EMISSIONS TEST REPORT

(FULL COMPLIANCE)

Report Number: 102894565BOX-002
Project Number: G102894565

Report Issue Date: 04/14/2017

Model(s) Tested: CMCT System
Model(s) Partially Tested: None
Model(s) Not Tested but declared equivalent by the client: None

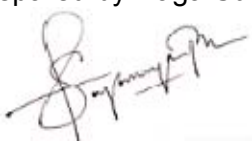
Standards: FCC 47CFR Part 15 Subpart C: 03/2017
FCC Part 15 Subpart B: 03/2017

Tested by:
Intertek Testing Services NA, Inc.
70 Codman Hill Road
Boxborough, MA 01719
USA

Client:
Zoll Medical Israel Ltd.
14 Atir Yeda Street
Kfar-Saba 4464313
Israel

Client:
Zoll Medical Corporation
121 Gamma Drive Pittsburgh
PA 15238
USA

Report prepared by Naga Suryadevara



Naga Suryadevara/EMC Engineer

Report reviewed by Kouma Sinn

Kouma Sinn/Staff Engineer, EMC

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1 Introduction and Conclusion

The tests indicated in section 2.0 were performed on the product constructed as described in section 4.0. The remaining test sections are the verbatim text from the actual data sheets used during the investigation. These test sections include the test name, the specified test Method, a list of the actual Test Equipment Used, documentation Photos, Results and raw Data. No additions, deviations, or exclusions have been made from the standard(s) unless specifically noted.

Based on the results of our investigation, we have concluded the product tested **complies** with the requirements of the standard(s) indicated. The results obtained in this test report pertain only to the item(s) tested. Intertek does not make any claims of compliance for samples or variants which were not tested.

2 Test Summary

Section	Test full name	Result
3	Client Information	--
4	Description of Equipment Under Test and Variant Models	--
5	System Setup and Method	--
6	Output Power and Human RF Exposure (CFR47 FCC Part 15 Subpart C (15.247): 03/2017)	Pass
7	Occupied (99%) and 20 dB Bandwidth (CFR47 FCC Part 15 Subpart C (15.247): 03/2017)	Pass
8	Channel Separation (CFR47 FCC Part 15 Subpart C (15.247): 03/2017)	Pass
9	Number of Hopping Channels (CFR47 FCC Part 15 Subpart C (15.247): 03/2017)	Pass
10	Average Channel Occupancy Time (CFR47 FCC Part 15 Subpart C (15.247): 03/2017)	Pass
11	Out of Band Conducted Emissions (CFR47 FCC Part 15 Subpart C (15.247): 03/2017)	Pass
12	Radiated Spurious Emissions (CFR47 FCC Part 15 Subpart C (15.247): 03/2017)	Pass
13	Radiated Emissions (Digital parts and Receiver) (FCC Part 15 Subpart B: 03/2017)	Pass
14	AC Mains Conducted Emissions (FCC Part 15 Subpart B: 03/2017)	Pass
15	Revision History	--

3 Client Information

This EUT was tested at the request of:

Client: Zoll Medical Israel Ltd.
14 Atir Yeda Street
Kfar-Saba 4464313
Israel

Contact: Moshik Mosesko
Telephone: +972 9 9603900
Fax: None
Email: moshik@zoll.com

4 Description of Equipment Under Test and Variant Models

Manufacturer: Zoll Medical Israel Ltd.
14 Atir Yeda Street
Kfar-Saba 4464313
Israel.

Equipment Under Test			
Description	Manufacturer	Model Number	Serial Number
CMCT sensor	ZOLL	UA5210	D5-61710-000C
CMCT sensor with cable for Bluetooth communication	ZOLL	UA5210	D5-61710-0007
CMCT open sensor on the Evaluation board with cable antenna	ZOLL	UA5210	N/A
Charger	ZOLL	UA5250	C5-61710-0011
Gateway based on cellular phone XT1505	ZOLL	UA5260	G5-61710-0011
Gateway based on cellular phone XT1527	ZOLL	UA5260	G5-61710-0012

Receive Date:	03/20/2017
Received Condition:	Good
Type:	Production

Description of Equipment Under Test (provided by client)
The CMCT System is intended to continuously record, store, and transmit ECG, Heart Rate, Activity, and Posture to medical professionals. The CMCT System also periodically records, stores, and transmits Respiration Rate and Thoracic Impedance to medical professionals. The CMCT System is intended for up to 30 days of monitoring. During the prescription period, the Sensor will automatically acquire clinical measurements. Data acquired by the body-worn Sensor will be transmitted wirelessly to the data transmission device, which will then be forwarded to the remote Server for data analysis, and subsequently to the Monitoring Center for review and report generation. Note: Manufacturer has declared that the CMCT System is a part of the uCor3.0 family.

Equipment Under Test Power Configuration			
Rated Voltage	Rated Current	Rated Frequency	Number of Phases
100-240VAC (I/P to Power Supply)	0.8 Amps	50/60 Hz	Single
Internal Battery Li-Pol 3.7V	1050 mA	N/A	N/A

Operating modes of the EUT:

No.	Descriptions of EUT Exercising
1	Transmit mode – operating on internal battery
2	Receive mode – operating on internal battery
3	Transmit mode – Charging
4	Receive mode – Charging

Software used by the EUT:

Sensor:

No.	Descriptions of EUT Exercising
1	Microcontroller version : 1.1.0
2	FPGA version: 3.0
3	BT version: 6
4	Fuel Gauge Version : 09062016

Gateway (cellular phone):

No.	Descriptions of EUT Exercising
1	Access point: 1.3

Server:

No.	Descriptions of EUT Exercising
1	ServerApp: 2.0.0.5

Radio/Receiver Characteristics	
Frequency Band(s)	2402 – 2480 MHz
Modulation Type(s)	π/4 DQPSK(low baud rate) and 8DPSK(high baud rate)
Data rates	Data Rate type(low baud rate) – Basic (DH3) Data Rate type(high baud rate) – EDR (3-DH5)
Maximum Output Power	3.5237087104 mW
Test Channels	Channel low - 2402 MHz Channel middle - 2441 MHz Channel high - 2480 MHz
Occupied Bandwidth	OBW – 1.21 MHz 20dB BW – 1.3 MHz
Frequency Hopper: Number of Hopping Channels	79
Frequency Hopper: Channel Dwell Time	0.288 seconds
MIMO Information (# of Transmit and Receive antenna ports)	N/A
Equipment Type	Bluetooth single chip radio based on CSRB5342
ETSI LBT/Adaptivity	N/A

ETSI Adaptivity Type	N/A
ETSI Temperature Category (I, II, III)	N/A
ETSI Receiver Category (1, 2, 3)	N/A
Antenna Type and Gain	PCB Inverted F antenna, 5dBi

Variant Models:
The following variant models were not tested as part of this evaluation, but have been identified by the manufacturer as being electrically identical models, depopulated models, or with reasonable similarity to the model(s) tested. Intertek does not make any claims of compliance for samples or variants which were not tested.

None

5 System Setup and Method

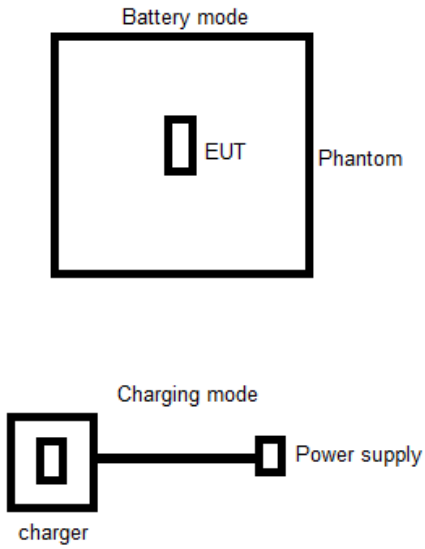
Cables					
ID	Description	Length (m)	Shielding	Ferrites	Termination
1	Power Cable	2	None	None	AC Mains

Support Equipment			
Description	Manufacturer	Model Number	Serial Number
Laptop	Dell	Latitude E7450	D48ZG72
Phantom+Patch	Zoll	Patch PT0203-01 Phantom JIG0021	None

5.1 Method:

Configuration as required by FCC Part 15 Subpart C: 03/2017, FCC Part 15 Subpart B: 03/2017, ANSI C 63.10 and ANSI C 63.4.

5.2 EUT Block Diagram:



6 Output Power and Human RF Exposure

6.1 Method

Tests are performed in accordance with FCC Part 15 Subpart C (15.247).

TEST SITE: EMC Lab

The EMC Lab has one Semi-anechoic Chamber and one Shielded Chamber. AC Mains Power is available at 120, 230, and 277 Single Phase; 208, 400, and 480 3-Phase. Large reference ground-planes are installed in the general lab area to facilitate EMC work not requiring a shielded environment.

6.2 Test Equipment Used:

Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due
DAV004'	Weather Station	Davis Instruments	7400	PE80529A61A	05/02/2016	05/02/2017
CBLSHF203	Cable, SMA - SMA, 9kHz-40GHz, Cable Kit 4	Sucoflex (Huber Suhn	104PE	CBLSHF203	09/08/2016	09/08/2017
ROS005'	ETSI Test System	Rhode & Schwartz	TS8997	N/A	09/15/2016	09/15/2017

Software Utilized:

Name	Manufacturer	Version
None		

6.3 Results:

The sample tested was found to Comply. For systems operating in the 2400-2483.5 MHz band employing at least 75 hopping channels, the maximum peak output power is 1 watt (30 dBm), for all other systems 0.125 W (21 dBm).

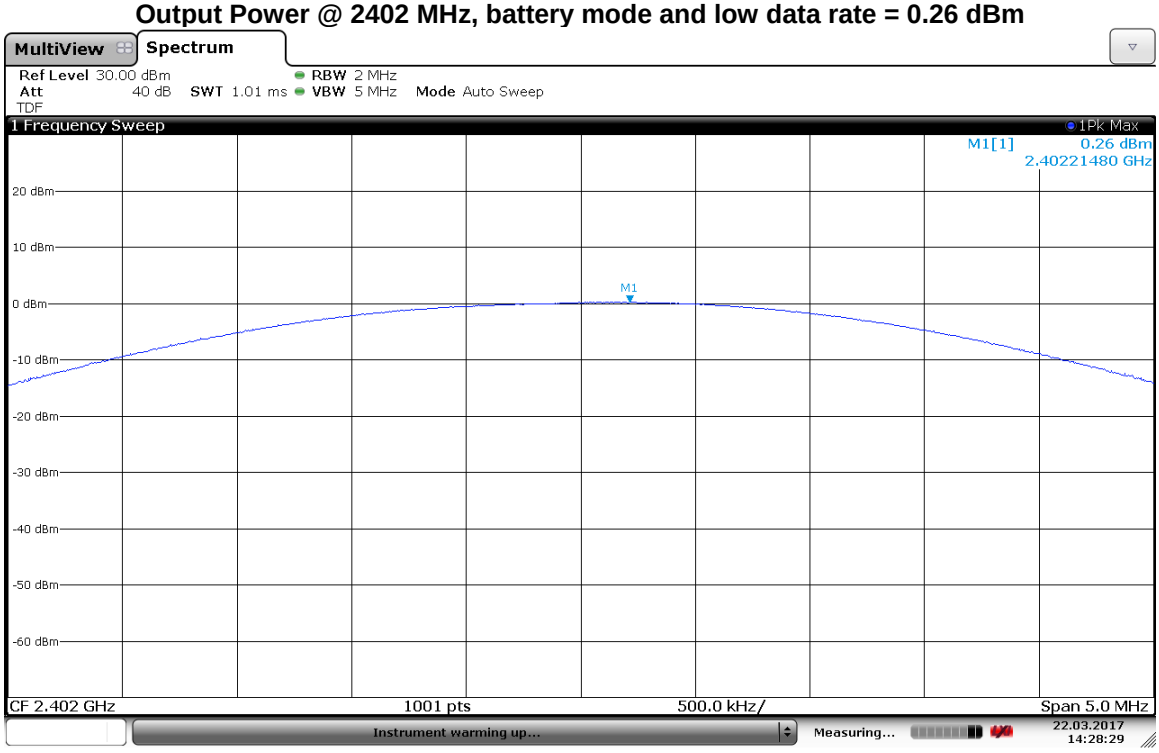
Device has 79 hopping channels

Frequency	Mode of operation	Data Rate	Output Power in dBm	Output Power in mW	Limit
2402	Charging	Low	0.49	1.1194378835	1 W
2402		High	-2.67	0.54075432295	1 W
2402	Battery	Low	0.26	1.0616955572	1 W
2402		High	-2.65	0.54325033149	1 W
2441	Charging	Low	4.53	2.8379190284	1 W
2441		High	2.07	1.6106456352	1 W
2441	Battery	Low	4.59	2.8773984147	1 W
2441		High	2.19	1.6557699635	1 W
2480	Charging	Low	5.47	3.5237087104	1 W
2480		High	2.95	1.9724227361	1 W
2480	Battery	Low	5.40	3.4673685045	1 W
2480		High	2.95	1.9724227361	1 W

Note: Devices antenna gain is less than 6 dBi.

6.4 Plots/Data:

Output Power @ 2402 MHz, battery mode and low data rate = 0.26 dBm



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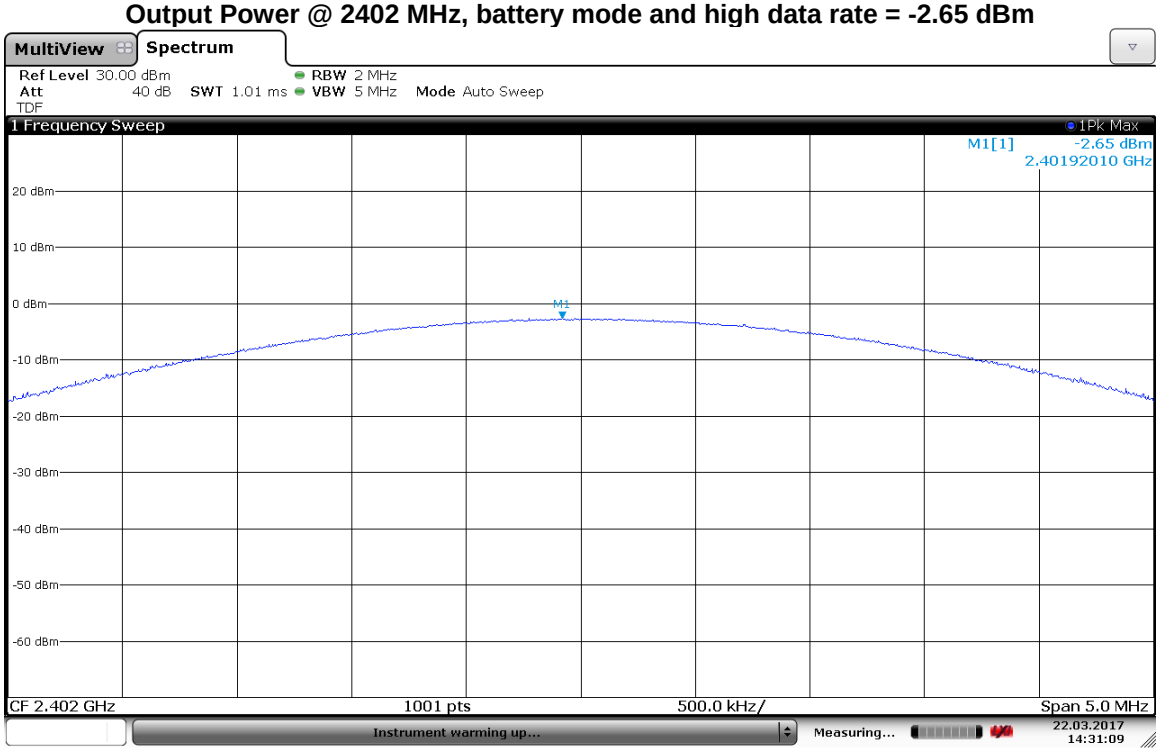
Output Power @ 2402 MHz, battery mode and high data rate = -2.65 dBm



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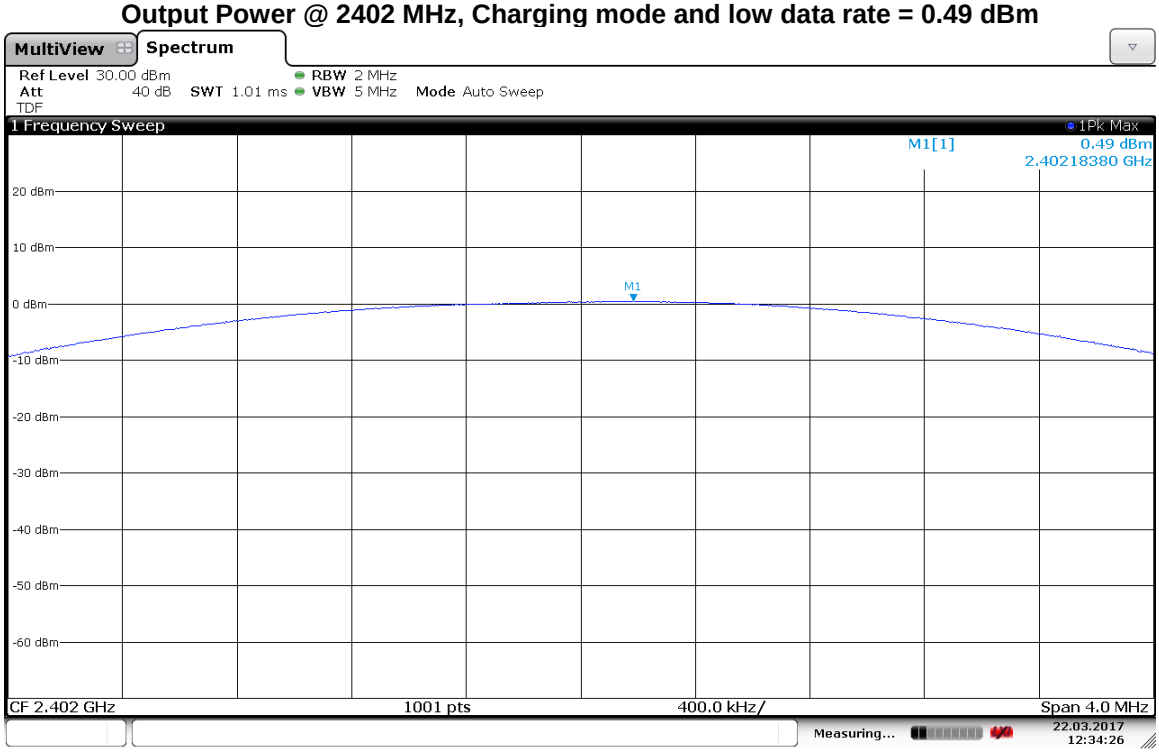
Output Power @ 2402 MHz, Charging mode and low data rate = 0.49 dBm



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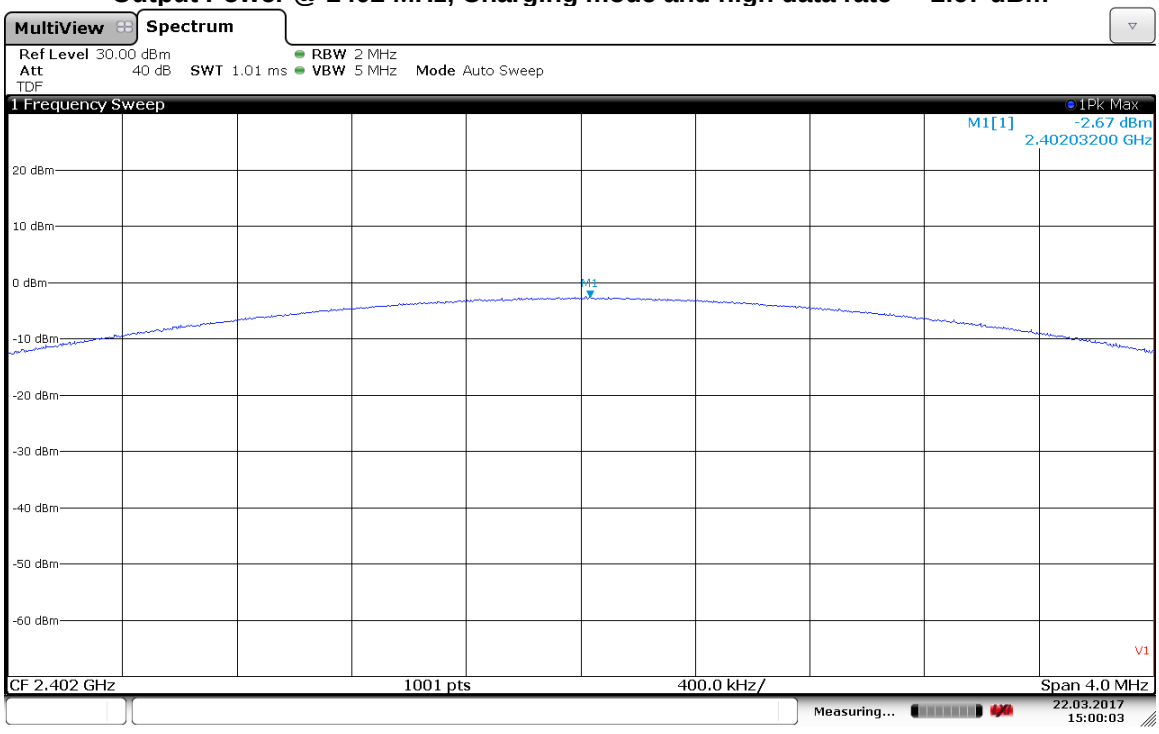
Output Power @ 2402 MHz, Charging mode and high data rate = -2.67 dBm



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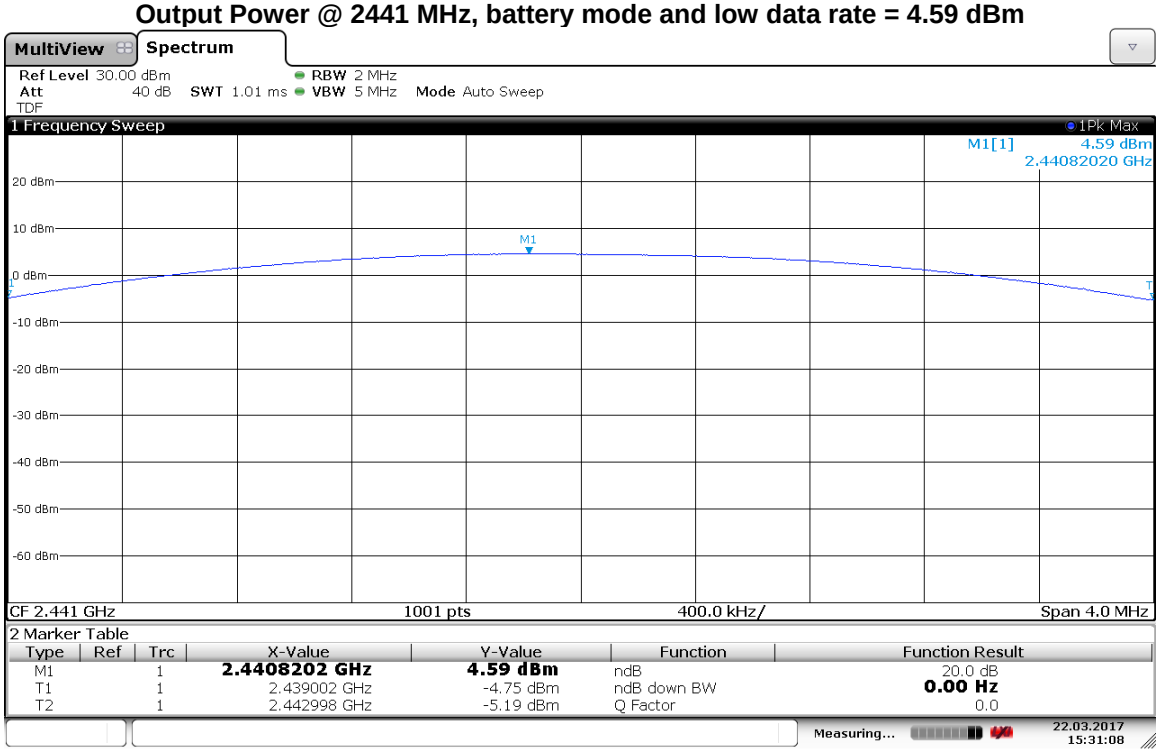
Output Power @ 2441 MHz, battery mode and low data rate = 4.59 dBm



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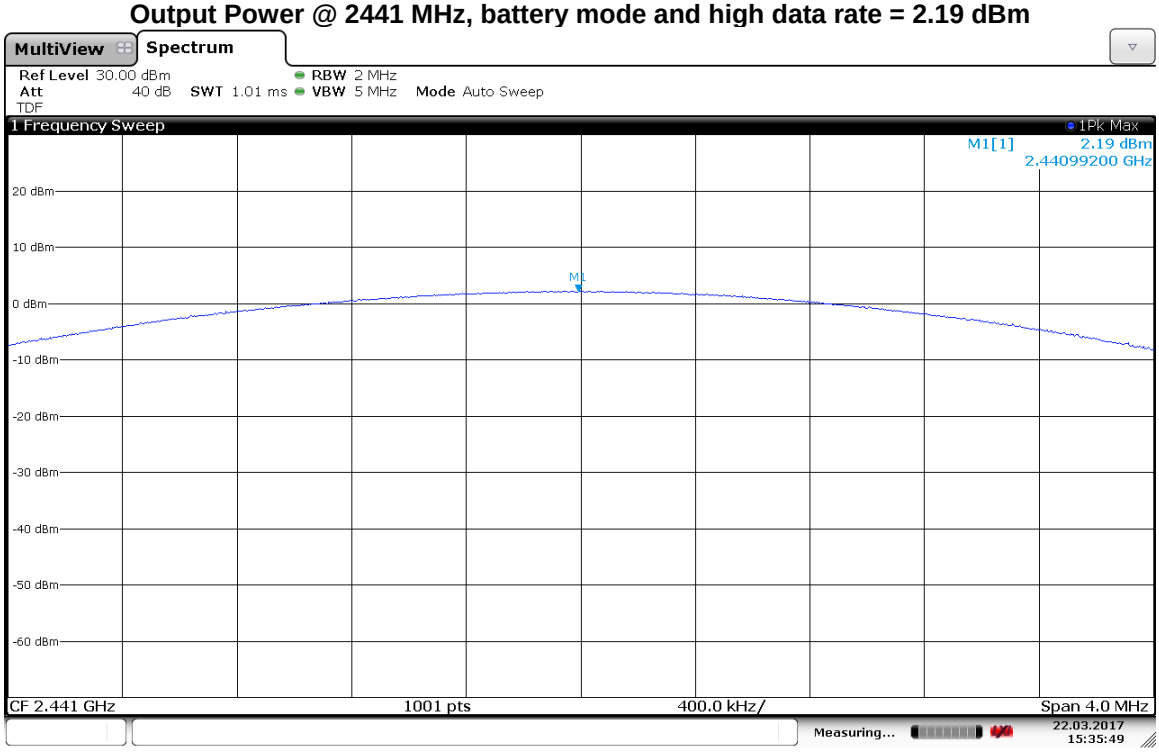
Output Power @ 2441 MHz, battery mode and high data rate = 2.19 dBm



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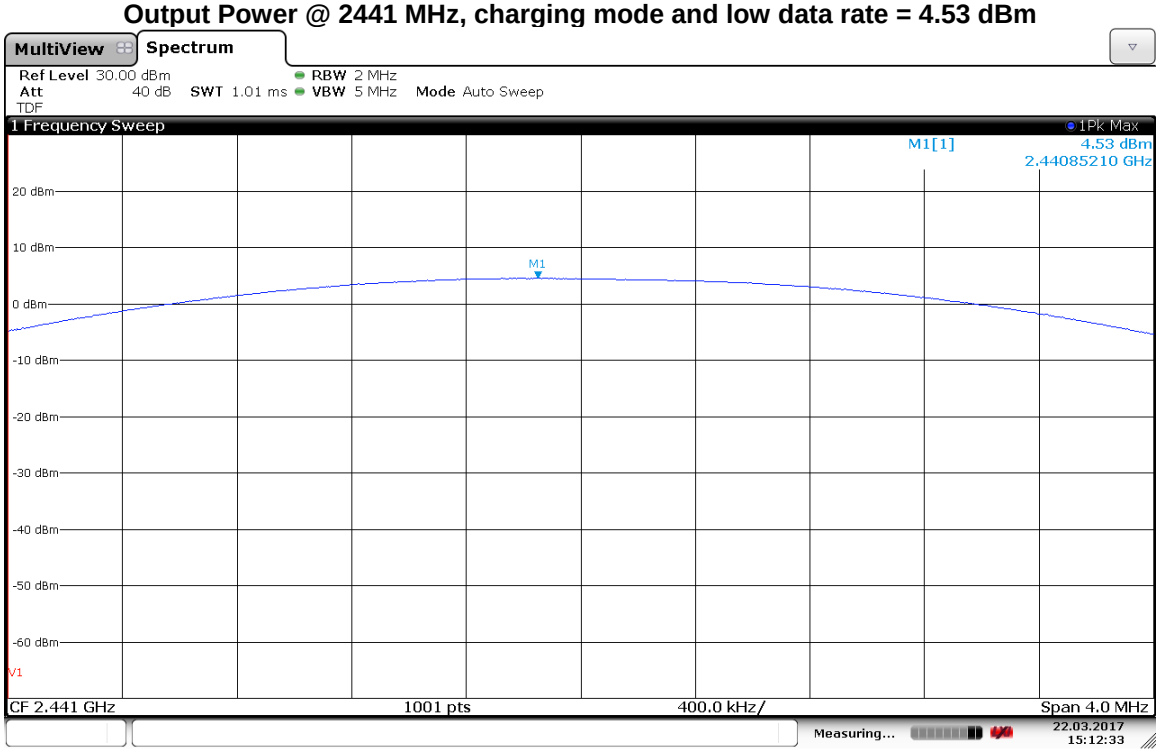
Output Power @ 2441 MHz, charging mode and low data rate = 4.53 dBm



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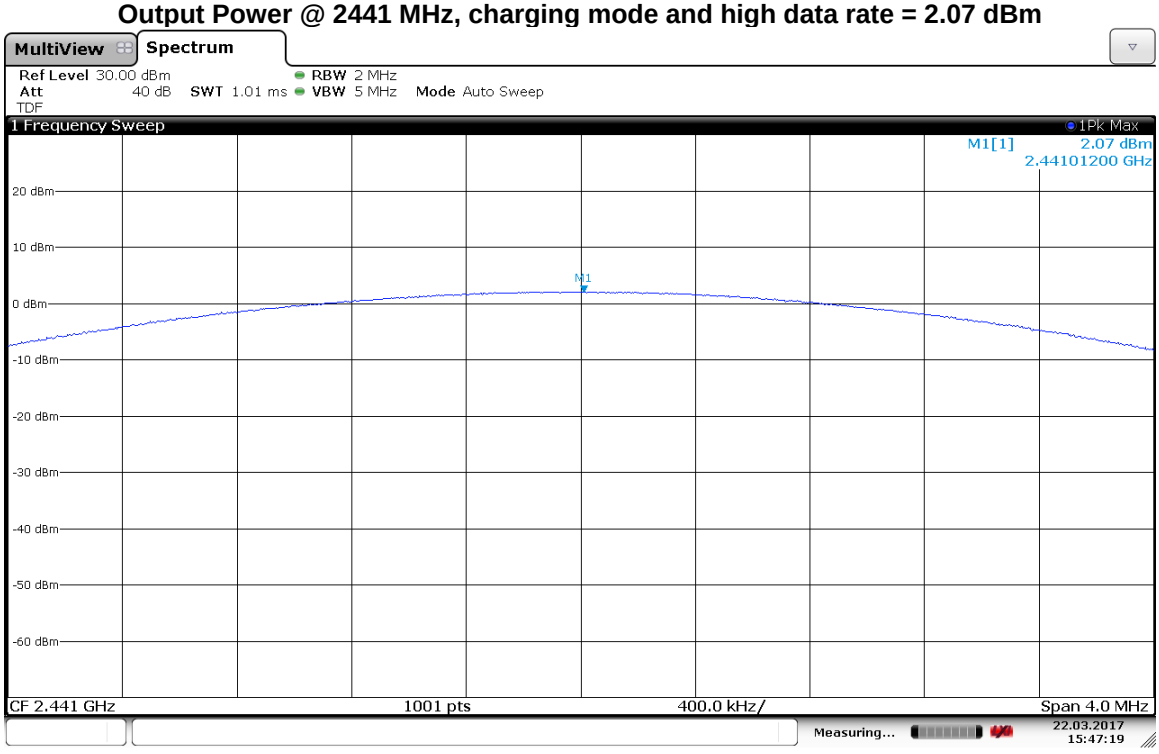
Output Power @ 2441 MHz, charging mode and high data rate = 2.07 dBm



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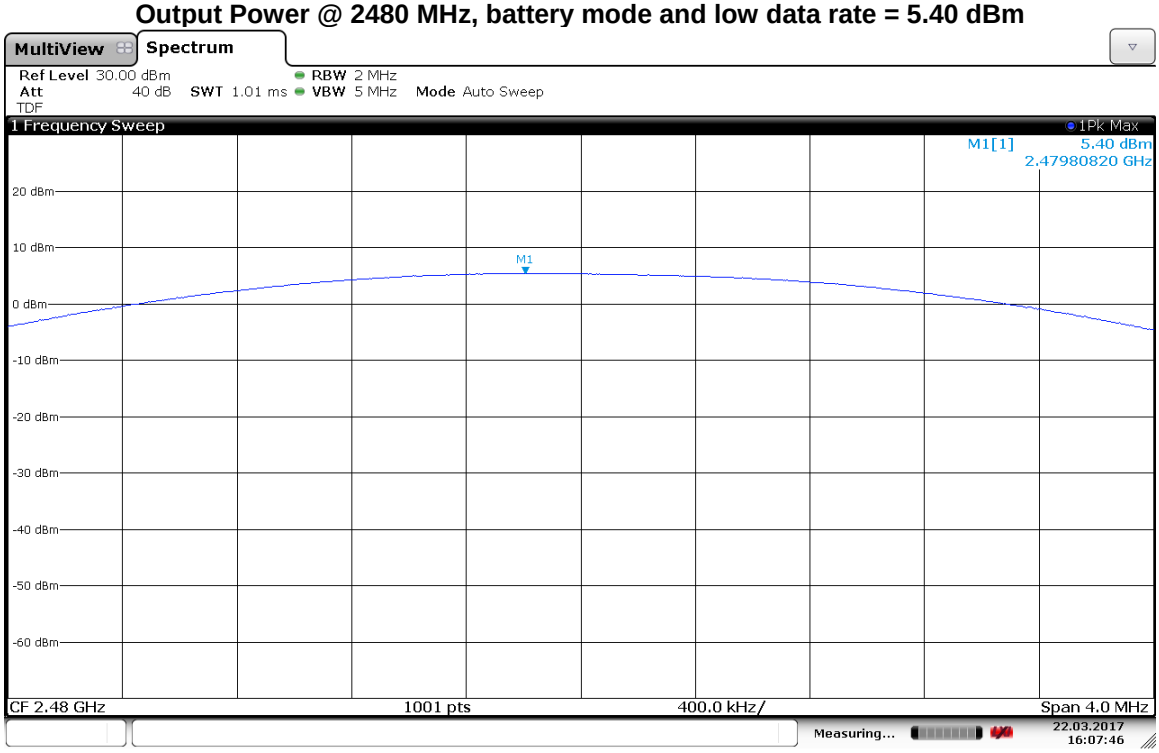
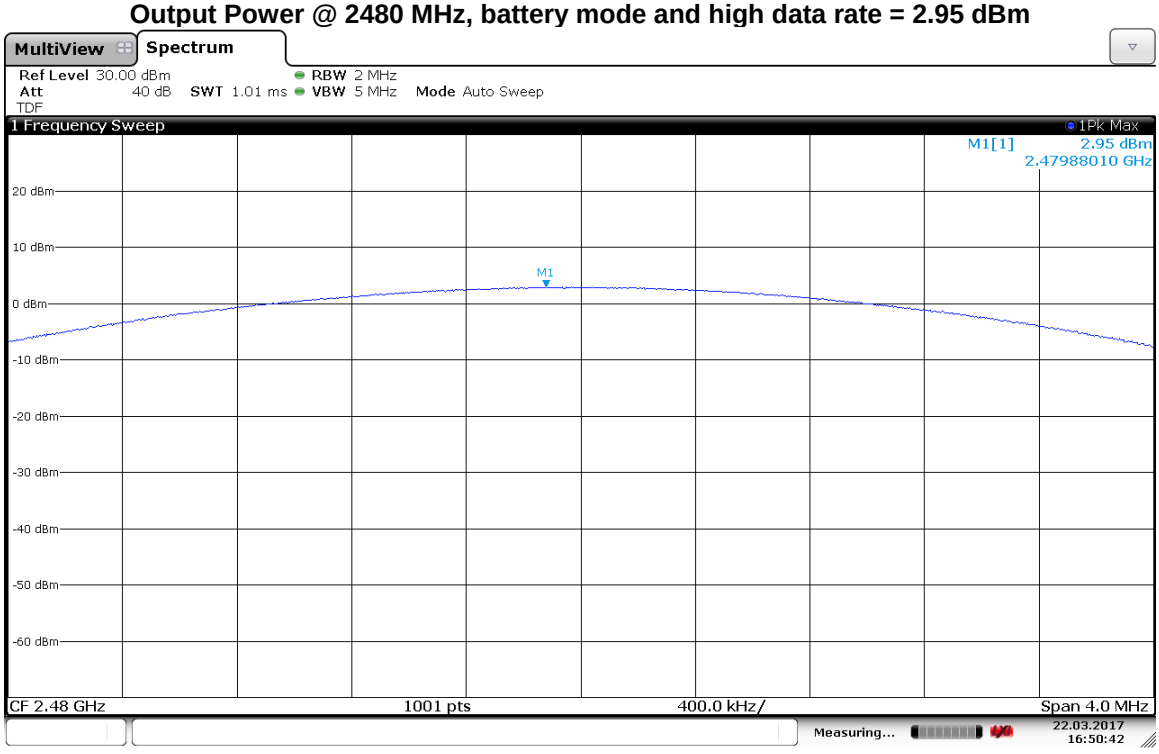
Output Power @ 2480 MHz, battery mode and low data rate = 5.40 dBm



Date: 22.MAR.2017 16:07:46

Output Power @ 2480 MHz, battery mode and high data rate = 2.95 dBm



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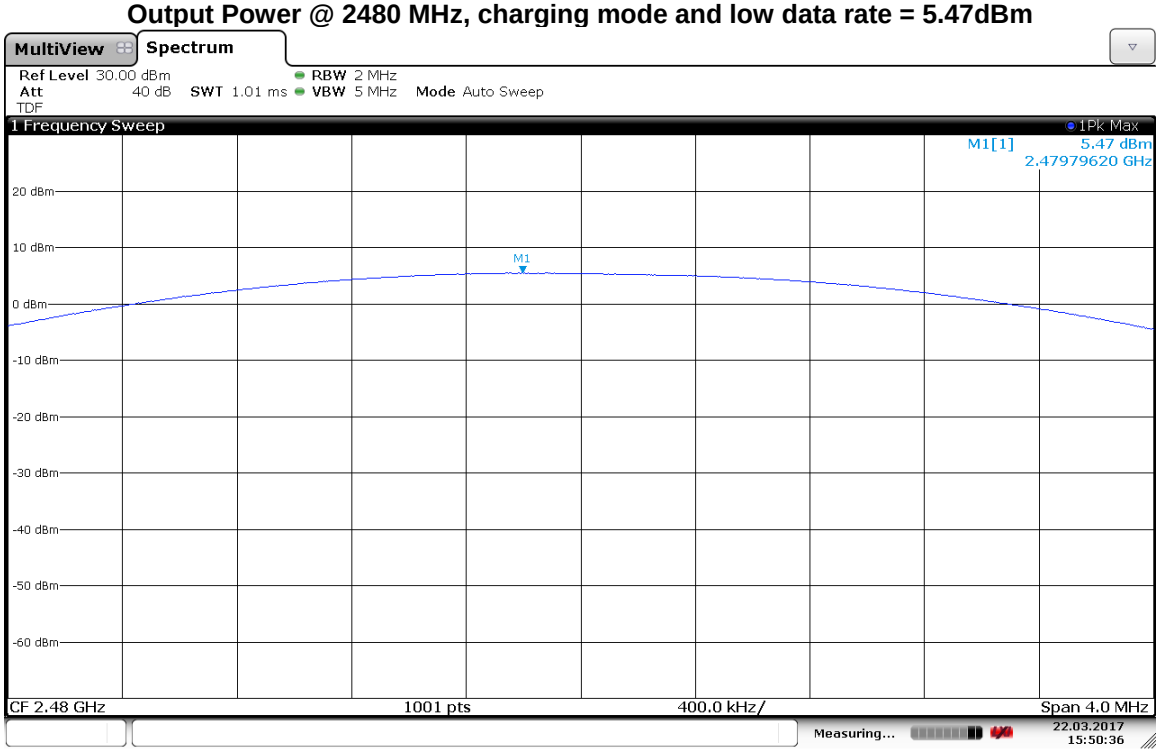
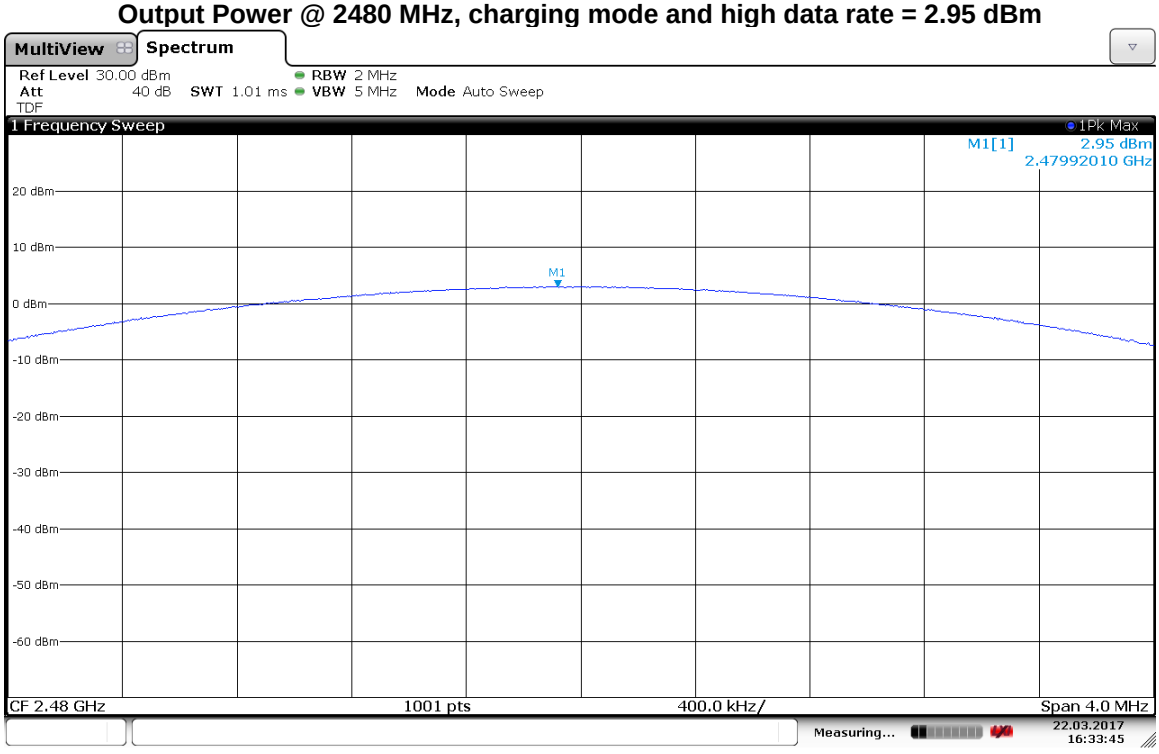
Output Power @ 2480 MHz, charging mode and low data rate = 5.47dBm



Date: 22.MAR.2017 15:50:35

Output Power @ 2480 MHz, charging mode and high data rate = 2.95 dBm



Date: 22.MAR.2017 16:33:46

Human RF Exposure/SAR Exemption

Maximum measured output power is 3.5237087104 mW @ 2480 MHz

FCC SAR Exemption per KDB 447498

a) For 100 MHz to 6 GHz and *test separation distances* ≤ 50 mm, the 1-g and 10-g *SAR test exclusion thresholds* are determined by the following:

[(*max. power of channel, including tune-up tolerance, mW*) / (*min. test separation distance, mm*)] · [$\sqrt{f_{(GHz)}}$] ≤ 3.0 for 1-g SAR, and ≤ 7.5 for 10-g extremity SAR,[30] where

- $f_{(GHz)}$ is the RF channel transmit frequency in GHz

= (3.523/5)*(sqrt(2.48))

= 1.09 < 3.0 (below the limit, SAR Exempt per FCC)

Test Personnel:	Naga Suryadevara N·S	Test Date:	03/22/2017
Supervising/Reviewing Engineer: (Where Applicable)	N/A		
Product Standard:	FCC Part 15 Subpart C (15.247)	Limit Applied:	See section 6.3
Input Voltage:	120VAC 60Hz, Internal Battery		
Pretest Verification w/ Ambient Signals or BB Source:	Yes – Signal generator	Ambient Temperature:	20 ºC
		Relative Humidity:	16 %
		Atmospheric Pressure:	1007 mbars

Deviations, Additions, or Exclusions: None

7 Occupied and 20dB Bandwidth

7.1 Method

Tests are performed in accordance with FCC Part 15 Subpart C (15.247).

TEST SITE: EMC Lab

The EMC Lab has one Semi-anechoic Chamber and one Shielded Chamber. AC Mains Power is available at 120, 230, and 277 Single Phase; 208, 400, and 480 3-Phase. Large reference ground-planes are installed in the general lab area to facilitate EMC work not requiring a shielded environment.

7.2 Test Equipment Used:

Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due
DAV004'	Weather Station	Davis Instruments	7400	PE80529A61A	05/02/2016	05/02/2017
CBLSHF203'	Cable, SMA - SMA, 9kHz-40GHz, Cable Kit 4	Sucoflex (Huber Suhn	104PE	CBLSHF203	09/08/2016	09/08/2017
ROS005'	ETSI Test System	Rhode & Schwartz	TS8997	N/A	09/15/2016	09/15/2017

Software Utilized:

Name	Manufacturer	Version
None		

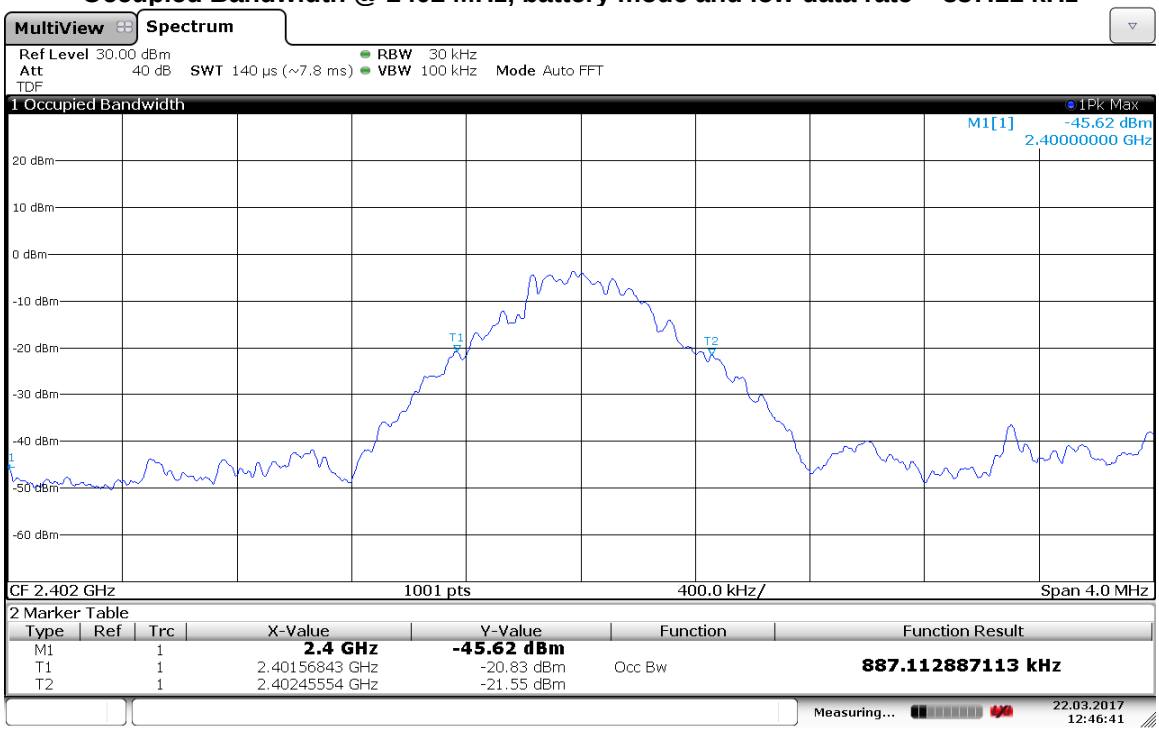
7.3 Results:

The sample tested was found to Comply.

