TEST REPORT

DT&C Co., Ltd.
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Tel : 031-321-2664, Fax : 031-321-1664

1. Report No : DRTFCC2105-0055
2. Customer
   - Name (FCC) : Point Mobile Co., LTD. / Name (IC) : POINTMOBILE CO.,LTD
   - Address (FCC) : B-9F, Kabul Great Valley 32 Digital-ro 9-gil, Geumcheon-gu Seoul South Korea 153-709
     Address (IC) : B-9F Kabul Great Valley, 32, Digital-ro 9-gil, Geumcheon-gu Seoul Korea (Republic Of)
3. Use of Report : FCC & IC Certification
4. Product Name / Model Name : Mobile Computer / PM30W
   FCC ID : V2X-PM30W
   IC : 10664A-PM30W
5. FCC Regulation(s): Part 15.407
   IC Standard(s): RSS-247 Issue 2
   Test Method used: KDB789033 D02v02r01, ANSI C63.10-2013
6. Date of Test : 2021.02.10 ~ 2021.03.29
7. Location of Test : ☒ Permanent Testing Lab ☐ On Site Testing
8. Testing Environment : See appended test report.
8. 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.

Affirmation	Tested by Name : JaeHyeok Bang (Signature)	Reviewed by Name : JaeJin Lee (Signature)

2021 . 05 . 27 .

DT&C Co., Ltd.

This test report is a general report that does not use the KOLAS accreditation mark and is not related to KS Q ISO/IEC 17025 and KOLAS accreditation.

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

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Test Report Version

Test Report No.	Date	Description	Revised by	Reviewed by
DRTFCC2105-0055	May. 27, 2021	Initial issue	JaeHyeok Bang	JaeJin Lee

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1. General Information

1.1 Explanations for Reference Test Data

1.1.1 Introduction

This report includes the WLAN test data of FCC ID: V2X-PM30 / IC: 10664A-PM30 with reference to KDB 484596 D01v01. The applicant takes full responsibility that the test data as reference section below represents compliance for FCC ID: V2X-PM30W / IC: 10664A-PM30W.

Reference FCC ID / IC	Exhibit type	Separated FCC ID / IC
FCC ID: V2X-PM30 / IC: 10664A-PM30	Original Grant / New Single Certification	FCC ID: V2X-PM30W / IC: 10664A-PM30W

1.1.2 Explain the Differences

FCC ID: V2X-PM30W / IC: 10664A-PM30W is same the internal printed circuit board with FCC ID: V2X-PM30 / IC: 10664A-PM30. For FCC ID: V2X-PM30W / IC: 10664-PM30W, WWAN transmitter has been removed.
(It does not changed the SW/HW component of WLAN.)

1.1.3 Spot Check Verification Data

Equipment Class (capability)	FCC Part/ RSS Std.	Mode	TX Freq. (MHz)	Test item	Detector Mode	Reference FCC ID: V2X-PM30 / IC: 10664A-PM30		Separated FCC ID: V2X-PM30W / IC: 10664A-PM30W		Limit (dBuV/m)	Deviation (dB)
						Frequency (MHz)	Result (dBuV/m)	Frequency (MHz)	Result (dBuV/m)		
NII (WLAN)	15.407 / RSS-247	802.11n (HT40)	5 510	Radiated Band edge	Peak	5 467.86	65.20	5 464.11	65.26	68.20	0.06
		802.11n (HT40)	5 550	Radiated Spurious emission	Average	11 099.34	44.59	11 100.04	43.37	54.00	-1.22

Note1: The spot check were performed based on worst-case results reported in the original test report.
The spot check test results are within 3dB and two products shows a good correlation. It also complies with the FCC limit.

1.1.4 Reference Section

Reference FCC ID: V2X-PM30 / IC: 10664A-PM30

Equipment Class	FCC Part/ RSS Std.	Capability	Band(MHz)	Exhibit type	Report title	Reference Sections
NII	15.407 / RSS-247	WLAN	5 180 ~ 5 240 5 260 ~ 5 320 5 500 ~ 5 720 5 745 ~ 5 825	Original Grant/ New Single Certification	NII	All

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1.2. Description of EUT

Equipment Class	Unlicensed National Information Infrastructure (UNII)
Product Name	Mobile Computer
Model Name	PM30W
Add Model Name	-
Firmware Version Identification Number	30.00xx
EUT Serial Number (Reference product) Note1	Conducted : 2034310066 Radiated: 2033910156
EUT Serial Number (Separated product) Note2	Conducted : 2034310069 Radiated: 2034010538
Power Supply	DC 3.85 V
Modulation Technique	OFDM
Antenna Specification	Antenna Type: LDS Antenna U-NII 1: 0.96 dBi U-NII 2A : -0.31 dBi U-NII 2C : 1.37 dBi U-NII 3: 0.02 dBi

Note1: Reference FCC ID: V2X-PM30 / IC: 10664A-PM30
Note2: Separated FCC ID: V2X-PM30W / IC: 10664A-PM30W

Band	Mode	Tx. frequency(MHz)	Max. conducted power(dBm)	Max. e.i.r.p (dBm)
U-NII 1	802.11a	5 180 ~ 5 240	16.67	17.63
	802.11n(HT20)	5 180 ~ 5 240	**16.86**	17.82
	802.11ac(VHT20)	5 180 ~ 5 240	16.83	17.79
	802.11n(HT40)	5 190 ~ 5 230	16.41	17.37
	802.11ac(VHT40)	5 190 ~ 5 230	16.39	17.35
	802.11ac(VHT80)	5 210	15.09	16.05
U-NII 2A	802.11a	5 260 ~ 5 320	16.94	16.63
	802.11n(HT20)	5 260 ~ 5 320	**17.11**	16.80
	802.11ac(VHT20)	5 260 ~ 5 320	17.03	16.72
	802.11n(HT40)	5 270 ~ 5 310	16.54	16.23
	802.11ac(VHT40)	5 270 ~ 5 310	16.52	16.21
	802.11ac(VHT80)	5 290	12.64	12.33
U-NII 2C	802.11a	5 500 ~ 5 720	16.75	18.12
	802.11n(HT20)	5 500 ~ 5 720	**16.89**	18.26
	802.11ac(VHT20)	5 500 ~ 5 720	16.82	18.19
	802.11n(HT40)	5 510 ~ 5 710	16.37	17.74
	802.11ac(VHT40)	5 510 ~ 5 710	16.36	17.73
	802.11ac(VHT80)	5 530 ~ 5 690	16.47	17.84
U-NII 3	802.11a	5 745 ~ 5 825	16.46	16.48
	802.11n(HT20)	5 745 ~ 5 825	**16.83**	16.85
	802.11ac(VHT20)	5 745 ~ 5 825	16.81	16.83
	802.11n(HT40)	5 755 ~ 5 795	16.47	16.49
	802.11ac(VHT40)	5 755 ~ 5 795	16.44	16.46
	802.11ac(VHT80)	5 775	16.27	16.29

1.3. Declaration by the applicant / manufacturer

N/A

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1.4. 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.dtnc.net		
Telephone	:	+ 82-31-321-2664
FAX	:	+ 82-31-321-1664

1.5. Testing Environment

Ambient Condition	
▪ Temperature	+20 ℃ ~ +26 ℃
▪ Relative Humidity	+35 % ~ +44 %

1.6. 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	1.0 dB (The confidence level is about 95 %, k = 2)
AC power-line conducted emission	3.6 dB (The confidence level is about 95 %, k = 2)
Radiated emission (1 GHz Below)	4.9 dB (The confidence level is about 95 %, k = 2)
Radiated emission (1 GHz ~ 18 GHz)	5.0 dB (The confidence level is about 95 %, k = 2)
Radiated emission (18 GHz Above)	5.3 dB (The confidence level is about 95 %, k = 2)

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1.7. Test Equipment List

Type	Manufacturer	Model	Cal.Date (yy/mm/dd)	Next.Cal.Date (yy/mm/dd)	S/N
Spectrum Analyzer	Agilent Technologies	N9020A	20/06/24	21/06/24	MY50410163
Spectrum Analyzer	Agilent Technologies	N9020A	20/12/16	21/12/16	MY48011700
Spectrum Analyzer	Agilent Technologies	N9020A	20/06/24	21/06/24	US47360812
Spectrum Analyzer	Agilent Technologies	N9030A	20/12/16	21/12/16	MY53310140
DC Power Supply	Agilent Technologies	66332A	20/06/24	21/06/24	MY43000211
Multimeter	FLUKE	17B+	20/12/16	21/12/16	3630701WS
Signal Generator	Rohde Schwarz	SMBV100A	20/12/16	21/12/16	255571
Signal Generator	ANRITSU	MG3695C	20/12/16	21/12/16	173501
Thermohygrometer	BODYCOM	BJ5478	20/12/16	21/12/16	120612-1
Thermohygrometer	BODYCOM	BJ5478	20/12/16	21/12/16	120612-2
Thermohygrometer	BODYCOM	BJ5478	20/07/01	21/07/01	N/A
Loop Antenna	ETS-Lindgren	6502	21/01/28	23/01/28	00226186
BILOG ANTENNA	Schwarzbeck	VULB 9160	20/12/16	21/12/16	3362
Horn Antenna	ETS-Lindgren	3117	20/10/23	21/10/23	00143278
Horn Antenna	A.H.Systems Inc.	SAS-574	20/06/24	21/06/24	155
PreAmplifier	tsj	MLA-0118-B01-40	20/12/16	21/12/16	1852267
PreAmplifier	tsj	MLA-1840-J02-45	20/06/24	21/06/24	16966-10728
PreAmplifier	H.P	8447D	20/12/16	21/12/16	2944A07774
High Pass Filter	Wainwright Instruments	WHKX12-935-1000-15000-40SS	20/06/24	21/06/24	8
High Pass Filter	Wainwright Instruments	WHKX10-2838-3300-18000-60SS	20/06/24	21/06/24	1
High Pass Filter	Wainwright Instruments	WHNX8.0/26.5-6SS	20/06/24	21/06/24	3
Attenuator	Hefei Shunze	SS5T2.92-10-40	20/06/24	21/06/24	16012202
Attenuator	SRTechnology	F01-B0606-01	20/06/24	21/06/24	13092403
Attenuator	Aeroflex/Weinschel	56-3	20/06/24	21/06/24	Y2370
Attenuator	SMAJK	SMAJK-2-3	20/06/24	21/06/24	2
Attenuator	Aeroflex/Weinschel	86-20-11	20/06/24	21/06/24	432
Power Meter & Wide Bandwidth Sensor	Anritsu	ML2495A MA2490A	20/06/24	21/06/24	1306007 1249001
EMI Receiver	ROHDE&SCHWARZ	ESU	20/11/16	21/11/16	100469
PULSE LIMITER	Rohde Schwarz	ESH3-Z2	20/08/25	21/08/25	101333
LISN	SCHWARZBECK	NSLK 8128 RC	20/10/23	21/10/23	8128 RC-387
HYGROMETER	TESTO	608-H1	21/01/19	22/01/19	34862883
Cable	DT&C	Cable	21/01/08	22/01/08	G-1
Cable	DT&C	Cable	21/01/08	22/01/08	G-2
Cable	HUBER+SUHNER	SUCOFLEX 100	21/01/08	22/01/08	G-3
Cable	DT&C	Cable	21/01/08	22/01/08	G-4
Cable	Junkosha	MWX241	21/01/08	22/01/08	mmW-1
Cable	Junkosha	MWX241	21/01/08	22/01/08	mmW-4
Cable	HUBER+SUHNER	SUCOFLEX100	21/01/08	22/01/08	M-01
Cable	HUBER+SUHNER	SUCOFLEX100	21/01/08	22/01/08	M-02
Cable	JUNFLON	MWX241	21/01/08	22/01/08	M-03
Cable	JUNFLON	J12J101757-00	21/01/08	22/01/08	M-07
Cable	HUBER+SUHNER	SUCOFLEX106	21/01/08	22/01/08	M-09
Cable	DT&C	Cable	21/01/05	22/01/05	RFC-69
Test Software	tsj	Radiated Emission Measurement	NA	NA	Version 2.00.0177
Test Software	tsj	Noise Terminal Measurement	NA	NA	Version 2.00.0170

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.

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2. Test Methodology

The measurement procedures described in the ANSI C63.10-2013 and the guidance provided in KDB 7899033 D02v02r01 were used in measurement of the EUT.

The EUT was tested per the guidance of KDB789033 D02v02r01. 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 15.407 under the FCC Rules Part 15 Subpart E.

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 KDB789033 D02v02r01. 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 KDB789033 D02v02r01.

The EUT is placed on a non-conductive table, which is 0.8 m above ground plane. 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 1 m or 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. In order to find out the highest emission, the relative positions of the EUT were rotated through three orthogonal axis.

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.

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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	Data rate
802.11a	6 Mbps ~ 54 Mbps
802.11n(HT20)	MCS 0 ~ 7
802.11ac(VHT20)	MCS 0 ~ 8
802.11n(HT40)	MCS 0 ~ 7
802.11ac(VHT40)	MCS 0 ~ 9
802.11ac(VHT80)	MCS 0 ~ 9

EUT Operation test setup

- Test Software: QRCT / V3.0-00277
- Power setting: Refer to the table below.

Tested frequency and power setting

Band	802.11a				
	Channel	Frequency (MHz)	Power Setting		
			6 ~ 12 Mbps	18 ~ 24 Mbps	36 ~ 54 Mbps
U-NII 1	36	5 180	18.0	17.0	17.0
	40	5 200	18.0	17.0	17.0
	48	5 240	18.0	17.0	17.0
U-NII 2A	52	5 260	18.0	17.0	17.0
	60	5 300	18.0	17.0	17.0
	64	5 320	18.0	17.0	17.0
U-NII 2C	100	5 500	16.5	15.5	15.5
	116	5 580	18.5	17.5	17.0
	144	5 720	18.5	17.5	17.0
U-NII 3	149	5 745	18.0	17.5	17.0
	157	5 785	18.0	17.5	17.0
	165	5 825	18.0	17.5	17.0

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Band	802.11n(HT20) / 802.11ac(VHT20)					
	Channel	Frequency (MHz)	Power Setting			
			MCS 0 ~ 2	MCS 3 ~ 4	MCS 5	MCS 6 ~ 8
U-NII 1	36	5 180	18.0	17.0	17.0	16.0
	40	5 200	18.0	17.5	17.5	17.0
	48	5 240	18.0	17.5	17.5	17.0
U-NII 2A	52	5 260	18.0	17.5	17.5	17.0
	60	5 300	18.0	17.5	17.5	17.0
	64	5 320	18.0	17.0	16.5	15.5
U-NII 2C	100	5 500	15.0	14.5	14.5	14.5
	116	5 580	18.0	17.5	17.5	17.0
	144	5 720	18.0	17.5	17.5	17.0
U-NII 3	149	5 745	18.0	17.5	17.5	17.0
	157	5 785	18.0	17.5	17.5	17.0
	165	5 825	18.0	17.5	17.5	17.0

Band	802.11n(HT40) / 802.11ac(VHT40)					
	Channel	Frequency (MHz)	Power Setting			
			MCS 0 ~ 2	MCS 3	MCS 4 ~ 5	MCS 6 ~ 9
U-NII 1	38	5 190	17.0	16.5	16.0	16.0
	46	5 230	18.0	17.5	17.0	17.0
U-NII 2A	54	5 270	18.0	17.5	17.0	17.0
	62	5 310	15.0	14.5	14.0	14.0
U-NII 2C	102	5 510	16.5	16.0	15.5	15.5
	110	5 550	18.0	17.5	17.0	17.0
	142	5 710	18.0	17.5	17.0	17.0
U-NII 3	151	5 755	18.0	17.5	17.0	17.0
	159	5 795	18.0	17.5	17.0	17.0

Band	802.11n(HT40) / 802.11ac(VHT40)							
	Channel	Frequency (MHz)	Power Setting					
			MCS 0 ~ 1	MCS 2 ~ 3	MCS 4	MCS 5	MCS 6 ~ 7	MCS 8 ~ 9
U-NII 1	42	5 210	17.0	16.0	15.5	15.5	15.5	15.5
U-NII 2A	58	5 290	14.0	13.0	12.5	12.5	12.5	12.5
U-NII 2C	106	5 530	15.0	14.0	13.5	13.5	13.5	13.5
	138	5 690	18.0	17.5	17.0	16.5	15.0	14.0
U-NII 3	155	5 775	18.0	17.5	17.0	16.5	15.0	14.0

Tested Mode

Test mode	Mode	Worst case data rate
TM 1	802.11a	6 Mbps
TM 2	802.11n(HT20)	MCS 2
TM 3	802.11n(HT40)	MCS 0
TM 4	802.11ac(VHT80)	MCS 0

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

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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 (Spring Tension).
Therefore this E.U.T complies with the requirement of Part 15.203

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4. Summary of Test Result

FCC Part Section(s)	RSS Section(s)	Test Description	Limit	Test Condition	Status Note 1
15.407(a)	RSS-247[6.2]	Emission Bandwidth (26 dB Bandwidth)	N/A	Conducted	C
15.407(e)	RSS-247[6.2]	Minimum Emission Bandwidth (6 dB Bandwidth)	> 500 kHz in 5 725 ~ 5 850 MHz		C
15.407(a)	RSS-247[6.2]	Maximum Conducted Output Power	Part 15.407(a) (Refer to section 5.3)		C
15.407(a)	RSS-247[6.2]	Peak Power Spectral Density	Part 15.407(a) (Refer to section 5.4)		C
-	RSS-Gen[6.7]	Occupied Bandwidth (99 %)	N/A		C
15.407(h)	RSS-247[6.3]	Dynamic Frequency Selection	Part 15.407(h) (Refer to the DFS test report)		C Note 4
15.205 15.209 15.407(b)	RSS-Gen[8.9] RSS-Gen[8.10] RSS-247[6.2]	Unwanted Emissions	Part 15.209, 15.407(b) (Refer to section 5.5)	Radiated	C Note 3, 5
15.207	RSS-Gen[8.8]	AC Conducted Emissions	FCC 15.207 (Refer to section 5.6)	AC Line Conducted	C
15.203	-	Antenna Requirements	FCC 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.
Note 4: Refer to the DFS test report.
Note 5: This device supports wireless charging.
So per KDB648474 D03v01r04, the radiated test items were performed all not charging, charging conditions. For wireless charging condition, the handset is placed on the representative charging pad under normal conditions and in a simulated call configuration.

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5. TEST RESULT

5.1 Emission Bandwidth (26 dB Bandwidth) & Occupied BW (99 %)

▣ Test Requirements

- Emission Bandwidth (26 dB Bandwidth)

The bandwidth at 26 dB down from the highest in-band spectral 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 26 dB bandwidth is used to determine the conducted output power limit.

- Occupied BW (99 %)

When an occupied bandwidth value is not specified in the applicable RSS, the transmitted signal bandwidth to be reported is to be its 99 % emission bandwidth, as calculated or measured

▣ Test Configuration

Refer to the APPENDIX I.

▣ Test Procedure

- Emission Bandwidth (26 dB Bandwidth)

The transmitter output is connected to the Spectrum Analyzer and used following test procedure of **KDB789033 D02v02r01**.

1. Set resolution bandwidth (RBW) = approximately **1 %** of the EBW.
2. Set the video bandwidth **(VBW) > RBW**.
3. Detector = **Peak**.
4. Trace mode = **max hold**.

Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1 %.

- Occupied BW (99 %): RSS-Gen[6.7]

1. The transmitter shall be operated at its maximum carrier power measured under normal test conditions.
2. The span of the analyzer shall be set to capture all products of the modulation process, including the emission skirts.
3. The resolution bandwidth (RBW) shall be in the range of 1 % to 5 % of the occupied bandwidth (OBW) and video bandwidth (VBW) shall be approximately 3x RBW.

