

TEST REPORT



Dt&C Co., Ltd.

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Tel : 031-321-2664, Fax : 031-321-1664

1. Report No : DRTFCC2405-0058

2. Customer

• Name (FCC) : Point Mobile Co., LTD.

• Address (FCC) : B-9F Kabul Great Valley, 32, Digital-ro 9-gil, Geumcheon-gu, Seoul, South Korea, 08512

3. Use of Report : FCC Certification

4. Product Name / Model Name : MOBILE COMPUTER / PM95

FCC ID : V2X-PM95

5. FCC Regulation(s): Part 15.247

Test Method used: KDB558074 D01v05r02, ANSI C63.10-2013

6. Date of Test : 2024.03.06 ~ 2024.04.29

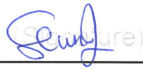
7. Location of Test : ☒ Permanent Testing Lab ☐ On Site Testing

8. Testing Environment : See appended test report.

9. Test Result : Refer to the attached test result.

The results shown in this test report refer only to the sample(s) tested unless otherwise stated.

This test report is not related to KOLAS accreditation.

Affirmation	Tested by	Technical Manager
	Name : SeungMin Gil 	Name : JaeJin Lee 

2024 . 05 . 30 .

Dt&C Co., Ltd.

If this report is required to confirmation of authenticity, please contact to report@dtnc.net

Test Report Version

Test Report No.	Date	Description	Revised by	Reviewed by
DRTFCC2405-0058	May, 30. 2024	Initial issue	SeungMin Gil	JaeJin Lee

Table of Contents

1. General Information	4
1.1. Description of EUT	4
1.2. Declaration by the applicant / manufacturer	4
1.3. Testing Laboratory	5
1.4. Testing Environment.....	5
1.5. Measurement Uncertainty.....	5
1.6. Test Equipment List	6
2. Test Methodology	7
2.1. EUT Configuration.....	7
2.2. EUT Exercise.....	7
2.3. General Test Procedures	7
2.4. Instrument Calibration	7
2.5. Description of Test Modes.....	8
3. Antenna Requirements	9
4. Summary of Test Result	10
5. Test Result	11
5.1. Maximum Peak Output Power	11
5.1.1. Test Setup.....	11
5.1.2. Test Procedures	11
5.1.3. Test Results.....	11
5.2. 6 dB Bandwidth	15
5.2.1. Test Setup.....	15
5.2.2. Test Procedures	15
5.2.3. Test Results.....	16
5.3. Power Spectral Density.....	33
5.3.1. Test Setup.....	33
5.3.2. Test Procedures	33
5.3.3. Test Results.....	33
5.4. Unwanted Emissions (Conducted)	50
5.4.1. Test Setup.....	50
5.4.2. Test Procedures	50
5.4.3. Test Results.....	51
5.5. Unwanted Emissions (Radiated).....	115
5.5.1. Test Setup.....	116
5.5.2. Test Procedures	116
5.5.3. Test Results.....	118
5.6. AC Power-Line Conducted Emissions	121
5.6.1. Test Setup.....	121
5.6.2. Test Procedures	121
5.6.3. Test Results.....	121
APPENDIX I	124
APPENDIX II	125
APPENDIX III	128

1. General Information

1.1. Description of EUT

Equipment Class	Digital Transmission System (DTS)
Product Name	MOBILE COMPUTER
Model Name	PM95
Add Model Name	-
Firmware Version Identification Number	95.00xx
EUT Serial Number	Conducted: 4b486b0c, Radiated: 536a3c99
Power Supply	DC 3.87 V
Modulation Technique	802.11b: CCK, DSSS 802.11g/n/ac: OFDM
Antenna Specification	Antenna Type: LDS Antenna Gain: Refer to the table below

Bands	SISO		MIMO (CDD) ^{Note 1.}
	ANT 1 [dBi]	ANT 2 [dBi]	Directional Gain [dBi]
2.4 GHz	3.51	5.46	7.55

Note 1. Directional gain (Correlated signal with unequal antenna gain and equal transmit power)

$$10 \log [(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] \text{ dBi}$$

Band	Mode	Tx. frequency(MHz)	Max. conducted power(dBm)
2.4 GHz	802.11b	2 412 ~ 2 462	19.34
	802.11g	2 412 ~ 2 462	25.99
	802.11n (HT20)	2 412 ~ 2 462	26.78
	802.11ac (VHT20)	2 412 ~ 2 462	26.80
	802.11n (HT40)	2 422 ~ 2 452	26.80
	802.11ac (VHT40)	2 422 ~ 2 452	26.92

1.2. Declaration by the applicant / manufacturer

N/A

1.3. Testing Laboratory

Dt&C Co., Ltd.		
The 3 m test site and conducted measurement facility used to collect the radiated data are located at the 42, Yurim-ro, 154beon-gil, Cheoin-gu, Yongin-si, Gyeonggi-do, Korea 17042.		
The test site complies with the requirements of Part 2.948 according to ANSI C63.4-2014.		
- FCC & IC MRA Designation No. : KR0034		
- ISED#: 5740A		
www.dtnet.net		
Telephone	:	+ 82-31-321-2664
FAX	:	+ 82-31-321-1664

1.4. Testing Environment

Ambient Condition	
▪ Temperature	+21 °C ~ +24 °C
▪ Relative Humidity	+35 % ~ +41 %

1.5. Measurement Uncertainty

The measurement uncertainties shown below were calculated in accordance with requirements of ANSI C63.4-2014 and ANSI C63.10-2013. All measurement uncertainty values are shown with a coverage factor of $k = 2$ to indicate a 95 % level of confidence.

Parameter	Measurement uncertainty
Antenna-port conducted emission	0.9 dB (The confidence level is about 95 %, $k = 2$)
AC power-line conducted emission	3.4 dB (The confidence level is about 95 %, $k = 2$)
Radiated emission (1 GHz Below)	5.0 dB (The confidence level is about 95 %, $k = 2$)
Radiated emission (1 GHz ~ 18 GHz)	4.8 dB (The confidence level is about 95 %, $k = 2$)
Radiated emission (18 GHz Above)	5.7 dB (The confidence level is about 95 %, $k = 2$)

1.6. Test Equipment List

Type	Manufacturer	Model	Cal.Date (yy/mm/dd)	Next.Cal.Date (yy/mm/dd)	S/N
Spectrum Analyzer	KEYSIGHT	N9020A	23/12/15	24/12/15	MY48011146
Spectrum Analyzer	KEYSIGHT	N9020A	23/12/15	24/12/15	MY52440526
Spectrum Analyzer	Agilent Technologies	N9020A	23/06/23	24/06/23	US47360812
Spectrum Analyzer	Agilent Technologies	N9020A	23/12/15	24/12/15	MY50110097
DC Power Supply	Agilent Technologies	66332A	23/12/15	24/12/15	66332A 220926-1
Multimeter	FLUKE	17B+	23/12/15	24/12/15	36390701WS
Signal Generator	Rohde Schwarz	SMBV100A	23/12/15	24/12/15	255571
Signal Generator	ANRITSU	MG3695C	23/12/15	24/12/15	173501
Thermohygrometer	BODYCOM	BJ5478	23/12/15	24/12/15	120612-1
Thermohygrometer	BODYCOM	BJ5478	23/12/15	24/12/15	090205-4
Thermohygrometer	BODYCOM	BJ5478	23/06/23	24/06/23	N/A
Loop Antenna	ETS-Lindgren	6502	23/11/09	24/11/09	00060496
Hybrid Antenna	Schwarzbeck	VULB 9160	23/12/15	24/12/15	3362
Horn Antenna	ETS-Lindgren	3117	23/06/23	24/06/23	00143278
Horn Antenna	A.H.Systems Inc.	SAS-574	23/06/23	24/06/23	155
PreAmplifier	tsj	MLA-0118-B01-40	23/12/15	24/12/15	1852267
PreAmplifier	tsj	MLA-1840-J02-45	23/06/23	24/06/23	16966-10728
PreAmplifier	H.P	8447D	23/12/15	24/12/15	2944A07774
High Pass Filter	Wainwright Instruments	WHKX12-935-1000-15000-40SS	23/06/23	24/06/23	8
High Pass Filter	Wainwright Instruments	WHKX10-2838-3300-18000-60SS	23/06/23	24/06/23	1
High Pass Filter	Wainwright Instruments	WHNX8.0/26.5-6SS	23/06/23	24/06/23	3
Attenuator	Hefei Shunze	SS5T2.92-10-40	23/06/23	24/06/23	16012202
Attenuator	Aeroflex/Weinschel	56-3	23/06/23	24/06/23	Y2370
Attenuator	SMAJK	SMAJK-2-3	23/06/23	24/06/23	3
Attenuator	SMAJK	SMAJK-2-3	23/06/23	24/06/23	2
Attenuator	Aeroflex/Weinschel	86-10-11	23/06/23	24/06/23	408
Attenuator	Aeroflex/Weinschel	86-20-11	23/06/23	24/06/23	432
Power Meter & Wide Bandwidth Sensor	Anritsu	ML2496A MA2490A MA2411B	23/12/15	24/12/15	1338004 1249303 1911481
EMI Test Receiver	ROHDE&SCHWARZ	ESC17	24/01/29	25/01/29	100910
PULSE LIMITER	ROHDE&SCHWARZ	ESH3-Z2	23/08/21	24/08/21	101333
LISN	SCHWARZBECK	NSLK 8128 RC	23/10/26	24/10/26	8128 RC-387
Digital Thermo Hygrometer	CAS	TE-303N	24/02/07	25/02/07	220502531
Cable	DT&C	Cable	24/01/03	25/01/03	G-2
Cable	HUBER+SUHNER	SUCOFLEX 100	24/01/03	25/01/03	G-3
Cable	DT&C	Cable	24/01/03	25/01/03	G-4
Cable	OMT	YSS21S	24/01/03	25/01/03	G-5
Cable	Junkosha	MWX241	24/01/03	25/01/03	mmW-1
Cable	Junkosha	MWX241	24/01/03	25/01/03	mmW-4
Cable	HUBER+SUHNER	SUCOFLEX100	24/01/03	25/01/03	M-1
Cable	HUBER+SUHNER	SUCOFLEX100	24/01/03	25/01/03	M-2
Cable	JUNKOSHA	MWX241/B	24/01/03	25/01/03	M-3
Cable	JUNKOSHA	J12J101757-00	24/01/03	25/01/03	M-7
Cable	HUBER+SUHNER	SUCOFLEX106	24/01/03	25/01/03	M-9
Cable	Dt&C	Cable	24/01/03	25/01/03	RFC-69
Test Software	tsj	Radiated Emission Measurement	NA	NA	Version 2.00.0185
Test Software	tsj	Noise Terminal Measurement	NA	NA	Version 2.00.0190

Note1: The measurement antennas were calibrated in accordance to the requirements of ANSI C63.5-2017.

Note2: The cable is not a regular calibration item, so it has been calibrated by Dt&C itself.

2. Test Methodology

The measurement procedures described in the ANSI C63.10-2013 and the guidance provided in KDB558074 D01v05r02 were used in measurement of the EUT.

The EUT was tested per the guidance of KDB558074 D01v05r02. And ANSI C63.10-2013 was used to reference appropriate EUT setup and maximizing procedures of radiated spurious emission and AC line conducted emission testing.

2.1. EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner that intends to maximize its emission characteristics in a continuous normal application.

2.2. EUT Exercise

The EUT was operated in the test mode to fix the TX frequency that was for the purpose of the measurements. According to its specifications, the EUT must comply with the requirements of the Section 15.207, 15.209 and 15.247 under the FCC Rules Part 15 Subpart C.

2.3. General Test Procedures

Conducted Emissions

The power-line conducted emission test procedure is not described on the KDB558074 D01v05r02.

So this test was fulfilled with the requirements in Section 6.2 of ANSI C63.10-2013.

The EUT is placed on the wooden table, which is 0.8 m above ground plane and the conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30 MHz using CISPR Quasi-peak and Average detector.

Radiated Emissions

Basically the radiated tests were performed with KDB558074 D01v05r02. But some requirements and procedures like test site requirements, EUT setup and maximizing procedure were fulfilled with the requirements in Section 5 and 6 of the ANSI C63.10-2013 as stated on section 12.1 of the KDB558074 D01v05r02.

The EUT is placed on a non-conductive table. For emission measurements at or below 1 GHz, the table height is 80 cm. For emission measurements above 1 GHz, the table height is 1.5 m. The turntable shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3 m away from the receiving antenna, which varied from 1 m to 4 m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.

2.4. Instrument Calibration

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipment, which is traceable to recognized national standards.

2.5. Description of Test Modes

The EUT has been tested with the operating condition for maximizing the emission characteristics. A test program is used to control the EUT for staying in continuous transmitting.

Transmitting Configuration of EUT

Mode	SISO		MIMO(CDD)	MIMO(SDM)
	Ant 1	Ant 2	Ant 1 & 2	Ant 1 & 2
	Data rate			
802.11b	1 Mbps ~ 11 Mbps	1 Mbps ~ 11 Mbps	-	-
802.11g	6 Mbps ~ 54 Mbps	6 Mbps ~ 54 Mbps	-	-
802.11n(HT20)	MCS 0 ~ MCS 7	MCS 0 ~ MCS 7	MCS 0 ~ MCS 7	MCS 8 ~ MCS 15
802.11ac(VHT20)	MCS 0 ~ MCS 8	MCS 0 ~ MCS 8	MCS 0 ~ MCS 8	MCS 0 ~ MCS 8
802.11n(HT40)	MCS 0 ~ MCS 7	MCS 0 ~ MCS 7	MCS 0 ~ MCS 7	MCS 8 ~ MCS 15
802.11ac(VHT40)	MCS 0 ~ MCS 9	MCS 0 ~ MCS 9	MCS 0 ~ MCS 9	MCS 0 ~ MCS 9

EUT Operation test setup

- **Test Software:** Qualcomm Radio Control Toolkit v4.0
- **Power setting:** Refer to the table below.