Frequency	Mode of operation	Data Rate	Occupied Bandwidth	20dB Bandwidth
2402	Charging	Low	894.10 kHz	964.00 kHz
2402		High	1.21 MHz	1.29 MHz
2402	Battery	Low	887.11 kHz	967.70 kHz
2402		High	1.18 MHz	1.30 MHz
2441	Charging	Low	903.09 kHz	959.00 kHz
2441		High	1.21 MHz	1.29 MHz
2441	Battery	Low	895.10 kHz	963.00 kHz
2441		High	1.19 MHz	1.29 MHz
2480	Charging	Low	891.10 kHz	959.0 kHz
2480		High	1.21 MHz	1.29 MHz
2480	Battery	Low	883.11 kHz	987.00 kHz
2480		High	1.21 MHz	1.29 MHz

7.4 Plots/Data:

Occupied Bandwidth @ 2402 MHz, battery mode and low data rate = 887.11 kHz



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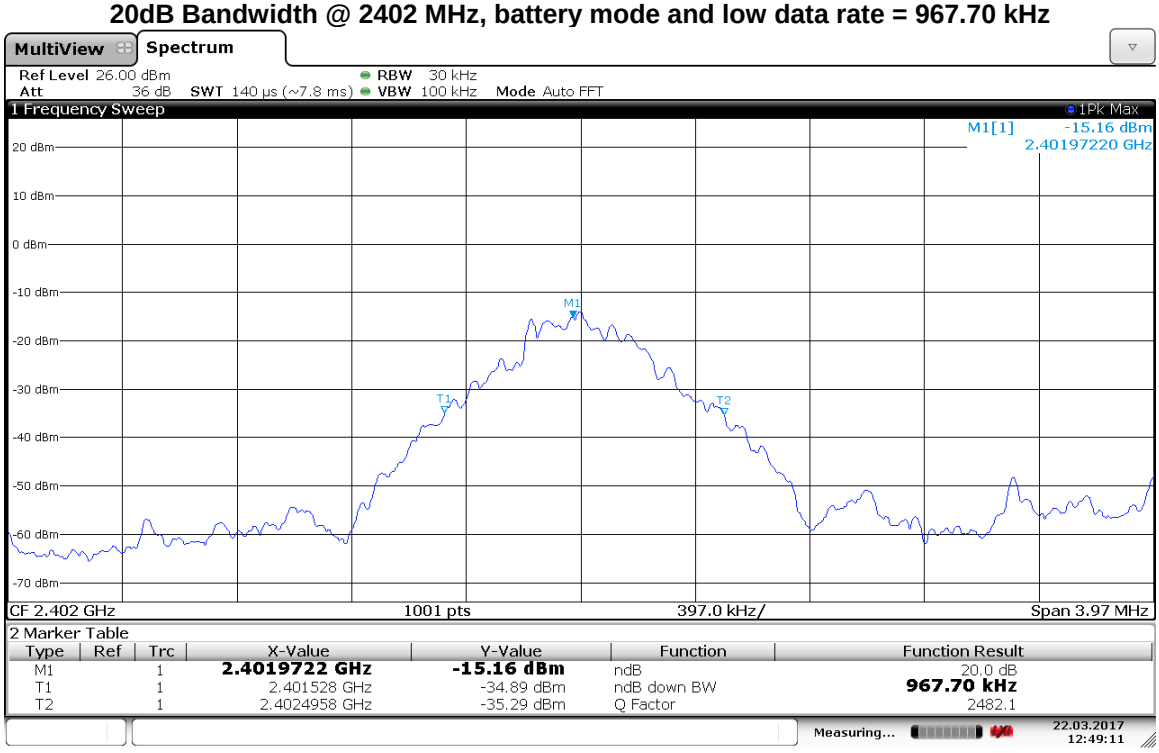
20dB Bandwidth @ 2402 MHz, battery mode and low data rate = 967.70 kHz



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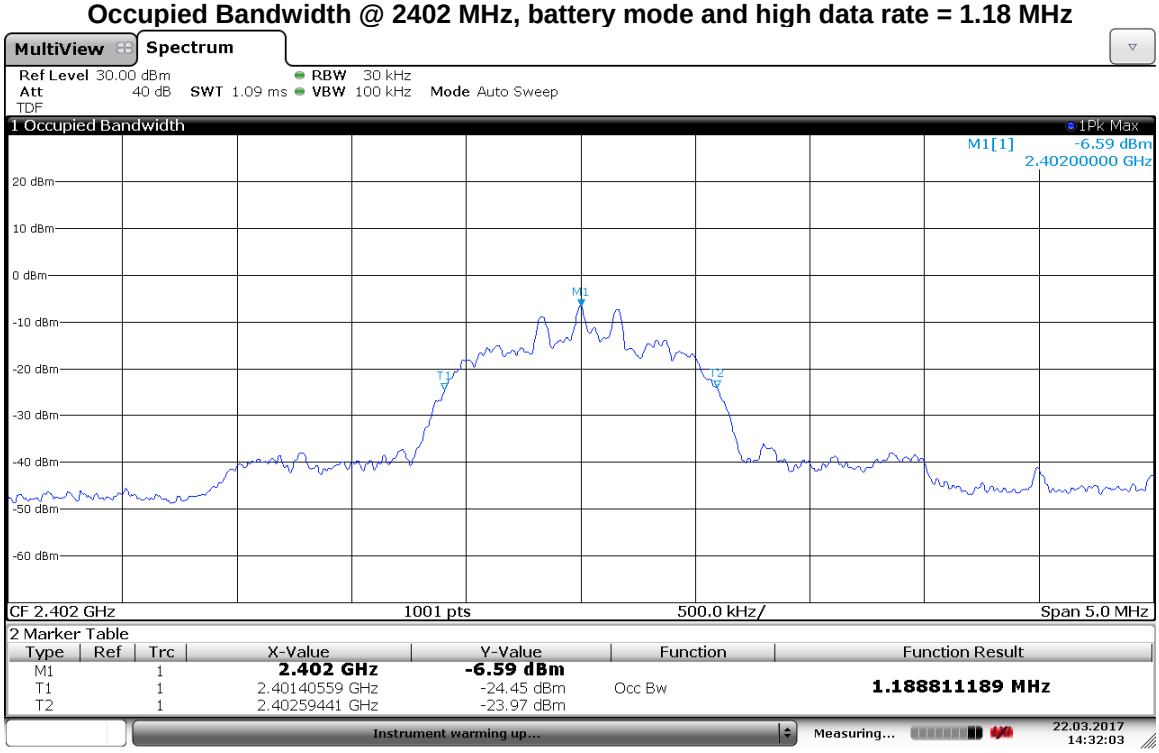
Occupied Bandwidth @ 2402 MHz, battery mode and high data rate = 1.18 MHz



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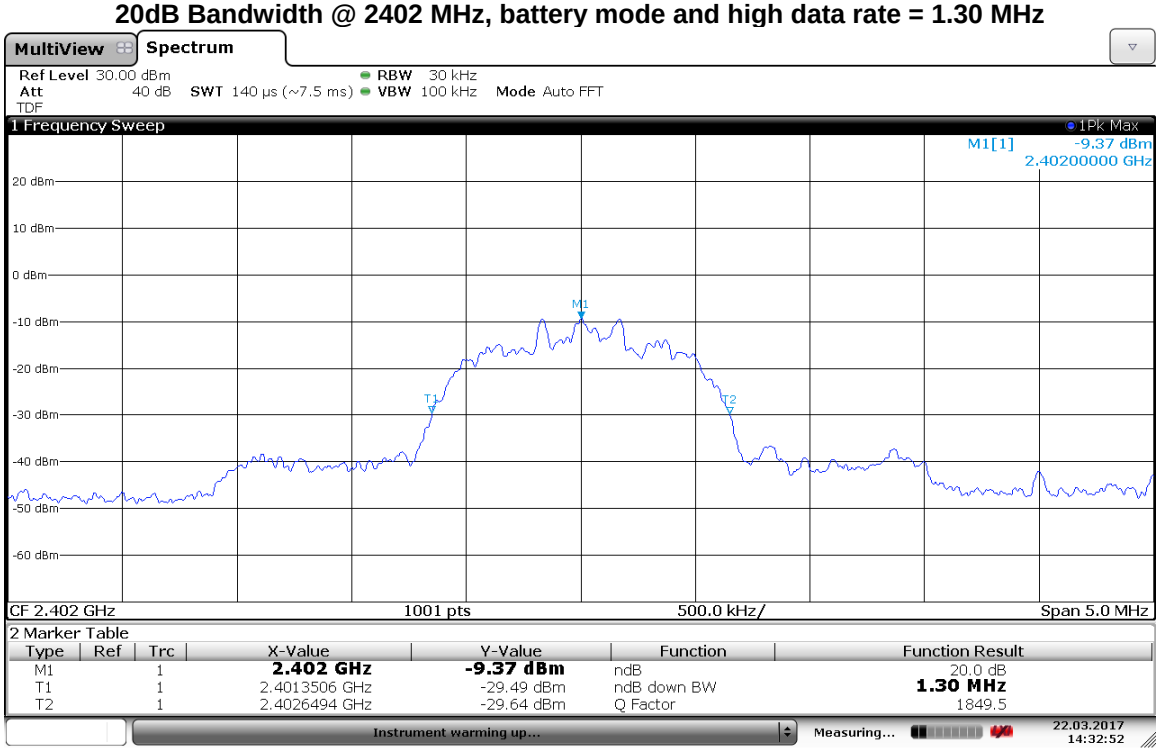
20dB Bandwidth @ 2402 MHz, battery mode and high data rate = 1.30 MHz



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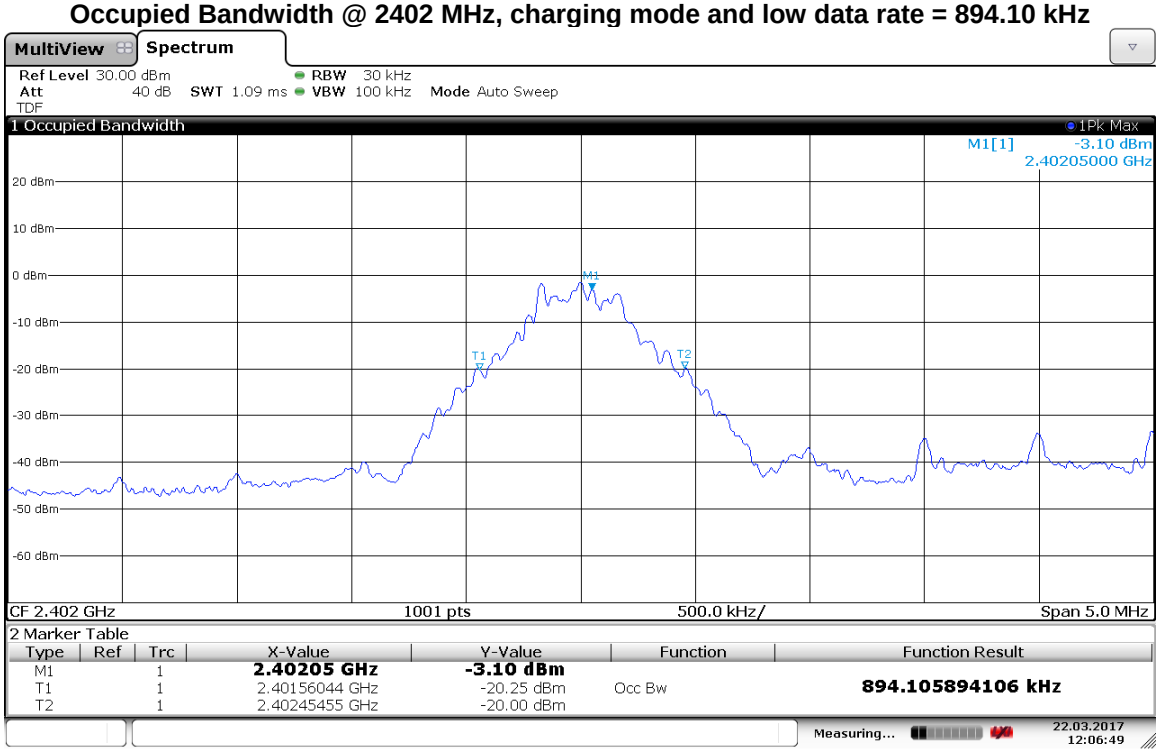
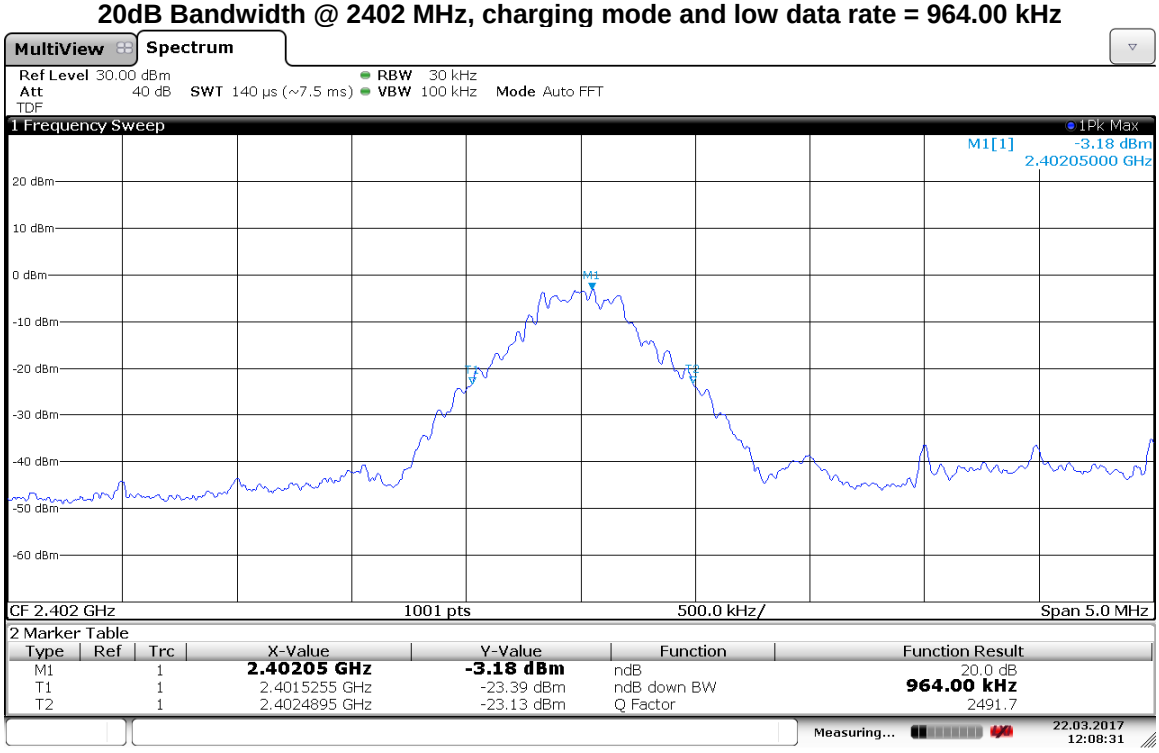
Occupied Bandwidth @ 2402 MHz, charging mode and low data rate = 894.10 kHz



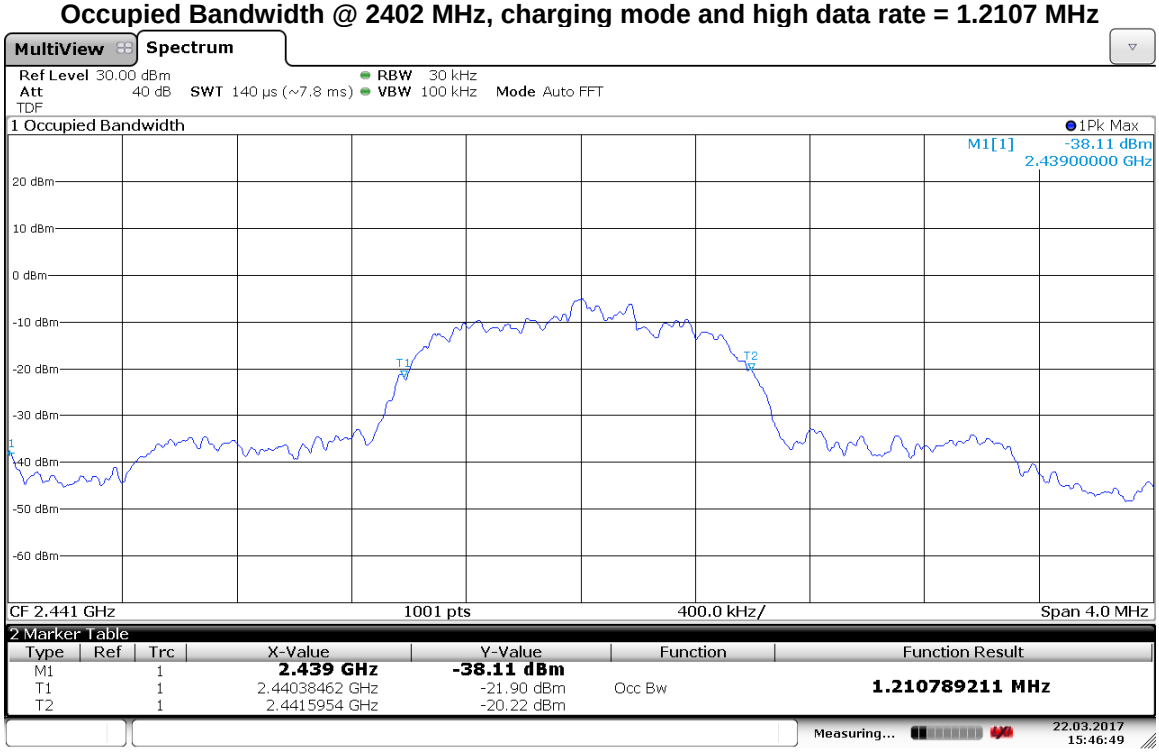
Date: 22.MAR.2017 12:06:48

20dB Bandwidth @ 2402 MHz, charging mode and low data rate = 964.00 kHz



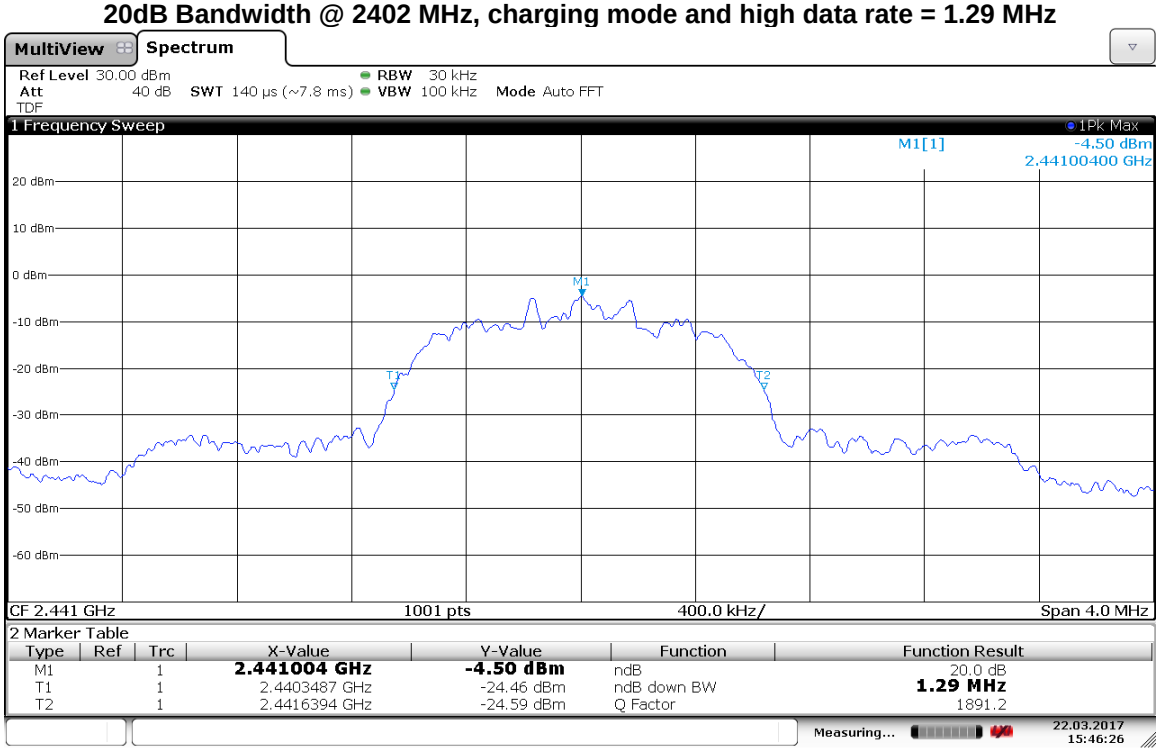
Date: 22.MAR.2017 12:08:32

Occupied Bandwidth @ 2402 MHz, charging mode and high data rate = 1.2107 MHz



Date: 22.MAR.2017 15:46:48

20dB Bandwidth @ 2402 MHz, charging mode and high data rate = 1.29 MHz



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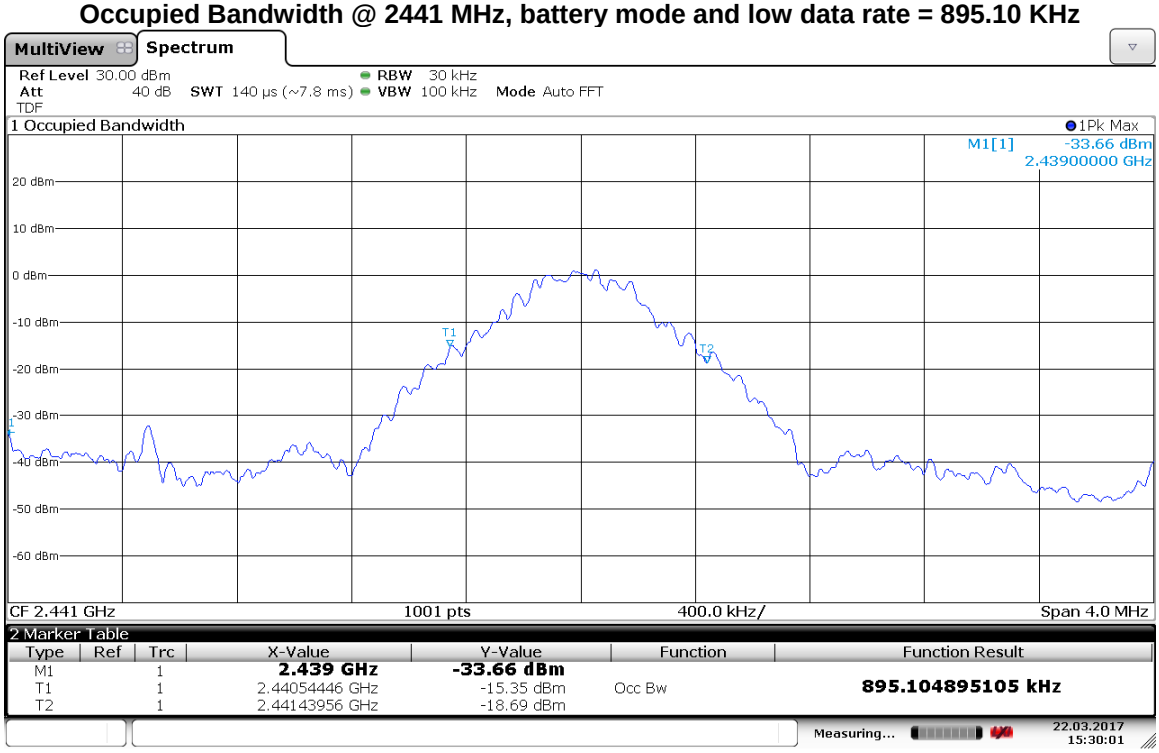
Occupied Bandwidth @ 2441 MHz, battery mode and low data rate = 895.10 KHz



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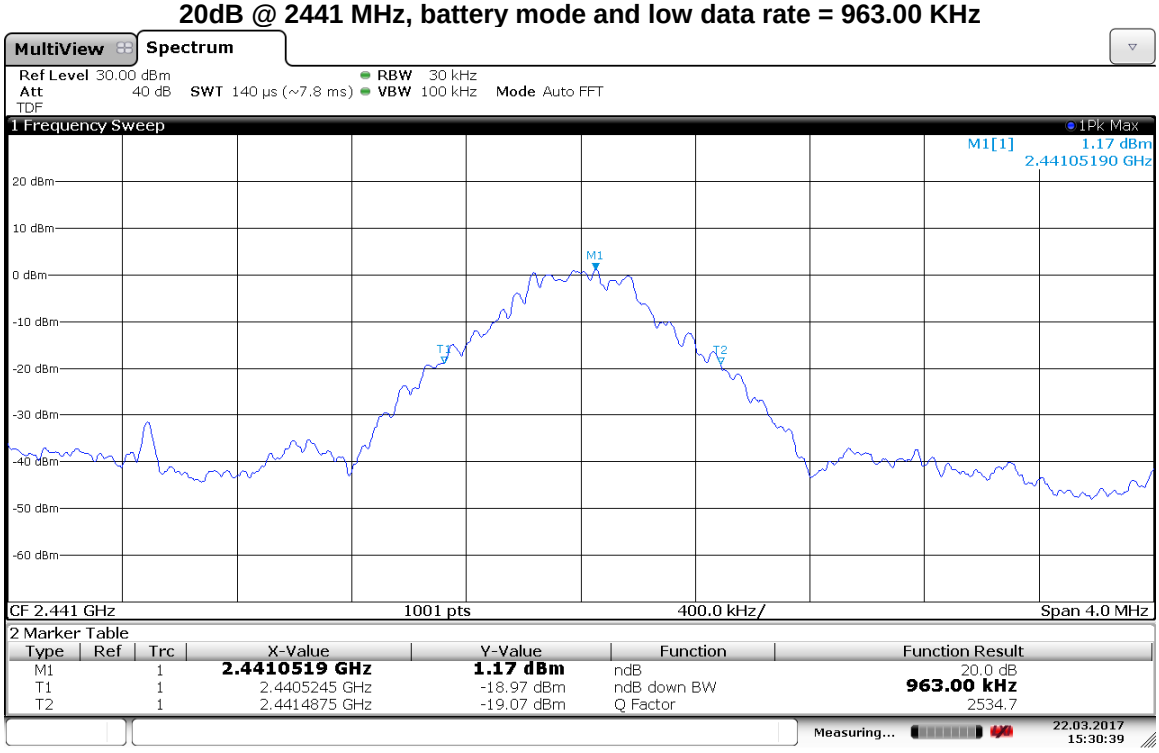
20dB @ 2441 MHz, battery mode and low data rate = 963.00 KHz



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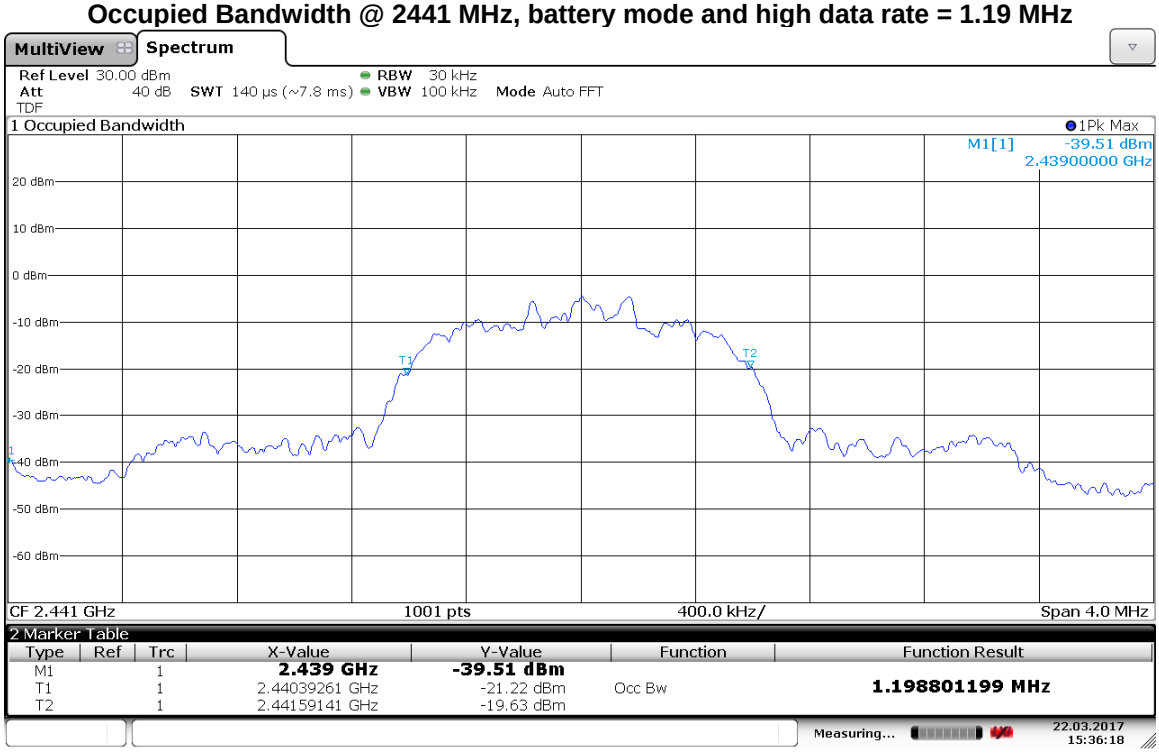
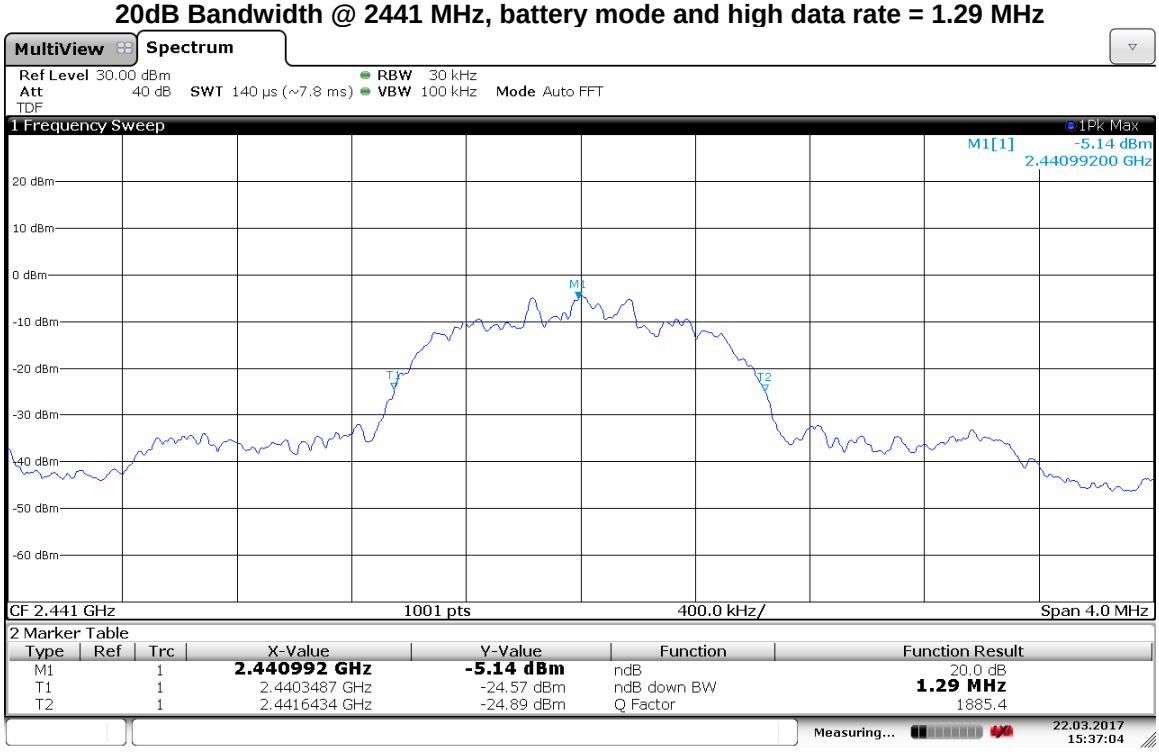
Occupied Bandwidth @ 2441 MHz, battery mode and high data rate = 1.19 MHz



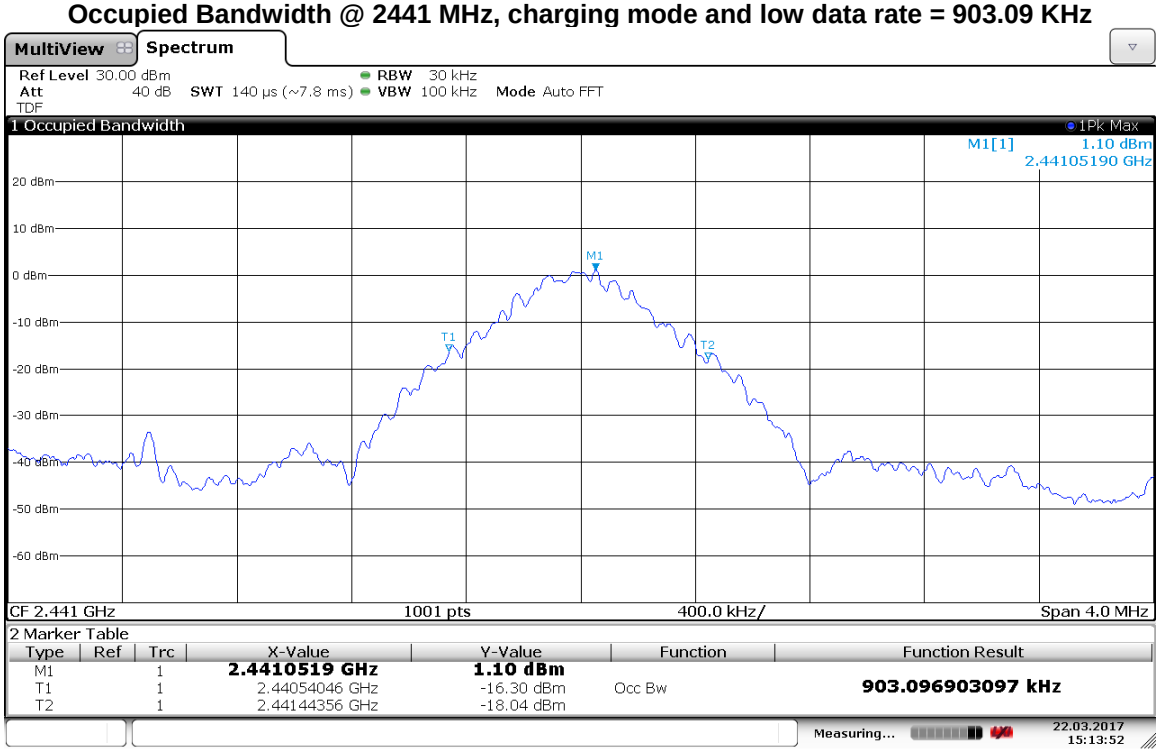
Date: 22.MAR.2017 15:36:18

20dB Bandwidth @ 2441 MHz, battery mode and high data rate = 1.29 MHz



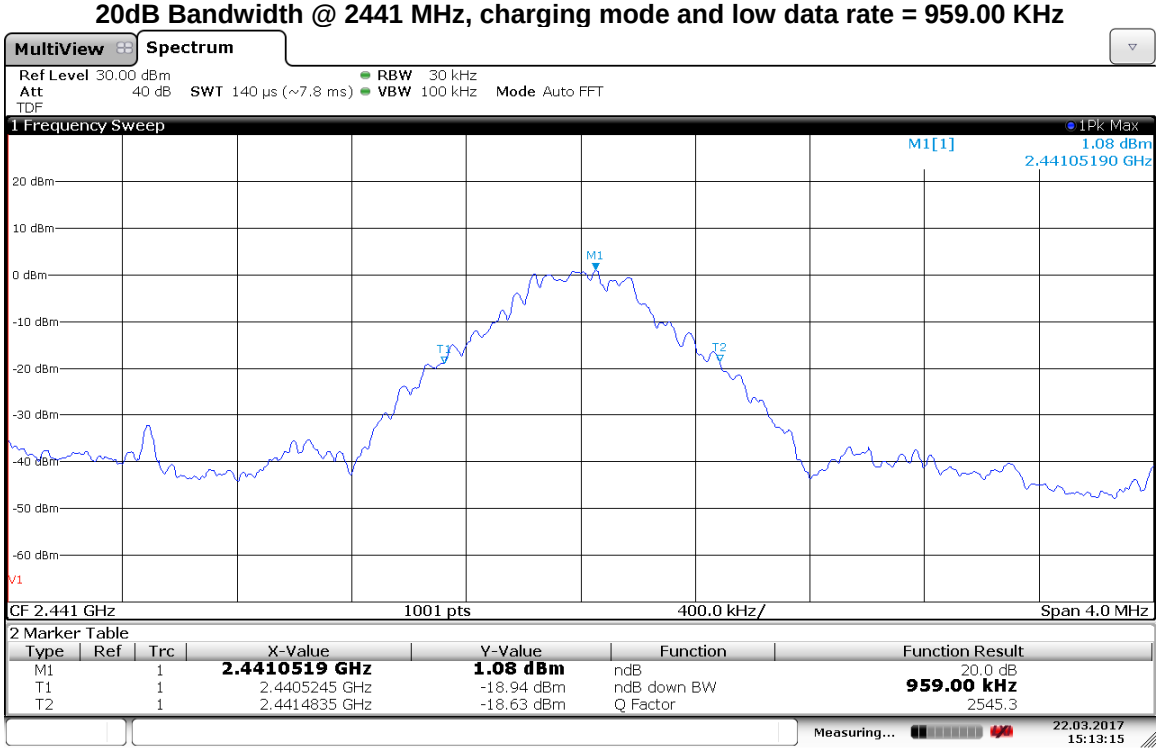
Date: 22.MAR.2017 15:37:04

Occupied Bandwidth @ 2441 MHz, charging mode and low data rate = 903.09 KHz



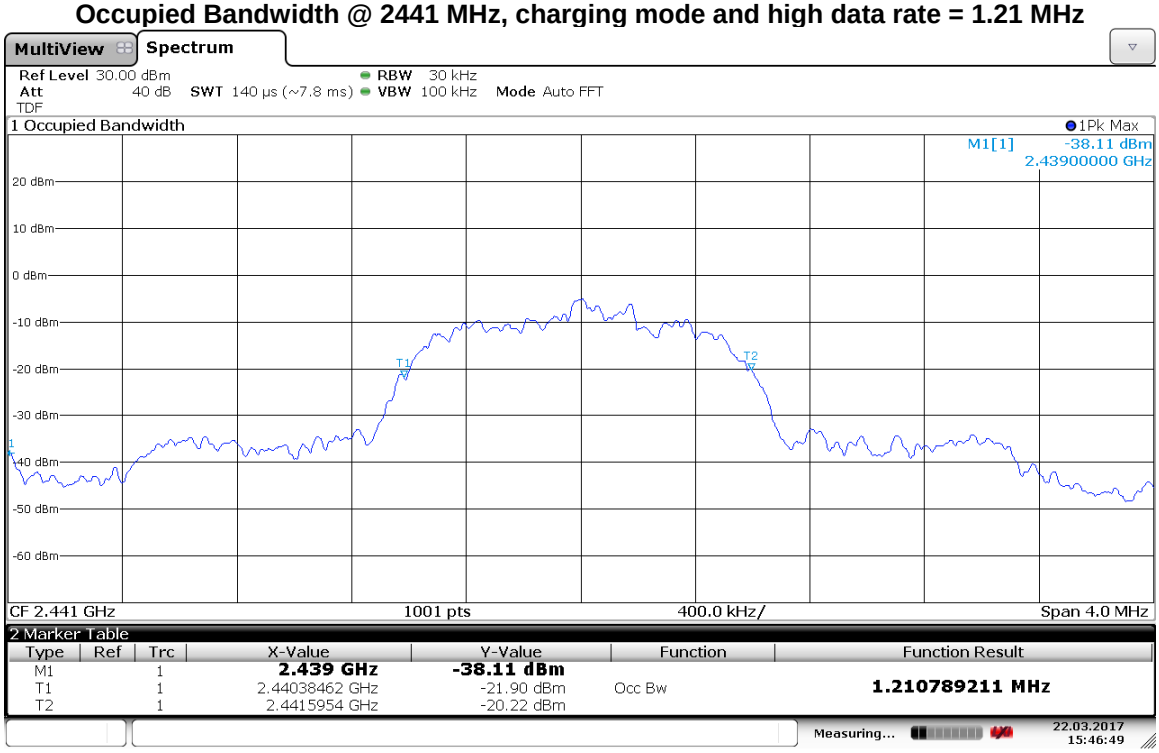
Date: 22.MAR.2017 15:13:52

20dB Bandwidth @ 2441 MHz, charging mode and low data rate = 959.00 KHz



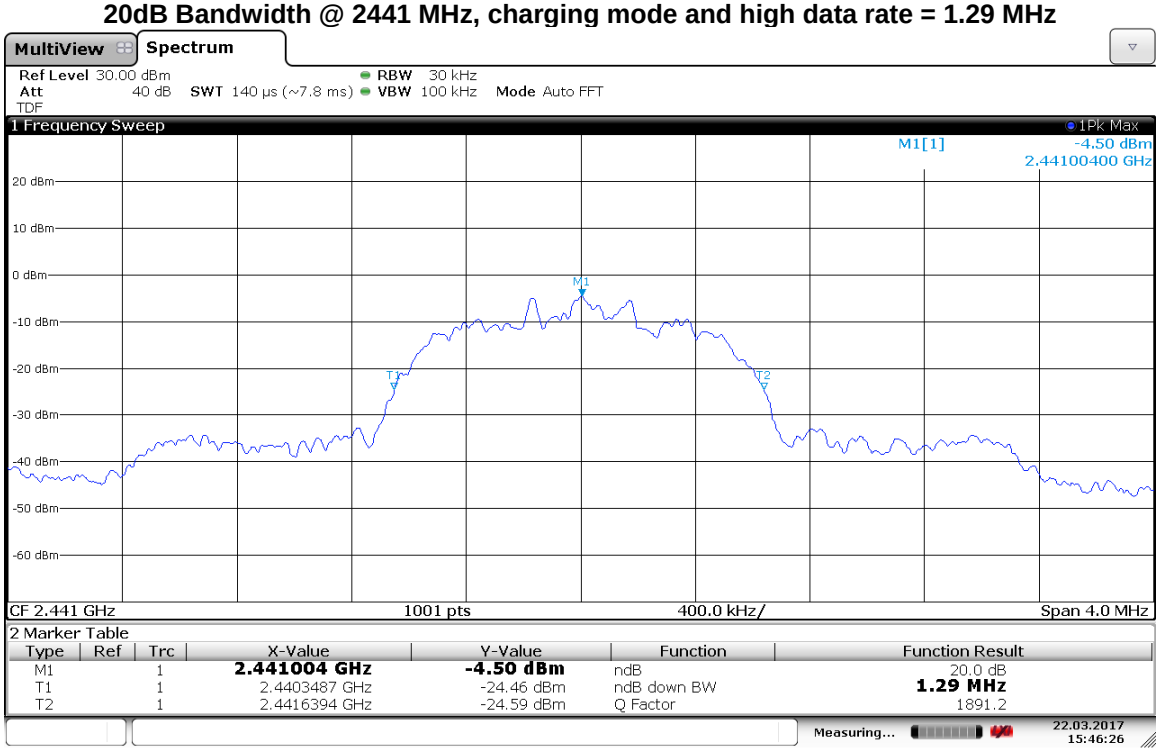
Date: 22.MAR.2017 15:13:14

Occupied Bandwidth @ 2441 MHz, charging mode and high data rate = 1.21 MHz



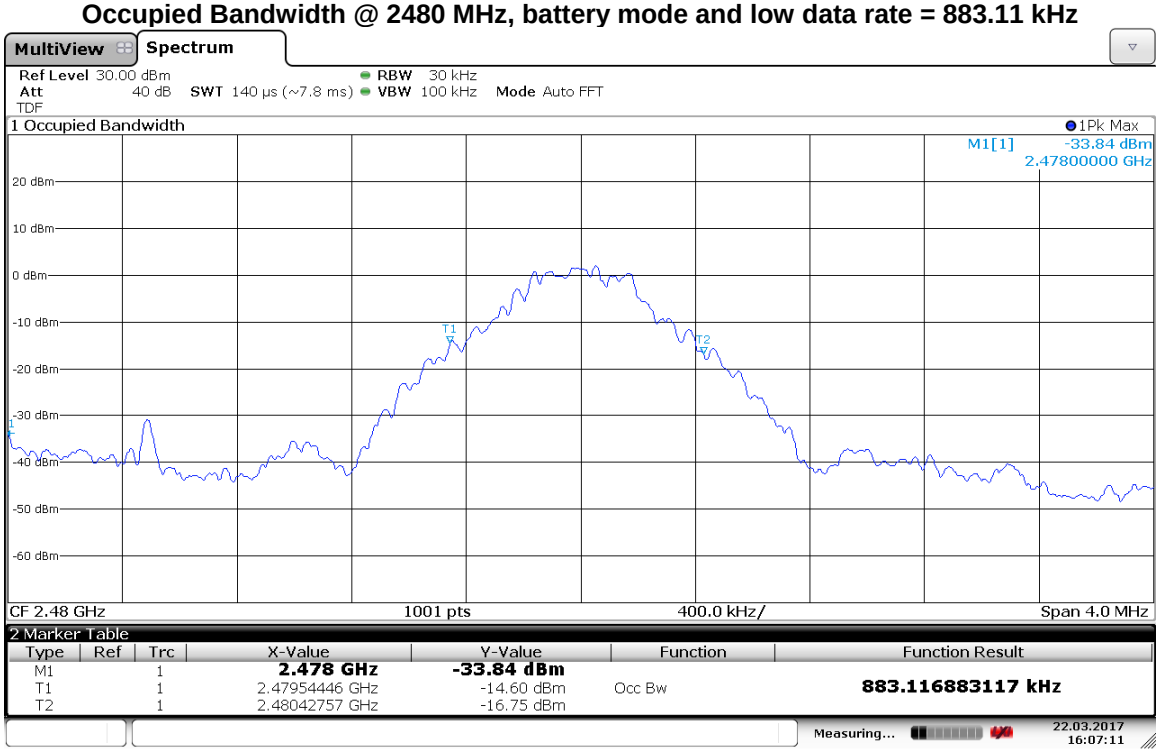
Date: 22.MAR.2017 15:46:48

20dB Bandwidth @ 2441 MHz, charging mode and high data rate = 1.29 MHz



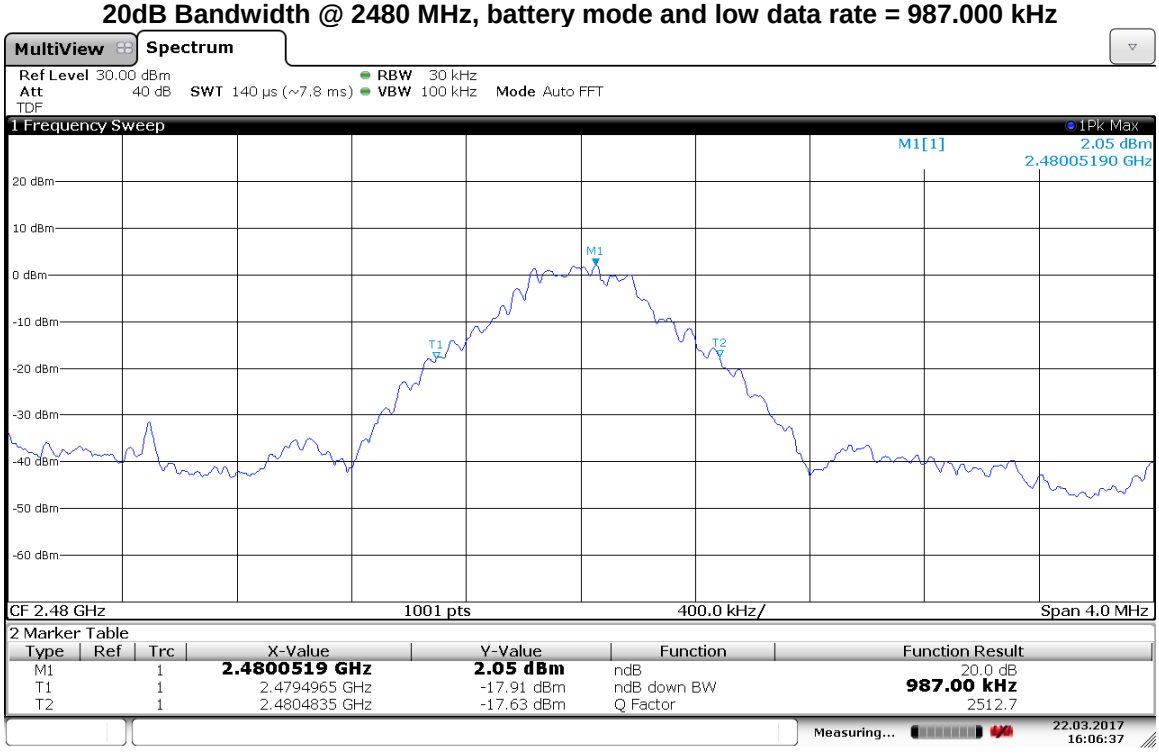
Date: 22.MAR.2017 15:46:26

Occupied Bandwidth @ 2480 MHz, battery mode and low data rate = 883.11 kHz



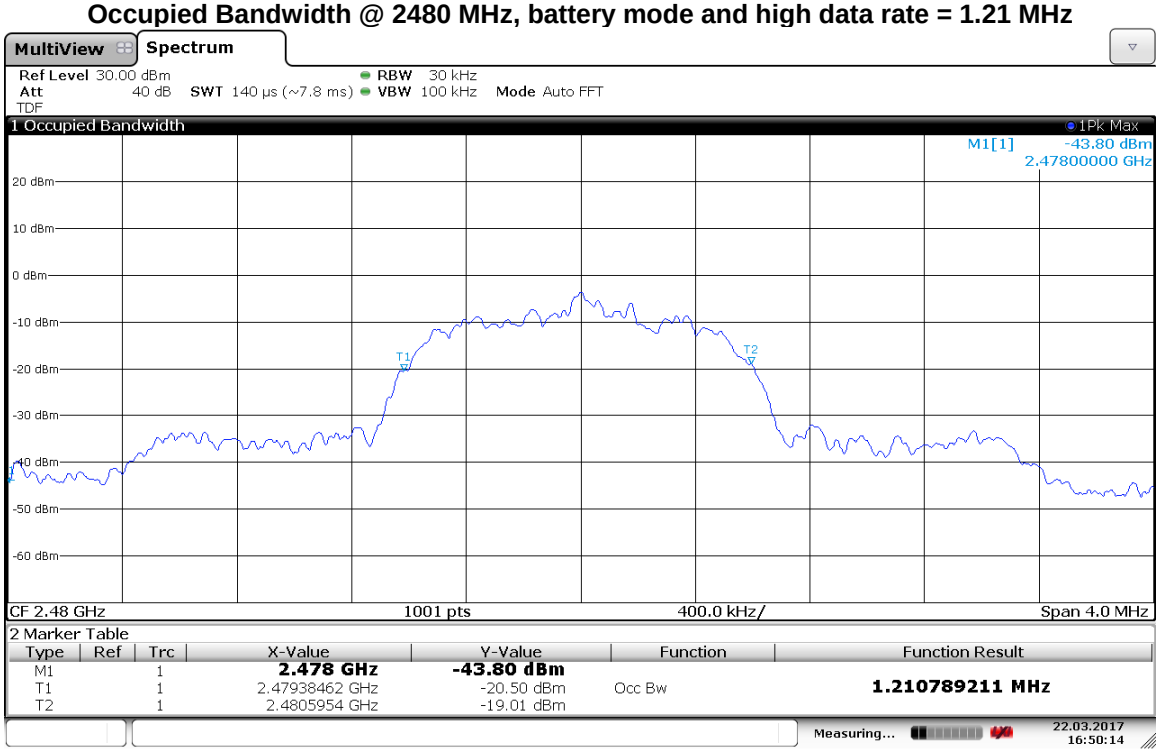
Date: 22.MAR.2017 16:07:11

20dB Bandwidth @ 2480 MHz, battery mode and low data rate = 987.000 kHz



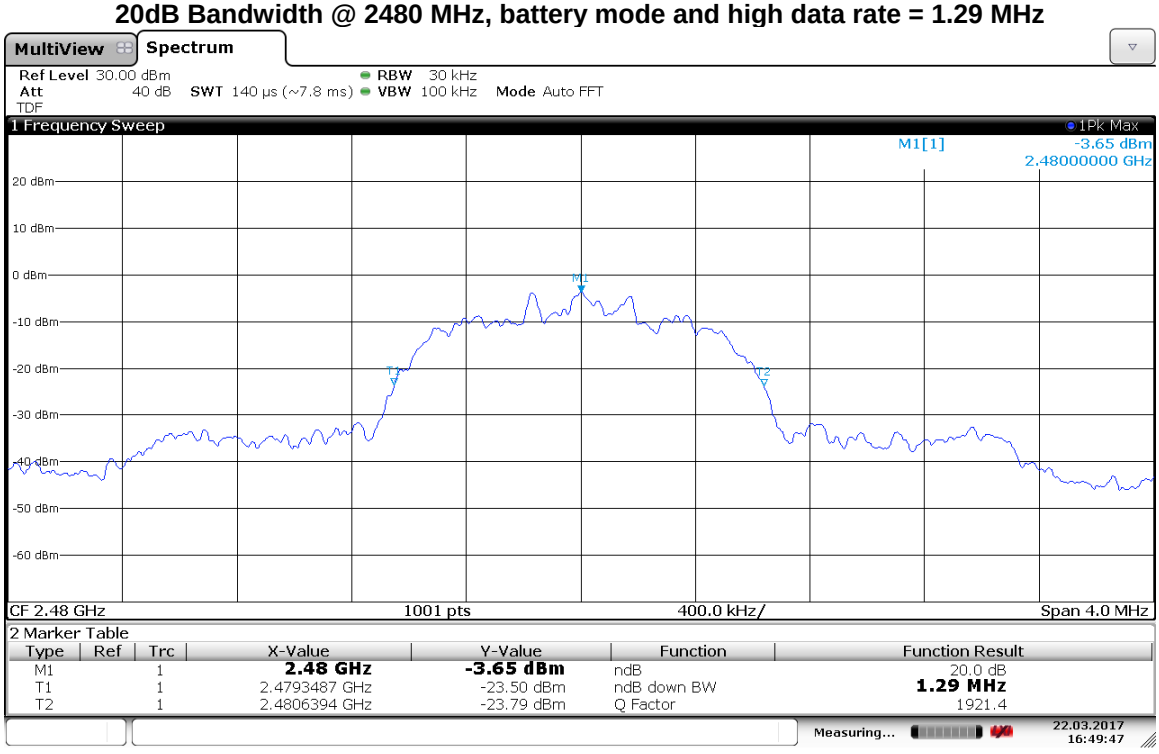
Date: 22.MAR.2017 16:06:37

Occupied Bandwidth @ 2480 MHz, battery mode and high data rate = 1.21 MHz



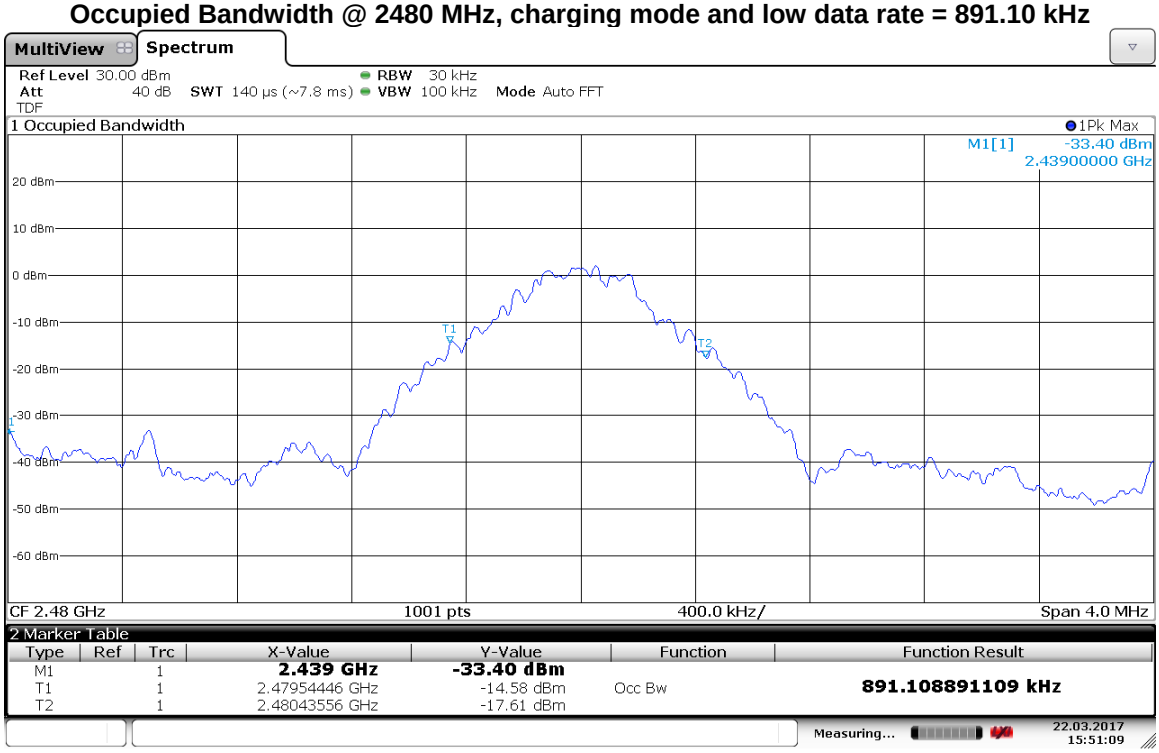
Date: 22.MAR.2017 16:50:14

20dB Bandwidth @ 2480 MHz, battery mode and high data rate = 1.29 MHz



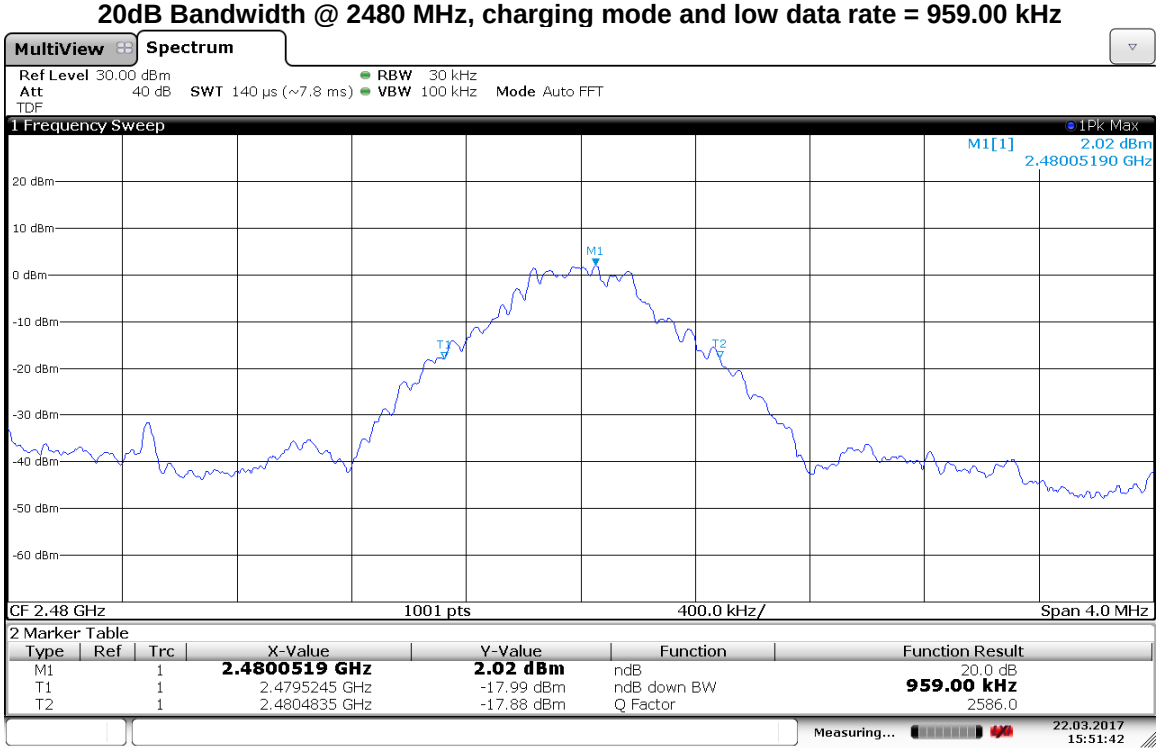
Date: 22.MAR.2017 16:49:46

Occupied Bandwidth @ 2480 MHz, charging mode and low data rate = 891.10 kHz



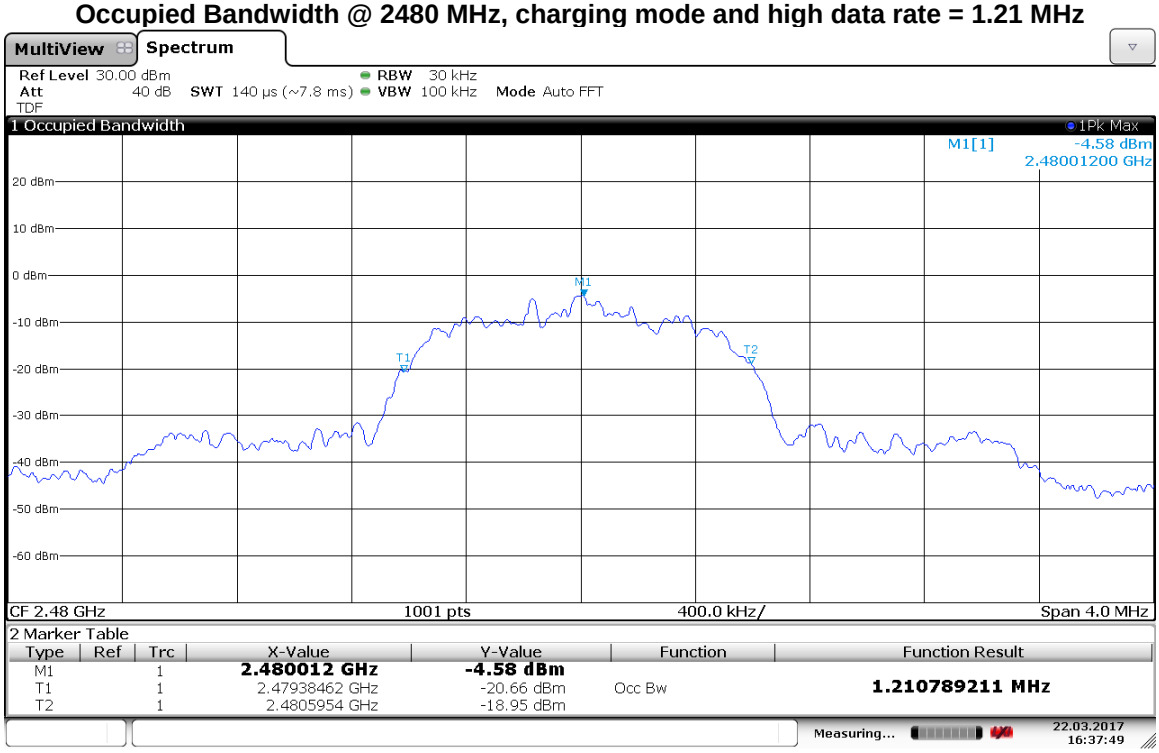
Date: 22.MAR.2017 15:51:09

20dB Bandwidth @ 2480 MHz, charging mode and low data rate = 959.00 kHz



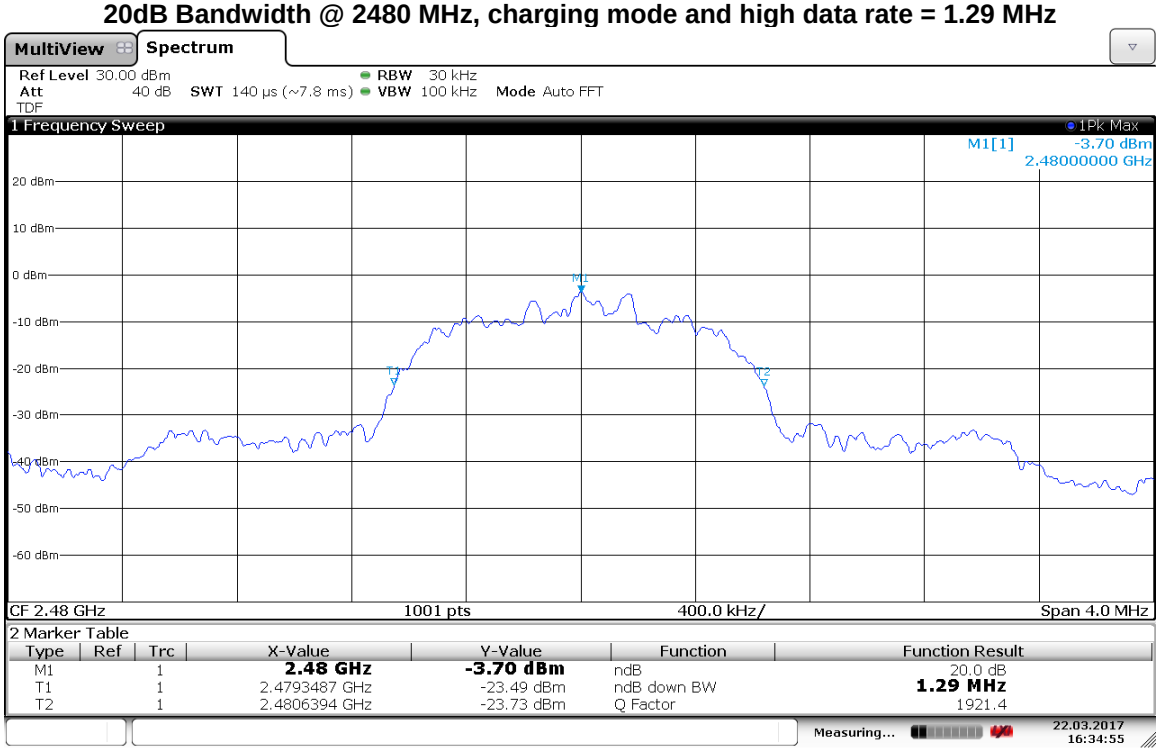
Date: 22.MAR.2017 15:51:41

Occupied Bandwidth @ 2480 MHz, charging mode and high data rate = 1.21 MHz



Date: 22.MAR.2017 16:37:49

20dB Bandwidth @ 2480 MHz, charging mode and high data rate = 1.29 MHz



Date: 22.MAR.2017 16:34:55

Test Personnel:	Naga Suryadevara N.S	Test Date:	03/22/2017
Supervising/Reviewing Engineer: (Where Applicable)	N/A		
Product Standard:	FCC Part 15 Subpart C (15.247)	Limit Applied:	See section 7.3
Input Voltage:	120VAC 60Hz, Internal Battery		
Pretest Verification w/ Ambient Signals or BB Source:	Yes – Signal generator	Ambient Temperature:	20 ºC
		Relative Humidity:	16 %
		Atmospheric Pressure:	1007 mbars

8 Channel Separation

8.1 Method

Tests are performed in accordance with FCC Part 15 Subpart C (15.247).