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▣ **Test Results: Comply**

Test Mode	Band	Channel	Frequency(MHz)	26 dB BW(MHz)	99 % BW(MHz)
TM 1	U-NII 1	36	5 180	22.67	16.53
		40	5 200	21.68	16.53
		48	5 240	22.11	16.52
	U-NII 2A	52	5 260	22.36	16.57
		60	5 300	22.05	16.55
		64	5 320	22.21	16.52
	U-NII 2C	100	5 500	21.49	16.51
		116	5 580	23.18	16.56
		144	5 720	22.45	16.54
TM 2	U-NII 1	36	5 180	20.36	17.66
		40	5 200	20.64	17.67
		48	5 240	20.49	17.66
	U-NII 2A	52	5 260	20.57	17.68
		60	5 300	20.75	17.68
		64	5 320	21.05	17.66
	U-NII 2C	100	5 500	20.68	17.67
		116	5 580	20.73	17.69
		144	5 720	20.56	17.67
TM 3	U-NII 1	38	5 190	41.04	36.20
		46	5 230	40.83	36.20
	U-NII 2A	54	5 270	40.93	36.16
		62	5 310	40.96	36.25
	U-NII 2C	102	5 510	40.85	36.21
		110	5 550	40.87	36.18
		142	5 710	41.80	36.21
TM 4	U-NII 1	42	5 210	83.49	75.76
	U-NII 2A	58	5 290	83.80	75.70
	U-NII 2C	106	5 530	83.29	75.81
		138	5 690	83.23	75.80

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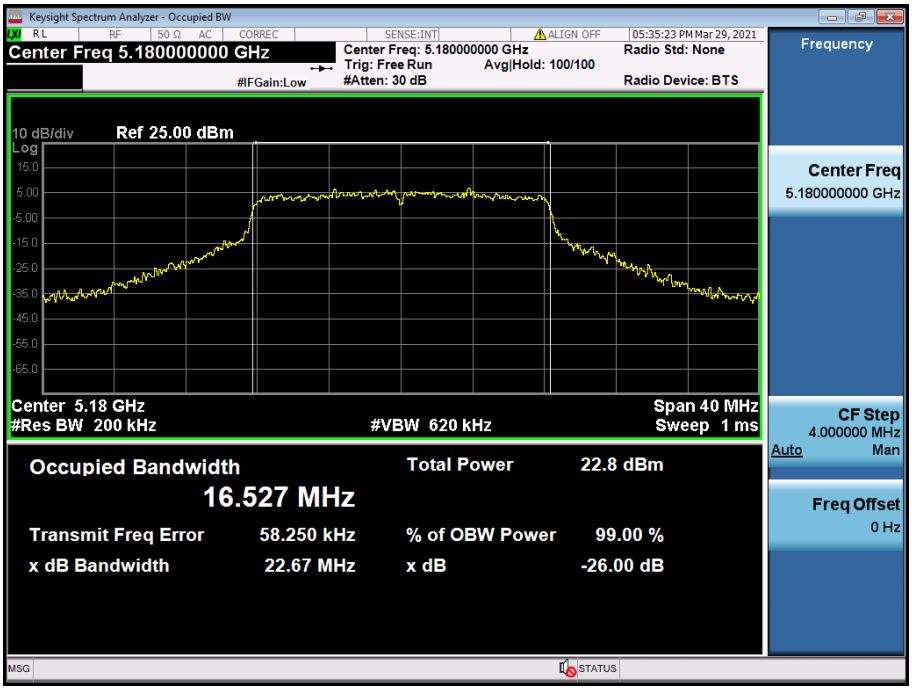
▣ Result Plots

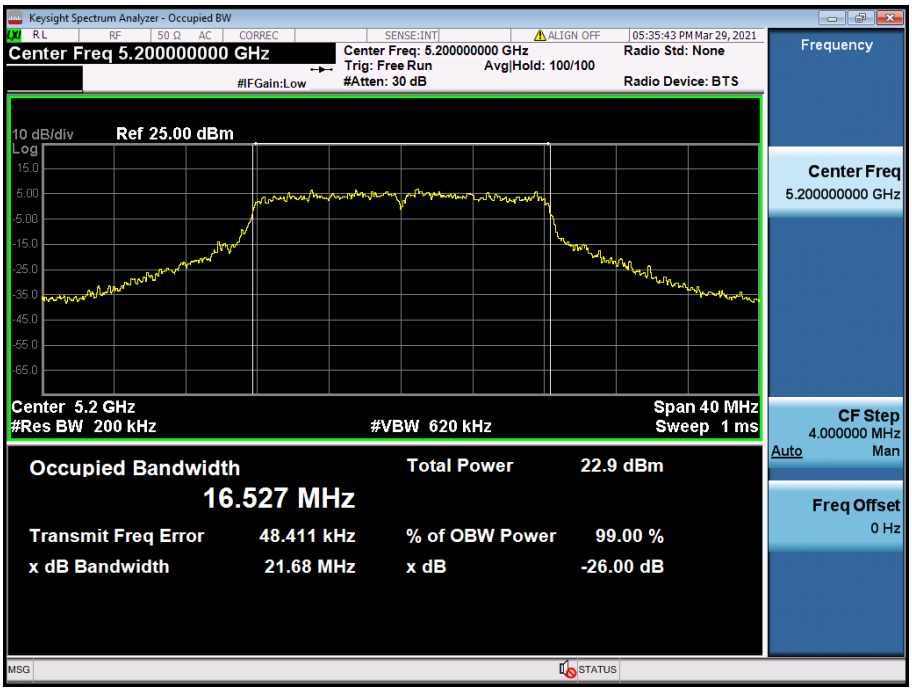
26 dB Bandwidth & Occupied BW

Test Mode: TM 1 & Ch.36



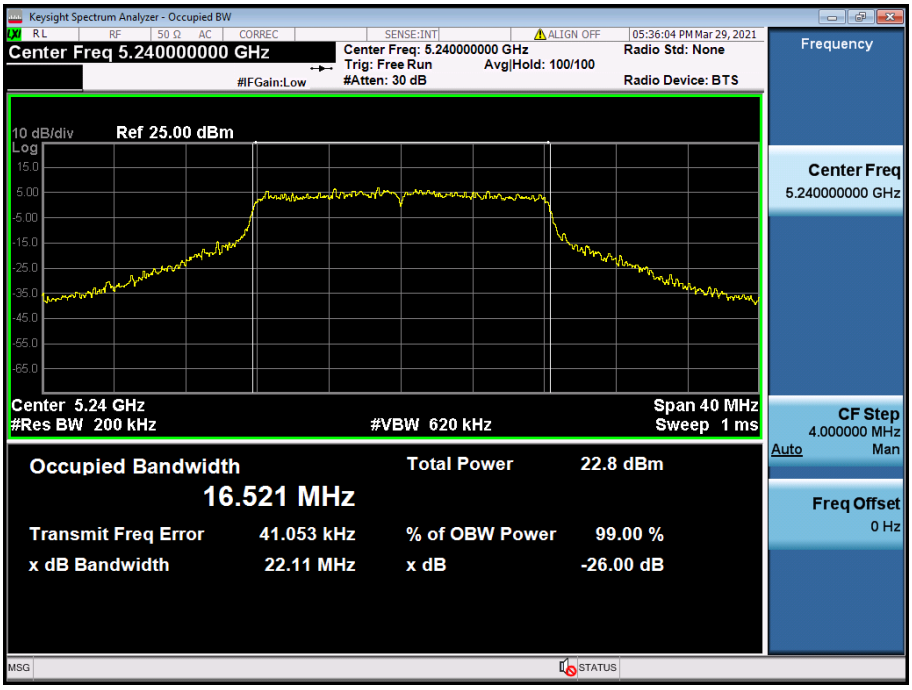
26 dB Bandwidth & Occupied BW

Test Mode: TM 1 & Ch.40



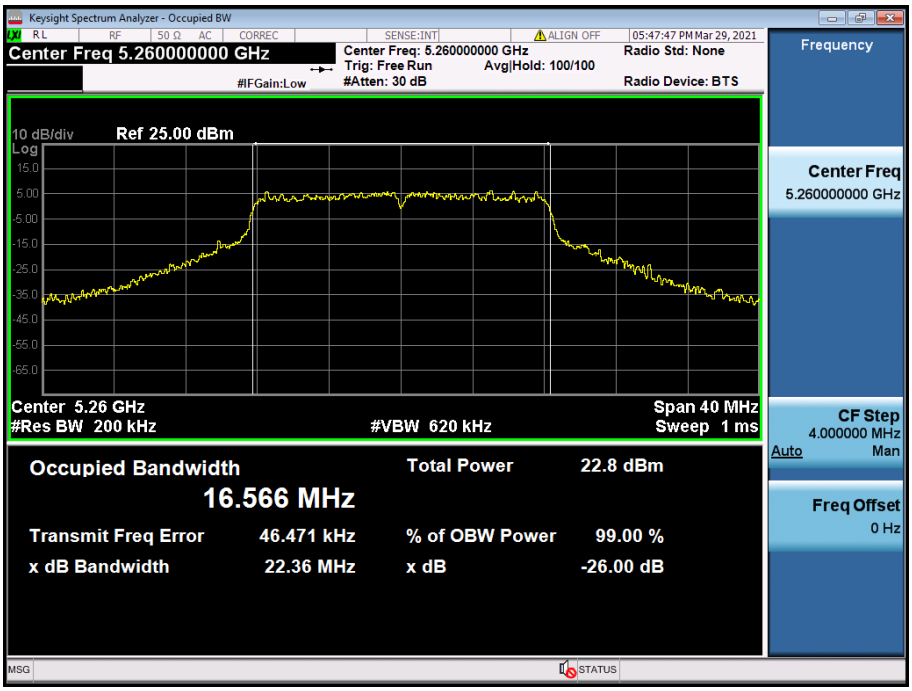
26 dB Bandwidth & Occupied BW

Test Mode: TM 1 & Ch.48



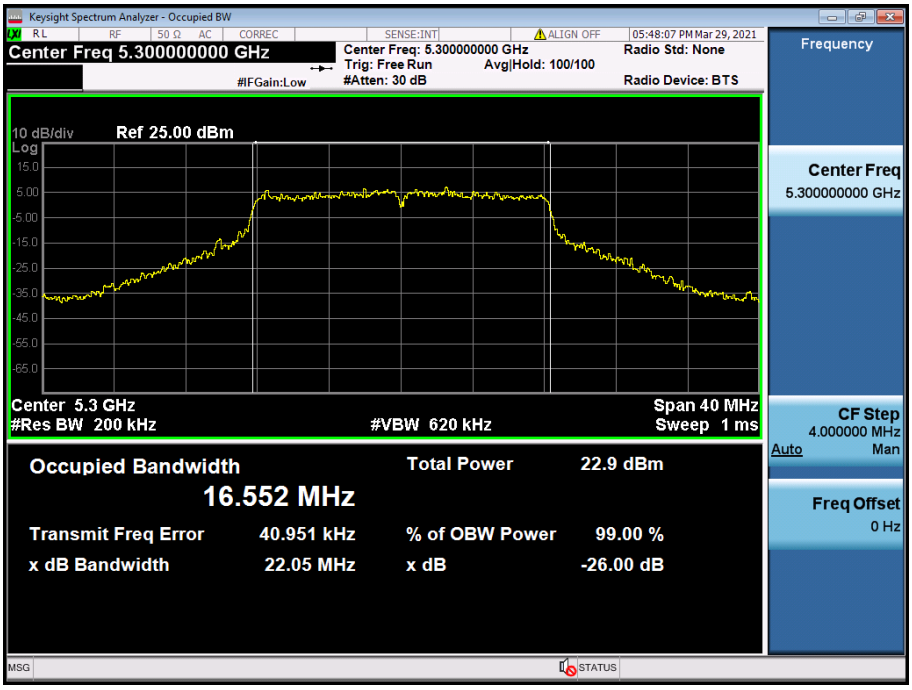
26 dB Bandwidth & Occupied BW

Test Mode: TM 1 & Ch.52



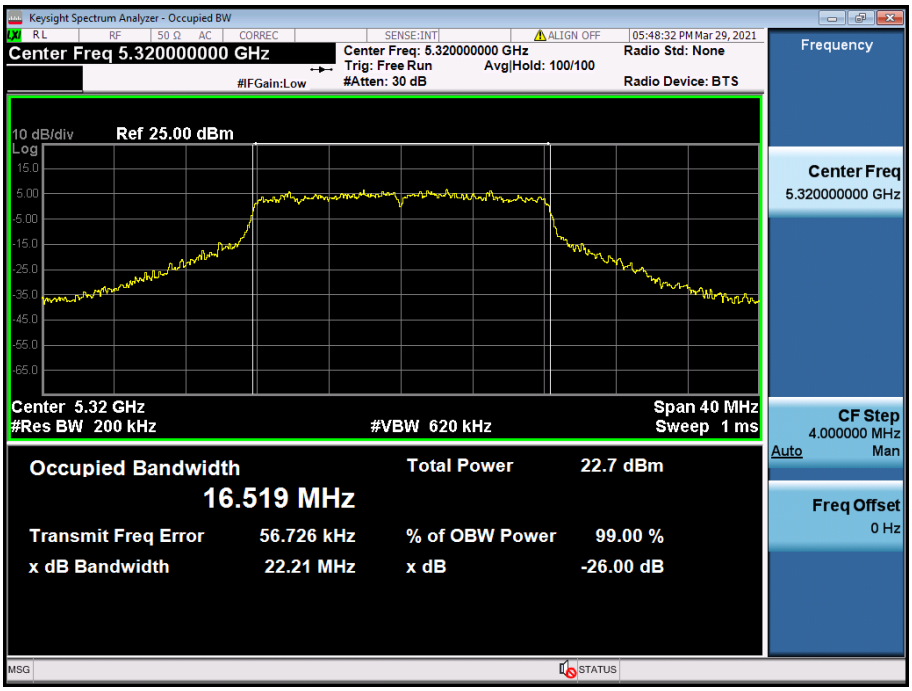
26 dB Bandwidth & Occupied BW

Test Mode: TM 1 & Ch.60



26 dB Bandwidth & Occupied BW

Test Mode: TM 1 & Ch.64



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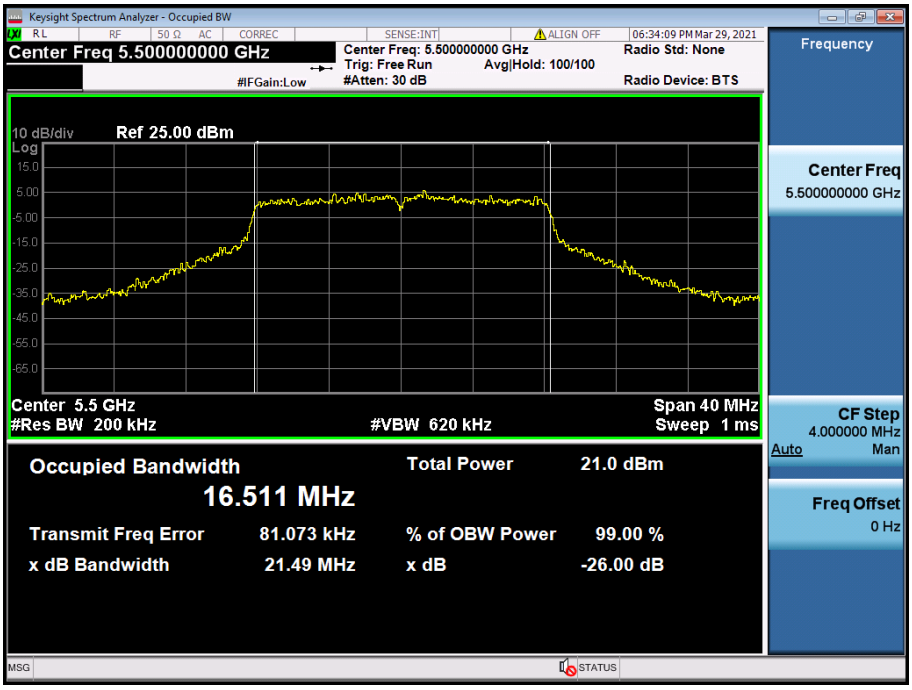
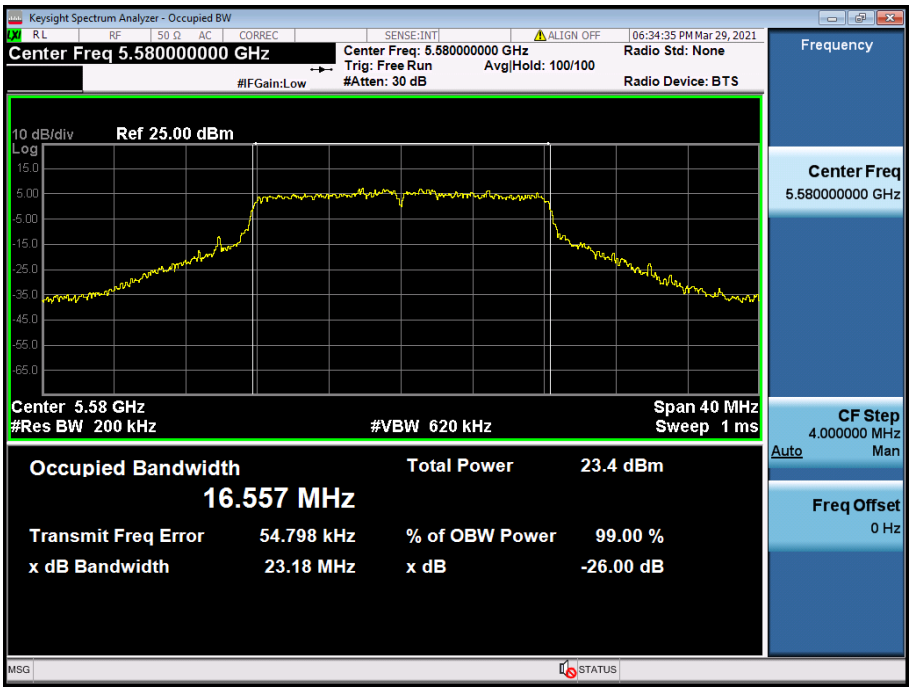
26 dB Bandwidth & Occupied BW

Test Mode: TM 1 & Ch.100



26 dB Bandwidth & Occupied BW

Test Mode: TM 1 & Ch.116



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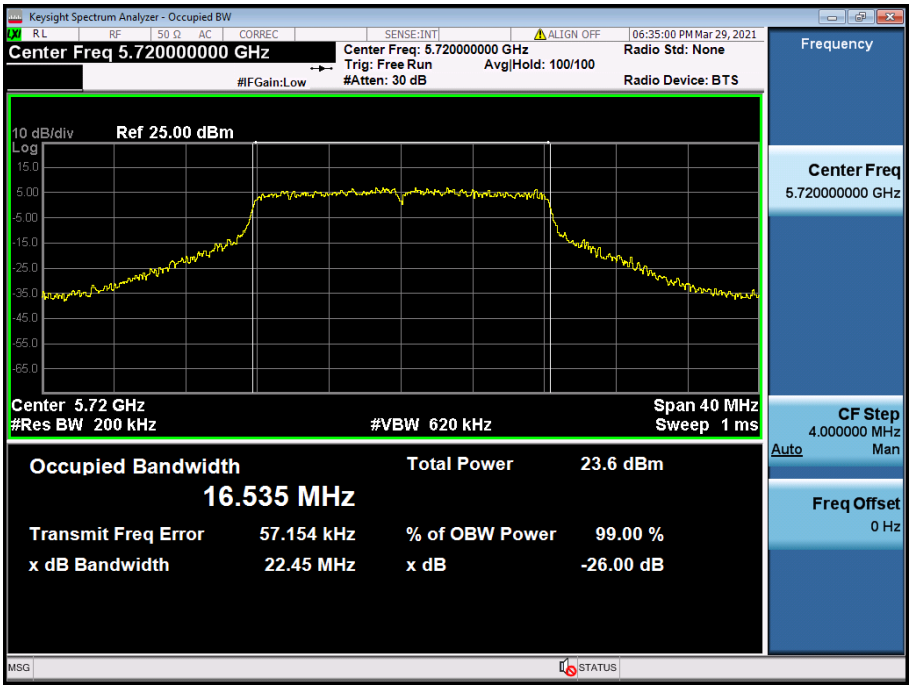
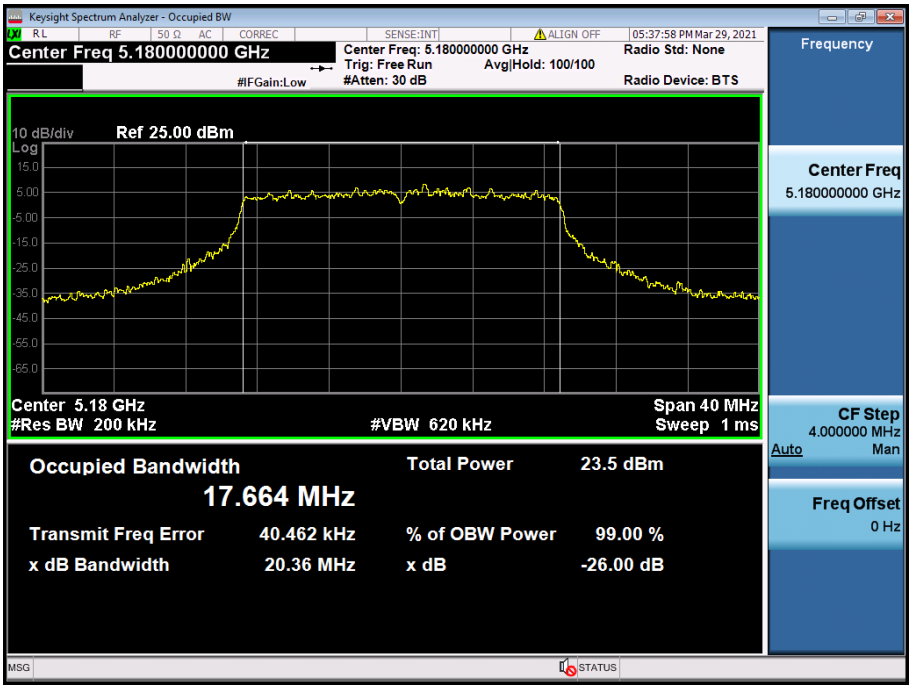
26 dB Bandwidth & Occupied BW

