41039 Boyce Road
Fremont, CA. 94538

510-578-3500 Phone
510-440-9525 Fax

EMC Test Report

Application for FCC Grant of Equipment Authorization

FCC Part 15 Subpart C

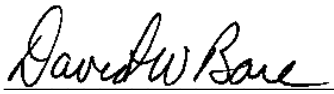
Model: IPG3000

FCC ID:	XKYIPG3000
APPLICANT:	Nevro Corporation 1800 Bridge Parkway Redwood City, CA 940655
TEST SITE(S):	National Technical Systems 41039 Boyce Road. Fremont, CA. 94538-2435
PROJECT NUMBER:	PR111764
REPORT DATE:	August 24, 2021
REISSUE DATE:	September 14, 2021
FINAL TEST DATES:	August 9 and 10, 2021
TOTAL NUMBER OF PAGES:	42

A2LA ACCREDITED
Testing Cert #0214.26

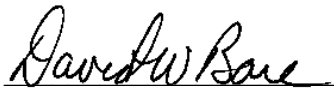
VALIDATING SIGNATORIES

PROGRAM MGR



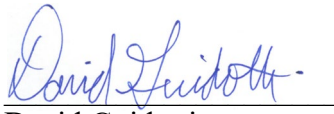
David W. Bare
Chief Engineer

TECHNICAL REVIEWER:



David W. Bare
Chief Engineer

FINAL REPORT PREPARER:



David Guidotti
Senior Technical Writer

QUALITY ASSURANCE DELEGATE

Gary Izard
Senior Technical Writer

REVISION HISTORY

Rev#	Date	Comments	Modified By
-	August 24, 2021	First release	
1	September 14, 2021	Correct type in powers on page 7	David Bare

TABLE OF CONTENTS

COVER PAGE **1**
VALIDATING SIGNATORIES **2**
REVISION HISTORY **3**
TABLE OF CONTENTS **4**
SCOPE **5**
OBJECTIVE **6**
STATEMENT OF COMPLIANCE **6**
DEVIATIONS FROM THE STANDARDS **6**
TEST RESULTS SUMMARY **7**
DIGITAL TRANSMISSION SYSTEMS (2400 – 2483.5MHZ) 7
MEASUREMENT UNCERTAINTIES 7
EQUIPMENT UNDER TEST (EUT) DETAILS **8**
GENERAL 8
ANTENNA SYSTEM 8
ENCLOSURE 8
MODIFICATIONS 8
SUPPORT EQUIPMENT 8
EUT INTERFACE PORTS 9
EUT OPERATION 9
TEST SITE **10**
GENERAL INFORMATION 10
CONDUCTED EMISSIONS CONSIDERATIONS 10
RADIATED EMISSIONS CONSIDERATIONS 10
MEASUREMENT INSTRUMENTATION **11**
RECEIVER SYSTEM 11
INSTRUMENT CONTROL COMPUTER 11
LINE IMPEDANCE STABILIZATION NETWORK (LISN) 11
FILTERS/ATTENUATORS 12
ANTENNAS 12
ANTENNA MAST AND EQUIPMENT TURNTABLE 12
INSTRUMENT CALIBRATION 12
TEST PROCEDURES **13**
EUT AND CABLE PLACEMENT 13
CONDUCTED EMISSIONS 13
RADIATED EMISSIONS 13
CONDUCTED EMISSIONS FROM ANTENNA PORT 17
BANDWIDTH MEASUREMENTS 17
SPECIFICATION LIMITS AND SAMPLE CALCULATIONS 18
GENERAL TRANSMITTER RADIATED EMISSIONS SPECIFICATION LIMITS 18
OUTPUT POWER LIMITS – DIGITAL TRANSMISSION SYSTEMS 19
TRANSMIT MODE SPURIOUS RADIATED EMISSIONS LIMITS – FHSS AND DTS SYSTEMS 19
SAMPLE CALCULATIONS - CONDUCTED EMISSIONS 20
SAMPLE CALCULATIONS - RADIATED EMISSIONS 20
SAMPLE CALCULATIONS - FIELD STRENGTH TO EIRP CONVERSION 21
APPENDIX A TEST EQUIPMENT CALIBRATION DATA **22**
APPENDIX B TEST DATA **23**
END OF REPORT **42**

SCOPE

An electromagnetic emissions test has been performed on the Nevro Corporation model IPG3000, pursuant to the following rules:

FCC Part 15 Subpart C

Conducted and radiated emissions data has been collected, reduced, and analyzed within this report in accordance with measurement guidelines set forth in the following reference standards and as outlined in National Technical Systems test procedures:

ANSI C63.10-2013
FCC DTS Measurement Guidance KDB558074

The intentional radiator above has been tested in a simulated typical installation to demonstrate compliance with the relevant Industry Canada performance and procedural standards.

Final system data was gathered in a mode that tended to maximize emissions by varying orientation of EUT, orientation of power and I/O cabling, antenna search height, and antenna polarization.

Every practical effort was made to perform an impartial test using appropriate test equipment of known calibration. All pertinent factors have been applied to reach the determination of compliance.

National Technical Systems is accredited by the A2LA, certificate number 0214.26, to perform the test(s) listed in this report, except where noted otherwise.

OBJECTIVE

The primary objective of the manufacturer is compliance with the regulations outlined in the previous section.

Prior to marketing in the USA, all unlicensed transmitters and transceivers require certification. Receive-only devices operating between 30 MHz and 960 MHz are subject to either certification or a manufacturer's declaration of conformity, with all other receive-only devices exempt from the technical requirements.

Certification is a procedure where the manufacturer submits test data and technical information to a certification body and receives a certificate or grant of equipment authorization upon successful completion of the certification body's review of the submitted documents. Once the equipment authorization has been obtained, the label indicating compliance must be attached to all identical units, which are subsequently manufactured.

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product which may result in increased emissions should be checked to ensure compliance has been maintained (i.e., printed circuit board layout changes, different line filter, different power supply, harnessing or I/O cable changes, etc.).

STATEMENT OF COMPLIANCE

The tested samples of Nevro Corporation model IPG3000 complied with the requirements of the following regulations:

FCC Part 15 Subpart C

Maintenance of compliance is the responsibility of the manufacturer. Any modifications to the product should be assessed to determine their potential impact on the compliance status of the device with respect to the standards detailed in this test report.

The test results recorded herein are based on a single type test of Nevro Corporation model IPG3000 and therefore apply only to the tested samples. The samples were selected and prepared by Susan McGill of Nevro Corporation.

DEVIATIONS FROM THE STANDARDS

No deviations were made from the published requirements listed in the scope of this report.

TEST RESULTS SUMMARY

DIGITAL TRANSMISSION SYSTEMS (2400 – 2483.5MHz)

FCC Rule Part	RSS Rule Part	Description	Measured Value / Comments	Limit / Requirement	Result
15.247(a)	RSS 247 5.2	Digital Modulation	Systems uses GFSK modulation	System must utilize a digital transmission technology	Complies
15.247 (a) (2)	RSS 247 5.2 (1)	6dB Bandwidth	0.721 MHz	>500kHz	Complies
15.247 (b) (3)	RSS 247 5.4 (4)	Output Power (multipoint systems)	4.4 dBm (2.7 mW) EIRP = 0.46 mW Note 1	1Watt, EIRP limited to 4 Watts.	Complies
15.247(e)	RSS 247 5.2 (2)	Power Spectral Density	Power less than 8 dBm	8dBm/3kHz	Complies
15.247(d)	RSS 247 5.5	Antenna Port Spurious Emissions 30MHz – 25 GHz	All > 20dBc	< -20dBc	Complies
15.247(d) / 15.209	RSS 247 5.5	Radiated Spurious Emissions 30MHz – 25 GHz	38.3 dBµV/m @ 2492.7 MHz (Margin: -15.7 dB)	Refer to the limits section (p18) for restricted bands, all others < -20dBc	Complies

Note 1 EIRP calculated using antenna gains of -7.8 dBi for the highest EIRP system.
Note 2 Pass/Fail criteria defined by standards listed above.

GENERAL REQUIREMENTS APPLICABLE TO ALL BANDS

FCC Rule Part	RSS Rule part	Description	Measured Value / Comments	Limit / Requirement	Result (margin)
15.203	-	RF Connector	Integral Antenna	Unique or integral antenna required	Complies
15.407 (b) (6)	RSS-Gen Table 4	AC Conducted Emissions	EUT is battery powered		
15.247 (i) 15.407 (f)	RSS 102	RF Exposure Requirements	Refer to RF exclusion calculations in separate exhibit.	Refer to OET 65, FCC Part 1	Complies

MEASUREMENT UNCERTAINTIES

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level and were calculated in accordance with UKAS document LAB 34.

Measurement Type	Measurement Unit	Frequency Range	Expanded Uncertainty
RF power, conducted (power meter)	dBm	25 to 7000 MHz	± 0.52 dB
Conducted emission of transmitter	dBm	25 to 26500 MHz	± 0.7 dB
Radiated emission (field strength)	dBµV/m	25 to 1000 MHz	± 3.6 dB
		1000 to 40000 MHz	± 6.0 dB
Conducted Emissions (AC Power)	dBµV	0.15 to 30 MHz	± 2.7 dB

EQUIPMENT UNDER TEST (EUT) DETAILS

GENERAL

The Nevro Corporation model IPG3000 is Implantable Spinal Cord stimulator that is designed to stimulate the spinal cord to mitigate pain. The EUT was placed on a tabletop for purpose of testing. The electrical rating of the EUT is 4.1 VDC with less than 200 mA.

The samples were received on August 9, 2021 and tested on August 9 and 10, 2021. The following samples of the EUT were used for testing:

Company	Model	Description	Serial Number	FCC ID
Nevro Corporation	IPG3000	Implantable Spinal Cord stimulator	10000893	XKYIPG3000
Nevro Corporation	IPG3000	Implantable Spinal Cord stimulator	10000470	XKYIPG3000

S/N 1000893 used for radiated tests
S/N 1000470 used for conducted tests (PCBA w/coax)

ANTENNA SYSTEM

The antenna system consists of an integral antenna.

ENCLOSURE

The EUT enclosure is primarily constructed of titanium. It measures approximately 5.8 x 4.7 x 1.2 cm.

MODIFICATIONS

No modifications were made to the EUT during the time the product was at NTS Silicon Valley.

SUPPORT EQUIPMENT

The following equipment was used as support equipment for testing:

Company	Model	Description	Serial Number	FCC ID
iET	RS-200	Resistance Substituter	L01131414	-
Keysight	E3648A	Power Supply	MY61176041	-

The resistance substituter was not used during antenna port measurements. The power supply was not used during radiated tests.

