

FCC/ISED Test Report

Prepared for: Garmin International, Inc.

Address: 1200 E. 151st Street
Olathe, Kansas, 66062, USA

Product: C03561

Test Report No: R20200110-20-E14A

Approved by:



Nic S. Johnson, NCE

Technical Manager

iNARTE Certified EMC Engineer #EMC-003337-NE

DATE: 21 April 2020

Total Pages: 55

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Report Number:	R20200110-20-E14	Rev	A
Prepared for:	Garmin International, Inc.		

REVISION PAGE

Rev. No.	Date	Description
0	21 April 2020	Original – NJohnson Prepared by KVepuri/CFarrington
A	9 May 2020	<ol style="list-style-type: none">1. Tables in Section 4.4 were updated to show the frequency range and statements were added to provide clarification about what data was reported.2. Restricted band edge measurements were updated in section 4.5 and Appendix C.3. The data corresponding to BT BR modulation was added.4. The duty cycle measurements and average power measurements were added in section 4.3 and 4.1 respectively.5. Contains the report R20200110-20-E14 and its amendments in full. -KV



Report Number:	R20200110-20-E14	Rev	A
Prepared for:	Garmin International, Inc.		

CONTENTS

Revision Page	2
1.0 Summary of test results.....	4
2.0 EUT Description	5
2.1 Equipment under test	5
2.2 Description of test modes	5
2.3 Description of support units.....	5
3.0 Laboratory and General Test Description	6
3.1 Laboratory description.....	6
3.2 Test personnel.....	6
3.3 Test equipment.....	7
3.4 General Test Procedure and Setup for Radio Measuremnts.....	8
4.0 Results.....	9
4.1 Output Power	9
4.2 Bandwidth.....	11
4.3 Duty Cycle	12
4.4 Radiated emissions.....	13
4.5 Band edges	19
4.6 Power Spectral Density.....	21
4.7 Conducted AC Mains Emissions	22
Appendix A: Sample Calculation	25
Appendix B – Measurement Uncertainty	27
Appendix C – Graphs and Tables	28
REPORT END.....	55



Report Number:	R20200110-20-E14	Rev	A
Prepared for:	Garmin International, Inc.		

1.0 SUMMARY OF TEST RESULTS

The worst-case measurements were reported in this report. Summary of test results presented in this report correspond to the following section (Please see the checked box below for the rule part used):

FCC Part 15.247

The EUT has been tested according to the following specifications:

- (1) US Code of Federal Regulations, Title 47, Part 15
- (2) ISED RSS-Gen, Issue 5
- (3) ISED RSS-247, Issue 2

APPLIED STANDARDS AND REGULATIONS		
Standard Section	Test Type	Result
FCC Part 15.35 RSS Gen, Issue 5, Section 6.10	Duty Cycle	Pass
FCC Part 15.247(a)(1) RSS-247 Issue 2 Section 5.2	Peak output power	Pass
FCC Part 15.247(a)(1) RSS-247 Issue 2 Section 5.2	Bandwidth	Pass
FCC Part 15.209 RSS-Gen Issue 4, Section 7.1	Receiver Radiated Emissions	Pass
FCC Part 15.209 (restricted bands), 15.247 (unrestricted) RSS-247 Issue 2 Section 5.5, RSS-Gen Issue 4, Section 8.9	Transmitter Radiated Emissions	Pass
FCC Part 15.247(a)(1) RSS-247 Issue 2 Section 5.2	Power Spectral Density	Pass
FCC Part 15.209, 15.247(d) RSS-247 Issue 2 Section 11.13	Band Edge Measurement	Pass
FCC Part 15.207 RSS-Gen Issue 4, Section 7.1	Conducted Emissions	Pass



Report Number:	R20200110-20-E14	Rev	A
Prepared for:	Garmin International, Inc.		

2.0 EUT DESCRIPTION

2.1 EQUIPMENT UNDER TEST

Summary and Operating Condition:

EUT	C03561
EUT Received	13 January 2020
EUT Tested	19 February 2020- 6 March 2020
Serial No.	3319808469 (Radiated Measurements) 3319808431 (Radiated Measurements) 3319808429 (Conducted Measurements)
Operating Band	2400 – 2483.5 MHz
Device Type	<input type="checkbox"/> GMSK <input type="checkbox"/> GFSK <input checked="" type="checkbox"/> BT BR <input checked="" type="checkbox"/> BT EDR 2MB <input type="checkbox"/> BT EDR 3MB <input type="checkbox"/> 802.11x
Power Supply / Voltage	Internal Battery/ 5VDC Charger: Garmin (Phi Hong) MN: PSAF10R-050Q (Representative Power Supply)

NOTE: For more detailed features description, please refer to the manufacturer's specifications or user's manual.

2.2 DESCRIPTION OF TEST MODES

The operating range of the EUT is dependent on the device type found in section 2.1:

For Bluetooth Transmissions:

Channel	Frequency
Low	2402 MHz
Mid	2440 MHz
High	2480 MHz

For 802.11x Transmissions:

Channel	Frequency
Low	2412 MHz
Mid	2437 MHz
High	2462 MHz

These are the only representative channels tested in the frequency range according to FCC Part 15.31 and RSS-Gen Table A1. See the operational description for a list of all channel frequency and designations.

2.3 DESCRIPTION OF SUPPORT UNITS

None

3.0 LABORATORY AND GENERAL TEST DESCRIPTION

3.1 LABORATORY DESCRIPTION

All testing was performed at the following Facility:

The Nebraska Center for Excellence in Electronics (NCEE Labs)
 4740 Discovery Drive
 Lincoln, NE 68521

A2LA Certificate Number:	1953.01
FCC Accredited Test Site Designation No:	US1060
Industry Canada Test Site Registration No:	4294A-1
NCC CAB Identification No:	US0177

Environmental conditions varied slightly throughout the tests:

Relative humidity of $35 \pm 4\%$
 Temperature of $22 \pm 3^\circ$ Celsius



3.2 TEST PERSONNEL

No.	PERSONNEL	TITLE	ROLE
1	Nic Johnson	Technical Manager	Review/editing
2	Karthik Vepuri	Test Engineer	Testing and report
3	Caleb Farrington	Test Engineer	Testing and report

Notes:

All personnel are permanent staff members of NCEE Labs. No testing or review was sub-contracted or performed by sub-contracted personnel.



Report Number:	R20200110-20-E14	Rev	A
Prepared for:	Garmin International, Inc.		

3.3 TEST EQUIPMENT

DESCRIPTION AND MANUFACTURER	MODEL NO.	SERIAL NO.	LAST CALIBRATION DATE	CALIBRATION DUE DATE
Keysight MXE Signal Analyzer	N9038A	MY59050109	23 Apr 2019	23 Apr 2021
Keysight EXA Signal Analyzer	N9010A	MY56070862	14 Dec 2018	14 Dec 2020
SunAR RF Motion	JB1	A082918-1	15 Oct 2018	15 Oct 2020
EMCO Horn Antenna	3115	6416	26 Jan 2018	26 Jan 2021
EMCO Horn Antenna	3116	2576	31 Jan 2018	31 Jan 2021
EMCO Loop Antenna	6512	00024936	11 Feb 2019	11 Feb 2021
Rohde & Schwarz Preamplifier	TS-PR18	3545700803	09 Mar 2018*	09 Mar 2021*
Trilithic High Pass Filter	6HC330	23042	09 Mar 2018*	09 Mar 2021*
Rohde & Schwarz LISN	ESH3-Z5	836679/010	25 Jul 2019	25 Jul 2020
TDK Emissions Lab Software	V11.25	700307	NA	NA
Humidity Meter - Omega	iTHX-SD	18020051	14 Feb 2019	14 Feb 2021
JFW Industries Variable attenuator	50DR-046 SMA	594239	29 May 2018*	29 May 2020*
RF Cable (preamplifier to antenna)	MFR-57500	01-07-002	09 Mar 2018*	09 Mar 2021*
RF Cable (antenna to 10m chamber bulkhead)	FSCM 64639	01E3872	09 Mar 2018*	09 Mar 2021*
RF Cable (10m chamber bulkhead to control room bulkhead)	FSCM 64639	01E3874	09 Mar 2018*	09 Mar 2021*
RF Cable (Control room bulkhead to RF switch)	FSCM 64639	01E3871	09 Mar 2018*	09 Mar 2021*
RF Cable (RF switch to test receiver)	FSCM 64639	01F1206	09 Mar 2018*	09 Mar 2021*
RF switch – Rohde and Schwarz	TS-RSP	1113.5503.14	09 Mar 2018*	09 Mar 2021*
N connector bulkhead (10m chamber)	PE9128	NCEEBH1	09 Mar 2018*	09 Mar 2021*
N connector bulkhead (control room)	PE9128	NCEEBH2	09 Mar 2018*	09 Mar 2021*

*Internal Characterization

Notes:

All equipment is owned by NCEE Labs and stored permanently at NCEE Labs facilities.

3.4 GENERAL TEST PROCEDURE AND SETUP FOR RADIO MEASUREMENTS

Measurement type presented in this report (Please see the checked box below):

Conducted

The conducted measurements were performed by connecting the output of the transmitter directly into a spectrum analyzer using an impedance matched cable and connector soldered to the EUT in place of the antenna. The information regarding resolution bandwidth, video bandwidth, span and the detector used can be found in the graphs provided in the Appendix C. All the radio measurements were performed using the sections from ANSI C63.10, details about the section used can be found in the spectrum analyzer titles on the graph.

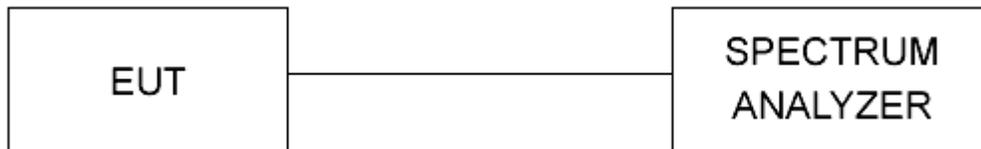


Figure 1 - Bandwidth Measurements Test Setup

Radiated

All the radiated measurements were taken at a distance of 3m from the EUT. The information regarding resolution bandwidth, video bandwidth, span and the detector used can be found in the graphs provided in the Appendix C. All the radio measurements were performed using the sections from ANSI C63.10, details about the section used can be found in the spectrum analyzer titles on the graph.

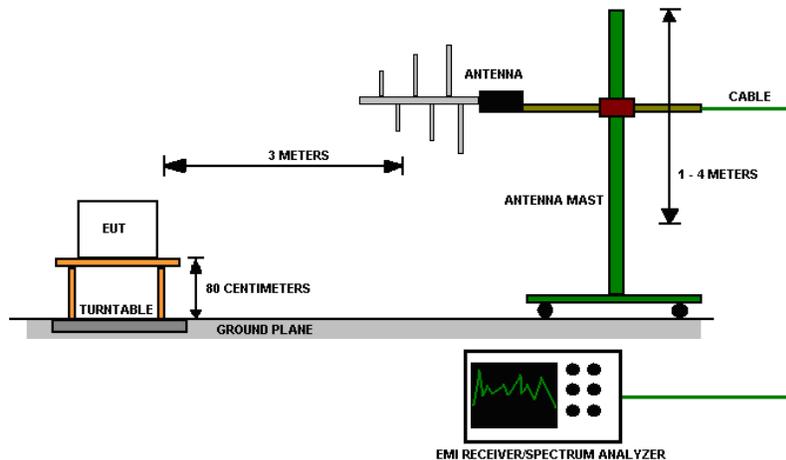


Figure 2 - Radiated Emissions Test Setup



Report Number:	R20200110-20-E14	Rev	A
Prepared for:	Garmin International, Inc.		

4.0 RESULTS

4.1 OUTPUT POWER

Test Method: All the radio measurements were performed using the sections from ANSI C63.10, details about the section used can be found in the spectrum analyzer titles on the graph.

Limits of power measurements:

For FCC Part 15.249 Device:

For Informational Purposes only

For FCC Part 15.247 Device:

The maximum allowed peak output power is 30 dBm.

Test procedures:

Details can be found in section 3.4 of this report.

Deviations from test standard:

No deviation.

Test setup:

Details can be found in section 3.4 of this report.

EUT operating conditions:

Details can be found in section 2.1 of this report.

Test results:

Pass

Comments:

1. All the output power plots can be found in the Appendix C.
2. All the measurements were found to be compliant.
3. The measurements are listed in the tables below.



Report Number:	R20200110-20-E14	Rev	A
Prepared for:	Garmin International, Inc.		

Peak Output Power

CHANNEL	PEAK OUTPUT POWER (dBm)	PEAK OUTPUT POWER (mW)	RESULT	Transmitter
Low	10.161	10.378	PASS	BT EDR 2MB
Mid	10.436	11.056	PASS	BT EDR 2MB
High	10.307	10.732	PASS	BT EDR 2MB
Low	13.259	21.179	PASS	BT BR
Mid	12.849	19.271	PASS	BT BR
High	12.884	19.427	PASS	BT BR

Average Output Power

CHANNEL	AVERAGE OUTPUT POWER (dBm)	AVERAGE OUTPUT POWER (mW)	RESULT	Transmitter
Low	7.047	5.066	PASS	BT EDR 2MB
Mid	7.388	5.480	PASS	BT EDR 2MB
High	7.648	5.818	PASS	BT EDR 2MB
Low	-1.838	0.655	PASS	BT BR
Mid	-2.248	0.596	PASS	BT BR
High	-2.213	0.601	PASS	BT BR

*Duty Cycle correction was applied to peak output power measurements to obtain average output power for BT BR modulation.



Report Number:	R20200110-20-E14	Rev	A
Prepared for:	Garmin International, Inc.		

4.2 BANDWIDTH

Test Method: All the radio measurements were performed using the sections from ANSI C63.10, details about the section used can be found in the spectrum analyzer titles on the graph.

Limits of bandwidth measurements:

For FCC Part 15.249 Device:

For Informational Purposes only

For FCC Part 15.247 Device:

The 99% occupied bandwidth is for informational purpose only. The 6dB bandwidth of the signal must be greater than 500 kHz.

Test procedures:

Details can be found in section 3.4 of this report.

Deviations from test standard:

No deviation.

Test setup:

Test setup details can be found in section 3.4 of this report.

EUT operating conditions:

Details can be found in section 2.1 of this report.

Test results:

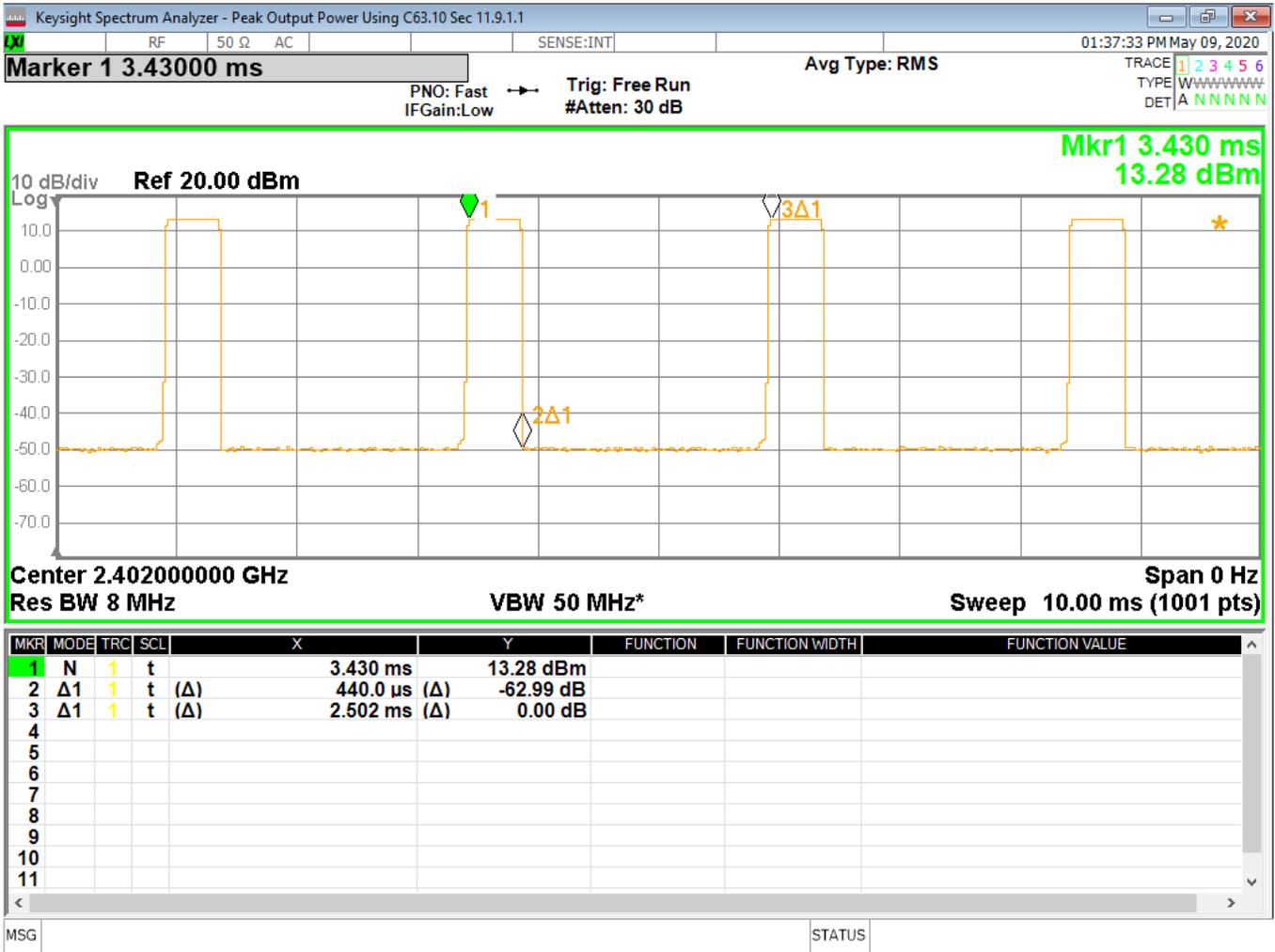
Pass

Comments:

1. All the bandwidth plots can be found in the Appendix C.
2. All the measurements were found to be compliant.

4.3 DUTY CYCLE

Test Method: N/A



BTBR Duty Cycle

On Time = 440.0 us

Period = 2.502 ms

Duty Cycle correction = $20 \cdot \log(0.44/2.502) = -15.097 \text{ dB}$

*Worst case duty cycle possible according to the manufacturer

4.4 RADIATED EMISSIONS

Test Method: ANSI C63.10-2013, Section 6.5, 6.6

Limits for radiated emissions measurements:

Emissions radiated outside of the specified bands shall be applied to the limits in 15.209 as followed:

FREQUENCIES (MHz)	FIELD STRENGTH ($\mu\text{V/m}$)	MEASUREMENT DISTANCE (m)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	3
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

NOTE:

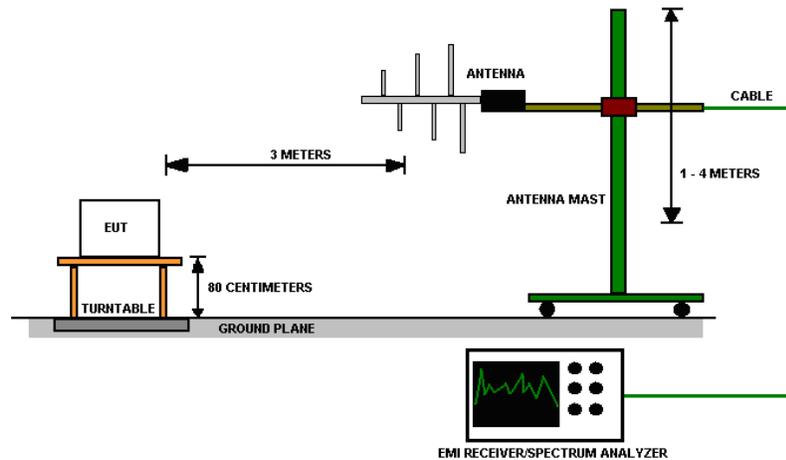
1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = $20 * \log * \text{Emission level } (\mu\text{V/m})$.
3. As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits by more than 20dB under any condition of modulation.
4. The EUT was tested for spurious emissions while running off of battery power and external USB power. The worse-case emissions were produced while running off of USB power, so results from this mode are presented.