Test Mode: TM 1 & Ch.144



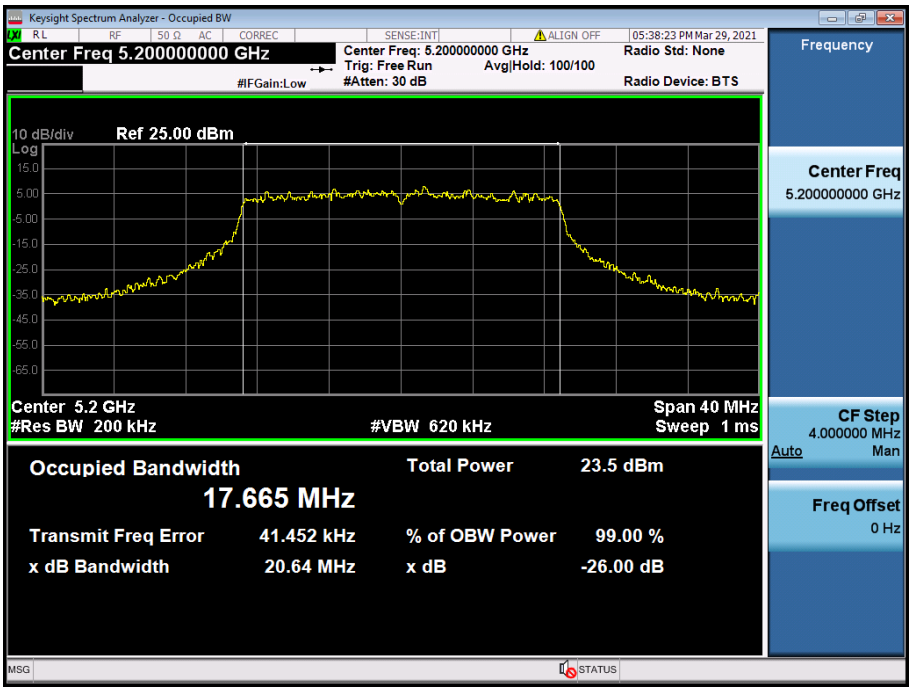
26 dB Bandwidth & Occupied BW

Test Mode: TM 2 & Ch.36



26 dB Bandwidth & Occupied BW

Test Mode: TM 2 & Ch.40



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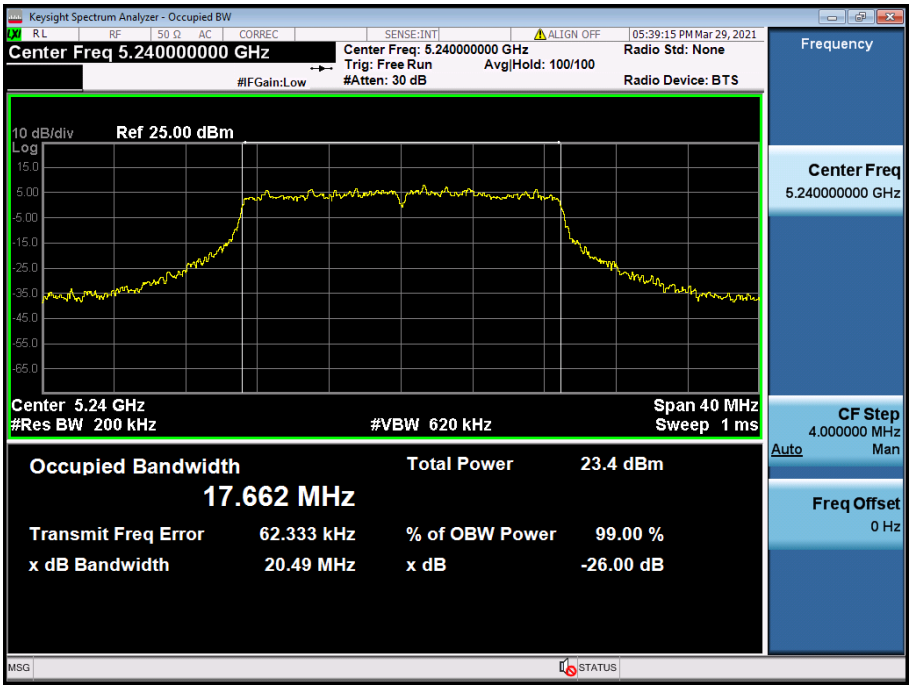
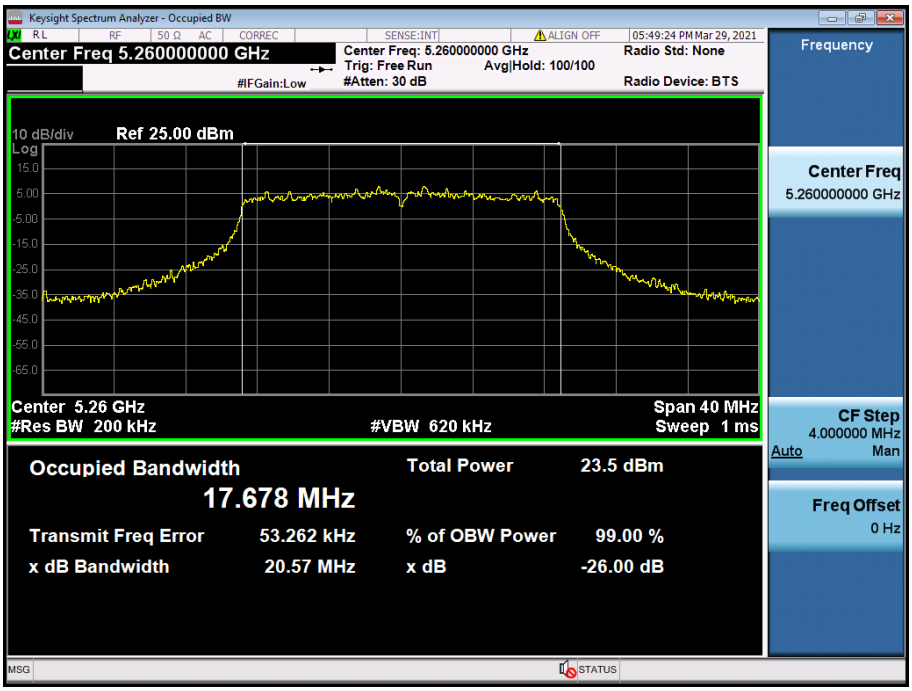
26 dB Bandwidth & Occupied BW

Test Mode: TM 2 & Ch.48



26 dB Bandwidth & Occupied BW

Test Mode: TM 2 & Ch.52



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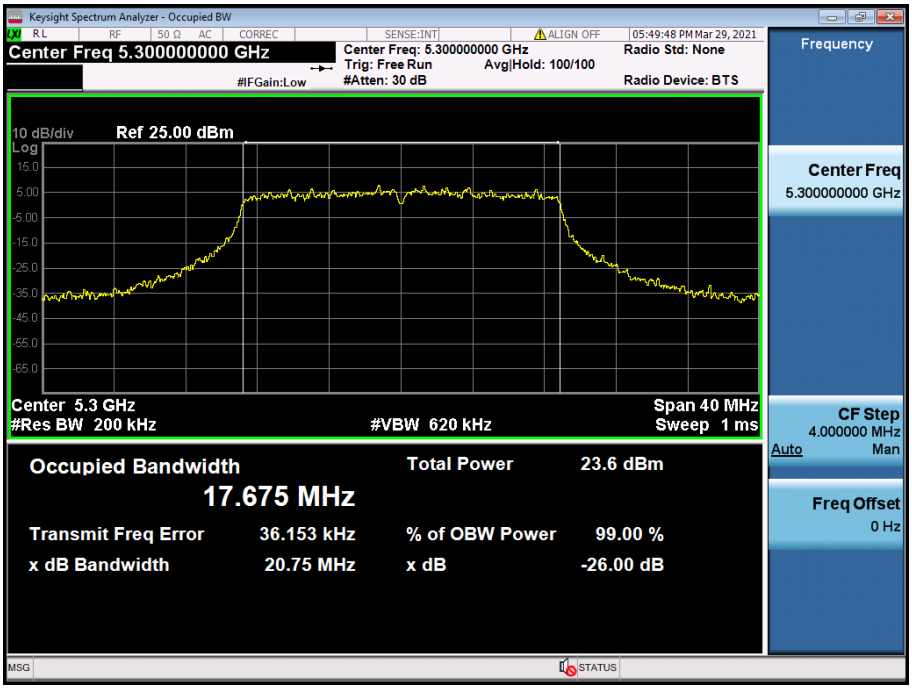
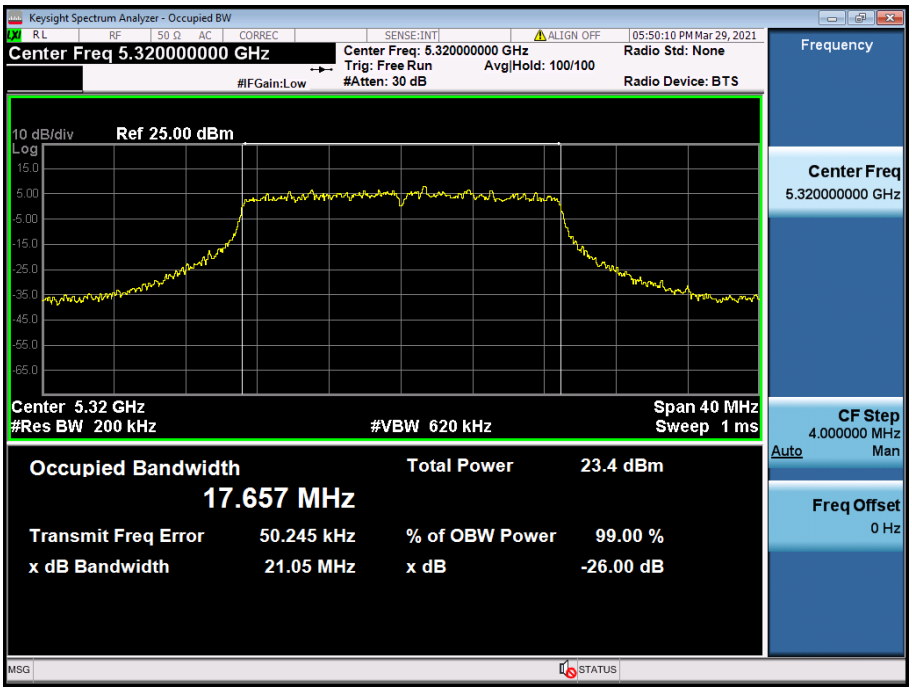
26 dB Bandwidth & Occupied BW

Test Mode: TM 2 & Ch.60



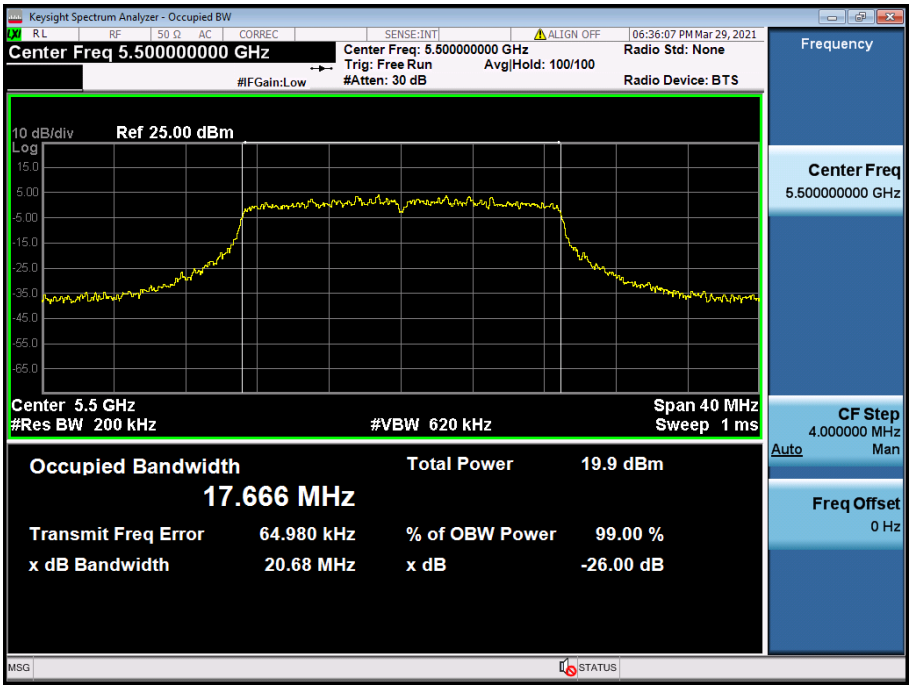
26 dB Bandwidth & Occupied BW

Test Mode: TM 2 & Ch.64



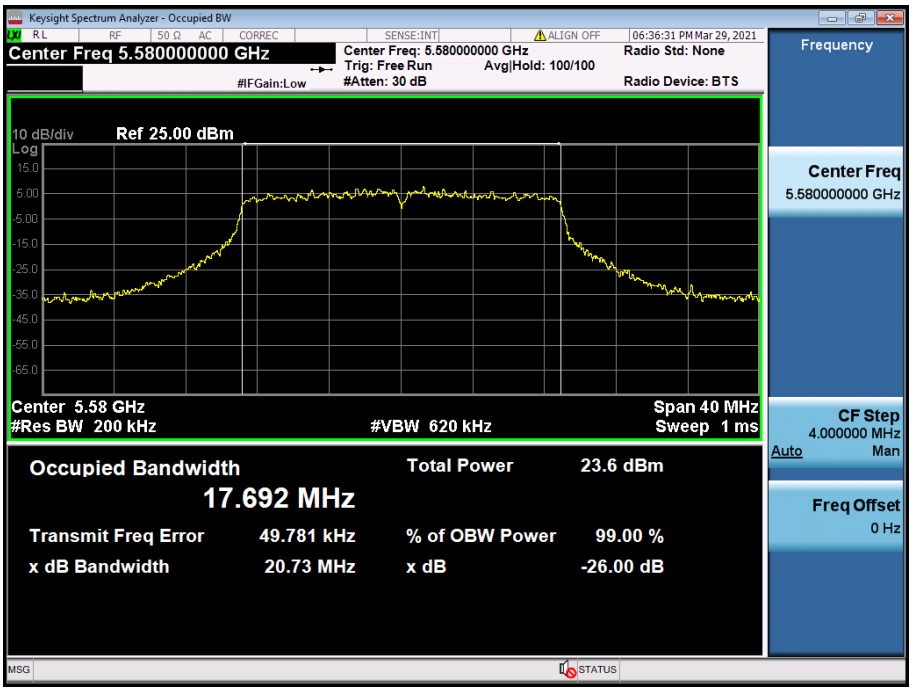
26 dB Bandwidth & Occupied BW

Test Mode: TM 2 & Ch.100



26 dB Bandwidth & Occupied BW

Test Mode: TM 2 & Ch.116



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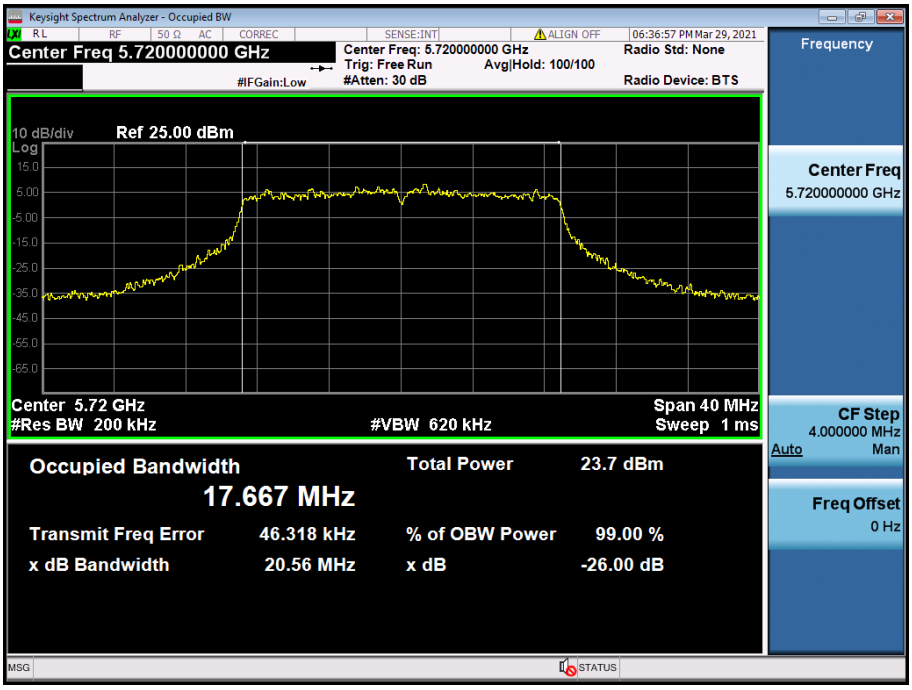
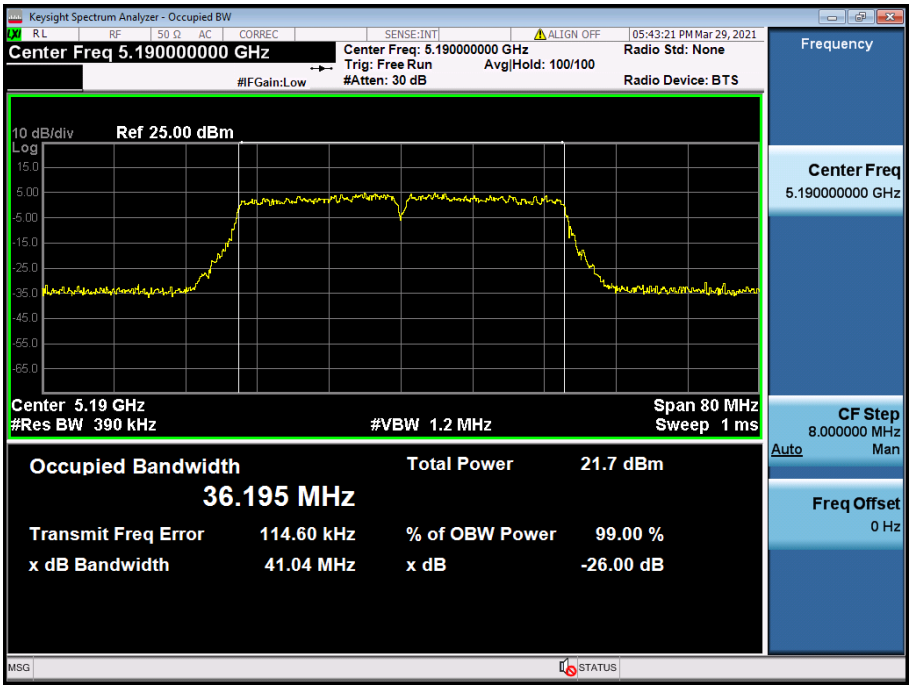
26 dB Bandwidth & Occupied BW

Test Mode: TM 2 & Ch.144



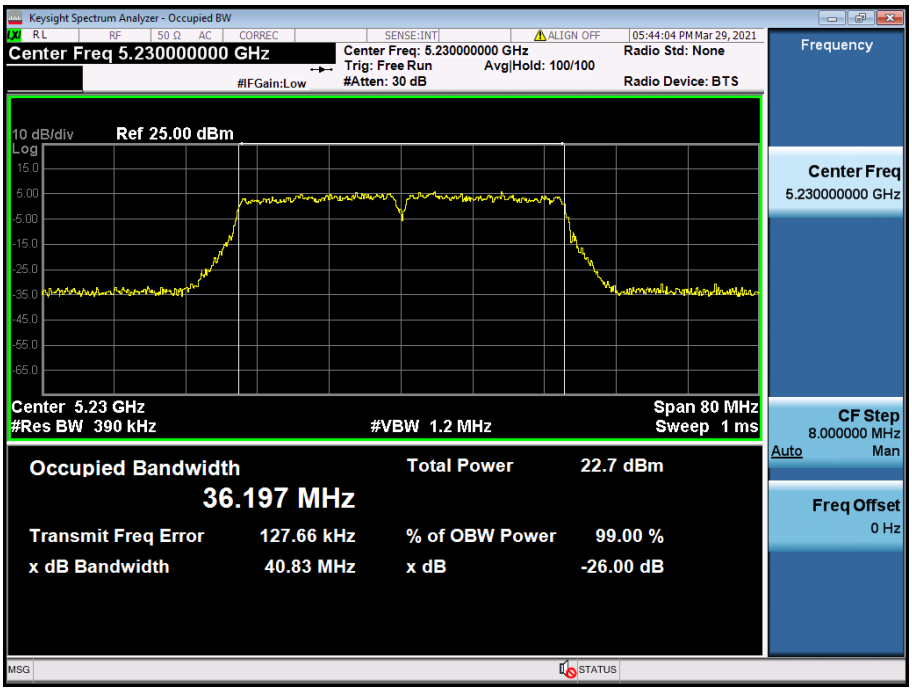
26 dB Bandwidth & Occupied BW

Test Mode: TM 3 & Ch.38



26 dB Bandwidth & Occupied BW

Test Mode: TM 3 & Ch.46



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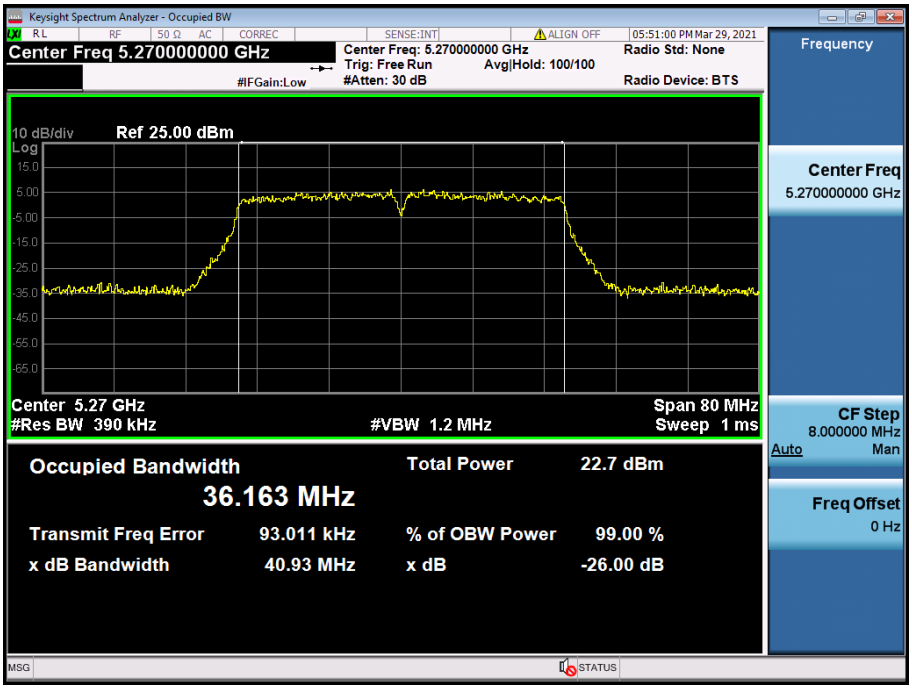
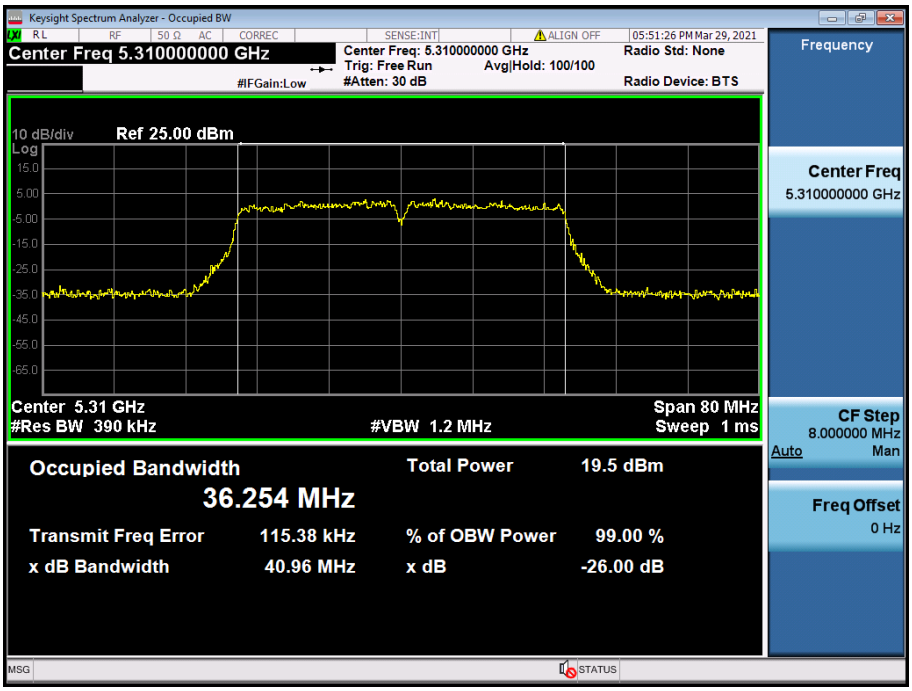
26 dB Bandwidth & Occupied BW