TEST SITE: EMC Lab

The EMC Lab has one Semi-anechoic Chamber and one Shielded Chamber. AC Mains Power is available at 120, 230, and 277 Single Phase; 208, 400, and 480 3-Phase. Large reference ground-planes are installed in the general lab area to facilitate EMC work not requiring a shielded environment.

8.2 Test Equipment Used:

Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due
DAV004'	Weather Station	Davis Instruments	7400	PE80529A61A	05/02/2016	05/02/2017
CBLSHF203'	Cable, SMA - SMA, 9kHz-40GHz, Cable Kit 4	Sucoflex (Huber Suhn	104PE	CBLSHF203	09/08/2016	09/08/2017
ROS005'	ETSI Test System	Rhode & Schwartz	TS8997	N/A	09/15/2016	09/15/2017

Software Utilized:

Name	Manufacturer	Version
None		

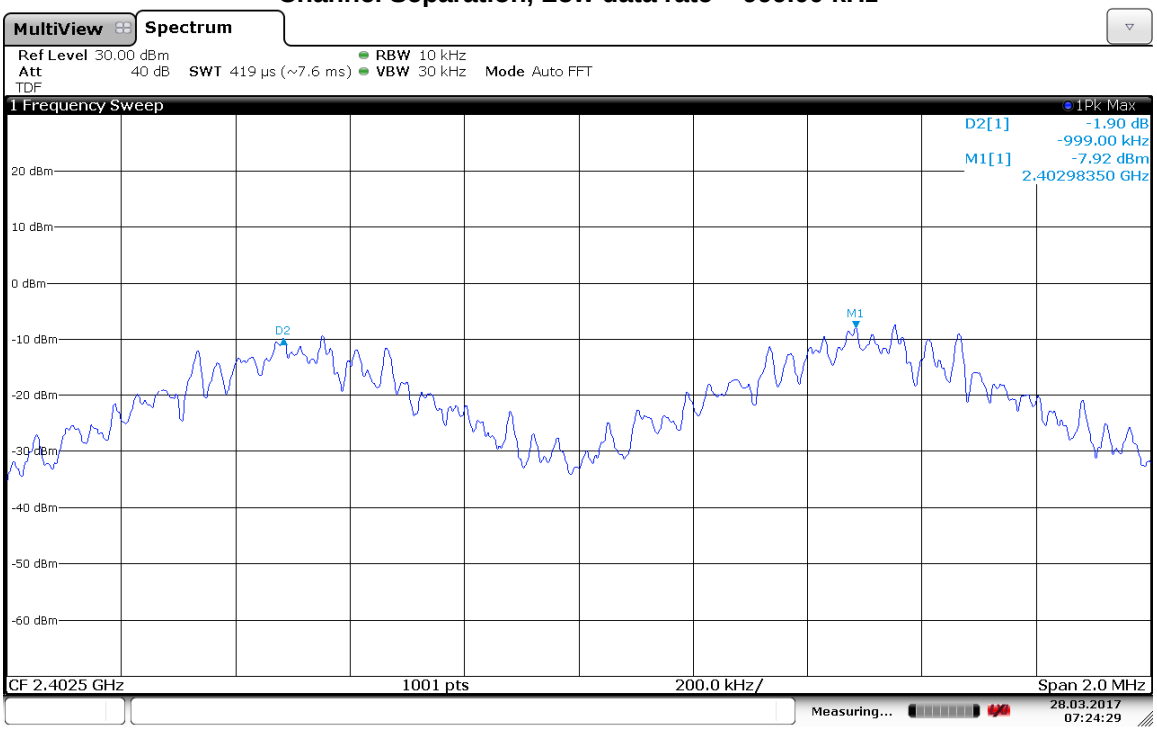
8.3 Results:

The sample tested was found to Comply. Systems shall have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20-dB bandwidth of the hopping channel, whichever is greater.

The measured channel frequency separation is 999 kHz @ low data rate and 1.0 MHz @ high data rate which is greater than 866.66 kHz (2/3rd of 20dB BW(maximum))

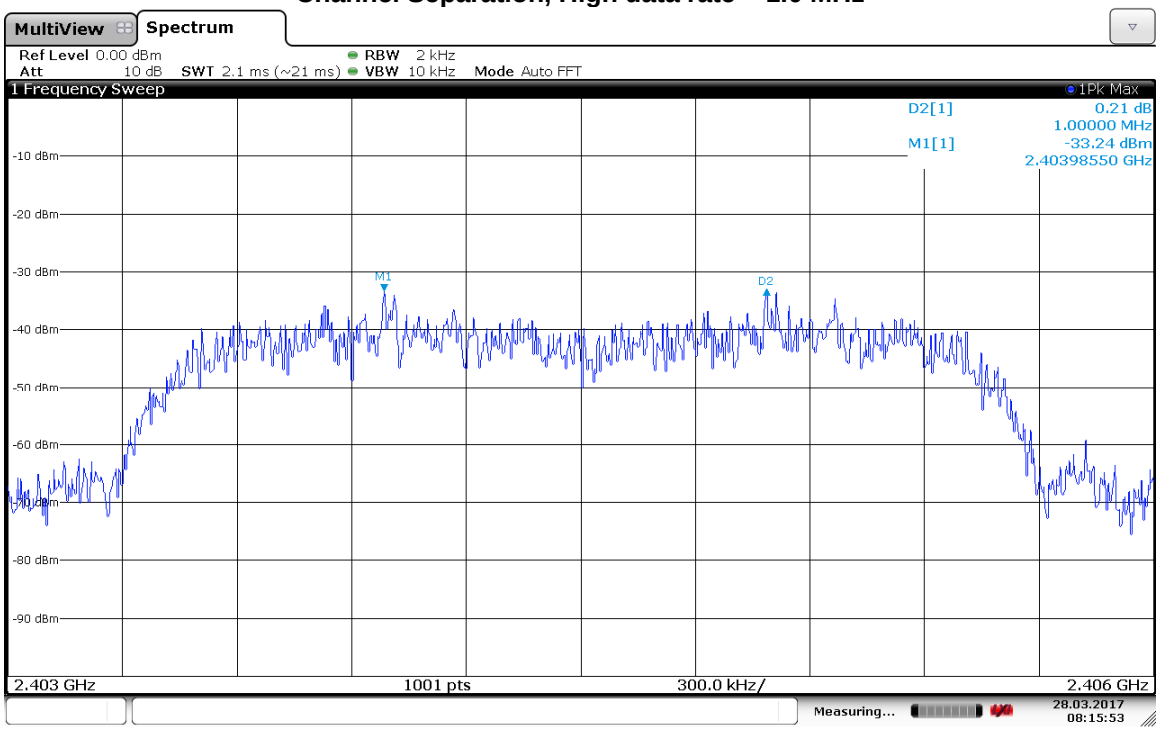
8.4 Plots/Data:

Channel Separation, Low data rate = 999.00 kHz



Date: 28.MAR.2017 07:24:29

Channel Separation, High data rate = 1.0 MHz



Date: 28.MAR.2017 08:15:53

Test Personnel:	Naga Suryadevara N.S	Test Date:	03/28/2017
Supervising/Reviewing Engineer: (Where Applicable)	N/A		
Product Standard:	FCC Part 15 Subpart C (15.247)	Limit Applied:	See section 8.3
Input Voltage:	120VAC 60Hz, Internal Battery		
Pretest Verification w/ Ambient Signals or BB Source:	Yes – Signal generator	Ambient Temperature:	20 ºC
		Relative Humidity:	17 %
		Atmospheric Pressure:	1003 mbars

9 Number of Hopping Channels

9.1 Method

Tests are performed in accordance with FCC Part 15 Subpart C (15.247).

TEST SITE: EMC Lab

The EMC Lab has one Semi-anechoic Chamber and one Shielded Chamber. AC Mains Power is available at 120, 230, and 277 Single Phase; 208, 400, and 480 3-Phase. Large reference ground-planes are installed in the general lab area to facilitate EMC work not requiring a shielded environment.

9.2 Test Equipment Used:

Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due
DAV004'	Weather Station	Davis Instruments	7400	PE80529A61A	05/02/2016	05/02/2017
CBLSHF203'	Cable, SMA - SMA, 9kHz-40GHz, Cable Kit 4	Sucoflex (Huber Suhn	104PE	CBLSHF203	09/08/2016	09/08/2017
ROS005'	ETSI Test System	Rhode & Schwartz	TS8997	N/A	09/15/2016	09/15/2017

Software Utilized:

Name	Manufacturer	Version
None		

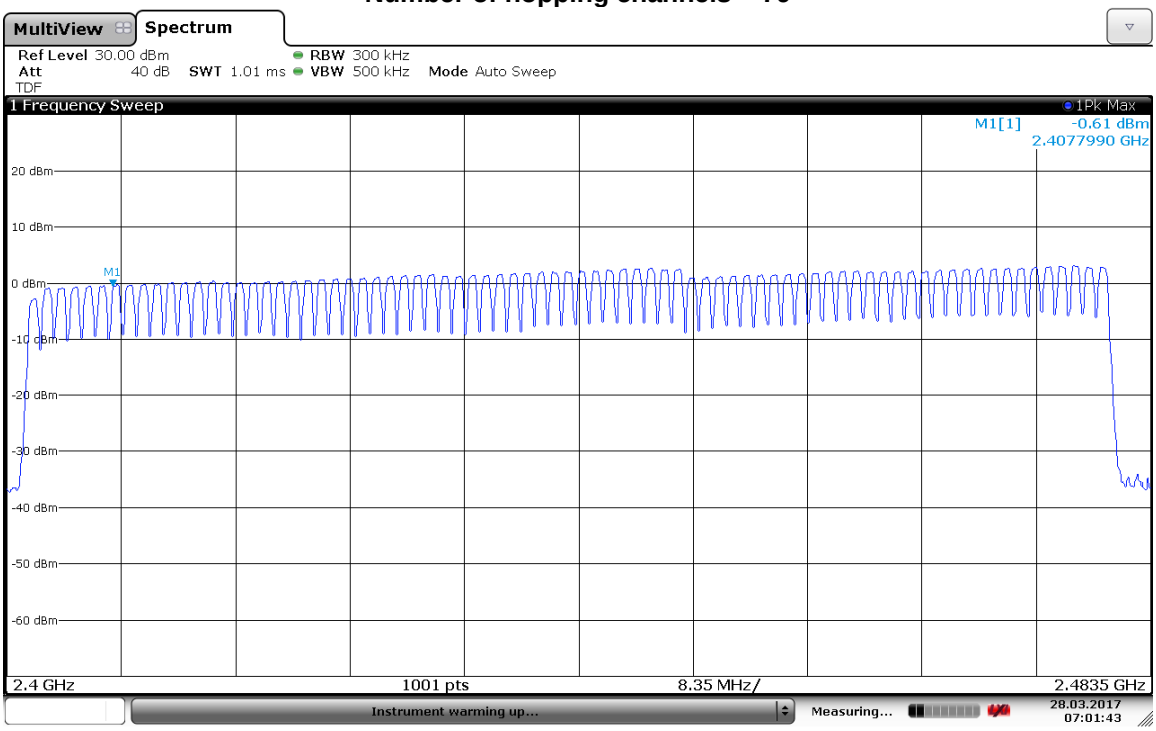
9.3 Results:

The sample tested was found to Comply. Systems operating in the 2400-2483.5 MHz band shall use at least 15 hopping channels.

The sample has 79 hopping channels.

9.4 Plots/Data:

Number of hopping channels = 79



Date: 28.MAR.2017 07:01:43

Test Personnel:	Naga Suryadevara NS	Test Date:	03/28/2017
Supervising/Reviewing Engineer: (Where Applicable)	N/A		
Product Standard:	FCC Part 15 Subpart C (15.247)	Limit Applied:	See section 9.3
Input Voltage:	120VAC 60Hz, Internal Battery		
Pretest Verification w/ Ambient Signals or BB Source:	Yes – Signal generator	Ambient Temperature:	20 ºC
		Relative Humidity:	17 %
		Atmospheric Pressure:	1003 mbars

10 Average Channel Occupancy Time

10.1 Method

Tests are performed in accordance with FCC Part 15 Subpart C (15.247).

TEST SITE: EMC Lab

The EMC Lab has one Semi-anechoic Chamber and one Shielded Chamber. AC Mains Power is available at 120, 230, and 277 Single Phase; 208, 400, and 480 3-Phase. Large reference ground-planes are installed in the general lab area to facilitate EMC work not requiring a shielded environment.

10.2 Test Equipment Used:

Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due
DAV004'	Weather Station	Davis Instruments	7400	PE80529A61A	05/02/2016	05/02/2017
CBLSHF203'	Cable, SMA - SMA, 9kHz-40GHz, Cable Kit 4	Sucoflex (Huber Suhn	104PE	CBLSHF203	09/08/2016	09/08/2017
ROS005'	ETSI Test System	Rhode & Schwartz	TS8997	N/A	09/15/2016	09/15/2017

Software Utilized:

Name	Manufacturer	Version
None		

10.3 Results:

The sample tested was found to Comply. For systems operating in the 2400-2483.5 MHz band, the average time of occupancy on any channel shall not be greater than 0.4 second within a period of 0.4 second multiplied by the number of hopping channels employed

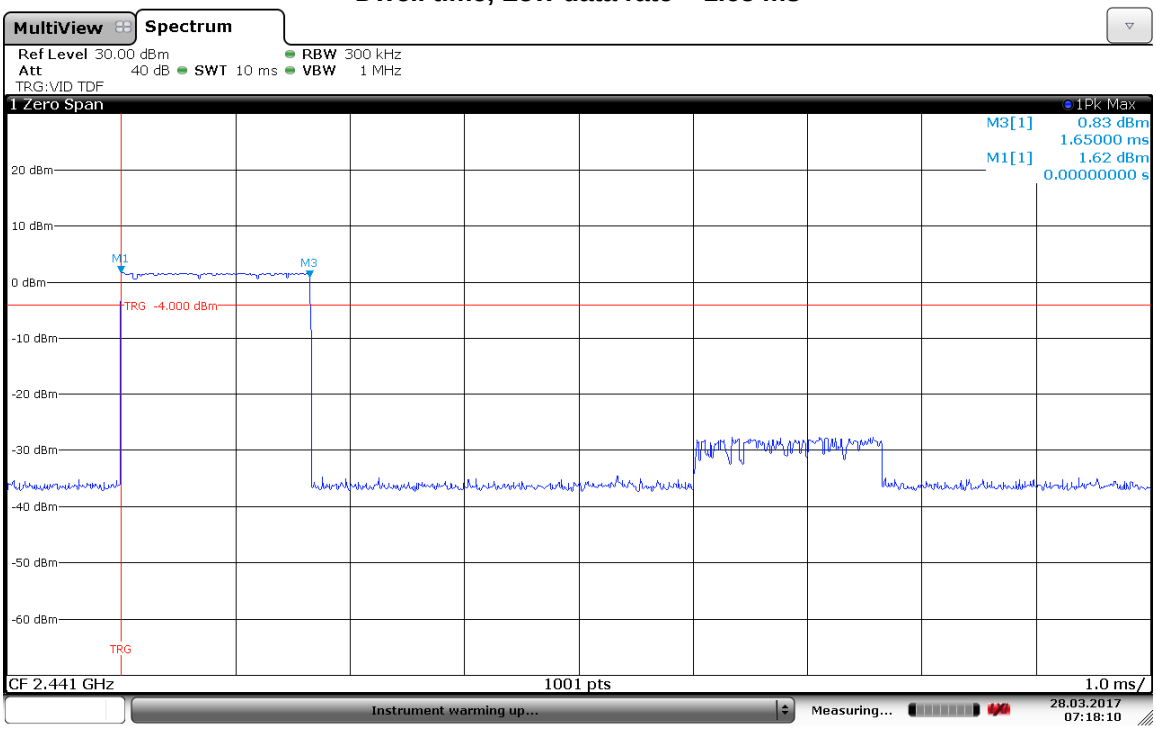
Since the radio employs 79 channels, Occupancy time was calculated during the period of 0.4 * 79 = 31.6 sec.

Occupancy Time @ low data rate = 0.00165 * 16 *10 = 0.264 sec

Occupancy Time @ high data rate = 0.00288 * 10 *10 = 0.288 sec

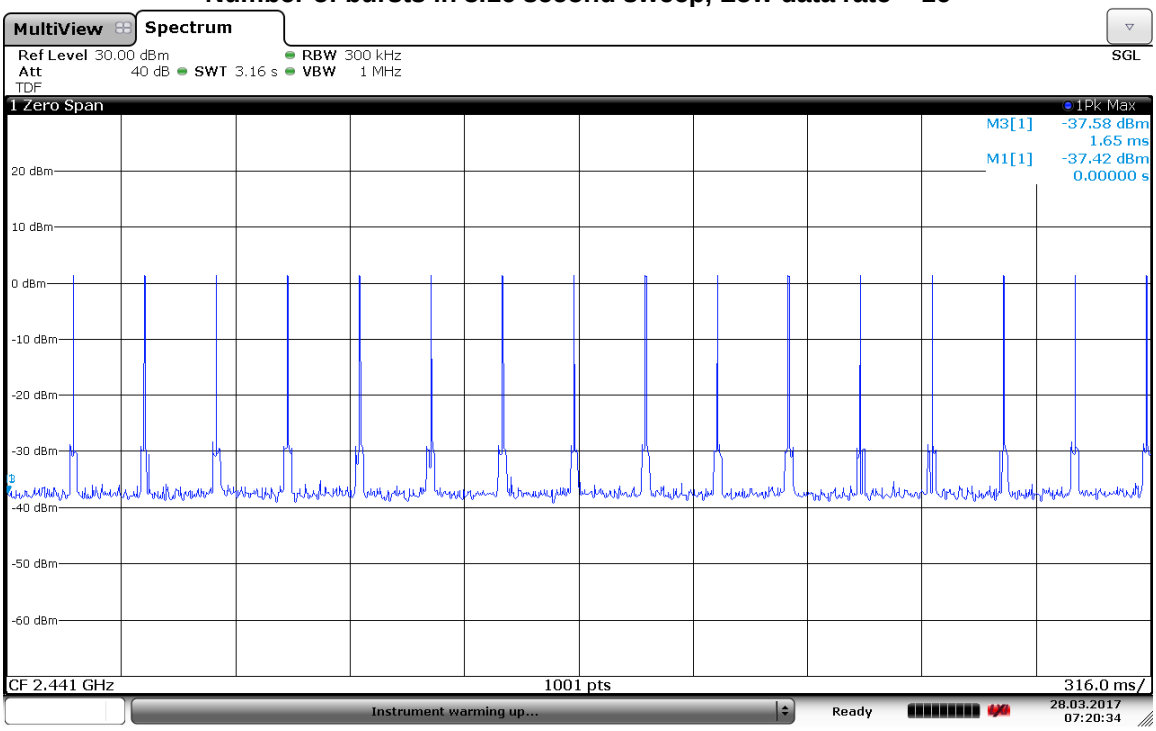
10.4 Plots/Data:

Dwell time, Low data rate = 1.65 ms



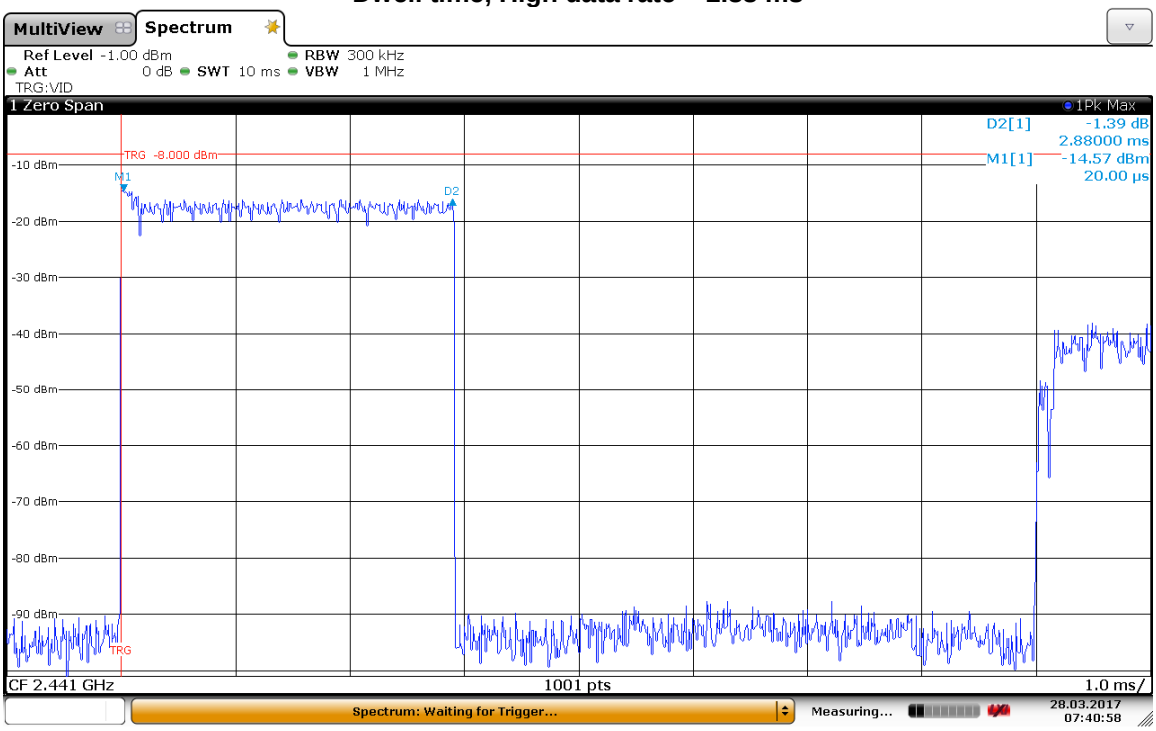
Date: 28.MAR.2017 07:18:10

Number of bursts in 3.16 second sweep, Low data rate = 16



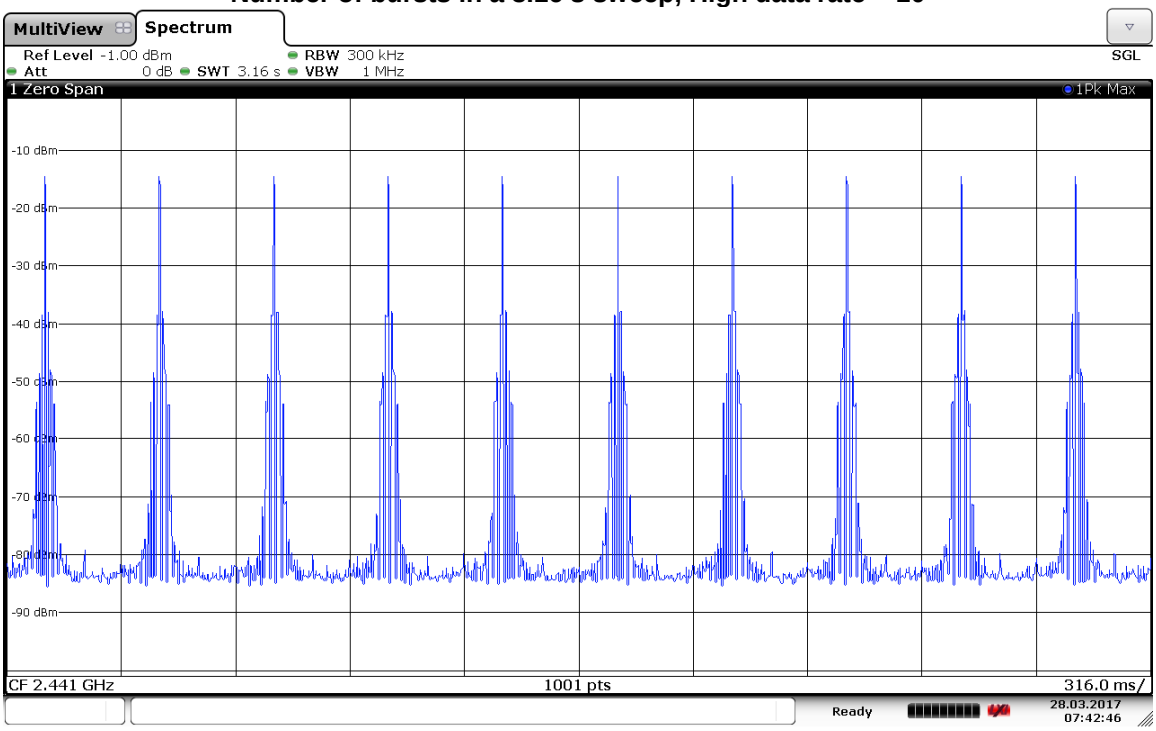
Date: 28.MAR.2017 07:20:34

Dwell time, High data rate = 2.88 ms



Date: 28.MAR.2017 07:40:58

Number of bursts in a 3.16 s sweep, High data rate = 10



Date: 28.MAR.2017 07:42:46

Test Personnel:	Naga Suryadevara N.S	Test Date:	03/28/2017
Supervising/Reviewing Engineer: (Where Applicable)	N/A		
Product Standard:	FCC Part 15 Subpart C (15.247)	Limit Applied:	See section 10.3
Input Voltage:	120VAC 60Hz, Internal Battery		
Pretest Verification w/ Ambient Signals or BB Source:	Yes – Signal generator	Ambient Temperature:	20 ºC
		Relative Humidity:	17 %
		Atmospheric Pressure:	1003 mbars

11 Out of Band Conducted Emissions

11.1 Method

Tests are performed in accordance with FCC Part 15 Subpart C (15.247) and RSS 247.

TEST SITE: EMC Lab

The EMC Lab has one Semi-anechoic Chamber and one Shielded Chamber. AC Mains Power is available at 120, 230, and 277 Single Phase; 208, 400, and 480 3-Phase. Large reference ground-planes are installed in the general lab area to facilitate EMC work not requiring a shielded environment.

11.2 Test Equipment Used:

Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due
DAV004'	Weather Station	Davis Instruments	7400	PE80529A61A	05/02/2016	05/02/2017
CBLSHF203'	Cable, SMA - SMA, 9kHz-40GHz, Cable Kit 4	Sucoflex (Huber Suhn	104PE	CBLSHF203	09/08/2016	09/08/2017
ROS005'	ETSI Test System	Rhode & Schwartz	TS8997	N/A	09/15/2016	09/15/2017

Software Utilized:

Name	Manufacturer	Version
None		

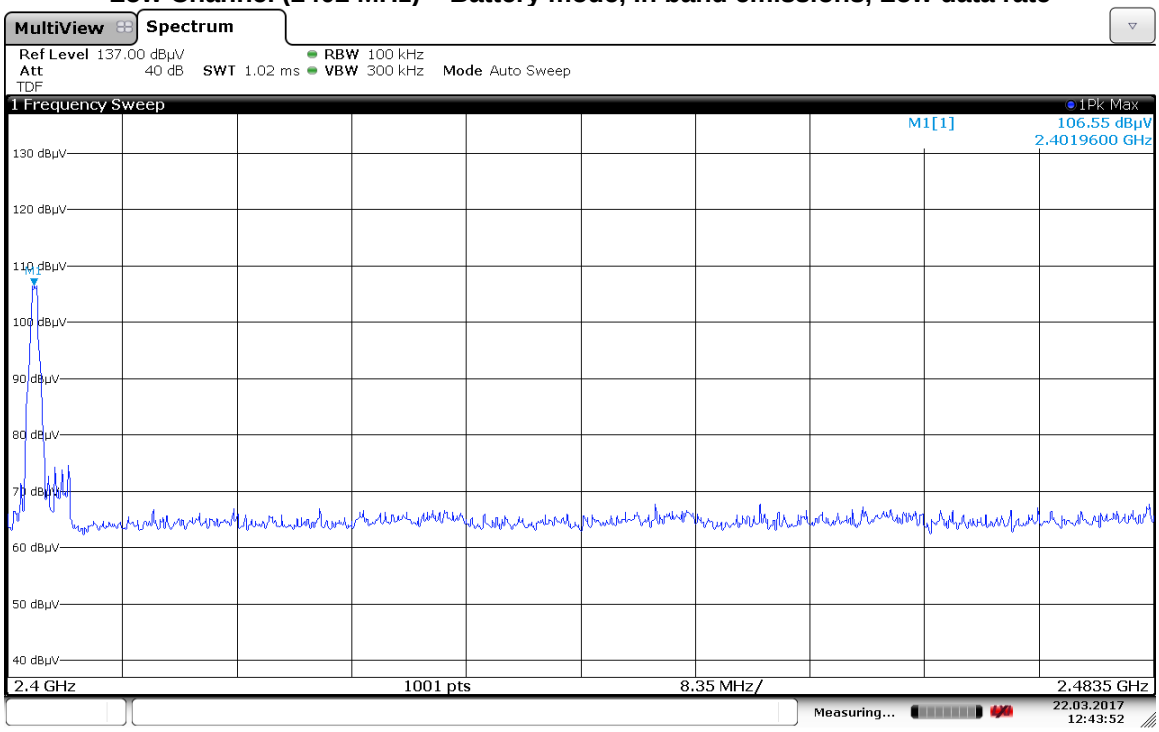
11.3 Results:

The sample tested was found to Comply. In any 100 kHz bandwidth outside the EUT pass-band, the RF power shall be at least 20 dB below that of the maximum in-band 100 kHz emission.

All emissions measured were 20 dB below fundamental as indicated in the plots in sections 11.4.

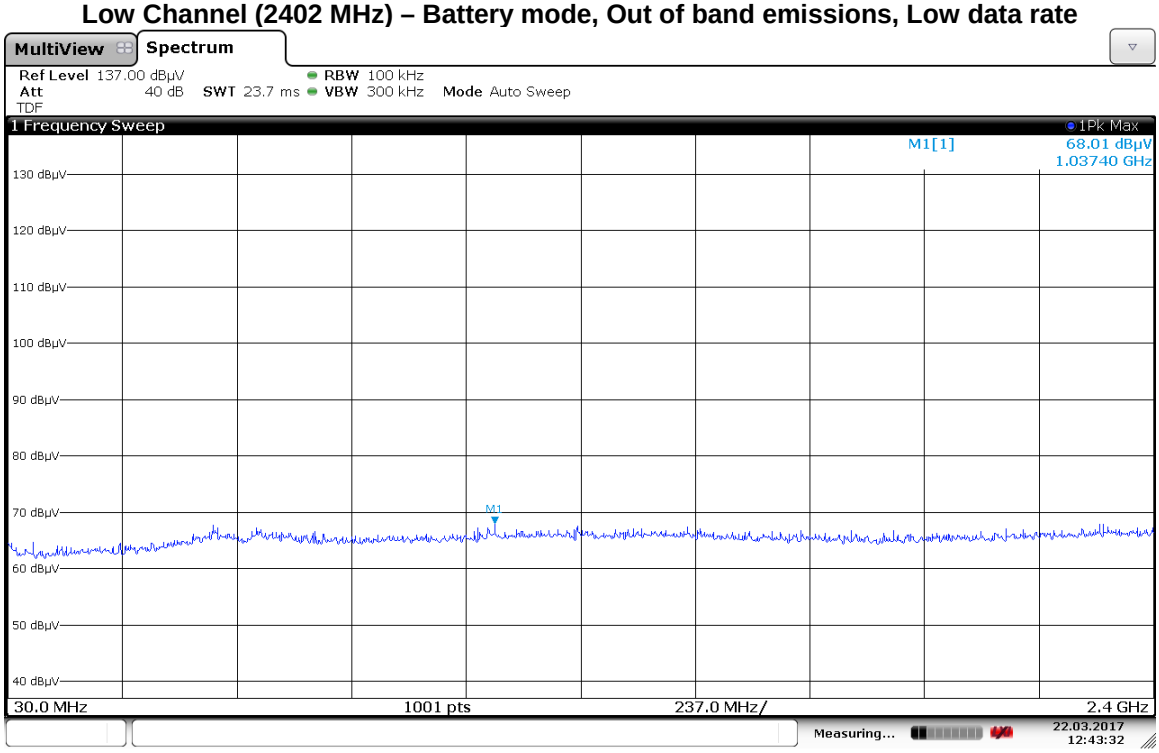
11.4 Plots/Data:

Low Channel (2402 MHz) – Battery mode, In band emissions, Low data rate



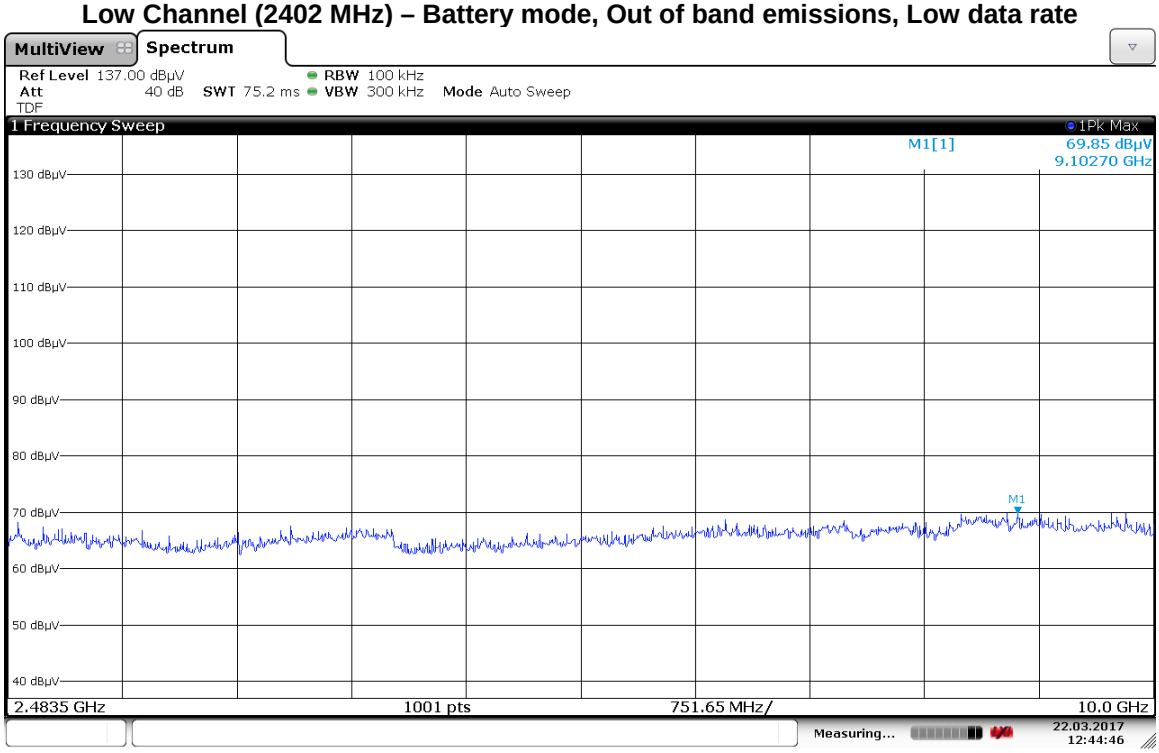
Date: 22.MAR.2017 12:43:52

Low Channel (2402 MHz) – Battery mode, Out of band emissions, Low data rate



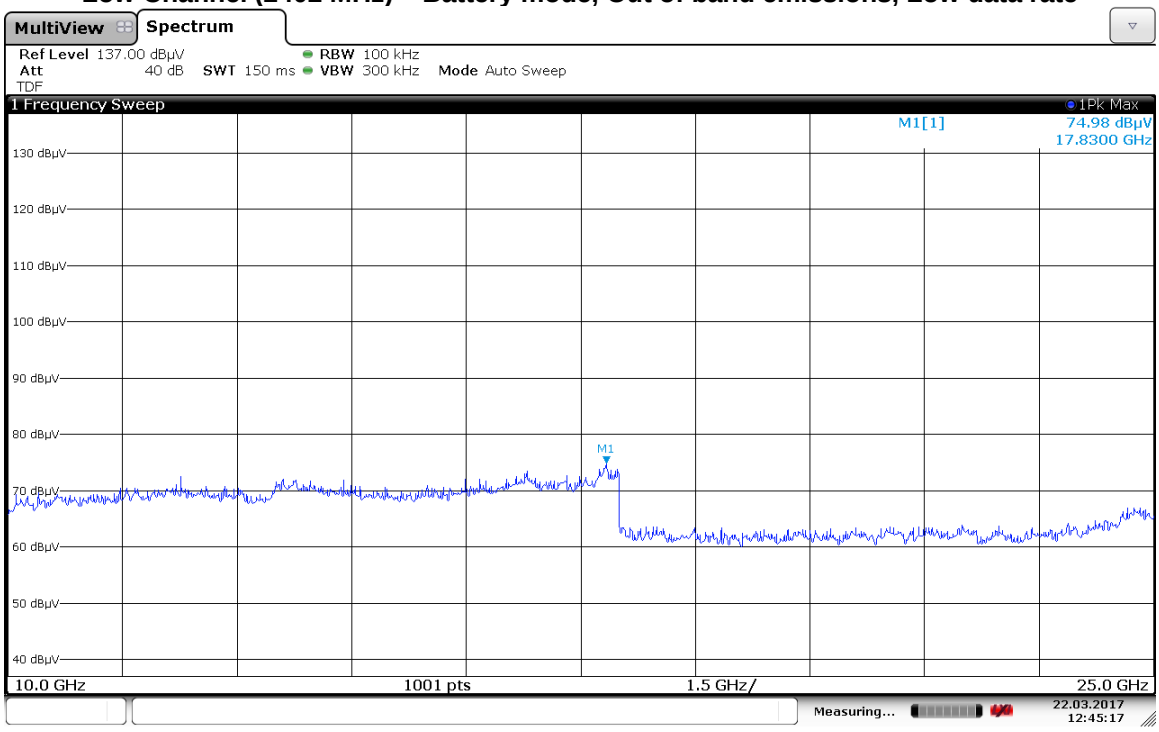
Date: 22.MAR.2017 12:43:31

Low Channel (2402 MHz) – Battery mode, Out of band emissions, Low data rate



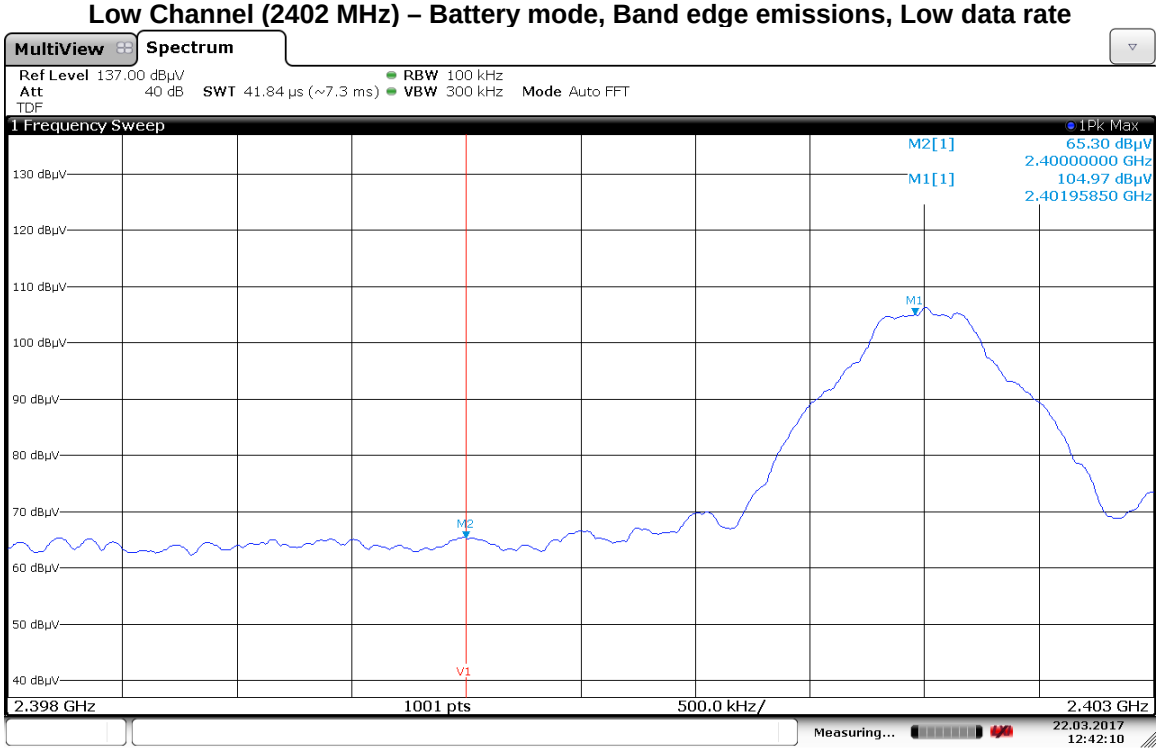
Date: 22.MAR.2017 12:44:45

Low Channel (2402 MHz) – Battery mode, Out of band emissions, Low data rate



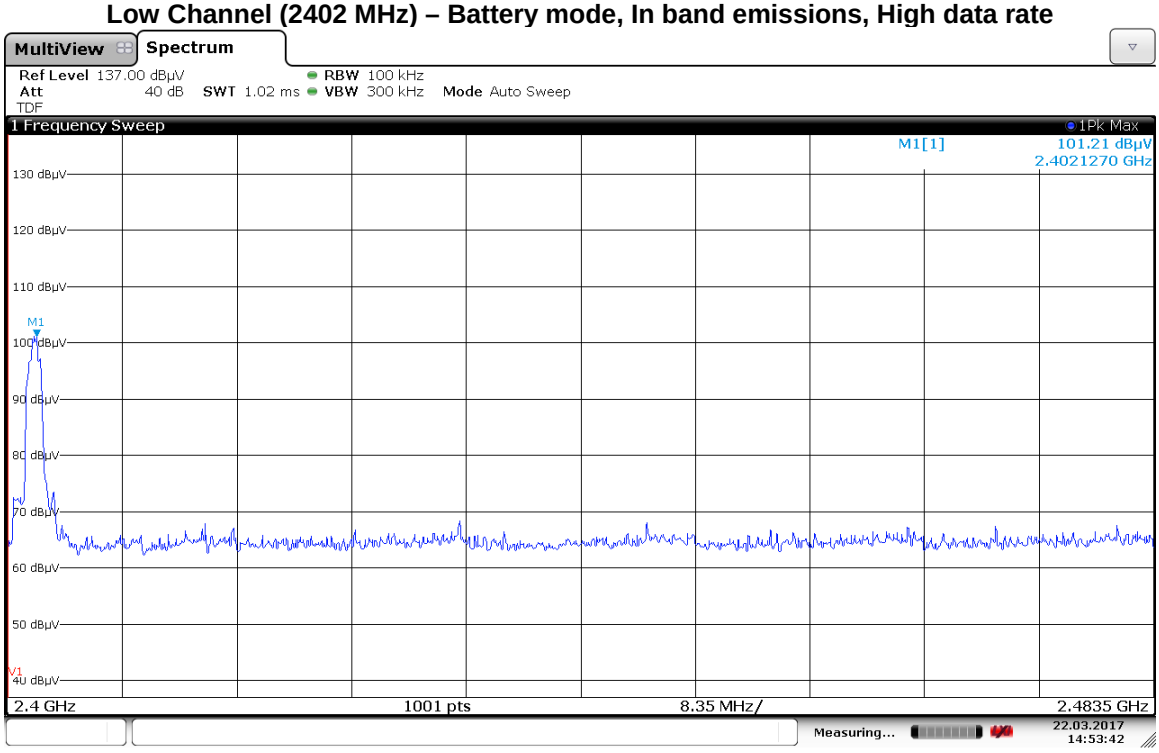
Date: 22.MAR.2017 12:45:17

Low Channel (2402 MHz) – Battery mode, Band edge emissions, Low data rate



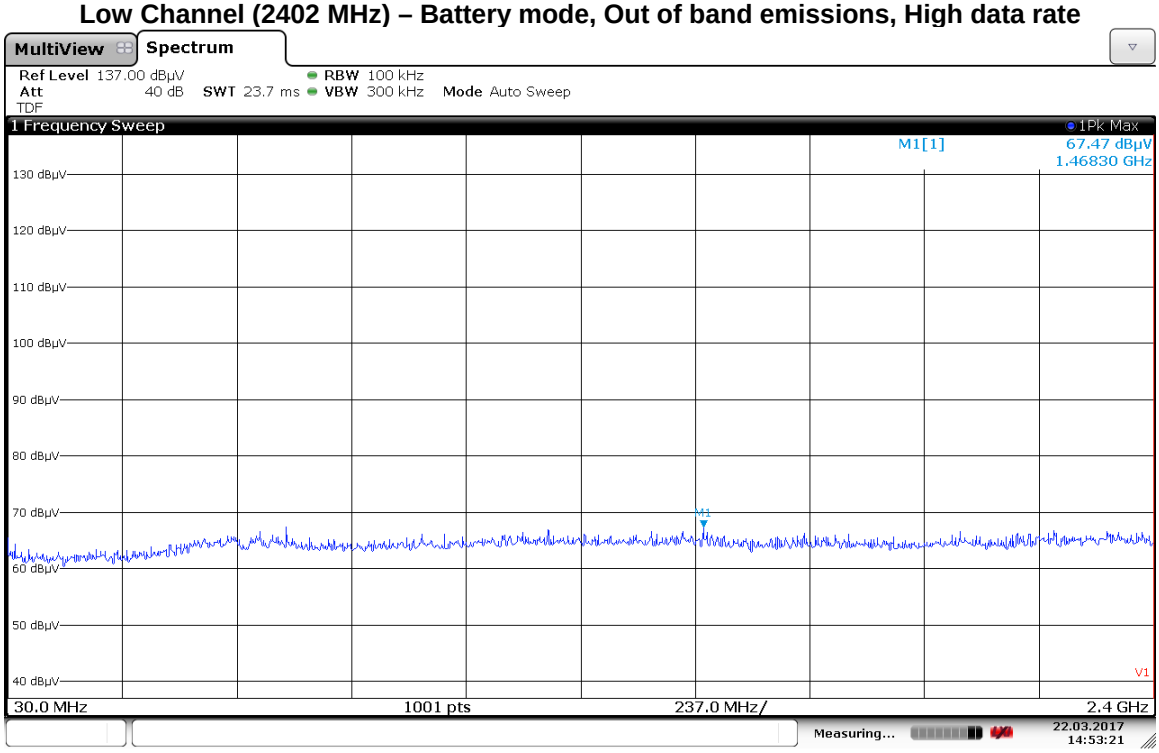
Date: 22.MAR.2017 12:42:10

Low Channel (2402 MHz) – Battery mode, In band emissions, High data rate



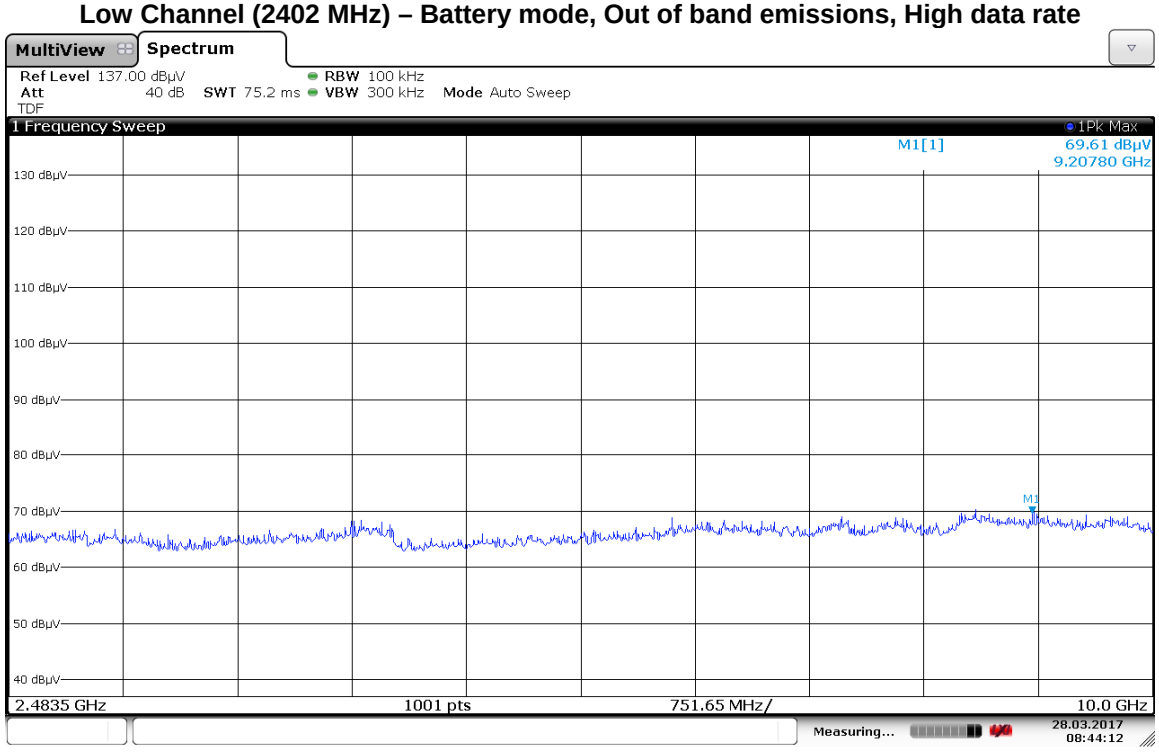
Date: 22.MAR.2017 14:53:42

Low Channel (2402 MHz) – Battery mode, Out of band emissions, High data rate



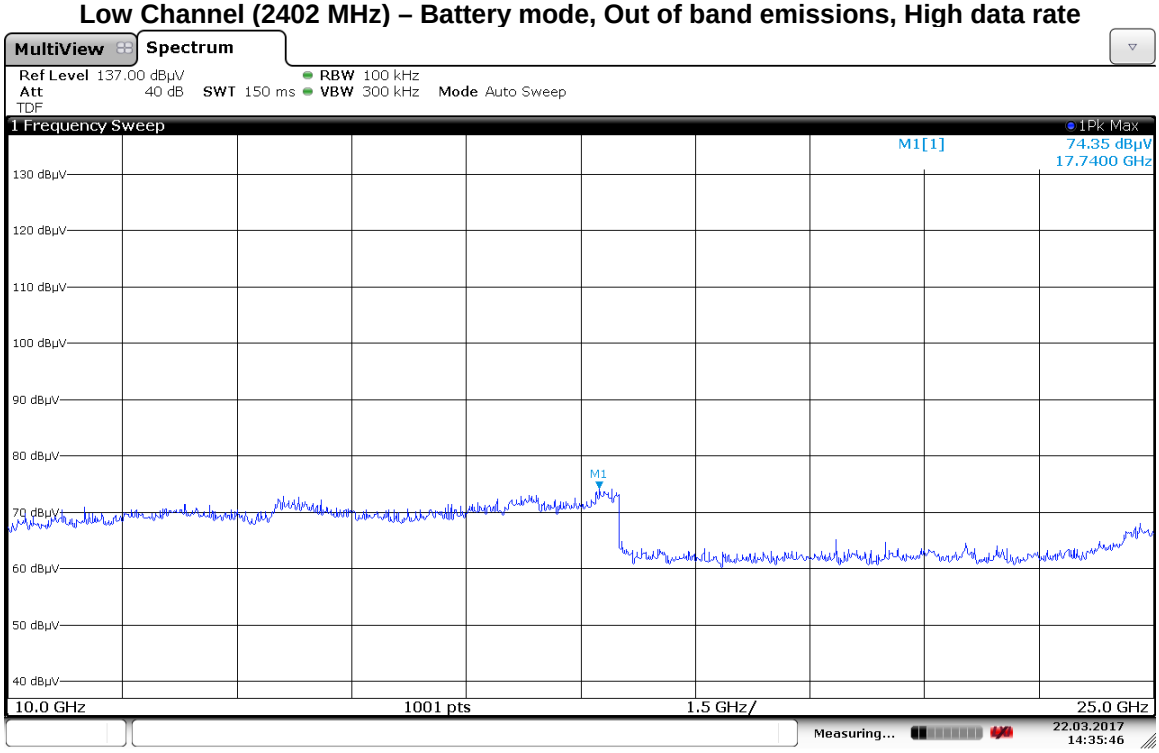
Date: 22.MAR.2017 14:53:21

Low Channel (2402 MHz) – Battery mode, Out of band emissions, High data rate



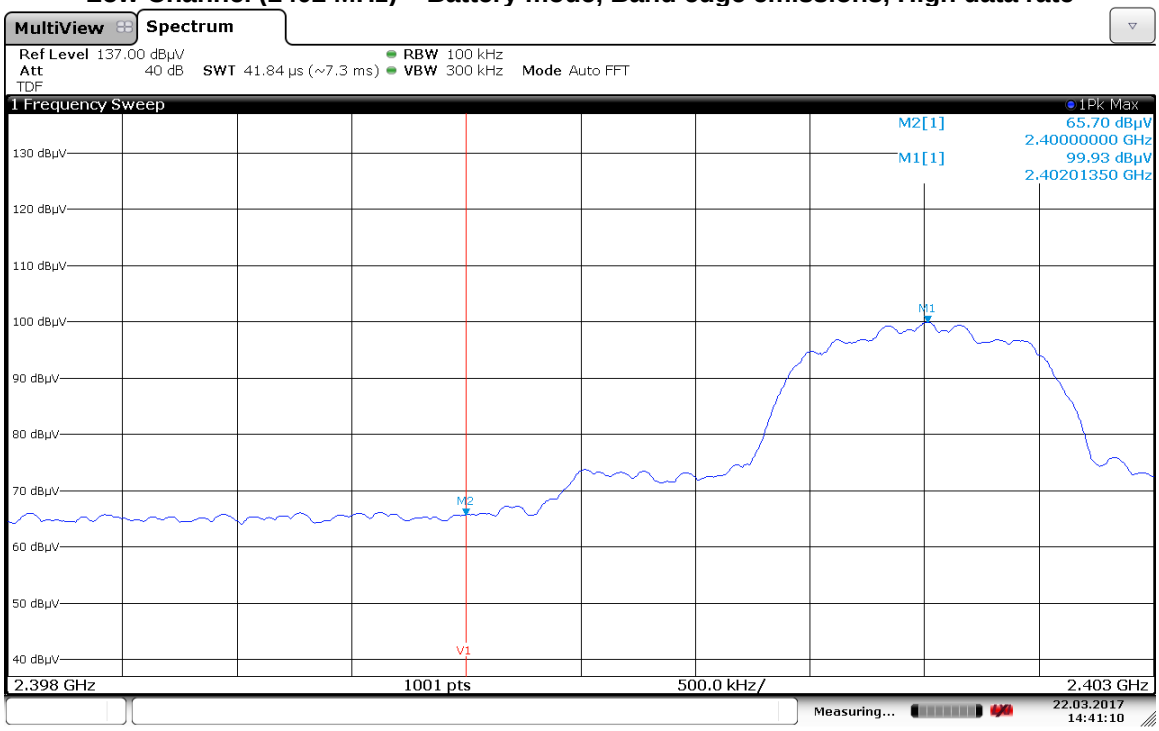
Date: 28.MAR.2017 08:44:12

Low Channel (2402 MHz) – Battery mode, Out of band emissions, High data rate



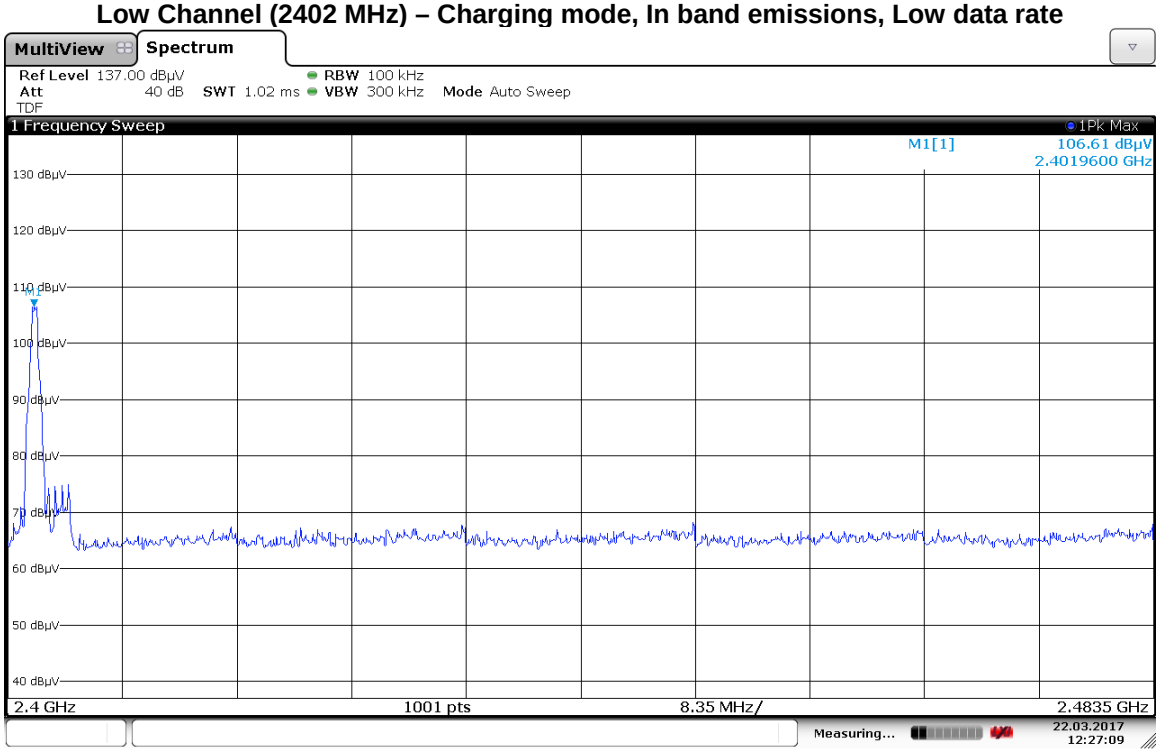
Date: 22.MAR.2017 14:35:45

Low Channel (2402 MHz) – Battery mode, Band edge emissions, High data rate



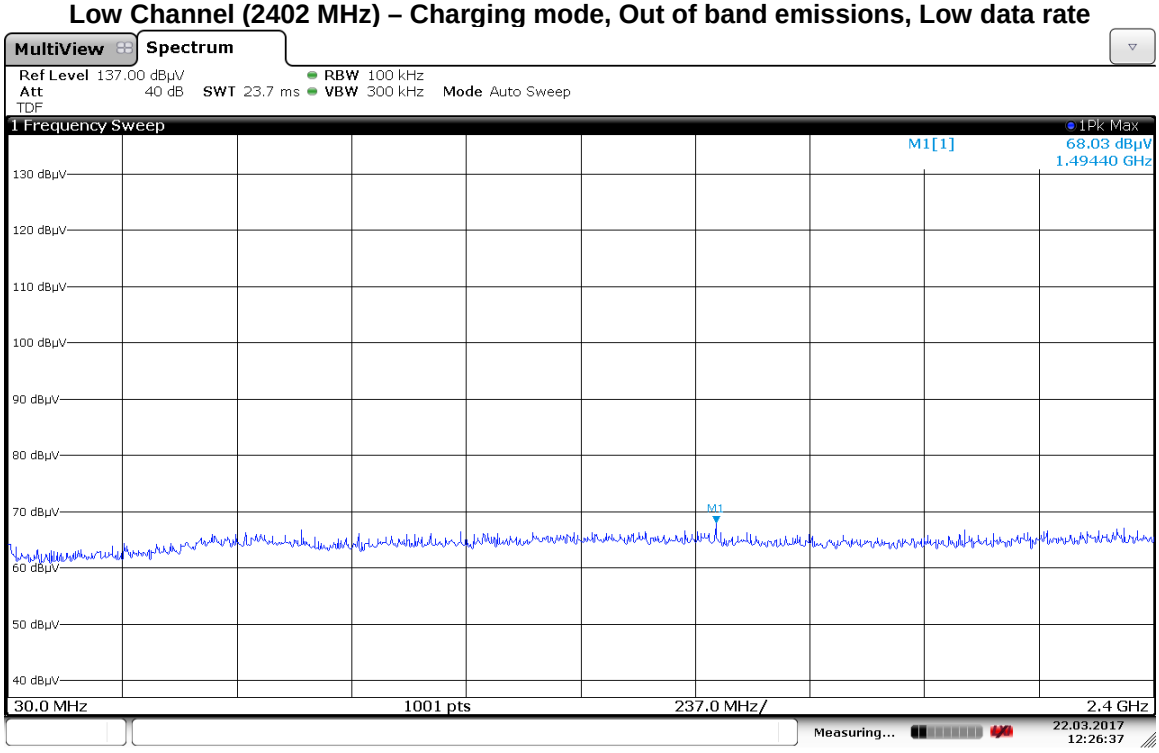
Date: 22.MAR.2017 14:41:10

Low Channel (2402 MHz) – Charging mode, In band emissions, Low data rate



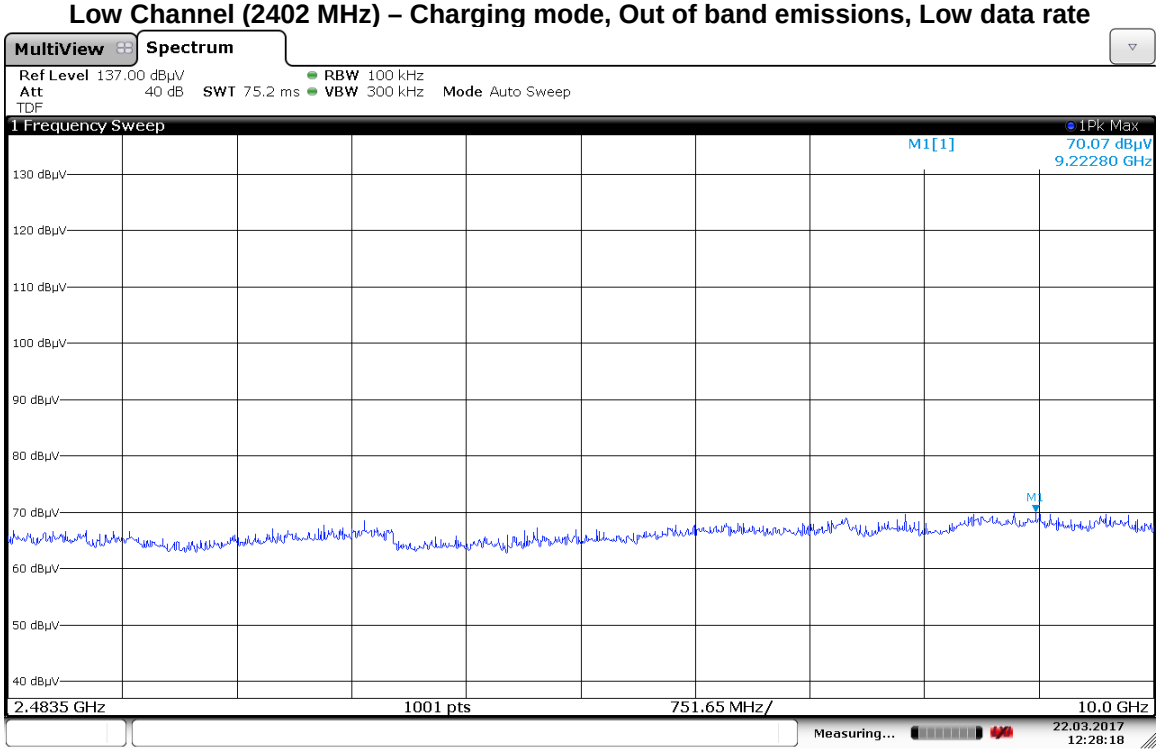
Date: 22.MAR.2017 12:27:09

Low Channel (2402 MHz) – Charging mode, Out of band emissions, Low data rate



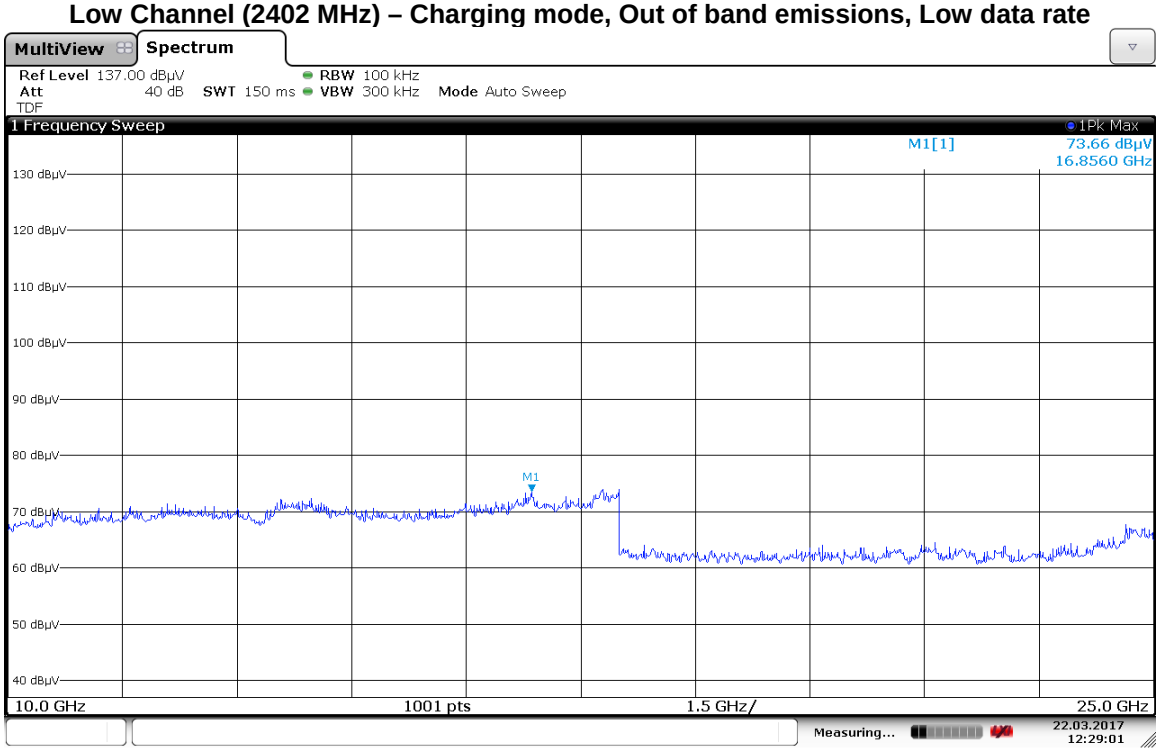
Date: 22.MAR.2017 12:26:36

Low Channel (2402 MHz) – Charging mode, Out of band emissions, Low data rate



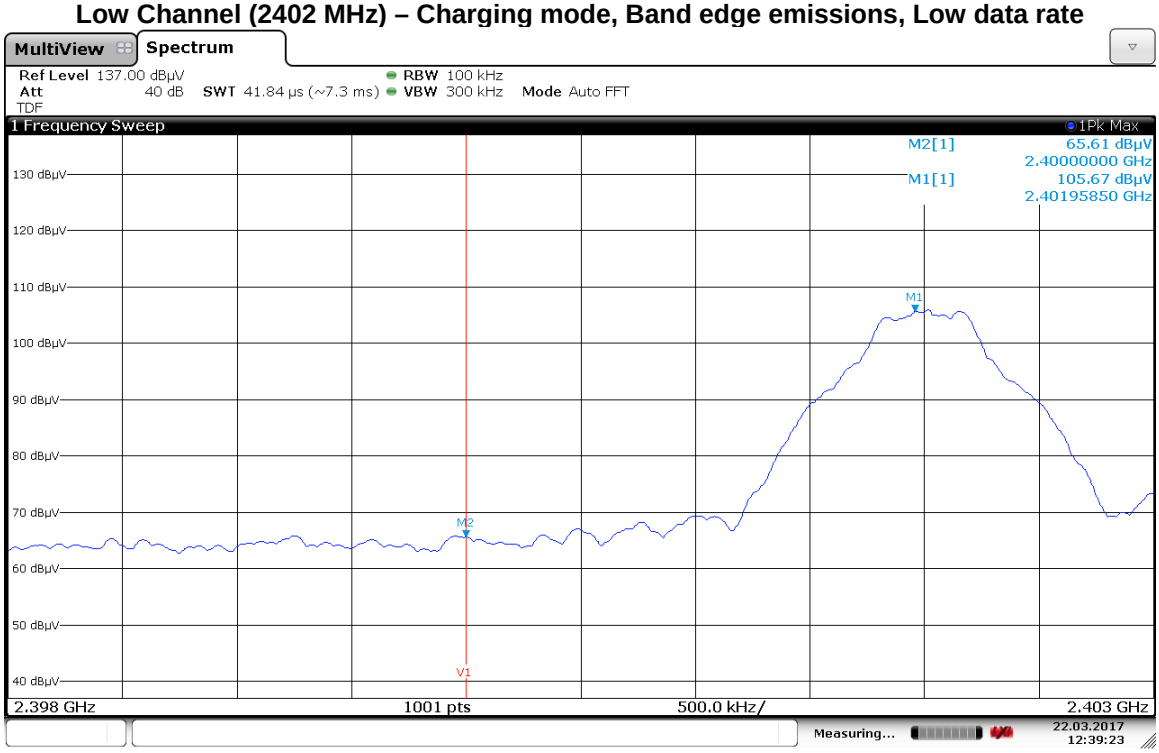
Date: 22.MAR.2017 12:28:18

Low Channel (2402 MHz) – Charging mode, Out of band emissions, Low data rate



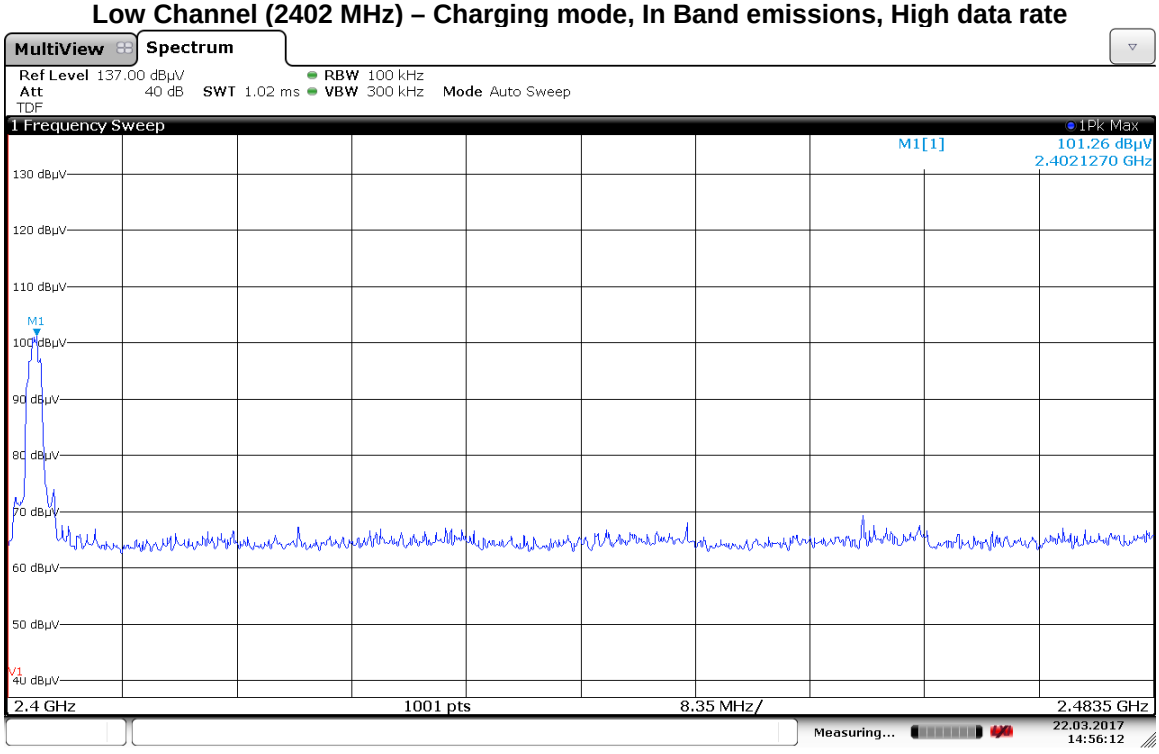
Date: 22.MAR.2017 12:29:00

Low Channel (2402 MHz) – Charging mode, Band edge emissions, Low data rate



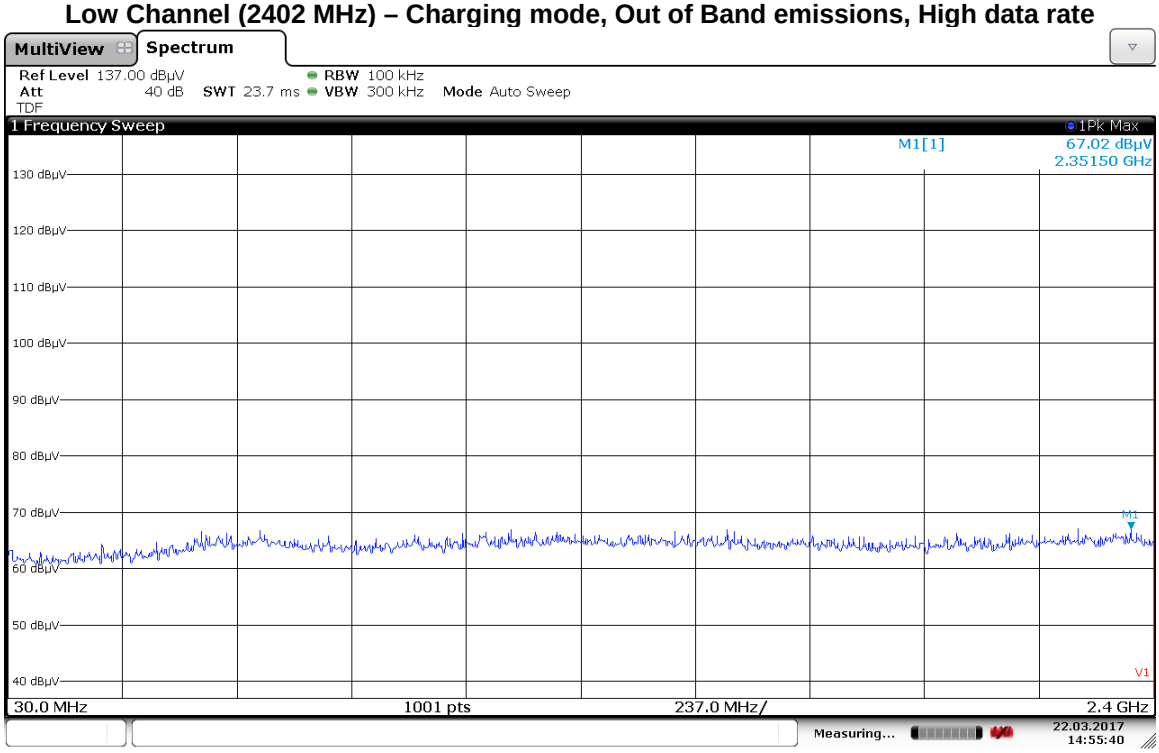
Date: 22.MAR.2017 12:39:23

Low Channel (2402 MHz) – Charging mode, In Band emissions, High data rate



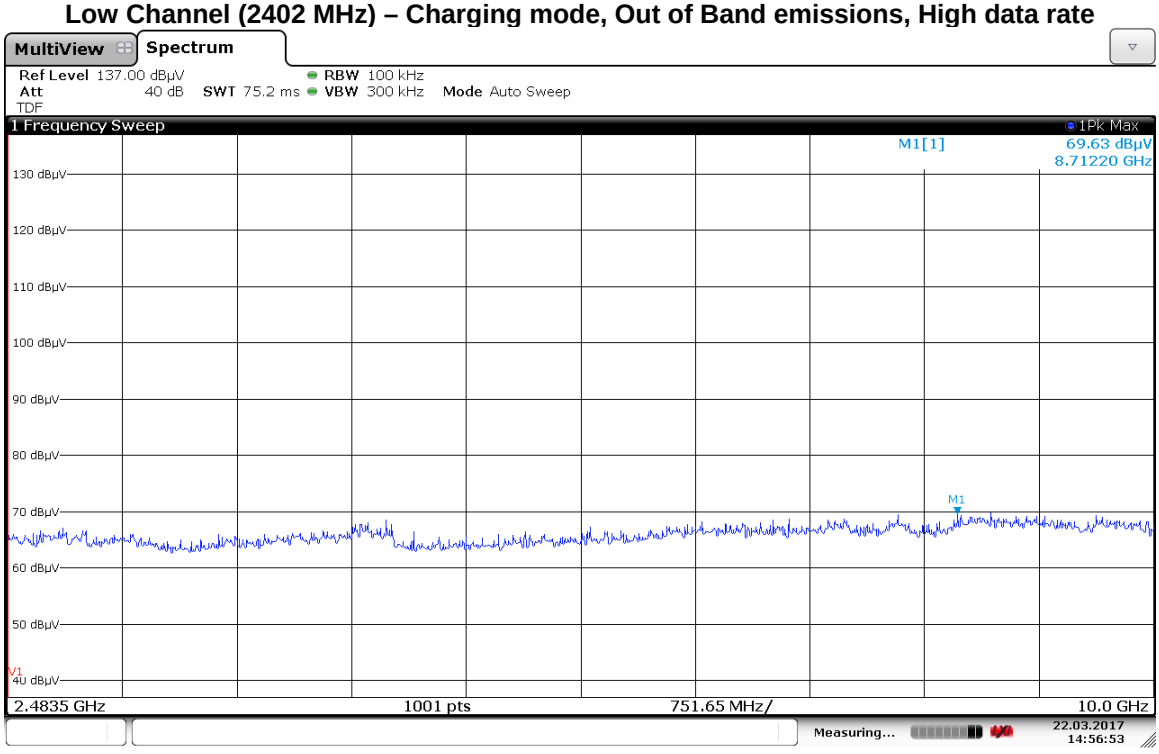
Date: 22.MAR.2017 14:56:11

Low Channel (2402 MHz) – Charging mode, Out of Band emissions, High data rate



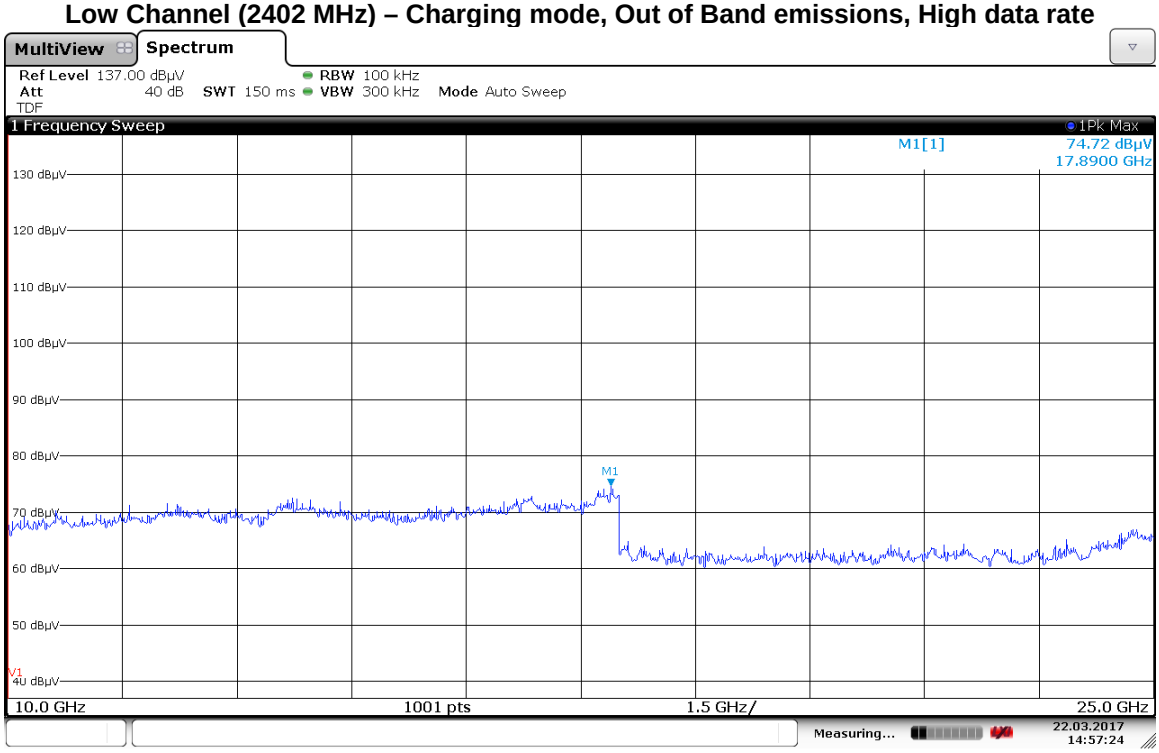
Date: 22.MAR.2017 14:55:40

Low Channel (2402 MHz) – Charging mode, Out of Band emissions, High data rate



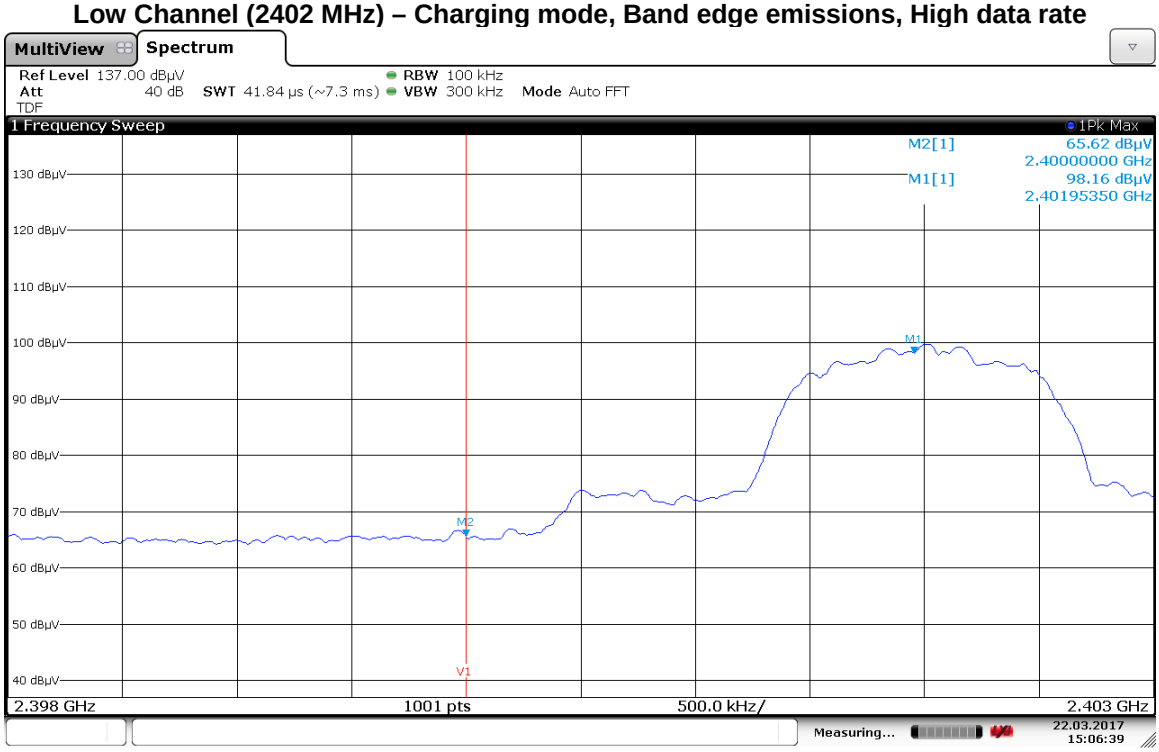
Date: 22.MAR.2017 14:56:53

Low Channel (2402 MHz) – Charging mode, Out of Band emissions, High data rate



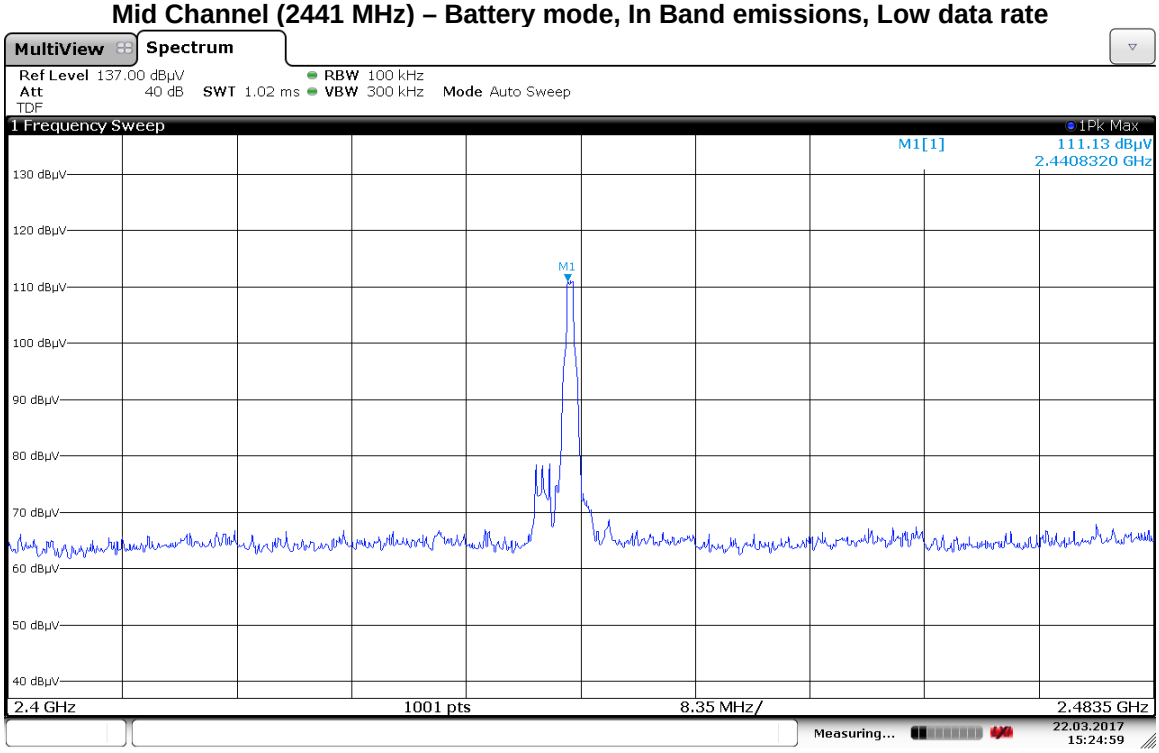
Date: 22.MAR.2017 14:57:24

Low Channel (2402 MHz) – Charging mode, Band edge emissions, High data rate



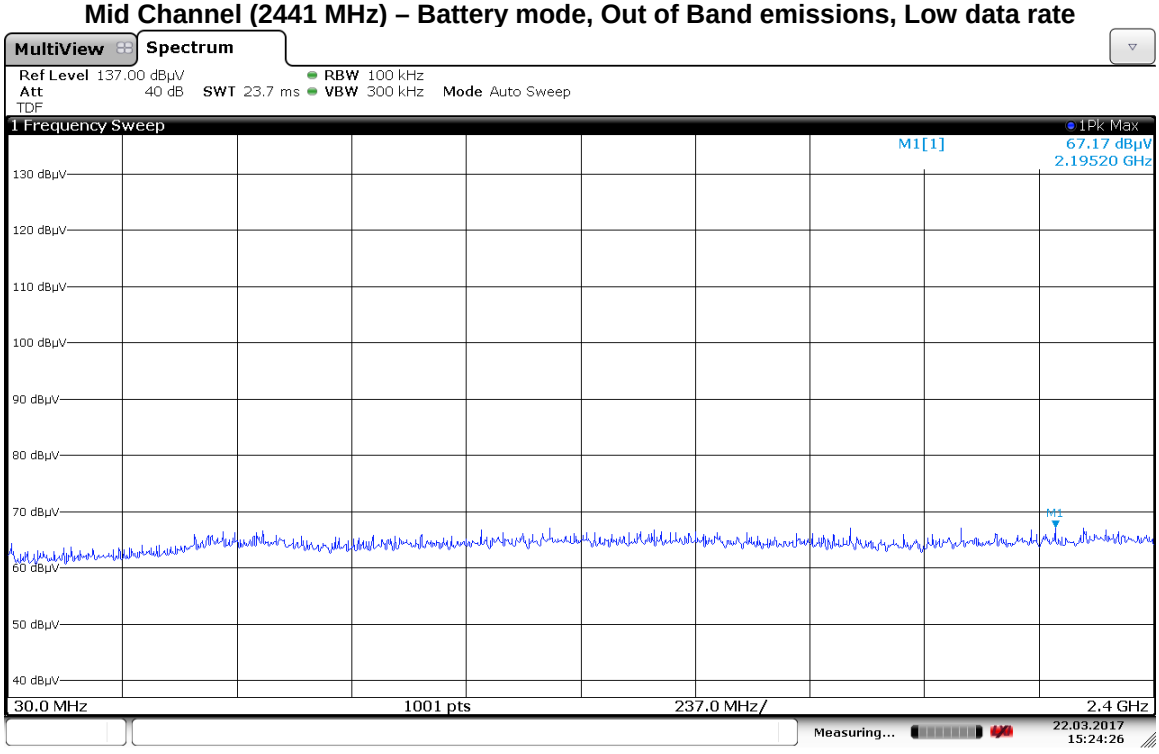
Date: 22.MAR.2017 15:06:39

Mid Channel (2441 MHz) – Battery mode, In Band emissions, Low data rate



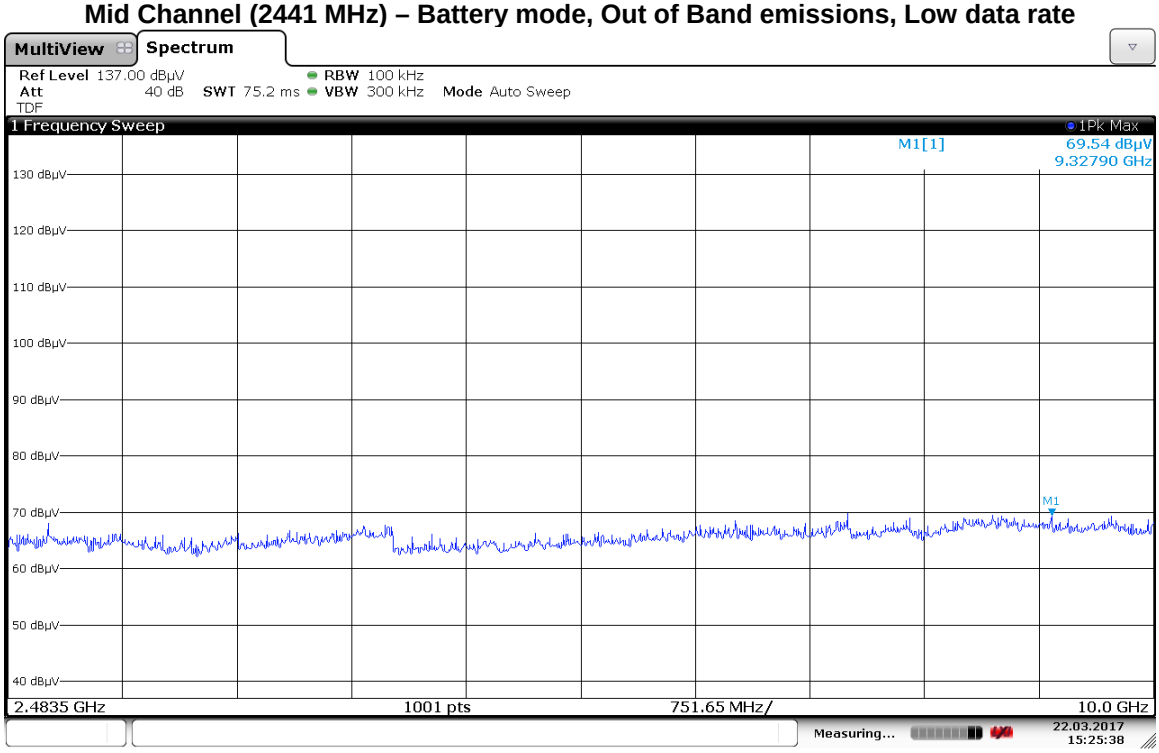
Date: 22.MAR.2017 15:25:00

Mid Channel (2441 MHz) – Battery mode, Out of Band emissions, Low data rate



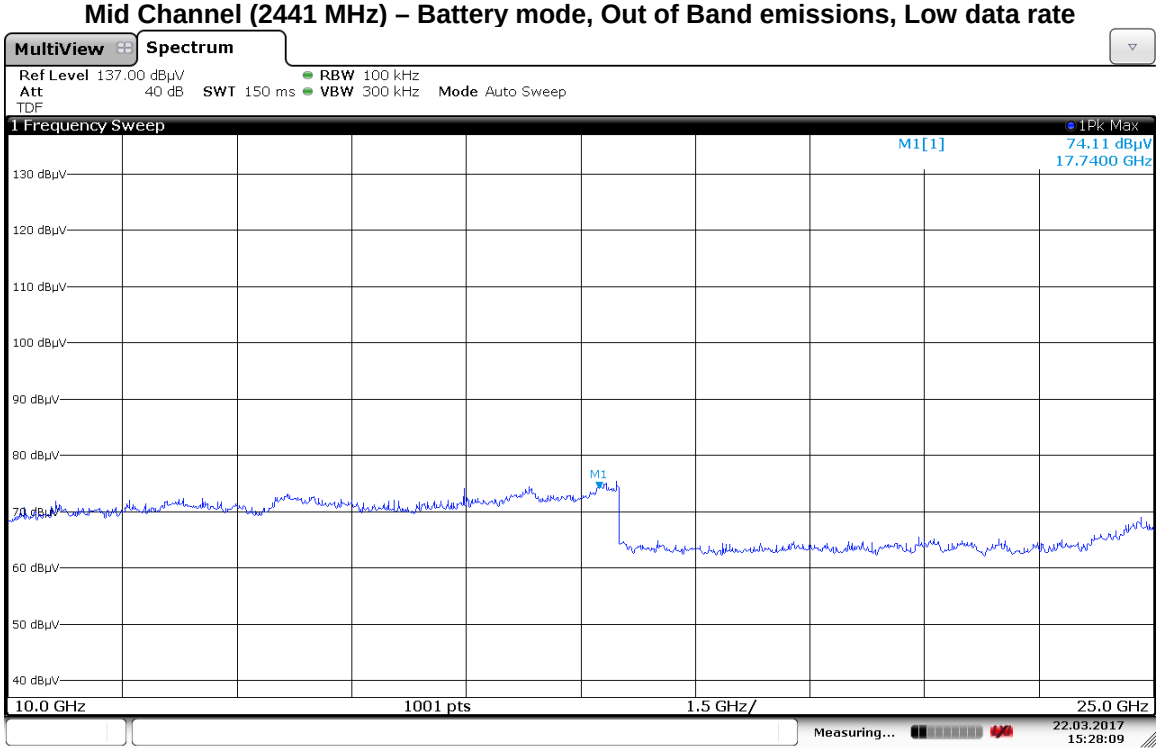
Date: 22.MAR.2017 15:24:26

Mid Channel (2441 MHz) – Battery mode, Out of Band emissions, Low data rate



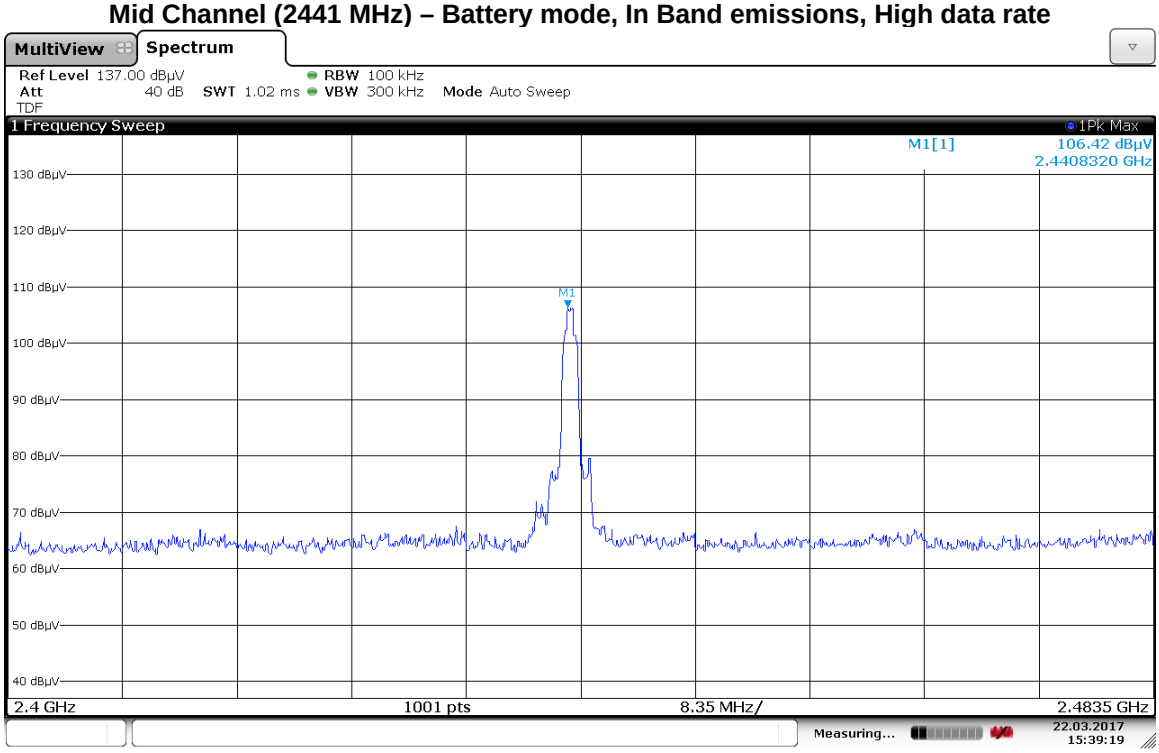
Date: 22.MAR.2017 15:25:37

Mid Channel (2441 MHz) – Battery mode, Out of Band emissions, Low data rate



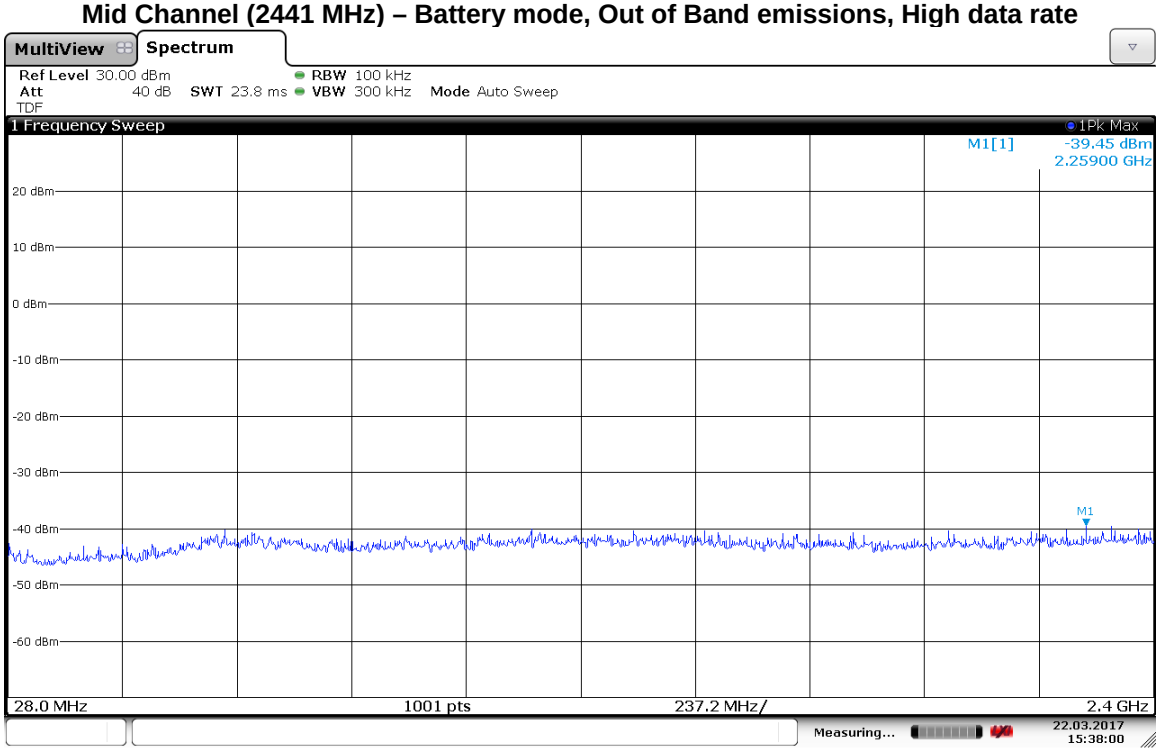
Date: 22.MAR.2017 15:28:09

Mid Channel (2441 MHz) – Battery mode, In Band emissions, High data rate



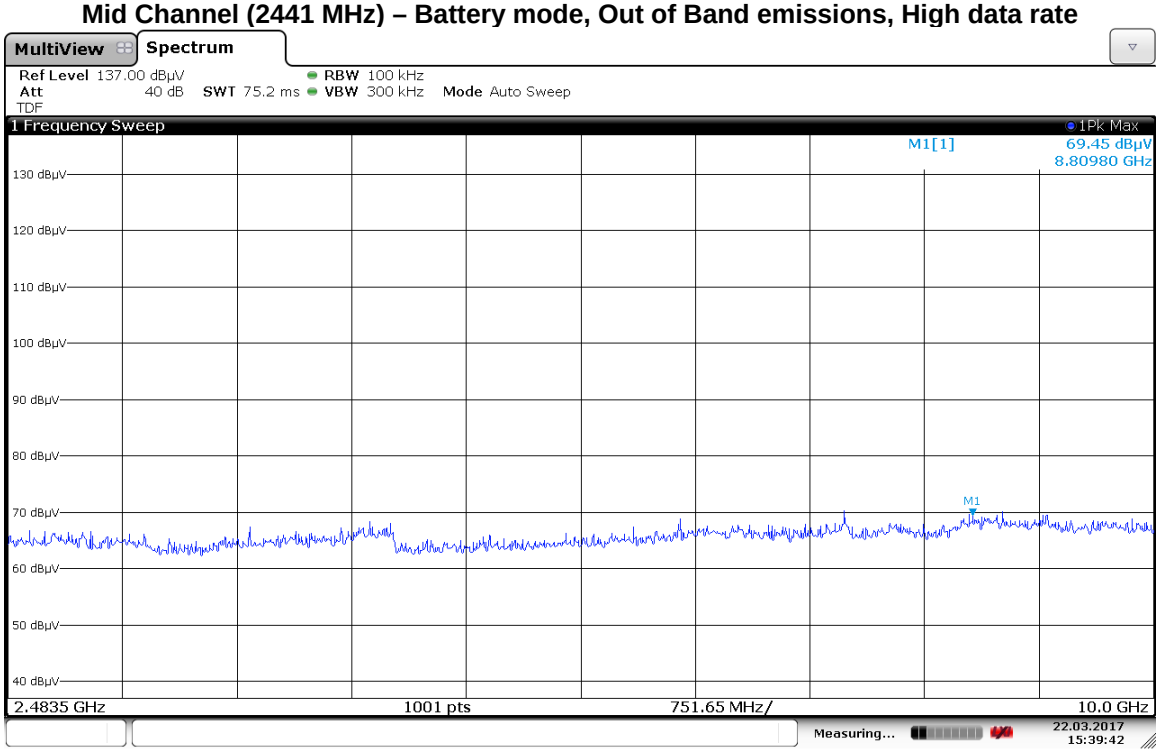
Date: 22.MAR.2017 15:39:18

Mid Channel (2441 MHz) – Battery mode, Out of Band emissions, High data rate



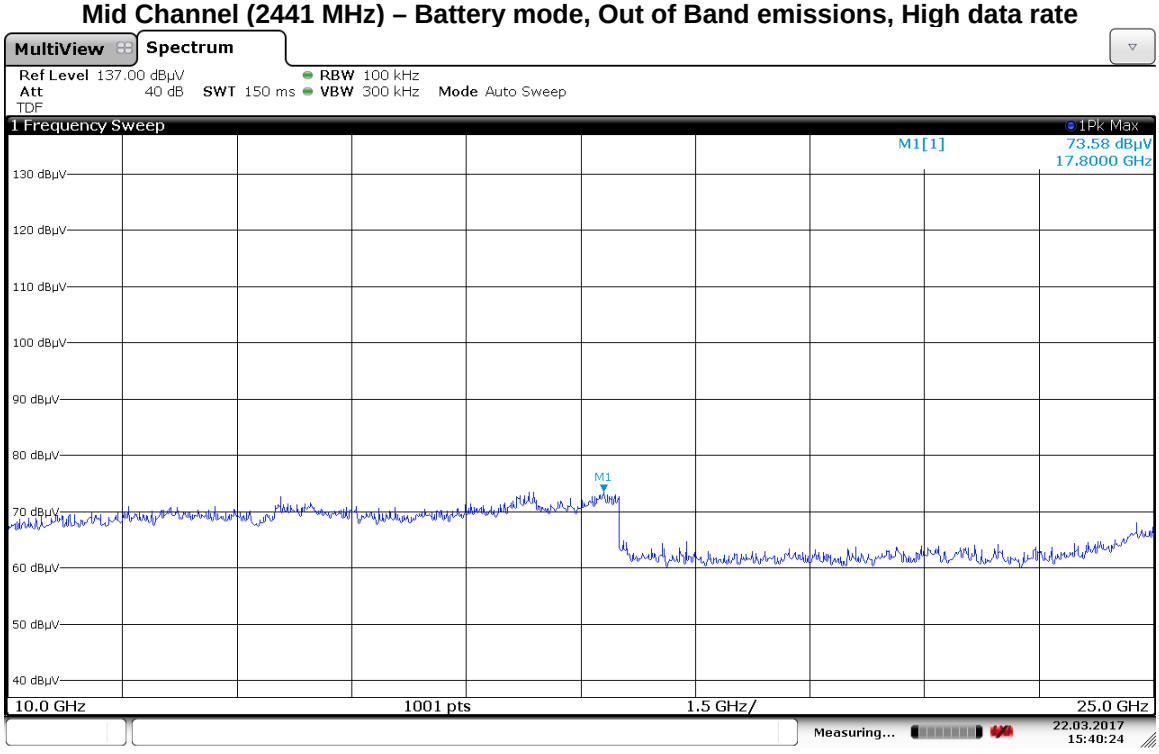
Date: 22.MAR.2017 15:37:59

Mid Channel (2441 MHz) – Battery mode, Out of Band emissions, High data rate



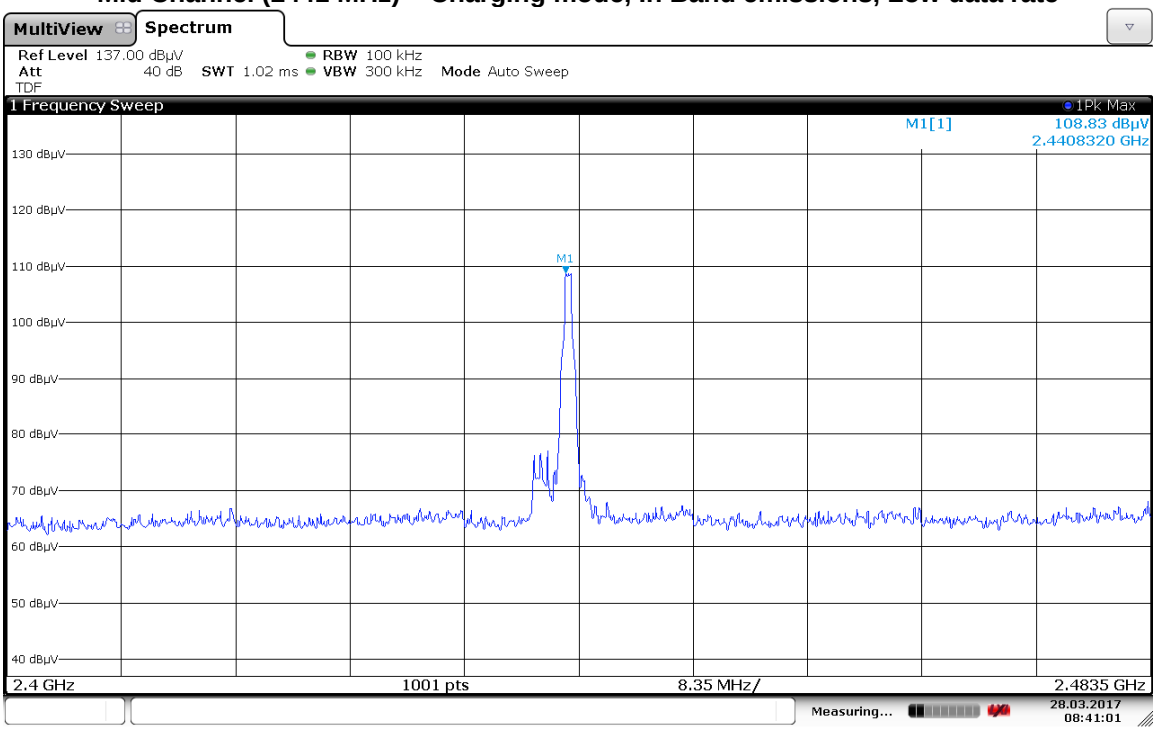
Date: 22.MAR.2017 15:39:41

Mid Channel (2441 MHz) – Battery mode, Out of Band emissions, High data rate



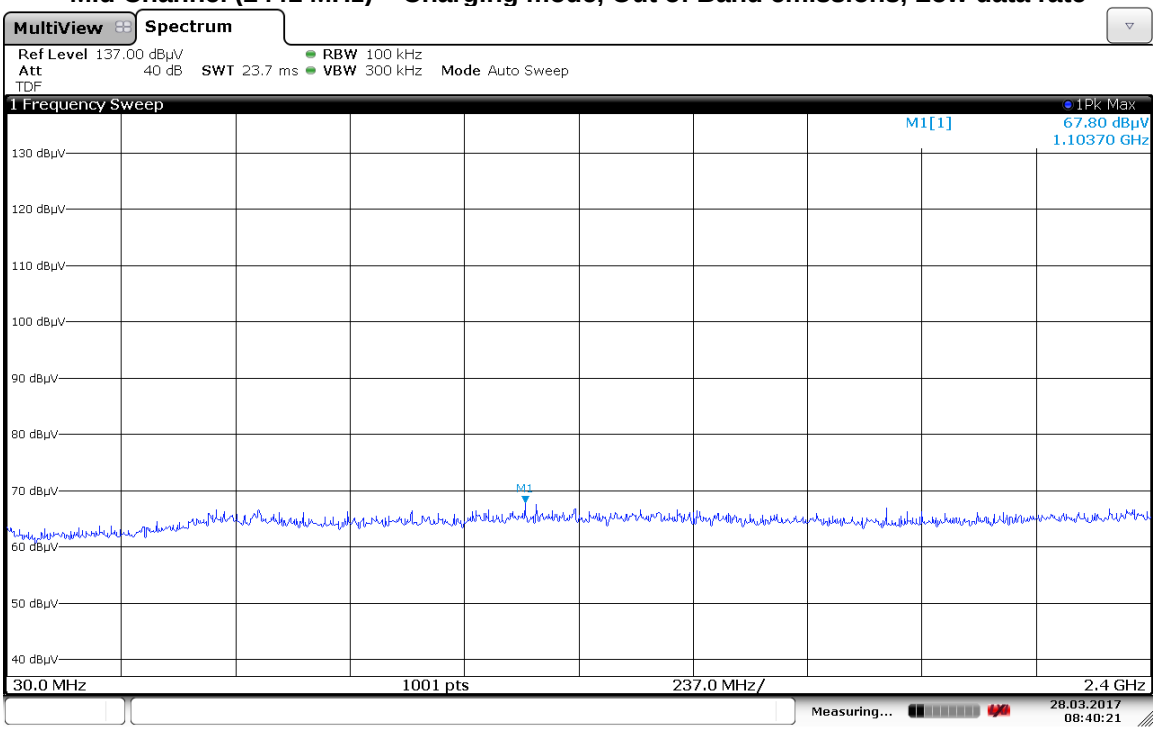
Date: 22.MAR.2017 15:40:24

Mid Channel (2441 MHz) – Charging mode, In Band emissions, Low data rate



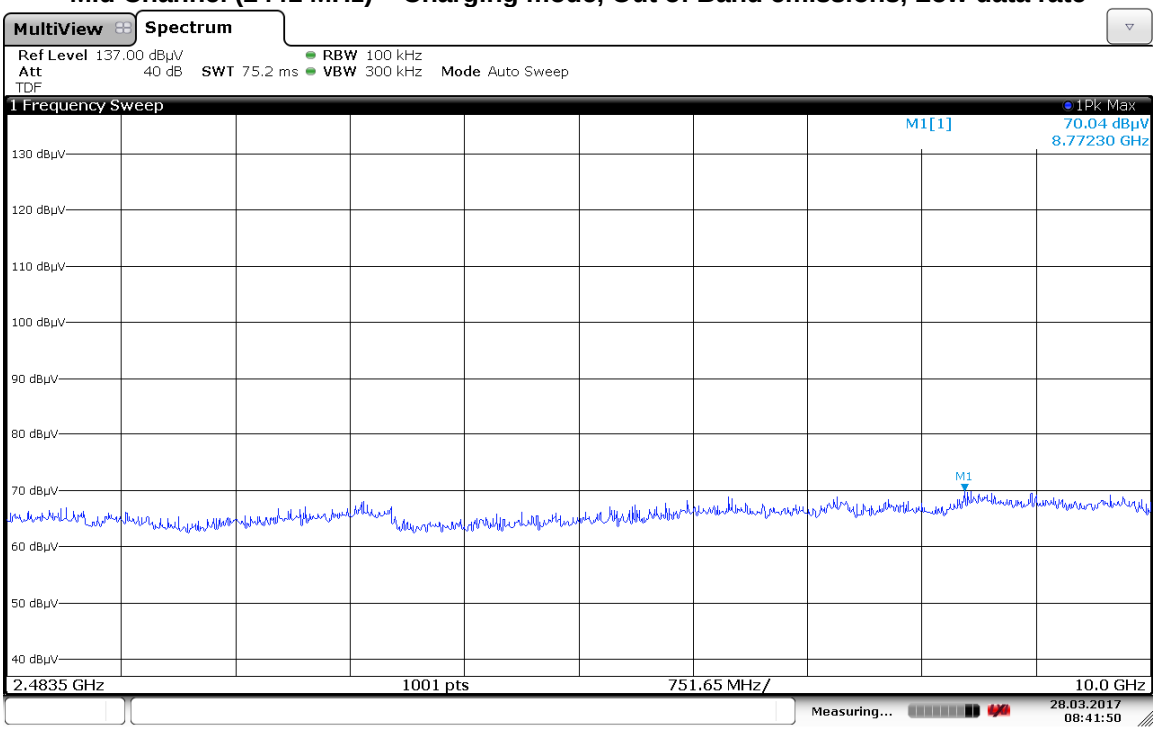
Date: 28.MAR.2017 08:41:00

Mid Channel (2441 MHz) – Charging mode, Out of Band emissions, Low data rate



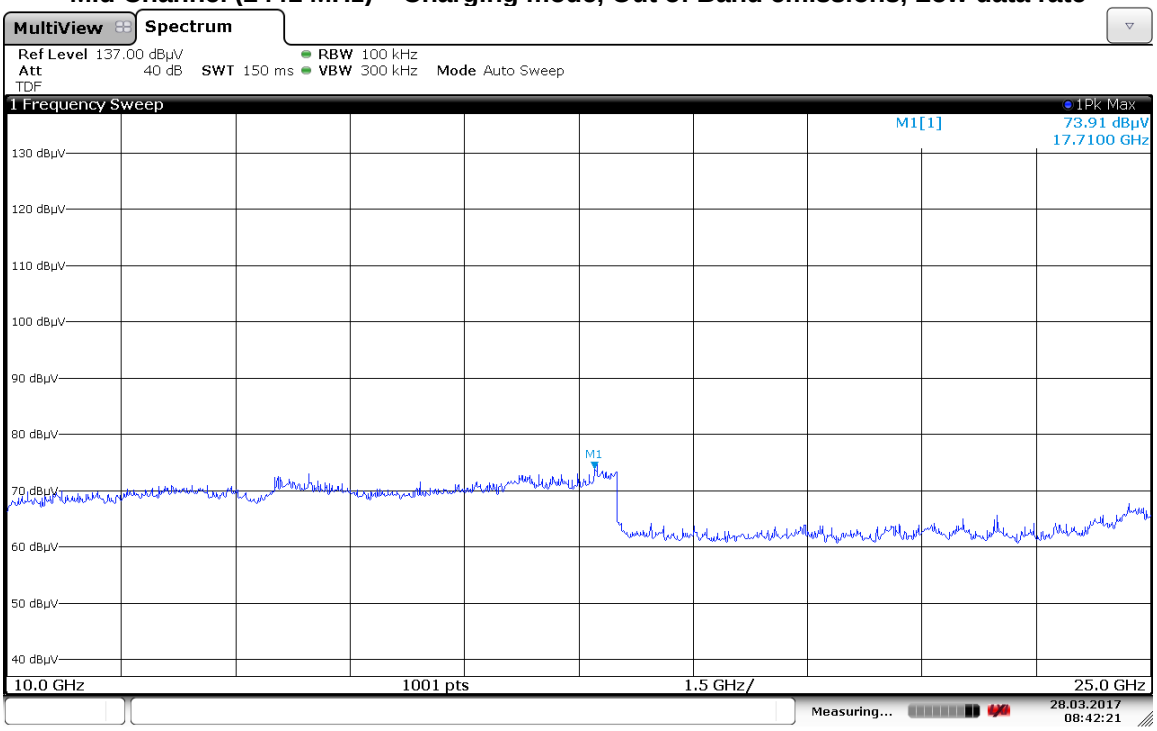
Date: 28.MAR.2017 08:40:21

Mid Channel (2441 MHz) – Charging mode, Out of Band emissions, Low data rate



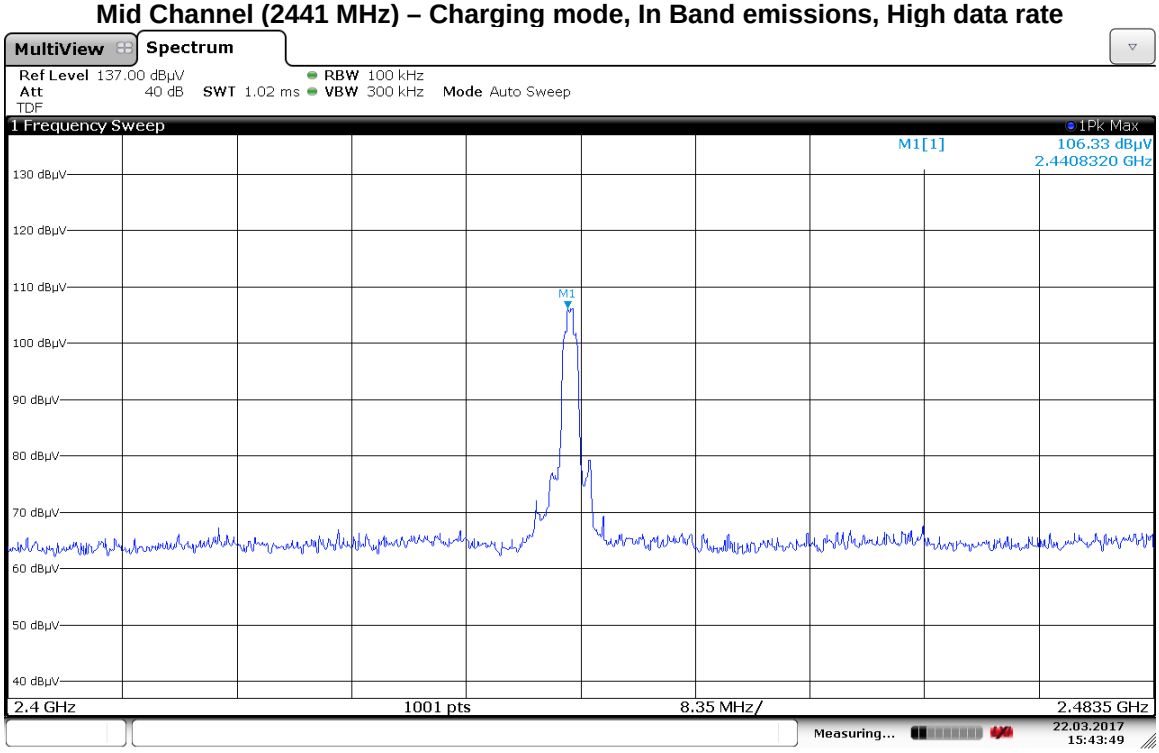
Date: 28.MAR.2017 08:41:51

Mid Channel (2441 MHz) – Charging mode, Out of Band emissions, Low data rate



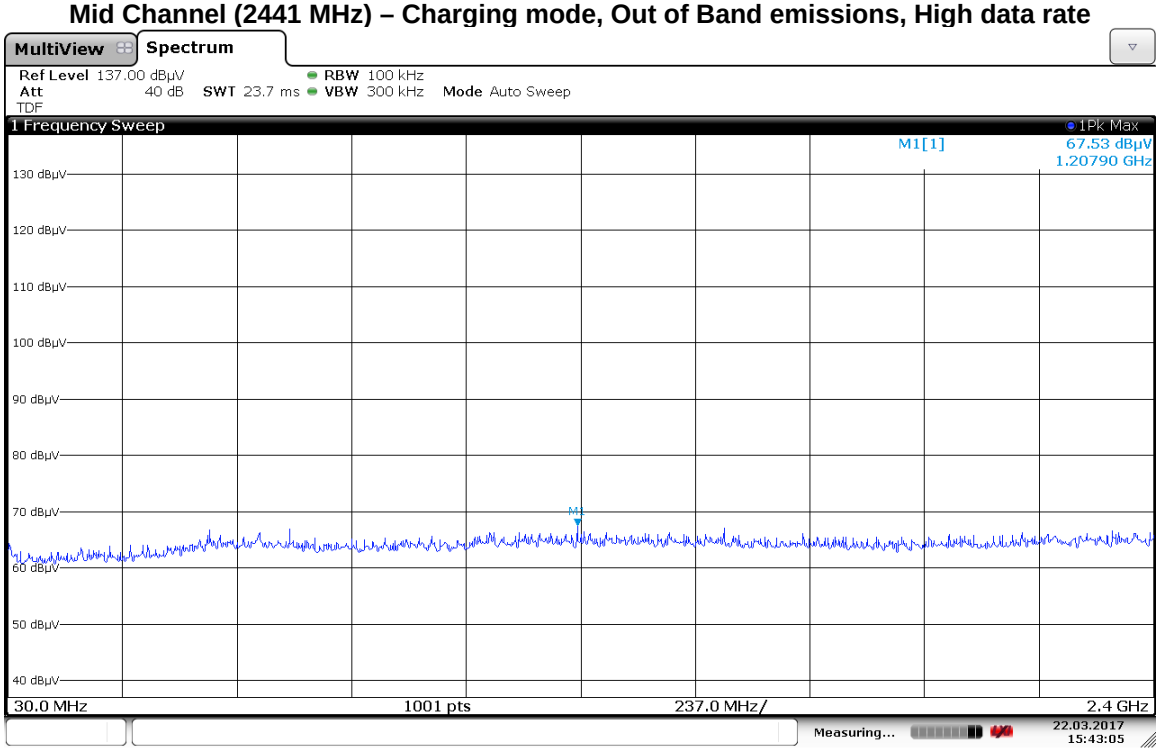
Date: 28.MAR.2017 08:42:21

Mid Channel (2441 MHz) – Charging mode, In Band emissions, High data rate



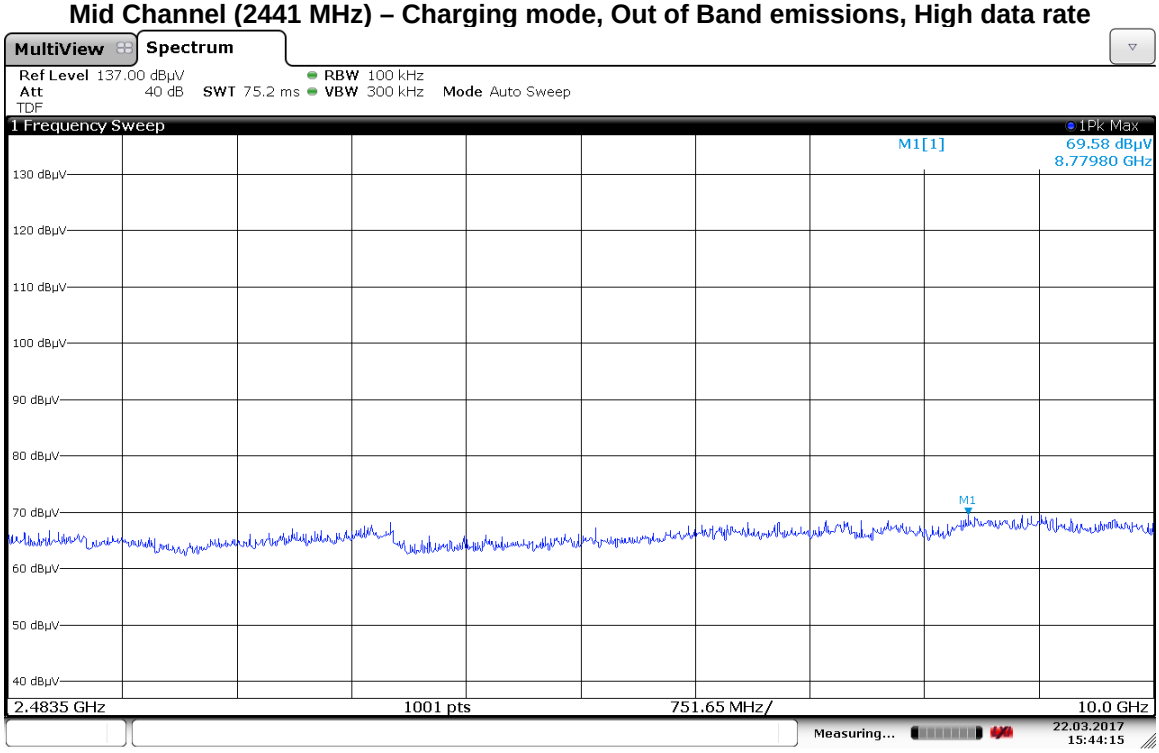
Date: 22.MAR.2017 15:43:49

Mid Channel (2441 MHz) – Charging mode, Out of Band emissions, High data rate



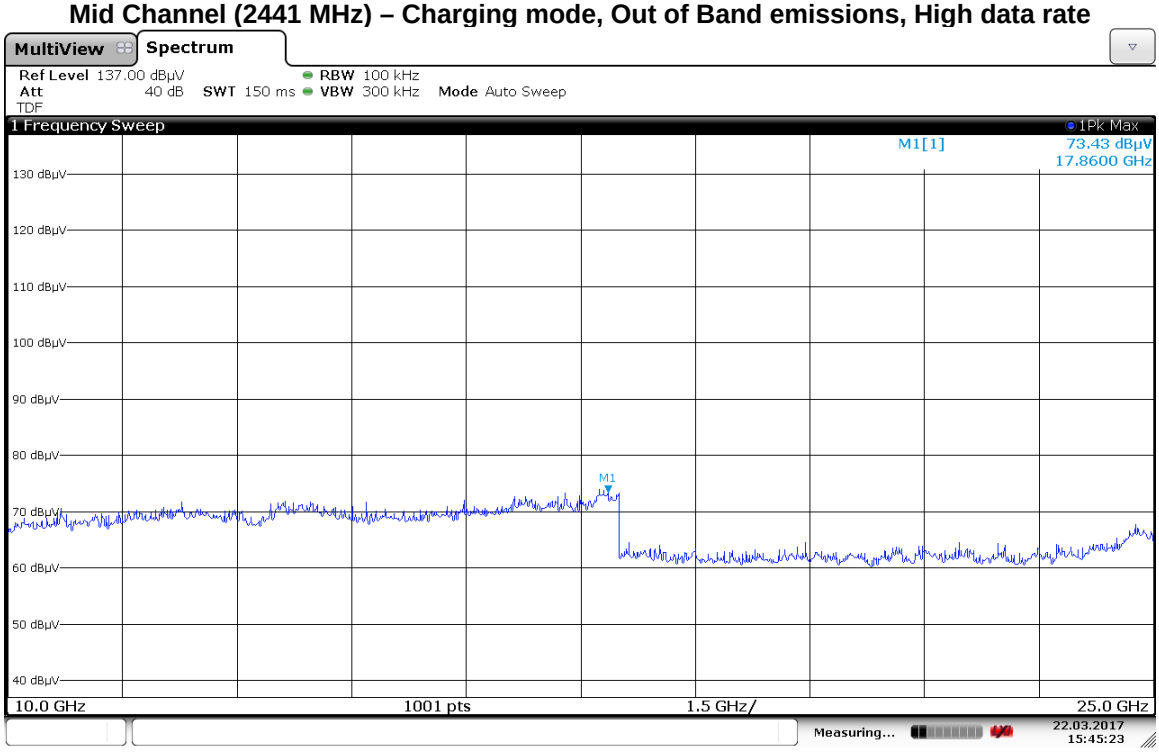
Date: 22.MAR.2017 15:43:05

Mid Channel (2441 MHz) – Charging mode, Out of Band emissions, High data rate



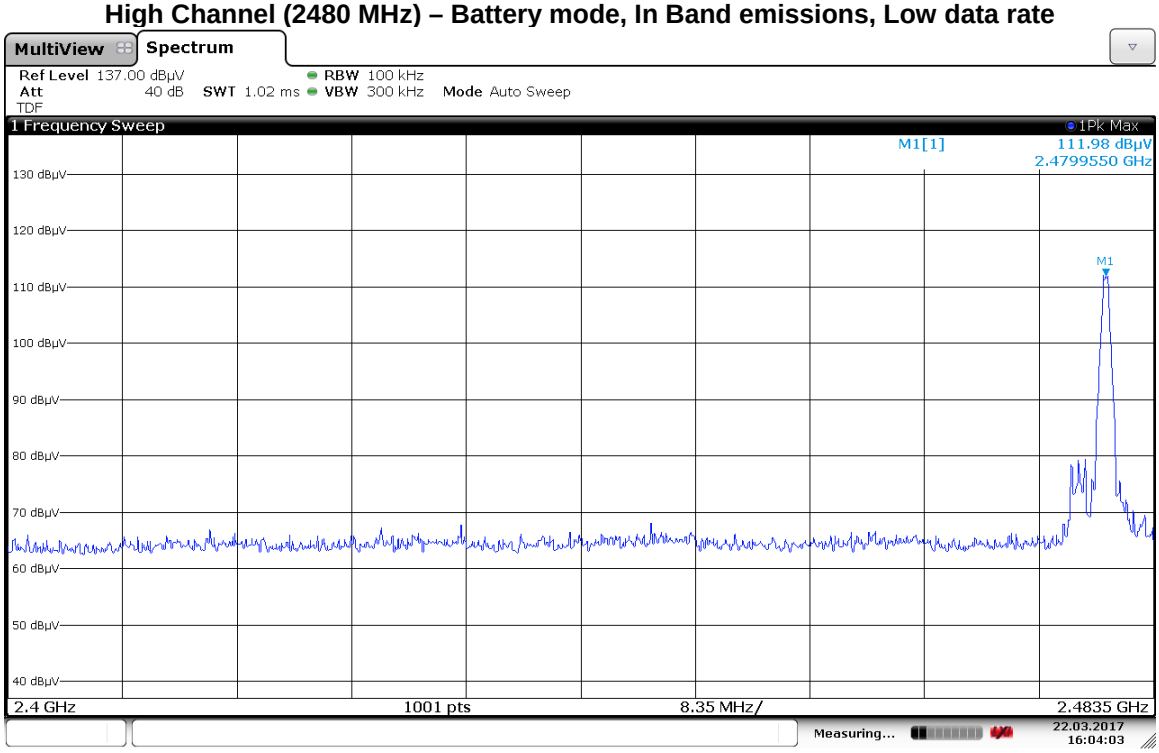
Date: 22.MAR.2017 15:44:16

Mid Channel (2441 MHz) – Charging mode, Out of Band emissions, High data rate



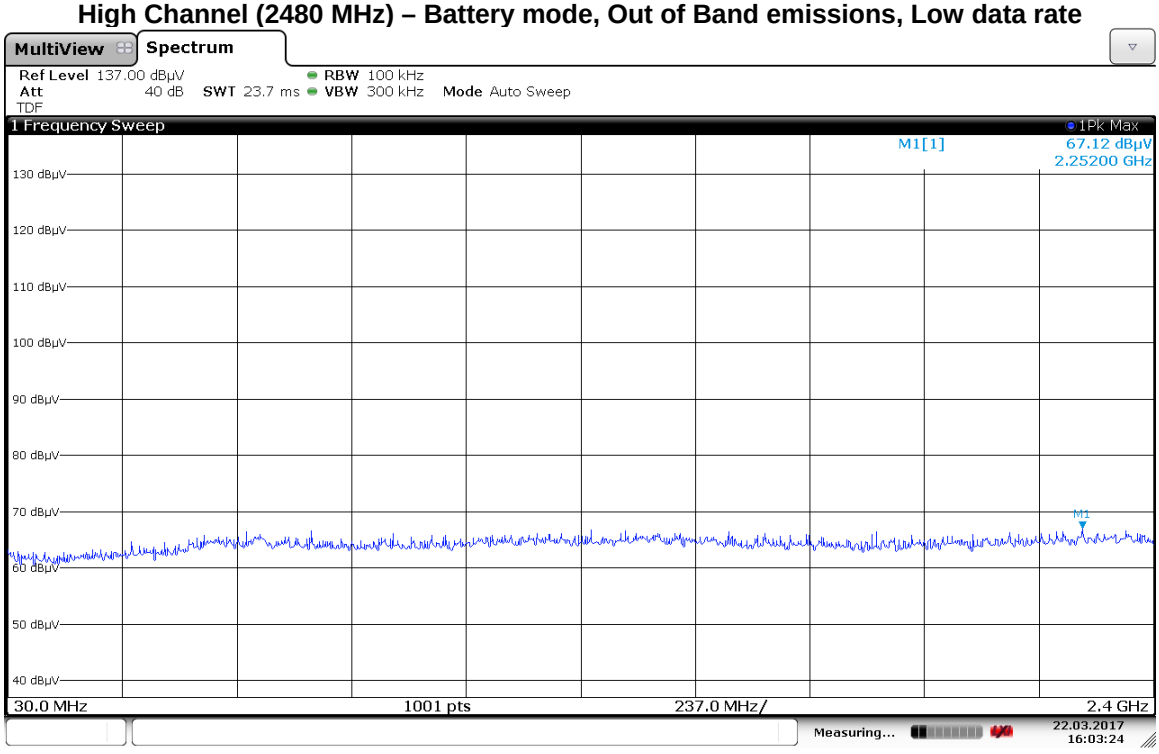
Date: 22.MAR.2017 15:45:23

High Channel (2480 MHz) – Battery mode, In Band emissions, Low data rate



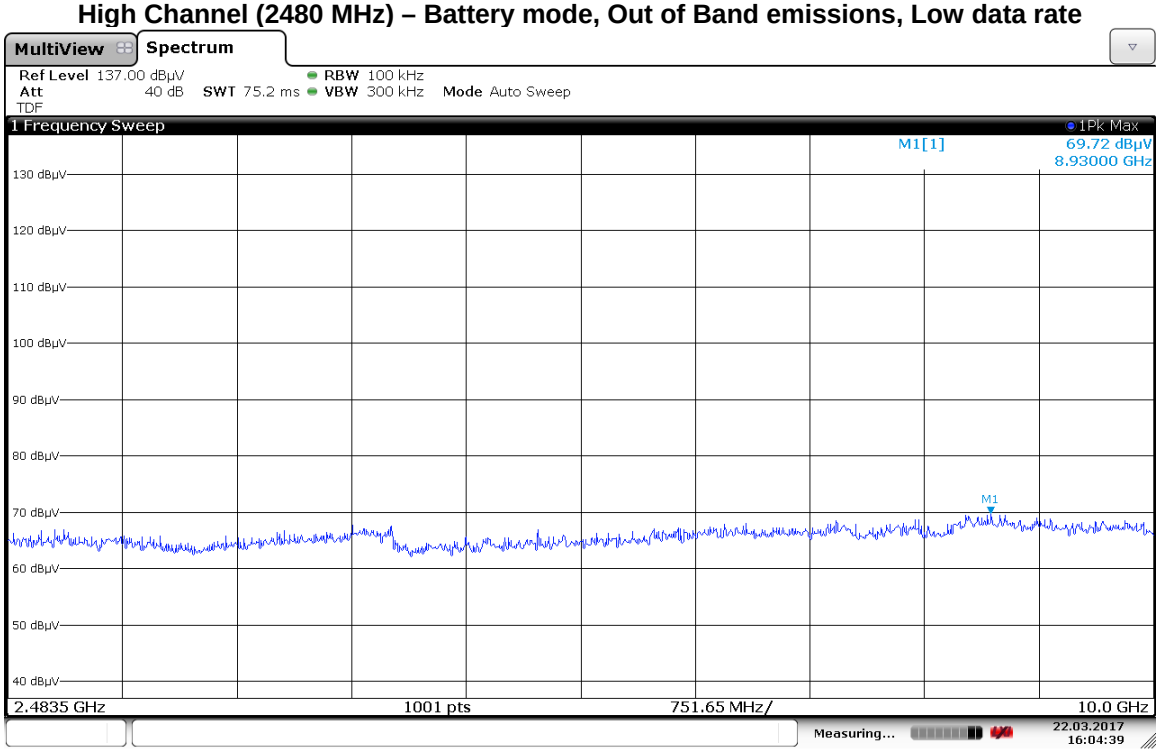
Date: 22.MAR.2017 16:04:02

High Channel (2480 MHz) – Battery mode, Out of Band emissions, Low data rate



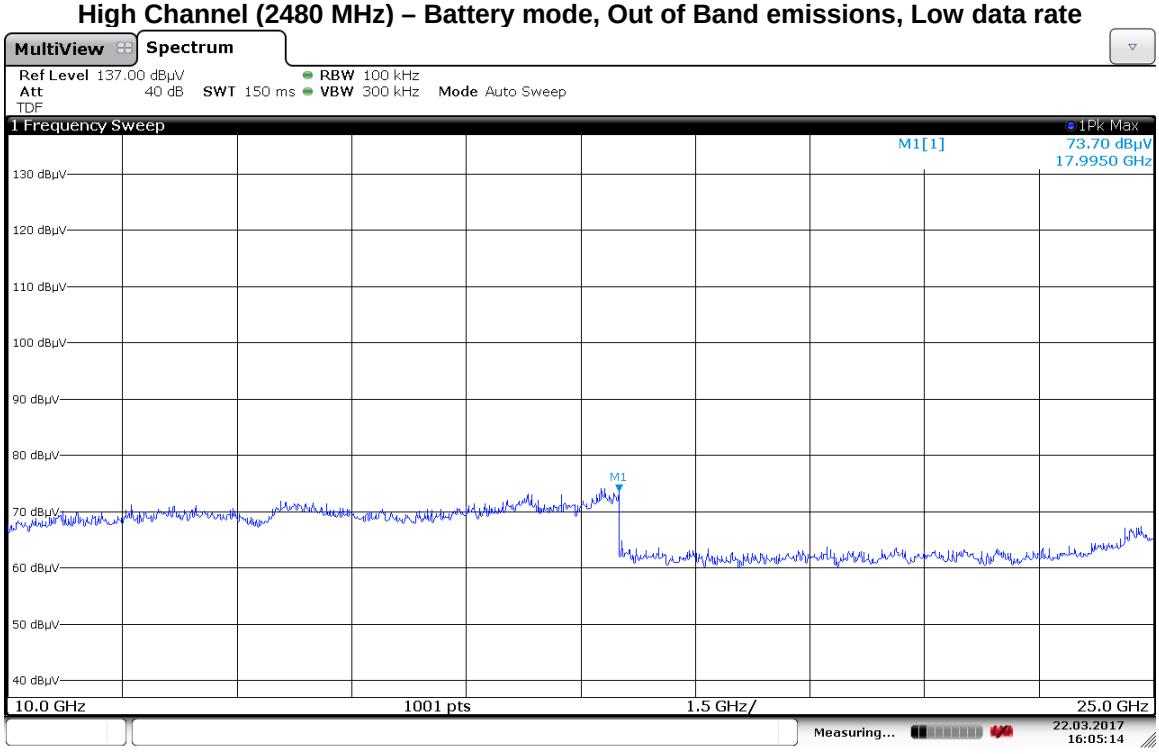
Date: 22.MAR.2017 16:03:23

High Channel (2480 MHz) – Battery mode, Out of Band emissions, Low data rate



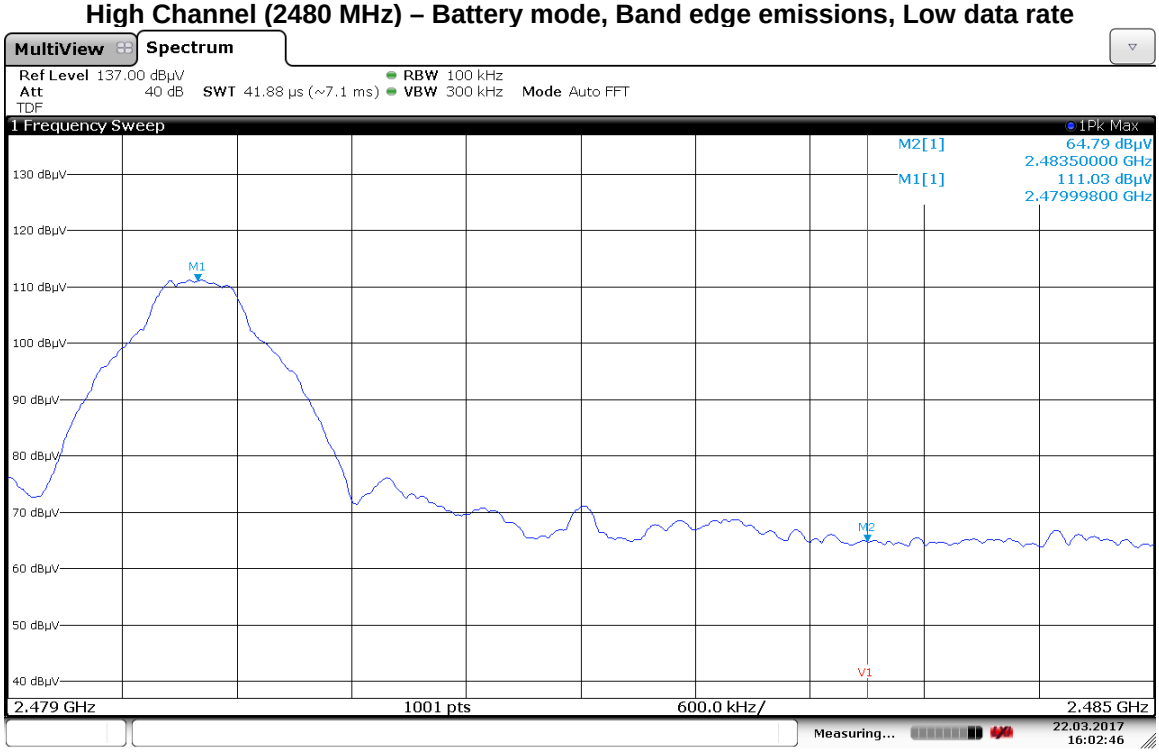
Date: 22.MAR.2017 16:04:39

High Channel (2480 MHz) – Battery mode, Out of Band emissions, Low data rate



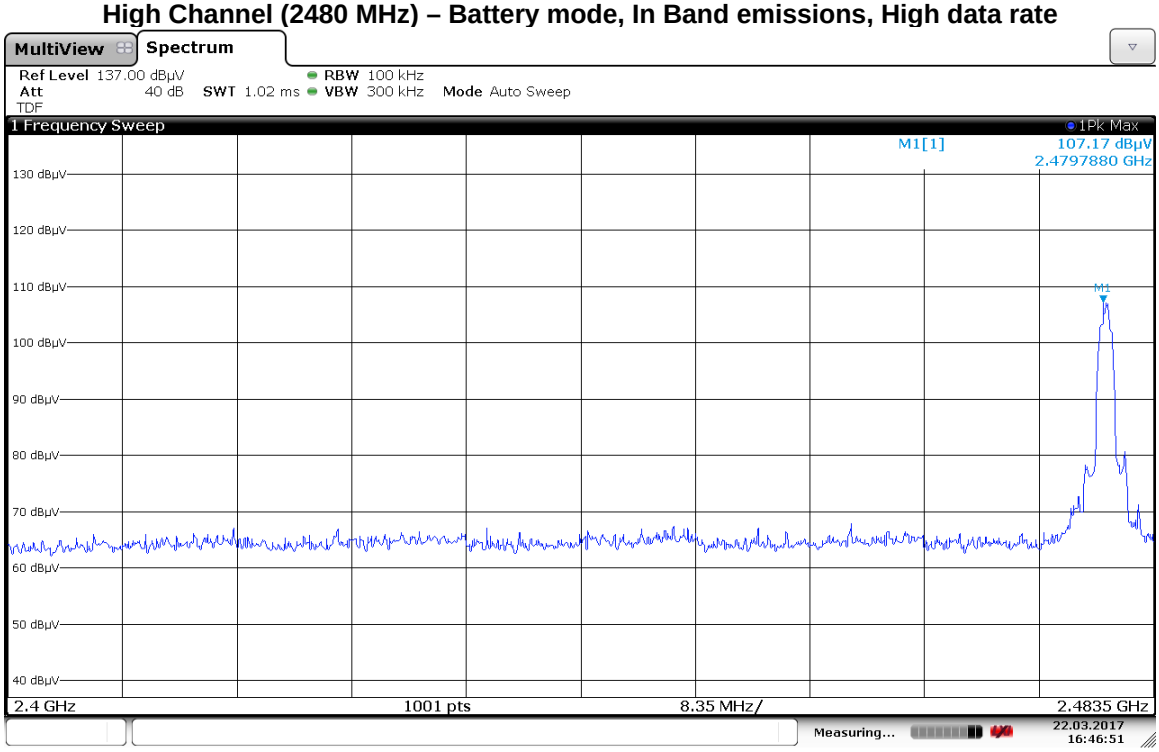
Date: 22.MAR.2017 16:05:14

High Channel (2480 MHz) – Battery mode, Band edge emissions, Low data rate



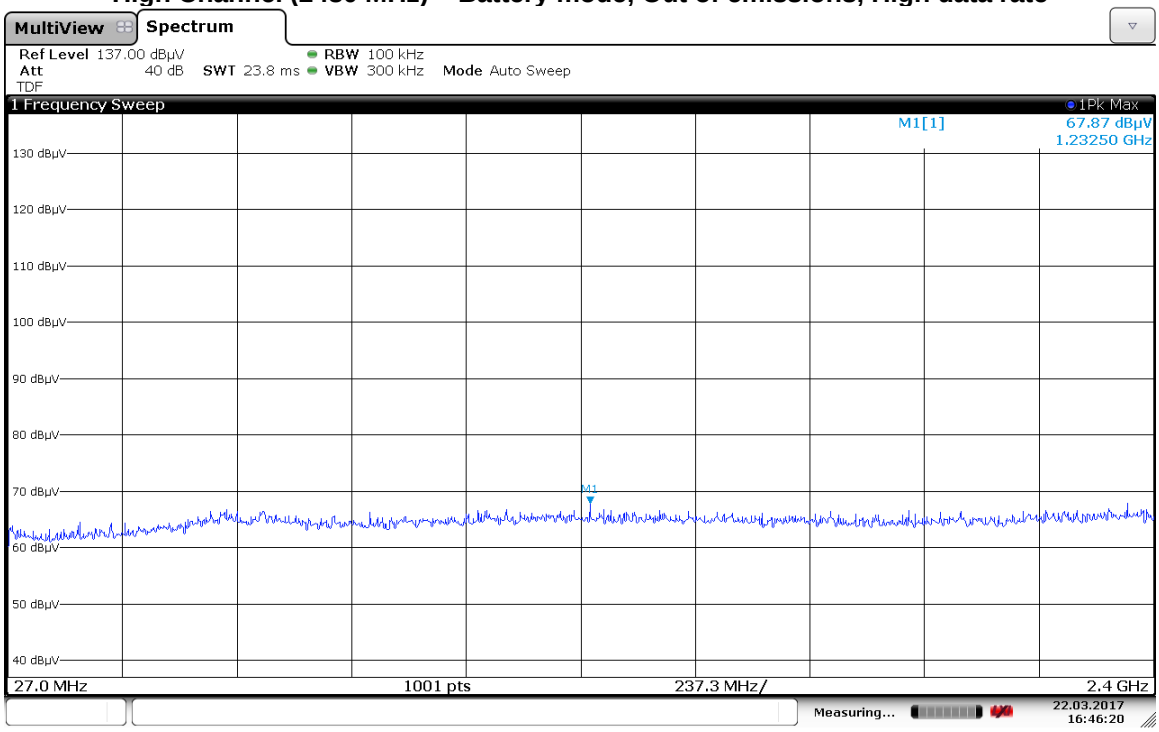
Date: 22.MAR.2017 16:02:45

High Channel (2480 MHz) – Battery mode, In Band emissions, High data rate