Report Number:	R20200110-20-E14	Rev	A
Prepared for:	Garmin International, Inc.		

Test procedures:

- a. The EUT was placed on the top of a rotating table above the ground plane in a 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. The table was 0.8m high for measurements from 30MHz-1Ghz and 1.5m for measurements from 1GHz and higher.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna was a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are used to make the measurement.
- d. For each suspected emission, the EUT was arranged to maximize its emissions and then the antenna height was varied from 1 meter to 4 meters and the rotating table was turned from 0 degrees to 360 degrees to find the maximum emission reading.
- e. The test-receiver system was set to use a peak detector with a specified resolution bandwidth. For spectrum analyzer measurements, the composite maximum of several analyzer sweeps was used for final measurements.
- f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10 dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
- g. The EUT was maximized in all 3 orthogonal positions. The results are presented for the axis that had the highest emissions.

Test setup:

Figure 3 - Radiated Emissions Test Setup
NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Peak detection (PK) and Quasi-peak detection (QP) at frequencies below 1GHz.
2. The resolution bandwidth 1 MHz for all measurements and at frequencies above 1GHz, A peak detector was used for all measurements above 1GHz. Measurements were made with an EMI Receiver.

Deviations from test standard:

No deviation.

EUT operating conditions

Details can be found in section 2.1 of this report.

Test results:

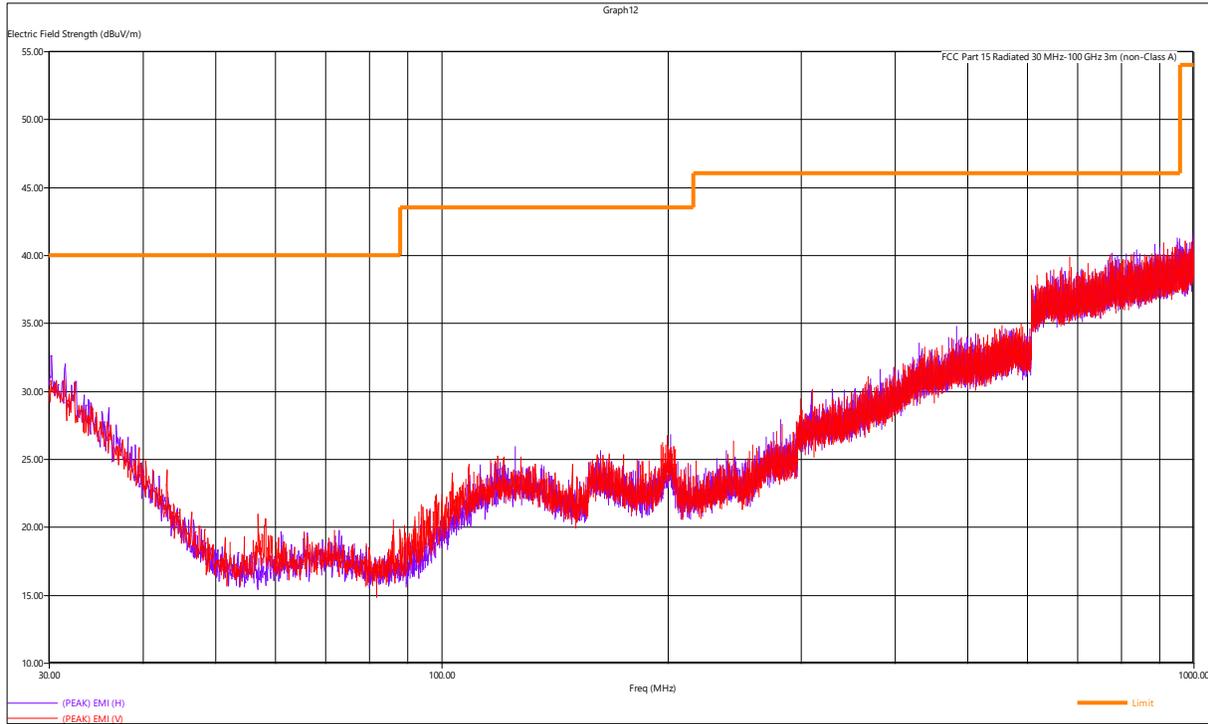


Figure 4 - Radiated Emissions Plot, Receive

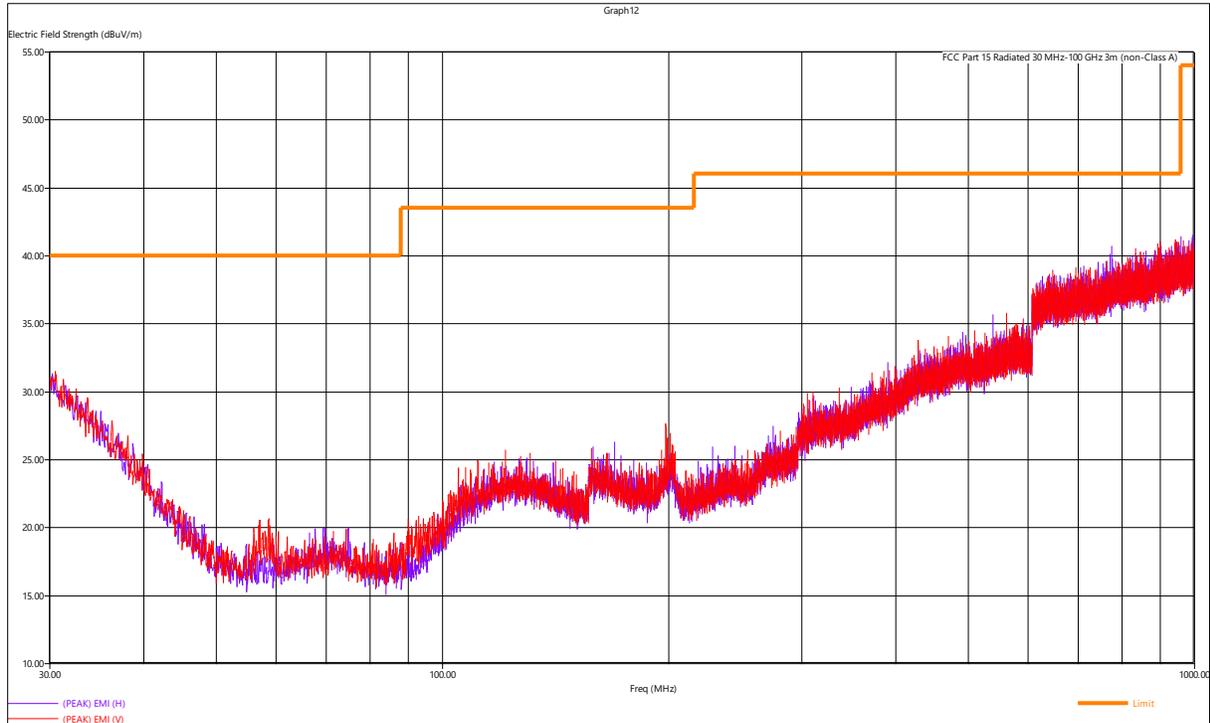


Figure 5 - Radiated Emissions Plot, BT EDR 2MB

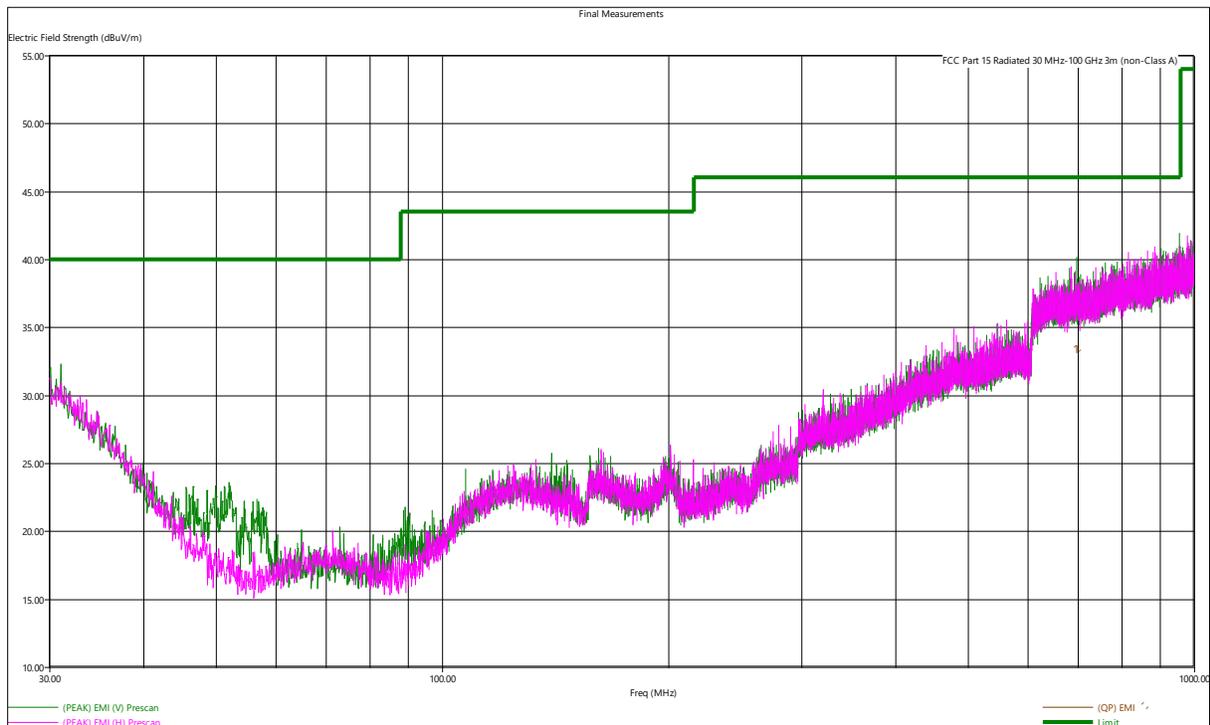


Figure 6 - Radiated Emissions Plot, BT BR



Report Number:	R20200110-20-E14	Rev	A
Prepared for:	Garmin International, Inc.		

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB)
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value

Quasi-Peak Measurements, Bluetooth Classic, 30 MHz - 1 GHz								
Frequency	Level	Limit	Margin	Height	Angle	Pol	Channel	Modulation
MHz	dBµV/m	dBµV/m	dB	cm.	deg.			
696.060000	33.41	46.02	12.61	270	13	V	Low	BT EDR 2MB

The EUT was maximized in all 3 orthogonal axis. The worst-case is shown in the plot and table above.

*If the measurements were found to be at least 6 dB below the limit, they were not reported.

Peak Measurements, Bluetooth Classic, 1 GHz – 25 GHz								
Frequency	Level	Limit	Margin	Height	Angle	Pol	Channel	Modulation
MHz	dBµV/m	dBµV/m	dB	cm.	deg.			
2402.000000	97.28	N/A	N/A	200	207	V	Low	BT EDR 2MB
2440.000000	97.64	N/A	N/A	200	207	V	Mid	BT EDR 2MB
2480.000000	95.94	N/A	N/A	200	207	V	High	BT EDR 2MB
2402.000000	101.44	N/A	N/A	200	207	V	Low	BT BR
2440.000000	101.50	N/A	N/A	200	207	V	Mid	BT BR
2480.000000	101.98	N/A	N/A	200	207	V	High	BT BR

The EUT was maximized in all 3 orthogonal axis. The worst-case is shown in the plot and table above.

*If the measurements were found to be at least 6 dB below the limit, they were not reported.

Report Number:	R20200110-20-E14	Rev	A
Prepared for:	Garmin International, Inc.		

4.5 BAND EDGES

Test Method: All the radio measurements were performed using the sections from ANSI C63.10, details about the section used can be found in the spectrum analyzer titles on the graph.

Limits of band-edge measurements:

For FCC Part 15.249 Device:

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in §15.209, whichever is the lesser attenuation.

For FCC Part 15.247 Device:

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c))

Test procedures:

The highest emissions level beyond the band-edge was measured and recorded. All band edge measurements were evaluated to the general limits in Part 15.209. More details can be found in section 3.4 of this report.

Deviations from test standard:

No deviation.

Test setup:

Test setup details can be found in section 3.4 of this report. All band edge measurements were evaluated to the general limits in Part 15.209. More details can be found in section 3.4 of this report.

EUT operating conditions:

Details can be found in section 2.1 of this report.



Report Number:	R20200110-20-E14	Rev	A
Prepared for:	Garmin International, Inc.		

Test results:
Pass

Restricted Band Edge Measurements							
Modulation	Channel	Average level	Average Limit	Average Margin	Peak Level	Peak Limit	Peak Margin
BT EDR 2MB	Low	40.828	53.980	13.152	52.924	73.890	20.966
BT EDR 2MB	High	41.868	53.980	12.112	57.417	73.890	16.473
BT BR	Low	40.907	53.980	13.073	53.029	73.890	20.861
BT BR	High	40.732	53.980	13.248	52.466	73.890	21.424

Comments:

1. All the band edge plots can be found in the Appendix C.
2. If the device falls under FCC Part 15.247 (Details can be found in summary of test results), compliance is shown in the unrestricted band edges by showing minimum delta of 20 dB between peak and the band edge.
3. If the device falls under FCC Part 15.249 (Details can be found in summary of test results), compliance is shown in the unrestricted band edges by showing minimum delta of 50 dB between peak and the band edge.
4. The restricted band edge compliance is shown by comparing to the general limit defined in Part 15.209. The limit shown in the graph accounts for the antenna gain of the device.



Report Number:	R20200110-20-E14	Rev	A
Prepared for:	Garmin International, Inc.		

4.6 POWER SPECTRAL DENSITY

Test Method: All the radio measurements were performed using the sections from ANSI C63.10, details about the section used can be found in the spectrum analyzer titles on the graph.

Limits of power measurements:

For FCC Part 15.249 Device:

Not Applicable

For FCC Part 15.247 Device:

The maximum PSD allowed is 8 dBm.

Test procedures:

Details can be found in section 3.4 of this report.

Deviations from test standard:

No deviation.

Test setup:

Details can be found in section 3.4 of this report.

EUT operating conditions:

Details can be found in section 2.1 of this report.

Test results:

Pass

Comments:

4. All the Power Spectral Density (PSD) plots can be found in the Appendix C.
5. All the measurements were found to be compliant.
6. The measurements are reported on the graph.

4.7 CONDUCTED AC MAINS EMISSIONS

Test Method: ANSI C63.10-2013, Section(s) 6.2

Limits for conducted emissions measurements:

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dB μ V)	
	Quasi-peak	Average
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50

Notes:

1. The lower limit shall apply at the transition frequencies.
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 MHz
3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

Test Procedures:

- a. The EUT was placed 0.8m above a ground reference plane and 0.4 meters from the conducting wall of a shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). The LISN provides 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference as well as the ground.
- c. The frequency range from 150 kHz to 30 MHz was searched. Emission levels over 10dB under the prescribed limits are not reported.
- d. Results were compared to the 15.207 limits.

Deviation from the test standard:

No deviation

EUT operating conditions:

Details can be found in section 2.1 of this report.

