O yes ■ no	1.5	O yes ■ no
DC cable (Planet)	O yes ■ no	0.2	O yes ■ no
Lights/sound cable	O yes ■ no	3	O yes ■ no
RF coax cable (P10, G10, G35, E10 2.0)	O yes ■ no	4	O yes ■ no
RF coax cable (G30)	O yes ■ no	12.5	O yes ■ no
Visiplus cable (G30)	O yes ■ no	11.5	O yes ■ no
RFID coax cable	O yes ■ no	4	■ yes O no
RFID lamp cable	O yes ■ no	1	O yes ■ no
Ethernet cable	■ yes O no	3	O yes ■ no
RFID Interpedestal cable	■ yes O no	3	O yes ■ no

4.9 Operation in Restricted Bands

The EUT is a digital swept frequency hopping transmitter. The EUT hops on discrete frequencies. The discrete frequencies that can be transmitted by the EUT are as follows:

Frequency table:

Frequency Table For Standard 8.2							
8.450 E+06	8.450 E+06	8.450 E+06	8.450 E+06	8.325 E+06	8.325 E+06	8.325 E+06	8.325 E+06
8.075 E+06	8.075 E+06	8.075 E+06	8.075 E+06	7.950 E+06	7.950 E+06	7.950 E+06	7.950 E+06

Frequency Table For Corral 8.2/9.0							
9.125 E+06	9.125 E+06	9.125 E+06	9.125 E+06	8.875 E+06	8.875 E+06	8.875 E+06	8.875 E+06
8.325 E+06	8.325 E+06	8.325 E+06	8.325 E+06	8.075 E+06	8.075 E+06	8.075 E+06	8.075 E+06

Frequency Table For Library 9.5							
9.800 E+06	9.800 E+06	9.800 E+06	9.800 E+06	9.600 E+06	9.600 E+06	9.600 E+060	9.600 E+06
9.400 E+06	9.400 E+06	9.400 E+06	9.400 E+06	9.200 E+06	9.200 E+06	9.200 E+06	9.200 E+06

Frequency Table For Apparel 8.2/9.2							
9.325 E+06	9.325 E+06	9.325 E+06	9.325 E+06	9.075 E+06	9.075 E+06	9.075 E+06	9.075 E+06
8.325 E+06	8.325 E+06	8.325 E+06	8.325 E+06	8.075 E+06	8.075 E+06	8.075 E+06	8.075 E+06

Frequency Table For Japan 1&2 8.2/9.5							
9.625 E+06	9.625 E+06	9.625 E+06	9.625 E+06	9.375 E+06	9.375 E+06	9.375 E+06	9.375 E+06
8.325 E+06	8.325 E+06	8.325 E+06	8.325 E+06	8.075 E+06	8.075 E+06	8.075 E+06	8.075 E+06

Frequency Table For Immunity 8.2							
8.800 E+06	8.800 E+06	8.800 E+06	8.800 E+06	8.325 E+06	8.325 E+06	8.325 E+06	8.325 E+06
8.075 E+06	8.075 E+06	8.075 E+06	8.075 E+06	7.400 E+06	7.400 E+06	7.400 E+06	7.400 E+06

Frequency Table For Pharma/Razor Keeper 7.2/8.2							
8.325 E+06	8.325 E+06	8.325 E+06	8.325 E+06	8.075 E+06	8.075 E+06	8.075 E+06	8.075 E+06
7.600 E+06	7.600 E+06	7.600 E+06	7.600 E+06	7.200 E+06	7.200 E+06	7.200 E+06	7.200 E+06

The restricted frequency bands (per FCC Part 15 Clause 15.205) in the operating frequency band of the EuT are as follows:

8.291 – 8.294 MHz
8.362 – 8.366 MHz
8.37625 – 8.38675 MHz
8.41425 – 8.41475 MHz

The transmitter is not capable of hopping into, or operating, in the restricted frequency bands and therefore complies with the restriction.

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: OATS 1

5.1.2 Photo documentation of the test set-up – See Attachment D

5.1.3 Description of Measurement

The final level, expressed in dBμV, is arrived at by taking the reading directly from the EMI receiver. This level is compared directly to the FCC Limit or to the CISPR limit.

To convert between dBμV and μV, the following conversions apply:
dBμV = 20(log μV)
μV = Inverse log(dBμV/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 50Ω/50 μH (CISPR 16) characteristics. Table top equipment is placed on a non-conducting table 80 centimeters above the floor and is positioned 40 centimeters 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 emissions are remeasured using a tuned receiver with quasi-peak and average detection and recorded on the data sheets.

5.1.4 Test result

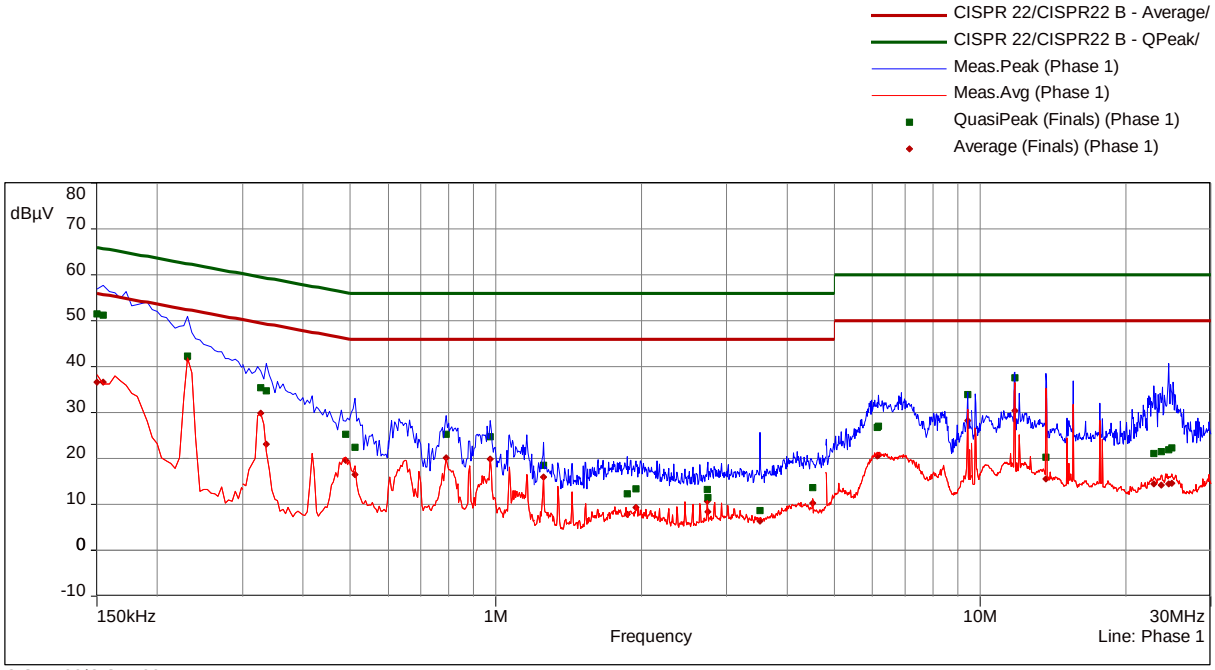
Frequency range:	0.15 MHz - 30 MHz
With PSU GT-2S5024D-R-ES:	
Min. limit margin	8.2 MHz Band: Evolve E10: 2.30 dB at 11.976 MHz
With PSU LFZVC65SG24S92:	
Min. limit margin	8.2 MHz Band: Evolve G10: 9.50 dB at 0.231 MHz

The requirements are **FULFILLED.**

Remarks: _____

5.1.5 Test protocol

Test point L1 Result: passed
Operation mode: Evolve E10 / Continuous sweep mode
Remarks: FCC/IC Requirements
With EOS PSU, Cable and Ferrite on DC line
8.2MHz Band, Tx1 & Tx2: 31 – Antenna dummy load
Tested by: Huber Markus



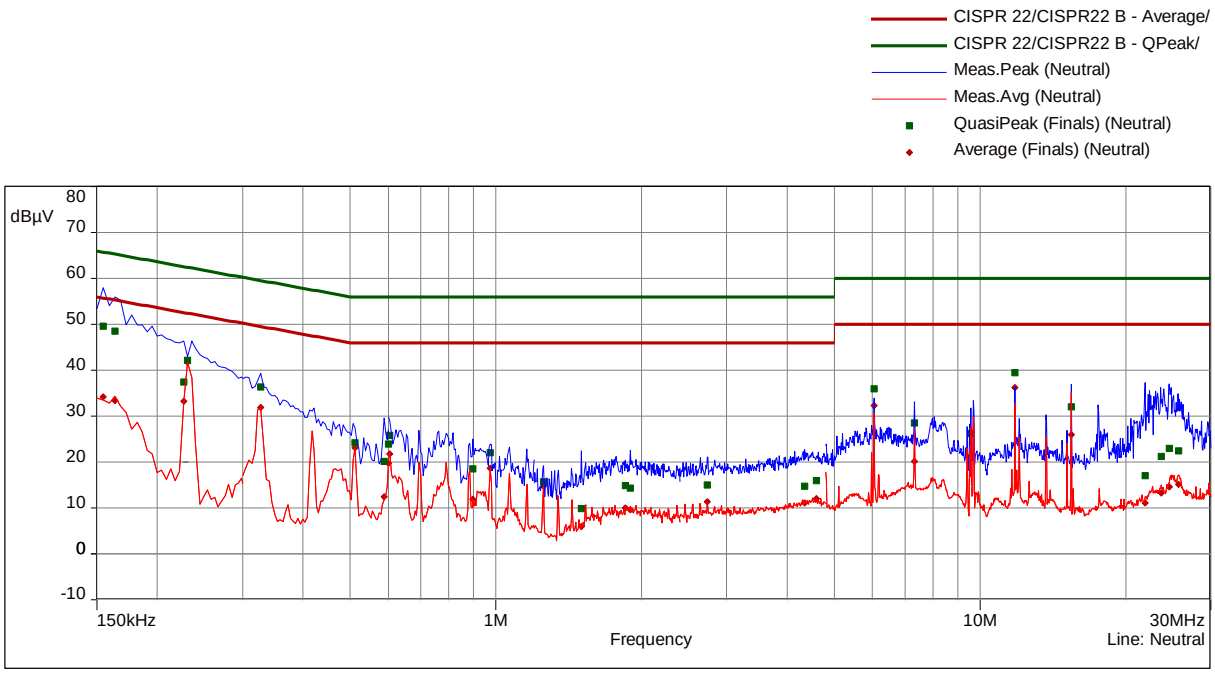
CISPR 22/CISPR22B

FCC ID: DO4TR7240R

freq	SR	QP	margin	limit	AV	margin	limit	line	corr
MHz		dB(µV)	dB	dB	dB(µV)	dB	dB		dB
0.15	1	51.51	14.49	66.00	36.61	19.39	56.00	Phase 1	9.98
0.1545	1	51.17	14.59	65.75	36.65	19.10	55.75	Phase 1	9.98
0.231	1	42.25	20.17	62.41	41.75	10.66	52.41	Phase 1	9.99
0.327	2	35.38	24.15	59.53	29.86	19.66	49.53	Phase 1	10.00
0.336	2	34.78	24.52	59.30	23.13	26.17	49.30	Phase 1	10.00
0.489	2	25.34	30.84	56.18	19.57	26.62	46.18	Phase 1	10.01
0.5115	2	22.48	33.52	56.00	16.47	29.53	46.00	Phase 1	10.01
0.789	3	25.29	30.71	56.00	20.11	25.89	46.00	Phase 1	10.02
0.9735	3	24.75	31.25	56.00	19.82	26.18	46.00	Phase 1	10.03
1.254	4	18.56	37.44	56.00	15.94	30.06	46.00	Phase 1	10.04
1.8705	4	12.29	43.71	56.00	7.91	38.09	46.00	Phase 1	10.06
1.947	4	13.38	42.62	56.00	9.29	36.71	46.00	Phase 1	10.06
2.7375	5	13.20	42.80	56.00	10.63	35.37	46.00	Phase 1	10.09
2.742	5	11.45	44.55	56.00	8.36	37.64	46.00	Phase 1	10.09
3.5115	5	8.68	47.32	56.00	6.38	39.62	46.00	Phase 1	10.11
4.5105	5	13.65	42.35	56.00	10.25	35.75	46.00	Phase 1	10.15
6.1275	6	26.79	33.21	60.00	20.51	29.49	50.00	Phase 1	10.21
6.177	6	27.04	32.96	60.00	20.69	29.31	50.00	Phase 1	10.22
9.4305	6	33.93	26.07	60.00	28.31	21.69	50.00	Phase 1	10.33
11.814	7	37.63	22.37	60.00	30.48	19.52	50.00	Phase 1	10.45
13.7085	7	20.28	39.72	60.00	15.58	34.42	50.00	Phase 1	10.56
22.8675	8	21.10	38.90	60.00	14.41	35.59	50.00	Phase 1	10.84
23.691	8	21.55	38.45	60.00	14.25	35.75	50.00	Phase 1	10.83
24.5415	8	21.97	38.03	60.00	14.47	35.53	50.00	Phase 1	10.83
24.9285	8	22.30	37.70	60.00	14.61	35.39	50.00	Phase 1	10.82

FCC ID: DO4TR7240R

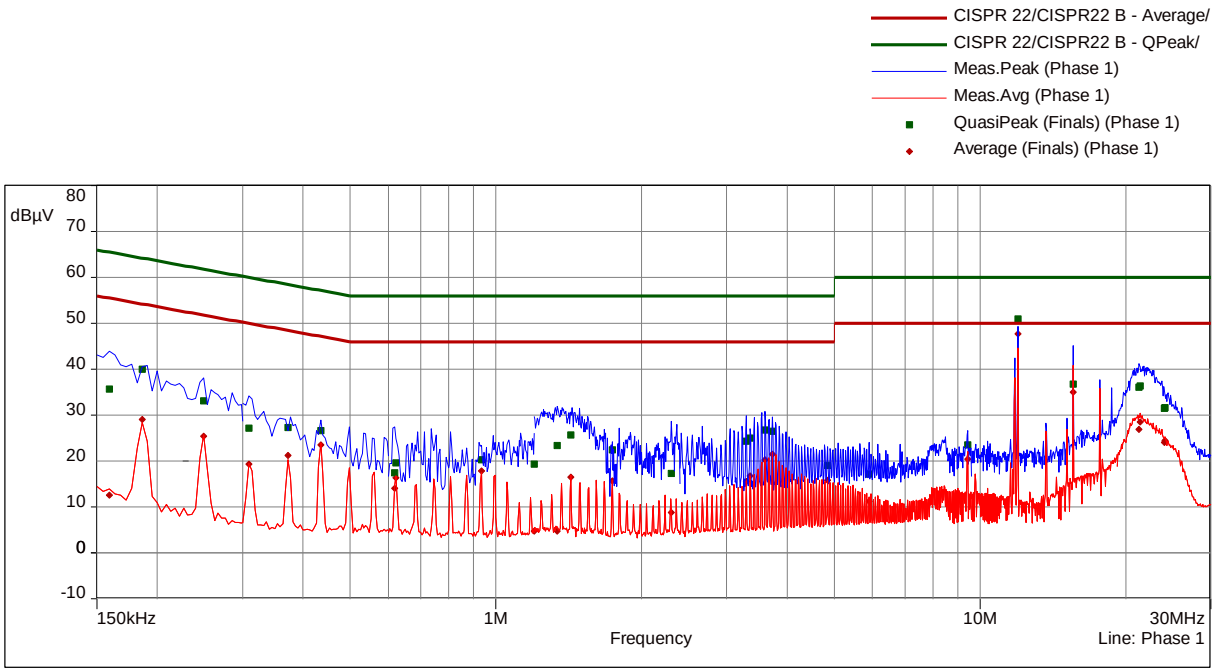
Test point	N	Result: passed
Operation mode:	Evolve E10 / Continuous sweep mode	
Remarks:	FCC/IC Requirements	
	With EOS PSU, Cable and Ferrite on DC line	
	8.2MHz Band, Tx1 & Tx2: 31 – Antenna dummy load	
Tested by:	Huber Markus	



CISPR 22/CISPR22B

freq	SR	QP	margin	limit	AV	margin	limit	line	corr
MHz		dB(µV)	dB	dB	dB(µV)	dB	dB		dB
0.1545	9	49.65	16.10	65.75	34.19	21.57	55.75	Neutral	9.99
0.1635	9	48.56	16.72	65.28	33.40	21.88	55.28	Neutral	9.99
0.2265	9	37.49	25.08	62.58	33.26	19.31	52.58	Neutral	10.00
0.231	9	42.16	20.26	62.41	41.82	10.59	52.41	Neutral	10.00
0.327	10	36.34	23.19	59.53	31.85	17.67	49.53	Neutral	10.00
0.5115	10	24.24	31.76	56.00	23.11	22.89	46.00	Neutral	10.01
0.588	10	20.16	35.84	56.00	12.50	33.50	46.00	Neutral	10.02
0.6	11	23.91	32.09	56.00	19.78	26.22	46.00	Neutral	10.02
0.6045	11	25.81	30.19	56.00	21.77	24.23	46.00	Neutral	10.02
0.897	11	18.48	37.52	56.00	11.87	34.13	46.00	Neutral	10.03
0.9735	11	21.99	34.01	56.00	18.67	27.33	46.00	Neutral	10.03
1.254	12	15.71	40.29	56.00	14.69	31.31	46.00	Neutral	10.04
1.5015	12	9.93	46.07	56.00	6.01	39.99	46.00	Neutral	10.05
1.8525	12	14.81	41.19	56.00	10.03	35.97	46.00	Neutral	10.06
1.8975	12	14.30	41.70	56.00	9.56	36.44	46.00	Neutral	10.06
2.7375	13	14.95	41.05	56.00	11.31	34.69	46.00	Neutral	10.09
4.344	13	14.79	41.21	56.00	11.06	34.94	46.00	Neutral	10.16
4.5915	13	16.01	39.99	56.00	12.00	34.00	46.00	Neutral	10.17
6.042	14	35.89	24.11	60.00	32.35	17.65	50.00	Neutral	10.24
7.329	14	28.46	31.54	60.00	20.16	29.84	50.00	Neutral	10.31
9.588	14	26.19	33.81	60.00	21.31	28.69	50.00	Neutral	10.41
11.814	15	39.51	20.49	60.00	36.28	13.72	50.00	Neutral	10.56
15.4365	15	32.00	28.00	60.00	25.93	24.07	50.00	Neutral	10.82
21.954	16	17.00	43.00	60.00	11.13	38.87	50.00	Neutral	11.12
23.7225	16	21.25	38.75	60.00	13.21	36.79	50.00	Neutral	11.14
24.6495	16	22.97	37.03	60.00	14.57	35.43	50.00	Neutral	11.15
25.7205	16	22.41	37.59	60.00	15.17	34.83	50.00	Neutral	11.14

Test point	L1	Result: passed
Operation mode:	Evolve E10 / Continuous sweep mode	
Remarks:	FCC/IC Requirements	
	With GlobTek PSU, Cable and Ferrite on DC line	
	8.2MHz Band, Tx1 & Tx2: 31 – Antenna dummy load	
Tested by:	Huber Markus	

