

FCC Radio Test Report

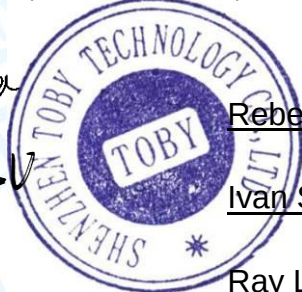
FCC ID: 2APBP-CS30

Original Grant

Report No. : TB-FCC179353
Applicant : Ciontek Technology Corp.
Equipment Under Test (EUT)
EUT Name : Handheld Smart POS
Model No. : CS30
Series Model No. : CS30PRO, CS30LITE, CS30S, CS30V, CS30MINI, CS30A, CS30C, CS31, CS32
Brand Name : Ciontek
Sample ID : 20200916-08-01#& 20200916-08-02#
Receipt Date : 2021-03-22
Test Date : 2021-03-23 to 2021-05-25
Issue Date : 2021-05-28
Standards : FCC Part 15, Subpart C 15.247
Test Method : ANSI C63.10: 2013
KDB 558074 D01 15.247 Meas Guidance v05r02
Conclusions : **PASS**

In the configuration tested, the EUT complied with the standards specified above,
The EUT technically complies with the FCC requirements

Test/Witness Engineer :  Rebecca
Engineer Supervisor :  Ivan Su
Engineer Manager :  Ray Lai



This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in the report.

Contents

CONTENTS.....	2
1. GENERAL INFORMATION ABOUT EUT.....	5
1.1 Client Information.....	5
1.2 General Description of EUT (Equipment Under Test)	5
1.3 Block Diagram Showing the Configuration of System Tested.....	6
1.4 Description of Support Units	6
1.5 Description of Test Mode.....	7
1.6 Description of Test Software Setting	8
1.7 Measurement Uncertainty	8
1.8 Test Facility.....	9
2. TEST SUMMARY.....	10
3. TEST SOFTWARE.....	10
4. TEST EQUIPMENT.....	11
5. CONDUCTED EMISSION TEST	12
5.1 Test Standard and Limit.....	12
5.2 Test Setup.....	12
5.3 Test Procedure.....	13
5.4 Deviation From Test Standard.....	13
5.5 EUT Operating Mode	13
5.6 Test Data.....	13
6. RADIATED AND CONDUCTED UNWANTED EMISSIONS.....	14
6.1 Test Standard and Limit.....	14
6.2 Test Setup.....	15
6.3 Test Procedure.....	16
6.4 Deviation From Test Standard.....	17
6.5 EUT Operating Condition	17
6.6 Test Data.....	17
7. RESTRICTED BANDS REQUIREMENT	18
7.1 Test Standard and Limit.....	18
7.2 Test Setup.....	18
7.3 Test Procedure.....	19
7.4 Deviation From Test Standard.....	19
7.5 EUT Operating Condition	19
7.6 Test Data.....	19
8. BANDWIDTH TEST.....	20
8.1 Test Standard and Limit.....	20
8.2 Test Setup.....	20
8.3 Test Procedure.....	20
8.4 Deviation From Test Standard.....	20

8.5 EUT Operating Condition	20
8.6 Test Data.....	20
9. PEAK OUTPUT POWER TEST.....	21
9.1 Test Standard and Limit.....	21
9.2 Test Setup.....	21
9.3 Test Procedure.....	21
9.4 Deviation From Test Standard.....	21
9.5 EUT Operating Condition	21
9.6 Test Data.....	21
10. POWER SPECTRAL DENSITY TEST	22
10.1 Test Standard and Limit	22
10.2 Test Setup.....	22
10.3 Test Procedure.....	22
9.4 Deviation From Test Standard.....	22
9.5 EUT Operating Condition	22
9.6 Test Data.....	22
11. ANTENNA REQUIREMENT.....	23
11.1 Standard Requirement.....	23
11.2 Deviation From Test Standard.....	23
11.3 Antenna Connected Construction	23
ATTACHMENT A-- CONDUCTED EMISSION TEST DATA	24
ATTACHMENT B--UNWANTED EMISSIONS DATA	26
ATTACHMENT C-- RESTRICTED BANDS REQUIREMENT AND BAND-EDGE TEST DATA	52
ATTACHMENT D-- BANDWIDTH TEST DATA.....	76
ATTACHMENT E-- PEAK OUTPUT POWER TEST DATA.....	83
ATTACHMENT F-- POWER SPECTRAL DENSITY TEST DATA.....	87

Revision History

Report No.	Version	Description	Issued Date
TB-FCC179353	Rev.01	Initial issue of report	2021-05-28

1. General Information about EUT

1.1 Client Information

Applicant	:	Ciontek Technology Corp.
Address	:	B501, Chanxueyan Building Wuhan University, No.6 Of Yuexing 2nd Road, Yuehai Street, Nanshan District, Shenzhen, China
Manufacturer	:	Ciontek Technology Corp.
Address	:	B501, Chanxueyan Building Wuhan University, No.6 Of Yuexing 2nd Road, Yuehai Street, Nanshan District, Shenzhen, China

1.2 General Description of EUT (Equipment Under Test)

EUT Name	:	Handheld Smart POS
Models No.	:	CS30, CS30PRO, CS30LITE, CS30S, CS30V, CS30MINI, CS30A, CS30C, CS31, CS32
Model Difference	:	All these models are identical in the same PCB, layout and electrical circuit, The only difference is model name.
Product Description	Operation Frequency:	802.11b/g/n(HT20): 2412MHz~2462MHz 802.11n(HT40): 2422MHz~2452MHz
	Number of Channel:	802.11b/g/n(HT20):11 channels see note(3) 802.11n(HT40):7 channels see note(3)
	Modulation Type:	802.11b: DSSS(CCK, DQPSK, DBPSK) 802.11g/n: OFDM(BPSK,QPSK,16QAM,64QAM)
	Antenna Gain:	0.7dBi PIFA Antenna
Power Rating	:	Adapter(XS12-050200U) Input: 100-240V~, 50/60Hz, 0.5A Output: DC5V2A
Li-ion Polymer Battery	:	7.6V, 2600mAh, 19.76Wh
Software Version	:	a51_v0.01_20210316c
Hardware Version	:	CS30HWV2.0
Remark	:	The antenna gain and adapter provided by the applicant, the verified for the RF conduction test and adapter provided by TOBY test lab.

Note:

- (1) For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

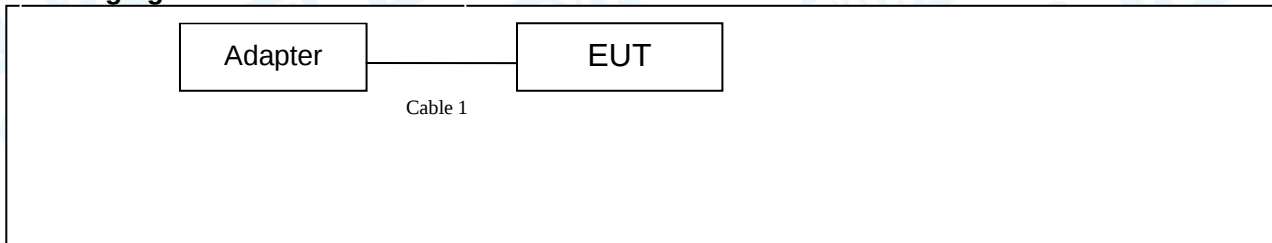
(2) Channel List:

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	2412	05	2432	09	2452
02	2417	06	2437	10	2457
03	2422	07	2442	11	2462
04	2427	08	2447		
Note: CH 01~CH 11 for 802.11b/g/n(HT20) CH 03~CH 09 for 802.11n(HT40)					

(3) The Antenna information about the equipment is provided by the applicant.

1.3 Block Diagram Showing the Configuration of System Tested

Charging Mode+TX mode



1.4 Description of Support Units

Equipment Information				
Name	Model	FCC ID/VOC	Manufacturer	Used “√”
----	-----	----	----	----
Cable Information				
Number	Shielded Type	Ferrite Core	Length	Note
Cable 1	Yes	NO	1.0M	Accessory

1.5 Description of Test Mode

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned follow was evaluated respectively.

For Conducted Test	
Final Test Mode	Description
Mode 1	Charging+TX B Mode

For Radiated Test	
Final Test Mode	Description
Mode 2	Charging+TX B Mode
Mode 3	TX Mode B Mode Channel 01/06/11
Mode 4	TX Mode G Mode Channel 01/06/11
Mode 5	TX Mode N(HT20) Mode Channel 01/06/11
Mode 6	TX Mode N(HT40) Mode Channel 03/06/09

Note:

- (1) For all test, we have verified the construction and function in typical operation. And all the test modes were carried out with the EUT in transmitting operation in maximum power with all kinds of data rate.

According to ANSI C63.10 standards, the measurements are performed at the highest, Middle, lowest available channels, and the worst case data rate as follows:

- 802.11b Mode: CCK (1 Mbps)
- 802.11g Mode: OFDM (6 Mbps)
- 802.11n (HT20) Mode: MCS 0 (6.5 Mbps)
- 802.11n (HT40) Mode: MCS 0 (13 Mbps)

- (2) During the testing procedure, the continuously transmitting with the maximum power mode was programmed by the customer.
- (3) The EUT is portable unit; in normal use it was positioned on X-plane. The worst case was found positioned on X-plane. Therefore only the test data of this X-plane was used for radiated emission measurement test.

1.6 Description of Test Software Setting

During testing channel&Power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product power parameters of WLAN.

Test Software Version	QRCT		
Channel	CH 01	CH 06	CH 11
IEEE 802.11b DSSS	6	6	6
IEEE 802.11g OFDM	6	6	6
IEEE 802.11n (HT20)	6	6	6
Channel	CH 03	CH 06	CH 09
IEEE 802.11n (HT40)	5	5	5

1.7 Measurement Uncertainty

The reported uncertainty of measurement $y \pm U$, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95 %.

Test Item	Parameters	Expanded Uncertainty (U_{Lab})
Conducted Emission	Level Accuracy: 9kHz~150kHz 150kHz to 30MHz	± 3.50 dB ± 3.10 dB
Radiated Emission	Level Accuracy: 9kHz to 30 MHz	± 4.60 dB
Radiated Emission	Level Accuracy: 30MHz to 1000 MHz	± 4.50 dB
Radiated Emission	Level Accuracy: Above 1000MHz	± 4.20 dB

1.8 Test Facility

The testing report were performed by the Shenzhen Toby Technology Co., Ltd., in their facilities located at 1A/F., Bldg.6, Yusheng Industrial Zone, The National Road No.107 Xixiang Section 467, Xixiang, Bao'an, Shenzhen, Guangdong, China. At the time of testing, the following bodies accredited the Laboratory:

CNAS (L5813)

The Laboratory has been accredited by CNAS to ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories for the competence in the field of testing. And the Registration No.: CNAS L5813.

A2LA Certificate No.: 4750.01

The laboratory has been accredited by American Association for Laboratory Accreditation(A2LA) to ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories for the technical competence in the field of Electrical Testing. And the A2LA Certificate No.: 4750.01.FCC Accredited Test Site Number: 854351. Designation Number: CN1223.

IC Registration No.: (11950A)

The Laboratory has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing. The site registration: Site# 11950A. CAB identifier: CN0056

2. Test Summary

FCC Part 15 Subpart C(15.247)				
Standard Section	Test Item	Test Sample(s)	Judgment	Remark
15.203	Antenna Requirement	20200916-08-01#	PASS	N/A
15.207(a)	Conducted Emission	20200916-08-02#	PASS	N/A
15.205&15.247(d)	Band-Edge & Unwanted Emissions into Restricted Frequency	20200916-08-01#	PASS	N/A
15.247(a)(2)	6dB Bandwidth	20200916-08-01#	PASS	N/A
15.247(b)(3)	Conducted Max Output Power	20200916-08-01#	PASS	N/A
15.247(e)	Power Spectral Density	20200916-08-01#	PASS	N/A
15.205, 15.209&15.247(d)	Transmitter Radiated Spurious &Unwanted Emissions into Restricted Frequency	20200916-08-01# 20200916-08-02#	PASS	N/A
Note: N/A is an abbreviation for Not Applicable.				

3. Test Software

Test Item	Test Software	Manufacturer	Version No.
Conducted Emission	EZ-EMC	EZ	CDI-03A2
Radiation Emission	EZ-EMC	EZ	FA-03A2RE
RF Conducted Measurement	MTS-8310	MWRFTest	V2.0.0.0

4. Test Equipment

Conducted Emission Test					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Due Date
EMI Test Receiver	Rohde & Schwarz	ESCI	100321	Jul. 06, 2020	Jul. 05, 2021
RF Switching Unit	Compliance Direction Systems Inc	RSU-A4	34403	Jul. 06, 2020	Jul. 05, 2021
AMN	SCHWARZBECK	NNBL 8226-2	8226-2/164	Jul. 06, 2020	Jul. 05, 2021
LISN	Rohde & Schwarz	ENV216	101131	Jul. 06, 2020	Jul. 05, 2021
Radiation Emission Test					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Due Date
Spectrum Analyzer	Agilent	E4407B	MY45106456	Jul. 06, 2020	Jul. 05, 2021
EMI Test Receiver	Rohde & Schwarz	ESPI	100010/007	Jul. 06, 2020	Jul. 05, 2021
Spectrum Analyzer	Rohde & Schwarz	FSV40-N	102197	Jul. 06, 2020	Jul. 05, 2021
Bilog Antenna	ETS-LINDGREN	3142E	00117537	Mar.01, 2020	Feb. 28, 2022
Horn Antenna	ETS-LINDGREN	3117	00143207	Mar.01, 2020	Feb. 28, 2022
Horn Antenna	ETS-LINDGREN	BBHA 9170	BBHA9170582	Mar.01, 2020	Feb. 28, 2022
Loop Antenna	SCHWARZBECK	FMZB 1519 B	1519B-059	Jul. 07, 2020	Jul. 06, 2021
Pre-amplifier	Sonoma	310N	185903	Feb. 25, 2021	Feb. 24, 2022
Pre-amplifier	HP	8449B	3008A00849	Feb. 25, 2021	Feb. 24, 2022
Pre-amplifier	SKET	LNPA_1840G-50	SK201904032	Feb. 25, 2021	Feb. 24, 2022
Cable	HUBER+SUHNER	100	SUCOFLEX	Feb. 25, 2021	Feb. 24, 2022
Positioning Controller	ETS-LINDGREN	2090	N/A	N/A	N/A
Antenna Conducted Emission					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Due Date
Spectrum Analyzer	Agilent	E4407B	MY45106456	Jul. 06, 2020	Jul. 05, 2021
Spectrum Analyzer	Rohde & Schwarz	ESPI	100010/007	Jul. 06, 2020	Jul. 05, 2021
MXA Signal Analyzer	Agilent	N9020A	MY49100060	Sep. 11, 2020	Sep. 10, 2021
Vector Signal Generator	Agilent	N5182A	MY50141294	Sep. 11, 2020	Sep. 10, 2021
Analog Signal Generator	Agilent	N5181A	MY50141953	Sep. 11, 2020	Sep. 10, 2021
RF Power Sensor	DARE!! Instruments	RadiPowerRPR3006W	17I00015SNO26	Sep. 11, 2020	Sep. 10, 2021
	DARE!! Instruments	RadiPowerRPR3006W	17I00015SNO29	Sep. 11, 2020	Sep. 10, 2021
	DARE!! Instruments	RadiPowerRPR3006W	17I00015SNO31	Sep. 11, 2020	Sep. 10, 2021
	DARE!! Instruments	RadiPowerRPR3006W	17I00015SNO33	Sep. 11, 2020	Sep. 10, 2021

5. Conducted Emission Test

5.1 Test Standard and Limit

5.1.1 Test Standard
FCC Part 15.207

5.1.2 Test Limit

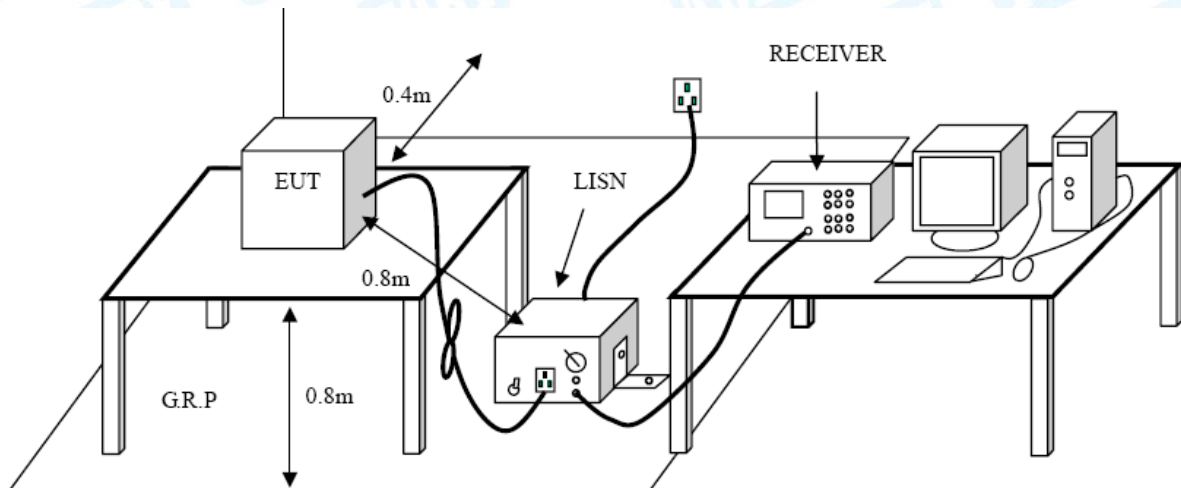
Conducted Emission Test Limit

Frequency	Maximum RF Line Voltage (dB μ V)	
	Quasi-peak Level	Average Level
150kHz~500kHz	66 ~ 56 *	56 ~ 46 *
500kHz~5MHz	56	46
5MHz~30MHz	60	50

Notes:

- (1) *Decreasing linearly with logarithm of the frequency.
- (2) The lower limit shall apply at the transition frequencies.
- (3) The limit decrease in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

5.2 Test Setup



5.3 Test Procedure

The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.

Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.

I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.

LISN at least 80 cm from nearest part of EUT chassis.

The bandwidth of EMI test receiver is set at 9kHz, and the test frequency band is from 0.15MHz to 30MHz.

5.4 Deviation From Test Standard

No deviation

5.5 EUT Operating Mode

Please refer to the description of test mode.

5.6 Test Data

Please refer to the Attachment A.

6. Radiated and Conducted Unwanted Emissions

6.1 Test Standard and Limit

6.1.1 Test Standard

FCC Part 15.209

6.1.2 Test Limit

Radiated Emission Limits (9 kHz~1000 MHz)

Frequency (MHz)	Field Strength (microvolt/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

Radiated Emission Limit (Above 1000MHz)

Frequency (MHz)	Distance of 3m (dBuV/m)	
	Peak	Average
Above 1000	74	54

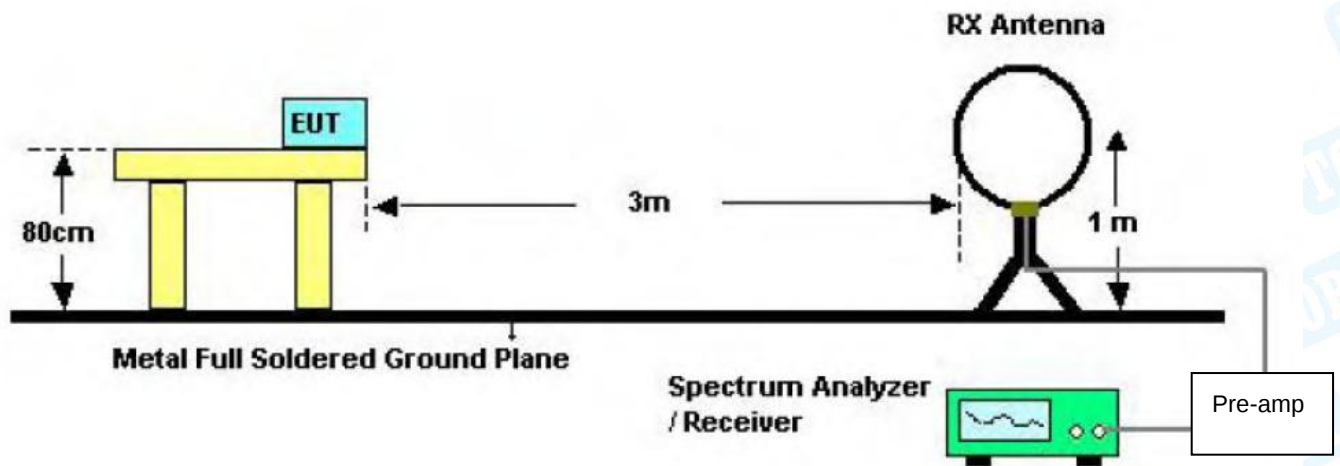
Note:

- (1) The tighter limit applies at the band edges.
- (2) Emission Level(dBuV/m)=20log Emission Level(uV/m)

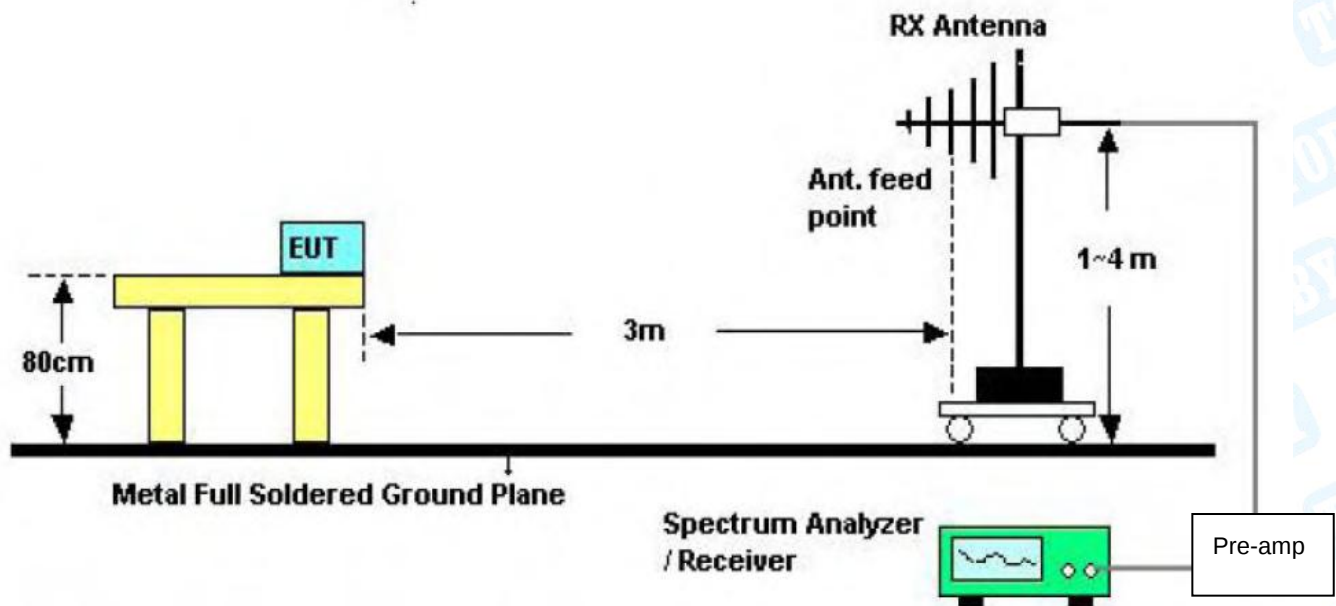
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided that the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of root-mean-square averaging over a time interval, as permitted under section 5.4(d), the attenuation required shall be 30 dB instead of 20 dB.

6.2 Test Setup

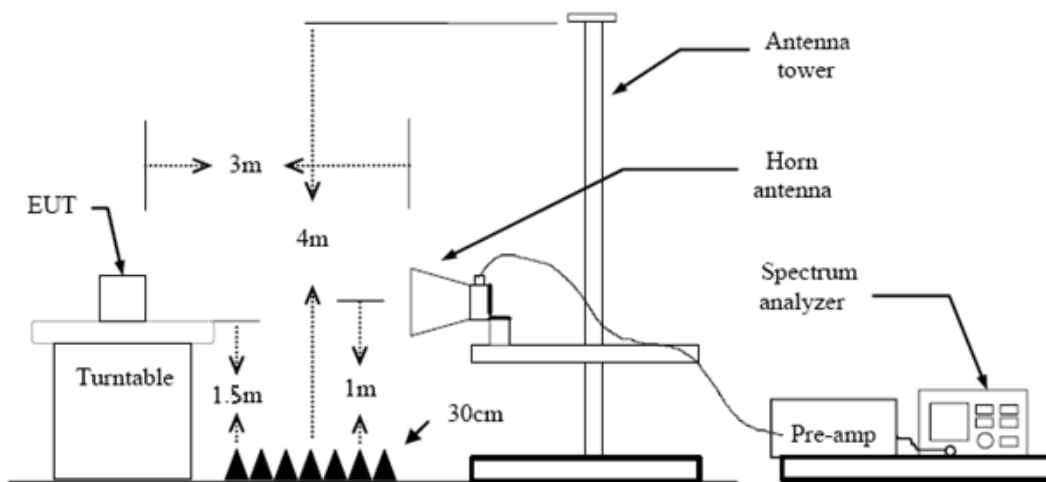
Radiated measurement



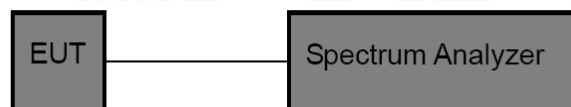
Below 30MHz Test Setup



Below 1000MHz Test Setup



Above 1GHz Test Setup

Conducted measurement**6.3 Test Procedure****Radiated measurement**

- (1) Measurements at frequency above 1GHz. The EUT was placed on a rotating 1.5m high above the ground. RF absorbers covered the ground plane with a minimum area of 3.0m by 3.0m between the EUT and measurement receiver antenna. The RF absorber shall not exceed 30cm in high above the conducting floor. The table was rotated 360 degrees to determine the position of the highest radiation.
- (2) Measurements at frequency Below 1GHz. The EUT was placed on a rotating 0.8m high above the ground. RF absorbers covered the ground plane with a minimum area of 3.0m by 3.0m between the EUT and measurement receiver antenna. The RF absorber shall not exceed 30cm in high above the conducting floor. The table was rotated 360 degrees to determine the position of the highest radiation.
- (3) The Test antenna shall vary between 1m and 4m, Both Horizontal and Vertical antenna are set to make measurement.
- (4) The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- (5) If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit Bellow 1 GHz, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed. But the Peak Value and average value both need to comply with applicable limit above 1 GHz.

- (6) Testing frequency range below 1GHz the measuring instrument use VBW=120 kHz with Quasi-peak detection.
- (7) Testing frequency range above 1GHz the measuring instrument use RBW=1 MHz and VBW=3 MHz with Peak Detector for Peak Values, and use RBW=1 MHz and VBW=10 Hz with Peak Detector for Average Values.
- (8) For the actual test configuration, please see the test setup photo.

Conducted measurement

Testing shall be done on a laboratory bench in a shielded room or in another suitable location. The active antenna port of the unlicensed wireless device shall be connected to the spectrum analyzer after applying appropriate precautions to protect the instrumentation. If a second antenna port is available, then it shall be tested at one operating frequency, with other port(s) appropriately terminated, to verify it has similar output characteristics as the fully tested port. (See also 7.8.8, 11.12.2, and 12.1.2.)

For the actual test configuration, please see the test setup photo.

6.4 Deviation From Test Standard

No deviation

6.5 EUT Operating Condition

The Equipment Under Test was set to Continual Transmitting in maximum power.

6.6 Test Data

Remark: During testing above 1GHz the measuring instrument use RBW=1 MHz and VBW=3 MHz with Peak Detector for Peak Values, and use RBW=1 MHz and VBW=10 Hz with Peak Detector for Average Values.

Please refer to the Attachment B.

7. Restricted Bands Requirement

7.1 Test Standard and Limit

7.1.1 Test Standard

FCC Part 15.247(d)

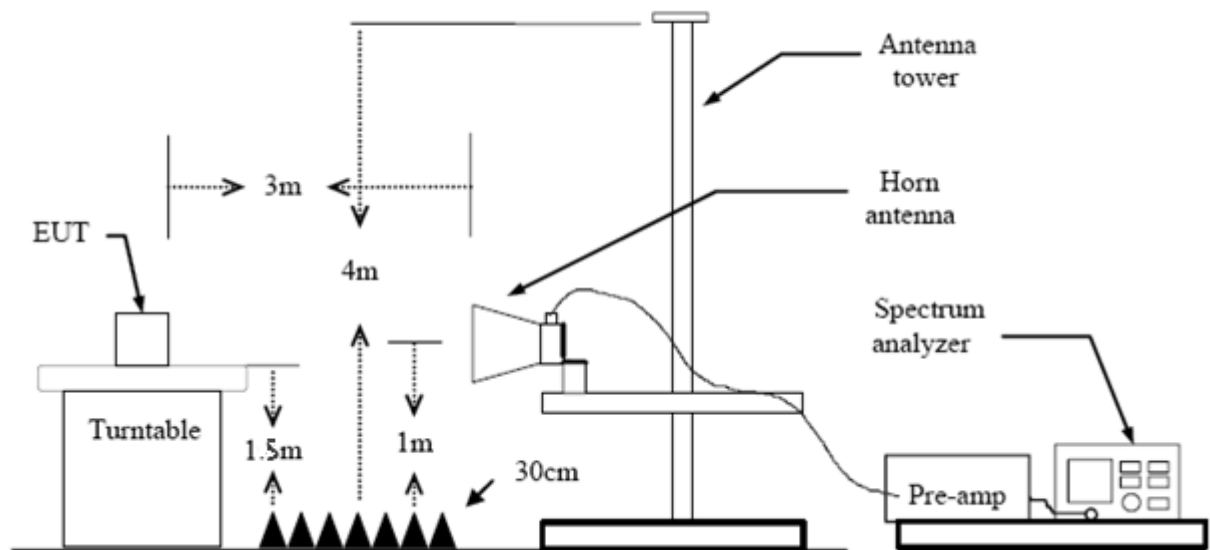
FCC Part 15.209

FCC Part 15.205

7.1.2 Test Limit

Restricted Frequency Band (MHz)	Distance of 3m (dBuV/m)	
	Peak	Average
2310 ~2390	74	54
2483.5 ~2500	74	54

7.2 Test Setup



7.3 Test Procedure

- (1) The measuring distance of 3m shall be used for measurements at frequency below 1GHz and above 1 GHz. The EUT was placed on a rotating 0.8m high above ground, the table was rotated 360 degrees to determine the position of the highest radiation.
- (2) Measurements at frequency above 1GHz. The EUT was placed on a rotating 1.5m high above the ground. RF absorbers covered the ground plane with a minimum area of 3.0m by 3.0m between the EUT and measurement receiver antenna. The RF absorber shall not exceed 30cm in high above the conducting floor. The table was rotated 360 degrees to determine the position of the highest radiation.
- (3) The Test antenna shall vary between 1m and 4m, Both Horizontal and Vertical antenna are set to make measurement.
- (4) The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- (5) If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit Bellow 1 GHz, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed. But the Peak Value and average value both need to comply with applicable limit above 1 GHz.
- (6) Testing frequency range below 1GHz the measuring instrument use VBW=120 kHz with Quasi-peak detection.
- (7) Testing frequency range above 1GHz the measuring instrument use RBW=1 MHz and VBW=3 MHz with Peak Detector for Peak Values, and use RBW=1 MHz and VBW=10 Hz with Peak Detector for Average Values.
- (8) For the actual test configuration, please see the test setup photo.

7.4 Deviation From Test Standard

No deviation

7.5 EUT Operating Condition

The Equipment Under Test was set to Continual Transmitting in maximum power.

7.6 Test Data

Please refer to the Attachment C.