Test Mode: TM 3 & Ch.54



26 dB Bandwidth & Occupied BW

Test Mode: TM 3 & Ch.62



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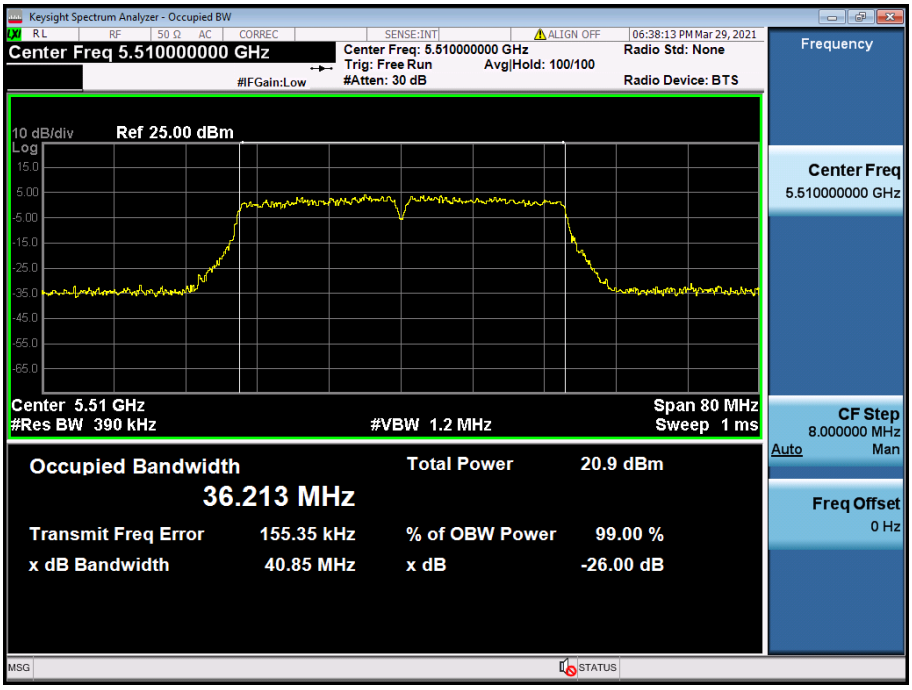
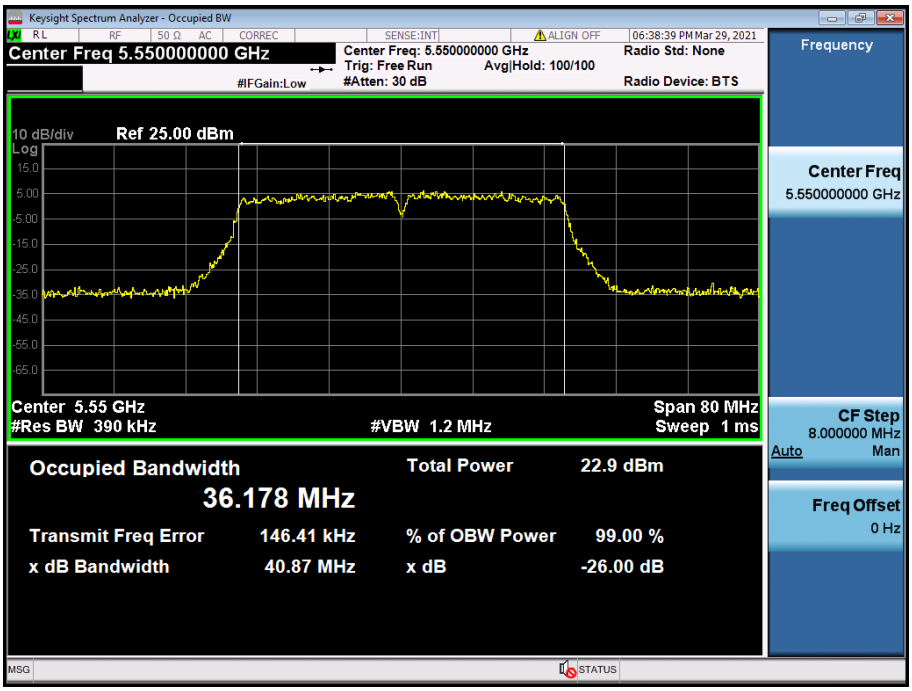
26 dB Bandwidth & Occupied BW

Test Mode: TM 3 & Ch.102



26 dB Bandwidth & Occupied BW

Test Mode: TM 3 & Ch.110



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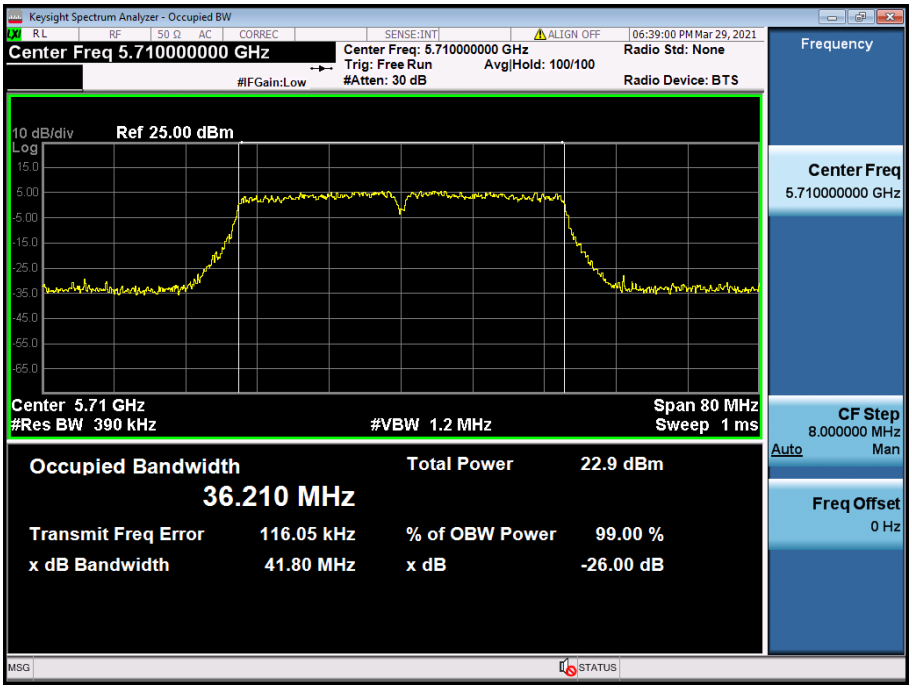
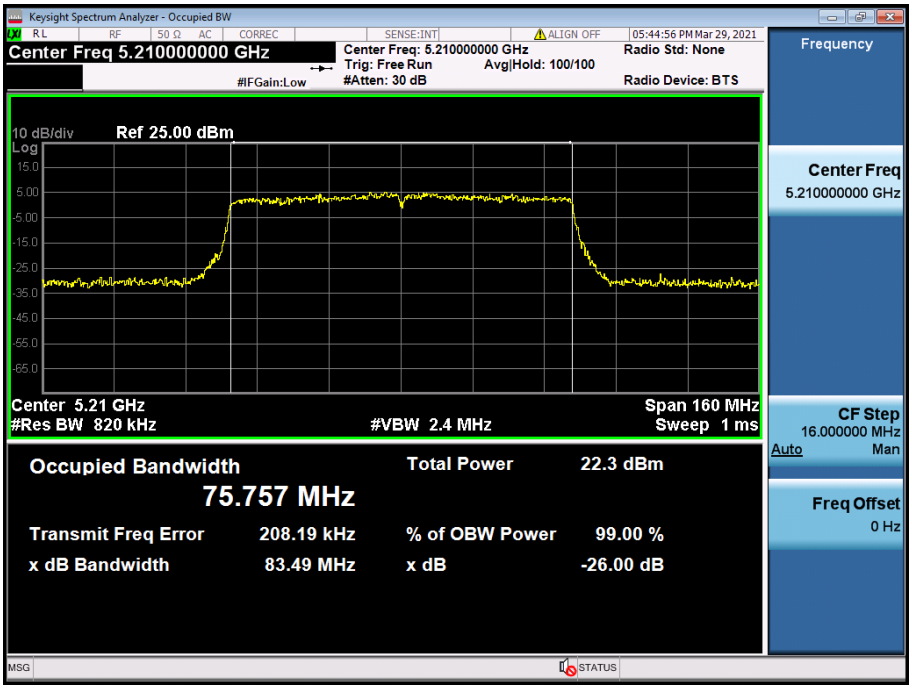
26 dB Bandwidth & Occupied BW

Test Mode: TM 3 & Ch.142



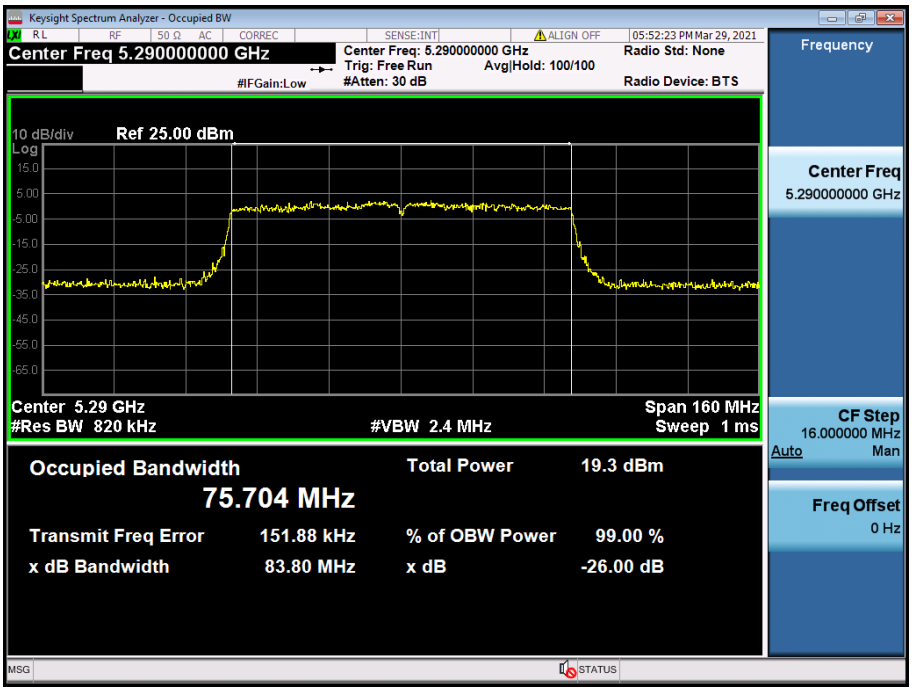
26 dB Bandwidth & Occupied BW

Test Mode: TM 4 & Ch.42



26 dB Bandwidth & Occupied BW

Test Mode: TM 4 & Ch.58



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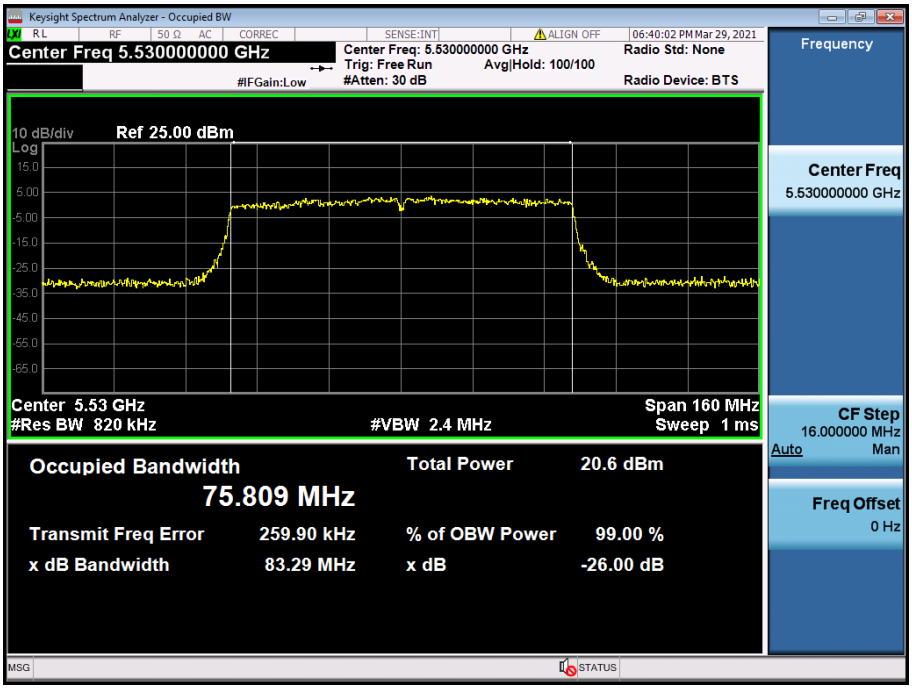
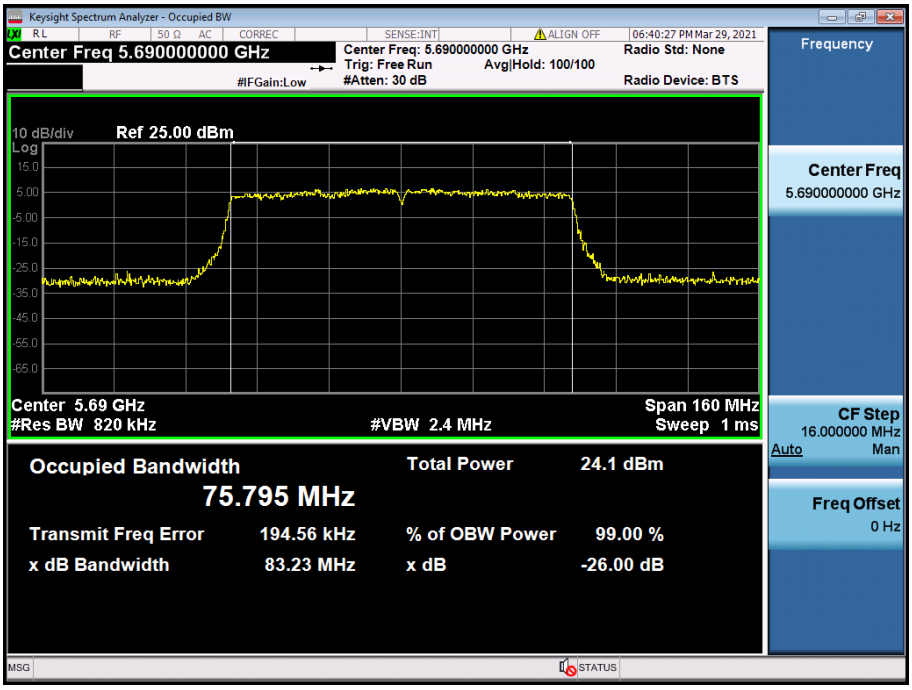
26 dB Bandwidth & Occupied BW

Test Mode: TM 4 & Ch.106



26 dB Bandwidth & Occupied BW

Test Mode: TM 4 & Ch.138



5.2 Minimum Emission Bandwidth (6 dB Bandwidth) & Occupied BW (99 %)

▣ Test Requirements

- Emission Bandwidth (6 dB Bandwidth)

Within the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

- Occupied BW (99 %)

When an occupied bandwidth value is not specified in the applicable RSS, the transmitted signal bandwidth to be reported is to be its 99 % emission bandwidth, as calculated or measured

▣ Test Configuration

Refer to the APPENDIX I.

▣ Test Procedure

- Emission Bandwidth (6 dB Bandwidth)

The transmitter output is connected to the Spectrum Analyzer and used following test procedure of **KDB789033 D02v02r01**.

1. Set resolution bandwidth (RBW) = 100 kHz
2. Set the video bandwidth **≥ 3 x RBW**.
3. Detector = **Peak**.
4. Trace mode = **max hold**.

   Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

- Occupied BW (99 %) : RSS-Gen[6.7]

1. The transmitter shall be operated at its maximum carrier power measured under normal test conditions.
2. The span of the analyzer shall be set to capture all products of the modulation process, including the emission skirts.
3. The resolution bandwidth (RBW) shall be in the range of 1 % to 5 % of the occupied bandwidth (OBW) and video bandwidth (VBW) shall be approximately 3 x RBW.

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▣ **Test Results: Comply**

Test Mode	Band	Channel	Frequency(MHz)	6 dB BW(MHz)	99 % BW(MHz)
TM 1	U-NII 3	149	5 745	14.44	16.56
		157	5 785	14.52	16.51
		165	5 825	15.85	16.51
TM 2	U-NII 3	149	5 745	15.70	17.65
		157	5 785	15.77	17.69
		165	5 825	16.33	17.69
TM 3	U-NII 3	151	5 755	35.31	36.25
		159	5 795	35.54	36.20
TM 4	U-NII 3	155	5 775	75.45	75.83

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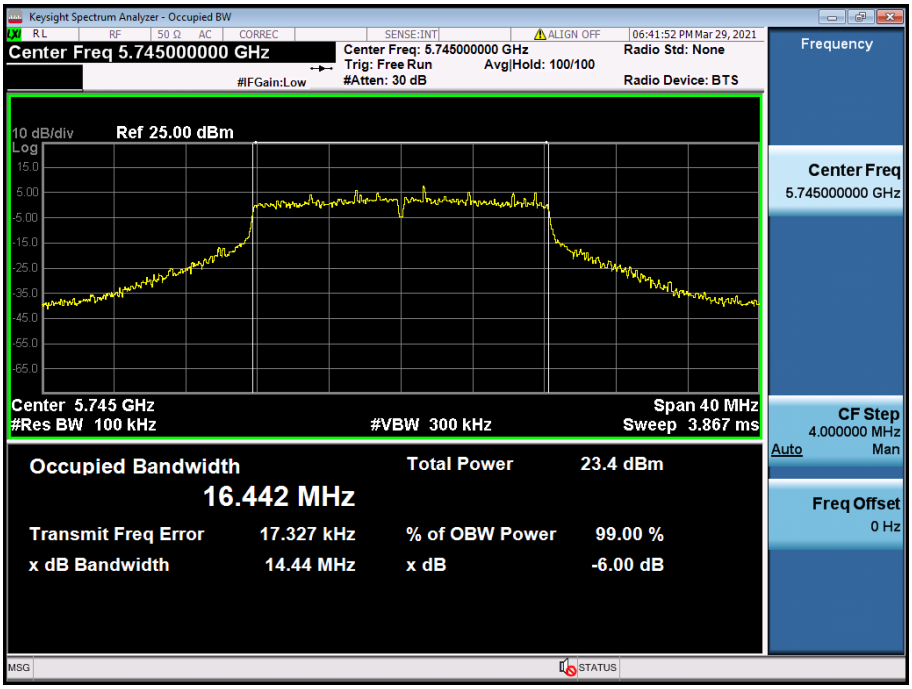
▣ Result Plots

6 dB Bandwidth

Test Mode: TM 1 & Ch.149



6 dB Bandwidth

Test Mode: TM 1 & Ch.157

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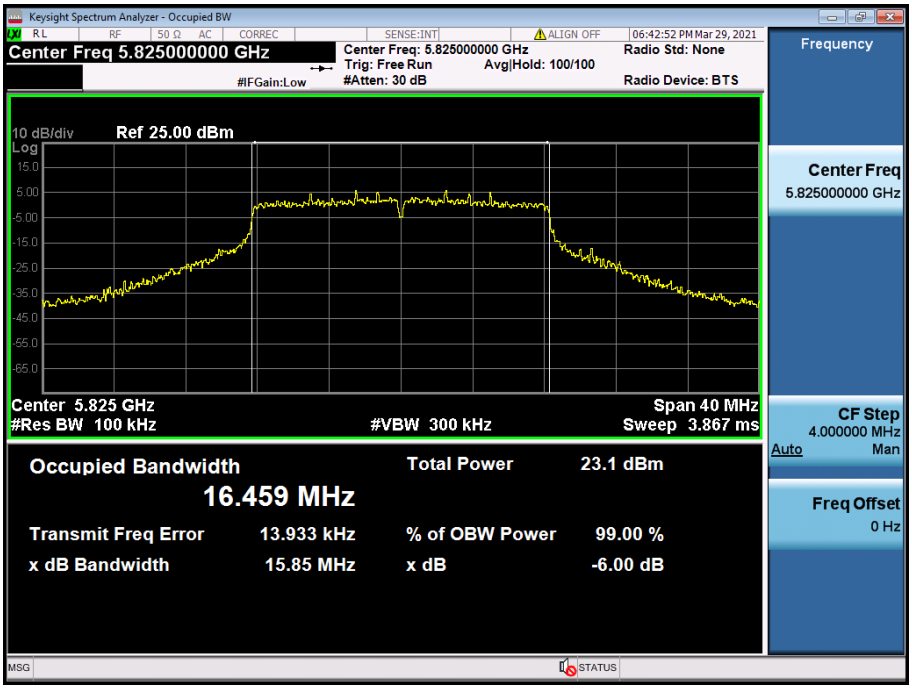
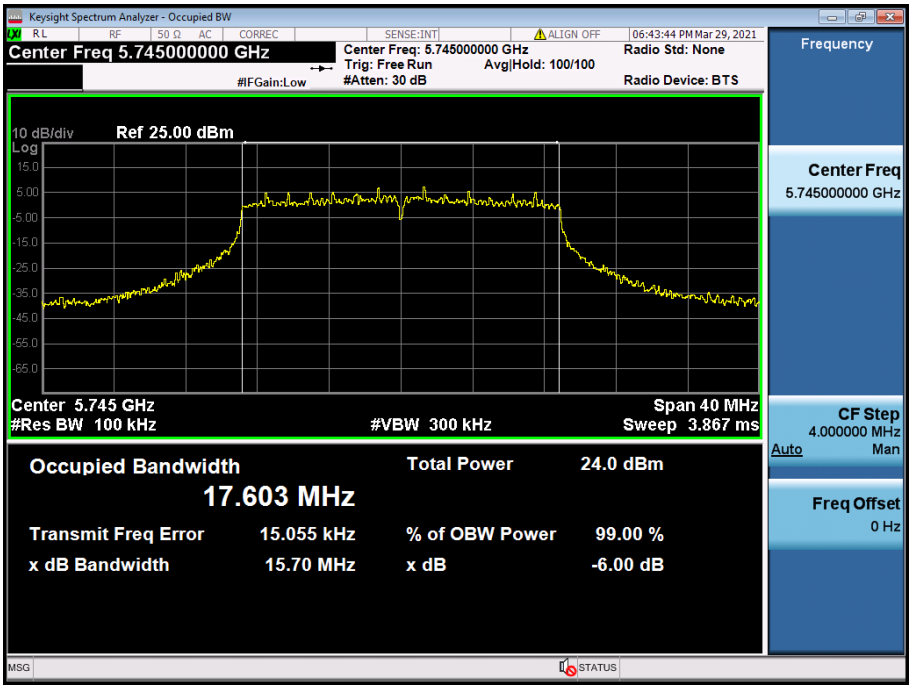
6 dB Bandwidth