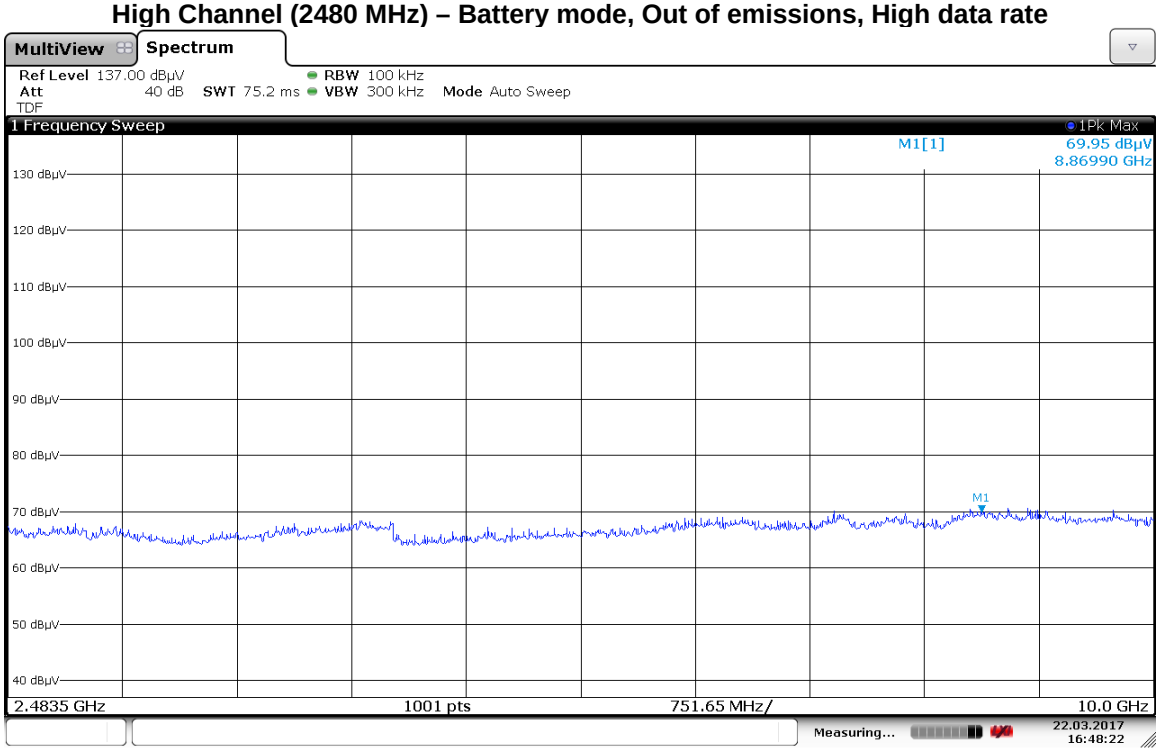
Date: 22.MAR.2017 16:46:50

High Channel (2480 MHz) – Battery mode, Out of emissions, High data rate



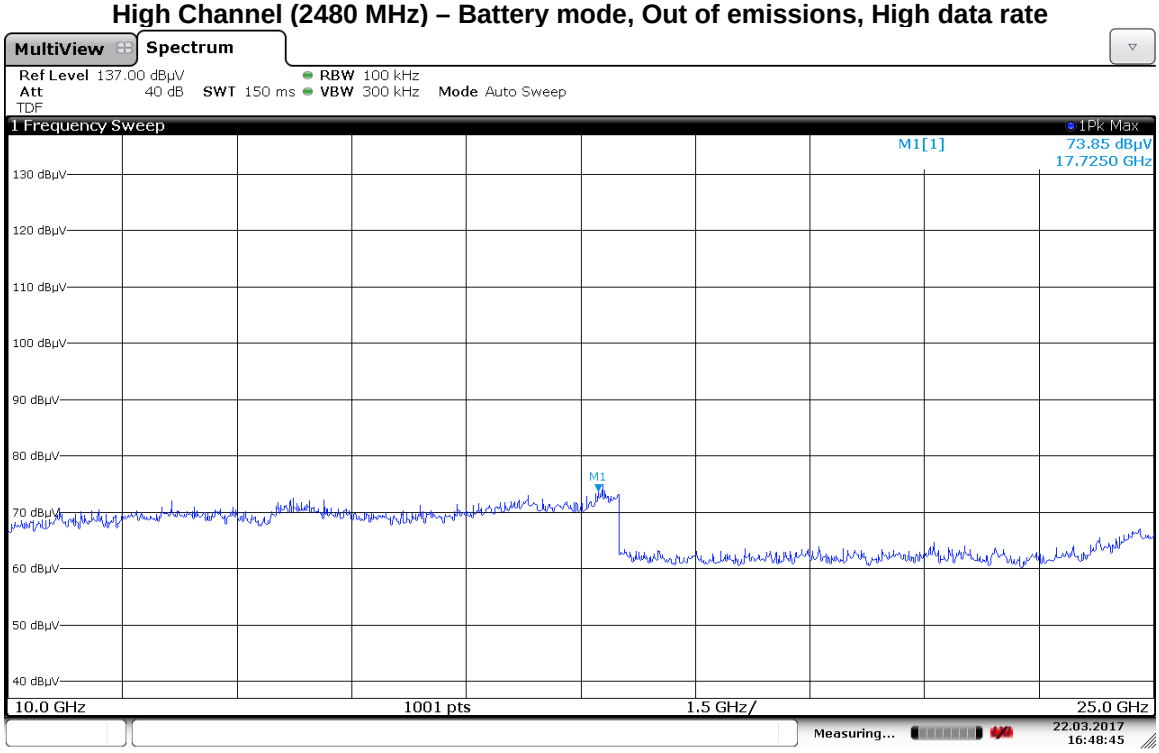
Date: 22.MAR.2017 16:46:20

High Channel (2480 MHz) – Battery mode, Out of emissions, High data rate



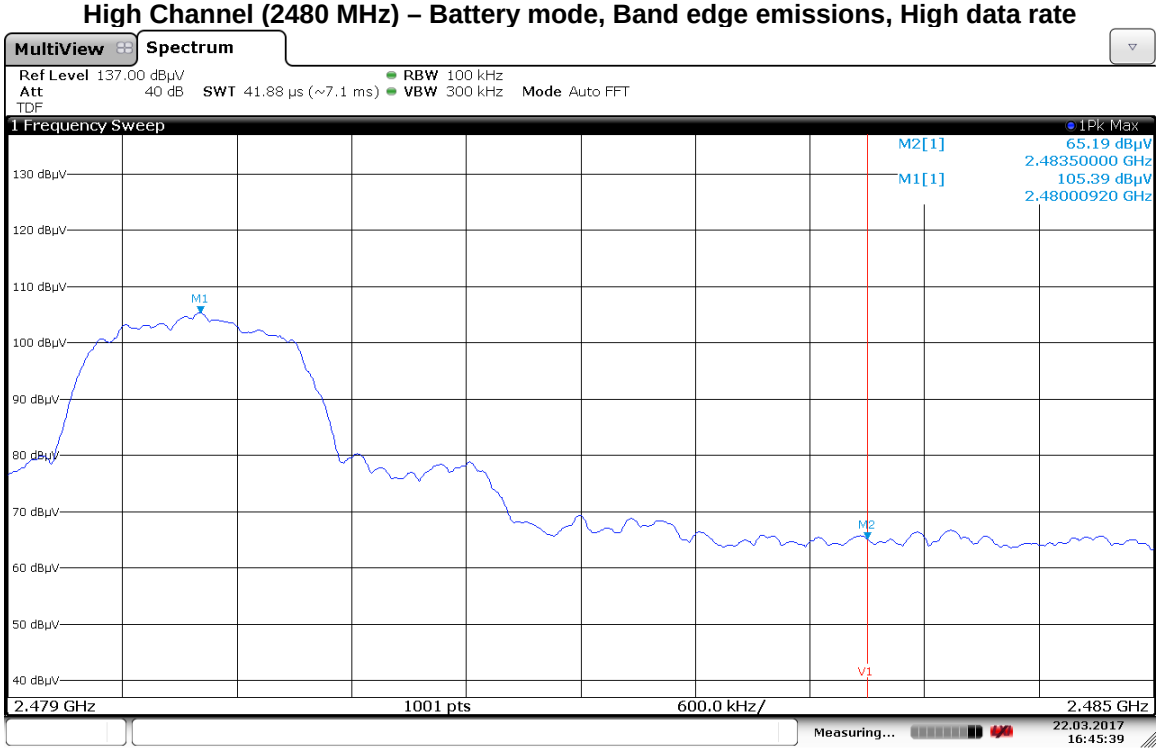
Date: 22.MAR.2017 16:48:21

High Channel (2480 MHz) – Battery mode, Out of emissions, High data rate



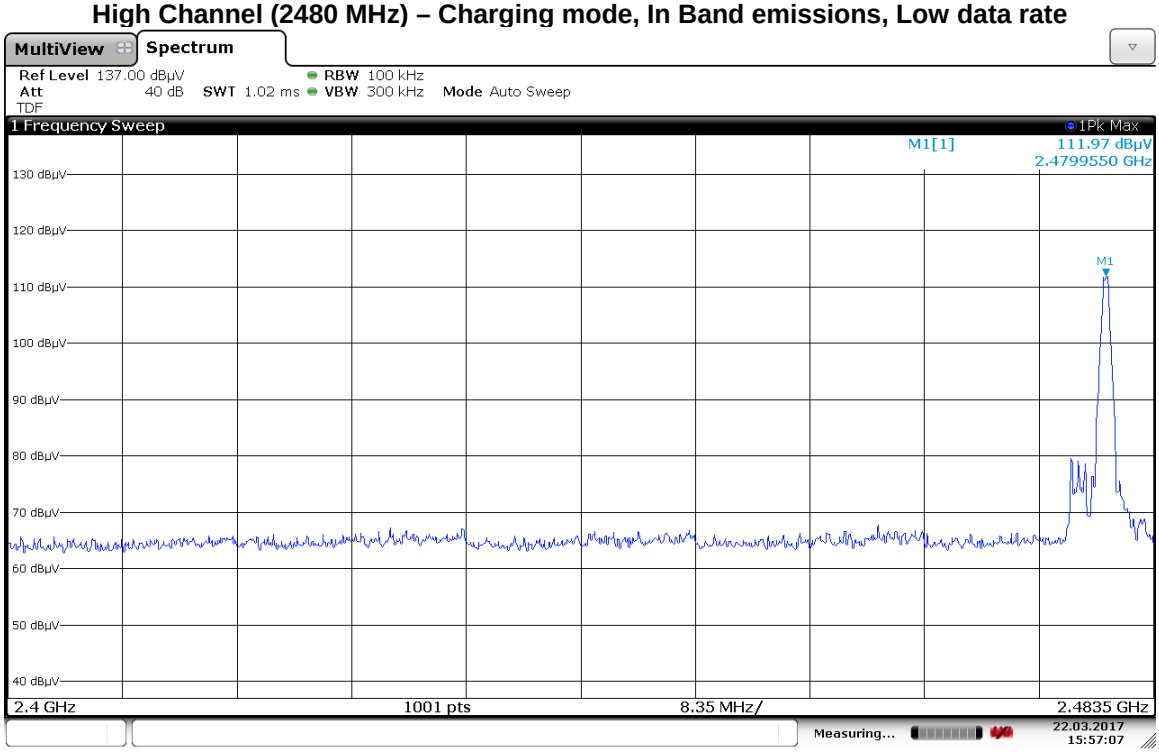
Date: 22.MAR.2017 16:48:44

High Channel (2480 MHz) – Battery mode, Band edge emissions, High data rate



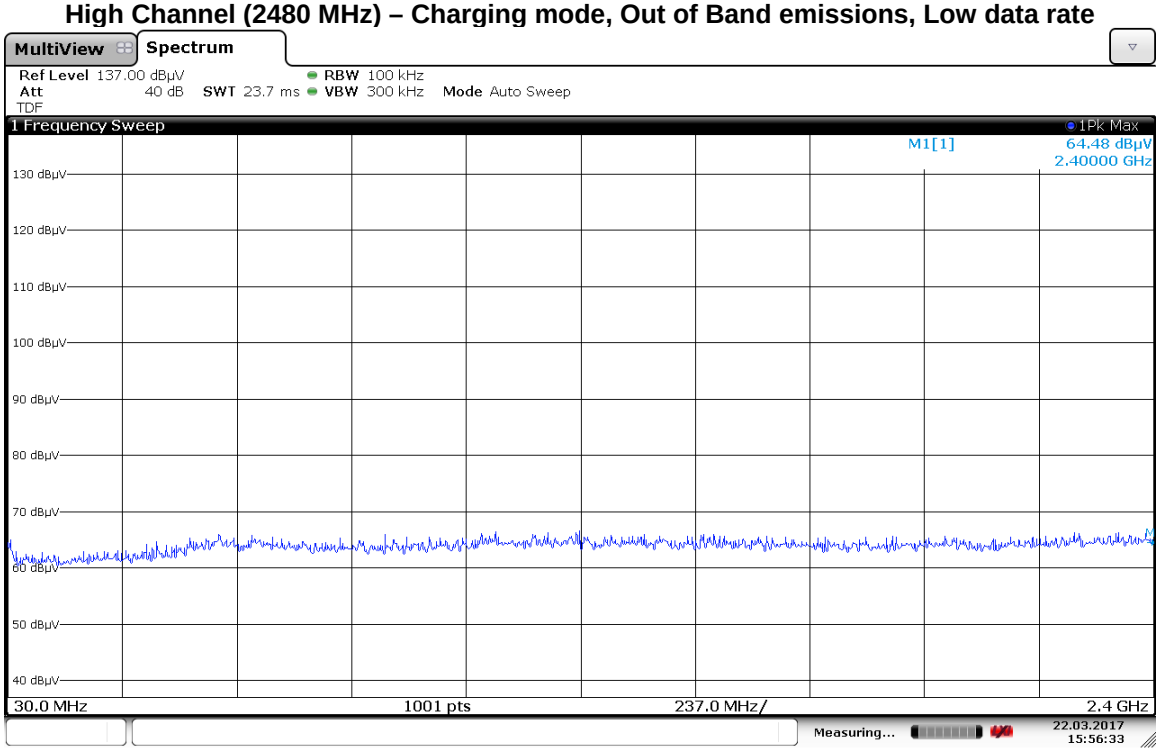
Date: 22.MAR.2017 16:45:39

High Channel (2480 MHz) – Charging mode, In Band emissions, Low data rate



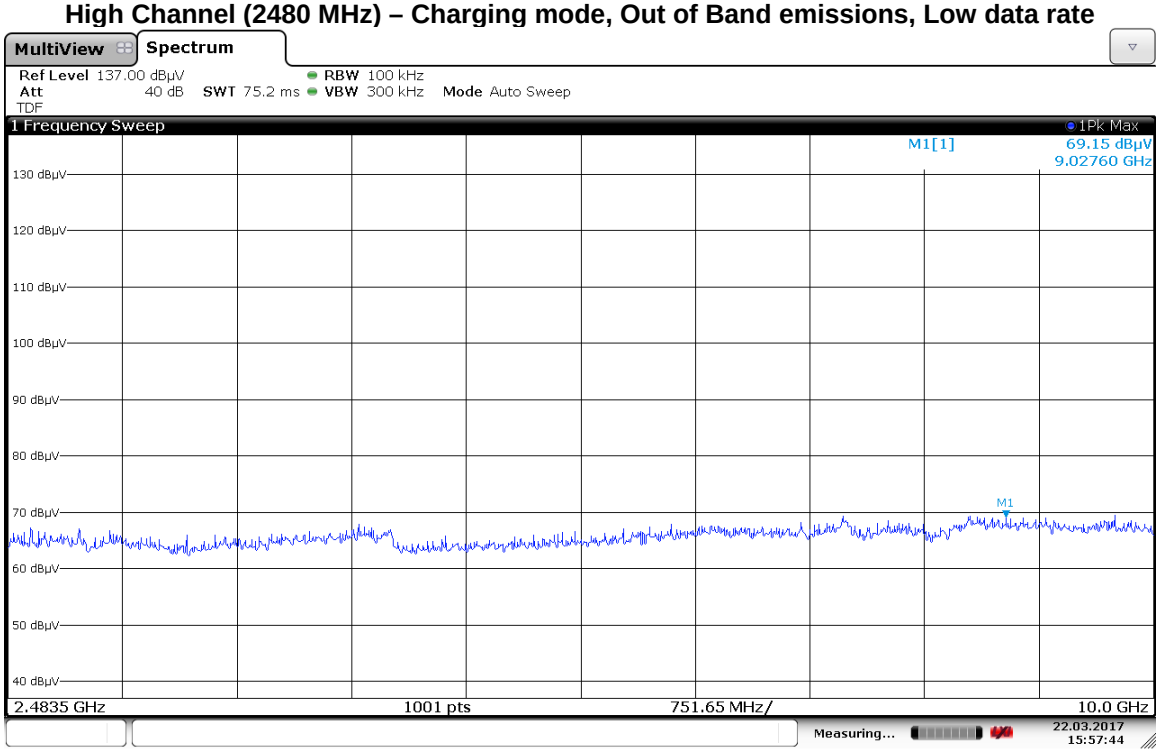
Date: 22.MAR.2017 15:57:07

High Channel (2480 MHz) – Charging mode, Out of Band emissions, Low data rate



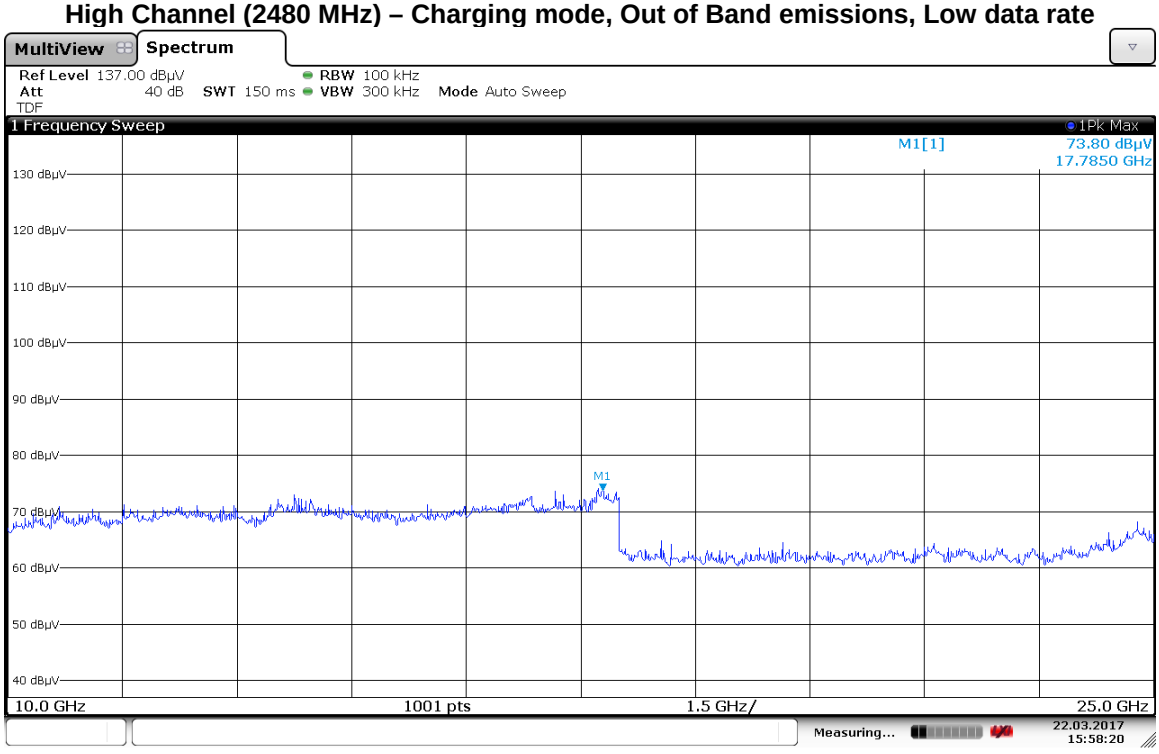
Date: 22.MAR.2017 15:56:33

High Channel (2480 MHz) – Charging mode, Out of Band emissions, Low data rate



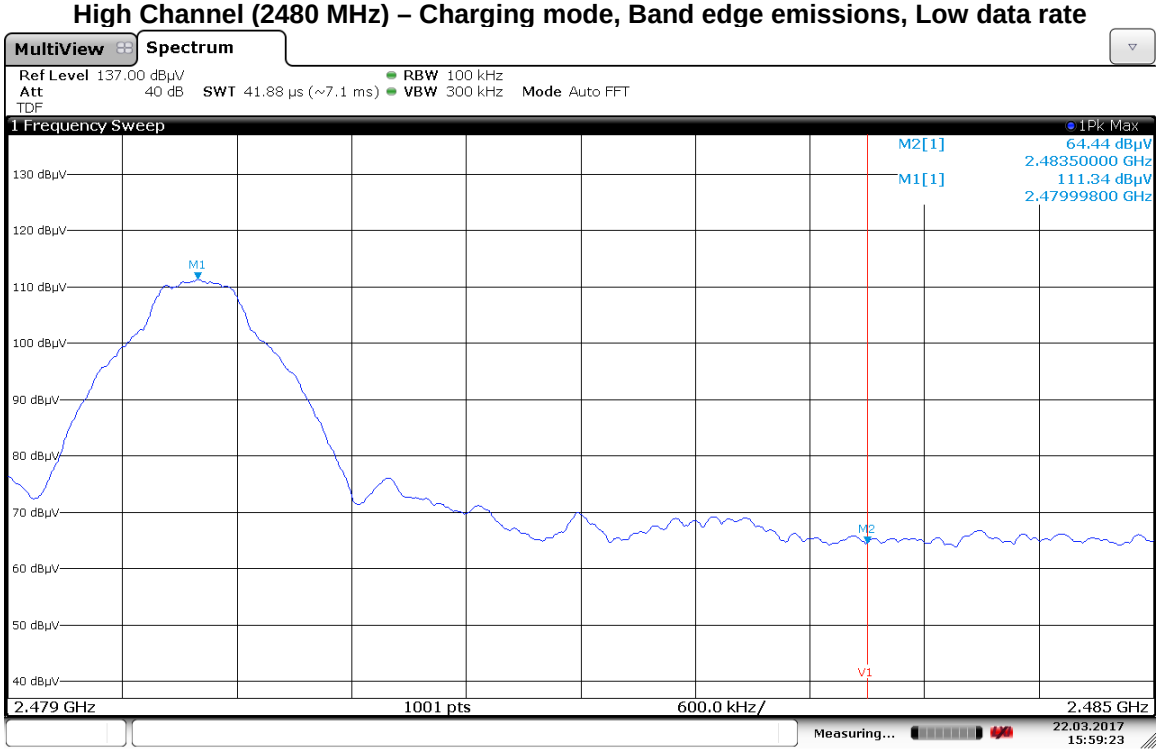
Date: 22.MAR.2017 15:57:43

High Channel (2480 MHz) – Charging mode, Out of Band emissions, Low data rate



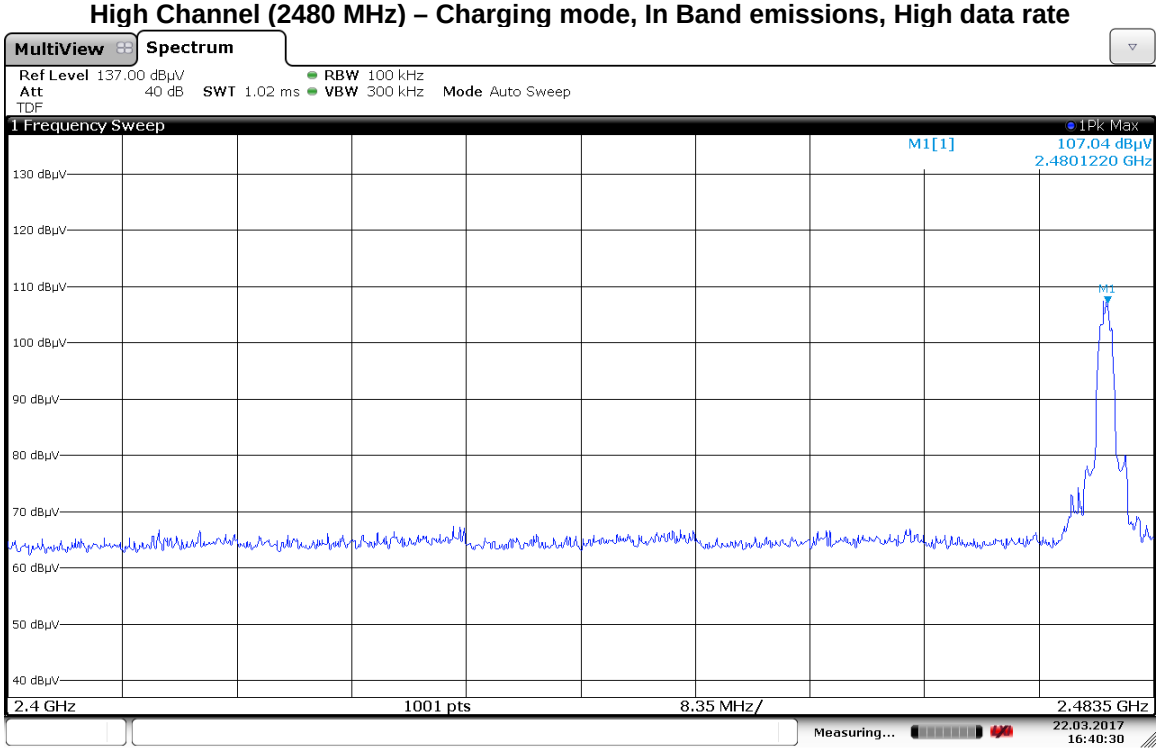
Date: 22.MAR.2017 15:58:20

High Channel (2480 MHz) – Charging mode, Band edge emissions, Low data rate



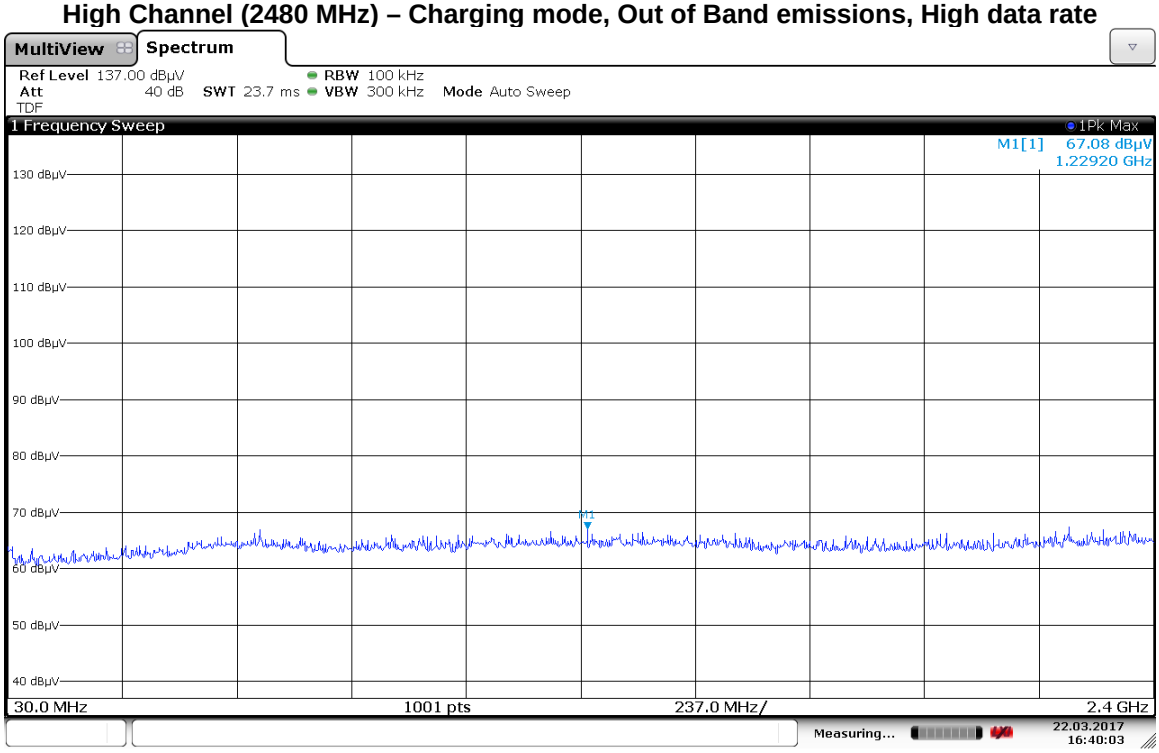
Date: 22.MAR.2017 15:59:23

High Channel (2480 MHz) – Charging mode, In Band emissions, High data rate



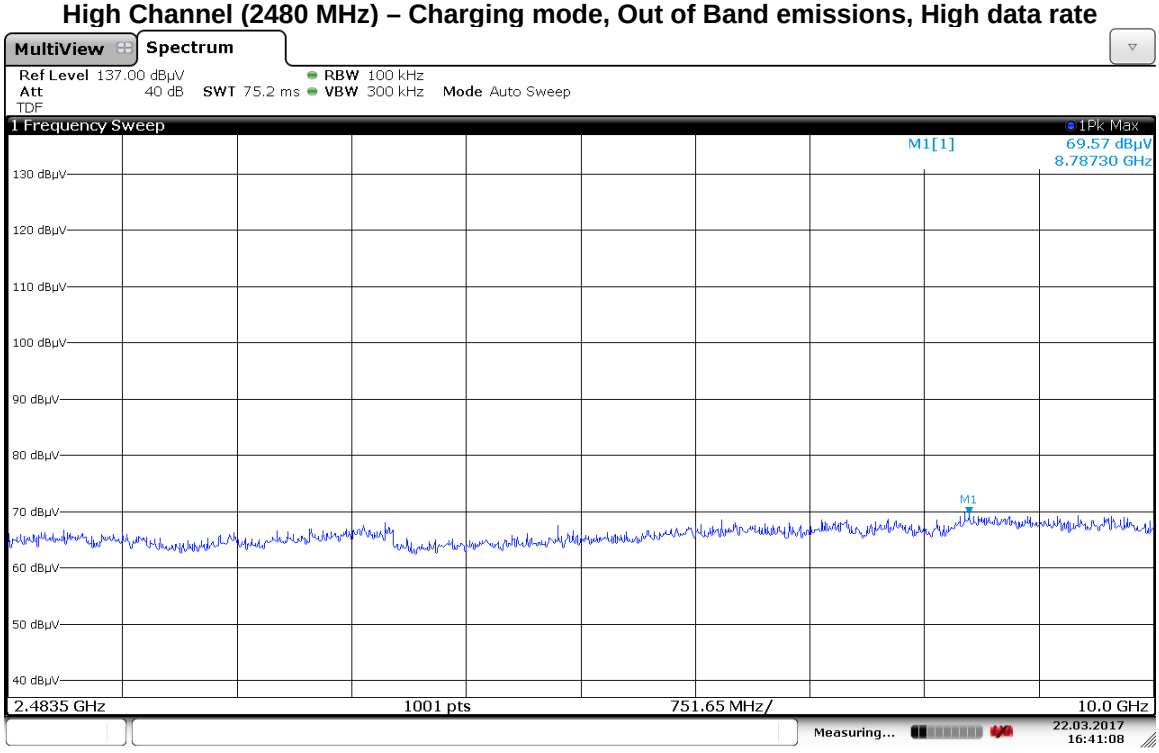
Date: 22.MAR.2017 16:40:30

High Channel (2480 MHz) – Charging mode, Out of Band emissions, High data rate



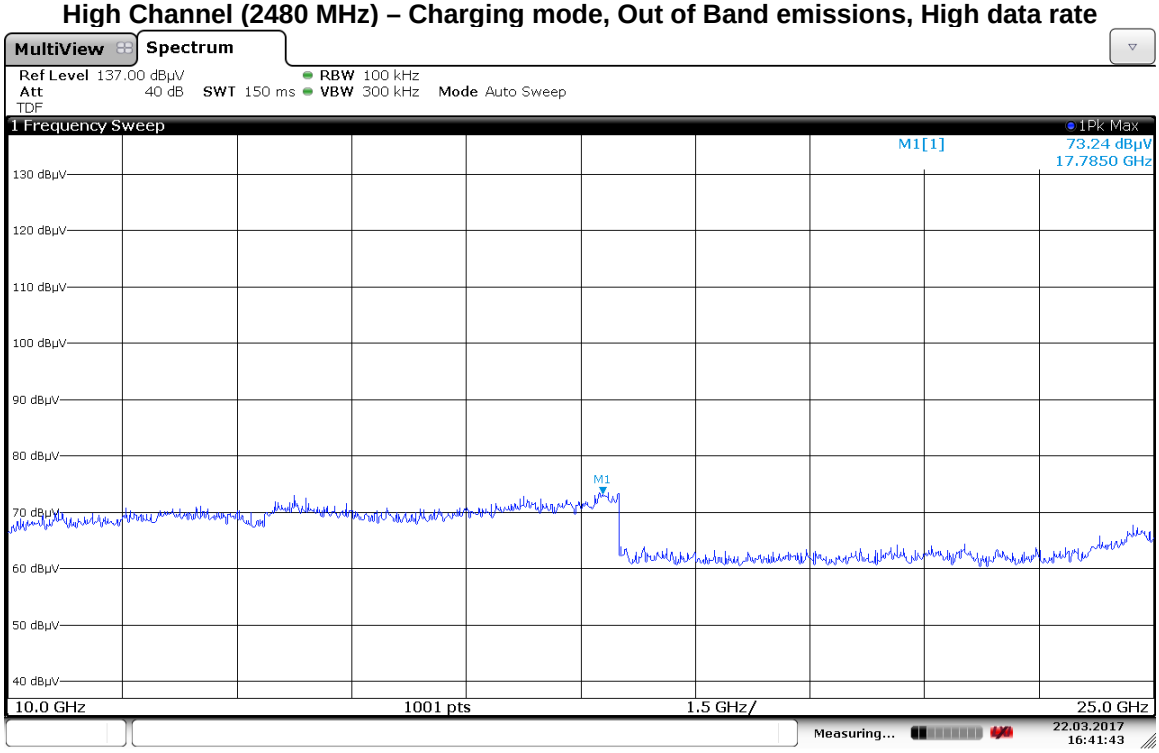
Date: 22.MAR.2017 16:40:03

High Channel (2480 MHz) – Charging mode, Out of Band emissions, High data rate



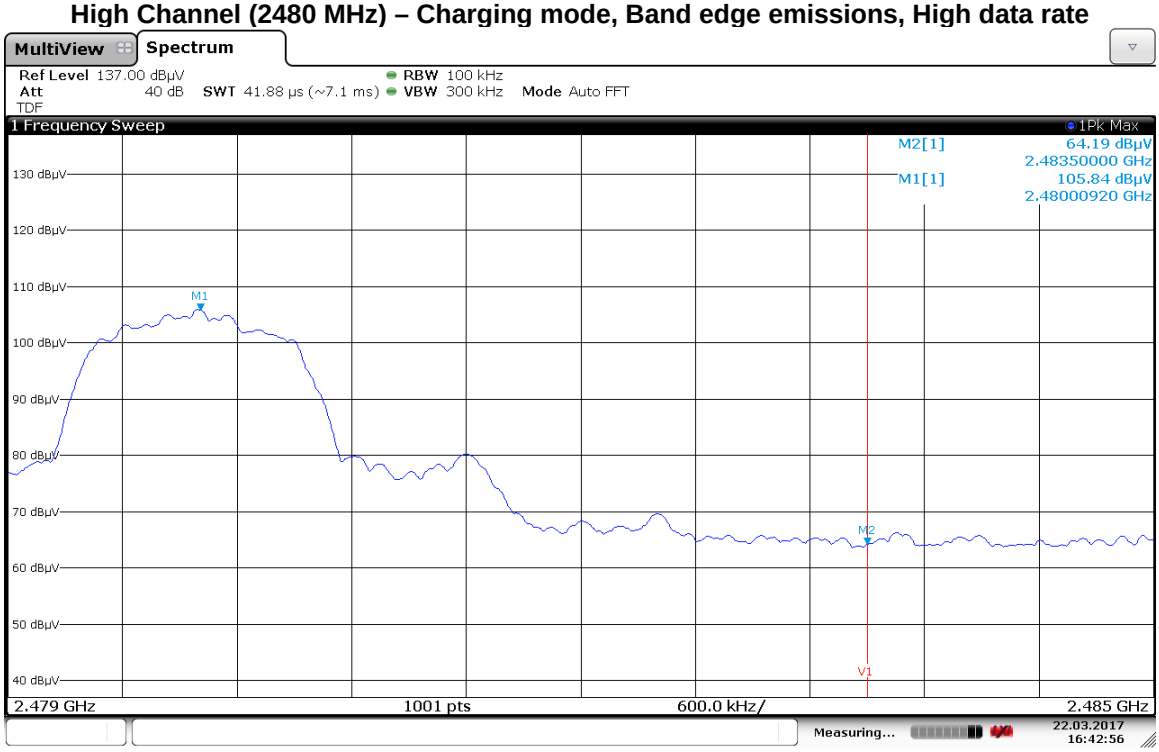
Date: 22.MAR.2017 16:41:07

High Channel (2480 MHz) – Charging mode, Out of Band emissions, High data rate



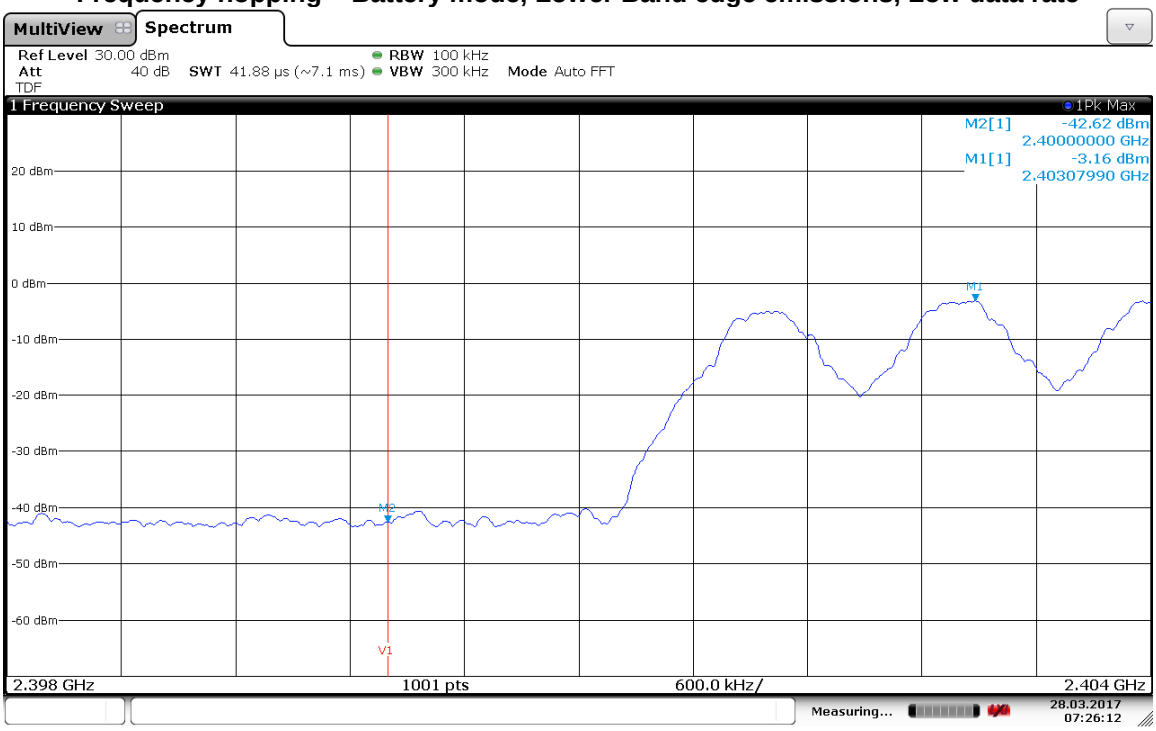
Date: 22.MAR.2017 16:41:43

High Channel (2480 MHz) – Charging mode, Band edge emissions, High data rate



Date: 22.MAR.2017 16:42:56

Frequency hopping – Battery mode, Lower Band edge emissions, Low data rate

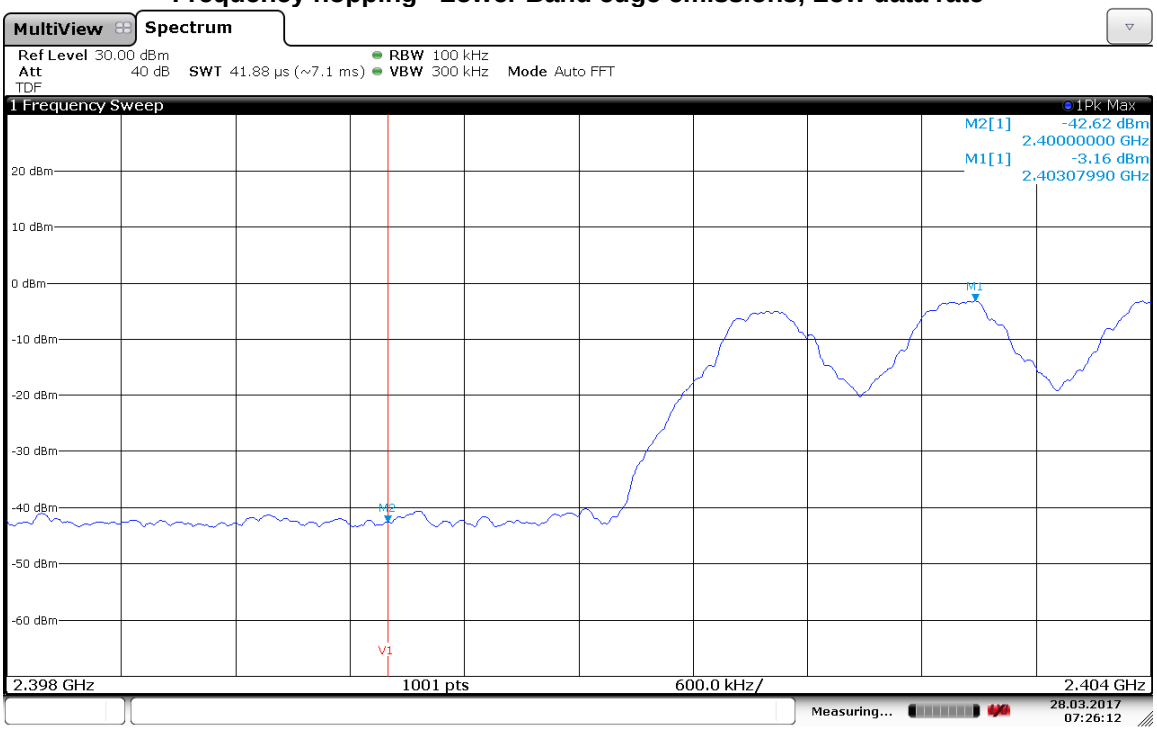


Date: 28.MAR.2017 07:26:12

Frequency hopping – Battery mode, Lower Band edge emissions, High data rate

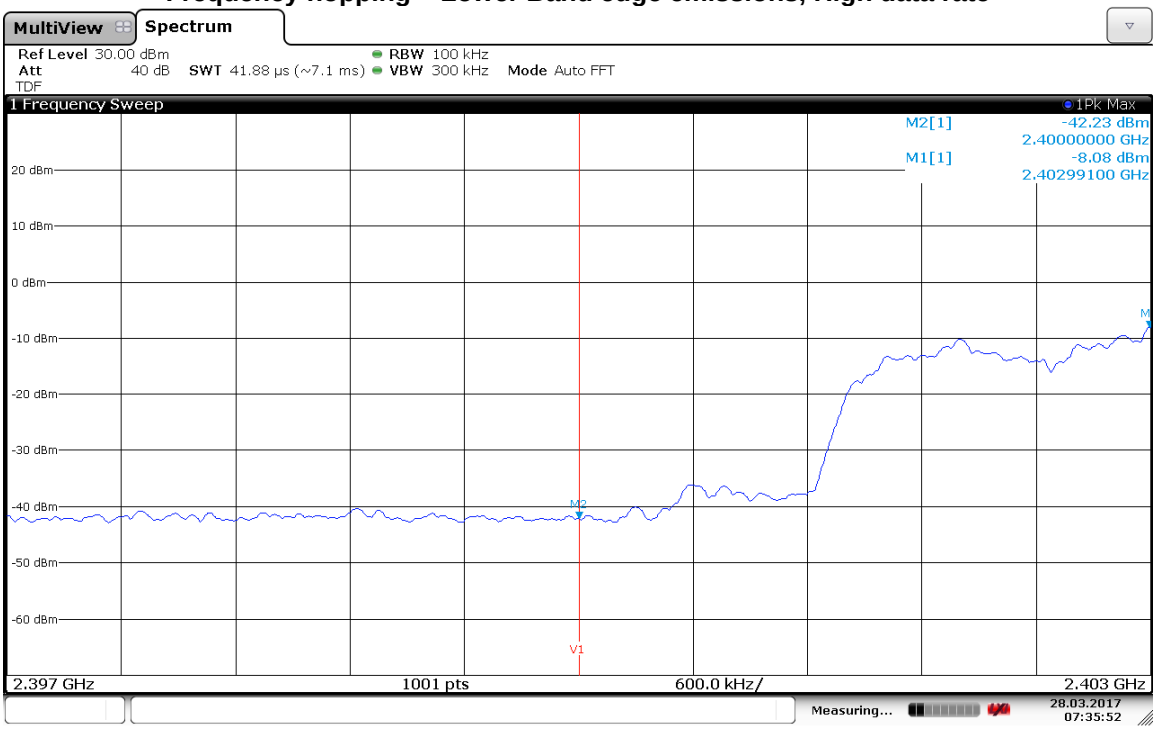
Date: 28.MAR.2017 07:35:52

Frequency hopping –Lower Band edge emissions, Low data rate



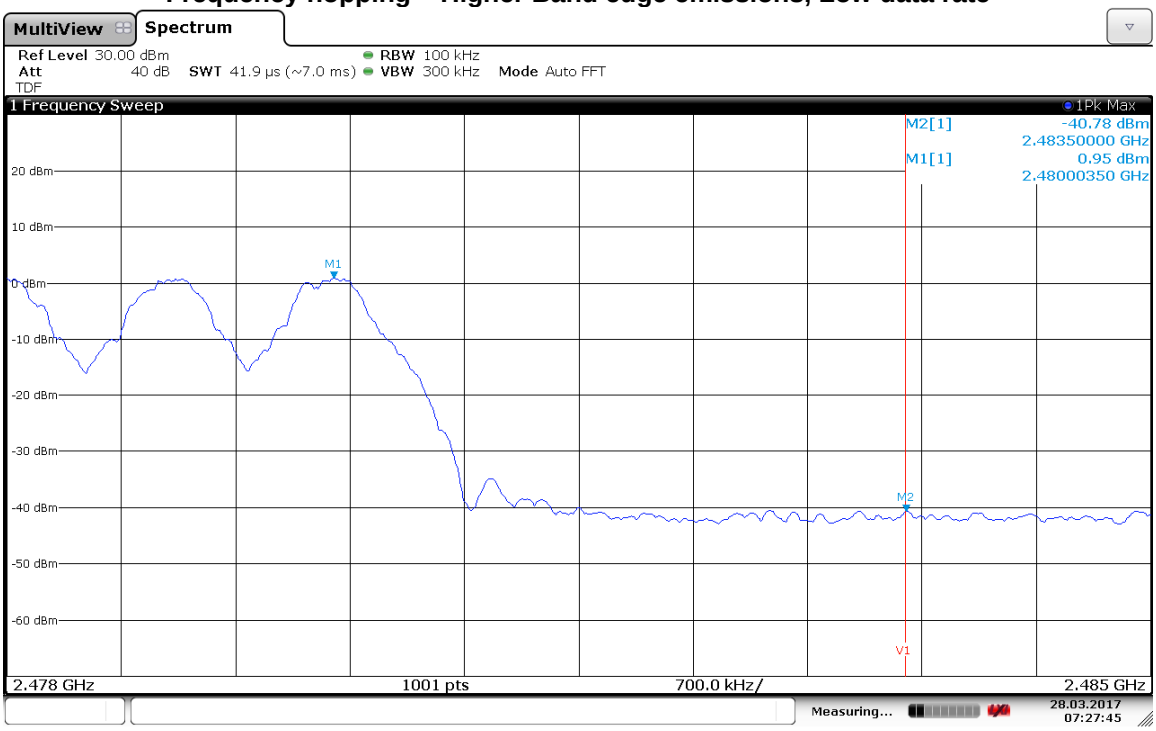
Date: 28.MAR.2017 07:26:12

Frequency hopping – Lower Band edge emissions, High data rate



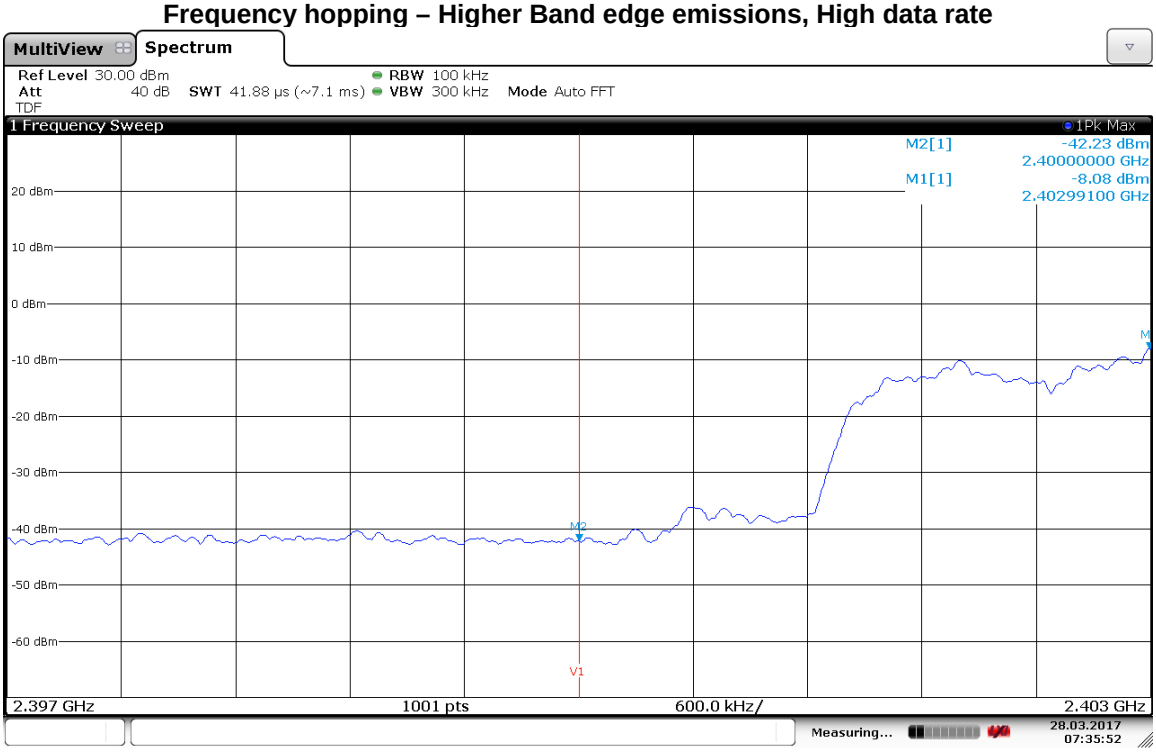
Date: 28.MAR.2017 07:35:52

Frequency hopping – Higher Band edge emissions, Low data rate



Date: 28.MAR.2017 07:27:44

Frequency hopping – Higher Band edge emissions, High data rate



Date: 28.MAR.2017 07:35:52

Test Personnel:	Naga Suryadevara N.S	Test Date:	03/28/2017
Supervising/Reviewing Engineer: (Where Applicable)	N/A		
Product Standard:	FCC Part 15 Subpart C (15.247)	Limit Applied:	See section 11.3
Input Voltage:	120VAC 60Hz, Internal Battery		
Pretest Verification w/ Ambient Signals or BB Source:	Yes – Signal generator	Ambient Temperature:	20 ºC
		Relative Humidity:	17 %
		Atmospheric Pressure:	1003 mbars

12 Radiated Spurious Emissions

12.1 Method

Tests are performed in accordance with FCC Part 15 Subpart C (15.247).

TEST SITE: 10m ALSE

The 10m ALSE is 13m (Length) x 21m (Depth) x 10m (Height) with the effective size in terms of space from the tips of the absorber is 12m (Length) x 20m (Depth) x 8.5m (Height). This chamber achieves broadband performance using a unique arrangement of hybrid and ferrite tile absorber. This chamber has a built in 3m diameter turntable (Embedded type). The metal structure of the table makes electrical connection around the entire circumference of the turntable to the ground plane with a metal brush type connection. The turntable is located on one end of the chamber and the antennas are mounted 3 and 10 meters away at the other end of the chamber on the adjustable an Antenna Mast. The antenna mast is a non-conductive bore sighted type with remote control of antenna height and polarization. The Antenna Mast and the turntable can be remotely controlled through the controller located in the adjacent Control room. A Styrofoam table 80 cm high is used for table-top equipment.

Measurement Uncertainty

Measurement	Frequency Range	Expanded Uncertainty (k=2)	Ucispr
Radiated Emissions, 10m	30-1000 MHz	4.6 dB	6.3 dB
Radiated Emissions, 3m	30-1000 MHz	5.3 dB	6.3 dB
Radiated Emissions, 3m	1-6 GHz	4.5 dB	5.2 dB
Radiated Emissions, 3m	6-15 GHz	5.2 dB	5.5 dB
Radiated Emissions, 3m	15-18 GHz	5.0 dB	5.5 dB
Radiated Emissions, 3m	18-40 GHz	5.0 dB	5.5 dB

As shown in the table above our radiated emissions U_{lab} is less than the corresponding U_{CISPR} reference value in CISPR 16-4-2 Table 1, hence the compliance of the product is only based on the measured value, and no measurement uncertainty correction is required, based on CISPR 22 and CISPR 11 (for 2006 and later revisions) Clause 11.

Sample 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
Where FS = Field Strength in dBμV/m
RA = Receiver Amplitude (including preamplifier) in dBμV
CF = Cable Attenuation Factor in dB
AF = Antenna Factor in dB
AG = Amplifier Gain in dB

In the following table(s), the reading shown on the data table reflects the preamplifier gain. An example for the calculations in the following table is as follows.

Assume a receiver reading of 52.0 dBμV is obtained. The antenna factor of 7.4 dB and cable factor of 1.6 dB is added. The amplifier gain of 29 dB is subtracted, giving a field strength of 32 dBμV/m. This value in dBμV/m was converted to its corresponding level in μV/m.

RA = 52.0 dBμV
AF = 7.4 dB/m
CF = 1.6 dB
AG = 29.0 dB
FS = 32 dBμV/m

To convert from dBμV to μV or mV the following was used:

$UF = 10^{(NF / 20)}$ where UF = Net Reading in μV
NF = Net Reading in dBμV

Example:

FS = RA + AF + CF – AG = 52.0 + 7.4 + 1.6 – 29.0 = 32.0
$UF = 10^{(32\ dB\mu V / 20)}$ = 39.8 μV/m