8. Bandwidth Test

8.1 Test Standard and Limit

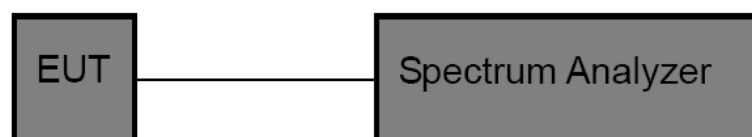
8.1.1 Test Standard

FCC Part 15.247 (a)(2)

8.1.2 Test Limit

FCC Part 15 Subpart C(15.247)		
Test Item	Limit	Frequency Range(MHz)
Bandwidth	≥ 500 KHz (6dB bandwidth)	2400~2483.5

8.2 Test Setup



8.3 Test Procedure

- (1) The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
- (2) The bandwidth is measured at an amplitude level reduced 6dB from the reference level. The reference level is the level of the highest amplitude signal observed from the transmitter at the fundamental frequency. Once the reference level is established, the equipment is conditioned with typical modulating signal to produce the worst –case (i.e the widest) bandwidth.
- (3)Measure the channel separation the spectrum analyzer was set to Resolution Bandwidth:100 kHz, and Video Bandwidth:300 kHz, Detector: Peak, Sweep Time set auto.

8.4 Deviation From Test Standard

No deviation

8.5 EUT Operating Condition

The EUT was set to continuously transmitting in each mode and low, Middle and high channel for the test.

8.6 Test Data

Please refer to the Attachment D.

9. Peak Output Power Test

9.1 Test Standard and Limit

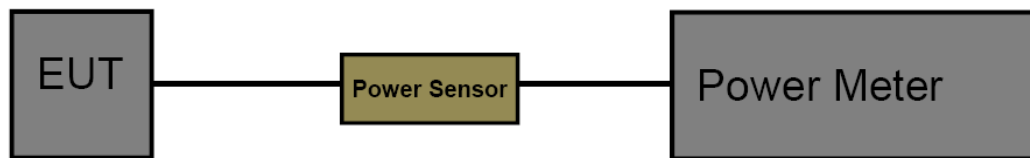
9.1.1 Test Standard

FCC Part 15.247 (b)

9.1.2 Test Limit

FCC Part 15 Subpart C(15.247)		
Test Item	Limit	Frequency Range(MHz)
Peak Output Power	1 Watt or 30 dBm	2400~2483.5

9.2 Test Setup



9.3 Test Procedure

The measurement is according to section 9.1.2 of KDB 558074 D01 DTS Meas Guidance v05r02.

The EUT was connected to RF power meter via a broadband power sensor as show the block above. The power sensor video bandwidth is greater than or equal to the DTS bandwidth of the equipment.

9.4 Deviation From Test Standard

No deviation

9.5 EUT Operating Condition

The EUT was set to continuously transmitting in the max power during the test.

9.6 Test Data

Please refer to the Attachment E.

10. Power Spectral Density Test

10.1 Test Standard and Limit

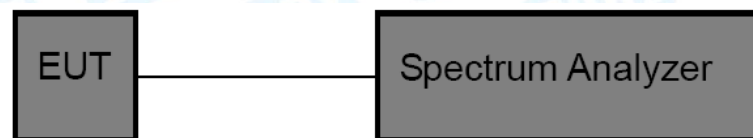
10.1.1 Test Standard

FCC Part 15.247 (e)

10.1.2 Test Limit

FCC Part 15 Subpart C(15.247)		
Test Item	Limit	Frequency Range(MHz)
Power Spectral Density	8dBm(in any 3 kHz)	2400~2483.5

10.2 Test Setup



10.3 Test Procedure

The EUT was directly connected to the Spectrum Analyzer and antenna output port as show in the block diagram above. The measurement according to section 10.2 of KDB 558074 D01 DTS Meas Guidance v05r02.

- (1) The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
- (2) Set analyser centre frequency to DTS channel centre frequency.
- (3) Set the span to 1.5 times the DTS bandwidth.
- (4) Set the RBW to: 3 kHz
- (5) Set the VBW to: 10 kHz
- (6) Detector: peak
- (7) Sweep time: auto
- (8) Allow trace to fully stabilize. Then use the peak marker function to determine the maximum amplitude level.

9.4 Deviation From Test Standard

No deviation

9.5 EUT Operating Condition

The EUT was set to continuously transmitting in each mode and low, Middle and high channel for the test.

9.6 Test Data

Please refer to the Attachment F.

11. Antenna Requirement

11.1 Standard Requirement

11.1.1 Standard

FCC Part 15.203

11.1.2 Requirement

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

11.2 Deviation From Test Standard

No deviation

11.3 Antenna Connected Construction

The gains of the antenna used for transmitting is 0.7dBi, and the antenna de-signed with permanent attachment and no consideration of replacement. Please see the EUT photo for details.

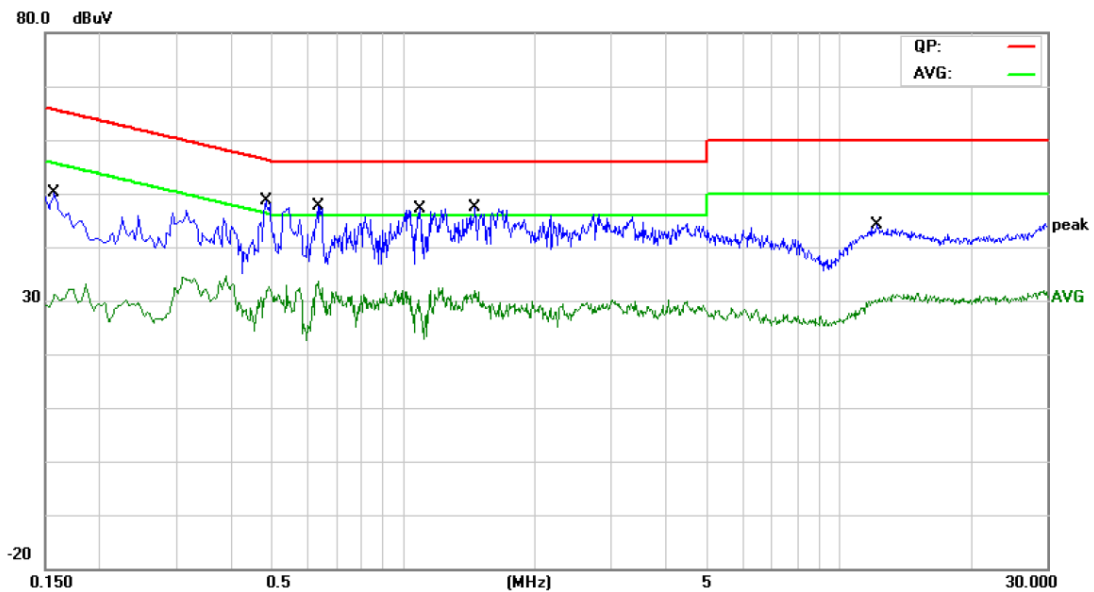
Result

The EUT antenna is a PIFA Antenna. It complies with the standard requirement.

Antenna Type
☐ Permanent attached antenna
☒ Unique connector antenna
☐ Professional installation antenna

Attachment A-- Conducted Emission Test Data

Temperature:	23.7°C	Relative Humidity:	46%
Test Voltage:	AC 120V/60Hz		
Terminal:	Line		
Test Mode:	Mode 1		
Remark:	Only worse case is reported		

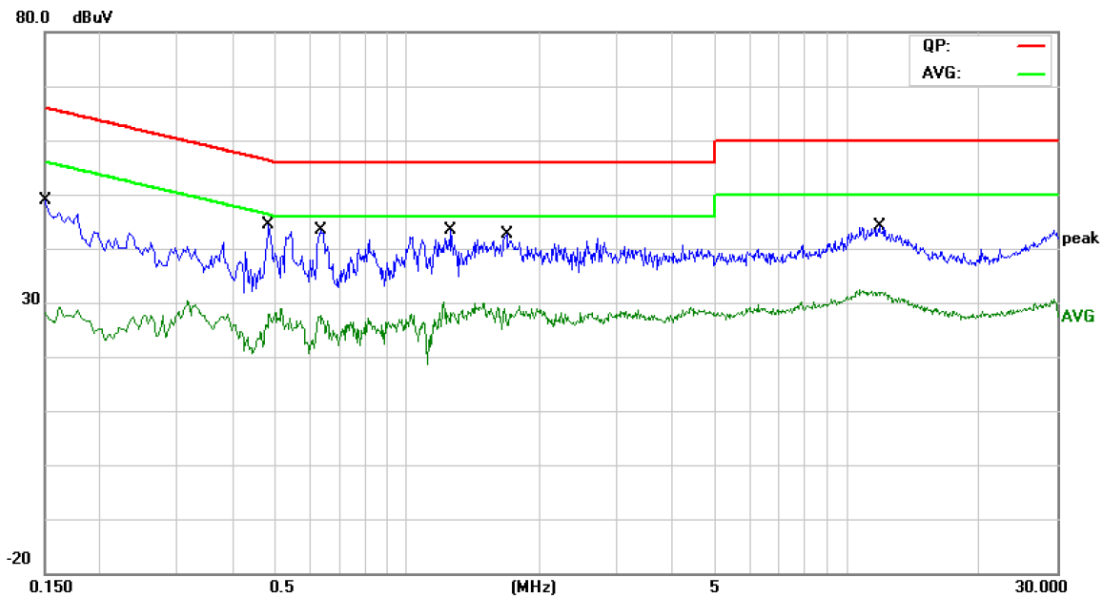


No.	Mk.	Freq. MHz	Reading Level dBμV	Correct Factor dB	Measure- ment dBμV	Limit dBμV	Over dB	Detector
1		0.1580	33.12	9.70	42.82	65.56	-22.74	QP
2		0.1580	20.35	9.70	30.05	55.56	-25.51	AVG
3	*	0.4820	36.97	9.70	46.67	56.30	-9.63	QP
4		0.4820	22.35	9.70	32.05	46.30	-14.25	AVG
5		0.6340	34.91	9.70	44.61	56.00	-11.39	QP
6		0.6340	23.51	9.70	33.21	46.00	-12.79	AVG
7		1.0900	33.96	9.79	43.75	56.00	-12.25	QP
8		1.0900	18.31	9.79	28.10	46.00	-17.90	AVG
9		1.4580	31.04	9.75	40.79	56.00	-15.21	QP
10		1.4580	20.57	9.75	30.32	46.00	-15.68	AVG
11		12.2460	28.42	9.89	38.31	60.00	-21.69	QP
12		12.2460	18.49	9.89	28.38	50.00	-21.62	AVG

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. QuasiPeak (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)
3. Margin (dB) = QuasiPeak (dBμV/m)-Limit QPK(dBμV/m)

Temperature:	23.7°C	Relative Humidity:	46%
Test Voltage:	AC 120V/60Hz		
Terminal:	Neutral		
Test Mode:	Mode 1		
Remark:	Only worse case is reported		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1		0.1500	31.03	9.80	40.83	65.99	-25.16	QP
2		0.1500	17.02	9.80	26.82	55.99	-29.17	AVG
3	*	0.4860	32.21	9.80	42.01	56.24	-14.23	QP
4		0.4860	17.93	9.80	27.73	46.24	-18.51	AVG
5		0.6340	29.60	9.80	39.40	56.00	-16.60	QP
6		0.6340	17.76	9.80	27.56	46.00	-18.44	AVG
7		1.2620	28.09	9.80	37.89	56.00	-18.11	QP
8		1.2620	17.92	9.80	27.72	46.00	-18.28	AVG
9		1.6820	29.04	9.80	38.84	56.00	-17.16	QP
10		1.6820	16.68	9.80	26.48	46.00	-19.52	AVG
11		11.8300	28.25	9.94	38.19	60.00	-21.81	QP
12		11.8300	20.63	9.94	30.57	50.00	-19.43	AVG

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. QuasiPeak (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)
3. Margin (dB) = QuasiPeak (dBμV/m)-Limit QPK(dBμV/m)

Attachment B--Unwanted Emissions Data

---Radiated Unwanted Emissions

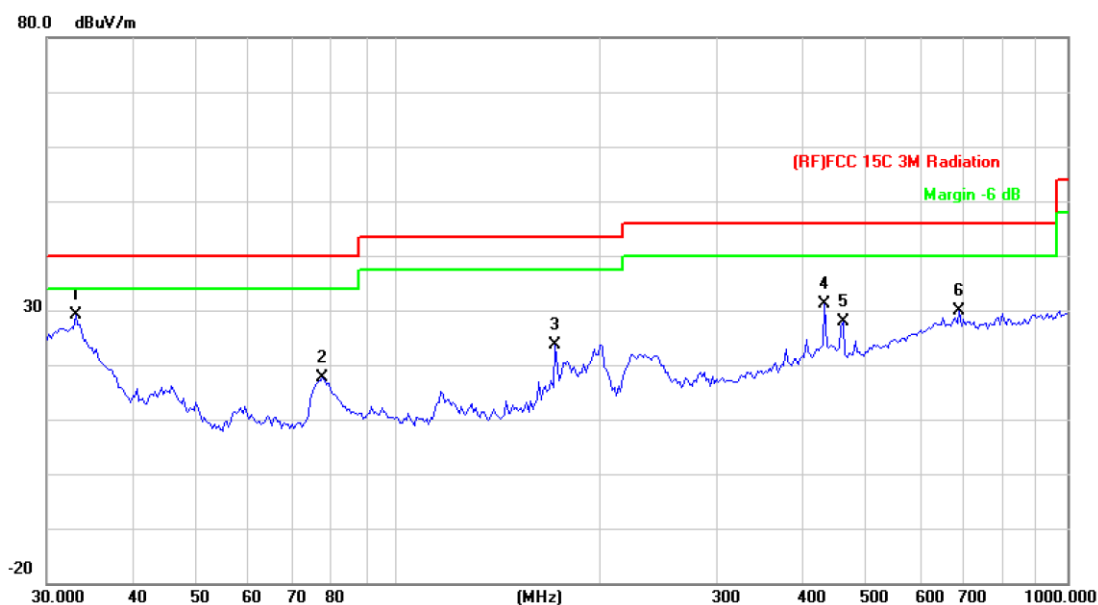
9KHz~30MHz

From 9KHz to 30MHz: Conclusion: PASS

Note: The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

30MHz~1GHz

Temperature:	23.7℃	Relative Humidity:	46%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	Mode 3		
Remark:	Only worse case is reported		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1	*	33.0950	44.30	-15.26	29.04	40.00	-10.96	peak
2		77.3212	40.26	-22.71	17.55	40.00	-22.45	peak
3		171.9946	44.06	-20.40	23.66	43.50	-19.84	peak
4		434.0651	43.15	-12.04	31.11	46.00	-14.89	peak
5		462.3455	39.47	-11.57	27.90	46.00	-18.10	peak
6		689.5644	36.89	-7.01	29.88	46.00	-16.12	peak

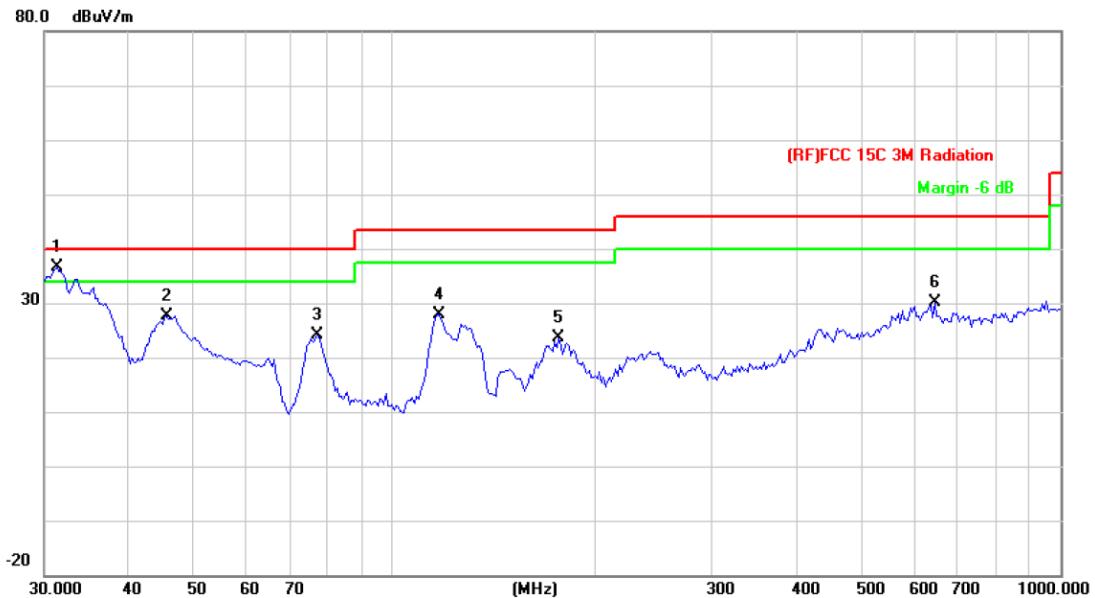
Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. QuasiPeak (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

3. Margin (dB) = QuasiPeak (dBμV/m)-Limit QPK(dBμV/m)

Temperature:	23.7°C	Relative Humidity:	46%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	Mode 3		
Remark:	Only worse case is reported		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	31.2893	50.49	-13.91	36.58	40.00	-3.42	peak
2		45.6948	49.40	-21.65	27.75	40.00	-12.25	peak
3		76.7808	46.96	-22.76	24.20	40.00	-15.80	peak
4		116.9495	50.07	-22.21	27.86	43.50	-15.64	peak
5		176.8878	43.82	-20.23	23.59	43.50	-19.91	peak
6		647.3856	38.23	-7.99	30.24	46.00	-15.76	peak

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. QuasiPeak (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)
3. Margin (dB) = QuasiPeak (dBμV/m)-Limit QPK(dBμV/m)

Above 1GHz

Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 7.6V		
Ant. Pol.	Horizontal		
Test Mode:	TX B Mode 2412MHz		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4823.946	35.43	13.16	48.59	54.00	-5.41	AVG
2		4824.266	48.22	13.16	61.38	74.00	-12.62	peak

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

4. The tests evaluated1-26.5GHz,The testing has been conformed to the 10th harmonic of the highest fundamental frequency.

5. No report for the emission which more than 20dB below the prescribed limit.

Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 7.6V		
Ant. Pol.	Vertical		
Test Mode:	TX B Mode 2412MHz		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4823.974	35.58	13.16	48.74	54.00	-5.26	AVG
2		4824.240	48.67	13.16	61.83	74.00	-12.17	peak

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

4. The tests evaluated1-26.5GHz,The testing has been conformed to the 10th harmonic of the highest fundamental frequency.

5. No report for the emission which more than 20dB below the prescribed limit.

Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 7.6V		
Ant. Pol.	Horizontal		
Test Mode:	TX B Mode 2437MHz		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB
							Detector
1		4874.008	48.61	13.53	62.14	74.00	-11.86
2	*	4874.256	34.41	13.53	47.94	54.00	-6.06

peak
AVG

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

4. The tests evaluated1-26.5GHz,The testing has been conformed to the 10th harmonic of the highest fundamental frequency.

5. No report for the emission which more than 20dB below the prescribed limit.

Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 7.6V		
Ant. Pol.	Vertical		
Test Mode:	TX B Mode 2437MHz		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB
							Detector
1		4873.832	48.16	13.53	61.69	74.00	-12.31 peak
2	*	4874.442	34.60	13.53	48.13	54.00	-5.87 AVG

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

4. The tests evaluated1-26.5GHz,The testing has been conformed to the 10th harmonic of the highest fundamental frequency.

5. No report for the emission which more than 20dB below the prescribed limit.

Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 7.6V		
Ant. Pol.	Horizontal		
Test Mode:	TX B Mode 2462MHz		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4923.920	35.09	13.89	48.98	54.00	-5.02	AVG
2		4924.114	48.33	13.89	62.22	74.00	-11.78	peak

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

4. The tests evaluated1-26.5GHz,The testing has been conformed to the 10th harmonic of the highest fundamental frequency.

5. No report for the emission which more than 20dB below the prescribed limit.

Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 7.6V		
Ant. Pol.	Vertical		
Test Mode:	TX B Mode 2462MHz		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4923.574	47.98	13.89	61.87	74.00	-12.13	peak
2	*	4923.574	34.35	13.89	48.24	54.00	-5.76	AVG

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

4. The tests evaluated1-26.5GHz,The testing has been conformed to the 10th harmonic of the highest fundamental frequency.

5. No report for the emission which more than 20dB below the prescribed limit.

Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 7.6V		
Ant. Pol.	Horizontal		
Test Mode:	TX G Mode 2412MHz		

Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 7.6V		
Ant. Pol.	Vertical		
Test Mode:	TX G Mode 2412MHz		

Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 7.6V		
Ant. Pol.	Horizontal		
Test Mode:	TX G Mode 2437MHz		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB
							Detector
1		4873.624	47.91	13.53	61.44	74.00	-12.56 peak
2	*	4874.460	34.54	13.53	48.07	54.00	-5.93 AVG

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

4. The tests evaluated1-26.5GHz,The testing has been conformed to the 10th harmonic of the highest fundamental frequency.

5. No report for the emission which more than 20dB below the prescribed limit.

Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 7.6V		
Ant. Pol.	Vertical		
Test Mode:	TX G Mode 2437MHz		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4874.228	48.02	13.53	61.55	74.00	-12.45	peak
2	*	4874.228	34.24	13.53	47.77	54.00	-6.23	AVG

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

4. The tests evaluated1-26.5GHz,The testing has been conformed to the 10th harmonic of the highest fundamental frequency.

5. No report for the emission which more than 20dB below the prescribed limit.

Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 7.6V		
Ant. Pol.	Horizontal		
Test Mode:	TX G Mode 2462MHz		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4923.564	48.06	13.89	61.95	74.00	-12.05	peak
2	*	4924.060	35.06	13.89	48.95	54.00	-5.05	AVG

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

4. The tests evaluated1-26.5GHz,The testing has been conformed to the 10th harmonic of the highest fundamental frequency.

5. No report for the emission which more than 20dB below the prescribed limit.

Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 7.6V		
Ant. Pol.	Vertical		
Test Mode:	TX G Mode 2462MHz		

Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 7.6V		
Ant. Pol.	Horizontal		
Test Mode:	TX N(HT20) Mode 2412MHz		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4823.566	34.24	13.16	47.40	54.00	-6.60	AVG
2		4824.082	48.06	13.16	61.22	74.00	-12.78	peak

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

4. The tests evaluated1-26.5GHz,The testing has been conformed to the 10th harmonic of the highest fundamental frequency.

5. No report for the emission which more than 20dB below the prescribed limit.

Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 7.6V		
Ant. Pol.	Vertical		
Test Mode:	TX N(HT20) Mode 2412MHz		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4824.324	47.63	13.16	60.79	74.00	-13.21	peak
2	*	4824.324	33.86	13.16	47.02	54.00	-6.98	AVG

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

4. The tests evaluated1-26.5GHz,The testing has been conformed to the 10th harmonic of the highest fundamental frequency.

5. No report for the emission which more than 20dB below the prescribed limit.

Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 7.6V		
Ant. Pol.	Horizontal		
Test Mode:	TX N(HT20) Mode 2437MHz		

Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 7.6V		
Ant. Pol.	Vertical		
Test Mode:	TX N(HT20) Mode 2437MHz		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB Detector
1		4873.664	48.33	13.53	61.86	74.00	-12.14 peak
2	*	4874.402	34.68	13.53	48.21	54.00	-5.79 AVG

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

4. The tests evaluated1-26.5GHz,The testing has been conformed to the 10th harmonic of the highest fundamental frequency.

5. No report for the emission which more than 20dB below the prescribed limit.

Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 7.6V		
Ant. Pol.	Horizontal		
Test Mode:	TX N(HT20) Mode 2462MHz		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4923.692	35.01	13.89	48.90	54.00	-5.10	AVG
2		4923.936	48.33	13.89	62.22	74.00	-11.78	peak

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

4. The tests evaluated1-26.5GHz,The testing has been conformed to the 10th harmonic of the highest fundamental frequency.

5. No report for the emission which more than 20dB below the prescribed limit.

Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 7.6V		
Ant. Pol.	Vertical		
Test Mode:	TX N(HT20) Mode 2462MHz		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB
							Detector
1		4923.880	49.23	13.89	63.12	74.00	-10.88
2	*	4923.880	34.27	13.89	48.16	54.00	-5.84

peak
AVG

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

4. The tests evaluated1-26.5GHz,The testing has been conformed to the 10th harmonic of the highest fundamental frequency.

5. No report for the emission which more than 20dB below the prescribed limit.

Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 7.6V		
Ant. Pol.	Horizontal		
Test Mode:	TX N(HT40) Mode 2422MHz		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4843.844	48.00	13.31	61.31	74.00	-12.69	peak
2	*	4843.844	34.10	13.31	47.41	54.00	-6.59	AVG

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

4. The tests evaluated1-26.5GHz,The testing has been conformed to the 10th harmonic of the highest fundamental frequency.

5. No report for the emission which more than 20dB below the prescribed limit.

Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 7.6V		
Ant. Pol.	Vertical		
Test Mode:	TX N(HT40) Mode 2422MHz		

Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 7.6V		
Ant. Pol.	Horizontal		
Test Mode:	TX N(HT40) Mode 2437MHz		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4873.588	34.54	13.53	48.07	54.00	-5.93	AVG
2		4873.768	47.62	13.53	61.15	74.00	-12.85	peak

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

4. The tests evaluated1-26.5GHz,The testing has been conformed to the 10th harmonic of the highest fundamental frequency.

5. No report for the emission which more than 20dB below the prescribed limit.

Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 7.6V		
Ant. Pol.	Vertical		
Test Mode:	TX N(HT40) Mode 2437MHz		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4874.454	34.49	13.53	48.02	54.00	-5.98	AVG
2		4874.488	48.00	13.53	61.53	74.00	-12.47	peak

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

4. The tests evaluated1-26.5GHz,The testing has been conformed to the 10th harmonic of the highest fundamental frequency.

5. No report for the emission which more than 20dB below the prescribed limit.

Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 7.6V		
Ant. Pol.	Horizontal		
Test Mode:	TX N(HT40) Mode 2452MHz		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4903.640	48.32	13.74	62.06	74.00	-11.94	peak
2	*	4903.640	34.42	13.74	48.16	54.00	-5.84	AVG

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

4. The tests evaluated1-26.5GHz,The testing has been conformed to the 10th harmonic of the highest fundamental frequency.

5. No report for the emission which more than 20dB below the prescribed limit.

Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 7.6V		
Ant. Pol.	Vertical		
Test Mode:	TX N(HT40) Mode 2452MHz		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB
							Detector
1		4903.688	48.25	13.74	61.99	74.00	-12.01
2	*	4903.758	34.78	13.74	48.52	54.00	-5.48

peak
AVG

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

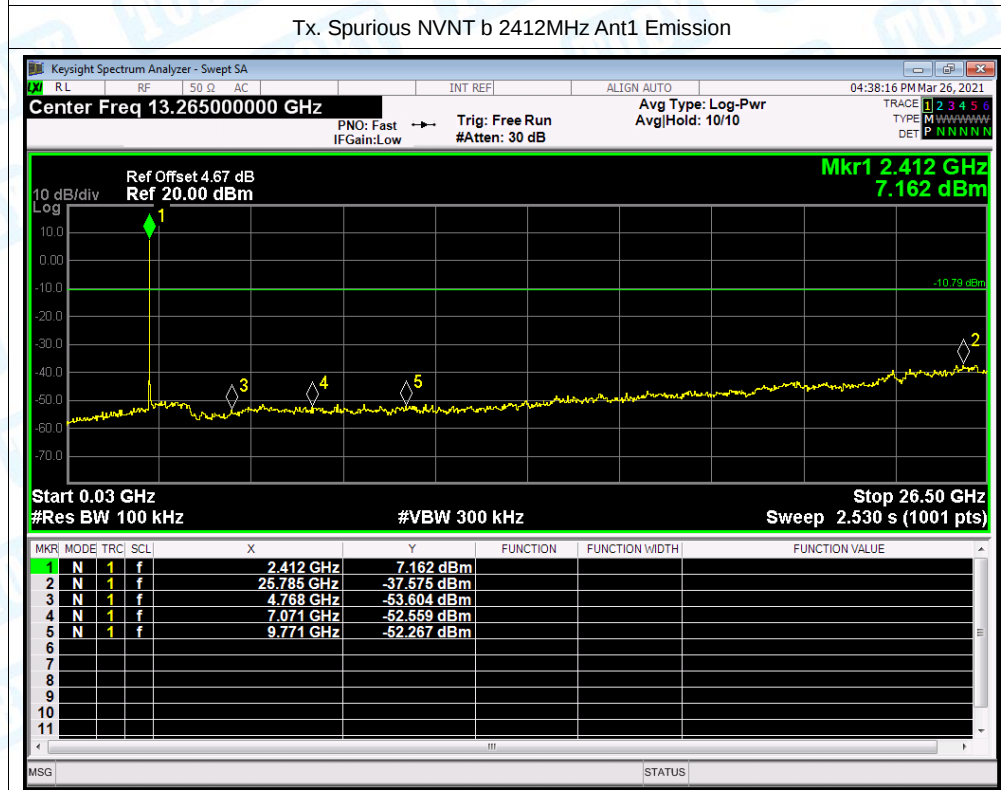
2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

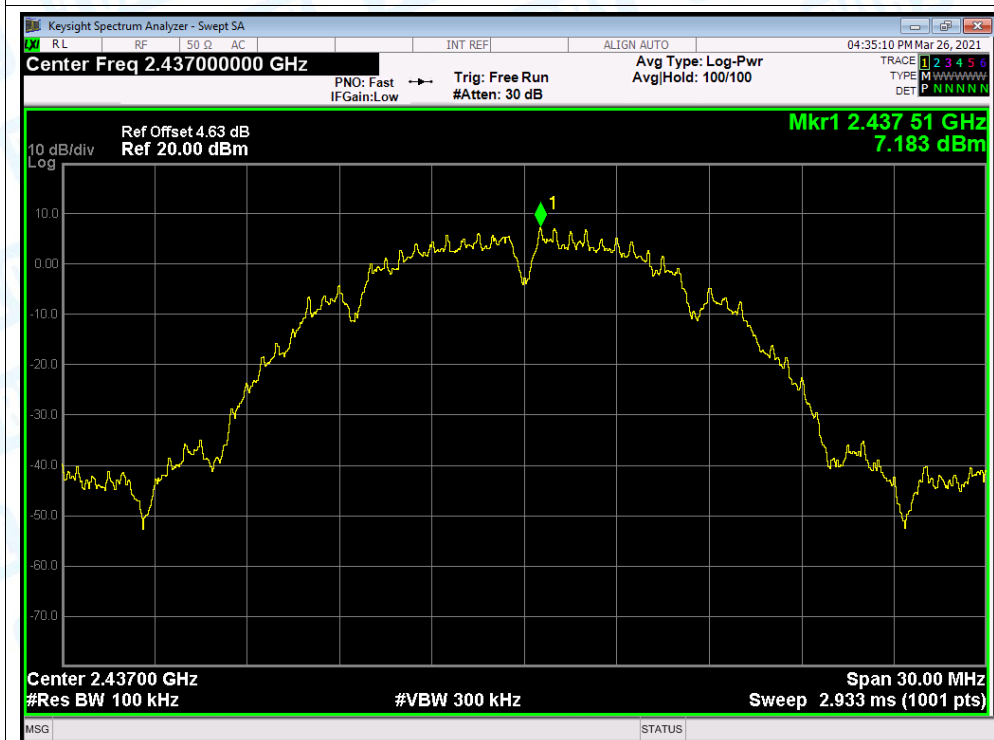
4. The tests evaluated1-26.5GHz,The testing has been conformed to the 10th harmonic of the highest fundamental frequency.