Mode	Frequency [MHz]	Power Setting
802.11b	2 412	15
	2 437	15
	2 462	15
802.11g	2 412	15
	2 437	15
	2 462	15
802.11n (HT20)	2 412	13
	2 437	13
	2 462	13
802.11ac (VHT20)	2 412	13
	2 437	13
	2 462	13
802.11n (HT40)	2 412	13
	2 437	13
	2 462	12
802.11ac (VHT40)	2 422	13
	2 437	13
	2 452	12

Test Mode

Test mode	Worst case data rate	ANT configuration	Tested Frequency (MHz)		
TM 1	802.11b 11 Mbps	Single transmitting	2 412	2 437	2 462
TM 2	802.11g 36 Mbps	Single transmitting	2 412	2 437	2 462
TM 3	802.11ac(VHT20) MCS 4	CDD Multiple transmitting	2 412	2 437	2 462
TM 4	802.11ac(VHT40) MCS 5	CDD Multiple transmitting	2 422	2 437	2 452

Note1: The worst case data rate was determined according to the power measurements.

3. Antenna Requirements

■ According to Part 15.203

“An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can 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 antenna is attached on the device by means of unique coupling method.
Therefore this E.U.T complies with the requirement of Part 15.203**

4. Summary of Test Result

FCC part section(s)	Test Description	Limit	Test Condition	Status Note 1
15.247(a)	6 dB Bandwidth	> 500 kHz	Conducted	C
15.247(b)	Maximum Peak Output Power	< 1 Watt (conducted)		C
15.247(d)	Unwanted Emissions(Conducted)	20 dBc in any 100 kHz BW		C
15.247(e)	Power Spectral Density	< 8 dBm / 3 kHz		C
15.247(d) 15.205 15.209	Unwanted Emissions(Radiated)	Part 15.209 limits (Refer to section 5.5)	Radiated	C Note 3
15.207	AC Power-Line Conducted Emissions	Part 15.207 limits (Refer to section 5.6)	AC Line Conducted	C
15.203	Antenna Requirements	Part 15.203 (Refer to section 3)	-	C
Note 1: C=Comply NC=Not Comply NT=Not Tested NA=Not Applicable Note 2: For radiated emission tests below 30 MHz were performed on semi-anechoic chamber which is correlated with OATS. Note 3: This test item was performed in three orthogonal EUT positions and the worst case data was reported.				

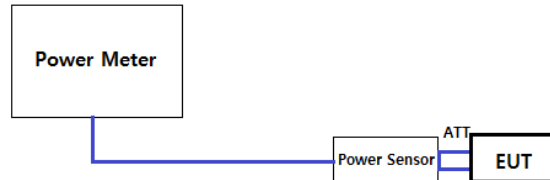
5. Test Result

5.1. Maximum Peak Output Power

■ Test Requirements and limit, Part 15.247(b)

The maximum permissible conducted output power is 1 Watt.

5.1.1. Test Setup



5.1.2. Test Procedures

- KDB558074 D01v05r02 - Section 8.3.1.3
- ANSI C63.10-2013 – Section 11.9.1.3

RBW ≥ DTSPKPM1 Peak-reading power meter method

The maximum conducted output powers were measured using a broadband peak RF power meter which has greater video bandwidth than DUT's DTS bandwidth and utilize a fast-responding diode detector.

- KDB558074 D01v05r02 - Section 8.3.2.3
- ANSI C63.10-2013 – Section 11.9.2.3

Method AVGPM-G

The average conducted output powers were measured using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since this measurement is made only during the ON time of the transmitter, no duty cycle correction is required.

5.1.3. Test Results

- Refer to the next page

▪ Single transmitting

ANT	Freq. (MHz)	Det.	Maximum Peak Conducted Output Power (dBm) for <u>802.11b</u>							
			Data Rate [Mbps]							
			1	2	5.5	11	-	-	-	-
ANT 1	2 412	PK	17.52	17.55	17.61	17.51	-	-	-	-
		AV	15.11	15.14	15.20	15.09	-	-	-	-
	2 437	PK	17.88	17.93	17.94	17.98	-	-	-	-
		AV	15.45	15.37	15.42	15.39	-	-	-	-
	2 462	PK	17.63	17.76	17.74	17.78	-	-	-	-
		AV	15.26	15.28	15.35	15.32	-	-	-	-
ANT 2	2 412	PK	19.01	19.01	18.95	19.04	-	-	-	-
		AV	16.39	16.38	16.27	16.40	-	-	-	-
	2 437	PK	19.23	19.21	19.11	19.24	-	-	-	-
		AV	16.66	16.45	16.34	16.54	-	-	-	-
	2 462	PK	19.32	19.33	19.24	19.34	-	-	-	-
		AV	16.59	16.57	16.45	16.68	-	-	-	-

ANT	Freq. (MHz)	Det.	Maximum Peak Conducted Output Power (dBm) for <u>802.11g</u>							
			Data Rate [Mbps]							
			6	9	12	18	24	36	48	54
ANT 1	2 412	PK	20.20	20.25	20.01	22.16	22.85	23.18	23.16	23.13
		AV	14.81	14.77	14.48	15.00	14.57	14.63	14.53	14.55
	2 437	PK	19.92	19.98	19.74	21.86	22.47	22.81	22.78	22.74
		AV	14.90	14.82	14.57	14.99	14.68	14.72	14.58	14.60
	2 462	PK	19.85	19.86	19.68	19.84	22.37	22.76	22.67	22.57
		AV	14.92	14.91	14.65	14.97	14.72	14.99	14.57	14.48
ANT 2	2 412	PK	22.39	22.70	22.40	24.74	25.89	25.99	25.87	25.77
		AV	16.29	16.38	16.12	16.44	16.02	16.05	16.07	16.08
	2 437	PK	22.38	22.67	22.41	24.36	25.78	25.82	25.76	25.65
		AV	16.32	16.42	16.20	16.45	16.09	16.10	16.15	16.17
	2 462	PK	22.17	22.56	22.38	24.28	25.66	25.69	25.57	25.51
		AV	16.36	16.47	16.27	16.49	16.18	16.17	16.20	16.24

▪ Multiple transmitting (CDD)

ANT	Freq. (MHz)	Det.	Maximum Peak Conducted Output Power (dBm) for <u>802.11n(HT20)</u>							
			Data Rate [Mbps]							
			0	1	2	3	4	5	6	7
ANT 1	2 412	PK	19.23	19.20	21.51	21.85	23.17	22.36	22.78	23.09
		AV	13.03	13.01	13.54	13.61	13.17	13.10	13.12	13.15
	2 437	PK	19.74	19.68	21.98	22.36	23.59	22.97	23.29	23.56
		AV	13.25	13.24	13.81	13.95	13.34	13.27	13.30	13.36
	2 462	PK	19.95	20.03	22.24	22.62	23.68	23.23	23.52	23.64
		AV	13.32	13.33	13.89	14.05	13.40	13.34	13.37	13.43
ANT 2	2 412	PK	20.03	19.98	22.17	22.64	23.21	23.04	23.06	23.13
		AV	13.66	13.58	14.44	14.24	13.69	13.69	13.65	13.75
	2 437	PK	20.38	20.24	22.43	23.02	23.65	23.47	23.39	23.51
		AV	13.68	13.61	14.45	14.26	13.70	13.73	13.69	13.81
	2 462	PK	20.57	20.42	22.58	23.22	23.86	23.63	23.57	23.68
		AV	13.98	14.00	14.48	14.42	14.04	14.08	14.02	14.10
Sum (ANT 1+2)	2 412	PK	22.66	22.62	24.86	25.27	26.20	25.72	25.93	26.12
	2 437	PK	23.08	22.98	25.22	25.71	26.63	26.24	26.35	26.55
	2 462	PK	23.28	23.24	25.42	25.94	26.78	26.44	26.56	26.67

ANT	Freq. (MHz)	Det.	Maximum Peak Conducted Output Power (dBm) for <u>802.11ac(VHT20)</u>								
			Data Rate [MCS]								
			0	1	2	3	4	5	6	7	8
ANT 1	2 412	PK	19.19	19.23	21.54	21.84	23.47	23.41	23.10	22.89	22.73
		AV	12.96	13.02	13.65	13.54	13.23	13.38	13.08	13.30	13.08
	2 437	PK	19.13	19.18	21.47	21.76	23.41	23.38	23.02	22.71	22.63
		AV	13.04	13.10	13.71	13.68	13.38	13.52	13.24	13.49	13.26
	2 462	PK	19.40	19.46	21.73	22.01	23.68	23.62	23.31	22.98	22.91
		AV	13.08	13.16	13.77	13.74	13.41	13.59	13.28	13.56	13.32
ANT 2	2 412	PK	20.04	19.96	22.39	22.54	23.71	23.58	23.55	23.68	23.53
		AV	13.62	13.66	14.25	14.22	13.68	13.77	13.67	13.93	13.76
	2 437	PK	20.39	20.32	22.74	22.93	24.14	23.98	23.96	24.07	23.95
		AV	13.71	13.74	14.38	14.33	13.77	13.86	13.80	14.05	13.89
	2 462	PK	20.08	19.97	22.45	22.00	23.75	23.62	23.60	23.75	23.60
		AV	14.00	14.03	14.48	14.50	14.06	14.15	14.08	14.32	14.17
Sum (ANT 1+2)	2 412	PK	22.65	22.62	25.00	25.21	26.60	26.51	26.34	26.31	26.16
	2 437	PK	22.82	22.80	25.16	25.39	26.80	26.70	26.53	26.45	26.35
	2 462	PK	22.76	22.73	25.12	25.02	26.73	26.63	26.47	26.39	26.28

ANT	Freq. (MHz)	Det.	Maximum Peak Conducted Output Power (dBm) for <u>802.11n(HT40)</u>							
			Data Rate [Mbps]							
			0	1	2	3	4	5	6	7
ANT 1	2 422	PK	20.63	20.65	21.10	21.97	22.90	23.02	22.92	22.84
		AV	13.81	13.86	13.49	13.34	13.33	13.28	13.27	13.31
	2 437	PK	21.01	21.05	21.49	22.42	23.31	23.41	23.35	23.22
		AV	13.94	13.98	13.61	13.45	13.43	13.37	13.40	13.42
	2 452	PK	20.78	20.81	21.24	22.13	23.07	23.16	23.08	22.99
		AV	13.17	13.20	12.79	12.66	12.63	12.49	12.55	12.58
ANT 2	2 422	PK	21.08	20.99	21.74	21.69	22.97	23.79	23.54	23.62
		AV	14.44	14.41	14.22	14.18	13.65	13.79	13.58	13.60
	2 437	PK	21.44	21.31	22.09	22.02	23.34	24.13	23.92	23.99
		AV	14.40	14.37	14.23	14.15	13.62	13.78	13.54	13.57
	2 452	PK	19.68	19.68	20.45	20.47	21.66	22.83	22.74	22.77
		AV	13.42	13.35	13.20	13.17	12.72	12.70	12.50	12.52
Sum (ANT 1+2)	2 422	PK	23.87	23.83	24.44	24.84	25.95	26.43	26.25	26.26
	2 437	PK	24.24	24.19	24.81	25.23	26.34	26.80	26.65	26.63
	2 452	PK	23.28	23.29	23.87	24.39	25.43	26.01	25.92	25.89

ANT	Freq. (MHz)	Det.	Maximum Peak Conducted Output Power (dBm) for <u>802.11ac(VHT40)</u>									
			Data Rate [MCS]									
			0	1	2	3	4	5	6	7	8	9
ANT 1	2 422	PK	20.52	20.50	21.56	21.25	23.11	23.67	23.10	23.16	23.20	23.15
		AV	14.32	14.33	13.83	13.83	13.28	13.23	13.21	13.25	13.23	13.31
	2 437	PK	20.43	20.41	21.45	21.11	23.00	23.57	22.98	23.03	23.08	23.16
		AV	14.55	14.47	13.97	13.98	13.44	13.38	13.38	13.41	13.39	13.33
	2 452	PK	19.56	19.57	20.60	20.24	22.07	22.62	22.09	22.12	22.16	22.60
		AV	13.47	13.60	12.11	12.30	12.64	12.47	12.58	12.63	12.48	12.31
ANT 2	2 422	PK	21.16	21.30	21.67	21.77	23.36	24.12	23.93	23.74	23.97	23.89
		AV	14.60	14.66	14.32	14.31	13.72	13.78	13.75	13.71	13.79	13.74
	2 437	PK	21.21	21.43	21.78	21.75	23.45	24.23	24.09	23.86	24.12	24.07
		AV	14.66	14.67	14.33	14.34	13.70	13.78	13.78	13.73	13.82	13.75
	2 452	PK	21.68	21.88	22.39	22.37	23.67	23.71	23.57	23.31	23.64	23.58
		AV	13.56	13.65	13.28	13.26	12.65	12.72	12.71	12.70	12.76	12.68
Sum (ANT 1+2)	2 422	PK	23.86	23.93	24.63	24.53	26.25	26.91	26.55	26.47	26.61	26.55
	2 437	PK	23.85	23.96	24.63	24.45	26.24	26.92	26.58	26.48	26.64	26.65
	2 452	PK	23.76	23.89	24.60	24.44	25.95	26.21	25.90	25.77	25.97	26.13

5.2. 6 dB Bandwidth

■ Test Requirements and limit, Part 15.247(a)

The bandwidth at 6 dB down from the highest in-band spectral density is measured with a spectrum analyzer connected to the EUT's antenna terminal while the EUT is operating in transmission mode at the appropriate frequencies.

The minimum permissible 6 dB bandwidth is 500 kHz.

5.2.1. Test Setup

Refer to the APPENDIX I.

