

**TEST REPORT
FROM
RFI GLOBAL SERVICES LTD**

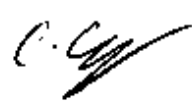
Test of: Satellite Tracking of People LLC, BluHome

To: 47CFR15.107 and 47CFR15.109

Test Report Serial No: RFI-EMC-RP81915JD01A V2.0

Version 2.0 supersedes all previous versions

This test report is issued under the authority of Chris Guy, Head of Global Approvals:



Checked By:	Nicholas Jones
Signature:	NT Jones
Date of Issue:	14 November 2011

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1. CUSTOMER DETAILS

Company Name:	Satellite Tracking of People LLC
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Address:	1212 North Post Oak Road Suite 100 Houston Texas 77055 United States
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2. SUMMARY OF TESTING

2.1. Test Specification

Reference:	47CFR15.107 and 47CFR15.109
Title:	Code of Federal Regulations Volume 47 (Telecommunications) 2010: Part 15 Subpart B (Radio Frequency Devices) – Sections 15.107 and 15.109.
Site Reference:	209735

2.2. Summary of Test Results

Clause	Measurement Type	Applicability	Result
15.109	Radiated Emissions (Enclosure)	Y	
15.107	Conducted Emissions (AC Mains Input / Output Ports)	Y	

KEY:  = Complied  = Did not comply

2.3. Location of Testing

All the measurements described in this report were performed at the premises of RFI Global Services Ltd, Unit 3 Horizon, Wade Road, Kingsland Business Park, Basingstoke, Hampshire RG24 8AH.

2.4. Deviations from the Test Specification

For the measurements contained within this test report, there were no deviations from, additions to, or exclusions from the test specification identified above, nor from the requirements defined in the basic standards called up within it.

3. EQUIPMENT UNDER TEST (EUT)

3.1. Description of EUT

The EUT was an offender tracking application.

3.2. Identification of Equipment under Test (EUT)

ID#	Description	Brand Name	Model No	Serial No
1	Offender Tracking Application	BluHome	13	004575

3.3. Port Identification

Port	Description	Type
1	Enclosure	-
2	Input Power	2-pin plug
3	Antenna	Antenna

3.4. Operating Modes

Mode Reference	Definition
Idle	The EUT was searching for an available network.

3.5. Modifications

NOTE: No modifications were made to the EUT during the course of testing

3.6. Additional Information Related to Testing

Equipment Category:	Tracker
Intended Operating Environment:	Domestic / Commercial
Cycle Time:	< 1 s
Power Supply Requirement(s):	110 VAC to 240 VAC
Weight:	1.0 kg
Dimensions:	180 x 205 x 65 mm
Software Version:	v.2
FCC ID:	S5EBH0107A

4. SUPPORT EQUIPMENT

4.1. Identification of Support Equipment

NOTE: No support equipment was used during the course of testing.

4.2. Interconnecting Cables

NOTE: No interconnecting cables were used during the course of testing.

5. MONITORING PERFORMANCE

5.1. Overview

Only emissions tests were performed; therefore performance criteria were not applicable.

5.2. Monitoring EUT Performance during Testing

For the purposes of testing, the term “ <i>operate as intended</i> ” was defined as:	The EUT was in a standalone state searching for available networks.
For the purposes of testing, an “ <i>unintentional response</i> ” was defined as:	Not Applicable
Method used to determine whether user control functions and stored data were lost after the EMC exposure:	Not Applicable
Method used to verify that a communications link was established and maintained (if appropriate):	Not Applicable
Method of assessment of level of performance or degradation of performance during and/or after EMC exposure:	Not Applicable

6. MEASUREMENT UNCERTAINTY

6.1. Overview

No measurement or test can ever be perfect and the imperfections give rise to error of measurement in the results. Consequently, the result of a measurement is only an approximation to the value of the measurand (the specific quantity subject to measurement) and is only complete when accompanied by a statement regarding the uncertainty of approximation.

The measurement uncertainty may need to be taken into account when interpreting the test results included within this test report.

6.2. Method of calculation

The methods used to calculate the uncertainties included within this test report are in line with those recommended within the various measurement specifications. Where measurement specifications do not include guidelines for the evaluation of measurement uncertainty, the published guidance of the United Kingdom Accreditation Service (UKAS) is followed.

7. MEASUREMENTS, EXAMINATIONS AND DERIVED RESULTS

7.1. General Comments

7.1.1. This section contains the test result sheets for the measurements listed in Section 2.2. *Summary of Test Results* (above).

7.1.2. The measurement uncertainties stated in the test result sheets were calculated in accordance with documented best practice and represent a confidence level of 95%. Where only confidence level is given, it has been demonstrated that the relevant items of test equipment used meet the specified requirements in the standard with at least this level of confidence.

7.1.3. Please refer to Section 6. *Measurement Uncertainty* on page 10 for details of our treatment of measurement uncertainty.

RADIATED EMISSIONS - TEST RESULTS

This test is covered by the scope of RFI's UKAS Accreditation under ISO/IEC 17025: 2005.

GENERAL INFORMATION

RFI JOB NUMBER:	81915JD01	TEST SITE ID:	Site 1
EUT:	BluHome	TEMPERATURE:	24 °C to 25 °C
TEST ENGINEER:	Timothy Golding	RELATIVE HUMIDITY:	33 % to 32 %
DATE OF TEST:	11 November 2011	ATMOSPHERIC PRESSURE:	999 mb to 999 mb
FIELD TYPE:	Electric Field	MEASUREMENT DISTANCE:	3 Meters
UNCERTAINTY (±):	±3.99 dB	EQUIPMENT CLASS:	Class B
MEASUREMENT UNITS:	dBµV/m	TEST ENVIRONMENT:	Test Site

TEST SPECIFICATION DETAILS

The EUT has been configured and tested in accordance with the methods and procedures detailed within the following basic standard:

REFERENCE:	ANSI C63.4-2009
TITLE:	American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz

COMMENTS

None

DEVIATIONS FROM TEST SPECIFICATION

There were no deviations from the test configuration and measurement arrangements defined in the test specification (identified above).