The following equipment was used as remote support equipment for emissions testing:

Company	Model	Description	Serial Number	FCC ID
Dell	Latitude 5289	Laptop	972W3M2	-

EUT INTERFACE PORTS

The I/O cabling configuration during testing was as follows:

Port	Connected To	Cable(s)		
		Description	Shielded or Unshielded	Length(m)
Port 1	Patient Lead 1	Single Wire	Unshielded	0.5
Port 2	Patient Lead 2	Single Wire	Unshielded	0.5
Patient Lead 1	Resistance Substituter	Single wire	Unshielded	0.5
Patient Lead 2	Resistance Substituter	Single Wire	Unshielded	0.5
PCB voltage input	Power supply	Two wire	Unshielded	0.5

The resistance substituter leads were not used during antenna port measurements. The power supply leads were not used during radiated tests.

EUT OPERATION

During emissions testing the EUT was transmitting continuously at one of the channels. The laptop was used to set the test mode of the EUT.

TEST SITE

GENERAL INFORMATION

Final test measurements were taken at the test sites listed below. Pursuant to section 2.948 of the FCC's Rules and section 6.2 of RSS-GEN, NTS has been recognized as an accredited test laboratory by the Commission and Innovation, Science and Economic Development Canada. A description of the facilities employed for testing is maintained by NTS.

Site	Company / Registration Numbers		Location
	FCC	Canada	
Chamber 7	US1031	2845B (Wireless Test Lab #US0027)	41039 Boyce Road Fremont, CA 94538-2435

ANSI C63.4 recommends that ambient noise at the test site be at least 6 dB below the allowable limits. Ambient levels are below this requirement. The test site(s) contain separate areas for radiated and conducted emissions testing. Results from testing performed in this chamber have been correlated with results from an open area test site. Considerable engineering effort has been expended to ensure that the facilities conform to all pertinent requirements of ANSI C63.4.

CONDUCTED EMISSIONS CONSIDERATIONS

Conducted emissions testing is performed in conformance with ANSI C63.10. Measurements are made with the EUT connected to the public power network through a nominal, standardized RF impedance, which is provided by a line impedance stabilization network, known as a LISN. A LISN is inserted in series with each current-carrying conductor in the EUT power cord.

RADIATED EMISSIONS CONSIDERATIONS

The FCC has determined that radiation measurements made in a shielded enclosure are not suitable for determining levels of radiated emissions. Radiated measurements are performed in an open field environment or in a semi-anechoic chamber. The test sites are maintained free of conductive objects within the CISPR defined elliptical area incorporated in ANSI C63.4 guidelines and meet the Normalized Site Attenuation (NSA) requirements of ANSI C63.4.

MEASUREMENT INSTRUMENTATION

RECEIVER SYSTEM

An EMI receiver as specified in CISPR 16-1-1 is used for emissions measurements. The receivers used can measure over the frequency range of 9 kHz up to 2000 MHz. These receivers allow both ease of measurement and high accuracy to be achieved. The receivers have Peak, Average, and CISPR (Quasi-peak) detectors built into their design so no external adapters are necessary. The receiver automatically sets the required bandwidth for the CISPR detector used during measurements. If the repetition frequency of the signal being measured is below 20Hz, peak measurements are made in lieu of Quasi-Peak measurements.

For measurements above the frequency range of the receivers, a spectrum analyzer is utilized because it provides visibility of the entire spectrum along with the precision and versatility required to support engineering analysis. Average measurements above 1000MHz are performed on the spectrum analyzer using the linear-average method with a resolution bandwidth of 1 MHz and a video bandwidth of 10 Hz, unless the signal is pulsed in which case the average (or video) bandwidth of the measuring instrument is reduced to onset of pulse desensitization and then increased.

INSTRUMENT CONTROL COMPUTER

Software is used to view and convert receiver measurements to the field strength at an antenna or voltage developed at the LISN measurement port, which is then compared directly with the appropriate specification limit. This provides faster, more accurate readings by performing the conversions described under Sample Calculations within the Test Procedures section of this report. Results are printed in a graphic and/or tabular format, as appropriate. A personal computer is used to record all measurements made with the receivers. The software used for radiated and conducted emissions measurements is NTS EMI Test Software (rev 2.10)

LINE IMPEDANCE STABILIZATION NETWORK (LISN)

Line conducted measurements utilize a fifty microhenry Line Impedance Stabilization Network as the monitoring point. The LISN used also contains a 250 uH CISPR adapter. This network provides for calibrated radio frequency noise measurements by the design of the internal low pass and high pass filters on the EUT and measurement ports, respectively.

FILTERS/ATTENUATORS

External filters and precision attenuators are often connected between the receiving antenna or LISN and the receiver. This eliminates saturation effects and non-linear operation due to high amplitude transient events.

ANTENNAS

A loop antenna is used below 30 MHz. For the measurement range 30 MHz to 1000 MHz either a combination of a biconical antenna and a log periodic or a bi-log antenna is used. Above 1000 MHz, horn antennas are used. The antenna calibration factors to convert the received voltage to an electric field strength are included with appropriate cable loss and amplifier gain factors to determine an overall site factor, which is then programmed into the test receivers or incorporated into the test software.

ANTENNA MAST AND EQUIPMENT TURNTABLE

The antennas used to measure the radiated electric field strength are mounted on a non-conductive antenna mast equipped with a motor-drive to vary the antenna height. Measurements below 30 MHz are made with the loop antenna at a fixed height of 1m above the ground plane.

ANSI C63.10 specifies that the test height above ground for table mounted devices shall be 80 centimeters for testing below 1 GHz and 1.5m for testing above 1 GHz. Floor mounted equipment shall be placed on the ground plane if the device is normally used on a conductive floor or separated from the ground plane by insulating material from 3 to 12 mm if the device is normally used on a non-conductive floor as specified in ANSI C63.4. During radiated measurements, the EUT is positioned on a motorized turntable in conformance with this requirement.

INSTRUMENT CALIBRATION

All test equipment is regularly checked to ensure that performance is maintained in accordance with the manufacturer's specifications. All antennas are calibrated at regular intervals with respect to tuned half-wave dipoles. An exhibit of this report contains the list of test equipment used and calibration information.

TEST PROCEDURES

EUT AND CABLE PLACEMENT

The regulations require that interconnecting cables be connected to the available ports of the unit and that the placement of the unit and the attached cables simulate the worst case orientation that can be expected from a typical installation, so far as practicable. To this end, the position of the unit and associated cabling is varied within the guidelines of ANSI C63.10, and the worst-case orientation is used for final measurements.

CONDUCTED EMISSIONS

Conducted emissions are measured at the plug end of the power cord supplied with the EUT. Excess power cord length is wrapped in a bundle between 30 and 40 centimeters in length near the center of the cord. Preliminary measurements are made to determine the highest amplitude emission relative to the specification limit for all the modes of operation. Placement of system components and varying of cable positions are performed in each mode. A final peak mode scan is then performed in the position and mode for which the highest emission was noted on all current carrying conductors of the power cord.

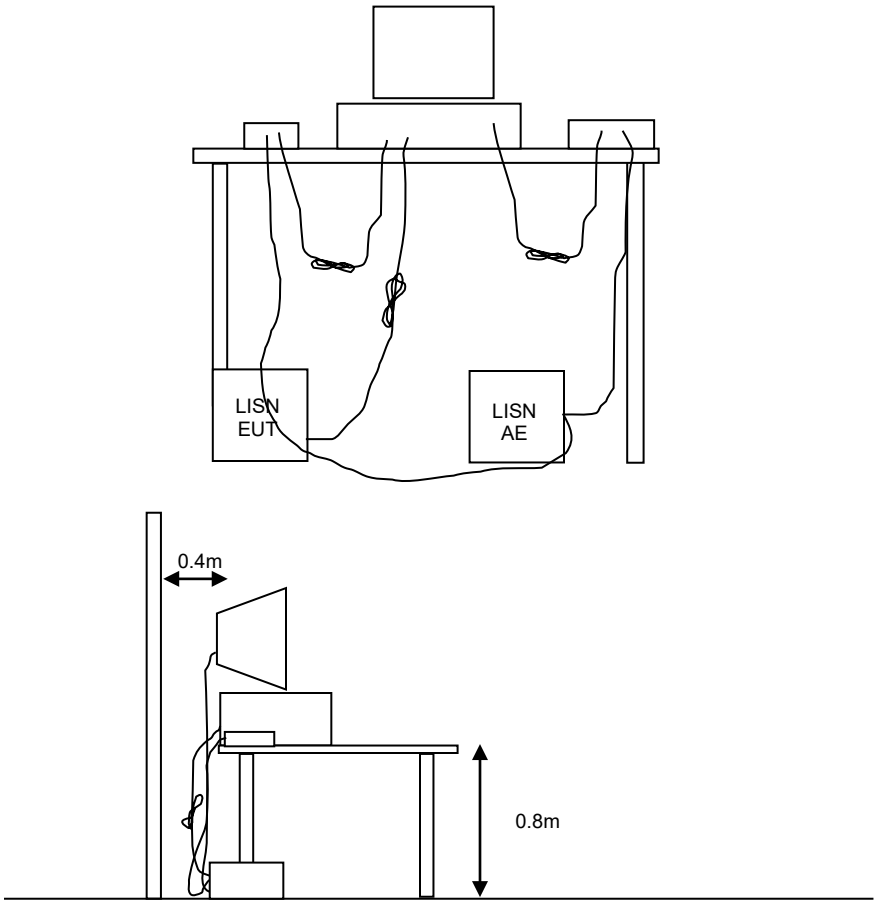


Figure 1 Typical Conducted Emissions Test Configuration

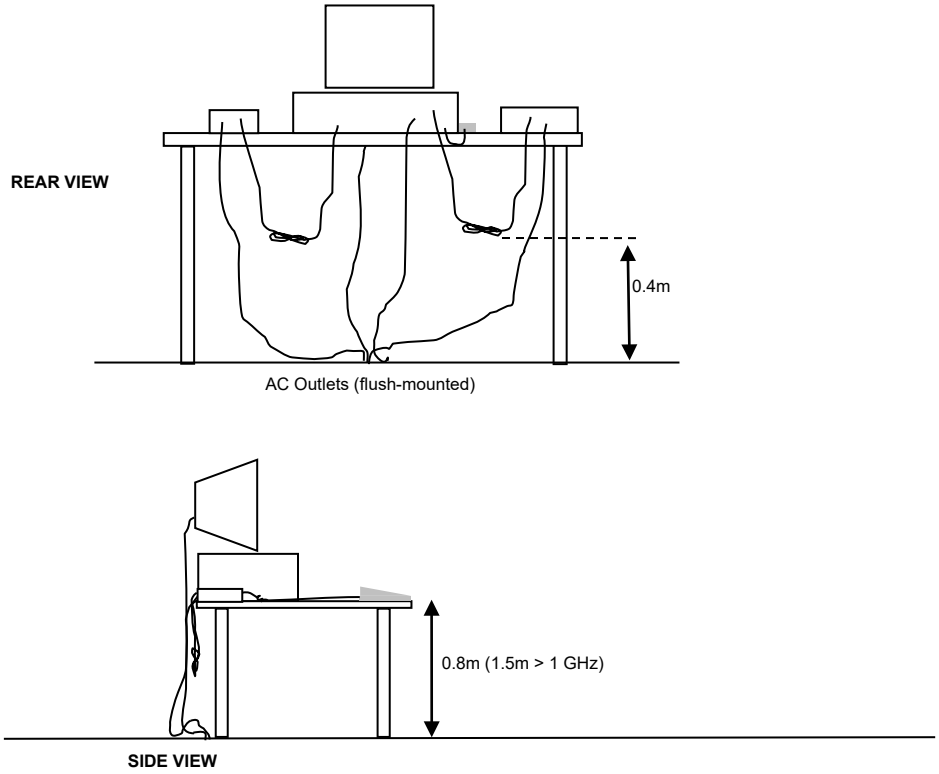
RADIATED EMISSIONS

A preliminary scan of the radiated emissions is performed in which all significant EUT frequencies are identified with the system in a nominal configuration. At least two scans are performed, one scan for each antenna polarization (horizontal and vertical; loop parallel and perpendicular to the EUT). During the preliminary scans, the EUT is rotated through 360˚, the antenna height is varied (for measurements above 30 MHz) and cable positions are varied to determine the highest emission relative to the limit. Preliminary scans may be performed in a fully anechoic chamber for the purposes of identifying the frequencies of the highest emissions from the EUT.