5.2.2. Test Procedures

- KDB558074 D01v05r02 - Section 8.2
- ANSI C63.10-2013 – Section 11.8.2

1. Set resolution bandwidth (RBW) = 100 kHz
2. Set the video bandwidth (VBW) $\geq 3 \times$ RBW.
3. Detector = **Peak**.
4. Trace mode = **max hold**.
5. Sweep = **auto couple**.
6. Allow the trace to stabilize.
7. Option 1 - Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

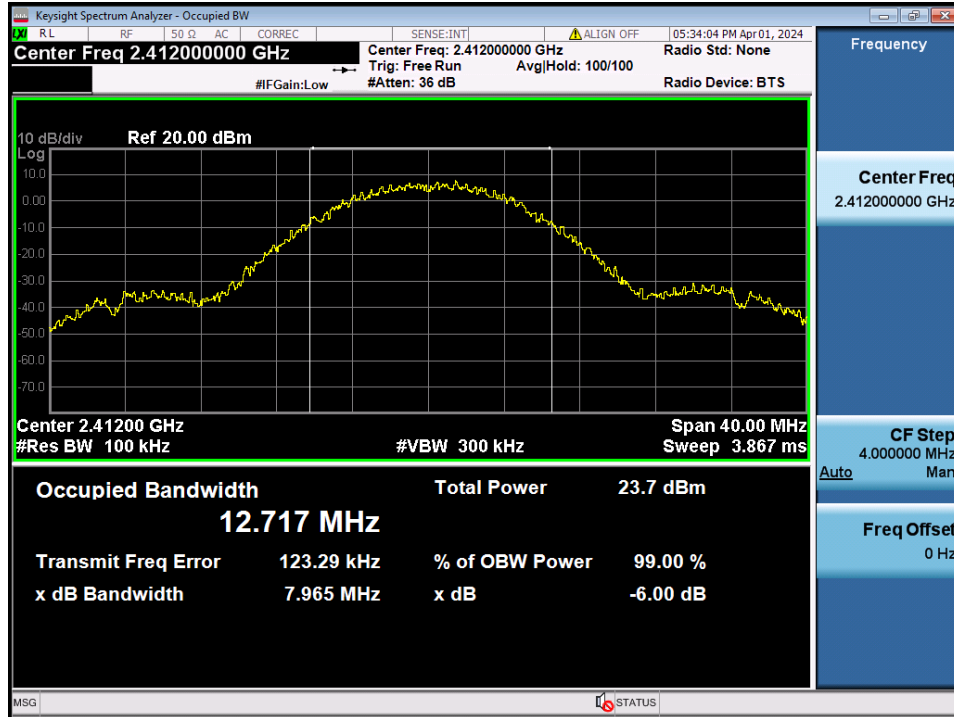
Option 2 - The automatic bandwidth measurement capability of an instrument may be employed using the X dB bandwidth mode with X set to 6 dB, if the functionality described above (i.e., RBW = 100 kHz, VBW $\geq 3 \times$ RBW, peak detector with maximum hold) is implemented by the instrumentation function. When using this capability, care shall be taken so that the bandwidth measurement is not influenced by any intermediate power nulls in the fundamental emission that might be ≥ 6 dB.

5.2.3. Test Results

Test Mode	Frequency	Test Results (MHz)	
		ANT 1	ANT2
TM 1	2 412	7.97	7.92
	2 437	7.09	8.06
	2 462	7.12	8.04
TM 2	2 412	16.53	16.51
	2 437	16.48	16.52
	2 462	16.54	16.54
TM 3	2 412	17.77	17.78
	2 437	17.76	17.76
	2 462	17.77	17.75
TM 4	2 422	36.52	36.57
	2 437	36.55	36.53
	2 452	36.55	36.57