EUT RELATED

OPERATING MODE:	Idle
FUNCTION(S) MONITORED:	Not Applicable

MEASUREMENT RESULTS

No.	Frequency (MHz)	Polarity	Detector	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Graph No.	Result
1	35.913	Vertical	Quasi-Peak	37.333	40.00	2.67	001	Complied
2	41.986	Vertical	Quasi-Peak	28.104	40.00	11.90	001	Complied
3	58.961	Vertical	Quasi-Peak	24.314	40.00	15.69	001	Complied
4	76.061	Vertical	Quasi-Peak	27.471	40.00	12.53	001	Complied
5	105.489	Vertical	Quasi-Peak	25.530	43.50	17.97	001	Complied
6	148.410	Vertical	Quasi-Peak	23.014	43.50	20.49	001	Complied
7	285.992	Horizontal	Quasi-Peak	37.278	46.00	8.72	001	Complied
8	363.988	Vertical	Quasi-Peak	19.641	46.00	26.36	001	Complied
9	809.263	Vertical	Quasi-Peak	20.869	46.00	25.13	001	Complied
10	1000 to 12750		Refer to Note 1				002 to 005	Complied

NOTES

- 1 No emissions were noted above the noise floor of the measurement system. Therefore no further measurements were made
- Measurements below 1 GHz were performed in a semi-anechoic chamber at a distance of 3 metres. The EUT was placed at a height of 80 cm above the reference ground plane in the centre of the chamber turntable. Maximum emission levels were determined by height searching the measurement antenna over the range 1 metre to 4 metres.
- 2 Pre-scans and final measurements above 1 GHz were performed in a semi-anechoic chamber at a distance of 3 metres. The EUT was placed at a height of 80 cm above the reference ground plane in the centre of the chamber turntable. Maximum emission levels were determined by height searching the measurement antenna over the range 1 metre to 4 metres.

TEST EQUIPMENT USED

RFI ID	INSTRUMENT DESCRIPTION	MODEL NUMBER	CALIBRATION DUE	INTERVAL
M1273	20 Hz - 26.6 GHz EMI Test Receiver, Rohde & Schwarz	ESIB 26	04 Feb 2012	12
A1817	1-18GHz Horn Antenna	3115	03 Feb 2012	12
A553	Bi-log Antenna	CBL6111A	26 Mar 2012	12
A1920	Camera System	Scout	Calibration not required	
C1306	15m Rosenberger Cable	FA210A0015005050	17 Apr 2012	12
A1834	3dB N-Type Attenuator	8491B	26 Jul 2012	12

CONDUCTED EMISSIONS - TEST RESULTS

This test is covered by the scope of RFI's UKAS Accreditation under ISO/IEC 17025: 2005.

GENERAL INFORMATION

RFI JOB NUMBER:	81915JD01	TEST SITE ID:	Site 1
EUT:	BluHome	TEMPERATURE:	24 °C To 24 °C
TEST ENGINEER:	Timothy Golding	RELATIVE HUMIDITY:	32 % To 32 %
DATE OF TEST:	11 November 2011	ATMOSPHERIC PRESSURE:	999 mb To 999 mb
UNCERTAINTY (±):	±3.99 dB	EQUIPMENT CLASS:	Class B
CATEGORY:	Not applicable	MEASUREMENT METHOD:	LISN (AC)

TEST SPECIFICATION DETAILS

The EUT has been configured and tested in accordance with the methods and procedures detailed within the following basic standard:

REFERENCE:	ANSI C63.4-2009
TITLE:	American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz

COMMENTS

None

DEVIATIONS FROM TEST SPECIFICATION

There were no deviations from the test configuration and measurement arrangements defined in the test specification (identified above).

EUT RELATED

OPERATING MODE:	Idle
FUNCTION(S) MONITORED:	Not Applicable

MEASUREMENT RESULTS

No.	Frequency (MHz)	Line	Detector	Level (dBµV)	Limit (dBµV)	Margin (dB)	Graph No.	Result
1	0.164	Neutral	Quasi-Peak	59.586	65.28	5.70	006	Complied
2	0.236	Neutral	Quasi-Peak	50.771	62.25	11.48	006	Complied
3	0.276	Neutral	Quasi-Peak	48.570	60.94	12.37	006	Complied
4	0.366	Neutral	Quasi-Peak	43.626	58.59	14.97	006	Complied
5	23.154	Neutral	Quasi-Peak	33.541	60.00	26.46	006	Complied
6	29.864	Neutral	Quasi-Peak	36.431	60.00	23.57	006	Complied
7	0.164	Neutral	Average (CISPR)	43.642	55.28	11.64	006	Complied
8	0.204	Neutral	Average (CISPR)	35.684	53.45	17.76	006	Complied
9	0.245	Neutral	Average (CISPR)	30.810	51.94	21.13	006	Complied
10	0.290	Neutral	Average (CISPR)	28.062	50.54	22.48	006	Complied
11	0.371	Neutral	Average (CISPR)	24.414	48.49	24.08	006	Complied
12	22.884	Neutral	Average (CISPR)	24.207	50.00	25.79	006	Complied
13	29.936	Neutral	Average (CISPR)	24.854	50.00	25.15	006	Complied
14	0.155	Live 1	Quasi-Peak	55.306	65.75	10.45	007	Complied
15	0.195	Live 1	Quasi-Peak	52.539	63.82	11.28	007	Complied
16	0.249	Live 1	Quasi-Peak	48.656	61.79	13.13	007	Complied