Test Results:

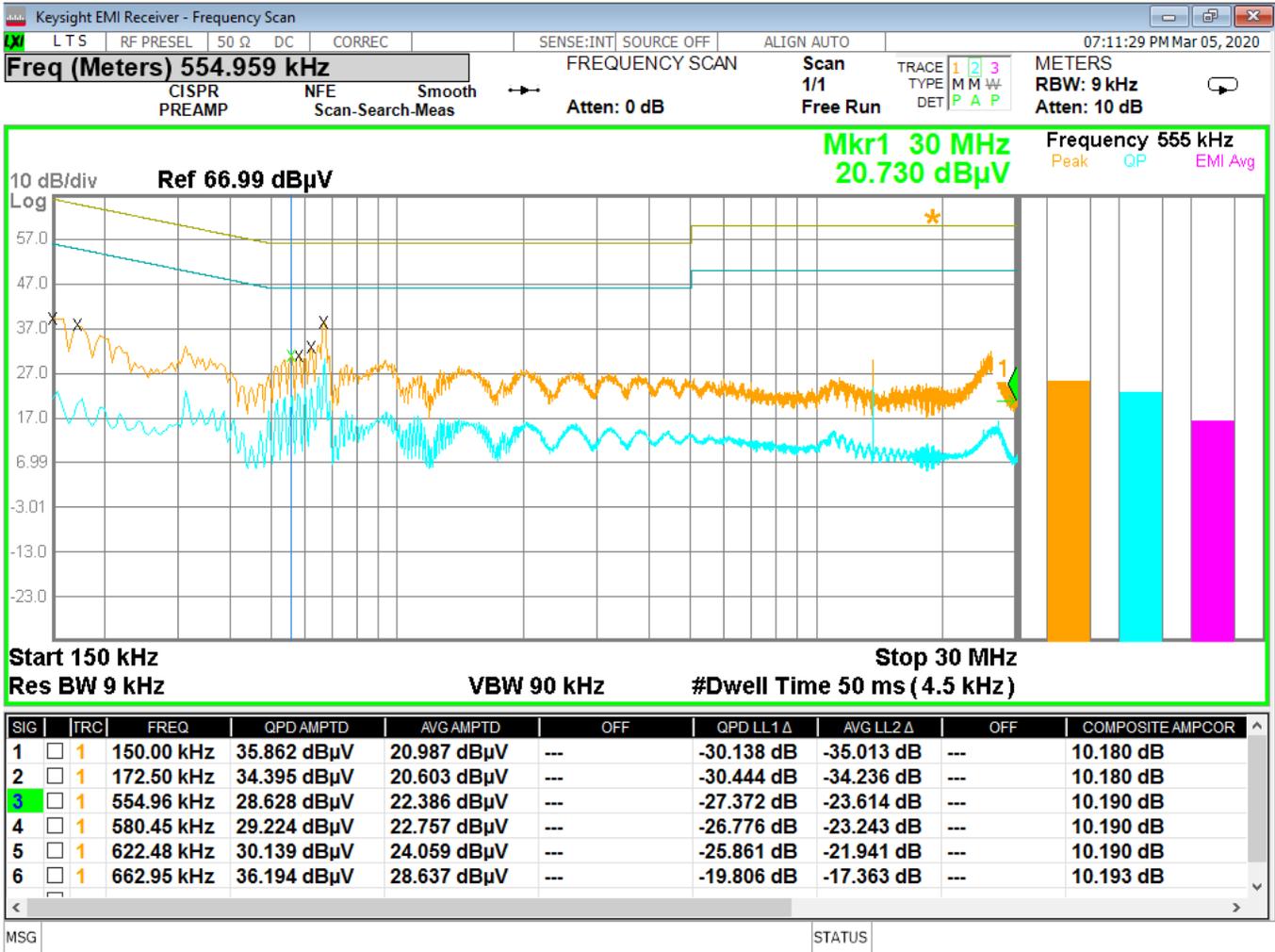


Figure 7 - Conducted Emissions Plot, Line

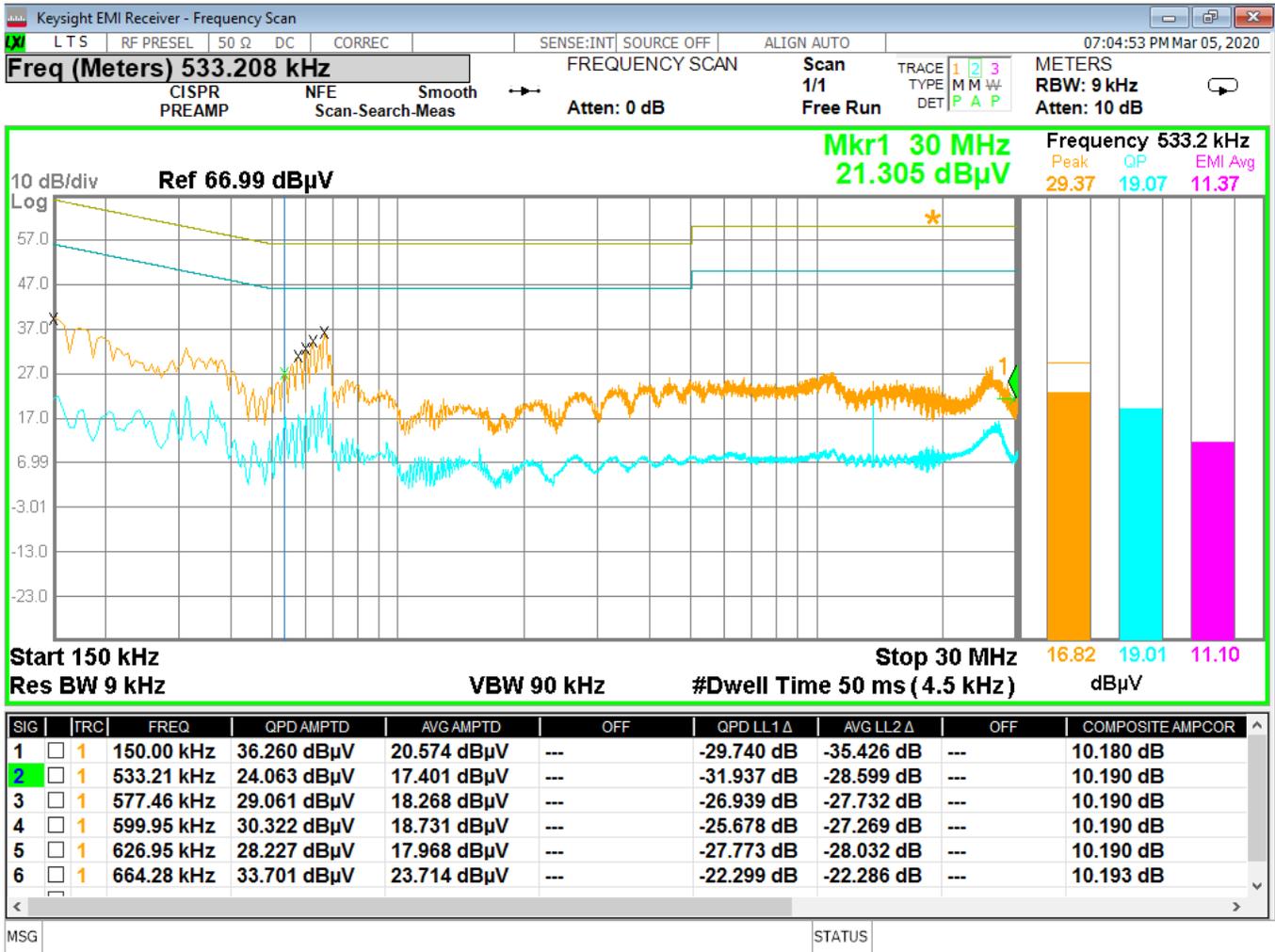


Figure 8 - Conducted Emissions Plot, Neutral



Report Number:	R20200110-20-E14	Rev	A
Prepared for:	Garmin International, Inc.		

APPENDIX A: SAMPLE CALCULATION

Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$FS = RA + AF - (-CF + AG) + AV$$

where FS = Field Strength

- RA = Receiver Amplitude
- AF = Antenna Factor
- CF = Cable Attenuation Factor
- AG = Amplifier Gain
- AV = Averaging Factor (if applicable)

Assume a receiver reading of 55 dB μ V is obtained. The Antenna Factor of 12 and a Cable Factor of 1.1 is added. The Amplifier Gain of 20 dB is subtracted, giving a field strength of 48.1 dB μ V/m.

$$FS = 55 + 12 - (-1.1 + 20) + 0 = 48.1 \text{ dB}\mu\text{V/m}$$

The 48.1 dB μ V/m value can be mathematically converted to its corresponding level in μ V/m.

$$\text{Level in } \mu\text{V/m} = \text{Common Antilogarithm} [(48.1 \text{ dB}\mu\text{V/m})/20] = 254.1 \mu\text{V/m}$$

AV is calculated by the taking the $20 \cdot \log(T_{on}/100)$ where T_{on} is the maximum transmission time in any 100ms window.

	Report Number:	R20200110-20-E14	Rev	A
	Prepared for:	Garmin International, Inc.		

EIRP Calculations

In cases where direct antenna port measurement is not possible or would be inaccurate, output power is measured in EIRP. The maximum field strength is measured at a specified distance and the EIRP is calculated using the following equation;

$$EIRP \text{ (Watts)} = [\text{Field Strength (V/m)} \times \text{antenna distance (m)}]^2 / 30$$

$$\text{Power (watts)} = 10^{[\text{Power (dBm)}/10]} / 1000$$

$$\text{Voltage (dB}\mu\text{V)} = \text{Power (dBm)} + 107 \text{ (for } 50\Omega \text{ measurement systems)}$$

$$\text{Field Strength (V/m)} = 10^{[\text{Field Strength (dB}\mu\text{V/m)} / 20]} / 10^6$$

$$\text{Gain} = 1 \text{ (numeric gain for isotropic radiator)}$$

Conversion from 3m field strength to EIRP (d=3):

$$EIRP = [\text{FS(V/m)} \times d^2] / 30 = \text{FS} [0.3] \quad \text{for } d = 3$$

$$EIRP(\text{dBm}) = \text{FS}(\text{dB}\mu\text{V/m}) - 10(\log 10^9) + 10\log[0.3] = \text{FS}(\text{dB}\mu\text{V/m}) - 95.23$$

10log(10^9) is the conversion from micro to milli



Report Number:	R20200110-20-E14	Rev	A
Prepared for:	Garmin International, Inc.		

APPENDIX B – MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been for tests performed in this test report:

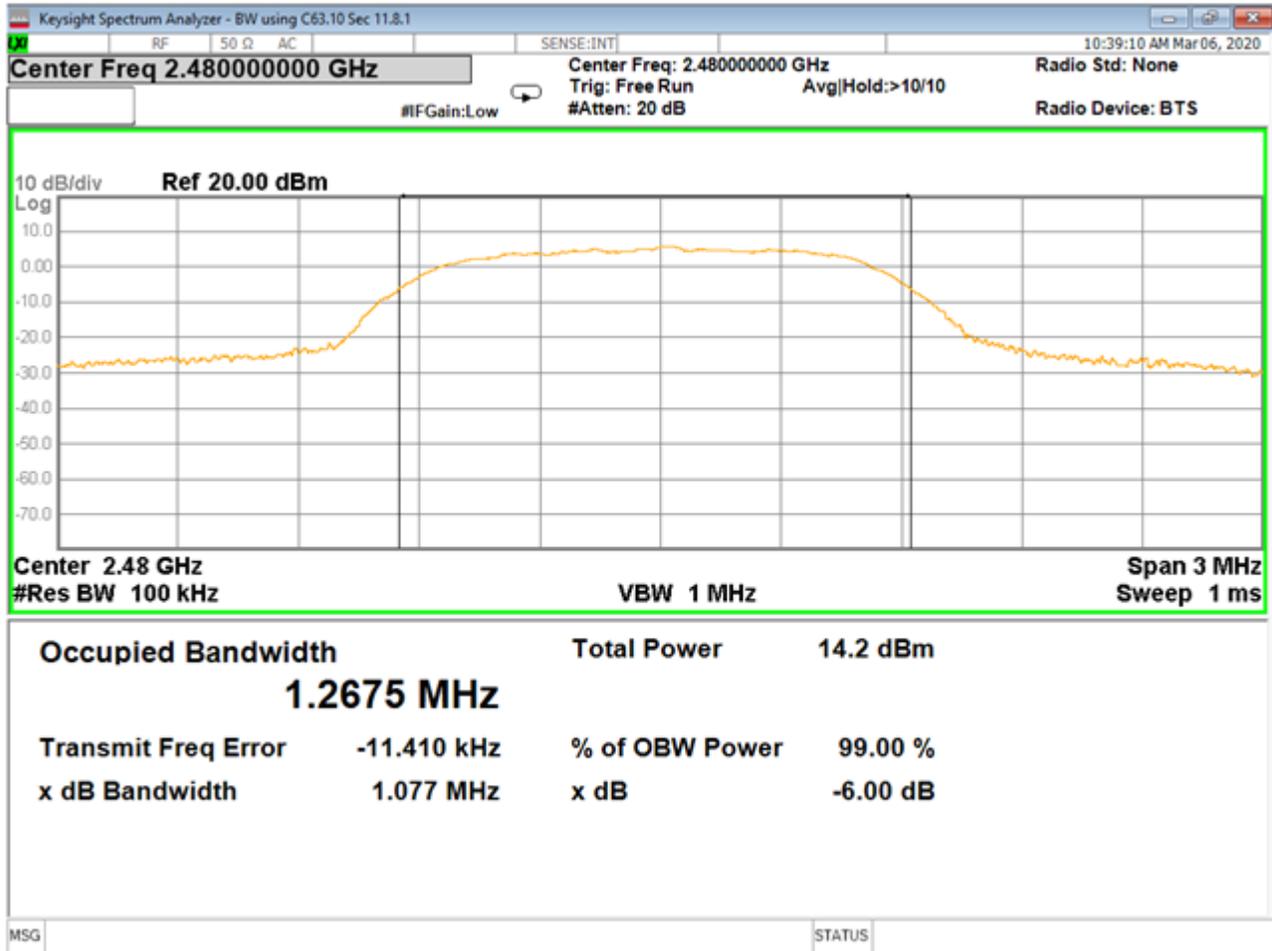
Test	Frequency Range	Uncertainty Value (dB)
Radiated Emissions, 3m	30MHz - 1GHz	3.82
Radiated Emissions, 3m	1GHz - 18GHz	4.44
Emissions limits, conducted	30MHz – 18GHz	±3.30 dB

Expanded uncertainty values are calculated to a confidence level of 95%.



Report Number:	R20200110-20-E14	Rev	A
Prepared for:	Garmin International, Inc.		