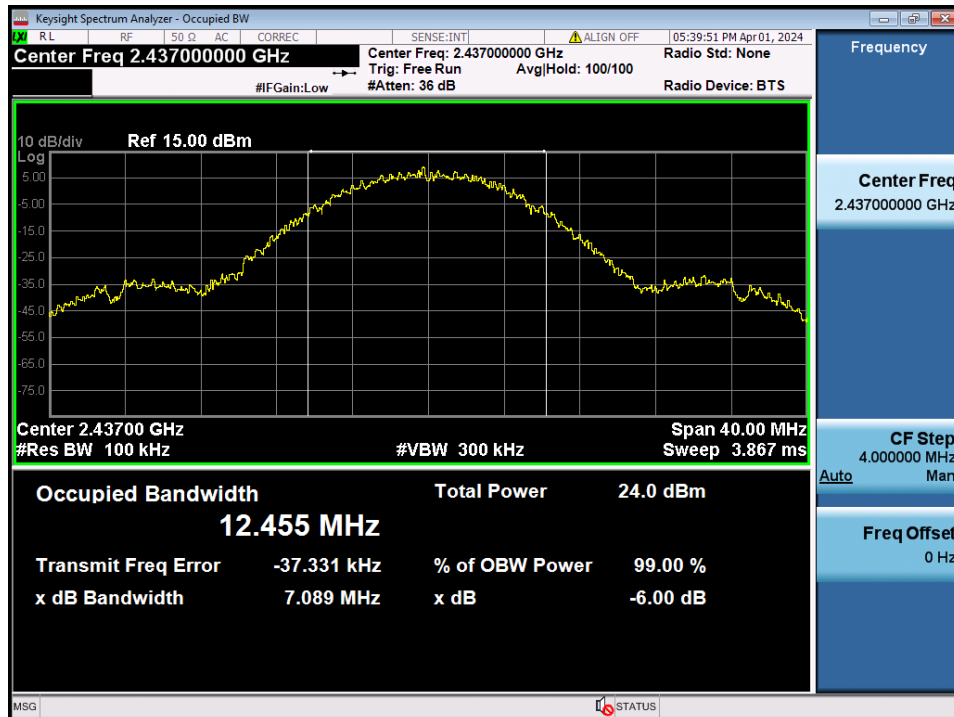
6 dB Bandwidth

TM 1 & ANT 1 & 2 412



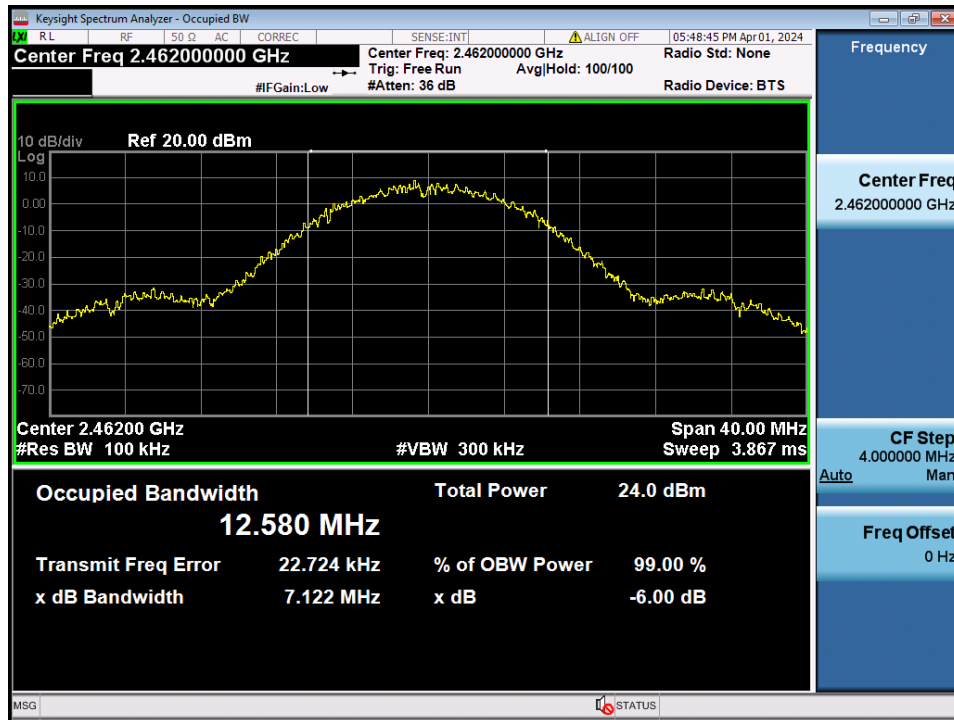
6 dB Bandwidth

TM 1 & ANT 1 & 2 437



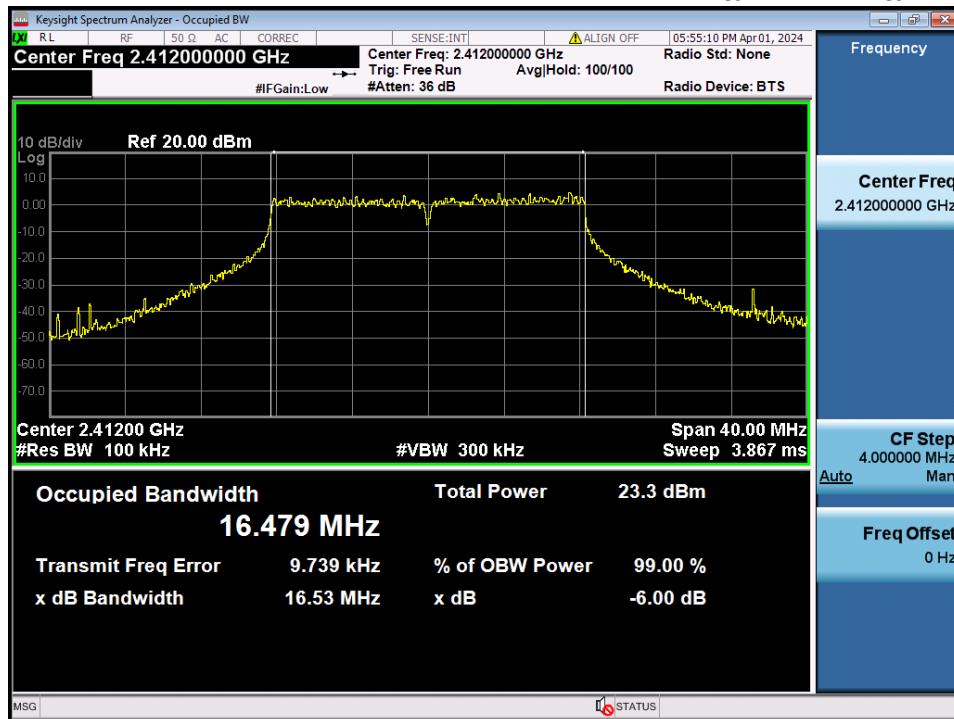
6 dB Bandwidth

TM 1 & ANT 1 & 2 462



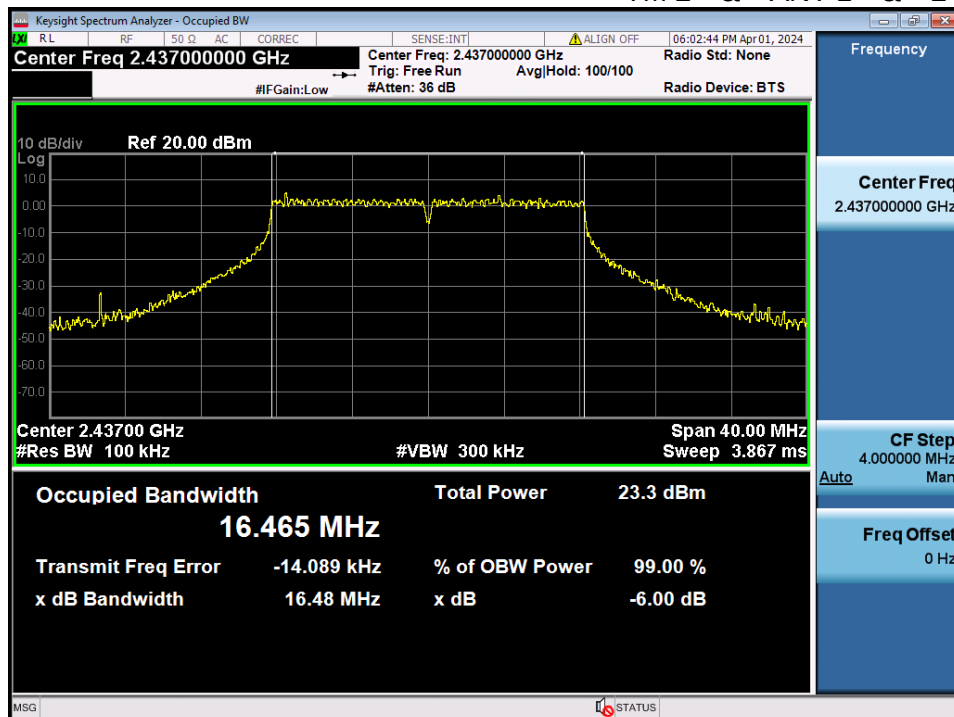
6 dB Bandwidth

TM 2 & ANT 1 & 2 412



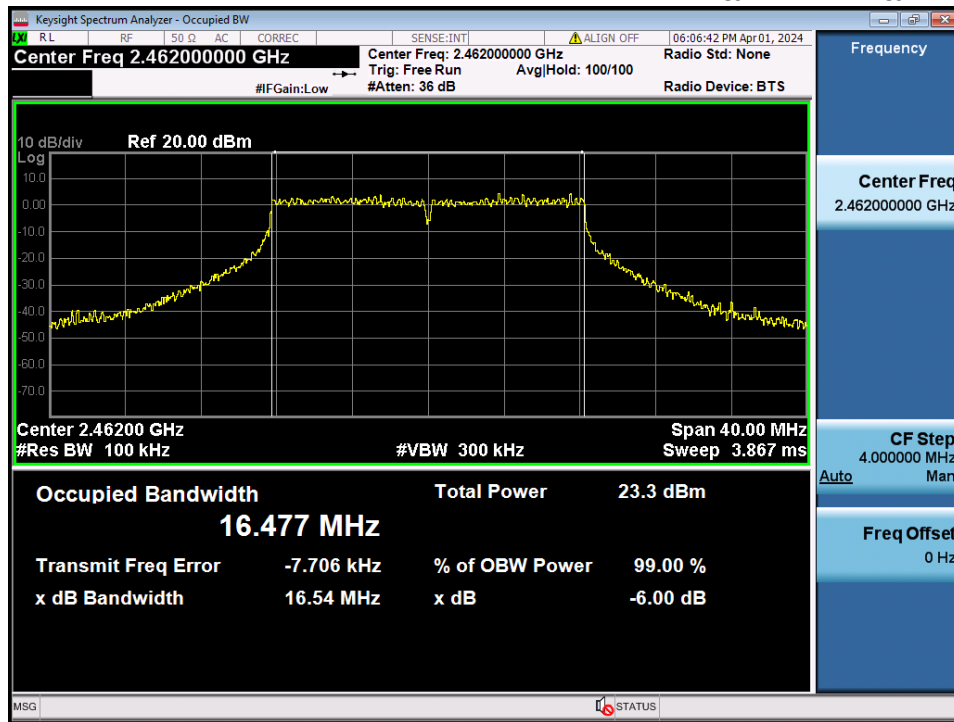
6 dB Bandwidth

TM 2 & ANT 1 & 2 437



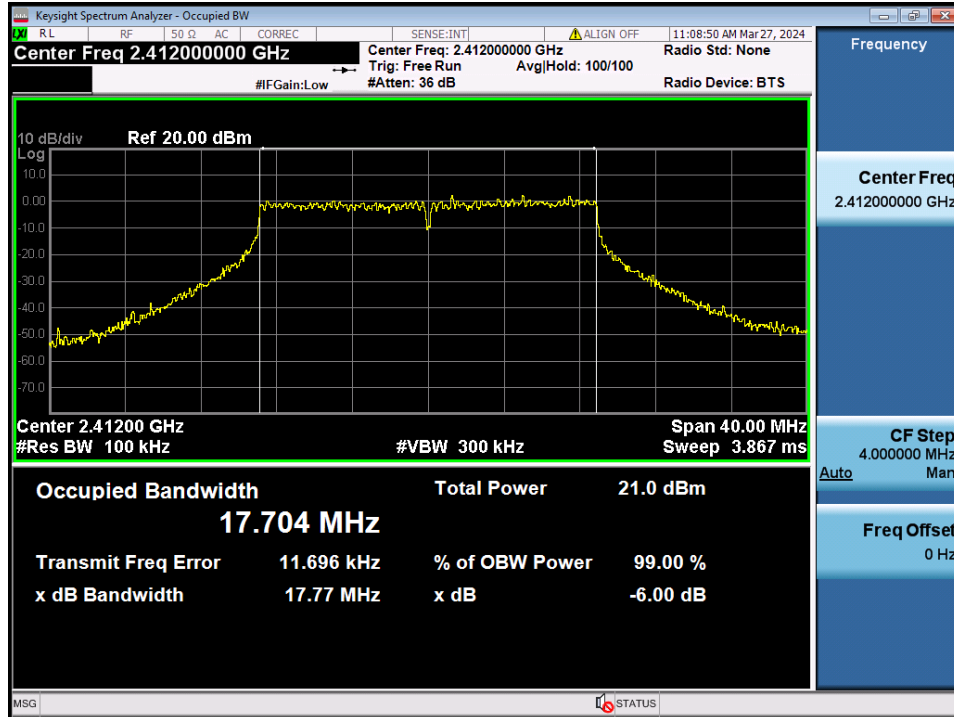
6 dB Bandwidth

TM 2 & ANT 1 & 2 462



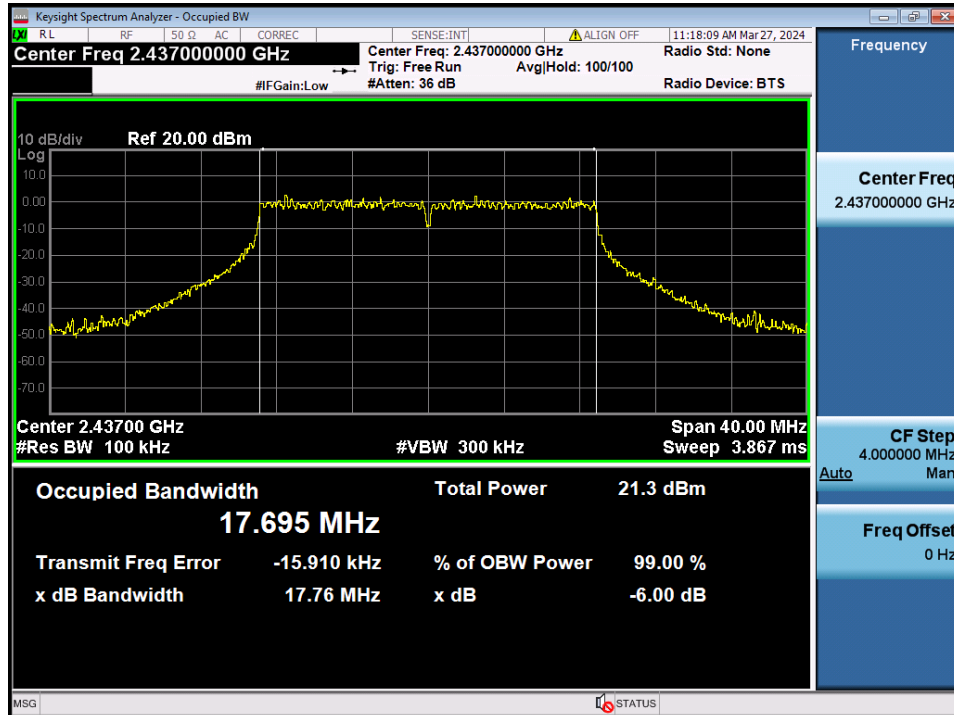
6 dB Bandwidth

TM 3 & ANT 1 & 2 412



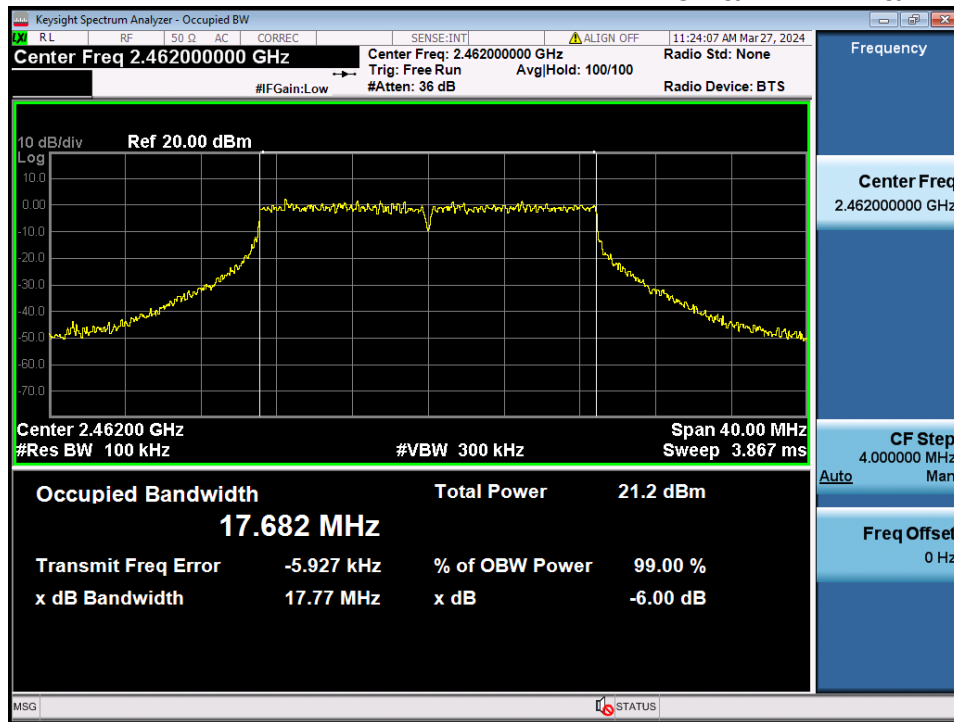
6 dB Bandwidth

TM 3 & ANT 1 & 2 437



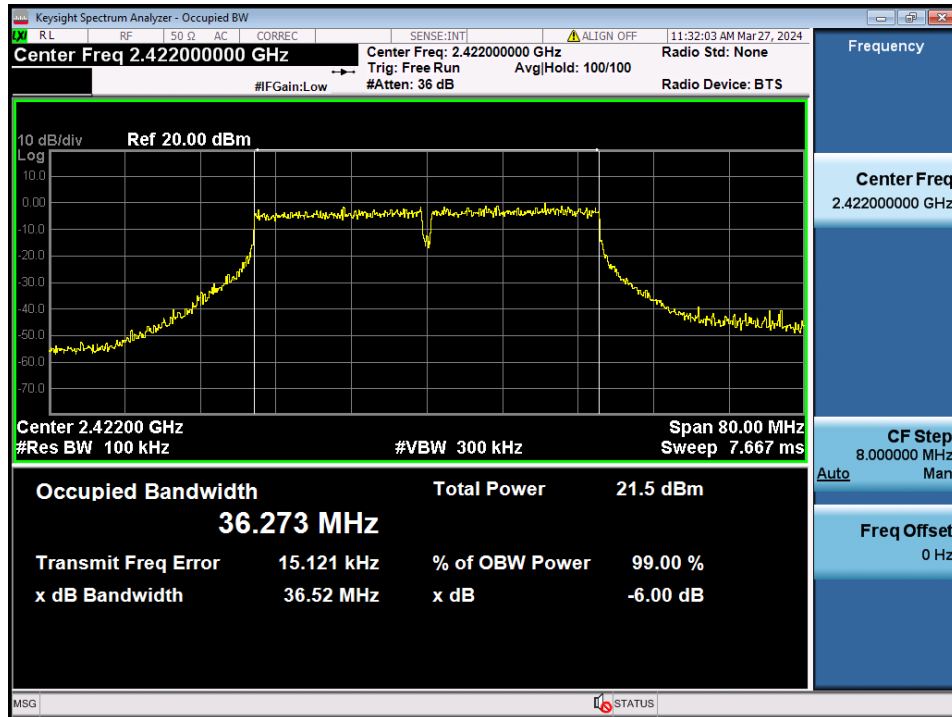
6 dB Bandwidth

TM 3 & ANT 1 & 2 462