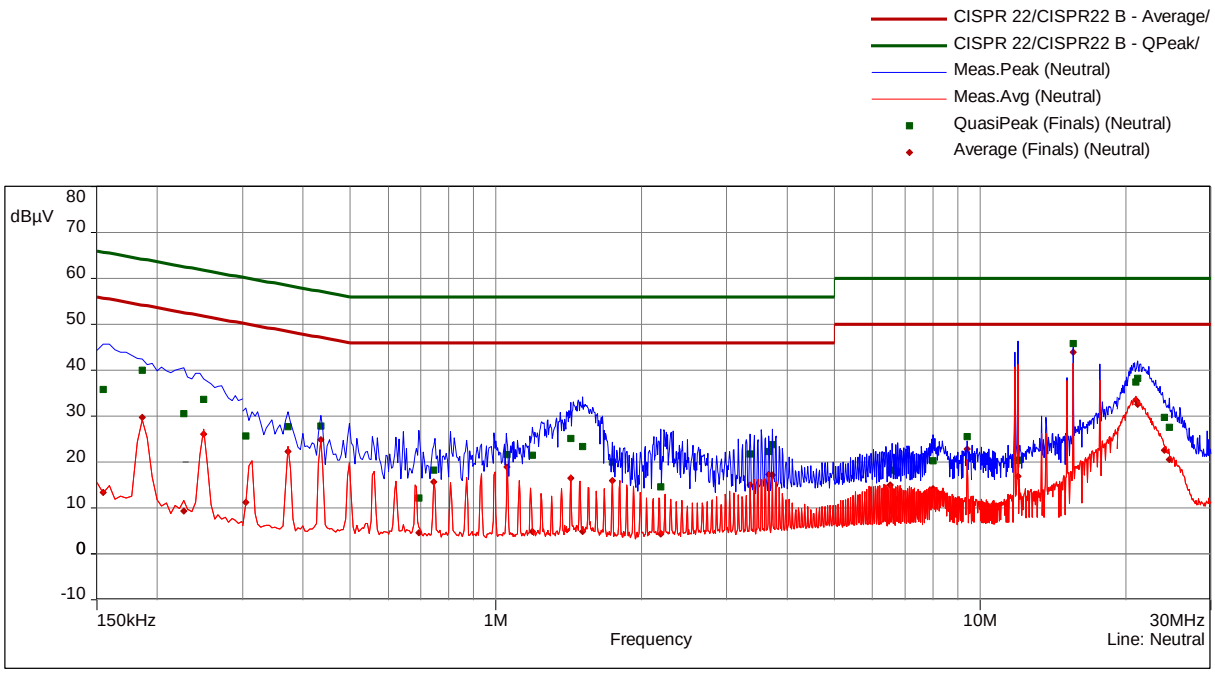


CISPR 22/CISPR22B

freq	SR	QP	margin	limit	AV	margin	limit	line	corr
MHz		dB(µV)	dB	dB	dB(µV)	dB	dB		dB
0.159	1	35.67	29.85	65.52	12.52	43.00	55.52	Phase 1	9.98
0.186	1	39.96	24.25	64.21	29.08	25.13	54.21	Phase 1	9.98
0.249	1	33.16	28.63	61.79	25.43	26.36	51.79	Phase 1	9.99
0.309	2	27.22	32.78	60.00	19.33	30.67	50.00	Phase 1	9.99
0.372	2	27.26	31.19	58.46	21.27	27.19	48.46	Phase 1	10.00
0.435	2	26.65	30.50	57.16	23.51	23.65	47.16	Phase 1	10.01
0.618	3	17.39	38.61	56.00	14.02	31.98	46.00	Phase 1	10.02
0.6225	3	19.54	36.46	56.00	16.36	29.64	46.00	Phase 1	10.02
0.933	3	20.31	35.69	56.00	17.80	28.20	46.00	Phase 1	10.03
1.2	3	19.38	36.62	56.00	4.75	41.25	46.00	Phase 1	10.04
1.3395	4	23.33	32.67	56.00	4.75	41.25	46.00	Phase 1	10.04
1.4295	4	25.64	30.36	56.00	16.45	29.55	46.00	Phase 1	10.05
1.74	4	22.45	33.55	56.00	15.74	30.26	46.00	Phase 1	10.06
2.3025	4	17.26	38.74	56.00	8.82	37.18	46.00	Phase 1	10.07
3.291	5	24.29	31.71	56.00	15.60	30.40	46.00	Phase 1	10.11
3.354	5	25.05	30.95	56.00	16.80	29.20	46.00	Phase 1	10.11
3.6015	5	26.81	29.19	56.00	20.23	25.77	46.00	Phase 1	10.12
3.7275	5	26.54	29.46	56.00	21.44	24.56	46.00	Phase 1	10.12
4.845	6	19.00	37.00	56.00	15.77	30.23	46.00	Phase 1	10.16
5.898	6	17.12	42.88	60.00	11.20	38.80	50.00	Phase 1	10.20
9.4305	6	23.48	36.52	60.00	20.36	29.64	50.00	Phase 1	10.33
11.976	7	50.99	9.01	60.00	47.70	2.30	50.00	Phase 1	10.46
15.5985	7	36.76	23.24	60.00	34.98	15.02	50.00	Phase 1	10.66
21.3105	8	36.03	23.97	60.00	26.93	23.07	50.00	Phase 1	10.85
21.432	8	36.42	23.58	60.00	28.53	21.47	50.00	Phase 1	10.85
24.0465	8	31.49	28.51	60.00	24.07	25.93	50.00	Phase 1	10.83
24.105	8	31.62	28.38	60.00	24.51	25.49	50.00	Phase 1	10.83

FCC ID: DO4TR7240R

Test point	N	Result: passed
Operation mode:	Evolve E10 / Continuous sweep mode	
Remarks:	FCC/IC Requirements	
	With GlobTek PSU, Cable and Ferrite on DC line	
	8.2MHz Band, Tx1 & Tx2: 31 – Antenna dummy load	
Tested by:	Huber Markus	



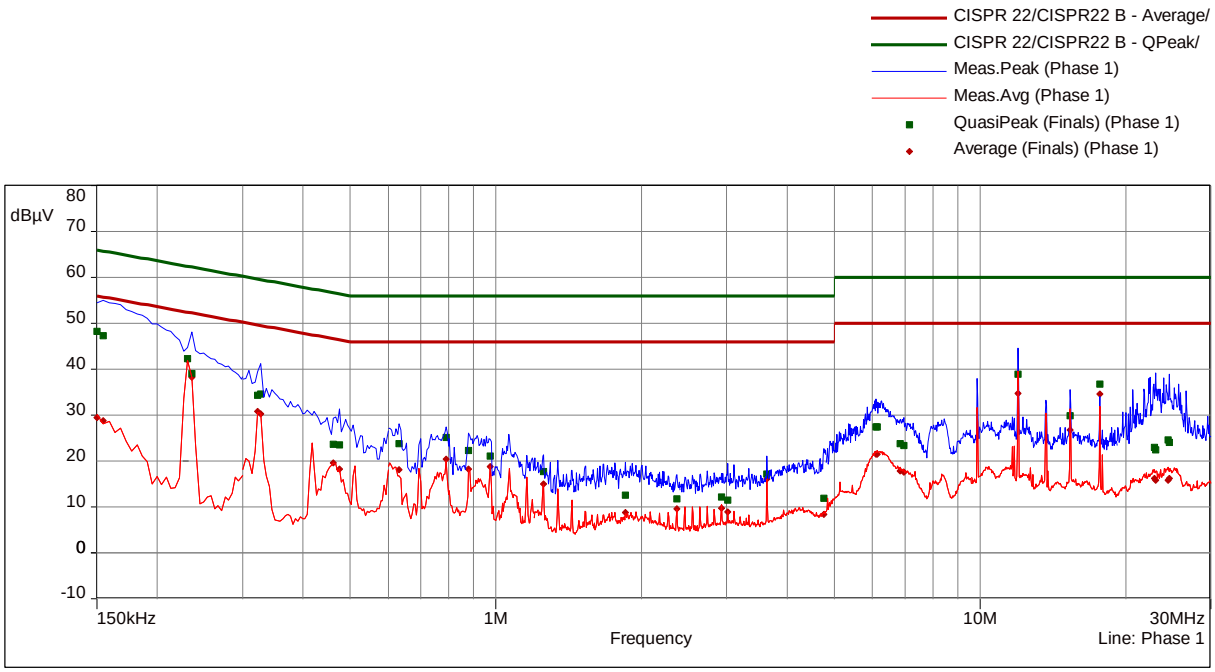
CISPR 22/CISPR22B

FCC ID: DO4TR7240R

freq	SR	QP	margin	limit	AV	margin	limit	line	corr
MHz		dB(µV)	dB	dB	dB(µV)	dB	dB		dB
0.1545	9	35.77	29.99	65.75	13.38	42.37	55.75	Neutral	9.99
0.186	9	39.98	24.24	64.21	29.80	24.42	54.21	Neutral	9.99
0.2265	9	30.62	31.96	62.58	9.36	43.22	52.58	Neutral	10.00
0.249	9	33.72	28.07	61.79	26.13	25.66	51.79	Neutral	10.00
0.3045	10	25.67	34.45	60.12	11.28	38.84	50.12	Neutral	10.00
0.372	10	27.67	30.79	58.46	22.29	26.17	48.46	Neutral	10.01
0.435	10	27.88	29.28	57.16	24.90	22.26	47.16	Neutral	10.01
0.6945	11	12.10	43.90	56.00	4.63	41.37	46.00	Neutral	10.02
0.744	11	18.22	37.78	56.00	15.67	30.33	46.00	Neutral	10.02
1.0545	11	21.64	34.36	56.00	18.99	27.01	46.00	Neutral	10.03
1.1895	11	21.48	34.52	56.00	4.82	41.18	46.00	Neutral	10.04
1.4295	12	25.19	30.81	56.00	16.53	29.47	46.00	Neutral	10.05
1.5105	12	23.39	32.61	56.00	4.94	41.06	46.00	Neutral	10.05
1.74	12	20.04	35.96	56.00	16.00	30.00	46.00	Neutral	10.06
2.19	12	14.65	41.35	56.00	4.36	41.64	46.00	Neutral	10.07
3.354	13	21.79	34.21	56.00	15.07	30.93	46.00	Neutral	10.12
3.6645	13	22.29	33.71	56.00	17.25	28.75	46.00	Neutral	10.13
3.7275	13	23.79	32.21	56.00	17.13	28.87	46.00	Neutral	10.13
6.5235	14	18.31	41.69	60.00	15.01	34.99	50.00	Neutral	10.27
6.7665	14	17.92	42.08	60.00	12.06	37.94	50.00	Neutral	10.28
8.013	14	20.22	39.78	60.00	14.21	35.79	50.00	Neutral	10.34
9.408	14	25.59	34.41	60.00	22.80	27.20	50.00	Neutral	10.40
11.976	15	20.44	39.56	60.00	16.85	33.15	50.00	Neutral	10.57
15.5985	15	45.86	14.14	60.00	43.93	6.07	50.00	Neutral	10.83
20.9955	16	37.43	22.57	60.00	33.54	16.46	50.00	Neutral	11.10
21.1845	16	38.30	21.70	60.00	32.60	17.40	50.00	Neutral	11.11
24.0465	16	29.79	30.21	60.00	22.59	27.41	50.00	Neutral	11.14
24.609	16	27.61	32.39	60.00	20.57	29.43	50.00	Neutral	11.15

FCC ID: DO4TR7240R

Test point	L1	Result: passed
Operation mode:	Evolve G10 / Continuous sweep mode	
Remarks:	FCC/IC Requirements	
	With EOS PSU, Cable and Ferrite on DC line	
	8.2MHz Band, Tx1 & Tx2: 31 – Antenna dummy load	
Tested by:	Huber Markus	



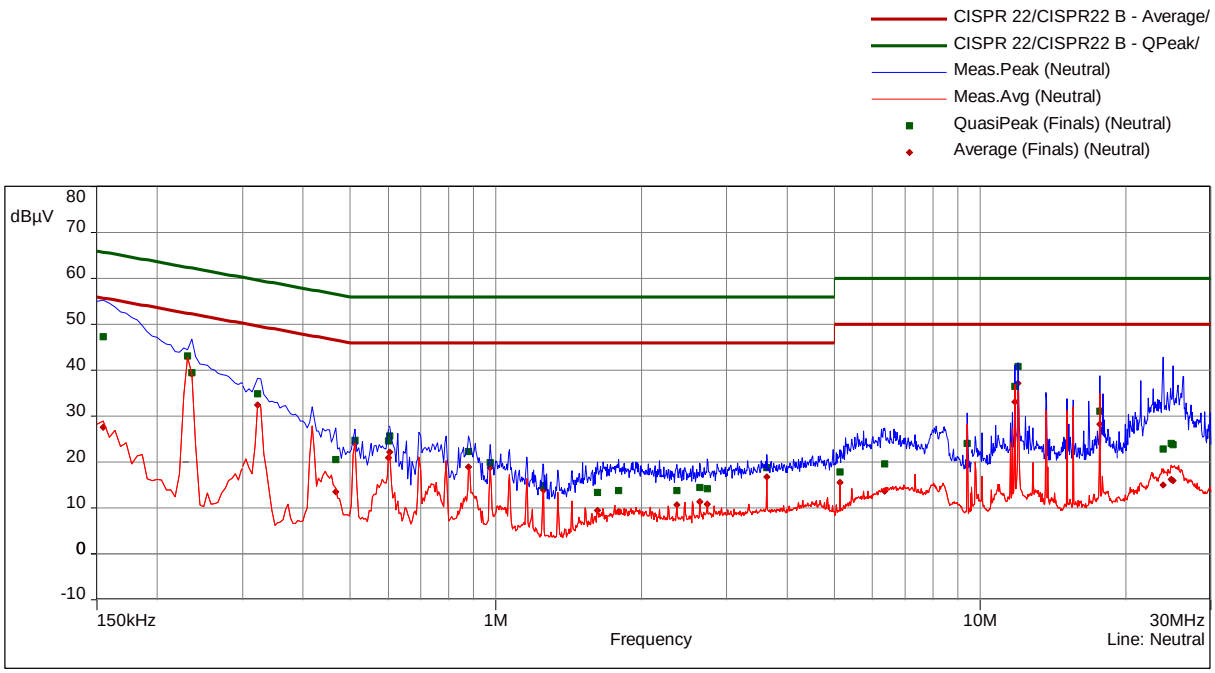
CISPR 22/CISPR22B

FCC ID: DO4TR7240R

freq	SR	QP	margin	limit	AV	margin	limit	line	corr
MHz		dB(µV)	dB	dB	dB(µV)	dB	dB		dB
0.15	1	48.20	17.80	66.00	29.42	26.58	56.00	Phase 1	9.98
0.1545	1	47.27	18.48	65.75	28.83	26.93	55.75	Phase 1	9.98
0.231	1	42.30	20.11	62.41	41.98	10.44	52.41	Phase 1	9.99
0.2355	1	39.10	23.16	62.25	38.26	13.99	52.25	Phase 1	9.99
0.3225	2	34.29	25.35	59.64	30.86	18.78	49.64	Phase 1	10.00
0.327	2	34.58	24.95	59.53	30.28	19.25	49.53	Phase 1	10.00
0.462	2	23.69	32.96	56.66	19.65	27.01	46.66	Phase 1	10.01
0.4755	2	23.46	32.96	56.42	18.27	28.14	46.42	Phase 1	10.01
0.6315	3	23.83	32.17	56.00	18.06	27.94	46.00	Phase 1	10.02
0.789	3	25.16	30.84	56.00	20.35	25.65	46.00	Phase 1	10.02
0.879	3	22.26	33.74	56.00	18.23	27.77	46.00	Phase 1	10.03
0.9735	3	21.03	34.97	56.00	18.85	27.15	46.00	Phase 1	10.03
1.254	4	17.68	38.32	56.00	15.00	31.00	46.00	Phase 1	10.04
1.8525	4	12.62	43.38	56.00	8.76	37.24	46.00	Phase 1	10.06
2.3655	4	11.74	44.26	56.00	9.61	36.39	46.00	Phase 1	10.08
2.922	5	12.16	43.84	56.00	9.74	36.26	46.00	Phase 1	10.09
3.012	5	11.46	44.54	56.00	8.87	37.13	46.00	Phase 1	10.10
3.633	5	17.22	38.78	56.00	16.06	29.94	46.00	Phase 1	10.12
4.767	5	11.84	44.16	56.00	8.44	37.56	46.00	Phase 1	10.16
6.105	6	27.38	32.62	60.00	21.51	28.49	50.00	Phase 1	10.21
6.141	6	27.49	32.51	60.00	21.53	28.47	50.00	Phase 1	10.21
6.834	6	23.79	36.21	60.00	17.84	32.16	50.00	Phase 1	10.25
6.969	6	23.33	36.67	60.00	17.57	32.43	50.00	Phase 1	10.25
11.976	7	38.91	21.09	60.00	34.78	15.22	50.00	Phase 1	10.46
15.3465	7	29.86	30.14	60.00	26.76	23.24	50.00	Phase 1	10.65
17.7045	7	36.76	23.24	60.00	34.56	15.44	50.00	Phase 1	10.76
22.9575	8	23.02	36.98	60.00	16.24	33.76	50.00	Phase 1	10.84
23.043	8	22.40	37.60	60.00	15.77	34.23	50.00	Phase 1	10.84
24.492	8	24.57	35.43	60.00	15.87	34.13	50.00	Phase 1	10.83
24.6405	8	24.01	35.99	60.00	16.21	33.79	50.00	Phase 1	10.83

FCC ID: DO4TR7240R

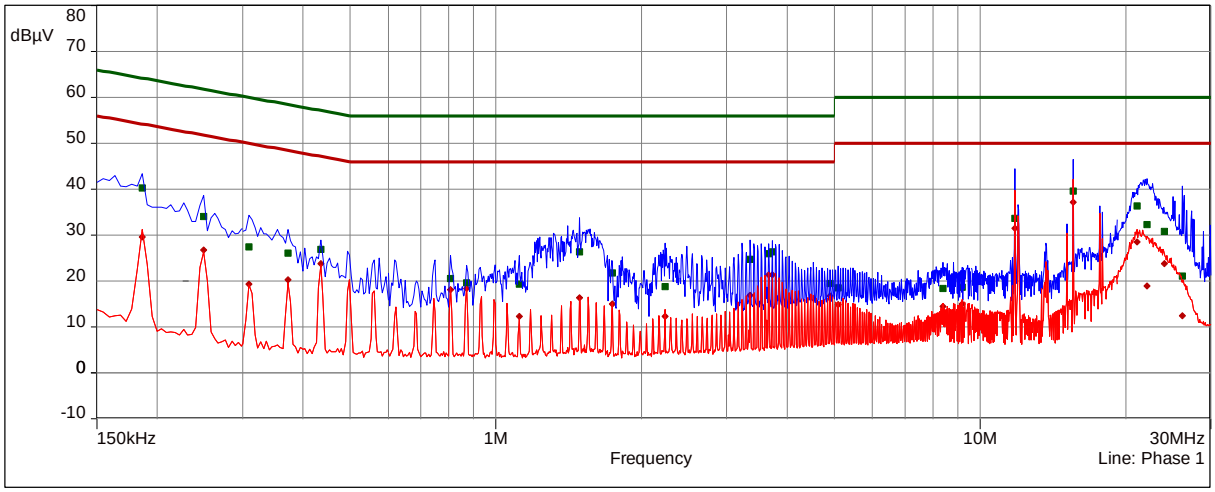
Test point	N	Result: passed
Operation mode:	Evolve G10 / Continuous sweep mode	
Remarks:	FCC/IC Requirements	
	With EOS PSU, Cable and Ferrite on DC line	
	8.2MHz Band, Tx1 & Tx2: 31 – Antenna dummy load	
Tested by:	Huber Markus	



CISPR 22/CISPR22B

freq	SR	QP	margin	limit	AV	margin	limit	line	corr
MHz		dB(µV)	dB	dB	dB(µV)	dB	dB		dB
0.1545	9	47.33	18.42	65.75	27.56	28.20	55.75	Neutral	9.99
0.231	9	43.06	19.35	62.41	42.91	9.50	52.41	Neutral	10.00
0.2355	9	39.43	22.82	62.25	39.14	13.12	52.25	Neutral	10.00
0.3225	10	34.88	24.76	59.64	32.40	17.24	49.64	Neutral	10.00
0.4665	10	20.59	35.99	56.58	13.50	33.08	46.58	Neutral	10.01
0.5115	10	24.76	31.24	56.00	24.09	21.91	46.00	Neutral	10.01
0.6	11	24.62	31.38	56.00	20.92	25.08	46.00	Neutral	10.02
0.6045	11	25.74	30.26	56.00	22.13	23.87	46.00	Neutral	10.02
0.879	11	22.33	33.67	56.00	18.94	27.06	46.00	Neutral	10.03
0.9735	11	19.88	36.12	56.00	18.78	27.22	46.00	Neutral	10.03
1.254	12	14.92	41.08	56.00	13.92	32.08	46.00	Neutral	10.04
1.623	12	13.34	42.66	56.00	9.47	36.53	46.00	Neutral	10.05
1.794	12	13.75	42.25	56.00	9.20	36.80	46.00	Neutral	10.06
2.3655	12	13.80	42.20	56.00	10.72	35.28	46.00	Neutral	10.08
2.643	13	14.41	41.59	56.00	11.33	34.67	46.00	Neutral	10.09
2.7375	13	14.25	41.75	56.00	10.80	35.20	46.00	Neutral	10.09
3.6285	13	18.79	37.21	56.00	16.75	29.25	46.00	Neutral	10.13
5.142	14	17.89	42.11	60.00	15.56	34.44	50.00	Neutral	10.19
6.3525	14	19.59	40.41	60.00	13.70	36.30	50.00	Neutral	10.26
9.408	14	24.06	35.94	60.00	19.14	30.86	50.00	Neutral	10.40
11.8185	15	36.45	23.55	60.00	33.10	16.90	50.00	Neutral	10.56
11.976	15	40.83	19.17	60.00	37.19	12.81	50.00	Neutral	10.57
17.7045	15	31.08	28.92	60.00	28.24	21.76	50.00	Neutral	10.95
23.9115	16	22.86	37.14	60.00	14.95	35.05	50.00	Neutral	11.14
24.807	16	24.02	35.98	60.00	16.18	33.82	50.00	Neutral	11.15
25.0635	16	23.85	36.15	60.00	15.91	34.09	50.00	Neutral	11.15

Test point L1 Result: passed
Operation mode: Evolve G10 / Continuous sweep mode
Remarks: FCC/IC Requirements
With GlobTek PSU, Cable and Ferrite on DC line
8.2MHz Band, Tx1 & Tx2: 31 – Antenna dummy load
Tested by: Huber Markus