Test Mode: TM 1 & Ch.165



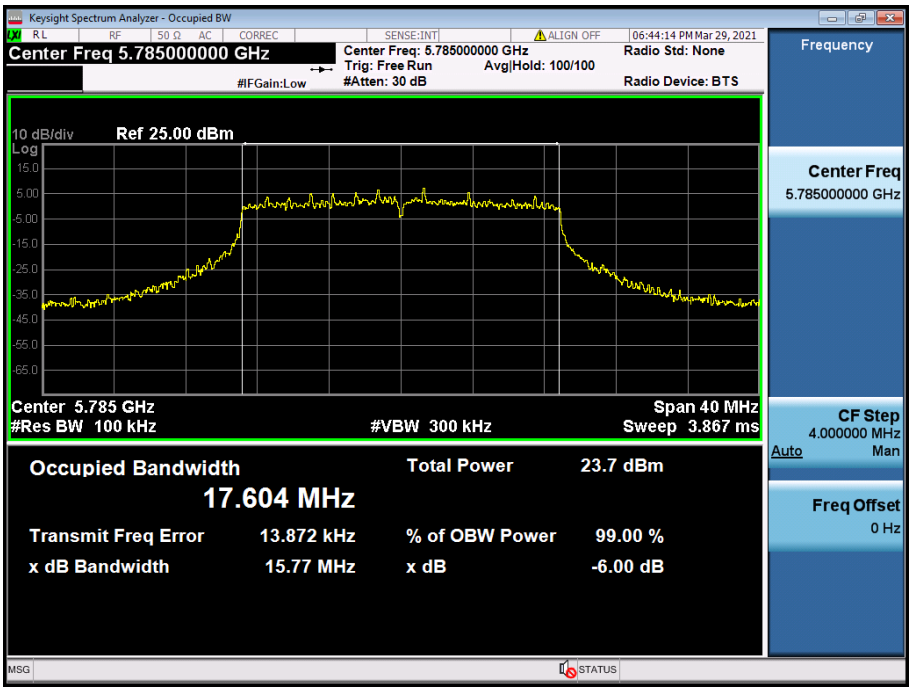
6 dB Bandwidth

Test Mode: TM 2 & Ch.149



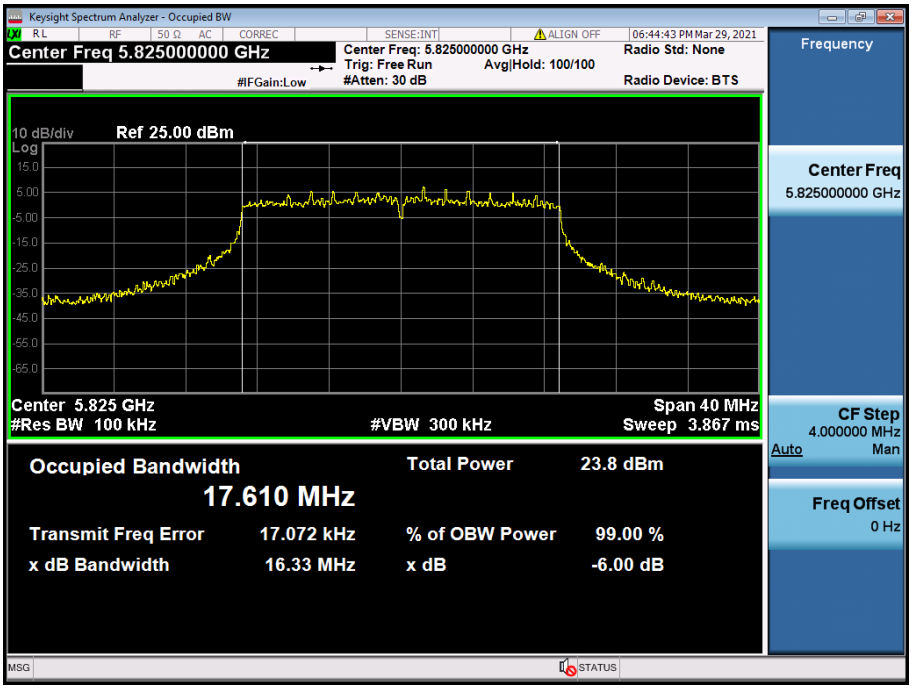
6 dB Bandwidth

Test Mode: TM 2 & Ch.157



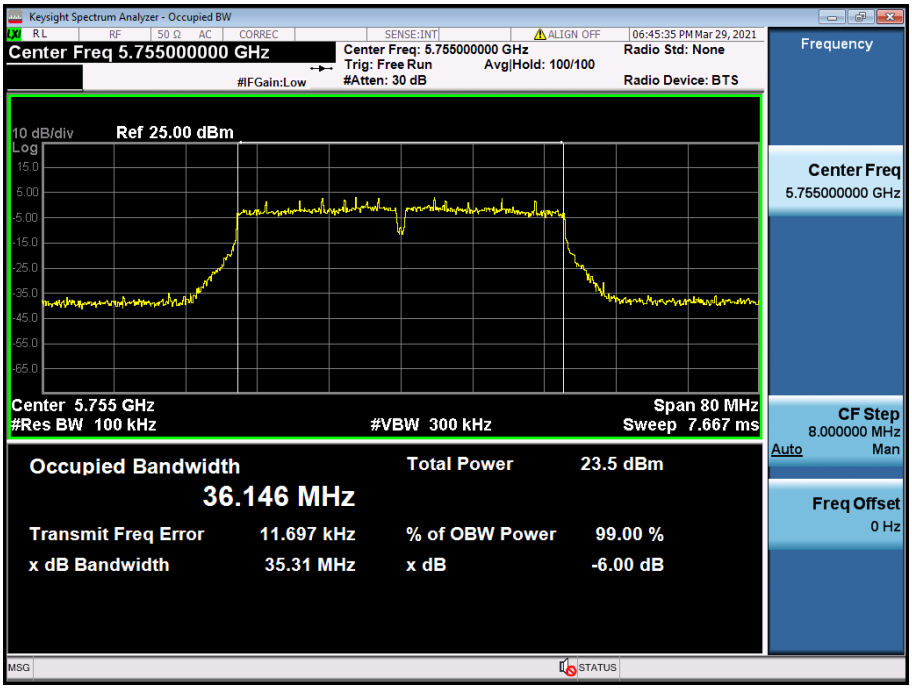
6 dB Bandwidth

Test Mode: TM 2 & Ch.165



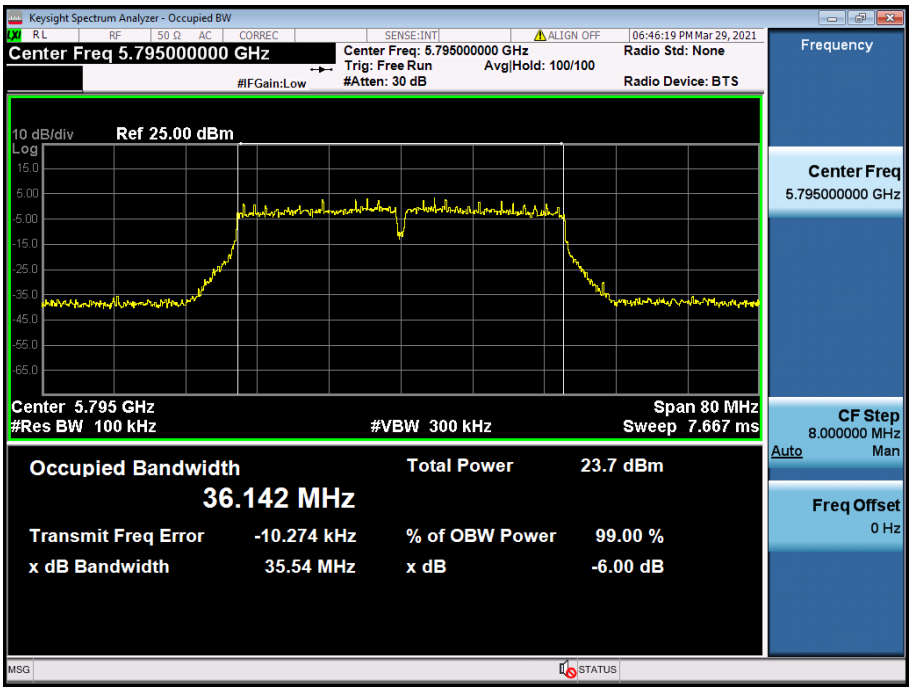
6 dB Bandwidth

Test Mode: TM 3 & Ch.151



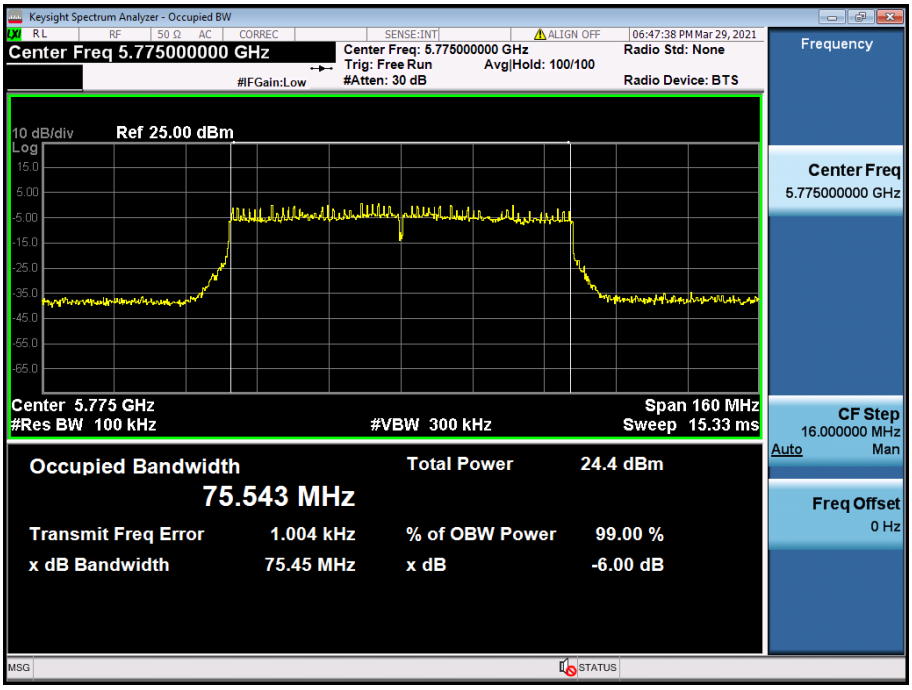
6 dB Bandwidth

Test Mode: TM 3 & Ch.159



6 dB Bandwidth

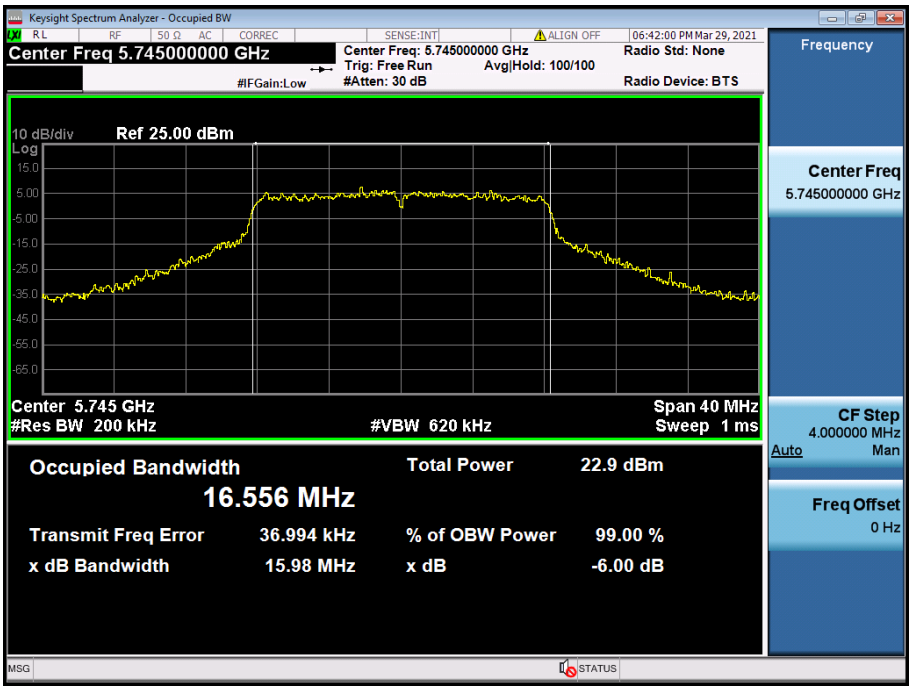
Test Mode: TM 4 & Ch.155



▣ Result Plots

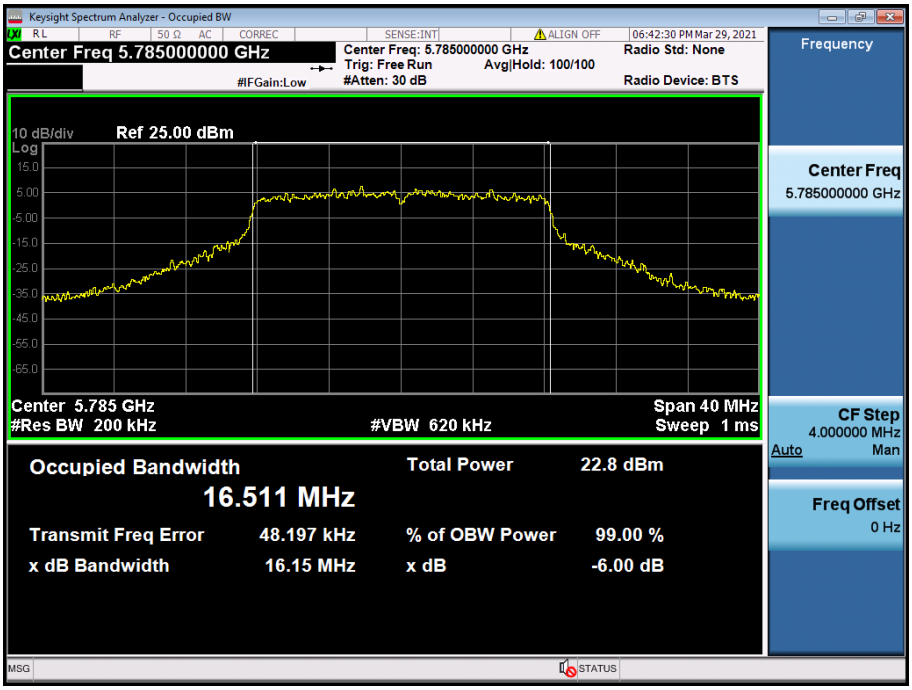
Occupied Bandwidth

Test Mode: TM 1 & Ch.149



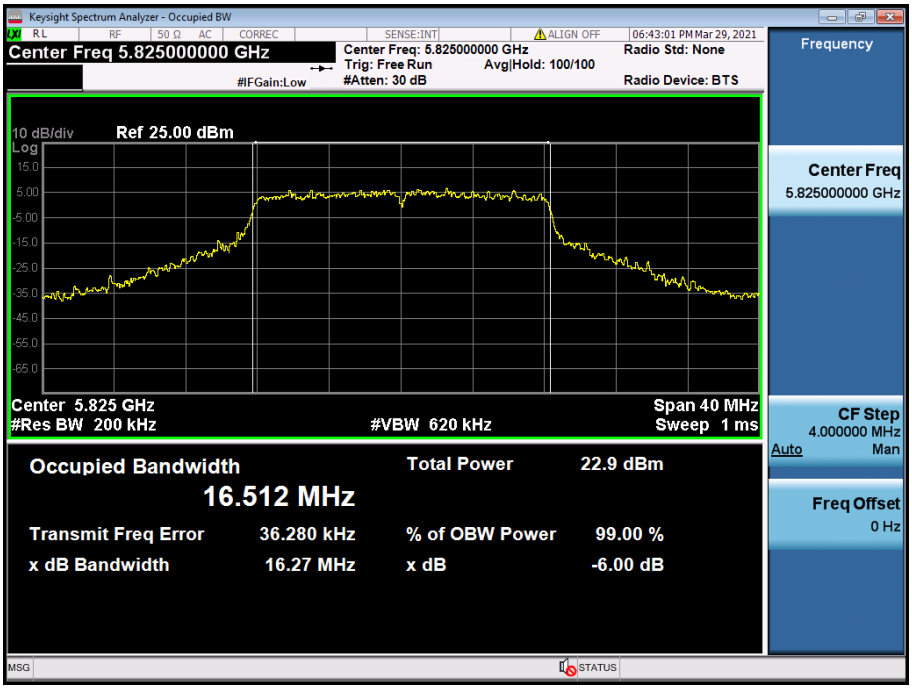
Occupied Bandwidth

Test Mode: TM 1 & Ch.157



Occupied Bandwidth

Test Mode: TM 1 & Ch.165



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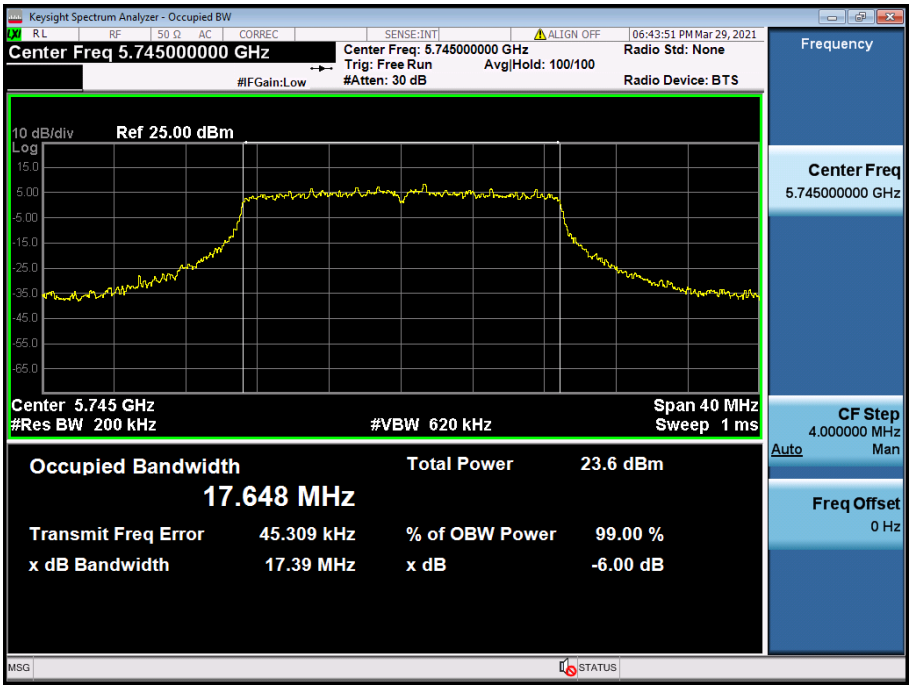
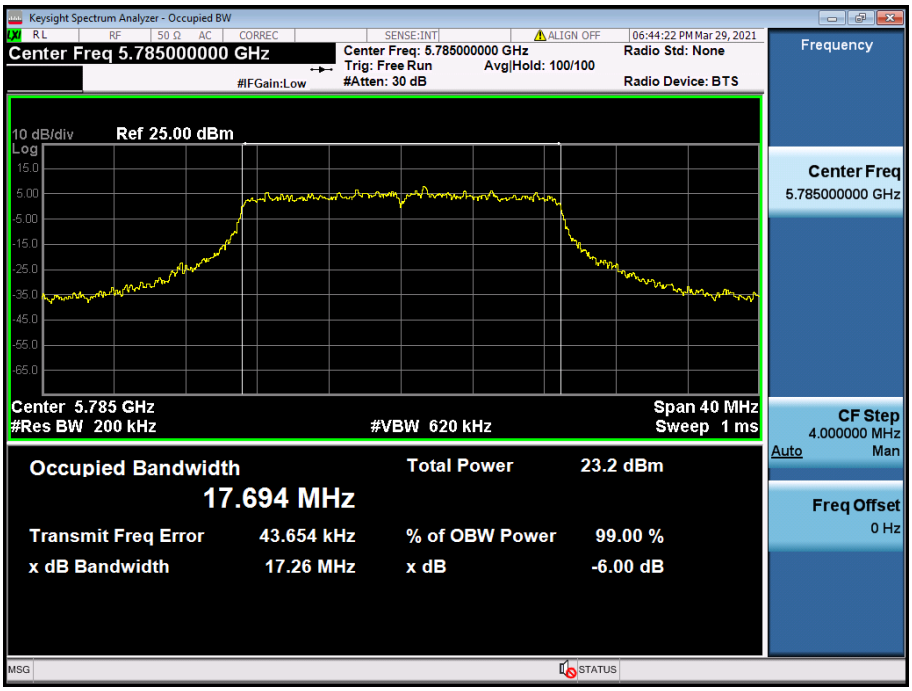
Occupied Bandwidth