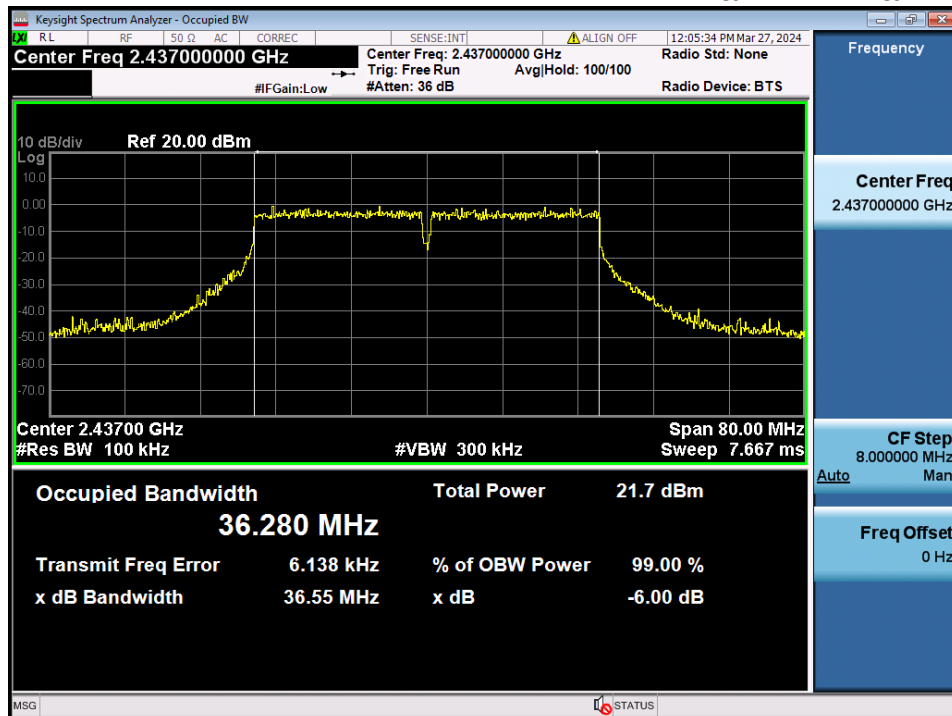
6 dB Bandwidth

TM 4 & ANT 1 & 2 422



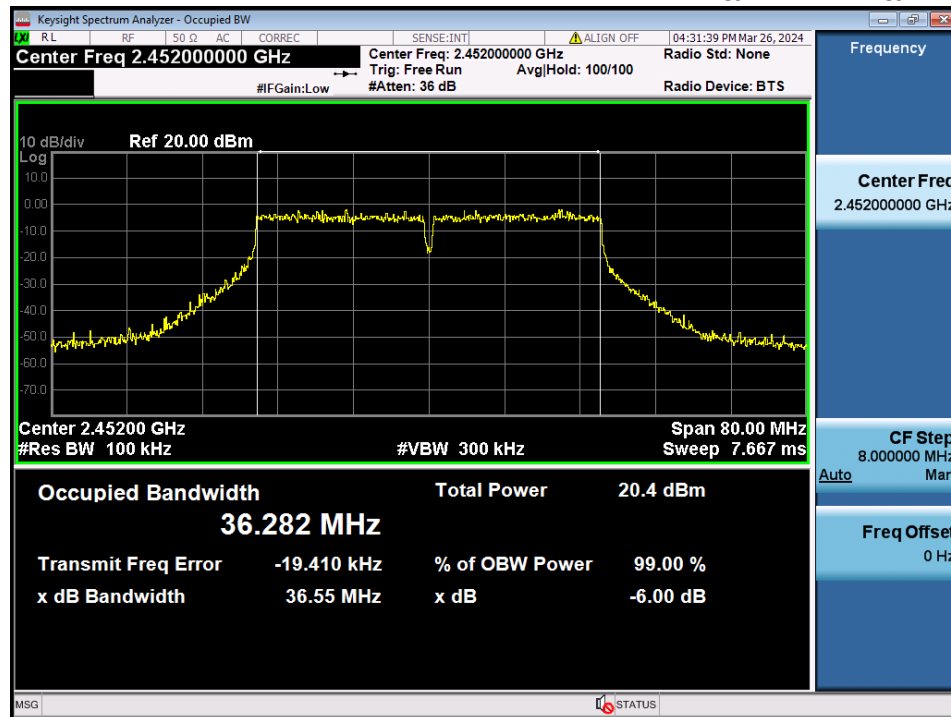
6 dB Bandwidth

TM 4 & ANT 1 & 2 437



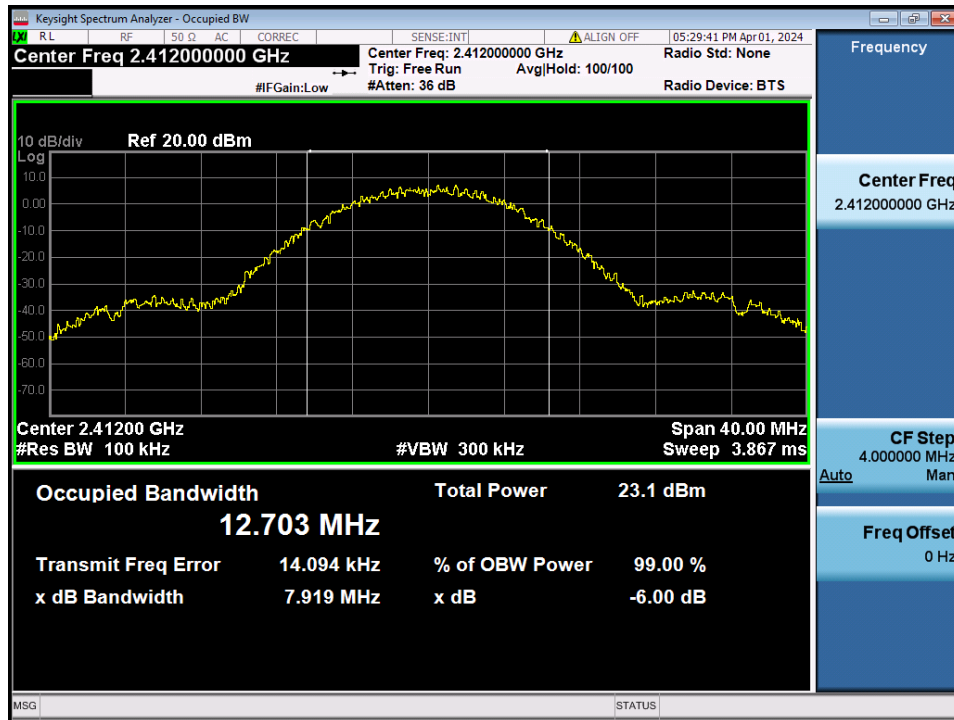
6 dB Bandwidth

TM 4 & ANT 1 & 2 452



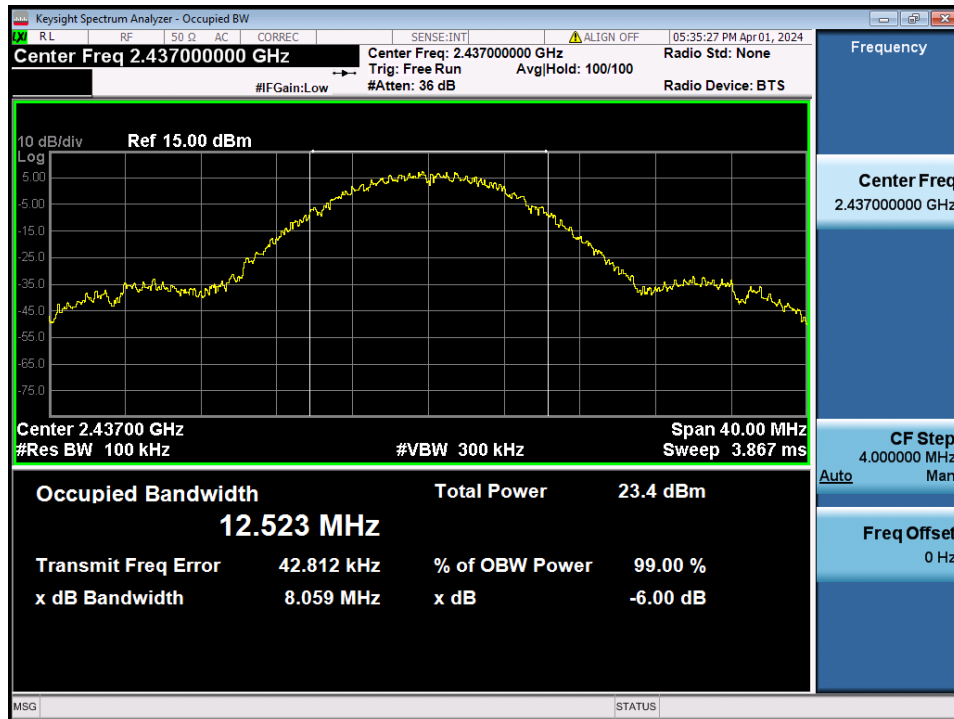
6 dB Bandwidth

TM 1 & ANT 2 & 2 412



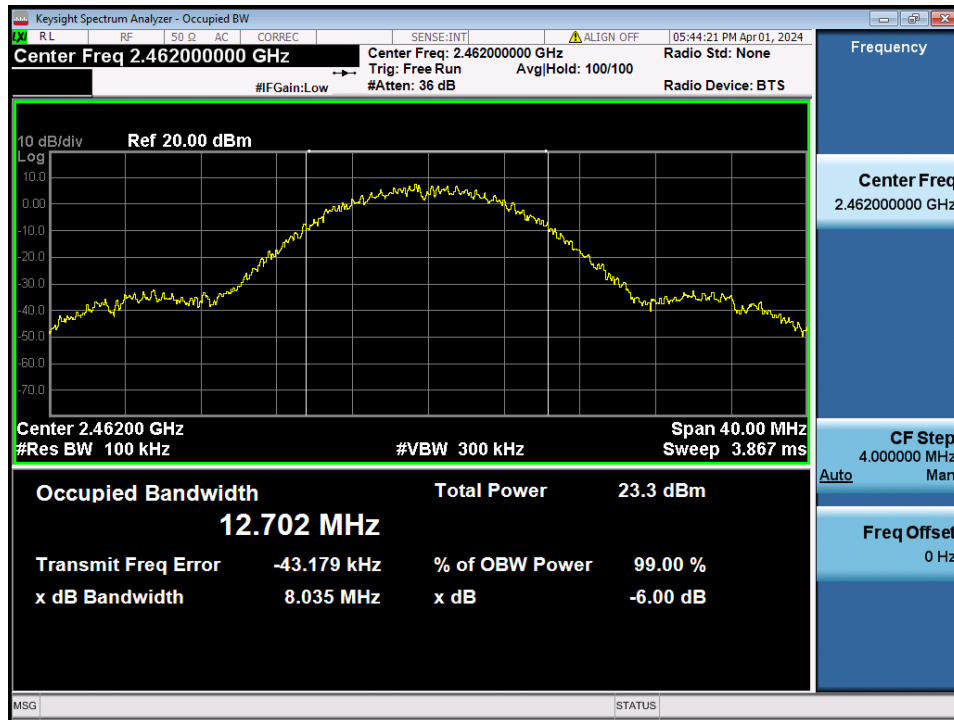
6 dB Bandwidth

TM 1 & ANT 2 & 2 437



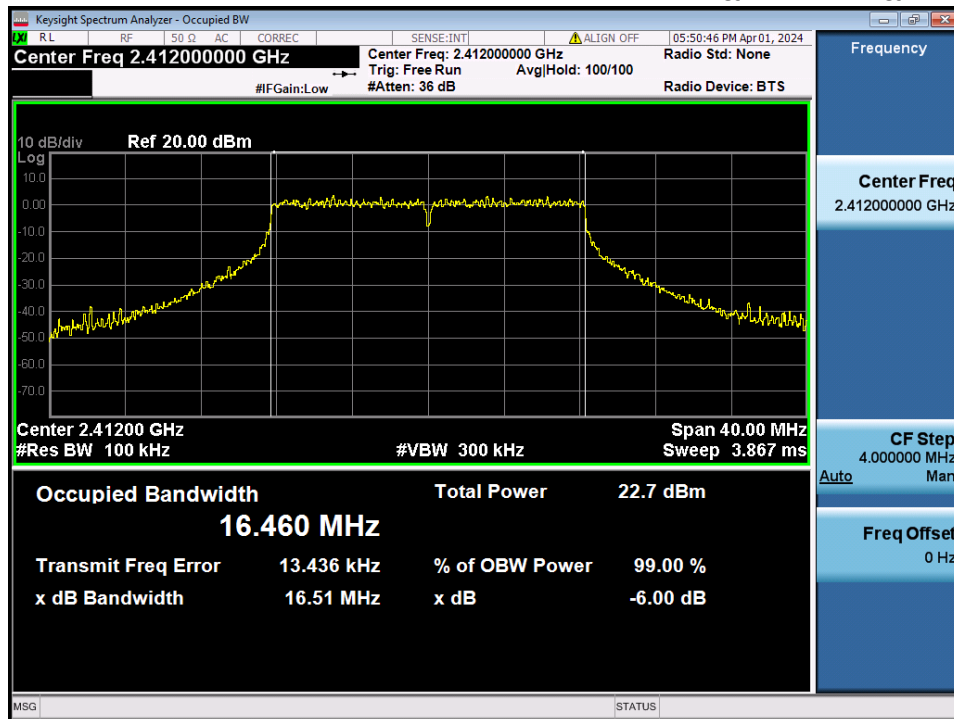
6 dB Bandwidth

TM 1 & ANT 2 & 2 462



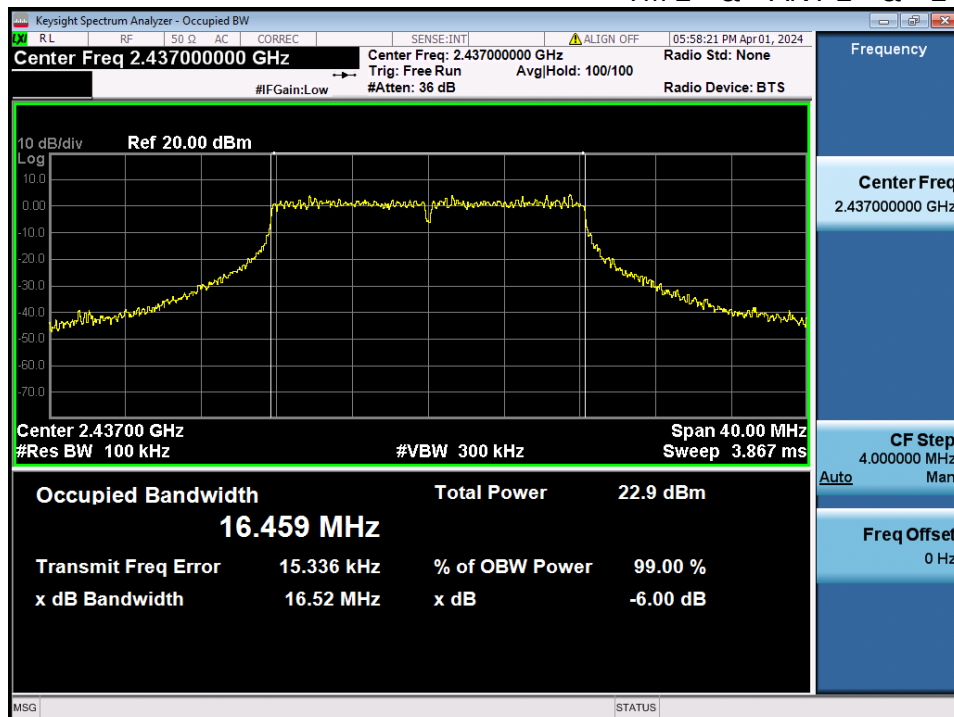
6 dB Bandwidth

TM 2 & ANT 2 & 2 412



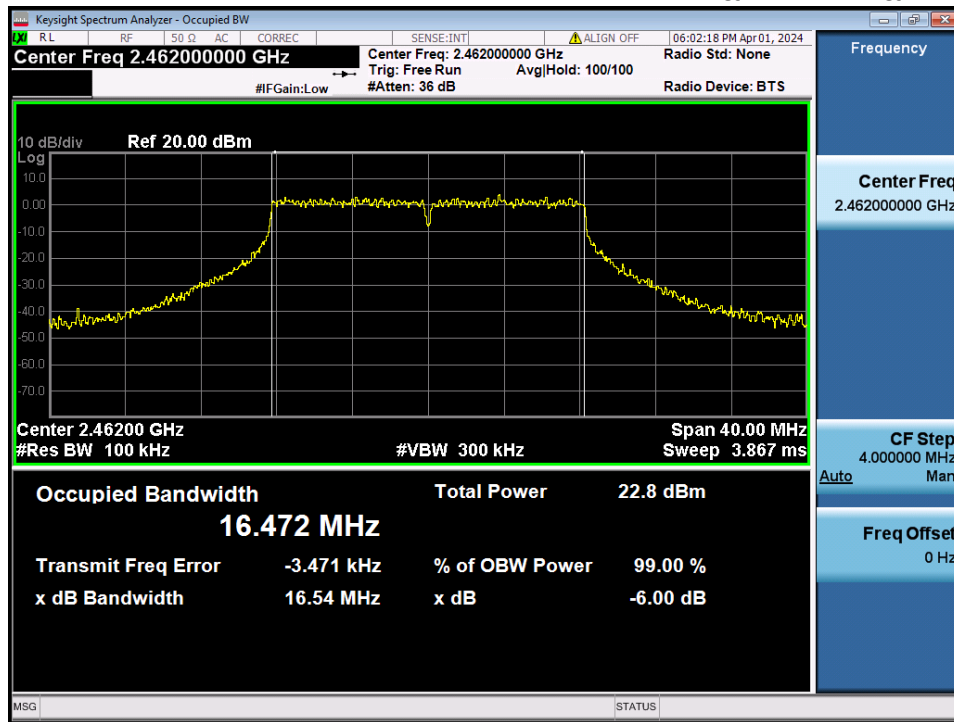
6 dB Bandwidth

TM 2 & ANT 2 & 2 437



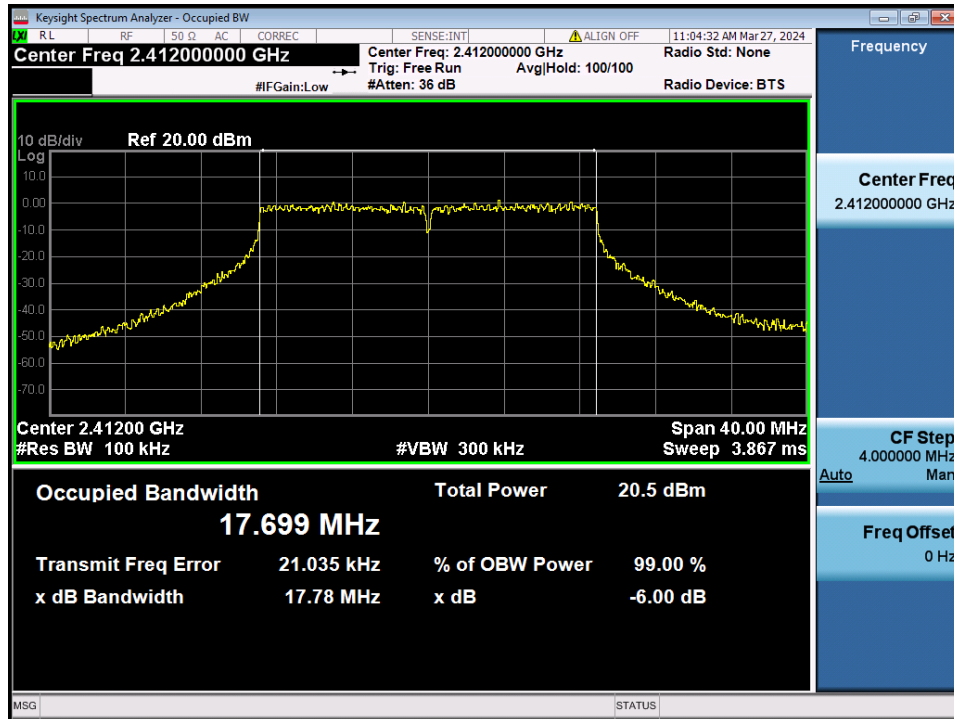
6 dB Bandwidth

TM 2 & ANT 2 & 2 462



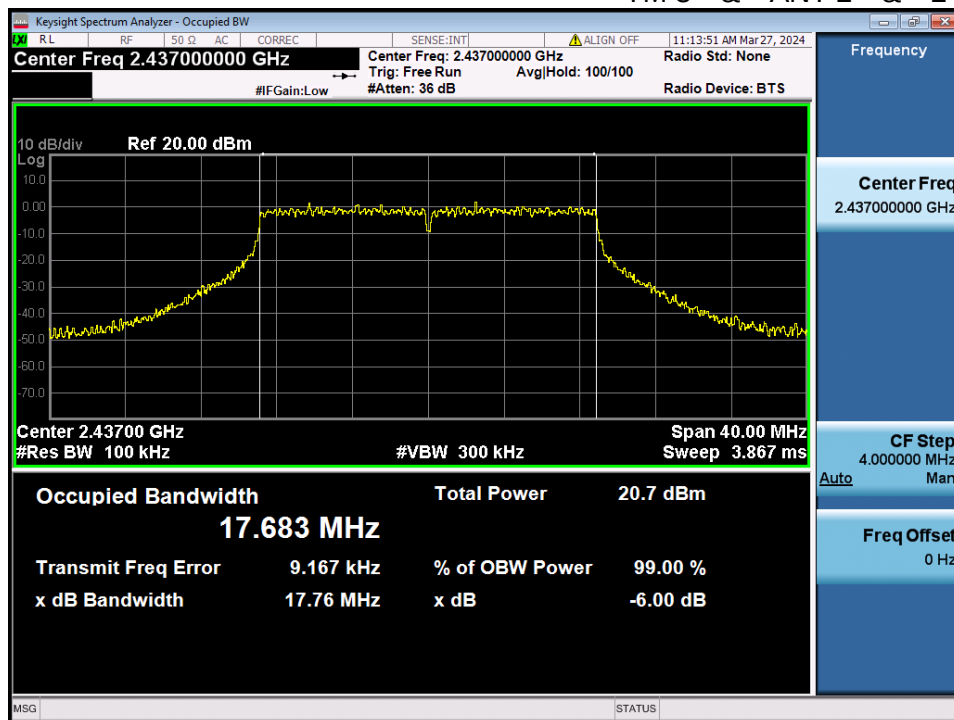