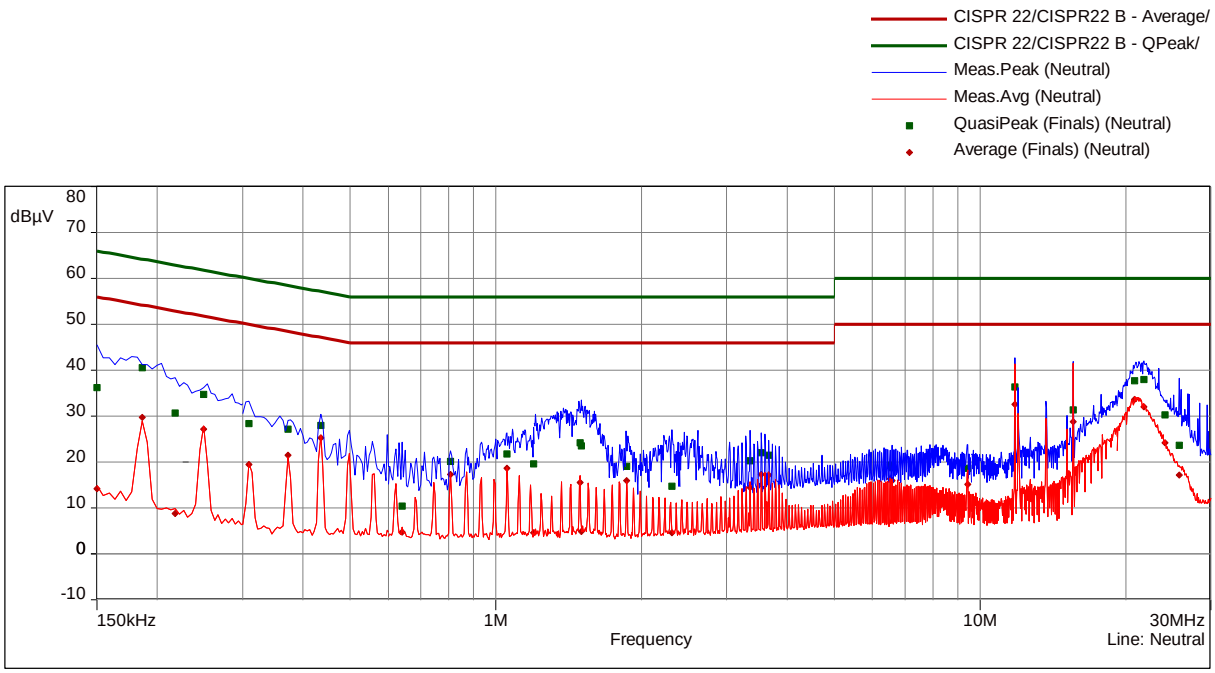
CISPR 22/CISPR22B

FCC ID: DO4TR7240R

freq	SR	QP	margin	limit	AV	margin	limit	line	corr
MHz		dB(µV)	dB	dB	dB(µV)	dB	dB		dB
0.15	9	36.16	29.84	66.00	14.14	41.86	56.00	Neutral	9.99
0.186	9	40.51	23.70	64.21	29.72	24.50	54.21	Neutral	9.99
0.2175	9	30.72	32.19	62.91	8.86	44.06	52.91	Neutral	9.99
0.249	9	34.69	27.10	61.79	27.23	24.56	51.79	Neutral	10.00
0.309	10	28.38	31.62	60.00	19.53	30.47	50.00	Neutral	10.00
0.372	10	27.16	31.30	58.46	21.56	26.90	48.46	Neutral	10.01
0.435	10	28.02	29.13	57.16	25.26	21.90	47.16	Neutral	10.01
0.6405	11	10.36	45.64	56.00	4.78	41.22	46.00	Neutral	10.02
0.807	11	20.13	35.87	56.00	17.26	28.74	46.00	Neutral	10.02
1.0545	11	21.76	34.24	56.00	18.63	27.37	46.00	Neutral	10.03
1.1985	11	19.59	36.41	56.00	4.56	41.44	46.00	Neutral	10.04
1.4925	12	24.25	31.75	56.00	15.59	30.41	46.00	Neutral	10.05
1.5015	12	23.58	32.42	56.00	4.93	41.07	46.00	Neutral	10.05
1.8615	12	19.05	36.95	56.00	15.98	30.02	46.00	Neutral	10.06
2.3115	12	14.72	41.28	56.00	4.57	41.43	46.00	Neutral	10.08
3.354	13	20.28	35.72	56.00	14.52	31.48	46.00	Neutral	10.12
3.5385	13	22.08	33.92	56.00	17.24	28.76	46.00	Neutral	10.12
3.6645	13	21.46	34.54	56.00	17.17	28.83	46.00	Neutral	10.13
6.519	14	19.31	40.69	60.00	16.33	33.67	50.00	Neutral	10.27
6.582	14	18.83	41.17	60.00	15.89	34.11	50.00	Neutral	10.27
9.4305	14	18.61	41.39	60.00	15.12	34.88	50.00	Neutral	10.40
11.814	15	36.30	23.70	60.00	32.56	17.44	50.00	Neutral	10.56
15.5985	15	31.31	28.69	60.00	28.78	21.22	50.00	Neutral	10.83
20.865	16	37.66	22.34	60.00	33.72	16.28	50.00	Neutral	11.10
21.792	16	37.99	22.01	60.00	32.07	17.93	50.00	Neutral	11.11
24.0915	16	30.31	29.69	60.00	24.15	25.85	50.00	Neutral	11.14
25.8375	16	23.69	36.31	60.00	17.23	32.77	50.00	Neutral	11.14

FCC ID: DO4TR7240R

Test point	N	Result: passed
Operation mode:	Evolve G10 / Continuous sweep mode	
Remarks:	FCC/IC Requirements	
	With GlobTek PSU, Cable and Ferrite on DC line	
	8.2MHz Band, Tx1 & Tx2: 31 – Antenna dummy load	
Tested by:	Huber Markus	

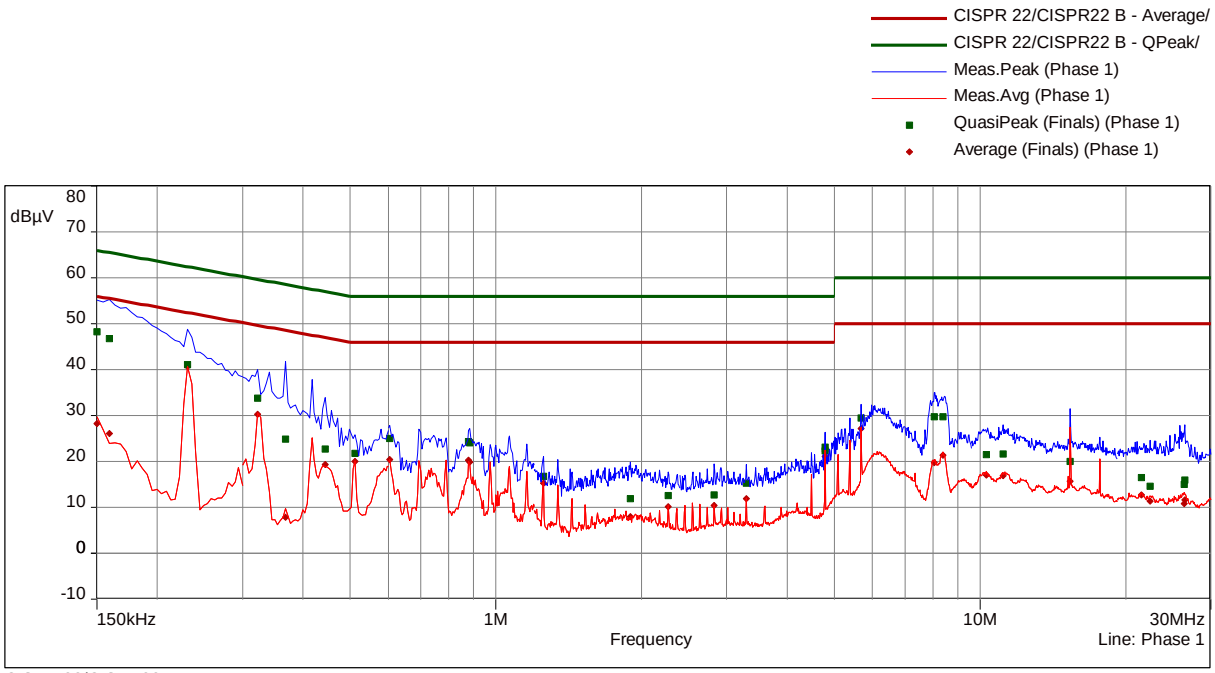


CISPR 22/CISPR22B

FCC ID: DO4TR7240R

freq	SR	QP	margin	limit	AV	margin	limit	line	corr
MHz		dB(µV)	dB	dB	dB(µV)	dB	dB		dB
0.15	9	36.16	29.84	66.00	14.14	41.86	56.00	Neutral	9.99
0.186	9	40.51	23.70	64.21	29.72	24.50	54.21	Neutral	9.99
0.2175	9	30.72	32.19	62.91	8.86	44.06	52.91	Neutral	9.99
0.249	9	34.69	27.10	61.79	27.23	24.56	51.79	Neutral	10.00
0.309	10	28.38	31.62	60.00	19.53	30.47	50.00	Neutral	10.00
0.372	10	27.16	31.30	58.46	21.56	26.90	48.46	Neutral	10.01
0.435	10	28.02	29.13	57.16	25.26	21.90	47.16	Neutral	10.01
0.6405	11	10.36	45.64	56.00	4.78	41.22	46.00	Neutral	10.02
0.807	11	20.13	35.87	56.00	17.26	28.74	46.00	Neutral	10.02
1.0545	11	21.76	34.24	56.00	18.63	27.37	46.00	Neutral	10.03
1.1985	11	19.59	36.41	56.00	4.56	41.44	46.00	Neutral	10.04
1.4925	12	24.25	31.75	56.00	15.59	30.41	46.00	Neutral	10.05
1.5015	12	23.58	32.42	56.00	4.93	41.07	46.00	Neutral	10.05
1.8615	12	19.05	36.95	56.00	15.98	30.02	46.00	Neutral	10.06
2.3115	12	14.72	41.28	56.00	4.57	41.43	46.00	Neutral	10.08
3.354	13	20.28	35.72	56.00	14.52	31.48	46.00	Neutral	10.12
3.5385	13	22.08	33.92	56.00	17.24	28.76	46.00	Neutral	10.12
3.6645	13	21.46	34.54	56.00	17.17	28.83	46.00	Neutral	10.13
6.519	14	19.31	40.69	60.00	16.33	33.67	50.00	Neutral	10.27
6.582	14	18.83	41.17	60.00	15.89	34.11	50.00	Neutral	10.27
9.4305	14	18.61	41.39	60.00	15.12	34.88	50.00	Neutral	10.40
11.814	15	36.30	23.70	60.00	32.56	17.44	50.00	Neutral	10.56
15.5985	15	31.31	28.69	60.00	28.78	21.22	50.00	Neutral	10.83
20.865	16	37.66	22.34	60.00	33.72	16.28	50.00	Neutral	11.10
21.792	16	37.99	22.01	60.00	32.07	17.93	50.00	Neutral	11.11
24.0915	16	30.31	29.69	60.00	24.15	25.85	50.00	Neutral	11.14
25.8375	16	23.69	36.31	60.00	17.23	32.77	50.00	Neutral	11.14

Test point	L1	Result: passed
Operation mode:	Evolve G30 / Continuous sweep mode	
Remarks:	FCC/IC Requirements	
	With EOS PSU, Cable and Ferrite on DC line	
	8.2MHz Band, Tx1 & Tx2: 31 – Antenna dummy load	
Tested by:	Huber Markus	



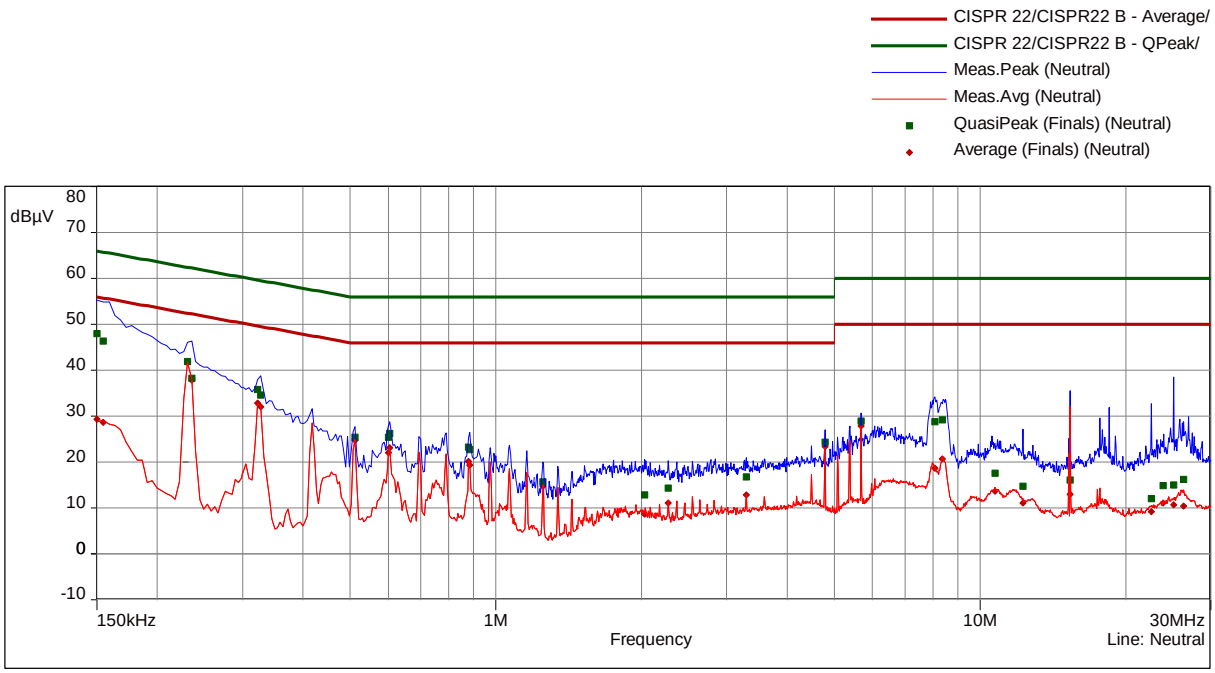
CISPR 22/CISPR22B

FCC ID: DO4TR7240R

freq	SR	QP	margin	limit	AV	margin	limit	line	corr
MHz		dB(µV)	dB	dB	dB(µV)	dB	dB		dB
0.15	1	48.24	17.76	66.00	28.20	27.80	56.00	Phase 1	9.98
0.159	1	46.79	18.72	65.52	26.10	29.42	55.52	Phase 1	9.98
0.231	1	41.09	21.32	62.41	40.69	11.73	52.41	Phase 1	9.99
0.3225	2	33.77	25.87	59.64	30.33	19.31	49.64	Phase 1	10.00
0.3675	2	24.91	33.65	58.56	7.90	40.66	48.56	Phase 1	10.00
0.444	2	22.73	34.26	56.99	19.27	27.72	46.99	Phase 1	10.01
0.5115	2	21.75	34.25	56.00	20.07	25.93	46.00	Phase 1	10.01
0.6045	3	25.03	30.97	56.00	20.41	25.59	46.00	Phase 1	10.02
0.879	3	24.30	31.70	56.00	20.30	25.70	46.00	Phase 1	10.03
0.8835	3	24.08	31.92	56.00	19.85	26.15	46.00	Phase 1	10.03
1.254	4	16.81	39.19	56.00	15.27	30.73	46.00	Phase 1	10.04
1.8975	4	11.92	44.08	56.00	7.94	38.06	46.00	Phase 1	10.06
2.271	4	12.52	43.48	56.00	10.13	35.87	46.00	Phase 1	10.07
2.8275	5	12.69	43.31	56.00	10.43	35.57	46.00	Phase 1	10.09
3.291	5	15.26	40.74	56.00	11.96	34.04	46.00	Phase 1	10.11
4.785	5	22.25	33.75	56.00	21.13	24.87	46.00	Phase 1	10.16
4.7895	5	23.17	32.83	56.00	22.23	23.77	46.00	Phase 1	10.16
5.6865	6	29.45	30.55	60.00	27.13	22.87	50.00	Phase 1	10.19
8.0535	6	29.77	30.23	60.00	19.71	30.29	50.00	Phase 1	10.28
8.3955	6	29.75	30.25	60.00	21.35	28.65	50.00	Phase 1	10.29
10.3245	7	21.46	38.54	60.00	17.04	32.96	50.00	Phase 1	10.36
11.175	7	21.60	38.40	60.00	16.91	33.09	50.00	Phase 1	10.41
15.351	7	20.02	39.98	60.00	15.73	34.27	50.00	Phase 1	10.65
21.54	8	16.56	43.44	60.00	12.69	37.31	50.00	Phase 1	10.85
22.4805	8	14.62	45.38	60.00	11.31	38.69	50.00	Phase 1	10.84
26.4405	8	15.06	44.94	60.00	10.81	39.19	50.00	Phase 1	10.79
26.5395	8	15.91	44.09	60.00	11.57	38.43	50.00	Phase 1	10.79

FCC ID: DO4TR7240R

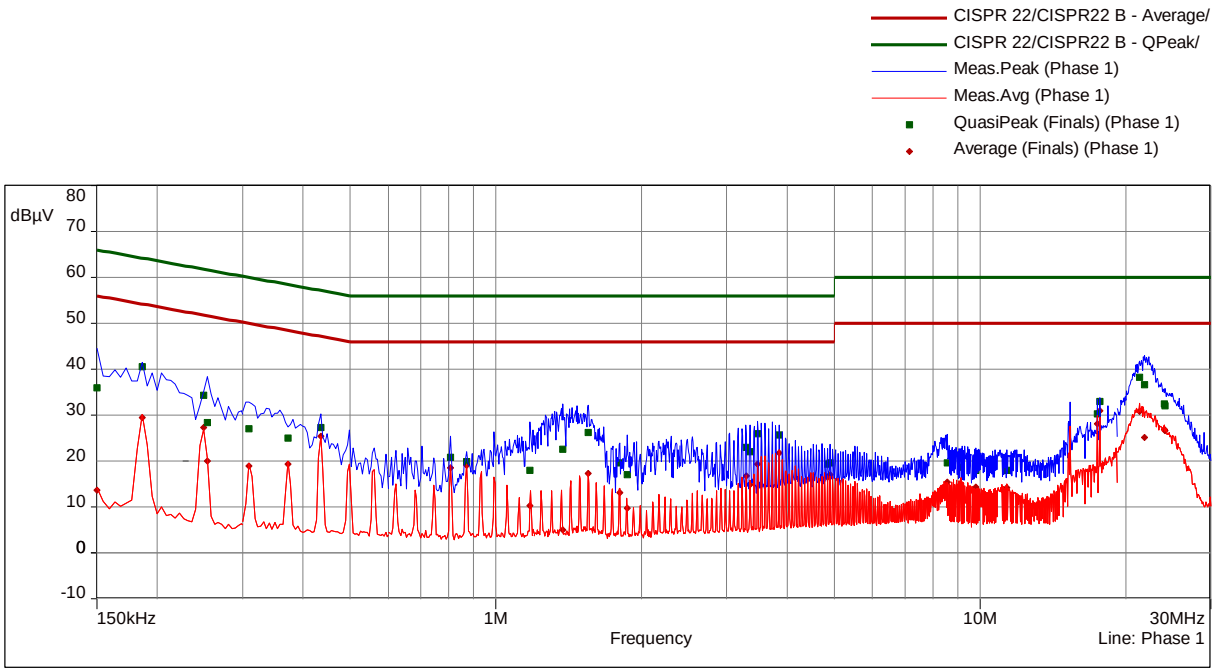
Test point	N	Result: passed
Operation mode:	Evolve G30 / Continuous sweep mode	
Remarks:	FCC/IC Requirements	
	With EOS PSU, Cable and Ferrite on DC line	
	8.2MHz Band, Tx1 & Tx2: 31 – Antenna dummy load	
Tested by:	Huber Markus	



CISPR 22/CISPR22B

freq	SR	QP	margin	limit	AV	margin	limit	line	corr
MHz		dB(µV)	dB	dB	dB(µV)	dB	dB		dB
0.15	9	48.04	17.96	66.00	29.40	26.60	56.00	Neutral	9.99
0.1545	9	46.31	19.45	65.75	28.70	27.05	55.75	Neutral	9.99
0.231	9	41.97	20.45	62.41	41.81	10.61	52.41	Neutral	10.00
0.2355	9	38.21	24.04	62.25	37.89	14.37	52.25	Neutral	10.00
0.3225	10	35.84	23.80	59.64	32.83	16.81	49.64	Neutral	10.00
0.327	10	34.61	24.92	59.53	32.08	17.45	49.53	Neutral	10.00
0.5115	10	25.47	30.53	56.00	24.81	21.19	46.00	Neutral	10.01
0.6	10	25.35	30.65	56.00	22.09	23.91	46.00	Neutral	10.02
0.6045	11	26.26	29.74	56.00	23.08	22.92	46.00	Neutral	10.02
0.879	11	23.20	32.80	56.00	20.14	25.86	46.00	Neutral	10.03
0.8835	11	22.74	33.26	56.00	19.28	26.72	46.00	Neutral	10.03
1.2495	12	15.65	40.35	56.00	14.80	31.20	46.00	Neutral	10.04
2.0325	12	12.79	43.21	56.00	8.72	37.28	46.00	Neutral	10.06
2.271	12	14.32	41.68	56.00	11.07	34.93	46.00	Neutral	10.07
3.291	13	16.76	39.24	56.00	12.79	33.21	46.00	Neutral	10.11
4.785	13	24.28	31.72	56.00	23.35	22.65	46.00	Neutral	10.17
5.682	14	28.88	31.12	60.00	27.85	22.15	50.00	Neutral	10.22
8.067	14	28.75	31.25	60.00	18.69	31.31	50.00	Neutral	10.34
8.373	14	29.19	30.81	60.00	20.66	29.34	50.00	Neutral	10.35
10.761	15	17.60	42.40	60.00	13.64	36.36	50.00	Neutral	10.48
12.282	15	14.70	45.30	60.00	11.15	38.85	50.00	Neutral	10.59
15.351	15	16.04	43.96	60.00	12.97	37.03	50.00	Neutral	10.81
22.611	16	11.99	48.01	60.00	9.14	40.86	50.00	Neutral	11.12
23.9295	16	14.85	45.15	60.00	11.07	38.93	50.00	Neutral	11.14
25.1265	16	15.01	44.99	60.00	10.68	39.32	50.00	Neutral	11.15
26.364	16	16.17	43.83	60.00	10.44	39.56	50.00	Neutral	11.14

Test point	L1	Result: passed
Operation mode:	Evolve G30 / Continuous sweep mode	
Remarks:	FCC/IC Requirements	
	With GlobTek PSU, Cable and Ferrite on DC line	
	8.2MHz Band, Tx1 & Tx2: 31 – Antenna dummy load	
Tested by:	Huber Markus	