Test Mode: TM 2 & Ch.149



Occupied Bandwidth

Test Mode: TM 2 & Ch.157



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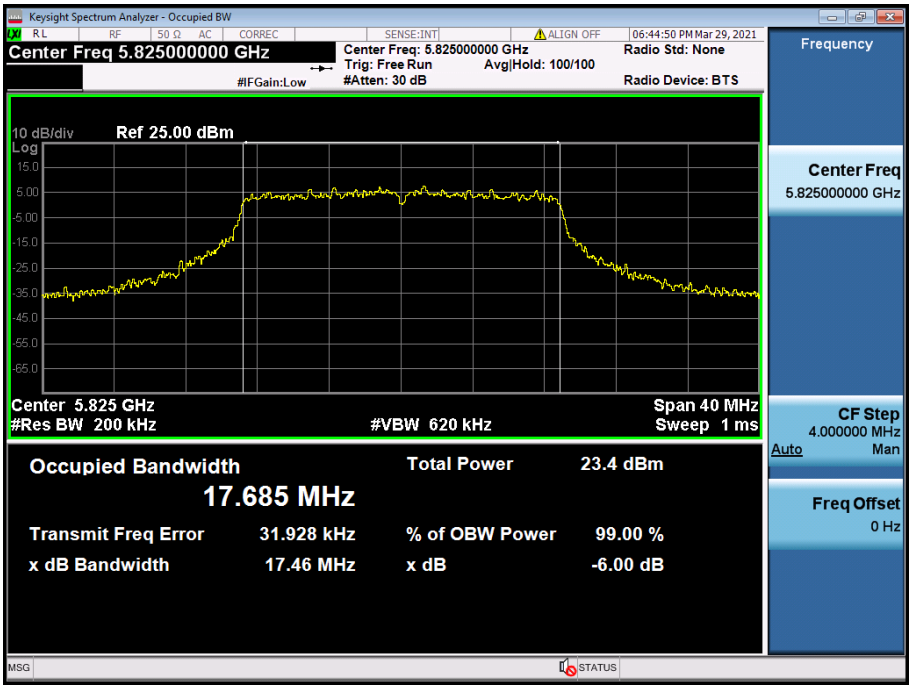
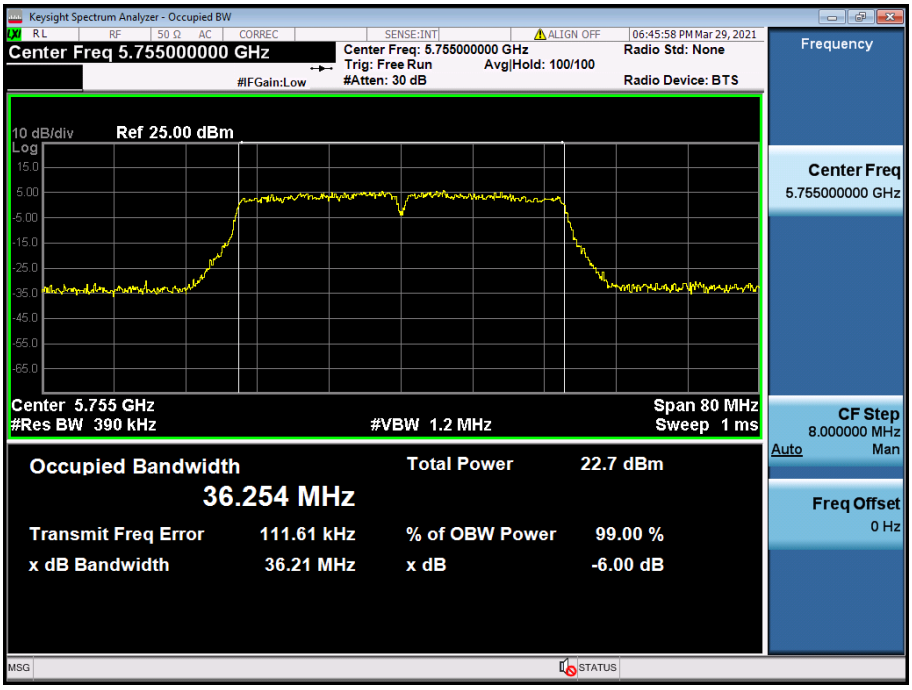
Occupied Bandwidth

Test Mode: TM 2 & Ch.165



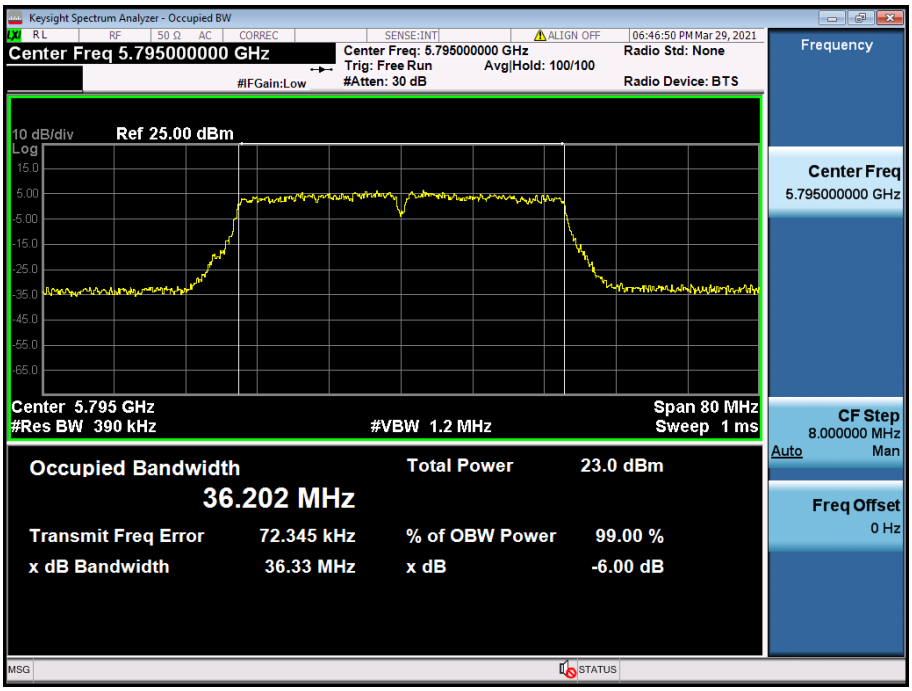
Occupied Bandwidth

Test Mode: TM 3 & Ch.151



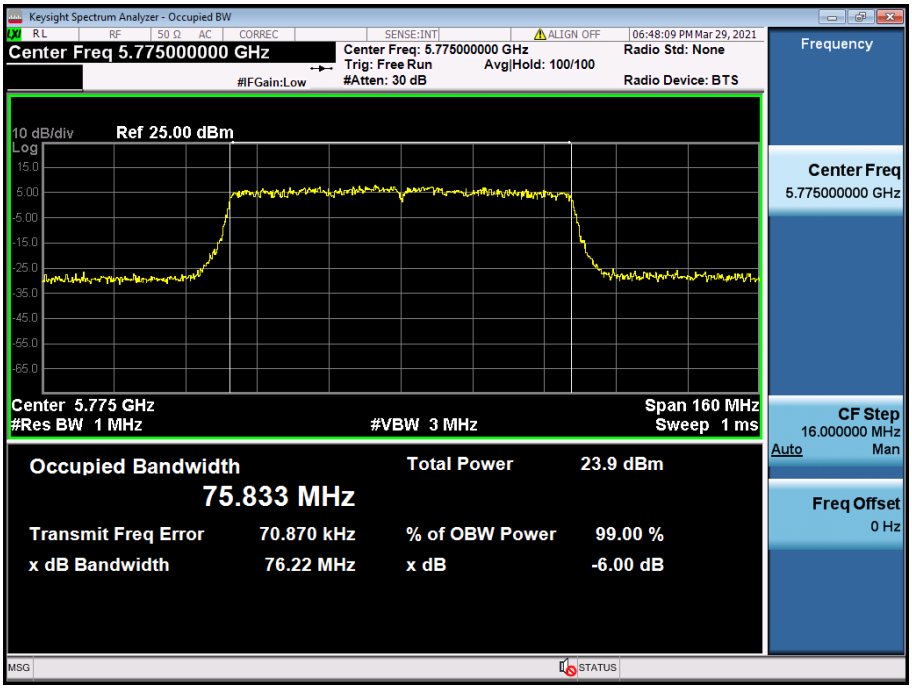
Occupied Bandwidth

Test Mode: TM 3 & Ch.159



Occupied Bandwidth

Test Mode: TM 4 & Ch.155



5.3 Maximum Conducted Output Power

▣ Test Requirements

Part. 15.407(a)

(1) For the band 5.15 GHz - 5.25 GHz.

(i) For an outdoor access point operating in the band 5.15 GHz - 5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).
(ii) For an indoor access point operating in the band 5.15 GHz - 5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
(iii) For fixed point-to-point access points operating in the band 5.15 GHz - 5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.
(iv) For mobile and portable client devices in the 5.15 GHz - 5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(2) **For the 5.25 GHz - 5.35 GHz and 5.47 GHz - 5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz.** If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(3) **For the band 5.725 GHz - 5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W**. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

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RSS-247[6.2]

(1) For band 5 150 MHz – 5 250 MHz

For OEM devices installed in vehicles, the maximum e.i.r.p. shall not exceed 30 mW or 1.76 + 10 log10B, dBm, whichever is less. Devices shall implement transmitter power control (TPC) in order to have the capability to operate at least 3 dB below the maximum permitted e.i.r.p. of 30 mW.
For other devices, the maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10B, dBm, whichever power is less. B is the 99 % emission bandwidth in megahertz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

(2) For band 5 250 MHz – 5 350 MHz

For OEM devices installed in vehicles, the maximum e.i.r.p. shall not exceed 30 mW or 1.76 + 10 log10B, dBm, whichever is less. Devices shall implement TPC in order to have the capability to operate at least 3 dB below the maximum permitted e.i.r.p. of 30 mW.
Devices, other than devices installed in vehicles, shall comply with the following:
a) The maximum conducted output power shall not exceed 250 mW or 11 + 10 log10B, dBm, whichever is less. The power spectral density shall not exceed 11 dBm in any 1.0 MHz band;
b) The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log10B, dBm, whichever is less. B is the 99 % emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

(3) For band 5 470 MHz – 5 600 MHz and 5 650 MHz – 5 725 MHz

The maximum conducted output power shall not exceed 250 mW or 11 + 10 log10B, dBm, whichever is less. The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.
The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log10B, dBm, whichever is less. B is the 99 % emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than
500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

(4) For band 5 725 MHz – 5 850 MHz

The maximum conducted output power shall not exceed 1 W. The output power spectral density shall not exceed 30 dBm in any 500 kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the output power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

▣ Test Configuration

Method PM-G

▣ Test Procedure

Method PM-G of KDB789033 D02v02r01

Measurements may be performed 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 the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

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▣ **Test Results: Comply**

Mode	Band	Channel	Frequency (MHz)	Conducted Output Power(dBm)	Antenna Gain(dBi)	e.i.r.p[Note1] (dBm)
802.11a	U-NII 1	36	5 180	16.67	0.96	17.63
		40	5 200	16.46	0.96	17.42
		48	5 240	16.38	0.96	17.34
	U-NII 2A	52	5 260	16.54	-0.31	16.23
		60	5 300	16.84	-0.31	16.53
		64	5 320	16.94	-0.31	16.63
	U-NII 2C	100	5 500	14.57	1.37	15.94
		116	5 580	16.72	1.37	18.09
		144	5 720	16.75	1.37	18.12
	U-NII 3	149	5 745	16.31	0.02	16.33
		157	5 785	16.41	0.02	16.43
		165	5 825	16.46	0.02	16.48
802.11n (HT20)	U-NII 1	36	5 180	16.86	0.96	17.82
		40	5 200	16.76	0.96	17.72
		48	5 240	16.73	0.96	17.69
	U-NII 2A	52	5 260	16.84	-0.31	16.53
		60	5 300	17.11	-0.31	16.80
		64	5 320	16.97	-0.31	16.66
	U-NII 2C	100	5 500	13.74	1.37	15.11
		116	5 580	16.75	1.37	18.12
		144	5 720	16.89	1.37	18.26
	U-NII 3	149	5 745	16.83	0.02	16.85
		157	5 785	16.57	0.02	16.59
		165	5 825	16.82	0.02	16.84
802.11ac (VHT20)	U-NII 1	36	5 180	16.83	0.96	17.79
		40	5 200	16.74	0.96	17.70
		48	5 240	16.72	0.96	17.68
	U-NII 2A	52	5 260	16.82	-0.31	16.51
		60	5 300	17.03	-0.31	16.72
		64	5 320	16.95	-0.31	16.64
	U-NII 2C	100	5 500	13.73	1.37	15.10
		116	5 580	16.72	1.37	18.09
		144	5 720	16.82	1.37	18.19
	U-NII 3	149	5 745	16.81	0.02	16.83
		157	5 785	16.61	0.02	16.63
		165	5 825	16.81	0.02	16.83

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Mode	Band	Channel	Frequency (MHz)	Conducted Output Power(dBm)	Antenna Gain(dBi)	e.i.r.p[Note1] (dBm)
802.11n (HT40)	U-NII 1	38	5 190	15.48	0.96	16.44
		46	5 230	16.41	0.96	17.37
	U-NII 2A	54	5 270	16.54	-0.31	16.23
		62	5 310	13.81	-0.31	13.50
	U-NII 2C	102	5 510	14.75	1.37	16.12
		110	5 550	16.33	1.37	17.70
		142	5 710	16.37	1.37	17.74
	U-NII 3	151	5 755	16.13	0.02	16.15
		159	5 795	16.47	0.02	16.49
802.11ac (VHT40)	U-NII 1	38	5 190	15.42	0.96	16.38
		46	5 230	16.39	0.96	17.35
	U-NII 2A	54	5 270	16.52	-0.31	16.21
		62	5 310	13.80	-0.31	13.49
	U-NII 2C	102	5 510	14.72	1.37	16.09
		110	5 550	16.25	1.37	17.62
		142	5 710	16.36	1.37	17.73
	U-NII 3	151	5 755	16.10	0.02	16.12
		159	5 795	16.44	0.02	16.46
802.11ac (VHT80)	U-NII 1	42	5 210	15.09	0.96	16.05
	U-NII 2A	58	5 290	12.64	-0.31	12.33
	U-NII 2C	106	5 530	13.19	1.37	14.56
		138	5 690	16.47	1.37	17.84
	U-NII 3	155	5 775	16.27	0.02	16.29

Note 1: e.i.r.p= Conducted Output Power + Antenna Gain

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5.4 Maximum Power Spectral Density

▣ Test requirements

Part. 15.407(a)

(1) For the band 5.15 GHz - 5.25 GHz.

(i) For an outdoor access point operating in the band 5.15 GHz - 5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 MHz band. note1

(ii) For an indoor access point operating in the band 5.15 GHz - 5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 MHz band. note1

(iii) For fixed point-to-point access points operating in the band 5.15 GHz - 5.25 GHz, transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi.

(iv) For mobile and portable client devices in the 5.15 GHz - 5.25 GHz band, the maximum power spectral density shall not exceed 11 dBm in any 1 MHz band. note1

(2) For the 5.25 GHz - 5.35 GHz and 5.47 GHz - 5.725 GHz bands, the peak power spectral density shall not exceed 11 dBm in any 1 MHz band. note1

(3) For the band 5.725 GHz - 5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500 kHz band.note1,note2

Note1: If transmitting antennas of directional gain greater than 6 dBi are used, the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Note2: Fixed point - to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information.

RSS-247[6.2]

(1) For band 5 150 MHz – 5 250 MHz

For OEM devices installed in vehicles, the maximum e.i.r.p. shall not exceed 30 mW or 1.76 + 10 log10B, dBm, whichever is less. Devices shall implement transmitter power control (TPC) in order to have the capability to operate at least 3 dB below the maximum permitted e.i.r.p. of 30 mW.
For other devices, the maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10B, dBm, whichever power is less. B is the 99 % emission bandwidth in megahertz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

(2) For band 5 250 MHz – 5 350 MHz

For OEM devices installed in vehicles, the maximum e.i.r.p. shall not exceed 30 mW or 1.76 + 10 log10B, dBm, whichever is less. Devices shall implement TPC in order to have the capability to operate at least 3 dB below the maximum permitted e.i.r.p. of 30 mW.
Devices, other than devices installed in vehicles, shall comply with the following:
a) The maximum conducted output power shall not exceed 250 mW or 11 + 10 log10B, dBm, whichever is less. The power spectral density shall not exceed 11 dBm in any 1.0 MHz band;
b) The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log10B, dBm, whichever is less. B is the 99 % emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

(3) For band 5 470 MHz – 5 600 MHz and 5 650 MHz – 5 725 MHz

The maximum conducted output power shall not exceed 250 mW or 11 + 10 log10B, dBm, whichever is less. The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.
The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log10B, dBm, whichever is less. B is the 99 % emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than
500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

(4) For band 5 725 MHz – 5 850 MHz

The maximum conducted output power shall not exceed 1 W. The output power spectral density shall not exceed 30 dBm in any 500 kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the output power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

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▣ Test Configuration

Refer to the APPENDIX I.

▣ Test Procedure

Maximum Power Spectral Density is measured using Measurement Procedure **of KDB789033 D02v02r01**

1) Create an average power spectrum for the EUT operating mode being tested by following the instructions in section II.E.2. for measuring maximum conducted output power using a spectrum analyzer or EMI receiver: select the appropriate test method (SA - 1, SA - 2, SA - 3, or alternatives to each) and apply it up to, but not including, the step labeled, “Compute power…”. (This procedure is required even if the maximum conducted output power measurement was performed using a power meter, method PM.)

2) Use the peak search function on the instrument to find the peak of the spectrum and record its value.

3) Make the following adjustments to the peak value of the spectrum, if applicable:

a) If Method SA - 2 or SA - 2 Alternative was used, add 10 log(1 / x), where x is the duty cycle, to the peak of the spectrum.

b) If Method SA - 3 Alternative was used and the linear mode was used in step II.E.2.g (viii), add 1 dB to the final result to compensate for the difference between linear averaging and power averaging.

4) The result is the Maximum PSD over 1 MHz reference bandwidth.

5) For devices operating in the bands 5.15 GHz - 5.25 GHz, 5.25 GHz - 5.35 GHz, and 5.47 GHz - 5.725 GHz, the above procedures make use of 1 MHz RBW to satisfy directly the 1 MHz reference bandwidth specified in §15.407(a)(5). For devices operating in the band 5.725 GHz - 5.85 GHz, the rules specify a measurement bandwidth of 500 kHz. Many spectrum analyzers do not have 500 kHz RBW, thus a narrower RBW may need to be used. The rules permit the use of a RBWs less than 1 MHz, or 500 kHz, “provided that the measured power is integrated over the full reference bandwidth” to show the total power over the specified measurement bandwidth (i.e., 1 MHz, or 500 kHz). If measurements are performed using a reduced resolution bandwidth (< 1 MHz, or < 500 kHz) and integrated over 1 MHz, or 500 kHz bandwidth, the following adjustments to the procedures apply:

a) Set RBW ≥ 1 / T, where T is defined in section II.B.1.a). (Refer to Appendix II)

b) Set VBW ≥ 3 RBW.

c) If measurement bandwidth of Maximum PSD is specified in 500 kHz, add 10 log(500 kHz / RBW) to the measured result, whereas RBW (< 500 kHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement.

d) If measurement bandwidth of Maximum PSD is specified in 1 MHz, add 10 log(1 MHz / RBW) to the measured result, whereas RBW (< 1 MHz) is the reduced resolution bandwidth of spectrum analyzer set during measurement.

e) Care must be taken to ensure that the measurements are performed during a period of continuous transmission or are corrected upward for duty cycle.

Note: As a practical matter, it is recommended to use reduced RBW of 100 kHz for the sections 5.c) and 5.d) above, since RBW = 100 kHz is available on nearly all spectrum analyzers.

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▣ **Test Results: Comply**

Test Mode	Band	Channel	Frequency (MHz)	Reading (dBm)	TF Note 1 (dB)	Power Spectral Density(dBm)	Antenna Gain(dBi)	e.i.r.p Spectral Density (dBm)
TM 1	U-NII 1	36	5 180	6.32	0.11	6.43	0.96	7.39
		40	5 200	6.38	0.11	6.49	0.96	7.45
		48	5 240	6.33	0.11	6.44	0.96	7.40
	U-NII 2A	52	5 260	6.47	0.11	6.58	-0.31	6.27
		60	5 300	6.42	0.11	6.53	-0.31	6.22
		64	5 320	6.43	0.11	6.54	-0.31	6.23
	U-NII 2C	100	5 500	4.38	0.11	4.49	1.37	5.86
		116	5 580	7.08	0.11	7.19	1.37	8.56
		144	5 720	7.22	0.11	7.33	1.37	8.70
	U-NII 3	149	5 745	-2.42	7.10	4.68	0.02	4.70
		157	5 785	-2.43	7.10	4.67	0.02	4.69
		165	5 825	-2.58	7.10	4.52	0.02	4.54
TM 2	U-NII 1	36	5 180	6.66	0.27	6.93	0.96	7.89
		40	5 200	6.69	0.27	6.96	0.96	7.92
		48	5 240	6.72	0.27	6.99	0.96	7.95
	U-NII 2A	52	5 260	6.70	0.27	6.97	-0.31	6.66
		60	5 300	6.66	0.27	6.93	-0.31	6.62
		64	5 320	6.45	0.27	6.72	-0.31	6.41
	U-NII 2C	100	5 500	3.16	0.27	3.43	1.37	4.80
		116	5 580	6.88	0.27	7.15	1.37	8.52
		144	5 720	6.78	0.27	7.05	1.37	8.42
	U-NII 3	149	5 745	-2.23	7.26	5.03	0.02	5.05
		157	5 785	-2.06	7.26	5.20	0.02	5.22
		165	5 825	-2.36	7.26	4.90	0.02	4.92
TM 3	U-NII 1	38	5 190	2.00	0.21	2.21	0.96	3.17
		46	5 230	3.01	0.21	3.22	0.96	4.18
	U-NII 2A	54	5 270	3.01	0.21	3.22	-0.31	2.91
		62	5 310	-0.03	0.21	0.18	-0.31	-0.13
	U-NII 2C	102	5 510	0.97	0.21	1.18	1.37	2.55
		110	5 550	2.87	0.21	3.08	1.37	4.45
		142	5 710	3.20	0.21	3.41	1.37	4.78
	U-NII 3	151	5 755	-5.70	7.20	1.50	0.02	1.52
		159	5 795	-5.78	7.20	1.42	0.02	1.44
TM 4	U-NII 1	42	5 210	-1.83	0.39	-1.44	0.96	-0.48
	U-NII 2A	58	5 290	-4.68	0.39	-4.29	-0.31	-4.60
	U-NII 2C	106	5 530	-3.47	0.39	-3.08	1.37	-1.71
		138	5 690	0.04	0.39	0.43	1.37	1.80
	U-NII 3	155	5 775	-8.56	7.38	-1.18	0.02	-1.16

Note 1: Power Spectral Density = Reading(Measurement Data) + TF
Note 2: e.i.r.p Spectral Density= Power spectral density + EUT Antenna Gain
Note 3: "U-NII 1, 2A, 2C [TF] = DCCF"
"U-NII 3 [TF] = 10*LOG(500 kHz/100 kHz) + DCCF"
Where, TF = Total Factor, DCCF = Duty Cycle Correction Factor
For DCCF(Duty Cycle Correction Factor) please refer to appendix II.

