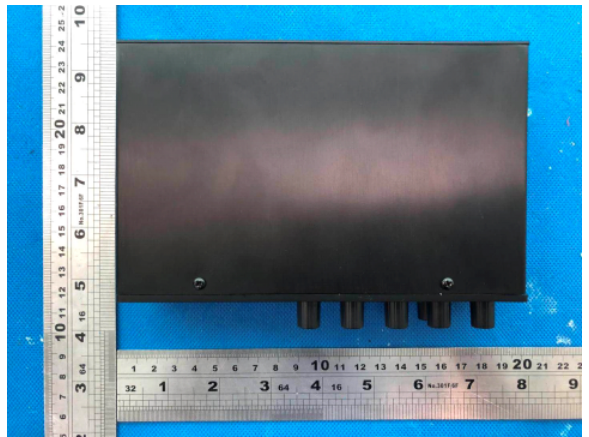


Prüfbericht-Nr.: <i>Test report No.:</i>	50264157 001	Auftrags-Nr.: <i>Order No.:</i>	174091930	Seite 1 von 27 <i>Page 1 of 27</i>	
Kunden-Referenz-Nr.: <i>Client reference No.:</i>	N/A	Auftragsdatum: <i>Order date.:</i>	14.05.2019		
Auftraggeber: <i>Client:</i>	Seikaku Technical Group Limited Offshore Chambers P. O. Box 217 Apia, Samoa				
Prüfgegenstand: <i>Test item:</i>	AMPLIFIER				
Bezeichnung / Typ-Nr.: <i>Identification / Type No.:</i>	PA-20B, PA-20HB PA-40B, PA-40HB				
Auftrags-Inhalt: <i>Order content:</i>	FCC approval				
Prüfgrundlage: <i>Test specification:</i>	CFR47 FCC Part 15: Subpart C Section 15.247 CFR47 FCC Part 15: Subpart C Section 15.207 CFR47 FCC Part 15: Subpart C Section 15.209 CFR47 FCC Part 2: Section 2.1093				
Wareneingangsdatum: <i>Date of receipt:</i>	14.05.2019				
Prüfmuster-Nr.: <i>Test sample No.:</i>	174091930-001~004				
Prüfzeitraum: <i>Testing period:</i>	Refer to test report				
Ort der Prüfung: <i>Place of testing:</i>	TÜV Rheinland (Guangdong) Ltd.				
Prüflaboratorium: <i>Testing laboratory:</i>	TÜV Rheinland (Guangdong) Ltd.				
Prüfergebnis*: <i>Test result*:</i>	Pass				
geprüft von / tested by:		kontrolliert von / reviewed by:			
12.07.2019 Arthur Liu / Project Manager <i>Arthur Liu</i>		12.07.2019 Storm Shu / Technical Certifier <i>Storm Shu</i>			
Datum <i>Date</i>	Name/Stellung <i>Name/Position</i>	Unterschrift <i>Signature</i>	Datum <i>Date</i>	Name/Stellung <i>Name/Position</i>	Unterschrift <i>Signature</i>
Sonstiges / Other:					
FCC ID: H38PA-20-40HB					
Zustand des Prüfgegenstandes bei Anlieferung: <i>Condition of the test item at delivery:</i>			Prüfmuster vollständig und unbeschädigt <i>Test item complete and undamaged:</i>		
* Legende: 1 = sehr gut 2 = gut 3 = befriedigend 4 = ausreichend 5 = mangelhaft P(ass) = entspricht o.g. Prüfgrundlage(n) F(ail) = entspricht nicht o.g. Prüfgrundlage(n) N/A = nicht anwendbar N/T = nicht getestet			Legend: 1 = very good 2 = good 3 = satisfactory 4 = sufficient 5 = poor P(ass) = passed a.m. test specifications(s) F(ail) = failed a.m. test specifications(s) N/A = not applicable N/T = not tested		
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. <i>This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i>					

V04

Test Summary

5.1.1 ANTENNA REQUIREMENT*RESULT: Pass***5.1.2 MAXIMUM PEAK CONDUCTED OUTPUT POWER***RESULT: Pass***5.1.3 CONDUCTED POWER SPECTRAL DENSITY***RESULT: Pass***5.1.4 6dB BANDWIDTH***RESULT: Pass***5.1.5 CONDUCTED SPURIOUS EMISSIONS MEASURED IN 100 kHz BANDWIDTH***RESULT: Pass***5.1.6 RADIATED SPURIOUS EMISSION***RESULT: Pass***5.1.7 20dB BANDWIDTH***RESULT: Pass***5.1.8 CARRIER FREQUENCY SEPARATION***RESULT: Pass***5.1.9 NUMBER OF HOPPING FREQUENCY***RESULT: Pass***5.1.10 TIME OF OCCUPANCY***RESULT: Pass***5.1.11 CONDUCTED EMISSION ON AC MAINS***RESULT: Pass***6.1.1 ELECTROMAGNETIC FIELDS***RESULT: Pass*

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1 General Remarks

1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:

Appendix A: Photographs of the Test Set-up

Appendix B: Test Results

2 Test Sites

2.1 Test Facilities

TÜV Rheinland (Guangdong) Ltd. EMC Laboratory

No.102, 1F of Southwest and No.205, 2F of West Warehouse Building, No.767 Tianyuan Road, Tianhe District, Guangzhou, Guangdong, P.R. China

FCC Accreditation Designation No.: CN1207

The tests at the test sites have been conducted under the supervision of a TÜV engineer.

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

For the measurement Equipment list, refer to the appendix B.

2.3 Traceability

All measurement equipment calibrations are traceable to NIM (National Institute of Metrology) or where calibration is performed in other countries, to equivalent nationally recognized standards organizations.

2.4 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basis using in house standards or comparisons.

2.5 Measurement Uncertainty

The estimated combined standard uncertainty for radiated emissions and conducted emissions measurements as below table.

Item		Extended Uncertainty
Conducted Emission		± 3.17 dB
Radiated Emission (9kHz-30MHz)	Field strength (dBμV/m)	U=3.08dB, k=2, σ=95%
Radiated Emission (30-1000MHz)	Field strength (dBμV/m)	U=5.16dB, k=2, σ=95%
Radiated Emission (above 1000MHz)	Field strength (dBμV/m)	U=3.08dB, k=2, σ=95%
Radio Spectrum		± 0.60 dB

2.6 Location of Original Data

The original copies of all test data taken during actual testing were attached at Appendix A & B of this report and delivered to the applicant. A copy has been retained in the TÜV Rheinland (Guangdong) Ltd. file for certification follow-up purposes.

2.7 Status of Facility Used for Testing

TÜV Rheinland (Guangdong) Ltd. EMC Laboratory
No.102, 1F of Southwest and No.205, 2F of West Warehouse Building, No.767 Tianyuan Road, Tianhe District, Guangzhou, Guangdong, P.R. China is listed on the US Federal Communications Commission list of facilities approved to perform measurements

3 General Product Information

3.1 Product Function and Intended Use

The new submitted samples are Amplifiers for professional use, which used 2.4GHz wireless technology for indoor use only.

Model difference:

The four models have the same transmitter PCB board and enclosure, they are electrically identical. The differences among them are PCB layout of non-RF circuit, audio IC, Audio output transformer and operating rated power, details as following:

Model name	Bluetooth function	Audio IC	Audio output transformer	Rated power	Weight (kg)	Size (L x W x H) Unit (mm)
PA-20B	Yes	CS8622E	No	30	0.85	168x105x44mm
PA-20HB	Yes	CS8622E	Yes			
PA-40B	Yes	TPA3116D2	No	60	0.49	
PA-40HB	Yes	TPA3116D2	Yes			

According to the above information, Full tests performed on the most complex and worst-case model PA-40HB. In case of AC conducted emissions and Radiated spurious emissions, each of them were considered separately, only worst-case data reported.

For details refer to the User Manual, Technical Description and Circuit Diagram.

3.2 Ratings and System Details

Table 2: Technical Specification of EUT

General Information of EUT	Value
Kind of Equipment	Amplifiers
Type Designation	PA-20B, PA-20HB, PA-40B, PA-40HB
FCC ID	H38PA-20-40HB
Operating Voltage	100-240V~; 50/60Hz Powered by Adapter; XinSPower: A361-1502000E(2A, for PA-20B, PA-20HB) A361-1504000E(4A, for PA-40B, PA-40HB)
Testing Voltage	AC 120V 60Hz
Technical Specification of Bluetooth 4.0 (double mode)	
Operating Frequency	2402 - 2480 MHz
Type of Modulation	GFSK, ($\pi/4$)DQPSK, 8DPSK
Channel Number	79 Channels(for FHSS) 40 Channels(for DSSS)
Channel Separation	1 MHz (for FHSS) 2 MHz (for DSSS)
Antenna Type	Integral Antenna
Gain	0 dBi

Table 3: RF Channel and Frequency of General 2.4GHz

RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)
0	2402.00	20	2422.00	40	2442.00	60	2462.00
1	2403.00	21	2423.00	41	2443.00	61	2463.00
2	2404.00	22	2424.00	42	2444.00	62	2464.00
3	2405.00	23	2425.00	43	2445.00	63	2465.00
4	2406.00	24	2426.00	44	2446.00	64	2466.00
5	2407.00	25	2427.00	45	2447.00	65	2467.00
6	2408.00	26	2428.00	46	2448.00	66	2468.00
7	2409.00	27	2429.00	47	2449.00	67	2469.00
8	2410.00	28	2430.00	48	2450.00	68	2470.00
9	2411.00	29	2431.00	49	2451.00	69	2471.00
10	2412.00	30	2432.00	50	2452.00	70	2472.00
11	2413.00	31	2433.00	51	2453.00	71	2473.00
12	2414.00	32	2434.00	52	2454.00	72	2474.00
13	2415.00	33	2435.00	53	2455.00	73	2475.00
14	2416.00	34	2436.00	54	2456.00	74	2476.00
15	2417.00	35	2437.00	55	2457.00	75	2477.00
16	2418.00	36	2438.00	56	2458.00	76	2478.00
17	2419.00	37	2439.00	57	2459.00	77	2479.00
18	2420.00	38	2440.00	58	2460.00	78	2480.00
19	2421.00	39	2441.00	59	2461.00	/	/

Test frequencies are lowest channel: 2402 MHz, middle channel: 2441 MHz and highest channel: 2480 MHz.

Table 4: RF Channel and Frequency of Bluetooth Low Energy

RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)
00	2402.00	10	2422.00	20	2442.00	30	2462.00
01	2404.00	11	2424.00	21	2444.00	31	2464.00
02	2406.00	12	2426.00	22	2446.00	32	2466.00
03	2408.00	13	2428.00	23	2448.00	33	2468.00
04	2410.00	14	2430.00	24	2450.00	34	2470.00
05	2412.00	15	2432.00	25	2452.00	35	2472.00
06	2414.00	16	2434.00	26	2454.00	36	2474.00
07	2416.00	17	2436.00	27	2456.00	37	2476.00
08	2418.00	18	2438.00	28	2458.00	38	2478.00
09	2420.00	19	2440.00	29	2460.00	39	2480.00

Test frequencies are lowest channel: 2402 MHz, middle channel: 2440 MHz and highest channel: 2480 MHz.

Table 5: Frequency Hopping Information

Technical Specification	Description
Hopping Range	Hereby we declare that the frequency range of this device is: 2402-2480MHz. This is according the Bluetooth Core Specification V4.0(double mode) for devices which will be operated in the USA. This was checked during the Bluetooth Qualification tests (Test Case: TRM/CA/04-E).
Hopping Sequence	Example of a 79 hopping sequence in data mode: 33,04,21,44,23,42,53,46,55,48,40,59,72,29,76,31,08,73,07,75,09,45,60,39,58,13,47,11,77,52,35,50,65,54,67,56,69,62,71,64, 7,25,27,66,57,70,74,61,78,63,10,41,05,43,15,44,64,68,02,70,06,01,51,03,55,05,03,66,53,49,36,47,
Receiver input bandwidth	The input bandwidth of the receiver is 1MHz. In every connection one Bluetooth device is the master and the other one is the slave. The master determines the hopping sequence. The slave follows this sequence. Both devices shift between RX and TX time slot according to the clock of the master. Additionally the type of connection is set up at the beginning of the connection. The master adapts its hopping frequency and its TX/RX timing according to the packet type of the connection. Also the slave of the connection will use these settings. Repeating of a packer has no influence on the hopping sequence. The hopping sequence generated by the master of the connection will be followed in any case. That means a repeated packet will not be send on the same frequency, it is send on the next frequency of the hopping sequence.

3.3 Independent Operation Modes

The basic operation modes are:

- A. On
 - 1. Traditional Bluetooth (BDR & EDR mode)
 - 1) Low Channel
 - 2) Middle Channel
 - 3) High Channel
 - 2. Low Energy mode
 - 1) Low Channel
 - 2) Middle Channel
 - 3) High Channel
- B. On, Traditional Bluetooth on Hopping channel
- C. On, Normal operation mode
- D. Off

3.4 Noise Generating and Noise Suppressing Parts

Refer to Circuit Diagram for further details.

3.5 Submitted Documents

- | | |
|----------------------------------|------------------|
| - Application Form | - Photo Document |
| - Block Diagram | - Schematics |
| - FCC/IC Label and Location Info | - User Manual |
| - Operation Description | |

4 Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

Radio Spectrum: The equipment under test (EUT) was configured at its highest power output in order to measure its highest possible radiation and conducted level. The test modes were adapted accordingly in reference to the instructions for use.

Emission: The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the instructions for use.

4.2 Test Operation and Test Software

Test operation refers to test setup in chapter 5. All tests were performed according to the procedures in ANSI C63.10: 2013.

4.3 Special Accessories and Auxiliary Equipment

Table 6: List of Accessories and Auxiliary Equipment

Description	Manufacturer	Model	S/N	Rating
Notebook	HP	TPN-I119	5CG6230MY	N/A

4.4 Countermeasures to Achieve EMC Compliance

The test sample which has been tested contained the noise suppression parts as described in the Technical Construction File (TCF).

No additional measures were employed to achieve compliance.

4.5 Test Setup Diagram

Diagram of Measurement Configuration for Radiation Test (Below 1GHz)

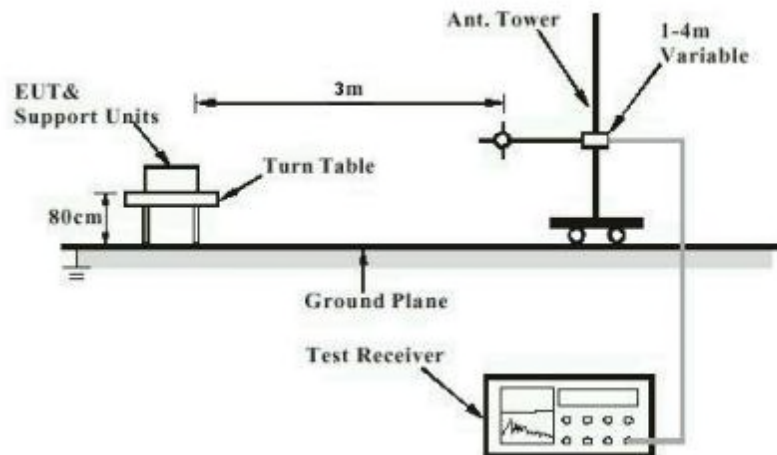


Diagram of Measurement Configuration for Radiation Test (Above 1GHz)

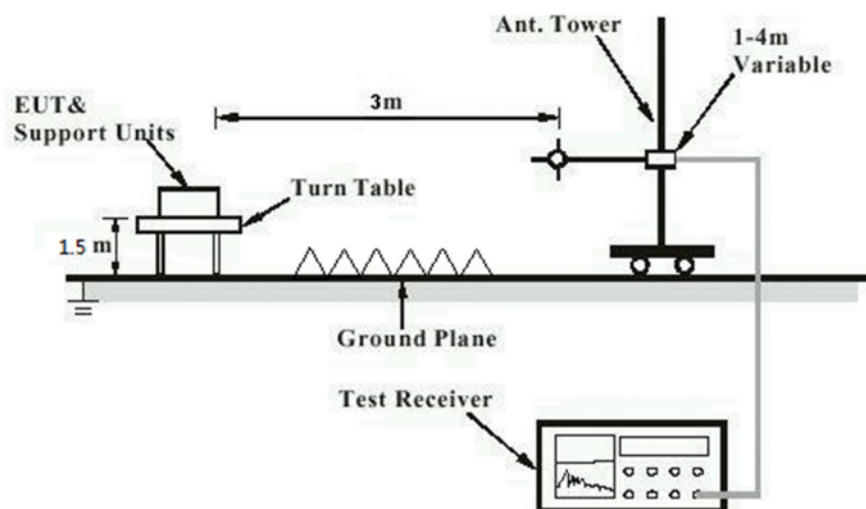


Diagram of Measurement Configuration for Mains Conduction Measurement

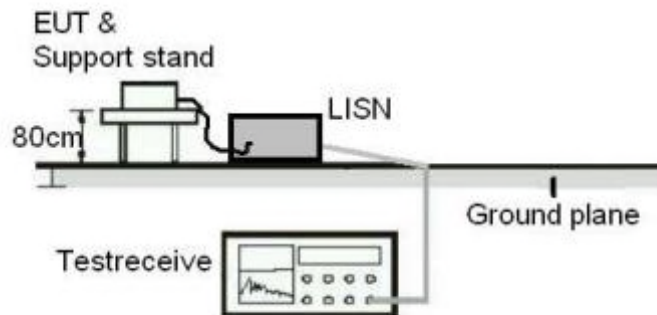
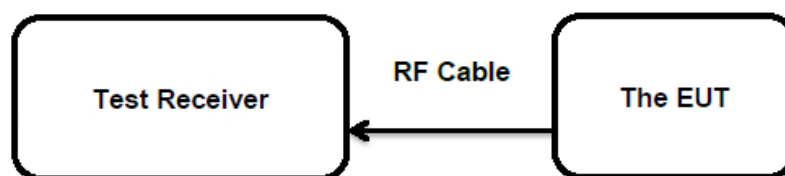


Diagram of Measurement Configuration for Conducted Transmitter Measurement



5 Test Results

5.1 Transmitter Requirement & Test Suites

5.1.1 Antenna Requirement

RESULT:**Pass****Test Specification**

Test standard : FCC Part 15.247(b)(4) and Part 15.203

According to the manufacturer declared, the EUT has one internal antenna, the directional gain of antenna is 0dBi, and the antenna connector is designed with permanent attachment and no consideration of replacement. Therefore the EUT is considered sufficient to comply with the provision.

Therefore the EUT is considered sufficient to comply with the provision.

Refer to EUT Photo for further details.

5.1.2 Maximum Peak Conducted Output Power

RESULT:
Pass
Test Specification

Test standard : FCC Part 15.247(b)(1)&(3)
 Basic standard : ANSI C63.10: 2013
 Limits : FHSS < 0.125 Watts
 Kind of test site : Shielded Room

Test Setup

Date of testing : 22.10.2018
 Input voltage : AC 120V 60Hz
 Operation mode : A
 Test channel : Low / Middle / High
 Ambient temperature : 24 °C
 Relative humidity : 50 %
 Atmospheric pressure : 101 kPa

For details refer to following test result.

Table 7: Test Result of Maximum Peak Conducted Output Power

Test Mode	Test Channel (MHz)	Measured Peak Power		Limit (W)
		(dBm)	(mW)	
BDR	2402	1.28	1.34	< 0.125
	2441	0.91	1.23	
	2480	-0.35	0.92	
Maximum Measured Value		1.28	1.34	

Test Mode	Test Channel (MHz)	Measured Peak Power		Limit (W)
		(dBm)	(mW)	
EDR	2402	5.08	3.22	< 0.125
	2441	4.79	3.01	
	2480	2.15	1.64	
Maximum Measured Value		5.08	3.22	

Test Mode	Test Channel (MHz)	Measured Peak Power		Limit (W)
		(dBm)	(mW)	
Low Energy	2402	5.82	3.82	< 1.0
	2440	5.05	3.20	
	2480	2.73	1.87	
Maximum Measured Value		5.82	3.82	

Note:

- 1) The cable loss is taken into account in results.
- 2) Antenna gain(G) of FHSS: 0dBi,
 The Maximum peak conducted output power (e.i.r.p.)= $P_{(\text{Peak power})} + G$, which is far below the 4 W

5.1.3 Conducted Power Spectral Density

RESULT:**Pass****Test Specification**

Test standard : FCC Part 15.247(e)
Basic standard : ANSI C63.10: 2013
Kind of test site : Shielded Room

Test Setup

Date of testing : 22.10.2018
Input voltage : AC 120V 60Hz
Operation mode : A
Test channel : Low / Middle / High
Ambient temperature : 24 °C
Relative humidity : 50 %
Atmospheric pressure : 101 kPa

For details refer to following test result.

Table 8: Test Result of Power Spectral Density, Low Energy

Test Mode	Test Channel (MHz)	Power Spectrum Density(dBm/3kHz)	Limit (dBm/3kHz)
Low Energy	2402	-9.75	< 8.0
	2440	-10.97	
	2480	-12.49	
Maximum Measured Value		-9.75	

5.1.4 6dB Bandwidth

RESULT:**Pass****Test Specification**

Test standard : FCC Part 15.247(a)(2)
Basic standard : ANSI C63.10: 2013
Limits : More than 500 KHz
Kind of test site : Shielded Room

Test Setup

Date of testing : 16.06.2018
Input voltage : AC 120V 60Hz
Operation mode : A.2
Test channel : Low / Middle / High
Ambient temperature : 24 °C
Relative humidity : 50 %
Atmospheric pressure : 101 kPa

Table 9: Test Result of 6dB Bandwidth, Low Energy

Test Mode	Test Channel (MHz)	-6dB Bandwidth (kHz)	Limit (kHz)
Low Energy	2402	698.8	> 500
	2440	691.1	
	2480	690.3	
Minimum Measured Value		698.8	

5.1.5 Conducted Spurious Emissions Measured in 100 kHz Bandwidth**RESULT:****Pass****Test Specification**

Test standard	: FCC Part 15.247(d)
Basic standard	: ANSI C63.10: 2013
Limits	: 20dB (below that in the 100kHz bandwidth within the band that contains the highest level of the desired power); In addition, radiated emissions which fall in the restricted bands, must also comply with the radiated emission limits specified in 15.209(a)
Kind of test site	: Shielded Room

Test Setup

Date of testing	: Refer to test result
Input voltage	: AC 120V 60Hz
Operation mode	: A
Test channel	: Low / Middle / High
Ambient temperature	: 24 °C
Relative humidity	: 50 %
Atmospheric pressure	: 101 kPa

Test results of 100kHz Bandwidth of Frequency Band Edge by Conducted method refer to test plots, and compliance is achieved as well.

For the measurement records, refer to the appendix B.

5.1.6 Radiated Spurious Emission

RESULT:**Pass****Test Specification**

Test standard : FCC Part 15.247(d) & FCC Part 15.205
Basic standard : ANSI C63.10: 2013
Limits : Refer to 15.209(a) of FCC part 15.247(d)

Kind of test site : 3m Semi-anechoic Chamber

Test Setup

Date of testing : Refer to test result
Input voltage : AC 120V 60Hz
Operation mode : A
Test channel : Low / Middle / High
Ambient temperature : 22 °C
Relative humidity : 53 %
Atmospheric pressure : 101 kPa

Remark:

Testing was carried out within frequency range 9kHz to the tenth harmonics. Only the worst case spurious emissions configuration of the each mode were reported.

For the measurement records, refer to the appendix B.

5.1.7 20dB Bandwidth

RESULT:
Pass
Test Specification

Test standard : FCC Part 15.247(a)(1)
 Basic standard : ANSI C63.10: 2013
 Kind of test site : Shielded Room

Test Setup

Date of testing : 16.06.2018
 Input voltage : AC 120V 60Hz
 Operation mode : A
 Test channel : Low / Middle / High
 Ambient temperature : 24 °C
 Relative humidity : 50 %
 Atmospheric pressure : 101 kPa

For details refer to following test result.

Table 10: Test Result of 20dB Bandwidth, General 2.4GHz

Test Mode	Test Channel (MHz)	20dB Bandwidth (kHz)	2/3 of 20dB Bandwidth (kHz)	Limit (MHz)
BDR	2402	906.50	604.33	/
	2441	879.90	586.60	
	2480	881.90	587.93	
Maximum Measured Value		906.50	604.33	

Test Mode	Test Channel (MHz)	20dB Bandwidth (kHz)	2/3 of 20dB Bandwidth (kHz)	Limit (MHz)
EDR	2402	1206.00	804.00	/
	2441	1208.00	805.33	
	2480	1209.00	806.00	
Maximum Measured Value		1209.00	806.00	

5.1.8 Carrier Frequency Separation

RESULT:
Pass
Test Specification

Test standard : FCC Part 15.247(a)(1)
 Basic standard : ANSI C63.10: 2013
 Limits : $\geq 25\text{kHz}$ or $2/3$ of 20dB bandwidth, whichever is greater
 Kind of test site : Shielded Room

Test Setup

Date of testing : 16.06.2018
 Input voltage : AC 120V 60Hz
 Operation mode : B
 Test channel : Low / Middle / High
 Ambient temperature : $24\text{ }^{\circ}\text{C}$
 Relative humidity : 50 %
 Atmospheric pressure : 101 kPa

For details refer to following test result.

Table 11: Test Result of Carrier Frequency Separation, General 2.4GHz

Test Mode	Test Channel	Test Channel (MHz)	Measured Channel Separation (KHz)	Limit (kHz)
FHSS	Low Channel	2402	1002	≥ 25kHz or 2/3 of 20dB bandwidth
	Adjacency Channel	2403		
	Middle Channel	2441	999	
	Adjacency Channel	2442		
	High Channel	2480	999	
	Adjacency Channel	2479		

Note: The limit is maximum $2/3$ of the 20 dB bandwidth: 806.00KHz .

5.1.9 Number of Hopping Frequency

RESULT:**Pass****Test Specification**

Test standard : FCC part 15.247(a)(1)(iii)
Basic standard : ANSI C63.10: 2013
Limits : ≥ 15 non-overlapping channels
Kind of test site : Shielded Room

Test Setup

Date of testing : 22.10.2018
Input voltage : AC 120V 60Hz
Operation mode : C
Ambient temperature : 24 °C
Relative humidity : 50 %
Atmospheric pressure : 101 kPa

For details refer to following test result.

Table 12: Test Result of Number of Hopping Frequency, General 2.4GHz

Test Mode	Frequency Range	Measured Quantity of Hopping Channel	Limit
FHSS	2402 - 2480 MHz	79	≥ 15

5.1.10 Time of Occupancy

RESULT:
Pass
Test Specification

Test standard : FCC part 15.247(a)(1)(iii)
 Basic standard : ANSI C63.10: 2013
 Limits : < 0.4s
 Kind of test site : Shielded Room

Test Setup

Date of testing : 16.06.2018
 Input voltage : AC 110V 60Hz
 Operation mode : B
 Test channel : Low / Middle / High
 Ambient temperature : 24 °C
 Relative humidity : 50 %
 Atmospheric pressure : 101 kPa

For details refer to following test result.

Table 13: Test Result of Time of Occupancy

Test Mode	Test Channel (MHz)	Pulse Width(ms)	Number of Channels	Measured Dwell Time(s)	Limit (s)
BDR	2402	/	/	/	0.4s
	2441	2.920	106	0.311	
	2480	/	/	/	

Test Mode	Test Channel (MHz)	Pulse Width(ms)	Number of Channels	Measured Dwell Time(s)	Limit (s)
EDR	2402	/	/	/	0.4s
	2441	2.928	106	0.312	
	2480	/	/	/	

Note:

Dwell time = Pulse width x Number of channels in Period

Period = 0.4 (seconds/ channel) x 79 (channel) = 31.6 seconds

5.1.11 Conducted Emission on AC Mains**RESULT:****Pass****Test Specification**

Test standard	: FCC Part 15.207(a)
Basic standard	: ANSI C63.10: 2013
Frequency range	: 0.15 – 30MHz
Limits	: FCC Part 15.207(a)
Kind of test site	: Shielded Room

Test Setup

Date of testing	: Refer to test result
Input voltage	: AC 120V 60Hz
Operation mode	: C
Earthing	: Not connected
Ambient temperature	: 25 °C
Relative humidity	: 56 %
Atmospheric pressure	: 101 kPa

For the measurement records, refer to the appendix B.

6 Safety Human Exposure

6.1 Radio Frequency Exposure Compliance

6.1.1 Electromagnetic Fields

RESULT:

Pass

Test Specification

Test standard : CFR47 FCC Part 2: Section 2.1093
CFR47 FCC Part 1: Section 1.1310
FCC KDB Publication 447498 D01 v06

The minimum distance for the EUT is less than 5mm.
Since maximum peak output power of the transmitter is 3.82 mW <10 mW.

Hence the EUT is excluded from SAR evaluation according to FCC KDB Publication 447498 D01 General RF Exposure Guidance v06.

7 Photographs of the Test Set-Up

For photographs of the test set-up, refer to the appendix A.

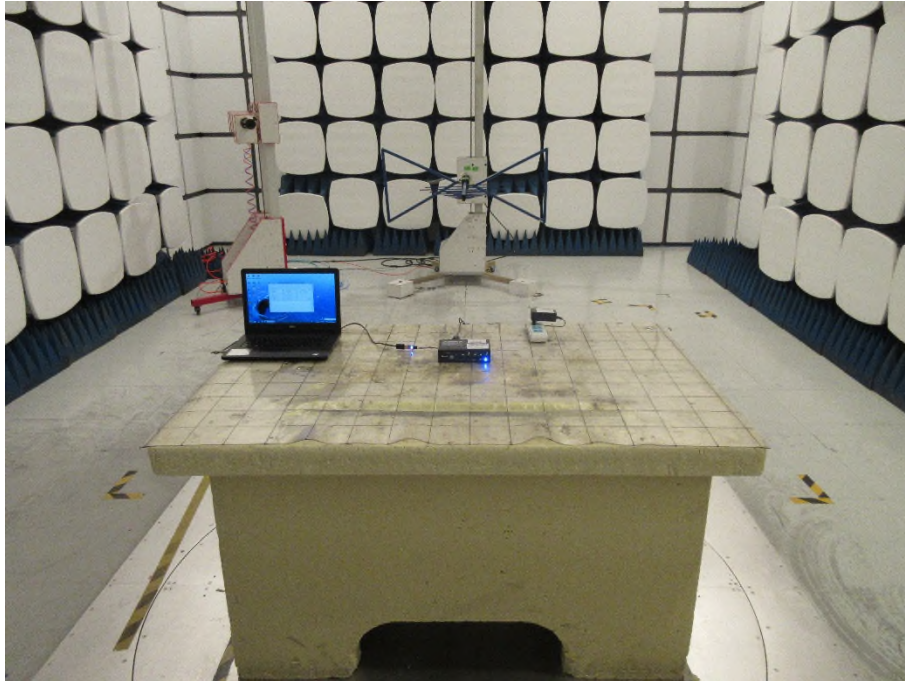
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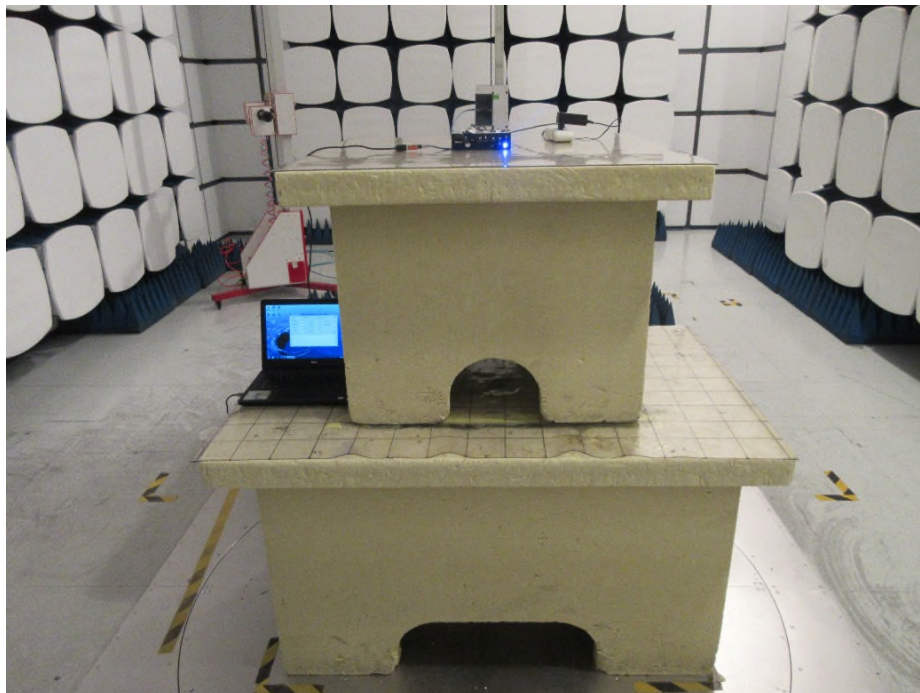
Appendix A: Photographs of the Test Set-Up

APPENDIX A: PHOTOGRAPHS OF THE TEST SET-UP	1
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Photograph 1: Set-up for Radiated Spurious Emission, 30MHz - 1GHz



Photograph 2: Set-up for Radiated Spurious Emission, 1GHz - 18GHz



Photograph 3: Set-up for Conducted Emission on AC Mains



Appendix B: Test Results

Appendix B.1: Measurement Equipment List



Measurement Equipment List

Testing Start Date 14.05.2019
Testing end date 01.09.2019

Project Manager Arthur Liu
Cost Center 41
Test Report Number 50264157 001
Order Item Number 0174091930C00140

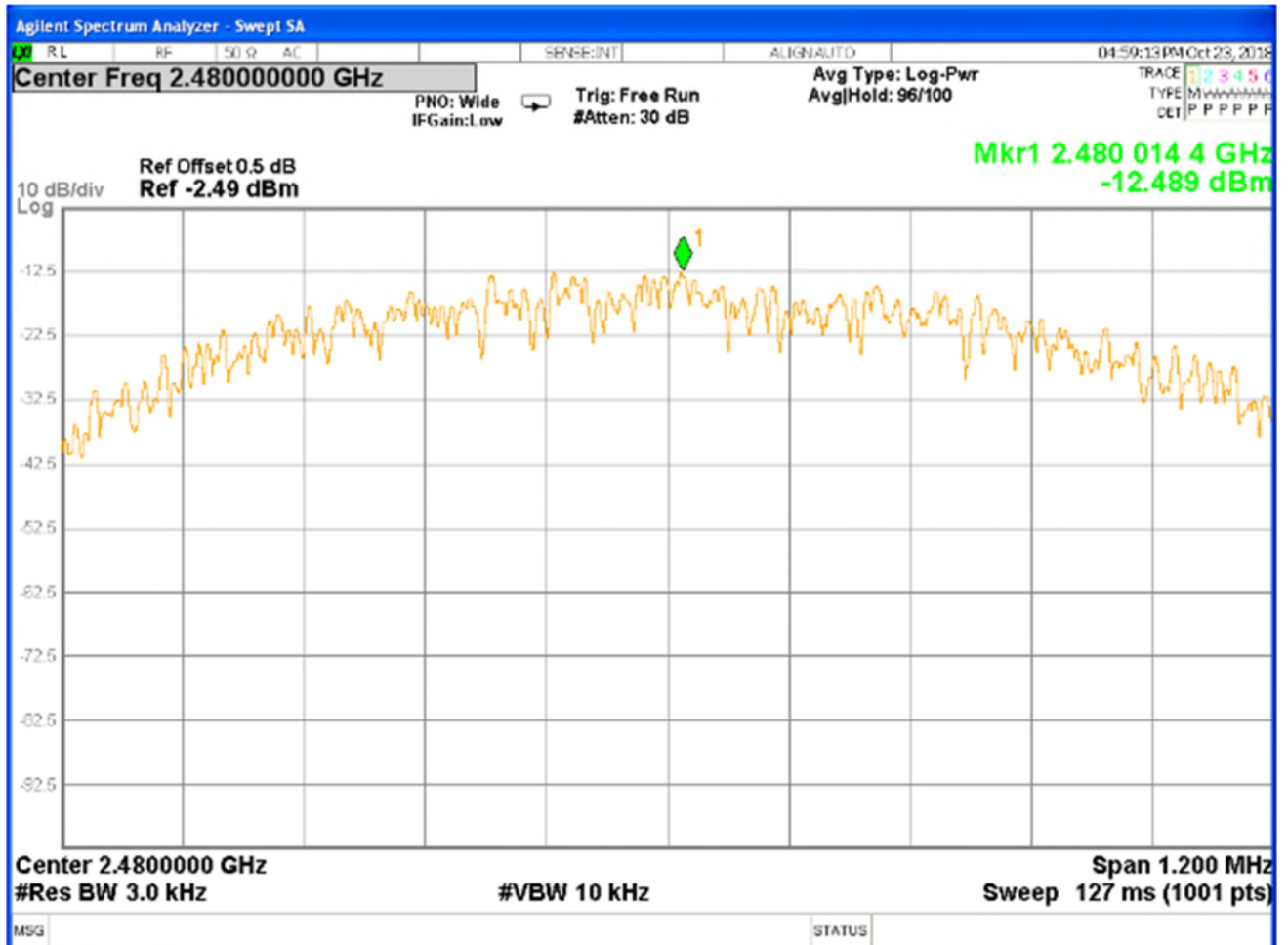
Customer Seikaku Technical Group Limited
Product Name AMPLIFIER
Comment

Page 1 of 1

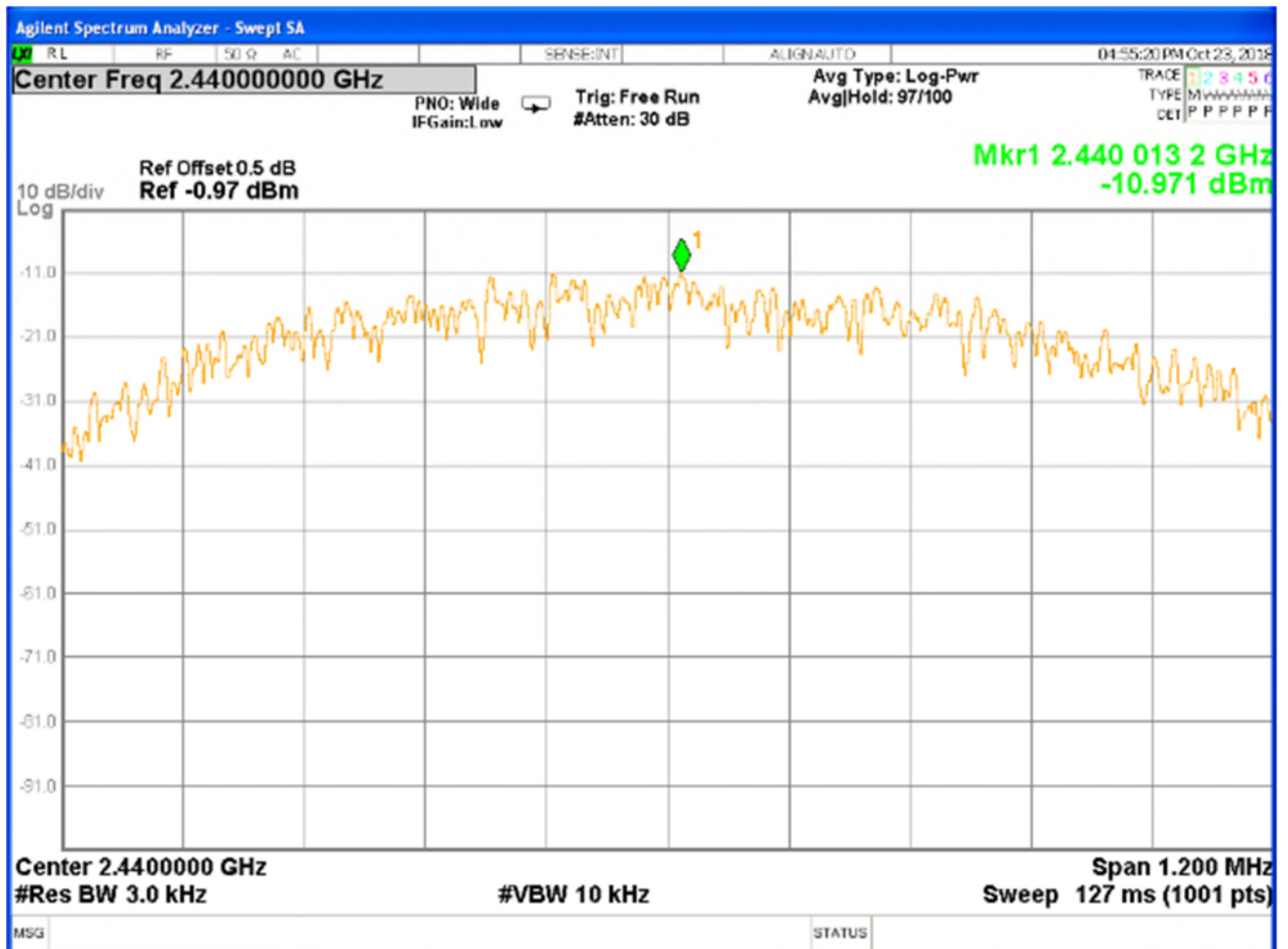
Old ID	Equip.	Description	Model	Manufacturer	Inte. (mon)	Due Date DD.MM.YYYY
1.887	1813944	EMI Test Receiver	ESCI	Rohde & Schwarz	12	15.03.2020
1.886	1813943	Two-Line V-Network	ENV216	Rohde & Schwarz	12	24.05.2020
1.807	1813832	EMI Test Receiver	ESCI	Rohde & Schwarz	12	14.03.2020
1.805	1813829	FSP30 Spectrum Analyzer	FSP30	Rohde & Schwarz	12	15.08.2020
1.921B	1814142	Trilog Broadband Antenna	VULB9168(6dB)	SCHWARZBECK	24	20.09.2019
1.822	1813850	Loop Antenna	HFH2-Z2	Rohde & Schwarz	24	15.03.2021
1.889C	1814199	Double-Ridged Horn Antenna	HF907(3s)	Rohde & Schwarz	24	23.10.2020
1.808	1813833	Horn Antenna	3160-09	EMCO	60	19.01.2024
1.819C	1814068	Pre-Amplifier	A44-00101800-25-10P-	MITEQ	12	08.05.2020
1.819A	1813846	Band Reject Filter	BRM50702	Micro-Tronics	24	04.07.2020
1.808A	1813834	Pre-Amplifier	A33-18002650-30-8P-4	MITEQ	24	29.07.2021
1.666	1813697	SAC	N/A	Albatross Project	36	27.11.2021
1.913	1814012	Shielding Room	9x4x3.4	Changzhou Yuanping	60	06.12.2020
3.769	1814017	Regulated power supply	APS-33045TT	APS	12	15.07.2020
3.765	1814004	Frequency Invertor	APW-1100N	APE	12	15.07.2020
3.770	1814018	Regulated power supply	APS-11020	APS	12	15.07.2020
3.647	1822646	Stable Power Supply	APS-11010GG	APS	12	15.07.2020
1.844	1813877	Automatic Voltage Regulator	AFR-345	Allpower	12	26.04.2020
3.648	1822647	Frequency Invertor	CIF-5000A	IDRC	12	15.07.2020
1.803C	1822648	Artificial Mains Network	LT32C/10	AFJ	12	30.07.2020
1.923B	1825388	EMI Test Receiver	ESR7	Rohde & Schwarz	12	08.04.2020
1.657N	1825384	Power Meter	NRX	Rohde & Schwarz	12	08.04.2020
1.657O	1825385	Average Power Sensor	NRP6A	Rohde & Schwarz	12	08.04.2020
1.657P	1825386	Average Power Sensor	NRP6A	Rohde & Schwarz	12	08.04.2020