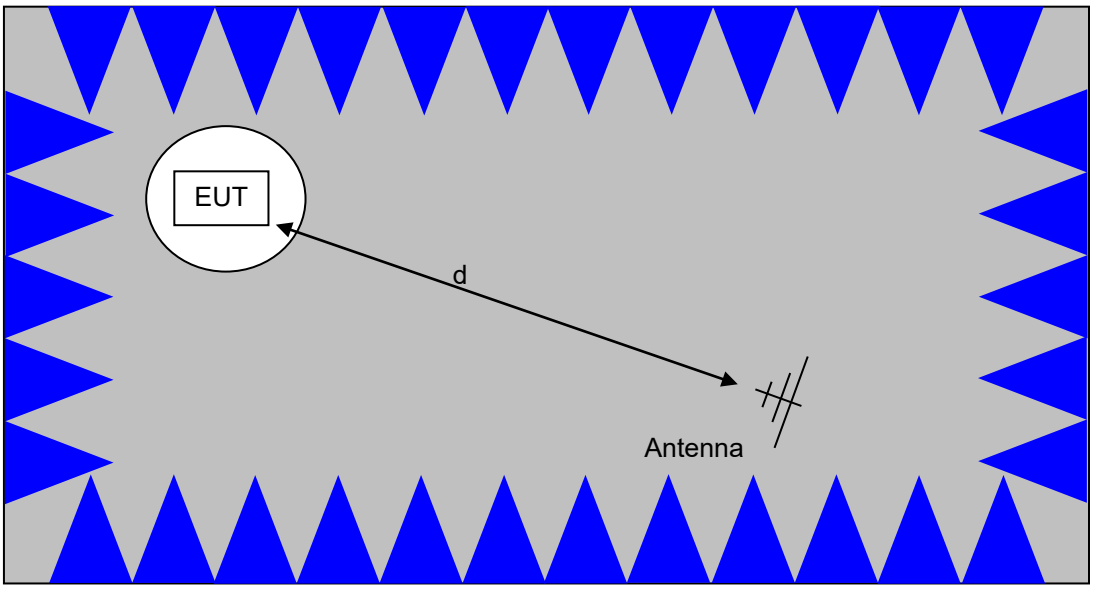
A speaker is provided in the receiver to aid in discriminating between EUT and ambient emissions. Other methods used during the preliminary scan for EUT emissions involve scanning with near field magnetic loops, monitoring I/O cables with RF current clamps, and cycling power to the EUT.

Final maximization is a phase in which the highest amplitude emissions identified in the spectral search are viewed while the EUT azimuth angle is varied from 0 to 360 degrees relative to the receiving antenna. The azimuth, which results in the highest emission is then maintained while varying the antenna height from one to four meters (for measurements above 30 MHz, measurements below 30 MHz are made with the loop antenna at a fixed height of 1m). The result is the identification of the highest amplitude for each of the highest peaks. Each recorded level is corrected in the receiver using appropriate factors for cables, connectors, antennas, and preamplifier gain.

When testing above 18 GHz, the receive antenna is located at 1meter from the EUT and the antenna height is restricted to a maximum of 2.5 meters.

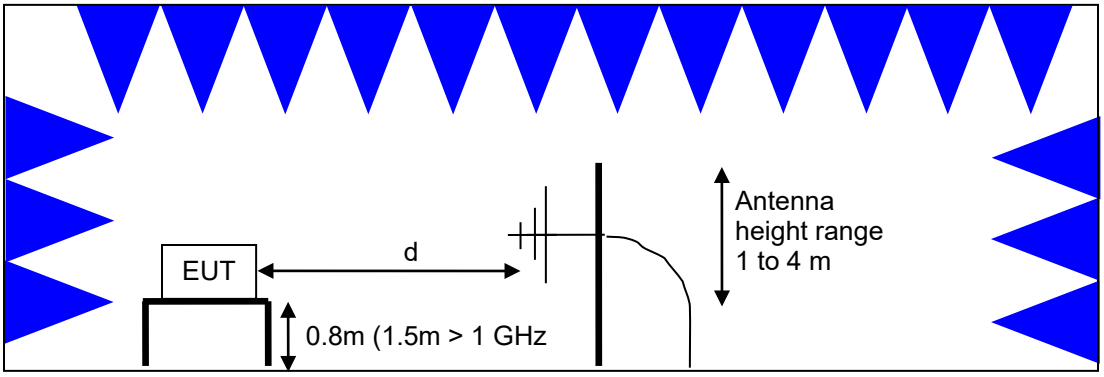


Typical Test Configuration for Radiated Field Strength Measurements



The anechoic materials on the walls and ceiling ensure compliance with the normalized site attenuation requirements of CISPR 16 / CISPR 22 / ANSI C63.4 for an alternate test site at the measurement distances used.

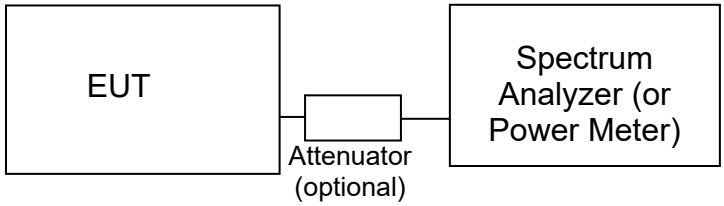
Floor-standing equipment is placed on the floor with insulating supports between the unit and the ground plane.



Test Configuration for Radiated Field Strength Measurements
Semi-Anechoic Chamber, Plan and Side Views

CONDUCTED EMISSIONS FROM ANTENNA PORT

Direct measurements of power, bandwidth and power spectral density are performed, where possible, with the antenna port of the EUT connected to either the power meter or spectrum analyzer via a suitable attenuator and/or filter. These are used to ensure that the front end of the measurement instrument is not overloaded by the fundamental transmission.



Test Configuration for Antenna Port Measurements

Measurement bandwidths (video and resolution) are set in accordance with the relevant standards and NTS Silicon Valley's test procedures for the type of radio being tested. When power measurements are made using a resolution bandwidth less than the signal bandwidth the power is calculated by summing the power across the signal bandwidth using either the analyzer channel power function or by capturing the trace data and calculating the power using software. In both cases the summed power is corrected to account for the equivalent noise bandwidth (ENBW) of the resolution bandwidth used.

If power averaging is used (typically for certain digital modulation techniques), the EUT is configured to transmit continuously. Power averaging is performed using either the built-in function of the analyzer or, if the analyzer does not feature power averaging, using external software. In both cases the average power is calculated over a number of sweeps (typically 100). When the EUT cannot be configured to continuously transmit then either the analyzer is configured to perform a gated sweep to ensure that the power is averaged over periods that the device is transmitting or power averaging is disabled and a max-hold feature is used.

If a power meter is used to make output power measurements the sensor head type (peak or average) is stated in the test data table.

BANDWIDTH MEASUREMENTS

The 6dB, 20dB, 26dB and/or 99% signal bandwidth are measured using the bandwidths recommended by ANSI C63.10 and RSS GEN.

SPECIFICATION LIMITS AND SAMPLE CALCULATIONS

The limits for conducted emissions are given in units of microvolts, and the limits for radiated emissions are given in units of microvolts per meter at a specified test distance. Data is measured in the logarithmic form of decibels relative to one microvolt, or dB microvolts (dBuV). For radiated emissions, the measured data is converted to the field strength at the antenna in dB microvolts per meter (dBuV/m). The results are then converted to the linear forms of uV and uV/m for comparison to published specifications.

For reference, converting the specification limits from linear to decibel form is accomplished by taking the base ten logarithm, then multiplying by 20. These limits in both linear and logarithmic form are as follows:

GENERAL TRANSMITTER RADIATED EMISSIONS SPECIFICATION LIMITS

The table below shows the limits for the spurious emissions from transmitters that fall in restricted bands[1].

Frequency Range (MHz)	Limit (uV/m)	Limit (dBuV/m @ 3m)
0.009-0.490	$2400/F_{KHz}$ @ 300m	$67.6-20*\log_{10}(F_{KHz})$ @ 300m
0.490-1.705	$24000/F_{KHz}$ @ 30m	$87.6-20*\log_{10}(F_{KHz})$ @ 30m
1.705 to 30	30 @ 30m	29.5 @ 30m
30 to 88	100 @ 3m	40 @ 3m
88 to 216	150 @ 3m	43.5 @ 3m
216 to 960	200 @ 3m	46.0 @ 3m
Above 960	500 @ 3m	54.0 @ 3m

[1] The restricted bands are detailed in FCC 15.205 and RSS-Gen Table 7

OUTPUT POWER LIMITS – DIGITAL TRANSMISSION SYSTEMS

The table below shows the limits for output power and output power density. Where the signal bandwidth is less than 20 MHz the maximum output power is reduced to the power spectral density limit plus 10 times the log of the bandwidth (in MHz).

Operating Frequency (MHz)	Output Power	Power Spectral Density
902 – 928	1 Watt (30 dBm)	8 dBm/3kHz
2400 – 2483.5	1 Watt (30 dBm)	8 dBm/3kHz
5725 – 5850	1 Watt (30 dBm)	8 dBm/3kHz

The maximum permitted output power is reduced by 1dB for every dB the antenna gain exceeds 6dBi. For FCC, fixed point to point applications using the 2400-2483.5 MHz band may use antennas with more than 6 dBi gain but output power is reduced by 1 dB for every 3dB that the antenna gain exceeds 6 dBi. For Canada, fixed point-to-point applications using the 2400-2483.5 MHz band are not subject to this restriction. Fixed point-to-point applications using the 5725 – 5850 MHz band are also not subject to this restriction. Certification of DTS systems operating in the 5725-5850 MHz band is no longer allowed under FCC Rules per §15.37(h).