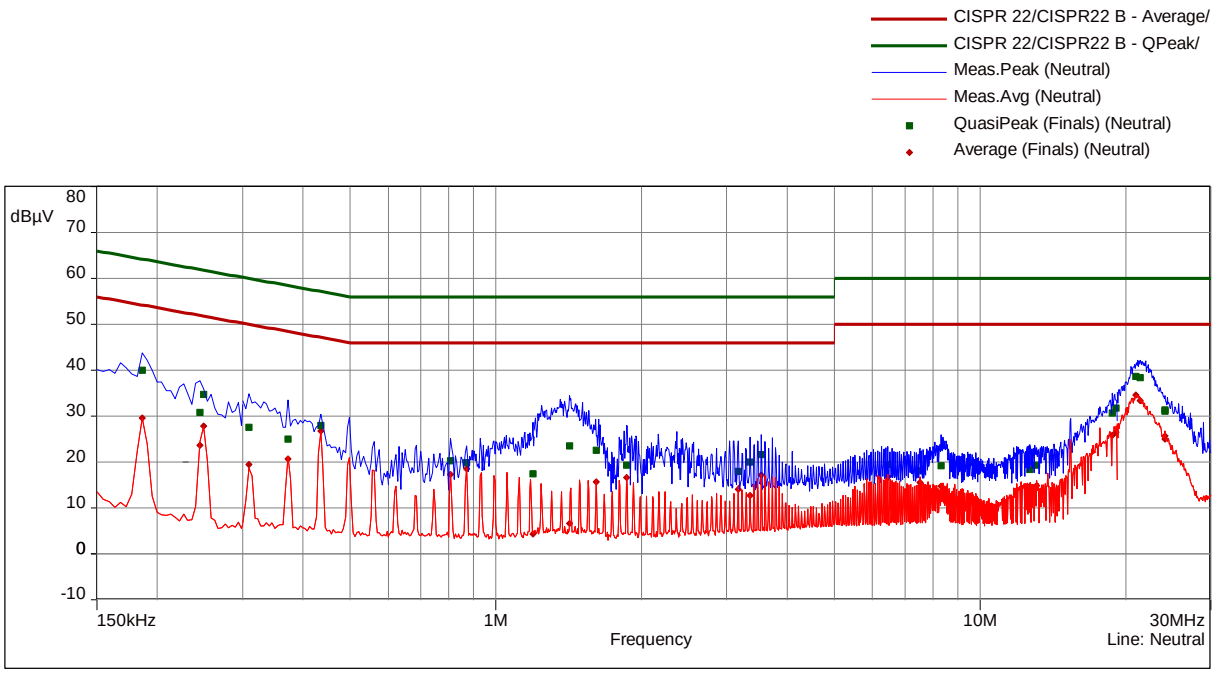
CISPR 22/CISPR22B

FCC ID: DO4TR7240R

freq	SR	QP	margin	limit	AV	margin	limit	line	corr
MHz		dB(µV)	dB	dB	dB(µV)	dB	dB		dB
0.15	1	35.94	30.06	66.00	13.62	42.38	56.00	Phase 1	9.98
0.186	1	40.56	23.65	64.21	29.53	24.69	54.21	Phase 1	9.98
0.249	1	34.29	27.50	61.79	27.36	24.43	51.79	Phase 1	9.99
0.2535	1	28.37	33.27	61.64	19.96	31.68	51.64	Phase 1	9.99
0.309	2	27.10	32.90	60.00	18.96	31.03	50.00	Phase 1	9.99
0.372	2	24.99	33.47	58.46	19.31	29.15	48.46	Phase 1	10.00
0.435	2	27.32	29.83	57.16	25.42	21.74	47.16	Phase 1	10.01
0.807	3	20.79	35.21	56.00	18.51	27.49	46.00	Phase 1	10.02
0.87	3	19.83	36.17	56.00	19.07	26.93	46.00	Phase 1	10.03
1.176	3	18.02	37.98	56.00	10.25	35.75	46.00	Phase 1	10.04
1.3755	4	22.56	33.44	56.00	5.06	40.94	46.00	Phase 1	10.04
1.551	4	26.26	29.74	56.00	17.34	28.66	46.00	Phase 1	10.05
1.803	4	19.64	36.36	56.00	13.13	32.87	46.00	Phase 1	10.06
1.866	4	17.08	38.92	56.00	9.80	36.20	46.00	Phase 1	10.06
3.291	5	22.97	33.03	56.00	16.74	29.26	46.00	Phase 1	10.11
3.3495	5	22.00	34.00	56.00	14.94	31.06	46.00	Phase 1	10.11
3.4755	5	25.89	30.11	56.00	19.32	26.68	46.00	Phase 1	10.11
3.849	5	25.62	30.38	56.00	21.82	24.18	46.00	Phase 1	10.12
4.8405	6	19.40	36.60	56.00	16.53	29.47	46.00	Phase 1	10.16
4.9035	6	19.55	36.45	56.00	16.99	29.01	46.00	Phase 1	10.16
8.5665	6	19.61	40.39	60.00	15.37	34.63	50.00	Phase 1	10.30
9.1245	6	18.66	41.34	60.00	15.02	34.98	50.00	Phase 1	10.32
9.807	7	18.03	41.97	60.00	14.28	35.72	50.00	Phase 1	10.34
11.3595	7	17.99	42.01	60.00	14.20	35.80	50.00	Phase 1	10.42
17.4885	7	30.30	29.70	60.00	28.13	21.87	50.00	Phase 1	10.75
17.7045	7	33.04	26.96	60.00	30.91	19.09	50.00	Phase 1	10.76
21.36	8	38.28	21.72	60.00	30.87	19.13	50.00	Phase 1	10.85
21.8505	8	36.63	23.37	60.00	25.18	24.82	50.00	Phase 1	10.85
24.0285	8	32.43	27.57	60.00	26.90	23.10	50.00	Phase 1	10.83
24.0915	8	32.09	27.91	60.00	26.64	23.36	50.00	Phase 1	10.83

FCC ID: DO4TR7240R

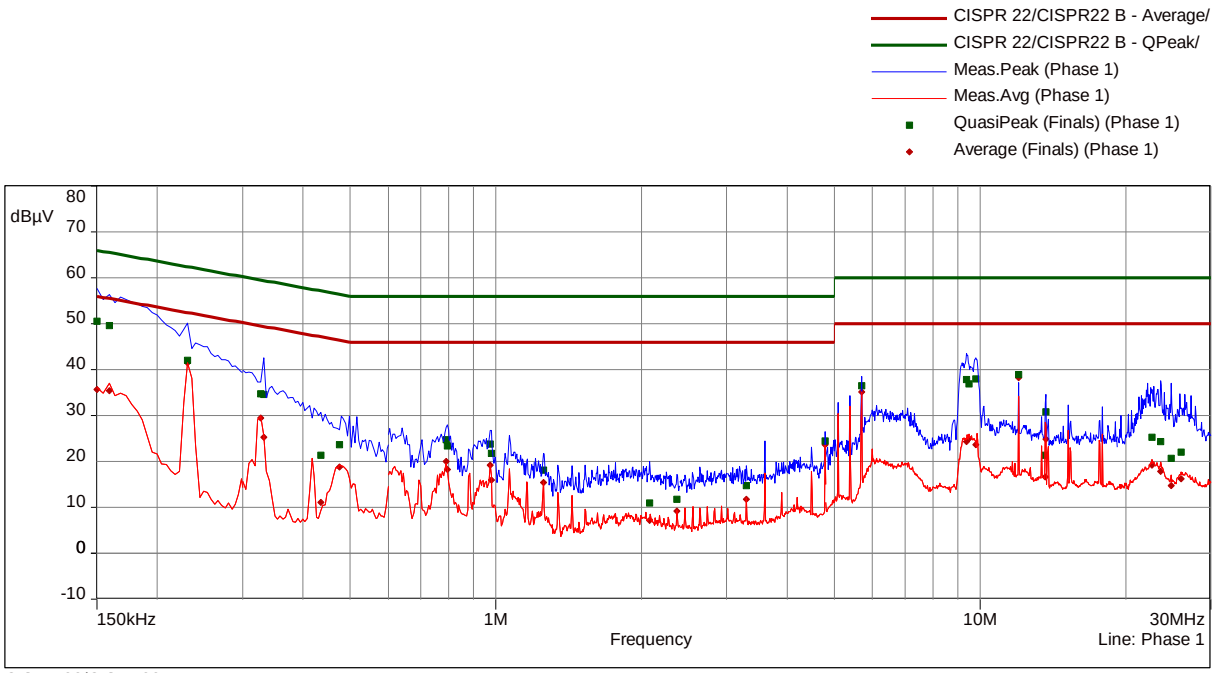
Test point	N	Result: passed
Operation mode:	Evolve G30 / Continuous sweep mode	
Remarks:	FCC/IC Requirements	
	With GlobTek PSU, Cable and Ferrite on DC line	
	8.2MHz Band, Tx1 & Tx2: 31 – Antenna dummy load	
Tested by:	Huber Markus	



CISPR 22/CISPR22B

freq	SR	QP	margin	limit	AV	margin	limit	line	corr
MHz		dB(µV)	dB	dB	dB(µV)	dB	dB		dB
0.186	9	40.04	24.17	64.21	29.67	24.54	54.21	Neutral	9.99
0.2445	9	30.84	31.10	61.94	23.60	28.35	51.94	Neutral	10.00
0.249	9	34.75	27.04	61.79	27.78	24.01	51.79	Neutral	10.00
0.309	10	27.57	32.42	60.00	19.44	30.56	50.00	Neutral	10.00
0.372	10	24.99	33.47	58.46	20.65	27.81	48.46	Neutral	10.01
0.435	10	27.95	29.21	57.16	26.73	20.43	47.16	Neutral	10.01
0.807	11	20.33	35.67	56.00	17.30	28.70	46.00	Neutral	10.02
0.87	11	19.92	36.08	56.00	18.55	27.45	46.00	Neutral	10.03
1.194	11	17.48	38.52	56.00	4.28	41.72	46.00	Neutral	10.04
1.4205	12	23.59	32.41	56.00	6.64	39.36	46.00	Neutral	10.05
1.614	12	22.55	33.45	56.00	15.63	30.37	46.00	Neutral	10.05
1.8615	12	19.30	36.70	56.00	16.68	29.32	46.00	Neutral	10.06
3.165	13	17.99	38.01	56.00	14.09	31.91	46.00	Neutral	10.11
3.3495	13	20.05	35.95	56.00	12.74	33.26	46.00	Neutral	10.12
3.5385	13	21.64	34.36	56.00	17.20	28.80	46.00	Neutral	10.12
6.456	14	19.48	40.52	60.00	16.78	33.22	50.00	Neutral	10.26
7.5135	14	18.08	41.92	60.00	15.61	34.39	50.00	Neutral	10.32
8.319	14	19.19	40.81	60.00	14.68	35.32	50.00	Neutral	10.35
12.6645	15	18.42	41.58	60.00	14.74	35.26	50.00	Neutral	10.62
13.0965	15	19.33	40.67	60.00	14.91	35.09	50.00	Neutral	10.65
18.744	15	30.71	29.29	60.00	25.80	24.20	50.00	Neutral	11.02
19.1175	15	31.76	28.24	60.00	26.44	23.56	50.00	Neutral	11.04
20.982	16	38.70	21.30	60.00	34.63	15.37	50.00	Neutral	11.10
21.4185	16	38.43	21.57	60.00	33.38	16.62	50.00	Neutral	11.11
24.087	16	31.32	28.68	60.00	25.69	24.31	50.00	Neutral	11.14
24.1455	16	31.11	28.89	60.00	25.07	24.93	50.00	Neutral	11.14

Test point L1 Result: passed
Operation mode: Evolve G35 / Continuous sweep mode
Remarks: FCC/IC Requirements
With EOS PSU, Cable and Ferrite on DC line
8.2MHz Band, Tx1 & Tx2: 31 – Antenna dummy load
Tested by: Huber Markus

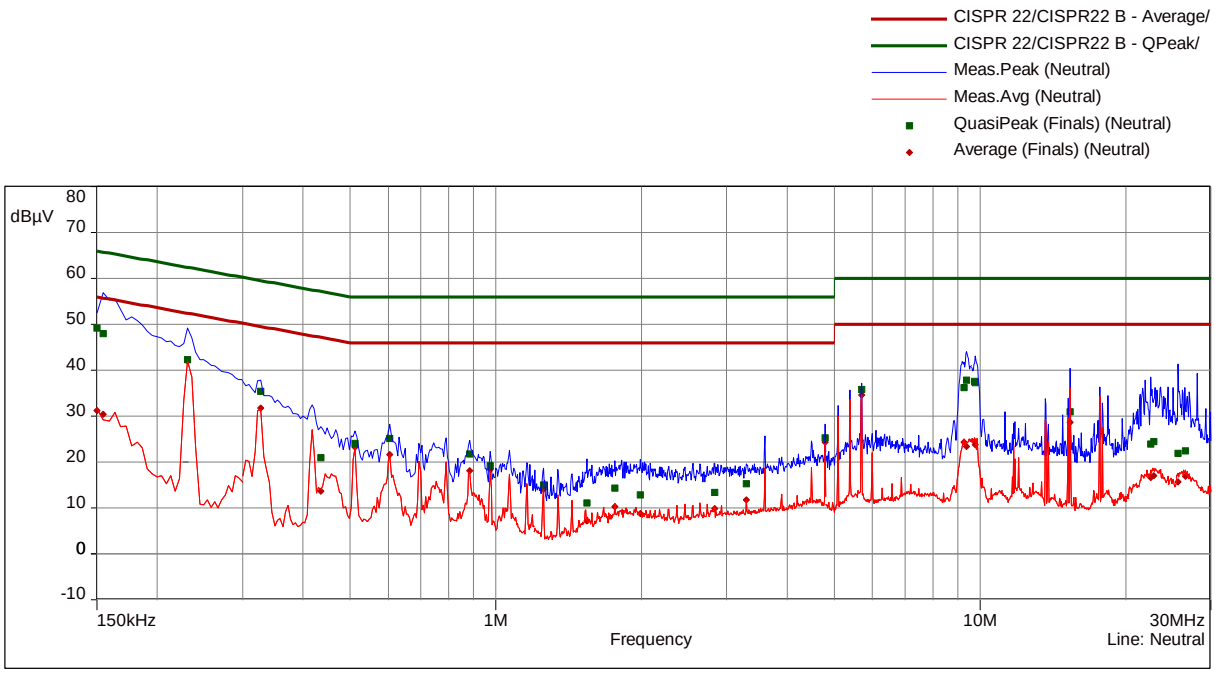


CISPR 22/CISPR22B

FCC ID: DO4TR7240R

freq	SR	QP	margin	limit	AV	margin	limit	line	corr
MHz		dB(µV)	dB	dB	dB(µV)	dB	dB		dB
0.15	1	50.49	15.51	66.00	35.67	20.33	56.00	Phase 1	9.98
0.159	1	49.55	15.96	65.52	35.42	20.09	55.52	Phase 1	9.98
0.231	1	42.09	20.33	62.41	41.51	10.91	52.41	Phase 1	9.99
0.327	2	34.73	24.80	59.53	29.52	20.00	49.53	Phase 1	10.00
0.3315	2	34.65	24.77	59.41	25.30	24.11	49.41	Phase 1	10.00
0.435	2	21.38	35.78	57.16	11.15	36.00	47.16	Phase 1	10.01
0.4755	2	23.62	32.80	56.42	18.83	27.59	46.42	Phase 1	10.01
0.789	3	24.73	31.27	56.00	20.05	25.95	46.00	Phase 1	10.02
0.7935	3	23.39	32.61	56.00	18.26	27.74	46.00	Phase 1	10.02
0.9735	3	23.74	32.26	56.00	19.24	26.76	46.00	Phase 1	10.03
0.978	3	21.78	34.22	56.00	15.97	30.03	46.00	Phase 1	10.03
1.254	4	18.17	37.83	56.00	15.36	30.64	46.00	Phase 1	10.04
2.0775	4	11.01	44.99	56.00	7.17	38.83	46.00	Phase 1	10.07
2.3655	4	11.73	44.27	56.00	9.24	36.76	46.00	Phase 1	10.08
3.2955	5	14.67	41.33	56.00	11.75	34.25	46.00	Phase 1	10.11
4.794	5	24.46	31.54	56.00	23.69	22.31	46.00	Phase 1	10.16
5.691	6	36.43	23.57	60.00	35.11	14.89	50.00	Phase 1	10.19
9.3945	6	37.89	22.11	60.00	24.35	25.65	50.00	Phase 1	10.32
9.489	6	36.90	23.10	60.00	24.96	25.04	50.00	Phase 1	10.33
9.798	7	38.04	21.96	60.00	23.69	26.31	50.00	Phase 1	10.34
12.0345	7	38.94	21.06	60.00	38.27	11.73	50.00	Phase 1	10.46
13.668	7	21.42	38.58	60.00	16.67	33.33	50.00	Phase 1	10.55
13.6725	7	30.88	29.12	60.00	24.81	25.19	50.00	Phase 1	10.56
22.6695	8	25.31	34.69	60.00	19.16	30.84	50.00	Phase 1	10.84
23.6055	8	24.35	35.65	60.00	17.80	32.20	50.00	Phase 1	10.83
24.8475	8	20.63	39.37	60.00	14.79	35.21	50.00	Phase 1	10.82
26.0175	8	22.10	37.90	60.00	16.21	33.79	50.00	Phase 1	10.80

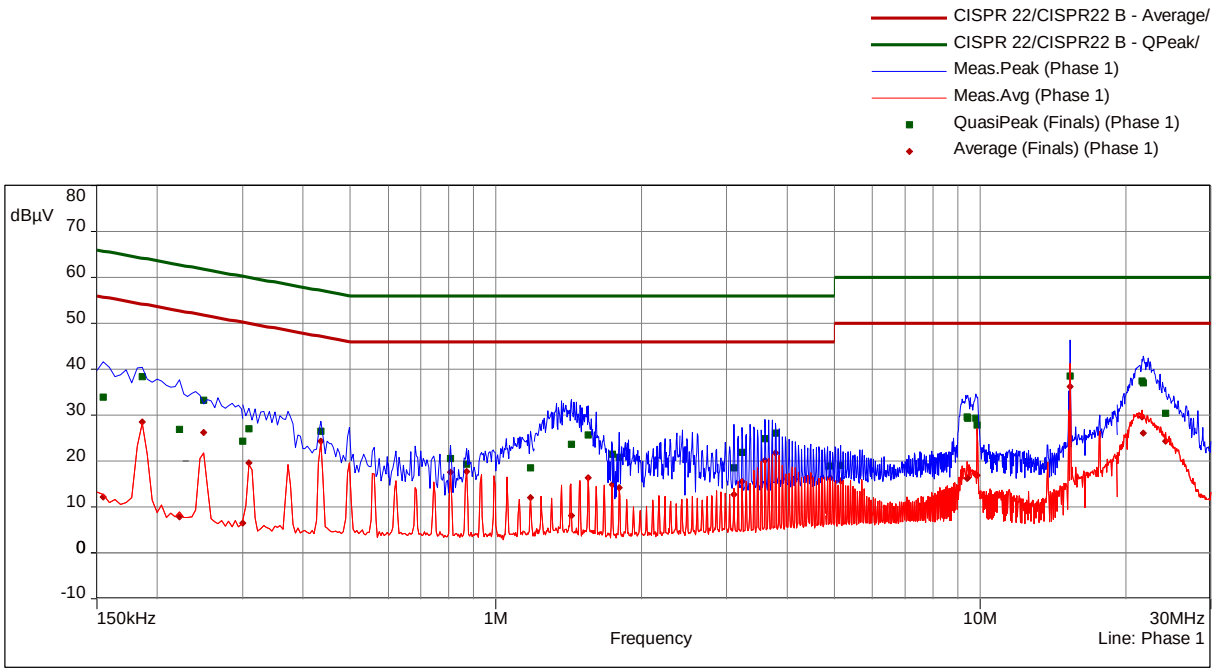
Test point	N	Result: passed
Operation mode:	Evolve G35 / Continuous sweep mode	
Remarks:	FCC/IC Requirements	
	With EOS PSU, Cable and Ferrite on DC line	
	8.2MHz Band, Tx1 & Tx2: 31 – Antenna dummy load	
Tested by:	Huber Markus	



CISPR 22/CISPR22B

freq	SR	QP	margin	limit	AV	margin	limit	line	corr
MHz		dB(µV)	dB	dB	dB(µV)	dB	dB		dB
0.15	9	49.25	16.75	66.00	31.16	24.84	56.00	Neutral	9.99
0.1545	9	47.98	17.78	65.75	30.48	25.27	55.75	Neutral	9.99
0.231	9	42.25	20.16	62.41	41.99	10.42	52.41	Neutral	10.00
0.327	10	35.44	24.09	59.53	31.78	17.75	49.53	Neutral	10.00
0.435	10	20.99	36.17	57.16	13.66	33.50	47.16	Neutral	10.01
0.5115	10	24.09	31.91	56.00	23.31	22.69	46.00	Neutral	10.01
0.6045	11	25.11	30.89	56.00	21.70	24.30	46.00	Neutral	10.02
0.8835	11	21.72	34.28	56.00	18.14	27.86	46.00	Neutral	10.03
0.9735	11	19.23	36.77	56.00	18.35	27.65	46.00	Neutral	10.03
1.254	12	14.97	41.03	56.00	14.03	31.97	46.00	Neutral	10.04
1.542	12	11.14	44.86	56.00	7.23	38.77	46.00	Neutral	10.05
1.7625	12	14.34	41.66	56.00	10.22	35.78	46.00	Neutral	10.06
1.9875	12	12.78	43.22	56.00	8.82	37.18	46.00	Neutral	10.06
2.832	13	13.34	42.66	56.00	9.82	36.18	46.00	Neutral	10.10
3.2955	13	15.28	40.72	56.00	11.80	34.20	46.00	Neutral	10.11
4.7895	13	25.27	30.73	56.00	24.32	21.68	46.00	Neutral	10.17
5.691	14	35.84	24.16	60.00	34.65	15.35	50.00	Neutral	10.22
9.2865	14	36.22	23.78	60.00	24.28	25.72	50.00	Neutral	10.39
9.3945	14	37.87	22.13	60.00	23.45	26.55	50.00	Neutral	10.40
9.7485	15	37.59	22.41	60.00	24.40	25.60	50.00	Neutral	10.41
9.78	15	37.36	22.64	60.00	23.75	26.25	50.00	Neutral	10.41
15.351	15	30.99	29.01	60.00	28.65	21.35	50.00	Neutral	10.81
22.512	16	24.00	36.00	60.00	16.66	33.34	50.00	Neutral	11.12
22.836	16	24.41	35.59	60.00	17.04	32.96	50.00	Neutral	11.13
25.671	16	21.95	38.05	60.00	15.74	34.26	50.00	Neutral	11.14
26.616	16	22.48	37.52	60.00	16.94	33.06	50.00	Neutral	11.13