5. No report for the emission which more than 20dB below the prescribed limit.

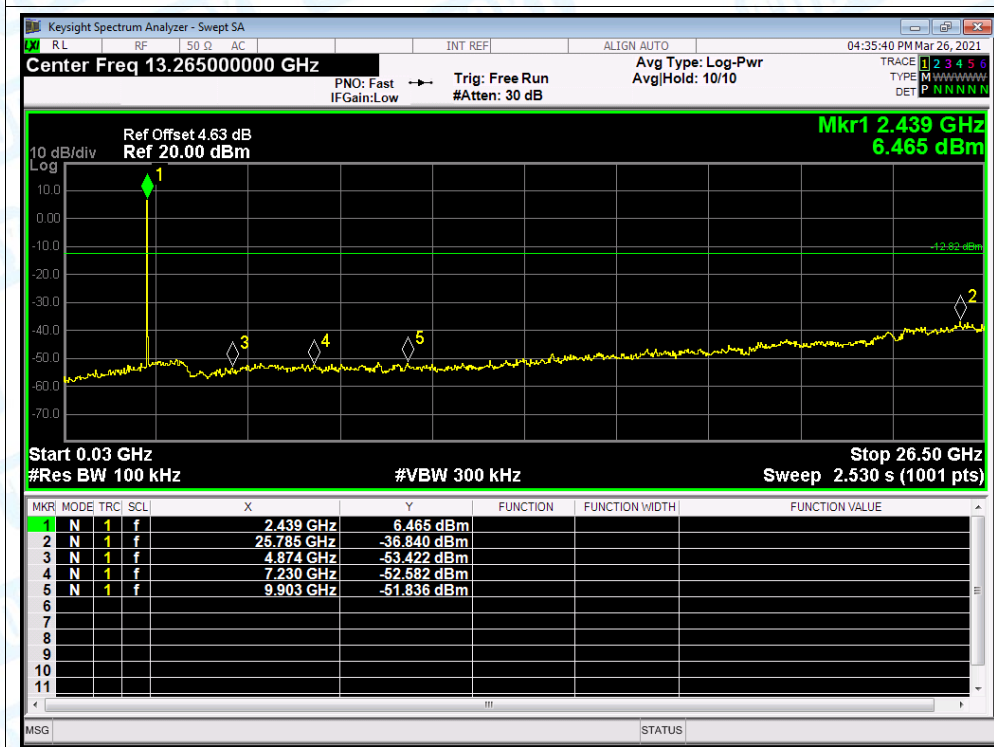
---Conducted Unwanted Emissions



Tx. Spurious NVNT b 2437MHz Ant1 Ref



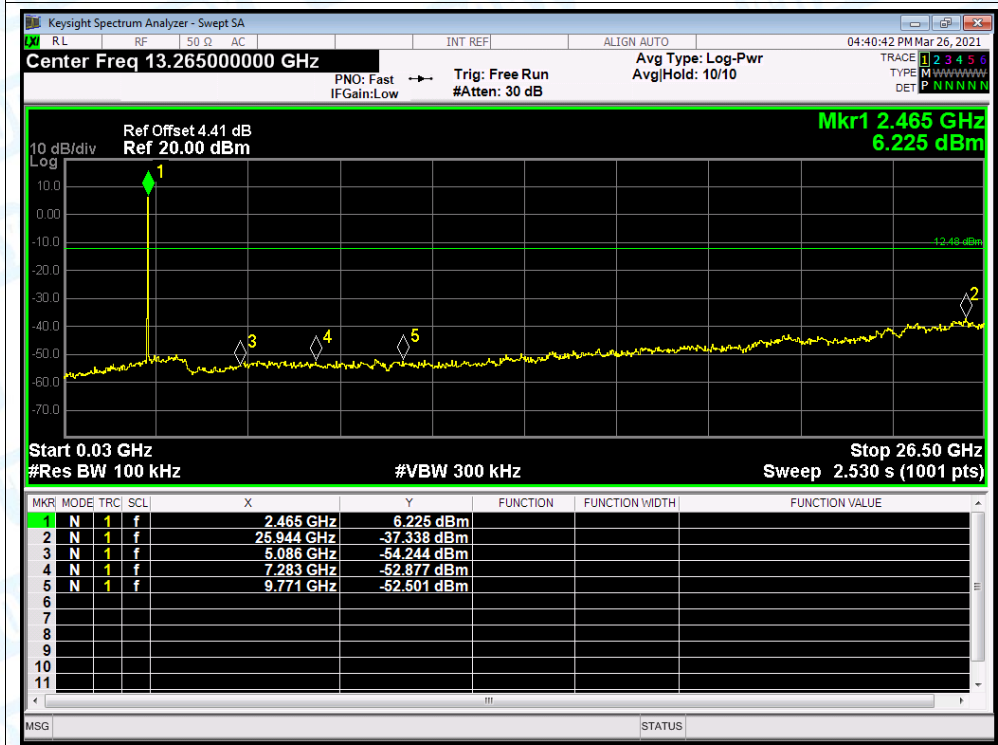
Tx. Spurious NVNT b 2437MHz Ant1 Emission



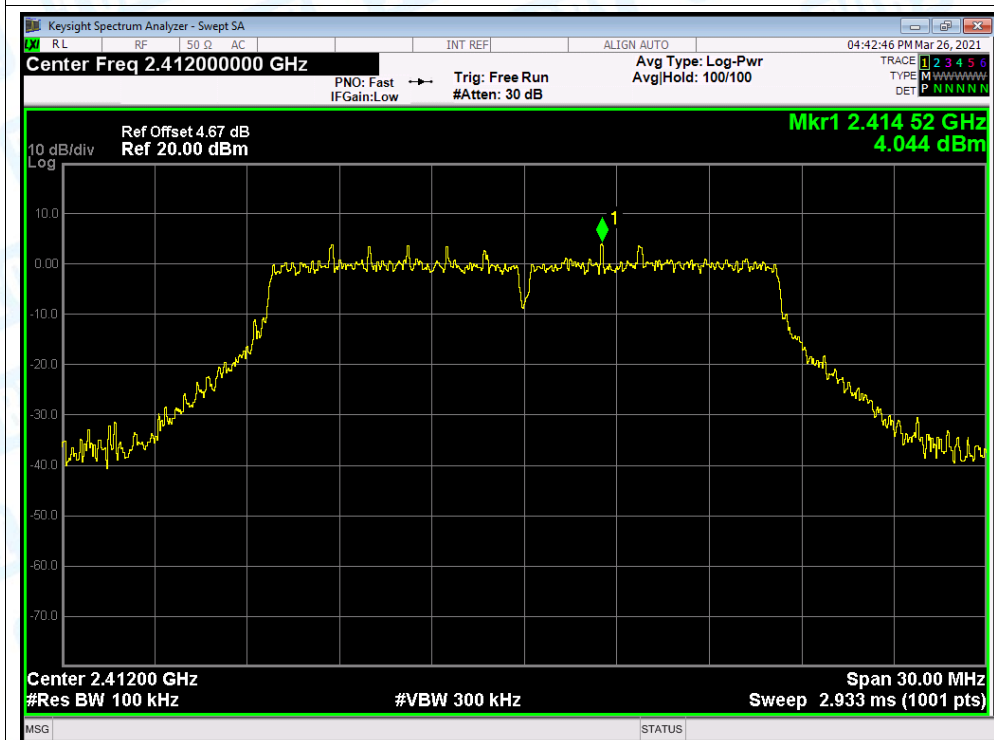
Tx. Spurious NVNT b 2462MHz Ant1 Ref



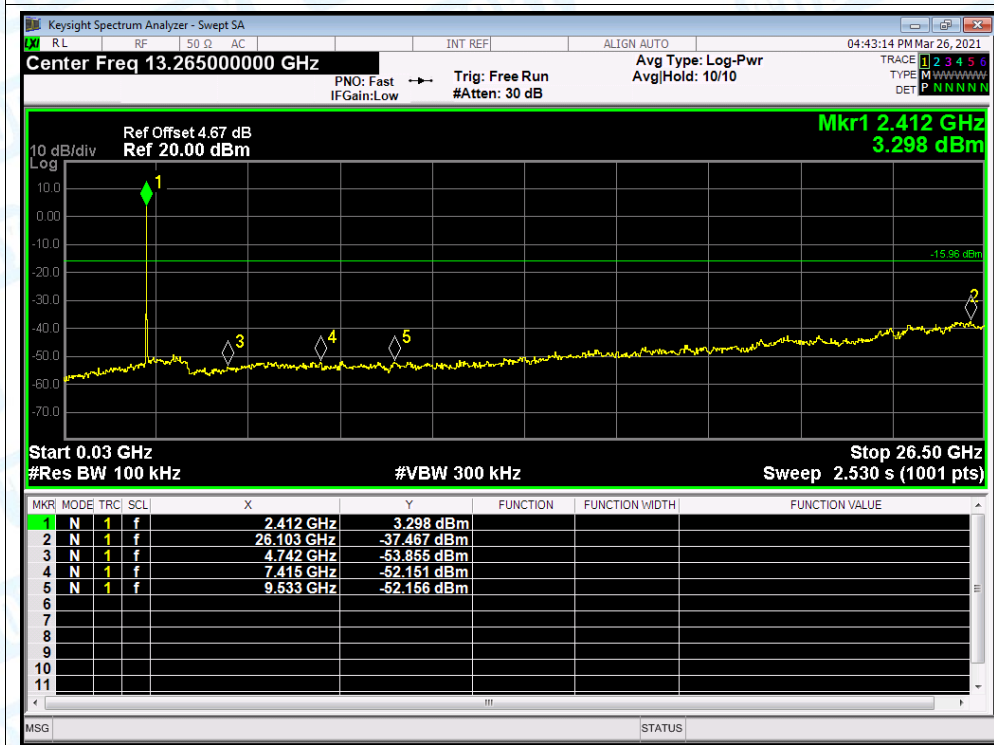
Tx. Spurious NVNT b 2462MHz Ant1 Emission



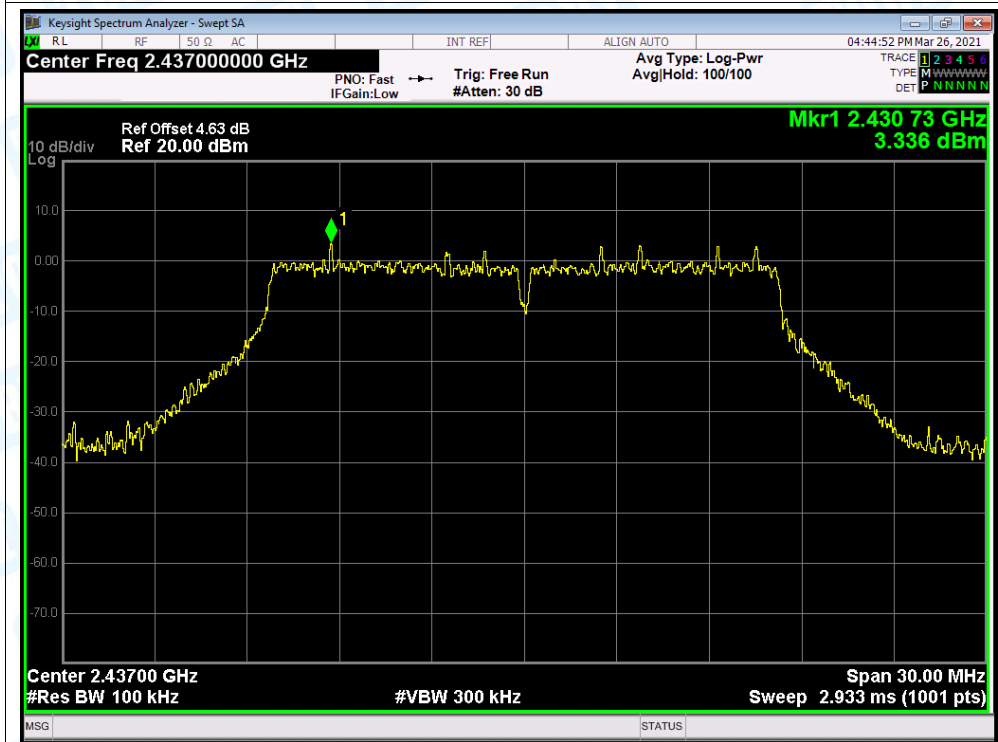
Tx. Spurious NVNT g 2412MHz Ant1 Ref



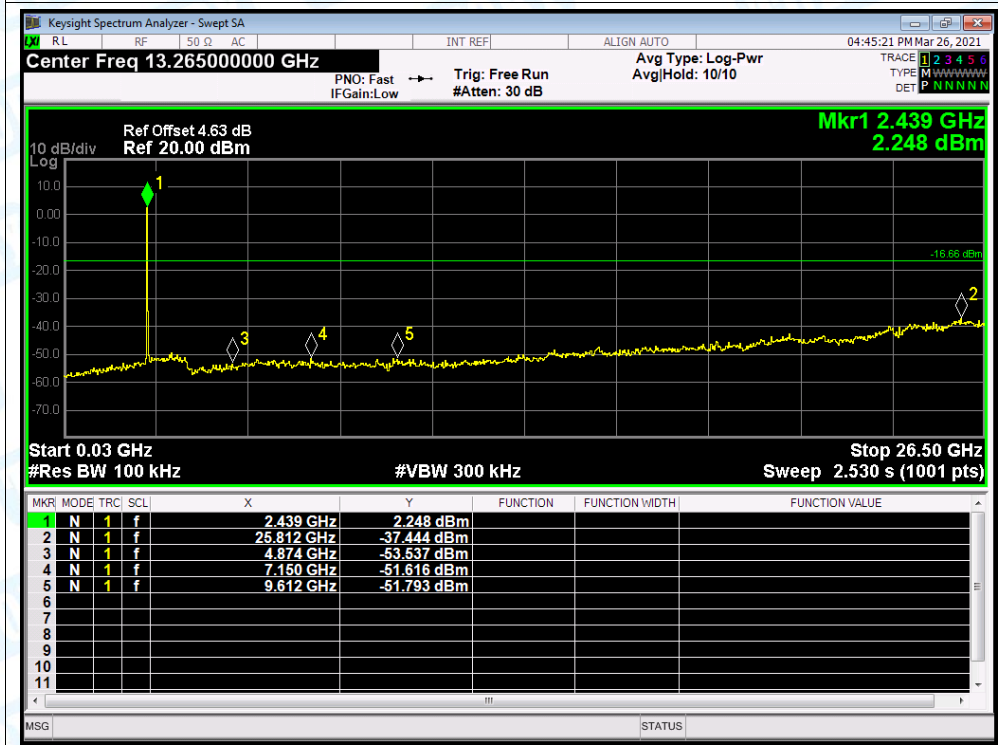
Tx. Spurious NVNT g 2412MHz Ant1 Emission



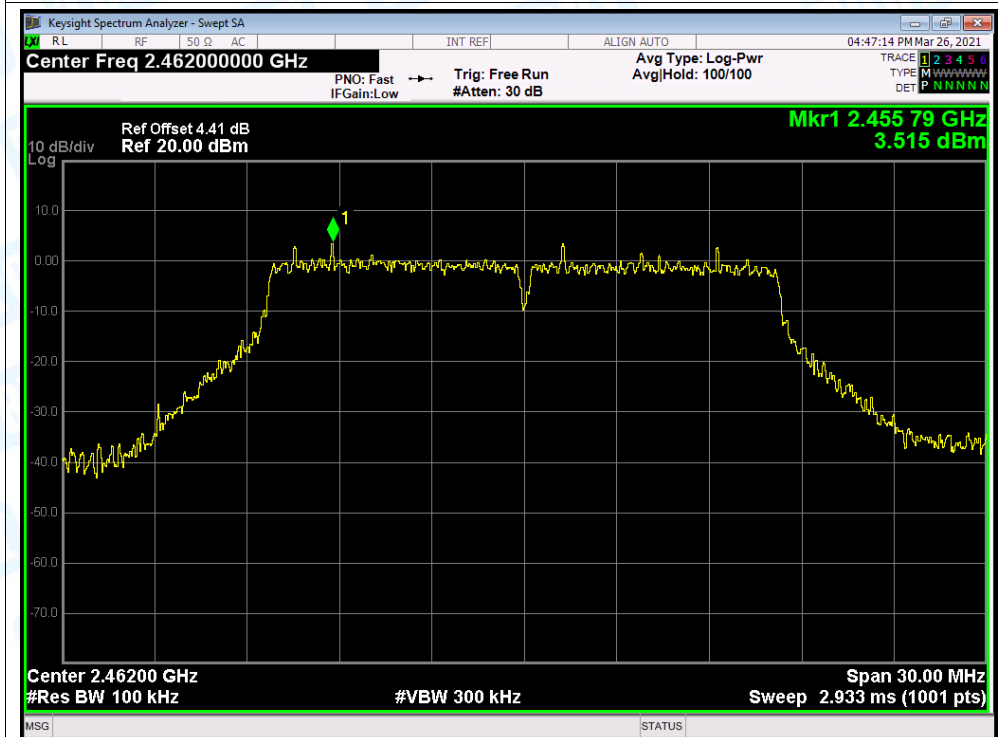
Tx. Spurious NVNT g 2437MHz Ant1 Ref



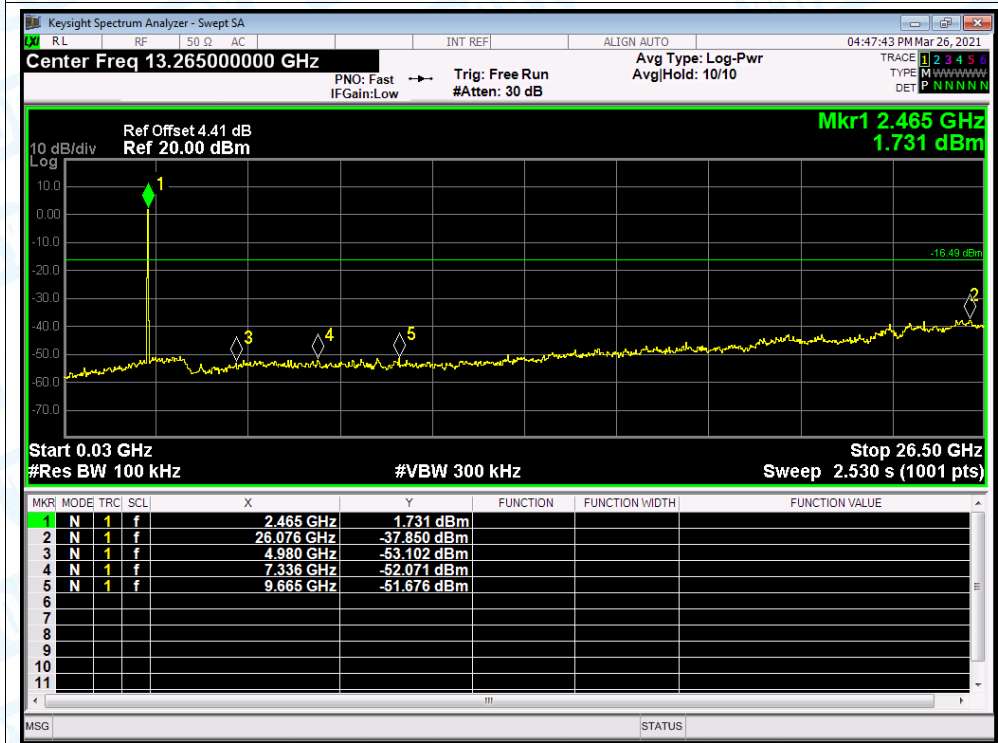
Tx. Spurious NVNT g 2437MHz Ant1 Emission



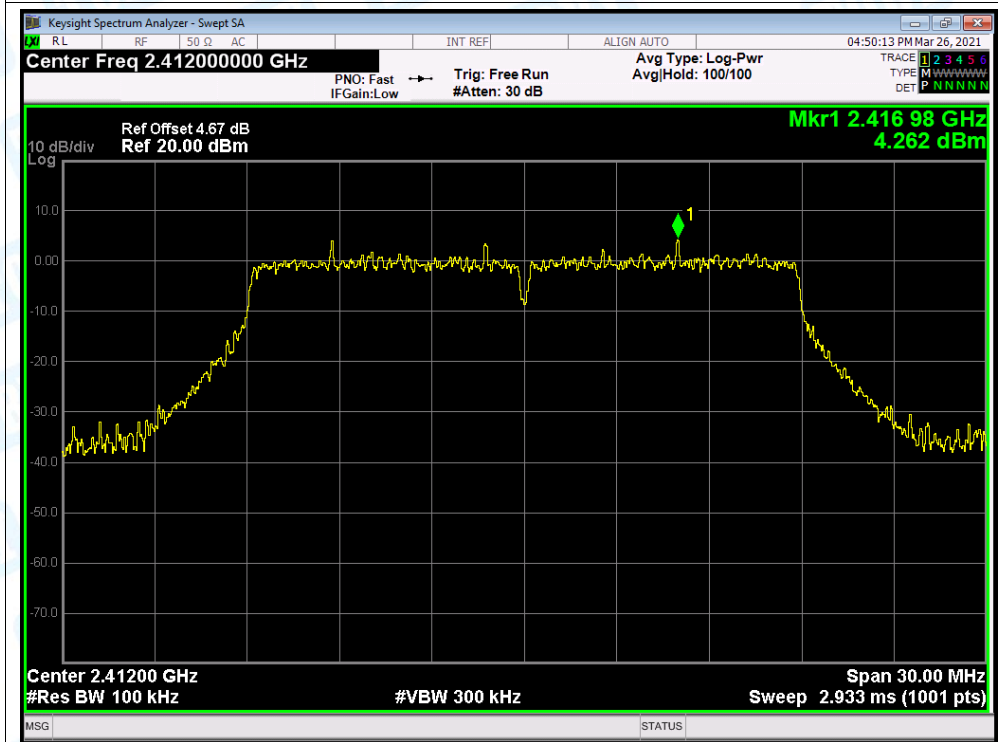
Tx. Spurious NVNT g 2462MHz Ant1 Ref



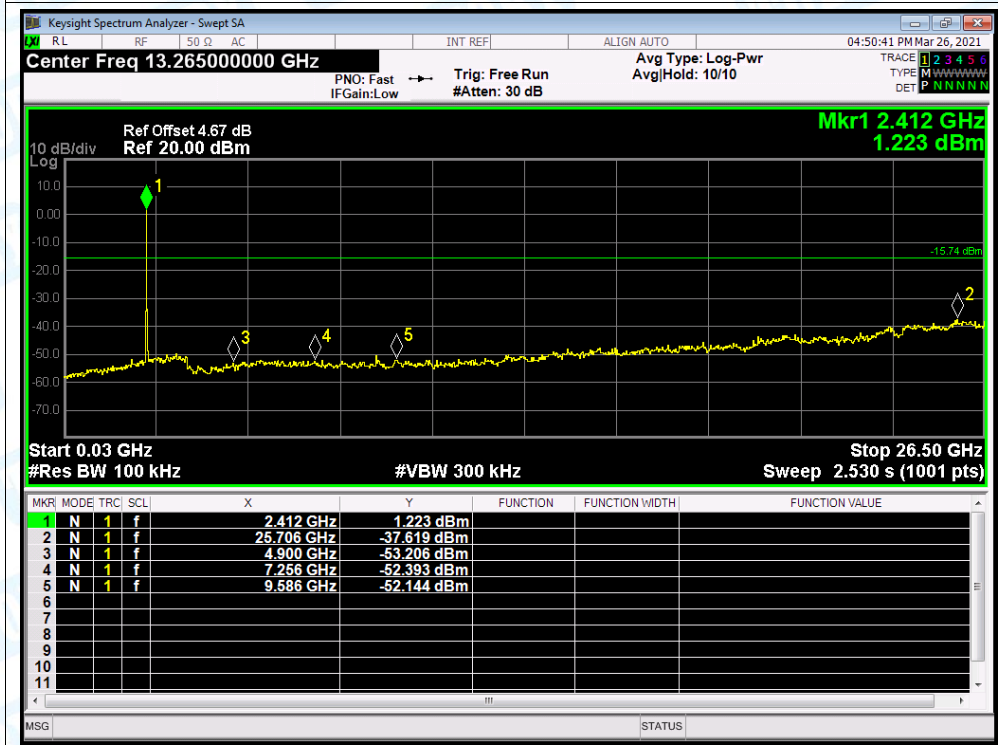
Tx. Spurious NVNT g 2462MHz Ant1 Emission

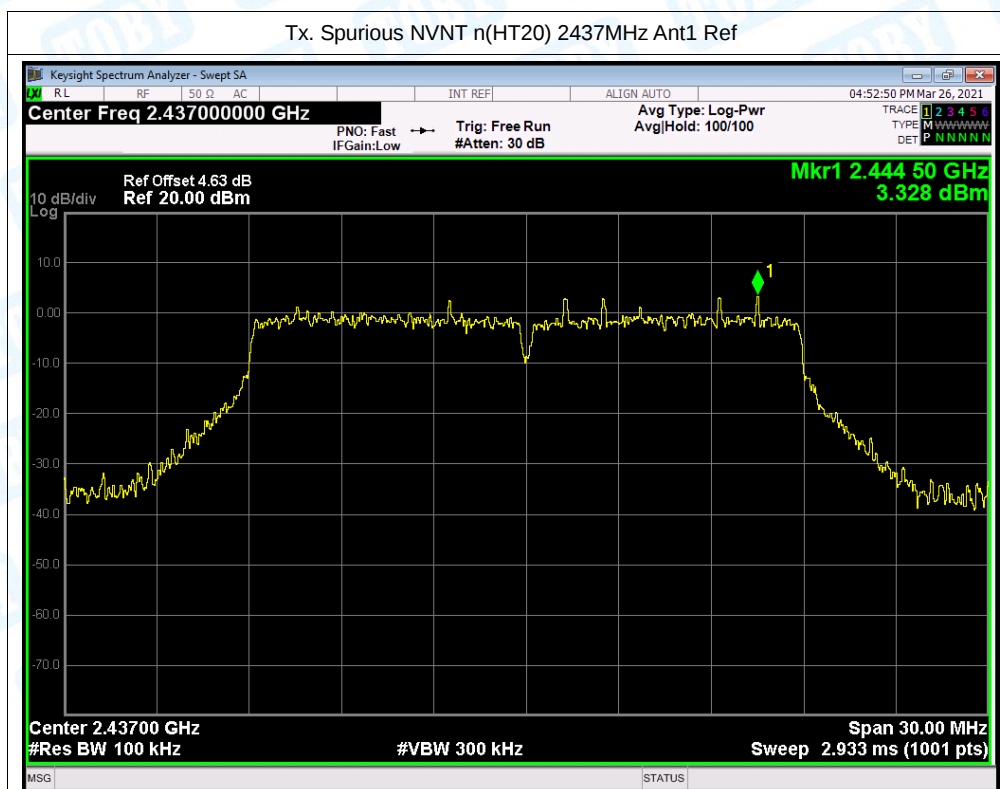


Tx. Spurious NVNT n(HT20) 2412MHz Ant1 Ref

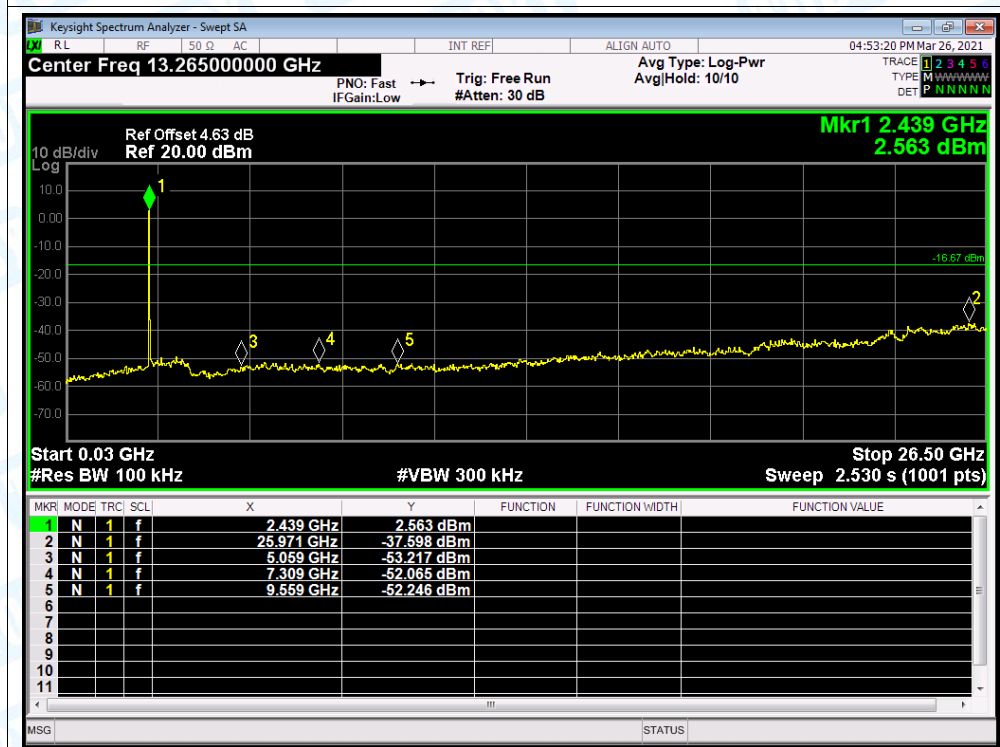


Tx. Spurious NVNT n(HT20) 2412MHz Ant1 Emission

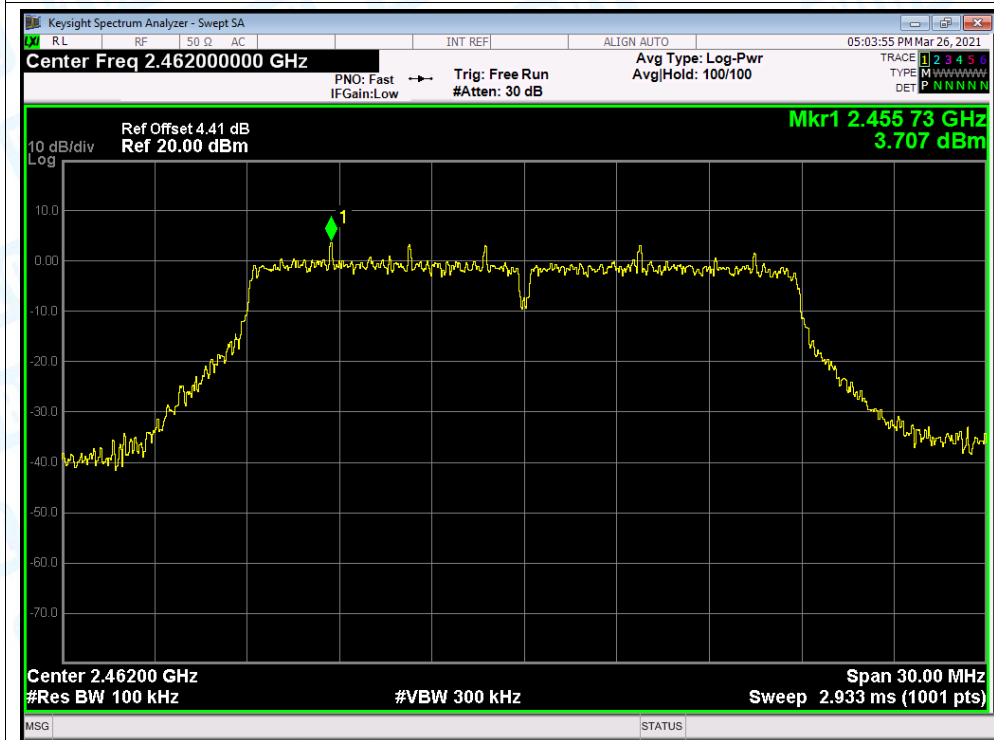




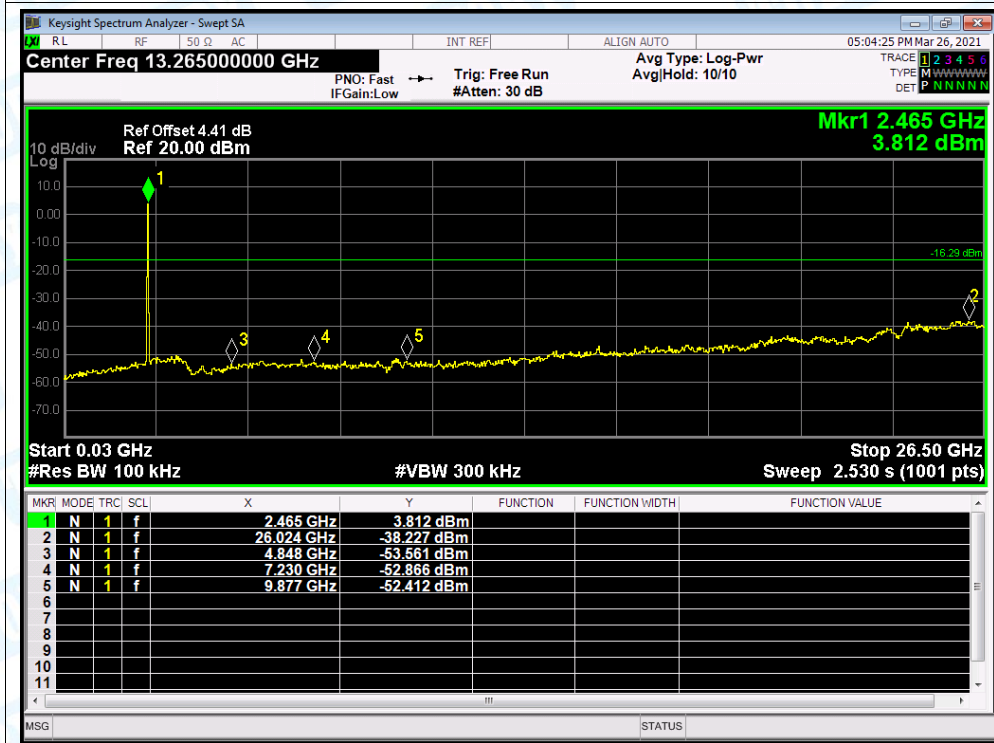
Tx. Spurious NVNT n(HT20) 2437MHz Ant1 Emission