MEASUREMENT RESULTS

No.	Frequency (MHz)	Line	Detector	Level (dB μ V)	Limit (dB μ V)	Margin (dB)	Graph No.	Result
17	0.317	Live 1	Quasi-Peak	44.196	59.80	15.60	007	Complied
18	23.244	Live 1	Quasi-Peak	33.332	60.00	26.67	007	Complied
19	29.112	Live 1	Quasi-Peak	35.691	60.00	24.31	007	Complied
20	0.164	Live 1	Average (CISPR)	37.452	55.28	17.83	007	Complied
21	0.164	Live 1	Average (CISPR)	39.698	55.28	15.59	007	Complied
22	0.249	Live 1	Average (CISPR)	28.640	51.79	23.15	007	Complied
23	0.330	Live 1	Average (CISPR)	24.505	49.45	24.95	007	Complied
24	21.566	Live 1	Average (CISPR)	23.513	50.00	26.49	007	Complied
25	28.347	Live 1	Average (CISPR)	22.781	50.00	27.22	007	Complied

NOTES

N/A During measurement the engineer did not record any specific notes relevant to report.

TEST EQUIPMENT USED

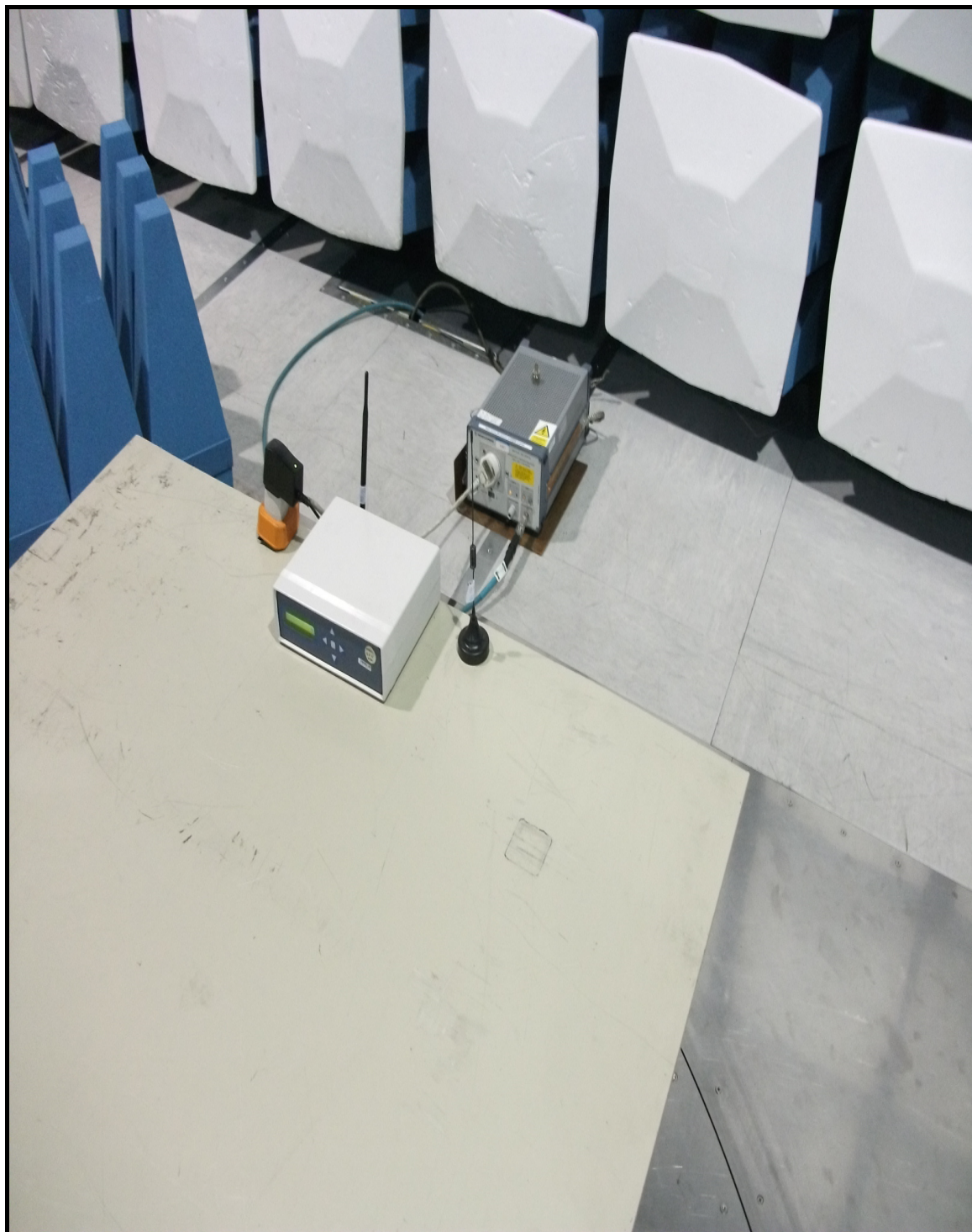
RFI ID	INSTRUMENT DESCRIPTION	MODEL NUMBER	CALIBRATION DUE	INTERVAL
M1273	20 Hz - 26.6 GHz EMI Test Receiver, Rohde & Schwarz	ESIB 26	04 Feb 2012	12
A1829	N-Type Pulse Limiter	ESH3-Z2	05 Mar 2012	12
A004	Single phase LISN	ESH3-Z5	14 Sep 2012	12
K0001	5m Semi-Anechoic Chamber	N/A	29 May 2012	12
G047	9 kHz to 1.04 GHz frequency range	SMY01	07 Apr 2012	12

8. PHOTOGRAPHS OF EUT

This section contains the following photographs:

Photo Reference Number	Title
PHT\81915JD01\001	Test Configuration Photograph - Conducted Emissions
PHT\81915JD01\002	Test Configuration Photograph - Radiated Emissions