Appendix B.2: Conducted Measure Power Spectral Density

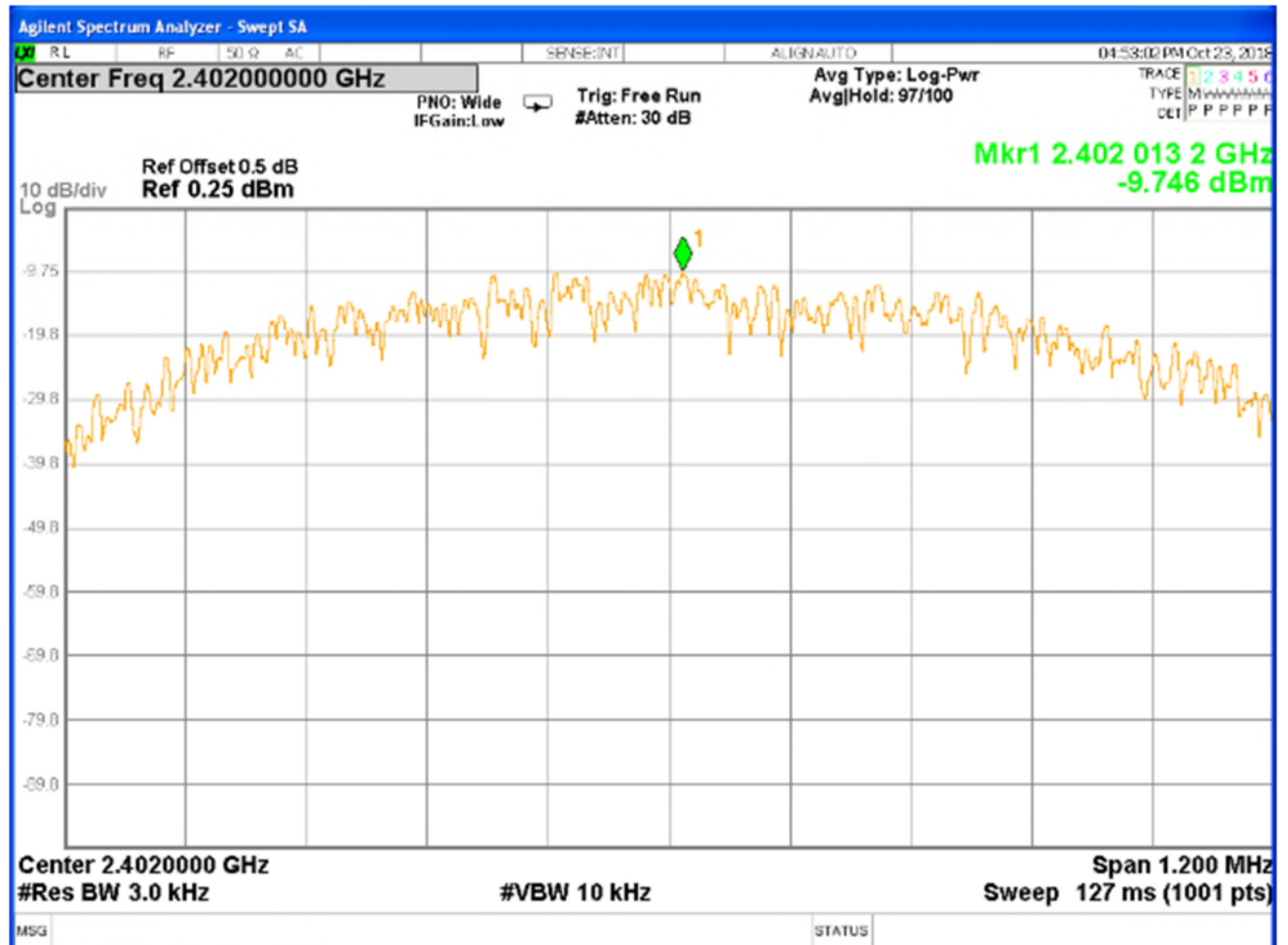
BLE, High Channel



BLE, Middle Channel

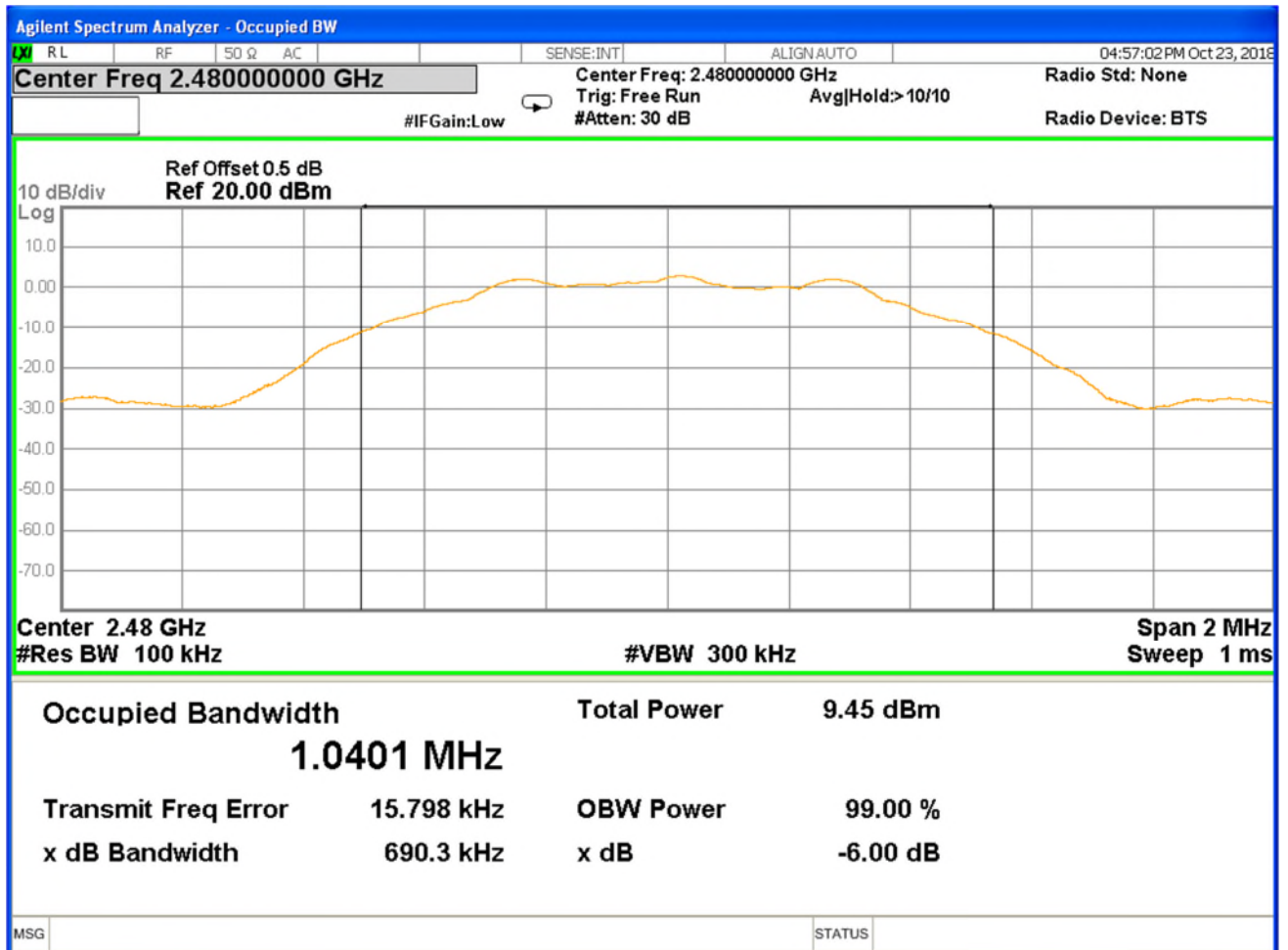


BLE, Low Channel

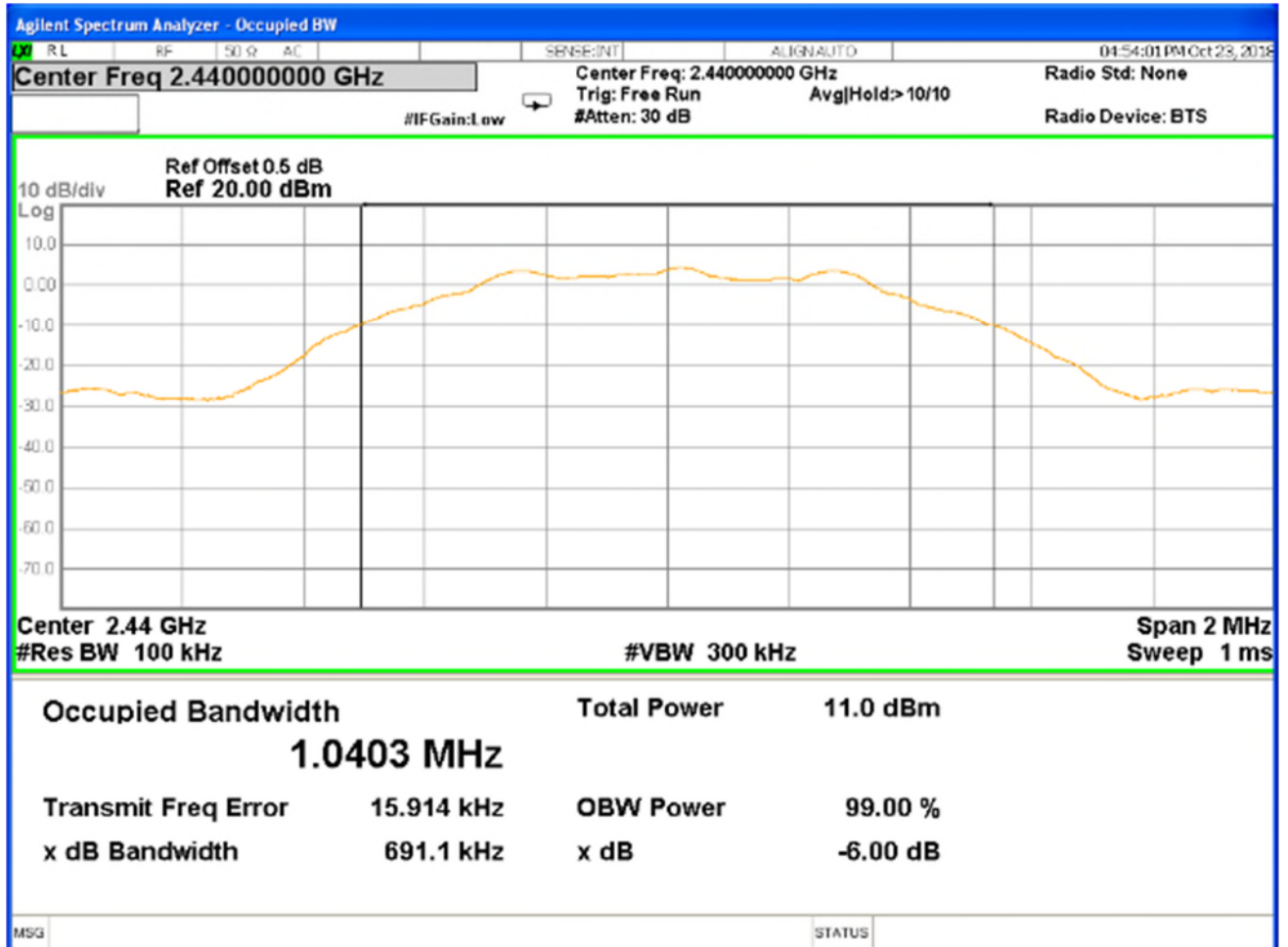


6 dB Bandwidth

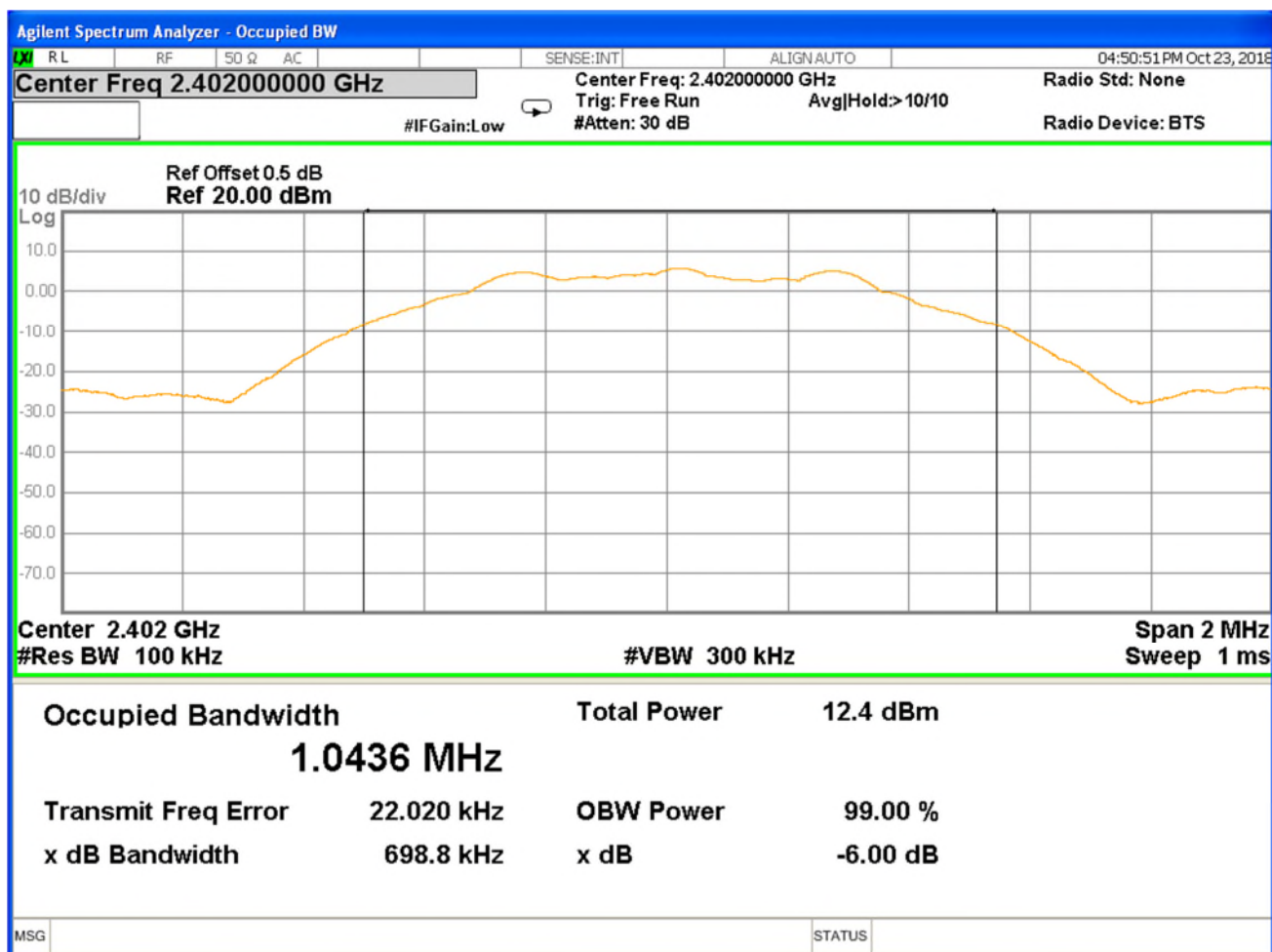
BLE, High Channel

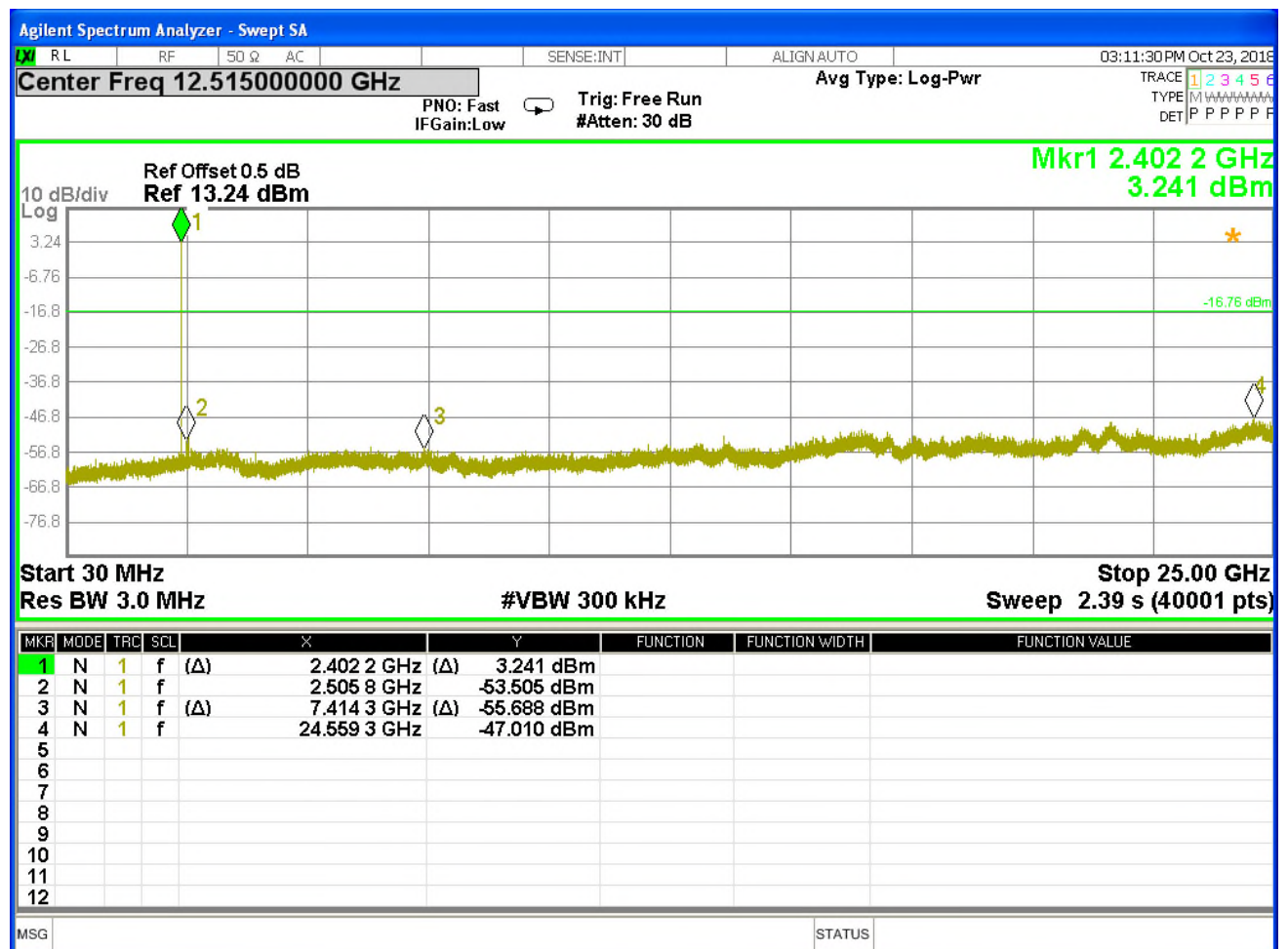


BLE, Middle Channel

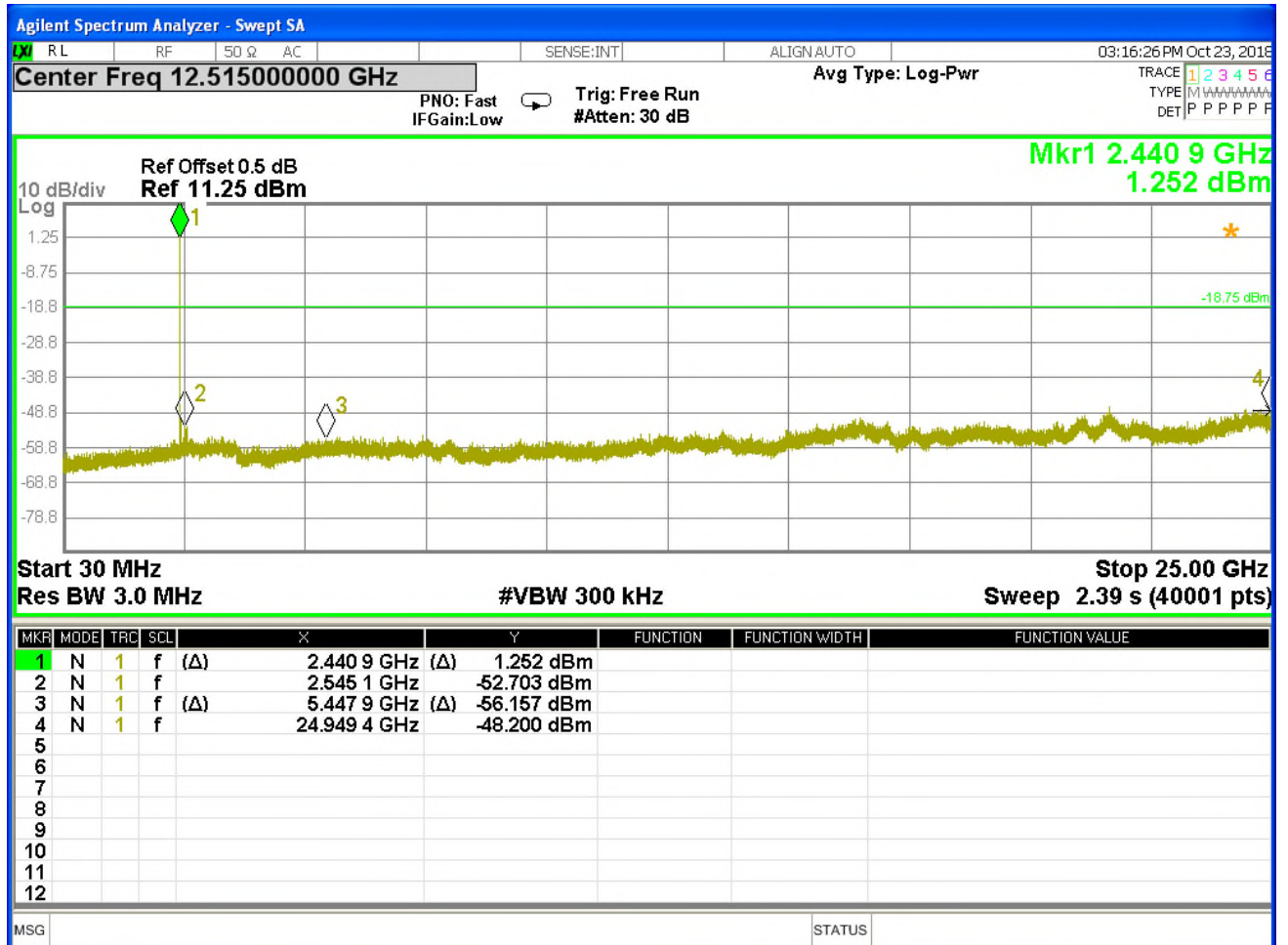


BLE, Low Channel

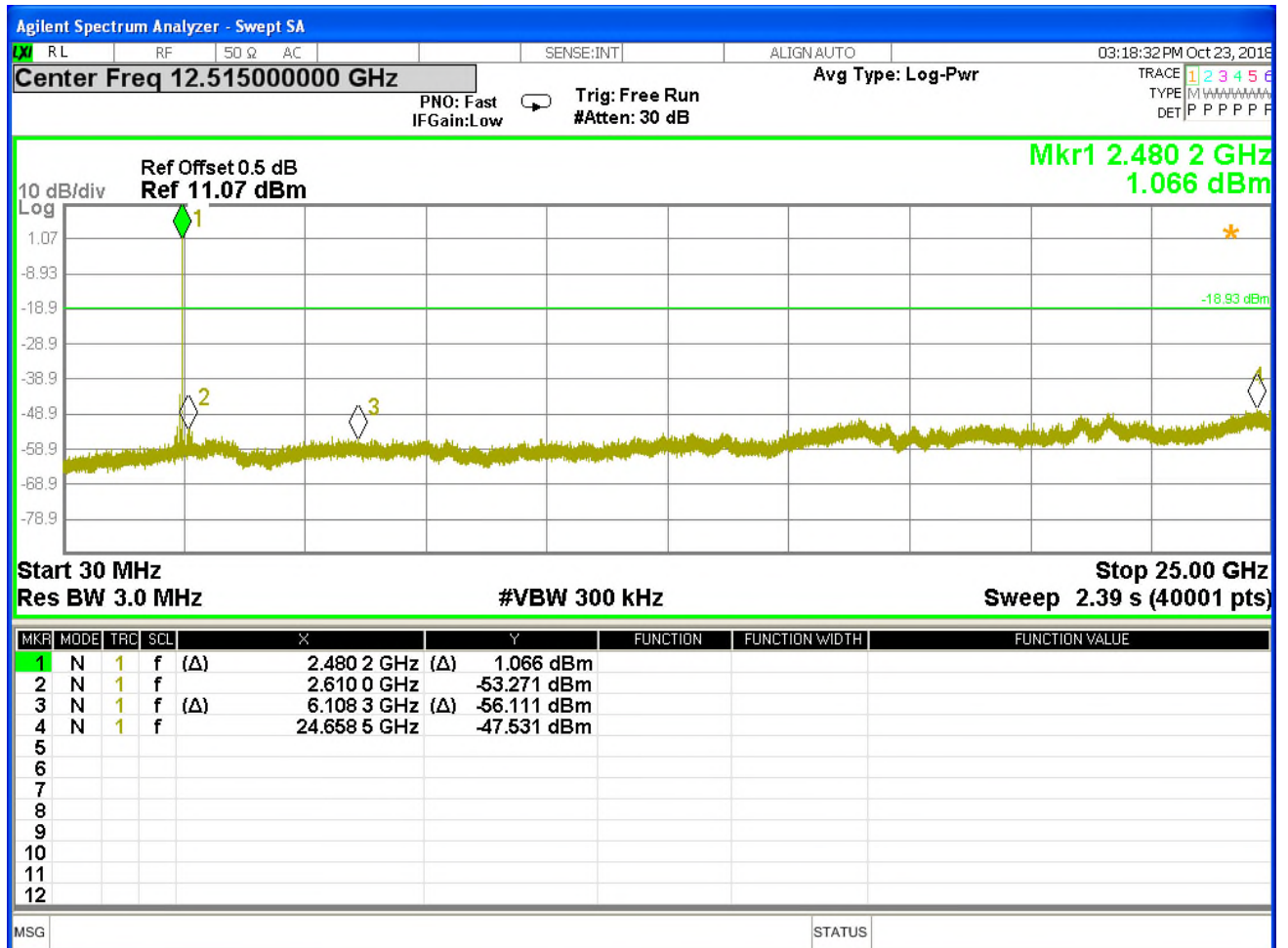




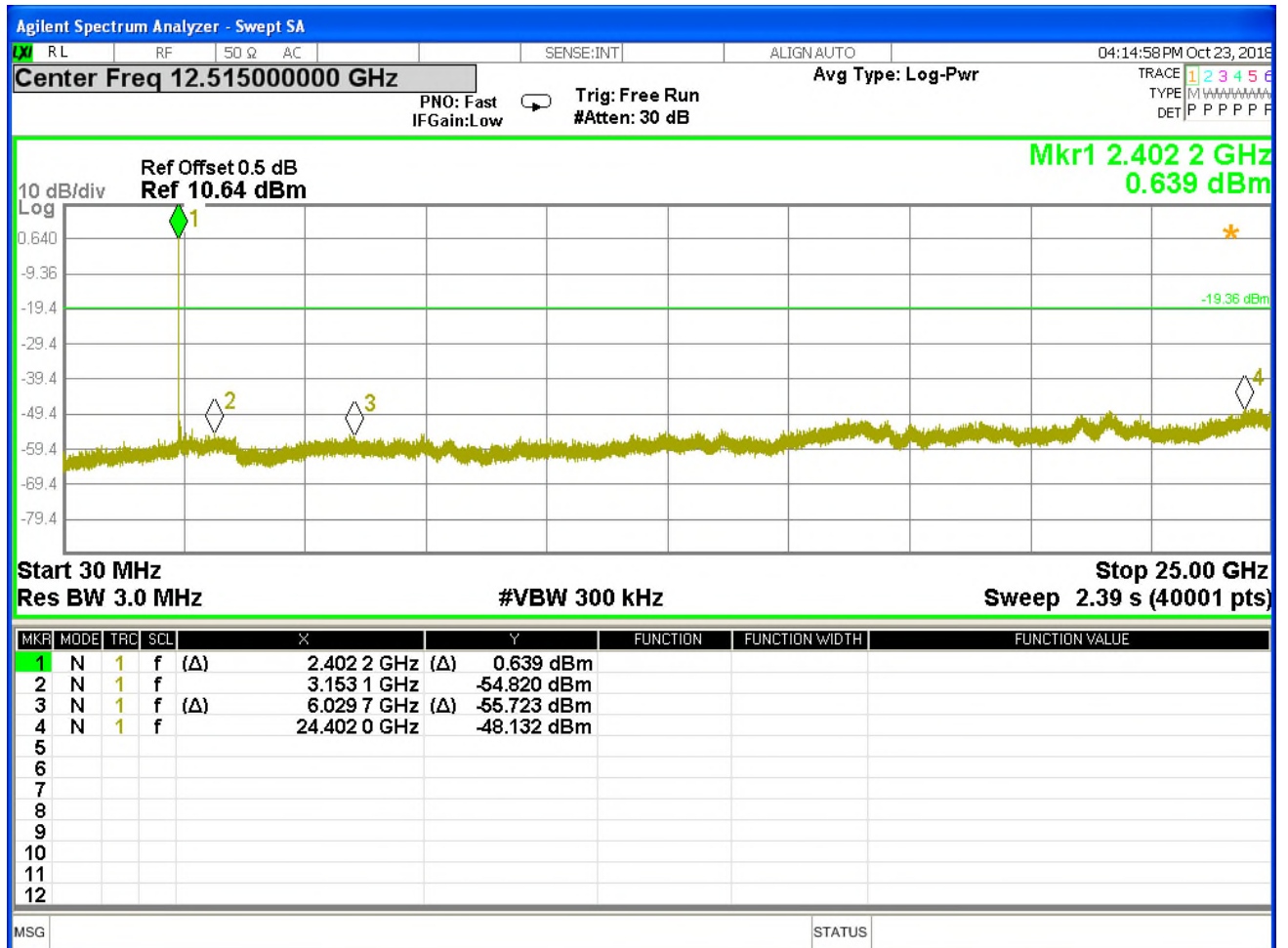
Middle Channel of BDR mode

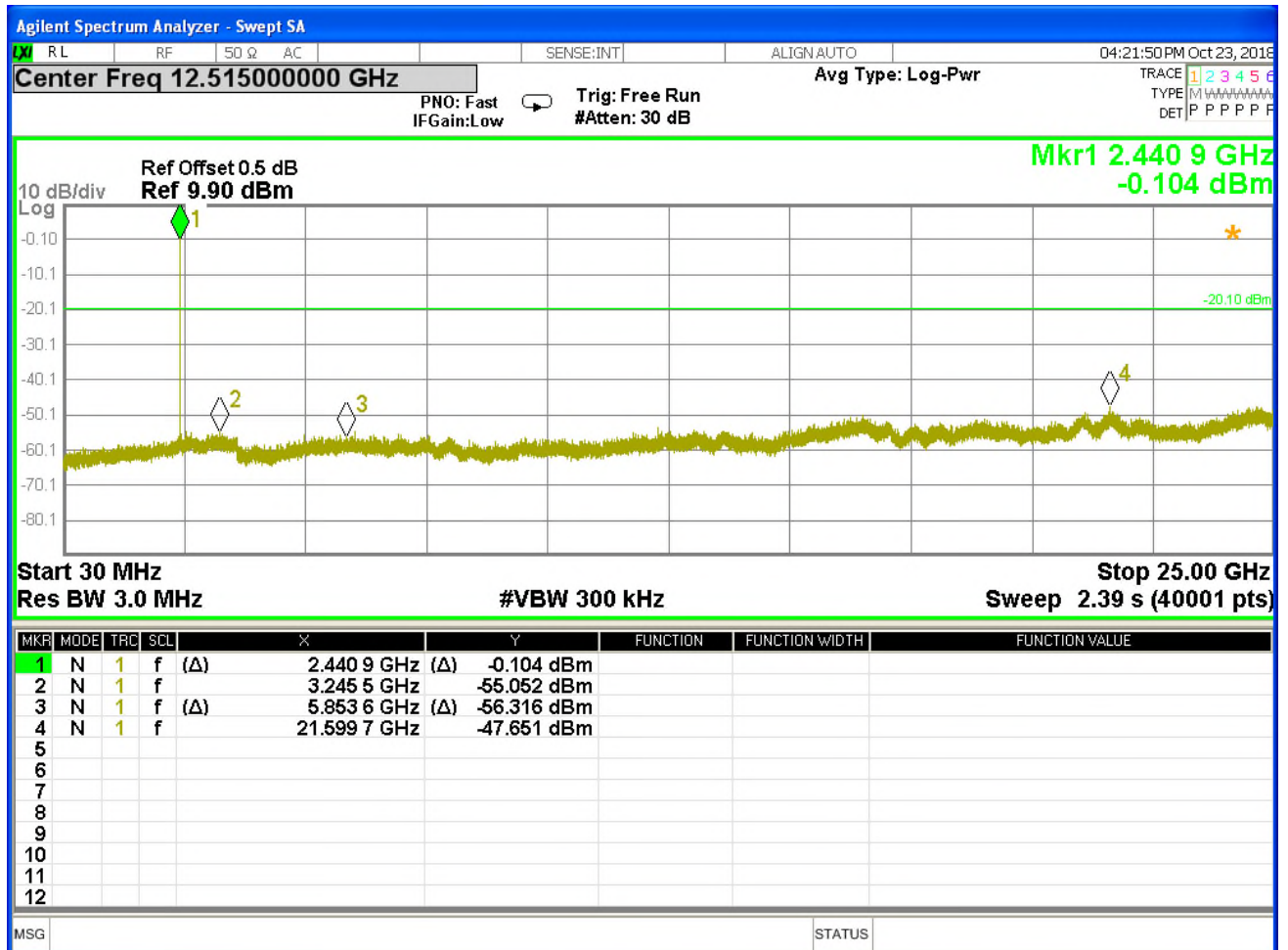


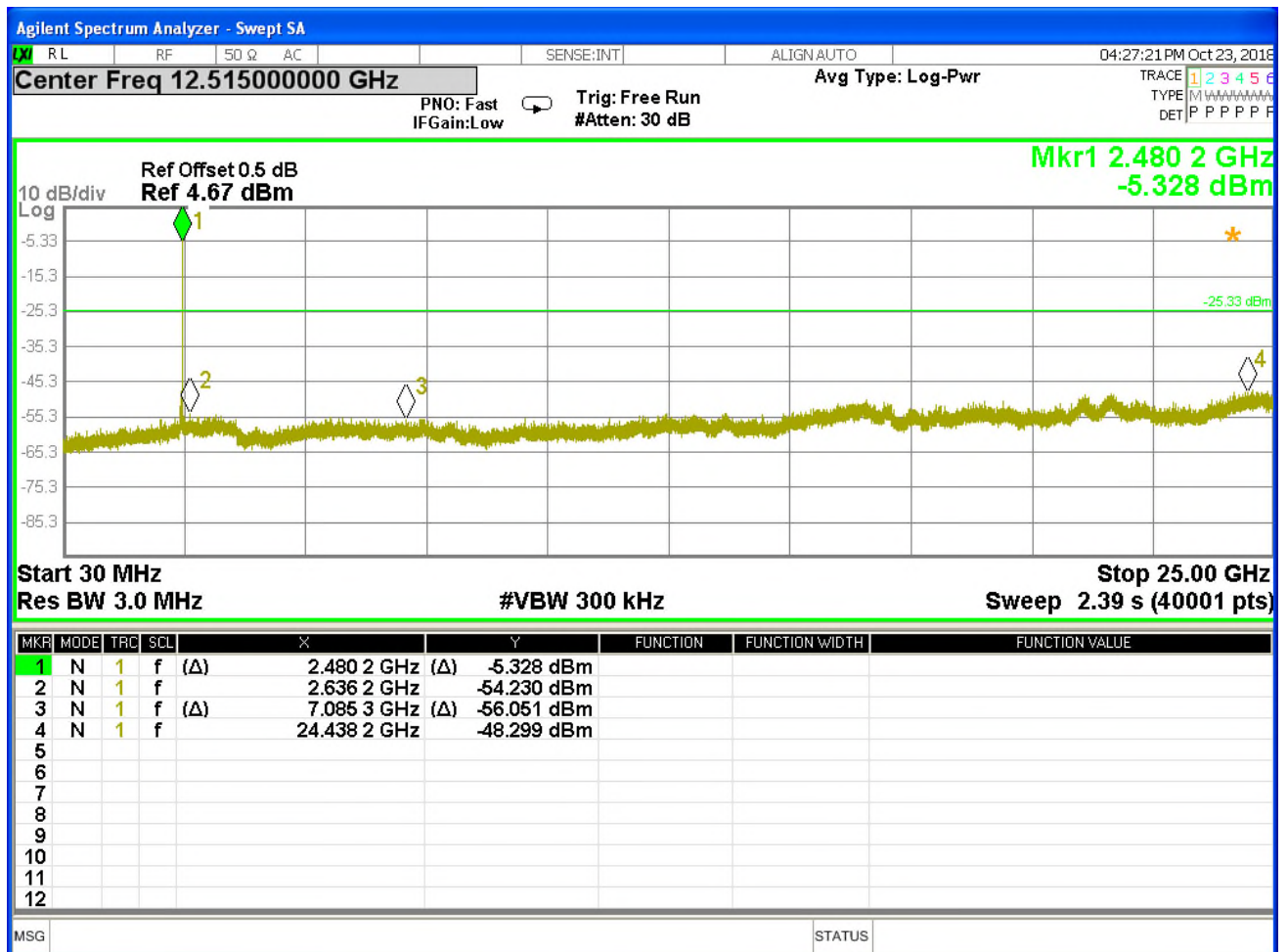
High Channel of BDR mode



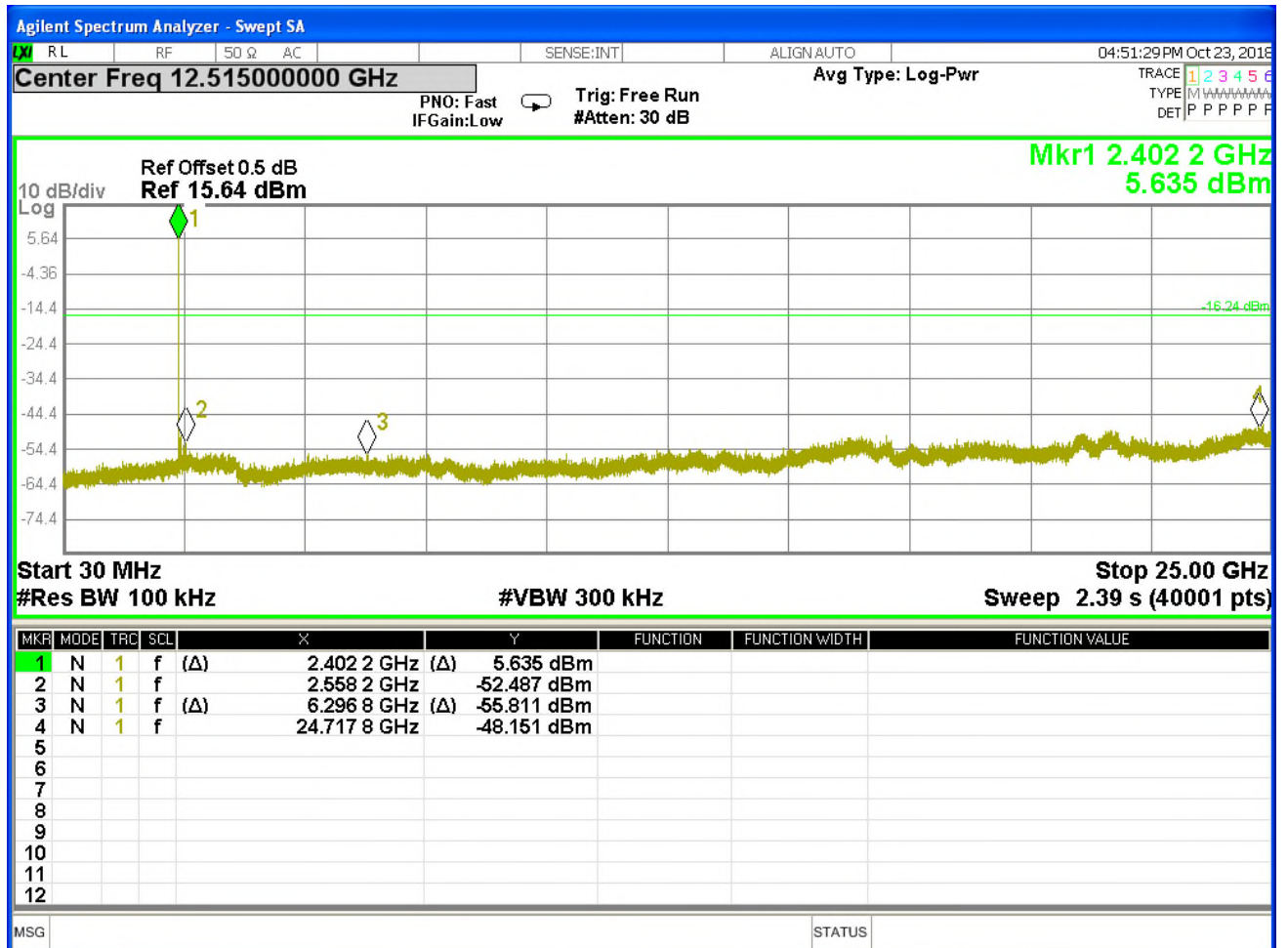
Low Channel of EDR mode



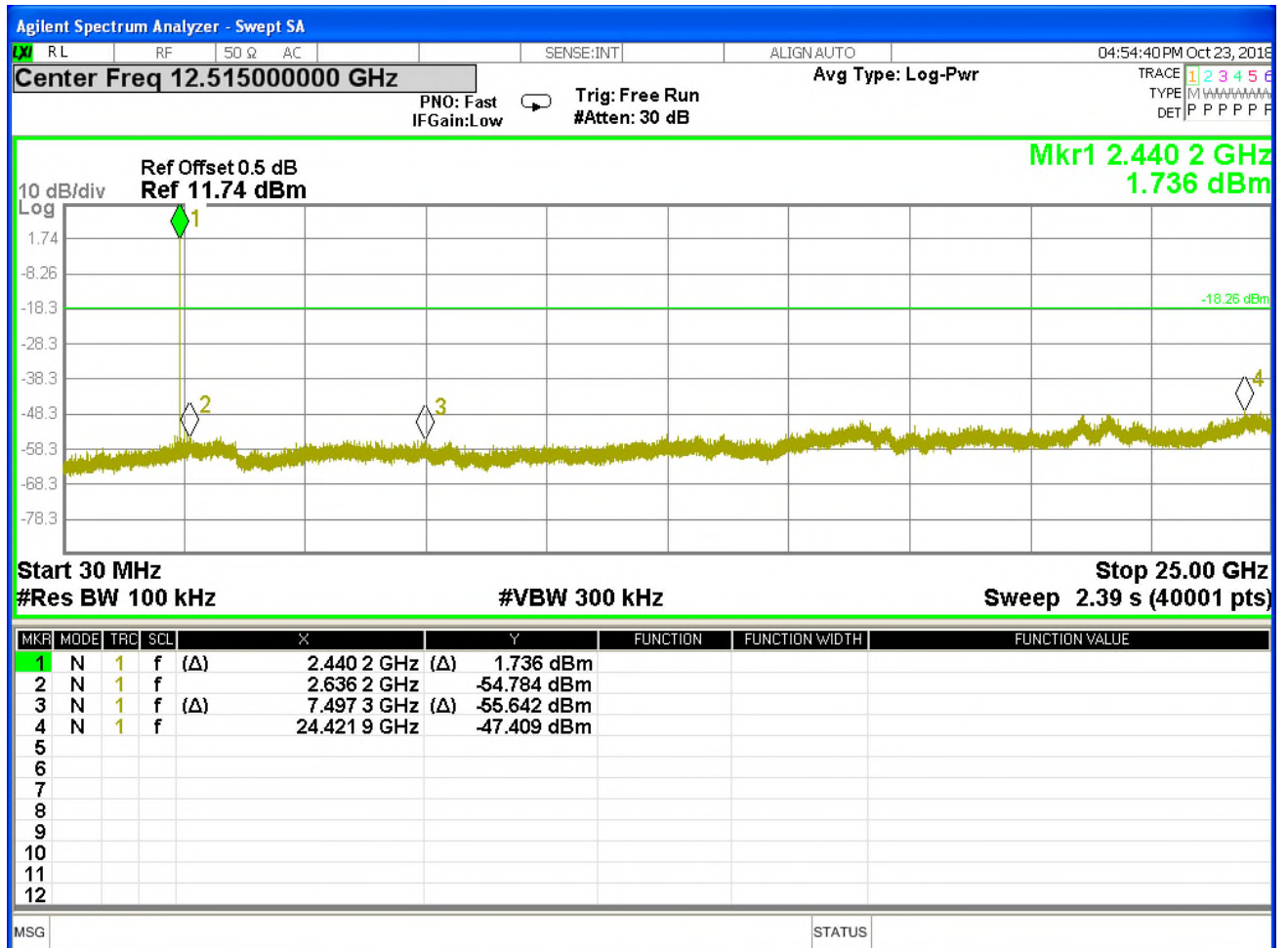




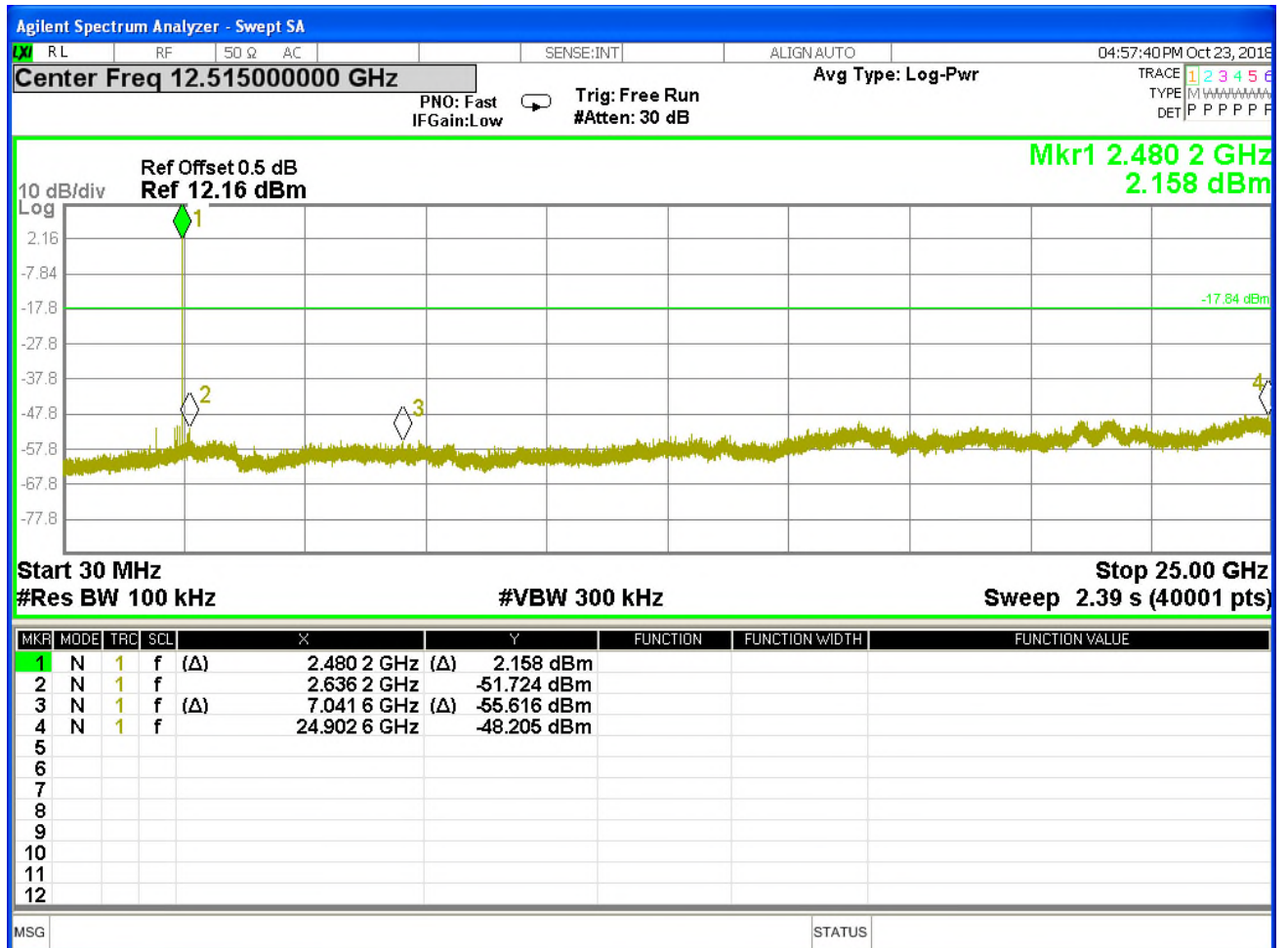
Low Channel of BLE mode



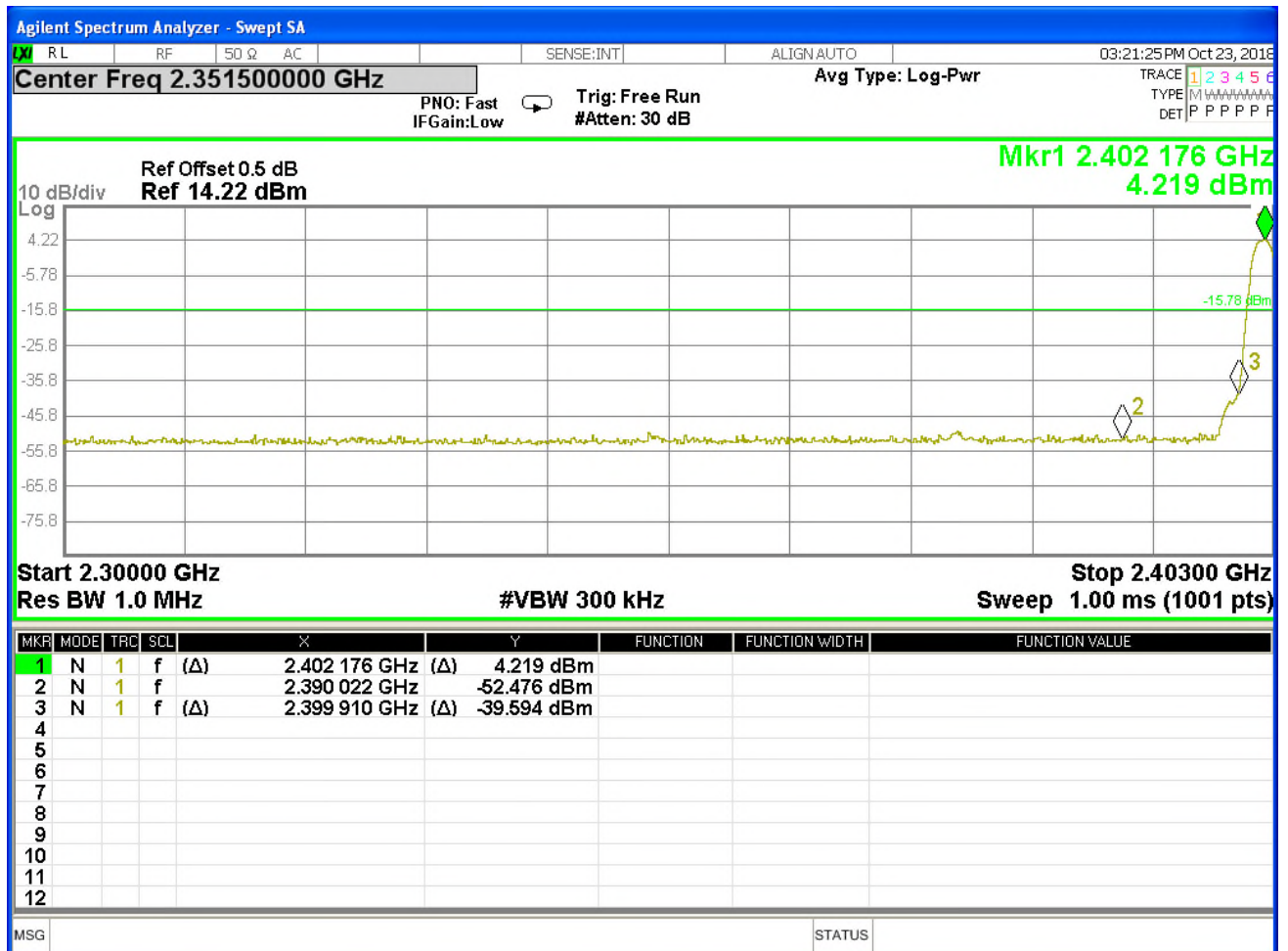
Middle Channel of BLE mode



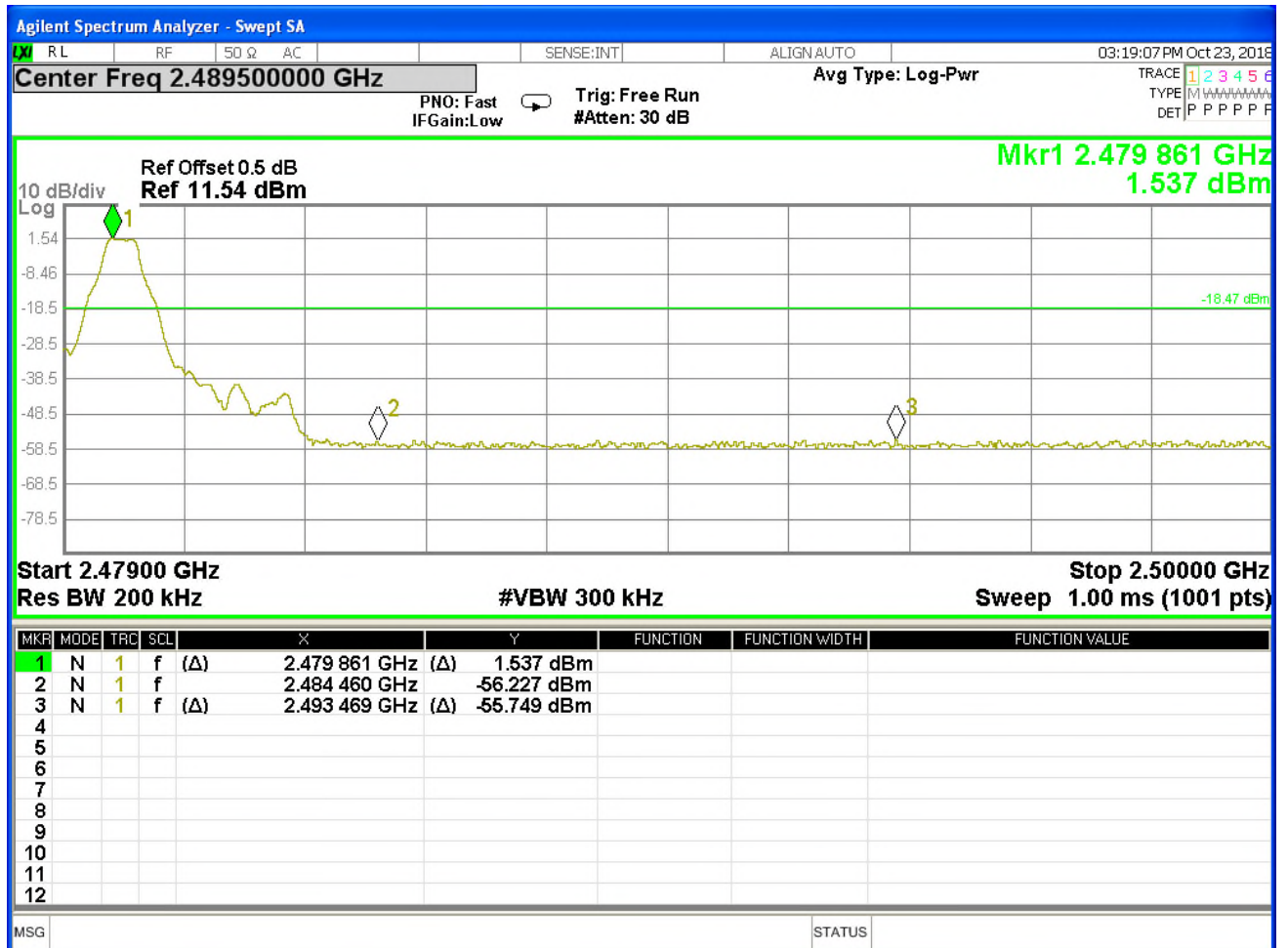
High Channel of BLE mode



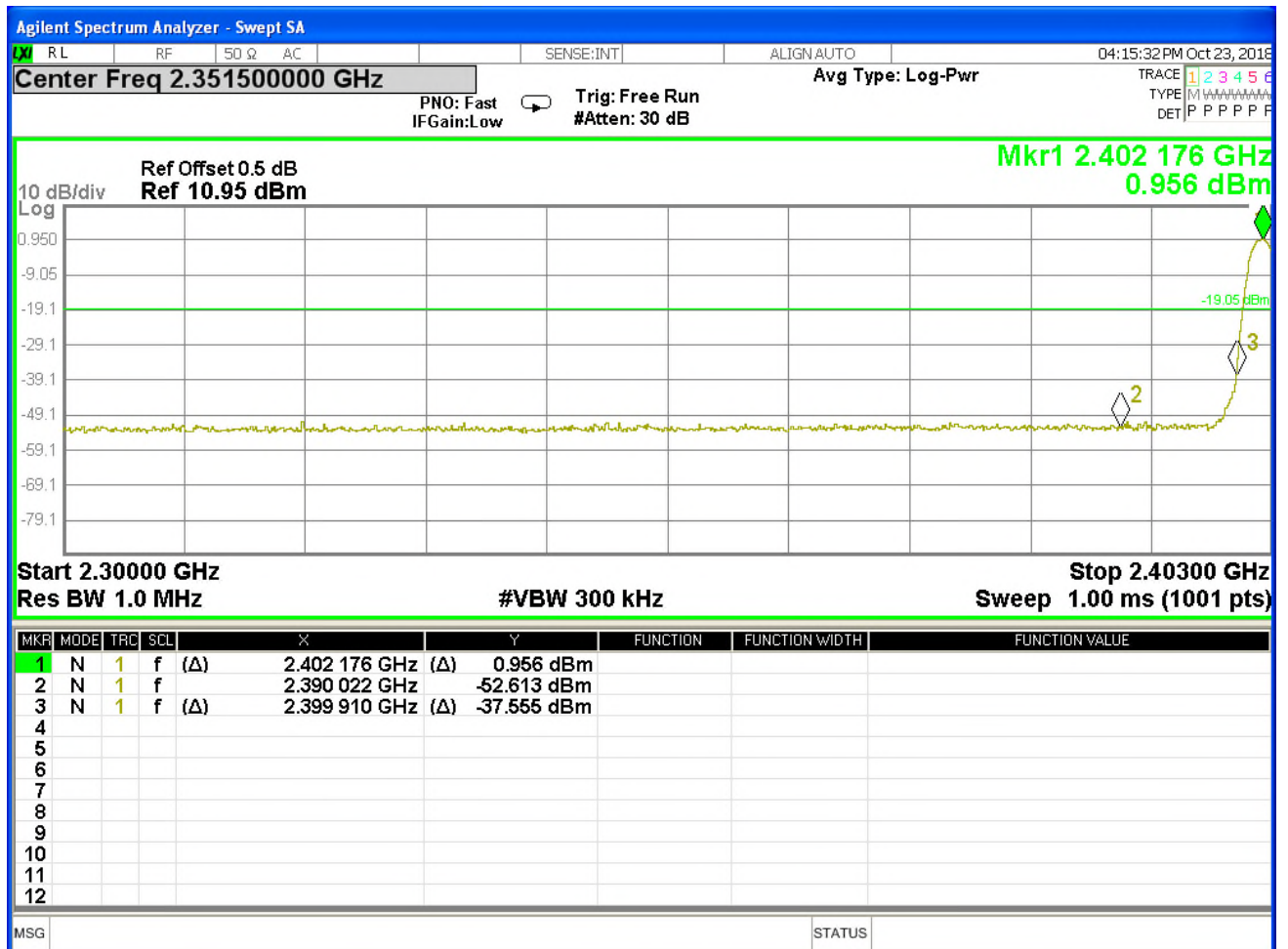
Band Edge, Low Channel of BDR mode



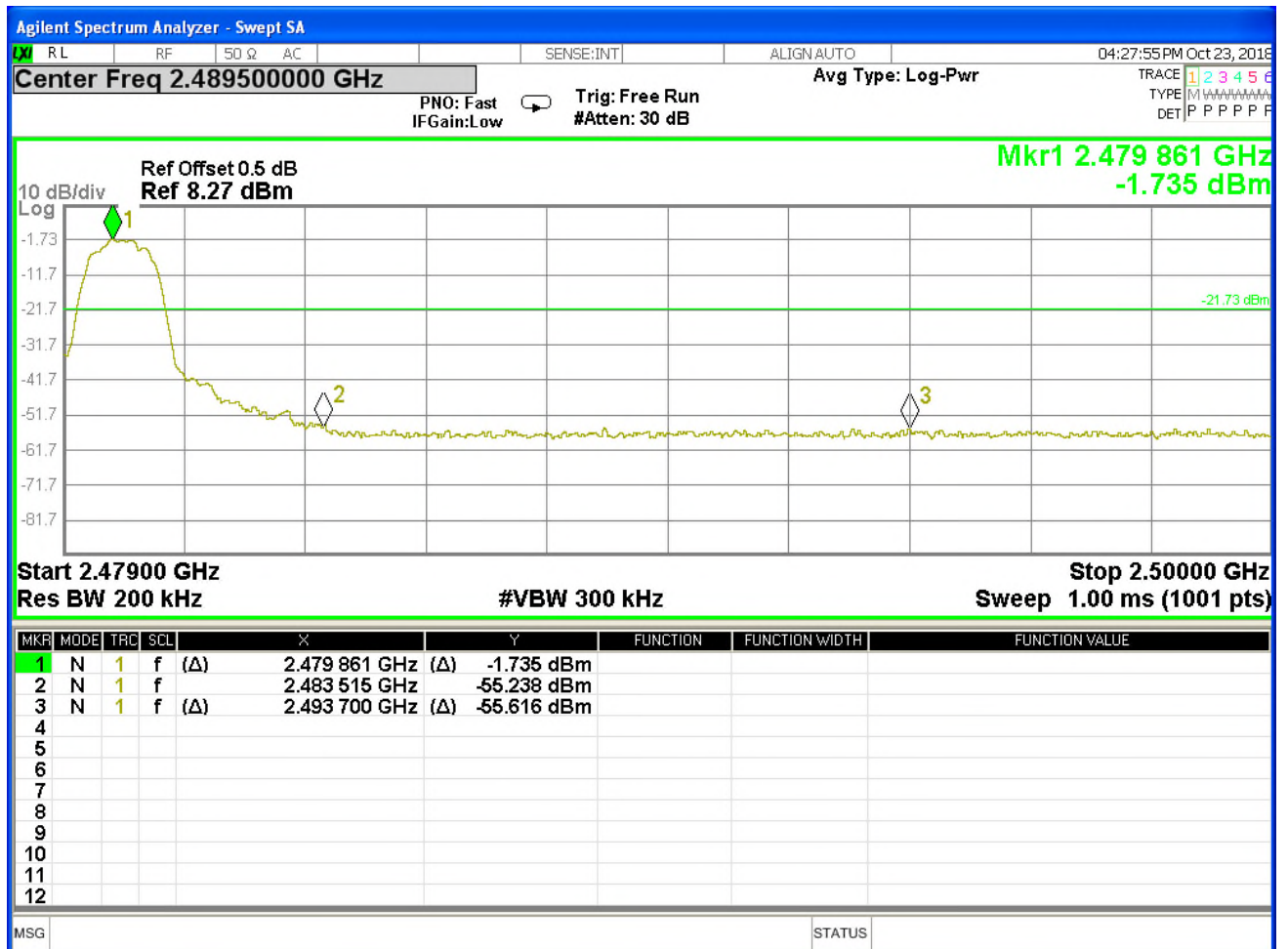
Band Edge, High Channel of BDR mode

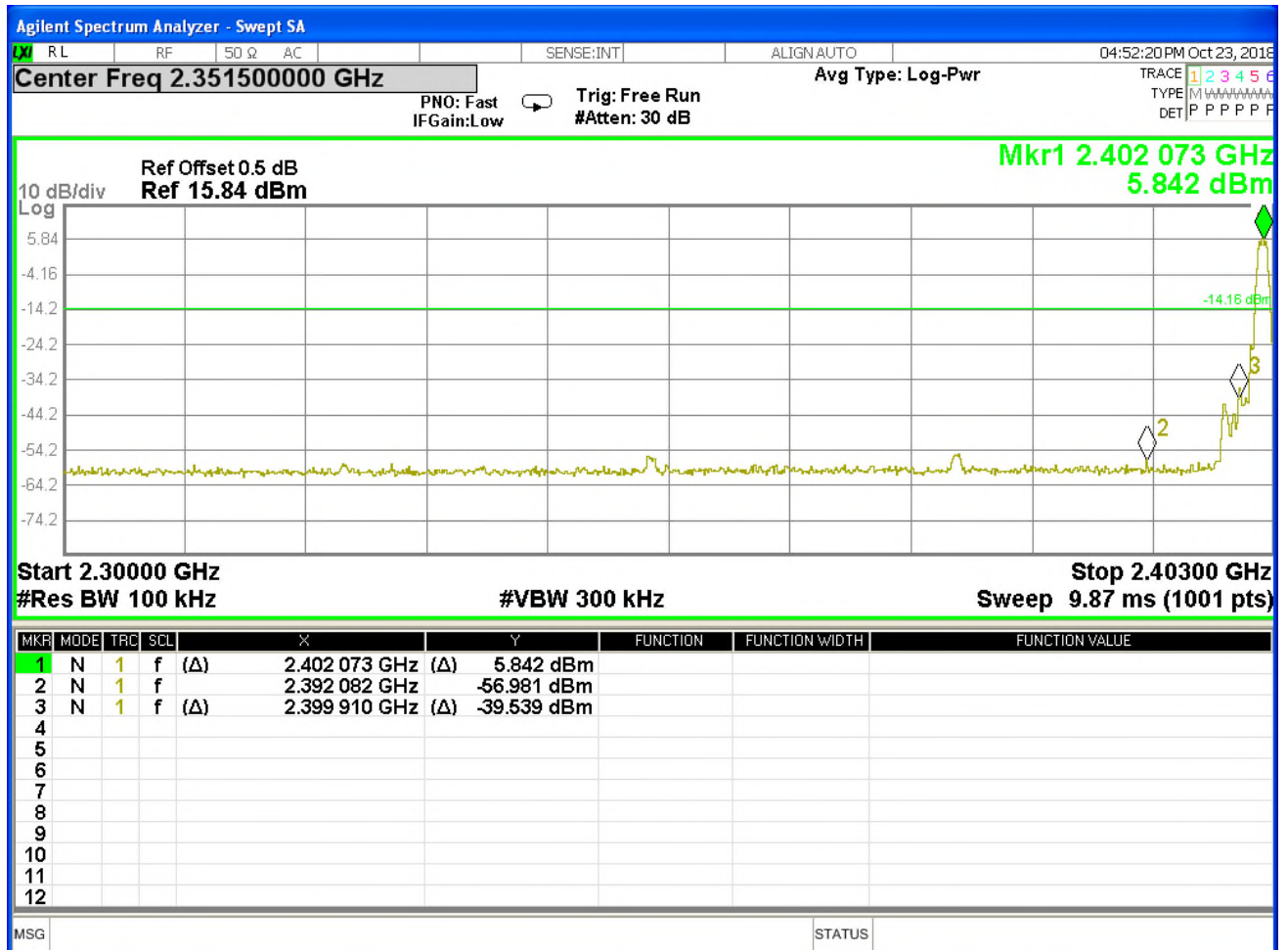


Band Edge, Low Channel of EDR mode



Band Edge, High Channel of EDR mode





Agilent Spectrum Analyzer - Swept SA