Test point	L1	Result: passed
Operation mode:	Evolve G35 / Continuous sweep mode	
Remarks:	FCC/IC Requirements	
	With GlobTek PSU, Cable and Ferrite on DC line	
	8.2MHz Band, Tx1 & Tx2: 31 – Antenna dummy load	
Tested by:	Huber Markus	



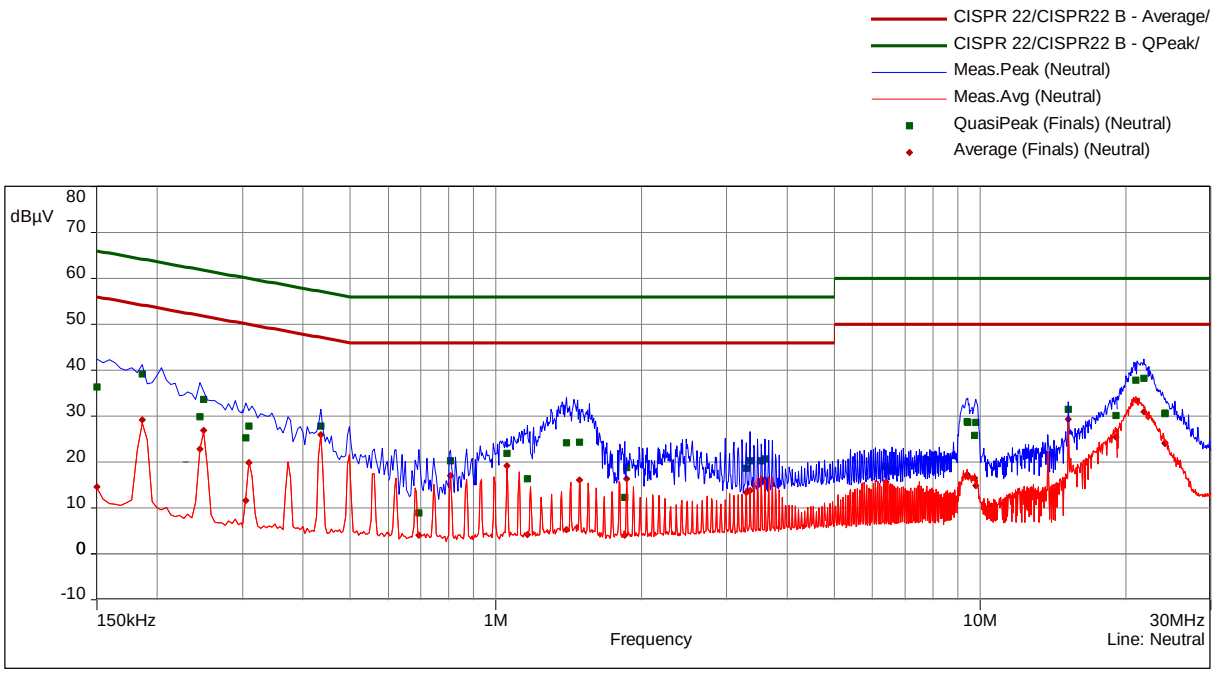
CISPR 22/CISPR22B

FCC ID: DO4TR7240R

freq	SR	QP	margin	limit	AV	margin	limit	line	corr
MHz		dB(µV)	dB	dB	dB(µV)	dB	dB		dB
0.1545	1	33.91	31.84	65.75	12.17	43.58	55.75	Phase 1	9.98
0.186	1	38.33	25.88	64.21	28.57	25.65	54.21	Phase 1	9.98
0.222	1	26.93	35.82	62.74	7.87	44.87	52.74	Phase 1	9.99
0.249	1	33.25	28.54	61.79	26.27	25.52	51.79	Phase 1	9.99
0.3	2	24.37	35.87	60.24	6.46	43.78	50.24	Phase 1	9.99
0.309	2	27.03	32.96	60.00	19.56	30.44	50.00	Phase 1	9.99
0.435	2	26.55	30.60	57.16	24.37	22.79	47.16	Phase 1	10.01
0.807	3	20.61	35.39	56.00	17.64	28.36	46.00	Phase 1	10.02
0.87	3	19.36	36.64	56.00	17.71	28.29	46.00	Phase 1	10.03
1.1805	3	18.51	37.49	56.00	12.01	33.99	46.00	Phase 1	10.04
1.434	4	23.65	32.35	56.00	8.12	37.88	46.00	Phase 1	10.05
1.551	4	25.68	30.32	56.00	16.32	29.68	46.00	Phase 1	10.05
1.74	4	21.54	34.46	56.00	14.86	31.14	46.00	Phase 1	10.06
1.7985	4	20.77	35.23	56.00	14.24	31.76	46.00	Phase 1	10.06
3.1065	5	18.50	37.50	56.00	12.78	33.22	46.00	Phase 1	10.10
3.228	5	21.96	34.04	56.00	15.52	30.48	46.00	Phase 1	10.10
3.6015	5	24.88	31.12	56.00	20.15	25.85	46.00	Phase 1	10.12
3.786	5	26.07	29.93	56.00	21.81	24.19	46.00	Phase 1	10.12
4.9035	6	18.94	37.06	56.00	16.37	29.63	46.00	Phase 1	10.16
5.151	6	19.10	40.90	60.00	15.66	34.34	50.00	Phase 1	10.17
9.399	6	29.56	30.44	60.00	16.29	33.71	50.00	Phase 1	10.32
9.426	6	29.31	30.69	60.00	16.34	33.66	50.00	Phase 1	10.33
9.8115	7	29.36	30.64	60.00	16.99	33.01	50.00	Phase 1	10.34
9.879	7	27.80	32.20	60.00	16.91	33.09	50.00	Phase 1	10.34
15.351	7	38.57	21.43	60.00	36.27	13.73	50.00	Phase 1	10.65
21.603	8	37.38	22.62	60.00	29.59	20.41	50.00	Phase 1	10.85
21.72	8	36.99	23.01	60.00	26.12	23.88	50.00	Phase 1	10.85
24.213	8	30.48	29.52	60.00	24.37	25.63	50.00	Phase 1	10.83

FCC ID: DO4TR7240R

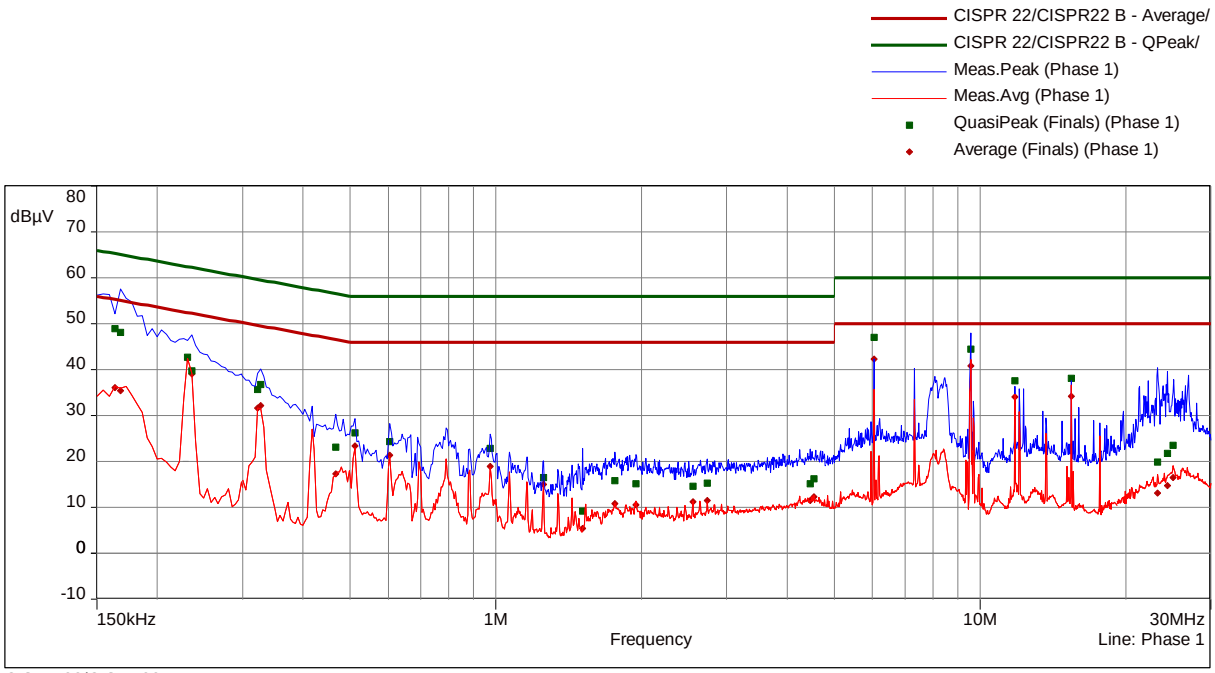
Test point	N	Result: passed
Operation mode:	Evolve G35 / Continuous sweep mode	
Remarks:	FCC/IC Requirements	
	With GlobTek PSU, Cable and Ferrite on DC line	
	8.2MHz Band, Tx1 & Tx2: 31 – Antenna dummy load	
Tested by:	Huber Markus	



CISPR 22/CISPR22B

freq	SR	QP	margin	limit	AV	margin	limit	line	corr
MHz		dB(µV)	dB	dB	dB(µV)	dB	dB		dB
0.15	9	36.32	29.68	66.00	14.64	41.36	56.00	Neutral	9.99
0.186	9	39.13	25.08	64.21	29.14	25.07	54.21	Neutral	9.99
0.2445	9	29.94	32.01	61.94	22.91	29.03	51.94	Neutral	10.00
0.249	9	33.72	28.07	61.79	26.90	24.89	51.79	Neutral	10.00
0.3045	10	25.25	34.87	60.12	11.57	38.55	50.12	Neutral	10.00
0.309	10	27.85	32.15	60.00	19.85	30.15	50.00	Neutral	10.00
0.435	10	27.80	29.36	57.16	25.97	21.19	47.16	Neutral	10.01
0.6945	11	8.90	47.10	56.00	4.06	41.94	46.00	Neutral	10.02
0.807	11	20.26	35.74	56.00	16.98	29.02	46.00	Neutral	10.02
1.0545	11	21.94	34.06	56.00	19.16	26.84	46.00	Neutral	10.03
1.1625	11	16.30	39.70	56.00	4.23	41.77	46.00	Neutral	10.04
1.398	12	24.22	31.78	56.00	5.27	40.73	46.00	Neutral	10.04
1.488	12	24.37	31.63	56.00	16.05	29.95	46.00	Neutral	10.05
1.848	12	12.25	43.75	56.00	4.13	41.87	46.00	Neutral	10.06
1.8615	12	18.74	37.26	56.00	16.36	29.64	46.00	Neutral	10.06
3.291	13	18.70	37.30	56.00	13.43	32.57	46.00	Neutral	10.11
3.3495	13	20.30	35.70	56.00	13.79	32.21	46.00	Neutral	10.12
3.5385	13	20.31	35.69	56.00	16.08	29.92	46.00	Neutral	10.12
3.6015	13	20.72	35.28	56.00	16.24	29.76	46.00	Neutral	10.13
6.393	14	19.03	40.97	60.00	15.68	34.32	50.00	Neutral	10.26
6.5775	14	18.30	41.70	60.00	14.40	35.60	50.00	Neutral	10.27
9.399	14	28.81	31.19	60.00	17.25	32.75	50.00	Neutral	10.40
9.4395	14	28.71	31.29	60.00	16.86	33.14	50.00	Neutral	10.40
9.744	15	25.76	34.24	60.00	16.55	33.45	50.00	Neutral	10.41
9.798	15	28.64	31.36	60.00	14.88	35.12	50.00	Neutral	10.41
15.207	15	31.55	28.45	60.00	29.30	20.70	50.00	Neutral	10.81
19.122	15	30.12	29.88	60.00	25.41	24.59	50.00	Neutral	11.04
20.982	16	37.81	22.19	60.00	33.50	16.50	50.00	Neutral	11.10
21.7875	16	38.27	21.73	60.00	31.01	18.99	50.00	Neutral	11.11
24.0825	16	30.68	29.32	60.00	24.21	25.79	50.00	Neutral	11.14
24.1455	16	30.61	29.39	60.00	24.06	25.94	50.00	Neutral	11.14

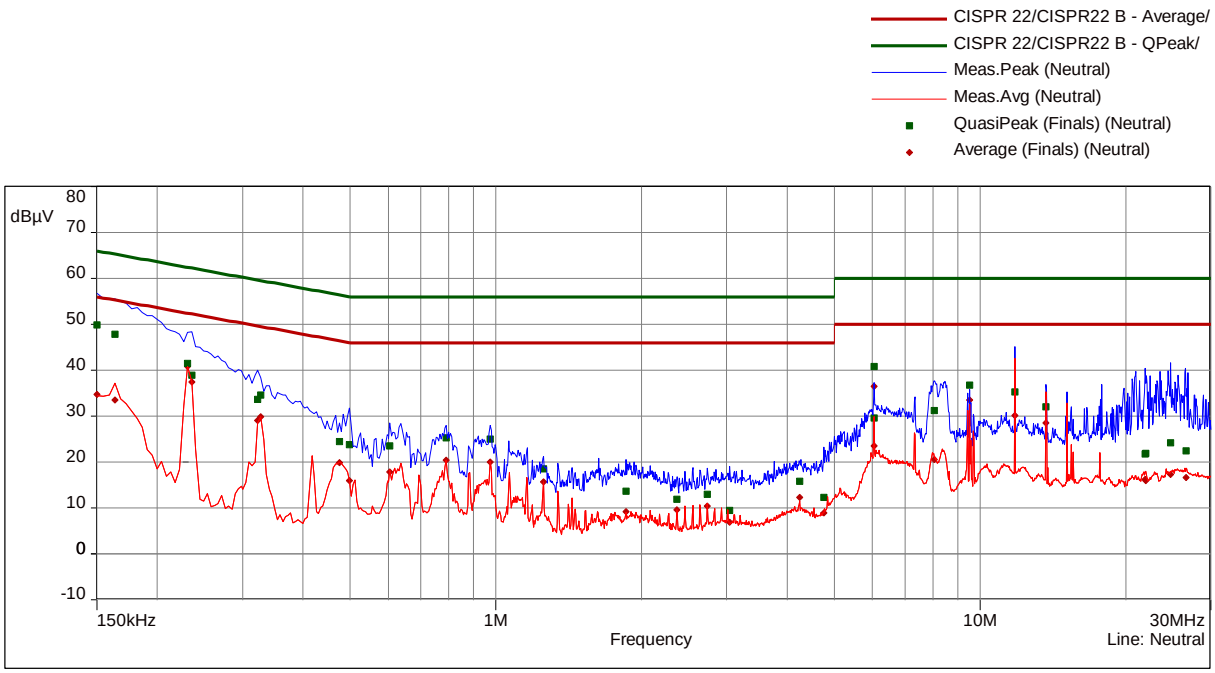
Test point L1 Result: passed
Operation mode: Evolve P10 / Continuous sweep mode
Remarks: FCC/IC Requirements
With EOS PSU, Cable and Ferrite on DC line
8.2MHz Band, Tx1 & Tx2: 31 – Antenna dummy load
Tested by: Huber Markus



CISPR 22/CISPR22B

freq	SR	QP	margin	limit	AV	margin	limit	line	corr
MHz		dB(µV)	dB	dB	dB(µV)	dB	dB		dB
0.1635	1	48.90	16.39	65.28	36.07	19.21	55.28	Phase 1	9.98
0.168	1	48.10	16.96	65.06	35.48	19.58	55.06	Phase 1	9.98
0.231	1	42.72	19.69	62.41	42.43	9.98	52.41	Phase 1	9.99
0.2355	1	39.79	22.47	62.25	39.11	13.15	52.25	Phase 1	9.99
0.3225	2	35.67	23.97	59.64	31.58	18.07	49.64	Phase 1	10.00
0.327	2	36.78	22.74	59.53	32.24	17.29	49.53	Phase 1	10.00
0.4665	2	23.11	33.47	56.58	17.26	29.32	46.58	Phase 1	10.01
0.5115	2	26.25	29.75	56.00	23.35	22.65	46.00	Phase 1	10.01
0.6045	3	24.39	31.61	56.00	21.38	24.62	46.00	Phase 1	10.02
0.9735	3	22.85	33.15	56.00	18.94	27.06	46.00	Phase 1	10.03
1.254	4	16.45	39.55	56.00	14.99	31.01	46.00	Phase 1	10.04
1.5105	4	9.16	46.84	56.00	5.43	40.57	46.00	Phase 1	10.05
1.7625	4	15.88	40.12	56.00	10.79	35.21	46.00	Phase 1	10.06
1.947	4	15.14	40.86	56.00	10.49	35.51	46.00	Phase 1	10.06
2.553	5	14.62	41.38	56.00	11.19	34.81	46.00	Phase 1	10.08
2.7375	5	15.29	40.71	56.00	11.43	34.57	46.00	Phase 1	10.09
4.4565	5	15.21	40.79	56.00	11.46	34.54	46.00	Phase 1	10.14
4.5465	5	16.17	39.83	56.00	12.34	33.66	46.00	Phase 1	10.15
6.042	6	46.97	13.03	60.00	42.33	7.67	50.00	Phase 1	10.21
9.5655	6	44.53	15.47	60.00	40.82	9.18	50.00	Phase 1	10.33
11.814	7	37.59	22.41	60.00	34.07	15.93	50.00	Phase 1	10.45
15.4365	7	38.06	21.94	60.00	34.21	15.79	50.00	Phase 1	10.65
23.286	8	19.84	40.16	60.00	13.17	36.83	50.00	Phase 1	10.84
24.3705	8	21.79	38.21	60.00	14.78	35.22	50.00	Phase 1	10.83
25.05	8	23.52	36.48	60.00	16.46	33.54	50.00	Phase 1	10.82

Test point	N	Result: passed
Operation mode:	Evolve P10 / Continuous sweep mode	
Remarks:	FCC/IC Requirements	
	With EOS PSU, Cable and Ferrite on DC line	
	8.2MHz Band, Tx1 & Tx2: 31 – Antenna dummy load	
Tested by:	Huber Markus	