PHT181915JD01\001 - Test Configuration Photograph - Conducted Emissions



PHT181915JD01\002 - Test Configuration Photograph - Radiated Emissions



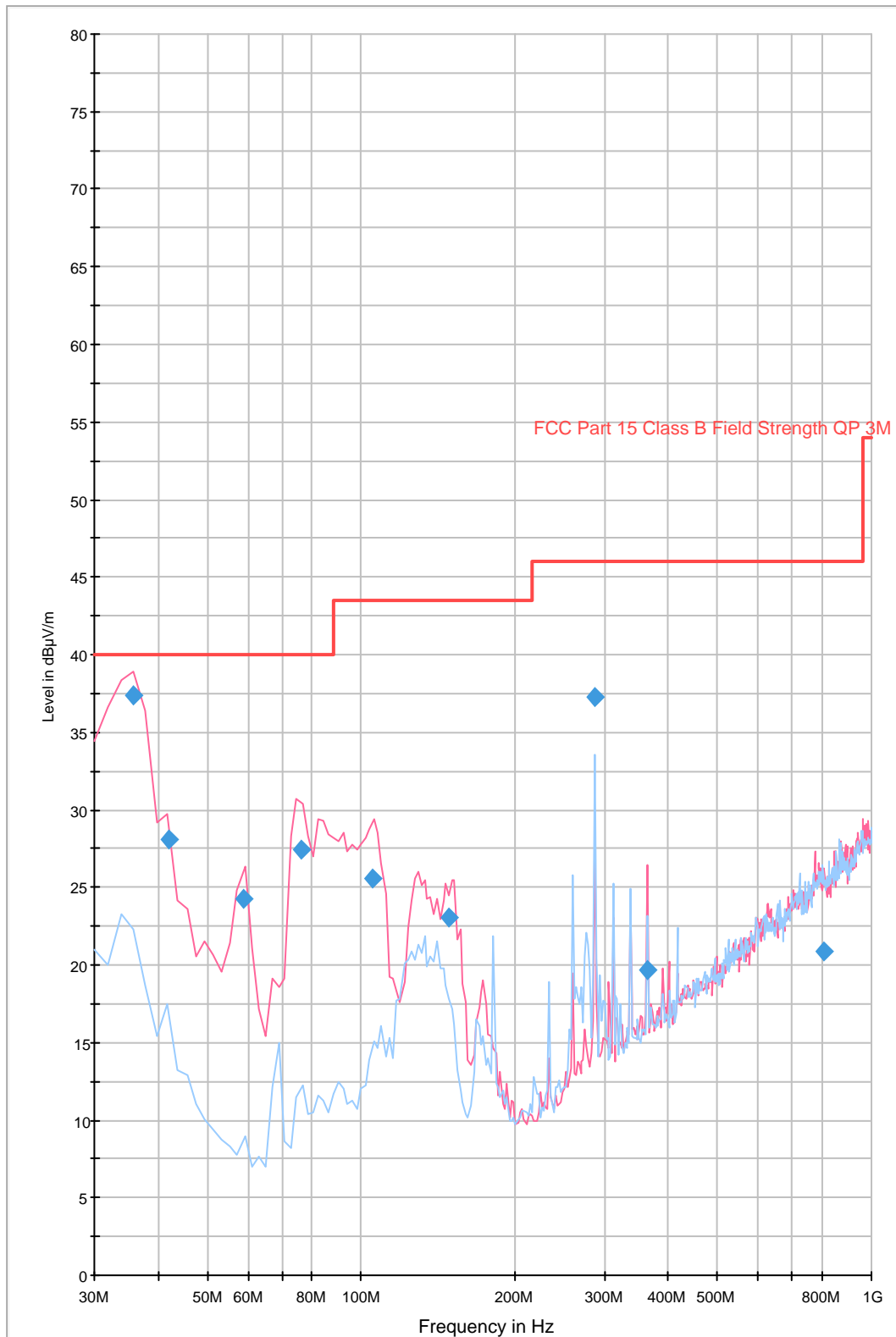
9. GRAPHICAL TEST RESULTS

9.1. This section contains the graphical results for the measurements listed in Section 2.2. *Summary of Test Results* (above).

Graph Number	Title
GPH\81915JD01\001	Radiated Emissions Pre-Scan (30 MHz to 1000 MHz)
GPH\81915JD01\002	Radiated Emissions Pre-Scan (1000 MHz to 4000 MHz)
GPH\81915JD01\003	Radiated Emissions Pre-Scan (4000 to 7000 MHz)
GPH\81915JD01\004	Radiated Emissions Pre-Scan (7000 to 10000 MHz)
GPH\81915JD01\005	Radiated Emissions Pre-Scan (10000 MHz to 12750 MHz)
GPH\81915JD01\006	Conducted Emissions (Neutral) Pre-Scan (150 kHz to 30 MHz)
GPH\81915JD01\007	Conducted Emissions (Live) Pre-Scan (150 kHz to 30 MHz)