Center Freq **2.48950000 GHz** Avg Type: Log-Pwr
 PNO: Fast IF Gain: Low Trig: Free Run #Atten: 30 dB

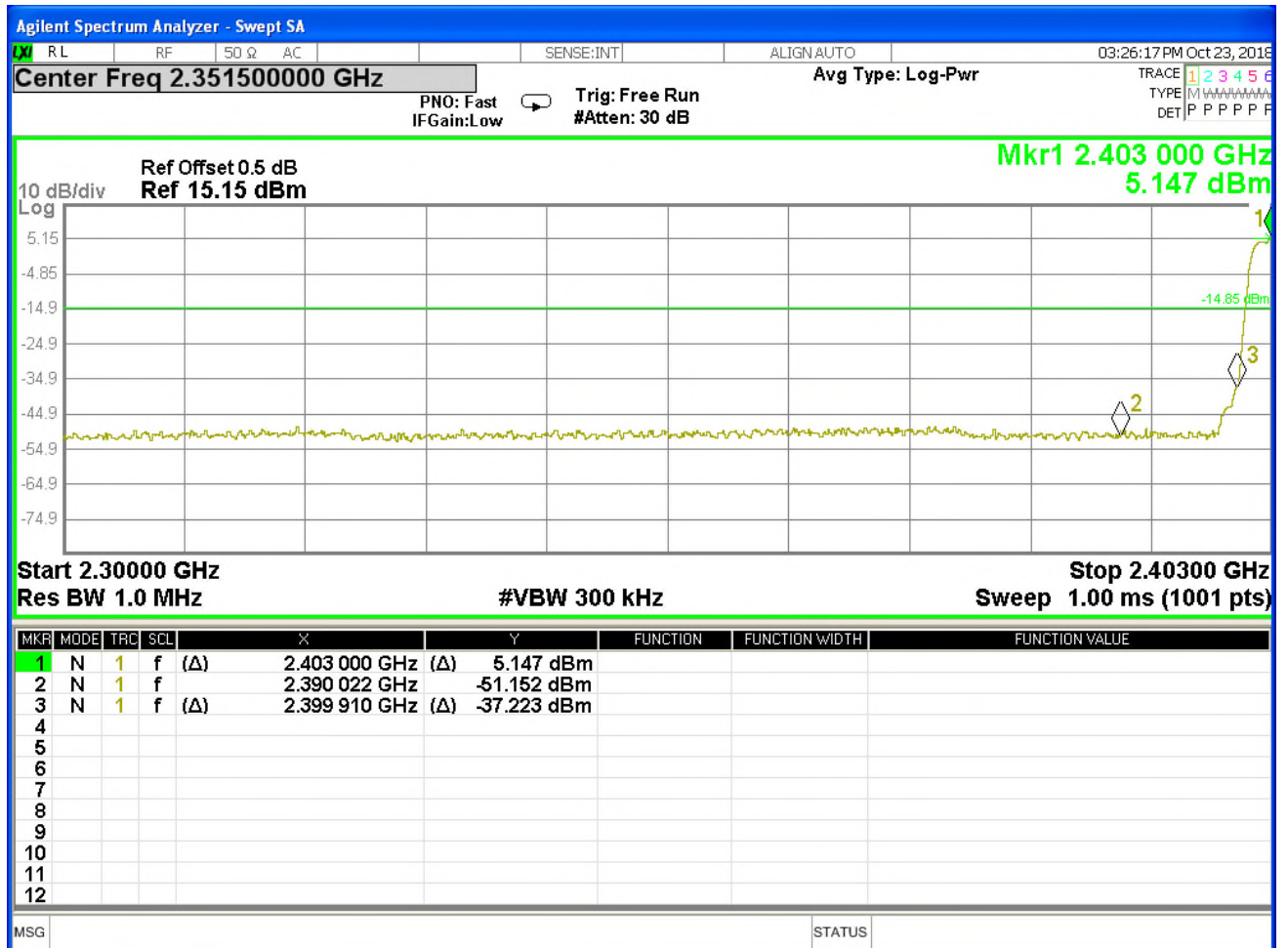
Ref Offset 0.5 dB Ref 11.53 dBm

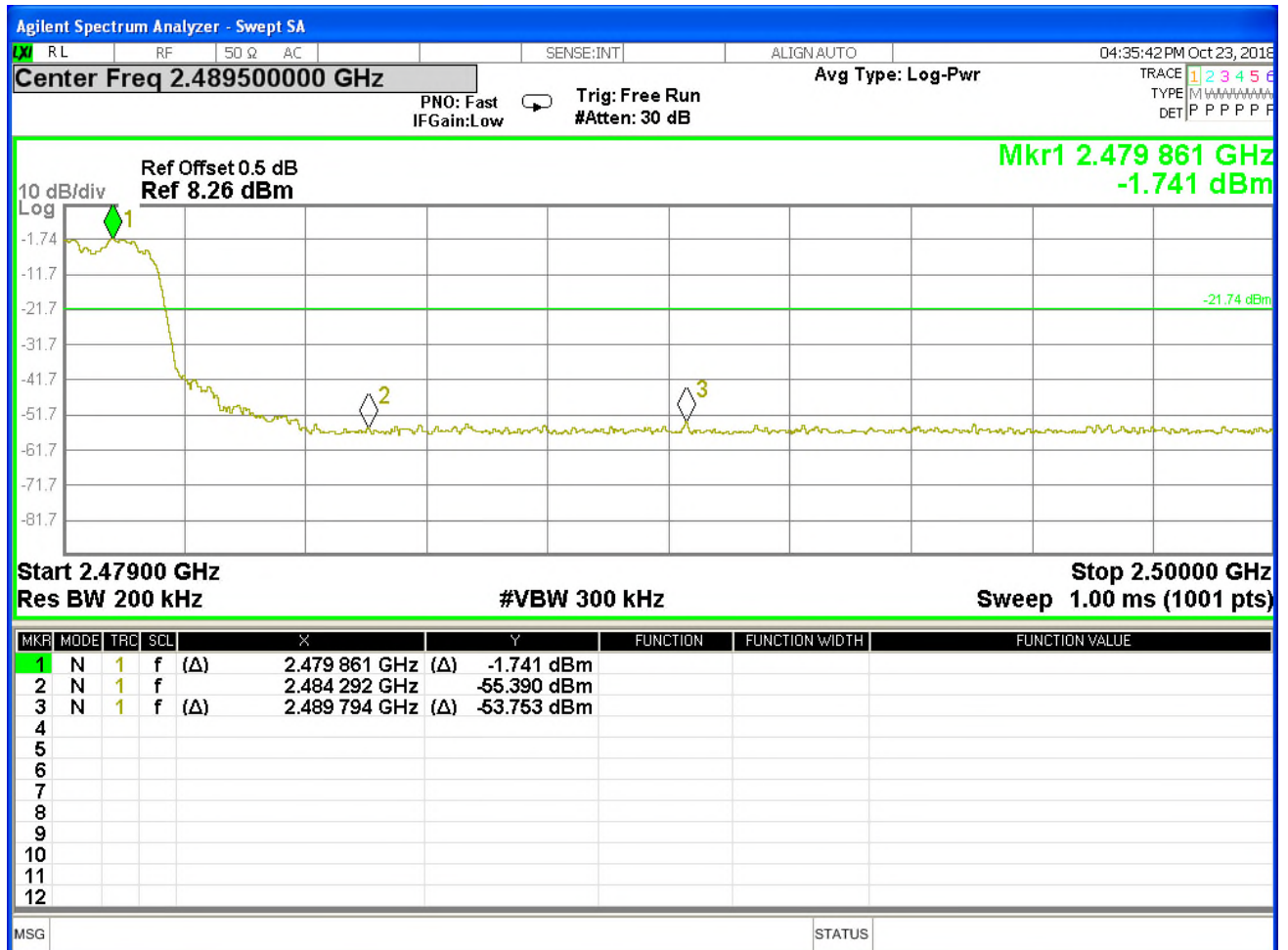
Mkr1 2.479 861 GHz 1.533 dBm

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	(Δ)	2.479 861 GHz (Δ)	1.533 dBm		
2	N	1	f		2.483 956 GHz	-53.953 dBm		
3	N	1	f	(Δ)	2.499 979 GHz (Δ)	-52.982 dBm		
4								
5								
6								
7								
8								
9								
10								
11								
12								

Start 2.47900 GHz Stop 2.50000 GHz
 Res BW 200 kHz #VBW 300 kHz Sweep 1.00 ms (1001 pts)

Band Edge, Left side of BDR hopping mode





Agilent Spectrum Analyzer - Swept SA

Center Freq **2.35150000 GHz** Avg Type: Log-Pwr PNO: Fast IFGain: Low Trig: Free Run #Atten: 30 dB 04:33:20 PM Oct 23, 2018

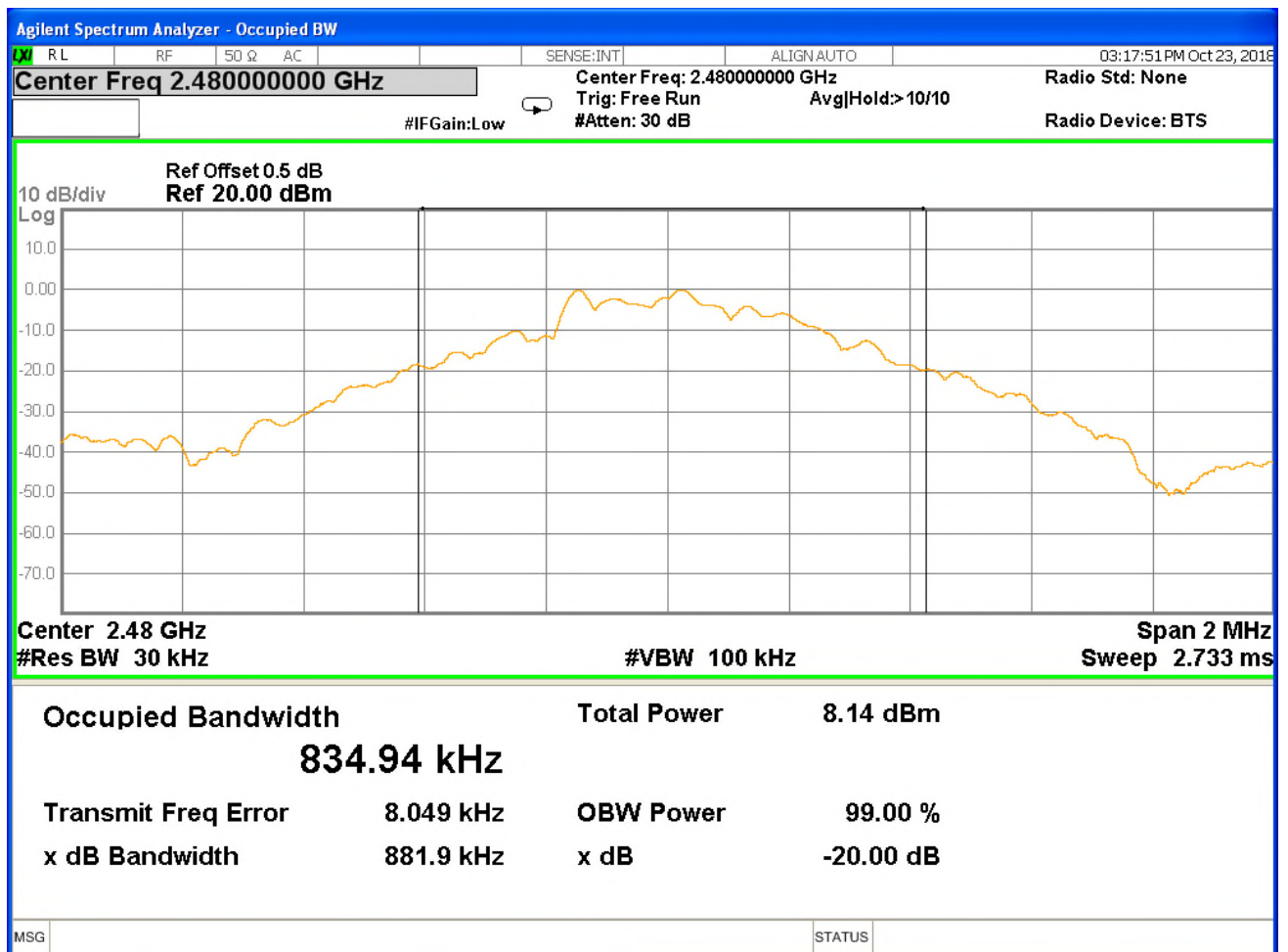
Ref Offset 0.5 dB Ref 12.23 dBm Mkr1 2.403 000 GHz 2.226 dBm

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f (Δ)	2.403 000 GHz (Δ)	2.226 dBm			
2	N	1	f (Δ)	2.390 22 GHz (Δ)	-51.880 dBm			
3	N	1	f (Δ)	2.399 910 GHz (Δ)	-39.075 dBm			
4								
5								
6								
7								
8								
9								
10								
11								
12								

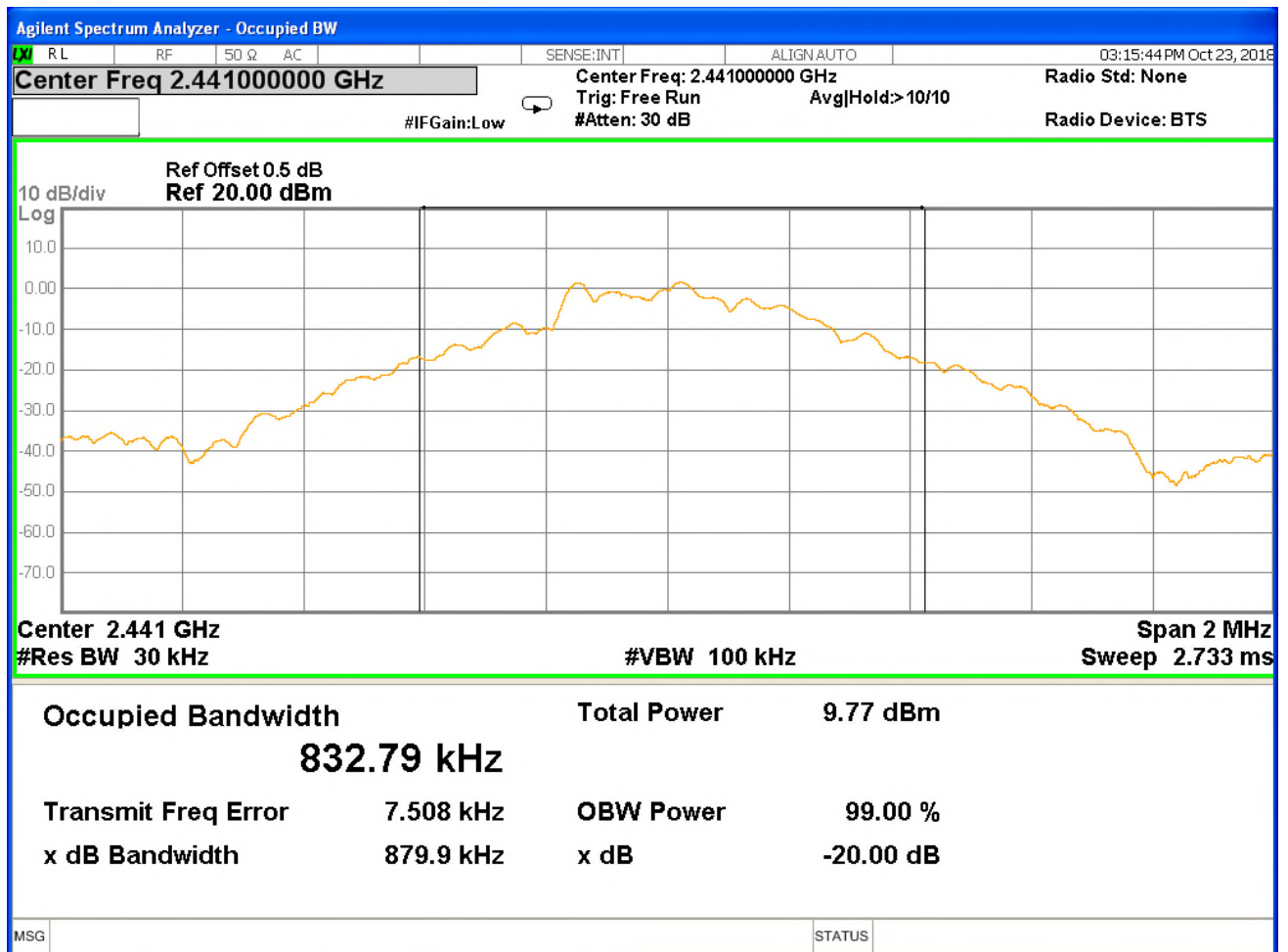
Start 2.30000 GHz Stop 2.40300 GHz
Res BW 1.0 MHz #VBW 300 kHz Sweep 1.00 ms (1001 pts)