Alternately, when BAT-EMC Emission Software is used, the “Level” includes all losses and gains and is compared directly in the “Margin” column to the “Limit”. The “Correction” includes Antenna Factor, Preamp, and Cable Loss. These are already accounted for in the “Level” column.

12.2 Test Equipment Used:

Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due
DAV004'	Weather Station	Davis Instruments	7400	PE80529A61A	05/02/2016	05/02/2017
145106'	Bilog Antenna (30MHz - 5GHz)	Sunol Sciences	JB5	A111003	05/03/2016	05/03/2017
145-410'	Cables 145-420 145-421 145-422 145-406	Huber + Suhner	10m Track A Cables	multiple	07/30/2016	07/30/2017
PRE10'	30-1000MHz pre-amp	ITS	PRE10	PRE10	12/16/2016	12/16/2017
ETS001'	1-18GHz DRG Horn Antenna	ETS Lindgren	3117	00143260	05/13/2016	05/13/2017
145-416'	Cables 145-420 145-423 145-424 145-408	Huber + Suhner	3m Track B cables	multiple	07/30/2016	07/30/2017
145014'	Preamplifier (1 GHz to 26.5 GHz)	Hewlett Packard	8449B	3008A00232	05/27/2016	05/27/2017
EMC04'	ANTENNA, RIDGED GUIDE, 18-40 GHZ	EMCO	3116	2090	09/14/2016	09/14/2017
REA004	3GHz High Pass Filter	Reactel, Inc	7HSX-3G/18G-S11	06-1	02/17/2017	02/17/2018
CBLSHF203'	Cable, SMA - SMA, 9kHz-40GHz, Cable Kit 4	Sucoflex (Huber Suhn	104PE	CBLSHF203	09/08/2016	09/08/2017
CBLSHF204'	Cable, SMA - SMA, 9kHz -40GHz, (Cable Kit 5)	Huber + Suhner	Sucoflex 102EA	234714001	08/27/2016	08/27/2017

Software Utilized:

Name	Manufacturer	Version
BAT-EMC Emissions	Nexio	3.16.0.69

12.3 Results:

The sample tested was found to Comply.

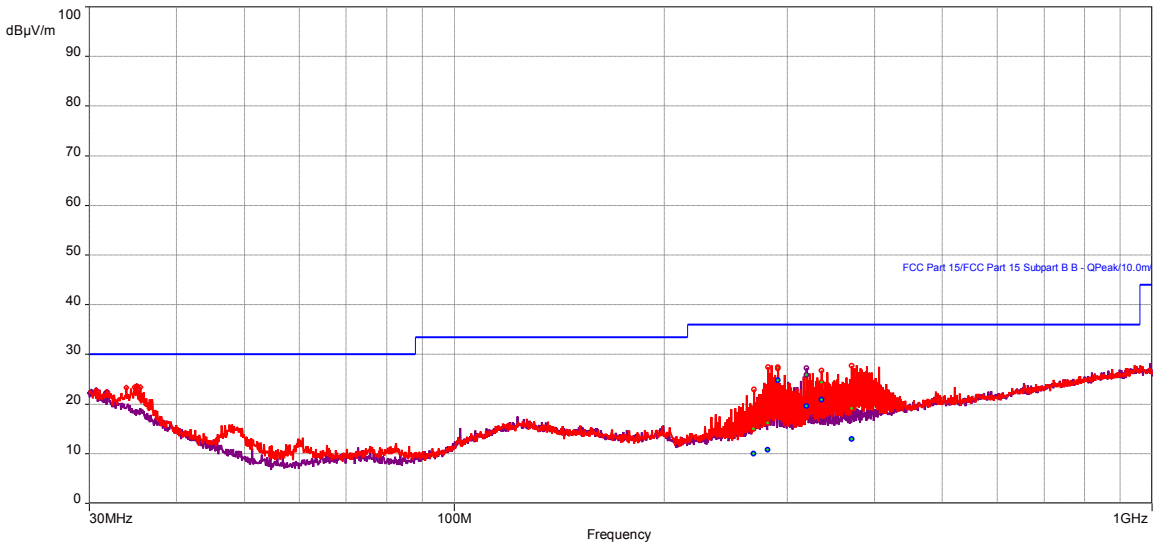
12.4 Plots/Data:

Low Channel, Charging mode, Tx (Low data rate, 30 MHz – 1 GHz)

Test Information:

Date and Time	03/20/2017
Client and Project Number	Zoll medical G102894565
Engineer	Naga Suryadevara
Temperature	20C
Humidity	16%
Atmospheric Pressure	1007mbars
Comments	120VAC 60Hz Tx mode Low Channel

Graph:



Results:

QuasiPeak (PASS) (6)

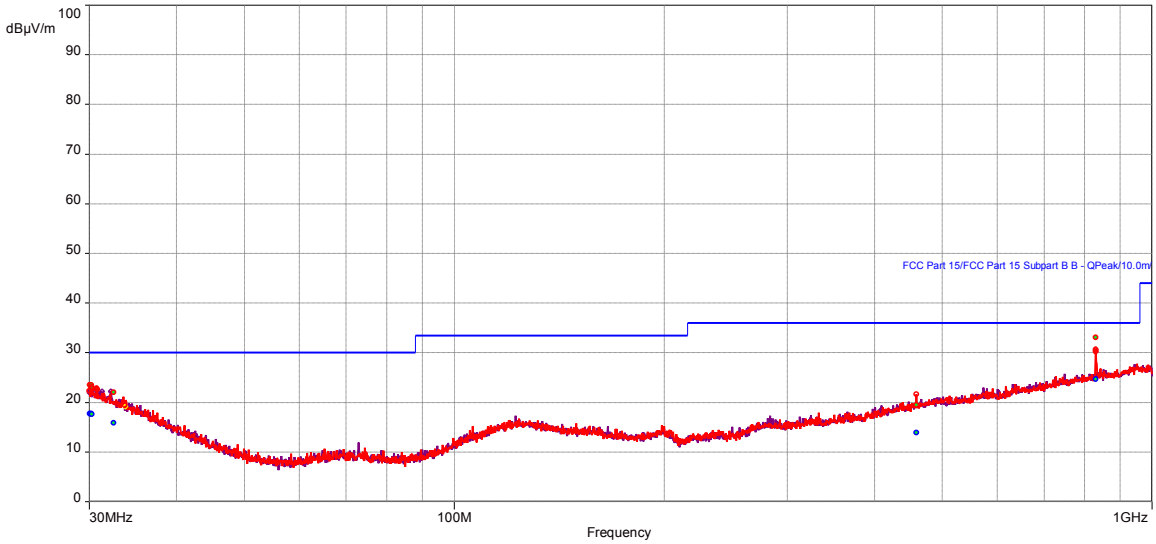
Frequency (MHz)	SR	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Meas. time (s)	Correction (dB)
268.5	1	9.99	36.00	-26.01	176.00	1.45	Vertical	0.10	-18.08
281.34	1	10.77	36.00	-25.23	41.00	1.32	Vertical	0.10	-17.41
291.18	1	24.74	36.00	-11.26	210.00	1.00	Vertical	0.10	-17.55
336	1	20.88	36.00	-15.12	98.00	1.32	Vertical	0.10	-16.74
371.22	1	12.91	36.00	-23.09	197.00	1.32	Vertical	0.10	-15.71
319.86	2	19.58	36.00	-16.42	109.00	3.72	Horizontal	0.10	-16.78

Low Channel, Battery mode, Tx (Low data rate, 30 MHz – 1 GHz, X-axis)

Test Information:

Date and Time	03/20/2017
Client and Project Number	Zoll medical G102894565
Engineer	Naga Suryadevara
Temperature	20C
Humidity	16%
Atmospheric Pressure	1007mbars
Comments	Battery mode Tx X axis

Graph:



Results:

QuasiPeak (PASS) (6)

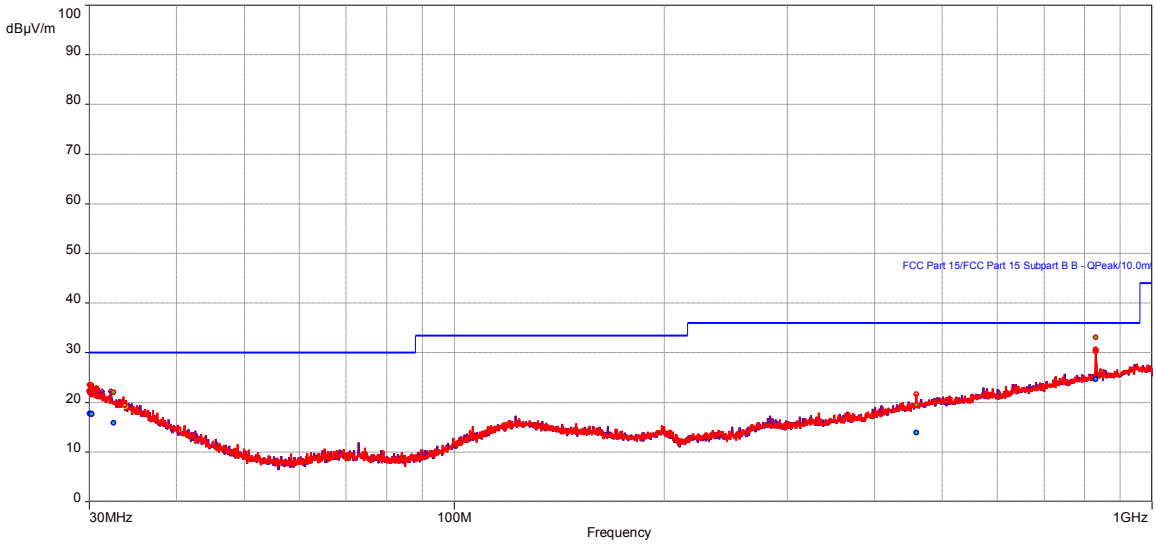
Frequency (MHz)	SR	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Meas. time (s)	Correction (dB)
30.06	1	17.75	30.00	-12.25	212.00	3.00	Vertical	0.10	-11.04
30.18	1	17.69	30.00	-12.31	210.00	2.31	Vertical	0.10	-11.15
30.24	1	17.63	30.00	-12.37	334.00	4.00	Vertical	0.10	-11.21
32.52	1	15.84	30.00	-14.16	245.00	1.00	Vertical	0.10	-12.99
459.72	1	13.94	36.00	-22.06	64.00	3.70	Vertical	0.10	-13.23
830.16	1	24.65	36.00	-11.35	314.00	3.00	Vertical	0.10	-6.51

Low Channel, Battery mode, Tx (Low data rate, 30 MHz – 1 GHz, Y-axis)

Test Information:

Date and Time	03/20/2017
Client and Project Number	Zoll medical G102894565
Engineer	Naga Suryadevara
Temperature	20C
Humidity	16%
Atmospheric Pressure	1007mbars
Comments	Battery mode Tx Y axis

Graph:



Results:

QuasiPeak (PASS) (6)

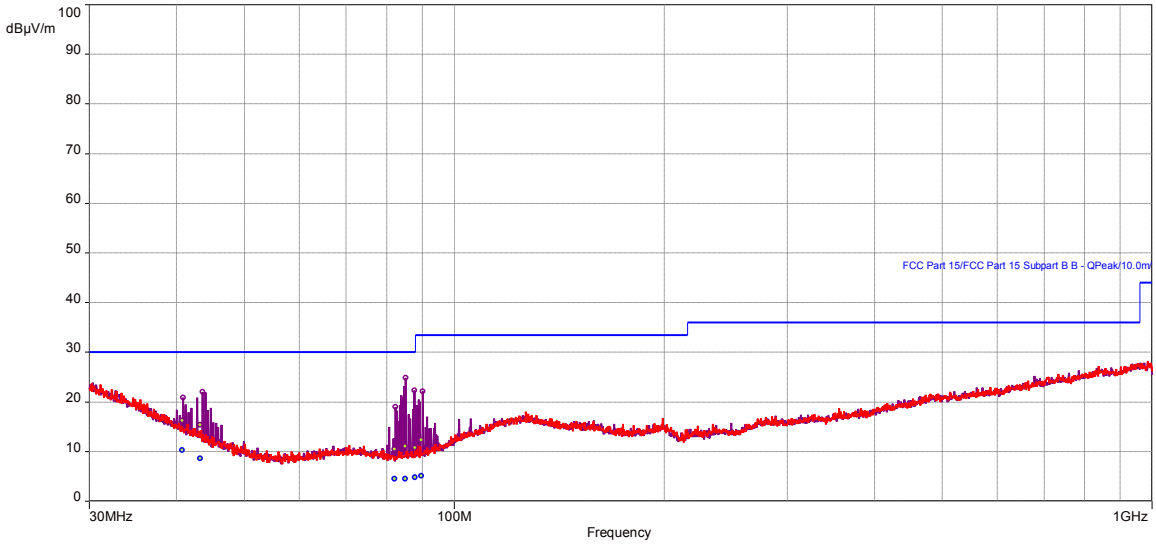
Frequency (MHz)	SR	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Meas. time (s)	Correction (dB)
30.06	1	17.75	30.00	-12.25	212.00	3.00	Vertical	0.10	-11.04
30.18	1	17.69	30.00	-12.31	210.00	2.31	Vertical	0.10	-11.15
30.24	1	17.63	30.00	-12.37	334.00	4.00	Vertical	0.10	-11.21
32.52	1	15.84	30.00	-14.16	245.00	1.00	Vertical	0.10	-12.99
459.72	1	13.94	36.00	-22.06	64.00	3.70	Vertical	0.10	-13.23
830.16	1	24.65	36.00	-11.35	314.00	3.00	Vertical	0.10	-6.51

Low Channel, Battery mode, Tx (Low data rate, 30 MHz – 1 GHz, Z-axis)

Test Information:

Date and Time	03/27/2017
Client and Project Number	Zoll medical
Engineer	Naga Suryadevara
Temperature	19C
Humidity	26%
Atmospheric Pressure	1013mbars
Comments	Battery mode Tx Z axis

Graph:



Results:

QuasiPeak (PASS) (6)

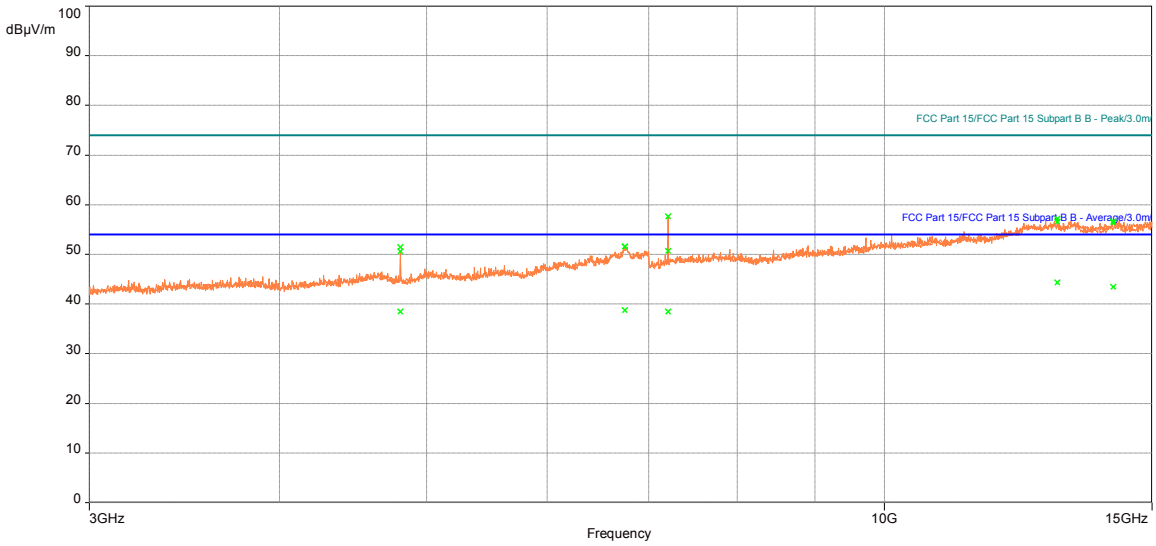
Frequency (MHz)	SR	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Meas. time (s)	Correction (dB)
40.74	2	10.24	30.00	-19.76	243.00	2.48	Horizontal	0.10	-19.10
43.26	2	8.65	30.00	-21.35	266.00	2.21	Horizontal	0.10	-20.79
82.14	2	4.46	30.00	-25.54	278.00	2.50	Horizontal	0.10	-24.84
85.08	2	4.50	30.00	-25.50	322.00	1.00	Horizontal	0.10	-24.89
87.84	2	4.76	30.00	-25.24	255.00	1.35	Horizontal	0.10	-24.58
89.64	2	5.07	33.50	-28.43	225.00	1.50	Horizontal	0.10	-24.22

Low Channel, Charging mode, Tx (Low data rate, above 1 GHz)

Test Information:

Date and Time	03/27/2017
Client and Project Number	Zoll medical
Engineer	Naga Suryadevara
Temperature	19C
Humidity	26%
Atmospheric Pressure	1013mbars
Comments	Charging Tx low channel

Graph:



Results:

Avg (PASS) (5)

Frequency (MHz)	SR	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Meas. time (s)	Correction (dB)
6748.5	1	38.71	54.00	-15.29	145.00	1.49	Vertical	0.10	11.67
7206	1	38.46	54.00	-15.54	6.00	2.74	Vertical	0.10	11.81
12991	1	44.34	54.00	-9.66	218.00	2.14	Vertical	0.10	22.64
14147.5	1	43.46	54.00	-10.54	299.00	3.29	Vertical	0.10	22.90
4804	2	38.45	54.00	-15.55	18.00	3.50	Horizontal	0.10	8.35

Peak (PASS) (5)

Frequency (MHz)	SR	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Meas. time (s)	Correction (dB)
6748.5	1	51.52	74.00	-22.48	145.00	1.49	Vertical	0.10	11.67
7206	1	50.70	74.00	-23.30	6.00	2.74	Vertical	0.10	11.81
12991	1	56.53	74.00	-17.47	218.00	2.14	Vertical	0.10	22.64
14147.5	1	56.40	74.00	-17.60	299.00	3.29	Vertical	0.10	22.90
4804	2	51.48	74.00	-22.52	18.00	3.50	Horizontal	0.10	8.35

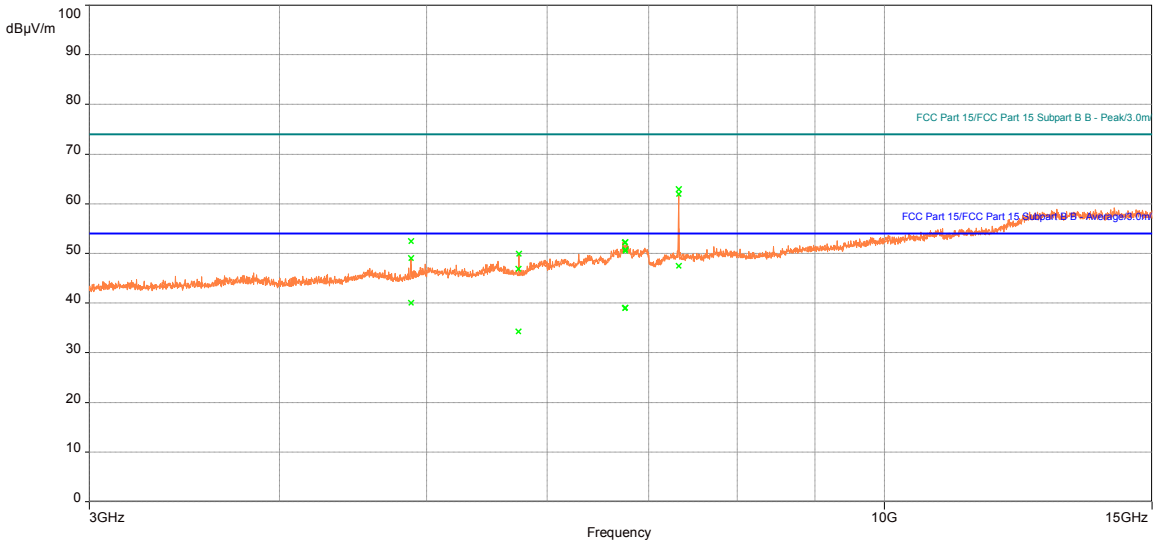
Note: Manual Scans were performed from 1-3 GHz and 15 – 40 GHz, no emissions were detected above the noise floor.