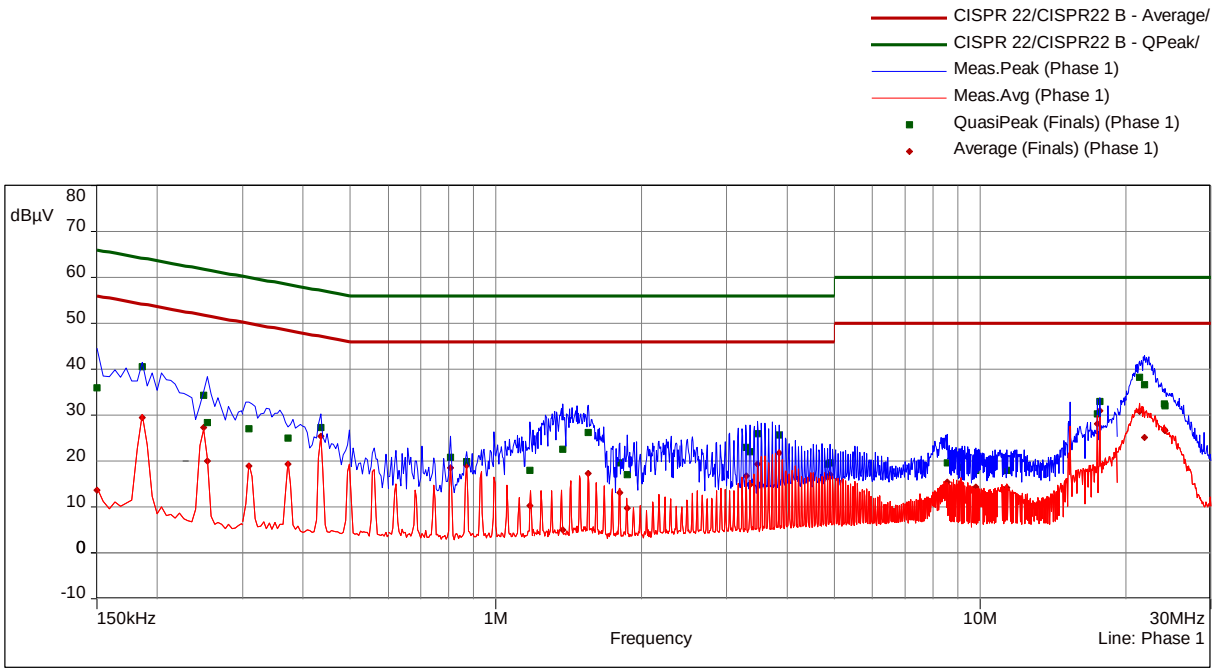


CISPR 22/CISPR22B

FCC ID: DO4TR7240R

freq	SR	QP	margin	limit	AV	margin	limit	line	corr
MHz		dB(µV)	dB	dB	dB(µV)	dB	dB		dB
0.1815	9	57.81	6.60	64.42	47.42	7.00	54.42	Neutral	9.99
0.24	9	51.34	10.76	62.10	39.84	12.26	52.10	Neutral	10.00
0.2445	9	51.45	10.49	61.94	40.44	11.50	51.94	Neutral	10.00
0.426	10	50.51	6.82	57.33	39.32	8.01	47.33	Neutral	10.01
0.435	10	50.86	6.29	57.16	39.00	8.16	47.16	Neutral	10.01
0.453	10	49.98	6.84	56.82	30.36	16.46	46.82	Neutral	10.01
0.6135	11	41.71	14.29	56.00	28.27	17.73	46.00	Neutral	10.02
0.645	11	41.97	14.03	56.00	25.71	20.29	46.00	Neutral	10.02
1.068	11	41.29	14.71	56.00	26.56	19.44	46.00	Neutral	10.04
1.077	11	41.02	14.98	56.00	25.27	20.73	46.00	Neutral	10.04
1.2405	12	40.73	15.27	56.00	27.13	18.87	46.00	Neutral	10.04
1.3575	12	40.16	15.84	56.00	26.29	19.71	46.00	Neutral	10.04
2.289	12	39.00	17.00	56.00	25.92	20.08	46.00	Neutral	10.07
2.3295	12	39.98	16.02	56.00	26.13	19.87	46.00	Neutral	10.08
2.5575	13	38.94	17.06	56.00	26.06	19.94	46.00	Neutral	10.09
2.625	13	38.62	17.38	56.00	25.53	20.47	46.00	Neutral	10.09
3.5115	13	37.37	18.63	56.00	25.15	20.85	46.00	Neutral	10.12
3.579	13	37.08	18.92	56.00	25.36	20.64	46.00	Neutral	10.13
5.097	14	34.48	25.52	60.00	24.51	25.49	50.00	Neutral	10.19
5.2005	14	34.17	25.83	60.00	24.78	25.22	50.00	Neutral	10.19
8.427	14	31.94	28.06	60.00	24.58	25.42	50.00	Neutral	10.35
10.5585	15	29.55	30.45	60.00	22.19	27.81	50.00	Neutral	10.46
12.885	15	31.32	28.68	60.00	26.39	23.61	50.00	Neutral	10.63
15.2205	15	38.61	21.39	60.00	33.64	16.36	50.00	Neutral	10.81
16.2825	15	37.65	22.35	60.00	30.80	19.20	50.00	Neutral	10.87
19.722	16	27.95	32.05	60.00	21.63	28.37	50.00	Neutral	11.08
19.7265	16	27.69	32.31	60.00	21.60	28.40	50.00	Neutral	11.08
24.105	16	25.90	34.10	60.00	20.49	29.51	50.00	Neutral	11.14
24.4965	16	25.40	34.60	60.00	19.93	30.07	50.00	Neutral	11.15

Test point	L1	Result: passed
Operation mode:	Evolve P10 / Continuous sweep mode	
Remarks:	FCC/IC Requirements	
	With GlobTek PSU, Cable and Ferrite on DC line	
	8.2MHz Band, Tx1 & Tx2: 31 – Antenna dummy load	
Tested by:	Huber Markus	



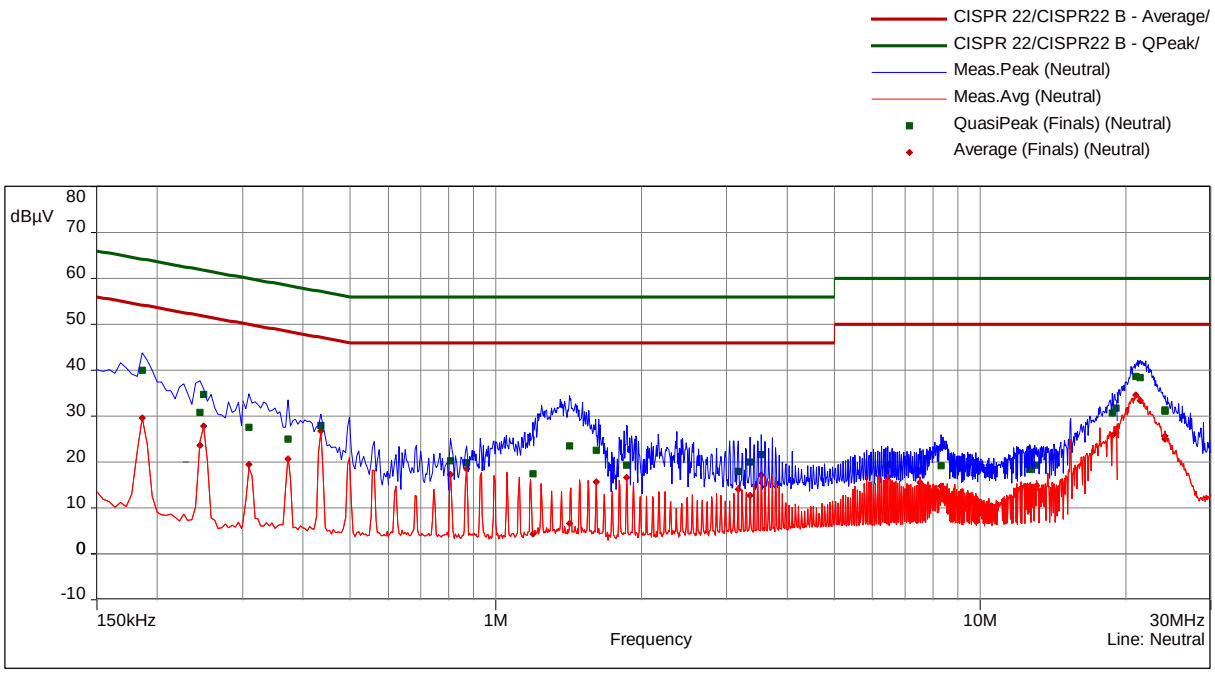
CISPR 22/CISPR22B

FCC ID: DO4TR7240R

freq	SR	QP	margin	limit	AV	margin	limit	line	corr
MHz		dB(µV)	dB	dB	dB(µV)	dB	dB		dB
0.15	1	35.94	30.06	66.00	13.62	42.38	56.00	Phase 1	9.98
0.186	1	40.56	23.65	64.21	29.53	24.69	54.21	Phase 1	9.98
0.249	1	34.29	27.50	61.79	27.36	24.43	51.79	Phase 1	9.99
0.2535	1	28.37	33.27	61.64	19.96	31.68	51.64	Phase 1	9.99
0.309	2	27.10	32.90	60.00	18.96	31.03	50.00	Phase 1	9.99
0.372	2	24.99	33.47	58.46	19.31	29.15	48.46	Phase 1	10.00
0.435	2	27.32	29.83	57.16	25.42	21.74	47.16	Phase 1	10.01
0.807	3	20.79	35.21	56.00	18.51	27.49	46.00	Phase 1	10.02
0.87	3	19.83	36.17	56.00	19.07	26.93	46.00	Phase 1	10.03
1.176	3	18.02	37.98	56.00	10.25	35.75	46.00	Phase 1	10.04
1.3755	4	22.56	33.44	56.00	5.06	40.94	46.00	Phase 1	10.04
1.551	4	26.26	29.74	56.00	17.34	28.66	46.00	Phase 1	10.05
1.803	4	19.64	36.36	56.00	13.13	32.87	46.00	Phase 1	10.06
1.866	4	17.08	38.92	56.00	9.80	36.20	46.00	Phase 1	10.06
3.291	5	22.97	33.03	56.00	16.74	29.26	46.00	Phase 1	10.11
3.3495	5	22.00	34.00	56.00	14.94	31.06	46.00	Phase 1	10.11
3.4755	5	25.89	30.11	56.00	19.32	26.68	46.00	Phase 1	10.11
3.849	5	25.62	30.38	56.00	21.82	24.18	46.00	Phase 1	10.12
4.8405	6	19.40	36.60	56.00	16.53	29.47	46.00	Phase 1	10.16
4.9035	6	19.55	36.45	56.00	16.99	29.01	46.00	Phase 1	10.16
8.5665	6	19.61	40.39	60.00	15.37	34.63	50.00	Phase 1	10.30
9.1245	6	18.66	41.34	60.00	15.02	34.98	50.00	Phase 1	10.32
9.807	7	18.03	41.97	60.00	14.28	35.72	50.00	Phase 1	10.34
11.3595	7	17.99	42.01	60.00	14.20	35.80	50.00	Phase 1	10.42
17.4885	7	30.30	29.70	60.00	28.13	21.87	50.00	Phase 1	10.75
17.7045	7	33.04	26.96	60.00	30.91	19.09	50.00	Phase 1	10.76
21.36	8	38.28	21.72	60.00	30.87	19.13	50.00	Phase 1	10.85
21.8505	8	36.63	23.37	60.00	25.18	24.82	50.00	Phase 1	10.85
24.0285	8	32.43	27.57	60.00	26.90	23.10	50.00	Phase 1	10.83
24.0915	8	32.09	27.91	60.00	26.64	23.36	50.00	Phase 1	10.83

FCC ID: DO4TR7240R

Test point	N	Result: passed
Operation mode:	Evolve P10 / Continuous sweep mode	
Remarks:	FCC/IC Requirements	
	With GlobTek PSU, Cable and Ferrite on DC line	
	8.2MHz Band, Tx1 & Tx2: 31 – Antenna dummy load	
Tested by:	Huber Markus	



CISPR 22/CISPR22B

freq	SR	QP	margin	limit	AV	margin	limit	line	corr
MHz		dB(µV)	dB	dB	dB(µV)	dB	dB		dB
0.186	9	40.04	24.17	64.21	29.67	24.54	54.21	Neutral	9.99
0.2445	9	30.84	31.10	61.94	23.60	28.35	51.94	Neutral	10.00
0.249	9	34.75	27.04	61.79	27.78	24.01	51.79	Neutral	10.00
0.309	10	27.57	32.42	60.00	19.44	30.56	50.00	Neutral	10.00
0.372	10	24.99	33.47	58.46	20.65	27.81	48.46	Neutral	10.01
0.435	10	27.95	29.21	57.16	26.73	20.43	47.16	Neutral	10.01
0.807	11	20.33	35.67	56.00	17.30	28.70	46.00	Neutral	10.02
0.87	11	19.92	36.08	56.00	18.55	27.45	46.00	Neutral	10.03
1.194	11	17.48	38.52	56.00	4.28	41.72	46.00	Neutral	10.04
1.4205	12	23.59	32.41	56.00	6.64	39.36	46.00	Neutral	10.05
1.614	12	22.55	33.45	56.00	15.63	30.37	46.00	Neutral	10.05
1.8615	12	19.30	36.70	56.00	16.68	29.32	46.00	Neutral	10.06
3.165	13	17.99	38.01	56.00	14.09	31.91	46.00	Neutral	10.11
3.3495	13	20.05	35.95	56.00	12.74	33.26	46.00	Neutral	10.12
3.5385	13	21.64	34.36	56.00	17.20	28.80	46.00	Neutral	10.12
6.456	14	19.48	40.52	60.00	16.78	33.22	50.00	Neutral	10.26
7.5135	14	18.08	41.92	60.00	15.61	34.39	50.00	Neutral	10.32
8.319	14	19.19	40.81	60.00	14.68	35.32	50.00	Neutral	10.35
12.6645	15	18.42	41.58	60.00	14.74	35.26	50.00	Neutral	10.62
13.0965	15	19.33	40.67	60.00	14.91	35.09	50.00	Neutral	10.65
18.744	15	30.71	29.29	60.00	25.80	24.20	50.00	Neutral	11.02
19.1175	15	31.76	28.24	60.00	26.44	23.56	50.00	Neutral	11.04
20.982	16	38.70	21.30	60.00	34.63	15.37	50.00	Neutral	11.10
21.4185	16	38.43	21.57	60.00	33.38	16.62	50.00	Neutral	11.11
24.087	16	31.32	28.68	60.00	25.69	24.31	50.00	Neutral	11.14
24.1455	16	31.11	28.89	60.00	25.07	24.93	50.00	Neutral	11.14

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: OATS1

Test distance: 3 metres

5.2.2 Photo documentation of the test set-up – See Attachment D

5.2.3 Description of Measurement

The magnetic field strength from the EuT will be measured on an open area test site in the frequency range of 9 kHz to 30 MHz using a tuned receiver and a shielded loop antenna. The set up of the Equipment under test will be in accordance to ANSI C63.10. The antenna was positioned 3, 10 or 30 meters horizontally from the EuT. Measurements have been made in all three orthogonal axes and the shielded loop antenna was rotated to locate the maximum of the emissions. In the case where larger measuring distances are required the results will extrapolated based on the values measured on the closer distances according to Section 15.31 (f) (2) [2]. The final measurement will be performed with an EMI Receiver set to an average and a peak detector.

The final level, expressed in dBµV/m, is arrived at by taking the reading from the EMI receiver (Level dBµV) and adding the antenna correction factor and cable loss factor (Factor dB) to it. This result then has to be compared with the relevant FCC limit.
The resolution bandwidth during the measurement was 300 kHz.

5.2.4 Test result

EVOLVE E10 2.0 iRange:
3m Distance measured:

Frequency [MHz]	L: PK [dBµV]	L: AV [dBµV]	Correct. [dB]	L: PK [dBµV/m]	L: AV [dBµV/m]	PK Limit [dBµV/m]	AV Limit [dBµV/m]	Delta [dB]	Tx1 & Tx2:
8.2	77.41	49.82	20	97.41	69.82	100.0	80.0	-10.18	31
7.2 & 8.2	76.48	46.79	20	96.48	66.79	100.0	80.0	-13.21	31
9.5	75.32	45.74	20	95.32	65.74	100.0	80.0	-14.26	31

30m Distance calculated:

Frequency [MHz]	L: PK [dBµV/m]	Limit [dBµV/m]	L: AV [dBµV/m]	Limit [dBµV/m]	Delta [dB]
8.2	57.41	60.0	29.82	40.0	-10.18
7.2 & 8.2	56.48	60.0	26.79	40.0	-13.21
9.5	55.32	60.0	25.74	40.0	-14.26

EVOLVE G10 iRange:
3m Distance measured:

Frequency [MHz]	L: PK [dBµV]	L: AV [dBµV]	Correct. [dB]	L: PK [dBµV/m]	L: AV [dBµV/m]	PK Limit [dBµV/m]	AV Limit [dBµV/m]	Delta [dB]	Tx1 & Tx2:
8.2	70.36	41.92	20	90.36	61.92	100.0	80.0	-18.08	31
7.2 & 8.2	74.10	43.54	20	94.10	63.54	100.0	80.0	-16.46	31
9.5	70.90	40.86	20	90.90	60.86	100.0	80.0	-19.14	31

30m Distance calculated:

Frequency [MHz]	L: PK [dBµV/m]	Limit [dBµV/m]	L: AV [dBµV/m]	Limit [dBµV/m]	Delta [dB]
8.2	50.36	60.0	21.92	40.0	-18.08
7.2 & 8.2	54.10	60.0	23.54	40.0	-16.46
9.5	50.90	60.0	20.86	40.0	-19.14

EVOLVE G30 iRange:
3m Distance measured:

Frequency [MHz]	L: PK [dBµV]	L: AV [dBµV]	Correct. [dB]	L: PK [dBµV/m]	L: AV [dBµV/m]	PK Limit [dBµV/m]	AV Limit [dBµV/m]	Delta [dB]	Tx1 & Tx2:
8.2	68.34	39.72	20	88.34	59.72	100.0	80.0	-20.28	31
7.2 & 8.2	68.67	40.08	20	88.67	60.08	100.0	80.0	-19.92	31
9.5	66.99	37.67	20	86.99	57.67	100.0	80.0	-22.33	31

30m Distance calculated:

Frequency [MHz]	L: PK [dBµV/m]	Limit [dBµV/m]	L: AV [dBµV/m]	Limit [dBµV/m]	Delta [dB]
8.2	48.34	60.0	19.72	40.0	-20.28
7.2 & 8.2	48.67	60.0	20.08	40.0	-19.92
9.5	46.99	60.0	17.67	40.0	-22.33

EVOLVE G35 iRange:
3m Distance measured:

Frequency [MHz]	L: PK [dBµV]	L: AV [dBµV]	Correct. [dB]	L: PK [dBµV/m]	L: AV [dBµV/m]	PK Limit [dBµV/m]	AV Limit [dBµV/m]	Delta [dB]	Tx1 & Tx2:
8.2	70.87	42.57	20	90.87	62.57	100.0	80.0	-17.43	31
7.2 & 8.2	72.39	44.51	20	92.39	64.51	100.0	80.0	-15.49	31
9.5	70.86	41.36	20	90.86	61.36	100.0	80.0	-18.64	31

30m Distance calculated:

Frequency [MHz]	L: PK [dBµV/m]	Limit [dBµV/m]	L: AV [dBµV/m]	Limit [dBµV/m]	Delta [dB]
8.2	50.87	60.0	22.57	40.0	-17.43
7.2 & 8.2	52.39	60.0	24.51	40.0	-15.49
9.5	50.86	60.0	21.36	40.0	-18.64

EVOLVE P10 iRange:
3m Distance measured:

Frequency [MHz]	L: PK [dBµV]	L: AV [dBµV]	Correct. [dB]	L: PK [dBµV/m]	L: AV [dBµV/m]	PK Limit [dBµV/m]	AV Limit [dBµV/m]	Delta [dB]	Tx1 & Tx2:
8.2	70.94	43.41	20	90.94	63.41	100.0	80.0	-16.59	31
7.2 & 8.2	70.88	42.00	20	90.88	62.00	100.0	80.0	-18.00	31
9.5	69.91	40.79	20	89.91	60.79	100.0	80.0	-19.21	31

30m Distance calculated:

Frequency [MHz]	L: PK [dBµV/m]	Limit [dBµV/m]	L: AV [dBµV/m]	Limit [dBµV/m]	Delta [dB]
8.2	50.94	60.0	23.41	40.0	-16.59
7.2 & 8.2	50.88	60.0	22.00	40.0	-18.00
9.5	49.91	60.0	20.79	40.0	-19.21

Limit according to FCC Part 15 Subpart 15.223, 15.35(b)

Frequency (MHz)	Field strength of fundamental – Average Detector	
	(µV/m)	dB (µV/m)
1.705-10.0	100*	40*

Frequency (MHz)	Field strength of fundamental – Peak Detector	
	(µV/m)	dB (µV/m)
1.705-10.0	1000*	60*

* At a test distance of 30 metres

The requirements are **FULFILLED.**

Remarks: _____

5.3 Spurious emissions (Magnetic field) 9 kHz – 30 MHz

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

5.3.1 Description of the test location

Test location: OATS1

Test distance: 10 metres

5.3.2 Photo documentation of the test set-up – See Attachmend D

5.3.3 Description of Measurement

The spurious emissions from the EuT will be measured on an open area test site in the frequency range of 9 kHz to 30 MHz using a tuned receiver and a shielded loop antenna. The antenna was positioned 3, 10 or 30 meters horizontally from the EuT. Measurements have been made in all three orthogonal axes and the shielded loop antenna was rotated to locate the maximum of the emissions. In the case where larger measuring distances are required the results will extrapolated based on the values measured on the closer distances according to Section 15.31 (f) (2) [2]. The final measurement will be performed with an EMI Receiver set to Quasi Peak detector except for the frequency bands 9 kHz to 90 kHz and 110 to 490 kHz where an average detector will be used according to Section 15.209 (d) [2].