20 dB Bandwidth

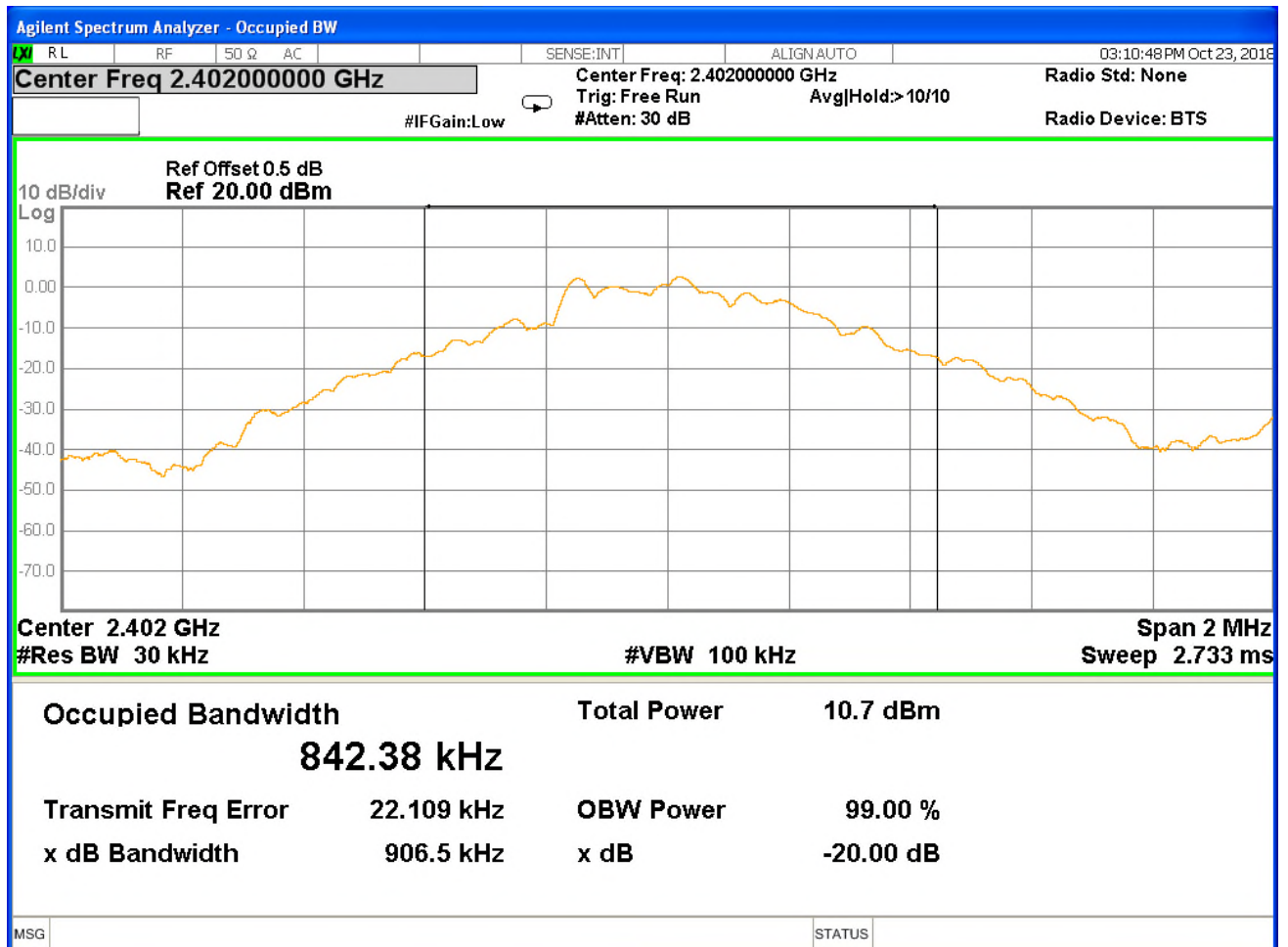
High Channel of BDR mode



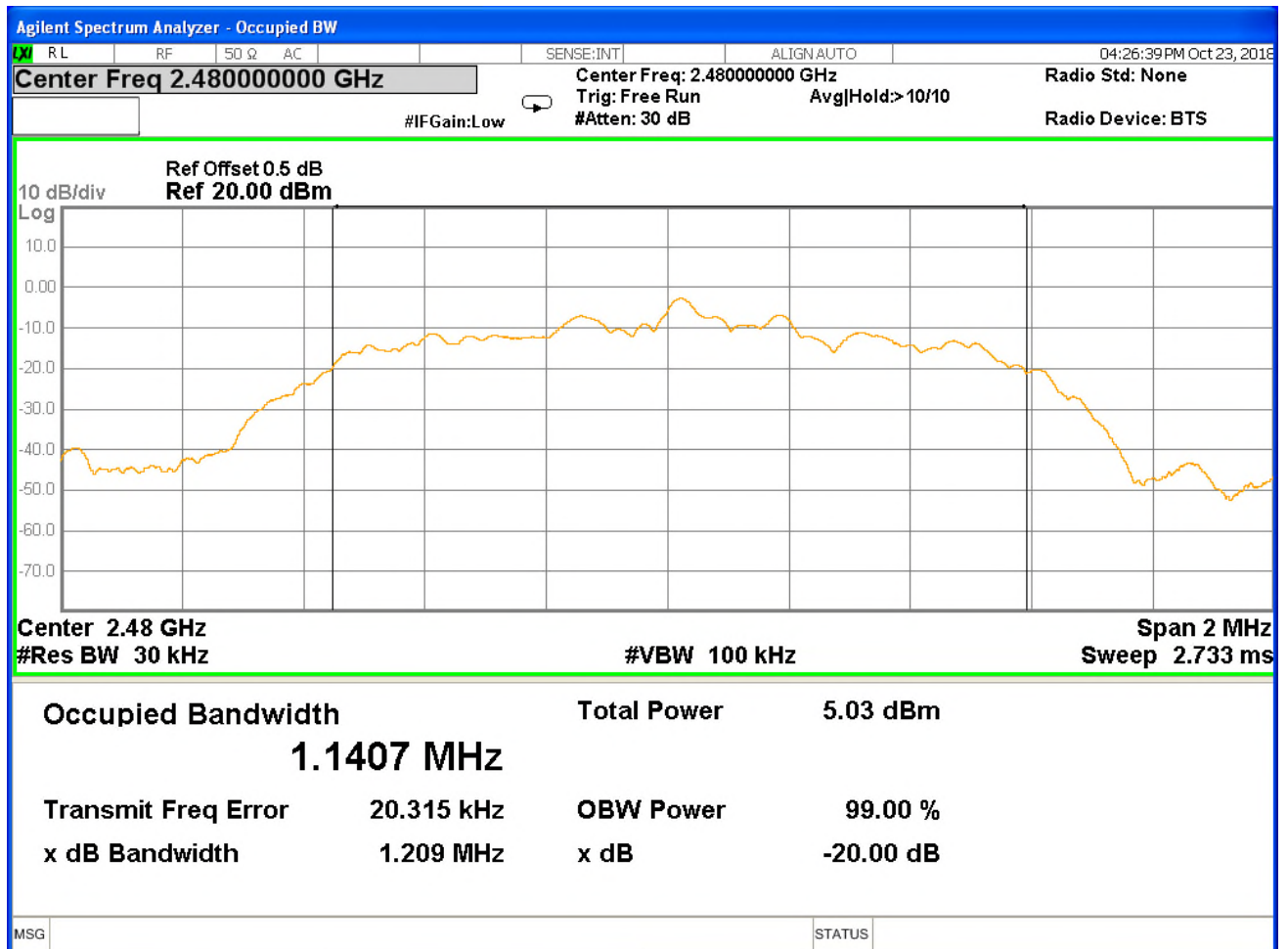
Middle Channel of BDR mode



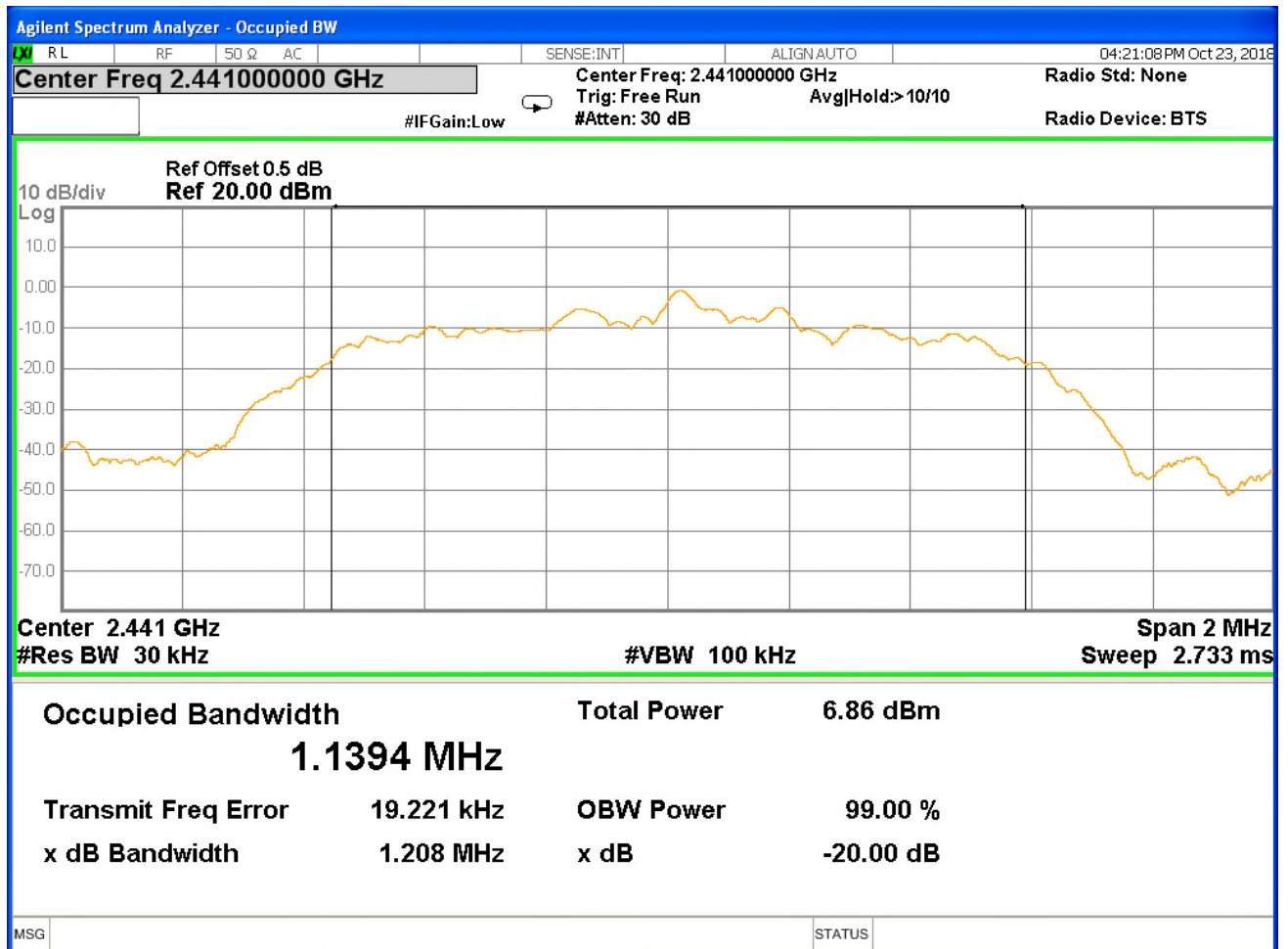
Low Channel of BDR mode



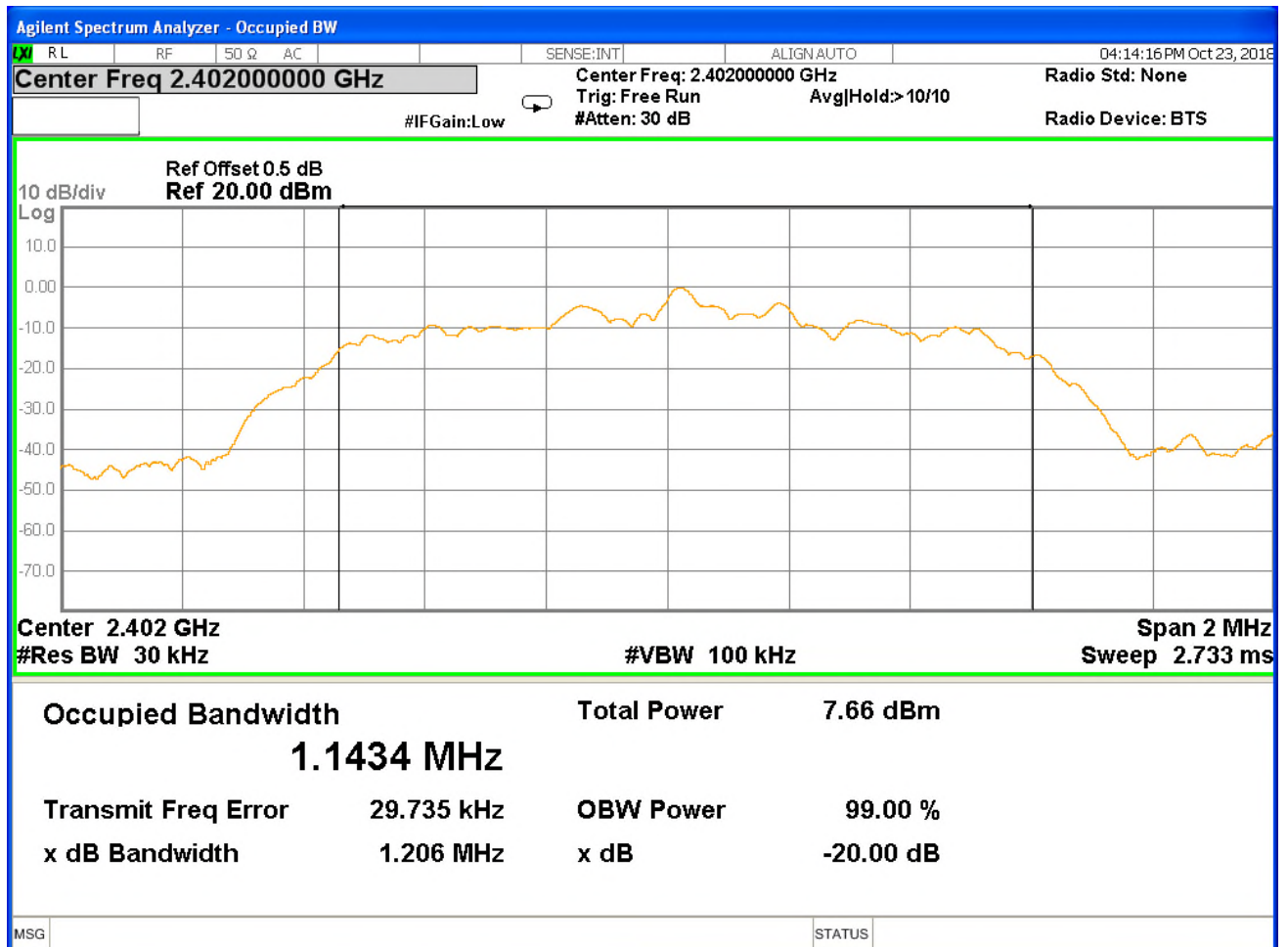
High Channel of EDR mode



Middle Channel of EDR mode

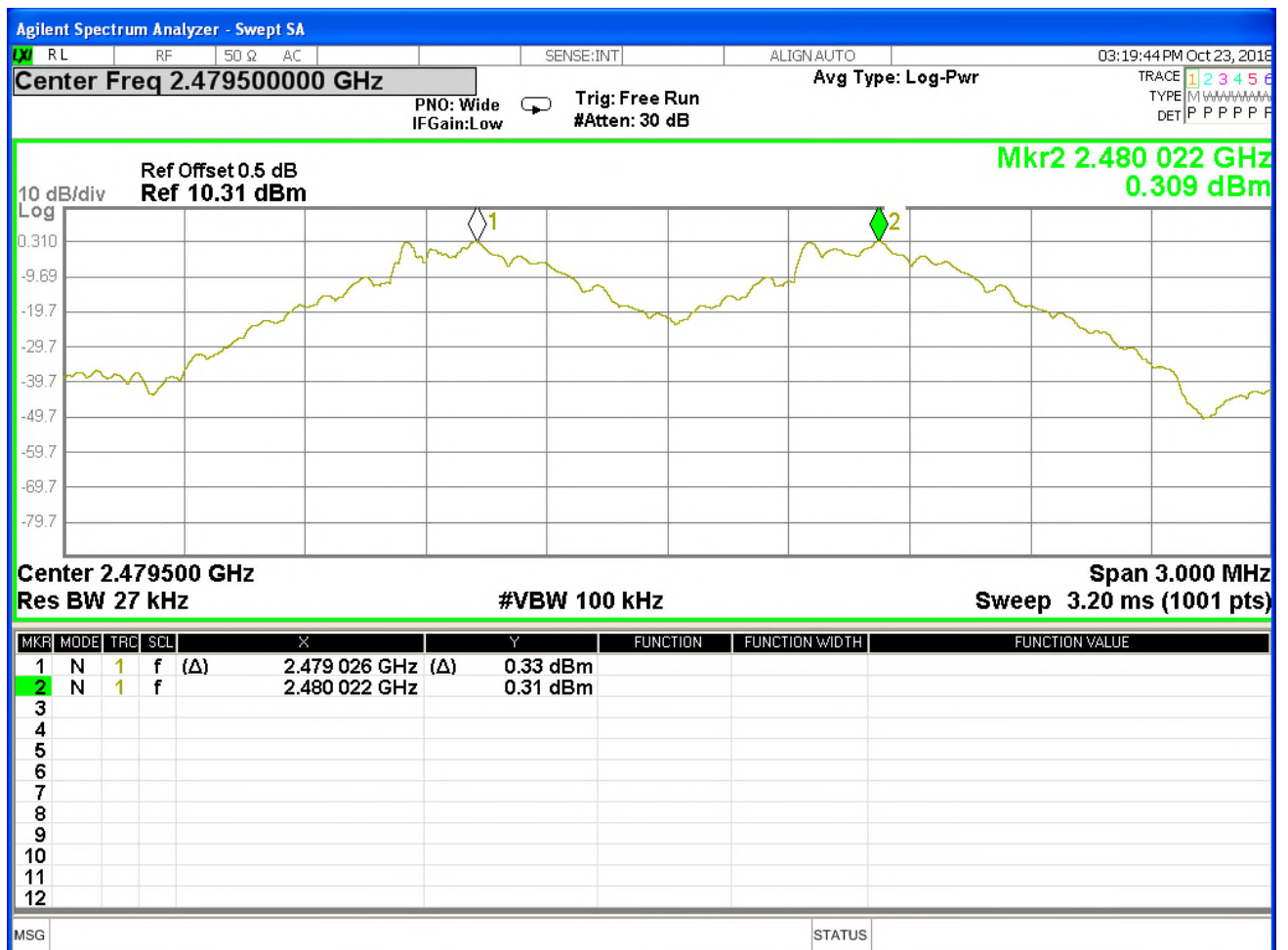


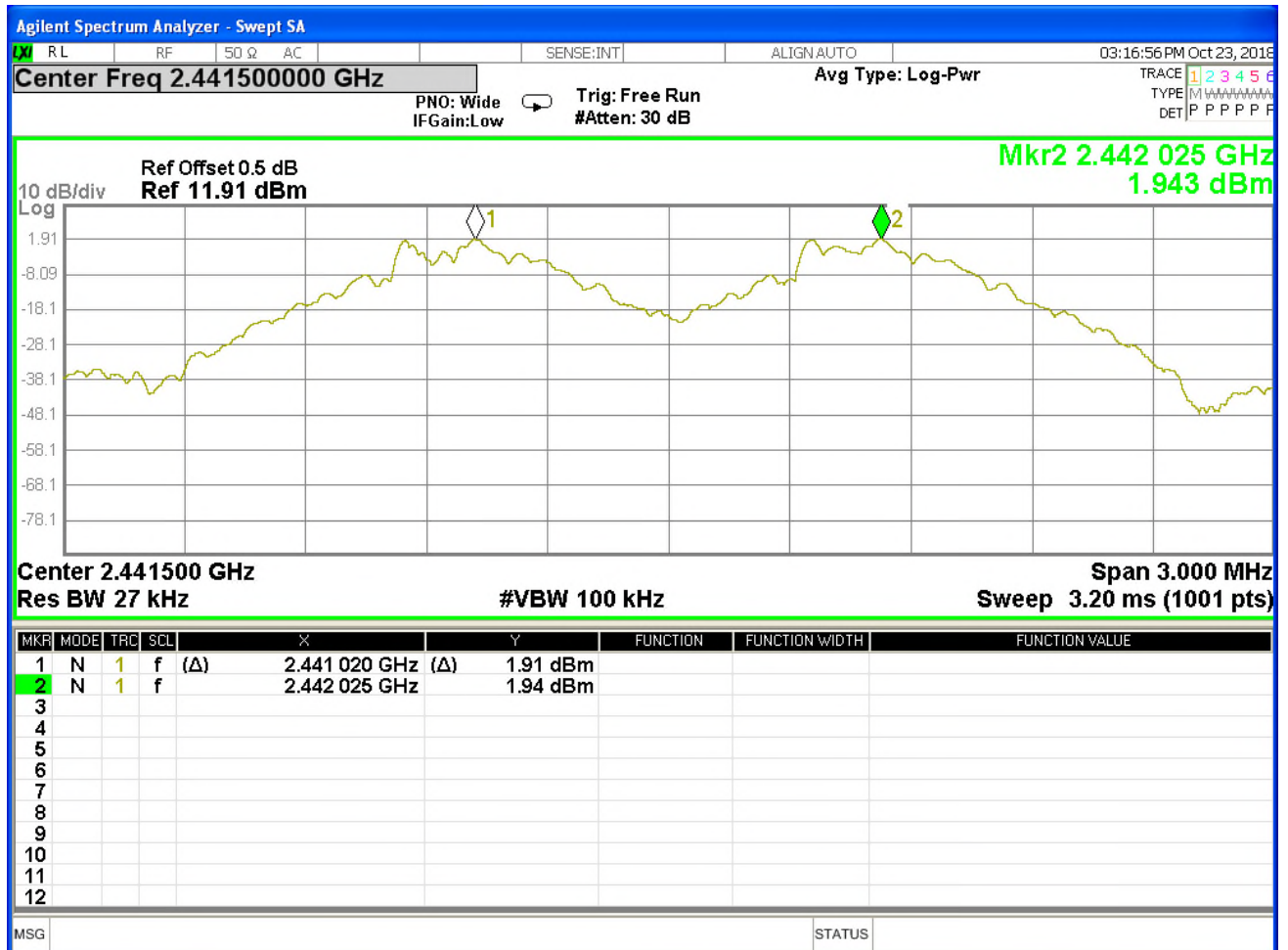
Low Channel of EDR mode



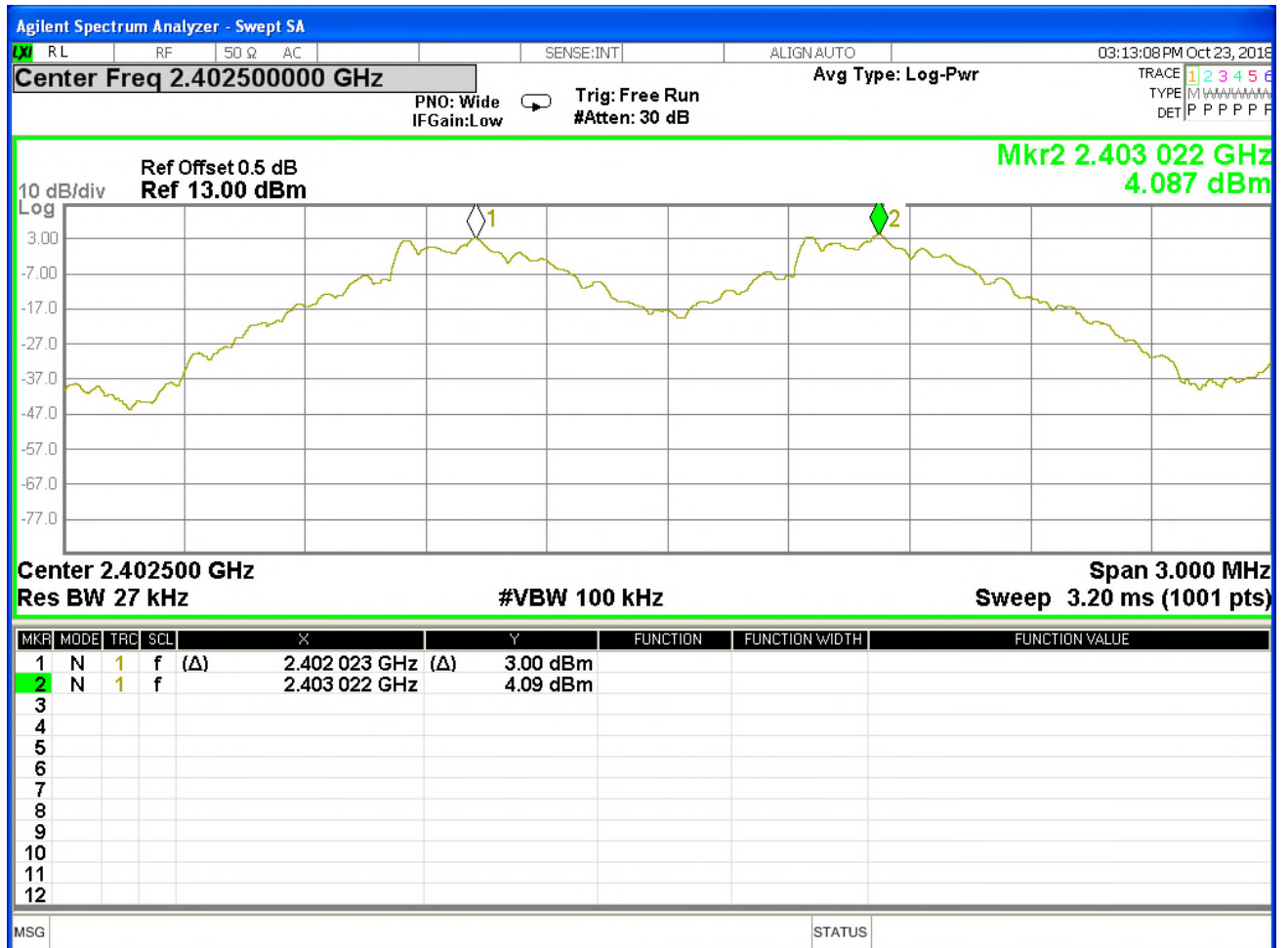
Channel Separation

High Channel of BDR mode

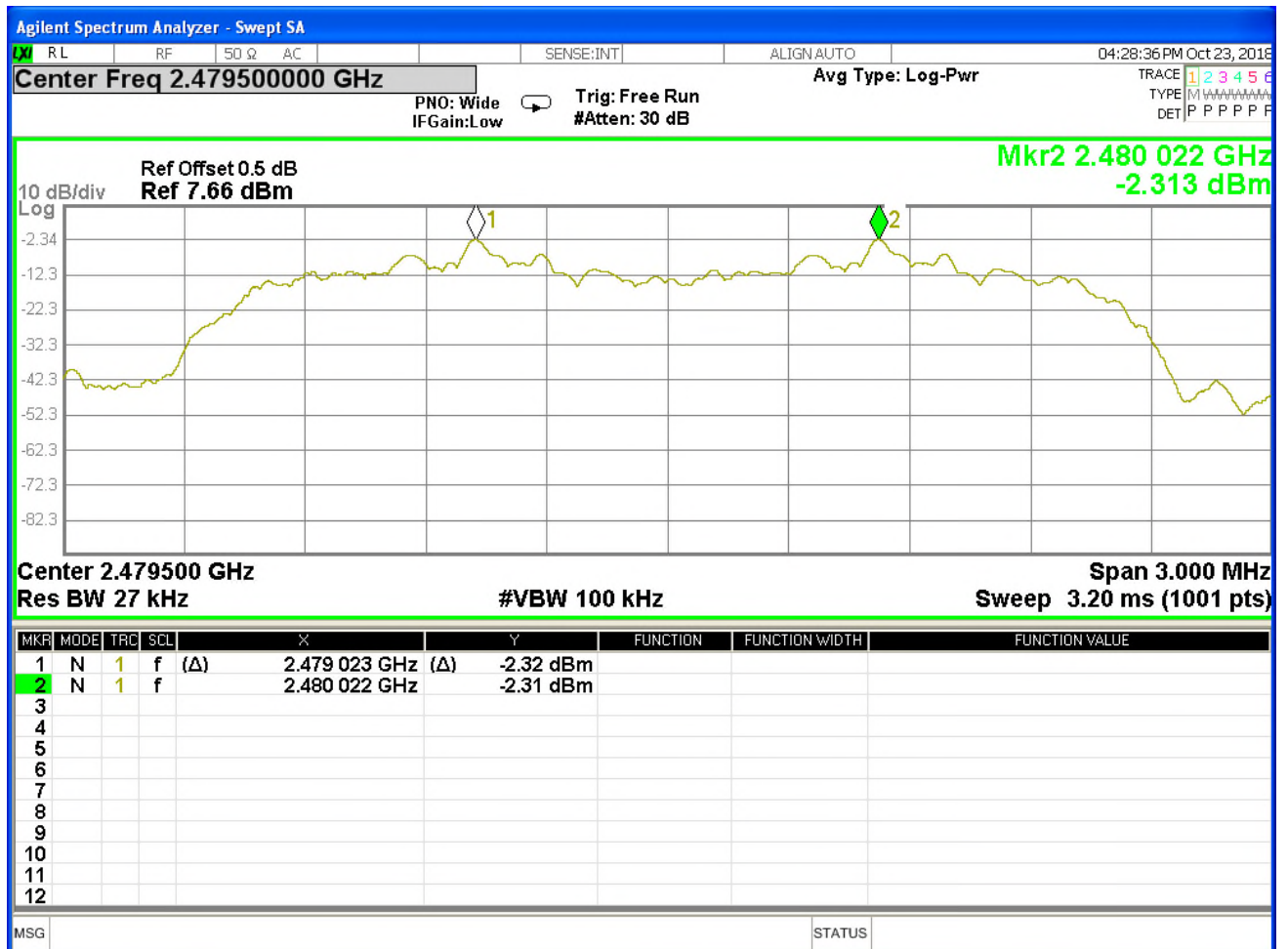




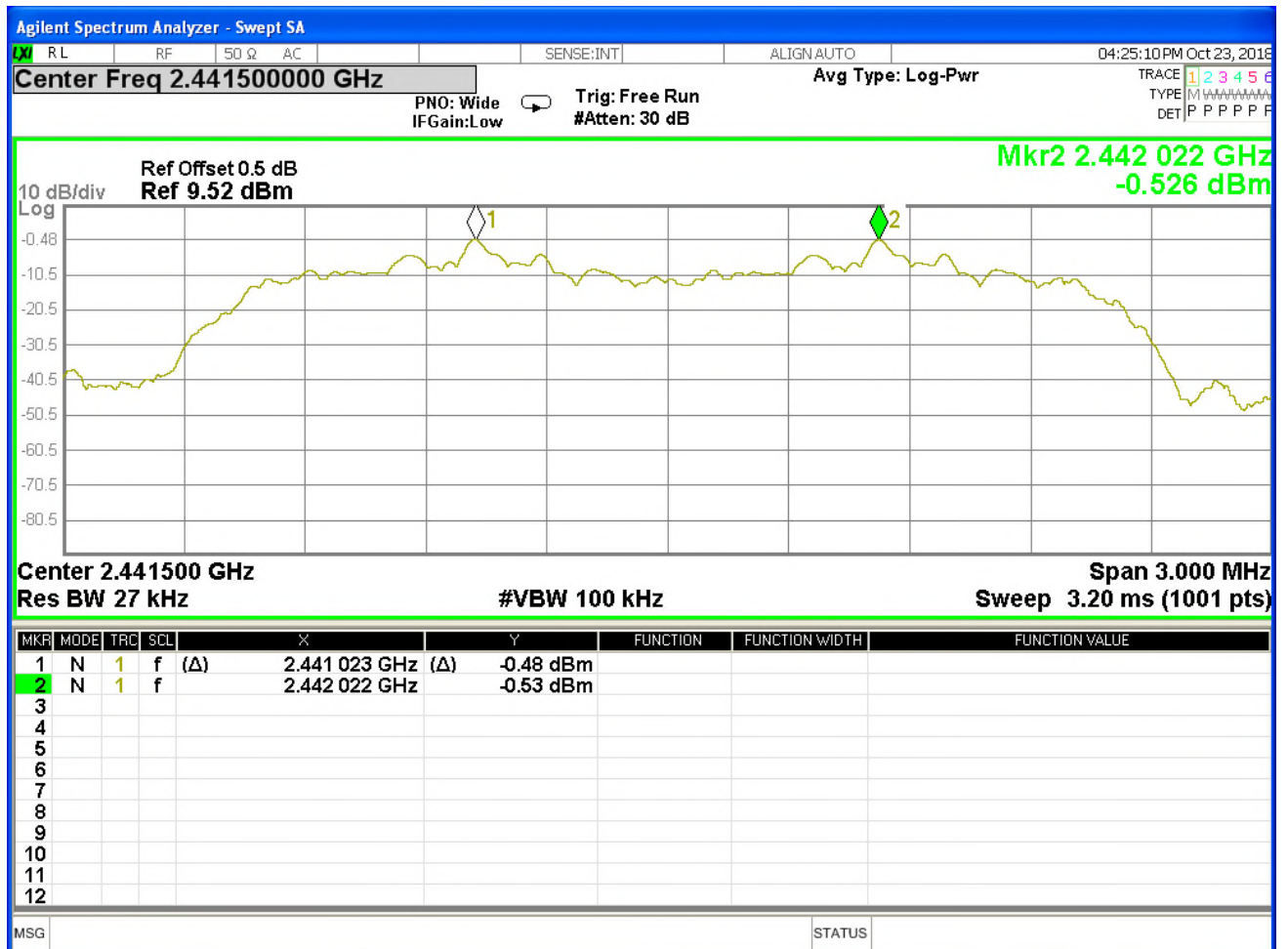
Low Channel of BDR mode



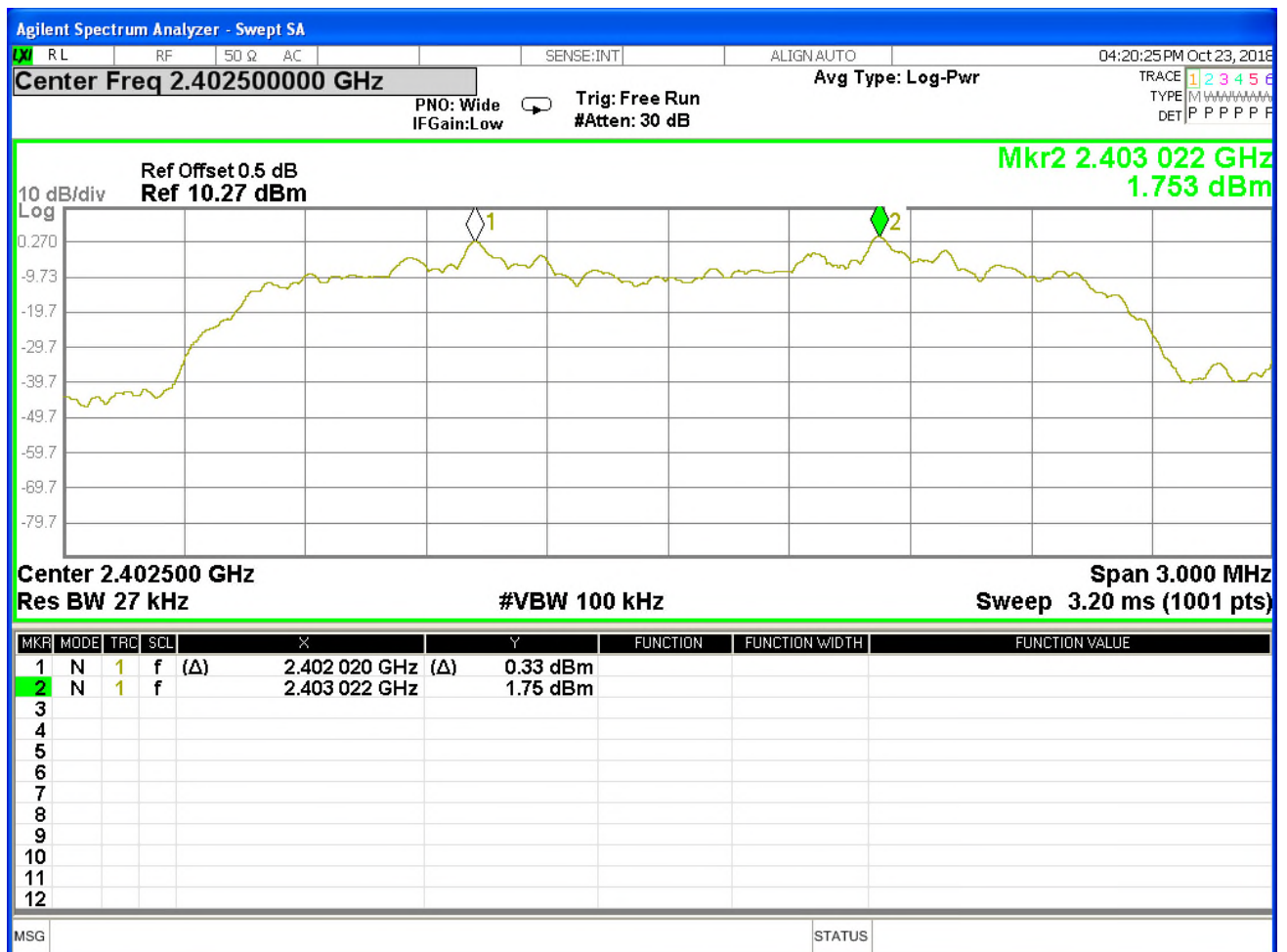
High Channel of EDR mode



Middle Channel of EDR mode

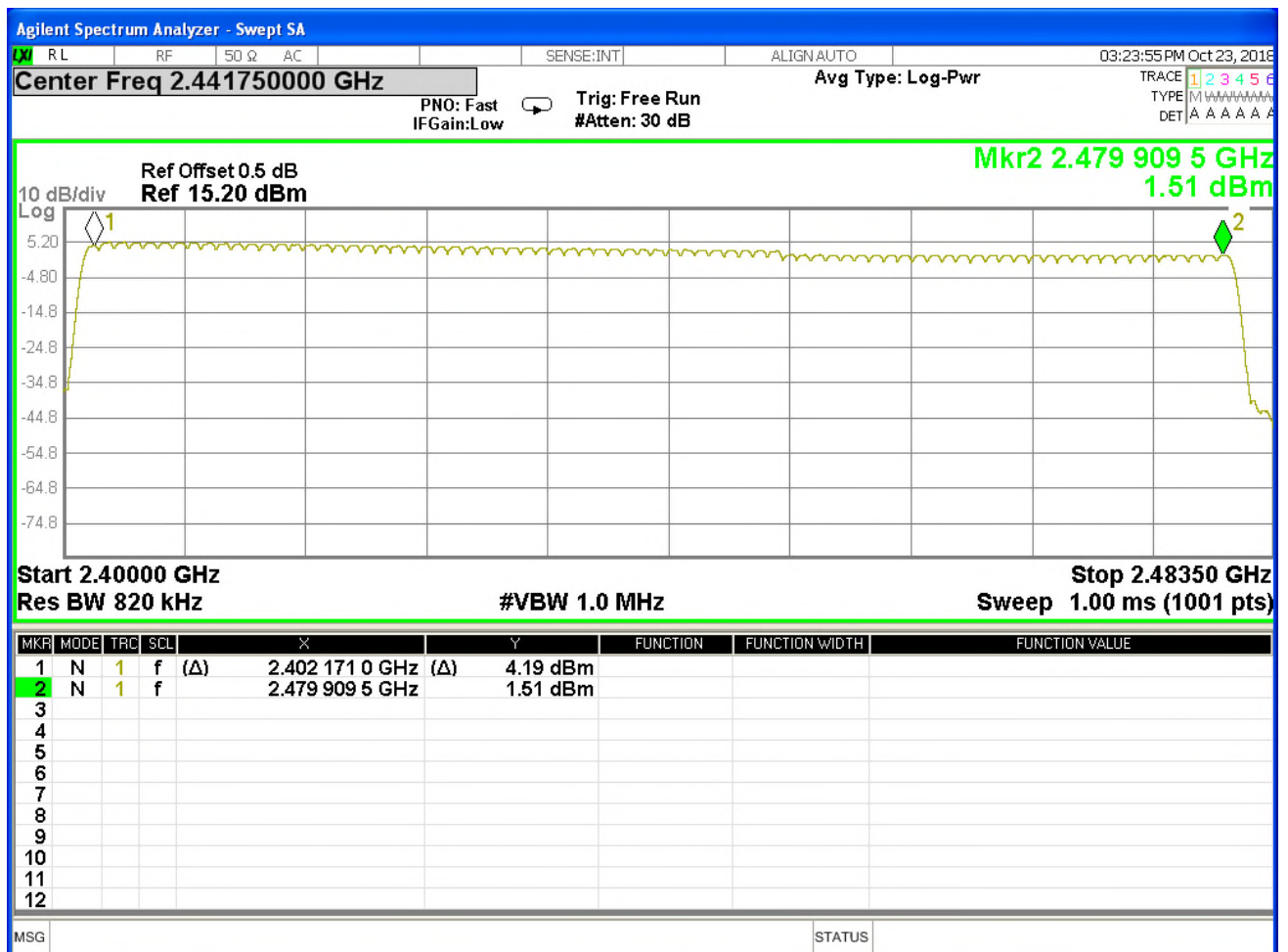


Low Channel of EDR mode

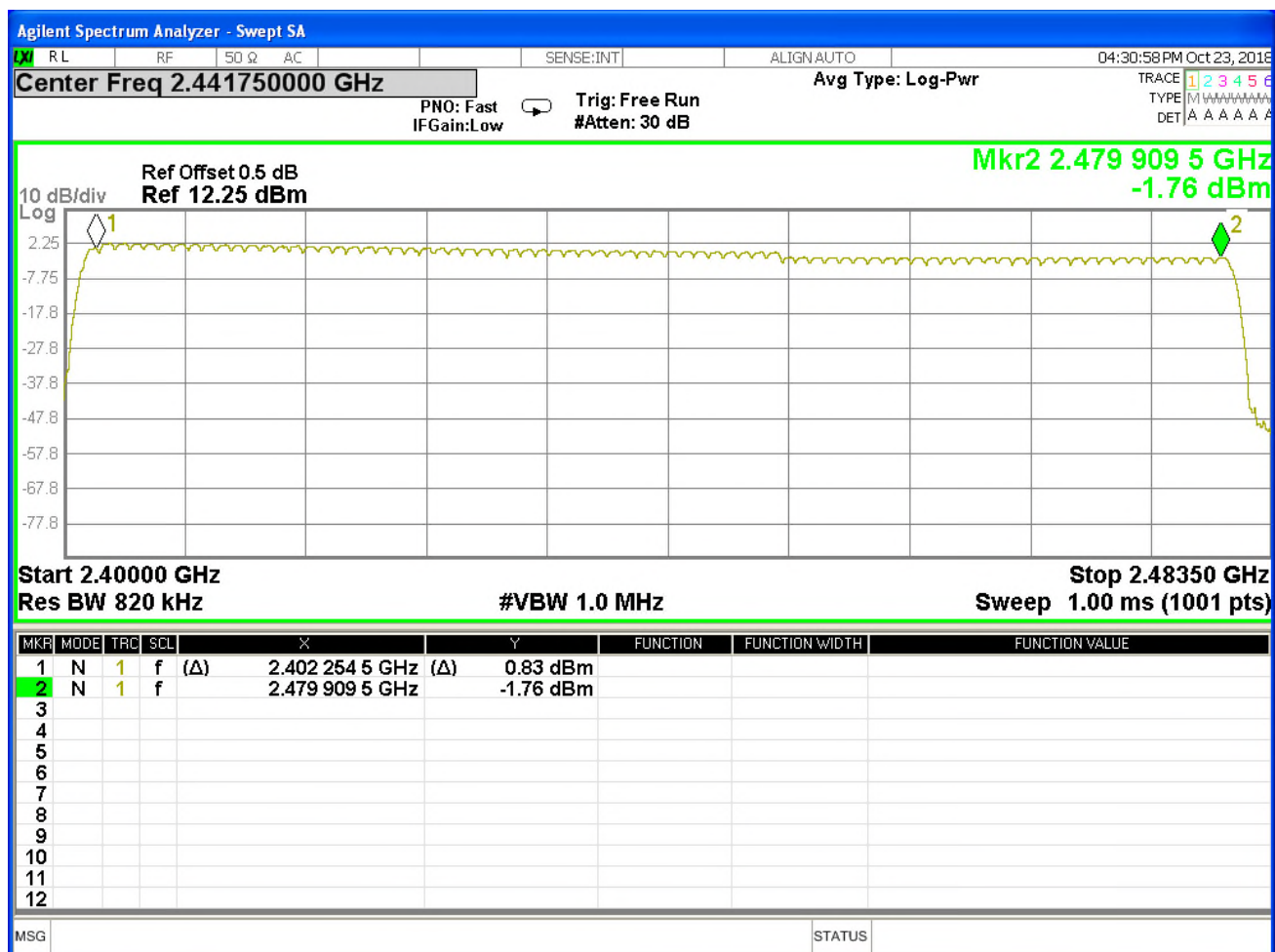


Hopping Channels

Hopping of BDR mode

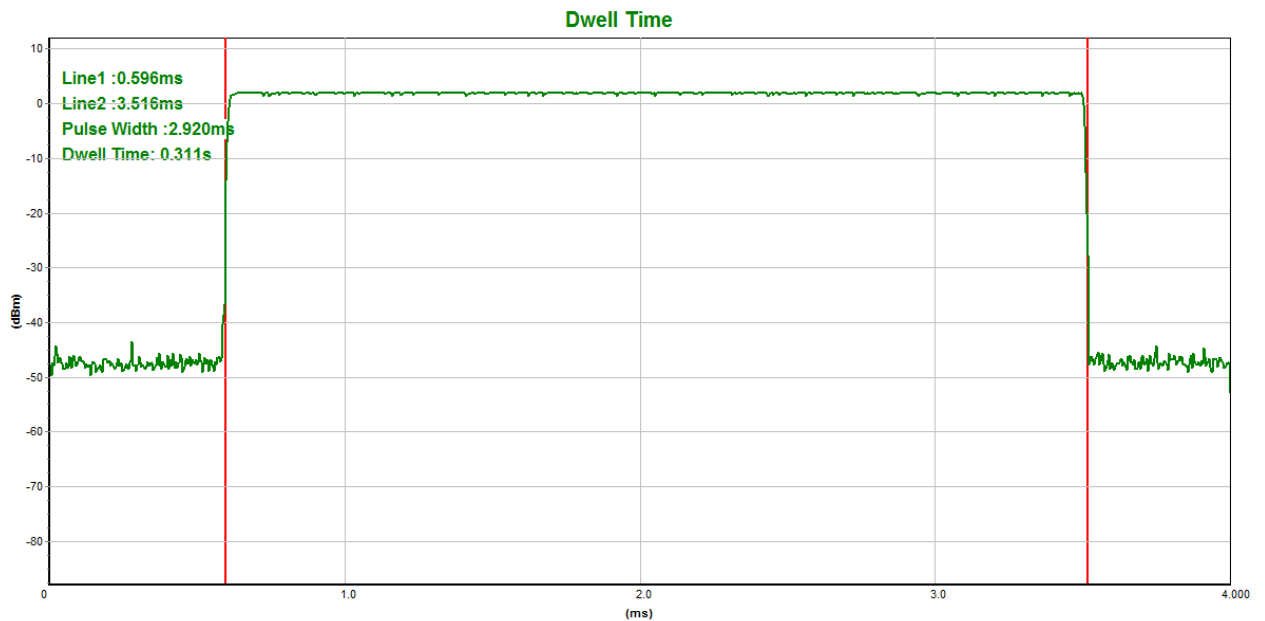


Hopping of EDR mode

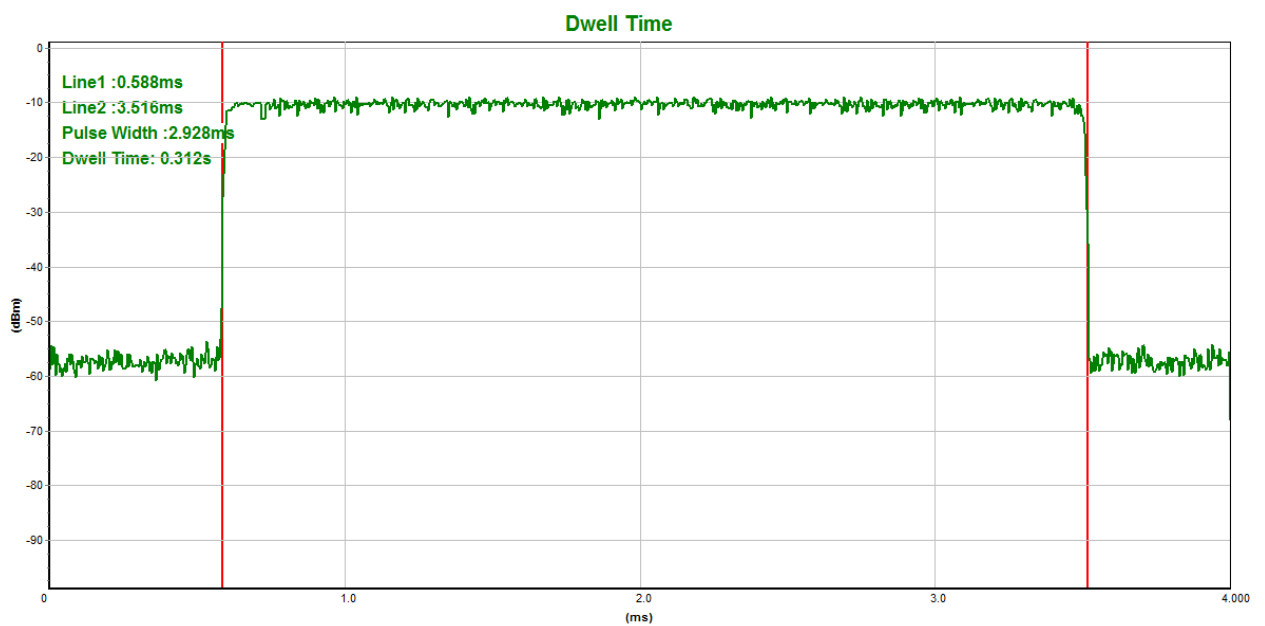


Dwell time

Middle Channel of BDR mode(DH5)



Middle Channel of EDR mode(3DH5)



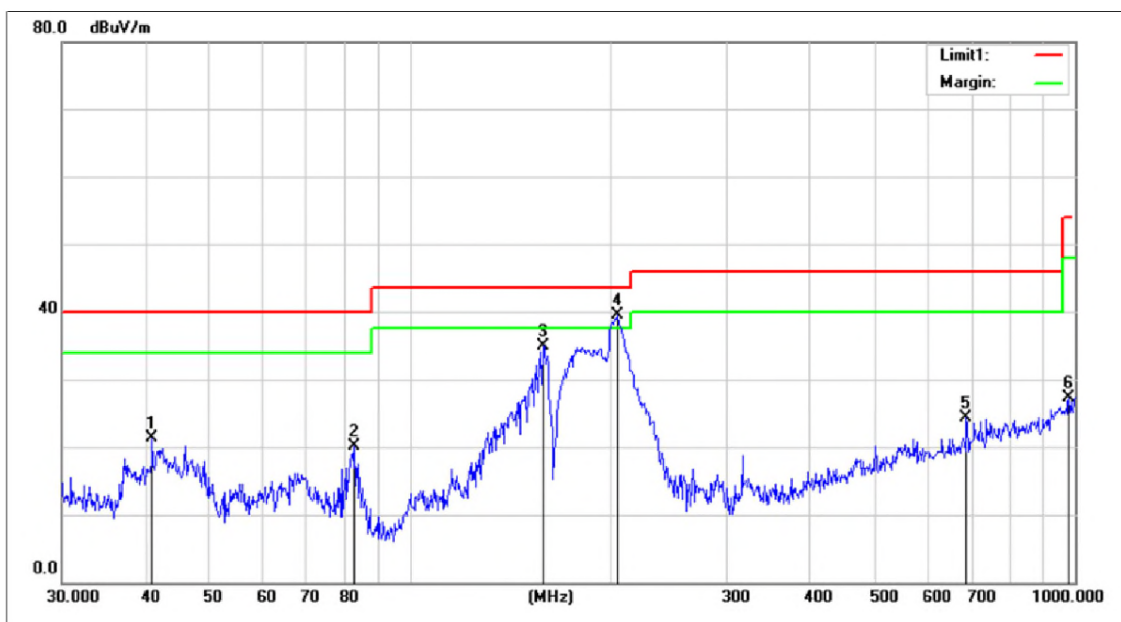
Note: It verified that all emissions below 30MHz are more than 20dB below the limits, needless to report it.

Appendix B.3: Test Results of Radiated Spurious Emissions

Only the worst results among different modulation modes were record.

Only the worst results among high\middle\low frequencies were record below 1GHz.

Standard:	FCC_PART15_B_03m_QP	Ant.Polar.:	Horizontal
Test item:	Radiated Emission	Date:2018/10/31	Time:22:27:18
Company:	Bluetooth Receiver	Distance:	3m
Model:	PA-40HB	Temp.(C)/Hum.(%RH):	21.5(C)/48%RH
Mode:	BT-G-L	Power:	AC 120V/60Hz
		Test By:	
Description:			



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	40.9881	38.15	-16.84	21.31	40.00	-18.69	QP
2	82.6482	42.16	-22.03	20.13	40.00	-19.87	QP
3	158.6677	53.41	-18.43	34.98	43.50	-8.52	QP
4	204.9551	59.41	-19.96	39.45	43.50	-4.05	QP
5	687.1507	29.85	-5.60	24.25	46.00	-21.75	QP
6	979.1804	27.38	-0.16	27.22	54.00	-26.78	QP

Standard:	FCC_PART15_B_03m_QP	Ant.Polar.:	Vertical
Test item:	Radiated Emission	Date:2018/10/31	Time:22:26:39
Company:	Bluetooth Receiver	Distance:	3m
Model:	PA-40HB	Temp.(C)/Hum.(%RH):	21.5(C)/48%RH
Mode:	BT-G-L	Power:	AC 120V/60Hz
		Test By:	
Description:			



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	41.7142	53.16	-17.21	35.95	40.00	-4.05	QP
2	60.0691	52.80	-24.34	28.46	40.00	-11.54	QP
3	161.4742	58.41	-18.62	39.79	43.50	-3.71	QP
4	200.6881	60.43	-20.14	40.29	43.50	-3.21	QP
5	501.1790	31.92	-8.90	23.02	46.00	-22.98	QP
6	900.1474	33.42	-2.26	31.16	46.00	-14.84	QP

Test result

Project Number: STS1810144

Test Time: 2018-10-31_21.08.12

EUT Name: Bluetooth Receiver

Test Engineer: xxxxx

Mode: G-H

Test Standard: FCC 15C

Model: PA-40HB

Work Addition: Normal

Temp.(oC): 25

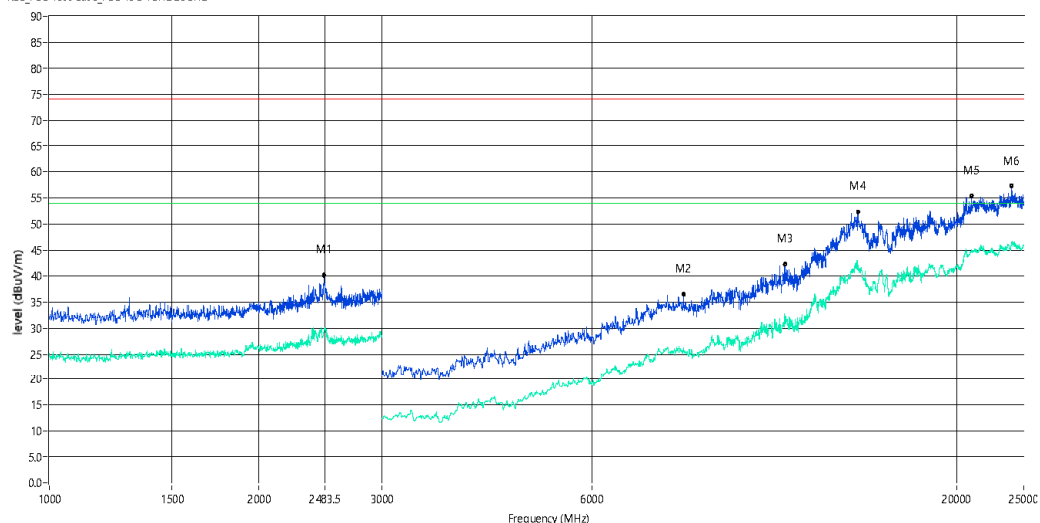
Load:

Hum.: 65%

Remark:

Manufacturer:

RSE_FCC Test Case_FCC 15C 1GHz-25GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2476.000	28.86	1.34	54.0	-25.14	AV	10.00	100	H	Pass
1	2476.000	40.19	1.34	74.0	-33.81	Peak	10.00	100	H	Pass
2**	8120.000	26.25	10.50	54.0	-27.75	AV	13.00	100	H	Pass
2	8120.000	36.47	10.50	74.0	-37.53	Peak	13.00	100	H	Pass
3**	11350.000	31.83	15.68	54.0	-22.17	AV	4.00	100	H	Pass
3	11350.000	42.30	15.68	74.0	-31.70	Peak	4.00	100	H	Pass
4**	14452.000	41.82	24.56	54.0	-12.18	AV	13.00	100	H	Pass
4	14452.000	52.35	24.56	74.0	-21.65	Peak	13.00	100	H	Pass
5**	21028.000	44.84	24.13	54.0	-9.16	AV	15.00	100	H	Pass
5	21028.000	55.36	24.13	74.0	-18.64	Peak	15.00	100	H	Pass
6**	23979.999	46.16	23.31	54.0	-7.84	AV	4.00	100	H	Pass
6	23979.999	57.28	23.31	74.0	-16.72	Peak	4.00	100	H	Pass

Test result

Project Number: STS1810144

Test Time: 2018-10-31_21.09.22

EUT Name: Bluetooth Receiver

Test Engineer: xxxxx

Mode: G-H

Test Standard: FCC 15C

Model: PA-40HB

Work Addition: Normal

Temp.(oC): 25

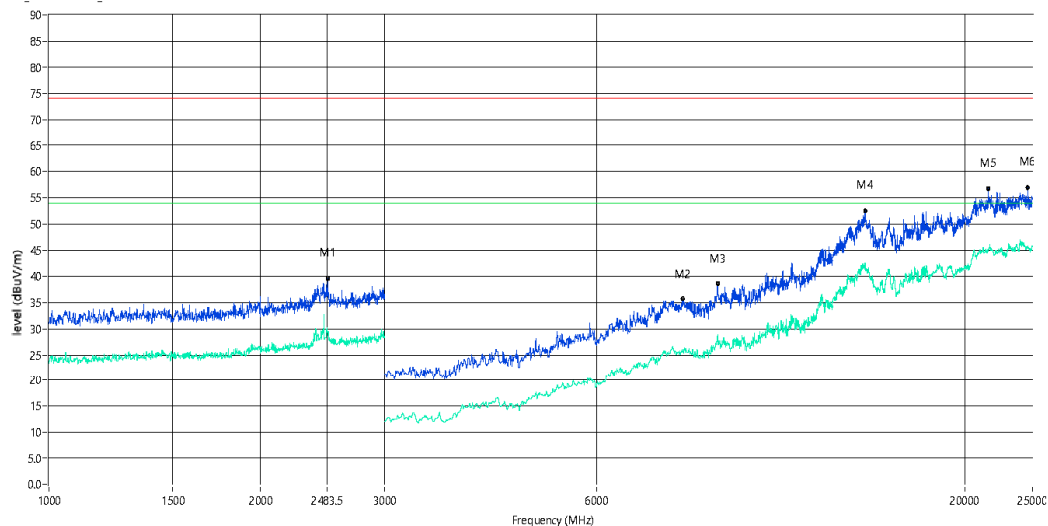
Load:

Hum.: 65%

Remark:

Manufacturer:

RSE_FCC Test Case_FCC 15C 1GHz~25GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2492.000	28.70	1.57	54.0	-25.30	AV	15.00	100	V	Pass
1	2492.000	39.67	1.57	74.0	-34.33	Peak	15.00	100	V	Pass
2**	7950.000	26.01	10.24	54.0	-27.99	AV	13.00	100	V	Pass
2	7950.000	35.64	10.24	74.0	-38.36	Peak	13.00	100	V	Pass
3**	8920.001	28.88	12.66	54.0	-25.12	AV	9.00	100	V	Pass
3	8920.001	38.54	12.66	74.0	-35.46	Peak	9.00	100	V	Pass
4**	14452.000	42.56	24.56	54.0	-11.44	AV	13.00	100	V	Pass
4	14452.000	52.55	24.56	74.0	-21.45	Peak	13.00	100	V	Pass
5**	21616.001	44.88	23.98	54.0	-9.12	AV	15.00	100	V	Pass
5	21616.001	56.76	23.98	74.0	-17.24	Peak	15.00	100	V	Pass
6**	24604.000	45.39	23.11	54.0	-8.61	AV	12.00	100	V	Pass
6	24604.000	56.92	23.11	74.0	-17.08	Peak	12.00	100	V	Pass

Test result

Project Number: STS1810144

Test Time: 2018-11-02_22.16.55

EUT Name: Bluetooth Receiver

Test Engineer: xxxxx

Mode: G-M

Test Standard: FCC 15C

Model: PA-40HB

Work Addition: Normal

Temp.(oC): 25

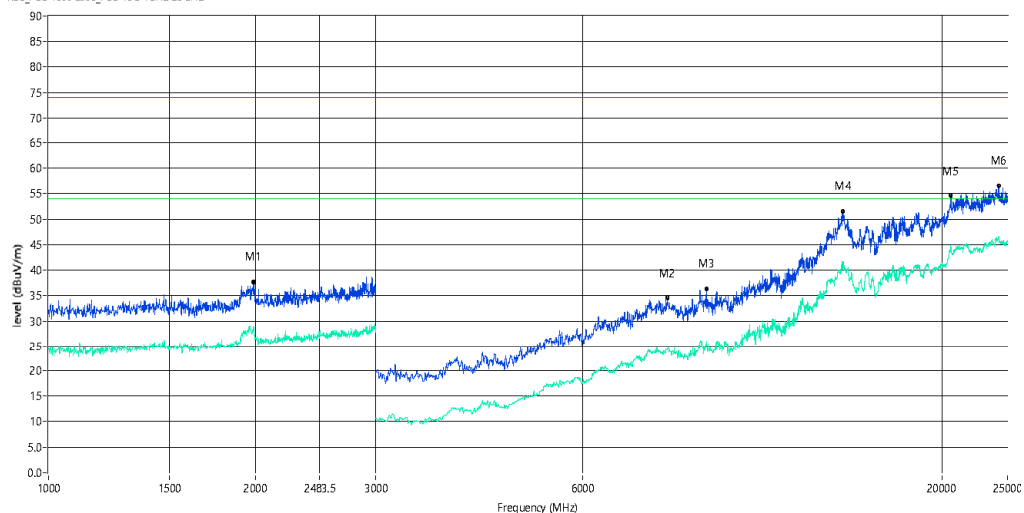
Load:

Hum.: 65%

Remark:

Manufacturer:

RSE_FCC Test Case_FCC 15C 1GHz-25GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1990.000	28.77	-0.40	54.0	-25.23	AV	11.00	100	H	Pass
1	1990.000	37.60	-0.40	74.0	-36.40	Peak	11.00	100	H	Pass
2**	7970.000	24.08	10.25	54.0	-29.92	AV	2.00	100	H	Pass
2	7970.000	34.48	10.25	74.0	-39.52	Peak	2.00	100	H	Pass
3**	9100.000	25.92	13.19	54.0	-28.08	AV	12.00	100	H	Pass
3	9100.000	36.40	13.19	74.0	-37.60	Peak	12.00	100	H	Pass
4**	14356.000	41.66	25.12	54.0	-12.34	AV	15.00	100	H	Pass
4	14356.000	51.65	25.12	74.0	-22.35	Peak	15.00	100	H	Pass
5**	20656.001	44.81	23.85	54.0	-9.19	AV	11.00	100	H	Pass
5	20656.001	54.69	23.85	74.0	-19.31	Peak	11.00	100	H	Pass
6**	24231.999	46.12	23.23	54.0	-7.88	AV	12.00	100	H	Pass
6	24231.999	56.53	23.23	74.0	-17.47	Peak	12.00	100	H	Pass

Test result

Project Number: STS1810144

Test Time: 2018-11-02_22.19.41

EUT Name: Bluetooth Receiver

Test Engineer: xxxxx

Mode: G-M

Test Standard: FCC 15C

Model: PA-40HB

Work Addition: Normal

Temp.(oC): 25

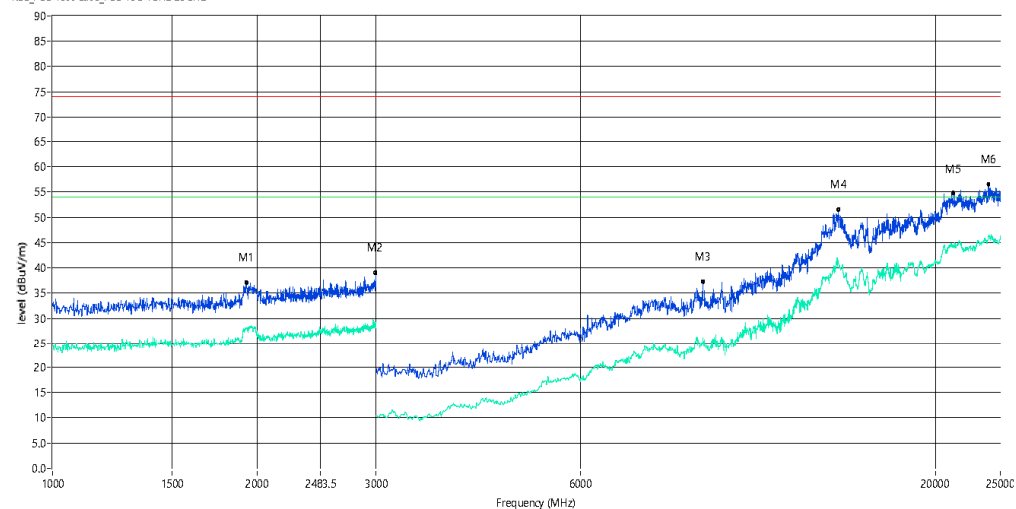
Load:

Hum.: 65%

Remark:

Manufacturer:

RSE_FCC Test Case_FCC 15C 1GHz-25GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1930.000	27.95	-0.98	54.0	-26.05	AV	4.00	100	H	Pass
1	1930.000	37.14	-0.98	74.0	-36.86	Peak	4.00	100	H	Pass
2**	2994.000	28.70	1.99	54.0	-25.30	AV	10.00	100	H	Pass
2	2994.000	38.96	1.99	74.0	-35.04	Peak	10.00	100	H	Pass
3**	9090.000	25.21	12.63	54.0	-28.79	AV	3.00	100	H	Pass
3	9090.000	37.35	12.63	74.0	-36.65	Peak	3.00	100	H	Pass
4**	14416.000	41.57	25.52	54.0	-12.43	AV	5.00	100	H	Pass
4	14416.000	51.50	25.52	74.0	-22.50	Peak	5.00	100	H	Pass
5**	21268.001	44.72	24.07	54.0	-9.28	AV	11.00	100	H	Pass
5	21268.001	54.77	24.07	74.0	-19.23	Peak	11.00	100	H	Pass
6**	23992.001	46.26	23.31	54.0	-7.74	AV	4.00	100	H	Pass
6	23992.001	56.58	23.31	74.0	-17.42	Peak	4.00	100	H	Pass

Test result

Project Number: STS1810144

Test Time: 2018-10-31_21.06.31

EUT Name: Bluetooth Receiver

Test Engineer: xxxxx

Mode: G-L

Test Standard: FCC 15C

Model: PA-40HB

Work Addition: Normal

Temp.(oC): 25

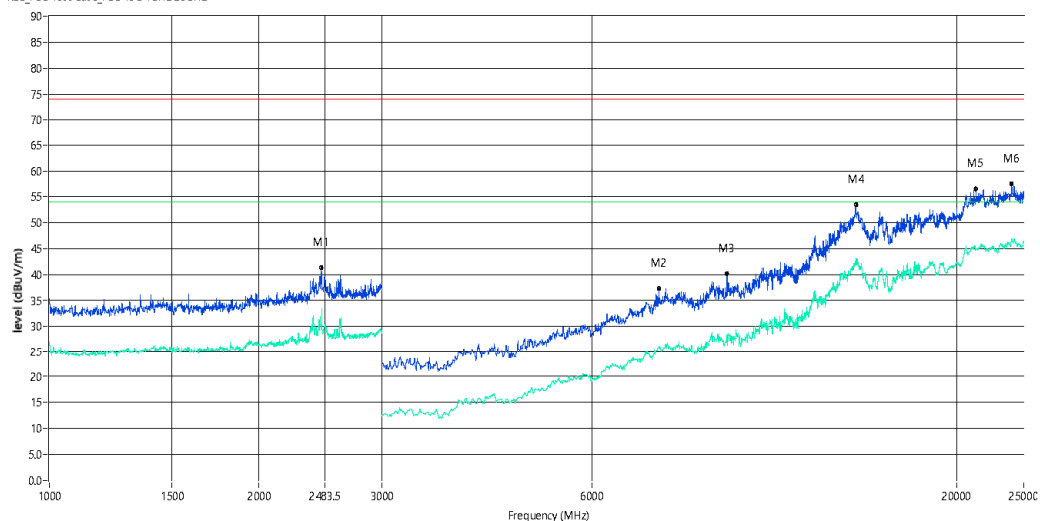
Load:

Hum.: 65%

Remark:

Manufacturer:

RSE_FCC Test Case_FCC 15C 1GHz-2.5GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2456.000	29.43	1.24	54.0	-24.57	AV	0.00	100	H	Pass
1	2456.000	41.31	1.24	74.0	-32.69	Peak	0.00	100	H	Pass
2**	7490.000	26.02	10.47	54.0	-27.98	AV	1.70	100	H	Pass
2	7490.000	37.33	10.47	74.0	-36.67	Peak	1.70	100	H	Pass
3**	9380.000	28.32	12.09	54.0	-25.68	AV	197.50	100	H	Pass
3	9380.000	40.12	12.09	74.0	-33.88	Peak	197.50	100	H	Pass
4**	14368.000	42.80	24.92	54.0	-11.20	AV	353.70	100	H	Pass
4	14368.000	53.48	24.92	74.0	-20.52	Peak	353.70	100	H	Pass
5**	21351.999	44.77	24.05	54.0	-9.23	AV	41.20	100	H	Pass
5	21351.999	56.49	24.05	74.0	-17.51	Peak	41.20	100	H	Pass
6**	24015.999	46.74	23.30	54.0	-7.26	AV	300.50	100	H	Pass
6	24015.999	57.58	23.30	74.0	-16.42	Peak	300.50	100	H	Pass

Test result

Project Number: STS1810144

Test Time: 2018-10-31_21.01.58

EUT Name: Bluetooth Receiver

Test Engineer: xxxxx

Mode: G-L

Test Standard: FCC 15C

Model: PA-40HB

Work Addition: Normal

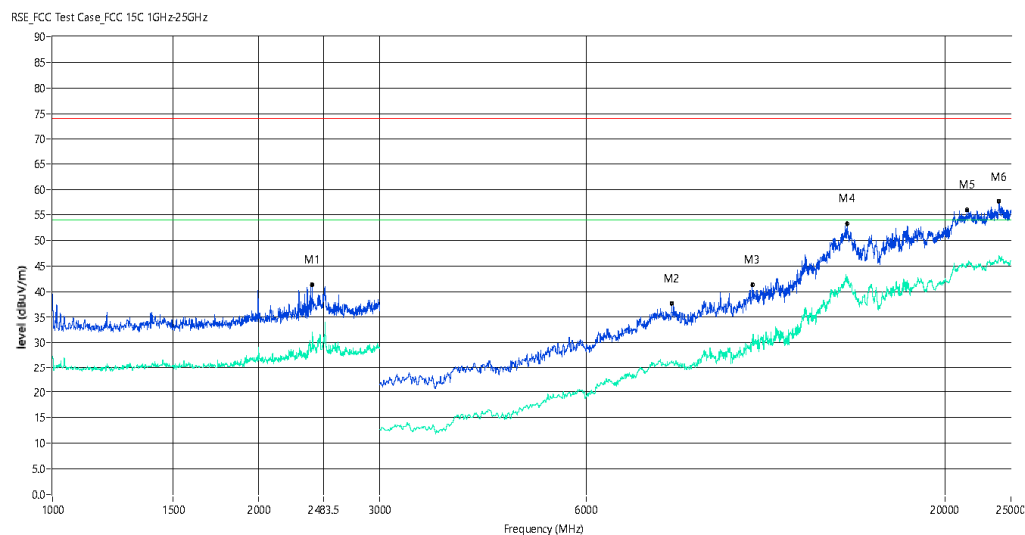
Temp.(oC): 25

Load:

Hum.: 65%

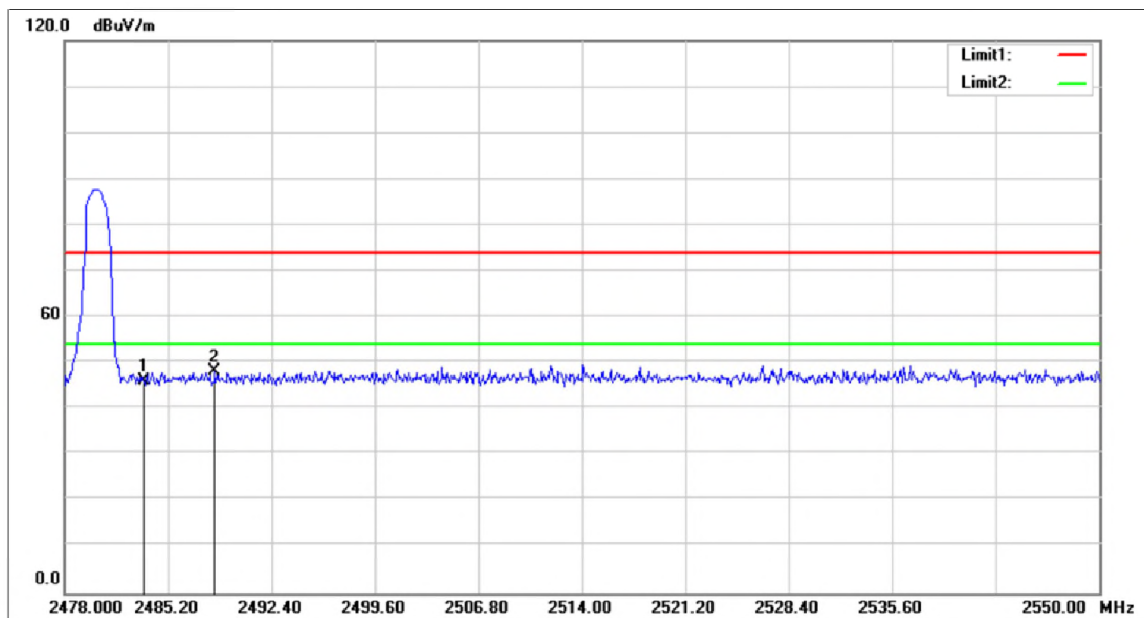
Remark:

Manufacturer:



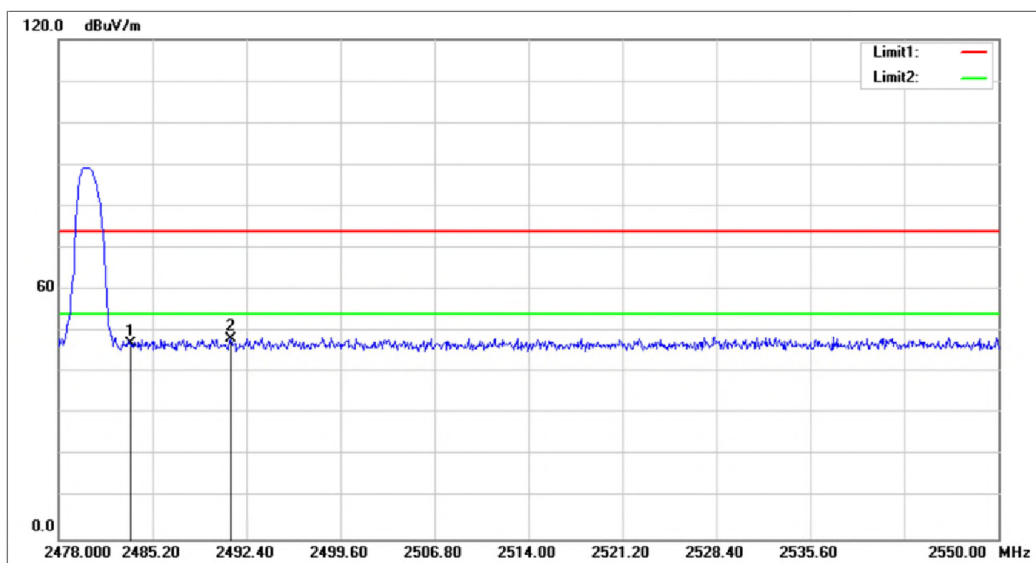
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2390.000	31.08	0.61	54.0	-22.92	AV	135.10	100	V	Pass
1	2390.000	41.27	0.61	74.0	-32.73	Peak	135.10	100	V	Pass
2**	8000.000	26.41	10.93	54.0	-27.59	AV	130.90	100	V	Pass
2	8000.000	37.60	10.93	74.0	-36.40	Peak	130.90	100	V	Pass
3**	10480.000	30.73	14.66	54.0	-23.27	AV	227.60	100	V	Pass
3	10480.000	41.37	14.66	74.0	-32.63	Peak	227.60	100	V	Pass
4**	14428.000	42.59	25.10	54.0	-11.41	AV	0.00	100	V	Pass
4	14428.000	53.23	25.10	74.0	-20.77	Peak	0.00	100	V	Pass
5**	21579.999	45.35	23.99	54.0	-8.65	AV	74.90	100	V	Pass
5	21579.999	56.05	23.99	74.0	-17.95	Peak	74.90	100	V	Pass
6**	24004.000	46.71	23.30	54.0	-7.29	AV	181.80	100	V	Pass
6	24004.000	57.65	23.30	74.0	-16.35	Peak	181.80	100	V	Pass