Mid Channel, Charging mode, Tx (Low data rate, above 1 GHz)

Test Information:

Date and Time	03/23/2017
Client and Project Number	Zoll Medical G102894565
Engineer	Kouma Sinn
Temperature	19C
Humidity	8%
Atmospheric Pressure	1021mbar
Comments	Bluetooth, Mid, Charging

Graph:



Results:

Avg (PASS) (5)

Frequency (MHz)	SR	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Meas. time (s)	Correction (dB)
7322.5	1	47.44	54.00	-6.56	0.00	2.83	Vertical	0.10	12.07
4882	2	40.00	54.00	-14.00	0.00	3.50	Horizontal	0.10	8.52
5746.5	2	34.27	54.00	-19.73	30.00	3.77	Horizontal	0.10	9.41
6751	2	38.90	54.00	-15.10	210.00	3.03	Horizontal	0.10	11.67
6756	2	39.01	54.00	-14.99	239.00	3.75	Horizontal	0.10	11.65

Peak (PASS) (5)

Frequency (MHz)	SR	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Meas. time (s)	Correction (dB)
7322.5	1	62.90	74.00	-11.10	0.00	2.83	Vertical	0.10	12.07
4882	2	52.42	74.00	-21.58	0.00	3.50	Horizontal	0.10	8.52
5746.5	2	46.83	74.00	-27.17	30.00	3.77	Horizontal	0.10	9.41
6751	2	52.11	74.00	-21.89	210.00	3.03	Horizontal	0.10	11.67
6756	2	52.24	74.00	-21.76	239.00	3.75	Horizontal	0.10	11.65

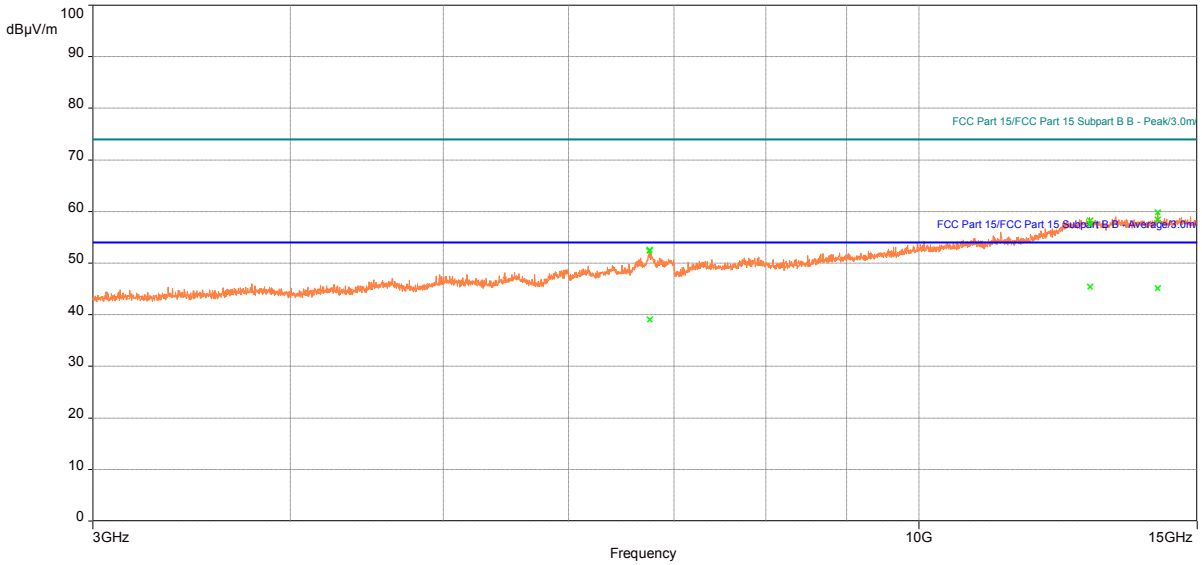
Note: Manual Scans were performed from 1-3 GHz and 15 – 40 GHz, no emissions were detected above the noise floor

High Channel, Charging mode, Tx (Low data rate, above 1 GHz)

Test Information:

Date and Time	03/23/2017
Client and Project Number	Zoll Medical G102894565
Engineer	Kouma Sinn
Temperature	19C
Humidity	8%
Atmospheric Pressure	1021mbar
Comments	3-15GHz Bluetooth, Tx High, Charging

Graph:



Results:

Avg (PASS) (3)

Frequency (MHz)	SR	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Meas. time (s)	Correction (dB)
6753	1	39.02	54.00	-14.98	228.00	2.85	Vertical	0.10	11.66
12834.5	1	45.36	54.00	-8.64	209.00	2.50	Vertical	0.10	22.33
14159	1	45.07	54.00	-8.93	105.00	1.76	Vertical	0.10	22.90

Peak (PASS) (3)

Frequency (MHz)	SR	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Meas. time (s)	Correction (dB)
6753	1	52.54	74.00	-21.46	228.00	2.85	Vertical	0.10	11.66
12834.5	1	57.57	74.00	-16.43	209.00	2.50	Vertical	0.10	22.33
14159	1	58.42	74.00	-15.58	105.00	1.76	Vertical	0.10	22.90

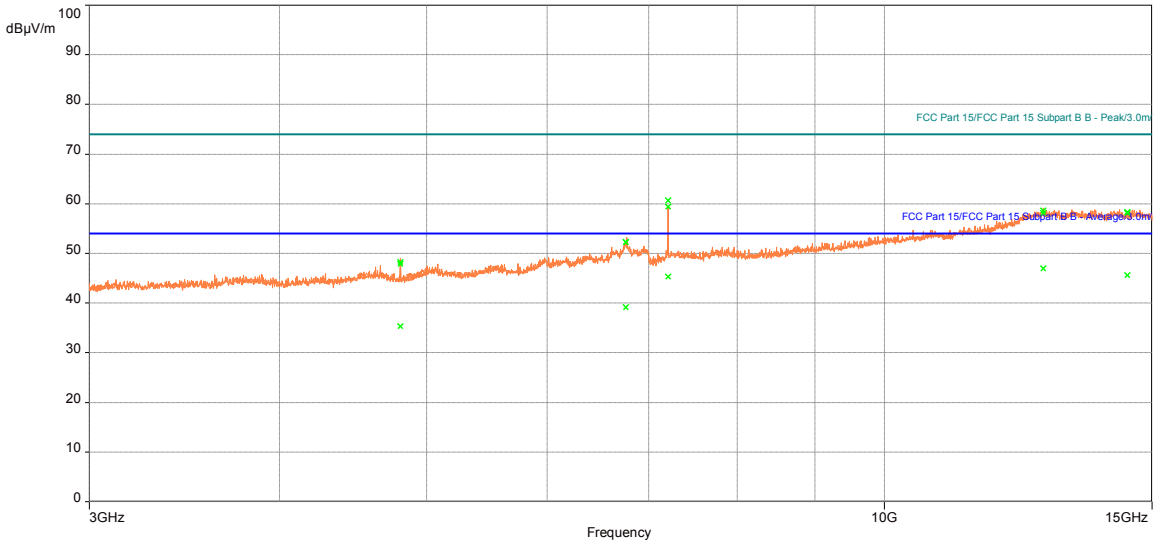
Note: Manual Scans were performed from 1-3 GHz and 15 – 40 GHz, no emissions were detected above the noise floor.

Low Channel, Battery mode, Tx (Low data rate, above 1 GHz, X axis)

Test Information:

Date and Time	03/22/2017
Client and Project Number	Zoll Medical G102894565
Engineer	Kouma Sinn
Temperature	20C
Humidity	20%
Atmospheric Pressure	1000mbar
Comments	Bluetooth, Tx Low, X-axis

Graph:



Results:

Avg (PASS) (5)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Meas. time (s)	Correction (dB)
7206.5	45.34	54.00	-8.66	0.00	2.00	Vertical	0.10	11.81
12721	46.94	54.00	-7.06	138.00	3.41	Vertical	0.10	22.00
14449	45.63	54.00	-8.37	359.00	3.13	Vertical	0.10	22.50
4804	35.32	54.00	-18.68	29.00	1.79	Horizontal	0.10	8.35
6759	39.18	54.00	-14.82	300.00	1.00	Horizontal	0.10	11.64

Peak (PASS) (5)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Meas. time (s)	Correction (dB)
7206.5	60.65	74.00	-13.35	0.00	2.00	Vertical	0.10	11.81
12721	58.08	74.00	-15.92	138.00	3.41	Vertical	0.10	22.00
14449	58.16	74.00	-15.84	359.00	3.13	Vertical	0.10	22.50
4804	48.21	74.00	-25.79	29.00	1.79	Horizontal	0.10	8.35
6759	52.23	74.00	-21.77	300.00	1.00	Horizontal	0.10	11.64

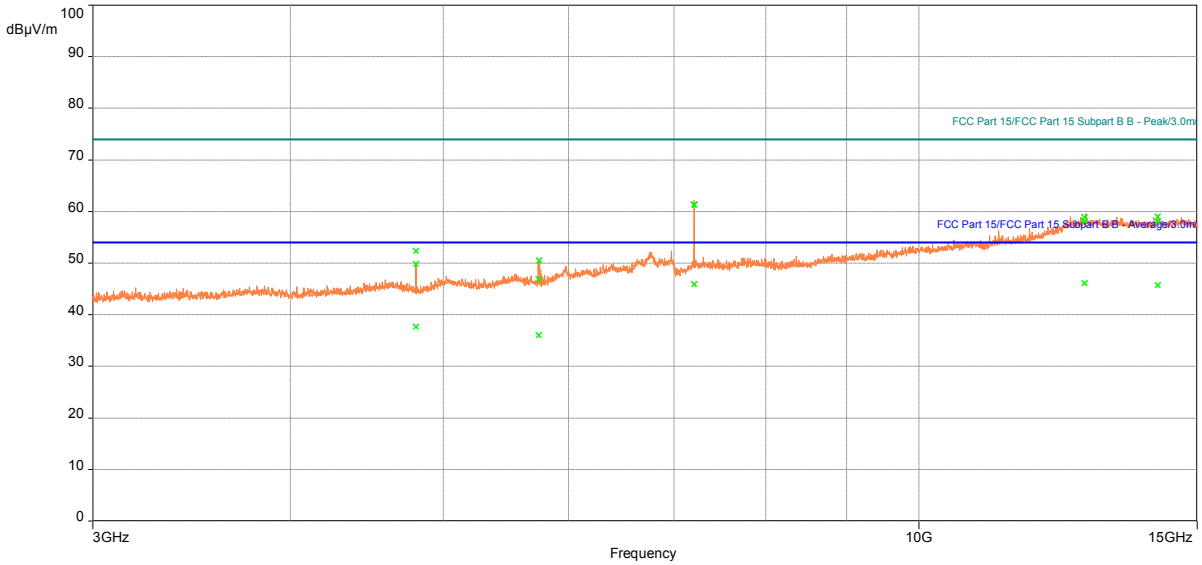
Note: Manual Scans were performed from 1-3 GHz and 15 – 40 GHz, no emissions were detected above the noise floor.

Low Channel, Battery mode, Tx (Low data rate, above 1 GHz, Y axis)

Test Information:

Date and Time	03/22/2017
Client and Project Number	Zoll Medical G102894565
Engineer	Kouma Sinn
Temperature	20C
Humidity	20%
Atmospheric Pressure	1000mbar
Comments	3-15GHz_Bluetooth, Tx Low, Y-axis

Graph:



Results:

Avg (PASS) (5)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Meas. time (s)	Correction (dB)
5744	36.06	54.00	-17.94	75.00	2.42	Vertical	0.10	9.41
12729	46.10	54.00	-7.90	255.00	2.49	Vertical	0.10	22.02
14165.5	45.72	54.00	-8.28	165.00	1.75	Vertical	0.10	22.91
4803.5	37.69	54.00	-16.31	16.00	2.28	Horizontal	0.10	8.35
7206.5	45.87	54.00	-8.13	37.00	2.99	Horizontal	0.10	11.81

Peak (PASS) (5)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Meas. time (s)	Correction (dB)
5744	46.83	74.00	-27.17	75.00	2.42	Vertical	0.10	9.41
12729	58.90	74.00	-15.10	255.00	2.49	Vertical	0.10	22.02
14165.5	58.00	74.00	-16.00	165.00	1.75	Vertical	0.10	22.91
4803.5	52.37	74.00	-21.63	16.00	2.28	Horizontal	0.10	8.35
7206.5	61.32	74.00	-12.68	37.00	2.99	Horizontal	0.10	11.81

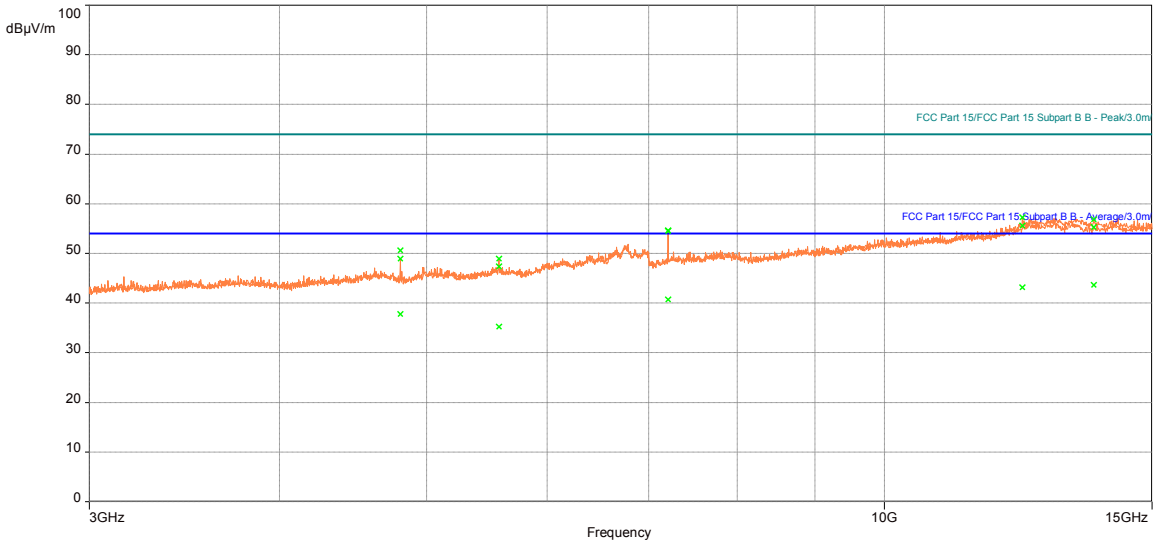
Note: Manual Scans were performed from 1-3 GHz and 15 – 40 GHz, no emissions were detected above the noise floor.

Low Channel, Battery mode, Tx (Low data rate, above 1 GHz, Z axis)

Test Information:

Date and Time	03/27/2017
Client and Project Number	Zoll medical
Engineer	Naga Suryadevara
Temperature	19C
Humidity	26%
Atmospheric Pressure	1013mbars
Comments	Battery mode Tx Z axis Low channel above 1 GHz

Graph:



Results:

Avg (PASS) (5)

Frequency (MHz)	SR	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Meas. time (s)	Correction (dB)
4804	1	37.79	54.00	-16.21	139.00	1.85	Vertical	0.10	8.35
5579	1	35.18	54.00	-18.82	150.00	1.76	Vertical	0.10	9.31
7206	1	40.75	54.00	-13.25	328.00	1.00	Vertical	0.10	11.81
12321.5	1	43.16	54.00	-10.84	254.00	1.48	Vertical	0.10	20.77
13732	1	43.62	54.00	-10.38	229.00	2.85	Vertical	0.10	22.41

Peak (PASS) (5)

Frequency (MHz)	SR	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Meas. time (s)	Correction (dB)
4804	1	50.64	74.00	-23.36	139.00	1.85	Vertical	0.10	8.35
5579	1	47.39	74.00	-26.61	150.00	1.76	Vertical	0.10	9.31
7206	1	54.52	74.00	-19.48	328.00	1.00	Vertical	0.10	11.81
12321.5	1	55.60	74.00	-18.40	254.00	1.48	Vertical	0.10	20.77
13732	1	55.28	74.00	-18.72	229.00	2.85	Vertical	0.10	22.41

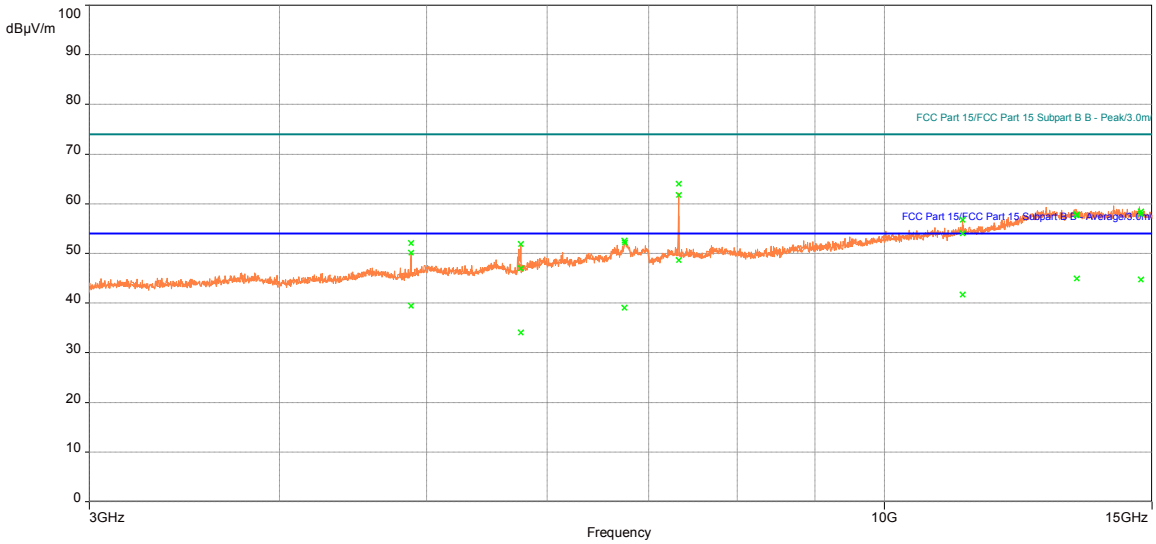
Note: Manual Scans were performed from 1-3 GHz and 15 – 40 GHz, no emissions were detected above the noise floor.

Mid Channel, Battery mode, Tx (Low data rate, above 1 GHz, X axis)

Test Information:

Date and Time	03/23/2017
Client and Project Number	Zoll Medical G102894565
Engineer	Kouma Sinn
Temperature	19C
Humidity	8%
Atmospheric Pressure	1021mbar
Comments	Bluetooth, Tx Mid, X-axis

Graph:



Results:

Avg (PASS) (7)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Meas. time (s)	Correction (dB)
4882	39.40	54.00	-14.60	0.00	2.42	Vertical	0.10	8.52
5765.5	34.00	54.00	-20.00	273.00	1.50	Vertical	0.10	9.40
6748	39.03	54.00	-14.97	172.00	1.50	Vertical	0.10	11.67
7322.5	48.61	54.00	-5.39	353.00	1.85	Vertical	0.10	12.07
11257	41.68	54.00	-12.32	29.00	1.00	Vertical	0.10	18.66
13380	44.94	54.00	-9.06	58.00	1.00	Vertical	0.10	22.66
14750	44.73	54.00	-9.27	164.00	2.50	Vertical	0.10	22.68

Peak (PASS) (7)

Frequency (MHz)	SR	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Meas. time (s)	Correction (dB)
4882	1	52.03	74.00	-21.97	0.00	2.42	Vertical	0.10	8.52
5765.5	1	46.95	74.00	-27.05	273.00	1.50	Vertical	0.10	9.40
6748	1	52.55	74.00	-21.45	172.00	1.50	Vertical	0.10	11.67
7322.5	1	63.96	74.00	-10.04	353.00	1.85	Vertical	0.10	12.07
11257	1	54.05	74.00	-19.95	29.00	1.00	Vertical	0.10	18.66
13380	1	57.62	74.00	-16.38	58.00	1.00	Vertical	0.10	22.66
14750	1	57.92	74.00	-16.08	164.00	2.50	Vertical	0.10	22.68

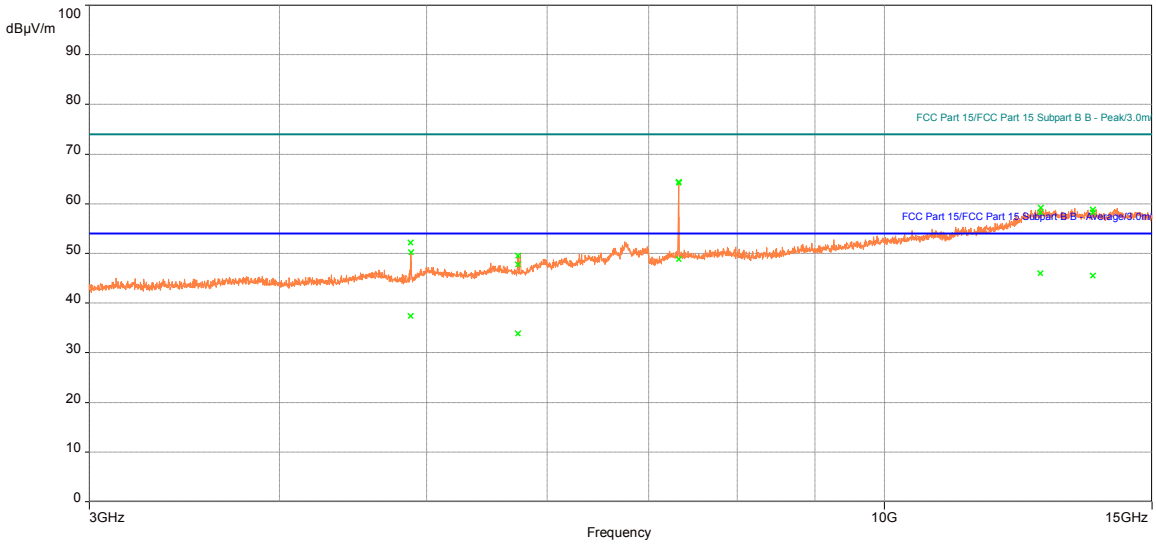
Note: Manual Scans were performed from 1-3 GHz and 15 – 40 GHz, no emissions were detected above the noise floor

Mid Channel, Battery mode, Tx (Low data rate, above 1 GHz, Y axis)

Test Information:

Date and Time	03/22/2017
Client and Project Number	Zoll Medical G102894565
Engineer	Kouma Sinn
Temperature	20C
Humidity	20%
Atmospheric Pressure	1000mbar
Comments	3-15GHz_Bluetooth, Tx Mid, Y-axis

Graph:



Results:

Avg (PASS) (5)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Meas. time (s)	Correction (dB)
4881.5	37.41	54.00	-16.59	19.00	2.28	Horizontal	0.10	8.52
5741	33.85	54.00	-20.15	127.00	2.42	Horizontal	0.10	9.41
7322.5	48.80	54.00	-5.20	37.00	1.99	Horizontal	0.10	12.07
12667.5	46.01	54.00	-7.99	76.00	1.99	Horizontal	0.10	21.84
13713.5	45.52	54.00	-8.48	165.00	2.42	Horizontal	0.10	22.40

Peak (PASS) (5)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Meas. time (s)	Correction (dB)
4881.5	52.15	74.00	-21.85	19.00	2.28	Horizontal	0.10	8.52
5741	47.79	74.00	-26.21	127.00	2.42	Horizontal	0.10	9.41
7322.5	64.23	74.00	-9.77	37.00	1.99	Horizontal	0.10	12.07
12667.5	58.18	74.00	-15.82	76.00	1.99	Horizontal	0.10	21.84
13713.5	58.19	74.00	-15.81	165.00	2.42	Horizontal	0.10	22.40

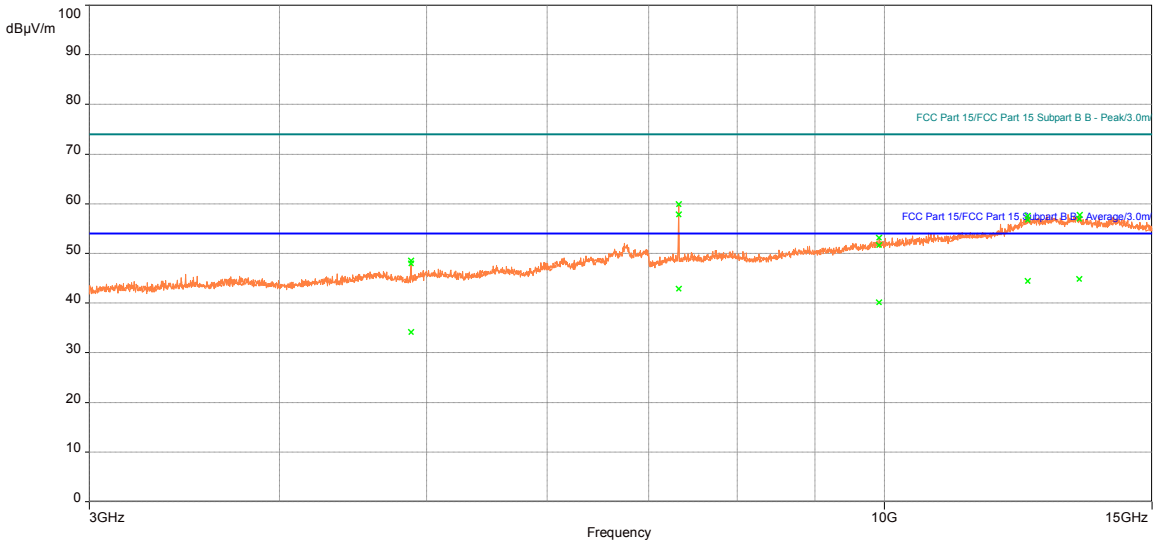
Note: Manual Scans were performed from 1-3 GHz and 15 – 40 GHz, no emissions were detected above the noise floor.

Mid Channel, Battery mode, Tx (Low data rate, above 1 GHz, Z axis)

Test Information:

Date and Time	03/27/2017
Client and Project Number	Zoll medical
Engineer	Naga Suryadevara
Temperature	19C
Humidity	26%
Atmospheric Pressure	1013mbars
Comments	Battery mode Tx Z axis Mid channel above 1 GHz

Graph:



Results:

Avg (PASS) (5)

Frequency (MHz)	SR	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Meas. time (s)	Correction (dB)
4882.5	1	34.17	54.00	-19.83	120.00	3.43	Vertical	0.10	8.52
7322.5	1	42.87	54.00	-11.13	328.00	1.00	Vertical	0.10	12.07
9918	1	40.15	54.00	-13.85	209.00	2.50	Vertical	0.10	15.30
12423.5	1	44.38	54.00	-9.62	299.00	1.36	Vertical	0.10	21.06
13437.5	1	44.78	54.00	-9.22	29.00	1.00	Vertical	0.10	22.62

Peak (PASS) (5)

Frequency (MHz)	SR	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Meas. time (s)	Correction (dB)
4882.5	1	48.50	74.00	-25.50	120.00	3.43	Vertical	0.10	8.52
7322.5	1	57.87	74.00	-16.13	328.00	1.00	Vertical	0.10	12.07
9918	1	51.64	74.00	-22.36	209.00	2.50	Vertical	0.10	15.30
12423.5	1	56.74	74.00	-17.26	299.00	1.36	Vertical	0.10	21.06
13437.5	1	56.91	74.00	-17.09	29.00	1.00	Vertical	0.10	22.62

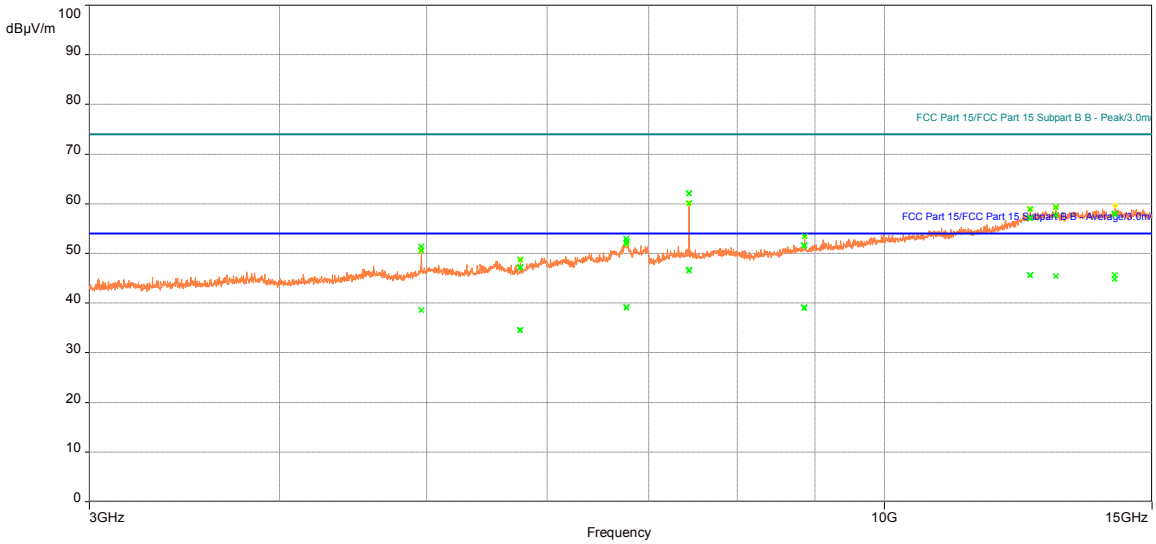
Note: Manual Scans were performed from 1-3 GHz and 15 – 40 GHz, no emissions were detected above the noise floor.

High Channel, Battery mode, Tx (Low data rate, above 1 GHz, X axis)

Test Information:

Date and Time	03/23/2017
Client and Project Number	Zoll Medical G102894565
Engineer	Kouma Sinn
Temperature	19C
Humidity	8%
Atmospheric Pressure	1021mbar
Comments	Bluetooth, High, X-axis

Graph:



Results:

Avg (PASS) (14)

Frequency (MHz)	SR	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Meas. time (s)	Correction (dB)
4960	1	38.59	54.00	-15.41	0.00	3.76	Vertical	0.10	8.77
5760	1	34.50	54.00	-19.50	174.00	1.75	Vertical	0.10	9.40
5762.5	1	34.50	54.00	-19.50	166.00	1.98	Vertical	0.10	9.40
6764.5	1	39.10	54.00	-14.90	58.00	1.50	Vertical	0.10	11.62
6769	1	39.09	54.00	-14.91	49.00	1.85	Vertical	0.10	11.60
7439.5	1	46.70	54.00	-7.30	329.00	1.73	Vertical	0.10	12.11
7440.5	1	46.46	54.00	-7.54	329.00	1.74	Vertical	0.10	12.11
8858	1	38.96	54.00	-15.04	30.00	3.85	Vertical	0.10	13.54
8859	1	39.12	54.00	-14.88	30.00	3.75	Vertical	0.10	13.54
12468	1	45.56	54.00	-8.44	217.00	2.00	Vertical	0.10	21.21
12470.5	1	45.57	54.00	-8.43	239.00	1.50	Vertical	0.10	21.22
12970	1	45.43	54.00	-8.57	0.00	1.49	Vertical	0.10	22.62
14175.5	2	44.85	54.00	-9.15	319.00	1.25	Horizontal	0.10	22.91
14177.5	2	45.62	54.00	-8.38	308.00	1.48	Horizontal	0.10	22.91

Peak (PASS) (14)

Frequency (MHz)	SR	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Meas. time (s)	Correction (dB)
4960	1	51.35	74.00	-22.65	0.00	3.76	Vertical	0.10	8.77
5760	1	47.09	74.00	-26.91	174.00	1.75	Vertical	0.10	9.40
5762.5	1	47.22	74.00	-26.78	166.00	1.98	Vertical	0.10	9.40
6764.5	1	52.92	74.00	-21.08	58.00	1.50	Vertical	0.10	11.62
6769	1	52.48	74.00	-21.52	49.00	1.85	Vertical	0.10	11.60
7439.5	1	62.03	74.00	-11.97	329.00	1.73	Vertical	0.10	12.11
7440.5	1	62.16	74.00	-11.84	329.00	1.74	Vertical	0.10	12.11
8858	1	51.64	74.00	-22.36	30.00	3.85	Vertical	0.10	13.54
8859	1	51.51	74.00	-22.49	30.00	3.75	Vertical	0.10	13.54
12468	1	57.01	74.00	-16.99	217.00	2.00	Vertical	0.10	21.21
12470.5	1	57.16	74.00	-16.84	239.00	1.50	Vertical	0.10	21.22
12970	1	57.71	74.00	-16.29	0.00	1.49	Vertical	0.10	22.62
14175.5	2	57.87	74.00	-16.13	319.00	1.25	Horizontal	0.10	22.91
14177.5	2	58.00	74.00	-16.00	308.00	1.48	Horizontal	0.10	22.91

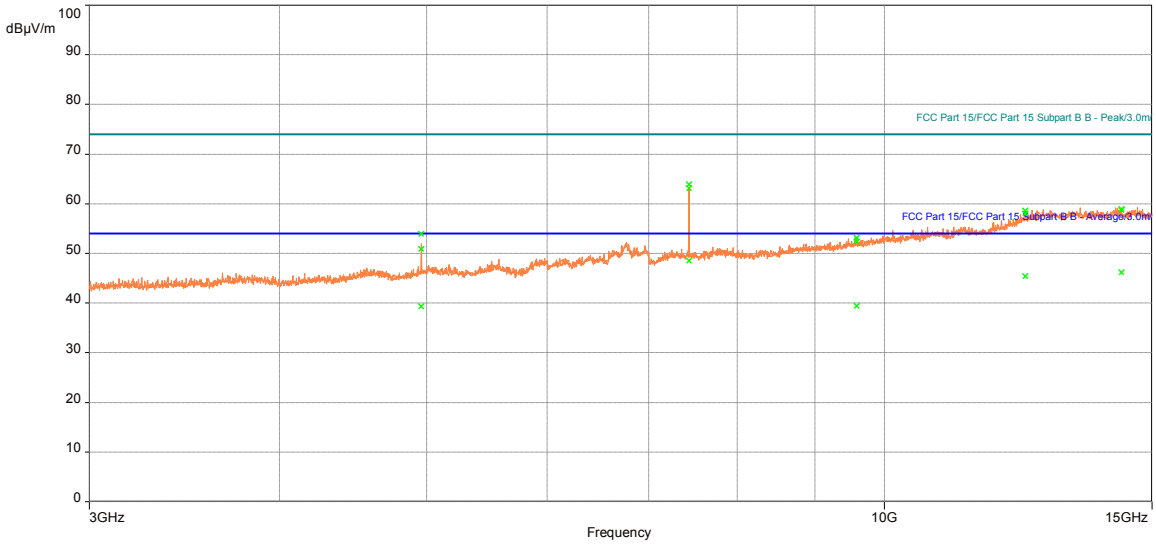
Note: Manual Scans were performed from 1-3 GHz and 15 – 40 GHz, no emissions were detected above the noise floor.

High Channel, Battery mode, Tx (Low data rate, above 1 GHz, Y axis)

Test Information:

Date and Time	03/23/2017
Client and Project Number	Zoll Medical G102894565
Engineer	Kouma Sinn
Temperature	19C
Humidity	8%
Atmospheric Pressure	1021mbar
Comments	Bluetooth, High, Y-axis

Graph:



Results:

Avg (PASS) (5)

Frequency (MHz)	SR	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Meas. time (s)	Correction (dB)
4959.5	2	39.31	54.00	-14.69	342.00	2.14	Horizontal	0.10	8.77
7439.5	2	48.54	54.00	-5.46	48.00	2.02	Horizontal	0.10	12.11
9592	2	39.41	54.00	-14.59	239.00	1.27	Horizontal	0.10	14.55
12376	2	45.43	54.00	-8.57	127.00	1.00	Horizontal	0.10	20.91
14316	2	46.18	54.00	-7.82	290.00	2.28	Horizontal	0.10	22.85

Peak (PASS) (5)

Frequency (MHz)	SR	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Meas. time (s)	Correction (dB)
4959.5	2	53.87	74.00	-20.13	342.00	2.14	Horizontal	0.10	8.77
7439.5	2	63.86	74.00	-10.14	48.00	2.02	Horizontal	0.10	12.11
9592	2	52.37	74.00	-21.63	239.00	1.27	Horizontal	0.10	14.55
12376	2	58.06	74.00	-15.94	127.00	1.00	Horizontal	0.10	20.91
14316	2	58.93	74.00	-15.07	290.00	2.28	Horizontal	0.10	22.85

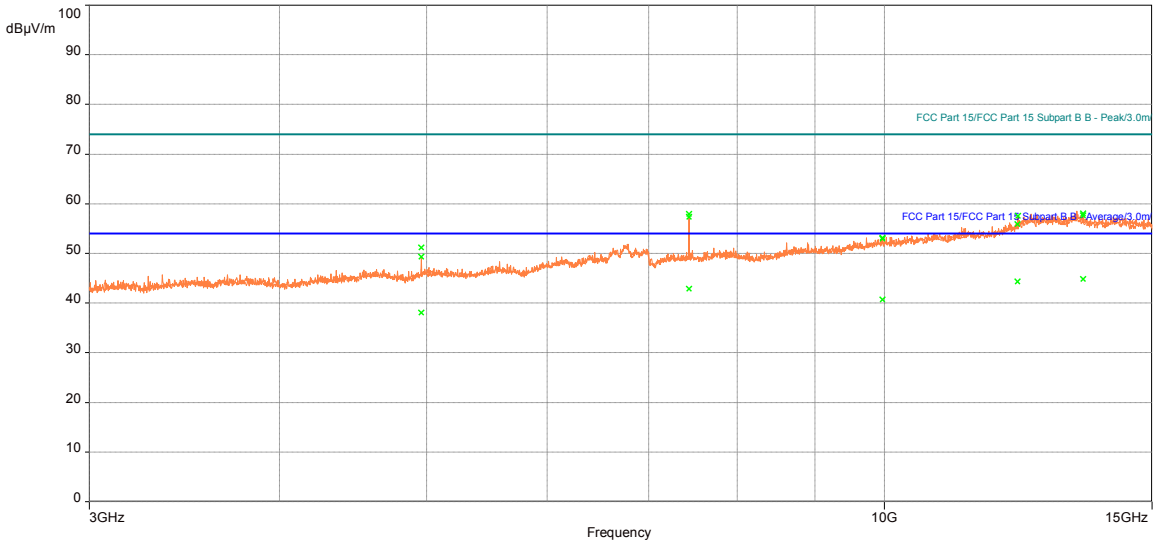
Note: Manual Scans were performed from 1-3 GHz and 15 – 40 GHz, no emissions were detected above the noise floor.

High Channel, Battery mode, Tx (Low data rate, above 1 GHz, Z axis)

Test Information:

Date and Time	03/27/2017
Client and Project Number	Zoll medical
Engineer	Naga Suryadevara
Temperature	19C
Humidity	26%
Atmospheric Pressure	1013mbars
Comments	Battery mode Tx Z axis high channel above 1 GHz

Graph:



Results:

Avg (PASS) (5)

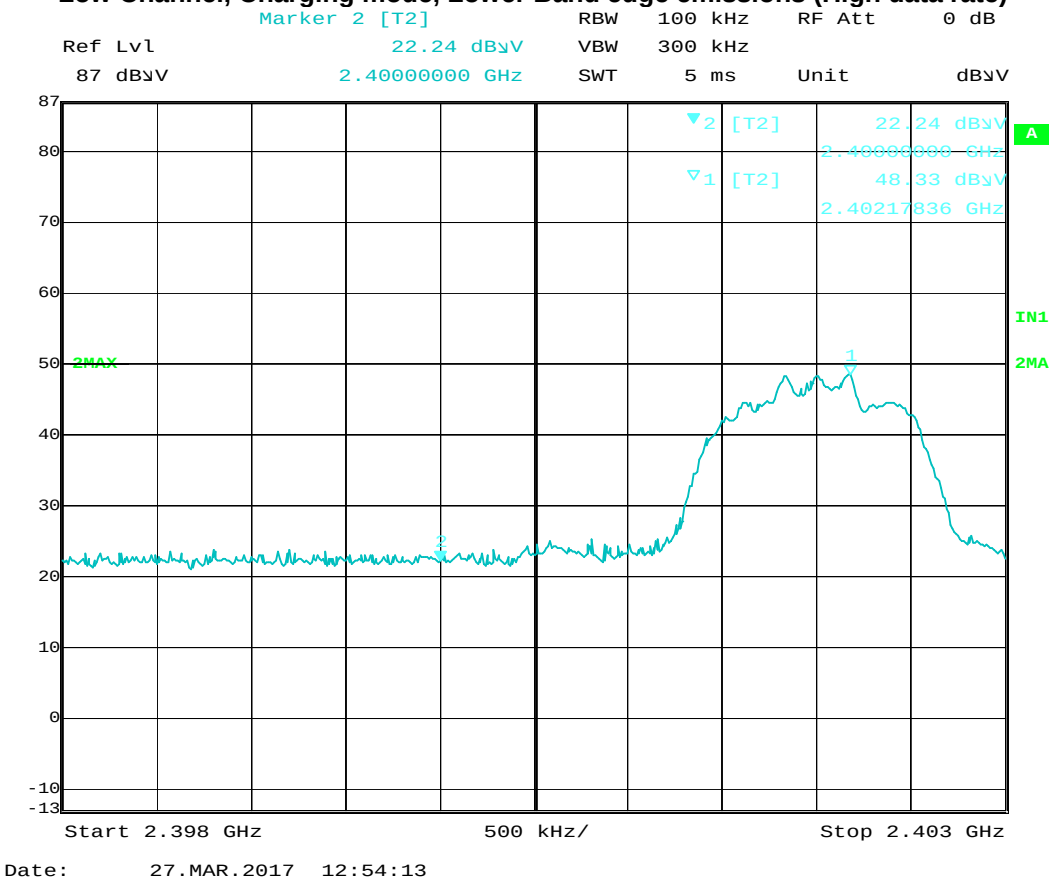
Frequency (MHz)	SR	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Meas. time (s)	Correction (dB)
4960	1	38.11	54.00	-15.89	139.00	1.85	Vertical	0.10	8.77
7439.5	1	42.86	54.00	-11.14	93.00	1.00	Vertical	0.10	12.11
9967	1	40.75	54.00	-13.25	0.00	1.74	Vertical	0.10	15.41
12238.5	1	44.33	54.00	-9.67	16.00	1.35	Vertical	0.10	20.52
13512.5	1	44.78	54.00	-9.22	75.00	1.84	Vertical	0.10	22.50

Peak (PASS) (5)

Frequency (MHz)	SR	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Meas. time (s)	Correction (dB)
4960	1	51.20	74.00	-22.80	139.00	1.85	Vertical	0.10	8.77
7439.5	1	57.91	74.00	-16.09	93.00	1.00	Vertical	0.10	12.11
9967	1	52.94	74.00	-21.06	0.00	1.74	Vertical	0.10	15.41
12238.5	1	55.91	74.00	-18.09	16.00	1.35	Vertical	0.10	20.52
13512.5	1	57.61	74.00	-16.39	75.00	1.84	Vertical	0.10	22.50

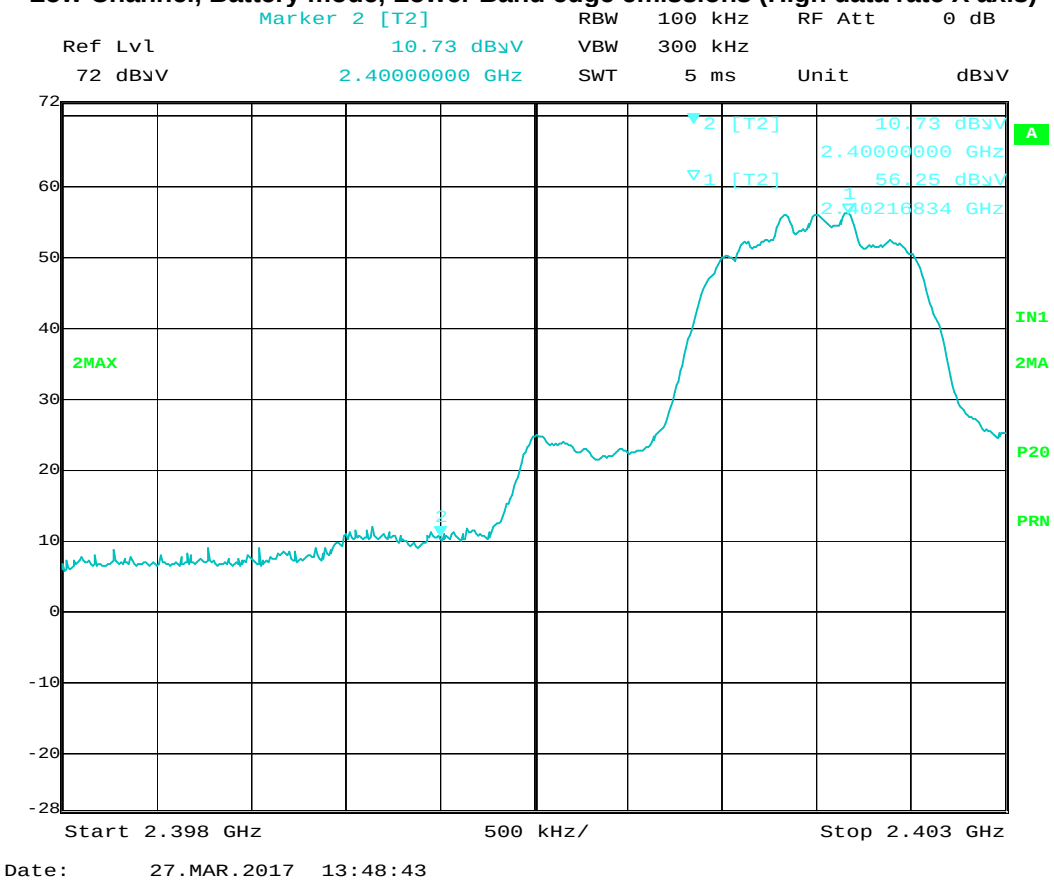
Note: Manual Scans were performed from 1-3 GHz and 15 – 40 GHz, no emissions were detected above the noise floor.

Low Channel, Charging mode, Lower Band edge emissions (High data rate)



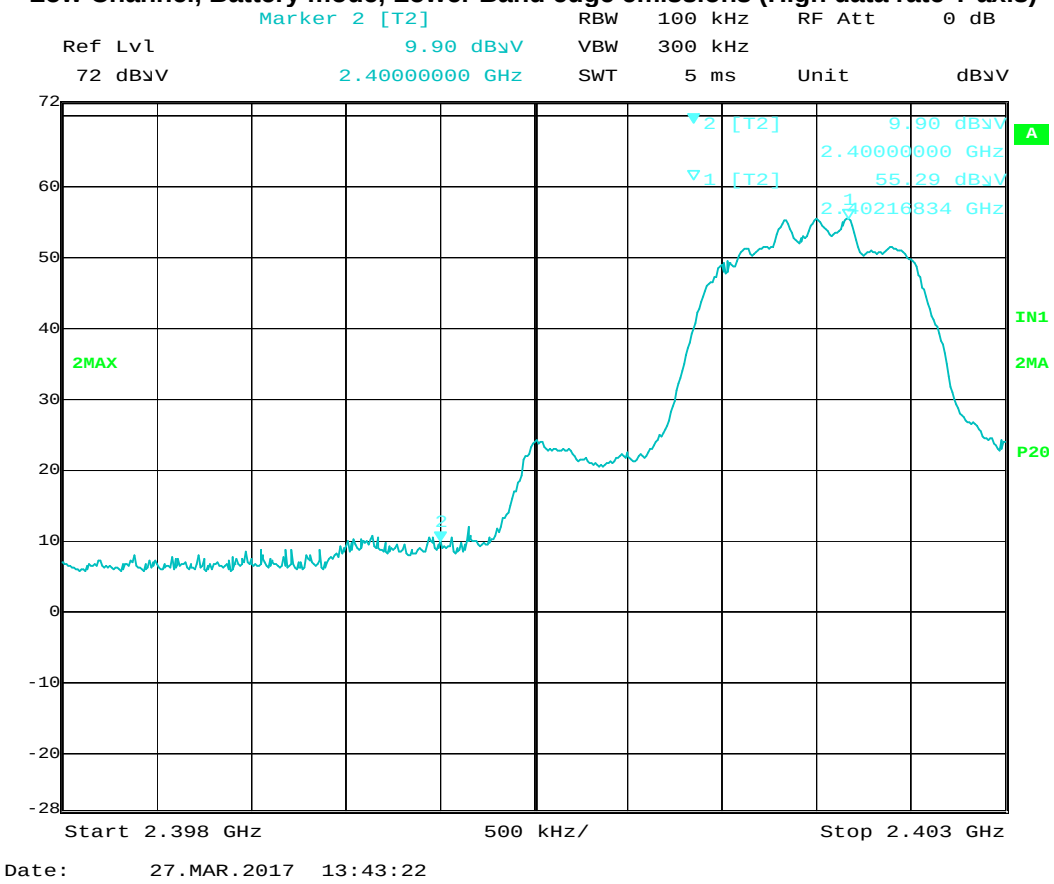
Emissions at lower band edge were 20 dB below the peak

Low Channel, Battery mode, Lower Band edge emissions (High data rate X axis)



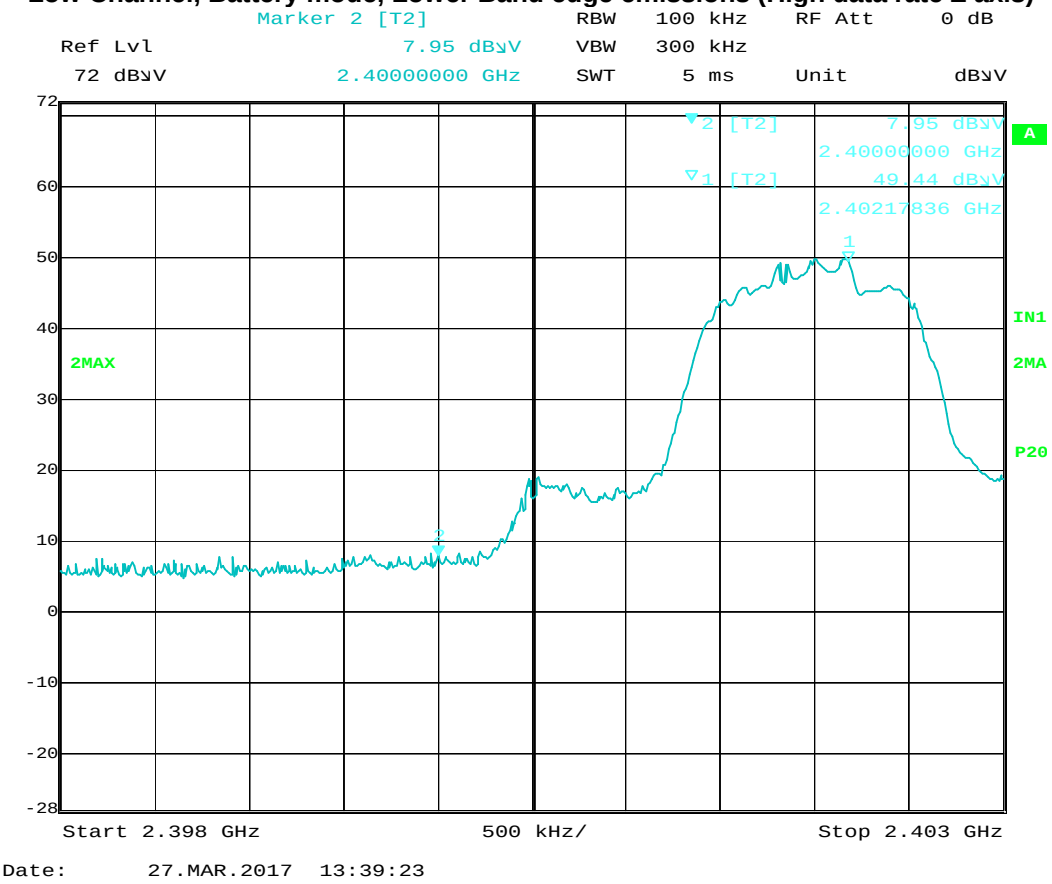
Emissions at lower band edge were 20 dB below the peak

Low Channel, Battery mode, Lower Band edge emissions (High data rate Y axis)



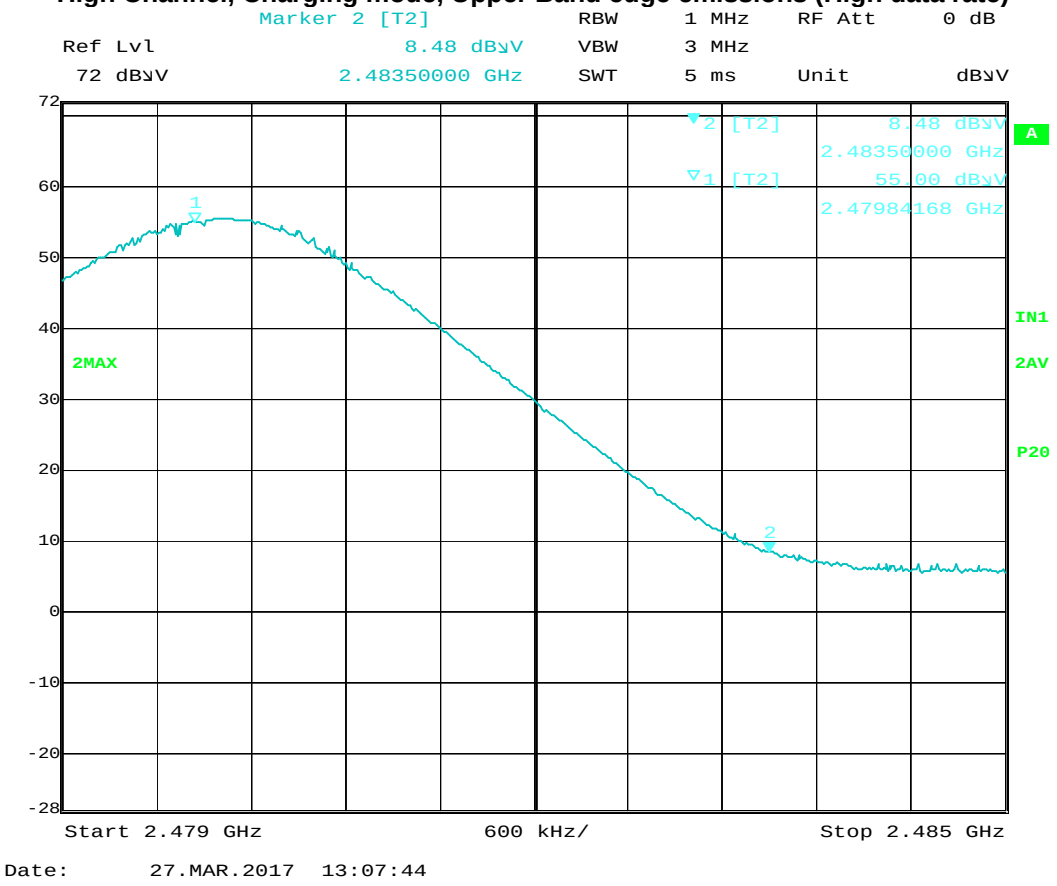
Emissions at lower band edge were 20 dB below the peak