The final level, expressed in dBµV/m, is arrived at by taking the reading from the EMI receiver (Level dBµV) and adding the antenna correction factor and cable loss factor (Factor dB) to it. This result then has to be compared with the relevant FCC limit.
The resolution bandwidth during the measurement is as follows:
9 kHz – 150 kHz: ResBW: 200 Hz
150 kHz – 30 MHz: ResBW: 300 kHz

Example:

Frequency (MHz)	Level (dBµV)	+	Factor (dB)	=	Level (dBµV/m)	Limit (dBµV/m)	=	Delta (dB)
1.705	5	+	20	=	25	30	=	5

5.3.4 Test result

Results at a measurement distance of 3m

P10, PAB/SAB TXI, 2=31, No Binoculuar Cores, EOS PS, Mid 8.2 Mhz

Frequency [MHz]	PK [dBµV]	AV [dBµV]	QP [dBµV]	Correct. [dB]	PK [dBµV/m]	AV [dBµV/m]	QP [dBµV/m]	Limit [dBµV/m]
10,0	21,2	7	11,7	20,5	41,7	27,5	32,2	69,5
26,61	24,8	7,7	12,4	20,5	45,3	28,2	32,9	69,5
16,62	20,1	9,4	15,8	20,5	40,6	29,9	36,3	69,5

P10, PAB/SAB TXI, 2=31, No Binoculuar Cores, GlobTek PS, Mid 8.2 Mhz

Frequency [MHz]	PK [dBµV]	AV [dBµV]	QP [dBµV]	Correct. [dB]	PK [dBµV/m]	AV [dBµV/m]	QP [dBµV/m]	Limit [dBµV/m]
10,0	22,3	6,5	11,9	20,5	42,8	27	32,4	69,5
26,61	25,2	7,6	12,6	20,5	45,7	28,1	33,1	69,5
16,62	20,2	9,5	15,6	20,5	40,7	30	36,1	69,5

G10, PAB/SAB TXI, 2=31, No Binoculuar Cores, EOS PS, Mid 8.2 Mhz

Frequency [MHz]	PK [dBµV]	AV [dBµV]	QP [dBµV]	Correct. [dB]	PK [dBµV/m]	AV [dBµV/m]	QP [dBµV/m]	Limit [dBµV/m]
10,0	22,4	8	12,3	20,5	42,9	28,5	32,8	69,5
26,61	25,1	7,5	12,3	20,5	45,6	28	32,8	69,5
16,62	21,4	8,1	16	20,5	41,9	28,6	36,5	69,5

G35, PAB/SAB TXI, 2=31, No Binoculuar Cores, EOS PS, Mid 8.2 Mhz

Frequency [MHz]	PK [dBµV]	AV [dBµV]	QP [dBµV]	Correct. [dB]	PK [dBµV/m]	AV [dBµV/m]	QP [dBµV/m]	Limit [dBµV/m]
10,0	22,3	7,4	13,9	20,5	42,8	27,9	34,4	69,5
26,61	25	8,3	12,8	20,5	45,5	28,8	33,3	69,5
16,62	19,3	9,3	15,8	20,5	39,8	29,8	36,3	69,5

E10, PAB/SAB TXI, 2=31, No Binoculuar Cores, HyperGuard, EOS PS, Mid 8.2 Mhz

Frequency [MHz]	PK [dBµV]	AV [dBµV]	QP [dBµV]	Correct. [dB]	PK [dBµV/m]	AV [dBµV/m]	QP [dBµV/m]	Limit [dBµV/m]
10,0	23,4	10,2	15,9	20,5	43,9	30,7	36,4	69,5
26,61	22,7	9,1	13,7	20,5	43,2	29,6	34,2	69,5
16,62	15,9	1,4	8,5	20,5	36,4	21,9	29	69,5

G30, PAB/SAB TXI, 2=31, No Binoculuar Cores, EOS PS, Mid 8.2 Mhz

Frequency [MHz]	PK [dBµV]	AV [dBµV]	QP [dBµV]	Correct. [dB]	PK [dBµV/m]	AV [dBµV/m]	QP [dBµV/m]	Limit [dBµV/m]
10,0	20,8	6,9	13	20,5	41,3	27,4	33,5	69,5
26,61	22,7	8	12,1	20,5	43,2	28,5	32,6	69,5
16,62	18,6	8,4	13,8	20,5	39,1	28,9	34,3	69,5

Limit according to FCC Part 15 Subpart 15.209(a), Subpart 15.223(a)

Limit according to FCC Part 15 Subpart 15.209(a):

Frequency	Field strength of spurious emissions		Measurement distance
(MHz)	(µV/m)	dB(µV/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 FCC Part 15 Subpart 15.223(a)

Frequency (MHz)	Field strength of spurious emissions		Measurement distance (meters)
	(µV/m)	dB (µV/m)	
0.009-0.490	2400/F(kHz)	--	300
0.490-1.705	24000/F (kHz)	--	30
1.705-30.0	100	40	30

The requirements are **FULFILLED.**

Remarks: _____

5.4 Radiated emissions (electric field) 30 MHz – 1 GHz

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

5.4.1 Description of the test location

Test location: OATS1

Test distance: 3 metres

5.4.2 Photo documentation of the test set-up – See Attachment D

5.4.3 Description of Measurement

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 polarized 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 meter non-conducting table 80 centimetres above the ground plane. Floor standing equipment is placed directly on the turntable/ground plane. The set up of the Equipment under test will be in accordance to ANSI C63.4-2003. The Interface cables that are closer than 40 centimetres to the ground plane are bundled in the center in a serpentine fashion so they are at least 40 centimetres from the ground plane. Cables to simulators/testers (if used in this test) are routed through the center of the table and to a screen room located outside the test area. The antenna was positioned 3, 10 or 30 meters horizontally from the EuT. To locate maximum emissions from the test sample the antenna is varied in height from 1 to 4 meters, measurement scans are made with both horizontal and vertical antenna polarization's and the EuT are rotated 360 degrees.

The final level, expressed in dBµV/m, is arrived by taking the reading from the EMI receiver (Level dBµV) and adding the correction factors and cable loss factor (Factor dB) to it. This is done automatically in the EMI receiver, where the correction factors are stored. This result then has the FCC or CISPR limit subtracted from it to provide the Delta which gives the tabular data as shown in the data sheets at page.

The resolution bandwidth during the measurement is as follows:
30 MHz – 1000 MHz: ResBW: 120 kHz

Example:

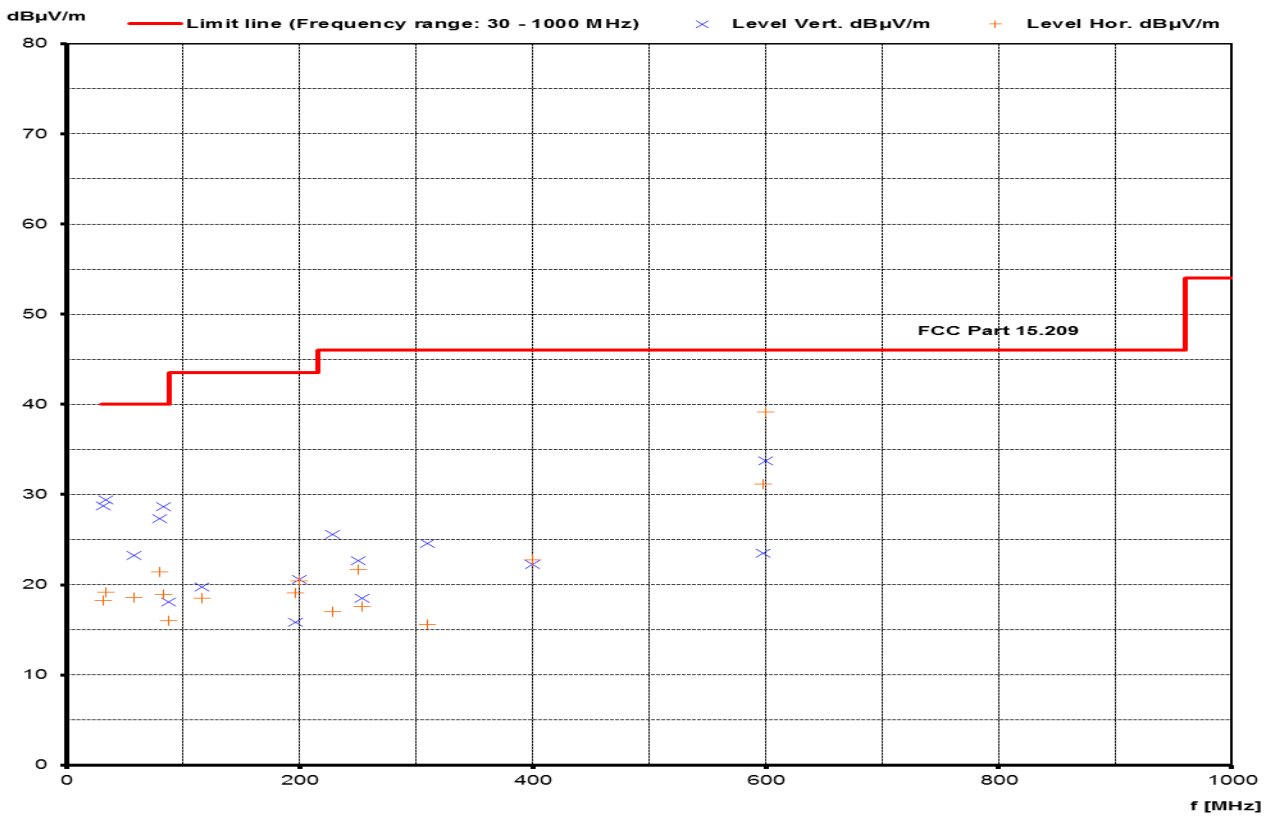
Frequency (MHz)	Level (dBµV)	+	Factor (dB)	=	Level (dBµV/m)	Limit (dBµV/m)	=	Delta (dB)
719	75	+	32.6	=	107.6	110	=	-2.4

5.4.4 Test result

Operation Mode: E10, PAB/SAB TXI, 2=31, No Binoculuar Cores, HyperGuard, EOS PS, Mid 8.2 Mhz

Remarks: The limits are met! Extract of the critical values

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)
31,80	14,7	5,7	14,0	12,6	28,7	18,3	40,0	-11,3
33,20	15,4	6,5	14,0	12,6	29,4	19,1	40,0	-10,6
57,30	8,4	4,7	14,9	13,9	23,3	18,6	40,0	-16,7
79,50	16,1	10,5	11,2	10,9	27,3	21,4	40,0	-12,7
83,30	18,3	8,5	10,3	10,4	28,6	18,9	40,0	-11,4
87,50	8,7	6,1	9,4	9,9	18,1	16,0	40,0	-21,9
115,70	8,1	6,2	11,7	12,3	19,8	18,5	43,5	-23,7
196,60	4,2	6,8	11,6	12,3	15,8	19,1	43,5	-24,4
200,00	9,3	8,5	11,3	12,0	20,6	20,5	43,5	-22,9
228,30	12,9	3,9	12,7	13,1	25,6	17,0	46,0	-20,4
250,00	8,9	7,7	13,8	14,0	22,7	21,7	46,0	-23,3
253,60	4,5	3,4	14,0	14,2	18,5	17,6	46,0	-27,5
310,10	7,4	-1,2	17,2	16,8	24,6	15,6	46,0	-21,4
400,00	2,4	3,2	19,8	19,6	22,2	22,8	46,0	-23,2
597,60	-1,9	5,9	25,4	25,2	23,5	31,1	46,0	-14,9
600,00	8,3	13,9	25,5	25,3	33,8	39,2	46,0	-6,8

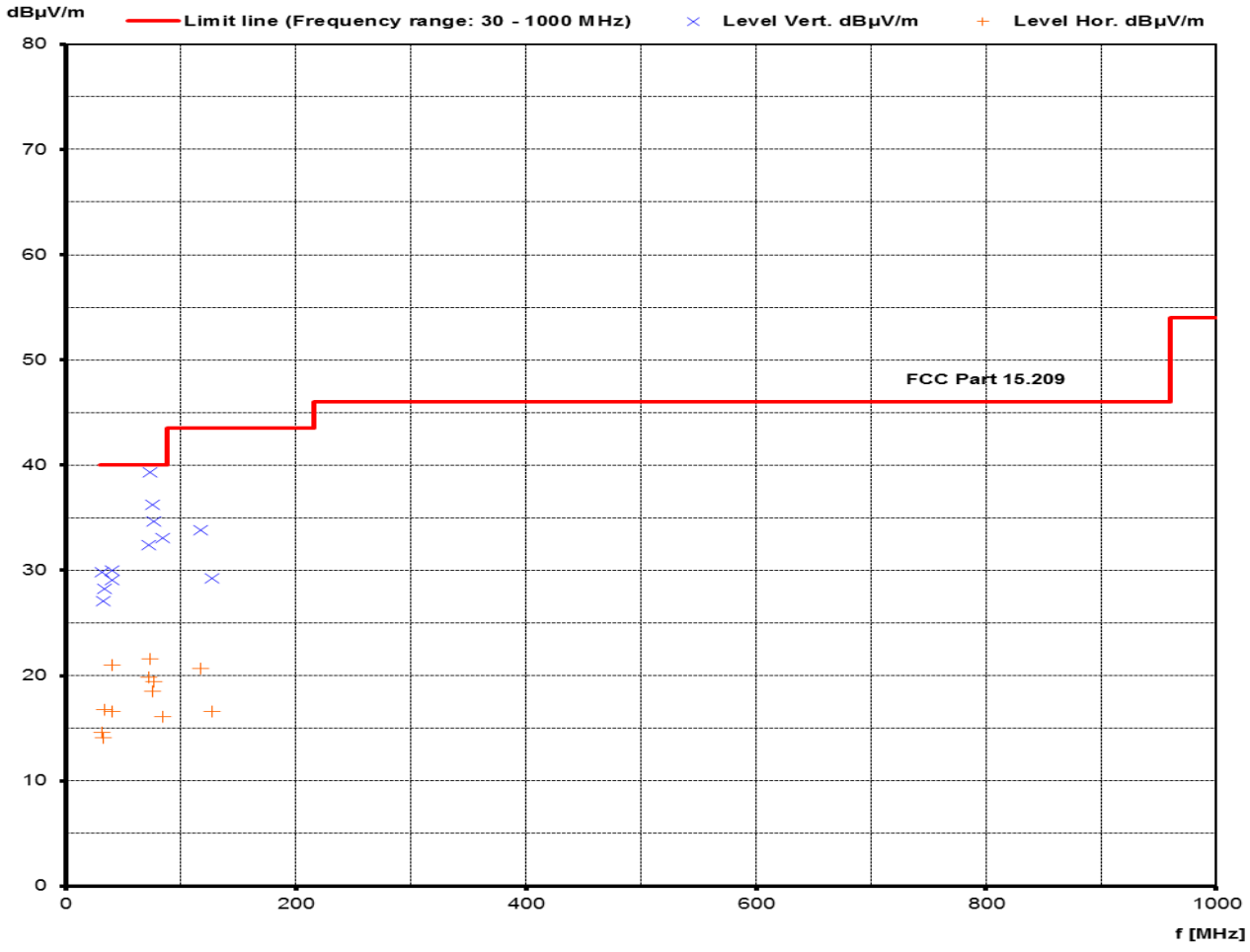


FCC ID: DO4TR7240R

Operation Mode: G10, PAB/SAB TXI, 2=31, No Binoculuar Cor, EOS PS, Mid 8.2 Mhz

Remarks: The limits are met! Extract of the critical values

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)
31,85	15,8	2,0	14,0	12,6	29,8	14,6	40,0	-10,2
32,25	13,1	1,5	14,0	12,6	27,1	14,1	40,0	-12,9
33,30	14,3	4,1	14,0	12,6	28,3	16,7	40,0	-11,7
39,80	15,4	7,6	14,6	13,4	30,0	21,0	40,0	-10,0
40,40	14,4	3,1	14,7	13,5	29,1	16,6	40,0	-10,9
71,61	18,9	6,9	13,5	12,9	32,4	19,8	40,0	-7,6
72,68	26,1	8,9	13,2	12,7	39,3	21,6	40,0	-0,7
74,96	23,7	6,4	12,6	12,1	36,3	18,5	40,0	-3,7
76,05	22,4	7,6	12,2	11,8	34,6	19,4	40,0	-5,4
84,50	23,0	5,8	10,1	10,3	33,1	16,1	40,0	-6,9
116,65	22,0	8,2	11,8	12,4	33,8	20,6	43,5	-9,7
127,20	16,5	3,2	12,8	13,4	29,3	16,6	43,5	-14,2

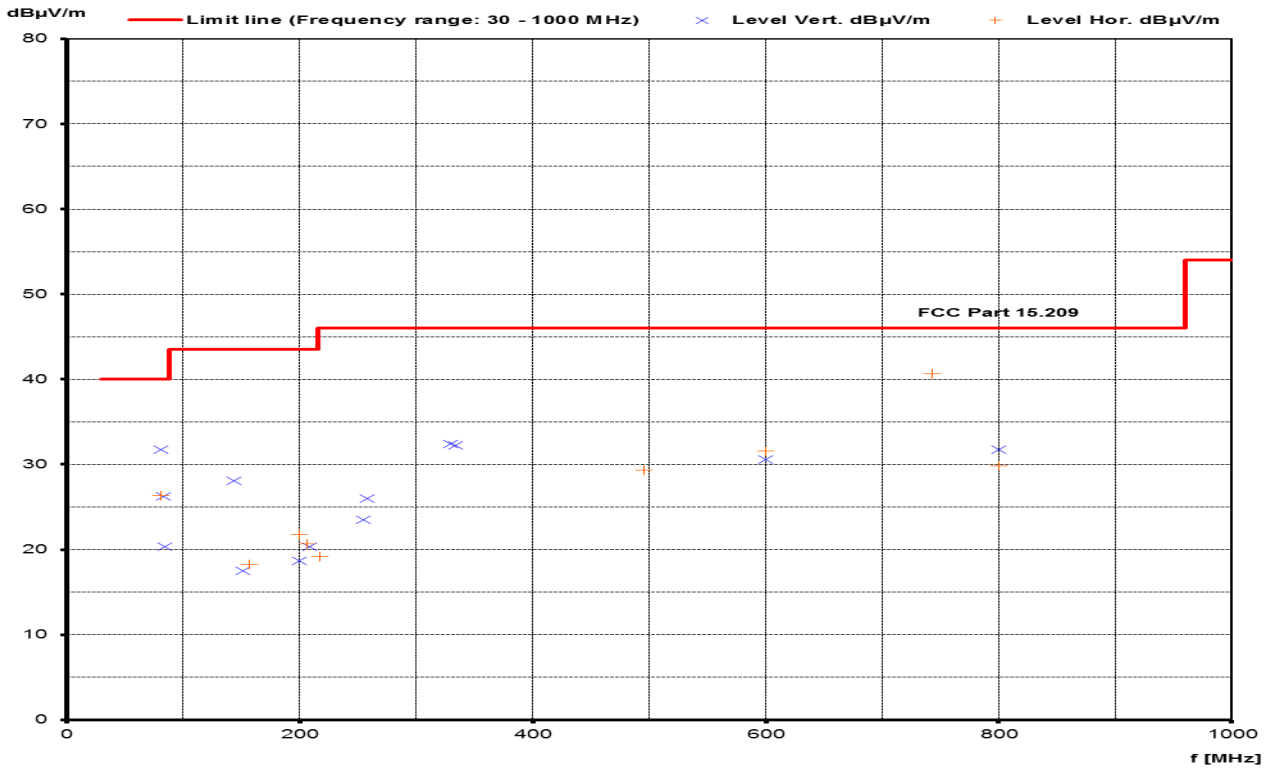


FCC ID: DO4TR7240R

Operation Mode: G30, PAB/SAB TXI, 2=31, No Binoculuar Cores, EOS PS, Mid 8.2 Mhz

Remarks: The limits are met! Extract of the critical values!

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)
80,6614	20,8	15,6	10,9	10,7	31,7	26,3	40,0	-8,3
83,3252	15,9		10,3		26,2		40,0	-13,8
84,5562	10,3		10,1		20,4		40,0	-19,6
143,7232	14,5		13,6		28,1		43,5	-15,4
151,1149	3,5		14,0		17,5		43,5	-26,0
208,1782	8,7		11,7		20,4		43,5	-23,1
254,4542	9,4		14,1		23,5		46,0	-22,5
258,4262	11,7		14,3		26,0		46,0	-20,0
329,5808	14,6		17,8		32,4		46,0	-13,6
333,9618	14,3		17,9		32,2		46,0	-13,8
157,0202		3,1		15,2		18,3	43,5	-25,2
206,7944		8,4		12,2		20,6	43,5	-22,9
217,6552		6,5		12,7		19,2	46,0	-26,8
494,9773		7,2		22,1		29,3	46,0	-16,7
742,4927		13,1		27,5		40,6	46,0	-5,4
200,0000	7,4	9,8	11,3	12,0	18,7	21,8	43,5	-21,7
600,0128	5,1	6,3	25,5	25,3	30,6	31,6	46,0	-14,4
800,0215	2,2	0,9	29,5	29,0	31,7	29,9	46,0	-14,3

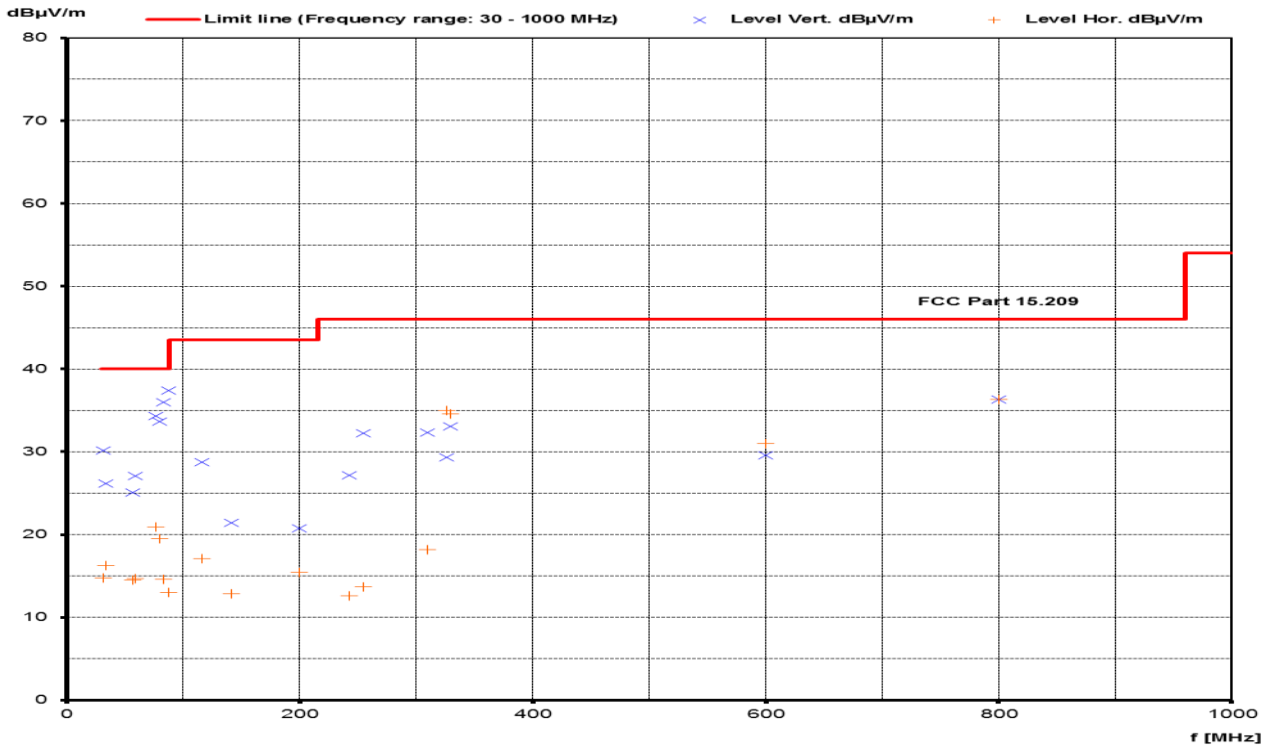


FCC ID: DO4TR7240R

Operation Mode: G35, PAB/SAB TXI, 2=31, No Binoculuar Cores, EOS PS, Mid 8.2 Mhz

Remarks: The limits are met! Extract of the critical values!