TRANSMIT MODE SPURIOUS RADIATED EMISSIONS LIMITS – FHSS and DTS SYSTEMS

The limits for unwanted (spurious) emissions from the transmitter falling in the restricted bands are those specified in the general limits sections of FCC Part 15 and RSS GEN. All other unwanted (spurious) emissions shall be at least 20dB below the level of the highest in-band signal level (30dB if the power is measured using the sample detector/power averaging method).

SAMPLE CALCULATIONS - CONDUCTED EMISSIONS

Receiver readings are compared directly to the conducted emissions specification limit (decibel form) as follows:

$$R_r - S = M$$

where:
R_r = Receiver Reading in dBuV
S = Specification Limit in dBuV
M = Margin to Specification in +/- dB

SAMPLE CALCULATIONS - RADIATED EMISSIONS

Receiver readings are compared directly to the specification limit (decibel form). The receiver internally corrects for cable loss, preamplifier gain, and antenna factor. The calculations are in the reverse direction of the actual signal flow, thus cable loss is added and the amplifier gain is subtracted. The Antenna Factor converts the voltage at the antenna coaxial connector to the field strength at the antenna elements.

A distance factor, when used for electric field measurements above 30MHz, is calculated by using the following formula:

$$F_d = 20*LOG_{10} (D_m/D_s)$$

where:
F_d = Distance Factor in dB
D_m = Measurement Distance in meters
D_s = Specification Distance in meters

For electric field measurements below 30MHz the extrapolation factor is either determined by making measurements at multiple distances or a theoretical value is calculated using the formula:

$$F_d = 40*LOG_{10} (D_m/D_s)$$

Measurement Distance is the distance at which the measurements were taken and Specification Distance is the distance at which the specification limits are based. The antenna factor converts the voltage at the antenna coaxial connector to the field strength at the antenna elements.

The margin of a given emission peak relative to the limit is calculated as follows:

$$R_c = R_r + F_d$$

and

$$M = R_c - L_s$$

where:
R_r = Receiver Reading in dBuV/m
F_d = Distance Factor in dB
R_c = Corrected Reading in dBuV/m
L_s = Specification Limit in dBuV/m
M = Margin in dB Relative to Spec

SAMPLE CALCULATIONS - FIELD STRENGTH TO EIRP CONVERSION

Where the radiated electric field strength is expressed in terms of the equivalent isotropic radiated power (eirp), or where a field strength measurement of output power is made in lieu of a direct measurement, the following formula is used to convert between eirp and field strength at a distance of d (meters) from the equipment under test:

$$E = \frac{1000000 \sqrt{30 P}}{d} \quad \text{microvolts per meter}$$

where P is the eirp (Watts)

For a measurement at 3m the conversion from a logarithmic value for field strength (dBuV/m) to an eirp power (dBm) is -95.3dB.

Appendix A Test Equipment Calibration Data

Manufacturer	Description	Model	Asset #	Calibrated	Cal Due
Radiated Emissions, 1,000 - 25,000 MHz, 9-Aug-21					
National Technical Systems	NTS EMI Software (rev 2.10)	N/A	WC022452	N/A	
ETS-Lindgren	EMC Chamber #7	FACT-5	WC055569	9/15/2019	9/15/2022
Hewlett Packard	Spectrum Analyzer (Red)	8564E (84125C)	WC055584	10/9/2020	10/9/2021
Rohde & Schwarz	Spectrum Analyzer	FSQ26	WC055662	8/17/2020	8/17/2021
EMCO	Horn Antenna	3115	WC062583	7/13/2020	7/13/2022
Hewlett Packard	Microwave Preamplifier, 1-26.5GHz	8449B	WC064416	8/26/2020	8/26/2021
Rhode & Schwarz	EMI Test Receiver 20Hz-26.5GHz	ESI	WC071498	6/2/2021	6/2/2022
Radiated Emissions, 30 - 1,000 MHz, 10-Aug-21					
National Technical Systems	NTS EMI Software (rev 2.10)	N/A	WC022452	N/A	
ETS-Lindgren	EMC Chamber #7	FACT-5	WC055569	9/15/2019	9/15/2022
Sunol Sciences	Biconilog, 30-3000 MHz	JB3	WC064478	10/31/2018	10/31/2021
Com-Power	Preamplifier, 30-1000 MHz	PA-103	WC064693	5/19/2021	5/19/2022
Rhode & Schwarz	EMI Test Receiver 20Hz-26.5GHz	ESI	WC071498	6/2/2021	6/2/2022
Radio Antenna Port (Power and Spurious Emissions), 10-Aug-21					
National Technical Systems	NTS EMI Software (rev 2.10)	N/A	WC022452	N/A	
National Technical Systems	NTS Capture Analyzer Software (rev 4.0)	N/A	WC022706	N/A	
National Technical Systems	EMC Lab #4B	None	WC055575	N/A	
Rohde & Schwarz	Spectrum Analyzer	FSQ26	WC055662	8/17/2020	8/17/2021
Rohde & Schwarz	Peak Power Sensor 100 uW - 2 Watts (w/ 20 dB attenuator, SN BJ5155)	NRV-Z32	WC064459	6/17/2021	6/17/2022
Rohde & Schwarz	Power Meter, Dual Channel	NRVD	WC064499	6/18/2021	6/18/2022
Rohde & Schwarz	Power Sensor, 1 uW-100 mW, DC-18 GHz	NRV-Z51	WC068114	11/17/2020	11/17/2021

Appendix B Test Data

TL111764-RA Pages 24 – 41

Client:	Nevro Corporation	PR Number:	PR111764
Product	IPG3000	T-Log Number:	TL111764-RA
System Configuration:	-	Project Manager:	Christine Krebill
Contact:	Susan McGill	Project Engineer:	David Bare
Emissions Standard(s):	FCC Part 15, EN 300 328	Class:	-
Immunity Standard(s):	EN 301 489-1, 17	Environment:	Radio

EMC Test Data

For The

Nevro Corporation

Product

IPG3000

Date of Last Test: 8/19/2021

Client:	Nevro Corporation	PR Number:	PR111764
Model:	IPG3000	T-Log Number:	TL111764-RA
		Project Manager:	Christine Krebill
Contact:	Susan McGill	Project Engineer:	David Bare
Standard:	FCC Part 15, EN 300 328	Class:	N/A

RSS-247 and FCC 15.247 (DTS) Antenna Port Measurements

Power, PSD, Bandwidth and Spurious Emissions

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: 8/10/2021
Test Engineer: M. Birgani
Test Location: Fremont EMC Lab # 4B

Config. Used: 1
Config Change: No patient leads or Substituter
EUT Voltage: 4.1VDC from Power Supply

General Test Configuration

The EUT was connected to the spectrum analyzer or power meter via a suitable attenuator. All measurements were made on a single chain.

All measurements have been corrected to allow for the external attenuators used.

Ambient Conditions:

Temperature: 22-23 °C
Rel. Humidity: 43-45 %

Summary of Results

Run #	Pwr setting	Test Performed	Limit	Pass / Fail	Result / Margin
1	4	Output Power	15.247(b)	Pass	4.4 dBm
2	4	Power spectral Density (PSD)	15.247(d)	Pass	Power less than 8 dBm
3	4	Minimum 6dB Bandwidth	15.247(a)	Pass	0.721 MHz
3	4	99% Bandwidth	RSS GEN	-	1.056 MHz
4	4	Spurious emissions	15.247(b)	Pass	All > 20dBc

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

Procedure Comments:

Measurements performed in accordance with ANSI C63.10

Sample Notes

Sample S/N: 10000470
Driver: 1.6.1.41

Client:	Nevro Corporation	PR Number:	PR111764
Model:	IPG3000	T-Log Number:	TL111764-RA
		Project Manager:	Christine Krebill
Contact:	Susan McGill	Project Engineer:	David Bare
Standard:	FCC Part 15, EN 300 328	Class:	N/A

Run #1: Output Power

Power Setting[2]	Frequency (MHz)	Output Power (dBm)[1]	Output Power mW	Antenna Gain (dBi)	Result	EIRP dBm	EIRP mW	Output Power (dBm)[3]	Output Power mW
4	2402	4.4	2.7	-7.8	Pass	-3.4	0.46		
4	2442	4.3	2.7	-9.4	Pass	-5.1	0.31		
4	2480	4.2	2.7	-10.0	Pass	-5.8	0.26		

Note 1: Output power measured using a peak power meter, spurious limit is **-20dBc**.

Run #2: Power spectral Density

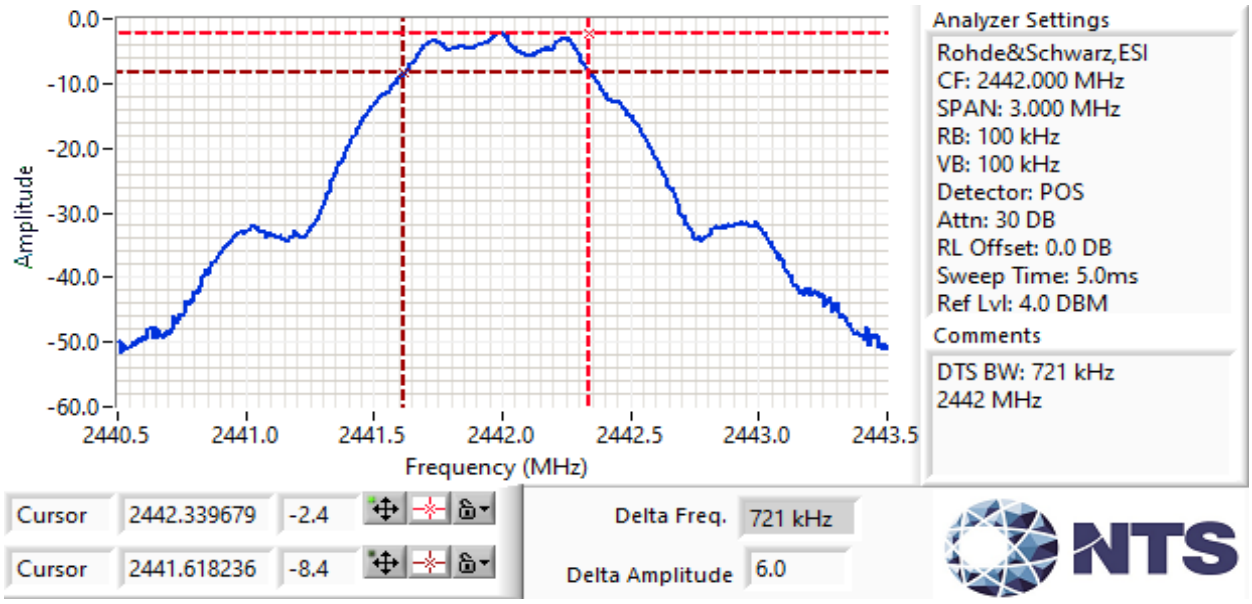
Not required - output power is less than 8 dBm PSD limit