6 dB Bandwidth

TM 3 & ANT 2 & 2 412



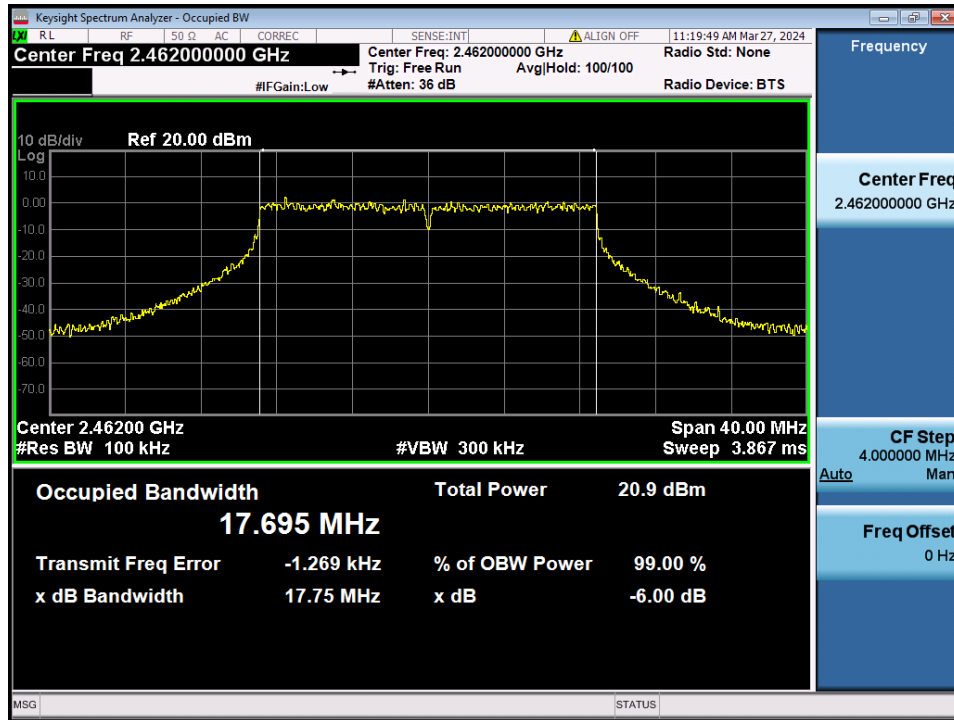
6 dB Bandwidth

TM 3 & ANT 2 & 2 437



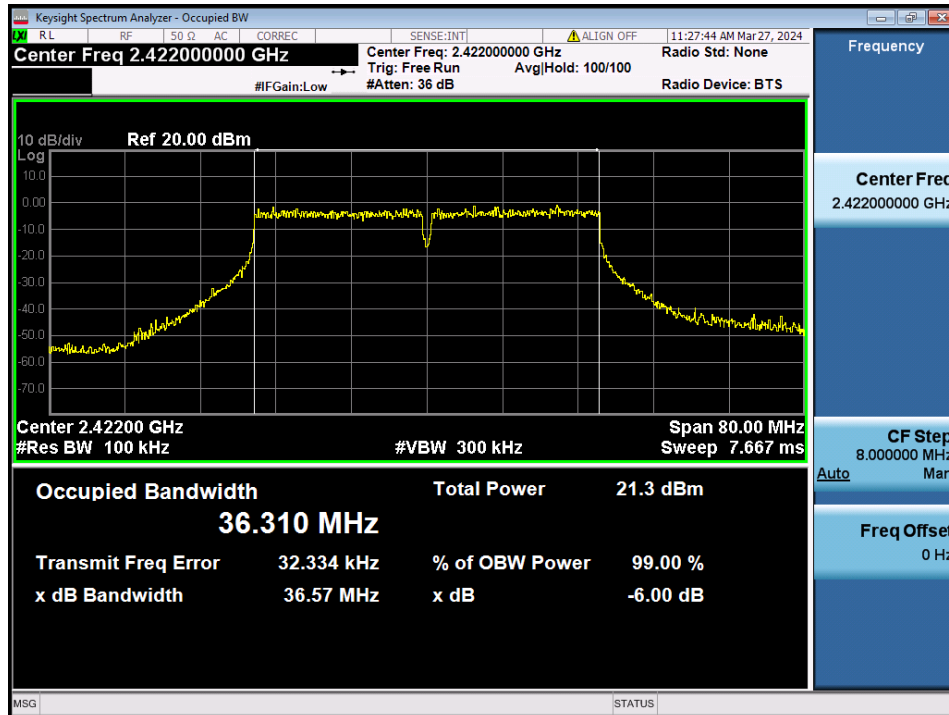
6 dB Bandwidth

TM 3 & ANT 2 & 2 462



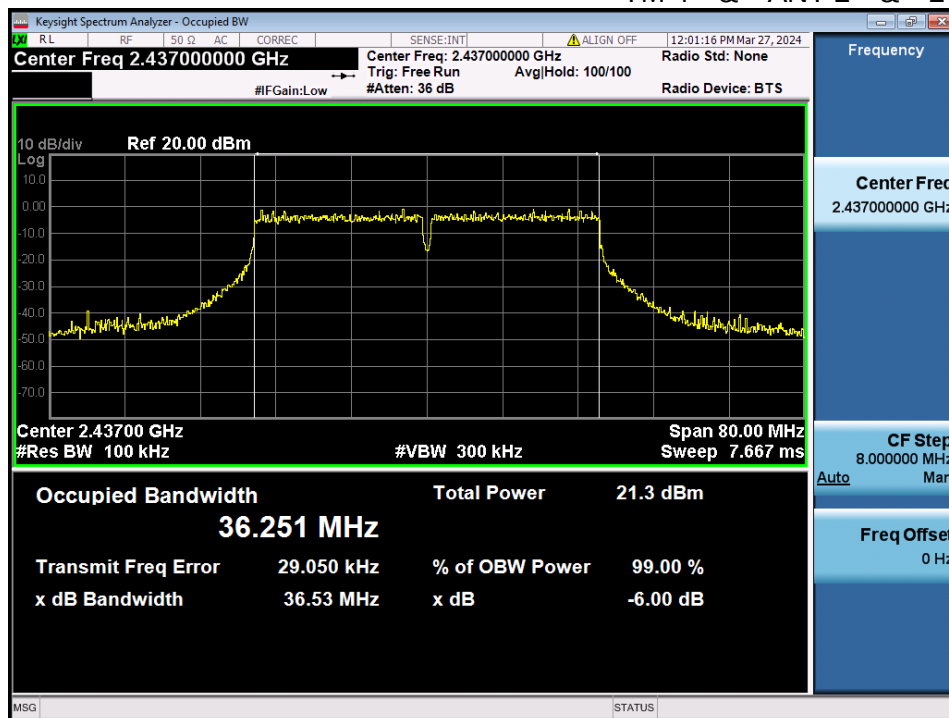
6 dB Bandwidth

TM 4 & ANT 2 & 2 422



6 dB Bandwidth

TM 4 & ANT 2 & 2 437



6 dB Bandwidth

TM 4 & ANT 2 & 2 452



5.3. Power Spectral Density

■ Test requirements and limit, Part 15.247(e)

The peak power density is measured with a spectrum analyzer connected to the antenna terminal while the EUT is operating in transmission mode at the appropriate frequencies.

The power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

5.3.1. Test Setup

Refer to the APPENDIX I.