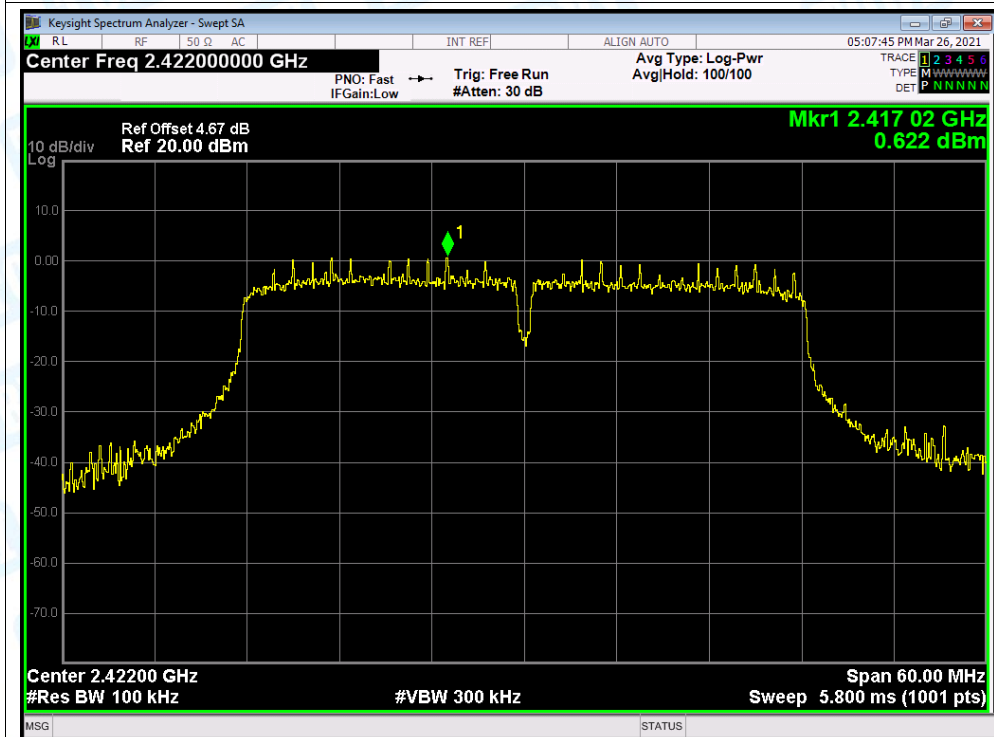
Tx. Spurious NVNT n(HT20) 2462MHz Ant1 Ref



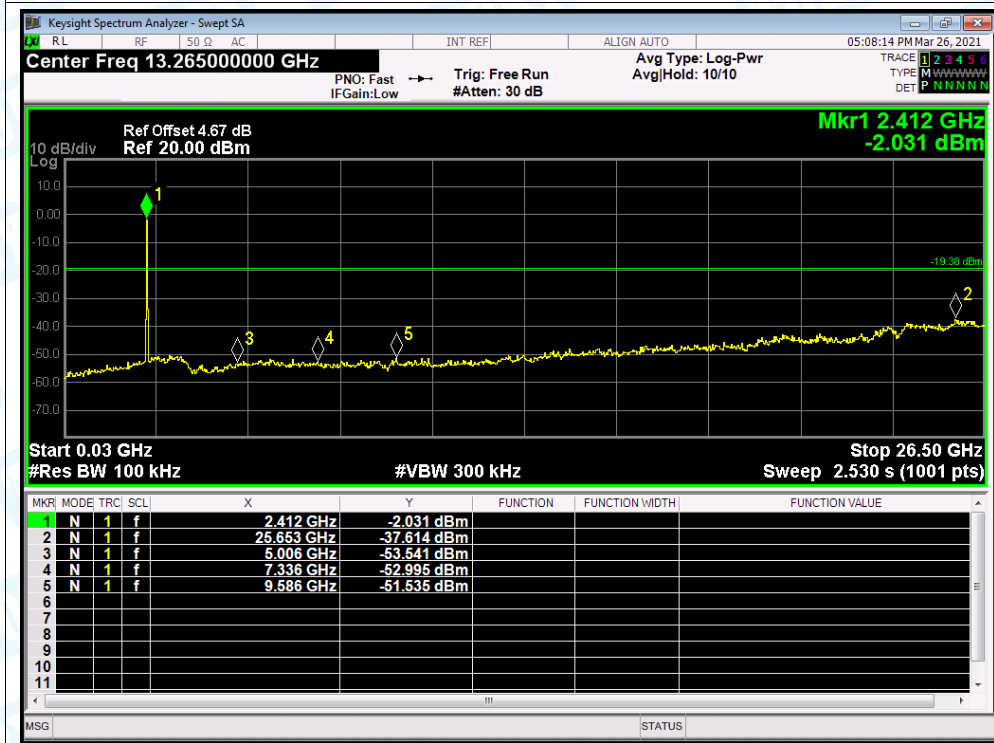
Tx. Spurious NVNT n(HT20) 2462MHz Ant1 Emission



Tx. Spurious NVNT n(HT40) 2422MHz Ant1 Ref



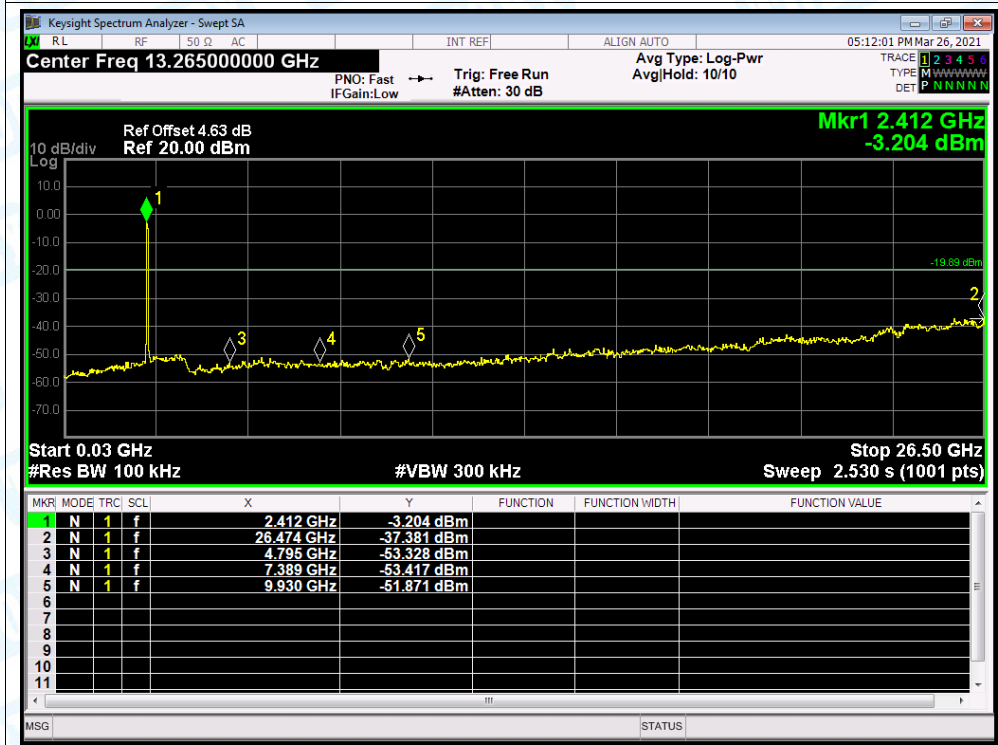
Tx. Spurious NVNT n(HT40) 2422MHz Ant1 Emission



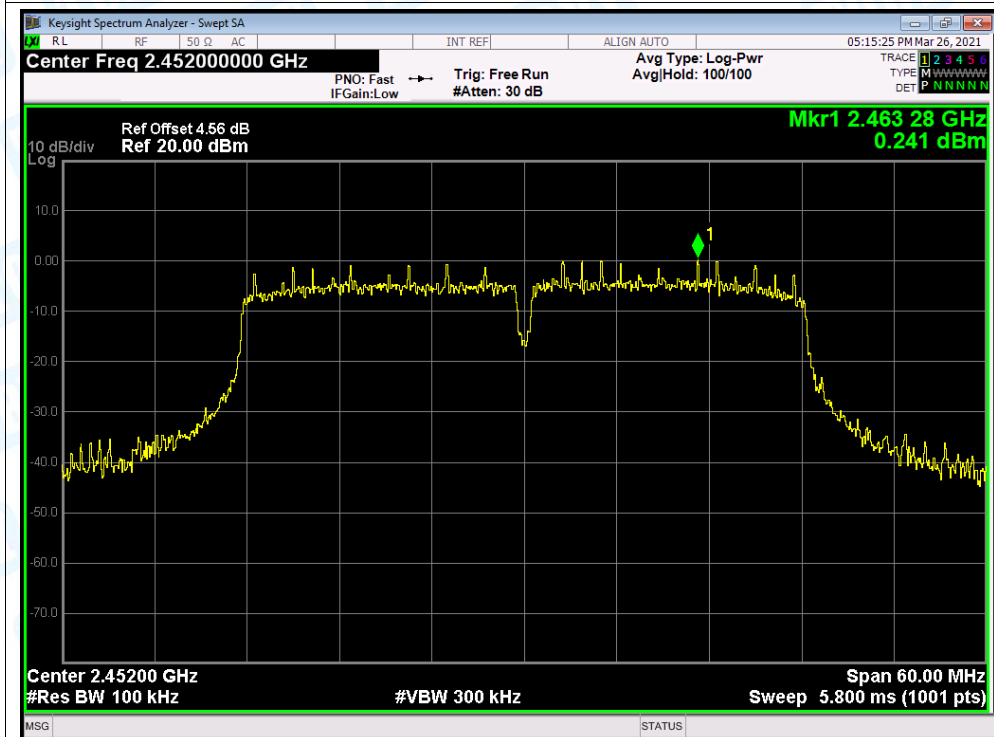
Tx. Spurious NVNT n(HT40) 2437MHz Ant1 Ref



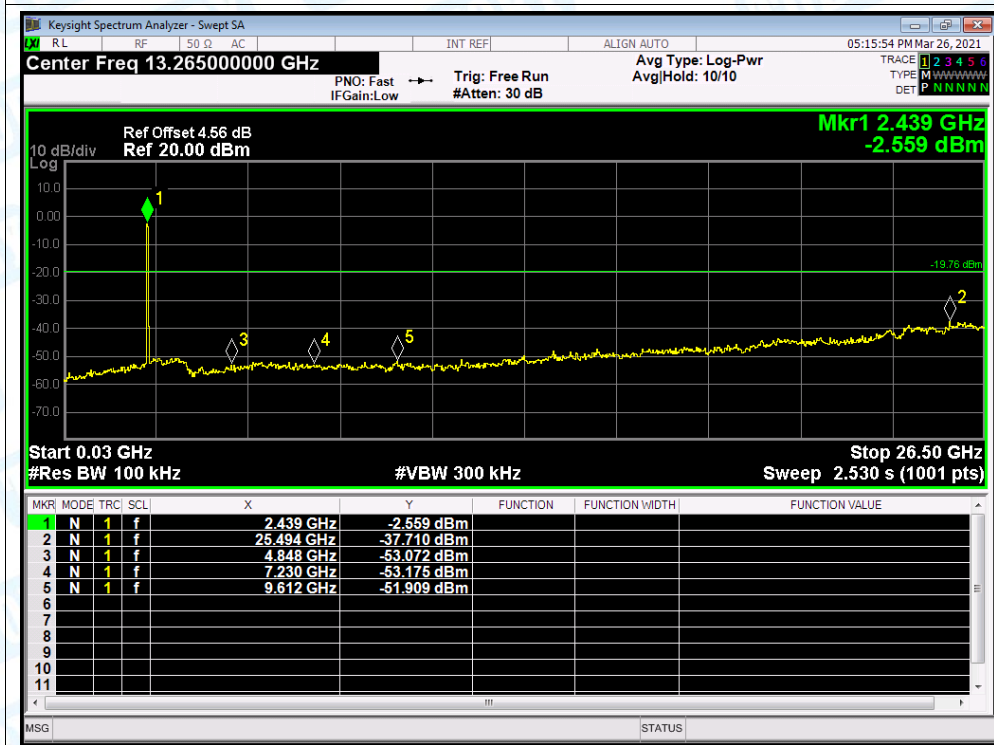
Tx. Spurious NVNT n(HT40) 2437MHz Ant1 Emission



Tx. Spurious NVNT n(HT40) 2452MHz Ant1 Ref



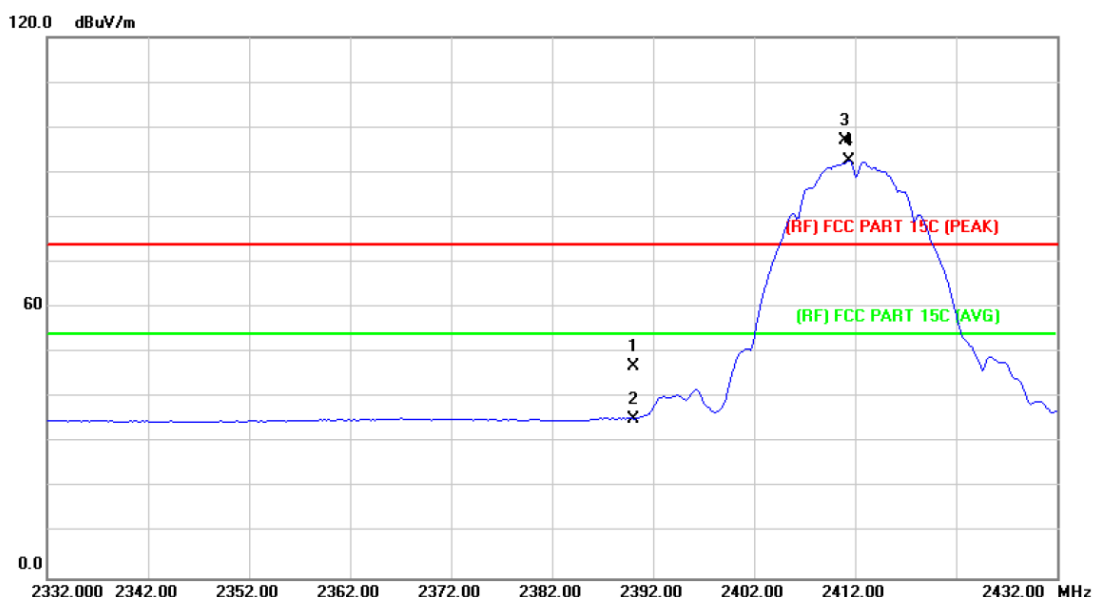
Tx. Spurious NVNT n(HT40) 2452MHz Ant1 Emission



Attachment C-- Restricted Bands Requirement and Band-edge Test Data

(1) Radiation Test

Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 7.6V		
Ant. Pol.	Horizontal		
Test Mode:	TX B Mode 2412MHz		
Remark:	N/A		

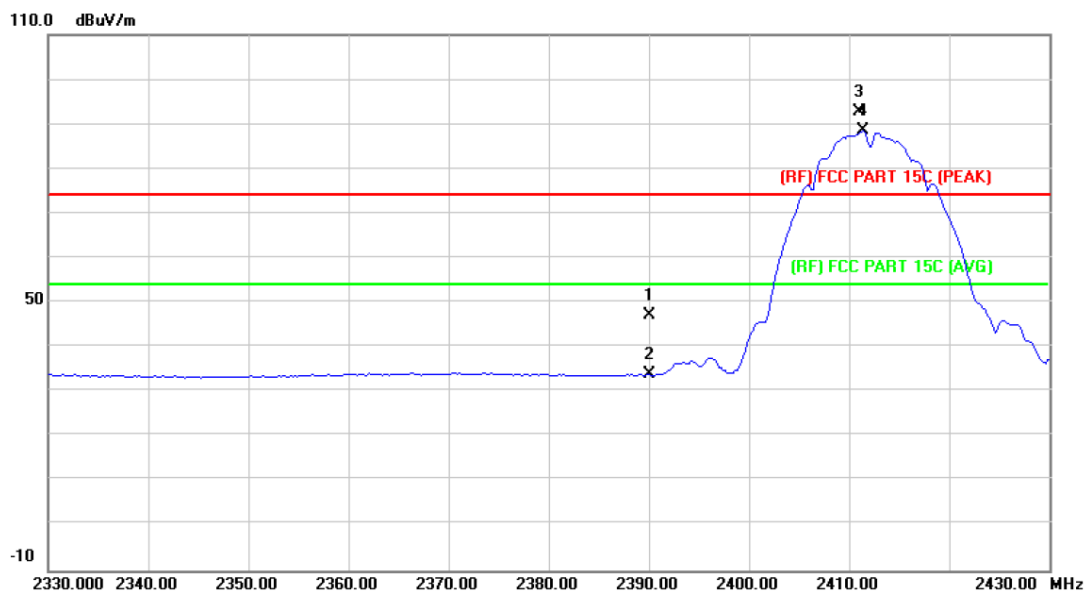


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		2390.000	45.58	1.28	46.86	74.00	-27.14	peak
2		2390.000	34.09	1.28	35.37	54.00	-18.63	AVG
3	X	2411.000	95.60	1.38	96.98	Fundamental Frequency		peak
4	*	2411.400	91.21	1.39	92.60	Fundamental Frequency		AVG

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. Peak/AVG (dBuV/m) = Corr. (dB/m) + Read Level (dBuV)
3. Margin (dB) = Peak/AVG (dBuV/m) - Limit PK/AVG (dBuV/m)

Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 7.6V		
Ant. Pol.	Vertical		
Test Mode:	TX B Mode 2412MHz		
Remark:	N/A		

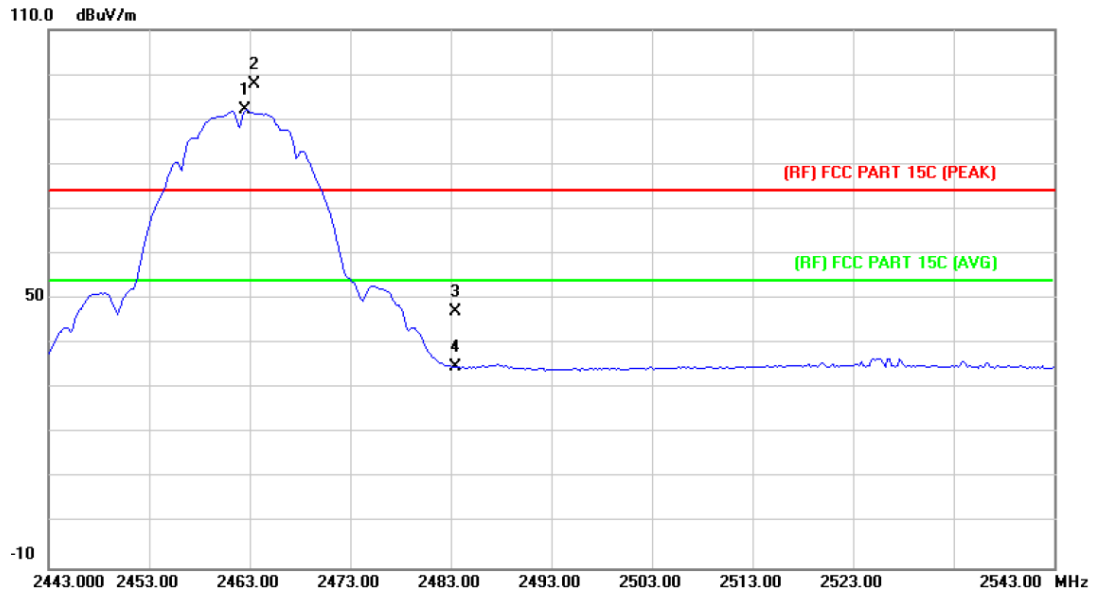


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		2390.000	45.73	1.28	47.01	74.00	-26.99	peak
2		2390.000	32.56	1.28	33.84	54.00	-20.16	AVG
3	X	2411.000	91.24	1.38	92.62	Fundamental Frequency		peak
4	*	2411.400	87.02	1.39	88.41	Fundamental Frequency		AVG

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. Peak/AVG (dBμV/m) = Corr. (dB/m) + Read Level (dBμV)
3. Margin (dB) = Peak/AVG (dBμV/m) - Limit PK/AVG (dBμV/m)

Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 7.6V		
Ant. Pol.	Horizontal		
Test Mode:	TX B Mode 2462MHz		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1	*	2462.600	90.29	1.74	92.03	Fundamental Frequency		AVG
2	X	2463.400	96.19	1.75	97.94	Fundamental Frequency		peak
3		2483.500	45.20	1.88	47.08	74.00	-26.92	peak
4		2483.500	32.92	1.88	34.80	54.00	-19.20	AVG

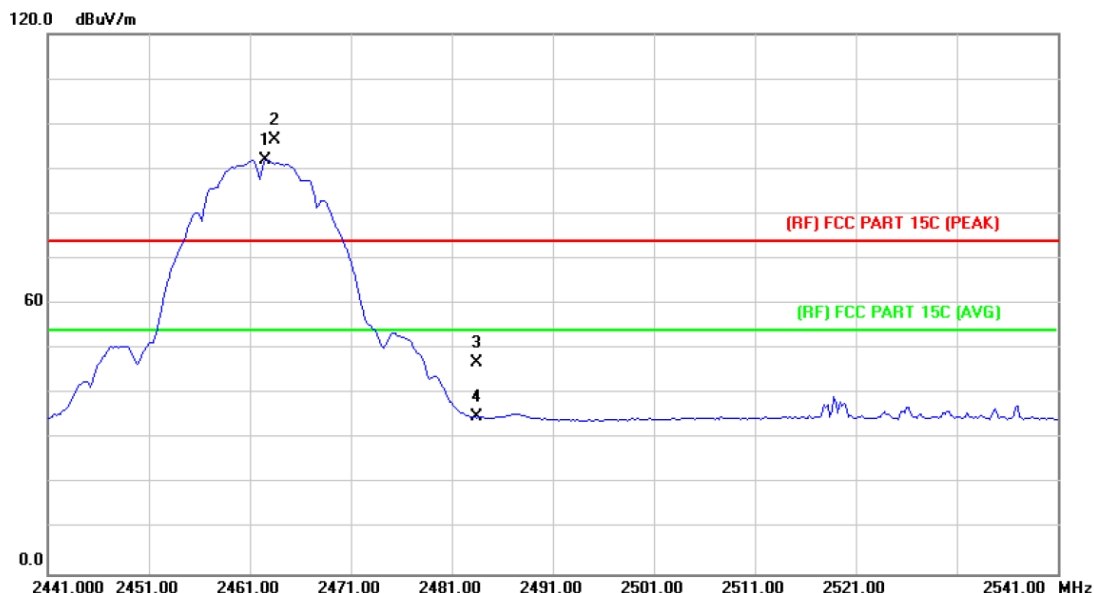
Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBuV/m) = Corr. (dB/m) + Read Level (dBuV)

3. Margin (dB) = Peak/AVG (dBuV/m) - Limit PK/AVG (dBuV/m)

Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 7.6V		
Ant. Pol.	Vertical		
Test Mode:	TX B Mode 2462MHz		
Remark:	N/A		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
1	*	2462.600	90.24	1.74	91.98	Fundamental Frequency		AVG
2	X	2463.400	94.78	1.75	96.53	Fundamental Frequency		peak
3		2483.500	44.94	1.88	46.82	74.00	-27.18	peak
4		2483.500	33.01	1.88	34.89	54.00	-19.11	AVG

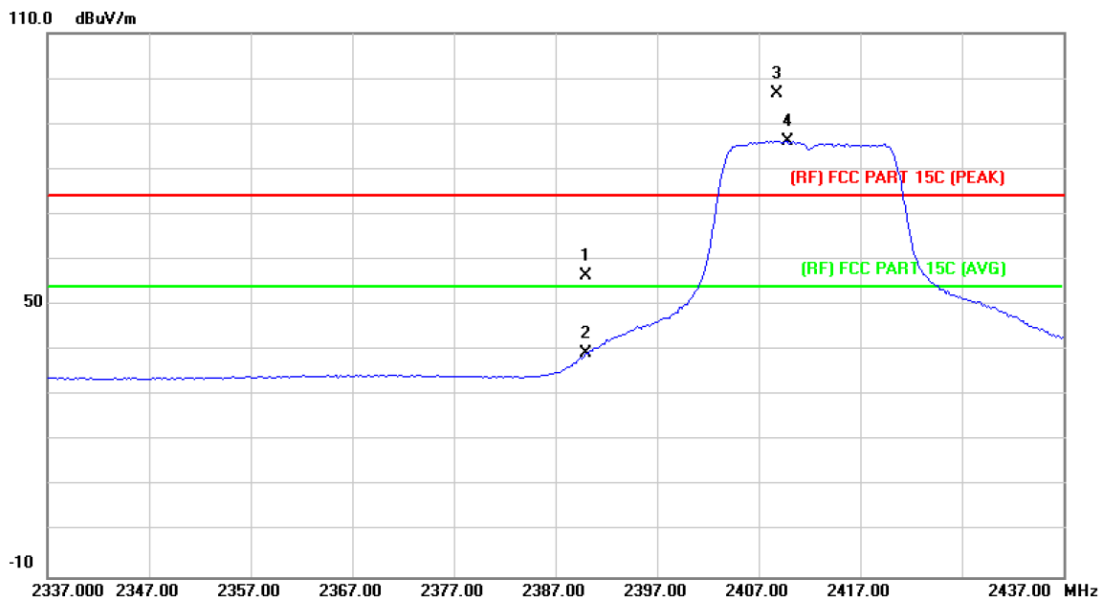
Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBuV/m) = Corr. (dB/m) + Read Level (dBuV)

3. Margin (dB) = Peak/AVG (dBuV/m) - Limit PK/AVG (dBuV/m)

Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 7.6V		
Ant. Pol.	Horizontal		
Test Mode:	TX G Mode 2412MHz		
Remark:	N/A		

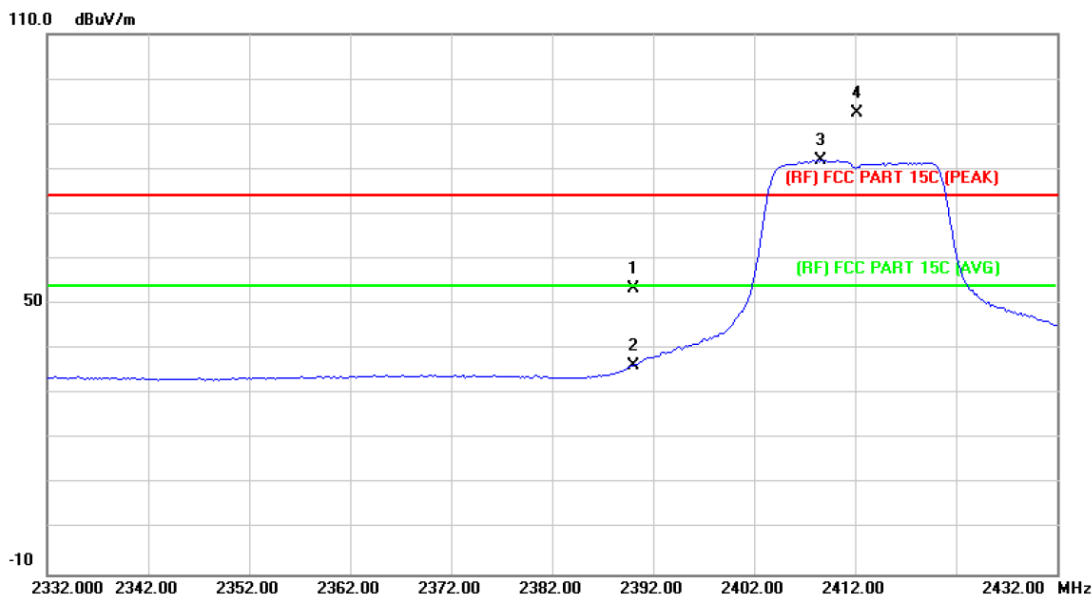


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		2390.000	55.29	1.28	56.57	74.00	-17.43	peak
2		2390.000	37.97	1.28	39.25	54.00	-14.75	AVG
3	X	2408.800	95.43	1.37	96.80	Fundamental Frequency		peak
4	*	2409.800	84.75	1.38	86.13	Fundamental Frequency		AVG

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. Peak/AVG (dBμV/m) = Corr. (dB/m) + Read Level (dBμV)
3. Margin (dB) = Peak/AVG (dBμV/m) - Limit PK/AVG (dBμV/m)

Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 7.6V		
Ant. Pol.	Vertical		
Test Mode:	TX G Mode 2412MHz		
Remark:	N/A		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB Detector
1		2390.000	52.17	1.28	53.45	74.00	-20.55 peak
2		2390.000	34.94	1.28	36.22	54.00	-17.78 AVG
3	*	2408.600	80.63	1.37	82.00	Fundamental Frequency AVG	
4	X	2412.200	91.19	1.39	92.58	Fundamental Frequency peak	

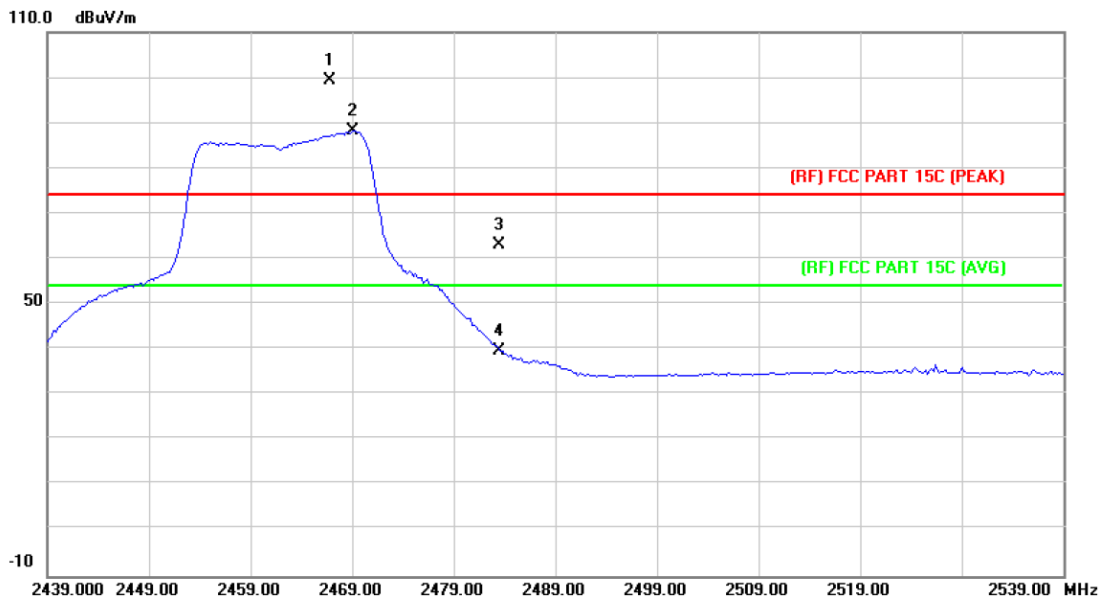
Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBuV/m) = Corr. (dB/m) + Read Level (dBuV)