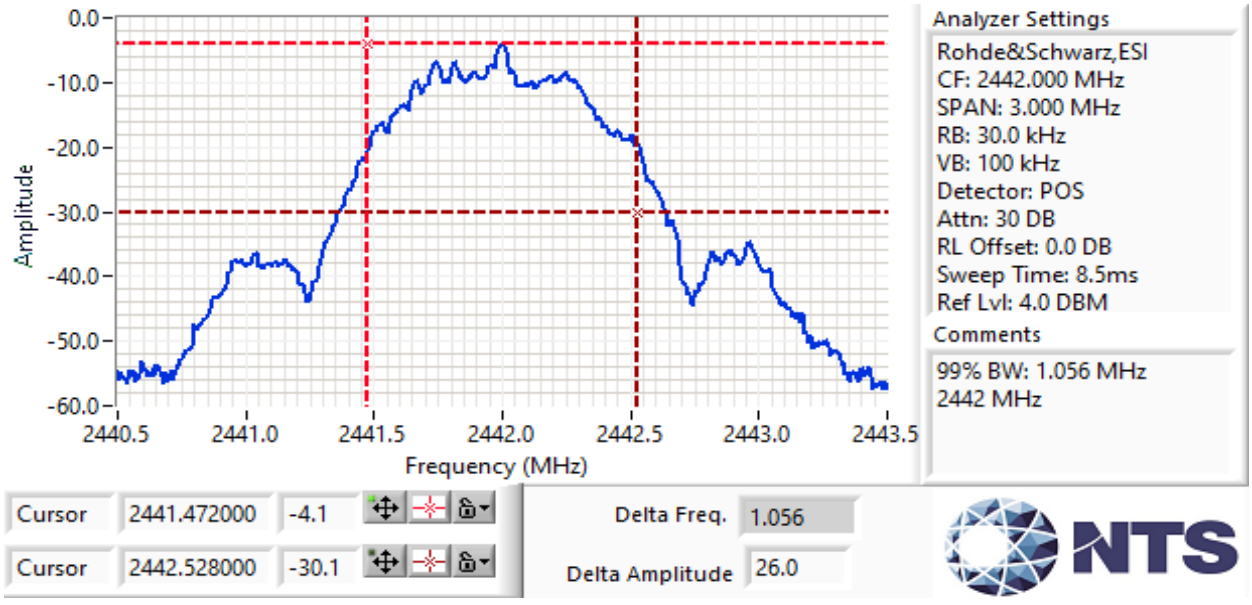
Run #3: Signal Bandwidth

Power Setting	Frequency (MHz)	Bandwidth (MHz) 6dB	Bandwidth (MHz) 99%	RBW Setting (kHz) 6dB	RBW Setting (kHz) 99%
4	2402	0.721	1.056	100	30
4	2442	0.721	1.056	100	30
4	2480	0.721	1.056	100	30

Note 1: DTS BW: RBW=100kHz, VBW ≥ 3*RBW, peak detector, max hold, auto sweep time, Span 2-5 times measured BW.
99% BW: RBW=1-5% of 99%BW, VBW ≥ 3*RBW, peak detector, max hold, auto sweep time. Span 1.5-5 times OBW.

Client:	Nevro Corporation	PR Number:	PR111764
Model:	IPG3000	T-Log Number:	TL111764-RA
		Project Manager:	Christine Krebill
Contact:	Susan McGill	Project Engineer:	David Bare
Standard:	FCC Part 15, EN 300 328	Class:	N/A





Client:	Nevro Corporation	PR Number:	PR111764
Model:	IPG3000	T-Log Number:	TL111764-RA
		Project Manager:	Christine Krebill
Contact:	Susan McGill	Project Engineer:	David Bare
Standard:	FCC Part 15, EN 300 328	Class:	N/A

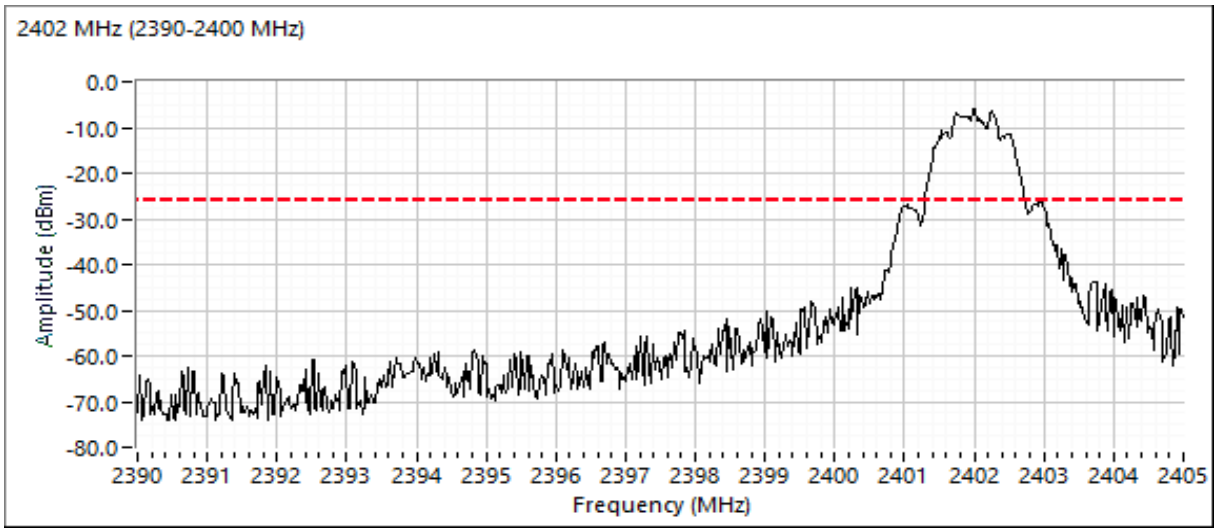
Run #4a: Out of Band Spurious Emissions (Tested in CW mode (100% duty cycle))

Frequency (MHz)	Power Setting	Mode	Limit	Result
2402	4	BLE	-20dBc	Pass
2442	4	BLE	-20dBc	Pass
2480	4	BLE	-20dBc	Pass

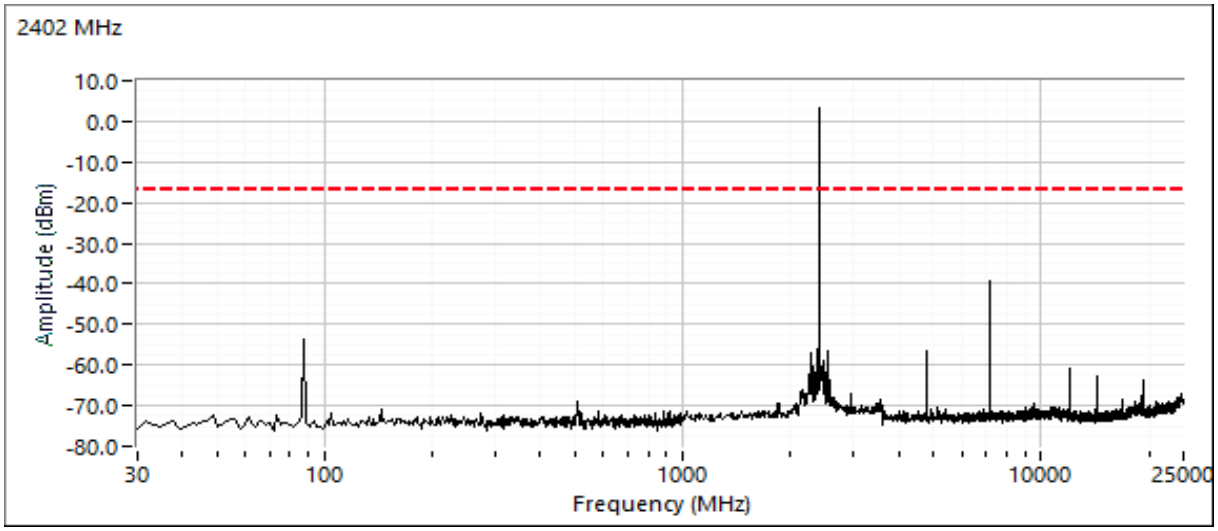
RBW = 100 kHz and VBW = 300 kHz for all plots.

Plots for low channel

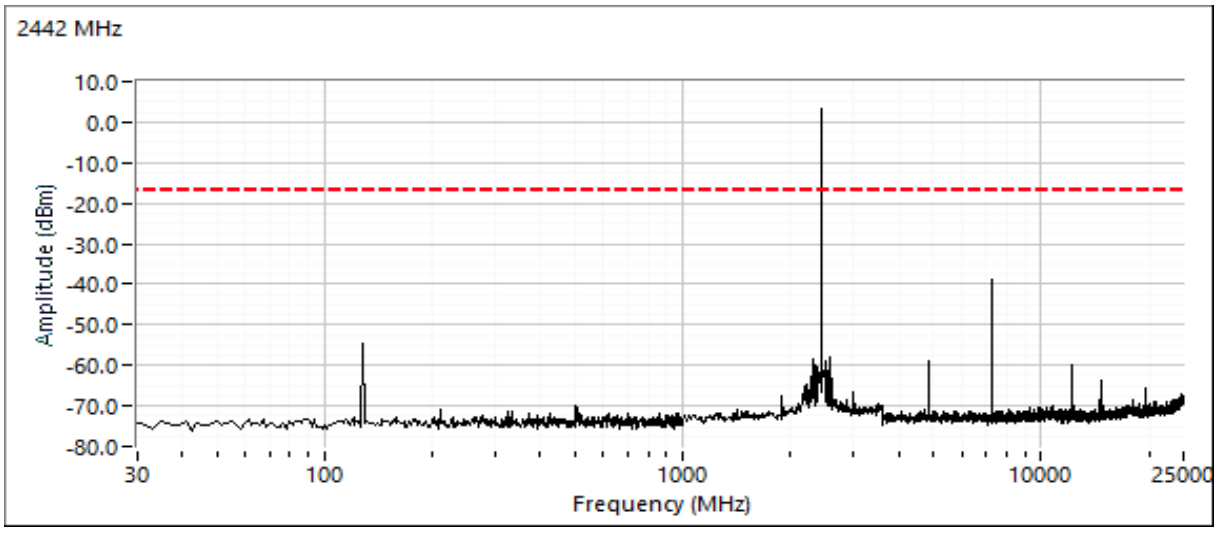
Additional plot showing compliance with -20dBc limit from 2390 MHz to 2400 MHz. Radiated measurements used to show compliance with the limits in the restricted band below 2390 MHz (Signal was modulated)



Client:	Nevro Corporation	PR Number:	PR111764
Model:	IPG3000	T-Log Number:	TL111764-RA
		Project Manager:	Christine Krebill
Contact:	Susan McGill	Project Engineer:	David Bare
Standard:	FCC Part 15, EN 300 328	Class:	N/A