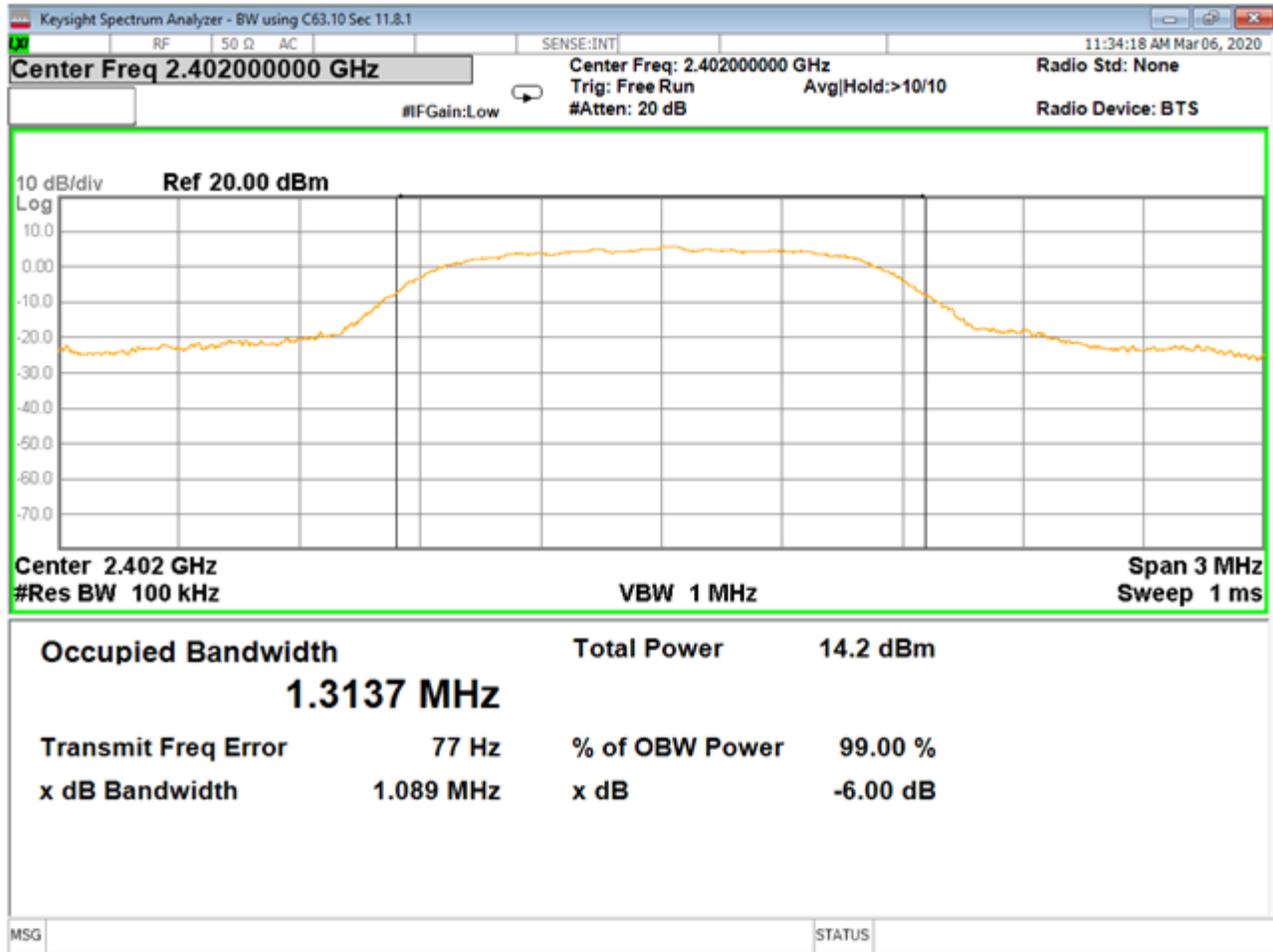
APPENDIX C – GRAPHS AND TABLES



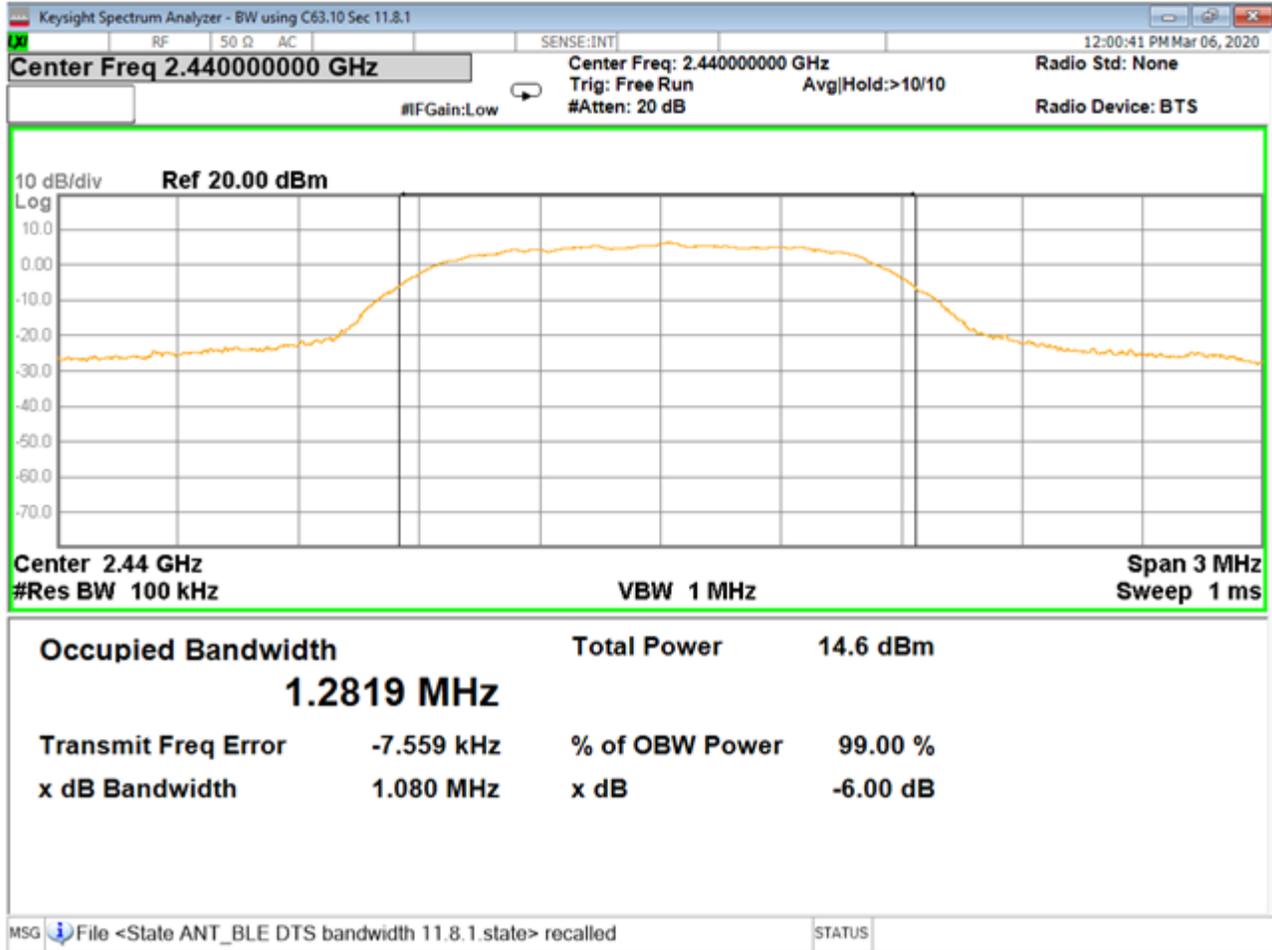
C03561 BW High Ch BT EDR 2MB



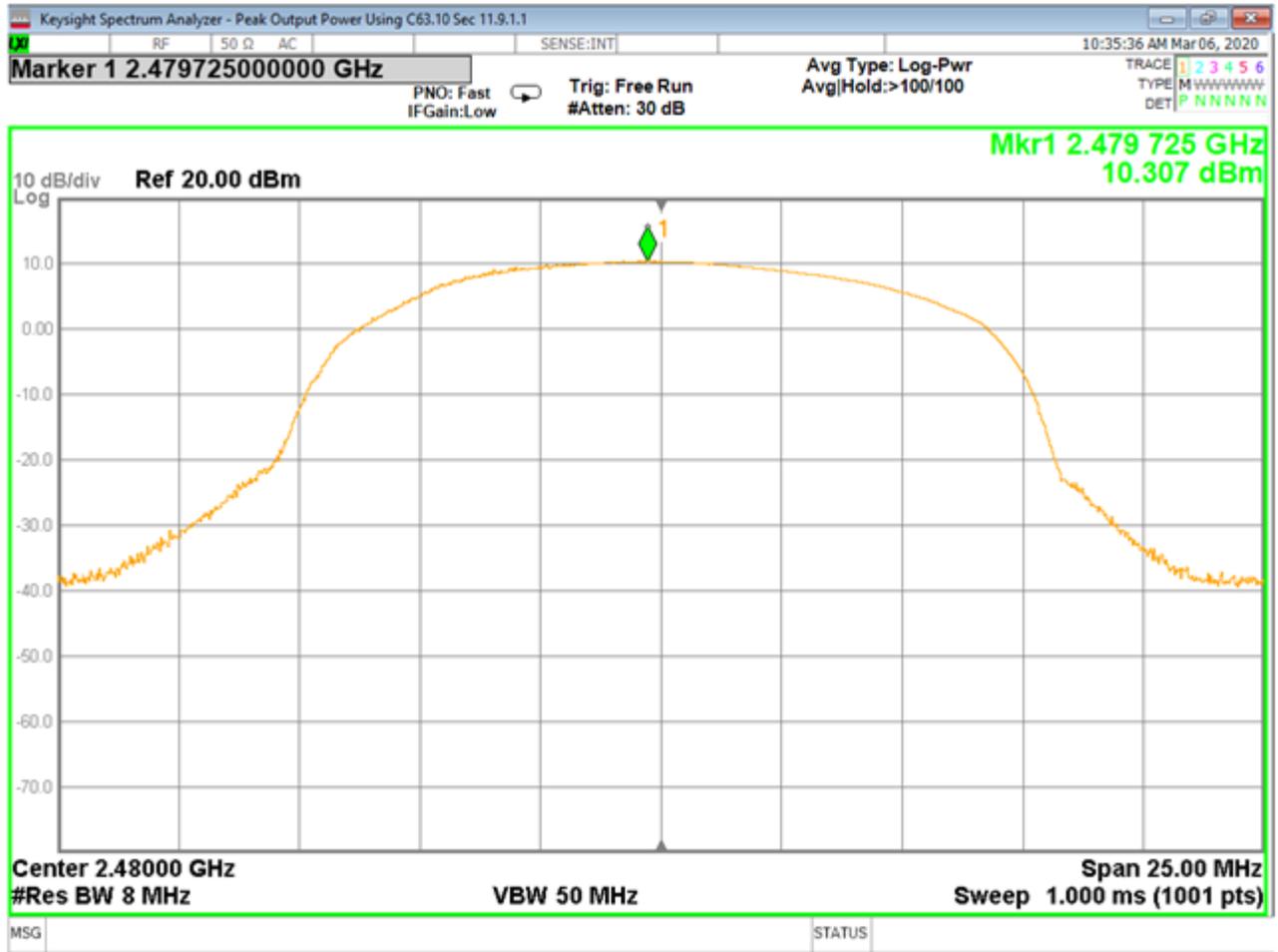
Report Number:	R20200110-20-E14	Rev	A
Prepared for:	Garmin International, Inc.		



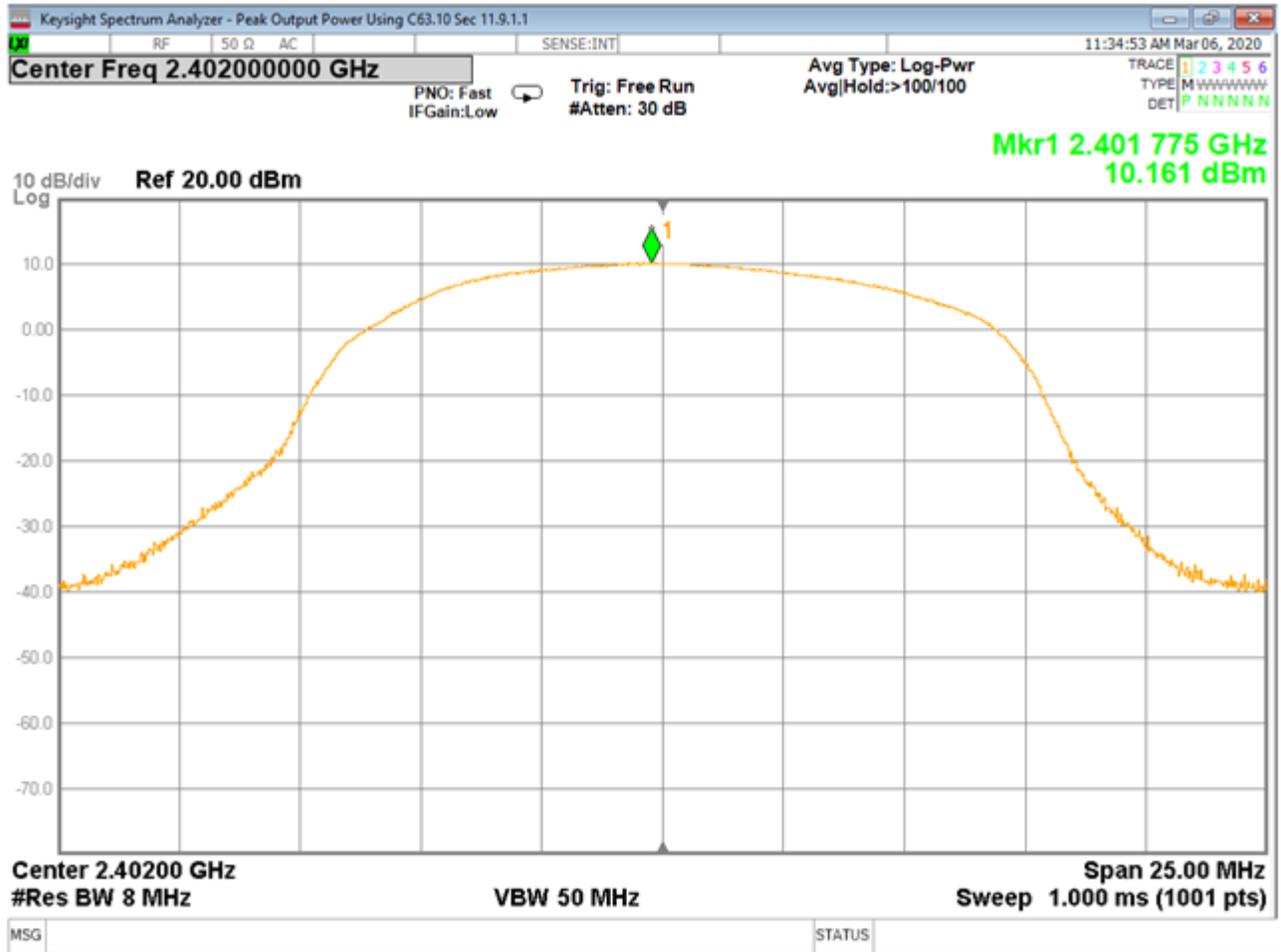
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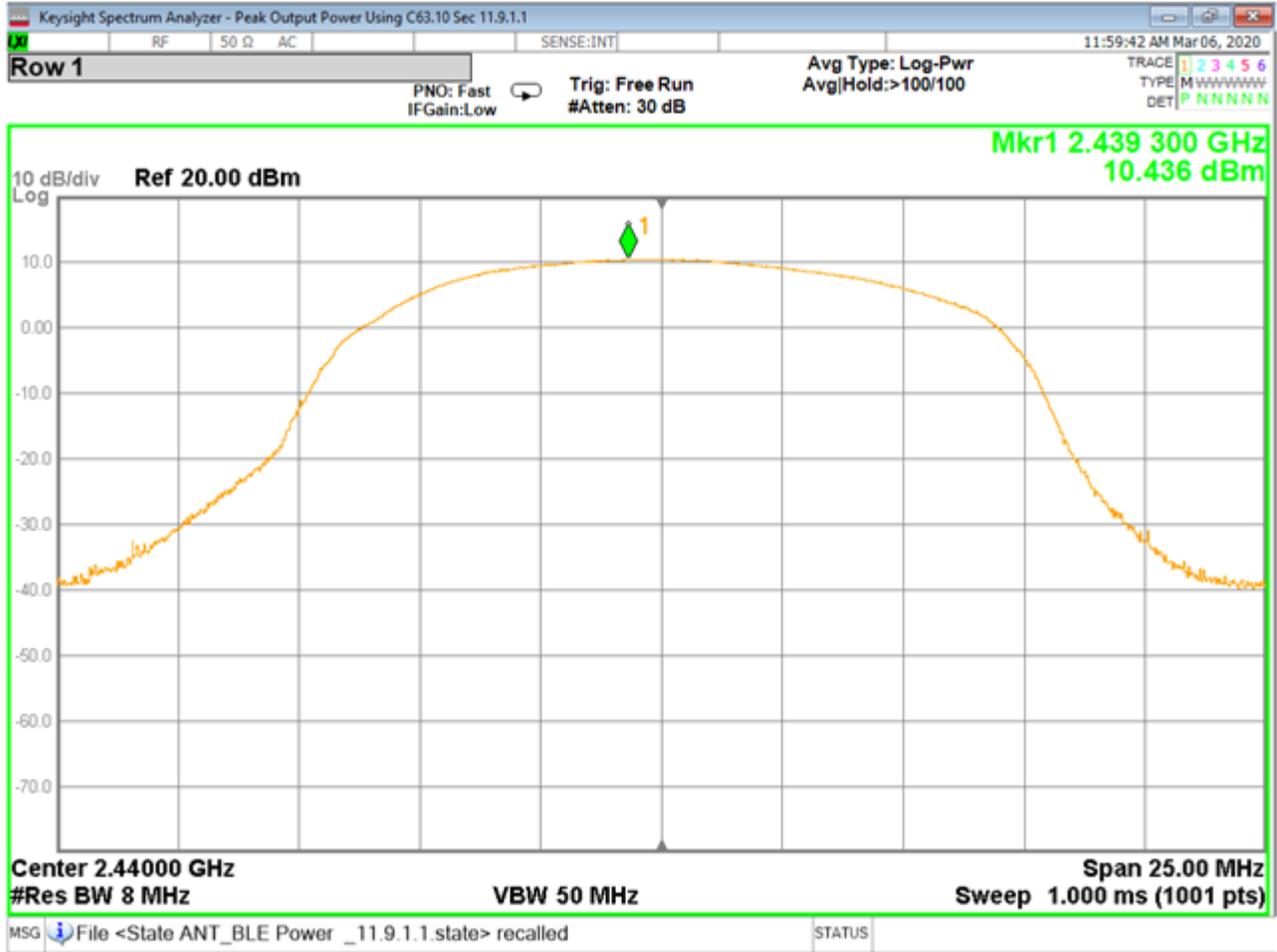
C03561 BW Mid Ch BT EDR 2MB



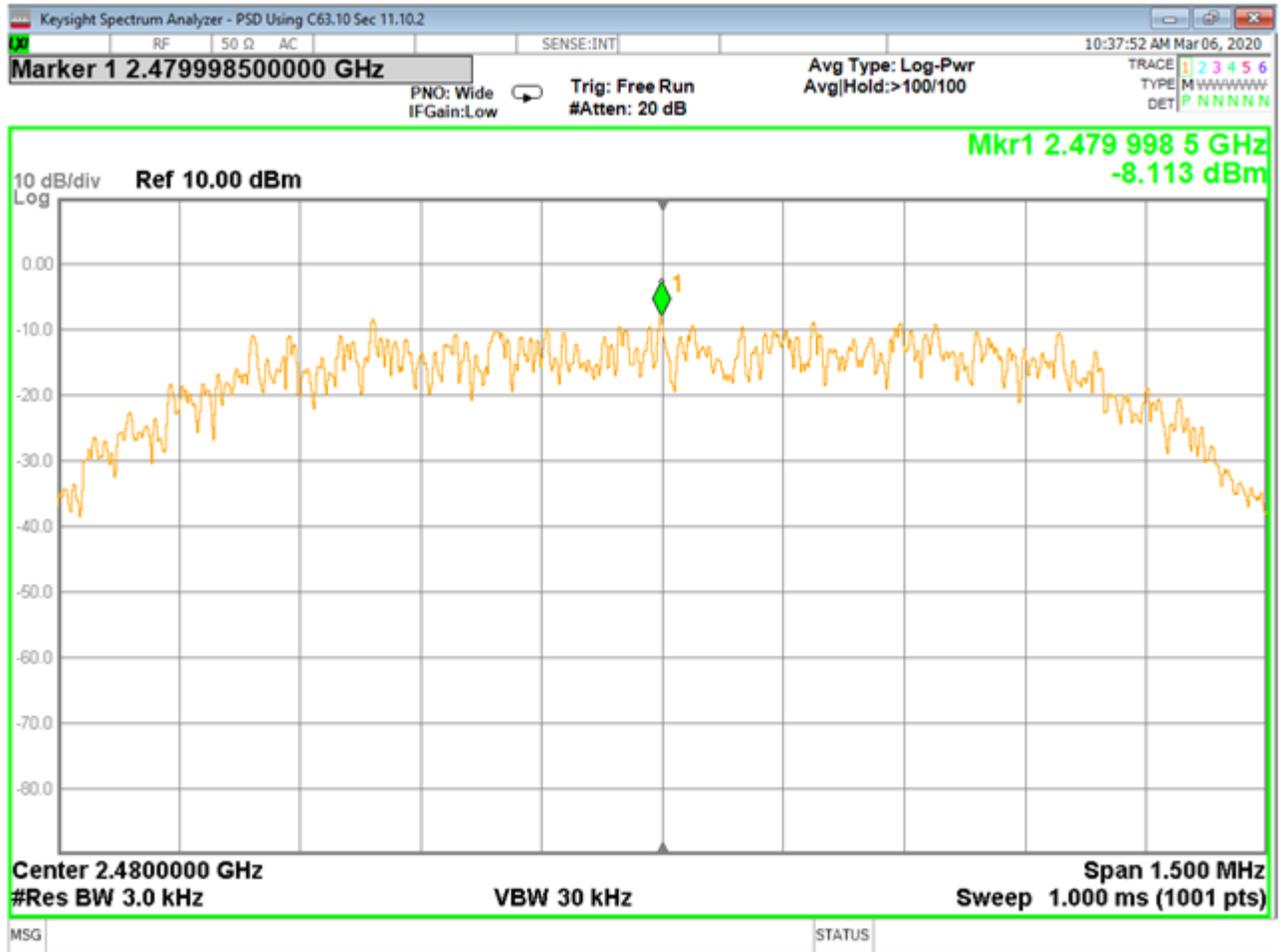
C03561 Peak Output Power High Ch BT EDR 2MB



C03561 Peak Output Power Low Ch BT EDR 2MB



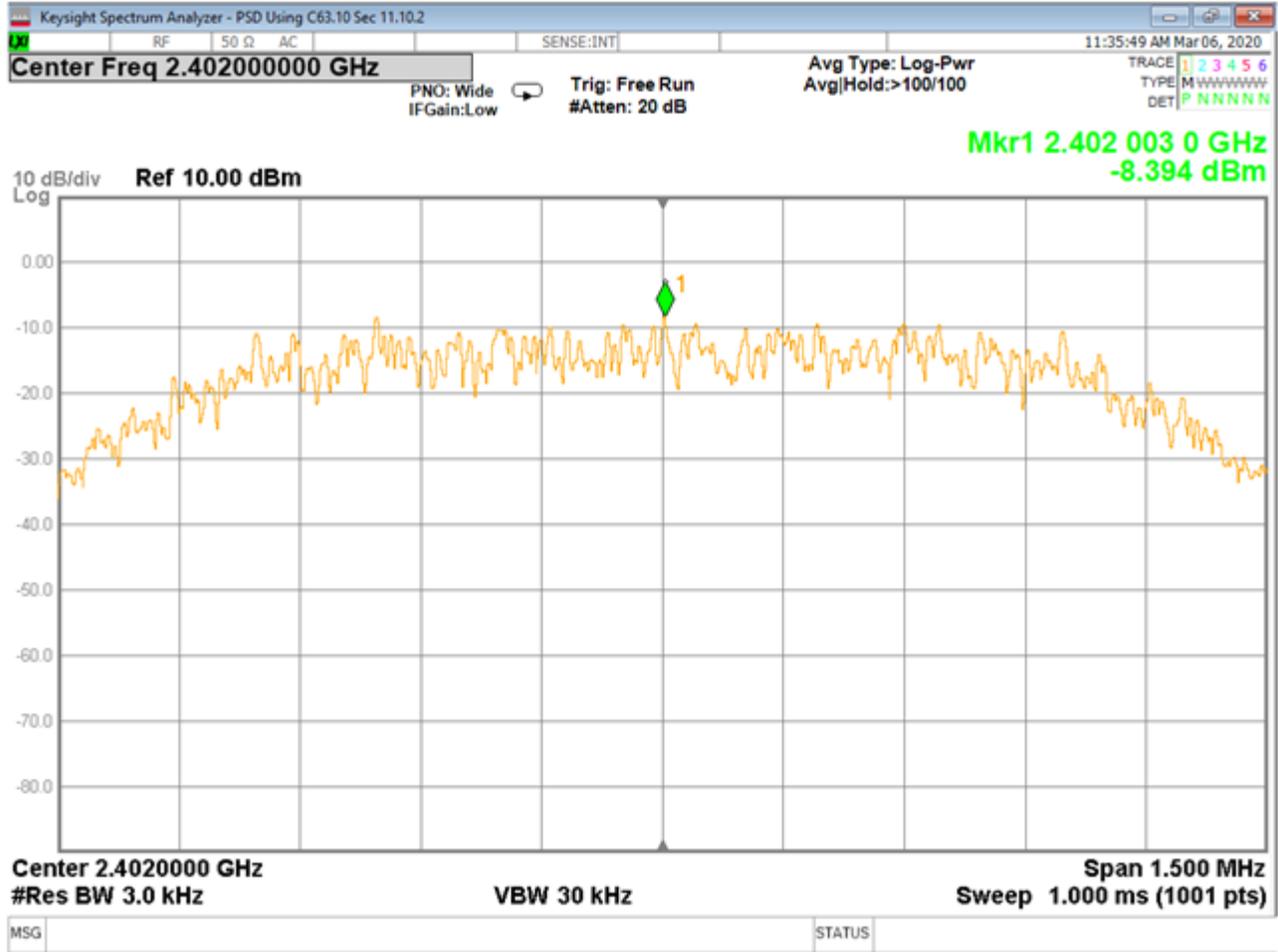
C03561 Peak Output Power Mid Ch BT EDR 2MB