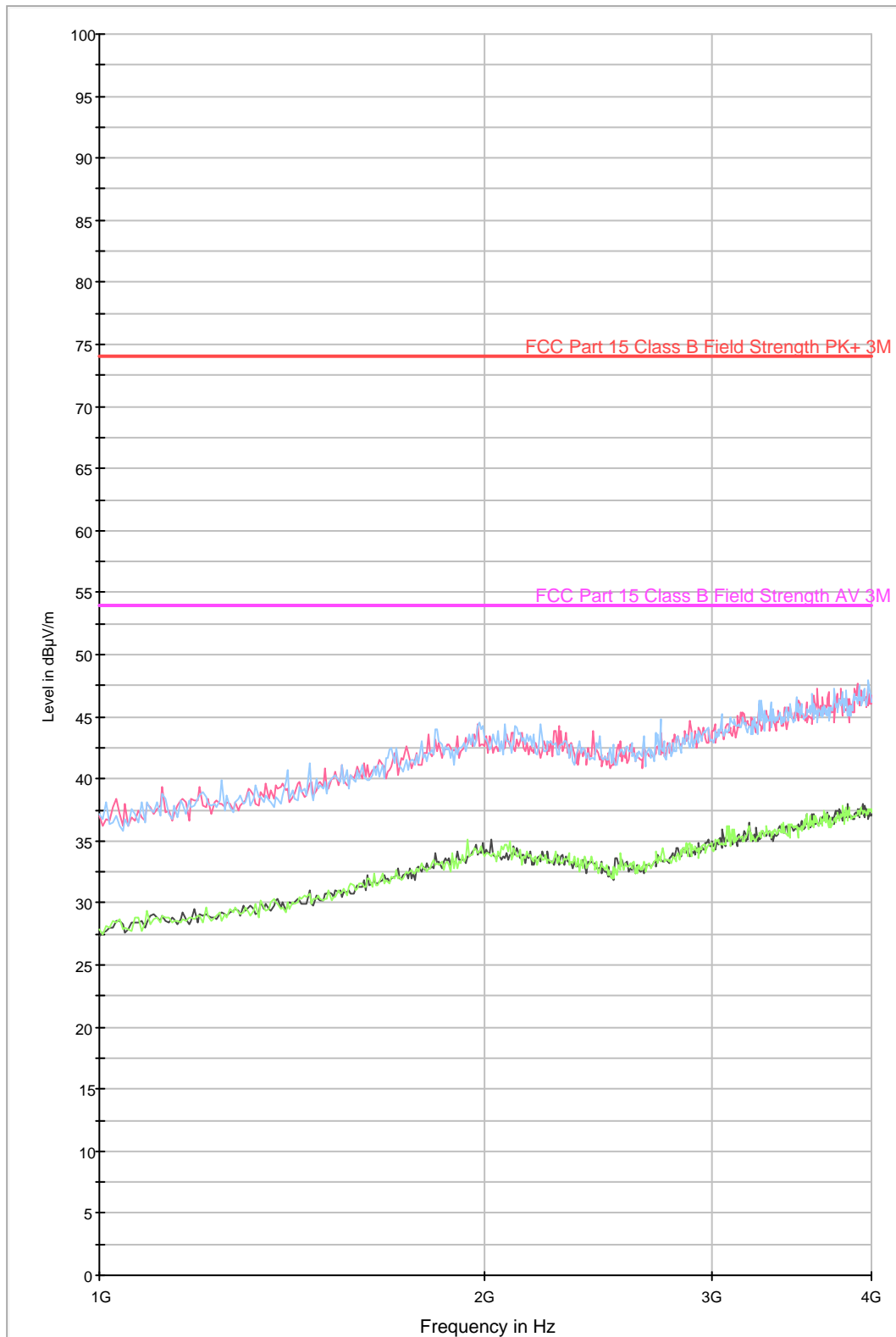
GPH81915JD05\001

FCC Part 15.109 Radiated Emissions Class B 30MHz-1GHz 3m



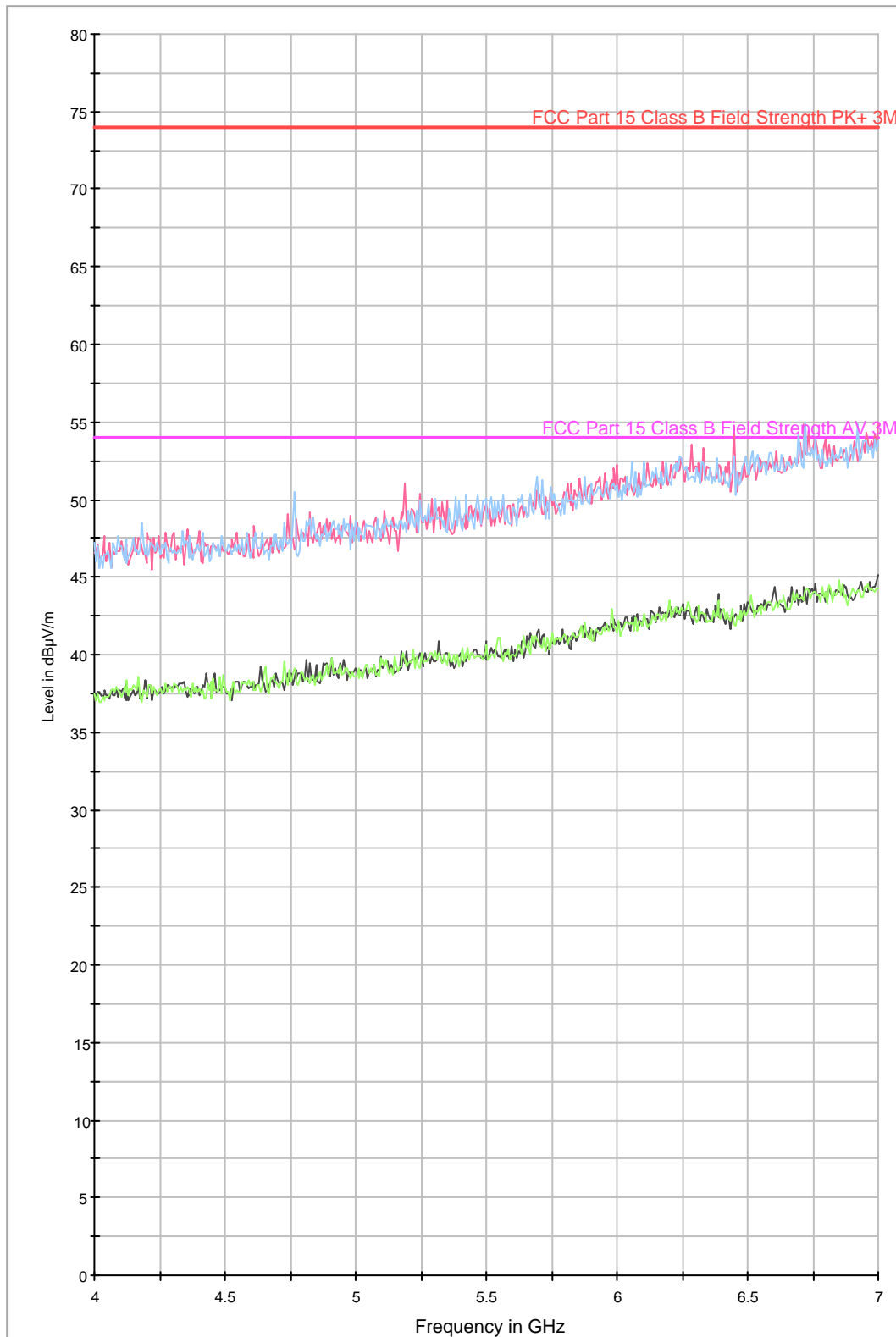
GPH81915JD05\002

FCC Part 15.109 Radiated Emissions Class B 1-4GHz



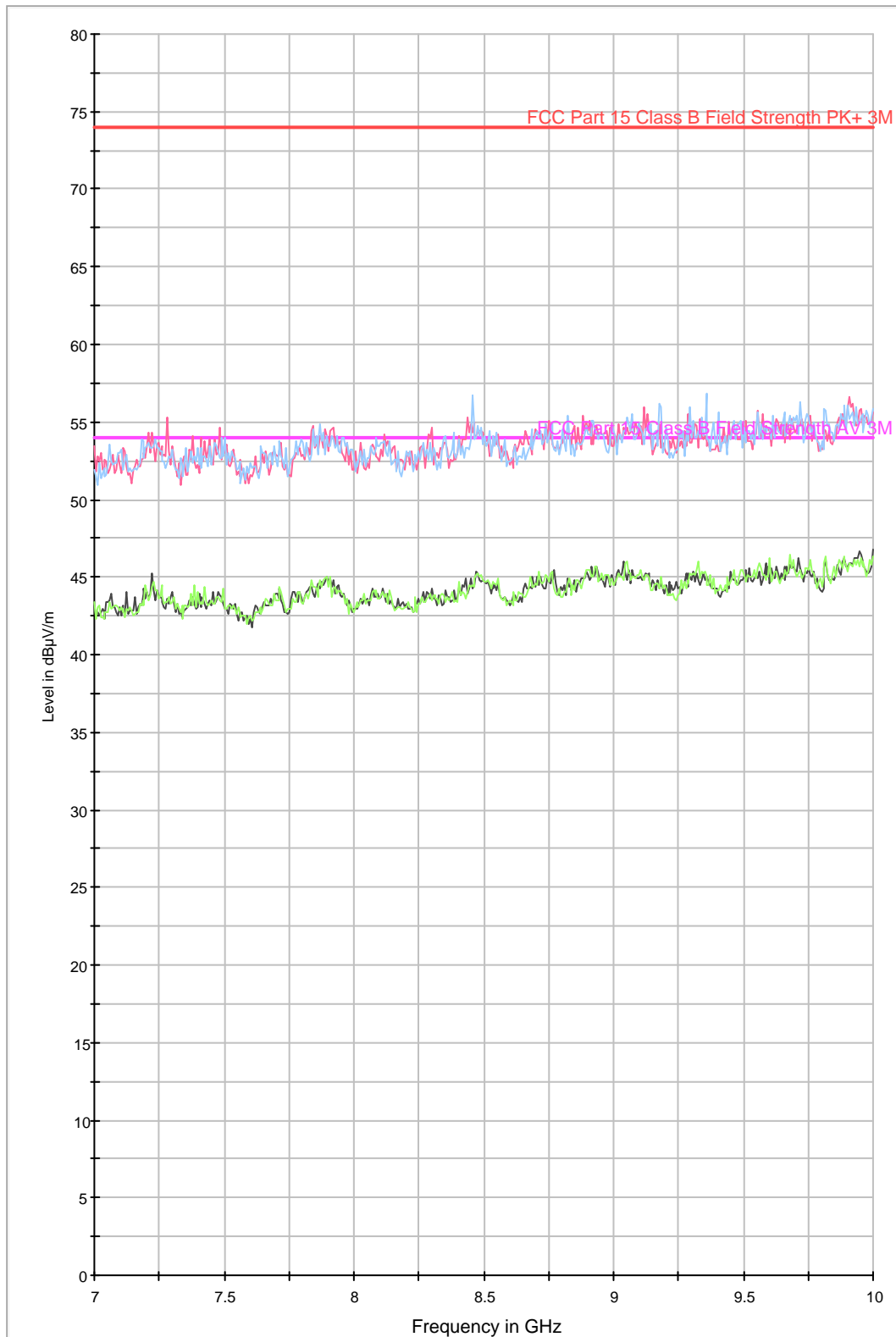
GPH81915JD05\003