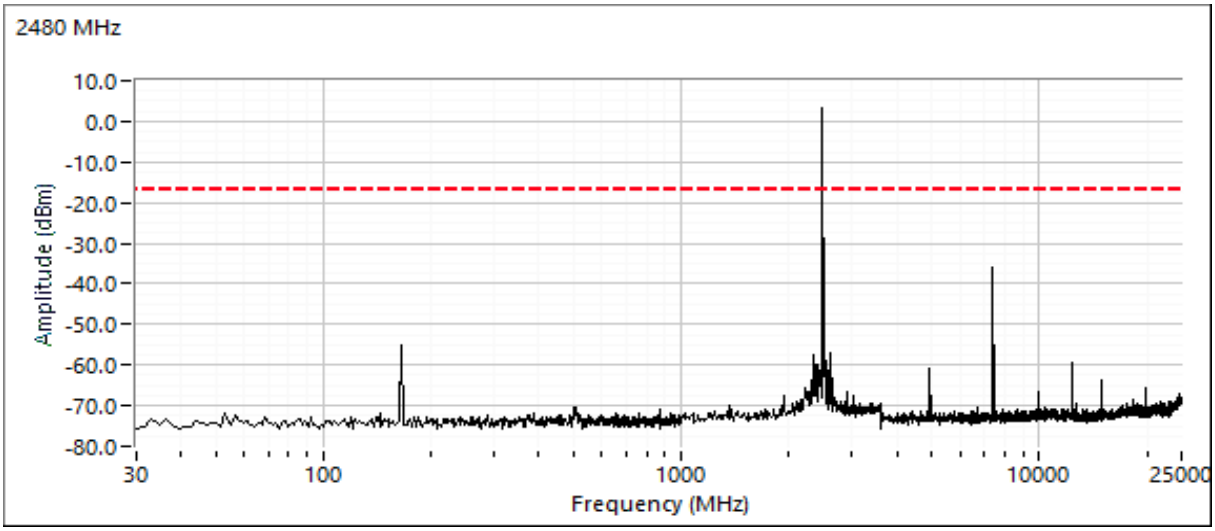


Plots for center channel



Client:	Nevro Corporation	PR Number:	PR111764
Model:	IPG3000	T-Log Number:	TL111764-RA
		Project Manager:	Christine Krebill
Contact:	Susan McGill	Project Engineer:	David Bare
Standard:	FCC Part 15, EN 300 328	Class:	N/A

Plots for high channel



Client:	Nevro Corporation	PR Number:	PR111764
Model:	IPG3000	T-Log Number:	TL111764-RA
		Project Manager:	Christine Krebill
Contact:	Susan McGill	Project Engineer:	David Bare
Standard:	FCC Part 15, EN 300 328	Class:	N/A

RSS-247 and FCC 15.247 (DTS) Radiated Spurious Emissions

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

General Test Configuration

The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing.
For radiated emissions testing the measurement antenna was located 3 meters from the EUT, unless otherwise noted.

Ambient Conditions:

Temperature: 24-25 °C
Rel. Humidity: 42-44 %

Summary of Results - Device Operating in the 2400-2483.5 MHz Band

Run #	Mode	Channel	Power Setting	Test Performed	Limit	Result / Margin
1	BLE	37 2402MHz	4	Restricted Band Edge (2390 MHz)	FCC Part 15.209 / 15.247(c)	35.9 dBµV/m @ 2370.6 MHz (Margin: -18.1 dB)
	BLE	39 2480MHz	4	Restricted Band Edge (2483.5 MHz)	FCC Part 15.209 / 15.247(c)	38.3 dBµV/m @ 2492.7 MHz (Margin: -15.7 dB)

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

Sample Notes

Sample S/N: 10000893
Driver: 1.6.1.41

Client:	Nevro Corporation	PR Number:	PR111764
Model:	IPG3000	T-Log Number:	TL111764-RA
		Project Manager:	Christine Krebill
Contact:	Susan McGill	Project Engineer:	David Bare
Standard:	FCC Part 15, EN 300 328	Class:	N/A

Procedure Comments:

Measurements performed in accordance with ANSI C63.10
Peak measurements performed with: RBW=1MHz, VBW=3MHz, peak detector, max hold, auto sweep time
Unless otherwise stated/noted, emission has a duty cycle ≥ 98% and was measured using RBW=1MHz, VBW=10Hz, peak detector, linear voltage average, auto sweep time, max hold.

Mode	Data Rate	Duty Cycle (x)	Constant DC?	T (ms)	Pwr Cor Factor*	Lin Volt Cor Factor**	Min VBW for FS (Hz)
BLE	1 Mbps	63.5%	Yes	0.40	1.97	3.94	2506

Measurement Specific Notes:

Note 1:	Emission in non-restricted band, but limit of 15.209 used.
Note 4:	Emission has constant duty cycle < 98%, average measurement performed: RBW=1MHz, VBW>1/T but not less than 10Hz, peak detector, linear averaging, auto sweep, trace average 100 traces, measurement corrected by Linear voltage correction factor
Note 8:	Plots of the average and peak bandedge do not account for any duty cycle correction. Refer to the tabular results for final measurements.

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments	
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters		
2491.270	36.8	V	54.0	-17.2	AVG	0	1.0	RB 1 MHz; VB: 3 kHz	Flat
2493.020	49.0	V	74.0	-25.0	PK	0	1.0	RB 1 MHz; VB: 3 MHz	Flat
2493.250	37.4	H	54.0	-16.6	AVG	115	1.5	RB 1 MHz; VB: 3 kHz	Flat
2489.390	48.6	H	74.0	-25.4	PK	115	1.5	RB 1 MHz; VB: 3 MHz	Flat
2492.730	38.3	H	54.0	-15.7	AVG	18	1.5	RB 1 MHz; VB: 3 kHz	Upright
2497.260	48.9	H	74.0	-25.1	PK	18	1.5	RB 1 MHz; VB: 3 MHz	Upright
2491.400	37.0	V	54.0	-17.0	AVG	198	1.5	RB 1 MHz; VB: 3 kHz	Upright
2492.230	49.3	V	74.0	-24.7	PK	198	1.5	RB 1 MHz; VB: 3 MHz	Upright
2491.400	37.0	V	54.0	-17.0	AVG	198	1.5	POS; RB 1 MHz; VB: 3 k	Side
2492.230	49.3	V	74.0	-24.7	PK	198	1.5	POS; RB 1 MHz; VB: 3 M	Side
2483.530	36.7	H	54.0	-17.3	AVG	35	1.5	POS; RB 1 MHz; VB: 3 k	Side
2491.200	48.5	H	74.0	-25.5	PK	35	1.5	POS; RB 1 MHz; VB: 3 M	Side

Note 2:	All 3 orientations were tested and worse orientation case was used for final measurment.

Client:	Nevro Corporation	PR Number:	PR111764
Model:	IPG3000	T-Log Number:	TL111764-RA
		Project Manager:	Christine Krebill
Contact:	Susan McGill	Project Engineer:	David Bare
Standard:	FCC Part 15, EN 300 328	Class:	N/A

Run #1: Radiated Bandedge Measurements

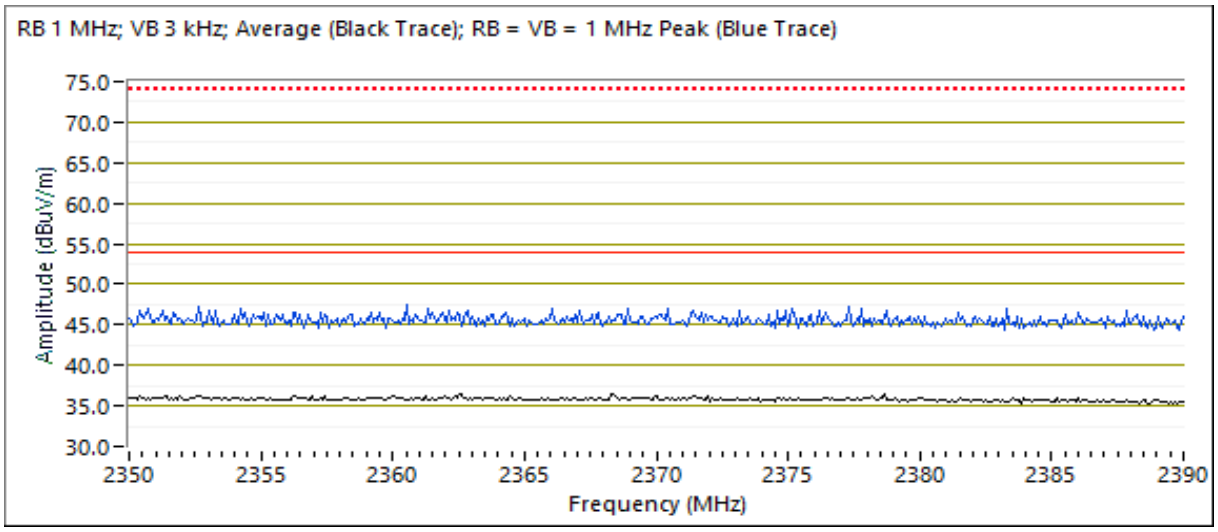
Date of Test: 08/09/21
Test Engineer: M. Birgani
Test Location: Chamber 7

Config. Used: 1
Config Change: -
EUT Voltage: Battery

Channel: 37

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments	Orientation
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters		
2370.600	**35.9**	H	54.0	**-18.1**	AVG	117	2.5	RB 1 MHz; VB: 3 kHz	Upright
2371.160	35.8	V	54.0	-18.2	AVG	360	1.0	RB 1 MHz; VB: 3 kHz	Upright
2361.060	48.4	V	74.0	-25.6	PK	360	1.0	RB 1 MHz; VB: 3 MHz	Upright
2373.970	48.1	H	74.0	-25.9	PK	117	2.5	RB 1 MHz; VB: 3 MHz	Upright

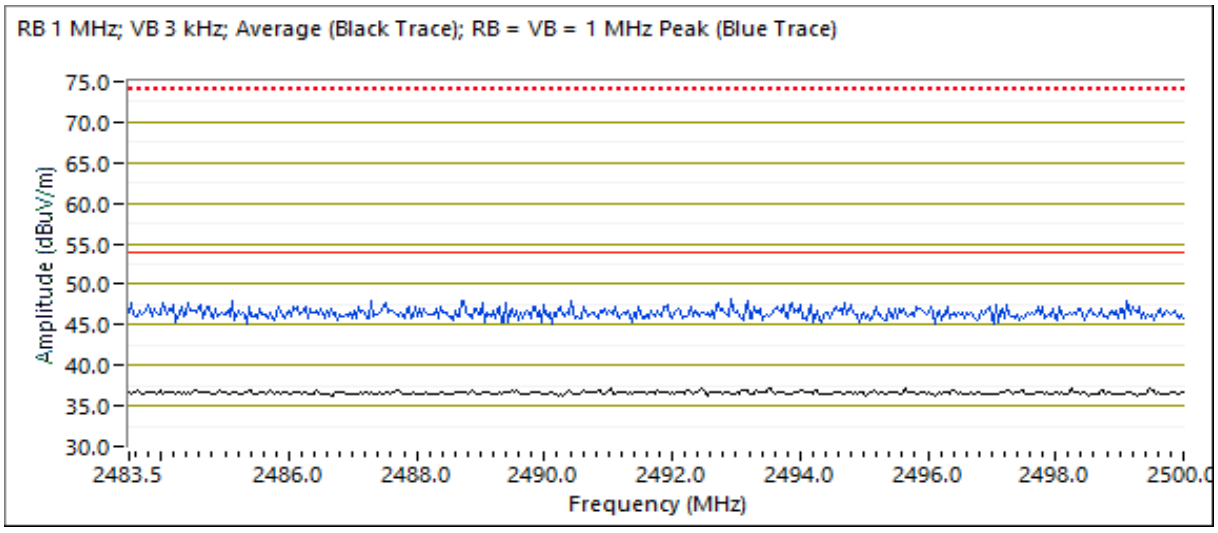


Client:	Nevro Corporation	PR Number:	PR111764
Model:	IPG3000	T-Log Number:	TL111764-RA
		Project Manager:	Christine Krebill
Contact:	Susan McGill	Project Engineer:	David Bare
Standard:	FCC Part 15, EN 300 328	Class:	N/A