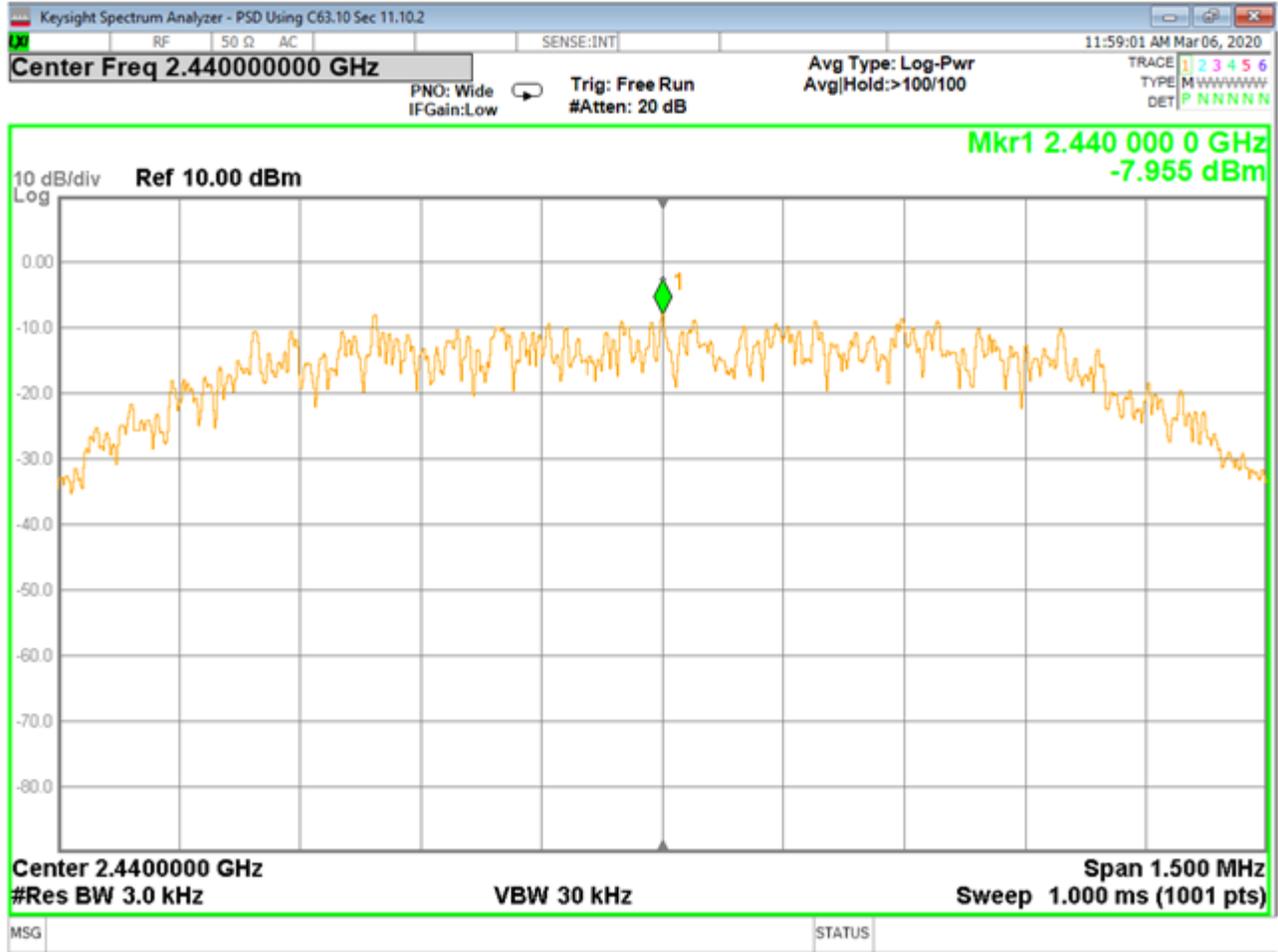
C03561 Peak PSD High Ch BT EDR 2MB



Report Number:	R20200110-20-E14	Rev	A
Prepared for:	Garmin International, Inc.		



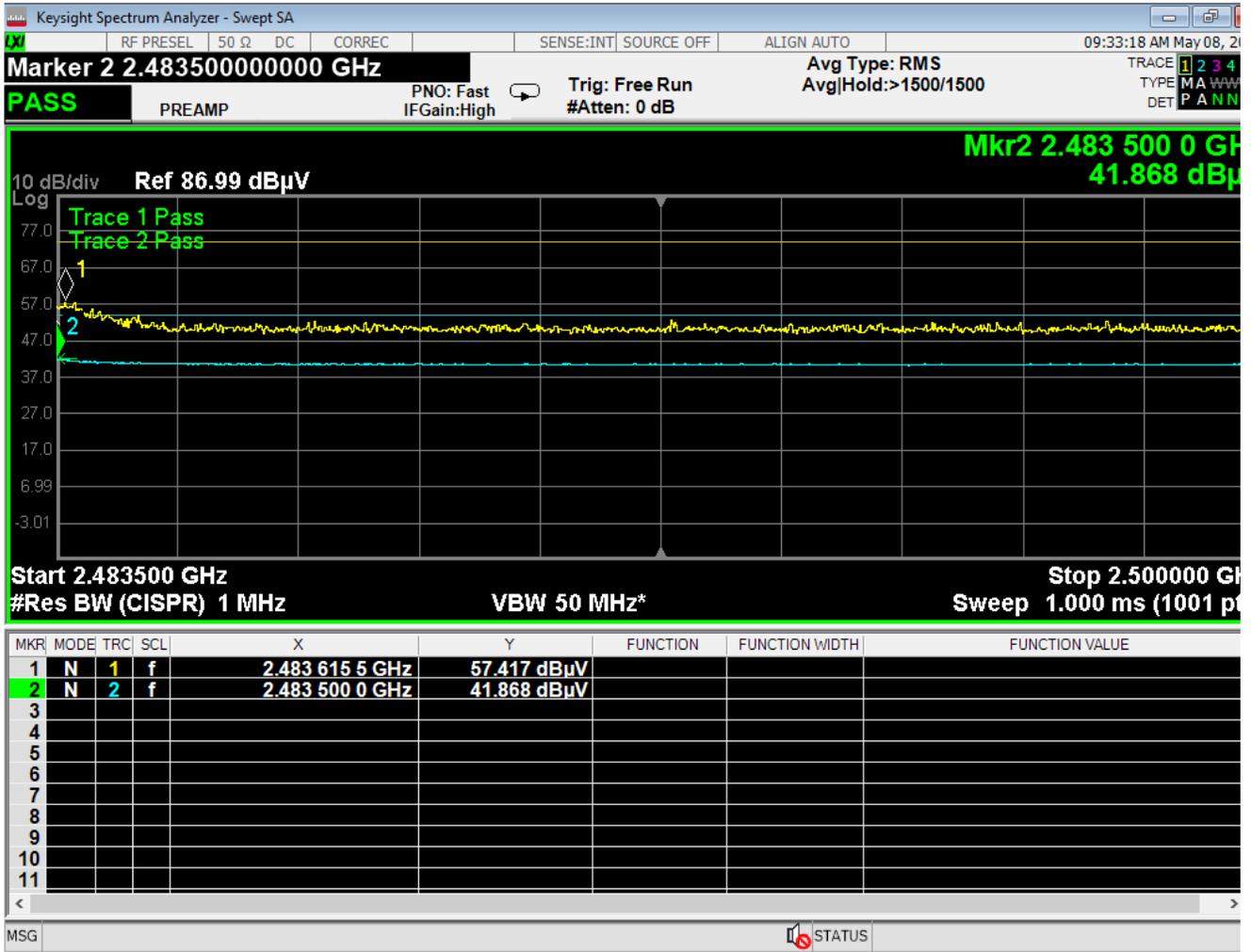
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C03561 Peak PSD Mid Ch BT EDR 2MB

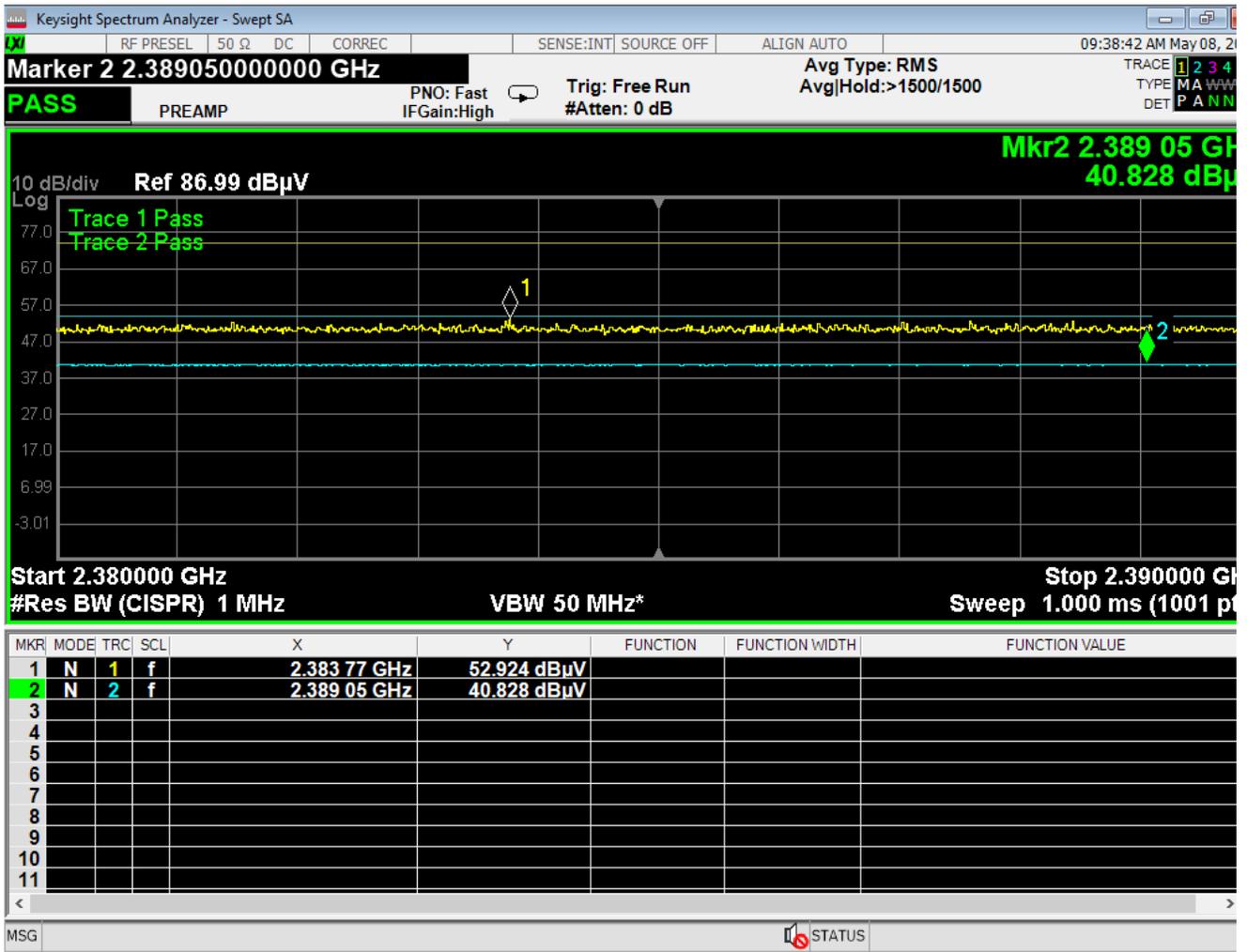


Report Number:	R20200110-20-E14	Rev	A
Prepared for:	Garmin International, Inc.		



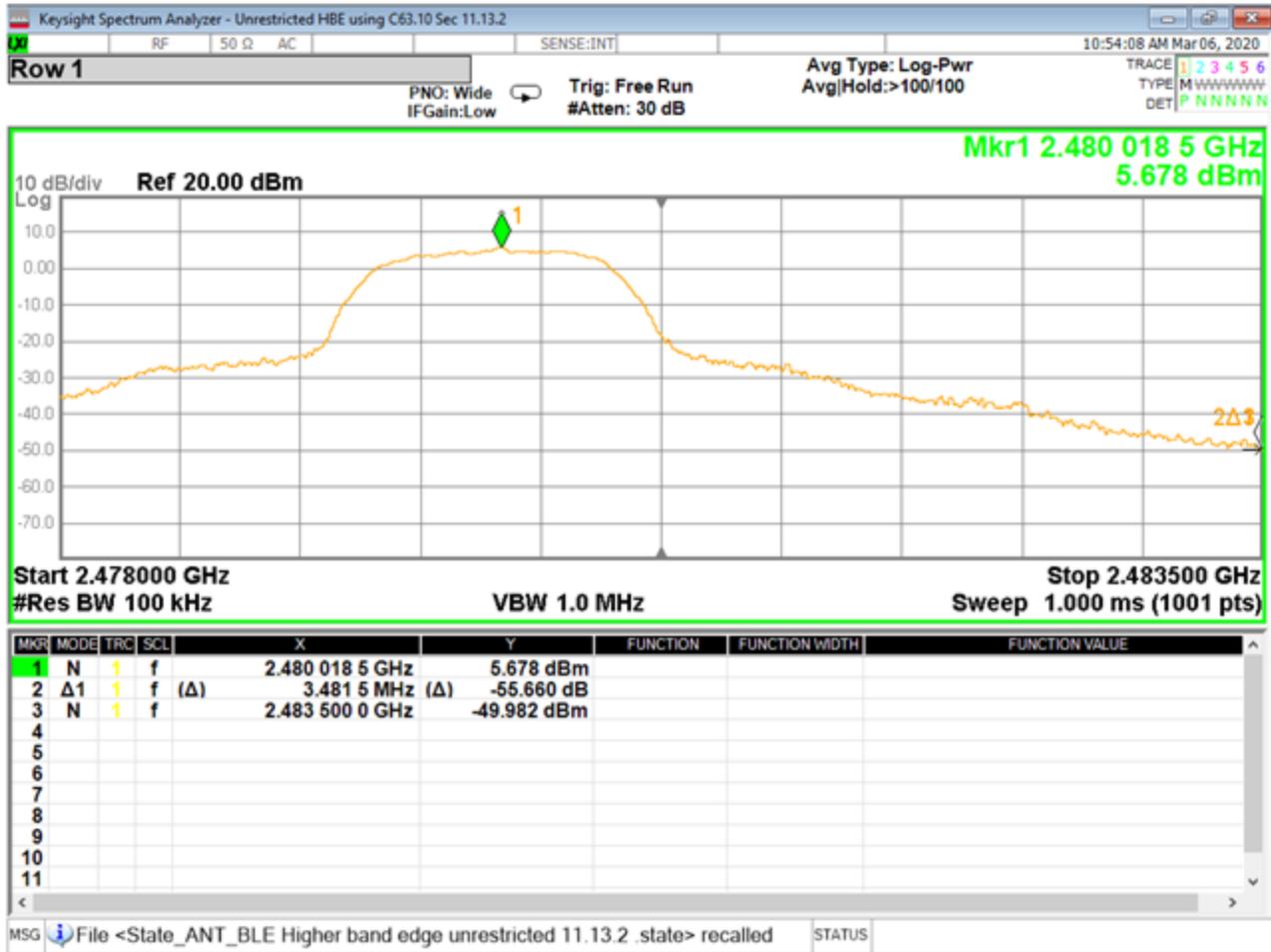
C03561 Peak Restricted Higher Band Edge BT EDR 2MB

*Limit per Part 15.209 is 73.98 dBμV/m for peak and 53.98 dBμV/m for average at 3m test distance. Peak and Average Trace values are shown with corresponding limits. Tabular data for worst case frequencies shown above can be found in section 4.5.

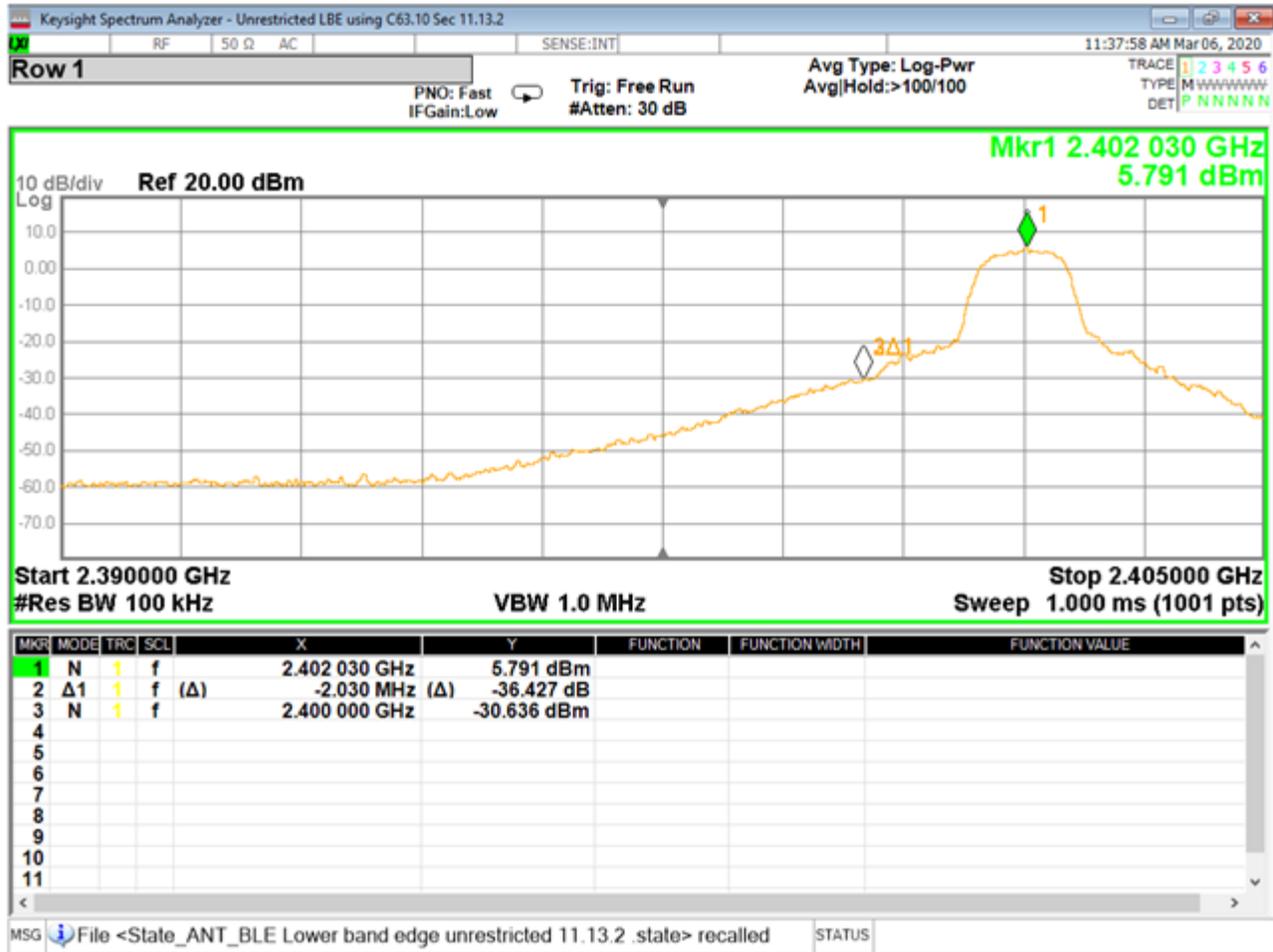


C03561 Peak Restricted Lower Band Edge BT EDR 2MB

*Limit per Part 15.209 is 73.98 dBμV/m for peak and 53.98 dBμV/m for average at 3m test distance. Peak and Average Trace values are shown with corresponding limits. Tabular data for worst case frequencies shown above can be found in section 4.5.