5.3.2. Test Procedures

- KDB558074 D01v05r02 - Section 8.4
- ANSI C63.10-2013 – Section 11.10.2

Method PKPSD (peak PSD)

1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to **1.5 times** the DTS bandwidth.
3. Set the RBW : **3 kHz ≤ RBW ≤ 100 kHz**.
4. Set the VBW ≥ **3 x RBW**.
5. Detector = **peak**.
6. Sweep time = **auto couple**.
7. Trace mode = **max hold**.
8. Allow trace to fully stabilize.
9. Use the **peak marker function** to determine the maximum amplitude level within the RBW.
10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

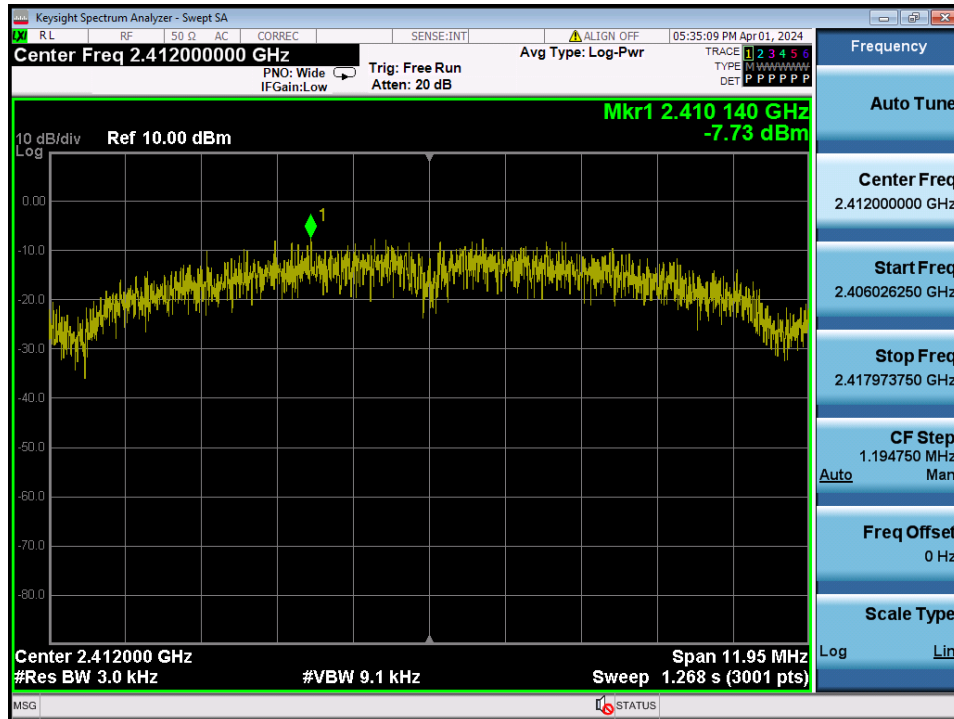
5.3.3. Test Results

Test Mode	Frequency	RBW	PKPSD (dBm)			Limit (dBm / 3 kHz)
			ANT 1	ANT 2	SUM (ANT 1 + ANT 2)	
TM 1	2 412	3 kHz	-7.73	-8.59	-	8.00
	2 437	3 kHz	-6.81	-7.84	-	8.00
	2 462	3 kHz	-6.12	-7.15	-	8.00
TM 2	2 412	3 kHz	-8.04	-8.90	-	8.00
	2 437	3 kHz	-7.63	-9.11	-	8.00
	2 462	3 kHz	-7.54	-8.23	-	8.00
TM 3	2 412	3 kHz	-10.03	-10.96	-7.46	4.45
	2 437	3 kHz	-10.86	-11.12	-7.98	4.45
	2 462	3 kHz	-10.18	-11.22	-7.66	4.45
TM 4	2 422	3 kHz	-13.01	-14.33	-10.61	4.45
	2 437	3 kHz	-13.75	-14.21	-10.96	4.45
	2 452	3 kHz	-13.94	-14.28	-11.10	4.45

Note: The limit is reduced by the amount of dB above which the antenna gain exceeds 6dBi.