3. Margin (dB) = Peak/AVG (dBuV/m) - Limit PK/AVG (dBuV/m)

Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 7.6V		
Ant. Pol.	Horizontal		
Test Mode:	TX G Mode 2462MHz		
Remark:	N/A		

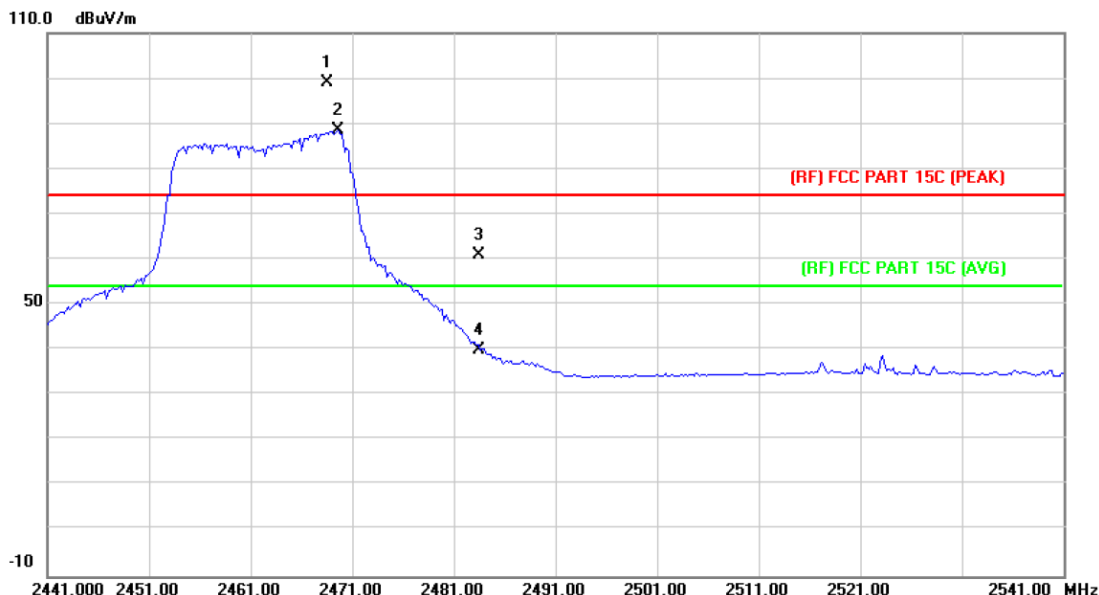


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Detector
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
1	X	2466.800	97.46	1.76	99.22	Fundamental Frequency		peak
2	*	2469.000	86.50	1.78	88.28	Fundamental Frequency		AVG
3		2483.500	61.20	1.88	63.08	74.00	-10.92	peak
4		2483.500	37.69	1.88	39.57	54.00	-14.43	AVG

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. Peak/AVG (dBuV/m)= Corr. (dB/m)+ Read Level (dBuV)
3. Margin (dB) = Peak/AVG (dBuV/m)-Limit PK/AVG(dBuV/m)

Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 7.6V		
Ant. Pol.	Vertical		
Test Mode:	TX G Mode 2462MHz		
Remark:	N/A		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	X	2468.600	97.17	1.78	98.95	Fundamental Frequency		peak
2	*	2469.600	86.66	1.79	88.45	Fundamental Frequency		AVG
3		2483.500	58.97	1.88	60.85	74.00	-13.15	peak
4		2483.500	38.10	1.88	39.98	54.00	-14.02	AVG

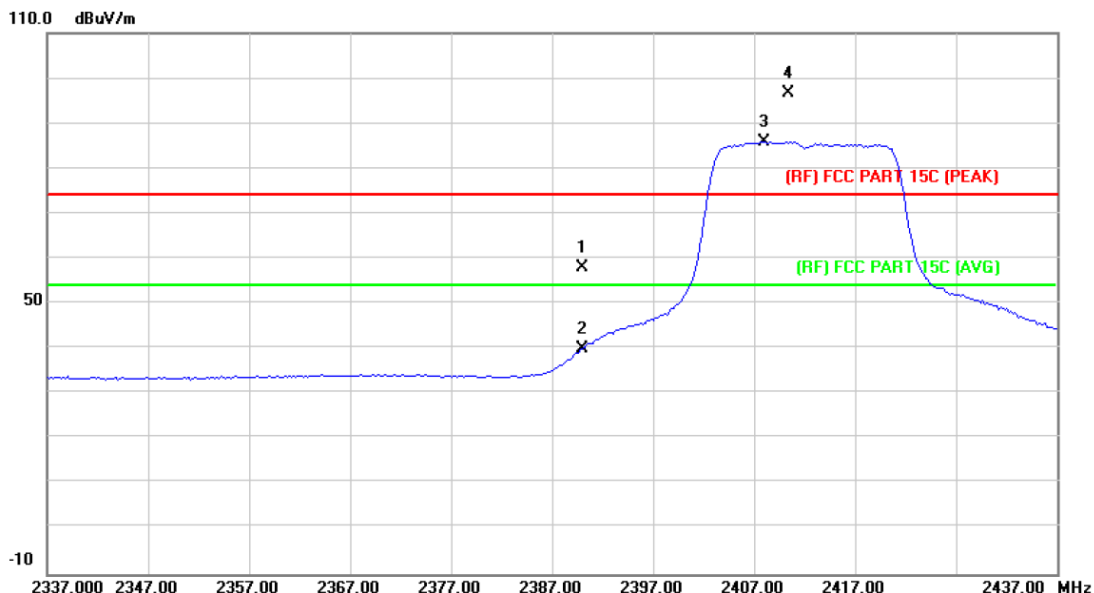
Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBuV/m) = Corr. (dB/m) + Read Level (dBuV)

3. Margin (dB) = Peak/AVG (dBuV/m) - Limit PK/AVG (dBuV/m)

Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 7.6V		
Ant. Pol.	Horizontal		
Test Mode:	TX N(HT20) Mode 2412MHz		
Remark:	N/A		

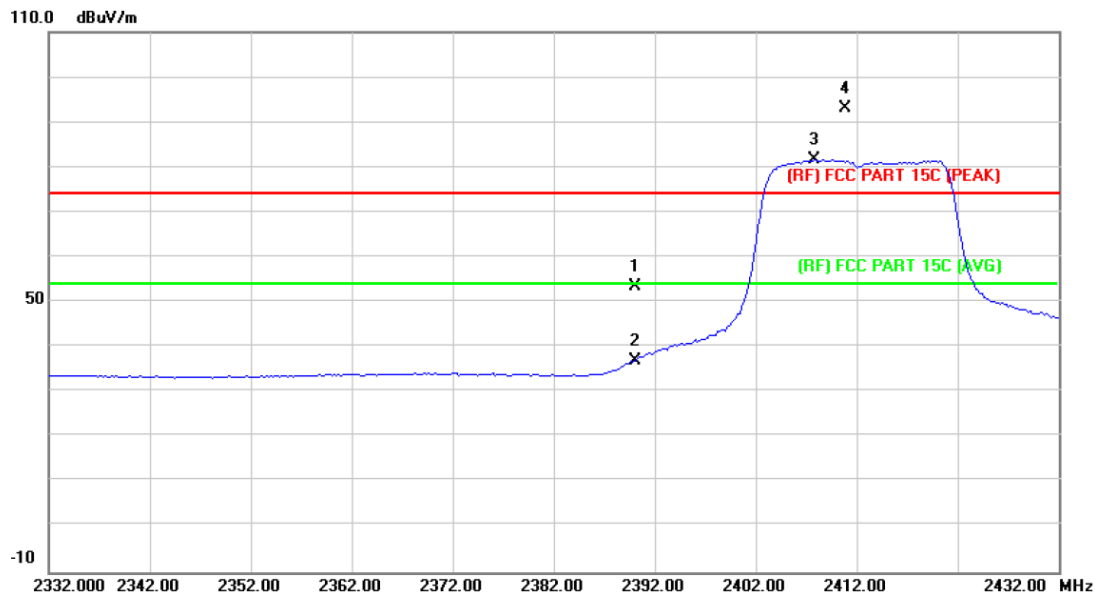


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		2390.000	56.61	1.28	57.89	74.00	-16.11	peak
2		2390.000	38.64	1.28	39.92	54.00	-14.08	AVG
3	*	2408.000	84.47	1.36	85.83	Fundamental Frequency		AVG
4	X	2410.400	95.16	1.38	96.54	Fundamental Frequency		peak

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. Peak/AVG (dBμV/m) = Corr. (dB/m) + Read Level (dBμV)
3. Margin (dB) = Peak/AVG (dBμV/m) - Limit PK/AVG (dBμV/m)

Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 7.6V		
Ant. Pol.	Vertical		
Test Mode:	TX N(HT20) Mode 2412MHz		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		2390.000	52.17	1.28	53.45	74.00	-20.55	peak
2		2390.000	35.77	1.28	37.05	54.00	-16.95	AVG
3	*	2407.800	80.16	1.36	81.52	Fundamental Frequency		AVG
4	X	2410.800	91.64	1.38	93.02	Fundamental Frequency		peak

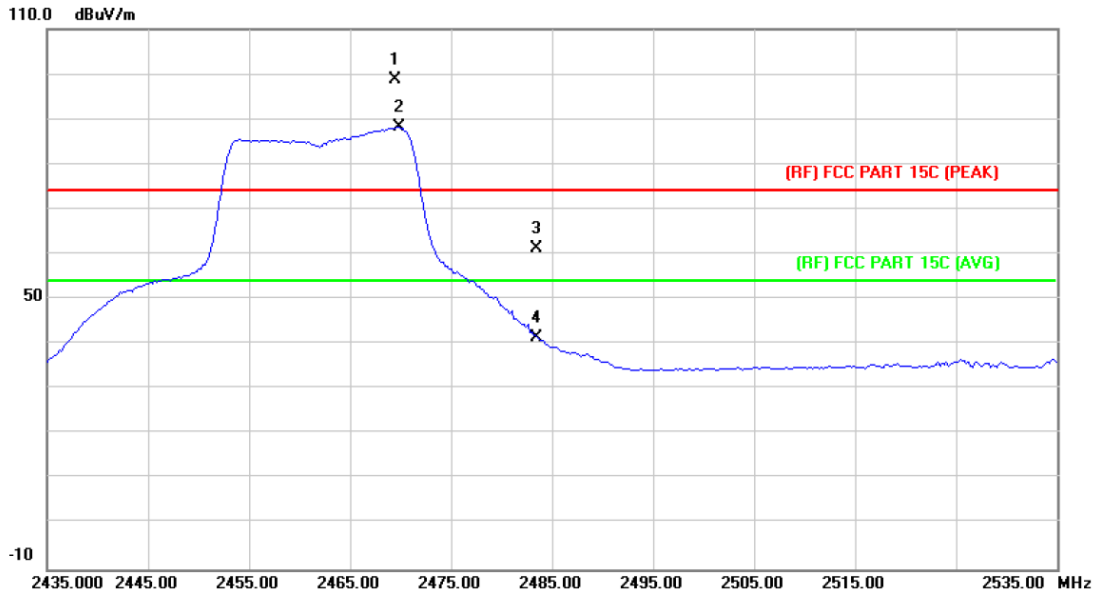
Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBuV/m) = Corr. (dB/m) + Read Level (dBuV)

3. Margin (dB) = Peak/AVG (dBuV/m) - Limit PK/AVG (dBuV/m)

Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 7.6V		
Ant. Pol.	Horizontal		
Test Mode:	TX N(HT20) Mode 2462MHz		
Remark:	N/A		

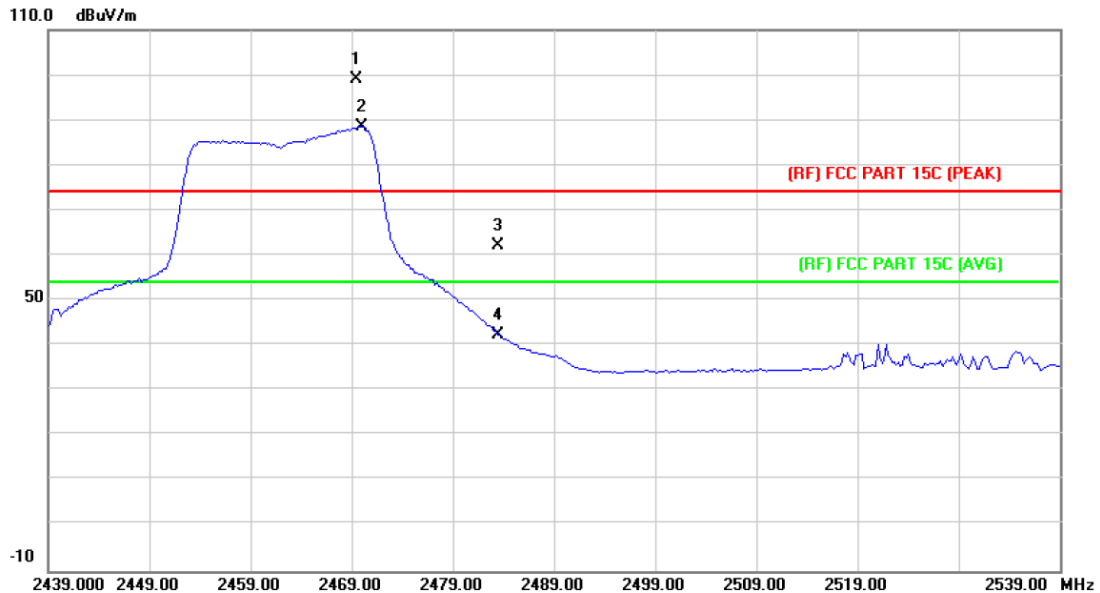


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1	X	2469.400	96.88	1.79	98.67	Fundamental Frequency		peak
2	*	2469.800	86.44	1.79	88.23	Fundamental Frequency		AVG
3		2483.500	59.44	1.88	61.32	74.00	-12.68	peak
4		2483.500	39.71	1.88	41.59	54.00	-12.41	AVG

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. Peak/AVG (dBμV/m) = Corr. (dB/m) + Read Level (dBμV)
3. Margin (dB) = Peak/AVG (dBμV/m) - Limit PK/AVG (dBμV/m)

Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 7.6V		
Ant. Pol.	Vertical		
Test Mode:	TX N(HT20) Mode 2462MHz		
Remark:	N/A		

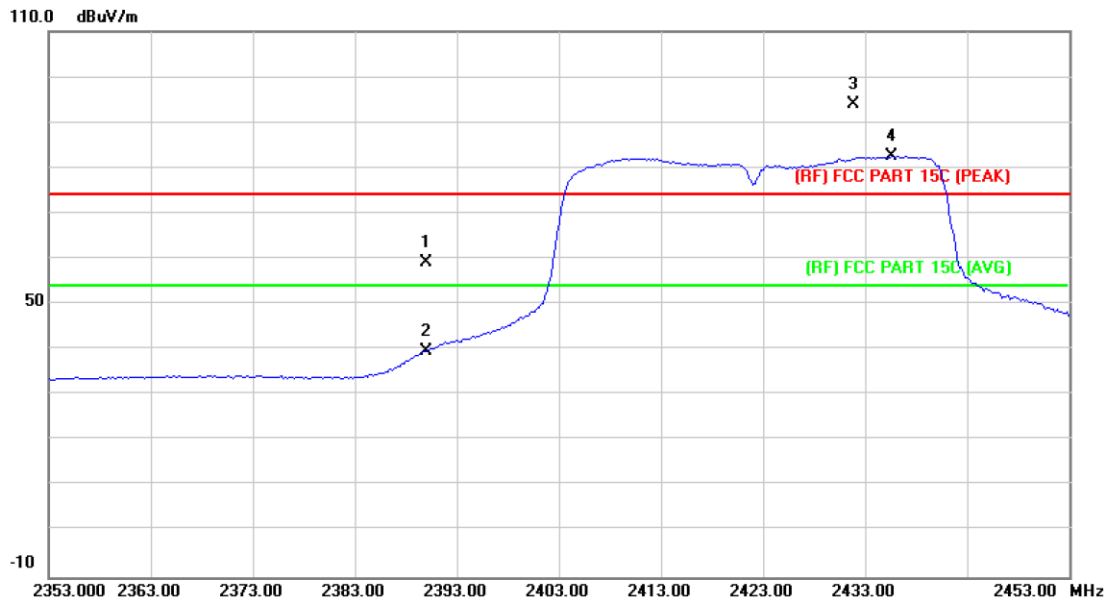


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1	X	2469.400	97.22	1.79	99.01	Fundamental Frequency		peak
2	*	2470.000	86.75	1.79	88.54	Fundamental Frequency		AVG
3		2483.500	60.34	1.88	62.22	74.00	-11.78	peak
4		2483.500	40.42	1.88	42.30	54.00	-11.70	AVG

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. Peak/AVG (dBμV/m) = Corr. (dB/m) + Read Level (dBμV)
3. Margin (dB) = Peak/AVG (dBμV/m) - Limit PK/AVG (dBμV/m)

Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 7.6V		
Ant. Pol.	Horizontal		
Test Mode:	TX N(HT40) Mode 2422MHz		
Remark:	N/A		

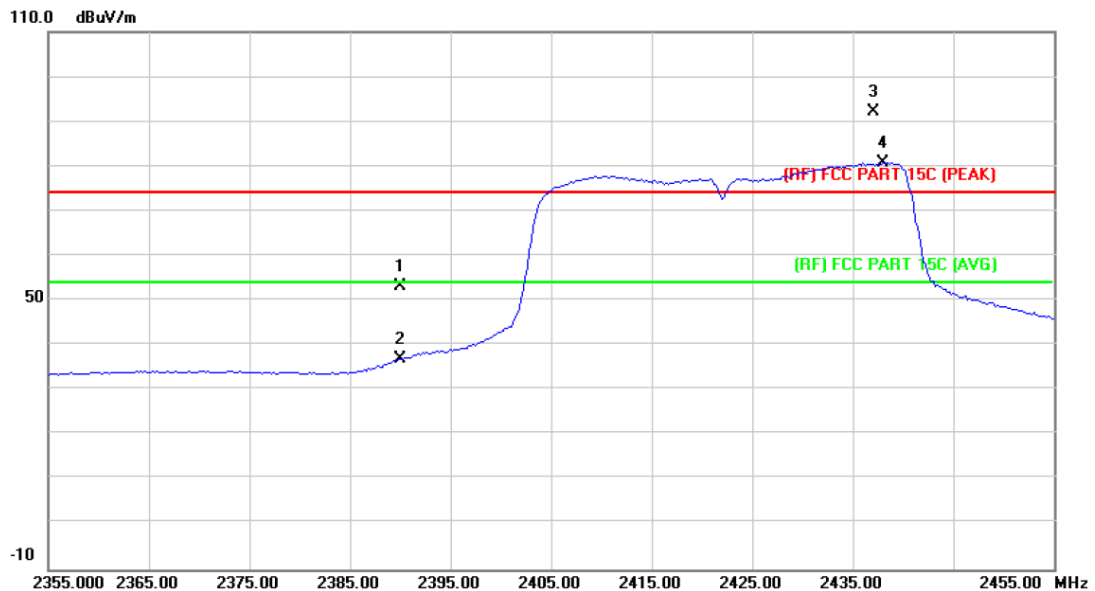


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		2390.000	57.89	1.28	59.17	74.00	-14.83	peak
2		2390.000	38.45	1.28	39.73	54.00	-14.27	AVG
3	X	2431.800	92.38	1.53	93.91	Fundamental Frequency		peak
4	*	2435.600	81.02	1.55	82.57	Fundamental Frequency		AVG

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. Peak/AVG (dBμV/m) = Corr. (dB/m) + Read Level (dBμV)
3. Margin (dB) = Peak/AVG (dBμV/m) - Limit PK/AVG (dBμV/m)

Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 7.6V		
Ant. Pol.	Vertical		
Test Mode:	TX N(HT40) Mode 2422MHz		
Remark:	N/A		

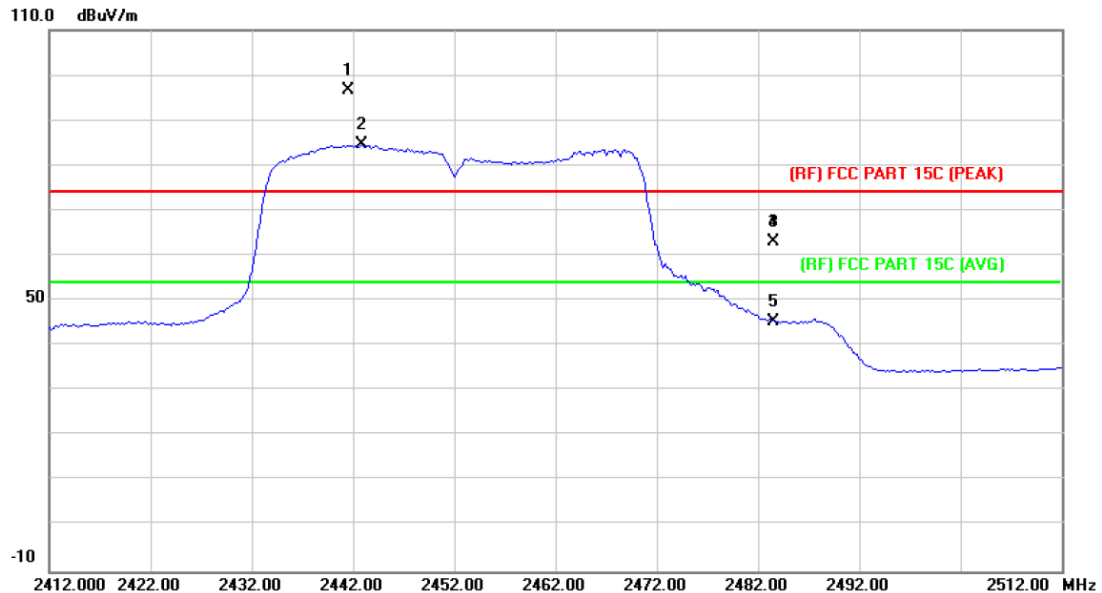


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		2390.000	51.90	1.28	53.18	74.00	-20.82	peak
2		2390.000	35.71	1.28	36.99	54.00	-17.01	AVG
3	X	2437.000	90.74	1.55	92.29	Fundamental Frequency		peak
4	*	2438.000	79.22	1.58	80.80	Fundamental Frequency		AVG

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. Peak/AVG (dBμV/m) = Corr. (dB/m) + Read Level (dBμV)
3. Margin (dB) = Peak/AVG (dBμV/m) - Limit PK/AVG (dBμV/m)

Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 7.6V		
Ant. Pol.	Horizontal		
Test Mode:	TX N(HT40) Mode 2452MHz		
Remark:	N/A		

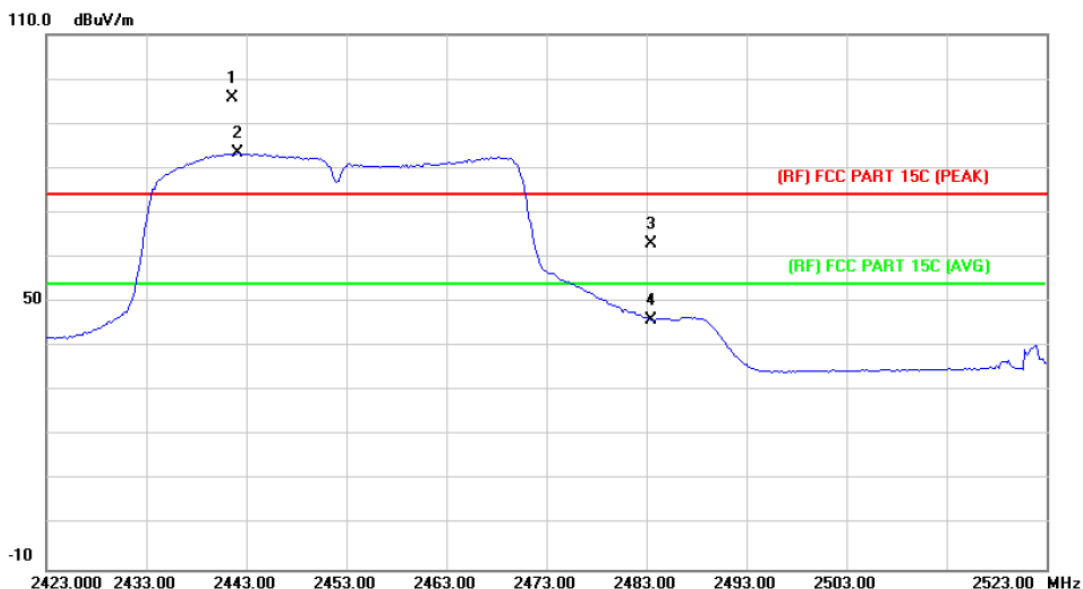


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1	X	2441.600	94.91	1.60	96.51	Fundamental Frequency		peak
2	*	2442.800	83.03	1.60	84.63	Fundamental Frequency		AVG
3		2483.500	61.25	1.88	63.13	74.00	-10.87	peak
4		2483.500	43.53	1.88	45.41	54.00	-8.59	AVG

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. Peak/AVG (dBμV/m) = Corr. (dB/m) + Read Level (dBμV)
3. Margin (dB) = Peak/AVG (dBμV/m) - Limit PK/AVG (dBμV/m)

Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 7.6V		
Ant. Pol.	Vertical		
Test Mode:	TX N(HT40) Mode 2452MHz		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1	X	2441.600	94.25	1.60	95.85	Fundamental Frequency		peak
2	*	2442.200	81.73	1.60	83.33	Fundamental Frequency		AVG
3		2483.500	61.31	1.88	63.19	74.00	-10.81	peak
4		2483.500	44.20	1.88	46.08	54.00	-7.92	AVG

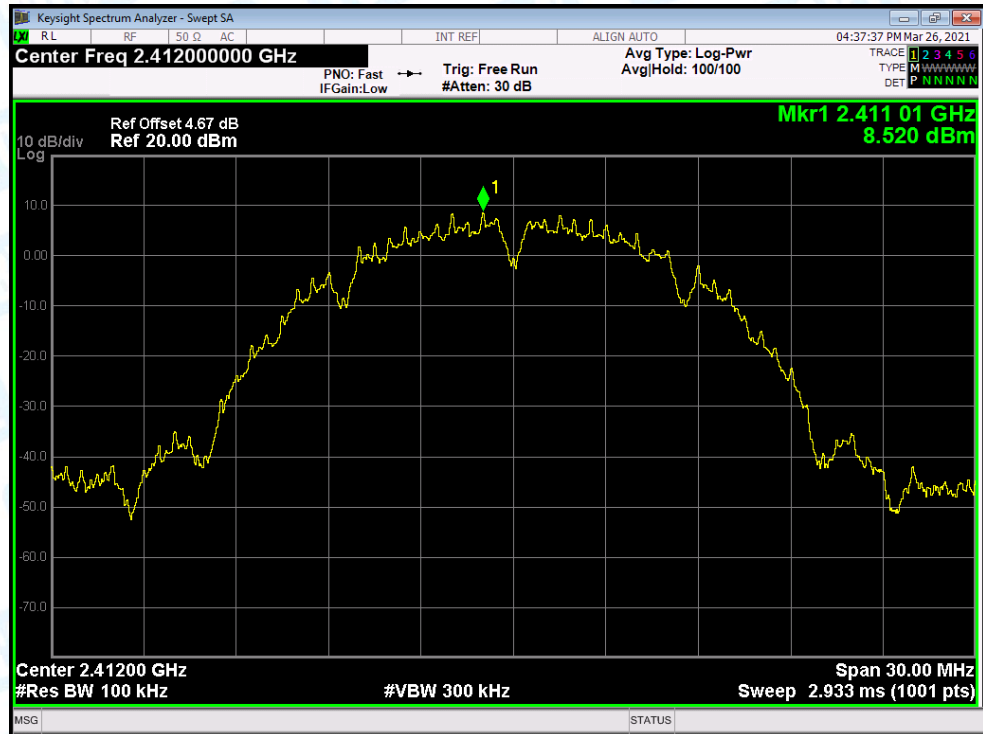
Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. Peak/AVG (dBμV/m) = Corr. (dB/m) + Read Level (dBμV)
3. Margin (dB) = Peak/AVG (dBμV/m) - Limit PK/AVG (dBμV/m)