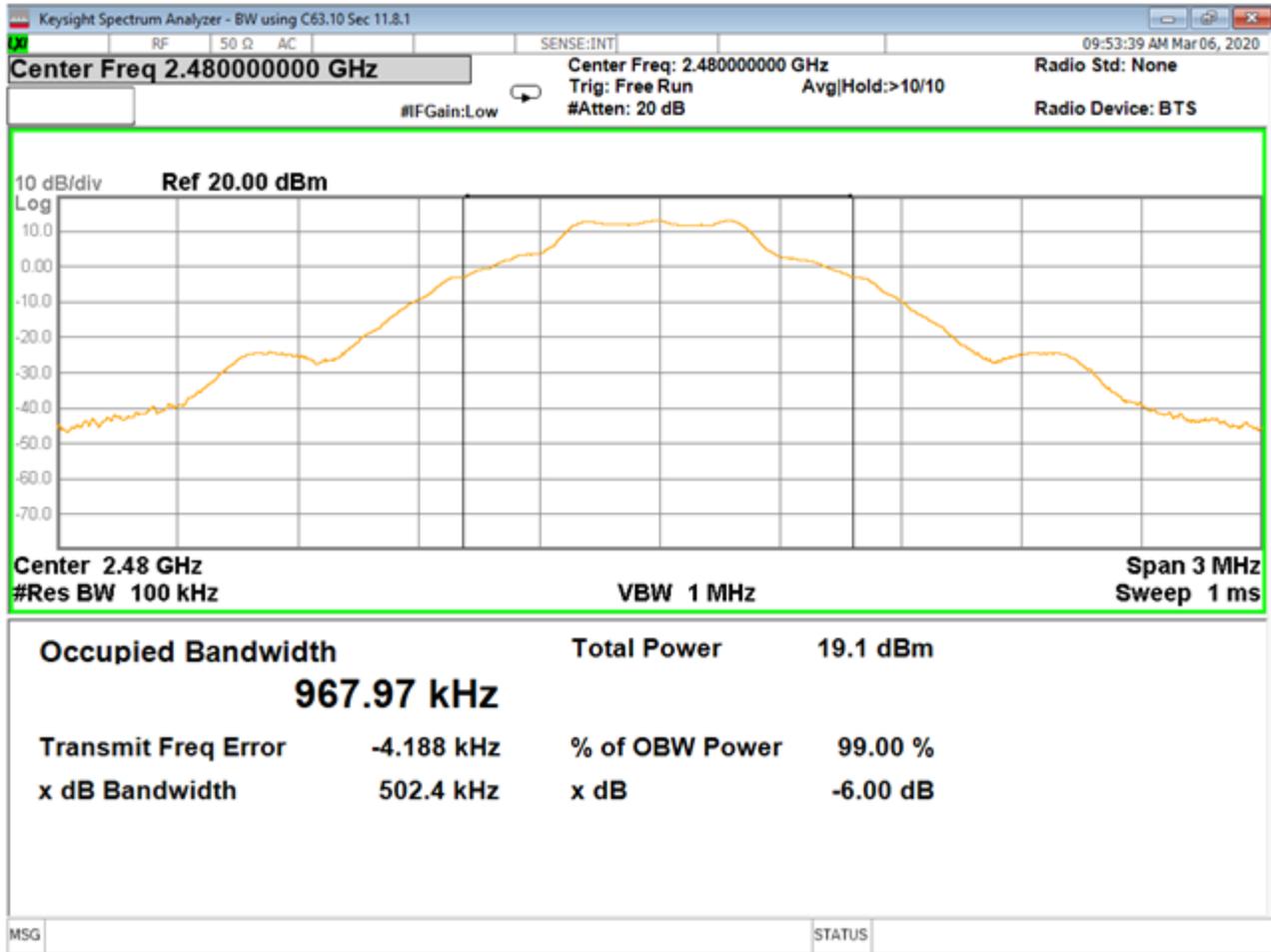
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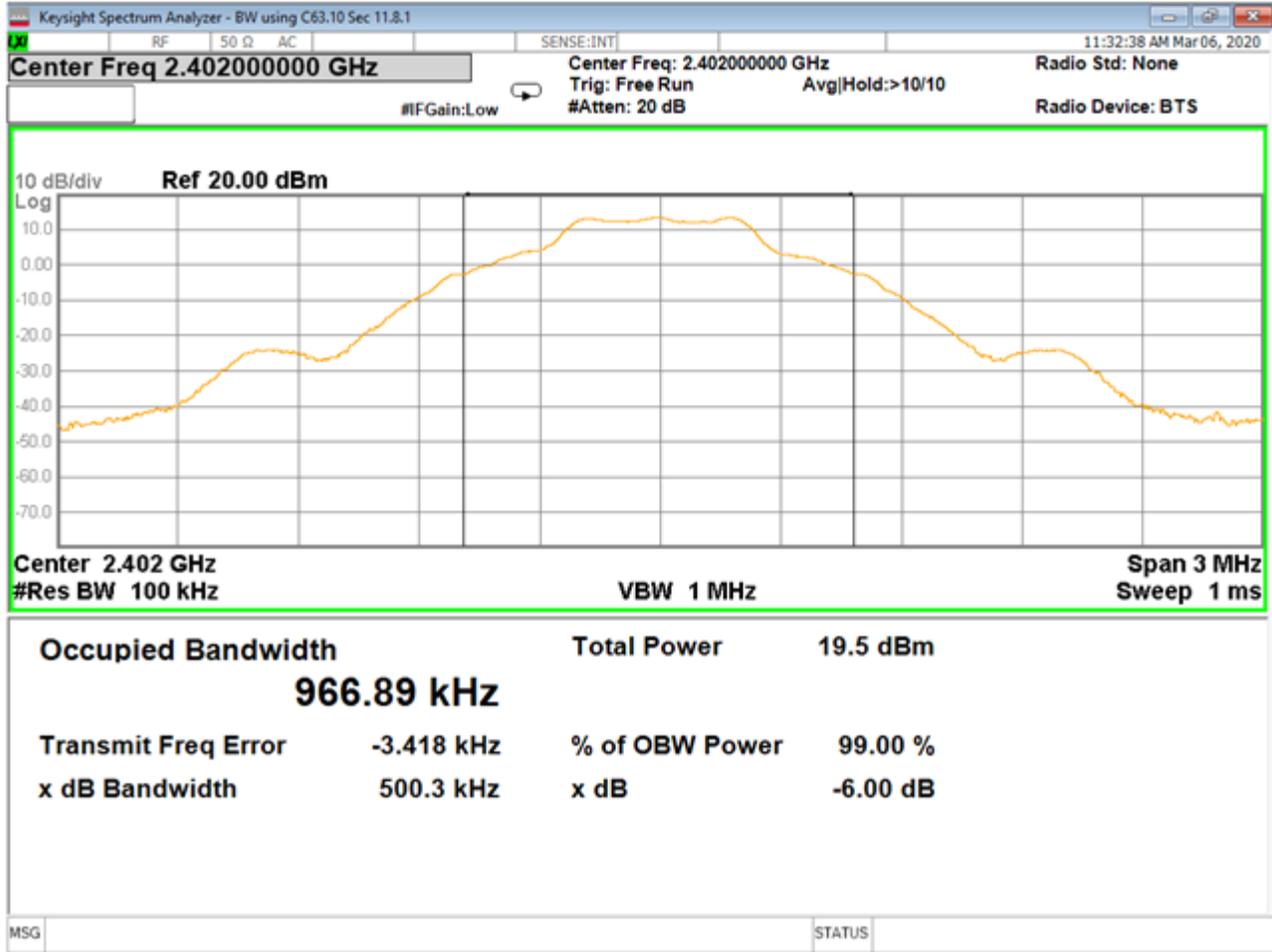
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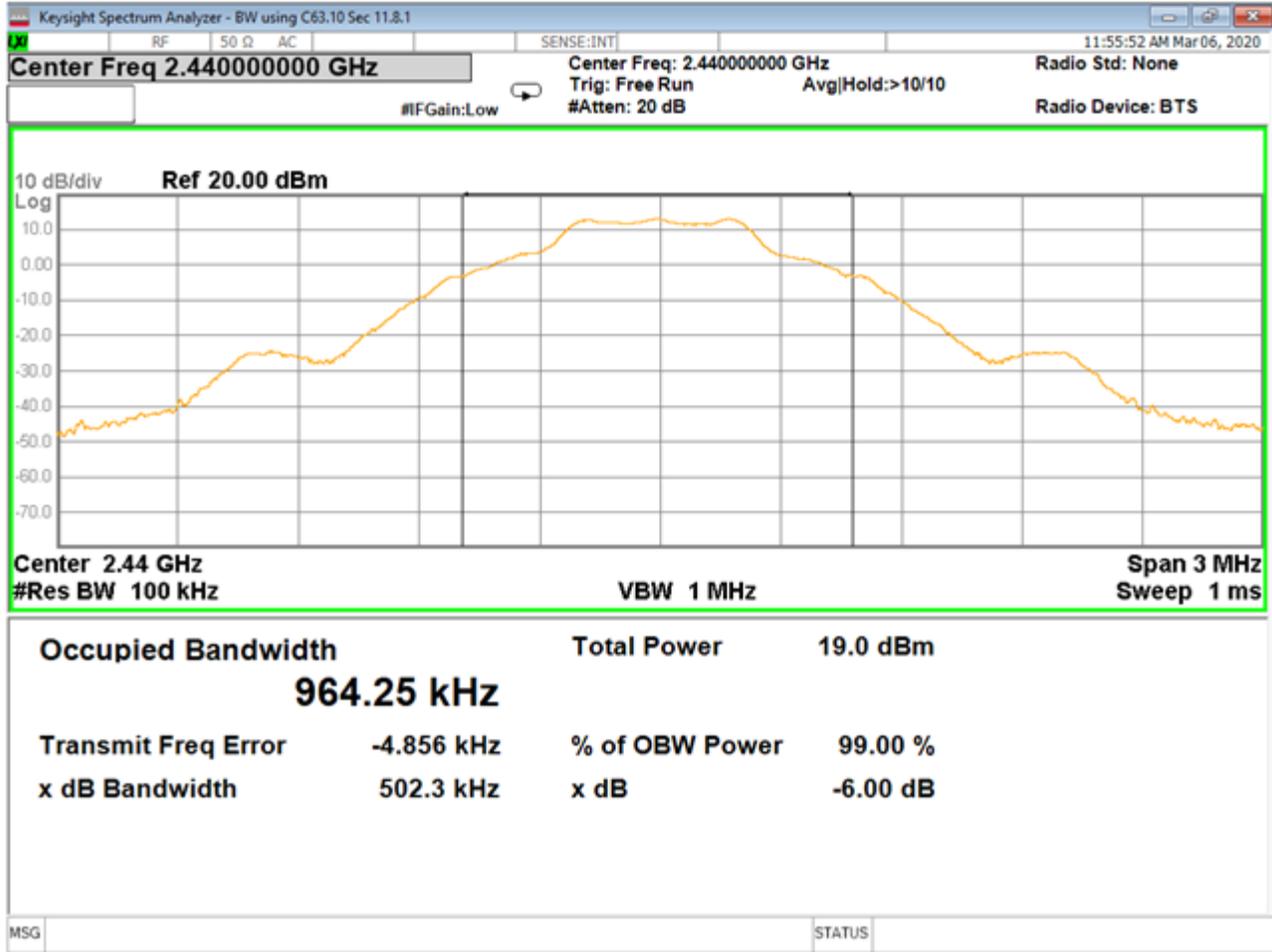
Report Number:	R20200110-20-E14	Rev	A
Prepared for:	Garmin International, Inc.		