Channel: 39

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments	Orientation
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters		
2492.730	**38.3**	H	54.0	**-15.7**	AVG	18	1.5	RB 1 MHz; VB: 3 kHz	Upright
2491.400	37.0	V	54.0	-17.0	AVG	198	1.5	RB 1 MHz; VB: 3 kHz	Upright
2492.230	49.3	V	74.0	-24.7	PK	198	1.5	RB 1 MHz; VB: 3 MHz	Upright
2497.260	48.9	H	74.0	-25.1	PK	18	1.5	RB 1 MHz; VB: 3 MHz	Upright



Client:	Nevro Corporation	PR Number:	PR111764
Model:	IPG3000	T-Log Number:	TL111764-RA
		Project Manager:	Christine Krebill
Contact:	Susan McGill	Project Engineer:	David Bare
Standard:	FCC Part 15, EN 300 328	Class:	N/A

RSS-247 and FCC 15.247 (DTS) Radiated Spurious Emissions

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

General Test Configuration

The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing.

For radiated emissions testing the measurement antenna was located 3 meters from the EUT, unless otherwise noted.

Ambient Conditions:

Temperature: 24-25 °C
Rel. Humidity: 42-44 %

Summary of Results - Device Operating in the 2400-2483.5 MHz Band

Run #	Mode	Channel	Power Setting	Test Performed	Limit	Result / Margin
1	BLE	37 2402MHz	4	Radiated Emissions, 30 MHz - 25 GHz	FCC Part 15.209 / 15.247(c)	36.4 dBµV/m @ 4803.9 MHz (Margin: -17.6 dB)
		17 2440MHz	4	Radiated Emissions, 30 MHz - 25 GHz	FCC Part 15.209 / 15.247(c)	22.1 dBµV/m @ 30.00 MHz (Margin: -17.9 dB)
		39 2480MHz	4	Radiated Emissions, 30 MHz - 25 GHz	FCC Part 15.209 / 15.247(c)	22.0 dBµV/m @ 30.00 MHz (Margin: -18.0 dB)

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

Sample Notes

Sample S/N: 10000893
Driver: 1.6.1.41

Client:	Nevro Corporation	PR Number:	PR111764
Model:	IPG3000	T-Log Number:	TL111764-RA
		Project Manager:	Christine Krebill
Contact:	Susan McGill	Project Engineer:	David Bare
Standard:	FCC Part 15, EN 300 328	Class:	N/A

Procedure Comments:

Measurements performed in accordance with ANSI C63.10
Peak measurements performed with: RBW=1MHz, VBW=3MHz, peak detector, max hold, auto sweep time
Unless otherwise stated/noted, emission has duty cycle ≥ 98% and was measured using RBW=1MHz, VBW=10Hz, peak detector, linear voltage average, auto sweep time, max hold.
2.4GHz band reject filter used

Mode	Data Rate	Duty Cycle (x)	Constant DC?	T (ms)	Pwr Cor Factor*	Lin Volt Cor Factor**	Min VBW for FS (Hz)
BLE	1 Mbps	63.5%	Yes	0.40	1.97	3.94	2506

Measurement Specific Notes:

Note 1:	Emission in non-restricted band, but limit of 15.209 used.
Note 4:	Emission has constant duty cycle < 98%, average measurement performed: RBW=1MHz, VBW>1/T but not less than 10Hz, peak detector, linear averaging, auto sweep, trace average 100 traces, measurement corrected by Linear voltage correction factor
Note 2:	All 3 orientations were tested and worse orientation case was used for final measurment.

Client:	Nevro Corporation	PR Number:	PR111764
Model:	IPG3000	T-Log Number:	TL111764-RA
		Project Manager:	Christine Krebill
Contact:	Susan McGill	Project Engineer:	David Bare
Standard:	FCC Part 15, EN 300 328	Class:	N/A

Run #1: Radiated Spurious Emissions, 1,000 - 25000 MHz.

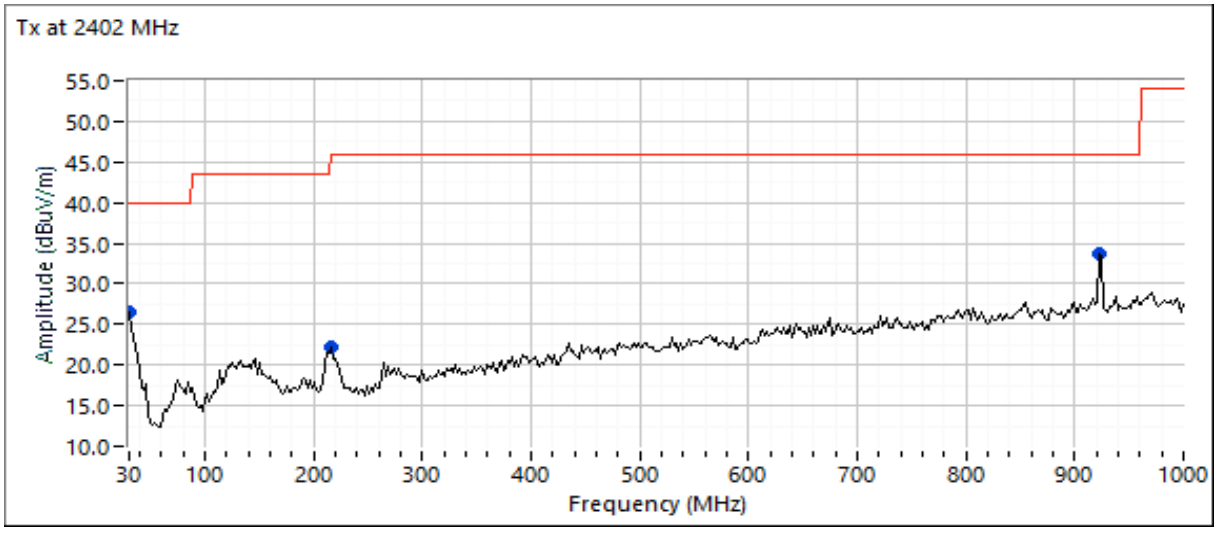
Date of Test: 08/09/21 Config. Used: 1
Test Engineer: M. Birgani Config Change: -
Test Location: Chamber 7 EUT Voltage: Battery

Run #1a: Low Channel

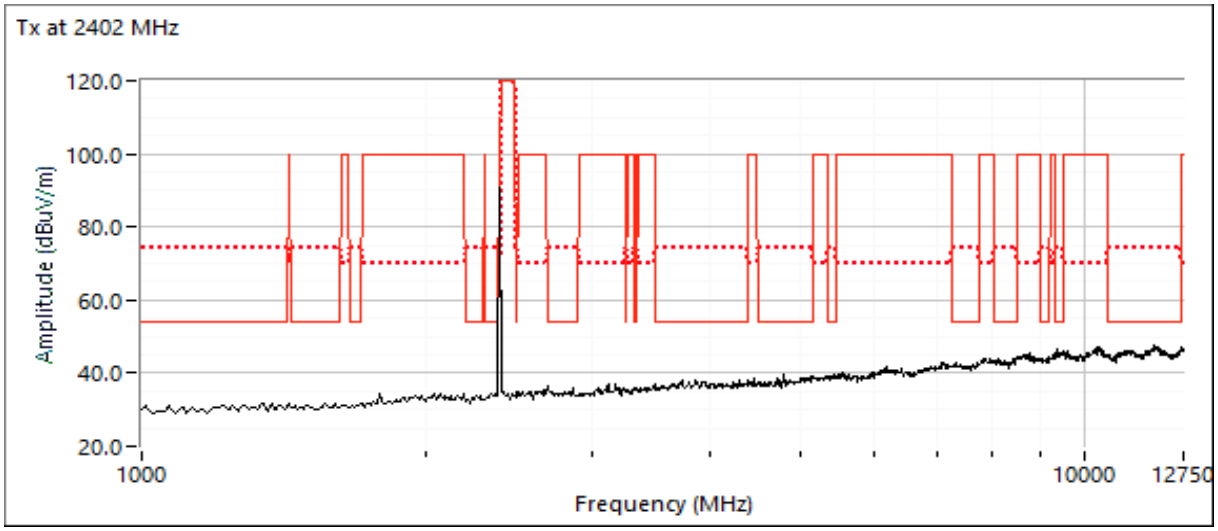
Channel: 37

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments	Orientation
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters		
30.000	21.9	H	40.0	-18.1	QP	22	3.5	QP (1.00s)	Upright
216.613	13.2	V	46.0	-32.8	QP	280	1.0	QP (1.00s)	Upright
922.245	24.1	H	46.0	-21.9	QP	303	3.0	QP (1.00s)	Upright
4803.860	36.4	V	54.0	-17.6	AVG	225	1.0	RB 1 MHz;VB 3 kHz	Upright
4804.270	46.6	V	74.0	-27.4	PK	225	1.0	RB 1 MHz;VB 3 MHz	Upright

Note:	Scans made between 12.75 - 25 GHz with the measurement antenna moved around the EUT 30cm from the device indicated there were no significant emissions in this frequency range
Note:	30-1000MHz plot limit lines are from FCC Rules §15.209.
Note:	None of the emissions from 30-1000 MHz are related to the BLE radio.