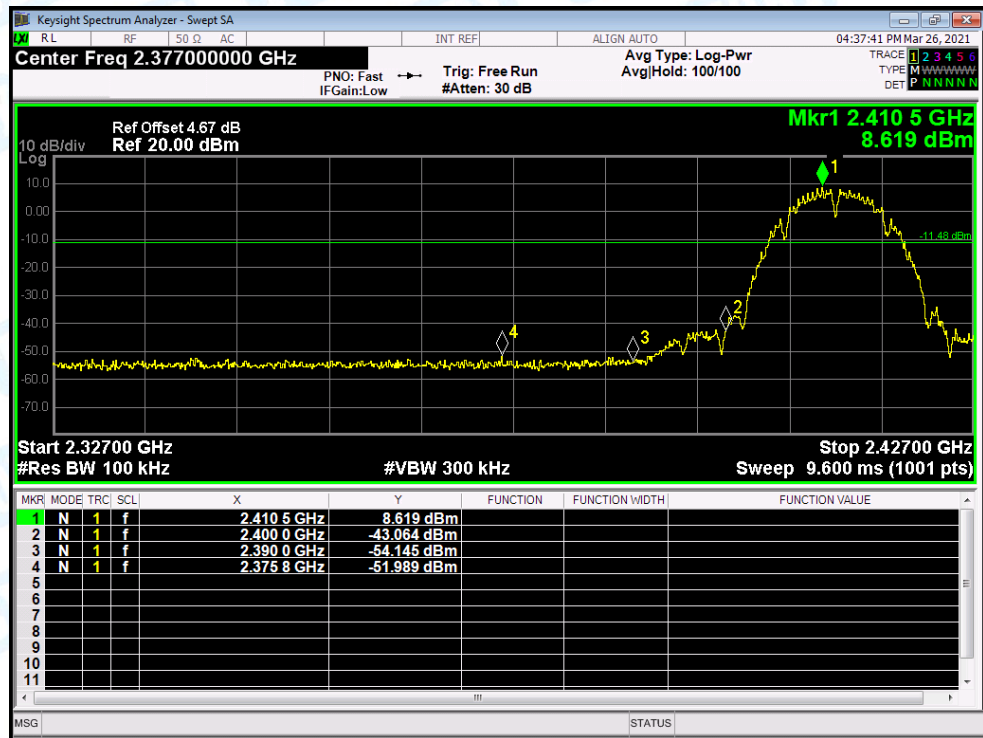
(2) Conducted Test

Test Graphs

Band Edge NVNT b 2412MHz Ant1 Ref



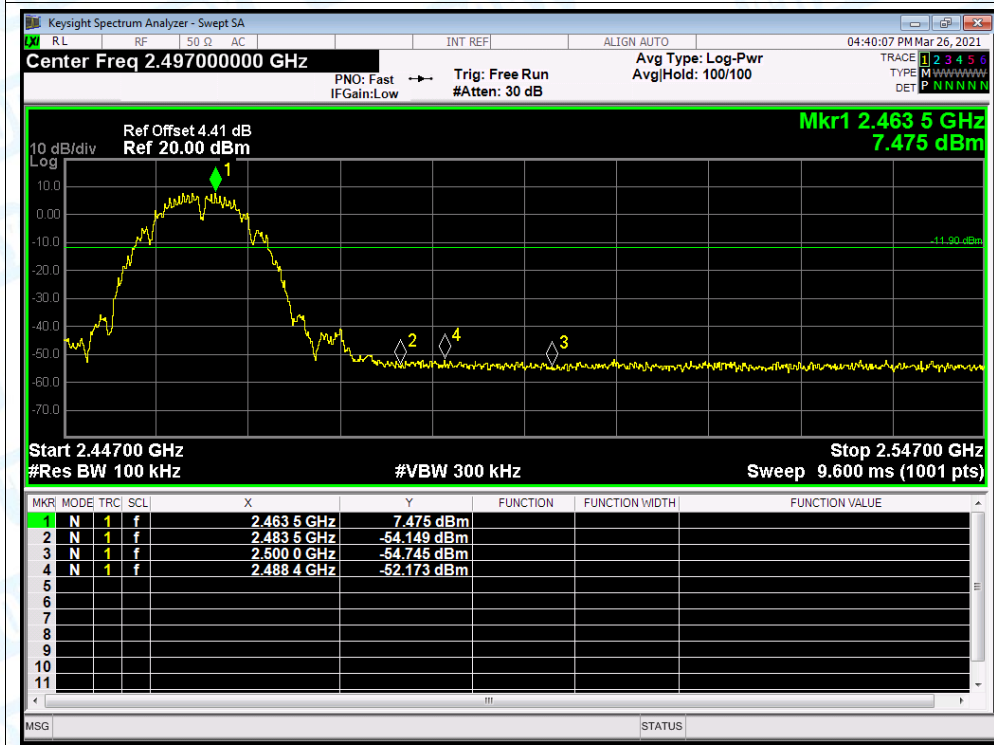
Band Edge NVNT b 2412MHz Ant1 Emission



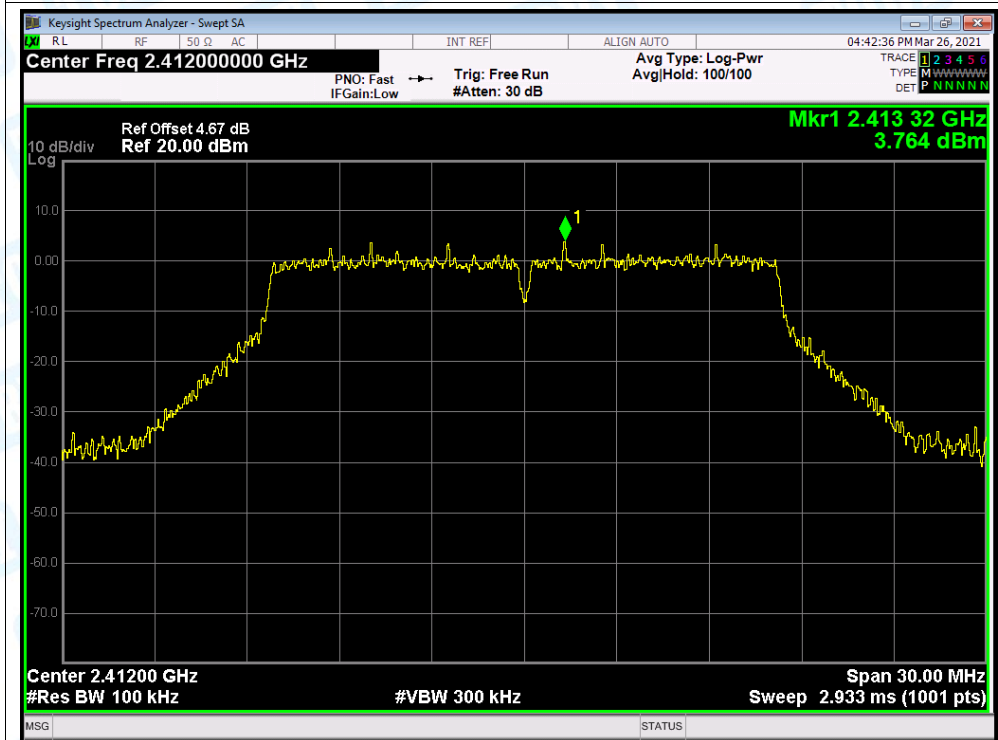
Band Edge NVNT b 2462MHz Ant1 Ref



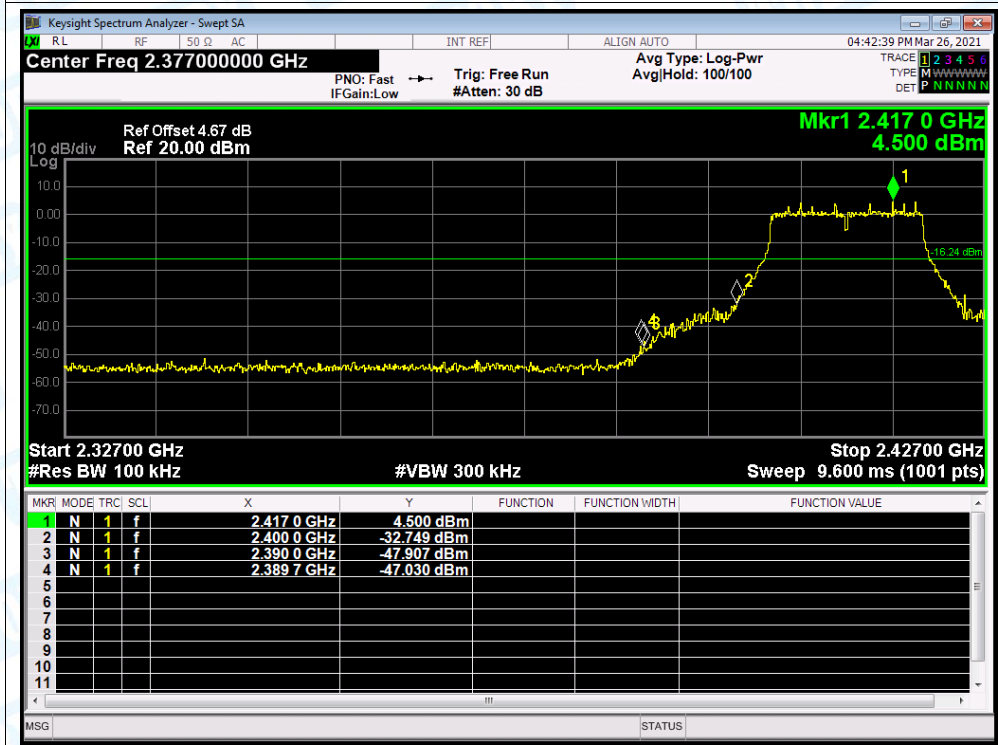
Band Edge NVNT b 2462MHz Ant1 Emission



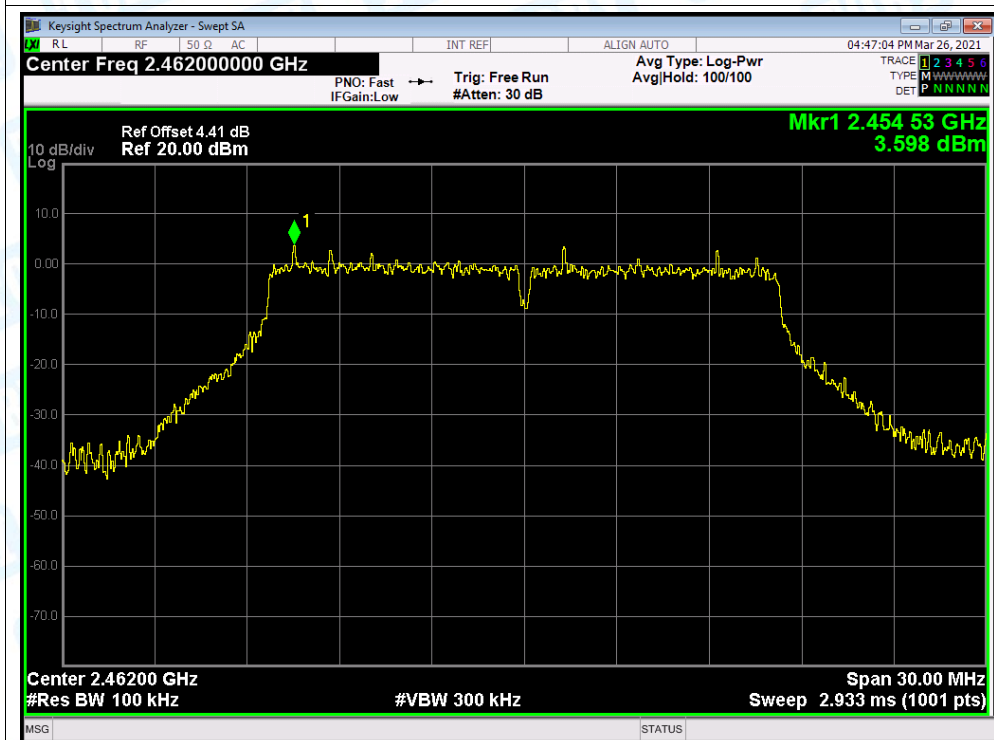
Band Edge NVNT g 2412MHz Ant1 Ref



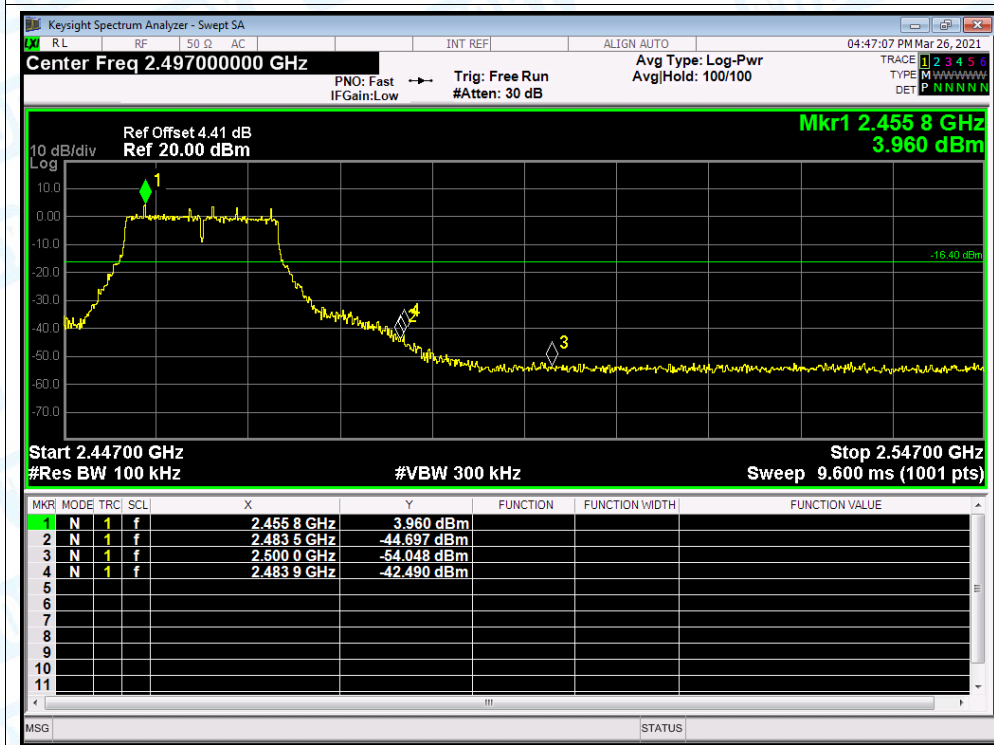
Band Edge NVNT g 2412MHz Ant1 Emission



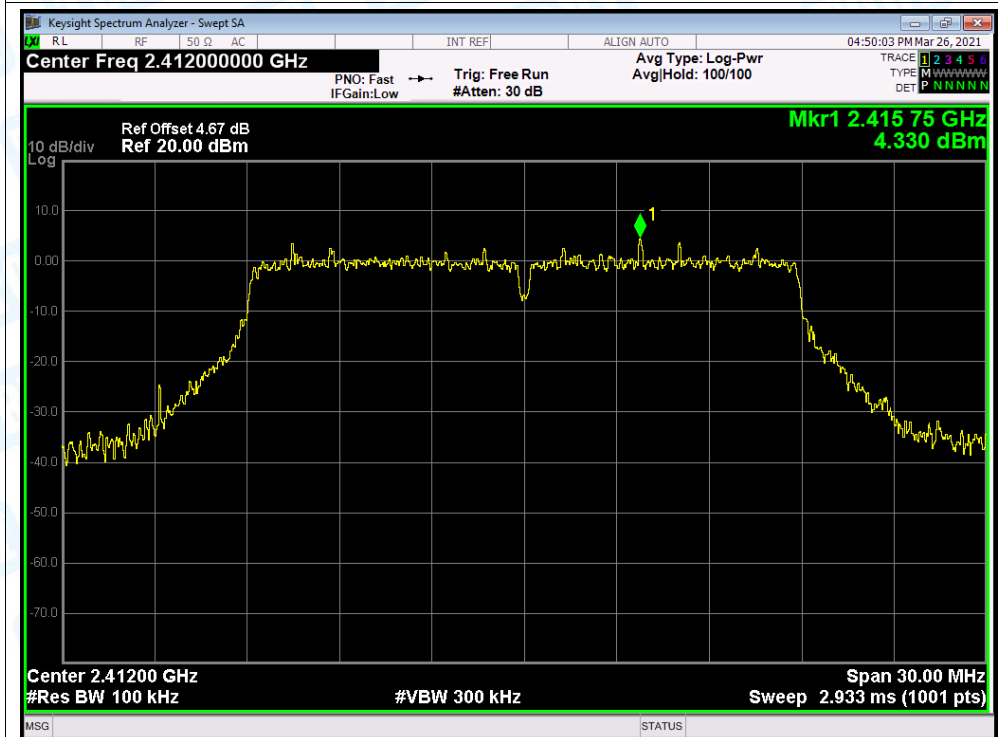
Band Edge NVNT g 2462MHz Ant1 Ref



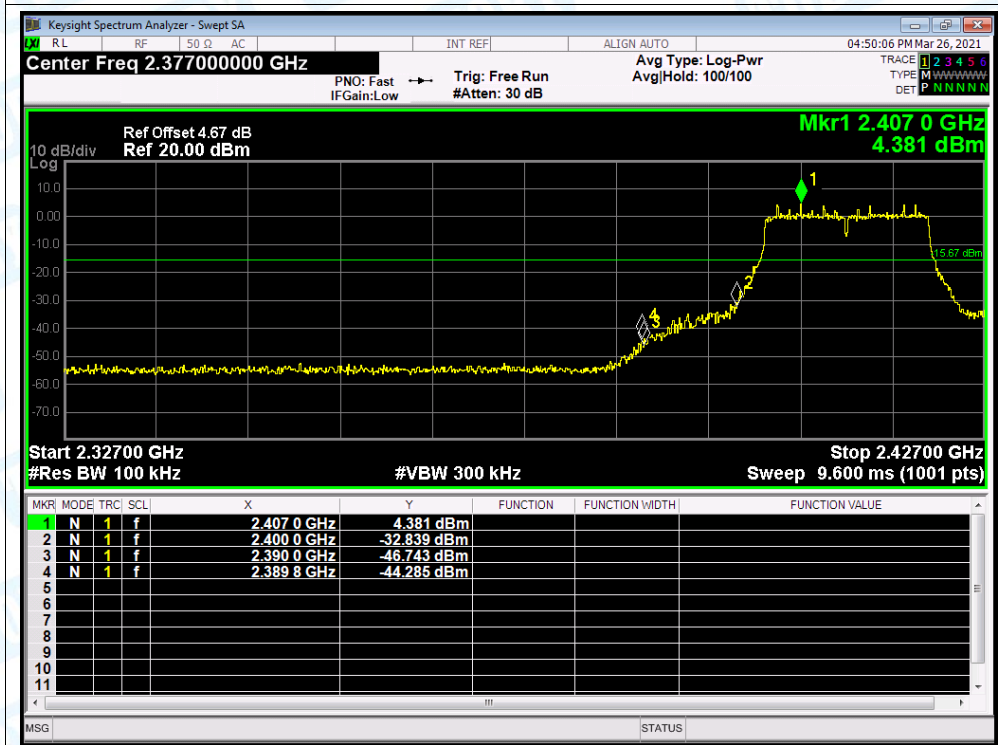
Band Edge NVNT g 2462MHz Ant1 Emission



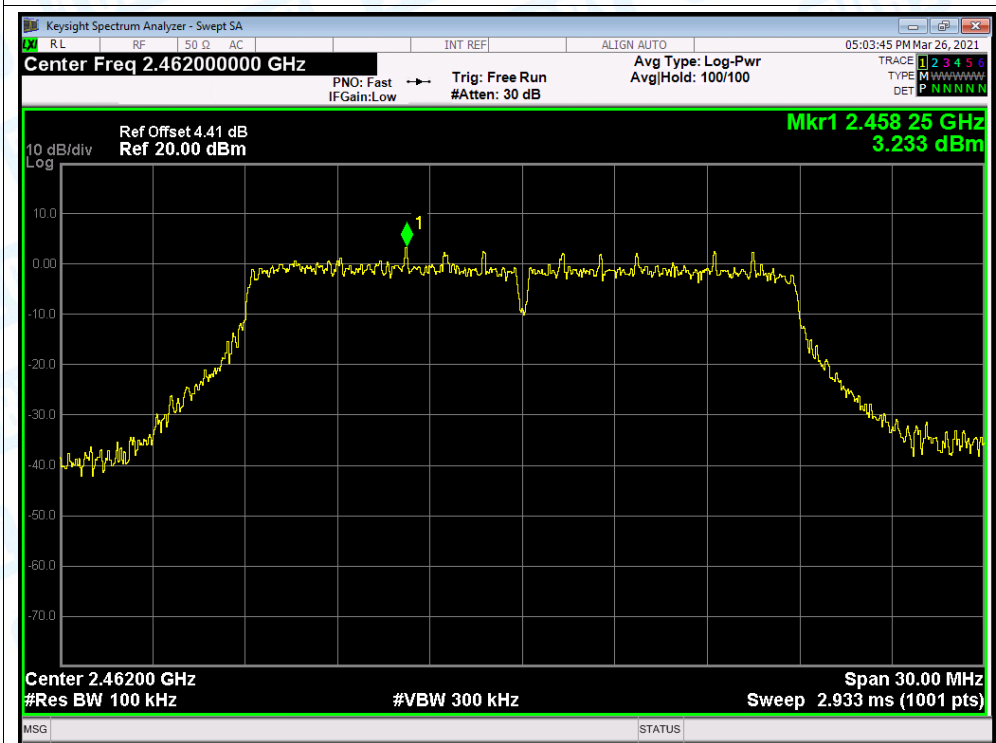
Band Edge NVNT n(HT20) 2412MHz Ant1 Ref



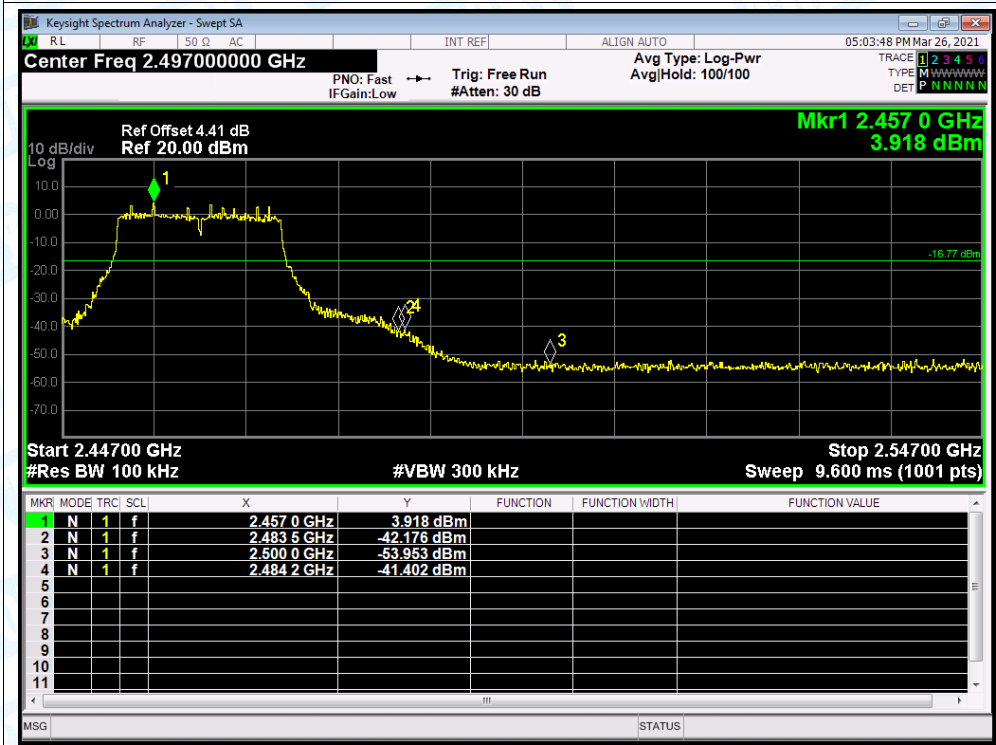
Band Edge NVNT n(HT20) 2412MHz Ant1 Emission



Band Edge NVNT n(HT20) 2462MHz Ant1 Ref



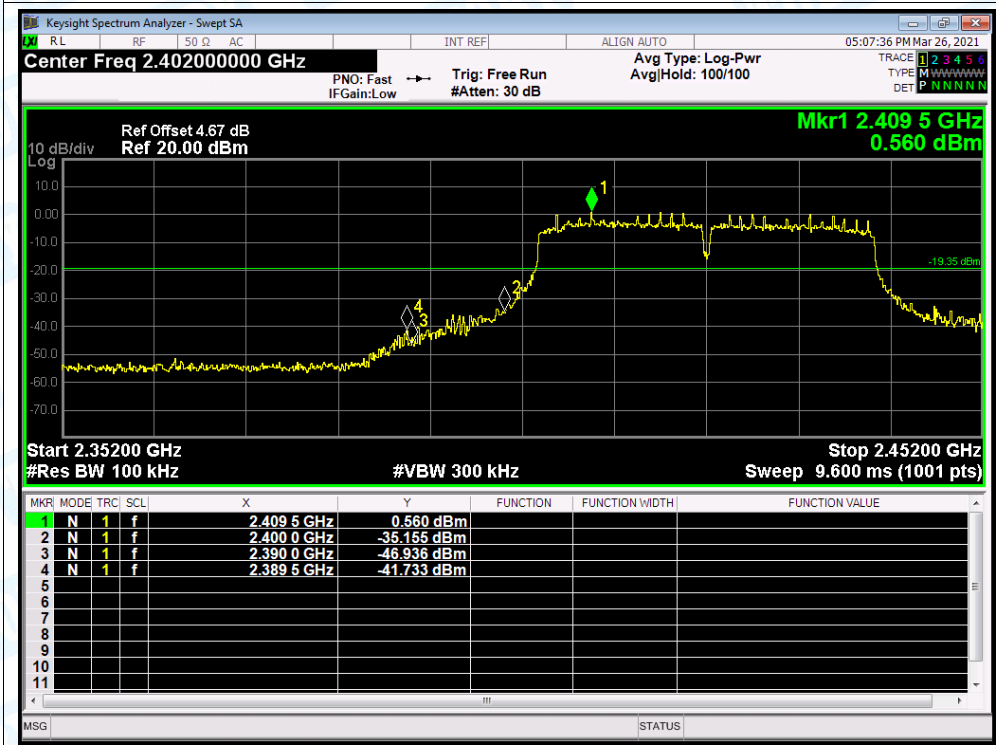
Band Edge NVNT n(HT20) 2462MHz Ant1 Emission



Band Edge NVNT n(HT40) 2422MHz Ant1 Ref



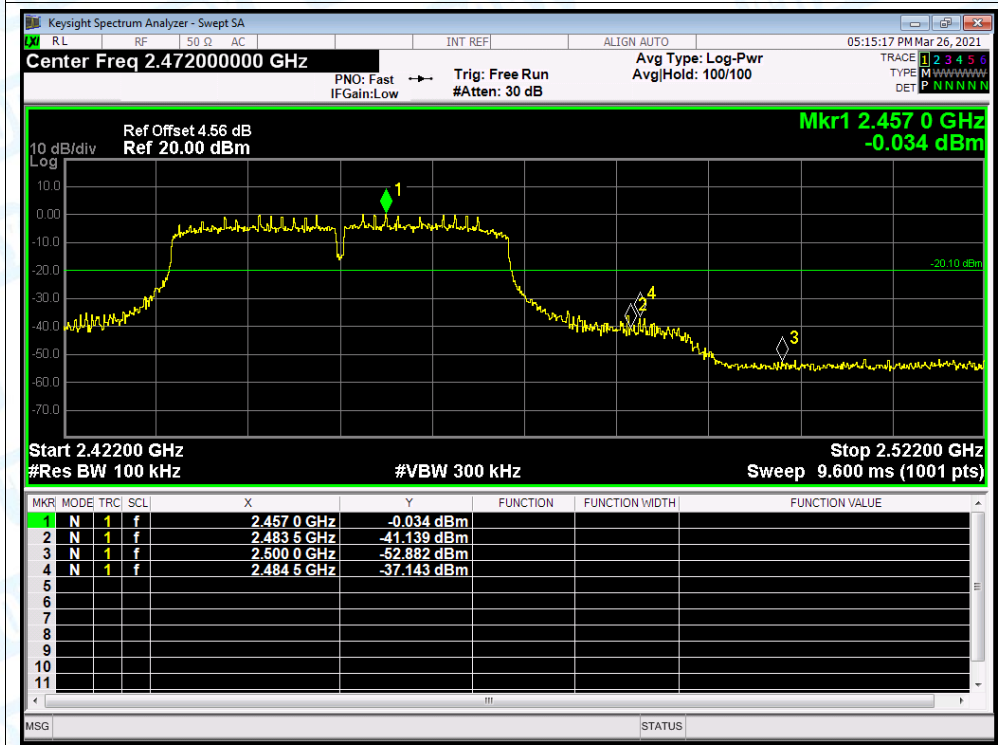
Band Edge NVNT n(HT40) 2422MHz Ant1 Emission



Band Edge NVNT n(HT40) 2452MHz Ant1 Ref



Band Edge NVNT n(HT40) 2452MHz Ant1 Emission

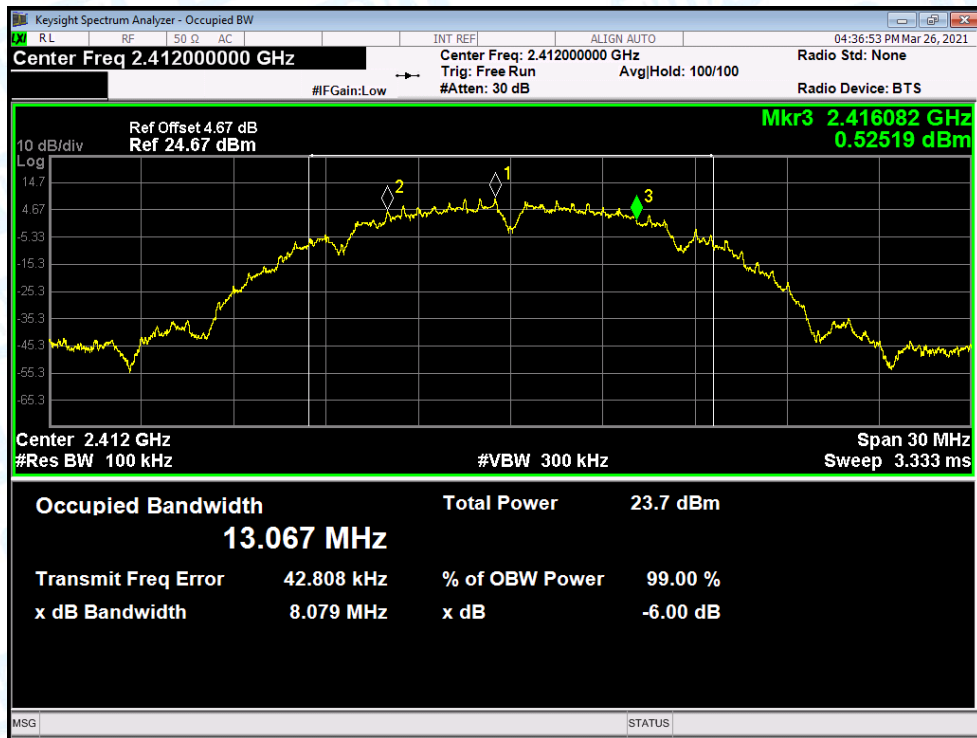


Attachment D-- Bandwidth Test Data

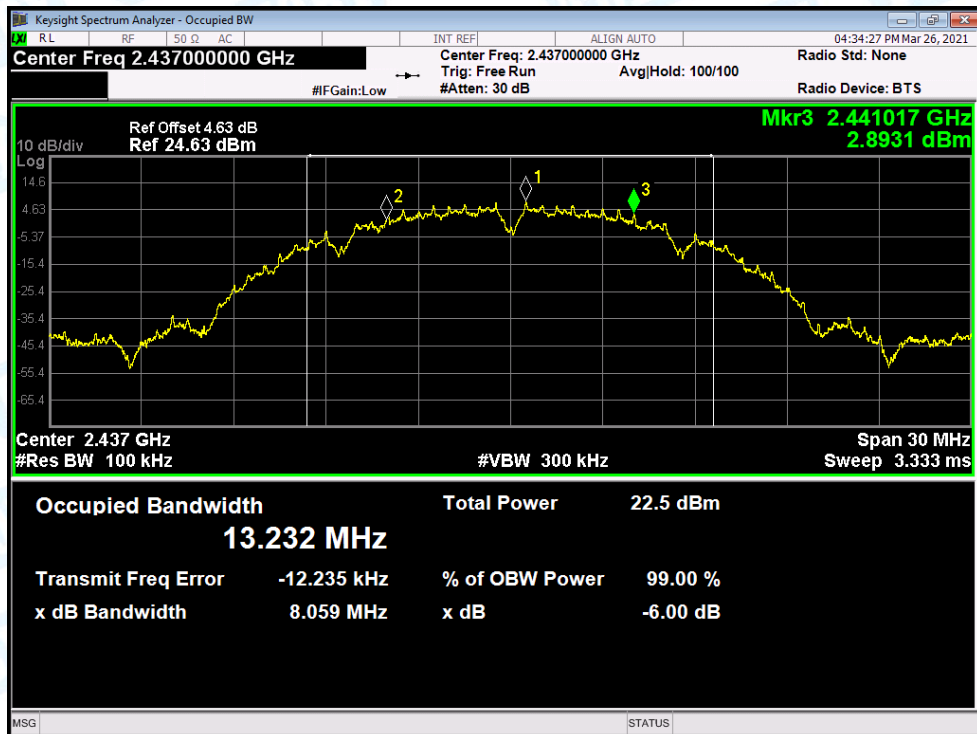
Condition	Mode	Frequency (MHz)	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	b	2412	8.079	0.5	Pass
NVNT	b	2437	8.059	0.5	Pass
NVNT	b	2462	8.081	0.5	Pass
NVNT	g	2412	16.34	0.5	Pass
NVNT	g	2437	16.389	0.5	Pass
NVNT	g	2462	16.328	0.5	Pass
NVNT	n(HT20)	2412	17.575	0.5	Pass
NVNT	n(HT20)	2437	17.574	0.5	Pass
NVNT	n(HT20)	2462	17.563	0.5	Pass
NVNT	n(HT40)	2422	35.082	0.5	Pass
NVNT	n(HT40)	2437	35.477	0.5	Pass
NVNT	n(HT40)	2452	35.018	0.5	Pass