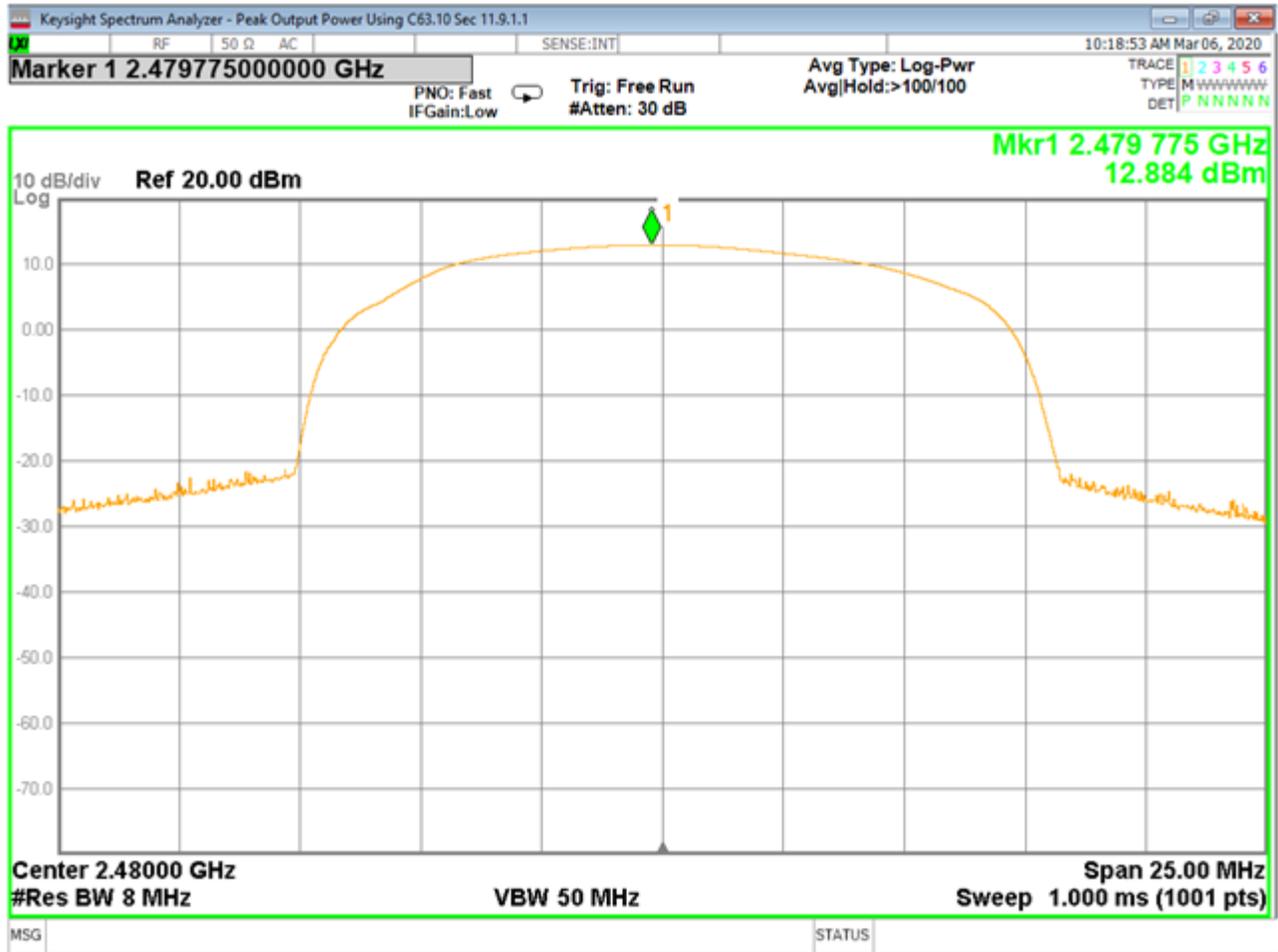
C03561 BW High Ch BT BR



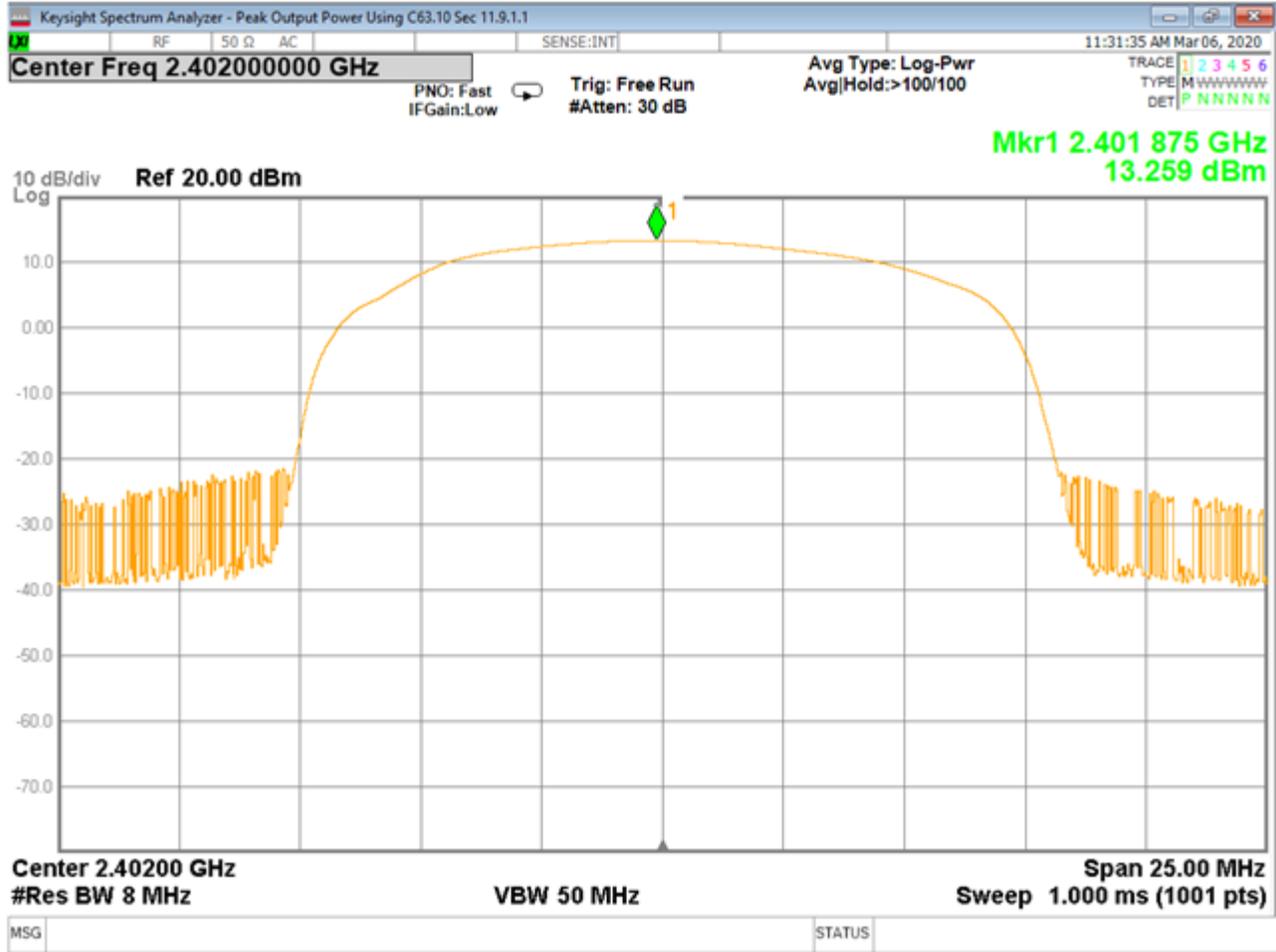
C03561 BW Low Ch BT BR



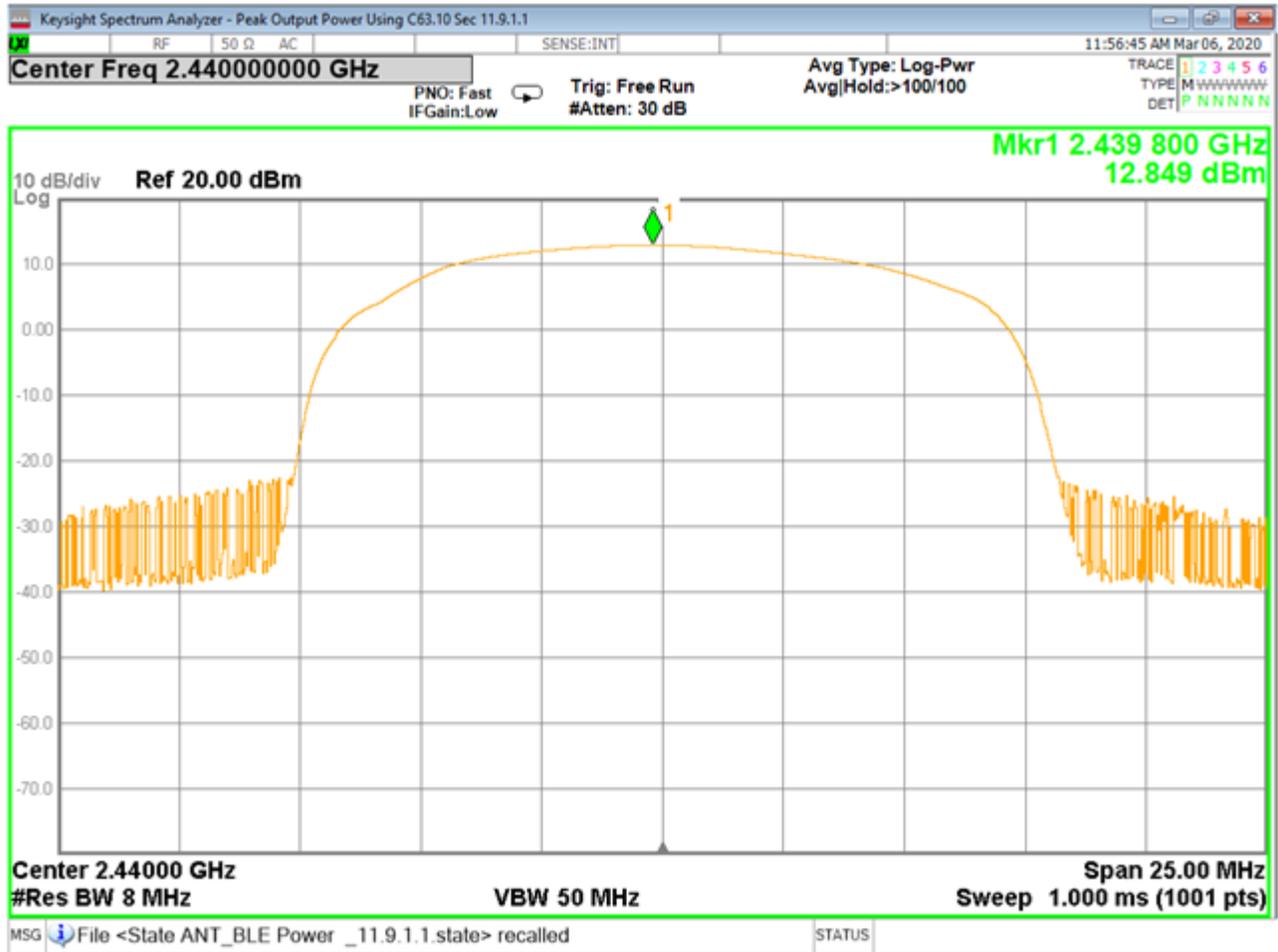
C03561 BW Mid Ch BT BR



C03561 Peak Output Power High Ch BT BR



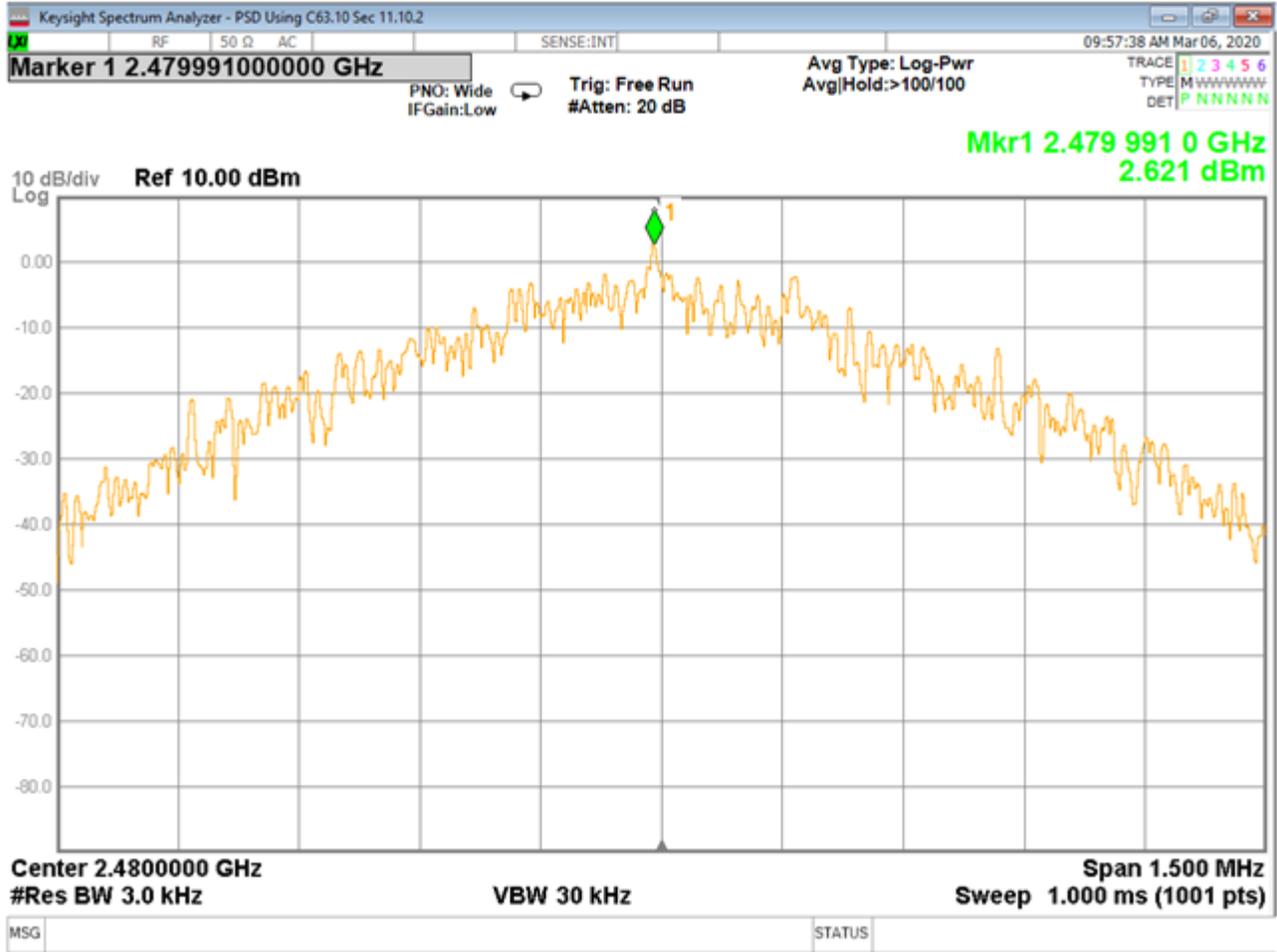
C03561 Peak Output Power low Ch BT BR



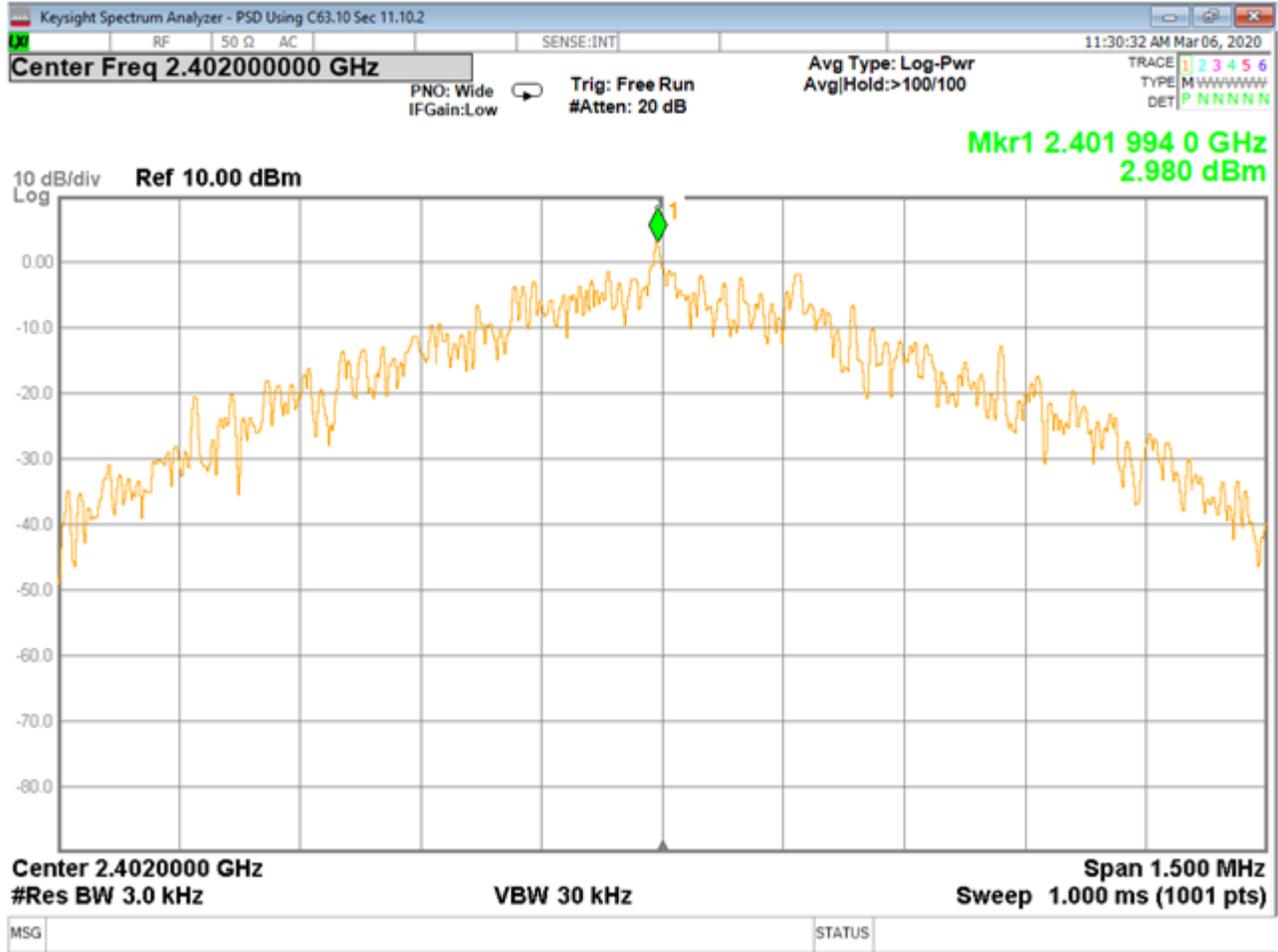
C03561 Peak Output Power Mid Ch BT BR



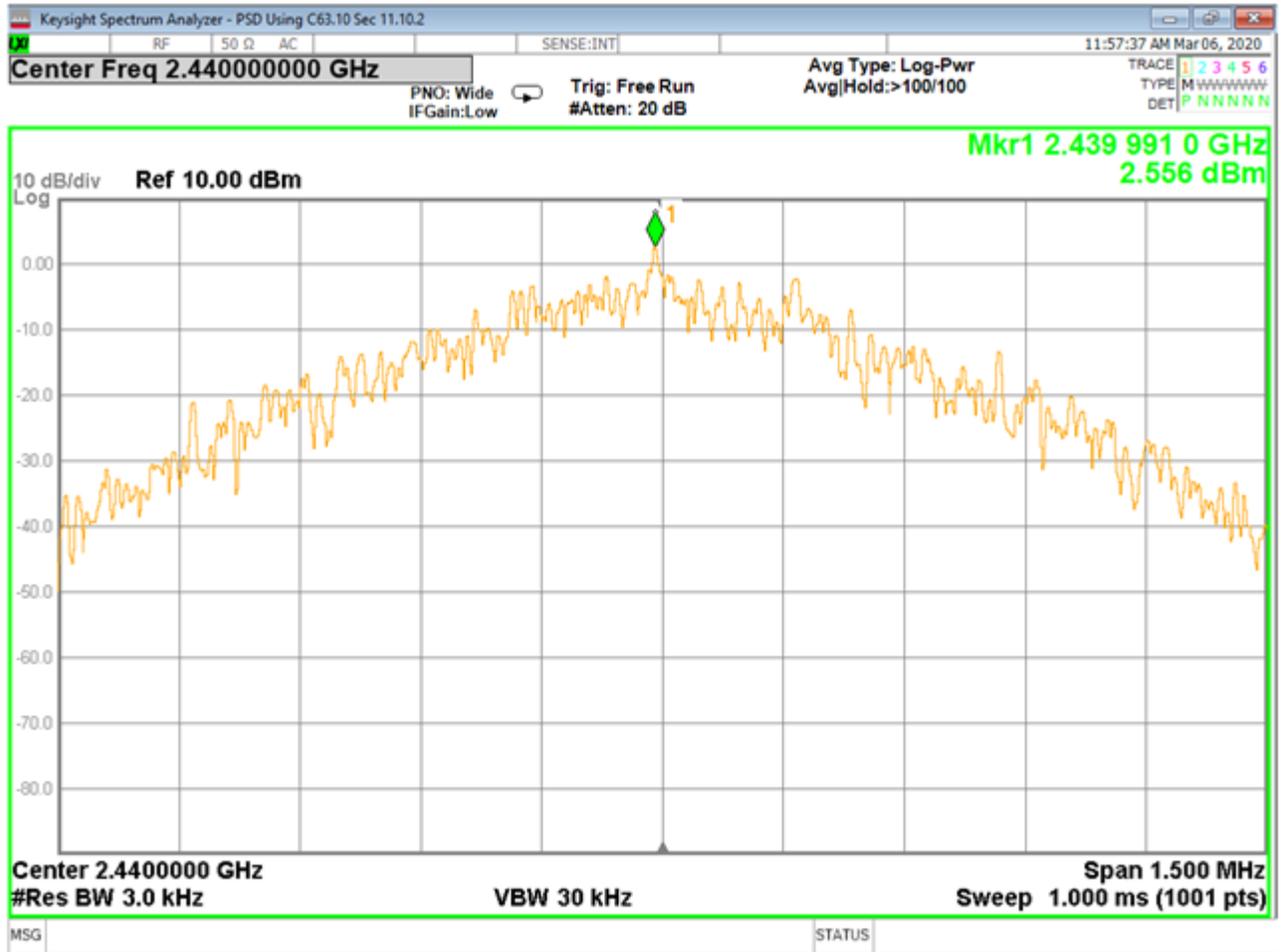
Report Number:	R20200110-20-E14	Rev	A
Prepared for:	Garmin International, Inc.		