Job No.:	STS1810144	Ant.Polar.:	Horizontal
Standard:	FCC_15B_ABOVE 1G-PK	Date:2018/10/24	Time:20:49:33
Test item:	Radiated Emission	Distance:	3m
Company:	Bluetooth Receiver	Temp.(C)/Hum.(%RH):	25.5(C)/43%RH
Model:	PA-40HB	Power:	
Mode:	G-H	Test By:	
Description:			



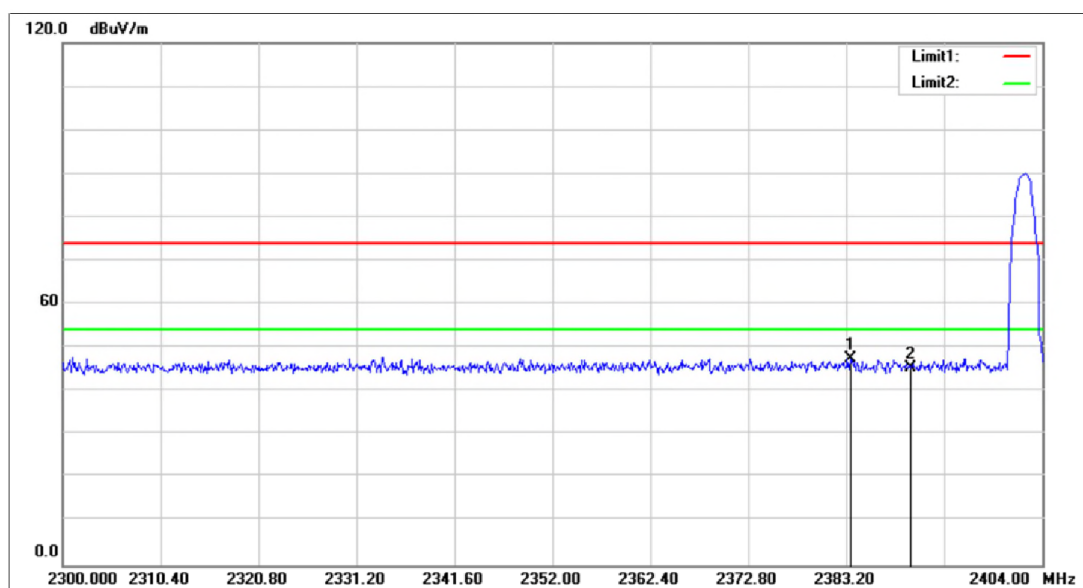
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	2483.500	56.17	-9.99	46.18	74.00	-27.82	100	130.00	peak
2	2488.440	58.17	-9.97	48.20	74.00	-25.80	100	181.54	peak

Job No.:	STS1810144	Ant.Polar.:	Vertical
Standard:	FCC_15B_ABOVE 1G-PK	Date:2018/10/24	Time:20:49:48
Test item:	Radiated Emission	Distance:	3m
Company:	Bluetooth Receiver	Temp.(C)/Hum.(%RH):	25.5(C)/43%RH
Model:	PA-40HB	Power:	
Mode:	G-H	Test By:	
Description:			



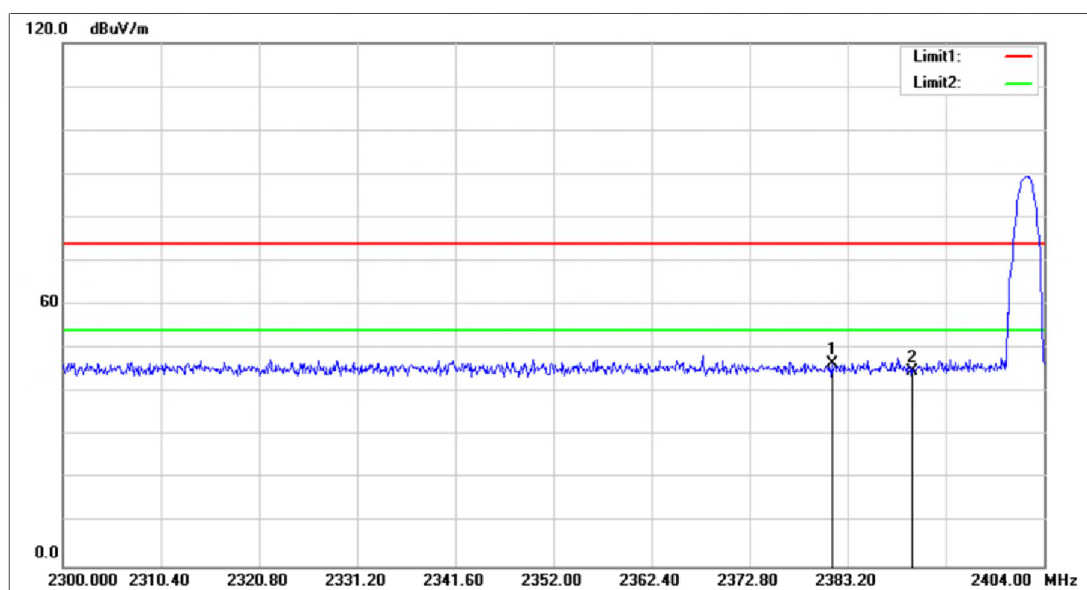
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	2483.500	56.95	-9.99	46.96	74.00	-27.04	100	0.00	peak
2	2491.176	58.19	-9.95	48.24	74.00	-25.76	100	227.00	peak

Job No.:	STS1810144	Ant.Polar.:	Horizontal
Standard:	FCC_15B_ABOVE 1G-PK	Date:2018/10/24	Time:20:47:57
Test item:	Radiated Emission	Distance:	3m
Company:	Bluetooth Receiver	Temp.(C)/Hum.(%RH):	25.5(C)/43%RH
Model:	PA-40HB	Power:	
Mode:	G-L	Test By:	
Description:			



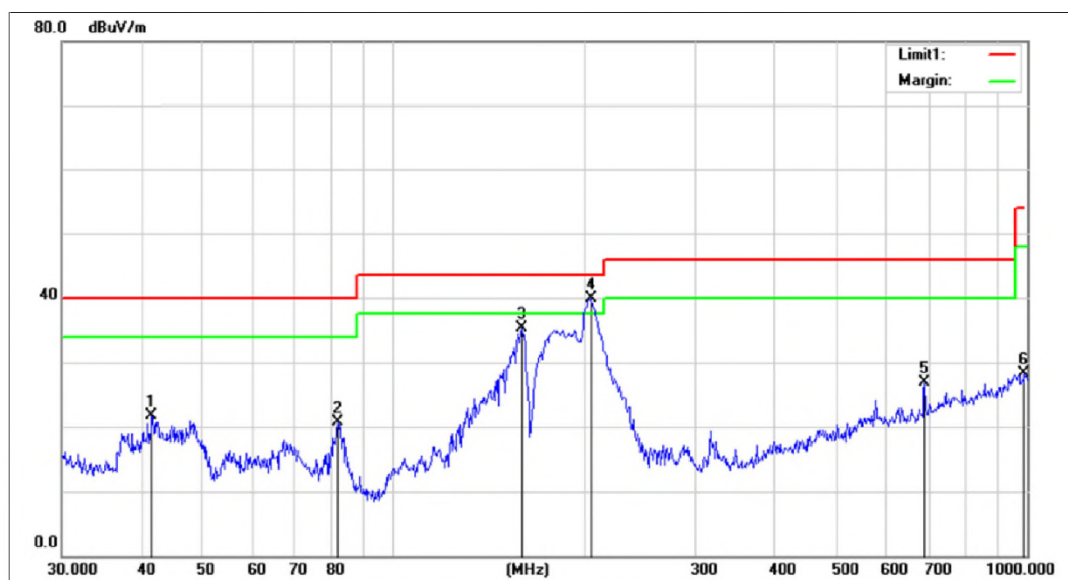
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	2383.616	58.11	-10.52	47.59	74.00	-26.41	100	74.00	peak
2	2390.000	56.02	-10.48	45.54	74.00	-28.46	100	87.00	peak

Job No.:	STS1810144	Ant.Polar.:	Vertical
Standard:	FCC_15B_ABOVE 1G-PK	Date:2018/10/24	Time:20:48:02
Test item:	Radiated Emission	Distance:	3m
Company:	Bluetooth Receiver	Temp.(C)/Hum.(%RH):	25.5(C)/43%RH
Model:	PA-40HB	Power:	
Mode:	G-L	Test By:	
Description:			



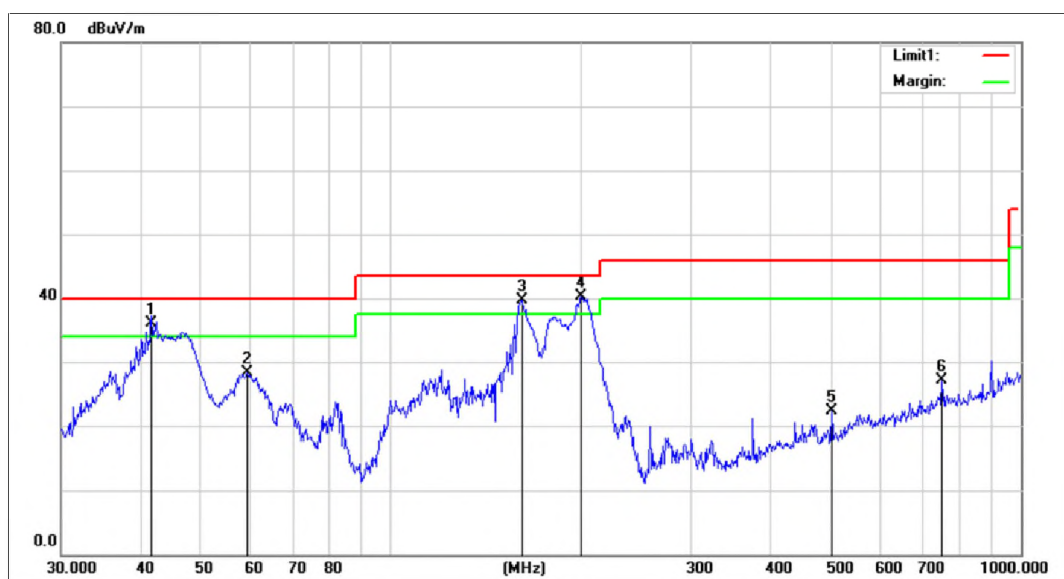
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	2381.536	57.13	-10.54	46.59	74.00	-27.41	100	35.60	peak
2	2390.000	55.36	-10.48	44.88	74.00	-29.12	100	27.80	peak

Job No.:	STS1810144	Ant.Polar.:	Horizontal
Standard:	FCC_PART15_B_03m_QP	Date:2018/10/31	Time:22:24:08
Test item:	Radiated Emission	Distance:	3m
Company:	Bluetooth Receiver	Temp.(C)/Hum.(%RH):	21.5(C)/48%RH
Model:	PA-40HB	Power:	AC 120V/60Hz
Mode:	BLE-L	Test By:	
Description:			



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	41.5670	38.83	-17.13	21.70	40.00	-18.30	100	35.70	QP
2	81.7833	42.90	-22.24	20.66	40.00	-19.34	100	64.00	QP
3	159.7844	53.80	-18.49	35.31	43.50	-8.19	100	37.00	QP
4	204.9551	59.84	-19.96	39.88	43.50	-3.62	100	127.60	QP
5	689.5644	32.56	-5.57	26.99	46.00	-19.01	100	37.50	QP
6	989.5355	28.41	-0.11	28.30	54.00	-25.70	100	178.00	QP

Job No.:	STS1810144	Ant.Polar.:	Vertical
Standard:	FCC_PART15_B_03m_QP	Date:	2018/10/31
Test item:	Radiated Emission	Distance:	3m
Company:	Bluetooth Receiver	Temp.(C)/Hum.(%RH):	21.5(C)/48%RH
Model:	PA-40HB	Power:	AC 120V/60Hz
Mode:	BLE-L	Test By:	
Description:			



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	41.7130	53.26	-17.21	36.05	40.00	-3.95	100	360.00	QP
2	59.2325	52.46	-24.12	28.34	40.00	-11.66	100	178.80	QP
3	161.4742	58.41	-18.62	39.79	43.50	-3.71	100	0.00	QP
4	200.6881	60.43	-20.14	40.29	43.50	-3.21	100	127.80	QP
5	501.1790	31.26	-8.90	22.36	46.00	-23.64	100	360.00	QP
6	750.1083	30.73	-3.56	27.17	46.00	-18.83	100	75.40	QP

Test result

Project Number: STS1810144

Test Time: 2018-10-31_20.55.55

EUT Name: Bluetooth Receiver

Mode: BLE-H

Model: PA-40HB

Temp.(oC):

Hum.: 48%

Test Engineer: xxxxx

Test Standard: FCC 15C

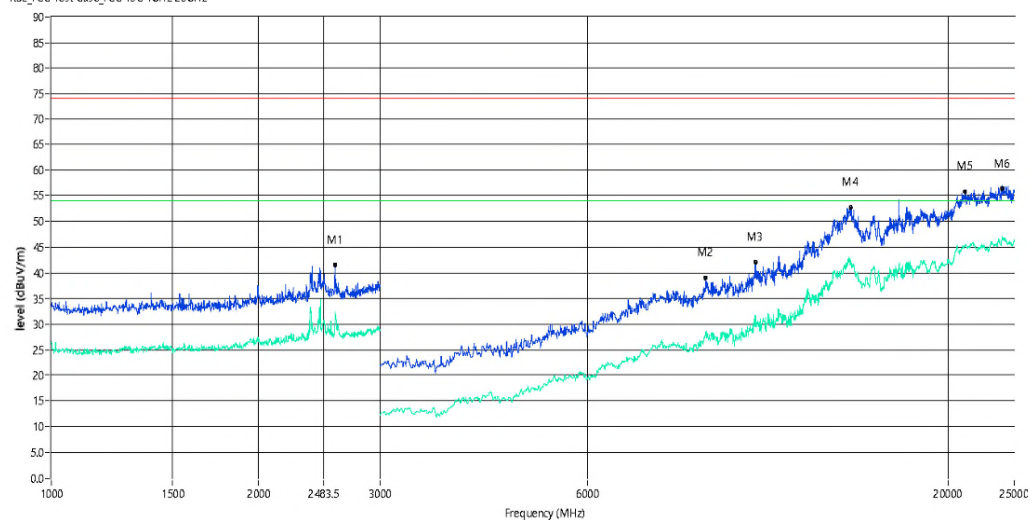
Work Addition: Normal

Load:

Remark:

Manufacturer:

RSE_FCC_Test Case_FCC_15C_1GHz-25GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2580.000	31.22	1.78	54.0	-22.78	AV	265.60	100	H	Pass
1	2580.000	41.54	1.78	74.0	-32.46	Peak	265.60	100	H	Pass
2**	8910.000	28.16	12.48	54.0	-25.84	AV	317.70	100	H	Pass
2	8910.000	39.08	12.48	74.0	-34.92	Peak	317.70	100	H	Pass
3**	10520.001	31.70	15.39	54.0	-22.30	AV	287.60	100	H	Pass
3	10520.001	42.04	15.39	74.0	-31.96	Peak	287.60	100	H	Pass
4**	14464.000	42.43	24.63	54.0	-11.57	AV	87.30	100	H	Pass
4	14464.000	52.67	24.63	74.0	-21.33	Peak	87.30	100	H	Pass
5**	21208.001	45.41	24.08	54.0	-8.59	AV	294.60	100	H	Pass
5	21208.001	55.81	24.08	74.0	-18.19	Peak	294.60	100	H	Pass
6**	23992.001	46.55	23.31	54.0	-7.45	AV	331.00	100	H	Pass
6	23992.001	56.40	23.31	74.0	-17.60	Peak	331.00	100	H	Pass

Test result

Project Number: STS1810144

Test Time: 2018-10-31_20.53.08

EUT Name: Bluetooth Receiver

Test Engineer: xxxxx

Mode: BLE-H

Test Standard: FCC 15C

Model: PA-40HB

Work Addition: Normal

Temp.(oC):

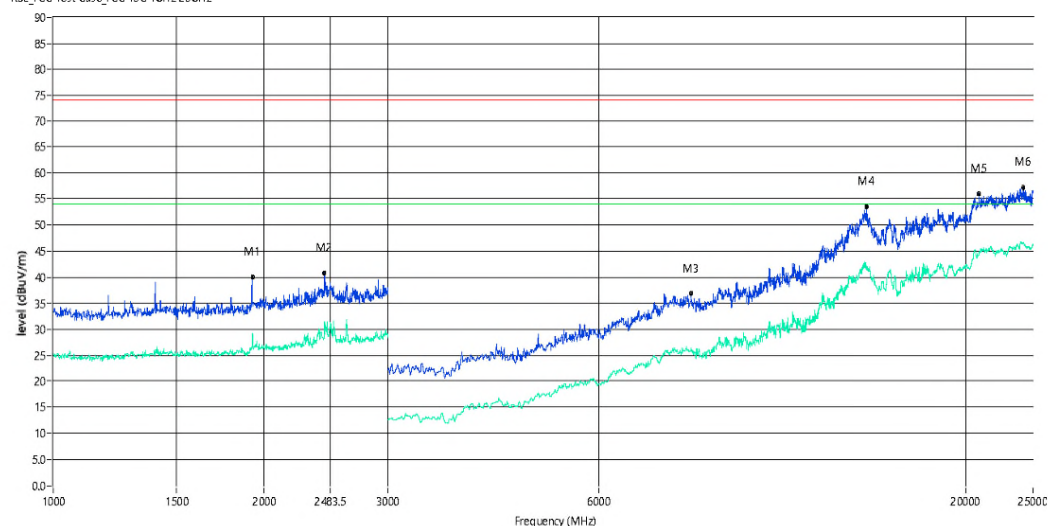
Load:

Hum.: 48%

Remark:

Manufacturer:

RSE_FCC Test Case_FCC 15C 1GHz-25GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1922.000	27.16	-2.74	54.0	-26.84	AV	151.90	100	V	Pass
1	1922.000	40.03	-2.74	74.0	-33.97	Peak	151.90	100	V	Pass
2**	2438.000	31.50	1.13	54.0	-22.50	AV	146.30	100	V	Pass
2	2438.000	40.83	1.13	74.0	-33.17	Peak	146.30	100	V	Pass
3**	8120.000	26.44	10.50	54.0	-27.56	AV	90.00	100	V	Pass
3	8120.000	36.79	10.50	74.0	-37.21	Peak	90.00	100	V	Pass
4**	14464.000	42.22	24.63	54.0	-11.78	AV	305.30	100	V	Pass
4	14464.000	53.46	24.63	74.0	-20.54	Peak	305.30	100	V	Pass
5**	20932.000	44.83	24.15	54.0	-9.17	AV	19.30	100	V	Pass
5	20932.000	55.93	24.15	74.0	-18.07	Peak	19.30	100	V	Pass
6**	24171.999	46.34	23.25	54.0	-7.66	AV	222.90	100	V	Pass
6	24171.999	57.24	23.25	74.0	-16.76	Peak	222.90	100	V	Pass

Test result

Project Number: STS1810144

Test Time: 2018-11-02_22.36.19

EUT Name: Bluetooth Receiver

Test Engineer: xxxxx

Mode: BLE-M

Test Standard: FCC 15C

Model: PA-40HB

Work Addition: Normal

Temp.(oC):

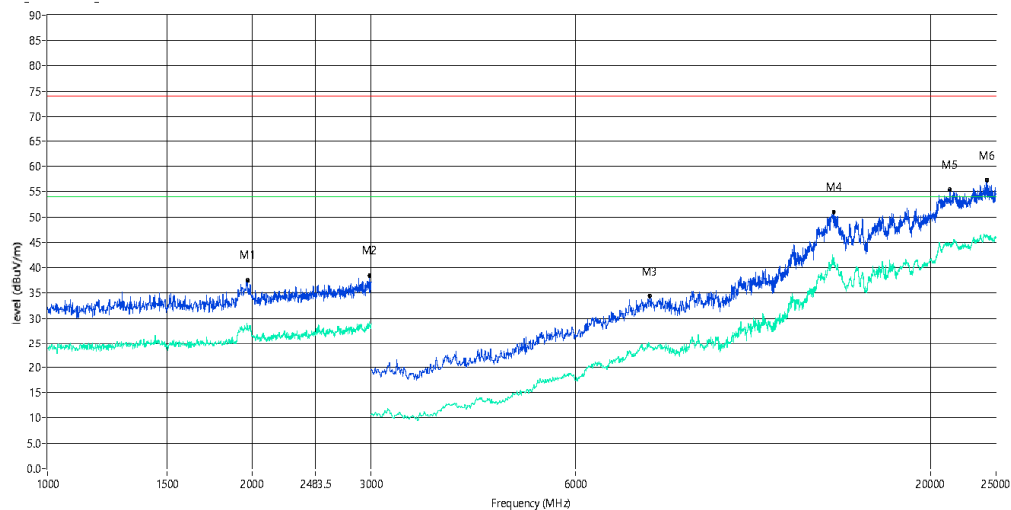
Load:

Hum.: 48%

Remark:

Manufacturer:

RSE_FCC Test Case_FCC 15C 1GHz-25GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1970.000	28.59	-0.54	54.0	-25.41	AV	10.00	100	H	Pass
1	1970.000	37.50	-0.54	74.0	-36.50	Peak	10.00	100	H	Pass
2**	2980.000	28.25	1.98	54.0	-25.75	AV	15.00	100	H	Pass
2	2980.000	38.50	1.98	74.0	-35.50	Peak	15.00	100	H	Pass
3**	7710.000	24.51	10.52	54.0	-29.49	AV	15.00	100	H	Pass
3	7710.000	34.29	10.52	74.0	-39.71	Peak	15.00	100	H	Pass
4**	14428.000	41.67	25.10	54.0	-12.33	AV	9.00	100	H	Pass
4	14428.000	50.77	25.10	74.0	-23.23	Peak	9.00	100	H	Pass
5**	21412.000	44.66	24.03	54.0	-9.34	AV	7.00	100	H	Pass
5	21412.000	55.38	24.03	74.0	-18.62	Peak	7.00	100	H	Pass
6**	24231.999	46.49	23.23	54.0	-7.51	AV	4.00	100	H	Pass
6	24231.999	57.27	23.23	74.0	-16.73	Peak	4.00	100	H	Pass

Test result

Project Number: ST51810144

Test Time: 2018-11-02_22.33.17

EUT Name: Bluetooth Receiver

Test Engineer: xxxxx

Mode: BLE-M

Test Standard: FCC 15C

Model: PA-40HB

Work Addition: Normal

Temp.(oC):

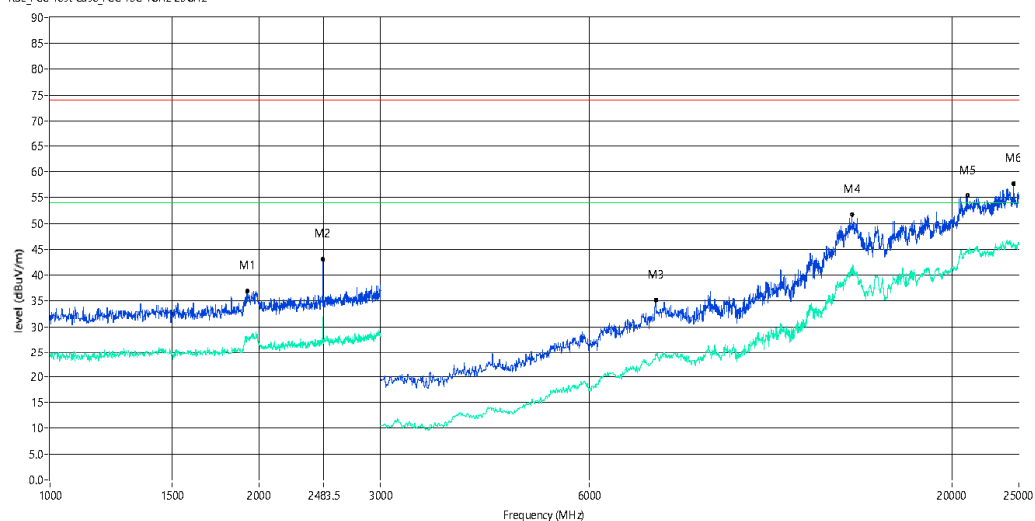
Load:

Hum.: 48%

Remark:

Manufacturer:

RSE_FCC Test Case_FCC 15C 1GHz-25GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1924.000	27.98	-1.06	54.0	-26.02	AV	7.00	100	V	Pass
1	1924.000	36.89	-1.06	74.0	-37.11	Peak	7.00	100	V	Pass
2**	2474.000	27.49	-0.84	54.0	-26.51	AV	12.00	100	V	Pass
2	2474.000	43.09	-0.84	74.0	-30.91	Peak	12.00	100	V	Pass
3**	7480.000	24.47	10.48	54.0	-29.53	AV	2.00	100	V	Pass
3	7480.000	35.19	10.48	74.0	-38.81	Peak	2.00	100	V	Pass
4**	14368.000	41.51	24.92	54.0	-12.49	AV	13.00	100	V	Pass
4	14368.000	51.77	24.92	74.0	-22.23	Peak	13.00	100	V	Pass
5**	21076.001	44.51	24.12	54.0	-9.49	AV	11.00	100	V	Pass
5	21076.001	55.49	24.12	74.0	-18.51	Peak	11.00	100	V	Pass
6**	24591.999	45.73	23.11	54.0	-8.27	AV	12.00	100	V	Pass
6	24591.999	57.77	23.11	74.0	-16.23	Peak	12.00	100	V	Pass



Test result

Project Number: STS1810144

Test Time: 2018-10-31_20.45.00

EUT Name: Bluetooth Receiver

Test Engineer: xxxxx

Mode: BLE-L

Test Standard: FCC 15C

Model: PA-40HB

Work Addition: Normal

Temp.(oC):

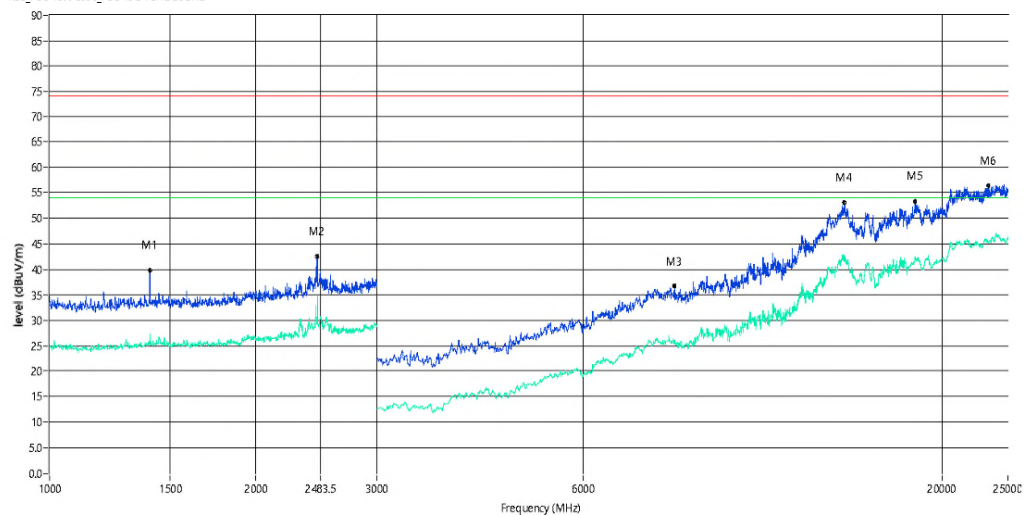
Load:

Hum.: 48%

Remark:

Manufacturer:

RSE_FCC_Test Case_FCC 15C 1GHz-25GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1400.000	25.25	-4.30	54.0	-28.75	AV	219.90	100	H	Pass
1	1400.000	39.88	-4.30	74.0	-34.12	Peak	219.90	100	H	Pass
2**	2456.000	29.25	1.24	54.0	-24.75	AV	183.10	100	H	Pass
2	2456.000	42.47	1.24	74.0	-31.53	Peak	183.10	100	H	Pass
3**	8160.000	26.13	10.53	54.0	-27.87	AV	86.20	100	H	Pass
3	8160.000	36.61	10.53	74.0	-37.39	Peak	86.20	100	H	Pass
4**	14428.000	42.47	25.10	54.0	-11.53	AV	267.40	100	H	Pass
4	14428.000	53.10	25.10	74.0	-20.90	Peak	267.40	100	H	Pass
5**	18304.000	42.51	23.47	54.0	-11.49	AV	112.90	100	H	Pass
5	18304.000	53.34	23.47	74.0	-20.66	Peak	112.90	100	H	Pass
6**	23428.000	45.30	23.49	54.0	-8.70	AV	277.80	100	H	Pass
6	23428.000	56.49	23.49	74.0	-17.51	Peak	277.80	100	H	Pass

Test result

Project Number: ST51810144

Test Time: 2018-10-31_20.49.14

EUT Name: Bluetooth Receiver

Mode: BLE-L

Model: PA-40HB

Temp.(oC):

Hum.: 48%

Test Engineer: xxxxx

Test Standard: FCC 15C

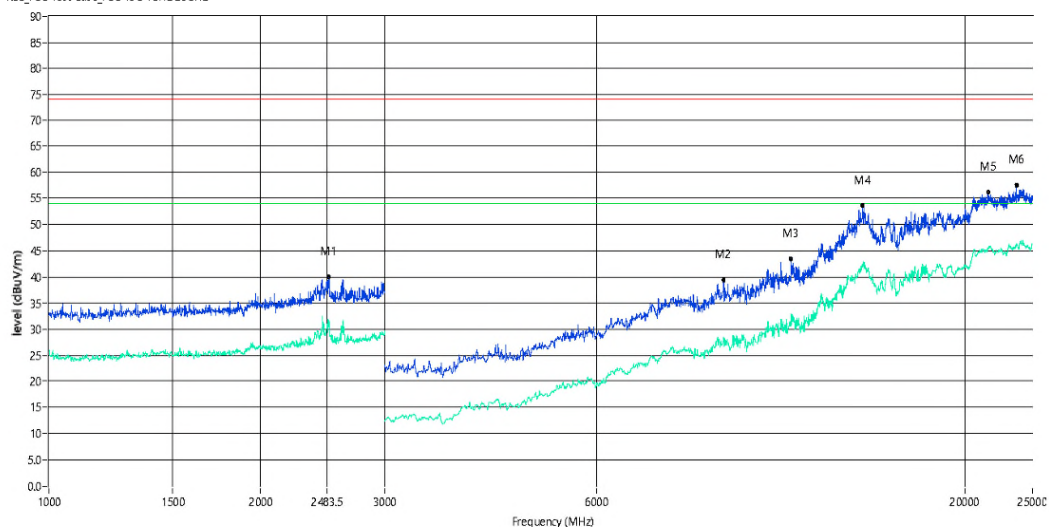
Work Addition: Normal

Load:

Remark:

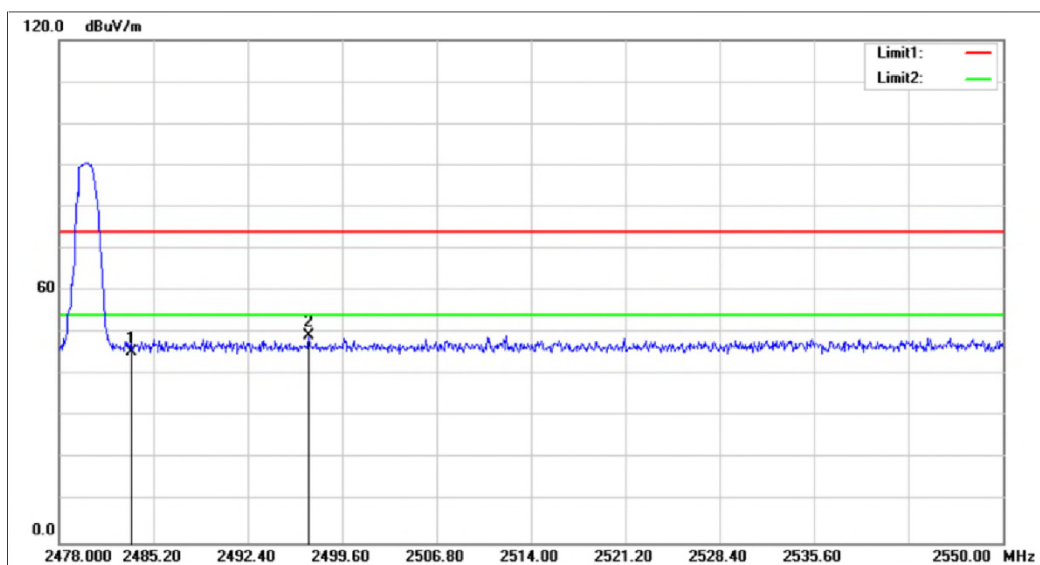
Manufacturer:

RSE_FCC Test Case_FCC 15C 1GHz~25GHz



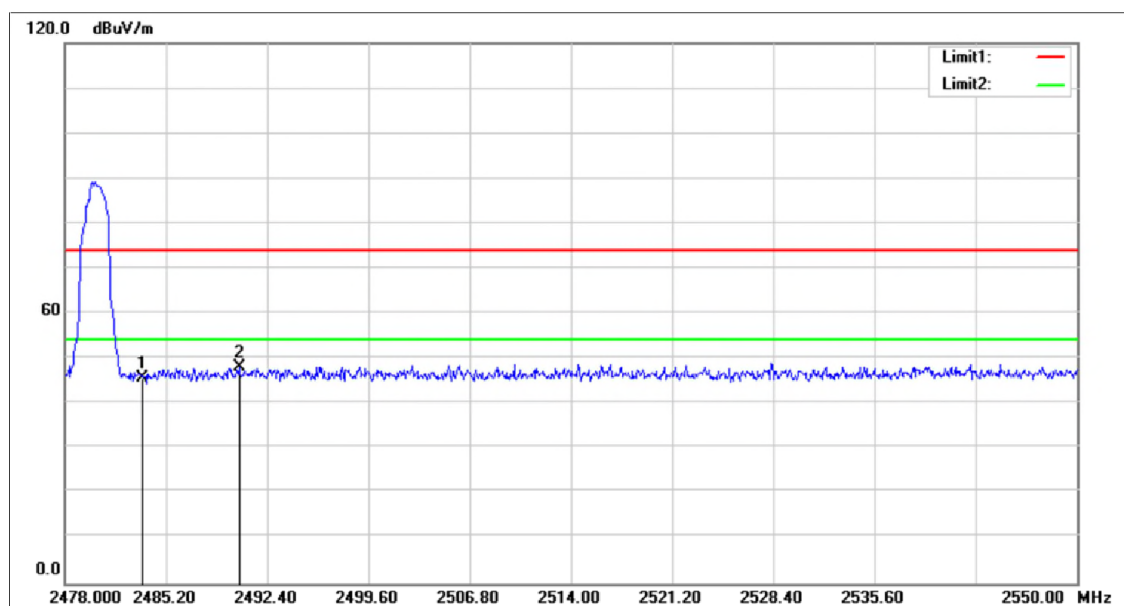
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2500.000	30.83	0.53	54.0	-23.17	AV	308.70	100	V	Pass
1	2500.000	39.93	0.53	74.0	-34.07	Peak	308.70	100	V	Pass
2**	9100.000	28.41	13.19	54.0	-25.59	AV	358.20	100	V	Pass
2	9100.000	39.43	13.19	74.0	-34.57	Peak	358.20	100	V	Pass
3**	11340.000	32.96	16.89	54.0	-21.04	AV	0.50	100	V	Pass
3	11340.000	43.53	16.89	74.0	-30.47	Peak	0.50	100	V	Pass
4**	14332.000	42.06	24.28	54.0	-11.94	AV	105.90	100	V	Pass
4	14332.000	53.62	24.28	74.0	-20.38	Peak	105.90	100	V	Pass
5**	21616.001	45.34	23.98	54.0	-8.66	AV	177.80	100	V	Pass
5	21616.001	56.13	23.98	74.0	-17.87	Peak	177.80	100	V	Pass
6**	23716.000	46.36	23.40	54.0	-7.64	AV	33.00	100	V	Pass
6	23716.000	57.60	23.40	74.0	-16.40	Peak	33.00	100	V	Pass

Job No.:	STS1810144	Ant.Polar.:	Horizontal
Standard:	FCC_15B_ABOVE 1G-PK	Date:2018/10/24	Time:21:04:10
Test item:	Radiated Emission	Distance:	3m
Company:	Bluetooth Receiver	Temp.(C)/Hum.(%RH):	25.5(C)/43%RH
Model:	PA-40HB	Power:	
Mode:	BLE-H	Test By:	
Description:			



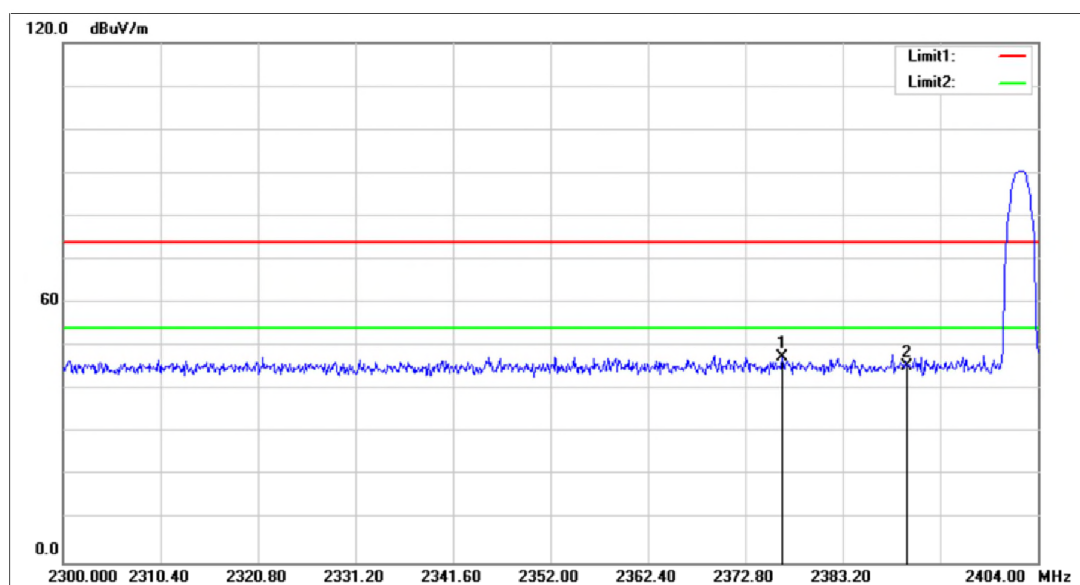
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	2483.500	55.38	-9.99	45.39	74.00	-28.61	100	0.00	peak
2	2497.008	59.33	-9.92	49.41	74.00	-24.59	100	39.00	peak

Job No.:	STS1810144	Ant.Polar.:	Vertical
Standard:	FCC_15B_ ABOVE 1G-PK	Date:2018/10/24	Time:21:04:15
Test item:	Radiated Emission	Distance:	3m
Company:	Bluetooth Receiver	Temp.(C)/Hum.(%RH):	25.5(C)/43%RH
Model:	PA-40HB	Power:	
Mode:	BLE-H	Test By:	
Description:			



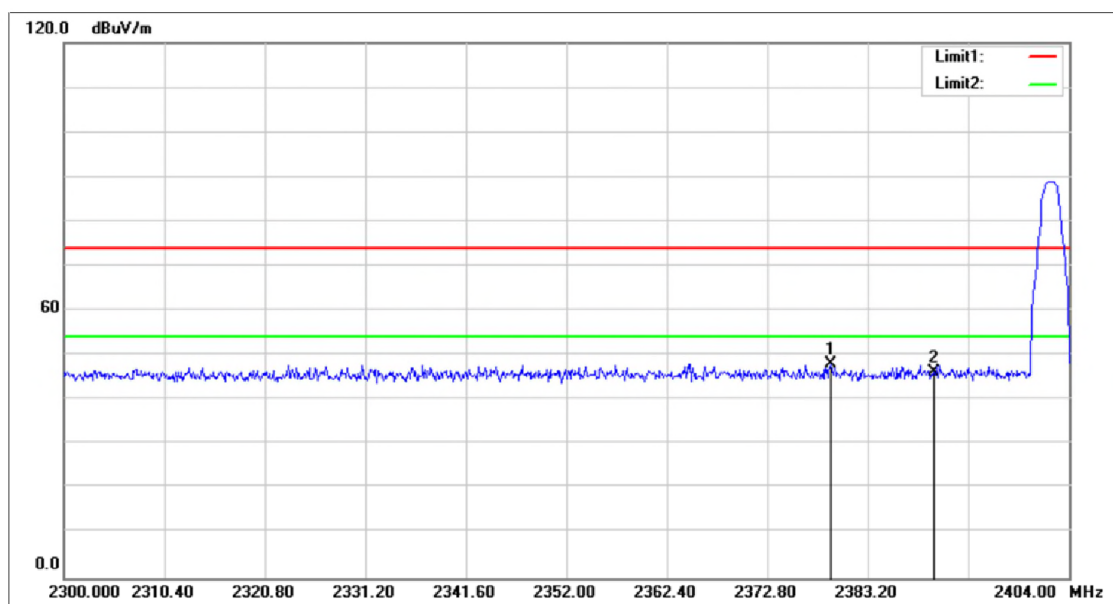
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	2483.500	55.89	-9.99	45.90	74.00	-28.10	100	360	peak
2	2490.384	58.07	-9.95	48.12	74.00	-25.88	100	330.60	peak

Job No.:	STS1810144	Ant.Polar.:	Horizontal
Standard:	FCC_15B_ABOVE 1G-PK	Date:2018/10/24	Time:21:05:45
Test item:	Radiated Emission	Distance:	3m
Company:	Bluetooth Receiver	Temp.(C)/Hum.(%RH):	25.5(C)/43%RH
Model:	PA-40HB	Power:	
Mode:	BLE-L	Test By:	
Description:			



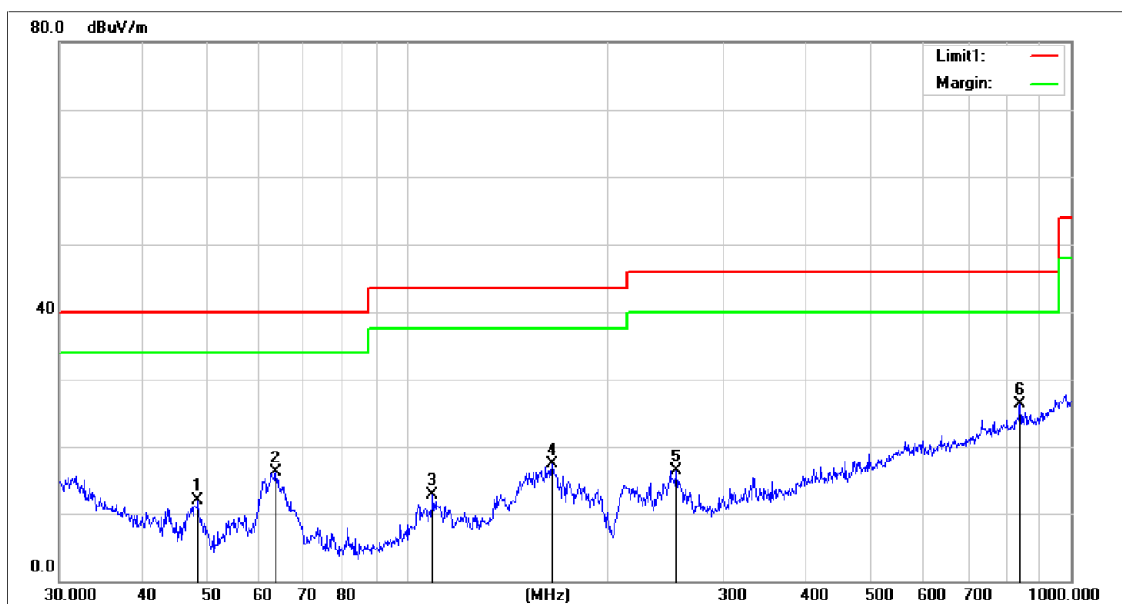
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	2376.752	58.19	-10.56	47.63	74.00	-26.37	100	350.80	peak
2	2390.000	55.99	-10.48	45.51	74.00	-28.49	100	330.20	peak

Job No.:	STS1810144	Ant.Polar.:	Vertical
Standard:	FCC_15B_ABOVE 1G-PK	Date:	2018/10/24
Test item:	Radiated Emission	Distance:	3m
Company:	Bluetooth Receiver	Temp.(C)/Hum.(%RH):	25.5(C)/43%RH
Model:	PA-40HB	Power:	
Mode:	BLE-L	Test By:	
Description:			



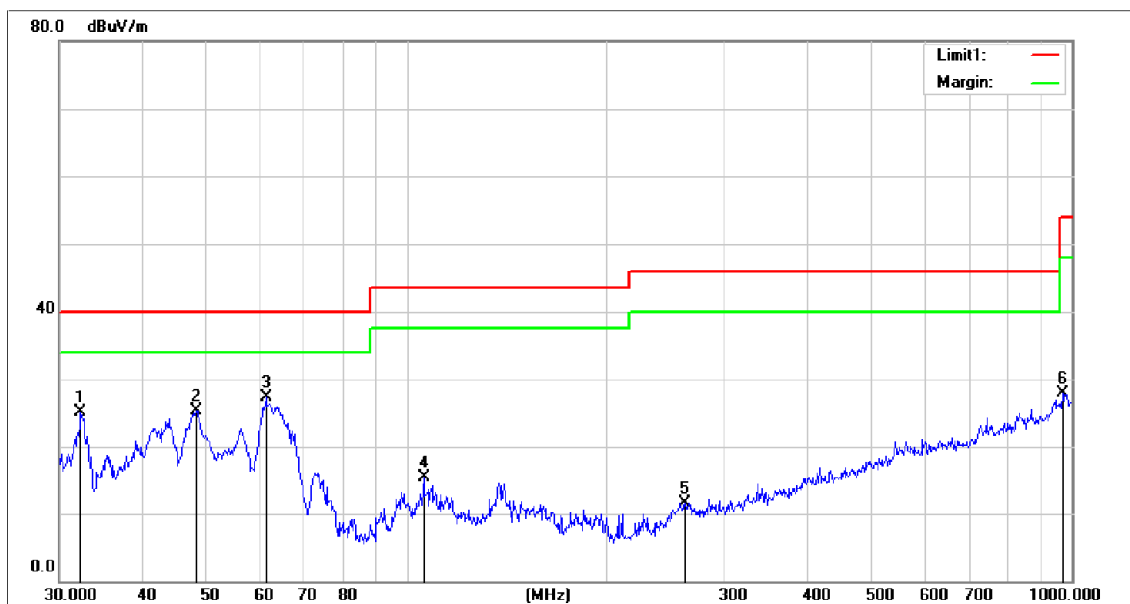
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	2379.352	58.65	-10.54	48.11	74.00	-25.89	100	0.00	peak
2	2390.000	56.88	-10.48	46.40	74.00	-27.60	100	35.60	peak

Job No.:	STS1810144	Ant.Polar.:	Horizontal
Standard:	FCC 15C_03m_QP	Date:2019/5/27	Time:16:00:21
Test item:	Radiated Emission	Temp.(C):	24(C)
Company:	Bluetooth receiver	Hum.(%RH):	65%RH
Model:	PA-20B	Power:	AC 120V/60Hz
Mode:	BT	Test By:	Lion
Description:			



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	48.5016	33.97	-22.10	11.87	40.00	-28.13	100	180.00	peak
2	63.5356	41.59	-25.46	16.13	40.00	-23.87	100	56.00	peak
3	109.4116	32.01	-19.23	12.78	43.50	-30.72	100	340.70	peak
4	165.4866	36.99	-19.76	17.23	43.50	-26.27	100	285.40	peak
5	254.7283	32.49	-16.10	16.39	46.00	-29.61	100	125.60	peak
6	839.1817	28.69	-2.46	26.23	46.00	-19.77	100	57.90	peak

Job No.:	STS1810144	Ant.Polar.:	Vertical
Standard:	FCC 15C_03m_QP	Date:	2019/5/27
Test item:	Radiated Emission	Time:	16:04:16
Company:	Bluetooth receiver	Temp.(C):	24(C)
Model:	PA-20B	Hum. (%RH):	65%RH
Mode:	BT	Power:	AC 120V/60Hz
		Test By:	Lion
Description:			



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	32.2924	38.60	-13.56	25.04	40.00	-14.96	100	56.00	peak
2	48.1625	47.28	-21.91	25.37	40.00	-14.63	100	76.00	peak
3	61.3462	52.78	-25.57	27.21	40.00	-12.79	100	340.90	peak
4	106.0126	34.95	-19.58	15.37	43.50	-28.13	100	76.80	peak
5	261.9753	26.94	-15.49	11.45	46.00	-34.55	100	24.50	peak
6	968.9338	28.16	-0.35	27.81	54.00	-26.19	100	35.00	peak

Test result

Project Number: STS1810144

Test Time: 2019-05-27_21.27.20

EUT Name: Bluetooth receiver

Test Engineer: Lion

Mode: BT-G-H

Test Standard: FCC 15C

Model: PA-20E

Work Addition: Normal

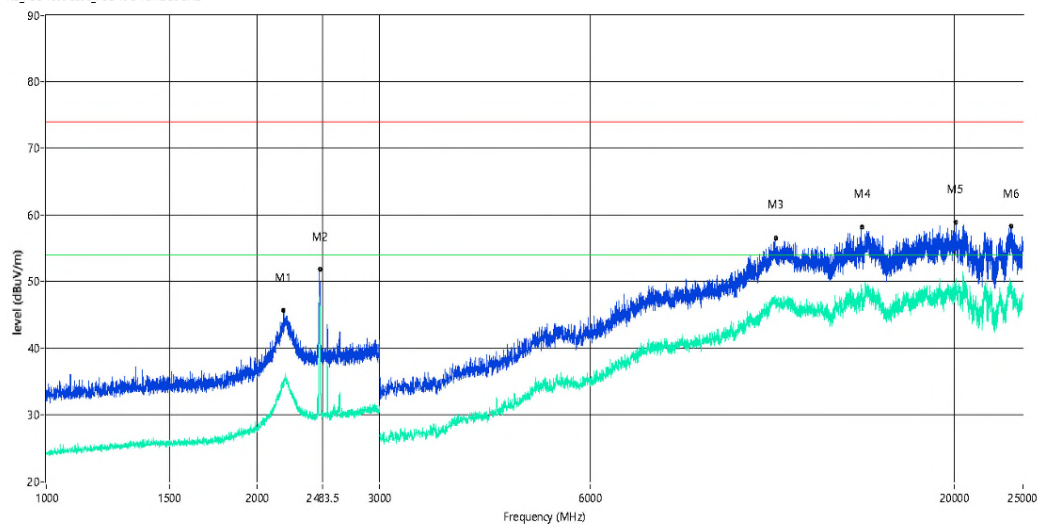
Temp.(oC): 22.2

Load:

Hum.: 55%

Remark:

RE_FCC Test Case FCC 15C 1GHz-2.5GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2186.000	35.01	-7.95	54.0	-18.99	AV	14.00	100	H	Pass
1	2186.000	45.63	-7.95	74.0	-28.37	Peak	14.00	100	H	Pass
2**	2461.000	47.74	-12.53	54.0	-6.26	AV	6.00	100	H	Pass
2	2461.000	51.77	-12.53	74.0	-22.23	Peak	6.00	100	H	Pass
3**	11060.000	46.57	10.71	54.0	-7.43	AV	7.00	100	H	Pass
3	11060.000	56.58	10.71	74.0	-17.42	Peak	7.00	100	H	Pass
4**	14700.000	48.00	11.89	54.0	-6.00	AV	5.00	100	H	Pass
4	14700.000	58.20	11.89	74.0	-15.80	Peak	5.00	100	H	Pass
5**	20047.499	50.31	14.41	54.0	-3.69	AV	3.00	100	H	Pass
5	20047.499	58.89	14.41	74.0	-15.11	Peak	3.00	100	H	Pass
6**	24032.250	49.10	15.09	54.0	-4.90	AV	15.00	100	H	Pass
6	24032.250	58.29	15.09	74.0	-15.71	Peak	15.00	100	H	Pass

Test result

Project Number: STS1810144

Test Time: 2019-05-27_21.25.08

EUT Name: Bluetooth receiver

Test Engineer: Lion

Mode: BT-G-H

Test Standard: FCC 15C

Model: PA-20E

Work Addition: Normal

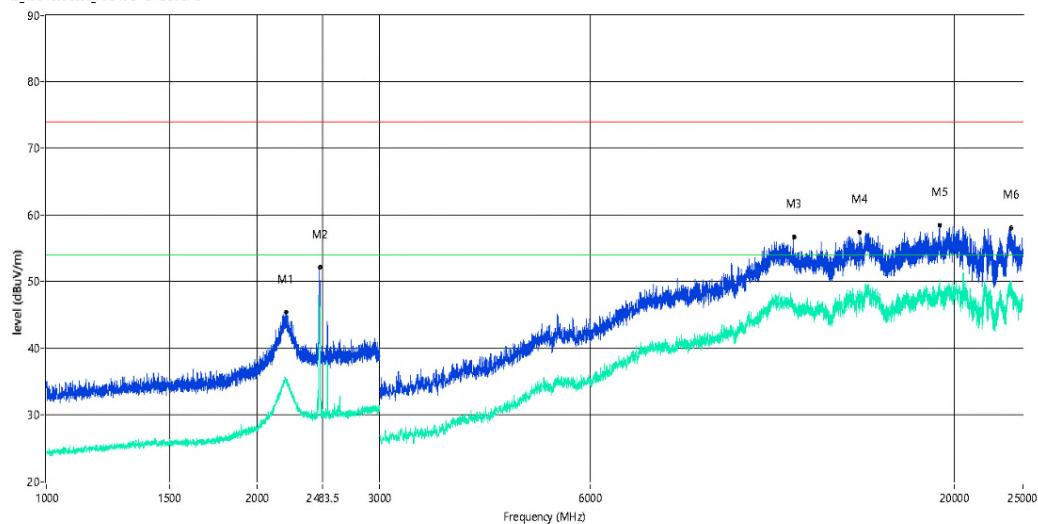
Temp.(oC): 22.2

Load:

Hum.: 55%

Remark:

RE_FCC Test Case_FCC 15C 1GHz-2.5GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2205.000	34.97	-7.45	54.0	-19.03	AV	1.00	100	V	Pass
1	2205.000	45.39	-7.45	74.0	-28.61	Peak	1.00	100	V	Pass
2**	2460.500	47.75	-12.53	54.0	-6.25	AV	14.00	100	V	Pass
2	2460.500	52.13	-12.53	74.0	-21.87	Peak	14.00	100	V	Pass
3**	11755.000	46.71	10.20	54.0	-7.29	AV	15.00	100	V	Pass
3	11755.000	56.70	10.20	74.0	-17.30	Peak	15.00	100	V	Pass
4**	14603.750	48.14	11.57	54.0	-5.86	AV	3.00	100	V	Pass
4	14603.750	57.39	11.57	74.0	-16.61	Peak	3.00	100	V	Pass
5**	19032.500	49.51	15.10	54.0	-4.49	AV	10.00	100	V	Pass
5	19032.500	58.43	15.10	74.0	-15.57	Peak	10.00	100	V	Pass
6**	24051.499	49.52	15.09	54.0	-4.48	AV	14.00	100	V	Pass
6	24051.499	58.02	15.09	74.0	-15.98	Peak	14.00	100	V	Pass

Test result

Project Number: STS1810144

Test Time: 2019-05-27_21.18.38

EUT Name: Bluetooth receiver

Test Engineer: Lion

Mode: BT-G-L

Test Standard: FCC 15C

Model: PA-20E

Work Addition: Normal

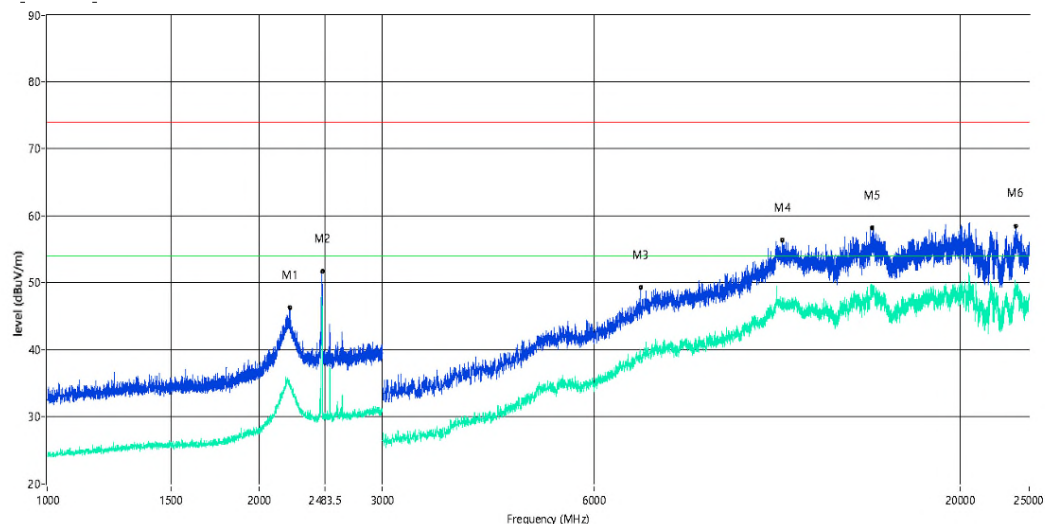
Temp.(oC): 22.2

Load:

Hum.: 55%

Remark:

RE_FCC Test Case_FCC 15C 1GHz-25GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2214.000	34.59	-7.89	54.0	-19.41	AV	12.00	100	H	Pass
1	2214.000	46.22	-7.89	74.0	-27.78	Peak	12.00	100	H	Pass
2**	2461.000	47.92	-12.53	54.0	-6.08	AV	13.00	100	H	Pass
2	2461.000	51.63	-12.53	74.0	-22.37	Peak	13.00	100	H	Pass
3**	6992.500	38.94	3.05	54.0	-15.06	AV	7.00	100	H	Pass
3	6992.500	49.24	3.05	74.0	-24.76	Peak	7.00	100	H	Pass
4**	11130.000	47.66	10.52	54.0	-6.34	AV	10.00	100	H	Pass
4	11130.000	56.32	10.52	74.0	-17.68	Peak	10.00	100	H	Pass
5**	14975.000	48.58	12.42	54.0	-5.42	AV	13.00	100	H	Pass
5	14975.000	58.15	12.42	74.0	-15.85	Peak	13.00	100	H	Pass
6**	23950.000	48.93	15.08	54.0	-5.07	AV	13.00	100	H	Pass
6	23950.000	58.51	15.08	74.0	-15.49	Peak	13.00	100	H	Pass

Test result

Project Number: STS1810144

Test Time: 2019-05-27_21.16.36

EUT Name: Bluetooth receiver

Test Engineer: Lion

Mode: BT-G-L

Test Standard: FCC 15C

Model: PA-20E

Work Addition: Normal

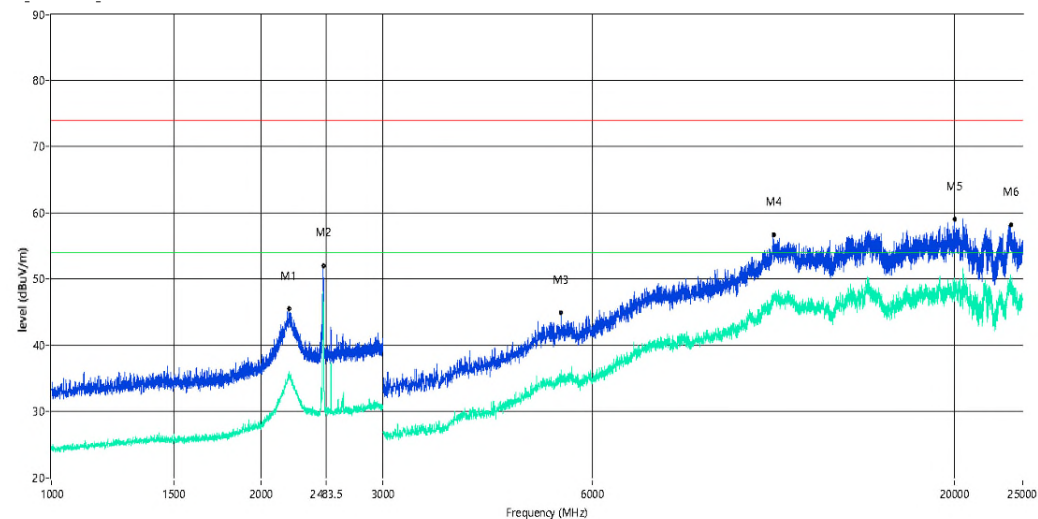
Temp.(oC): 22.2

Load:

Hum.: 55%

Remark:

RE_FCC Test Case_FCC 15C 1GHz-2.5GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2196.500	35.19	-7.40	54.0	-18.81	AV	7.00	100	V	Pass
1	2196.500	45.51	-7.40	74.0	-28.49	Peak	7.00	100	V	Pass
2**	2460.500	47.72	-12.53	54.0	-6.28	AV	4.00	100	V	Pass
2	2460.500	52.05	-12.53	74.0	-21.95	Peak	4.00	100	V	Pass
3**	5412.500	34.82	-1.36	54.0	-19.18	AV	2.00	100	V	Pass
3	5412.500	44.97	-1.36	74.0	-29.03	Peak	2.00	100	V	Pass
4**	10947.500	46.87	10.75	54.0	-7.13	AV	5.00	100	V	Pass
4	10947.500	56.71	10.75	74.0	-17.29	Peak	5.00	100	V	Pass
5**	19979.250	50.10	15.36	54.0	-3.90	AV	1.00	100	V	Pass
5	19979.250	59.08	15.36	74.0	-14.92	Peak	1.00	100	V	Pass
6**	24044.501	49.21	15.09	54.0	-4.79	AV	2.00	100	V	Pass
6	24044.501	58.22	15.09	74.0	-15.78	Peak	2.00	100	V	Pass

Test result

Project Number: STS1810144

Test Time: 2019-05-27_21.21.19

EUT Name: Bluetooth receiver

Test Engineer: Lion

Mode: BT-G-M

Test Standard: FCC 15C

Model: PA-20E

Work Addition: Normal

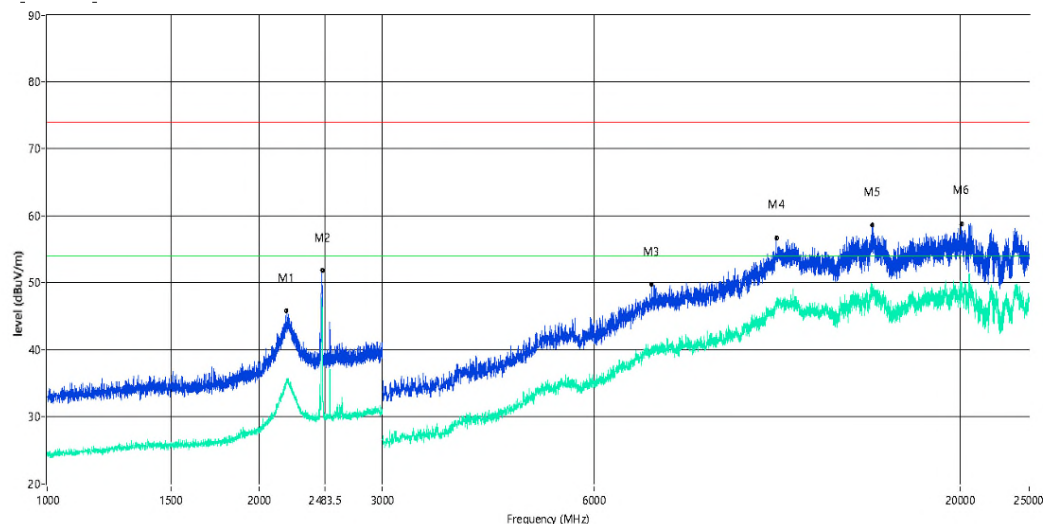
Temp.(oC): 22.2

Load:

Hum.: 55%

Remark:

RE_FCC Test Case_FCC 15C 1GHz-25GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2193.500	35.40	-7.55	54.0	-18.60	AV	8.00	100	H	Pass
1	2193.500	45.80	-7.55	74.0	-28.20	Peak	8.00	100	H	Pass
2**	2461.000	47.77	-12.53	54.0	-6.23	AV	2.00	100	H	Pass
2	2461.000	51.79	-12.53	74.0	-22.21	Peak	2.00	100	H	Pass
3**	7252.500	40.46	4.10	54.0	-13.54	AV	11.00	100	H	Pass
3	7252.500	49.79	4.10	74.0	-24.21	Peak	11.00	100	H	Pass
4**	10912.500	47.03	10.61	54.0	-6.97	AV	8.00	100	H	Pass
4	10912.500	56.65	10.61	74.0	-17.35	Peak	8.00	100	H	Pass
5**	14966.250	48.50	12.44	54.0	-5.50	AV	10.00	100	H	Pass
5	14966.250	58.56	12.44	74.0	-15.44	Peak	10.00	100	H	Pass
6**	20026.499	48.66	14.70	54.0	-5.34	AV	3.00	100	H	Pass
6	20026.499	58.81	14.70	74.0	-15.19	Peak	3.00	100	H	Pass

Test result

Project Number: STS1810144

Test Time: 2019-05-27_21.23.15

EUT Name: Bluetooth receiver

Test Engineer: Lion

Mode: BT-G-M

Test Standard: FCC 15C

Model: PA-20E

Work Addition: Normal

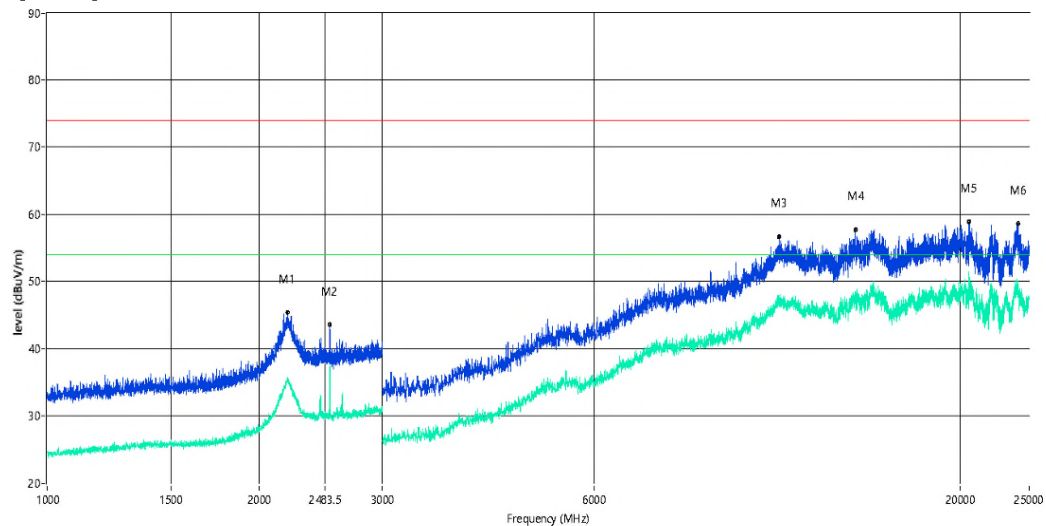
Temp.(oC): 22.2

Load:

Hum.: 55%

Remark:

RE_FCC Test Case_FCC 15C 1GHz-25GHz

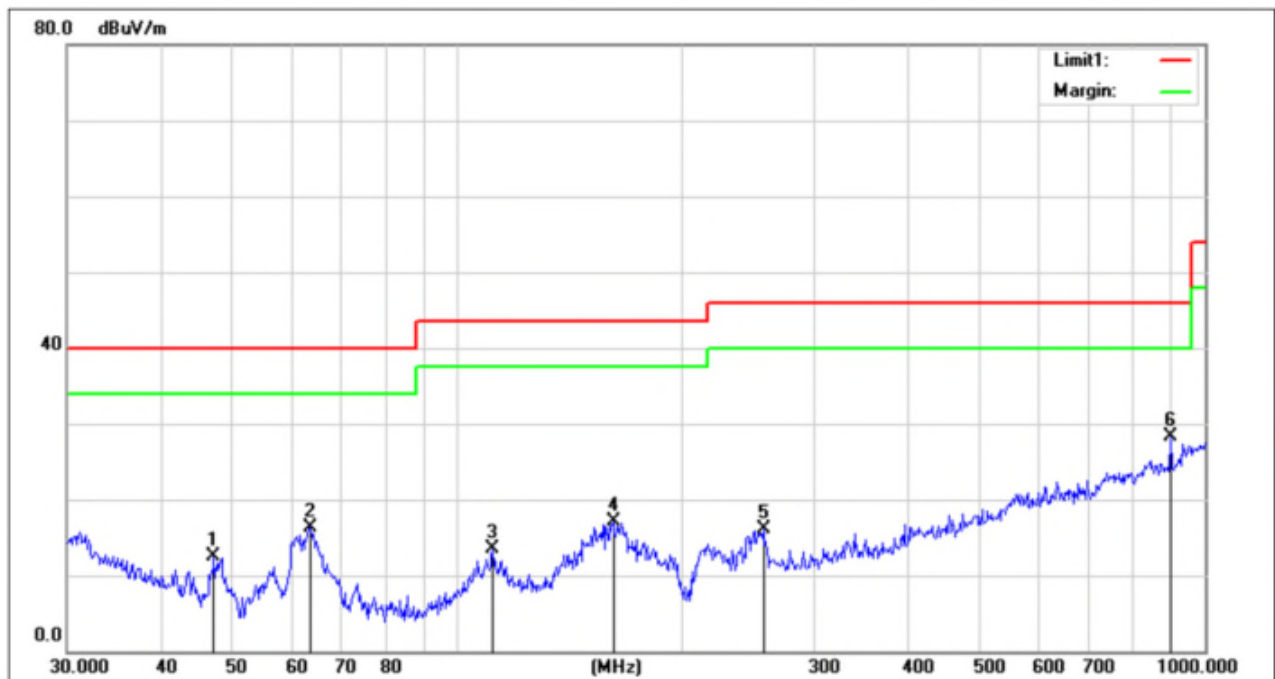


No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2198.000	35.01	-7.32	54.0	-18.99	AV	11.00	100	V	Pass
1	2198.000	45.34	-7.32	74.0	-28.66	Peak	11.00	100	V	Pass
2**	2526.000	34.86	-12.35	54.0	-19.14	AV	15.00	100	V	Pass
2	2526.000	43.61	-12.35	74.0	-30.39	Peak	15.00	100	V	Pass
3**	11015.000	47.21	10.91	54.0	-6.79	AV	9.00	100	V	Pass
3	11015.000	56.69	10.91	74.0	-17.31	Peak	9.00	100	V	Pass
4**	14148.750	47.79	11.47	54.0	-6.21	AV	4.00	100	V	Pass
4	14148.750	57.77	11.47	74.0	-16.23	Peak	4.00	100	V	Pass
5**	20542.751	49.62	14.09	54.0	-4.38	AV	14.00	100	V	Pass
5	20542.751	58.84	14.09	74.0	-15.16	Peak	14.00	100	V	Pass
6**	24116.251	47.62	15.09	54.0	-6.38	AV	1.00	100	V	Pass
6	24116.251	58.65	15.09	74.0	-15.35	Peak	1.00	100	V	Pass

Job No.: STS1810144
Standard: FCC 15C_03m_QP
Test item: Radiated Emission
Company: Bluetooth receiver
Model: PA-20B
Mode: BLE

Ant.Polar.: Horizontal
Date:2019/5/27 Time:15:56:27
Temp.(C): 24(C)
Hum.(%RH): 65%RH
Power: AC 120V/60Hz
Test By: Lion

Description:



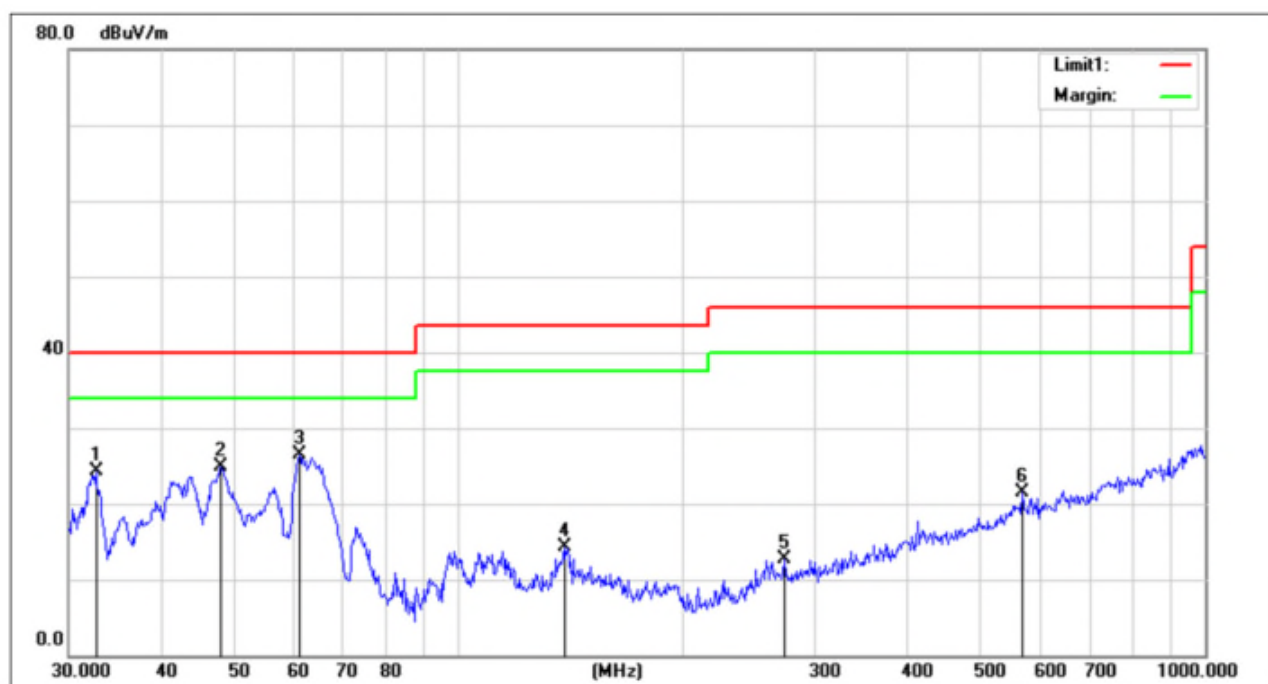
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	47.1600	33.96	-21.36	12.60	40.00	-27.40	100	360.00	peak
2	63.5356	41.71	-25.46	16.25	40.00	-23.75	100	127.60	peak
3	111.3468	32.46	-19.03	13.43	43.50	-30.07	100	135.60	peak
4	161.4740	36.48	-19.34	17.14	43.50	-26.36	100	57.70	peak
5	256.5210	31.97	-15.89	16.08	46.00	-29.92	100	83.20	peak
6	900.1473	31.00	-2.64	28.36	46.00	-17.64	100	12.20	peak

Produkte
Products

Job No.: STS1810144
Standard: FCC 15C_03m_QP
Test item: Radiated Emission
Company: Bluetooth receiver
Model: PA-20B
Mode: BLE

Ant.Polar.: Vertical
Date:2019/5/27 Time:15:52:04
Temp.(C): 24(C)
Hum. (%RH): 65%RH
Power: AC 120V/60Hz
Test By: Lion

Description:



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	32.6340	38.13	-13.73	24.40	40.00	-15.60	100	360.00	peak
2	47.9940	46.73	-21.83	24.90	40.00	-15.10	100	128.00	peak
3	61.1315	52.13	-25.58	26.55	40.00	-13.45	100	110.40	peak
4	138.3873	32.56	-18.24	14.32	43.50	-29.18	100	138.90	peak
5	273.2341	28.88	-16.10	12.78	46.00	-33.22	100	272.40	peak

Test result

Project Number: STS1810144

Test Time: 2019-05-27_22.04.36

EUT Name: Bluetooth receiver

Test Engineer: Lion

Mode: BLE-H

Test Standard: FCC 15C

Model: PA-20E

Work Addition: Normal

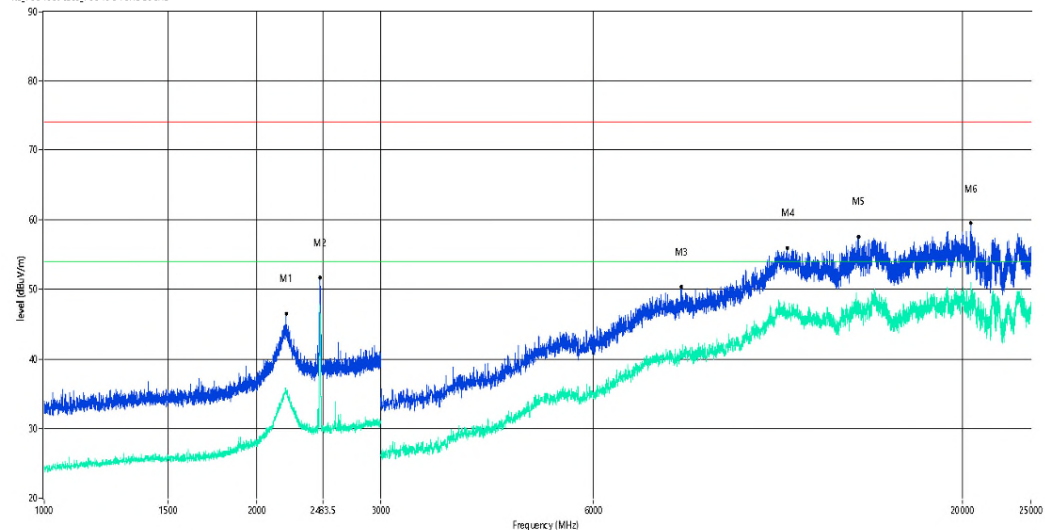
Temp.(oC): 22.2

Load:

Hum.: 55%

Remark:

RE_FCC Test Case_FCC 15C 1GHz-25GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2202.500	35.44	-7.33	54.0	-18.56	AV	3.00	100	H	Pass
1	2202.500	46.55	-7.33	74.0	-27.45	Peak	3.00	100	H	Pass
2**	2461.000	47.84	-12.53	54.0	-6.16	AV	14.00	100	H	Pass
2	2461.000	51.70	-12.53	74.0	-22.30	Peak	14.00	100	H	Pass
3**	7987.500	40.44	4.81	54.0	-13.56	AV	11.00	100	H	Pass
3	7987.500	50.33	4.81	74.0	-23.67	Peak	11.00	100	H	Pass
4**	11287.500	46.92	10.28	54.0	-7.08	AV	9.00	100	H	Pass
4	11287.500	55.92	10.28	74.0	-18.08	Peak	9.00	100	H	Pass
5**	14232.500	47.17	11.76	54.0	-6.83	AV	11.00	100	H	Pass
5	14232.500	57.59	11.76	74.0	-16.41	Peak	11.00	100	H	Pass
6**	20541.000	50.97	14.09	54.0	-3.03	AV	12.00	100	H	Pass
6	20541.000	59.58	14.09	74.0	-14.42	Peak	12.00	100	H	Pass

Test result

Project Number: STS1810144

Test Time: 2019-05-27_22.06.01

EUT Name: Bluetooth receiver

Test Engineer: Lion

Mode: BLE-H

Test Standard: FCC 15C

Model: PA-20E

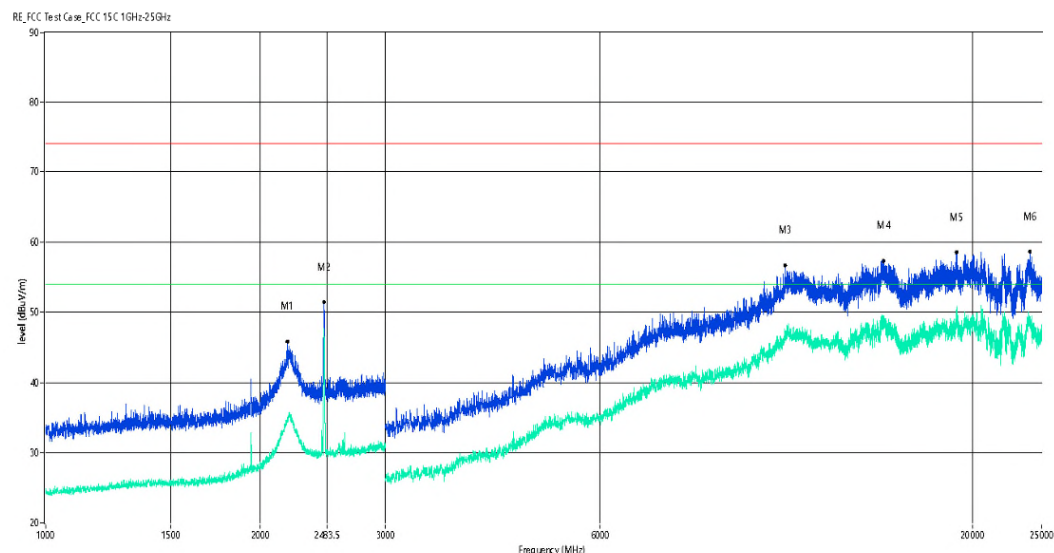
Work Addition: Normal

Temp.(oC): 22.2

Load:

Hum.: 55%

Remark:



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2185.500	35.12	-7.98	54.0	-18.88	AV	8.00	100	V	Pass
1	2185.500	45.92	-7.98	74.0	-28.08	Peak	8.00	100	V	Pass
2**	2461.000	47.66	-12.53	54.0	-6.34	AV	12.00	100	V	Pass
2	2461.000	51.50	-12.53	74.0	-22.50	Peak	12.00	100	V	Pass
3**	10907.500	47.31	10.59	54.0	-6.69	AV	14.00	100	V	Pass
3	10907.500	56.73	10.59	74.0	-17.27	Peak	14.00	100	V	Pass
4**	14970.000	48.53	12.43	54.0	-5.47	AV	10.00	100	V	Pass
4	14970.000	57.33	12.43	74.0	-16.67	Peak	10.00	100	V	Pass
5**	18973.000	48.53	14.76	54.0	-5.47	AV	14.00	100	V	Pass
5	18973.000	58.55	14.76	74.0	-15.45	Peak	14.00	100	V	Pass
6**	24039.250	49.00	15.09	54.0	-5.00	AV	14.00	100	V	Pass
6	24039.250	58.66	15.09	74.0	-15.34	Peak	14.00	100	V	Pass

□

Test result

Project Number: STS1810144

Test Time: 2019-05-27_21.56.21

EUT Name: Bluetooth receiver

Test Engineer: Lion

Mode: BLE-L

Test Standard: FCC 15C

Model: PA-20E

Work Addition: Normal

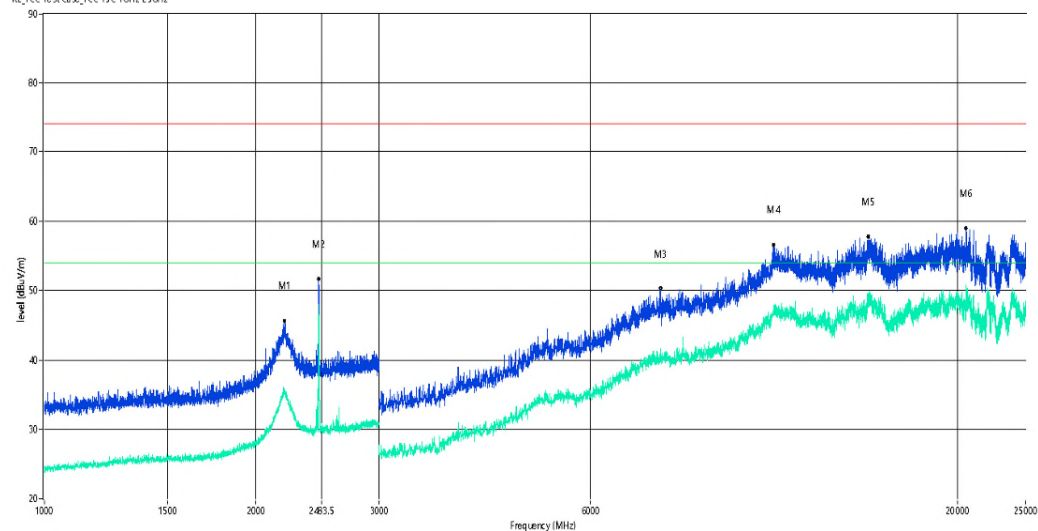
Temp.(oC): 22.2

Load:

Hum.: 55%

Remark:

RE_FCC Test Case_FCC 15C 1GHz-25GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2201.500	35.16	-7.28	54.0	-18.84	AV	11.00	100	H	Pass
1	2201.500	45.63	-7.28	74.0	-28.37	Peak	11.00	100	H	Pass
2**	2460.500	47.78	-12.53	54.0	-6.22	AV	8.00	100	H	Pass
2	2460.500	51.67	-12.53	74.0	-22.33	Peak	8.00	100	H	Pass
3**	7540.000	39.76	4.60	54.0	-14.24	AV	13.00	100	H	Pass
3	7540.000	50.33	4.60	74.0	-23.67	Peak	13.00	100	H	Pass
4**	10930.000	46.66	10.68	54.0	-7.34	AV	3.00	100	H	Pass
4	10930.000	56.61	10.68	74.0	-17.39	Peak	3.00	100	H	Pass
5**	14923.750	49.26	12.56	54.0	-4.74	AV	8.00	100	H	Pass
5	14923.750	57.74	12.56	74.0	-16.26	Peak	8.00	100	H	Pass
6**	20542.751	50.28	14.09	54.0	-3.72	AV	14.00	100	H	Pass
6	20542.751	59.03	14.09	74.0	-14.97	Peak	14.00	100	H	Pass

Test result

Project Number: STS1810144

Test Time: 2019-05-27_21.58.08

EUT Name: Bluetooth receiver

Test Engineer: Lion

Mode: BLE-L

Test Standard: FCC 15C

Model: PA-20E

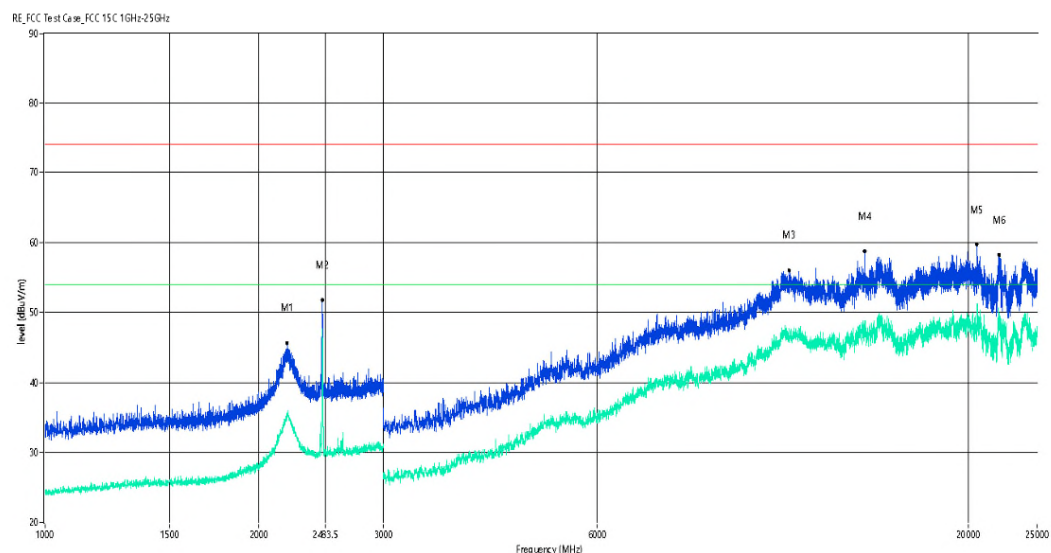
Work Addition: Normal

Temp.(oC): 22.2

Load:

Hum.: 55%

Remark:



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2197.000	35.60	-7.37	54.0	-18.40	AV	2.00	100	V	Pass
1	2197.000	45.72	-7.37	74.0	-28.28	Peak	2.00	100	V	Pass
2**	2460.500	47.44	-12.53	54.0	-6.56	AV	1.00	100	V	Pass
2	2460.500	51.78	-12.53	74.0	-22.22	Peak	1.00	100	V	Pass
3**	11160.001	47.43	10.51	54.0	-6.57	AV	10.00	100	V	Pass
3	11160.001	56.07	10.51	74.0	-17.93	Peak	10.00	100	V	Pass
4**	14270.000	48.80	11.81	54.0	-5.20	AV	8.00	100	V	Pass
4	14270.000	58.77	11.81	74.0	-15.23	Peak	8.00	100	V	Pass
5**	20537.500	50.36	14.08	54.0	-3.64	AV	8.00	100	V	Pass
5	20537.500	59.71	14.08	74.0	-14.29	Peak	8.00	100	V	Pass
6**	22059.999	49.50	9.88	54.0	-4.50	AV	14.00	100	V	Pass
6	22059.999	58.20	9.88	74.0	-15.80	Peak	14.00	100	V	Pass

Test result

Project Number: STS1810144

Test Time: 2019-05-27_22.01.25

EUT Name: Bluetooth receiver

Test Engineer: Lion

Mode: BLE-M

Test Standard: FCC 15C

Model: PA-20E

Work Addition: Normal

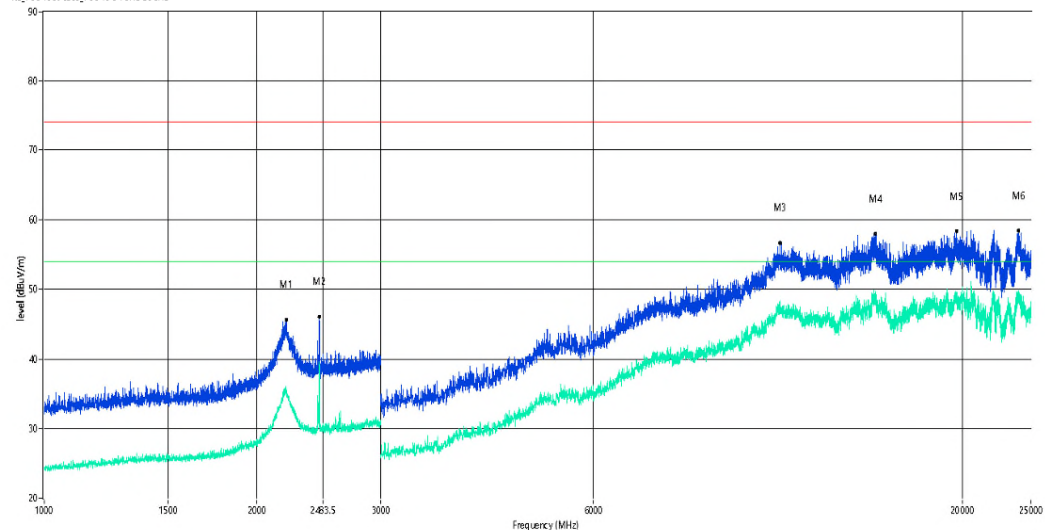
Temp.(oC): 22.2

Load:

Hum.: 55%

Remark:

RE_FCC Test Case_FCC 15C 1GHz-25GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2206.000	35.54	-7.50	54.0	-18.46	AV	7.00	100	H	Pass
1	2206.000	45.69	-7.50	74.0	-28.31	Peak	7.00	100	H	Pass
2**	2456.500	39.43	-12.55	54.0	-14.57	AV	14.00	100	H	Pass
2	2456.500	46.13	-12.55	74.0	-27.87	Peak	14.00	100	H	Pass
3**	11020.000	46.57	10.88	54.0	-7.43	AV	11.00	100	H	Pass
3	11020.000	56.74	10.88	74.0	-17.26	Peak	11.00	100	H	Pass
4**	15040.000	48.85	11.70	54.0	-5.15	AV	8.00	100	H	Pass
4	15040.000	58.03	11.70	74.0	-15.97	Peak	8.00	100	H	Pass
5**	19585.499	48.72	16.83	54.0	-5.28	AV	15.00	100	H	Pass
5	19585.499	58.35	16.83	74.0	-15.65	Peak	15.00	100	H	Pass
6**	23958.749	48.89	15.08	54.0	-5.11	AV	15.00	100	H	Pass
6	23958.749	58.48	15.08	74.0	-15.52	Peak	15.00	100	H	Pass

Test result

Project Number: STS1810144

Test Time: 2019-05-27_21.59.36

EUT Name: Bluetooth receiver

Test Engineer: Lion

Mode: BLE-M

Test Standard: FCC 15C

Model: PA-20E

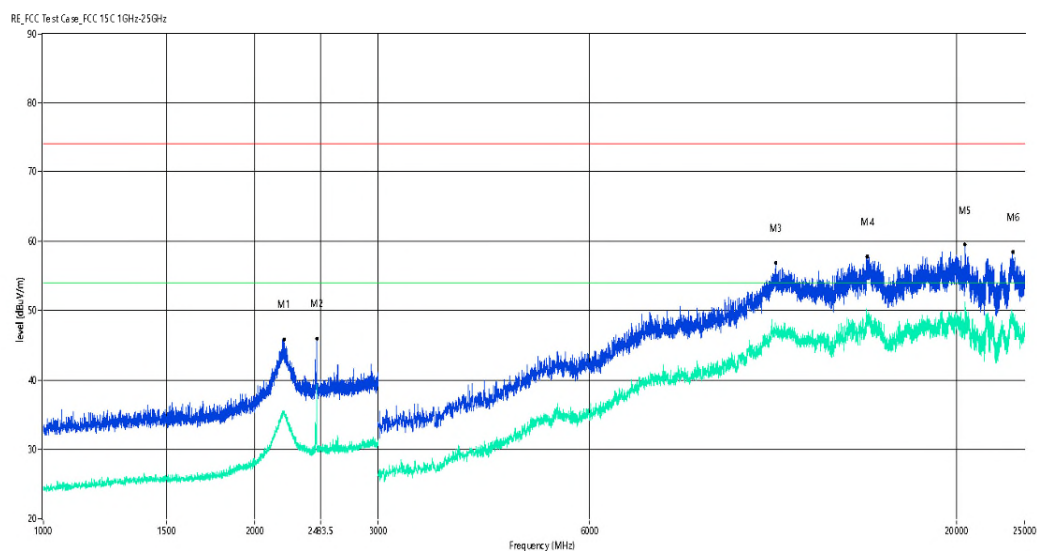
Work Addition: Normal

Temp.(oC): 22.2

Load:

Hum.: 55%

Remark:



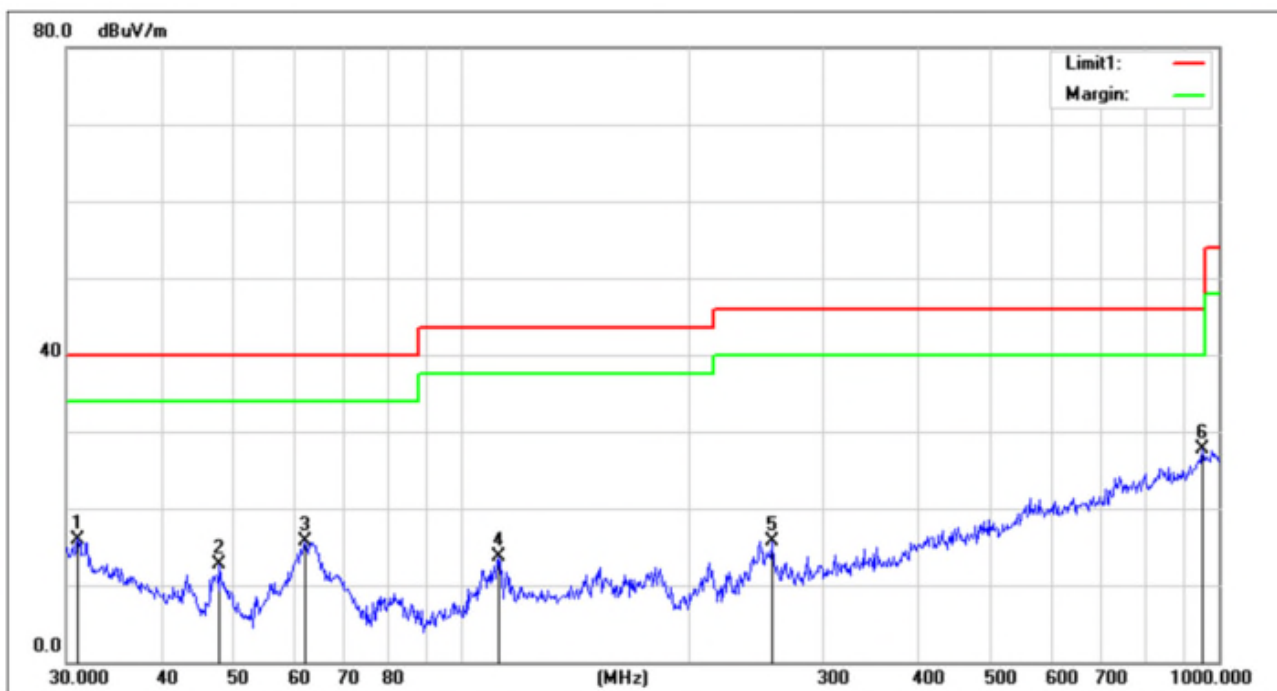
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2203.500	35.11	-7.38	54.0	-18.89	AV	15.00	100	V	Pass
1	2203.500	45.93	-7.38	74.0	-28.07	Peak	15.00	100	V	Pass
2**	2453.500	37.09	-12.56	54.0	-16.91	AV	9.00	100	V	Pass
2	2453.500	46.03	-12.56	74.0	-27.97	Peak	9.00	100	V	Pass
3**	11057.500	47.20	10.72	54.0	-6.80	AV	14.00	100	V	Pass
3	11057.500	56.87	10.72	74.0	-17.13	Peak	14.00	100	V	Pass
4**	14902.500	48.97	12.62	54.0	-5.03	AV	3.00	100	V	Pass
4	14902.500	57.74	12.62	74.0	-16.26	Peak	3.00	100	V	Pass
5**	20537.500	50.13	14.08	54.0	-3.87	AV	10.00	100	V	Pass
5	20537.500	59.56	14.08	74.0	-14.44	Peak	10.00	100	V	Pass
6**	24009.501	48.30	15.09	54.0	-5.70	AV	5.00	100	V	Pass
6	24009.501	58.40	15.09	74.0	-15.60	Peak	5.00	100	V	Pass

Produkte
Products

Job No.: STS1810144
Standard: FCC 15C_03m_QP
Test item: Radiated Emission
Company: Bluetooth receiver
Model: PA-20HB
Mode: BT

Ant.Polar.: Horizontal
Date:2019/5/27 Time:16:11:56
Temp.(C): 24(C)
Hum.(%RH): 65%RH
Power: AC 120V/60Hz
Test By: Lion

Description:



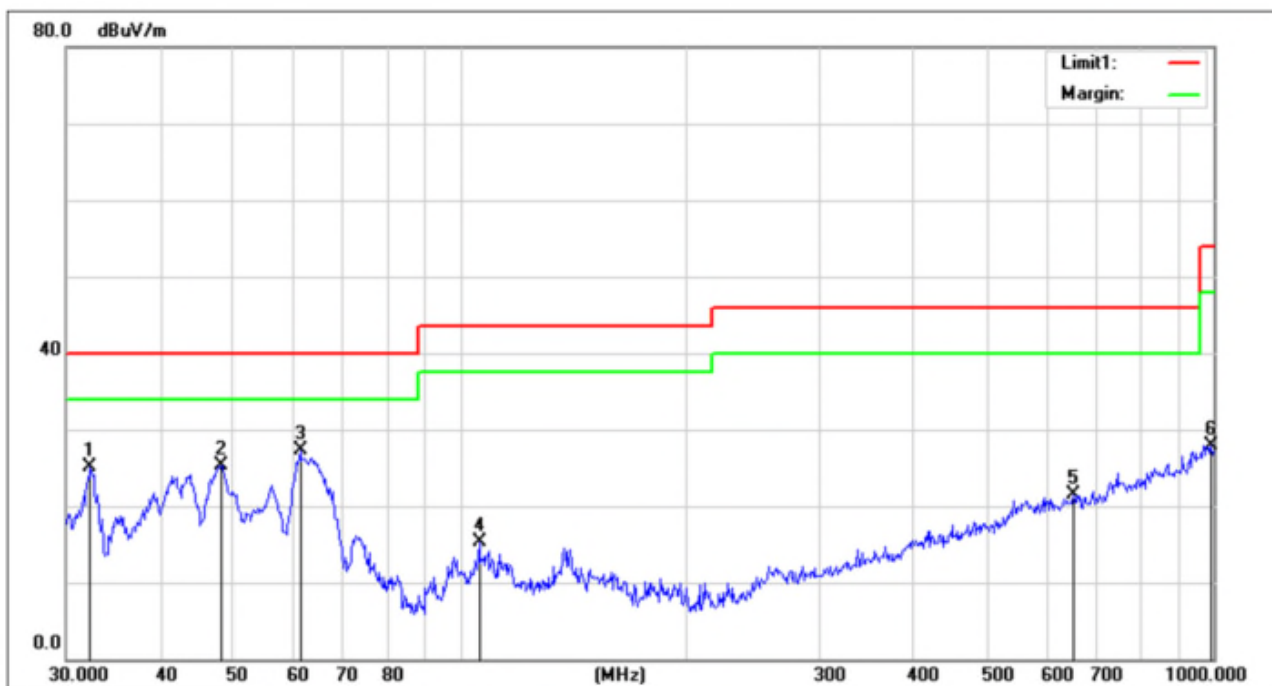
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	31.0705	28.95	-12.95	16.00	40.00	-24.00	100	357.90	peak
2	47.8260	34.37	-21.73	12.64	40.00	-27.36	100	34.50	peak
3	61.9951	41.17	-25.54	15.63	40.00	-24.37	100	55.70	peak
4	111.7380	32.65	-18.99	13.66	43.50	-29.84	100	88.90	peak
5	256.5210	31.63	-15.89	15.74	46.00	-30.26	100	56.90	peak
6	952.0937	28.39	-0.61	27.78	46.00	-18.22	100	34.90	peak

Produkte
Products

Job No.: STS1810144
Standard: FCC 15C_03m_QP
Test item: Radiated Emission
Company: Bluetooth receiver
Model: PA-20HB
Mode: BT