Test Graphs

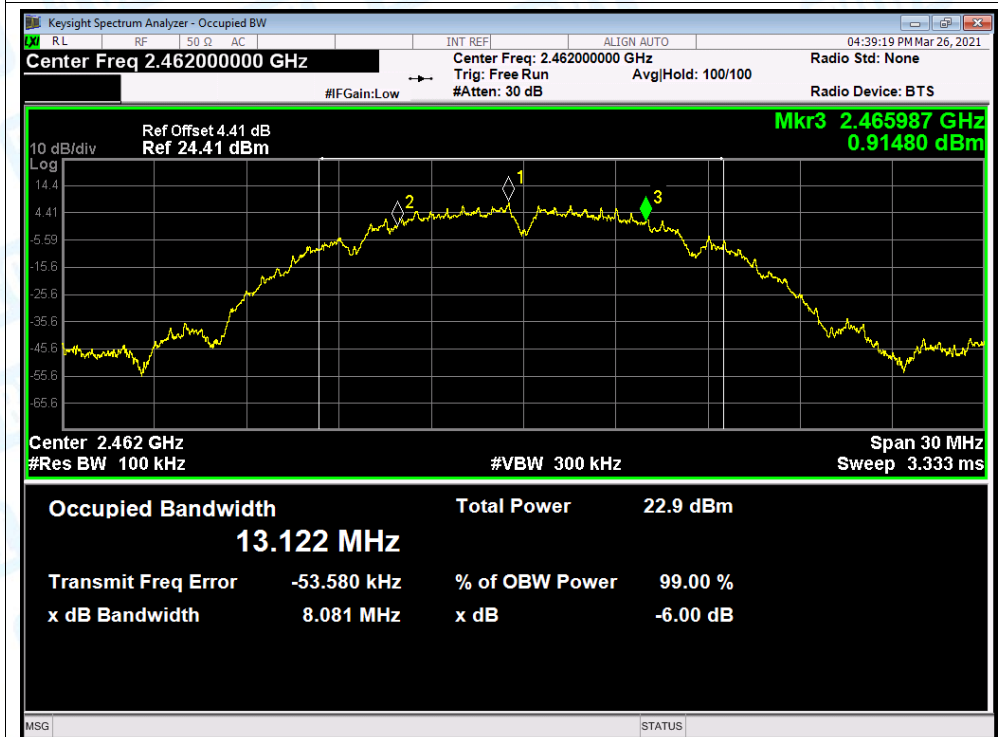
-6dB Bandwidth NVNT b 2412MHz Ant1



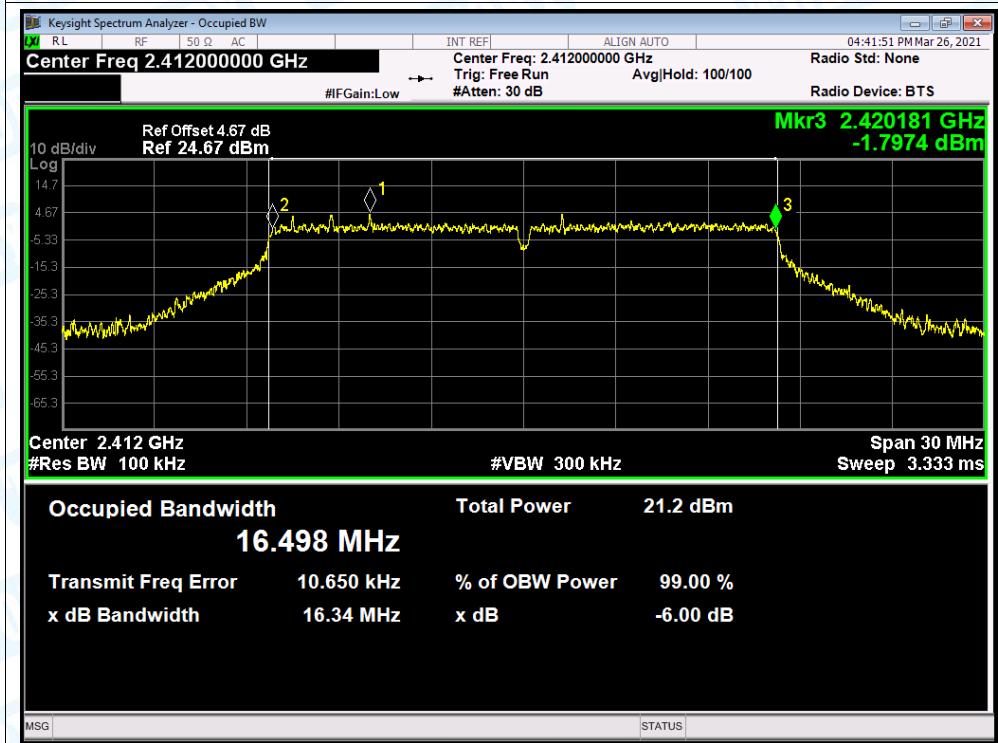
-6dB Bandwidth NVNT b 2437MHz Ant1



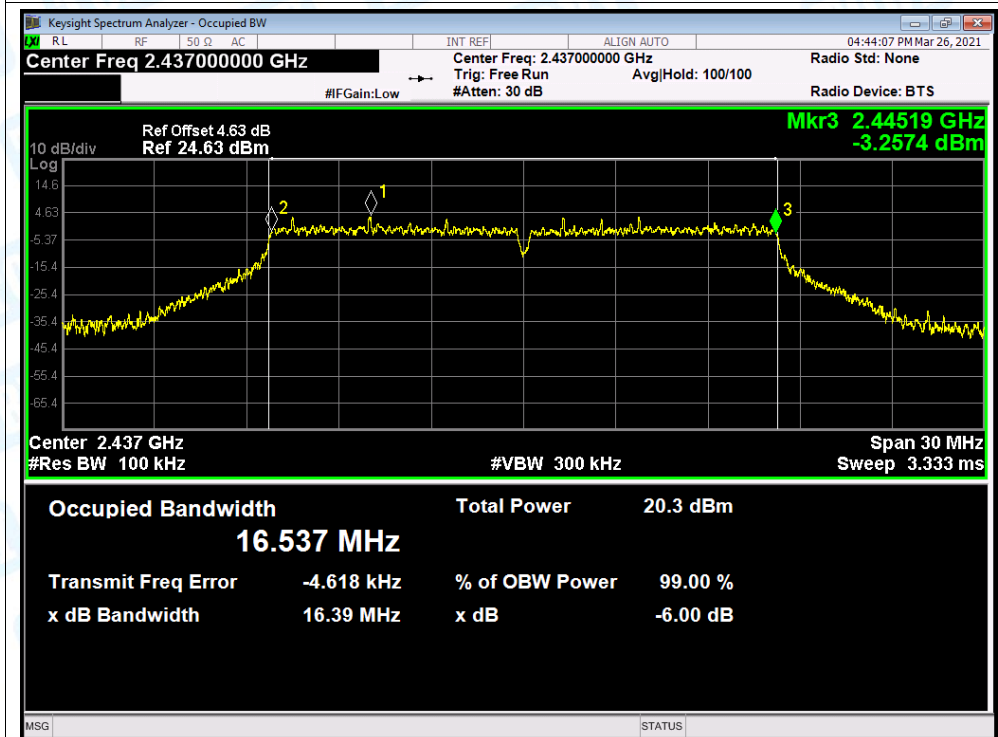
-6dB Bandwidth NVNT b 2462MHz Ant1



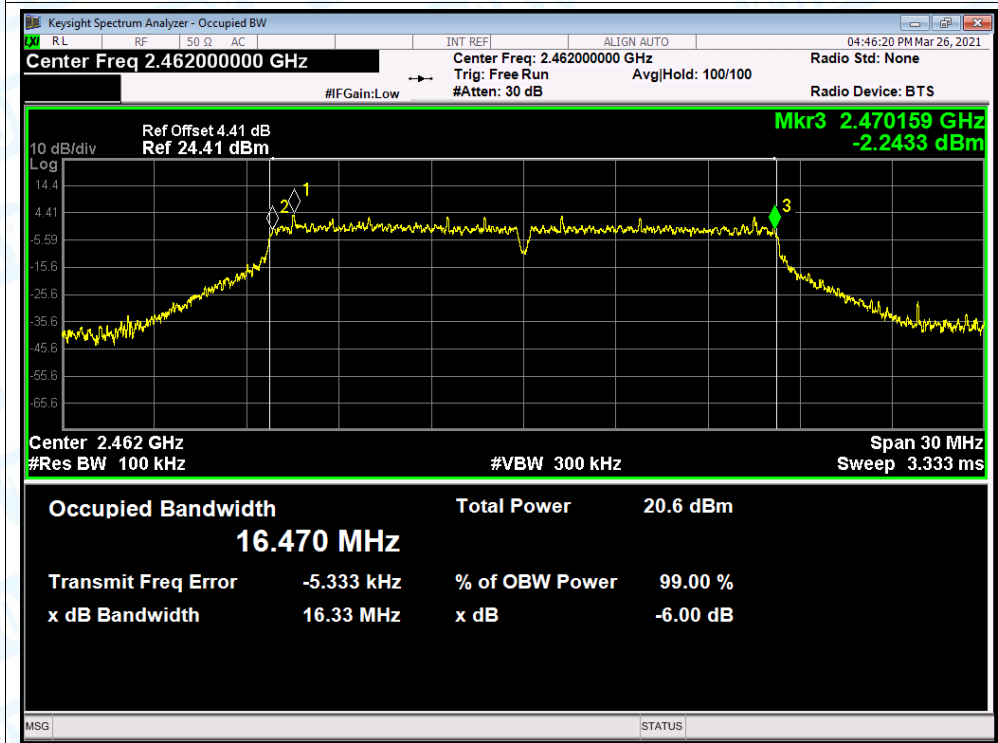
-6dB Bandwidth NVNT g 2412MHz Ant1



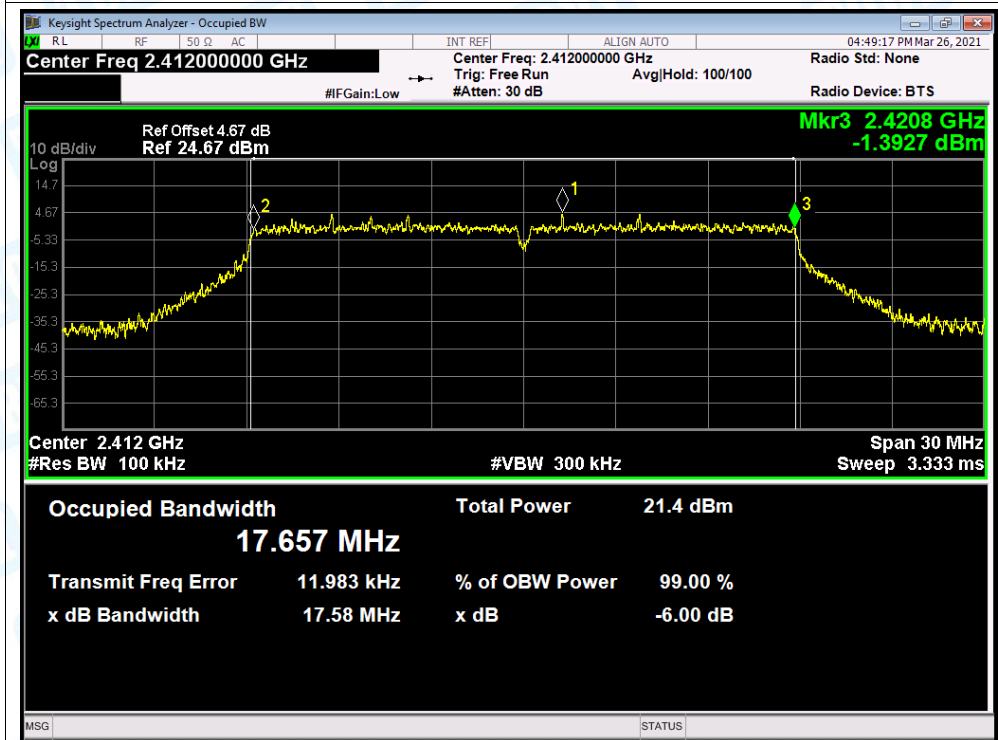
-6dB Bandwidth NVNT g 2437MHz Ant1



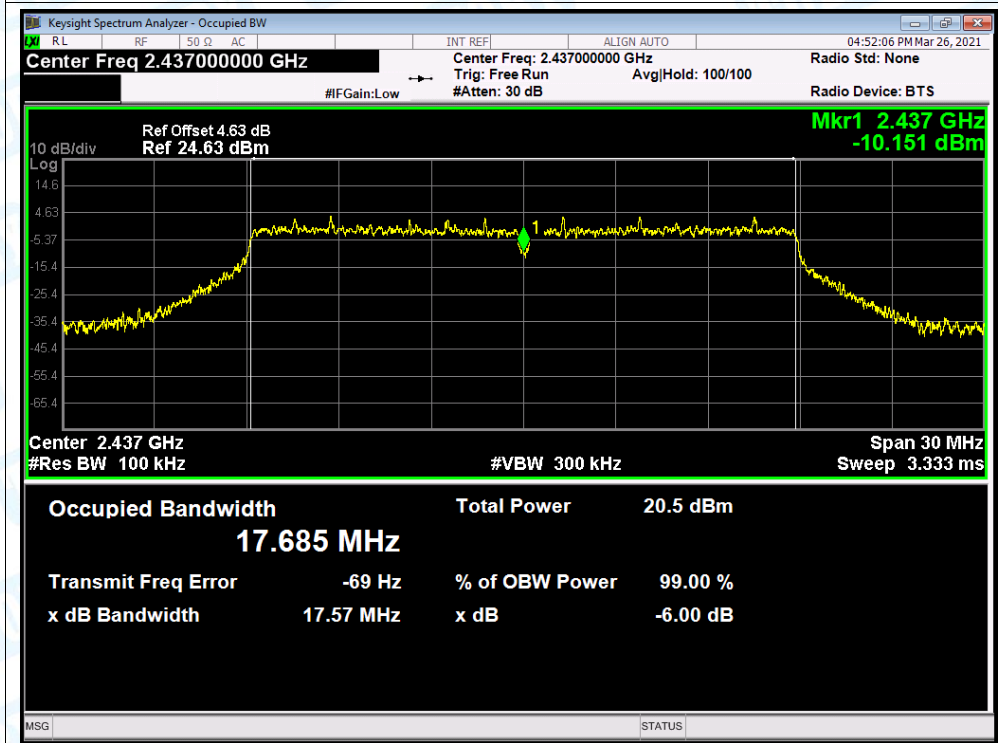
-6dB Bandwidth NVNT g 2462MHz Ant1



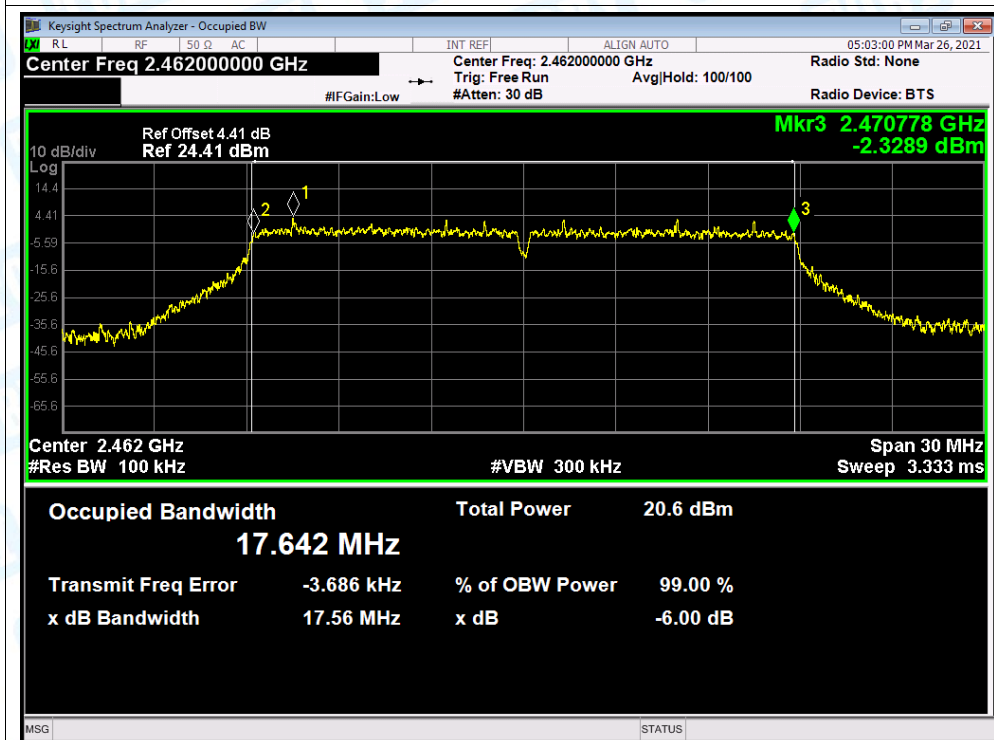
-6dB Bandwidth NVNT n(HT20) 2412MHz Ant1



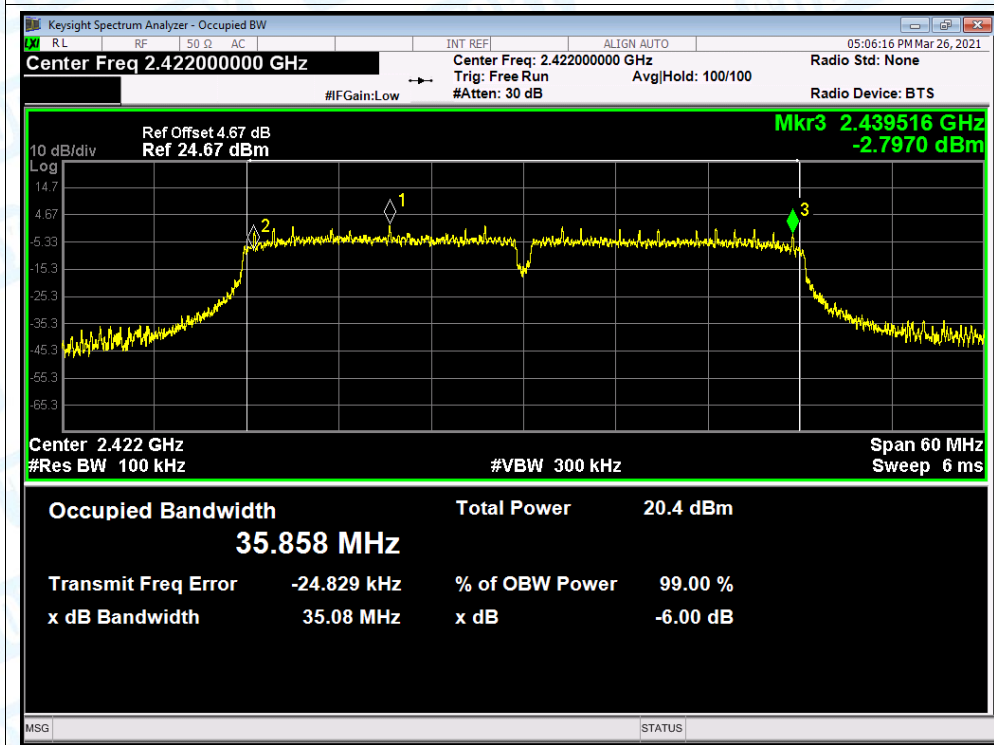
-6dB Bandwidth NVNT n(HT20) 2437MHz Ant1



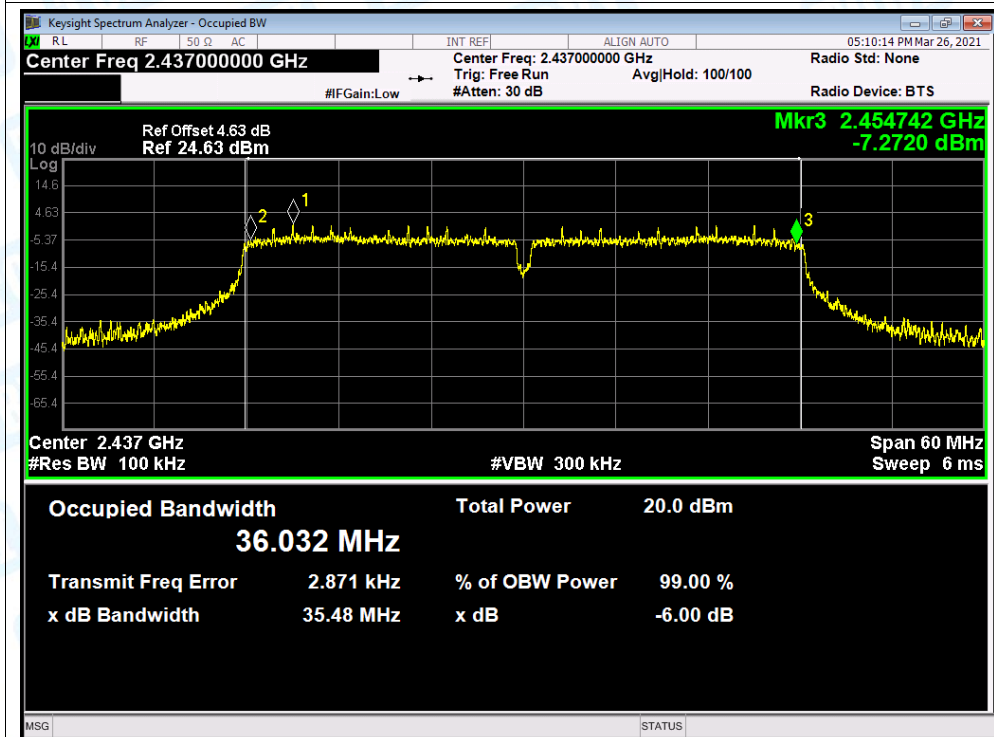
-6dB Bandwidth NVNT n(HT20) 2462MHz Ant1



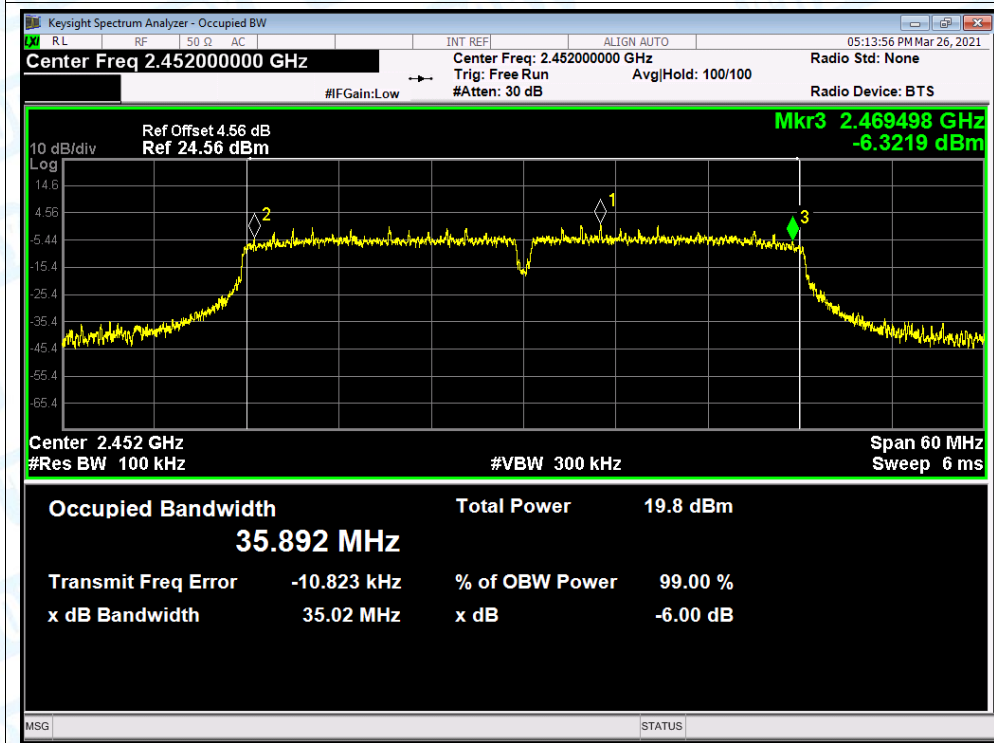
-6dB Bandwidth NVNT n(HT40) 2422MHz Ant1



-6dB Bandwidth NVNT n(HT40) 2437MHz Ant1



-6dB Bandwidth NVNT n(HT40) 2452MHz Ant1

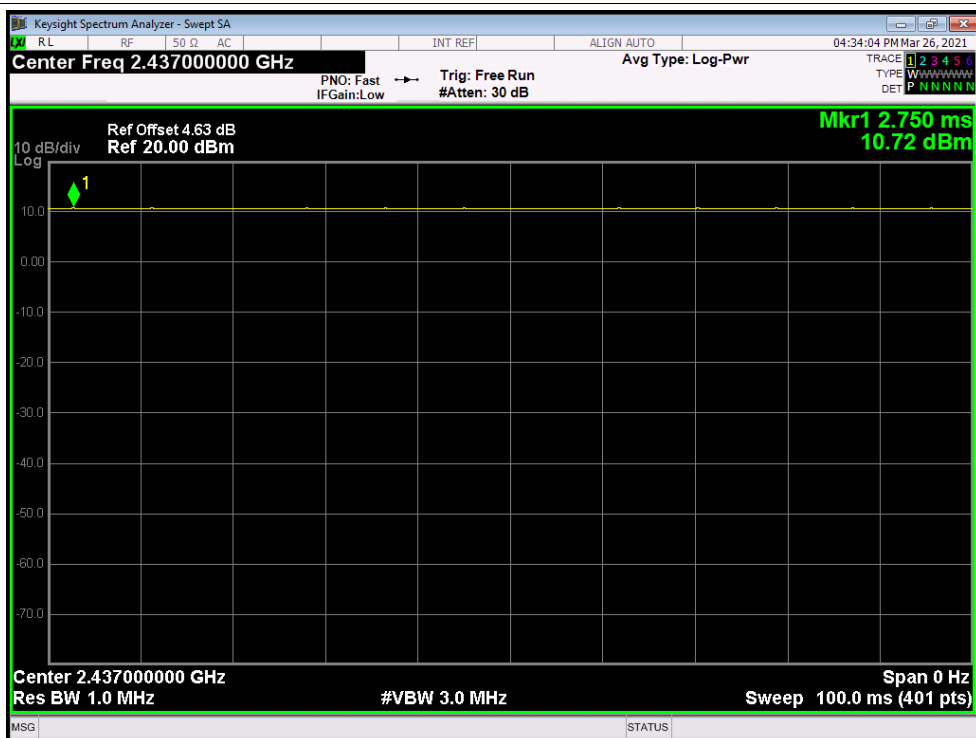


Attachment E-- Peak Output Power Test Data

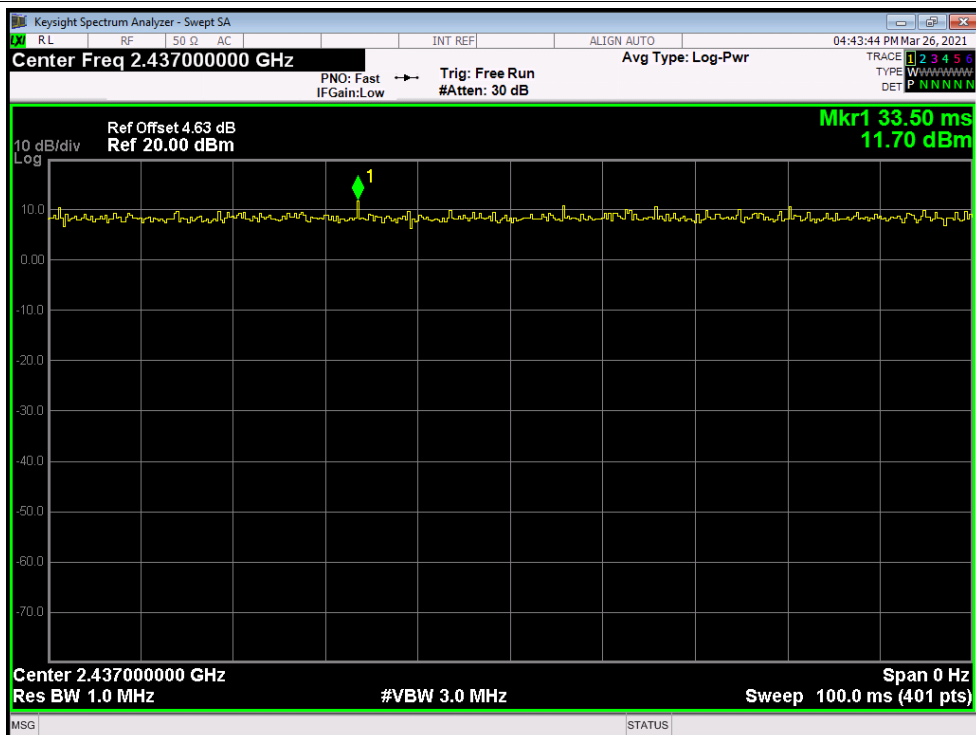
Test Conditions:		Continuous Transmitting Mode	
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 7.6V		
Mode	Channel frequency (MHz)	Test Result (dBm)	Limit (dBm)
802.11b	2412	17.179	30
	2437	15.998	
	2462	16.450	
802.11g	2412	14.910	
	2437	13.981	
	2462	14.104	
802.11n (HT20)	2412	15.124	
	2437	13.949	
	2462	14.094	
802.11n (HT40)	2422	13.283	
	2437	12.959	
	2452	12.835	
Result: PASS			

Duty Cycle		
Mode	Channel frequency (MHz)	Test Result
802.11b	2412	>98%
	2437	
	2462	
802.11g	2412	
	2437	
	2462	
802.11n (HT20)	2412	
	2437	
	2462	
802.11n (HT40)	2422	
	2437	
	2452	
Please see below plots		