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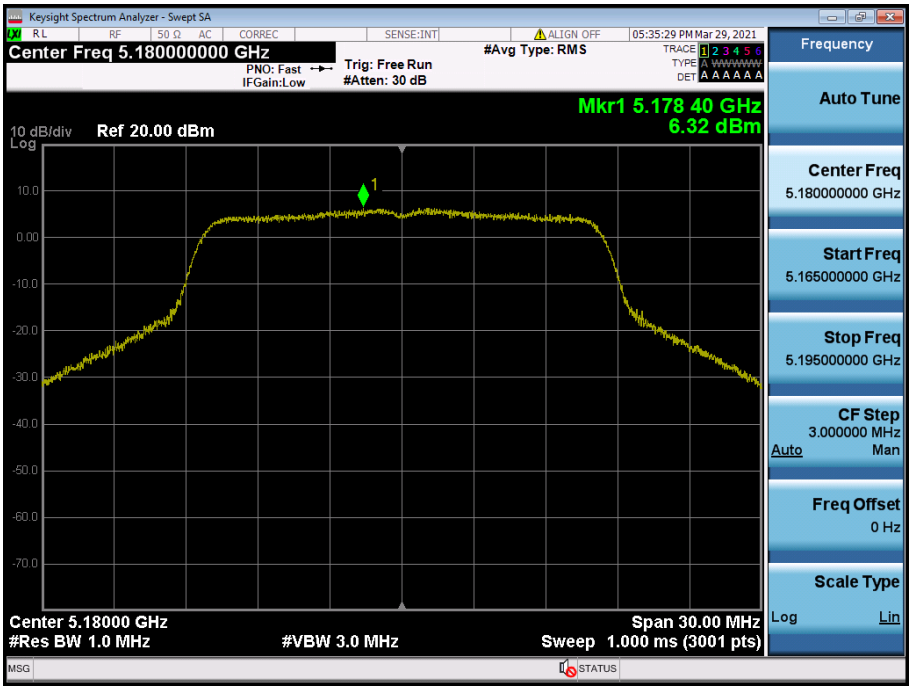
▣ RESULT PLOTS

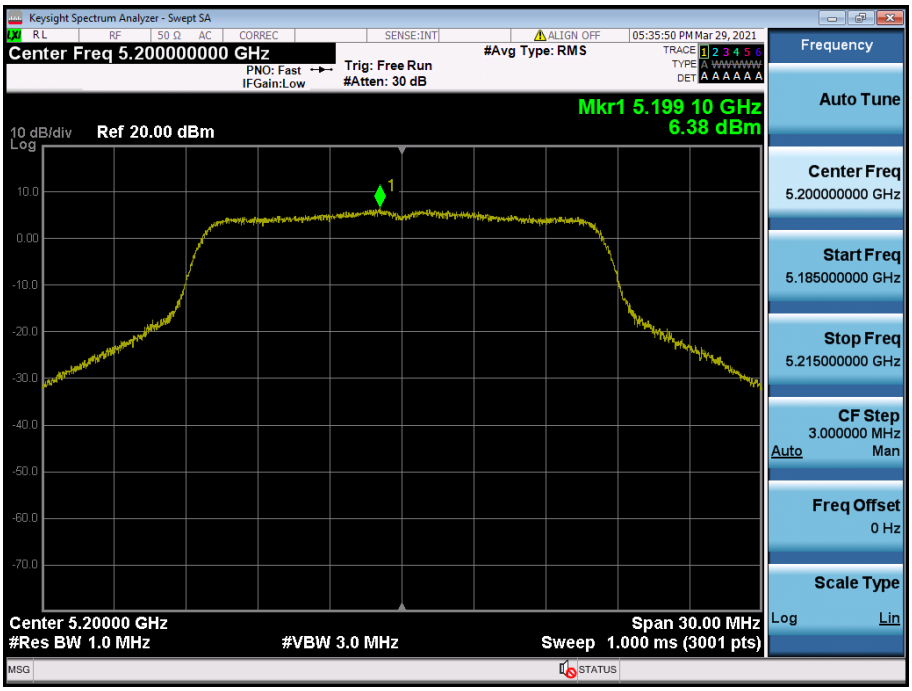
Maximum Power Spectral Density

Test Mode: TM 1 & Ch.36



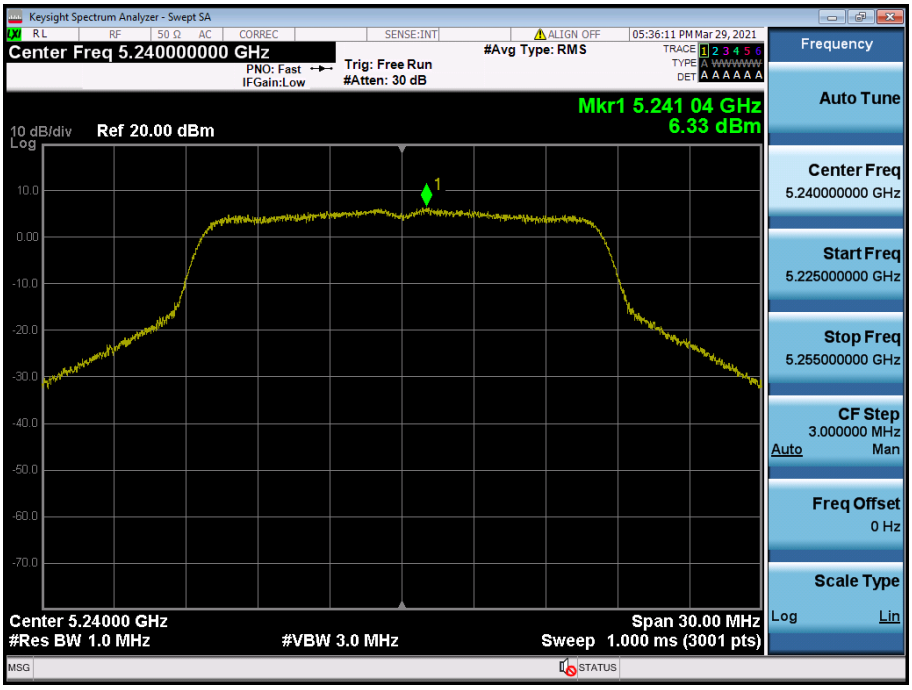
Maximum Power Spectral Density

Test Mode: TM 1 & Ch.40



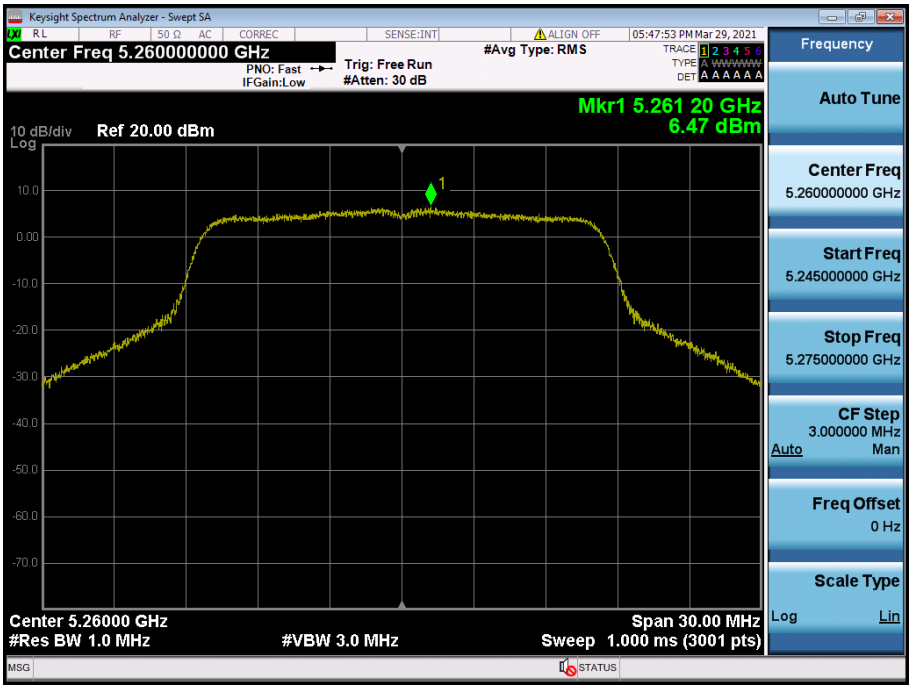
Maximum Power Spectral Density

Test Mode: TM 1 & Ch.48



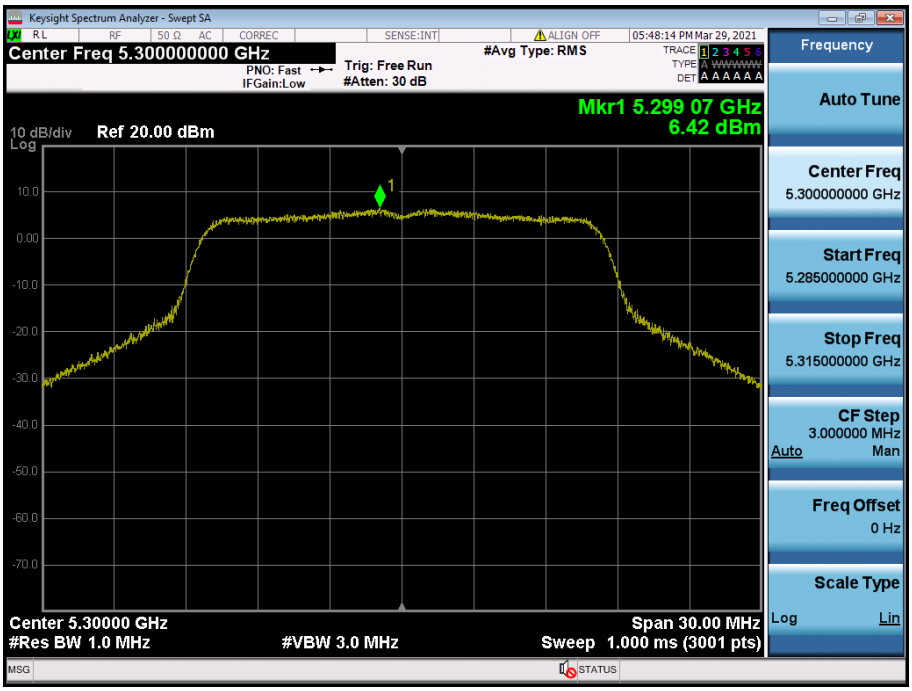
Maximum Power Spectral Density

Test Mode: TM 1 & Ch.52



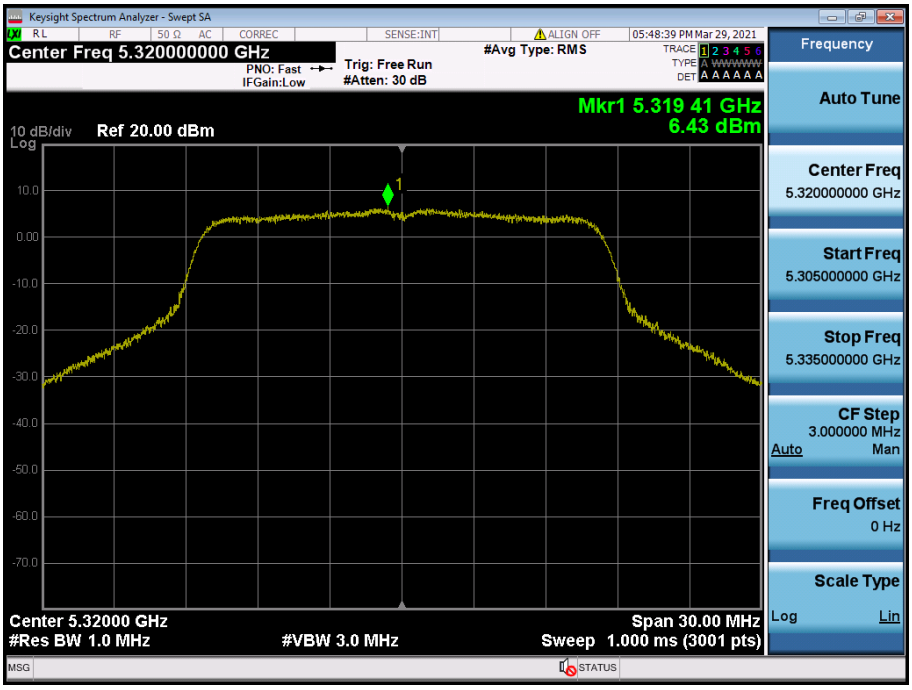
Maximum Power Spectral Density

Test Mode: TM 1 & Ch.60



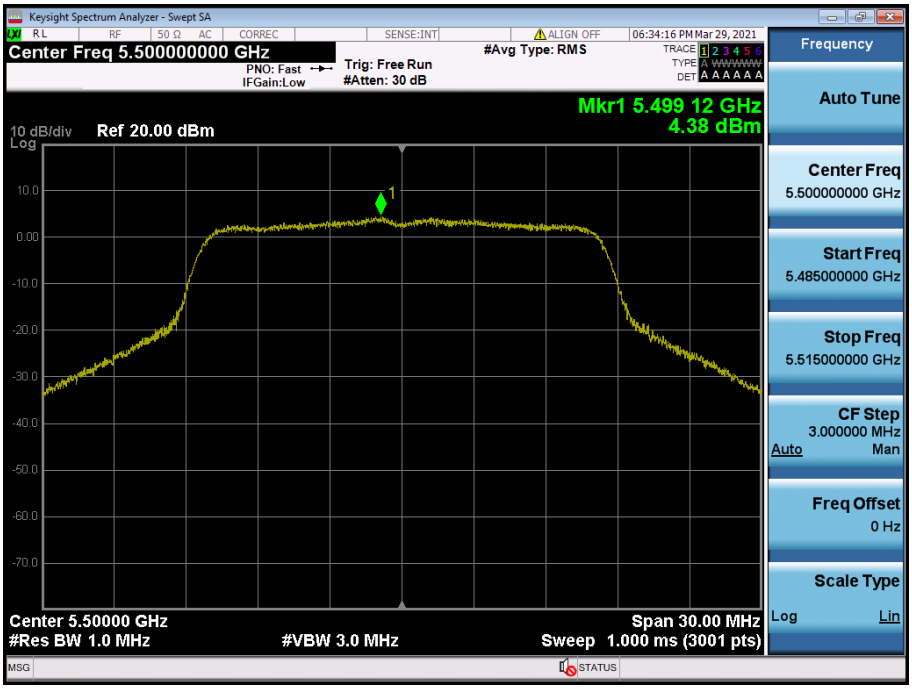
Maximum Power Spectral Density

Test Mode: TM 1 & Ch.64



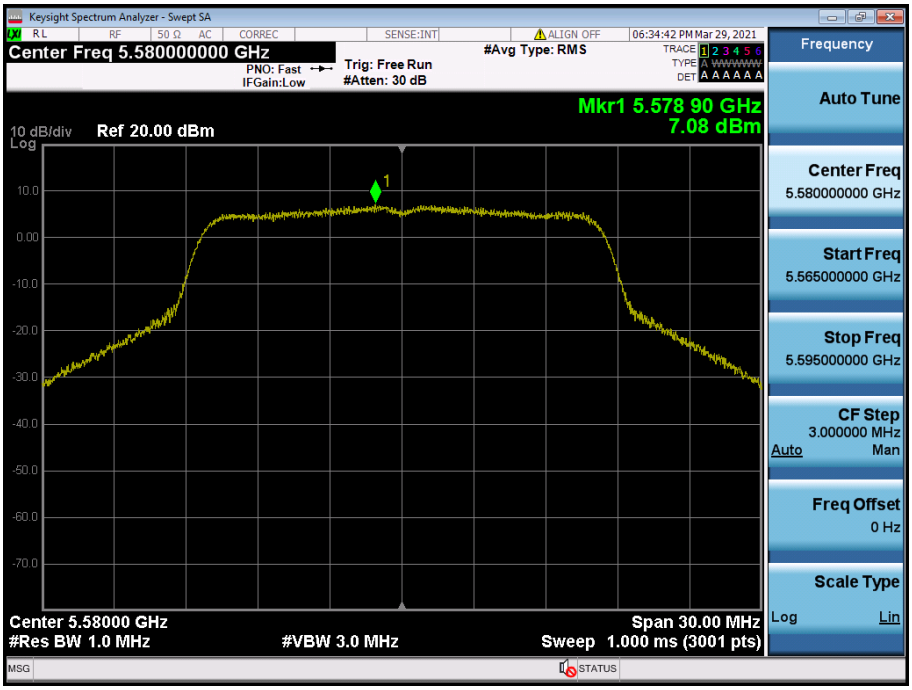
Maximum Power Spectral Density

Test Mode: TM 1 & Ch.100



Maximum Power Spectral Density

Test Mode: TM 1 & Ch.116



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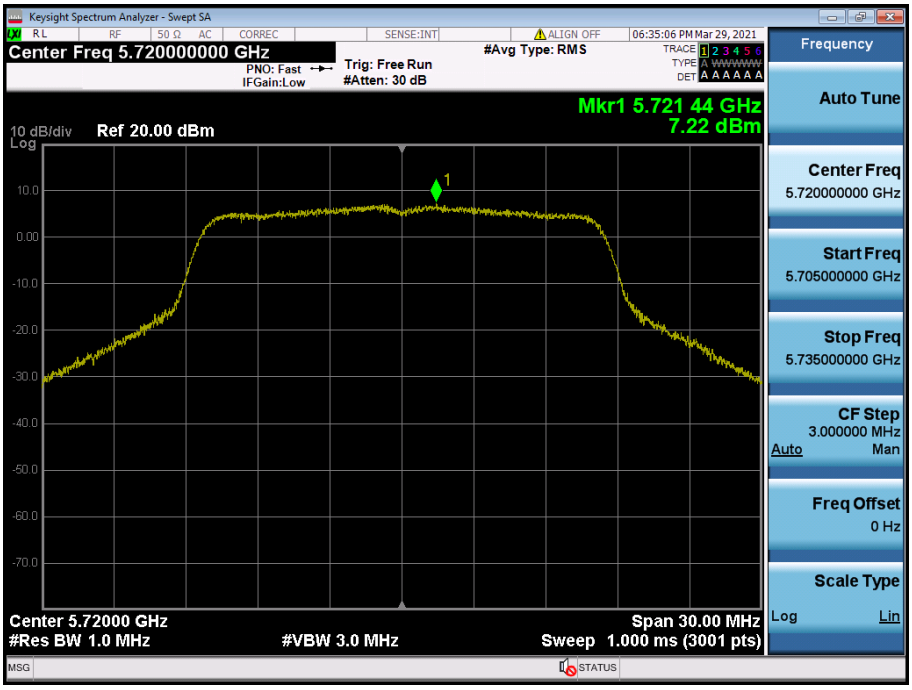
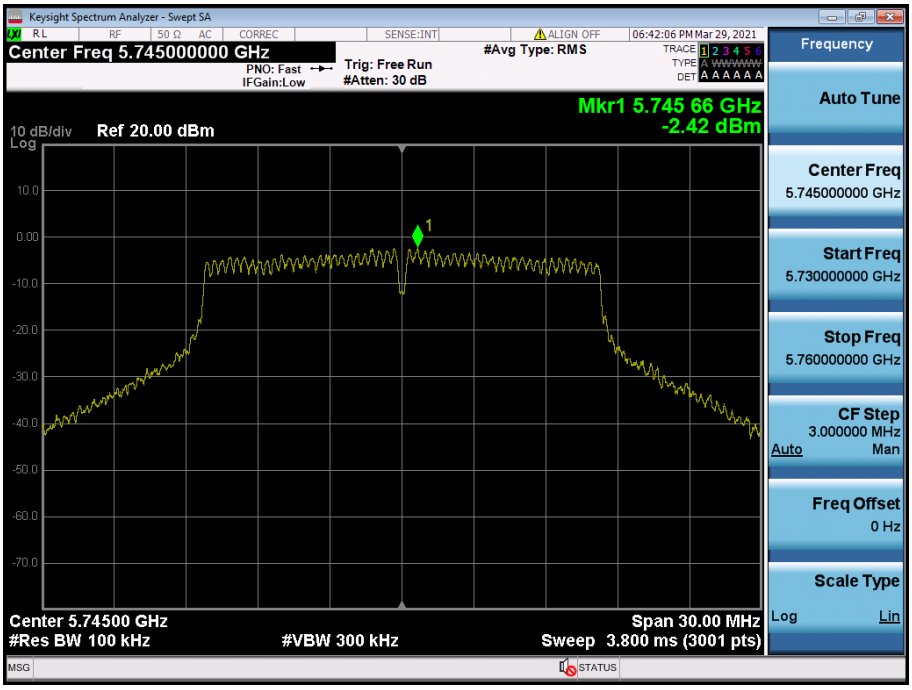
Maximum Power Spectral Density Test Mode: TM 1 & Ch.144