Client:	Nevro Corporation	PR Number:	PR111764
Model:	IPG3000	T-Log Number:	TL111764-RA
		Project Manager:	Christine Krebill
Contact:	Susan McGill	Project Engineer:	David Bare
Standard:	FCC Part 15, EN 300 328	Class:	N/A



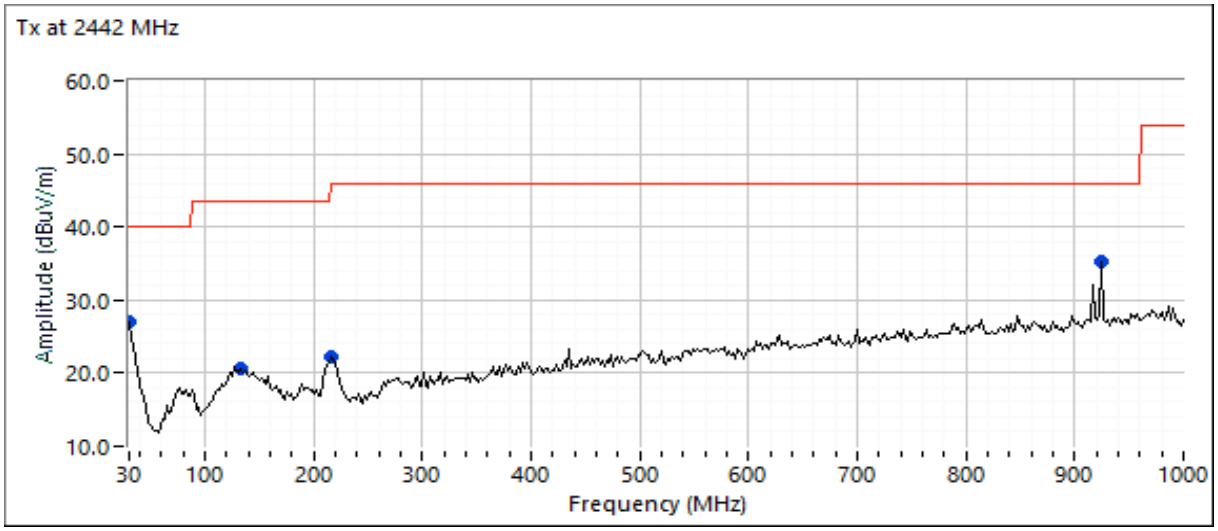
Run #1b: Center Channel

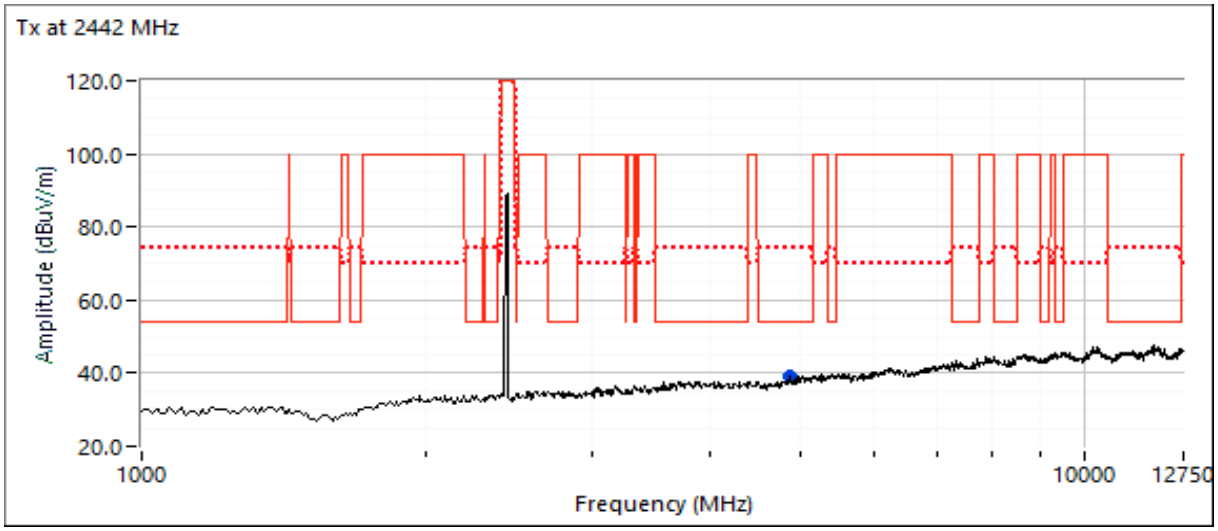
Channel: 17

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments	Orientation
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters		
30.000	22.1	V	40.0	-17.9	QP	282	3.0	QP (1.00s)	Upright
924.188	24.1	V	46.0	-21.9	QP	256	1.0	QP (1.00s)	Upright
216.613	13.2	V	46.0	-32.8	QP	256	1.0	QP (1.00s)	Upright
133.026	15.1	V	43.5	-28.4	QP	156	1.0	QP (1.00s)	Upright
4884.350	35.0	V	54.0	-19.0	AVG	30	1.9	RB 1 MHz;VB 3 kHz	Upright
4882.850	47.0	V	74.0	-27.0	PK	30	1.9	RB 1 MHz;VB 3 MHz	Upright

Note:	Scans made between 12.75 - 25 GHz with the measurement antenna moved around tthe EUT 30cm from the device indicated there were no significant emissions in this frequency range
Note:	30-1000MHz plot limit lines are from FCC Rules §15.209.
Note:	None of the emissions from 30-1000 MHz are related to the BLE radio.

Client:	Nevro Corporation	PR Number:	PR111764
Model:	IPG3000	T-Log Number:	TL111764-RA
		Project Manager:	Christine Krebill
Contact:	Susan McGill	Project Engineer:	David Bare
Standard:	FCC Part 15, EN 300 328	Class:	N/A



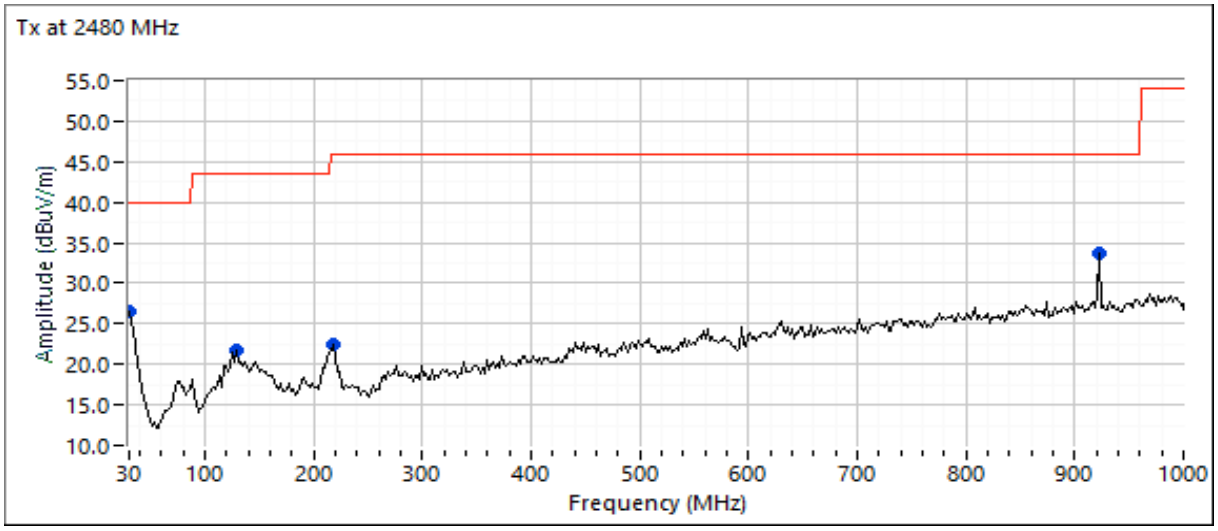


Client:	Nevro Corporation	PR Number:	PR111764
Model:	IPG3000	T-Log Number:	TL111764-RA
		Project Manager:	Christine Krebill
Contact:	Susan McGill	Project Engineer:	David Bare
Standard:	FCC Part 15, EN 300 328	Class:	N/A

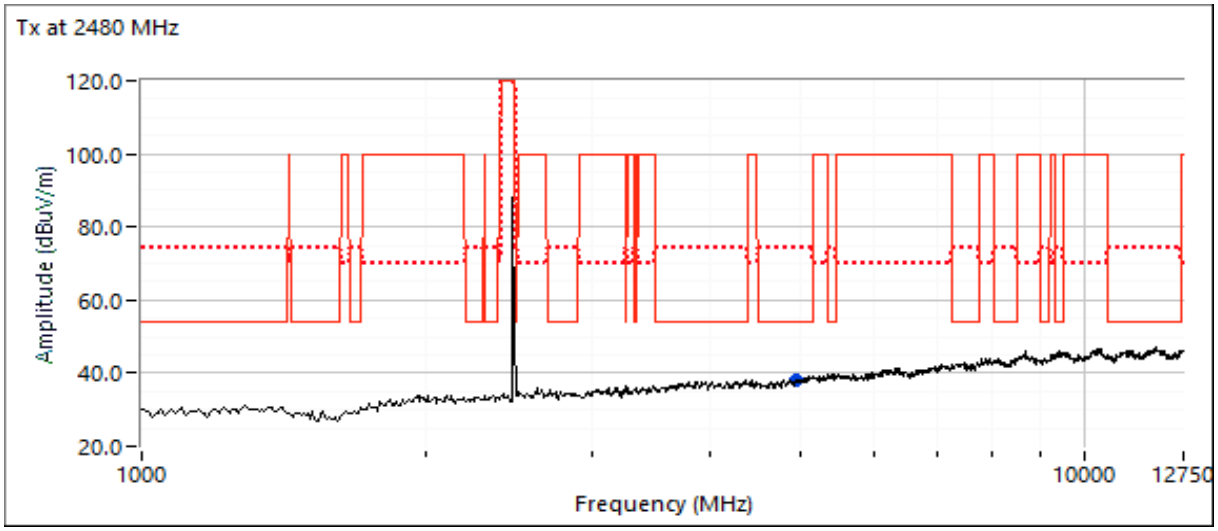
Run #1c: High Channel
Channel: 39

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments	Orientation
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters		
30.000	22.0	V	40.0	-18.0	QP	302	4.0	QP (1.00s)	Upright
129.138	15.1	V	43.5	-28.4	QP	332	1.0	QP (1.00s)	Upright
218.557	13.4	V	46.0	-32.6	QP	147	1.0	QP (1.00s)	Upright
922.245	24.1	V	46.0	-21.9	QP	152	4.0	QP (1.00s)	Upright
4959.260	46.8	V	74.0	-27.2	PK	207	1.3	RB 1 MHz;VB 3 MHz	Upright
4959.910	34.7	V	54.0	-19.3	AVG	207	1.3	RB 1 MHz;VB 3 kHz	Upright

Note:	Scans made between 12.75 - 25 GHz with the measurement antenna moved around tthe EUT 30cm from the device indicated there were no significant emissions in this frequency range
Note:	30-1000MHz plot limit lines are from FCC Rules §15.209.
Note:	None of the emissions from 30-1000 MHz are related to the BLE radio.



Client:	Nevro Corporation	PR Number:	PR111764
Model:	IPG3000	T-Log Number:	TL111764-RA
		Project Manager:	Christine Krebill
Contact:	Susan McGill	Project Engineer:	David Bare
Standard:	FCC Part 15, EN 300 328	Class:	N/A



End of Report

This page is intentionally blank and
marks the last page of this test report.