Ant.Polar.: Vertical
Date:2019/5/27 Time:16:08:34
Temp.(C): 24(C)
Hum.(%RH): 65%RH
Power: AC 120V/60Hz
Test By: Lion

Description:



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	32.2924	38.60	-13.56	25.04	40.00	-14.96	100	68.60	peak
2	48.1625	47.28	-21.91	25.37	40.00	-14.63	100	123.70	peak
3	61.3462	52.78	-25.57	27.21	40.00	-12.79	100	178.90	peak
4	106.0126	34.95	-19.58	15.37	43.50	-28.13	100	112.40	peak
5	651.9416	28.19	-6.60	21.59	46.00	-24.41	100	189.70	peak
6	993.0113	28.21	-0.27	27.94	54.00	-26.06	100	156.90	peak

Test result

Project Number: STS1810144

Test Time: 2019-05-28_01.15.22

EUT Name: Bluetooth receiver

Test Engineer: Lion

Mode: BT-G-H

Test Standard: FCC 15C

Model: PA-20HB

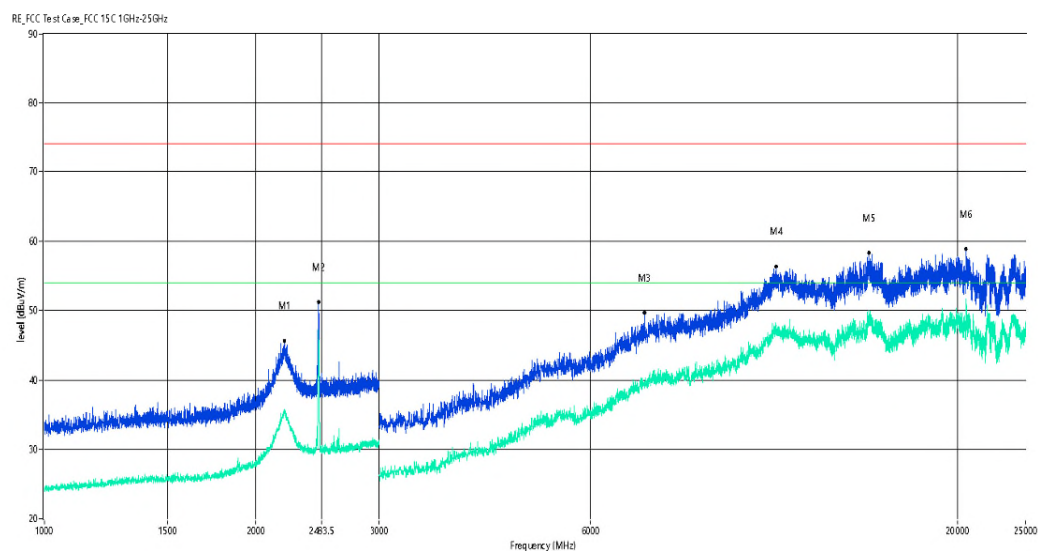
Work Addition: Normal

Temp.(oC): 22.2

Load:

Hum.: 55%

Remark:



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2200.000	35.27	-7.21	54.0	-18.73	AV	1.00	100	H	Pass
1	2200.000	45.71	-7.21	74.0	-28.29	Peak	1.00	100	H	Pass
2**	2460.500	47.14	-12.53	54.0	-6.86	AV	10.00	100	H	Pass
2	2460.500	51.27	-12.53	74.0	-22.73	Peak	10.00	100	H	Pass
3**	7167.500	39.79	3.77	54.0	-14.21	AV	15.00	100	H	Pass
3	7167.500	49.75	3.77	74.0	-24.25	Peak	15.00	100	H	Pass
4**	11032.500	47.05	10.83	54.0	-6.95	AV	8.00	100	H	Pass
4	11032.500	56.40	10.83	74.0	-17.60	Peak	8.00	100	H	Pass
5**	14952.500	49.93	12.48	54.0	-4.07	AV	10.00	100	H	Pass
5	14952.500	58.37	12.48	74.0	-15.63	Peak	10.00	100	H	Pass
6**	20542.751	51.70	14.09	54.0	-2.30	AV	14.00	100	H	Pass
6	20542.751	58.88	14.09	74.0	-15.12	Peak	14.00	100	H	Pass

Test result

Project Number: STS1810144

Test Time: 2019-05-28_01.16.46

EUT Name: Bluetooth receiver

Test Engineer: Lion

Mode: BT-G-H

Test Standard: FCC 15C

Model: PA-20HB

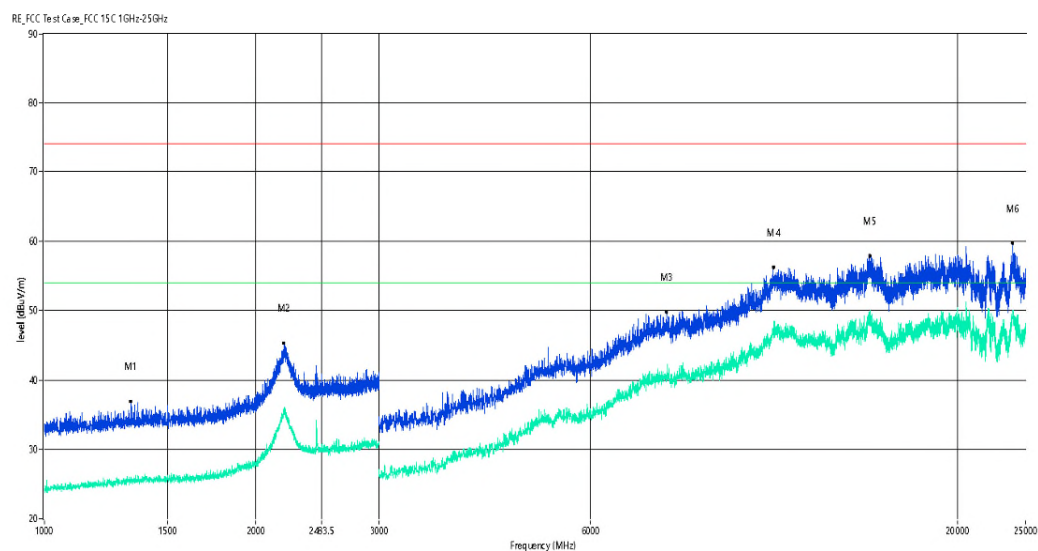
Work Addition: Normal

Temp.(oC): 22.2

Load:

Hum.: 55%

Remark:



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1329.000	25.50	-17.50	54.0	-28.50	AV	1.00	100	V	Pass
1	1329.000	36.91	-17.50	74.0	-37.09	Peak	1.00	100	V	Pass
2**	2196.000	35.40	-7.42	54.0	-18.60	AV	15.00	100	V	Pass
2	2196.000	45.37	-7.42	74.0	-28.63	Peak	15.00	100	V	Pass
3**	7700.000	40.51	5.05	54.0	-13.49	AV	6.00	100	V	Pass
3	7700.000	49.82	5.05	74.0	-24.18	Peak	6.00	100	V	Pass
4**	10917.500	47.46	10.63	54.0	-6.54	AV	9.00	100	V	Pass
4	10917.500	56.20	10.63	74.0	-17.80	Peak	9.00	100	V	Pass
5**	14963.750	49.33	12.45	54.0	-4.67	AV	15.00	100	V	Pass
5	14963.750	57.91	12.45	74.0	-16.09	Peak	15.00	100	V	Pass
6**	23918.500	49.09	15.08	54.0	-4.91	AV	9.00	100	V	Pass
6	23918.500	59.77	15.08	74.0	-14.23	Peak	9.00	100	V	Pass

Test result

Project Number: STS1810144

Test Time: 2019-05-28_01.10.32

EUT Name: Bluetooth receiver

Test Engineer: Lion

Mode: BT-G-L

Test Standard: FCC 15C

Model: PA-20HB

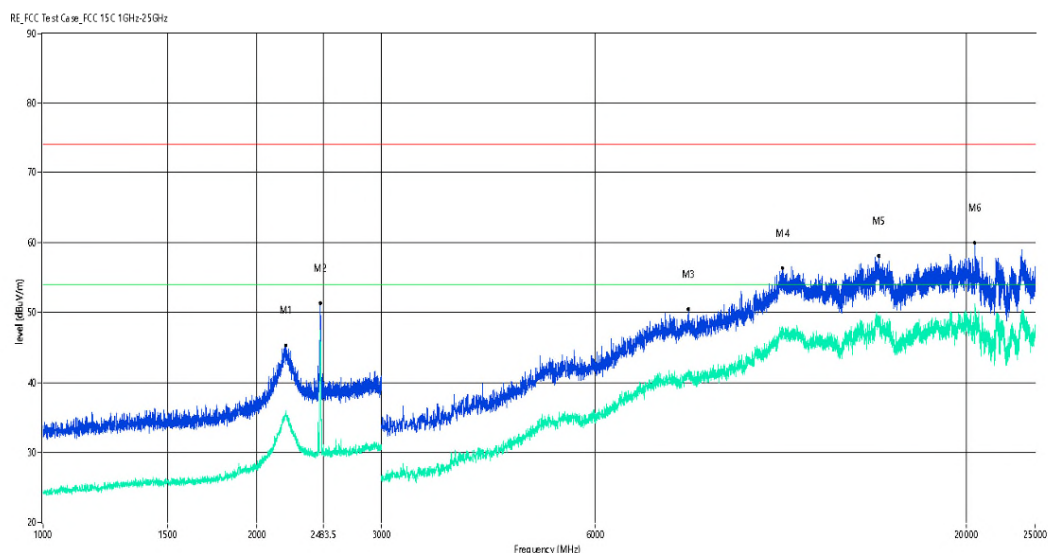
Work Addition: Normal

Temp.(oC): 22.2

Load:

Hum.: 55%

Remark:



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2200.500	35.42	-7.23	54.0	-18.58	AV	6.00	100	H	Pass
1	2200.500	45.39	-7.23	74.0	-28.61	Peak	6.00	100	H	Pass
2**	2460.500	47.24	-12.53	54.0	-6.76	AV	9.00	100	H	Pass
2	2460.500	51.32	-12.53	74.0	-22.68	Peak	9.00	100	H	Pass
3**	8115.000	40.85	5.36	54.0	-13.15	AV	6.00	100	H	Pass
3	8115.000	50.52	5.36	74.0	-23.48	Peak	6.00	100	H	Pass
4**	11005.000	47.14	10.95	54.0	-6.86	AV	15.00	100	H	Pass
4	11005.000	56.33	10.95	74.0	-17.67	Peak	15.00	100	H	Pass
5**	15037.500	48.29	11.74	54.0	-5.71	AV	3.00	100	H	Pass
5	15037.500	58.17	11.74	74.0	-15.83	Peak	3.00	100	H	Pass
6**	20541.000	50.49	14.09	54.0	-3.51	AV	14.00	100	H	Pass
6	20541.000	59.96	14.09	74.0	-14.04	Peak	14.00	100	H	Pass

Test result

Project Number: STS1810144

Test Time: 2019-05-28_01.11.45

EUT Name: Bluetooth receiver

Test Engineer: Lion

Mode: BT-G-L

Test Standard: FCC 15C

Model: PA-20HB

Work Addition: Normal

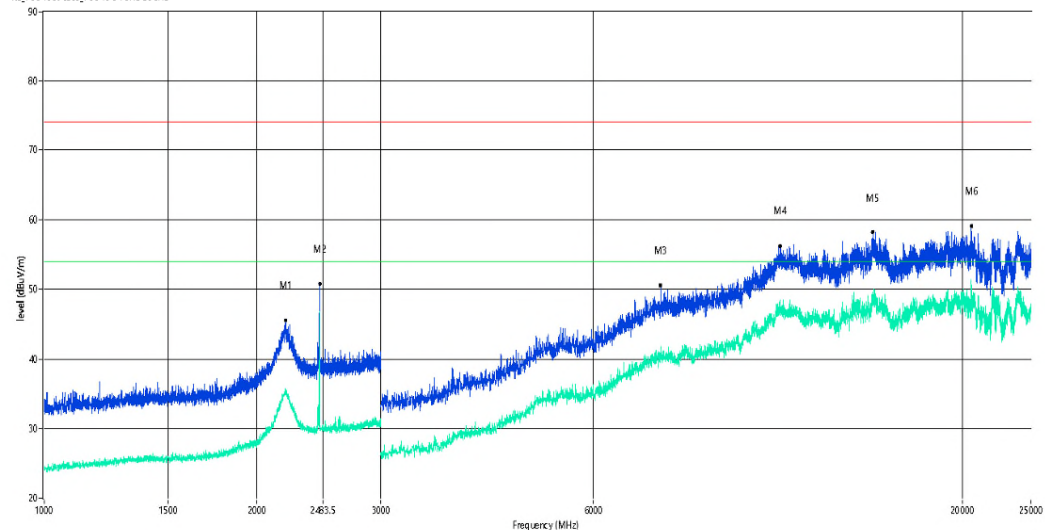
Temp.(oC): 22.2

Load:

Hum.: 55%

Remark:

RE_FCC Test Case_FCC 15C 1GHz-25GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2201.500	35.22	-7.28	54.0	-18.78	AV	14.00	100	V	Pass
1	2201.500	45.59	-7.28	74.0	-28.41	Peak	14.00	100	V	Pass
2**	2460.000	46.80	-12.53	54.0	-7.20	AV	1.00	100	V	Pass
2	2460.000	50.84	-12.53	74.0	-23.16	Peak	1.00	100	V	Pass
3**	7467.500	40.94	4.49	54.0	-13.06	AV	6.00	100	V	Pass
3	7467.500	50.60	4.49	74.0	-23.40	Peak	6.00	100	V	Pass
4**	11020.000	46.96	10.88	54.0	-7.04	AV	2.00	100	V	Pass
4	11020.000	56.24	10.88	74.0	-17.76	Peak	2.00	100	V	Pass
5**	14919.999	48.37	12.57	54.0	-5.63	AV	1.00	100	V	Pass
5	14919.999	58.18	12.57	74.0	-15.82	Peak	1.00	100	V	Pass
6**	20565.500	50.69	14.12	54.0	-3.31	AV	15.00	100	V	Pass
6	20565.500	59.08	14.12	74.0	-14.92	Peak	15.00	100	V	Pass



Test result

Project Number: STS1810144

Test Time: 2019-05-28_01.14.10

EUT Name: Bluetooth receiver

Test Engineer: Lion

Mode: BT-G-M

Test Standard: FCC 15C

Model: PA-20HB

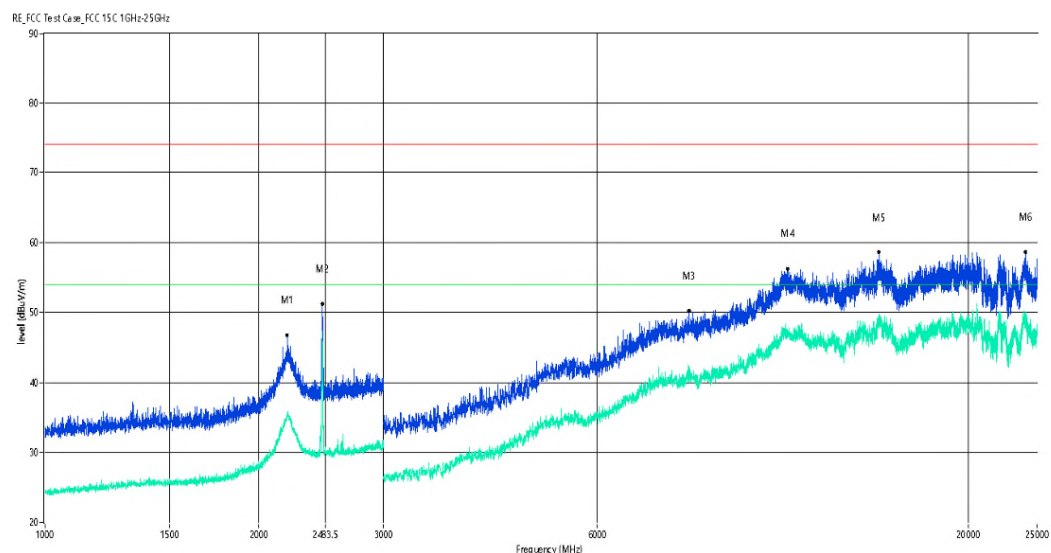
Work Addition: Normal

Temp.(oC): 22.2

Load:

Hum.: 55%

Remark:



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2195.000	35.34	-7.47	54.0	-18.66	AV	6.00	100	H	Pass
1	2195.000	46.79	-7.47	74.0	-27.21	Peak	6.00	100	H	Pass
2**	2460.500	47.37	-12.53	54.0	-6.63	AV	10.00	100	H	Pass
2	2460.500	51.28	-12.53	74.0	-22.72	Peak	10.00	100	H	Pass
3**	8082.500	40.82	5.36	54.0	-13.18	AV	5.00	100	H	Pass
3	8082.500	50.23	5.36	74.0	-23.77	Peak	5.00	100	H	Pass
4**	11127.500	46.58	10.53	54.0	-7.42	AV	15.00	100	H	Pass
4	11127.500	56.29	10.53	74.0	-17.71	Peak	15.00	100	H	Pass
5**	14958.750	48.82	12.47	54.0	-5.18	AV	3.00	100	H	Pass
5	14958.750	58.61	12.47	74.0	-15.39	Peak	3.00	100	H	Pass
6**	24041.001	49.71	15.09	54.0	-4.29	AV	14.00	100	H	Pass
6	24041.001	58.65	15.09	74.0	-15.35	Peak	14.00	100	H	Pass

Test result

Project Number: STS1810144

Test Time: 2019-05-28_01.12.57

EUT Name: Bluetooth receiver

Test Engineer: Lion

Mode: BT-G-M

Test Standard: FCC 15C

Model: PA-20HB

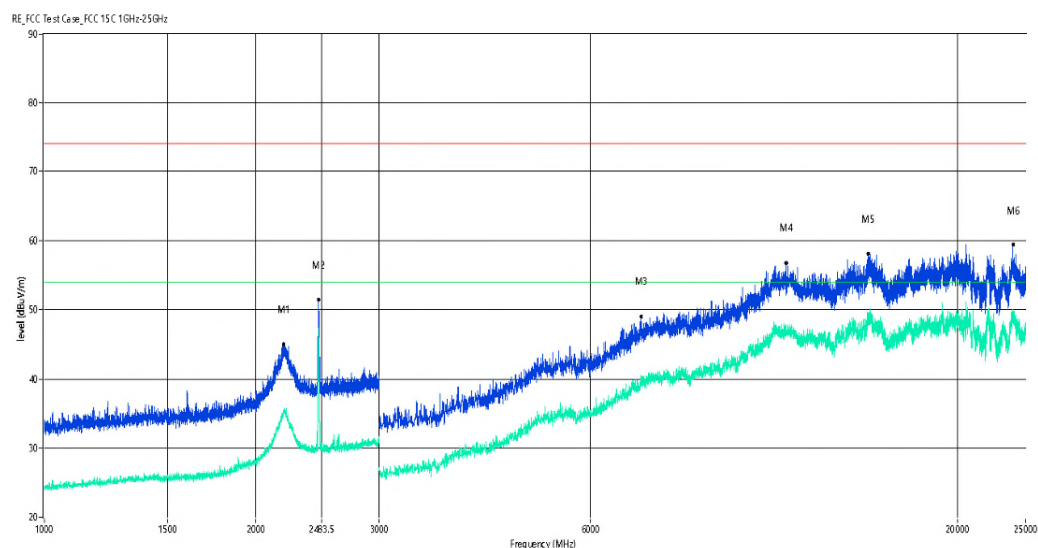
Work Addition: Normal

Temp.(oC): 22.2

Load:

Hum.: 55%

Remark:

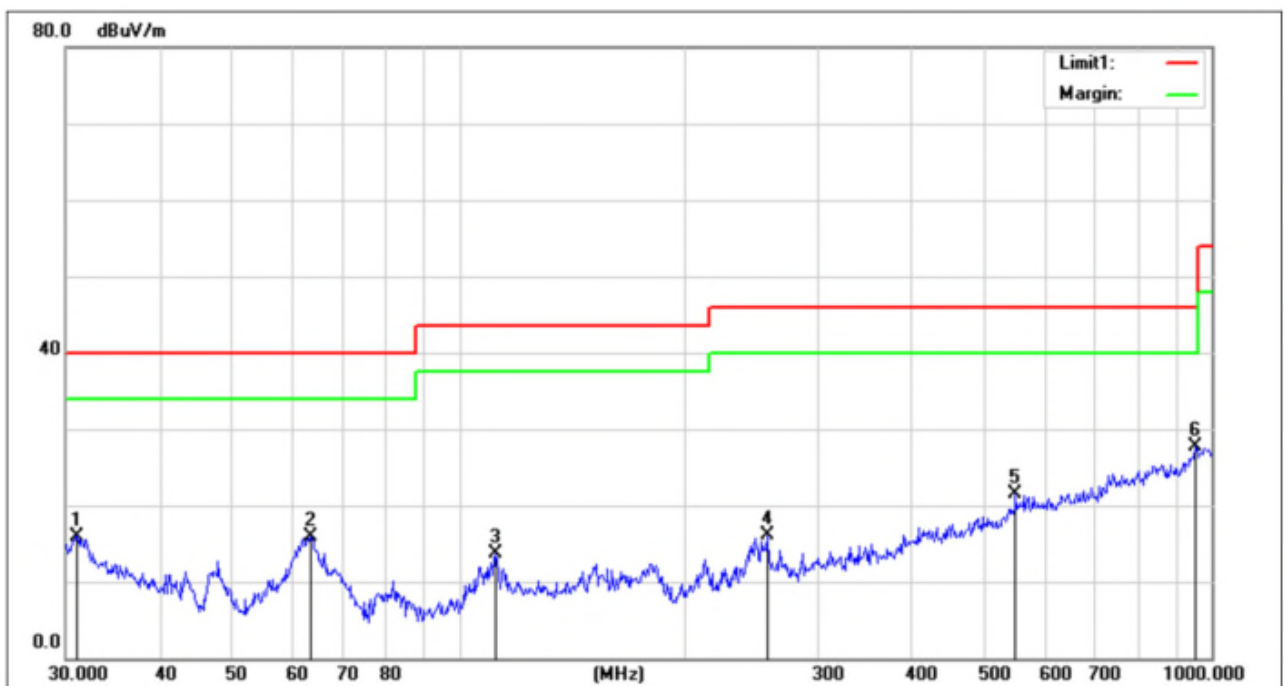


No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2193.500	35.46	-7.55	54.0	-18.54	AV	5.00	100	V	Pass
1	2193.500	44.98	-7.55	74.0	-29.02	Peak	5.00	100	V	Pass
2**	2460.000	46.80	-12.53	54.0	-7.20	AV	10.00	100	V	Pass
2	2460.000	51.49	-12.53	74.0	-22.51	Peak	10.00	100	V	Pass
3**	7075.000	39.50	3.75	54.0	-14.50	AV	5.00	100	V	Pass
3	7075.000	49.09	3.75	74.0	-24.91	Peak	5.00	100	V	Pass
4**	11387.500	47.08	10.79	54.0	-6.92	AV	8.00	100	V	Pass
4	11387.500	56.82	10.79	74.0	-17.18	Peak	8.00	100	V	Pass
5**	14897.500	49.03	12.60	54.0	-4.97	AV	13.00	100	V	Pass
5	14897.500	58.13	12.60	74.0	-15.87	Peak	13.00	100	V	Pass
6**	23958.749	48.76	15.08	54.0	-5.24	AV	9.00	100	V	Pass
6	23958.749	59.38	15.08	74.0	-14.62	Peak	9.00	100	V	Pass

Job No.: STS1810144
Standard: FCC 15C_03m_QP
Test item: Radiated Emission
Company: Bluetooth receiver
Model: PA-20HB
Mode: BLE

Ant.Polar.: Horizontal
Date:2019/5/27 Time:16:15:52
Temp.(C): 24(C)
Hum.(%RH): 65%RH
Power: AC 120V/60Hz
Test By: Lion

Description:



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	31.0705	28.95	-12.95	16.00	40.00	-24.00	100	35.00	peak
2	63.5356	41.30	-25.46	15.84	40.00	-24.16	100	133.50	peak
3	111.7380	32.65	-18.99	13.66	43.50	-29.84	100	40.70	peak
4	256.5210	31.90	-15.89	16.01	46.00	-29.99	100	57.70	peak
5	549.0193	28.98	-7.40	21.58	46.00	-24.42	100	350.00	peak
6	952.0937	28.39	-0.61	27.78	46.00	-18.22	100	180.0	peak

Produkte
Products

Job No.: STS1810144
Standard: FCC 15C_03m_QP
Test item: Radiated Emission
Company: Bluetooth receiver
Model: PA-20HB
Mode: BLE

Ant.Polar.: Vertical
Date:2019/5/27 Time:16:19:59
Temp.(C): 24(C)
Hum.(%RH): 65%RH
Power: AC 120V/60Hz
Test By: Lion

Description:



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	32.1794	37.10	-13.51	23.59	40.00	-16.41	100	77.60	peak
2	47.8260	47.24	-21.73	25.51	40.00	-14.49	100	105.90	peak
3	63.5356	51.81	-25.46	26.35	40.00	-13.65	100	23.80	peak
4	106.7587	33.03	-19.50	13.53	43.50	-29.97	100	360.00	peak
5	294.1136	28.32	-15.83	12.49	46.00	-33.51	100	56.30	peak
6	982.6200	27.92	0.13	28.05	54.00	-25.95	100	77.90	peak

Test result

Project Number: STS1810144

Test Time: 2019-05-28_01.08.56

EUT Name: Bluetooth receiver

Test Engineer: Lion

Mode: BLE-H

Test Standard: FCC 15C

Model: PA-20HB

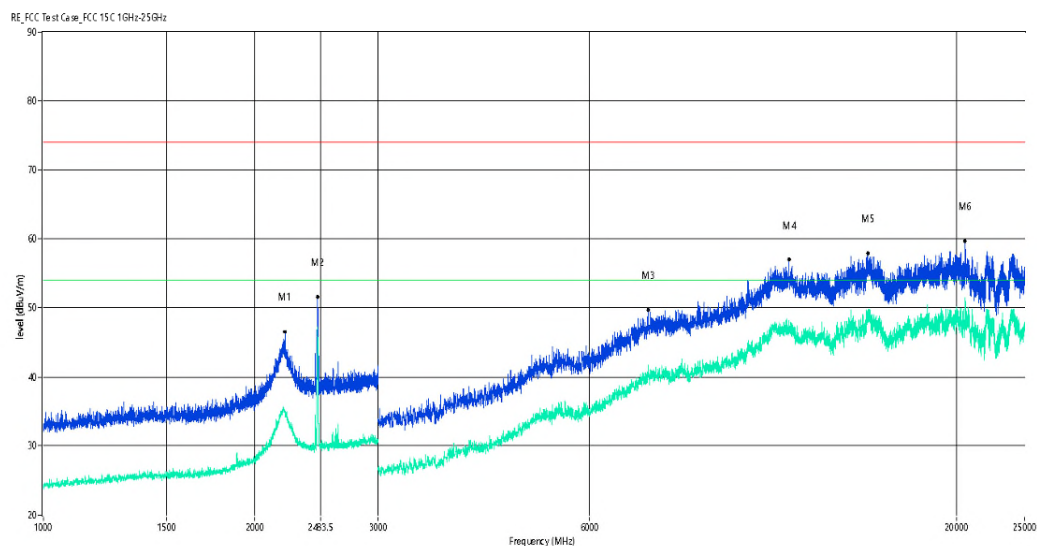
Work Addition: Normal

Temp.(oC): 22.2

Load:

Hum.: 55%

Remark:



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2211.000	35.04	-7.75	54.0	-18.96	AV	1.00	100	H	Pass
1	2211.000	46.59	-7.75	74.0	-27.41	Peak	1.00	100	H	Pass
2**	2460.500	47.14	-12.53	54.0	-6.86	AV	7.00	100	H	Pass
2	2460.500	51.53	-12.53	74.0	-22.47	Peak	7.00	100	H	Pass
3**	7267.500	40.38	4.22	54.0	-13.62	AV	15.00	100	H	Pass
3	7267.500	49.73	4.22	74.0	-24.27	Peak	15.00	100	H	Pass
4**	11542.500	47.11	10.98	54.0	-6.89	AV	10.00	100	H	Pass
4	11542.500	56.98	10.98	74.0	-17.02	Peak	10.00	100	H	Pass
5**	14948.750	49.14	12.49	54.0	-4.86	AV	2.00	100	H	Pass
5	14948.750	57.91	12.49	74.0	-16.09	Peak	2.00	100	H	Pass
6**	20534.000	50.90	14.08	54.0	-3.10	AV	5.00	100	H	Pass
6	20534.000	59.63	14.08	74.0	-14.37	Peak	5.00	100	H	Pass

Test result

Project Number: STS1810144

Test Time: 2019-05-28_01.07.40

EUT Name: Bluetooth receiver

Test Engineer: Lion

Mode: BLE-H

Test Standard: FCC 15C

Model: PA-20HB

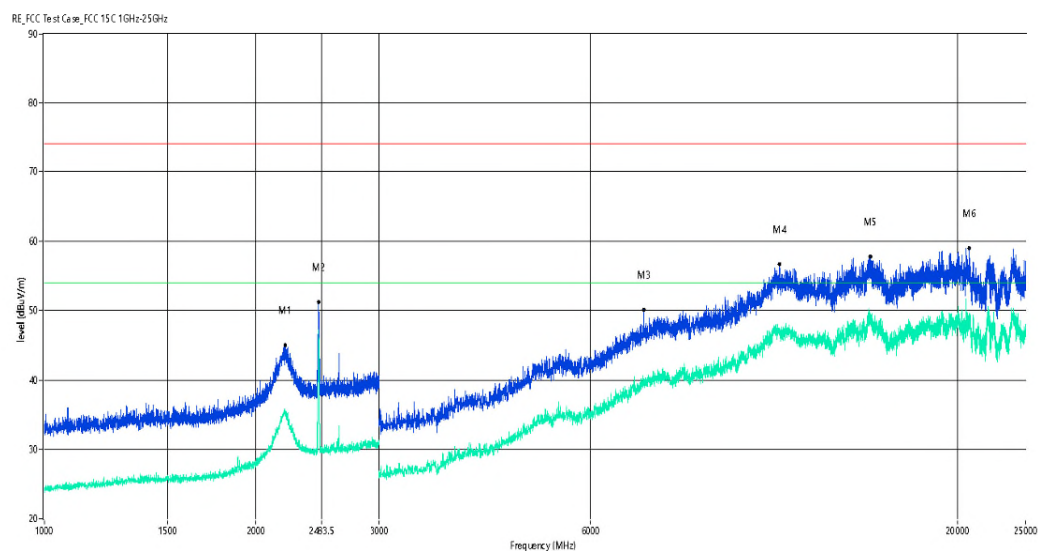
Work Addition: Normal

Temp.(oC): 22.2

Load:

Hum.: 55%

Remark:



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2204.500	35.26	-7.43	54.0	-18.74	AV	3.00	100	V	Pass
1	2204.500	44.98	-7.43	74.0	-29.02	Peak	3.00	100	V	Pass
2**	2460.500	47.24	-12.53	54.0	-6.76	AV	12.00	100	V	Pass
2	2460.500	51.23	-12.53	74.0	-22.77	Peak	12.00	100	V	Pass
3**	7147.500	39.44	3.84	54.0	-14.56	AV	8.00	100	V	Pass
3	7147.500	50.19	3.84	74.0	-23.81	Peak	8.00	100	V	Pass
4**	11147.500	47.22	10.52	54.0	-6.78	AV	10.00	100	V	Pass
4	11147.500	56.64	10.52	74.0	-17.36	Peak	10.00	100	V	Pass
5**	15007.500	48.43	12.23	54.0	-5.57	AV	3.00	100	V	Pass
5	15007.500	57.73	12.23	74.0	-16.27	Peak	3.00	100	V	Pass
6**	20745.751	48.90	14.38	54.0	-5.10	AV	9.00	100	V	Pass
6	20745.751	59.02	14.38	74.0	-14.98	Peak	9.00	100	V	Pass

Test result

Project Number: STS1810144

Test Time: 2019-05-28_01.03.26

EUT Name: Bluetooth receiver

Test Engineer: Lion

Mode: BLE-L

Test Standard: FCC 15C

Model: PA-20HB

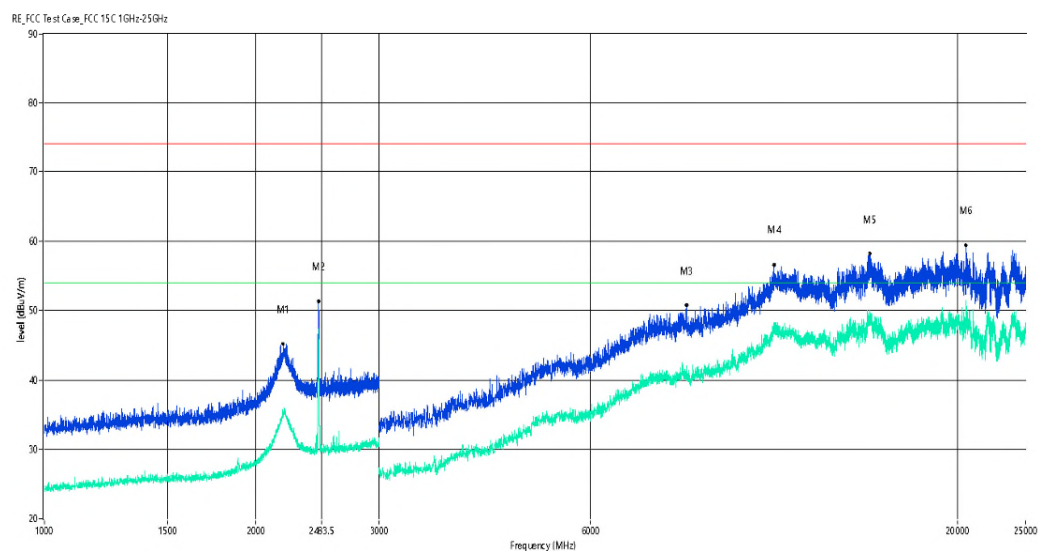
Work Addition: Normal

Temp.(oC): 22.2

Load:

Hum.: 55%

Remark:



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2191.500	34.94	-7.66	54.0	-19.06	AV	4.00	100	H	Pass
1	2191.500	45.18	-7.66	74.0	-28.82	Peak	4.00	100	H	Pass
2**	2460.500	47.19	-12.53	54.0	-6.81	AV	15.00	100	H	Pass
2	2460.500	51.33	-12.53	74.0	-22.67	Peak	15.00	100	H	Pass
3**	8212.500	40.89	4.77	54.0	-13.11	AV	4.00	100	H	Pass
3	8212.500	50.76	4.77	74.0	-23.24	Peak	4.00	100	H	Pass
4**	10952.500	46.85	10.78	54.0	-7.15	AV	14.00	100	H	Pass
4	10952.500	56.56	10.78	74.0	-17.44	Peak	14.00	100	H	Pass
5**	14962.500	49.23	12.45	54.0	-4.77	AV	3.00	100	H	Pass
5	14962.500	58.17	12.45	74.0	-15.83	Peak	3.00	100	H	Pass
6**	20542.751	50.60	14.09	54.0	-3.40	AV	10.00	100	H	Pass
6	20542.751	59.46	14.09	74.0	-14.54	Peak	10.00	100	H	Pass

Test result

Project Number: STS1810144

Test Time: 2019-05-28_01.02.07

EUT Name: Bluetooth receiver

Test Engineer: Lion

Mode: BLE-L

Test Standard: FCC 15C

Model: PA-20HB

Work Addition: Normal

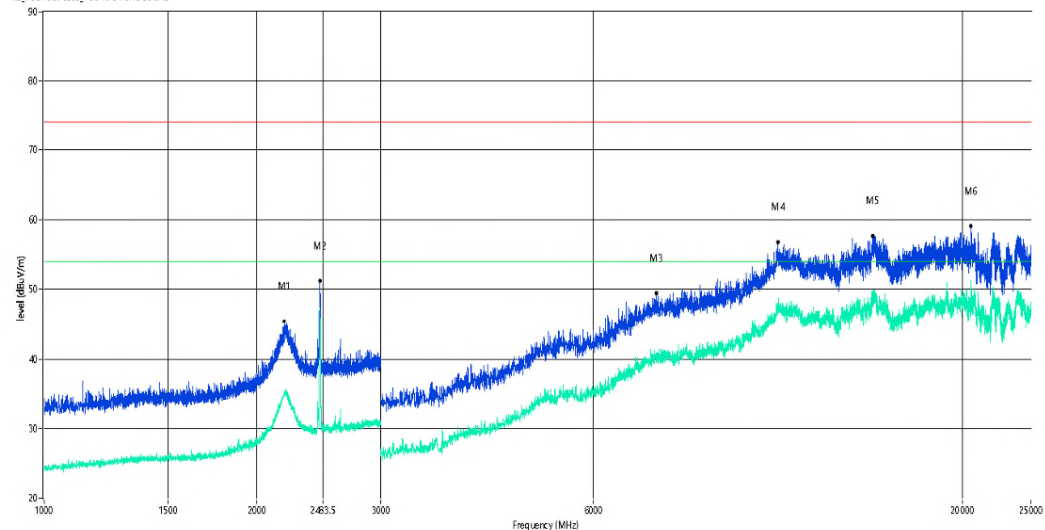
Temp.(oC): 22.2

Load:

Hum.: 55%

Remark:

RE_FCC Test Case_FCC 15C 1GHz-25GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2191.000	35.27	-7.69	54.0	-18.73	AV	13.00	100	V	Pass
1	2191.000	45.42	-7.69	74.0	-28.58	Peak	13.00	100	V	Pass
2**	2460.000	46.99	-12.53	54.0	-7.01	AV	2.00	100	V	Pass
2	2460.000	51.25	-12.53	74.0	-22.75	Peak	2.00	100	V	Pass
3**	7365.000	40.38	4.43	54.0	-13.62	AV	15.00	100	V	Pass
3	7365.000	49.52	4.43	74.0	-24.48	Peak	15.00	100	V	Pass
4**	10952.500	47.57	10.78	54.0	-6.43	AV	7.00	100	V	Pass
4	10952.500	56.77	10.78	74.0	-17.23	Peak	7.00	100	V	Pass
5**	14922.500	48.87	12.57	54.0	-5.13	AV	15.00	100	V	Pass
5	14922.500	57.71	12.57	74.0	-16.29	Peak	15.00	100	V	Pass
6**	20534.000	50.65	14.08	54.0	-3.35	AV	15.00	100	V	Pass
6	20534.000	59.13	14.08	74.0	-14.87	Peak	15.00	100	V	Pass

Test result

Project Number: STS1810144

Test Time: 2019-05-28_01.05.12

EUT Name: Bluetooth receiver

Test Engineer: Lion

Mode: BLE-M

Test Standard: FCC 15C

Model: PA-20HB

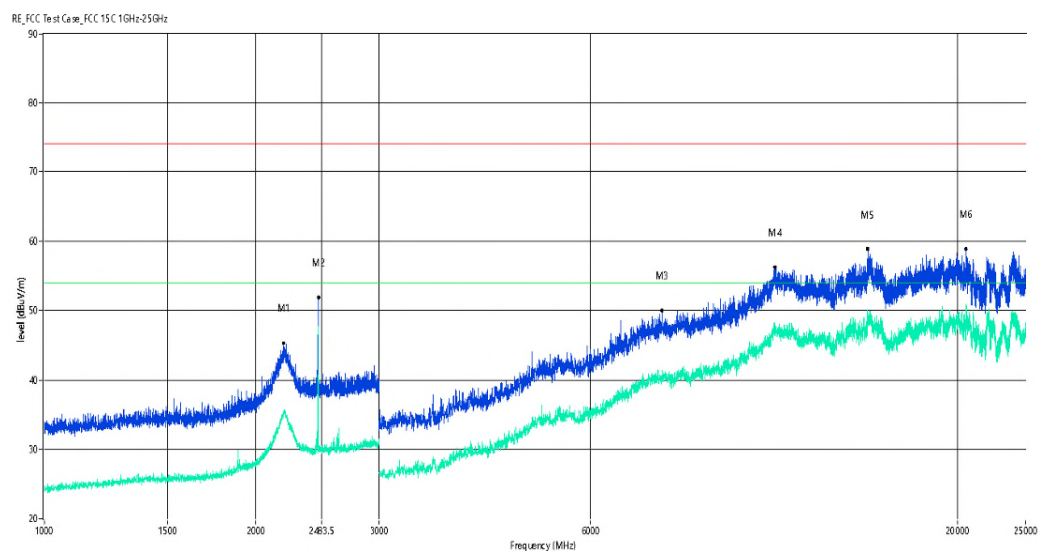
Work Addition: Normal

Temp.(oC): 22.2

Load:

Hum.: 55%

Remark:



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2193.000	35.13	-7.58	54.0	-18.87	AV	14.00	100	H	Pass
1	2193.000	45.38	-7.58	74.0	-28.62	Peak	14.00	100	H	Pass
2**	2460.500	47.60	-12.53	54.0	-6.40	AV	13.00	100	H	Pass
2	2460.500	51.89	-12.53	74.0	-22.11	Peak	13.00	100	H	Pass
3**	7585.000	39.86	4.68	54.0	-14.14	AV	4.00	100	H	Pass
3	7585.000	50.02	4.68	74.0	-23.98	Peak	4.00	100	H	Pass
4**	10985.000	47.41	10.91	54.0	-6.59	AV	10.00	100	H	Pass
4	10985.000	56.22	10.91	74.0	-17.78	Peak	10.00	100	H	Pass
5**	14892.500	49.22	12.53	54.0	-4.78	AV	8.00	100	H	Pass
5	14892.500	58.87	12.53	74.0	-15.13	Peak	8.00	100	H	Pass
6**	20539.251	50.36	14.09	54.0	-3.64	AV	6.00	100	H	Pass
6	20539.251	58.91	14.09	74.0	-15.09	Peak	6.00	100	H	Pass

Test result

Project Number: STS1810144

Test Time: 2019-05-28_01.06.23

EUT Name: Bluetooth receiver

Test Engineer: Lion

Mode: BLE-M

Test Standard: FCC 15C

Model: PA-20HB

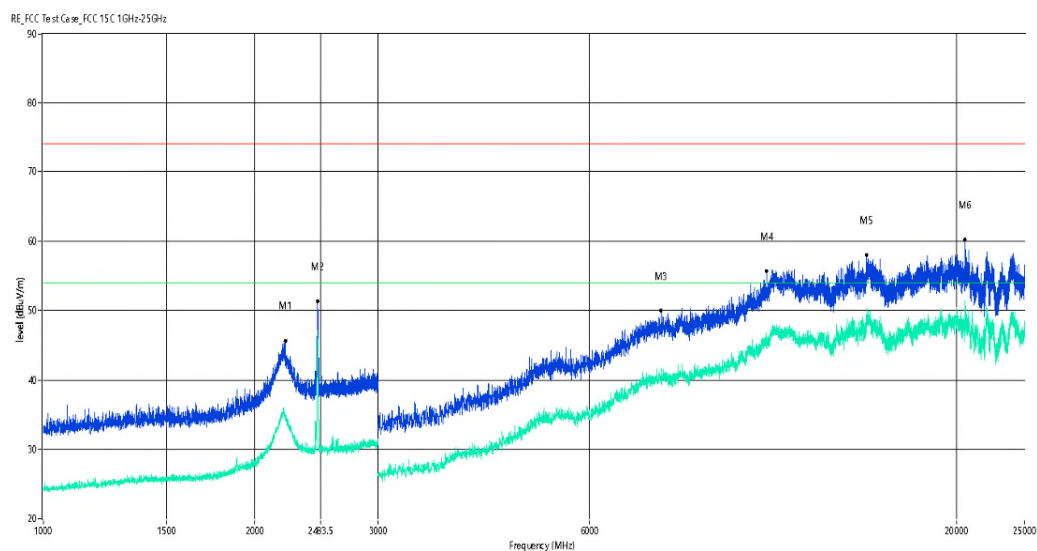
Work Addition: Normal

Temp.(oC): 22.2

Load:

Hum.: 55%

Remark:



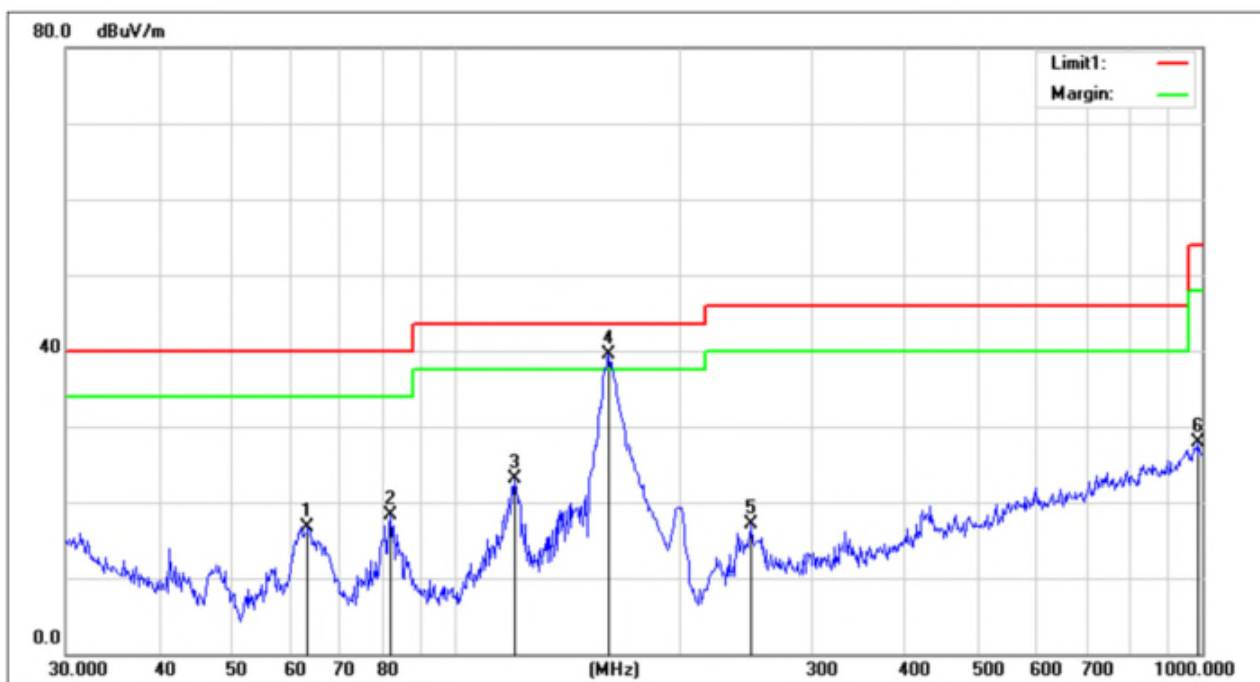
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2215.000	34.59	-7.94	54.0	-19.41	AV	15.00	100	V	Pass
1	2215.000	45.66	-7.94	74.0	-28.34	Peak	15.00	100	V	Pass
2**	2460.500	47.14	-12.53	54.0	-6.86	AV	12.00	100	V	Pass
2	2460.500	51.33	-12.53	74.0	-22.67	Peak	12.00	100	V	Pass
3**	7585.000	40.82	4.68	54.0	-13.18	AV	3.00	100	V	Pass
3	7585.000	49.99	4.68	74.0	-24.01	Peak	3.00	100	V	Pass
4**	10722.500	46.07	9.07	54.0	-7.93	AV	2.00	100	V	Pass
4	10722.500	55.66	9.07	74.0	-18.34	Peak	2.00	100	V	Pass
5**	14862.500	47.42	12.14	54.0	-6.58	AV	10.00	100	V	Pass
5	14862.500	57.99	12.14	74.0	-16.01	Peak	10.00	100	V	Pass
6**	20534.000	51.36	14.08	54.0	-2.64	AV	8.00	100	V	Pass
6	20534.000	60.20	14.08	74.0	-13.80	Peak	8.00	100	V	Pass

Produkte
Products

Job No.: STS1810144
Standard: FCC 15C_03m_QP
Test item: Radiated Emission
Company: Bluetooth receiver
Model: PA-40B
Mode: BT

Ant.Polar.: Horizontal
Date:2019/5/27 Time:15:44:11
Temp.(C): 24(C)
Hum.(%RH): 65%RH
Power: AC 120V/60Hz
Test By: Lion

Description:

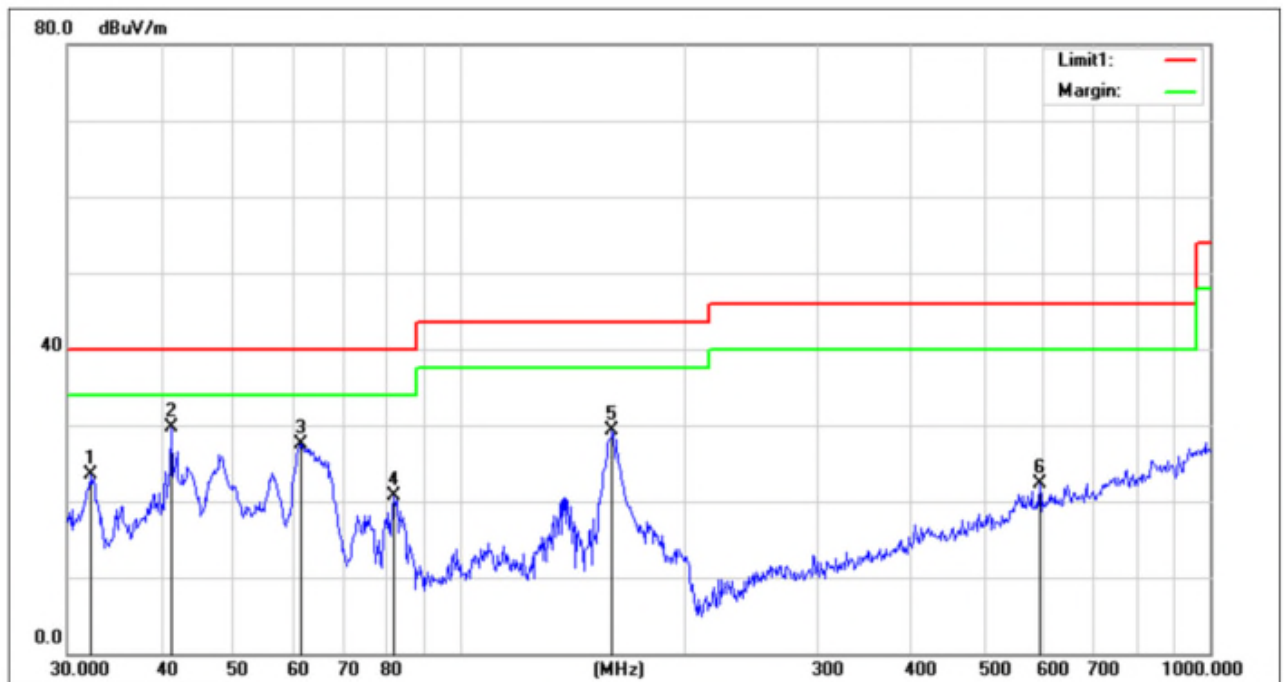


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	63.3132	42.19	-25.47	16.72	40.00	-23.28	100	0.00	peak
2	81.7831	41.05	-22.70	18.35	40.00	-21.65	100	89.00	peak
3	119.8555	41.52	-18.46	23.06	43.50	-20.44	100	57.40	peak
4	160.3456	58.75	-19.22	39.53	43.50	-3.97	100	78.90	peak
5	248.5518	34.25	-17.06	17.19	46.00	-28.81	100	158.70	peak