C03561 Peak PSD High Ch BT BR



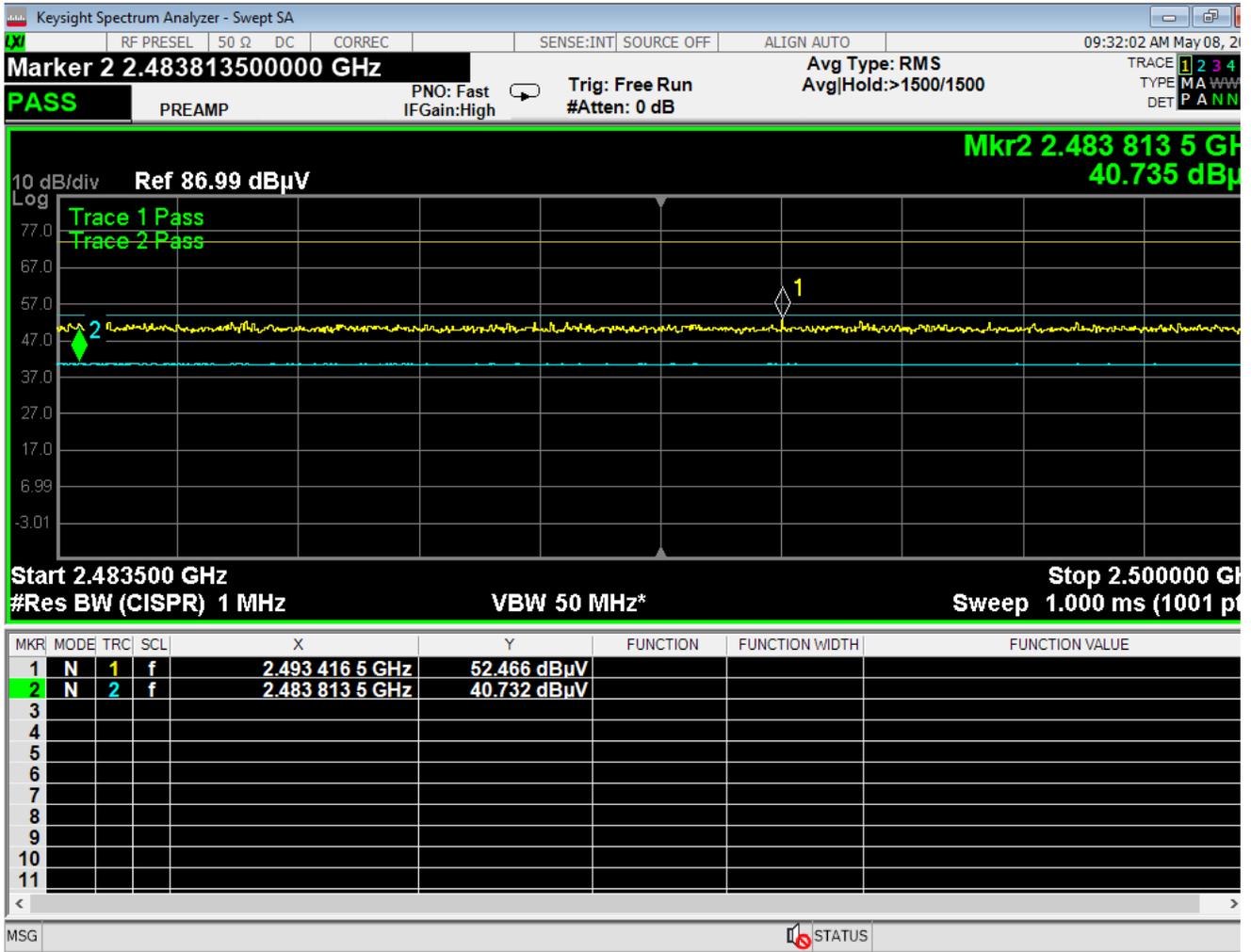
C03561 Peak PSD Low Ch BT BR



C03561 Peak PSD Mid Ch BT BR



Report Number:	R20200110-20-E14	Rev	A
Prepared for:	Garmin International, Inc.		

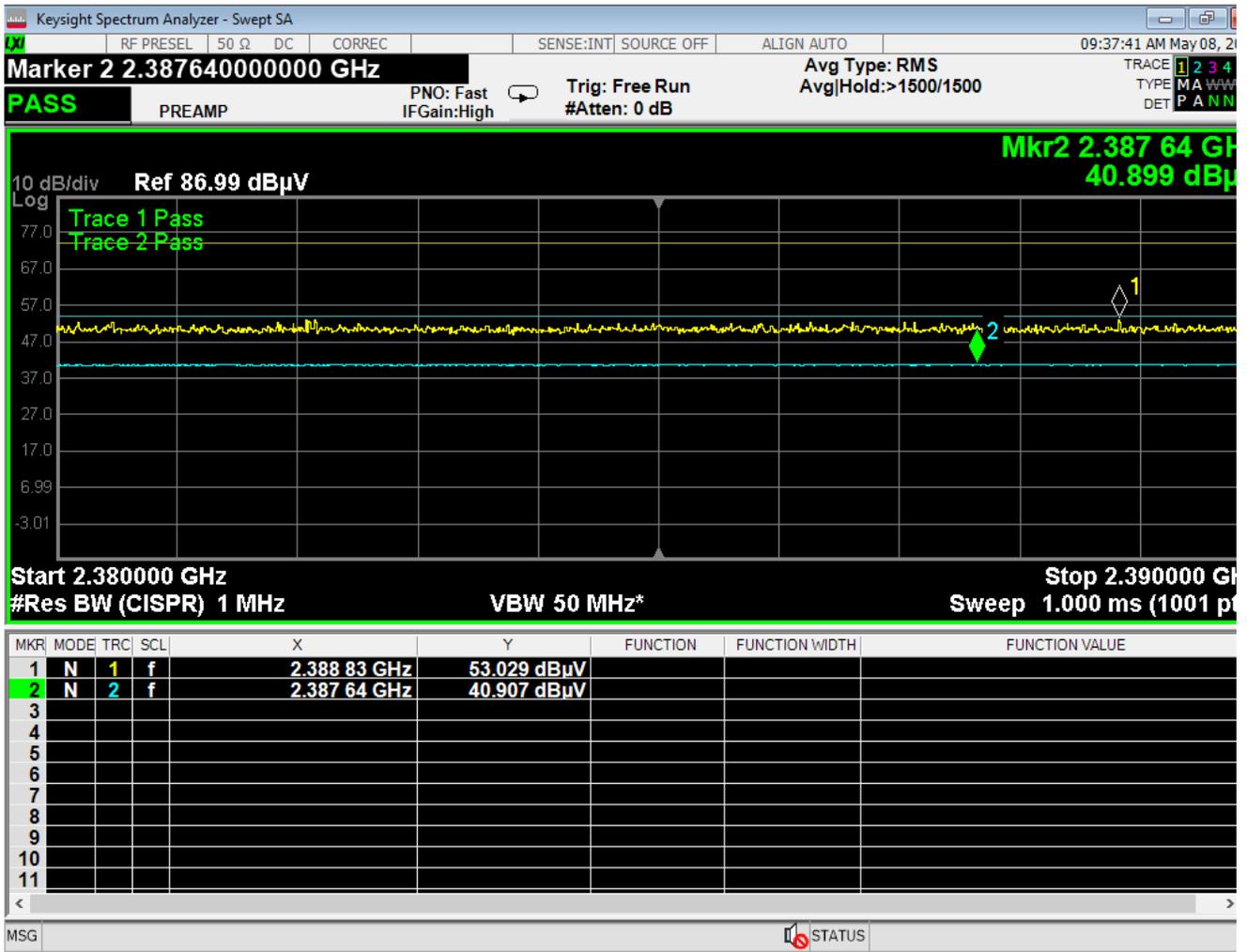


C03561 Peak Restricted Higher Band Edge BT BR

*Limit per Part 15.209 is 73.98 dBμV/m for peak and 53.98 dBμV/m for average at 3m test distance. Peak and Average Trace values are shown with corresponding limits. Tabular data for worst case frequencies shown above can be found in section 4.5.



Report Number:	R20200110-20-E14	Rev	A
Prepared for:	Garmin International, Inc.		

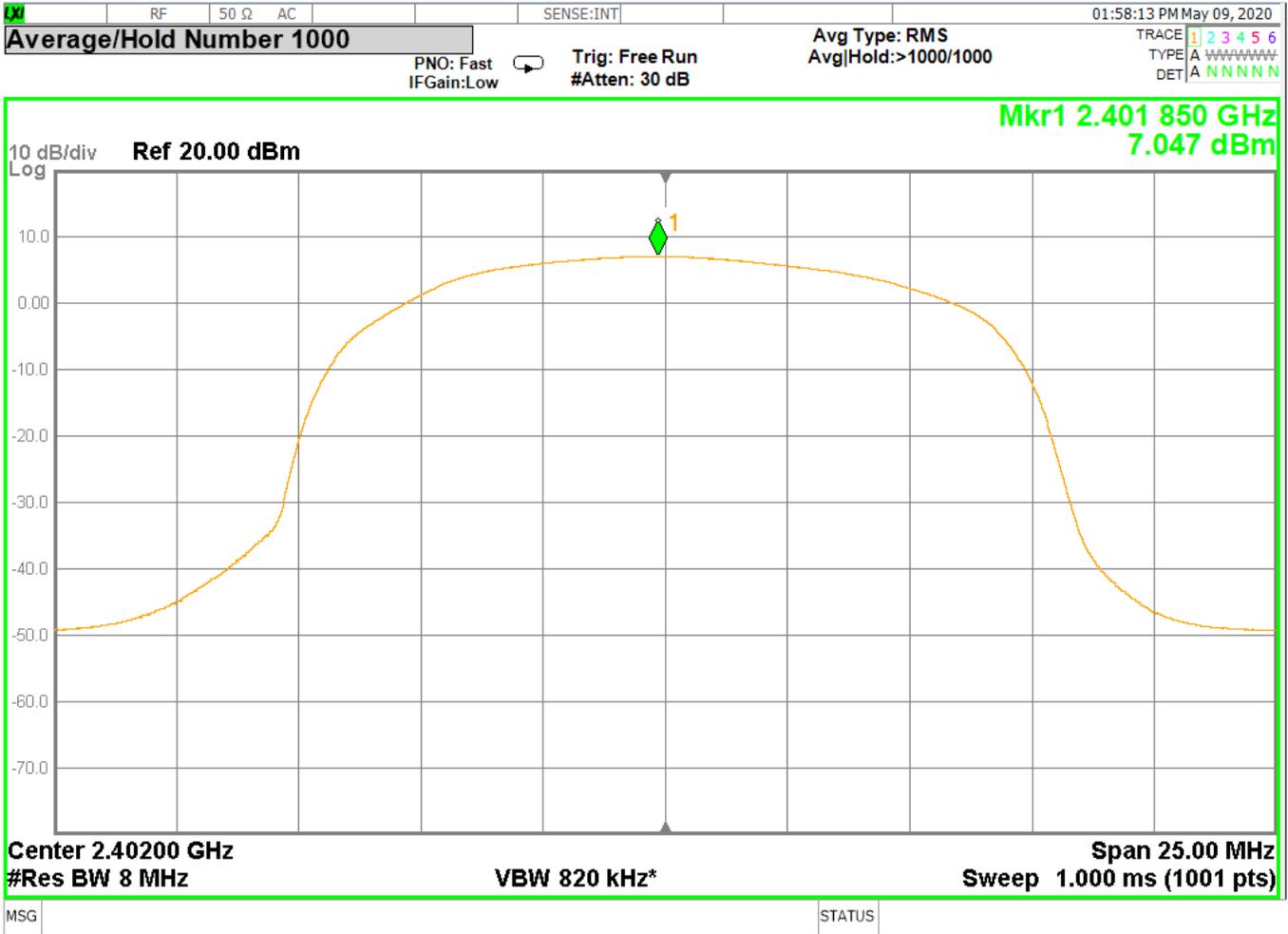


C03561 Peak Restricted Lower Band Edge BT BR

*Limit per Part 15.209 is 73.98 dBμV/m for peak and 53.98 dBμV/m for average at 3m test distance. Peak and Average Trace values are shown with corresponding limits. Tabular data for worst case frequencies shown above can be found in section 4.5.



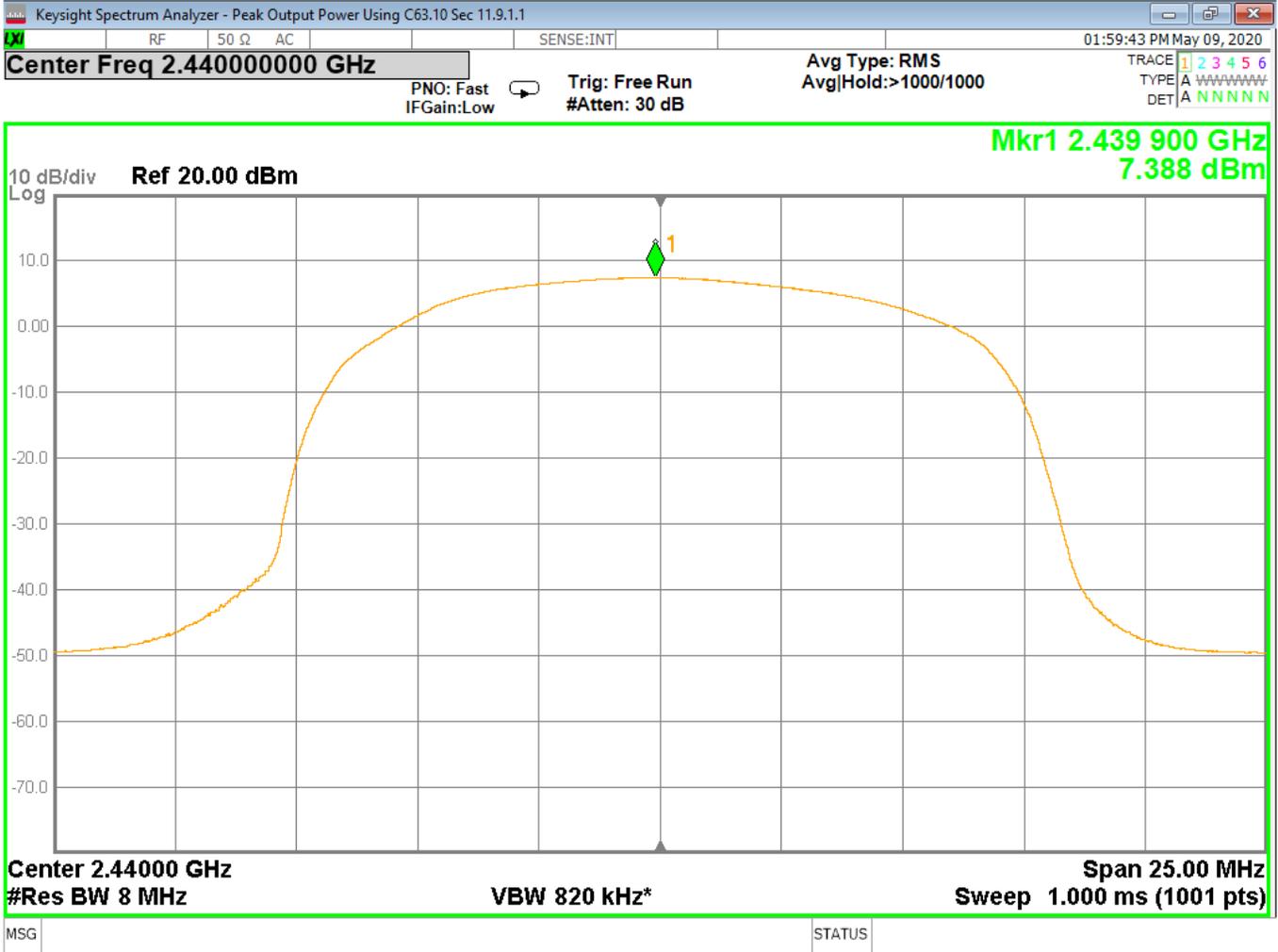
Report Number:	R20200110-20-E14	Rev	A
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C03561 Average Output Power BT EDR 2MB Low Channel



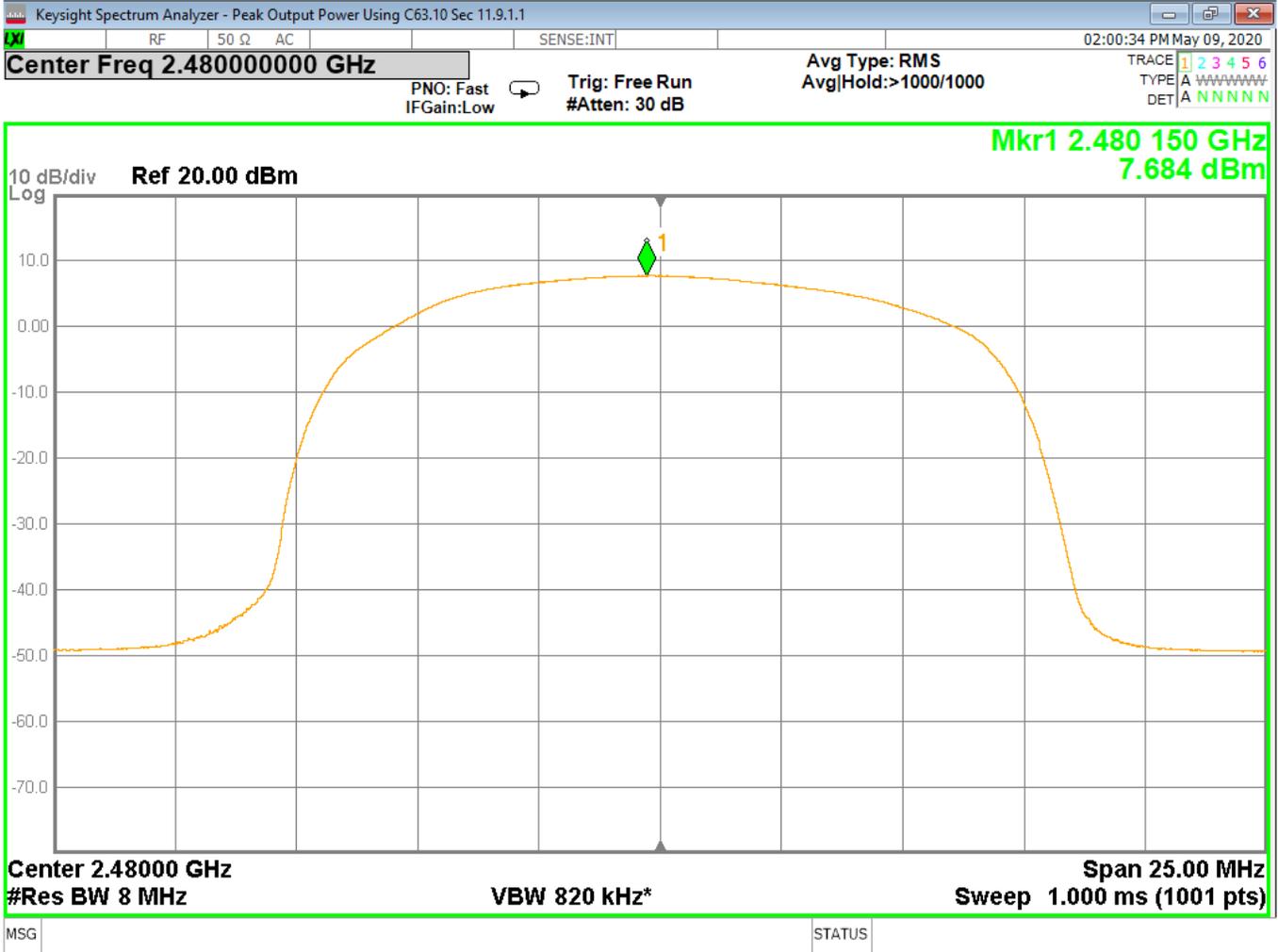
Report Number:	R20200110-20-E14	Rev	A
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C03561 Average Output Power BT EDR 2MB Mid Channel



Report Number:	R20200110-20-E14	Rev	A
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C03561 Average Output Power BT EDR 2MB High Channel



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REPORT END