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)
31,78	16,1	2,2	14,0	12,6	30,1	14,8	40,0	-9,9
33,20	12,2	3,6	14,0	12,6	26,2	16,2	40,0	-13,8
56,58	10,2	0,6	14,9	13,9	25,1	14,5	40,0	-14,9
59,15	12,3	0,8	14,8	13,9	27,1	14,7	40,0	-12,9
76,10	22,1	9,1	12,2	11,8	34,3	20,9	40,0	-5,7
79,50	22,4	8,6	11,2	10,9	33,6	19,5	40,0	-6,4
83,20	25,6	4,2	10,4	10,4	36,0	14,6	40,0	-4,0
87,30	28,0	3,1	9,4	9,9	37,4	13,0	40,0	-2,6
116,60	16,9	4,7	11,8	12,4	28,7	17,1	43,5	-14,8
141,60	8,0	-1,5	13,4	14,3	21,4	12,8	43,5	-22,1
200,00	9,5	3,5	11,3	12,0	20,8	15,5	43,5	-22,7
242,30	13,8	-1,1	13,4	13,7	27,2	12,6	46,0	-18,8
254,50	18,2	-0,5	14,1	14,2	32,3	13,7	46,0	-13,7
310,10	15,1	1,4	17,2	16,8	32,3	18,2	46,0	-13,7
326,00	11,7	17,7	17,7	17,3	29,4	35,0	46,0	-11,0
329,60	15,3	17,2	17,8	17,4	33,1	34,6	46,0	-11,4
600,00	4,1	5,7	25,5	25,3	29,6	31,0	46,0	-15,0
800,00	6,8	7,4	29,5	29,0	36,3	36,4	46,0	-9,6

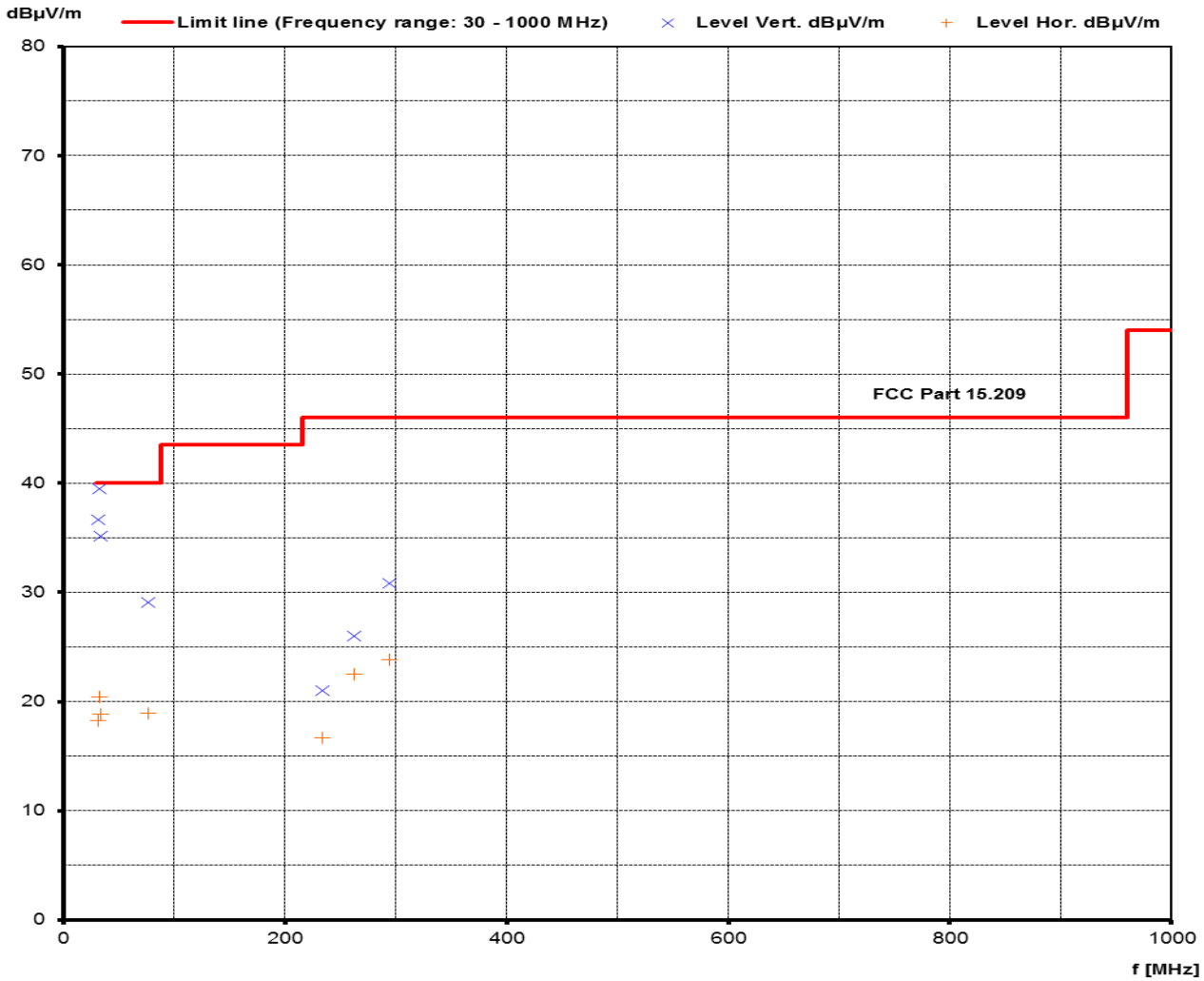


FCC ID: DO4TR7240R

Operation Mode: P10, PAB/SAB TXI, 2=31, No Binoculuar Cor, EOS PS, Mid 8.2 Mhz

Remarks: The limits are met! Extract of the critical values!

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)
32,30	25,5	7,8	14,0	12,6	39,5	20,4	40,0	-0,5
76,00	16,8	7,1	12,3	11,8	29,1	18,9	40,0	-10,9
31,84	22,6	5,7	14,0	12,6	36,6	18,3	40,0	-3,4
33,28	21,2	6,2	14,0	12,6	35,2	18,8	40,0	-4,8
234,22	8,0	3,3	13,0	13,3	21,0	16,6	46,0	-25,0
262,00	11,5	7,9	14,5	14,6	26,0	22,5	46,0	-20,0
294,24	14,3	7,6	16,5	16,2	30,8	23,8	46,0	-15,2



Limit according to FCC Part 15 Subpart 15.209(a)

Frequency (MHz)	Field strength of spurious emissions		Measurement distance (meters)
	(µV/m)	dB (µV/m)	
30-88	100	40	3
88-216	150	43.5	3
216-960	200	46	3
960-1000	500	54	3

The requirements are **FULFILLED.**

Remarks: _____

5.5 Emission Bandwidth

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

5.5.1 Description of the test location

Test location: OATS1

5.5.2 Photo documentation of the test set-up – See Attachment D

5.5.3 Test result

Tx Frequency: 8.2 MHz Band

Fundamental [MHz] See Plot 1	6dB Bandwidth F1 [MHz]	6dB Bandwidth F2 [MHz]	Measured Bandwidth [MHz]
8.2	7.696	8.674	0.978

Tx Frequency: 7.2 & 8.2 MHz Dual Band

Fundamental [MHz] See Plot 2	6dB Bandwidth F1 [MHz]	6dB Bandwidth F2 [MHz]	Measured Bandwidth [MHz]
7.2 & 8.2	6.99	8.363	1.373

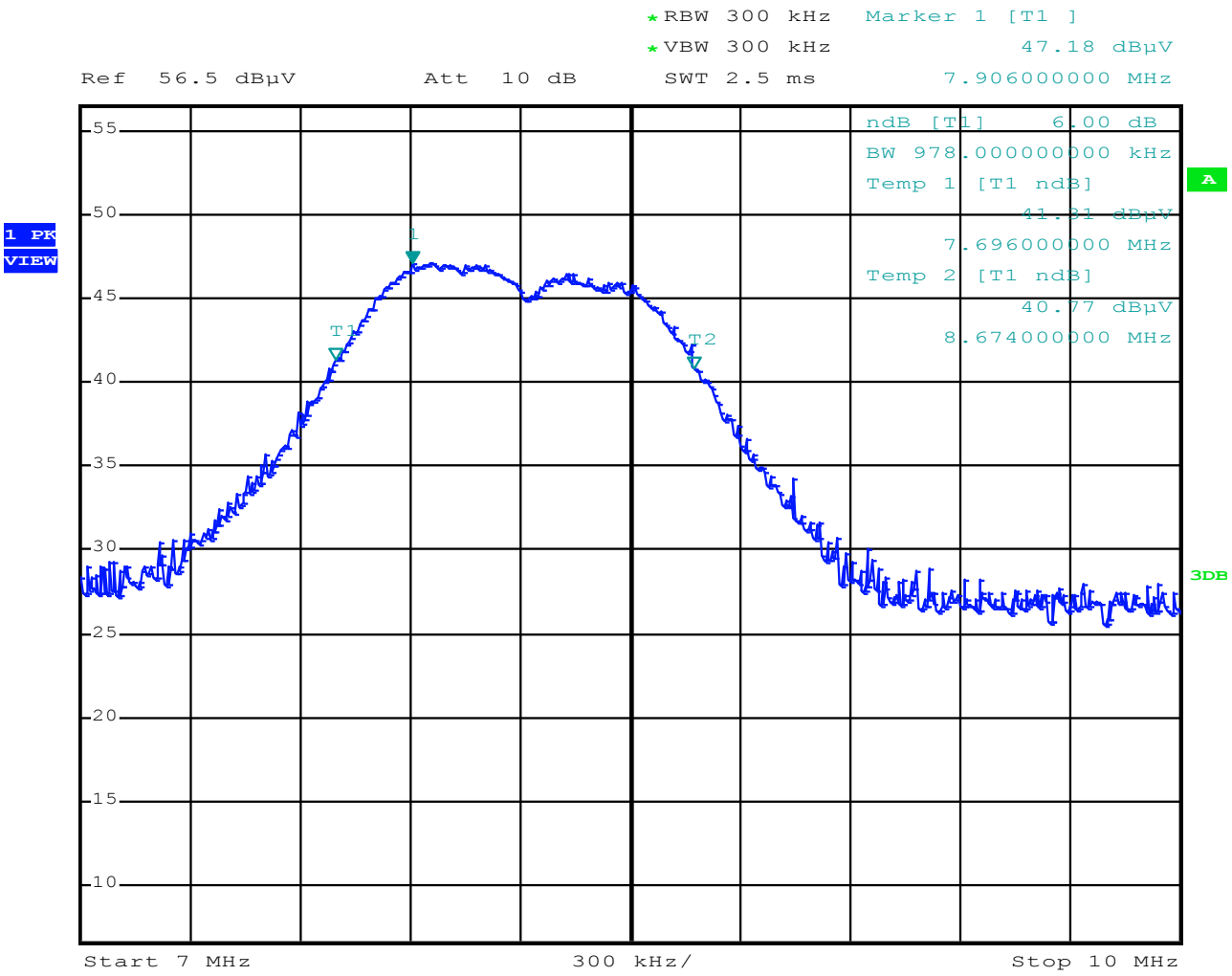
Tx Frequency: 9.5 MHz Band

Fundamental [MHz] See Plot 3	6dB Bandwidth F1 [MHz]	6dB Bandwidth F2 [MHz]	Measured Bandwidth [MHz]
9.5	8.960	9.998	1.038

5.5.4 Test protocol

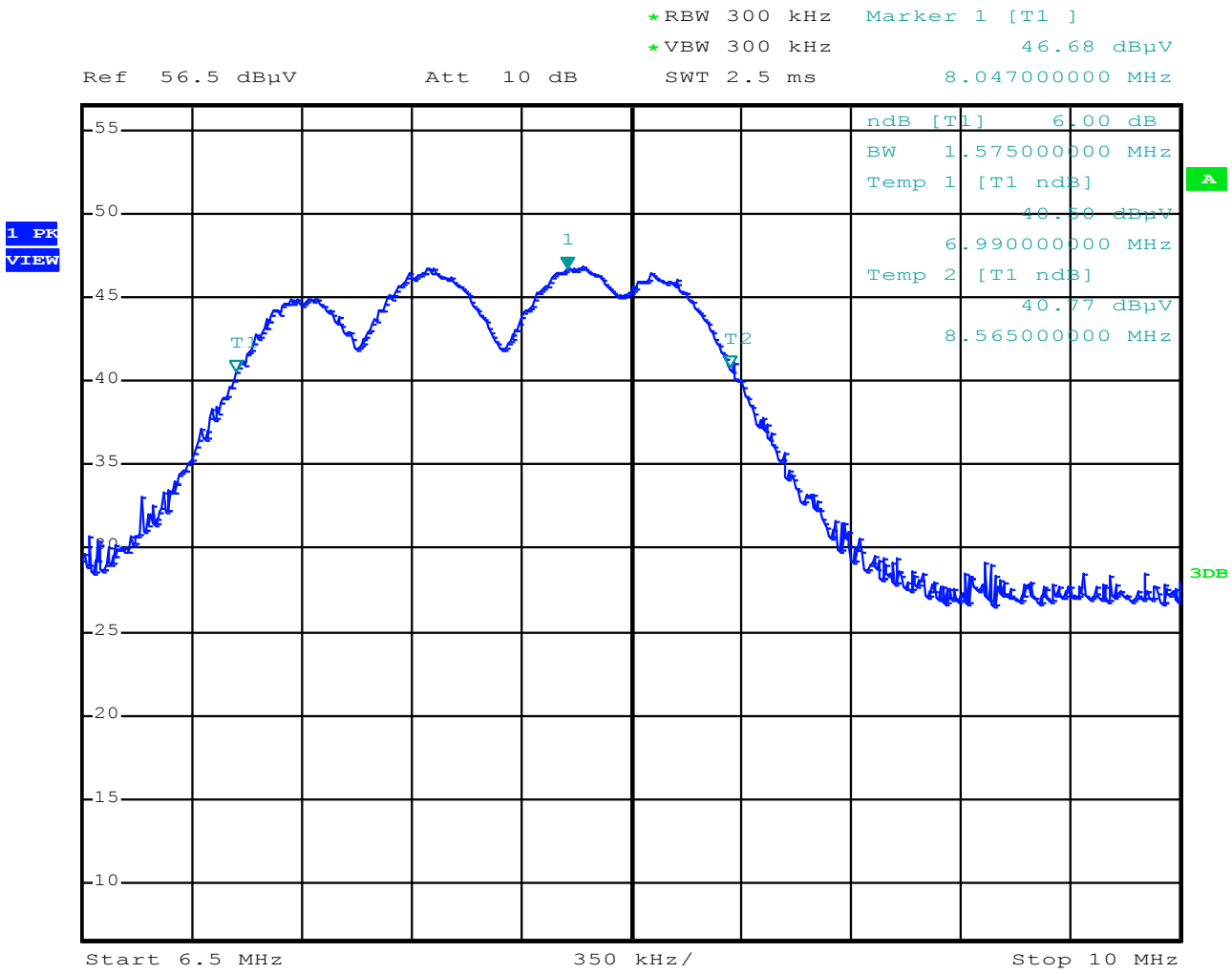
Emission Bandwidth
FCC Part 15 Subpart 15.223(a)

Plot 1:



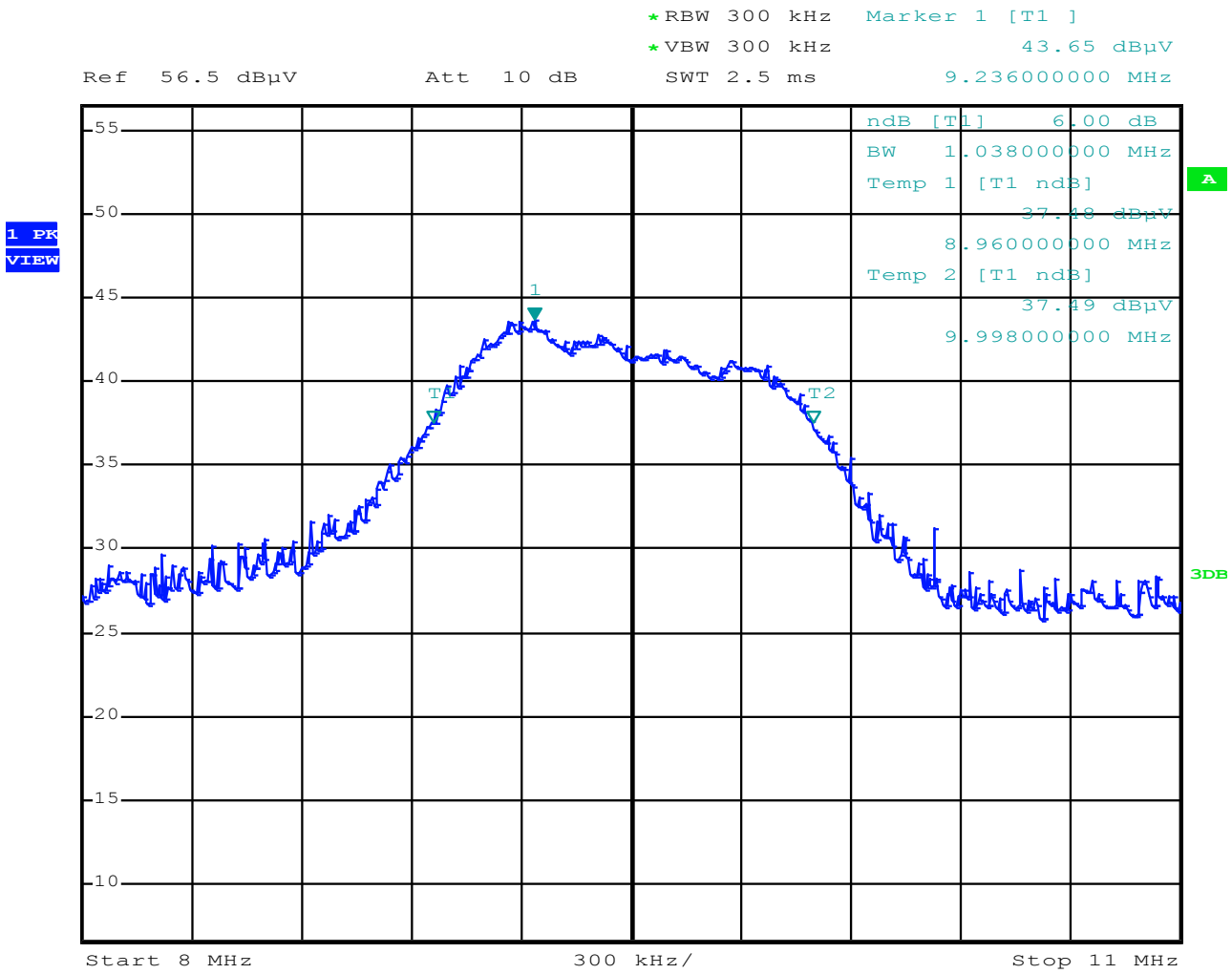
Emission Bandwidth
FCC Part 15 Subpart 15.223(a)

Plot 2:



Emission Bandwidth
FCC Part 15 Subpart 15.223(a)

Plot 3:



6 USED TEST EQUIPMENT AND ACCESSORIES

All test instruments used, in addition to the test accessories, are calibrated and verified regularly.

The calibration intervals and the calibration history will be given out on request.

Test ID	Model Type	Equipment No.	Next Calib.	Last Calib.	Next Verif.	Last Verif.
A 4	ESCI	02-02/03-05-004	12/09/2017	12/09/2016		
	ESH 2 - Z 5	02-02/20-05-003	15/04/2017	15/04/2014	15/06/2017	15/12/2016
	NSLK 8127	02-02/20-05-005			24/05/2017	24/11/2016
	N-1500-N	02-02/50-05-141				
	N-3000-BNCW	02-02/50-05-142				
	ESH 3 - Z 2	02-02/50-05-185	27/10/2019	27/10/2016	27/04/2017	27/10/2016
CPR 1	ESCI	02-02/03-05-004	12/09/2017	12/09/2016		
	HFH 2 - Z 2	02-02/24-15-001	23/03/2017	23/03/2016	23/09/2016	23/03/2016
	KK-EF393-21N-16	02-02/50-05-033				
	NW-2000-NB	02-02/50-05-113				
	KK-SD_7/8-2X21N-33,0M	02-02/50-15-028				
MB	ESR 7	02-02/03-13-001	15/06/2017	15/06/2016		
	HFRAE 5161 _ 50 kHz-120	02-02/24-11-004				
SER 1	ESCI	02-02/03-05-004	12/09/2017	12/09/2016		
	HFH 2 - Z 2	02-02/24-15-001	23/03/2017	23/03/2016	23/09/2016	23/03/2016
	KK-EF393-21N-16	02-02/50-05-033				
	NW-2000-NB	02-02/50-05-113				
	KK-SD_7/8-2X21N-33,0M	02-02/50-15-028				
SER 2	ESVS 30	02-02/03-05-003	08/07/2017	08/07/2016		
	VULB 9168	02-02/24-05-005	20/04/2017	20/04/2016	01/03/2017	01/09/2016
	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				