FCC Part 15.109 Radiated Emissions Class B 4-7GHz



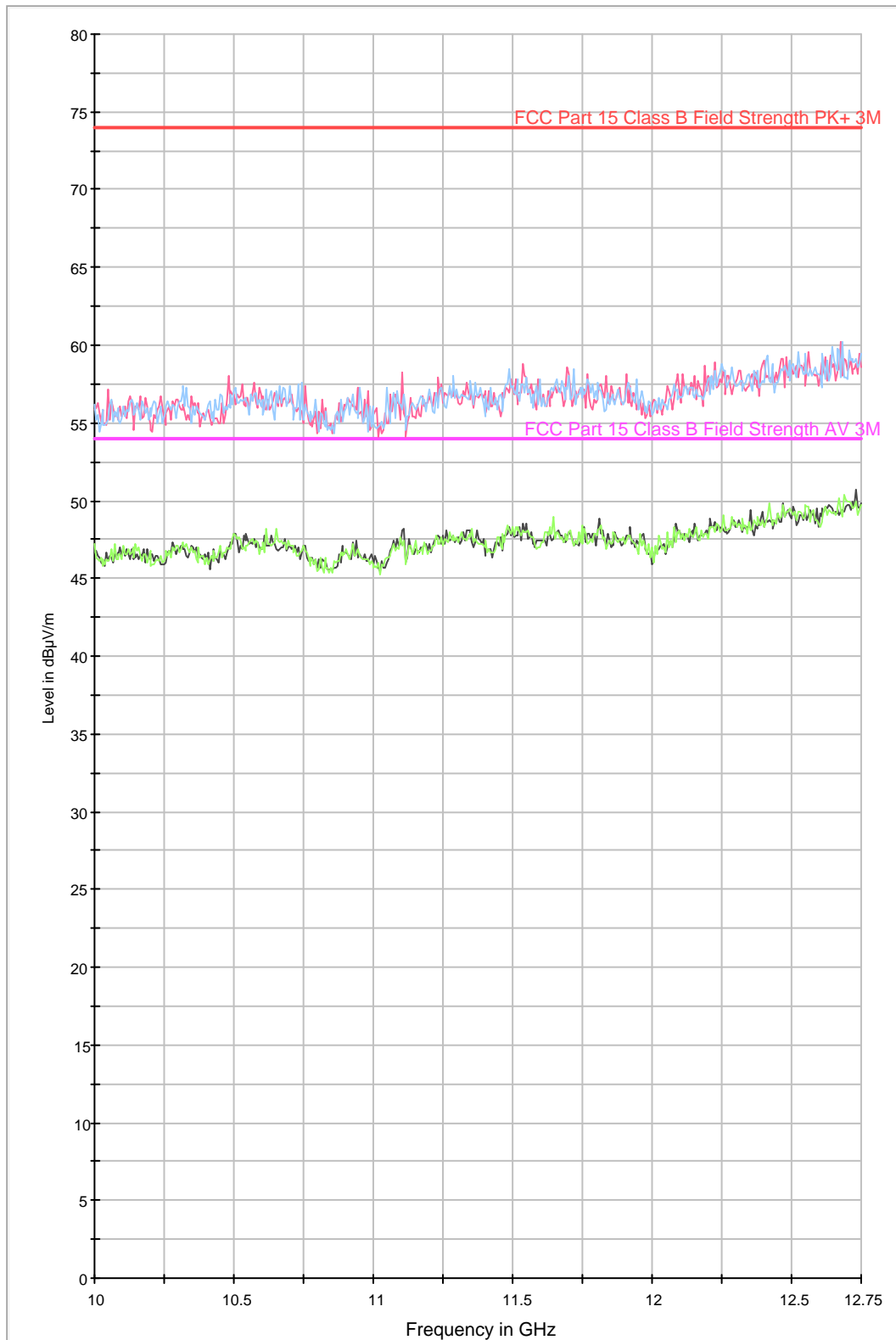
GPH81915JD05\004

FCC Part 15.109 Radiated Emissions Class B 7-10GHz



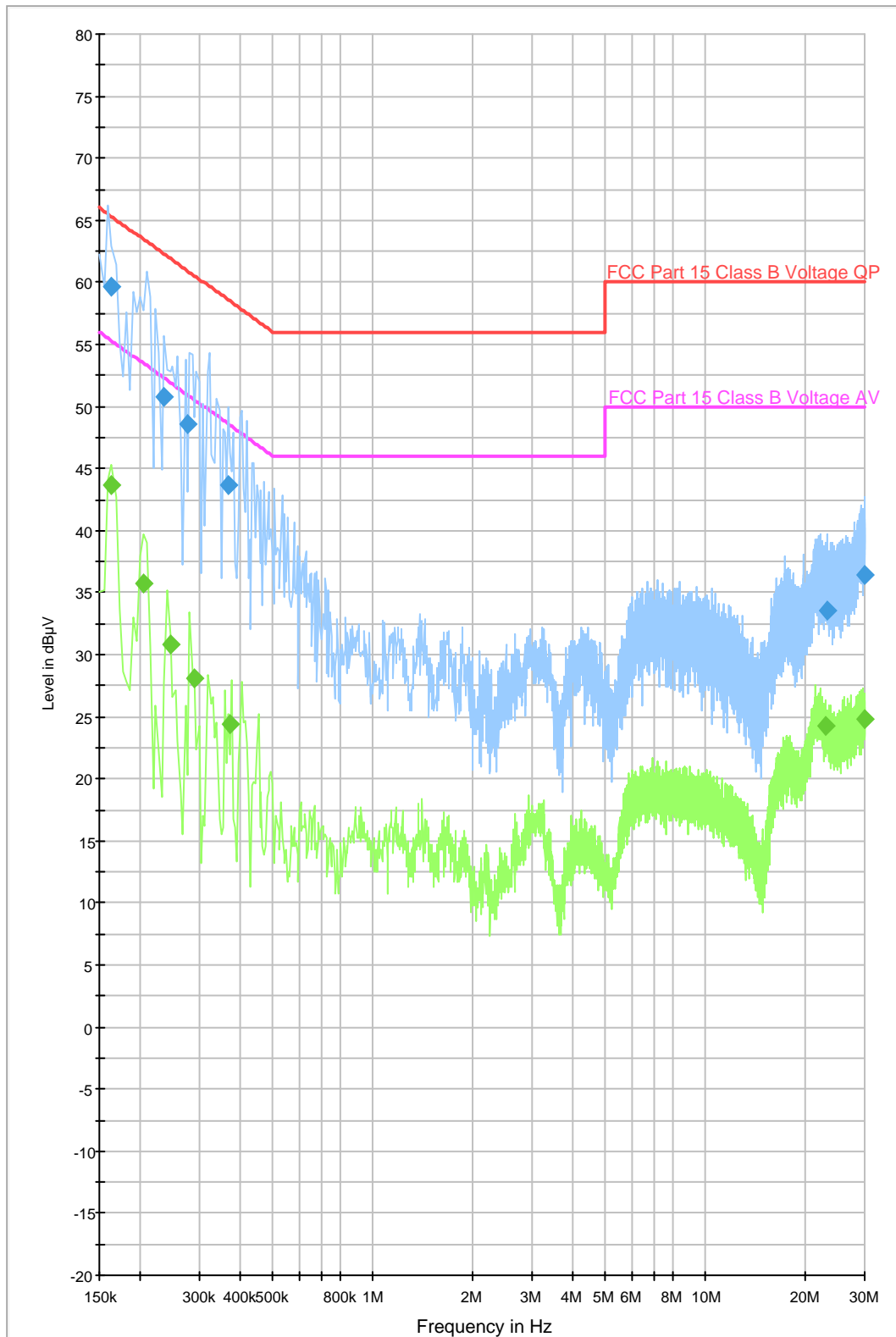
GPH81915JD05\005

FCC Part 15.109 Radiated Emissions Class B 10-12.75GHz



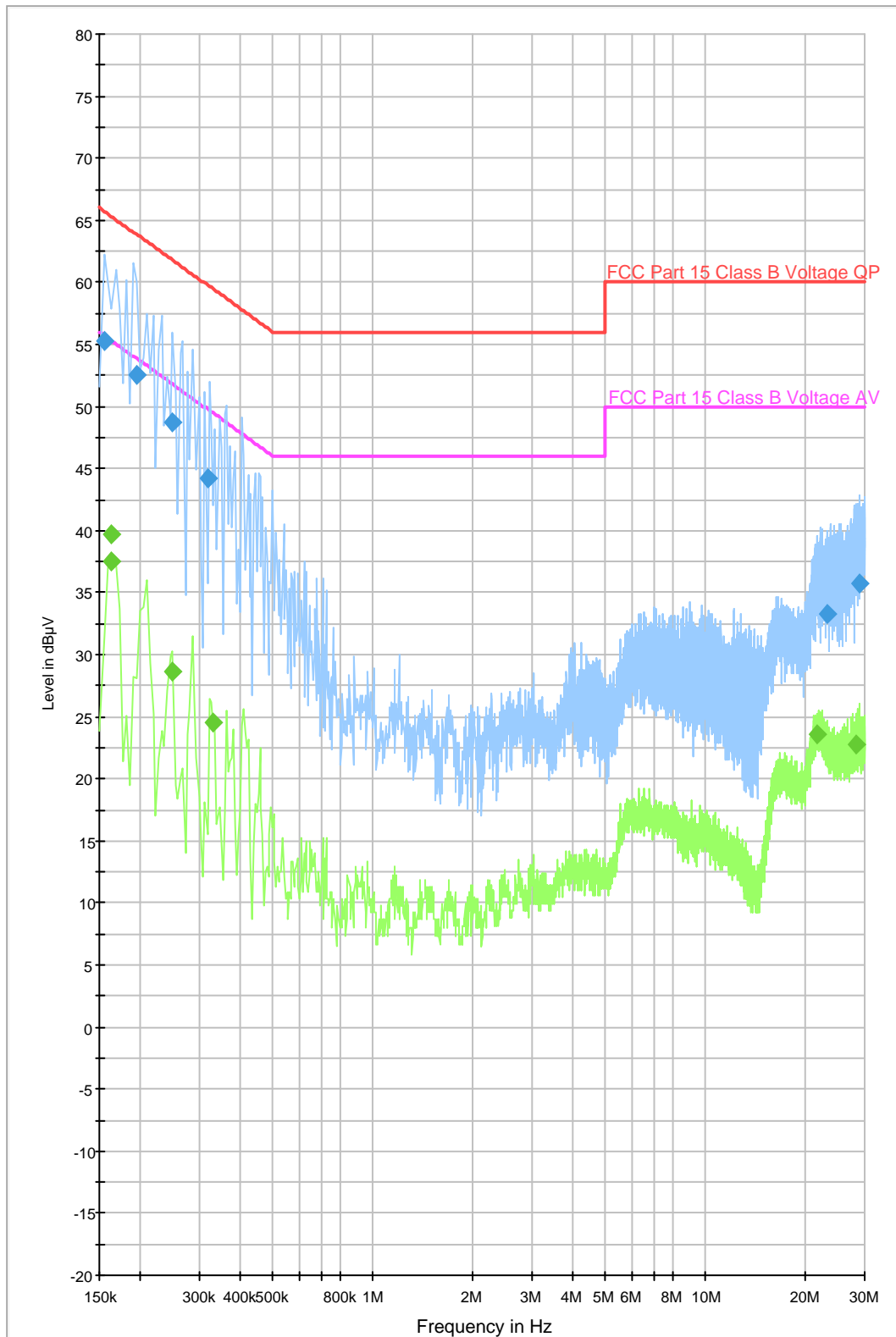
GPH81915JD05\006

FCC Part 15.107 Conducted Emissions Class B Neutral



GPH81915JD05\007

FCC Part 15.107 Conducted Emissions Class B Live



10. TEST CONFIGURATION DRAWING

10.1. This section contains the Test Configuration Drawings for the measurements listed in Section 7: Measurements, Examinations and Derived Results.

Test Configuration Reference Number	Title
DRG\81915JD01\001	Schematic diagram of the EUT, support equipment and interconnecting cables used for the test.

DRG\81915JD01\001 - Schematic diagram of the EUT, support equipment and interconnecting cables used for the test.