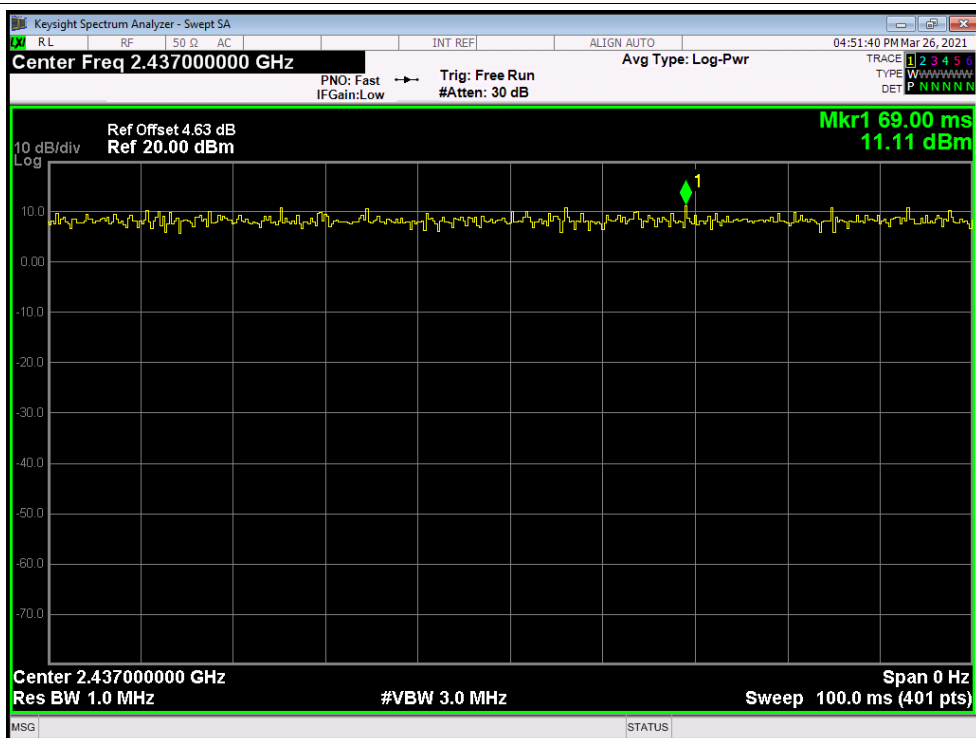
802.11b 2437MHz



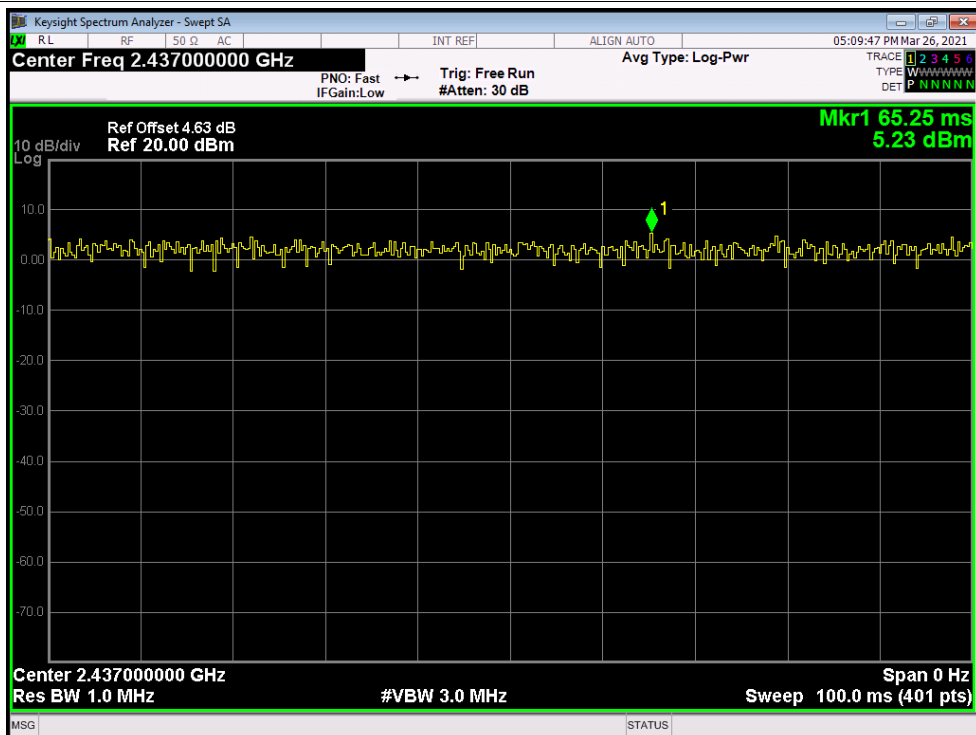
802.11g 2437MHz



802.11n(HT20) 2437MHz



802.11n(HT40) 2437MHz

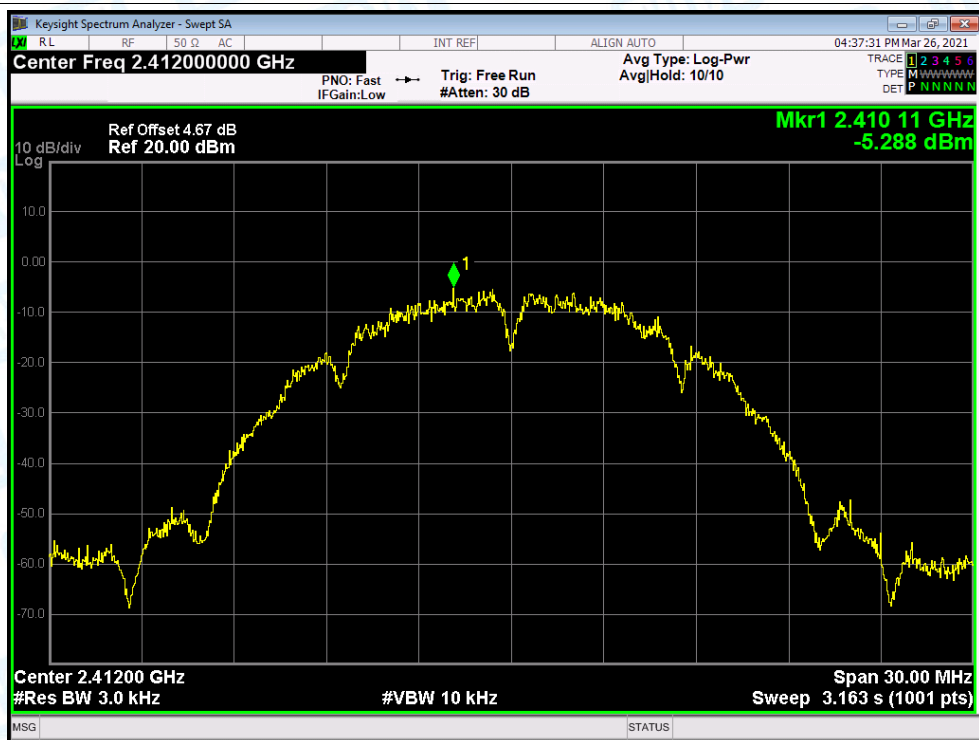


Attachment F-- Power Spectral Density Test Data

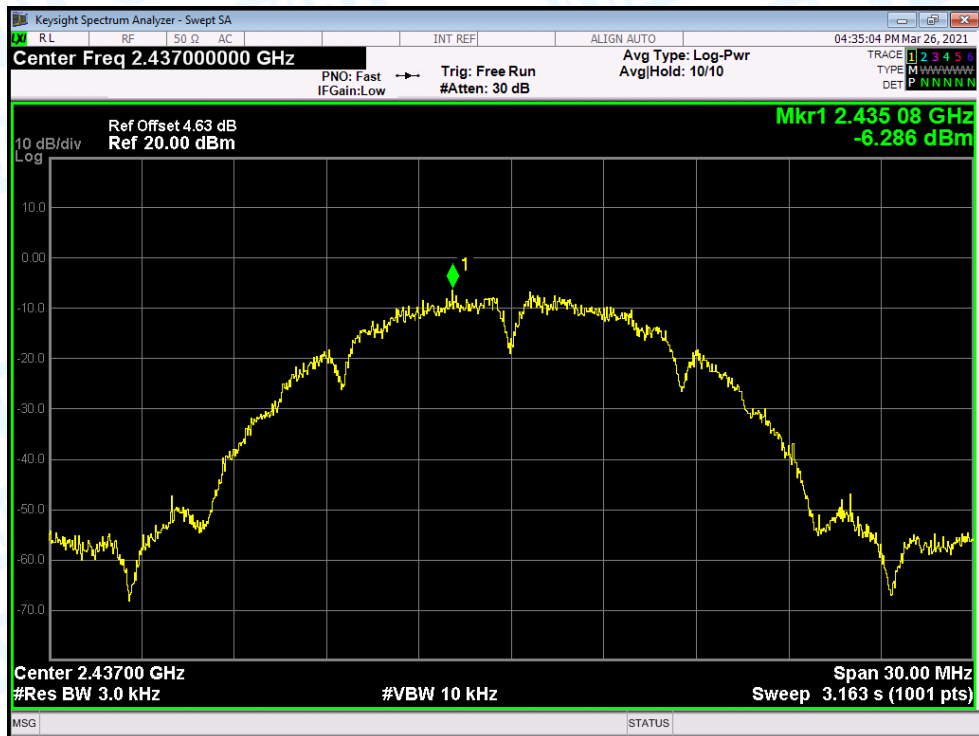
Condition	Mode	Frequency (MHz)	Max PSD (dBm/3KHz)	Limit (dBm/3KHz)	Verdict
NVNT	b	2412	-5.288	8	Pass
NVNT	b	2437	-6.286	8	Pass
NVNT	b	2462	-5.687	8	Pass
NVNT	g	2412	-9.819	8	Pass
NVNT	g	2437	-10.574	8	Pass
NVNT	g	2462	-10.337	8	Pass
NVNT	n(HT20)	2412	-9.569	8	Pass
NVNT	n(HT20)	2437	-10.434	8	Pass
NVNT	n(HT20)	2462	-10.043	8	Pass
NVNT	n(HT40)	2422	-12.829	8	Pass
NVNT	n(HT40)	2437	-14.288	8	Pass
NVNT	n(HT40)	2452	-13.962	8	Pass

Test Graphs

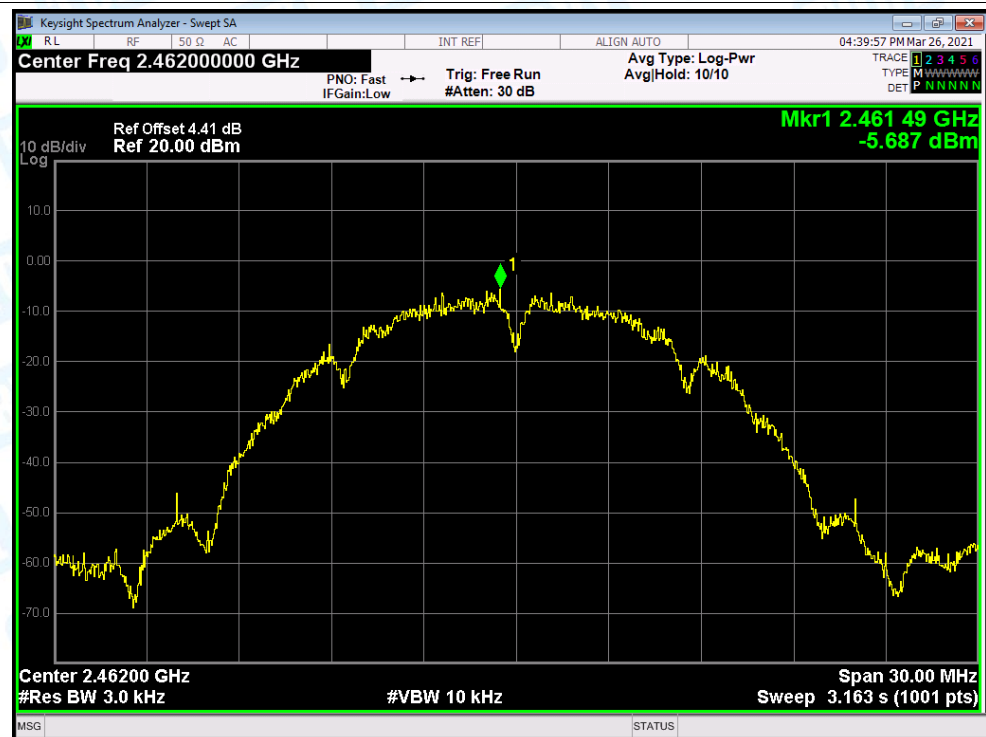
PSD NVNT b 2412MHz Ant1



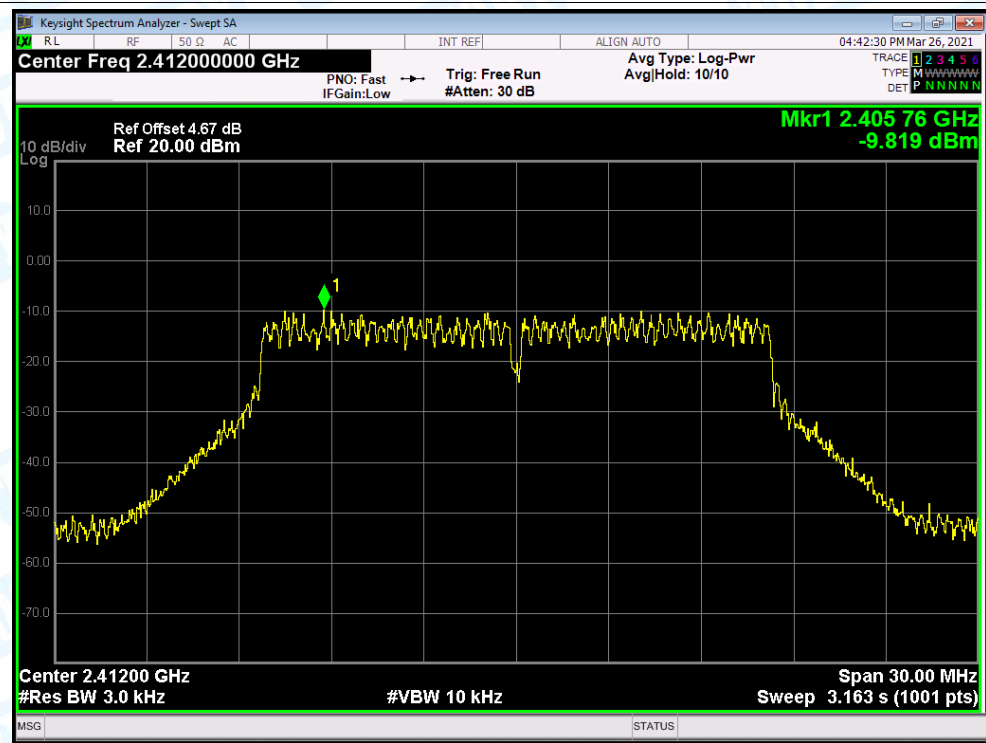
PSD NVNT b 2437MHz Ant1



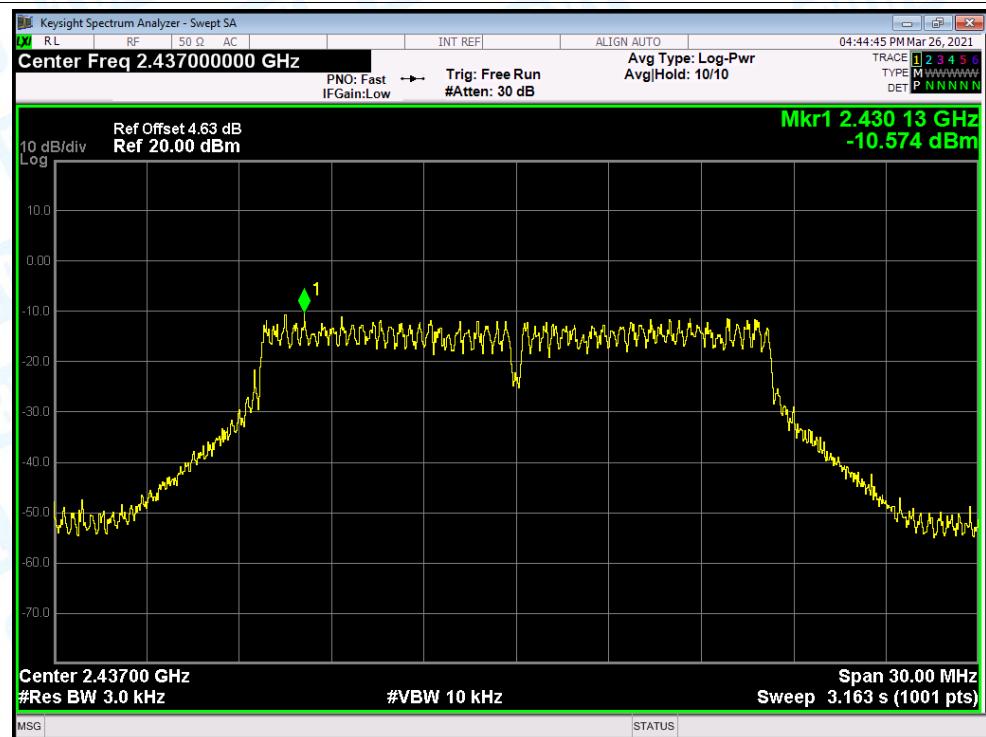
PSD NVNT b 2462MHz Ant1



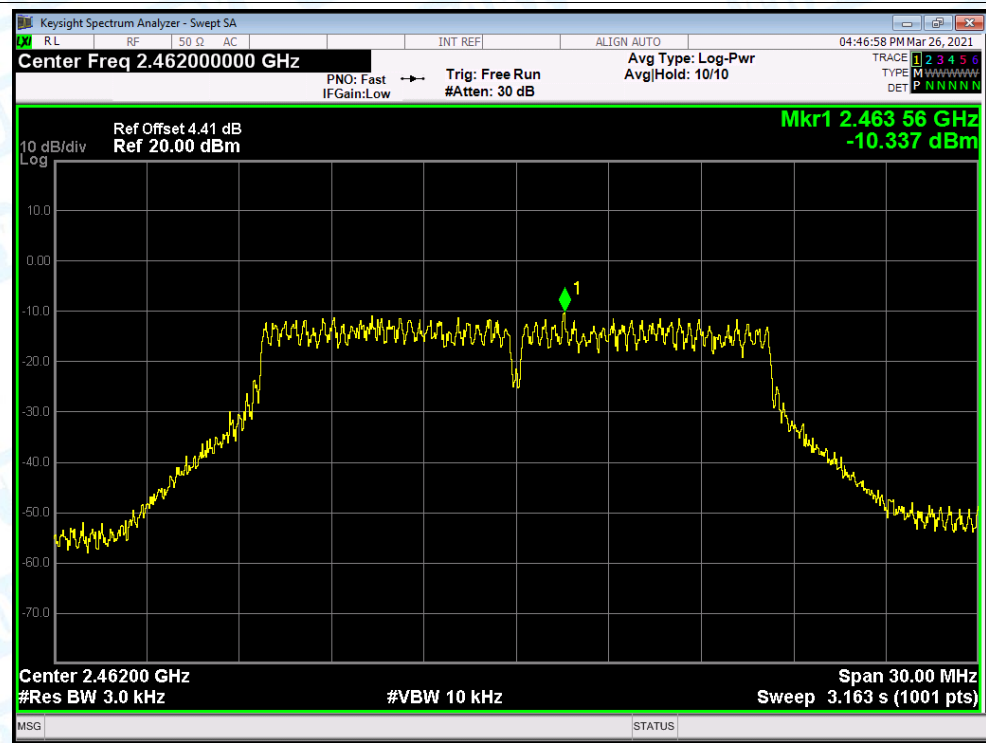
PSD NVNT g 2412MHz Ant1



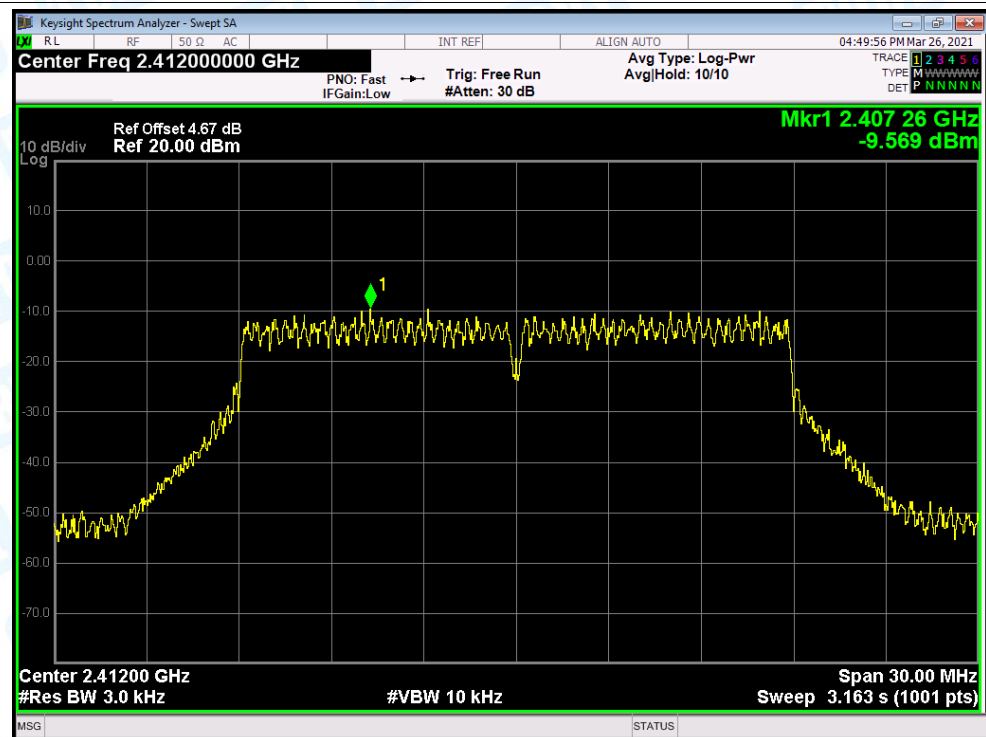
PSD NVNT g 2437MHz Ant1



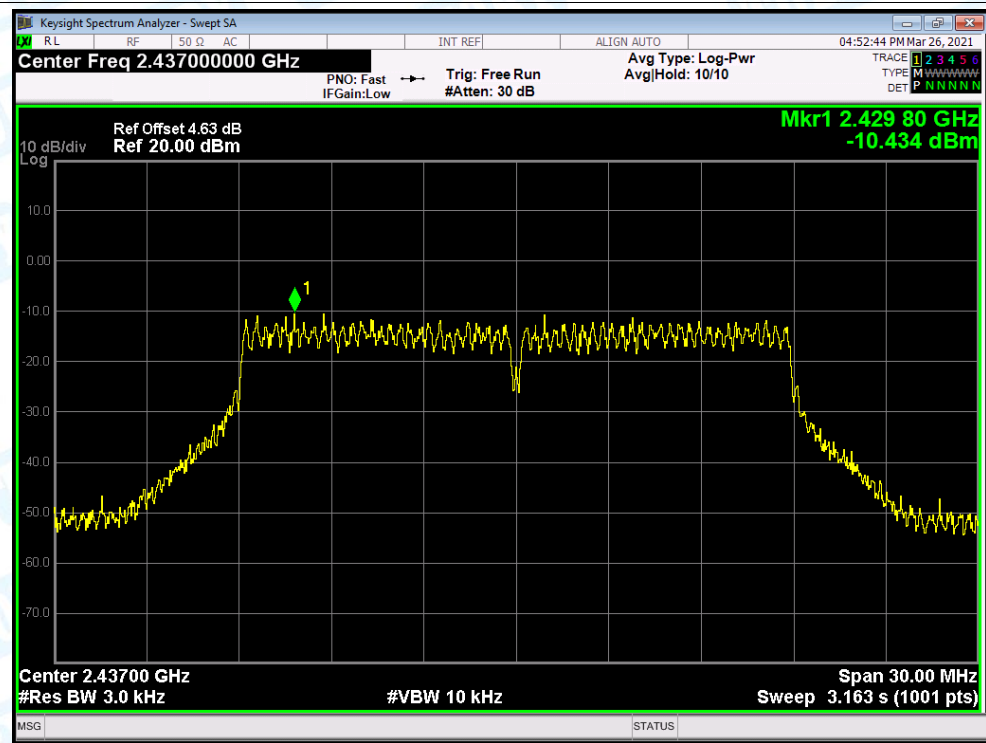
PSD NVNT g 2462MHz Ant1



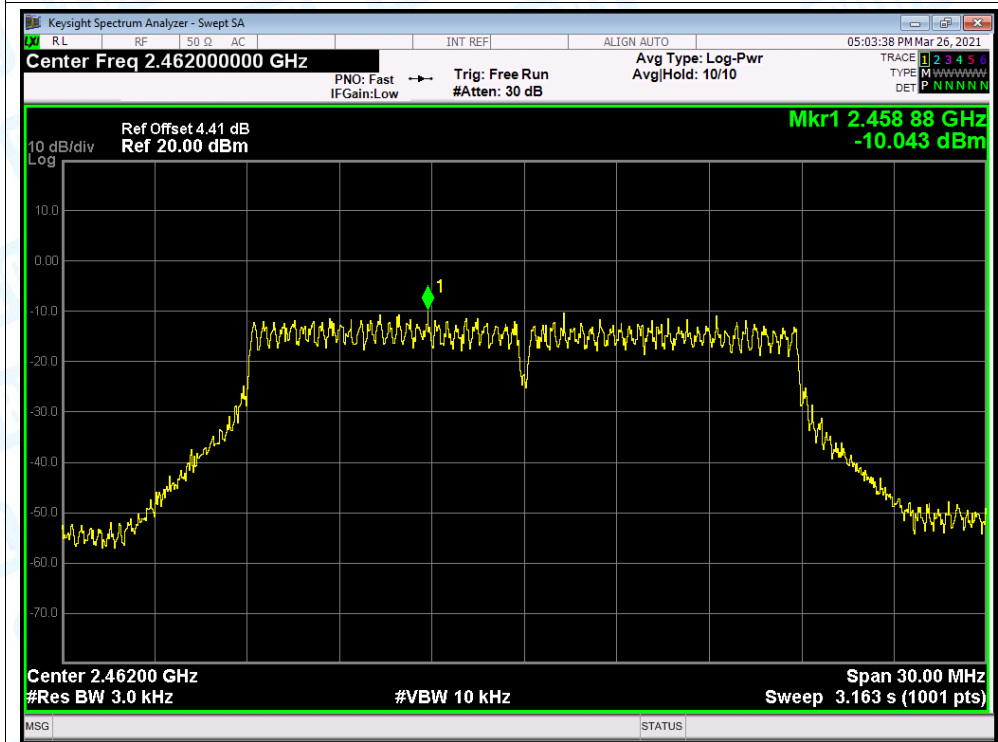
PSD NVNT n(HT20) 2412MHz Ant1



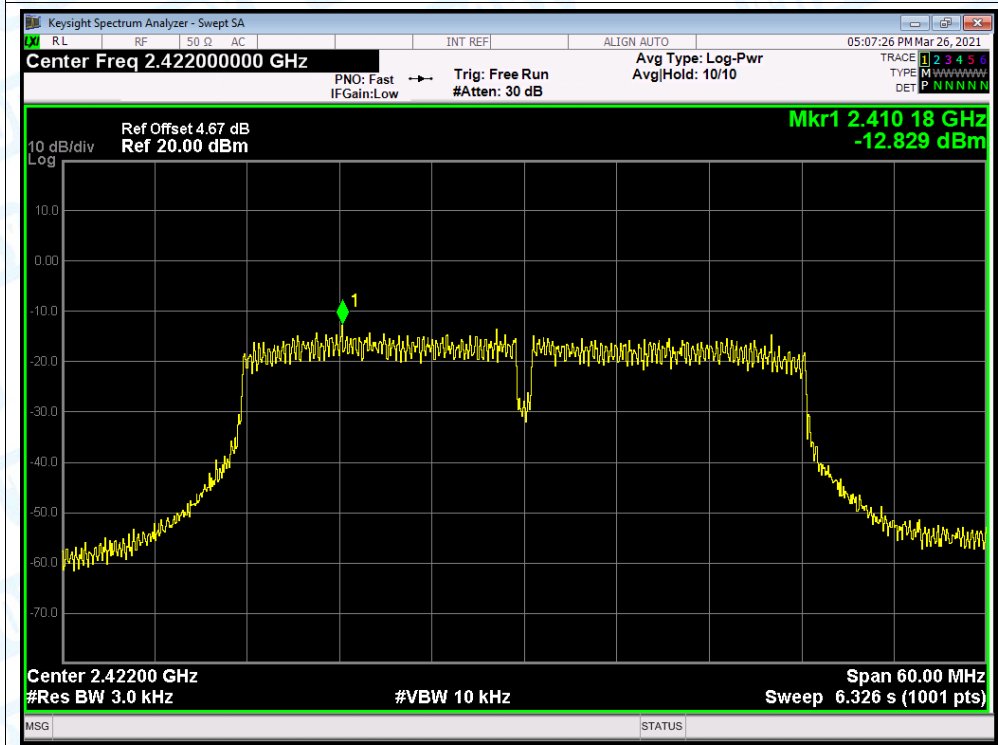
PSD NVNT n(HT20) 2437MHz Ant1



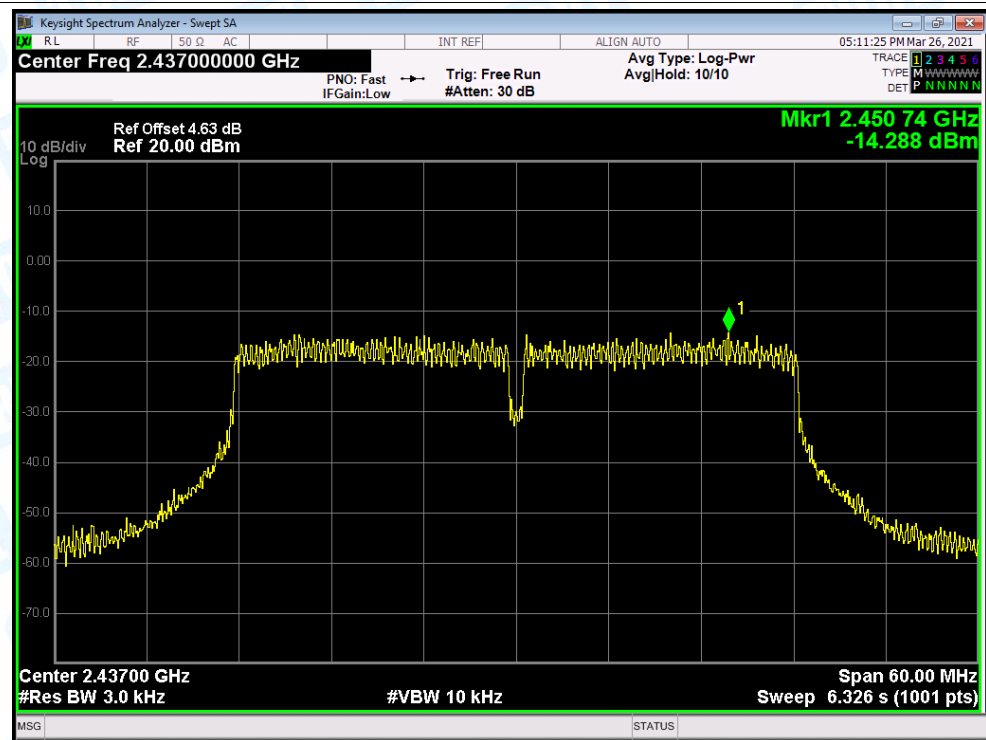
PSD NVNT n(HT20) 2462MHz Ant1



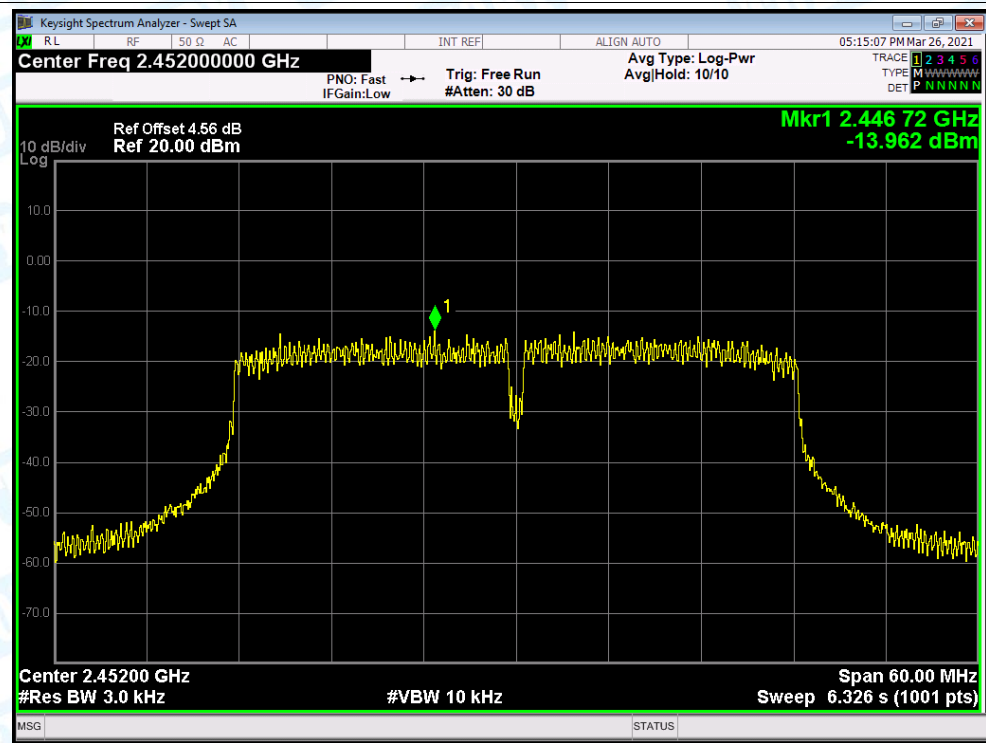
PSD NVNT n(HT40) 2422MHz Ant1



PSD NVNT n(HT40) 2437MHz Ant1



PSD NVNT n(HT40) 2452MHz Ant1



-----END OF REPORT-----