Low Channel, Battery mode, Lower Band edge emissions (High data rate Z axis)



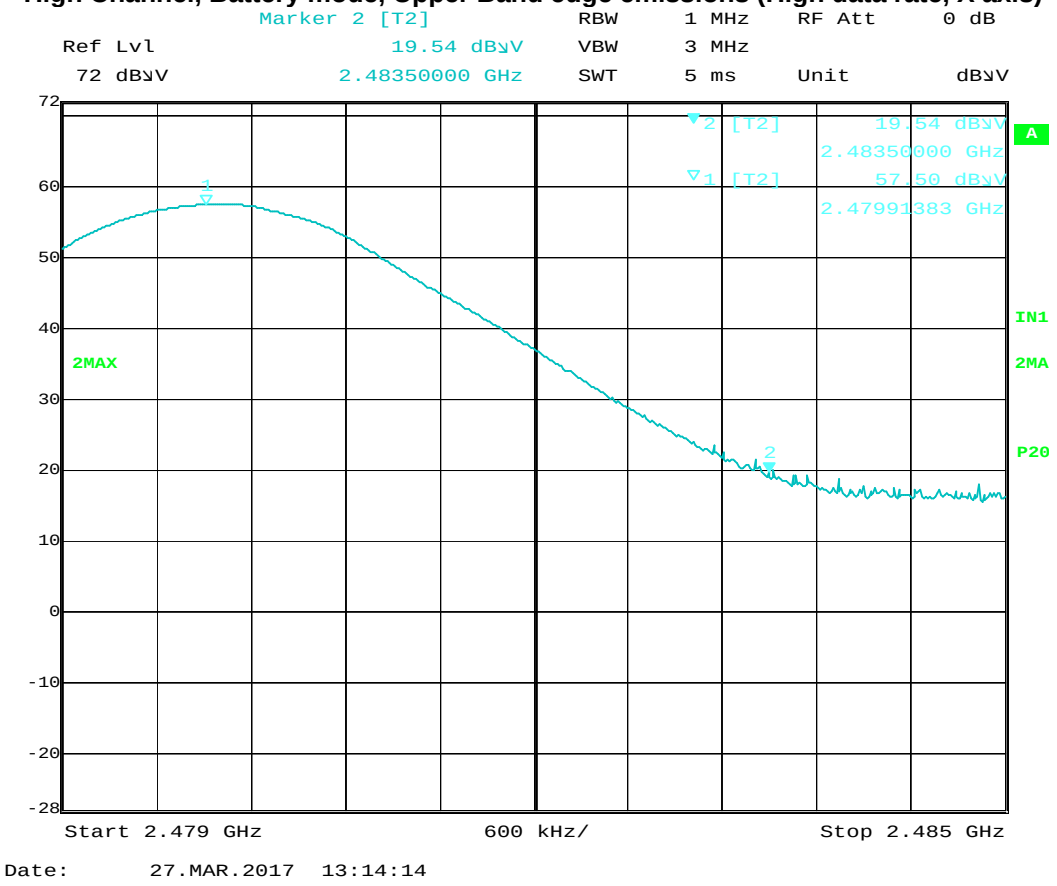
Emissions at lower band edge were 20 dB below the peak

High Channel, Charging mode, Upper Band edge emissions (High data rate)



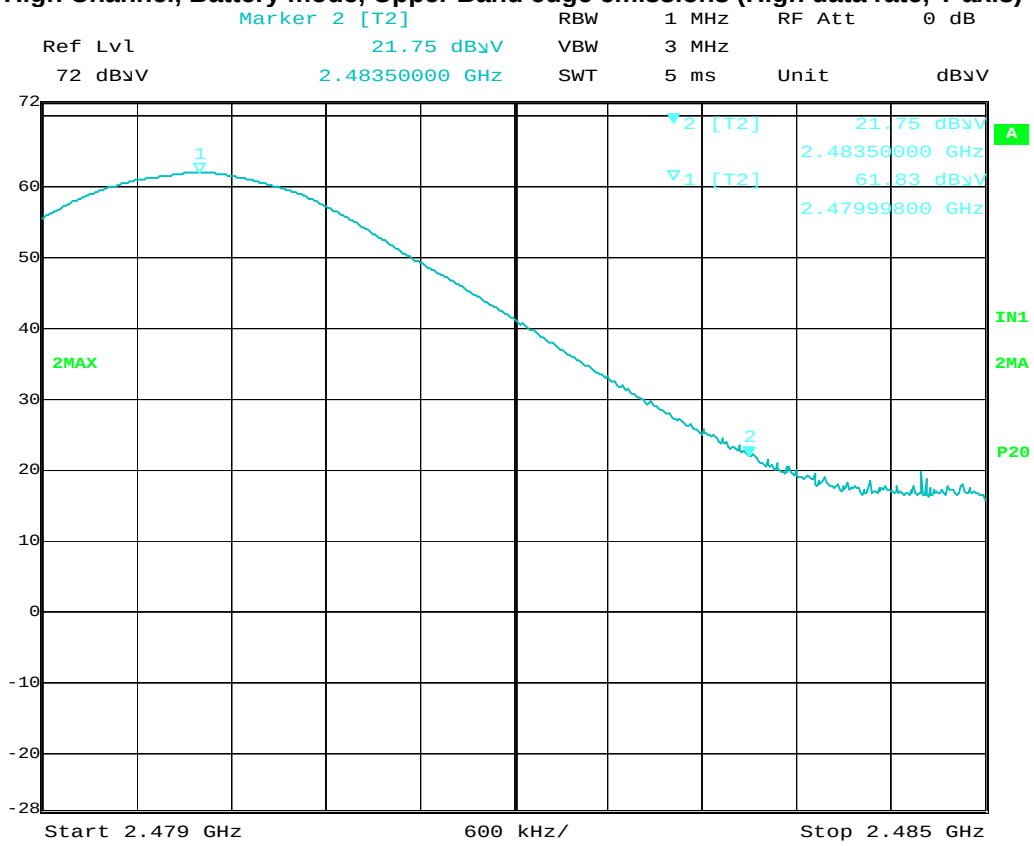
Detector Type	Ant. Pol. (V/H)	Frequency MHz	Reading dB(uV)	Antenna Factor dB(1/m)	Cable Loss dB	Pre-amp Factor dB	Distance Factor dB	Net dB(uV/m)	Limit dB(uV/m)	Margin dB	Bandwidth
PK	V	2483.500	8.48	32.22	5.18	0.00	0.00	45.88	74.00	-28.12	1/3 MHz
AVG	V	2483.500	5.32	32.22	5.18	0.00	0.00	42.72	54.00	-11.28	1/3 MHz

High Channel, Battery mode, Upper Band edge emissions (High data rate, X axis)



Detector Type	Ant. Pol. (V/H)	Frequency MHz	Reading dB(uV)	Antenna Factor dB(1/m)	Cable Loss dB	Pre-amp Factor dB	Distance Factor dB	Net dB(uV/m)	Limit dB(uV/m)	Margin dB	Bandwidth
PK	V	2483.500	19.54	32.22	5.18	0.00	0.00	56.94	74.00	-17.06	1/3 MHz
AVG	V	2483.500	8.77	32.22	5.18	0.00	0.00	46.17	54.00	-7.83	1/3 MHz

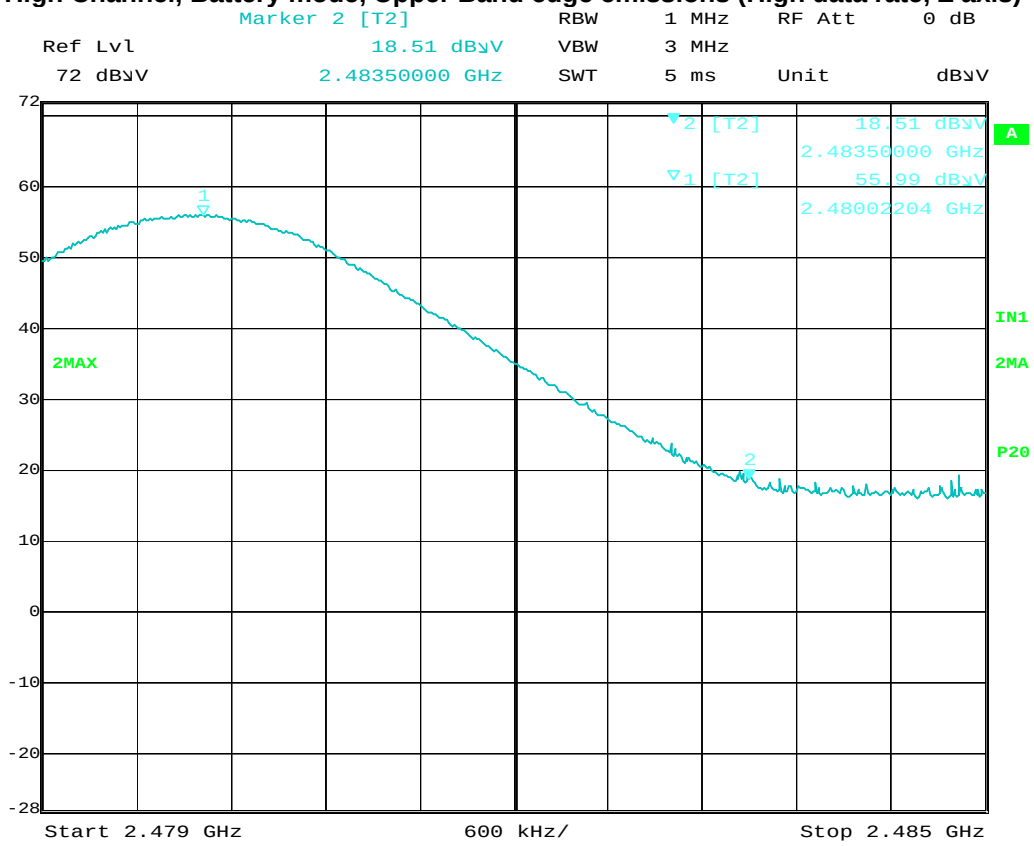
High Channel, Battery mode, Upper Band edge emissions (High data rate, Y axis)



Date: 27.MAR.2017 13:26:20

Detector Type	Ant. Pol. (V/H)	Frequency MHz	Reading dB(uV)	Antenna Factor dB(1/m)	Cable Loss dB	Pre-amp Factor dB	Distance Factor dB	Net dB(uV/m)	Limit dB(uV/m)	Margin dB	Bandwidth
PK	V	2483.500	21.75	32.22	5.18	0.00	0.00	59.15	74.00	-14.85	1/3 MHz
AVG	V	2483.500	10.11	32.22	5.18	0.00	0.00	47.51	54.00	-6.49	1/3 MHz

High Channel, Battery mode, Upper Band edge emissions (High data rate, Z axis)



Date: 27.MAR.2017 13:34:00

Detector Type	Ant. Pol. (V/H)	Frequency MHz	Reading dB(uV)	Antenna Factor dB(1/m)	Cable Loss dB	Pre-amp Factor dB	Distance Factor dB	Net dB(uV/m)	Limit dB(uV/m)	Margin dB	Bandwidth
PK	V	2483.500	18.51	32.22	5.18	0.00	0.00	55.91	74.00	-18.09	1/3 MHz
AVG	V	2483.500	9.22	32.22	5.18	0.00	0.00	46.62	54.00	-7.38	1/3 MHz

Test Personnel:	Naga Suryadevara N·S	Test Date:	03/20/2017, 03/22/2017 03/23/2017, 03/27/2017
Supervising/Reviewing Engineer: (Where Applicable)	N/A		
Product Standard:	FCC Part 15 Subpart C (15.247)	Limit Applied:	As specified in the plots (Section 12.4)
Input Voltage:	120VAC 60Hz, Internal Battery		
Pretest Verification w/ Ambient Signals or BB Source:	BB Source	Ambient Temperature:	20, 20, 19. 19 ºC
		Relative Humidity:	16, 20, 8, 26 %
		Atmospheric Pressure:	1007, 1000, 1021, 1013 mbars

Deviations, Additions, or Exclusions: None

13 Radiated Emissions (Digital Device and Receiver)

13.1 Method

Tests are performed in accordance with FCC Part 15 Subpart B.

TEST SITE: 10m ALSE

The 10m ALSE is 13m (Length) x 21m (Depth) x 10m (Height) with the effective size in terms of space from the tips of the absorber is 12m (Length) x 20m (Depth) x 8.5m (Height). This chamber achieves broadband performance using a unique arrangement of hybrid and ferrite tile absorber. This chamber has a built in 3m diameter turntable (Embedded type). The metal structure of the table makes electrical connection around the entire circumference of the turntable to the ground plane with a metal brush type connection. The turntable is located on one end of the chamber and the antennas are mounted 3 and 10 meters away at the other end of the chamber on the adjustable an Antenna Mast. The antenna mast is a non-conductive bore sighted type with remote control of antenna height and polarization. The Antenna Mast and the turntable can be remotely controlled through the controller located in the adjacent Control room. A Styrofoam table 80 cm high is used for table-top equipment.

Measurement Uncertainty

Measurement	Frequency Range	Expanded Uncertainty (k=2)	Ucispr
Radiated Emissions, 10m	30-1000 MHz	4.6 dB	6.3 dB
Radiated Emissions, 3m	30-1000 MHz	5.3 dB	6.3 dB
Radiated Emissions, 3m	1-6 GHz	4.5 dB	5.2 dB
Radiated Emissions, 3m	6-15 GHz	5.2 dB	5.5 dB
Radiated Emissions, 3m	15-18 GHz	5.0 dB	5.5 dB
Radiated Emissions, 3m	18-40 GHz	5.0 dB	5.5 dB

As shown in the table above our radiated emissions U_{lab} is less than the corresponding U_{CISPR} reference value in CISPR 16-4-2 Table 1, hence the compliance of the product is only based on the measured value, and no measurement uncertainty correction is required, based on CISPR 22 and CISPR 11 (for 2006 and later revisions) Clause 11.

Sample 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
Where FS = Field Strength in dBμV/m
RA = Receiver Amplitude (including preamplifier) in dBμV
CF = Cable Attenuation Factor in dB
AF = Antenna Factor in dB
AG = Amplifier Gain in dB

In the following table(s), the reading shown on the data table reflects the preamplifier gain. An example for the calculations in the following table is as follows.

Assume a receiver reading of 52.0 dBμV is obtained. The antenna factor of 7.4 dB and cable factor of 1.6 dB is added. The amplifier gain of 29 dB is subtracted, giving a field strength of 32 dBμV/m. This value in dBμV/m was converted to its corresponding level in μV/m.

RA = 52.0 dBμV
AF = 7.4 dB/m
CF = 1.6 dB
AG = 29.0 dB
FS = 32 dBμV/m

To convert from dBμV to μV or mV the following was used:

$UF = 10^{(NF / 20)}$ where UF = Net Reading in μV
NF = Net Reading in dBμV

Example:

FS = RA + AF + CF – AG = 52.0 + 7.4 + 1.6 – 29.0 = 32.0
$UF = 10^{(32\ dB\mu V / 20)}$ = 39.8 μV/m

Alternately, when BAT-EMC Emission Software is used, the “Level” includes all losses and gains and is compared directly in the “Margin” column to the “Limit”. The “Correction” includes Antenna Factor, Preamp, and Cable Loss. These are already accounted for in the “Level” column.

13.2 Test Equipment Used:

Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due
DAV004'	Weather Station	Davis Instruments	7400	PE80529A61A	05/02/2016	05/02/2017
145106'	Bilog Antenna (30MHz - 5GHz)	Sunol Sciences	JB5	A111003	05/03/2016	05/03/2017
145-410'	Cables 145-420 145-421 145-422 145-406	Huber + Suhner	10m Track A Cables	multiple	07/30/2016	07/30/2017
PRE10'	30-1000MHz pre-amp	ITS	PRE10	PRE10	12/16/2016	12/16/2017
ETS001'	1-18GHz DRG Horn Antenna	ETS Lindgren	3117	00143260	05/13/2016	05/13/2017
145-416'	Cables 145-420 145-423 145-424 145-408	Huber + Suhner	3m Track B cables	multiple	07/30/2016	07/30/2017
145014'	Preamplifier (1 GHz to 26.5 GHz)	Hewlett Packard	8449B	3008A00232	05/27/2016	05/27/2017
EMC04'	ANTENNA, RIDGED GUIDE, 18-40 GHZ	EMCO	3116	2090	09/14/2016	09/14/2017
REA004	3GHz High Pass Filter	Reactel, Inc	7HSX-3G/18G-S11	06-1	02/17/2017	02/17/2018
CBLSHF203'	Cable, SMA - SMA, 9kHz-40GHz, Cable Kit 4	Sucoflex (Huber Suhn	104PE	CBLSHF203	09/08/2016	09/08/2017
CBLSHF204'	Cable, SMA - SMA, 9kHz -40GHz, (Cable Kit 5)	Huber + Suhner	Sucoflex 102EA	234714001	08/27/2016	08/27/2017

Software Utilized:

Name	Manufacturer	Version
BAT-EMC Emissions	Nexio	3.16.0.69

13.3 Results:

The sample tested was found to Comply.

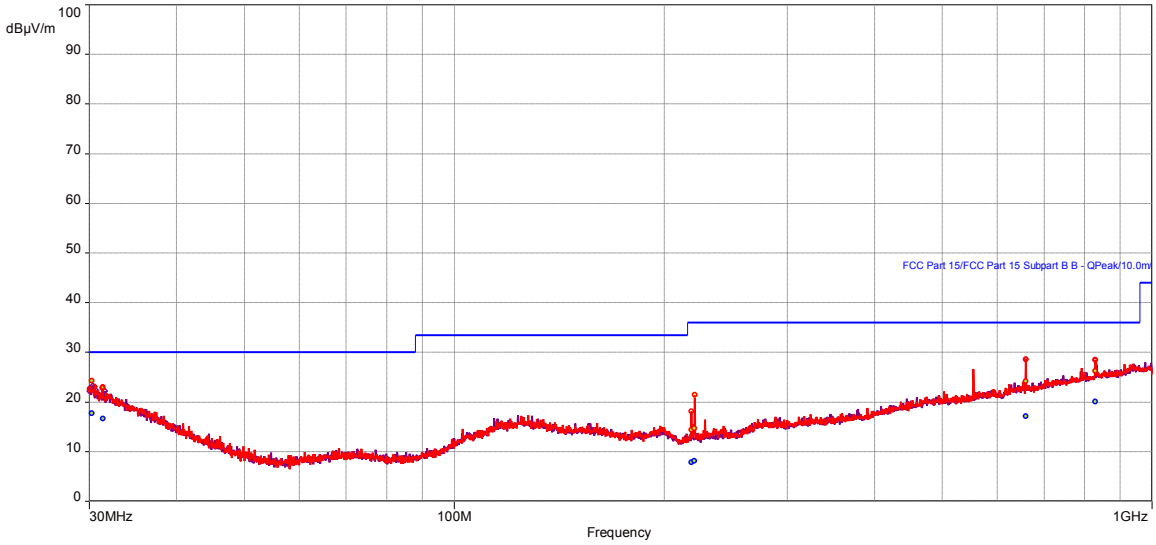
13.4 Plots/Data:

Battery mode, Rx, 30 – 1000 MHz

Test Information:

Date and Time	03/20/2017
Client and Project Number	Zoll medical G102894565
Engineer	Naga Suryadevara
Temperature	20C
Humidity	16%
Atmospheric Pressure	1007mbars
Comments	Battery mode Rx

Graph:



Results:

QuasiPeak (PASS) (6)

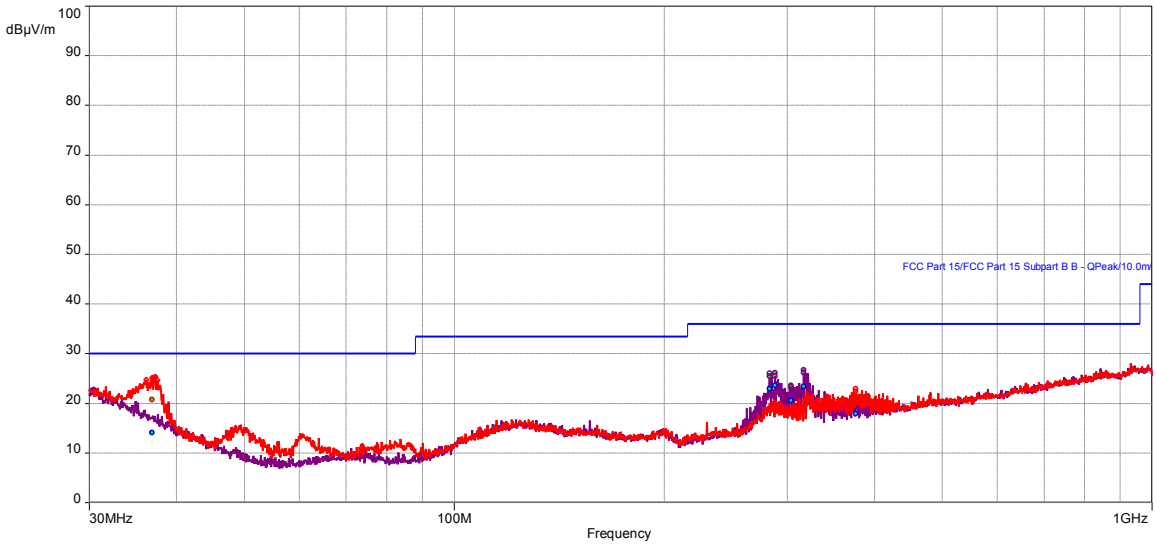
Frequency (MHz)	SR	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Meas. time (s)	Correction (dB)
30.24	1	17.68	30.00	-12.32	6.00	1.89	Vertical	0.10	-11.21
31.38	1	16.67	30.00	-13.33	301.00	1.90	Vertical	0.10	-12.21
218.76	1	7.81	36.00	-28.19	233.00	2.32	Vertical	0.10	-20.15
220.92	1	8.13	36.00	-27.87	221.00	2.31	Vertical	0.10	-20.06
659.1	1	17.16	36.00	-18.84	244.00	2.32	Vertical	0.10	-9.55
829.5	1	20.10	36.00	-15.90	47.00	3.08	Vertical	0.10	-6.54

Charging mode, Rx, 30 – 1000 MHz (XT 1505)

Test Information:

Date and Time	03/20/2017
Client and Project Number	Zoll medical G102894565
Engineer	Naga Suryadevara
Temperature	20C
Humidity	16%
Atmospheric Pressure	1007mbars
Comments	120VAC 60Hz Rx mode XT1505

Graph:



Results:

QuasiPeak (PASS) (6)

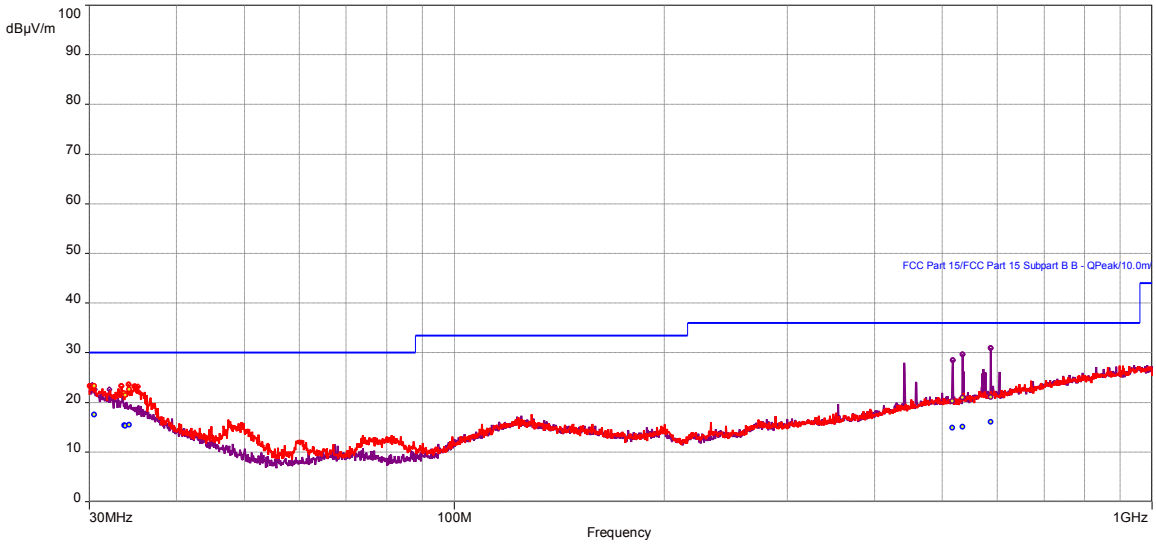
Frequency (MHz)	SR	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Meas. time (s)	Correction (dB)
36.9	1	14.08	30.00	-15.92	75.00	1.90	Vertical	0.10	-16.28
375.96	1	17.88	36.00	-18.12	221.00	3.69	Vertical	0.10	-15.62
283.2	2	22.88	36.00	-13.12	268.00	2.32	Horizontal	0.10	-17.44
288	2	23.57	36.00	-12.43	279.00	2.32	Horizontal	0.10	-17.52
304.02	2	20.55	36.00	-15.45	298.00	3.89	Horizontal	0.10	-17.25
316.8	2	23.43	36.00	-12.57	119.00	2.30	Horizontal	0.10	-16.85

Charging mode, Rx, 30 – 1000 MHz (XT 1527)

Test Information:

Date and Time	03/20/2017
Client and Project Number	Zoll medical G102894565
Engineer	Naga Suryadevara
Temperature	20C
Humidity	16%
Atmospheric Pressure	1007mbars
Comments	120VAC 60Hz Rx mode XT1527

Graph:



Results:

QuasiPeak (PASS) (7)

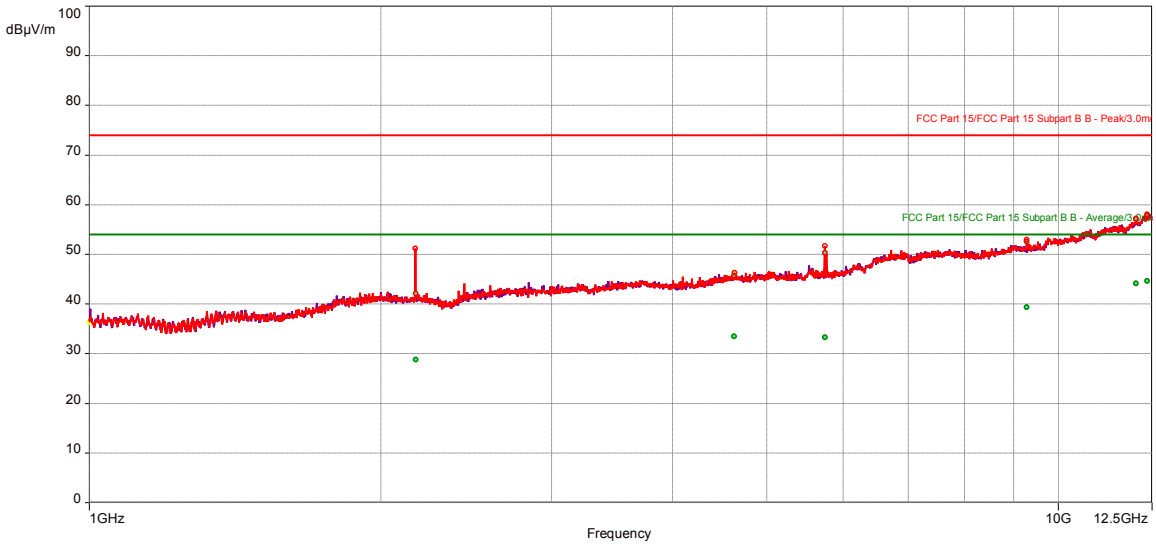
Frequency (MHz)	SR	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Meas. time (s)	Correction (dB)
30.48	1	17.56	30.00	-12.44	200.00	2.90	Vertical	0.10	-11.44
33.66	1	15.41	30.00	-14.59	334.00	1.46	Vertical	0.10	-13.83
33.78	1	15.32	30.00	-14.68	18.00	1.92	Vertical	0.10	-13.93
34.2	1	15.47	30.00	-14.53	65.00	1.00	Vertical	0.10	-14.26
517.32	2	14.89	36.00	-21.11	120.00	2.74	Horizontal	0.10	-12.09
534.96	2	15.04	36.00	-20.96	29.00	2.51	Horizontal	0.10	-11.81
587.04	2	16.05	36.00	-19.95	0.00	1.45	Horizontal	0.10	-10.92

Battery mode, Rx, 1 – 12.5 GHz

Test Information:

Date and Time	03/21/2017
Client and Project Number	Zoll medical G102894565
Engineer	Naga Suryadevara
Temperature	20C
Humidity	18%
Atmospheric Pressure	1001mbars
Comments	Bluetooth Rx mode Battery

Graph:



Results:

Avg (PASS) (6)

Frequency (MHz)	SR	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Meas. time (s)	Correction (dB)
2174	1	28.78	54.00	-25.22	137.00	1.36	Vertical	0.10	3.13
4631	1	33.49	54.00	-20.51	53.00	3.99	Vertical	0.10	8.27
5747.5	1	33.28	54.00	-20.72	35.00	3.42	Vertical	0.10	9.41
9284	1	39.32	54.00	-14.68	37.00	2.29	Vertical	0.10	14.06
12029	1	44.16	54.00	-9.84	300.00	2.50	Vertical	0.10	19.91
12355.5	1	44.66	54.00	-9.34	217.00	3.16	Vertical	0.10	20.86

Peak (PASS) (6)

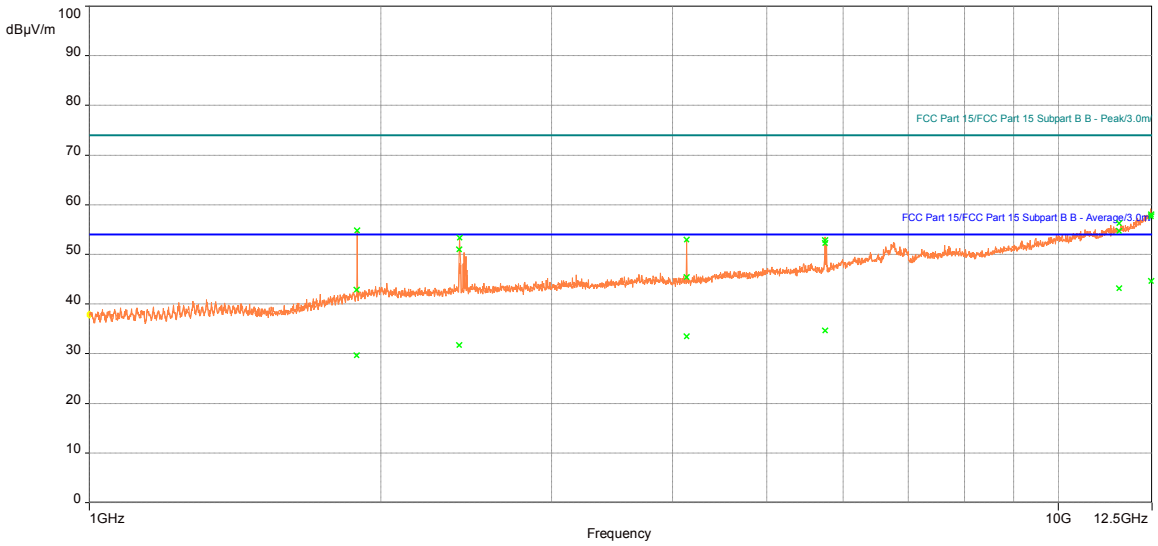
Frequency (MHz)	SR	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Meas. time (s)	Correction (dB)
2174	1	42.04	74.00	-31.96	137.00	1.36	Vertical	0.10	3.13
4631	1	45.72	74.00	-28.28	53.00	3.99	Vertical	0.10	8.27
5747.5	1	50.31	74.00	-23.69	35.00	3.42	Vertical	0.10	9.41
9284	1	52.56	74.00	-21.44	37.00	2.29	Vertical	0.10	14.06
12029	1	57.15	74.00	-16.85	300.00	2.50	Vertical	0.10	19.91
12355.5	1	57.98	74.00	-16.02	217.00	3.16	Vertical	0.10	20.86

Bluetooth charging, Rx Mode, Cell XT 1505 (1-12.5 GHz)

Test Information:

Date and Time	03/22/2017
Client and Project Number	Zoll Medical G102894565
Engineer	Kouma Sinn
Temperature	20C
Humidity	20%
Atmospheric Pressure	1000mbar
Comments	Bluetooth Charging, Rx Mode, Cell XT 1505

Graph:



Results:

Avg (PASS) (6)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Meas. time (s)	Correction (dB)
1887.5	29.67	54.00	-24.33	127.00	1.85	Vertical	0.10	2.43
2409	31.71	54.00	-22.29	105.00	2.02	Vertical	0.10	3.99
4136	33.50	54.00	-20.50	255.00	2.27	Vertical	0.10	7.12
5747.5	34.59	54.00	-19.41	149.00	4.00	Vertical	0.10	9.41
11562	43.17	54.00	-10.83	37.00	2.43	Vertical	0.10	18.74
12473.5	44.65	54.00	-9.35	75.00	1.35	Vertical	0.10	21.23

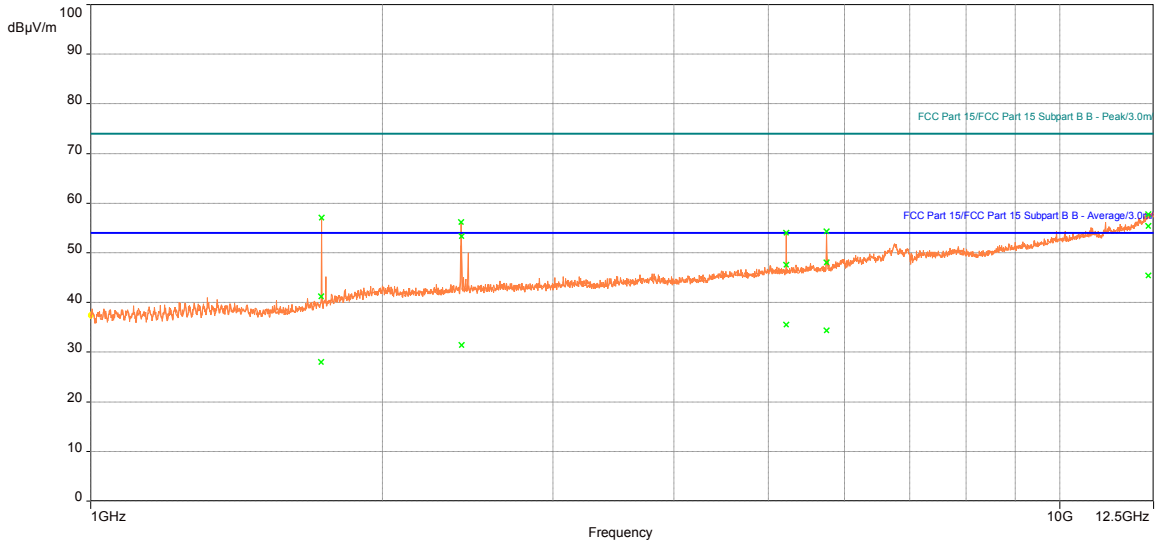
Peak (PASS) (6)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Meas. time (s)	Correction (dB)
1887.5	42.87	74.00	-31.13	127.00	1.85	Vertical	0.10	2.43
2409	51.03	74.00	-22.97	105.00	2.02	Vertical	0.10	3.99
4136	45.36	74.00	-28.64	255.00	2.27	Vertical	0.10	7.12
5747.5	52.27	74.00	-21.73	149.00	4.00	Vertical	0.10	9.41
11562	56.29	74.00	-17.71	37.00	2.43	Vertical	0.10	18.74
12473.5	57.99	74.00	-16.01	75.00	1.35	Vertical	0.10	21.23

Bluetooth Charging, Rx mode, 1 – 12.5 GHz (XT 1527)

Test Information:

Date and Time	03/22/2017
Client and Project Number	Zoll Medical G102894565
Engineer	Kouma Sinn
Temperature	20C
Humidity	20%
Atmospheric Pressure	1000mbar
Comments	Bluetooth Charging, Rx Mode, Cell XT 1527



Avg (PASS) (5)

Frequency (MHz)	SR	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Meas. time (s)	Correction (dB)
1729.5	1	27.99	54.00	-26.01	166.00	1.36	Vertical	0.10	0.64
2413	1	31.42	54.00	-22.58	30.00	1.00	Vertical	0.10	4.00
5219.5	1	35.51	54.00	-18.49	329.00	4.00	Vertical	0.10	9.13
5746.5	1	34.35	54.00	-19.65	49.00	4.00	Vertical	0.10	9.41
12339.5	1	45.42	54.00	-8.58	30.00	2.75	Vertical	0.10	20.82

Peak (PASS) (5)

Frequency (MHz)	SR	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Meas. time (s)	Correction (dB)
1729.5	1	41.22	74.00	-32.78	166.00	1.36	Vertical	0.10	0.64
2413	1	53.37	74.00	-20.63	30.00	1.00	Vertical	0.10	4.00
5219.5	1	47.51	74.00	-26.49	329.00	4.00	Vertical	0.10	9.13
5746.5	1	48.06	74.00	-25.94	49.00	4.00	Vertical	0.10	9.41
12339.5	1	57.70	74.00	-16.30	30.00	2.75	Vertical	0.10	20.82

Test Personnel:	Naga Suryadevara N.S	Test Date:	03/20/2017, 03/21/2017 03/22/2017
Supervising/Reviewing Engineer: (Where Applicable)	N/A		
Product Standard:	FCC Part 15 Subpart B	Limit Applied:	Class A
Input Voltage:	120VAC 60Hz, Internal Battery		
Pretest Verification w/ Ambient Signals or BB Source:	BB Source	Ambient Temperature:	20, 20, 20 ºC
		Relative Humidity:	16, 18, 20 %
		Atmospheric Pressure:	1007, 1001, 1000 mbars

14 AC Mains Conducted Emissions

14.1 Method

Tests are performed in accordance with FCC Part 15 Subpart C and FCC Part 15 Subpart B.

TEST SITE: EMC Lab

The EMC Lab has one Semi-anechoic Chamber and one Shielded Chamber. AC Mains Power is available at 120, 230, and 277 Single Phase; 208, 400, and 480 3-Phase. Large reference ground-planes are installed in the general lab area to facilitate EMC work not requiring a shielded environment.

Measurement Uncertainty

Measurement	Frequency Range	Expanded Uncertainty (k=2)	Ucispr
AC Line Conducted Emissions	150 kHz - 30 MHz	2.8dB	3.4dB
Telco Port Emissions	150 kHz - 30 MHz	3.2dB	5.0dB

As shown in the table above our conducted emissions U_{lab} is less than the corresponding U_{CISPR} reference value in CISPR 16-4-2 Table 1, hence the compliance of the product is only based on the measured value, and no measurement uncertainty correction is required, based on CISPR 22 and CISPR 11 (for 2006 and later revisions) Clause 11.

Sample Calculations

The following is how net line-conducted readings were determined:

NF = RF + LF + CF + AF
Where NF = Net Reading in dBμV
RF = Reading from receiver in dBμV
LF = LISN or ISN Correction Factor in dB
CF = Cable Correction Factor in dB
AF = Attenuator Loss Factor in dB

To convert from dBμV to μV or mV the following was used:

$UF = 10^{(NF / 20)}$ where UF = Net Reading in μV
NF = Net Reading in dBμV

Example:

NF = RF + LF + CF + AF = 28.5 + 0.2 + 0.4 + 20.0 = 49.1 dBμV
$UF = 10^{(49.1\ dB\mu V / 20)}$ = 285.1 μV/m

Alternately, when C5 Software is used, the "Level" includes all losses and gains and is compared directly in the "Margin" column to the "Limit". "TF" is the Transducer Factor; in this case LISN or ISN loss.

14.2 Test Equipment Used:

Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due
DAV002'	Weather Station	Davis Instruments	7400	PE80519A93	06/01/2016	06/01/2017
ROS002'	9kHz to 3GHz EMI Test Receiver	Rohde & Schwartz	ESCI 1166.5950K03	100067	07/29/2016	07/29/2017
DS22'	Attenuator, 20dB	Mini Circuits	20dB, 50 ohm	DS22	09/08/2016	09/08/2017
CBLBNC2012-4'	50 Ohm Coaxial Cable	Pomona	RG58C/U	CBLBCN2012-4	03/21/2016	03/21/2017
LISN31'	LISN - CISPR16 Compliant 9kHz-30MHz	Com-Power	LI-215A	191957	03/14/2016	03/14/2017

Software Utilized:

Name	Manufacturer	Version
Compliance 5	Teseq	5.26.46.46

14.3 Results:

The sample tested was found to Comply.

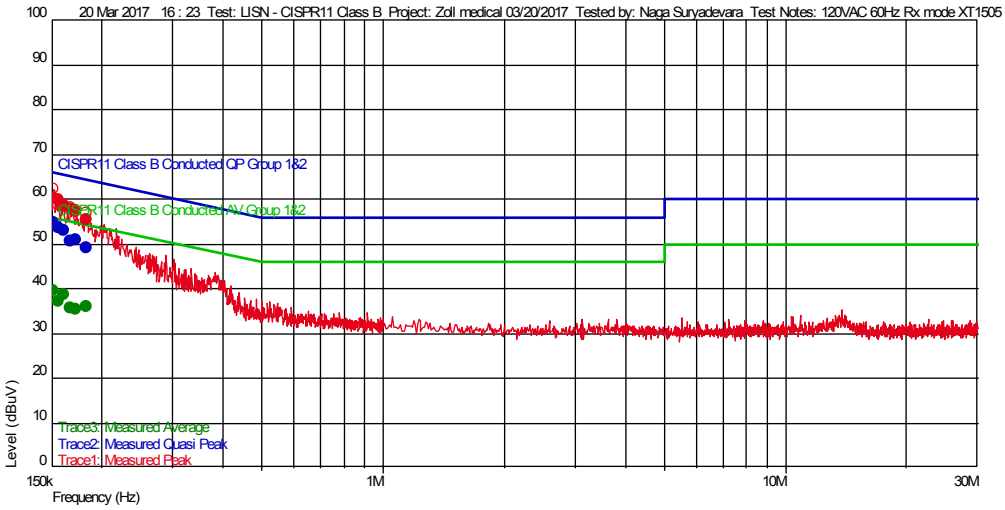
14.4 Plots/Data:

120VAC 60Hz, Rx mode, XT 1505

Test Information

Test Details	User Entry	Additional Information
Test:	LISN - CISPR11 Class B	
Project:	Zoll medical 03/20/2017	
Test Notes:	120VAC 60Hz Rx mode XT1505	
Temperature:	22C	
Humidity:	9% 1004 mbars	
Tested by:	Naga Suryadevara	
Test Started:	20 Mar 2017 16 : 23	

Prescan Emission Graph



Measured Peak Value
Measured Quasi Peak Value
Measured Average Value
Maximum Value of Mast and Turntable

Swept Peak Data
Swept Quasi Peak Data
Swept Average Data

Emissions Test Data

Trace2: Measured Quasi Peak

Frequency(Hz)	Level(dBuV)	TF	PA+CL	Limit(dBuV)	Margin(dBuV)	RBW(Hz)	Comment	LINE
184.0 k	49.03	0.053	20.592	64.303	-15.28	9 k		L2
167.0 k	50.63	0.066	20.593	65.108	-14.48	9 k		L2
172.95 k	50.93	0.062	20.593	64.818	-13.89	9 k		L3
161.05 k	52.98	0.071	20.594	65.410	-12.43	9 k		L2
155.95 k	53.59	0.075	20.594	65.677	-12.08	9 k		L3
151.7 k	54.75	0.079	20.594	65.906	-11.16	9 k		L2

Trace3: Measured Average

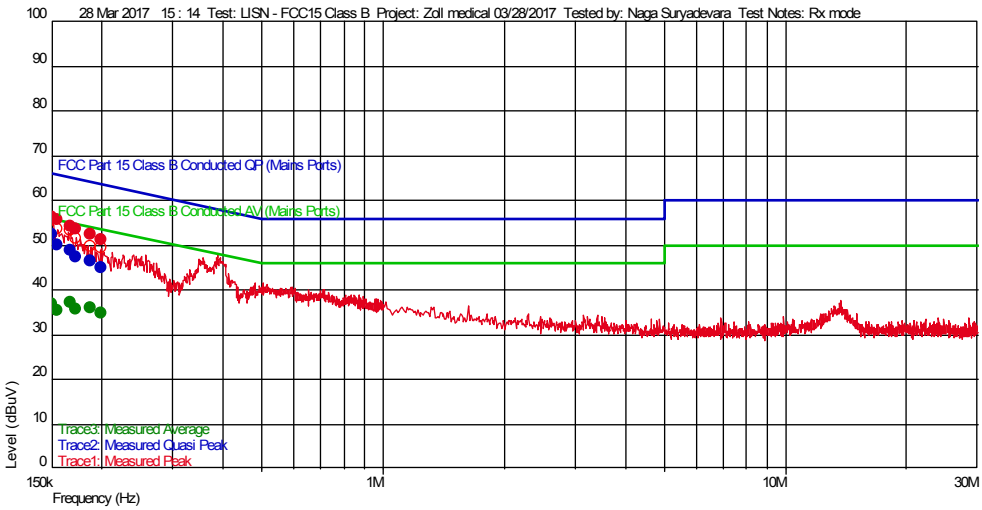
Frequency(Hz)	Level(dBuV)	TF	PA+CL	Limit(dBuV)	Margin(dBuV)	RBW(Hz)	Comment	LINE
167.0 k	35.72	0.066	20.593	55.108	-19.38	9 k		L2
172.95 k	35.46	0.062	20.593	54.818	-19.36	9 k		L3
155.95 k	37.22	0.075	20.594	55.677	-18.45	9 k		L3
184.0 k	36.07	0.053	20.592	54.303	-18.24	9 k		L2
161.05 k	38.64	0.071	20.594	55.410	-16.77	9 k		L2
151.7 k	39.59	0.079	20.594	55.906	-16.32	9 k		L2

120VAC 60Hz, Rx mode, XT1527

Test Information

Test Details	User Entry	Additional Information
Test:	LISN - FCC15 Class B	
Project:	Zoll medical 03/28/2017	
Test Notes:	Rx mode	
Tested by:	Naga Suryadevara	
Test Started:	28 Mar 2017 15 : 14	

Prescan Emission Graph



- Measured Peak Value
- Measured Quasi Peak Value
- Measured Average Value
- Maximum Value of Mast and Turntable
- Swept Peak Data
- Swept Quasi Peak Data
- Swept Average Data

Emissions Test Data

Trace2: Measured Quasi Peak

Frequency(Hz)	Level(dBuV)	TF	PA+CL	Limit(dBuV)	Margin(dBuV)	RBW(Hz)	Comment	LINE
199.3 k	45.05	0.041	20.591	63.640	-18.58	9 k		N
187.4 k	46.53	0.050	20.592	64.151	-17.62	9 k		N
172.1 k	47.29	0.062	20.593	64.858	-17.57	9 k		N
167.0 k	48.83	0.066	20.593	65.108	-16.28	9 k		N
155.1 k	50.09	0.076	20.594	65.722	-15.64	9 k		N
150.0 k	52.32	0.080	20.594	66.000	-13.68	9 k		N

Trace3: Measured Average

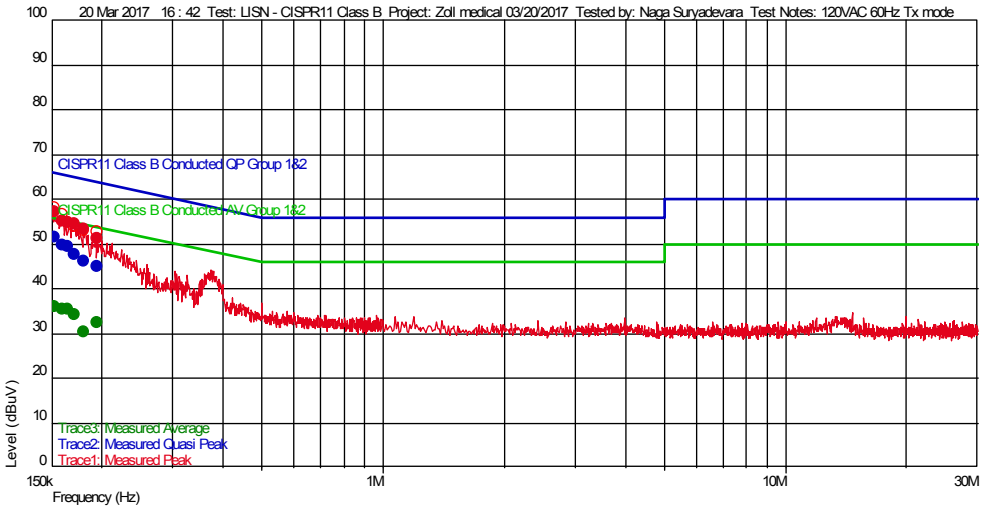
Frequency(Hz)	Level(dBuV)	TF	PA+CL	Limit(dBuV)	Margin(dBuV)	RBW(Hz)	Comment	LINE
155.1 k	35.39	0.076	20.594	55.722	-20.34	9 k		N
172.1 k	35.60	0.062	20.593	54.858	-19.26	9 k		N
150.0 k	36.85	0.080	20.594	56.000	-19.15	9 k		N
199.3 k	34.93	0.041	20.591	53.640	-18.71	9 k		N
187.4 k	35.87	0.050	20.592	54.151	-18.28	9 k		N
167.0 k	37.17	0.066	20.593	55.108	-17.94	9 k		N

120VAC 60Hz, Tx mode, XT1505

Test Information

Test Details	User Entry	Additional Information
Test:	LISN - CISPR11 Class B	
Project:	Zoll medical 03/20/2017	
Test Notes:	120VAC 60Hz Tx mode XT1505	
Temperature:	22C	
Humidity:	9% 1004 mbars	
Tested by:	Naga Suryadevara	
Test Started:	20 Mar 2017 16 : 42	

Prescan Emission Graph



Measured Peak Value
Measured Quasi Peak Value
Measured Average Value
Maximum Value of Mast and Turntable

Swept Peak Data
Swept Quasi Peak Data
Swept Average Data

Emissions Test Data

Trace2: Measured Quasi Peak

Frequency(Hz)	Level(dBuV)	TF	PA+CL	Limit(dBuV)	Margin(dBuV)	RBW(Hz)	Comment	LINE
195.05 k	44.81	0.044	20.592	63.819	-19.01	9 k		L2
181.45 k	46.05	0.055	20.592	64.419	-18.37	9 k		L3
171.25 k	47.68	0.063	20.593	64.900	-17.22	9 k		L2
165.3 k	49.46	0.068	20.593	65.193	-15.73	9 k		L2
160.2 k	49.84	0.072	20.594	65.454	-15.61	9 k		L2
152.55 k	51.49	0.078	20.594	65.860	-14.37	9 k		L2

Trace3: Measured Average

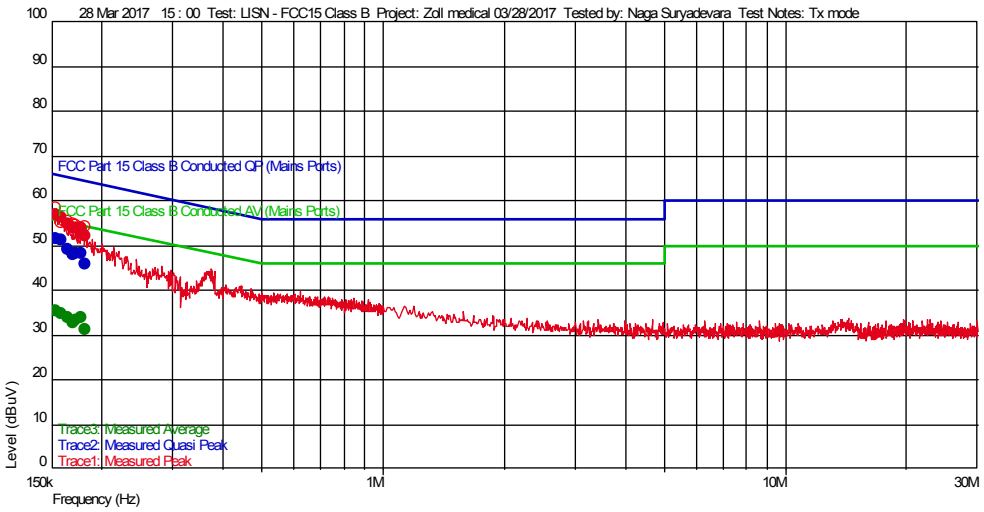
Frequency(Hz)	Level(dBuV)	TF	PA+CL	Limit(dBuV)	Margin(dBuV)	RBW(Hz)	Comment	LINE
181.45 k	30.37	0.055	20.592	54.419	-24.05	9 k		L3
195.05 k	32.40	0.044	20.592	53.819	-21.42	9 k		L2
171.25 k	34.13	0.063	20.593	54.900	-20.77	9 k		L2
160.2 k	35.25	0.072	20.594	55.454	-20.21	9 k		L2
165.3 k	35.23	0.068	20.593	55.193	-19.96	9 k		L2
152.55 k	35.90	0.078	20.594	55.860	-19.96	9 k		L2

120VAC 60Hz, Tx mode, XT1527

Test Information

Test Details	User Entry	Additional Information
Test:	LISN - FCC15 Class B	
Project:	Zoll medical 03/28/2017	
Test Notes:	Tx mode XT1527	
Tested by:	Naga Suryadevara	
Test Started:	28 Mar 2017 15 : 00	

Prescan Emission Graph



- Measured Peak Value
- Measured Quasi Peak Value
- Measured Average Value
- Maximum Value of Mast and Turntable
- Swept Peak Data
- Swept Quasi Peak Data
- Swept Average Data

Emissions Test Data

Trace2: Measured Quasi Peak

Frequency(Hz)	Level(dBuV)	TF	PA+CL	Limit(dBuV)	Margin(dBuV)	RBW(Hz)	Comment	LINE
182.3 k	45.80	0.054	20.592	64.380	-18.58	9 k		N
169.55 k	47.87	0.064	20.593	64.982	-17.11	9 k		N
172.1 k	48.22	0.062	20.593	64.858	-16.64	9 k		N
178.05 k	48.21	0.058	20.593	64.576	-16.36	9 k		L1
165.3 k	49.22	0.068	20.593	65.193	-15.97	9 k		N
159.35 k	51.08	0.073	20.594	65.498	-14.42	9 k		L1
154.25 k	51.60	0.077	20.594	65.768	-14.17	9 k		N

Trace3: Measured Average

Frequency(Hz)	Level(dBuV)	TF	PA+CL	Limit(dBuV)	Margin(dBuV)	RBW(Hz)	Comment	LINE
182.3 k	31.32	0.054	20.592	54.380	-23.06	9 k		N
169.55 k	32.67	0.064	20.593	54.982	-22.31	9 k		N
172.1 k	33.36	0.062	20.593	54.858	-21.50	9 k		N
165.3 k	33.78	0.068	20.593	55.193	-21.42	9 k		N
178.05 k	33.78	0.058	20.593	54.576	-20.79	9 k		L1
159.35 k	34.77	0.073	20.594	55.498	-20.72	9 k		L1
154.25 k	35.42	0.077	20.594	55.768	-20.35	9 k		N

Test Personnel:	Naga Suryadevara NS	Test Date:	03/20/2017, 03/28/2017
Supervising/Reviewing Engineer: (Where Applicable)	N/A		
Product Standard:	FCC Part 15 Subpart C FCC Part 15 Subpart B	Limit Applied:	Class B
Input Voltage:	120VAC 60Hz		
Pretest Verification w/ Ambient Signals or BB Source:	Signal generator	Ambient Temperature:	22, 20 ºC
		Relative Humidity:	09, 17 %
		Atmospheric Pressure:	1004, 1003 mbars

Deviations, Additions, or Exclusions: None

15 Revision History

Revision Level	Date	Report Number	Prepared By	Reviewed By	Notes
0	04/14/2017	102894565BOX-002	NS	KPS KPS	Original Issue