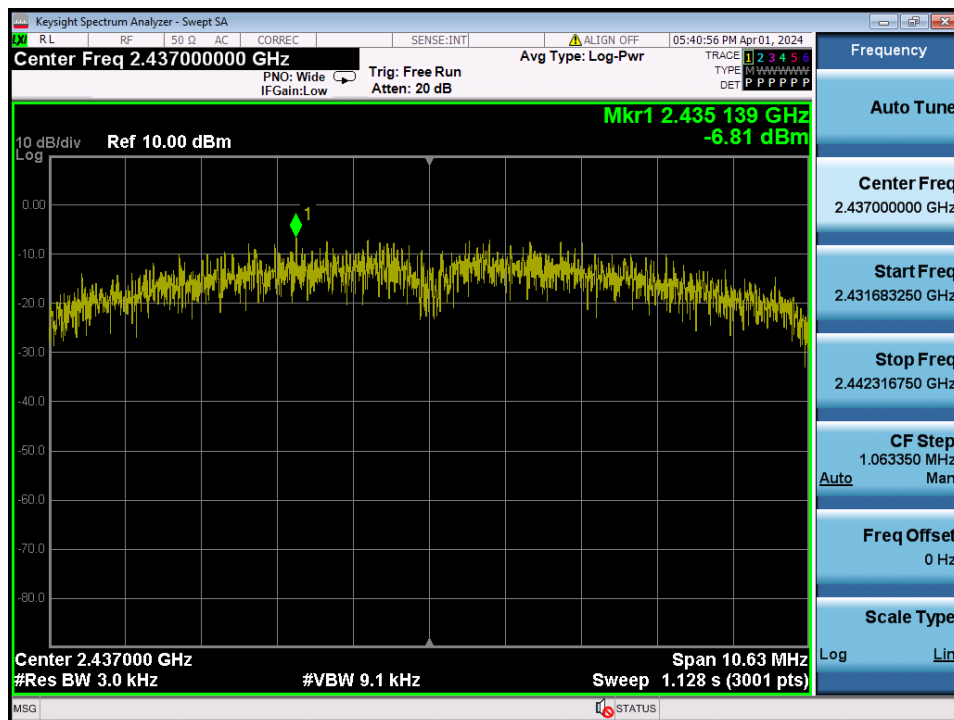
Power Spectral Density

TM 1 & ANT 1 & 2 412



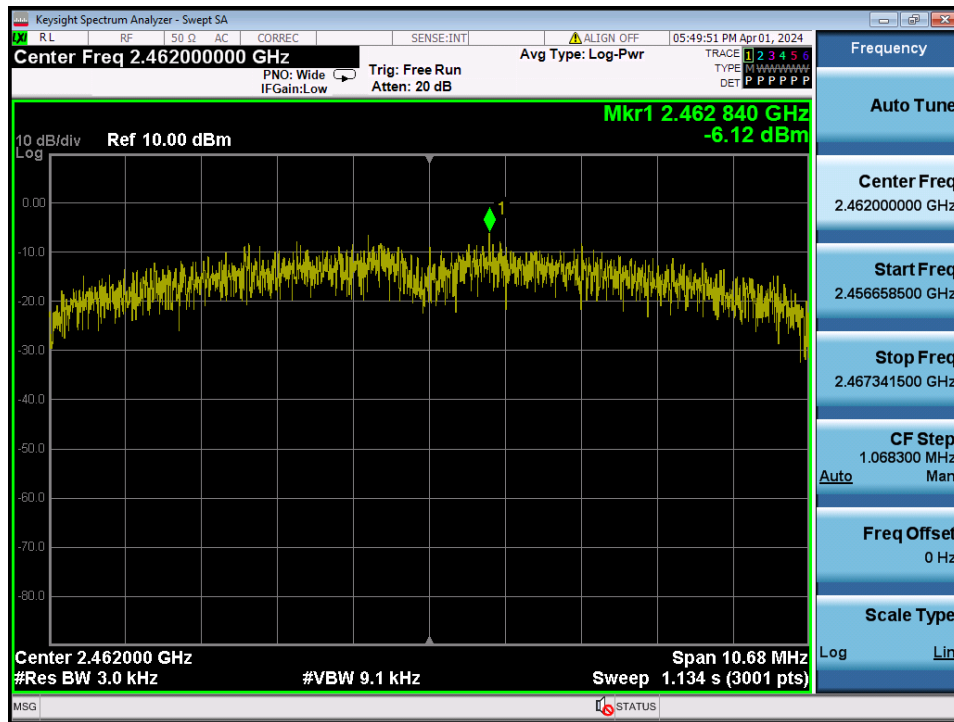
Power Spectral Density

TM 1 & ANT 1 & 2 437



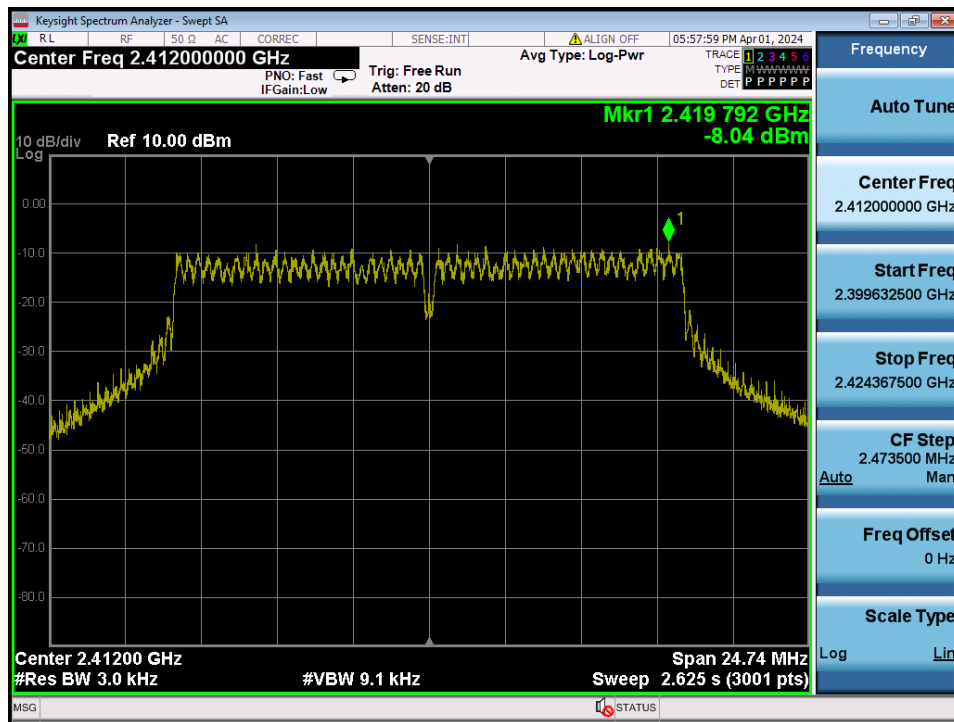
Power Spectral Density

TM 1 & ANT 1 & 2 462



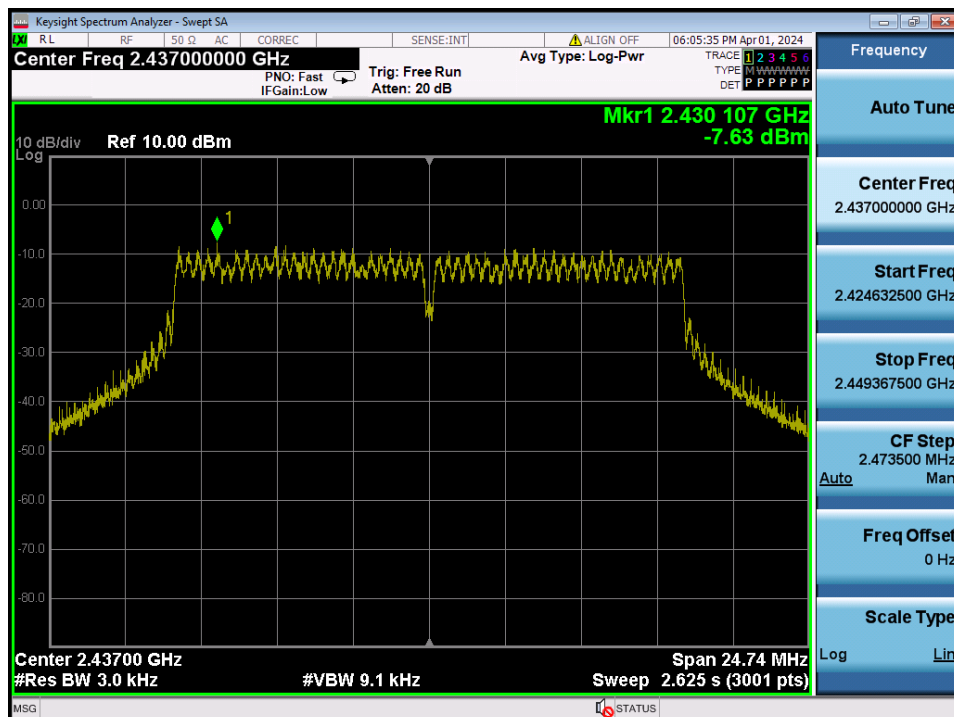
Power Spectral Density

TM 2 & ANT 1 & 2 412



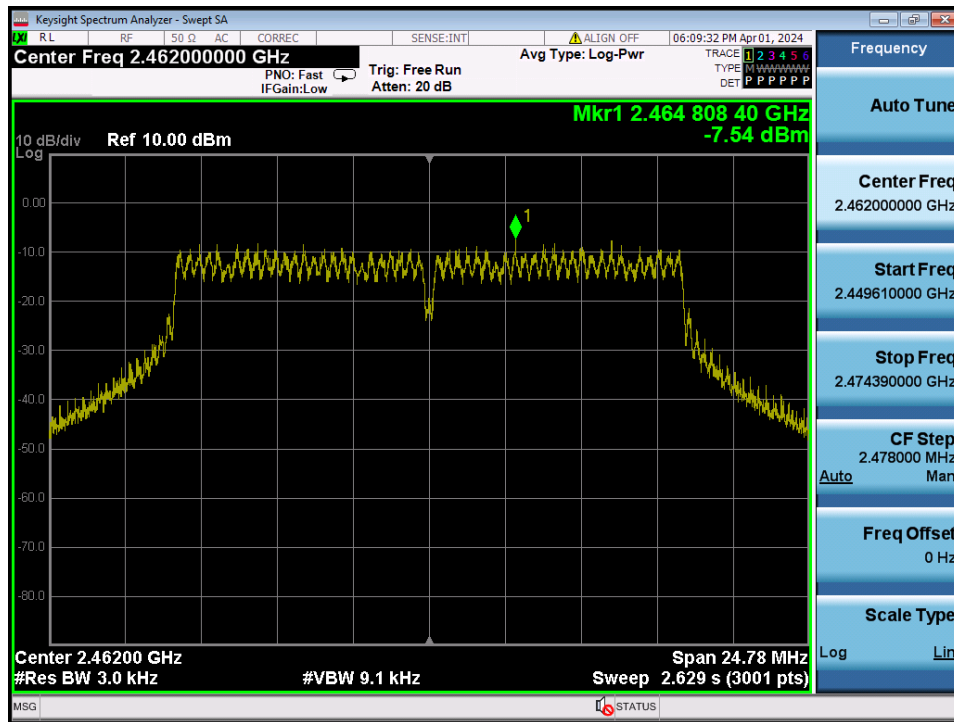
Power Spectral Density

TM 2 & ANT 1 & 2 437



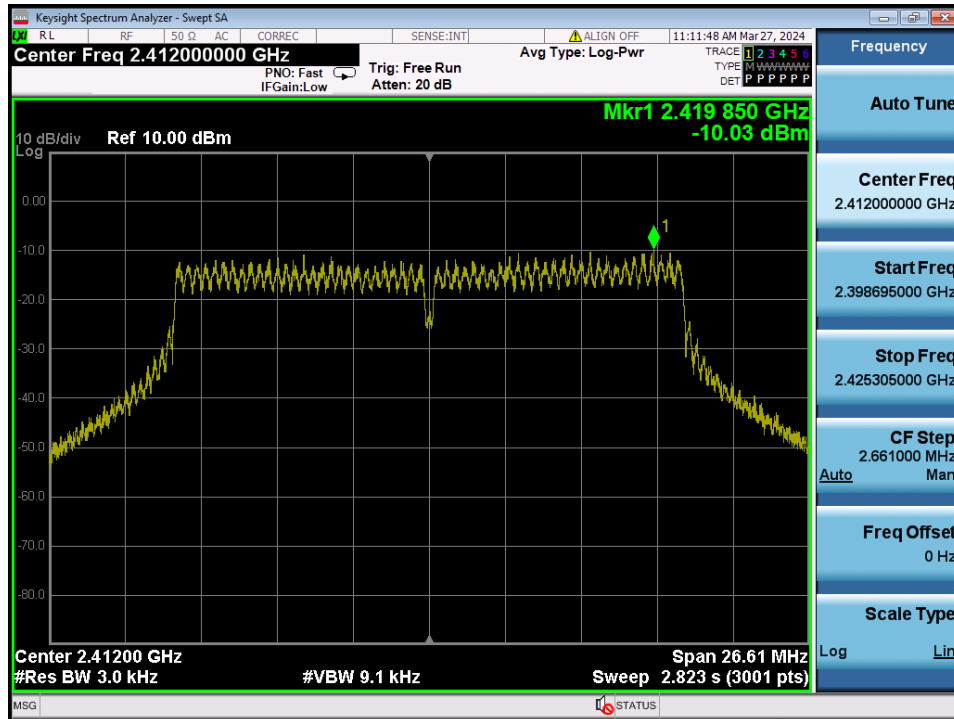
Power Spectral Density

TM 2 & ANT 1 & 2 462



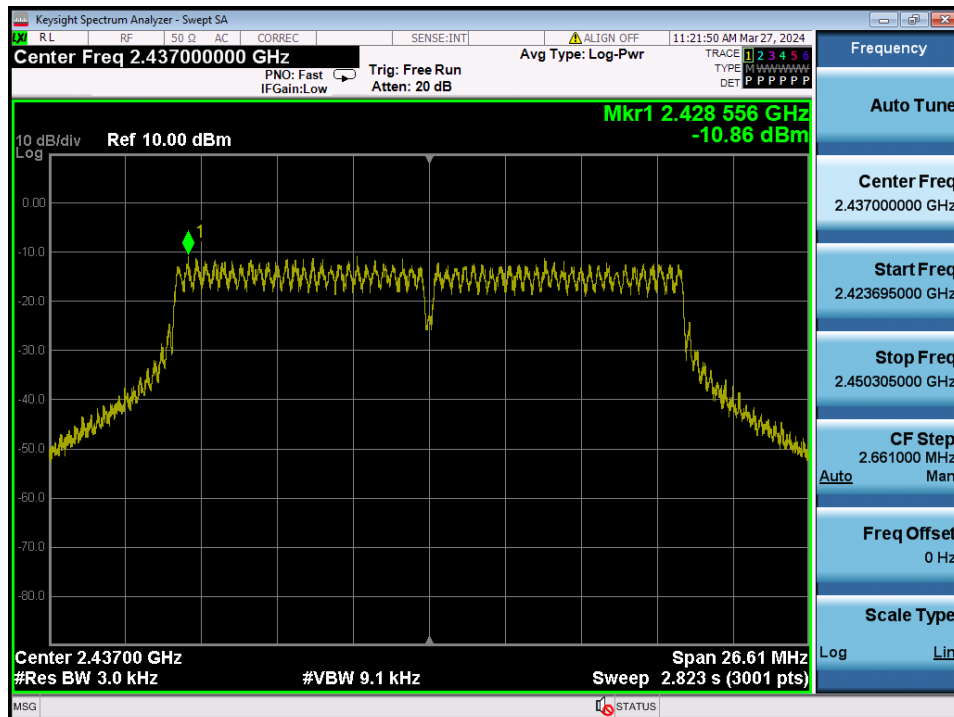
Power Spectral Density

TM 3 & ANT 1 & 2 412



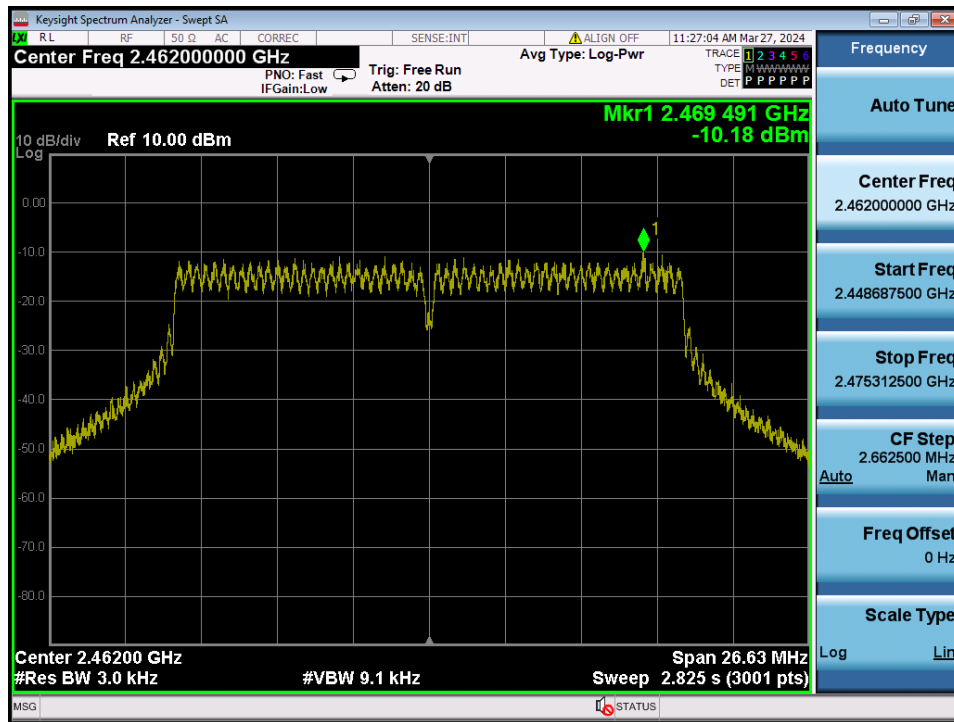
Power Spectral Density

TM 3 & ANT 1 & 2 437



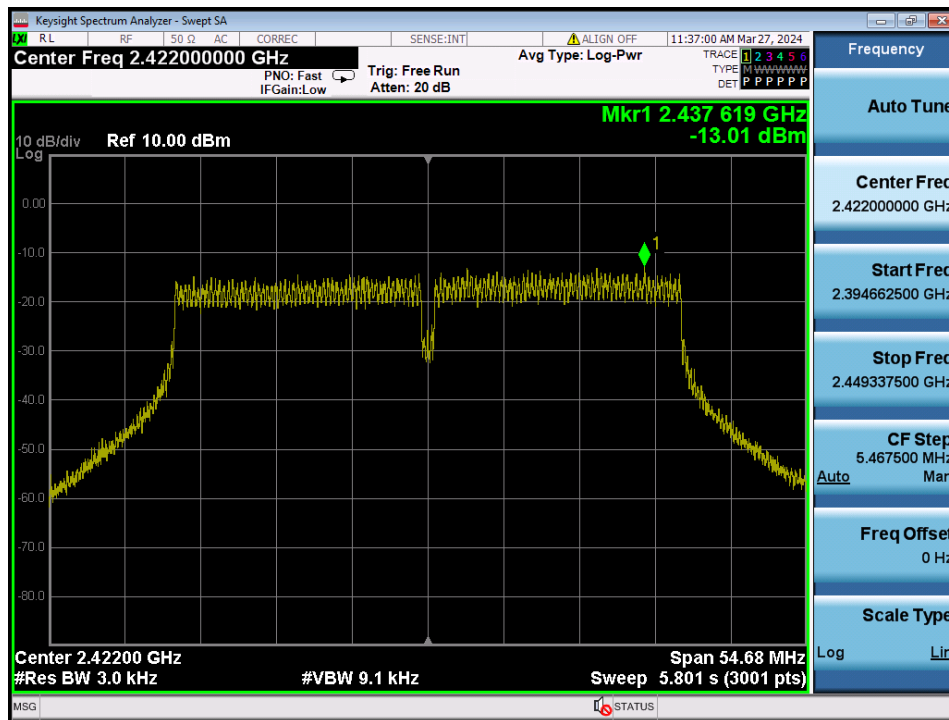
Power Spectral Density

TM 3 & ANT 1 & 2 462



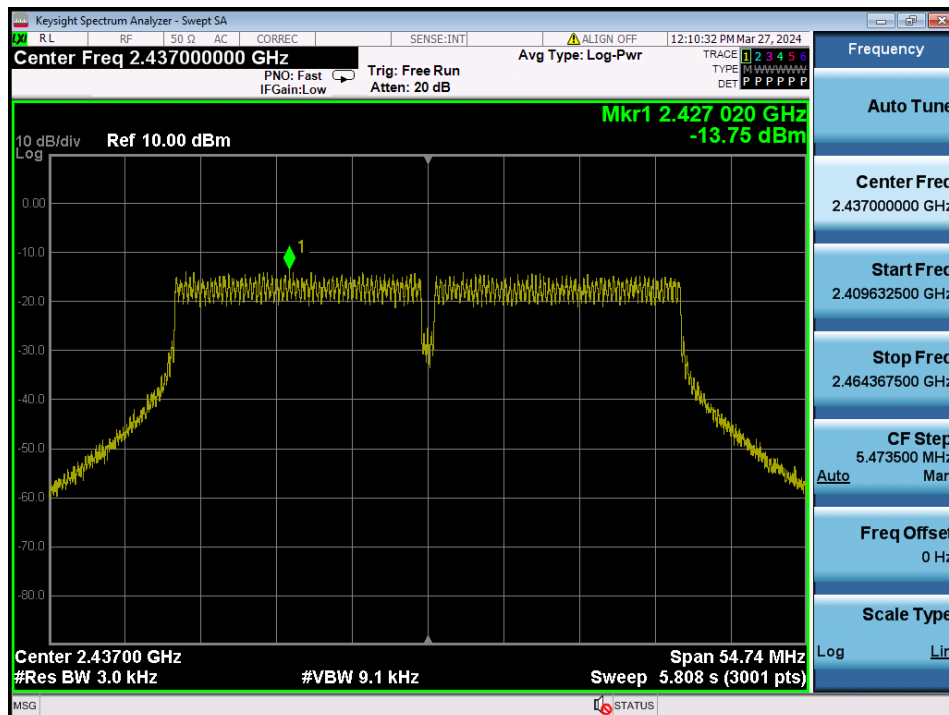
Power Spectral Density

TM 4 & ANT 1 & 2 422



Power Spectral Density

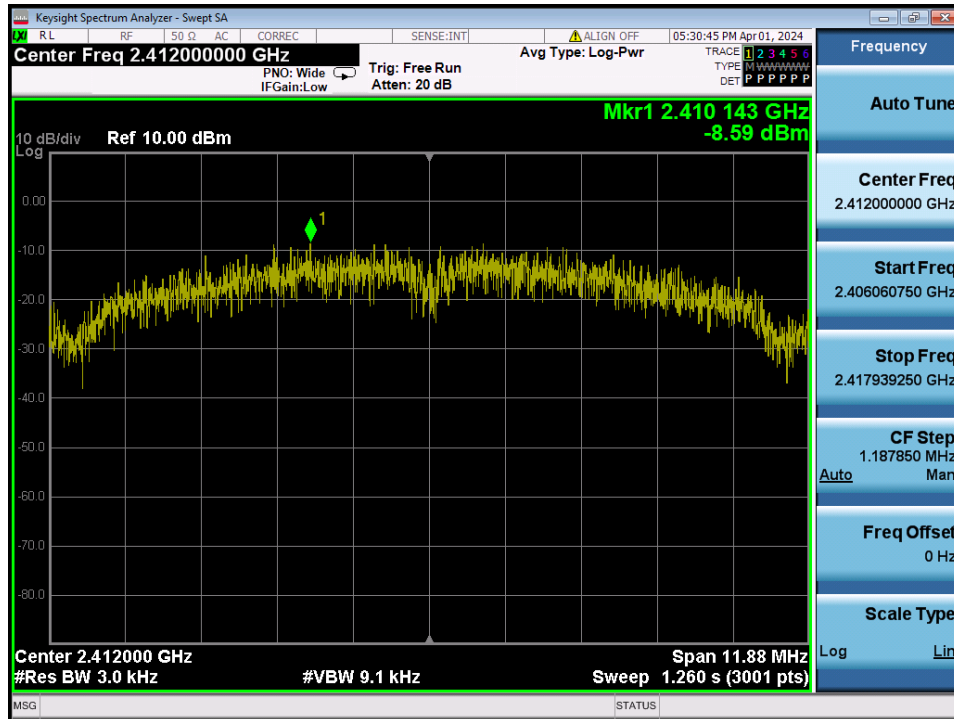
TM 4 & ANT 1 & 2 437



TM 4 & ANT 1 & 2 452

Power Spectral Density

TM 1 & ANT 2 & 2 412



Power Spectral Density

TM 1 & ANT 2 & 2 437