Job No.: STS1810144
Standard: FCC 15C_03m_QP
Test item: Radiated Emission
Company: Bluetooth receiver
Model: PA-40B
Mode: BT

Ant.Polar.: Vertical
Date: 2019/5/27 **Time:** 15:48:11
Temp.(C): 24(C)
Hum. (%RH): 65%RH
Power: AC 120V/60Hz
Test By: Lion

Description:



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	32.1794	37.09	-13.51	23.58	40.00	-16.42	100	0.00	peak
2	41.2764	47.98	-18.26	29.72	40.00	-10.28	100	0.00	peak
3	61.5617	53.11	-25.57	27.54	40.00	-12.46	100	56.90	peak
4	81.7832	43.42	-22.70	20.72	40.00	-19.28	100	102.20	peak
5	159.7844	48.46	-19.17	29.29	43.50	-14.21	100	22.50	peak
6	593.0497	29.76	-7.51	22.25	46.00	-23.75	100	89.90	peak

Test result

Project Number: STS1810144

Test Time: 2019-05-28_01.49.29

EUT Name: Bluetooth receiver

Test Engineer: Lion

Mode: BT-G-H

Test Standard: FCC 15C

Model: PA-40B

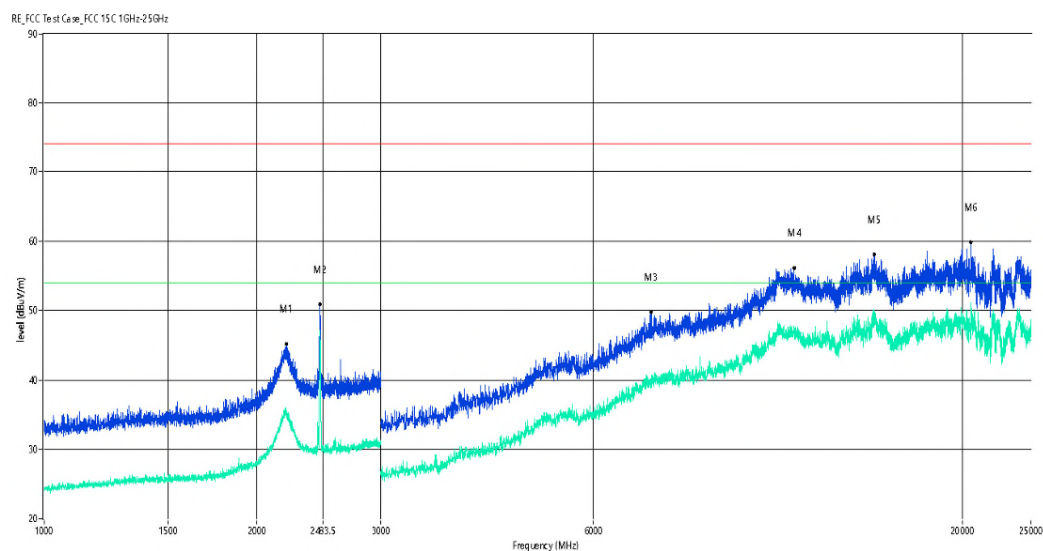
Work Addition: Normal

Temp.(oC): 22.2

Load:

Hum.: 55%

Remark:



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2206.000	35.10	-7.50	54.0	-18.90	AV	13.00	100	H	Pass
1	2206.000	45.21	-7.50	74.0	-28.79	Peak	13.00	100	H	Pass
2**	2461.000	47.15	-12.53	54.0	-6.85	AV	10.00	100	H	Pass
2	2461.000	50.90	-12.53	74.0	-23.10	Peak	10.00	100	H	Pass
3**	7242.500	40.22	4.02	54.0	-13.78	AV	12.00	100	H	Pass
3	7242.500	49.86	4.02	74.0	-24.14	Peak	12.00	100	H	Pass
4**	11532.500	47.00	10.94	54.0	-7.00	AV	3.00	100	H	Pass
4	11532.500	56.18	10.94	74.0	-17.82	Peak	3.00	100	H	Pass
5**	14967.500	48.87	12.44	54.0	-5.13	AV	7.00	100	H	Pass
5	14967.500	58.13	12.44	74.0	-15.87	Peak	7.00	100	H	Pass
6**	20541.000	50.73	14.09	54.0	-3.27	AV	1.00	100	H	Pass
6	20541.000	59.89	14.09	74.0	-14.11	Peak	1.00	100	H	Pass

Test result

Project Number: STS1810144

Test Time: 2019-05-28_01.50.46

EUT Name: Bluetooth receiver

Test Engineer: Lion

Mode: BT-G-H

Test Standard: FCC 15C

Model: PA-40B

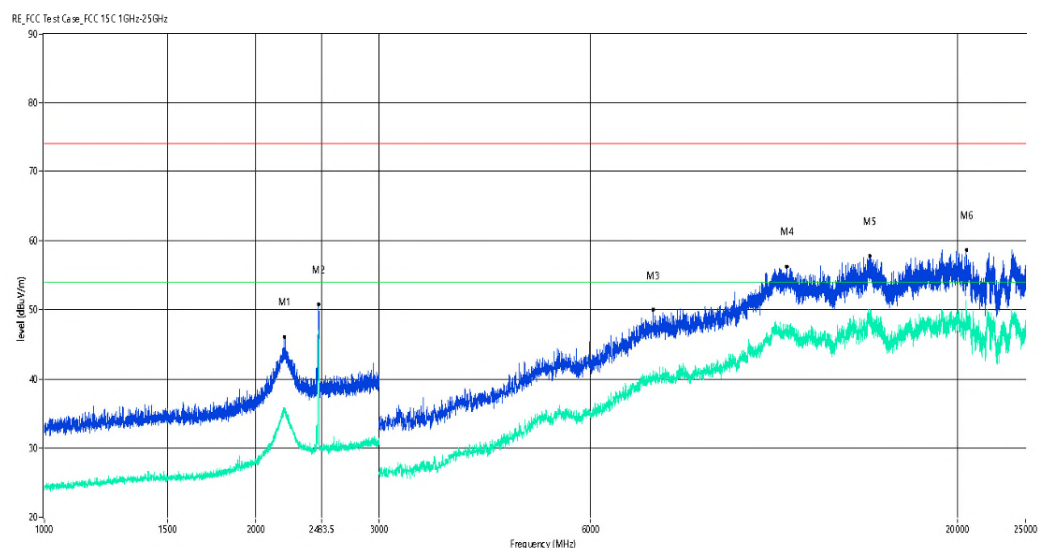
Work Addition: Normal

Temp.(oC): 22.2

Load:

Hum.: 55%

Remark:



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2198.500	35.25	-7.29	54.0	-18.75	AV	3.00	100	V	Pass
1	2198.500	46.14	-7.29	74.0	-27.86	Peak	3.00	100	V	Pass
2**	2461.000	46.98	-12.53	54.0	-7.02	AV	12.00	100	V	Pass
2	2461.000	50.81	-12.53	74.0	-23.19	Peak	12.00	100	V	Pass
3**	7367.500	41.24	4.43	54.0	-12.76	AV	12.00	100	V	Pass
3	7367.500	49.99	4.43	74.0	-24.01	Peak	12.00	100	V	Pass
4**	11412.500	46.85	10.86	54.0	-7.15	AV	7.00	100	V	Pass
4	11412.500	56.31	10.86	74.0	-17.69	Peak	7.00	100	V	Pass
5**	14981.250	48.93	12.40	54.0	-5.07	AV	14.00	100	V	Pass
5	14981.250	57.78	12.40	74.0	-16.22	Peak	14.00	100	V	Pass
6**	20558.500	50.15	14.11	54.0	-3.85	AV	9.00	100	V	Pass
6	20558.500	58.65	14.11	74.0	-15.35	Peak	9.00	100	V	Pass

Test result

Project Number: STS1810144

Test Time: 2019-05-28_01.54.27

EUT Name: Bluetooth receiver

Test Engineer: Lion

Mode: BT-G-L

Test Standard: FCC 15C

Model: PA-40B

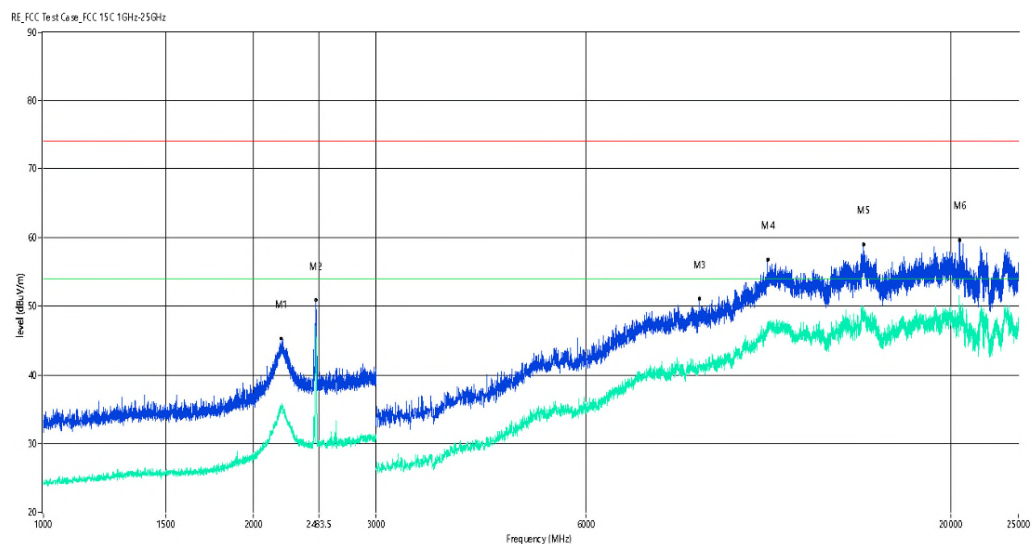
Work Addition: Normal

Temp.(oC): 22.2

Load:

Hum.: 55%

Remark:



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2197.000	35.62	-7.37	54.0	-18.38	AV	3.00	100	H	Pass
1	2197.000	45.29	-7.37	74.0	-28.71	Peak	3.00	100	H	Pass
2**	2460.500	46.75	-12.53	54.0	-7.25	AV	6.00	100	H	Pass
2	2460.500	50.86	-12.53	74.0	-23.14	Peak	6.00	100	H	Pass
3**	8712.500	41.62	5.35	54.0	-12.38	AV	1.00	100	H	Pass
3	8712.500	51.07	5.35	74.0	-22.93	Peak	1.00	100	H	Pass
4**	10927.500	46.25	10.67	54.0	-7.75	AV	6.00	100	H	Pass
4	10927.500	56.75	10.67	74.0	-17.25	Peak	6.00	100	H	Pass
5**	14962.500	49.41	12.45	54.0	-4.59	AV	11.00	100	H	Pass
5	14962.500	58.97	12.45	74.0	-15.03	Peak	11.00	100	H	Pass
6**	20572.500	49.72	14.13	54.0	-4.28	AV	7.00	100	H	Pass
6	20572.500	59.66	14.13	74.0	-14.34	Peak	7.00	100	H	Pass

Test result

Project Number: STS1810144

Test Time: 2019-05-28_01.55.39

EUT Name: Bluetooth receiver

Test Engineer: Lion

Mode: BT-G-L

Test Standard: FCC 15C

Model: PA-40B

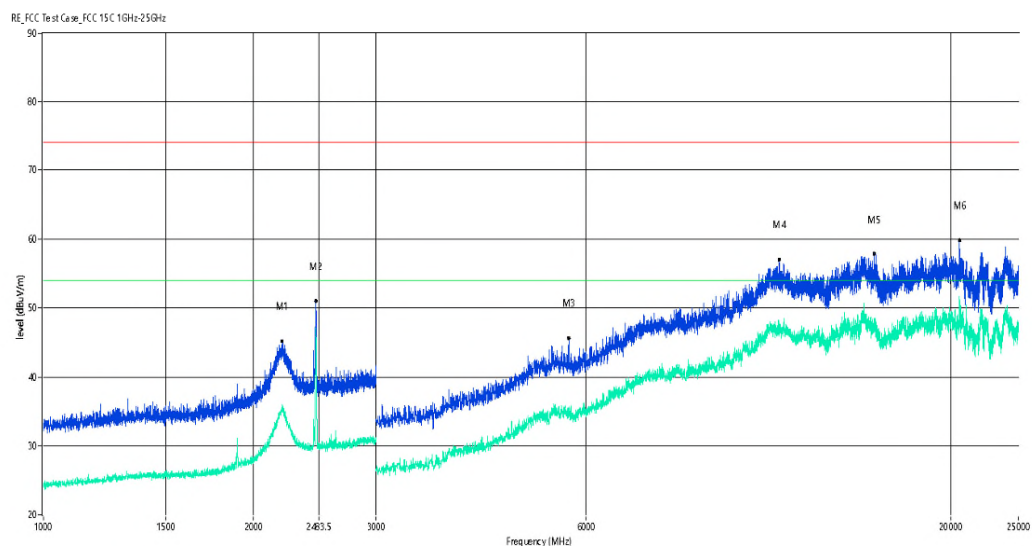
Work Addition: Normal

Temp.(oC): 22.2

Load:

Hum.: 55%

Remark:



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2201.000	35.35	-7.26	54.0	-18.65	AV	1.00	100	V	Pass
1	2201.000	45.24	-7.26	74.0	-28.76	Peak	1.00	100	V	Pass
2**	2461.000	47.05	-12.53	54.0	-6.95	AV	1.00	100	V	Pass
2	2461.000	51.01	-12.53	74.0	-22.99	Peak	1.00	100	V	Pass
3**	5667.500	35.60	-1.36	54.0	-18.40	AV	11.00	100	V	Pass
3	5667.500	45.65	-1.36	74.0	-28.35	Peak	11.00	100	V	Pass
4**	11345.000	46.41	10.53	54.0	-7.59	AV	3.00	100	V	Pass
4	11345.000	57.05	10.53	74.0	-16.95	Peak	3.00	100	V	Pass
5**	15518.750	47.27	11.53	54.0	-6.73	AV	15.00	100	V	Pass
5	15518.750	57.86	11.53	74.0	-16.14	Peak	15.00	100	V	Pass
6**	20569.000	51.66	14.13	54.0	-2.34	AV	1.00	100	V	Pass
6	20569.000	59.88	14.13	74.0	-14.12	Peak	1.00	100	V	Pass

Test result

Project Number: STS1810144

Test Time: 2019-05-28_01.53.13

EUT Name: Bluetooth receiver

Test Engineer: Lion

Mode: BT-G-M

Test Standard: FCC 15C

Model: PA-40B

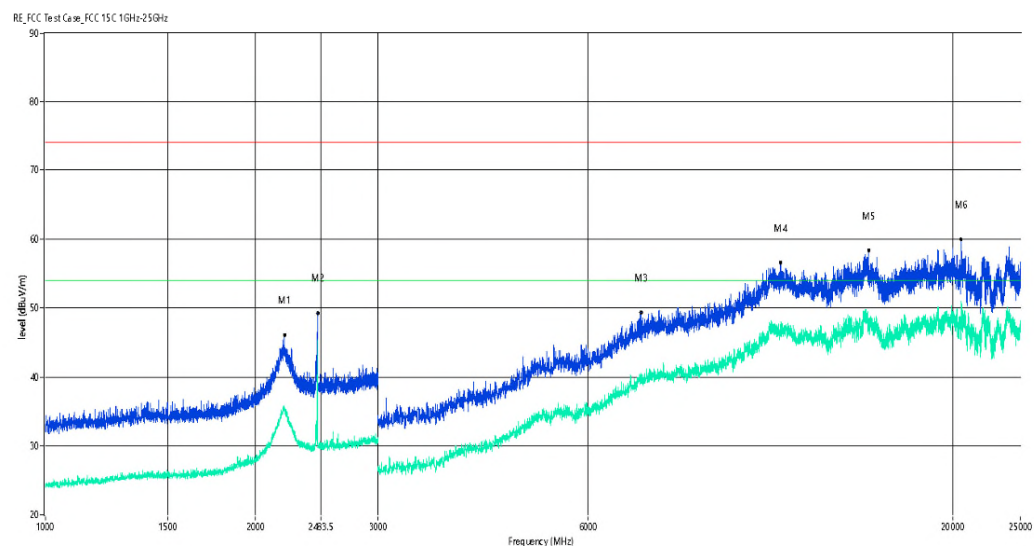
Work Addition: Normal

Temp.(oC): 22.2

Load:

Hum.: 55%

Remark:



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2204.000	35.65	-7.40	54.0	-18.35	AV	3.00	100	H	Pass
1	2204.000	46.09	-7.40	74.0	-27.91	Peak	3.00	100	H	Pass
2**	2459.000	45.43	-12.54	54.0	-8.57	AV	6.00	100	H	Pass
2	2459.000	49.31	-12.54	74.0	-24.69	Peak	6.00	100	H	Pass
3**	7147.500	39.31	3.84	54.0	-14.69	AV	15.00	100	H	Pass
3	7147.500	49.33	3.84	74.0	-24.67	Peak	15.00	100	H	Pass
4**	11320.001	46.61	10.37	54.0	-7.39	AV	8.00	100	H	Pass
4	11320.001	56.55	10.37	74.0	-17.45	Peak	8.00	100	H	Pass
5**	15125.000	47.09	10.85	54.0	-6.91	AV	6.00	100	H	Pass
5	15125.000	58.38	10.85	74.0	-15.62	Peak	6.00	100	H	Pass
6**	20544.500	50.50	14.09	54.0	-3.50	AV	7.00	100	H	Pass
6	20544.500	59.96	14.09	74.0	-14.04	Peak	7.00	100	H	Pass

Test result

Project Number: STS1810144

Test Time: 2019-05-28_01.51.58

EUT Name: Bluetooth receiver

Test Engineer: Lion

Mode: BT-G-M

Test Standard: FCC 15C

Model: PA-40B

Work Addition: Normal

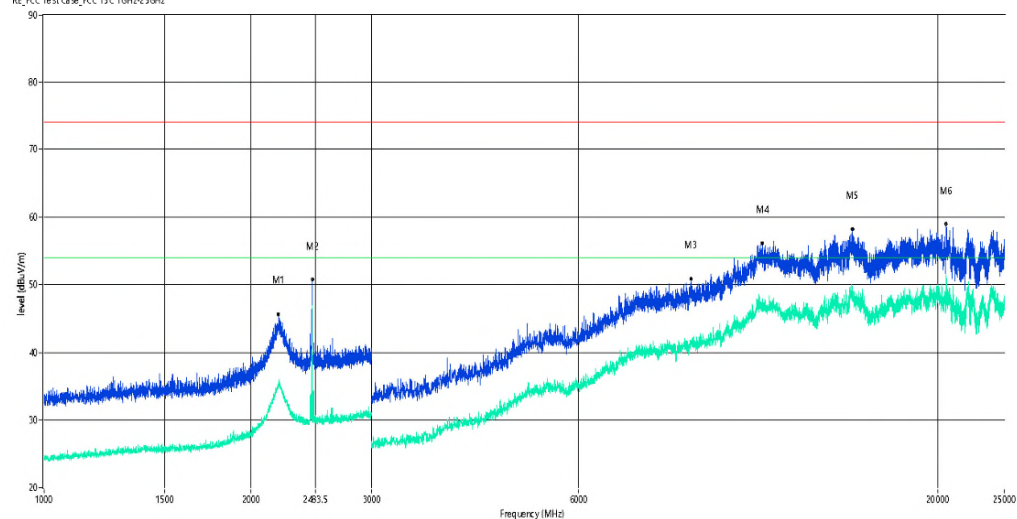
Temp.(oC): 22.2

Load:

Hum.: 55%

Remark:

RE_FCC Test Case_FCC 15C 1GHz-25GHz

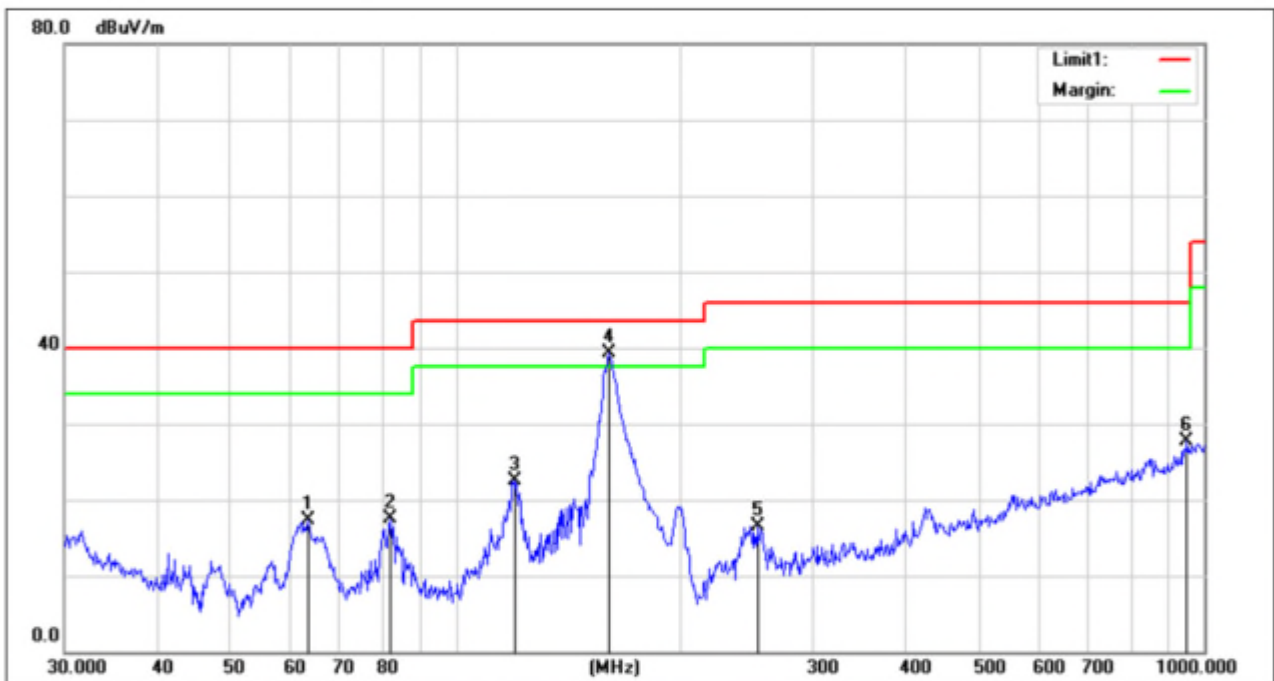


No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2195.500	35.56	-7.45	54.0	-18.44	AV	7.00	100	V	Pass
1	2195.500	45.69	-7.45	74.0	-28.31	Peak	7.00	100	V	Pass
2**	2460.500	46.73	-12.53	54.0	-7.27	AV	5.00	100	V	Pass
2	2460.500	50.76	-12.53	74.0	-23.24	Peak	5.00	100	V	Pass
3**	8745.000	41.24	5.26	54.0	-12.76	AV	3.00	100	V	Pass
3	8745.000	50.90	5.26	74.0	-23.10	Peak	3.00	100	V	Pass
4**	11102.500	47.10	10.54	54.0	-6.90	AV	15.00	100	V	Pass
4	11102.500	56.10	10.54	74.0	-17.90	Peak	15.00	100	V	Pass
5**	14997.500	48.51	12.36	54.0	-5.49	AV	13.00	100	V	Pass
5	14997.500	58.23	12.36	74.0	-15.77	Peak	13.00	100	V	Pass
6**	20548.000	50.18	14.10	54.0	-3.82	AV	2.00	100	V	Pass
6	20548.000	58.93	14.10	74.0	-15.07	Peak	2.00	100	V	Pass

Job No.: STS1810144
Standard: FCC 15C_03m_QP
Test item: Radiated Emission
Company: Bluetooth receiver
Model: PA-40B
Mode: BLE

Ant.Polar.: Horizontal
Date:2019/5/27 Time:15:40:20
Temp.(C): 24(C)
Hum.(%RH): 65%RH
Power: AC 120V/60Hz
Test By: Lion

Description:



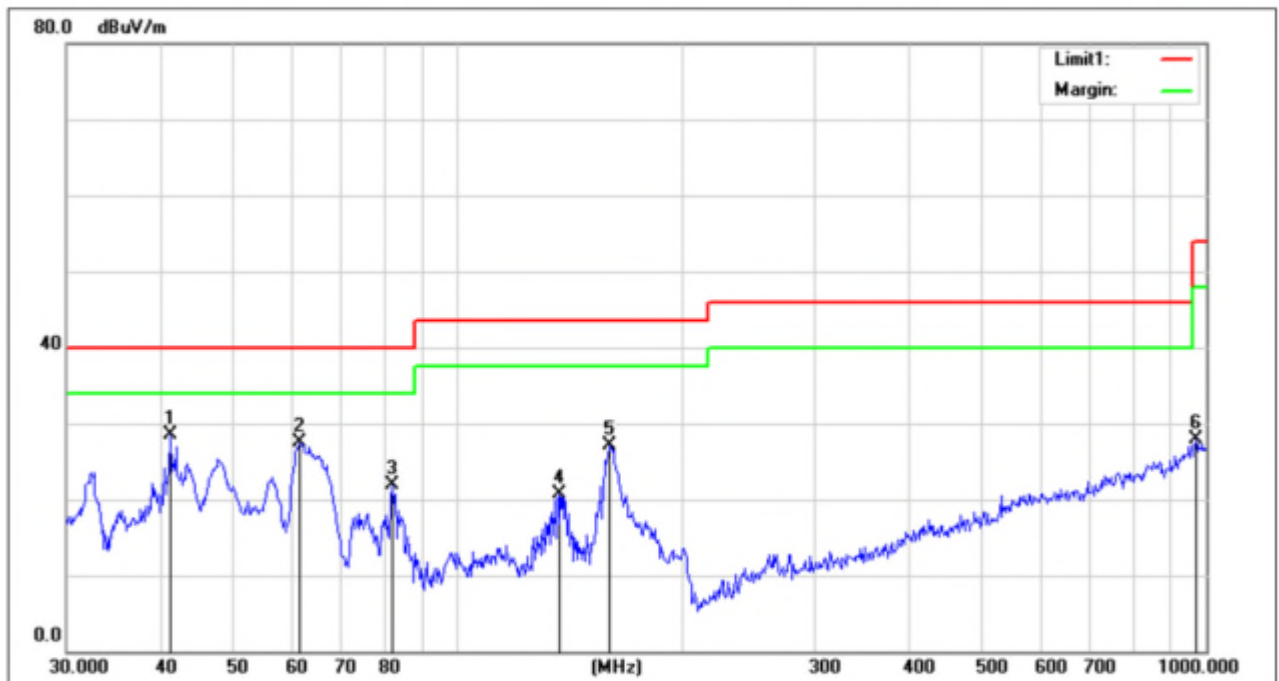
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	63.5356	42.67	-25.46	17.21	40.00	-22.79	100	35.60	peak
2	81.7831	40.26	-22.70	17.56	40.00	-22.44	100	45.80	peak
3	119.8555	40.97	-18.46	22.51	43.50	-20.99	100	167.50	peak
4	160.3456	58.44	-19.22	39.22	43.50	-4.28	100	0.00	peak
5	252.9482	32.94	-16.38	16.56	46.00	-29.44	100	56.80	peak
6	948.7610	28.33	-0.67	27.66	46.00	-18.34	100	230.00	peak

Produkte
Products

Job No.: STS1810144
Standard: FCC 15C_03m_QP
Test item: Radiated Emission
Company: Bluetooth receiver
Model: PA-40B
Mode: BLE

Ant.Polar.: Vertical
Date:2019/5/27 Time:15:36:14
Temp.(C): 24(C)
Hum. (%RH): 65%RH
Power: AC 120V/60Hz
Test By: Lion

Description:



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	41.2764	46.72	-18.26	28.46	40.00	-11.54	100	350.80	peak
2	61.5617	53.05	-25.57	27.48	40.00	-12.52	100	330.30	peak
3	81.7831	44.58	-22.70	21.88	40.00	-18.12	100	120.40	peak
4	136.4598	39.00	-18.26	20.74	43.50	-22.76	100	106.70	peak
5	159.7844	46.27	-19.17	27.10	43.50	-16.40	100	352.30	peak
6	968.9338	28.22	-0.35	27.87	54.00	-26.13	100	78.90	peak

Test result

Project Number: STS1810144

Test Time: 2019-05-28_02.04.29

EUT Name: Bluetooth receiver

Test Engineer: Lion

Mode: BLE-H

Test Standard: FCC 15C

Model: PA-40B

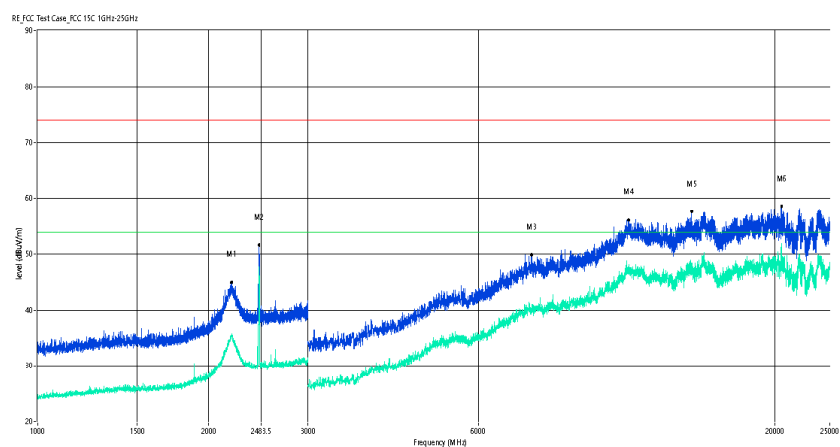
Work Addition: Normal

Temp.(oC): 22.2

Load:

Hum.: 55%

Remark:



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2198.500	35.60	-7.29	54.0	-18.40	AV	14.00	100	H	Pass
1	2198.500	45.05	-7.29	74.0	-28.95	Peak	14.00	100	H	Pass
2**	2460.500	47.74	-12.53	54.0	-6.26	AV	15.00	100	H	Pass
2	2460.500	51.68	-12.53	74.0	-22.32	Peak	15.00	100	H	Pass
3**	7445.000	39.92	4.46	54.0	-14.08	AV	2.00	100	H	Pass
3	7445.000	49.93	4.46	74.0	-24.07	Peak	2.00	100	H	Pass
4**	11047.500	47.06	10.77	54.0	-6.94	AV	7.00	100	H	Pass
4	11047.500	56.12	10.77	74.0	-17.88	Peak	7.00	100	H	Pass
5**	14273.750	47.77	11.81	54.0	-6.23	AV	15.00	100	H	Pass
5	14273.750	57.64	11.81	74.0	-16.36	Peak	15.00	100	H	Pass
6**	20563.751	50.87	14.12	54.0	-3.13	AV	15.00	100	H	Pass
6	20563.751	58.55	14.12	74.0	-15.45	Peak	15.00	100	H	Pass

Test result

Project Number: STS1810144

Test Time: 2019-05-28_02.03.17

EUT Name: Bluetooth receiver

Test Engineer: Lion

Mode: BLE-H

Test Standard: FCC 15C

Model: PA-40B

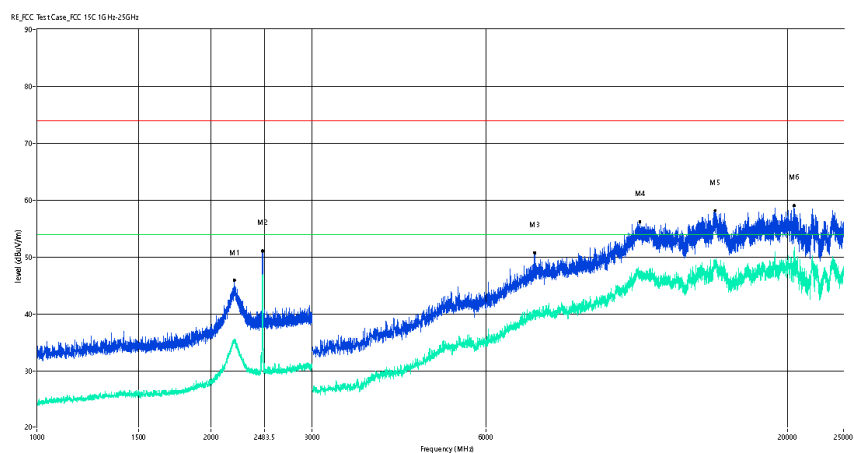
Work Addition: Normal

Temp.(oC): 22.2

Load:

Hum.: 55%

Remark:



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2200.000	35.55	-7.21	54.0	-18.45	AV	3.00	100	V	Pass
1	2200.000	45.94	-7.21	74.0	-28.06	Peak	3.00	100	V	Pass
2**	2461.000	46.93	-12.53	54.0	-7.07	AV	10.00	100	V	Pass
2	2461.000	51.11	-12.53	74.0	-22.89	Peak	10.00	100	V	Pass
3**	7287.500	39.79	4.39	54.0	-14.21	AV	15.00	100	V	Pass
3	7287.500	50.77	4.39	74.0	-23.23	Peak	15.00	100	V	Pass
4**	11092.500	46.35	10.57	54.0	-7.65	AV	8.00	100	V	Pass
4	11092.500	56.24	10.57	74.0	-17.76	Peak	8.00	100	V	Pass
5**	14976.250	48.80	12.42	54.0	-5.20	AV	3.00	100	V	Pass
5	14976.250	58.19	12.42	74.0	-15.81	Peak	3.00	100	V	Pass
6**	20530.500	51.00	14.07	54.0	-3.00	AV	13.00	100	V	Pass
6	20530.500	59.12	14.07	74.0	-14.88	Peak	13.00	100	V	Pass

Test result

Project Number: STS1810144

Test Time: 2019-05-28_01.58.08

EUT Name: Bluetooth receiver

Test Engineer: Lion

Mode: BLE-L

Test Standard: FCC 15C

Model: PA-40B

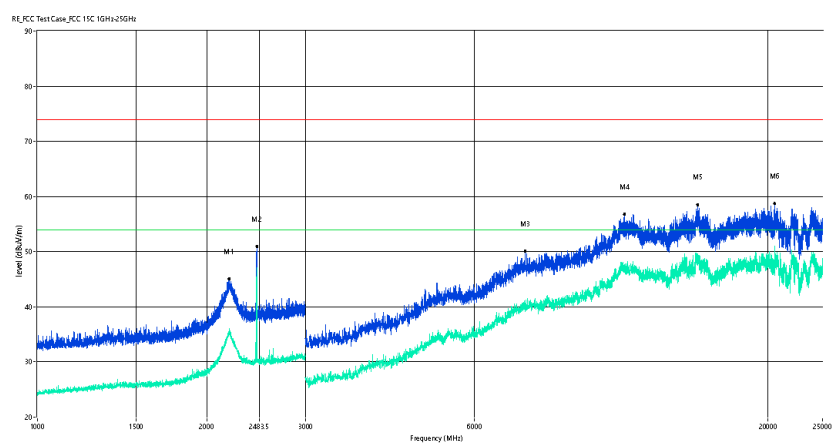
Work Addition: Normal

Temp.(oC): 22.2

Load:

Hum.: 55%

Remark:



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2193.000	35.07	-7.58	54.0	-18.93	AV	9.00	100	H	Pass
1	2193.000	45.08	-7.58	74.0	-28.92	Peak	9.00	100	H	Pass
2**	2461.000	47.04	-12.53	54.0	-6.96	AV	14.00	100	H	Pass
2	2461.000	50.97	-12.53	74.0	-23.03	Peak	14.00	100	H	Pass
3**	7390.000	40.47	4.41	54.0	-13.53	AV	8.00	100	H	Pass
3	7390.000	50.09	4.41	74.0	-23.91	Peak	8.00	100	H	Pass
4**	11092.500	46.29	10.57	54.0	-7.71	AV	1.00	100	H	Pass
4	11092.500	56.81	10.57	74.0	-17.19	Peak	1.00	100	H	Pass
5**	14981.250	48.03	12.40	54.0	-5.97	AV	7.00	100	H	Pass
5	14981.250	58.53	12.40	74.0	-15.47	Peak	7.00	100	H	Pass
6**	20534.000	50.34	14.08	54.0	-3.66	AV	12.00	100	H	Pass
6	20534.000	58.73	14.08	74.0	-15.27	Peak	12.00	100	H	Pass

Test result

Project Number: STS1810144

Test Time: 2019-05-28_01.56.54

EUT Name: Bluetooth receiver

Test Engineer: Lion

Mode: BLE-L

Test Standard: FCC 15C

Model: PA-40B

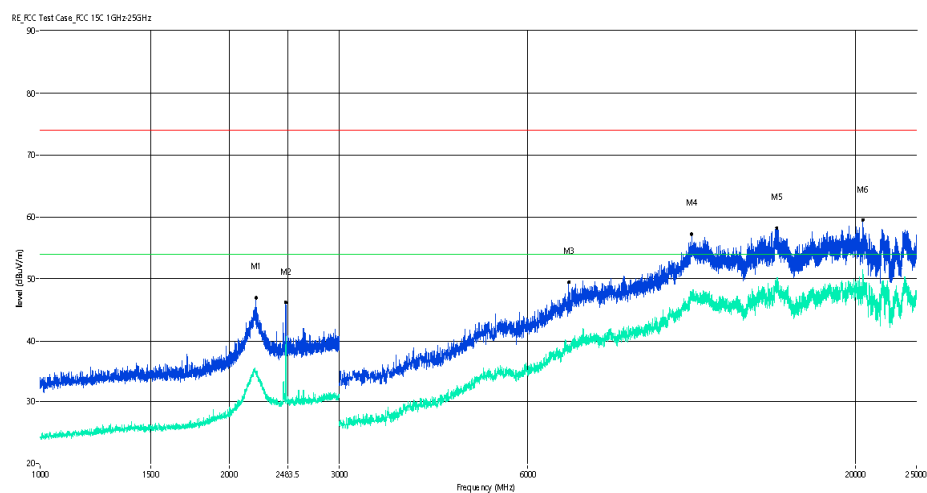
Work Addition: Normal

Temp.(oC): 22.2

Load:

Hum.: 55%

Remark:



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2211.000	34.88	-7.75	54.0	-19.12	AV	11.00	100	V	Pass
1	2211.000	46.98	-7.75	74.0	-27.02	Peak	11.00	100	V	Pass
2**	2465.500	30.32	-12.51	54.0	-23.68	AV	3.00	100	V	Pass
2	2465.500	46.18	-12.51	74.0	-27.82	Peak	3.00	100	V	Pass
3**	6972.500	38.76	3.08	54.0	-15.24	AV	5.00	100	V	Pass
3	6972.500	49.45	3.08	74.0	-24.55	Peak	5.00	100	V	Pass
4**	10952.500	47.67	10.78	54.0	-6.33	AV	15.00	100	V	Pass
4	10952.500	57.26	10.78	74.0	-16.74	Peak	15.00	100	V	Pass
5**	14965.000	48.96	12.45	54.0	-5.04	AV	7.00	100	V	Pass
5	14965.000	58.27	12.45	74.0	-15.73	Peak	7.00	100	V	Pass
6**	20532.251	51.47	14.08	54.0	-2.53	AV	13.00	100	V	Pass
6	20532.251	59.49	14.08	74.0	-14.51	Peak	13.00	100	V	Pass

Test result

Project Number: STS1810144

Test Time: 2019-05-28_01.59.21

EUT Name: Bluetooth receiver

Test Engineer: Lion

Mode: BLE-M

Test Standard: FCC 15C

Model: PA-40B

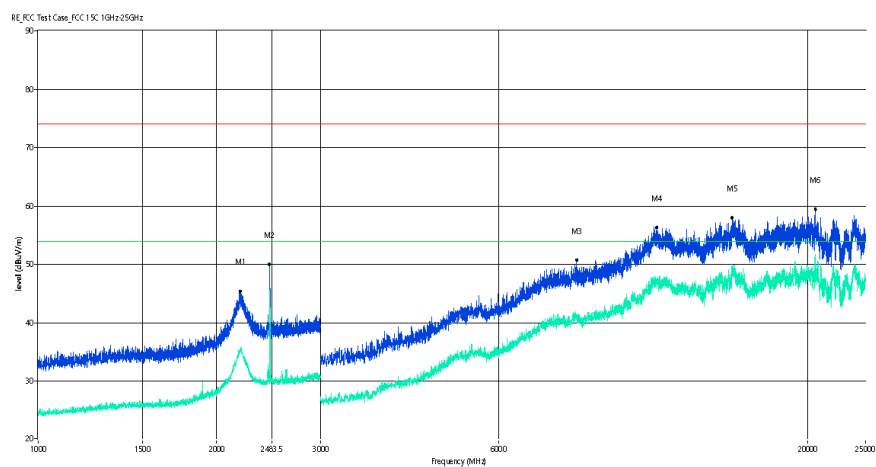
Work Addition: Normal

Temp.(oC): 22.2

Load:

Hum.: 55%

Remark:



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2194.500	35.28	-7.50	54.0	-18.72	AV	4.00	100	H	Pass
1	2194.500	45.44	-7.50	74.0	-28.56	Peak	4.00	100	H	Pass
2**	2461.000	30.45	-12.53	54.0	-23.55	AV	7.00	100	H	Pass
2	2461.000	50.06	-12.53	74.0	-23.94	Peak	7.00	100	H	Pass
3**	8130.000	41.26	5.26	54.0	-12.74	AV	14.00	100	H	Pass
3	8130.000	50.74	5.26	74.0	-23.26	Peak	14.00	100	H	Pass
4**	11105.000	47.51	10.54	54.0	-6.49	AV	15.00	100	H	Pass
4	11105.000	56.32	10.54	74.0	-17.68	Peak	15.00	100	H	Pass
5**	14886.250	49.33	12.45	54.0	-4.67	AV	11.00	100	H	Pass
5	14886.250	58.01	12.45	74.0	-15.99	Peak	11.00	100	H	Pass
6**	20576.000	49.96	14.14	54.0	-4.04	AV	3.00	100	H	Pass
6	20576.000	59.40	14.14	74.0	-14.60	Peak	3.00	100	H	Pass

Test result

Project Number: STS1810144

Test Time: 2019-05-28_02.00.35

EUT Name: Bluetooth receiver

Test Engineer: Lion

Mode: BLE-M

Test Standard: FCC 15C

Model: PA-40B

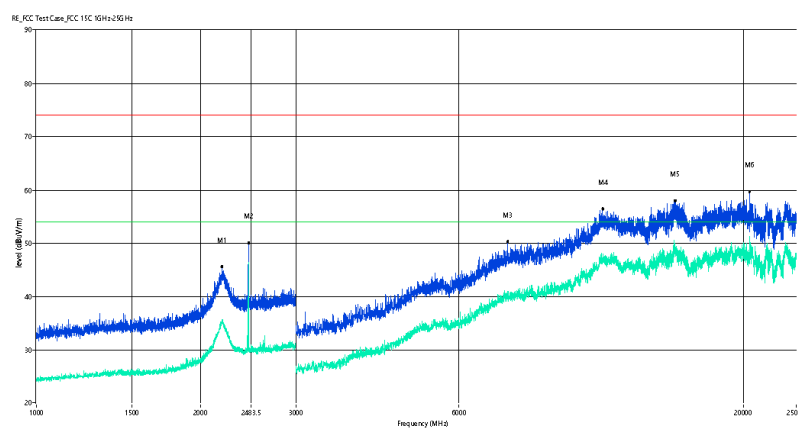
Work Addition: Normal

Temp.(oC): 22.2

Load:

Hum.: 55%

Remark:



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2194.000	35.31	-7.53	54.0	-18.69	AV	6.00	100	V	Pass
1	2194.000	45.68	-7.53	74.0	-28.32	Peak	6.00	100	V	Pass
2**	2459.500	45.73	-12.53	54.0	-8.27	AV	9.00	100	V	Pass
2	2459.500	50.12	-12.53	74.0	-23.88	Peak	9.00	100	V	Pass
3**	7375.000	40.26	4.42	54.0	-13.74	AV	4.00	100	V	Pass
3	7375.000	50.38	4.42	74.0	-23.62	Peak	4.00	100	V	Pass
4**	11015.000	46.72	10.91	54.0	-7.28	AV	7.00	100	V	Pass
4	11015.000	56.45	10.91	74.0	-17.55	Peak	7.00	100	V	Pass
5**	14980.000	49.43	12.41	54.0	-4.57	AV	14.00	100	V	Pass
5	14980.000	57.99	12.41	74.0	-16.01	Peak	14.00	100	V	Pass
6**	20546.251	49.92	14.09	54.0	-4.08	AV	12.00	100	V	Pass
6	20546.251	59.79	14.09	74.0	-14.21	Peak	12.00	100	V	Pass

B.3: Test Results of Conducted Emission on AC Mains

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EMC Test Service Hotline: +86-20-28391188

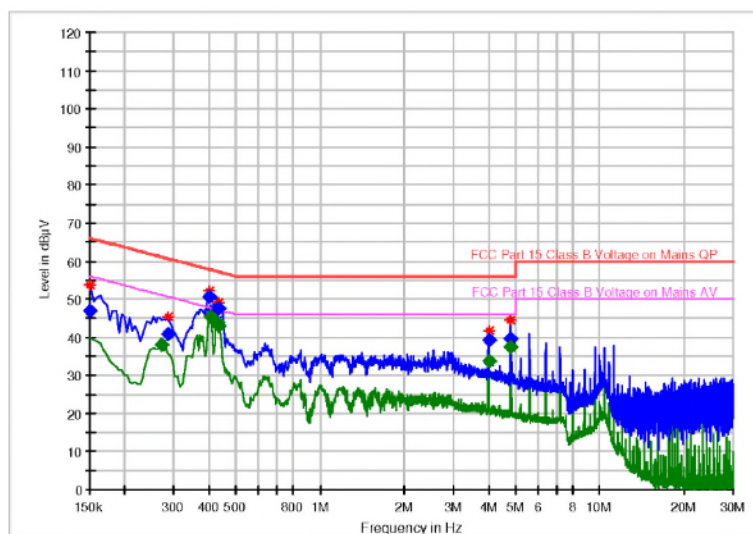
EMC Test Record (EMISSION)

Common Information

Manufacturer: Seikaku
Test Item: Bluetooth receiver
Identification: PA-40HB
Test Standard: FCC Part 15
Test Detail: Conducted Emission
Operation Mode: A
Climate Condition: 20 °C, 50 %, 100 kPa
Test Voltage/ Freq.: AC 120V/60Hz
Port / Line: AC mains
Receipt No.: 174091930
Report No.: /
Result: Pass
Comment: /

Hardware Setup: 1phase LISN ENV216 to ESCI 3
Level Unit: dBμV

Subrange	Detectors	IF Bandwidth	Step Size	Meas. Time	Receiver
150kHz - 30MHz	Peak; Average	9kHz	4.5kHz	10ms	ESCI 3



Tested by

Chris Liang

20190510

Reviewed by

Jacky Chen

20190513

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.150000	47.06	---	66.00	18.94	1000.	9.000	L1	OFF	9.8
0.271500	---	37.95	51.07	13.12	1000.	9.000	L1	OFF	9.8
0.285000	40.86	---	60.67	19.81	1000.	9.000	N	OFF	9.7
0.402000	50.52	---	57.81	7.29	1000.	9.000	L1	OFF	9.8
0.406500	---	45.49	47.72	2.23	1000.	9.000	N	OFF	9.7
0.429000	---	43.92	47.27	3.35	1000.	9.000	N	OFF	9.7
0.433500	---	42.88	47.19	4.31	1000.	9.000	L1	OFF	9.8
0.433500	47.68	---	57.19	9.51	1000.	9.000	N	OFF	9.7
4.002000	39.14	---	56.00	16.86	1000.	9.000	L1	OFF	10.2
4.002000	---	33.86	46.00	12.14	1000.	9.000	L1	OFF	10.2
4.798500	---	37.36	46.00	8.64	1000.	9.000	L1	OFF	10.2
4.803000	39.51	---	56.00	16.49	1000.	9.000	L1	OFF	10.2

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Chris Liang

20190510

Reviewed by

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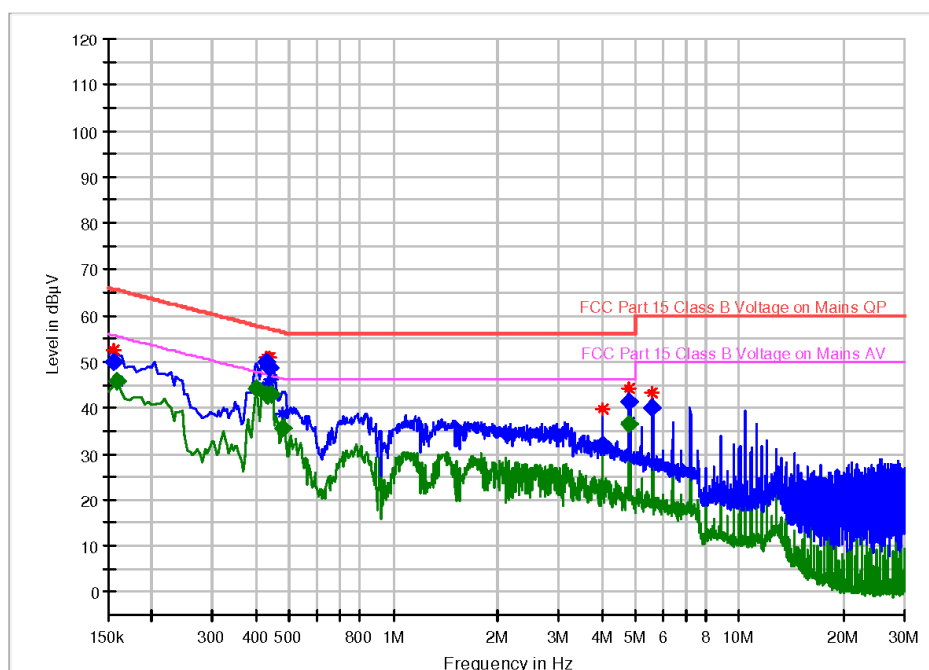
EMC Test Record (EMISSION)

Common Information

Manufacturer:	Seikaku
Test Item:	Bluetooth receiver
Identification:	PA-40HB
Test Standard:	FCC Part 15
Test Detail:	Conducted Emission
Operation Mode:	A
Climate Condition:	20 °C, 50 %, 100 kPa
Test Voltage/ Freq.:	AC 240V/50Hz
Port / Line:	AC mains
Receipt No.:	174091930
Report No.:	/
Result:	Pass
Comment:	/

Hardware Setup:	1phase LISN ENV216 to ESCI 3
Level Unit:	dBµV

Subrange	Detectors	IF Bandwidth	Step Size	Meas. Time	Receiver
150kHz - 30MHz	Peak; Average	9kHz	4.5kHz	10ms	ESCI 3



Tested by

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Reviewed by

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Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.154500	49.98	---	65.75	15.77	1000.	9.000	L1	OFF	9.8
0.159000	---	45.90	55.52	9.62	1000.	9.000	N	OFF	9.6
0.402000	---	44.29	47.81	3.52	1000.	9.000	N	OFF	9.7
0.429000	---	43.01	47.27	4.26	1000.	9.000	L1	OFF	9.8
0.429000	49.85	---	57.27	7.42	1000.	9.000	L1	OFF	9.8
0.438000	48.65	---	57.10	8.45	1000.	9.000	L1	OFF	9.8
0.442500	---	42.96	47.02	4.05	1000.	9.000	L1	OFF	9.8
0.478500	---	35.70	46.37	10.67	1000.	9.000	N	OFF	9.7
4.011000	32.18	---	56.00	23.82	1000.	9.000	N	OFF	9.9
4.803000	41.50	---	56.00	14.50	1000.	9.000	N	OFF	9.9
4.803000	---	36.45	46.00	9.55	1000.	9.000	N	OFF	9.9
5.608500	40.22	---	60.00	19.78	1000.	9.000	N	OFF	9.9

Tested by

Chris Liang

20190510

Reviewed by

Jacky Chen

20190513