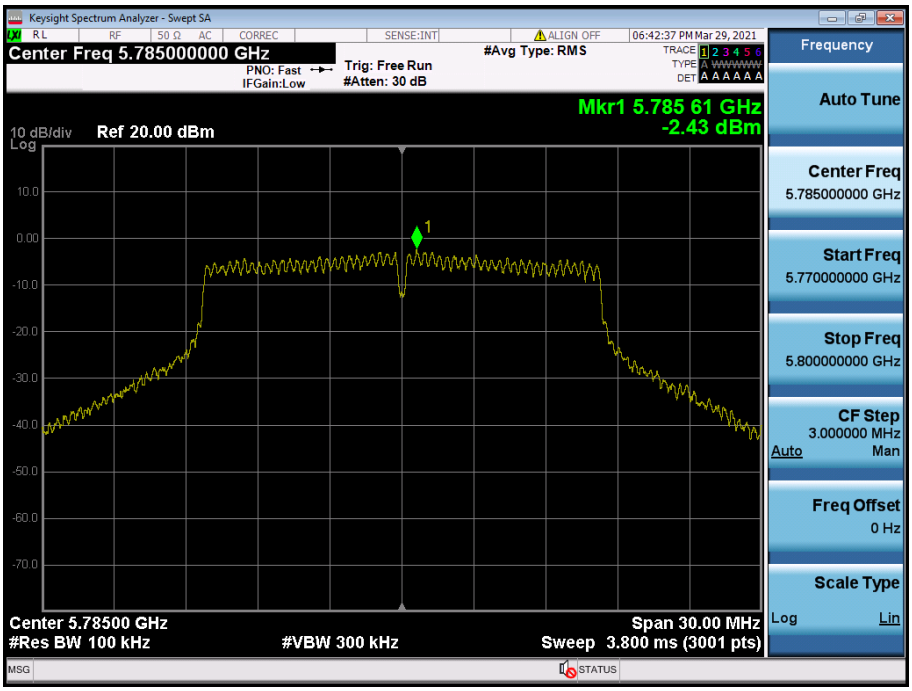
Maximum Power Spectral Density

Test Mode: TM 1 & Ch.149



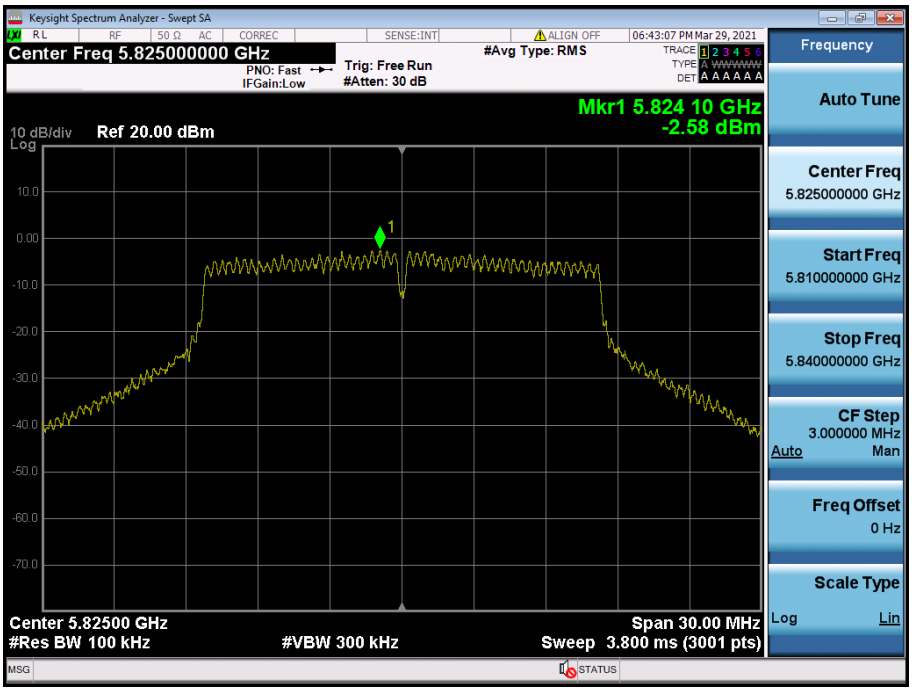
Maximum Power Spectral Density

Test Mode: TM 1 & Ch.157



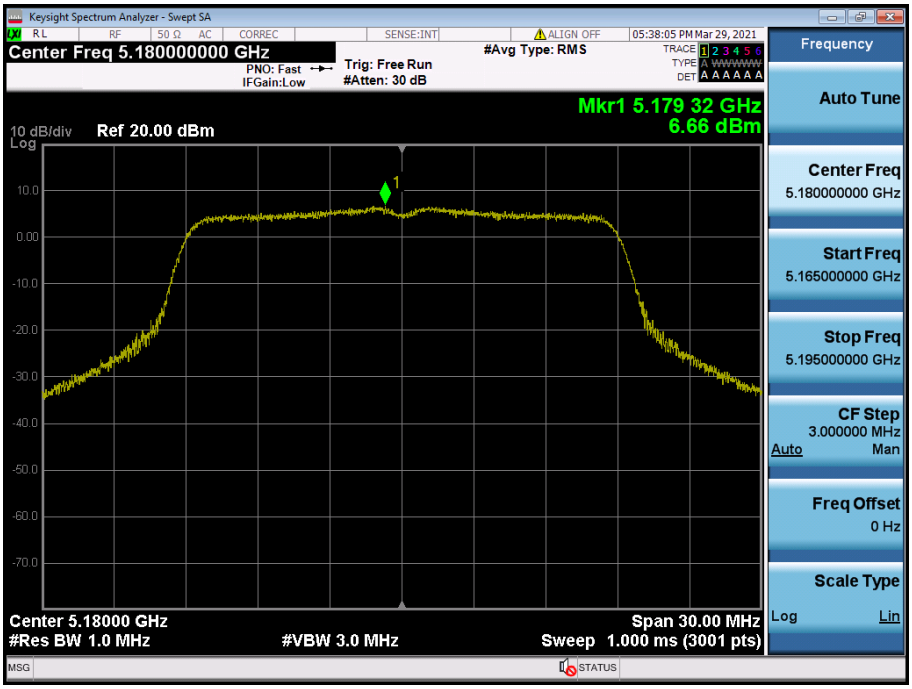
Maximum Power Spectral Density

Test Mode: TM 1 & Ch.165



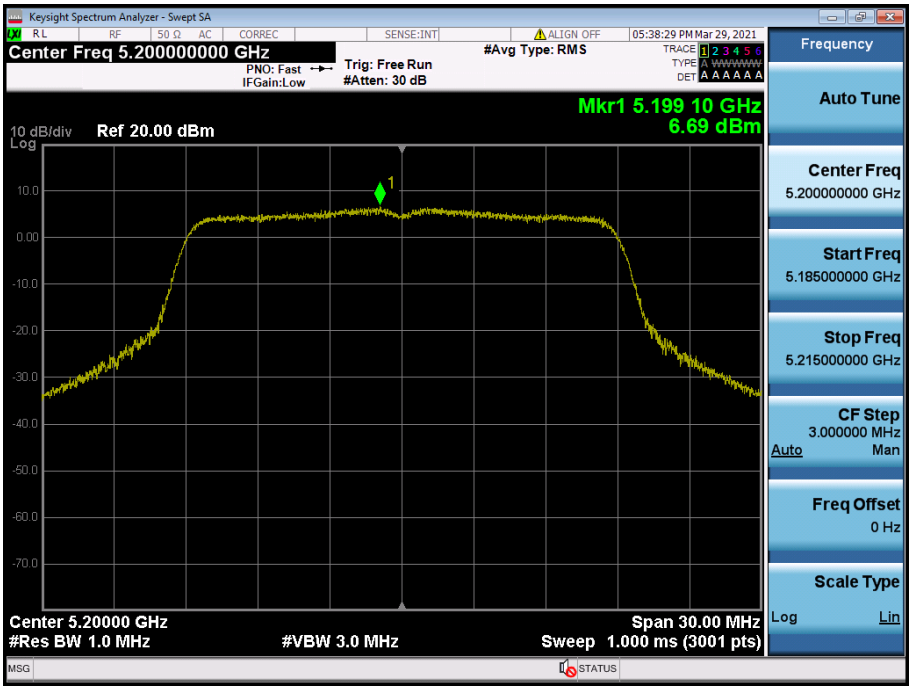
Maximum Power Spectral Density

Test Mode: TM 2 & Ch.36



Maximum Power Spectral Density

Test Mode: TM 2 & Ch.40



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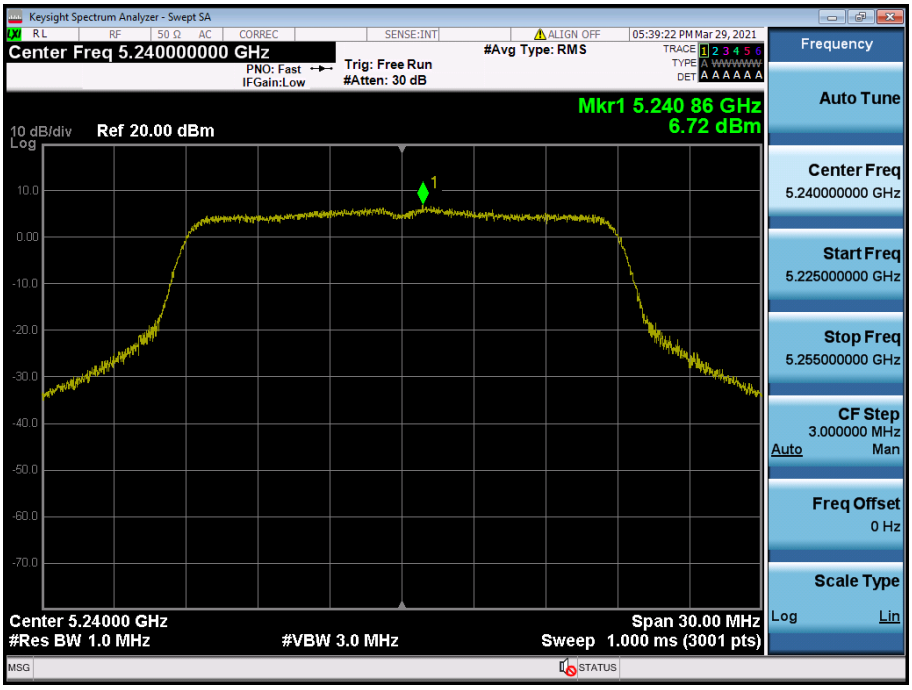
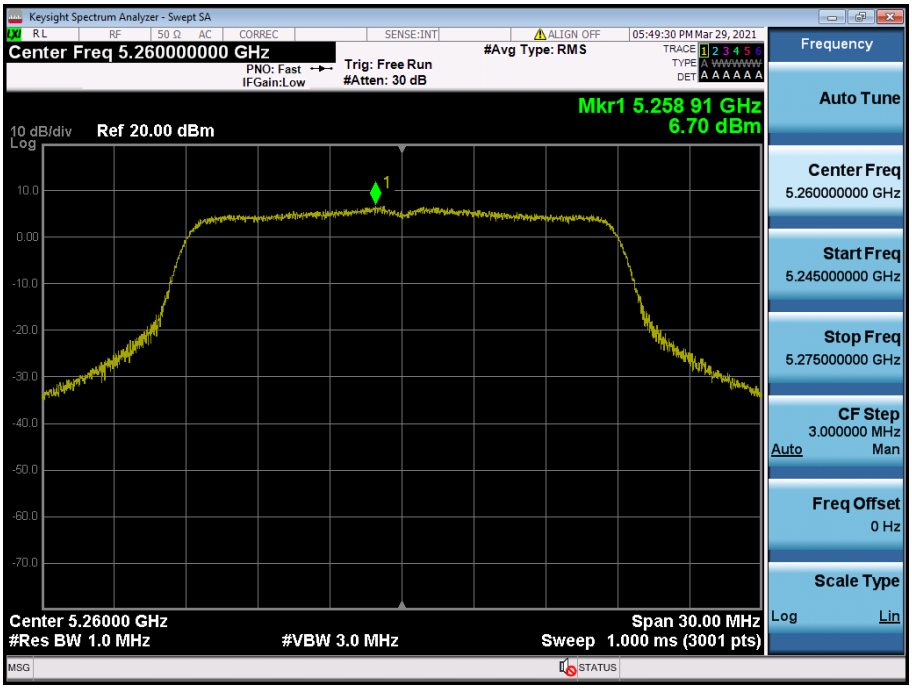
Maximum Power Spectral Density Test Mode: TM 2 & Ch.48



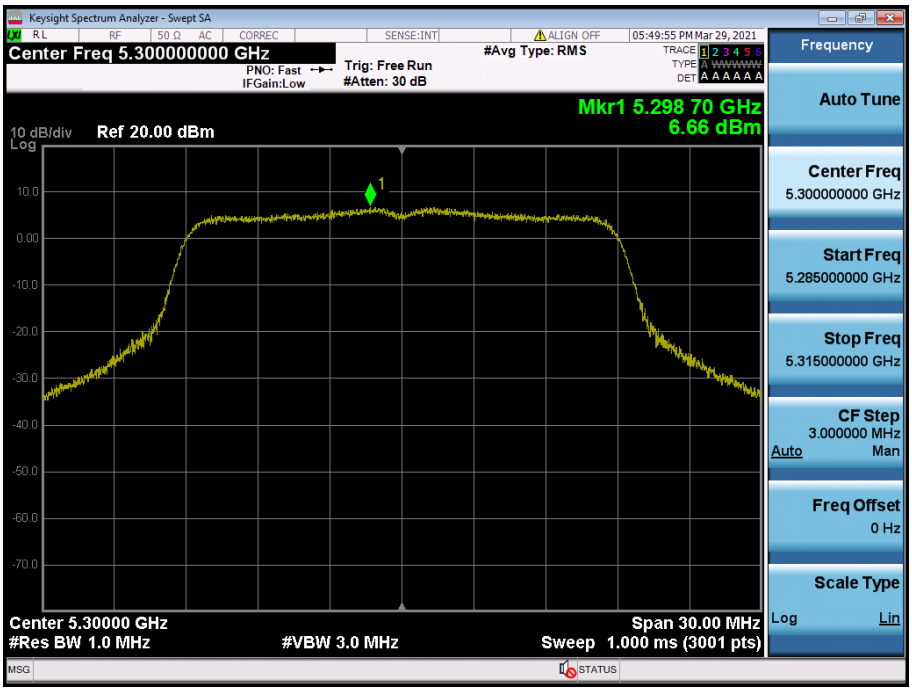
Maximum Power Spectral Density

Test Mode: TM 2 & Ch.52

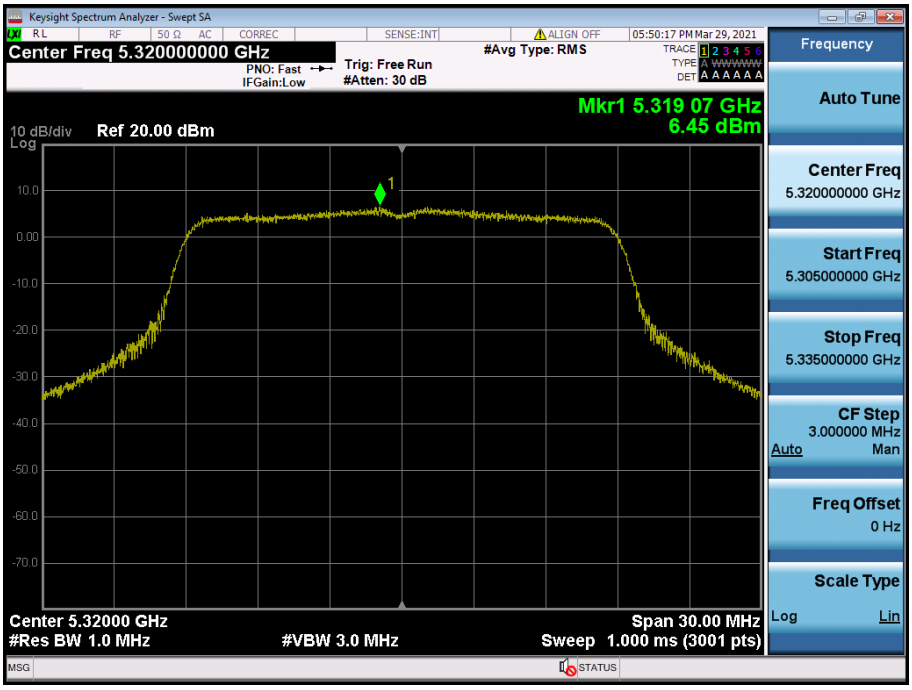


Maximum Power Spectral Density

Test Mode: TM 2 & Ch.60

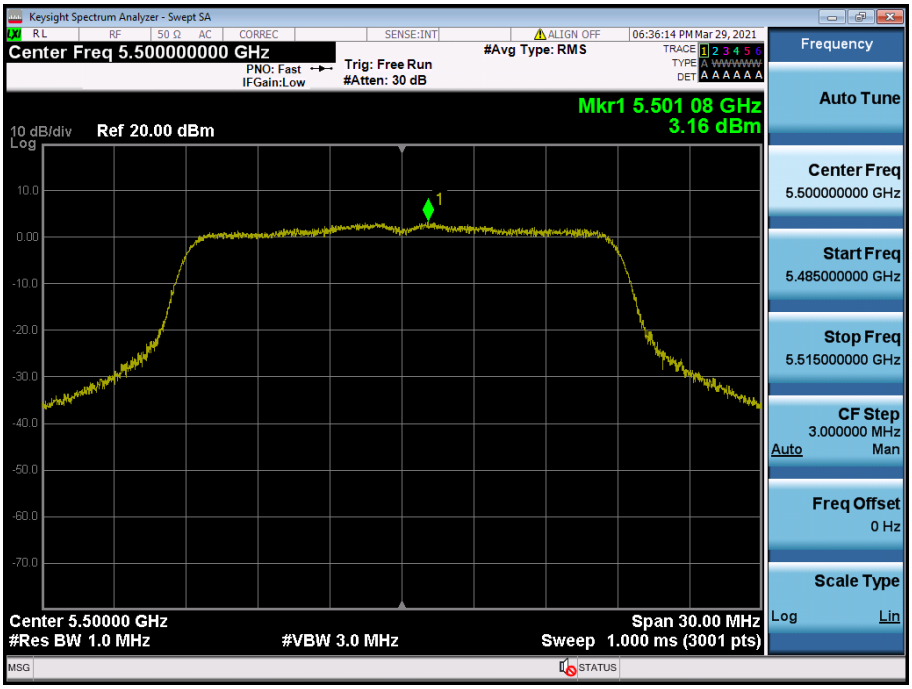


Maximum Power Spectral Density Test Mode: TM 2 & Ch.64



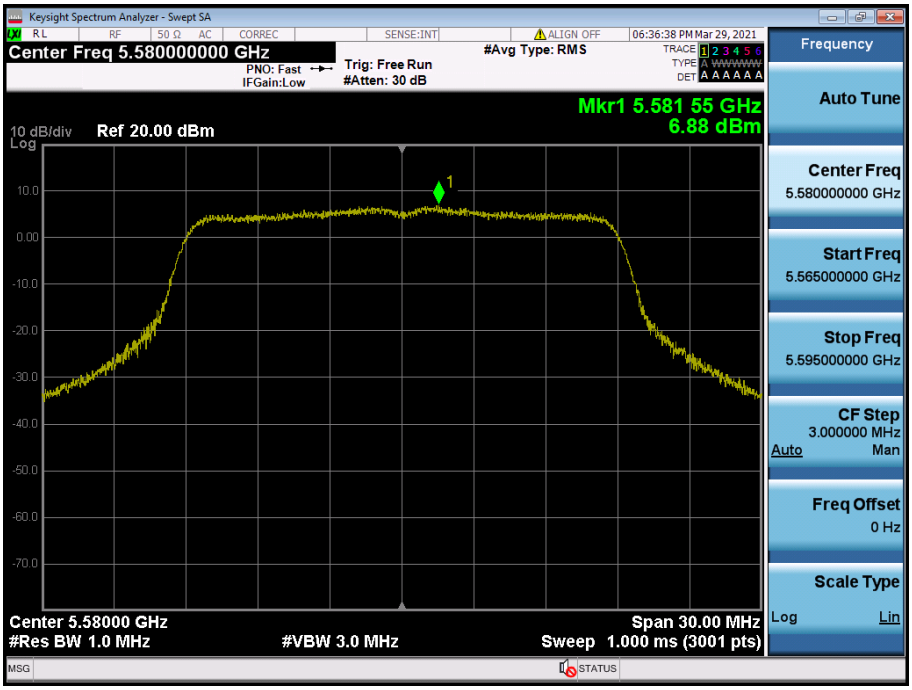
Maximum Power Spectral Density

Test Mode: TM 2 & Ch.100

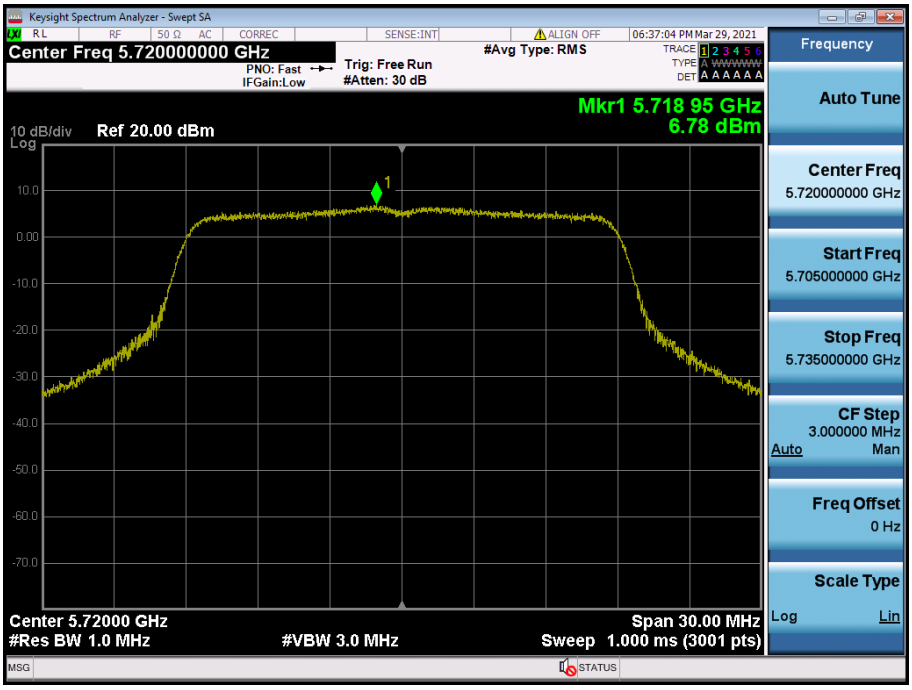


Maximum Power Spectral Density

Test Mode: TM 2 & Ch.116

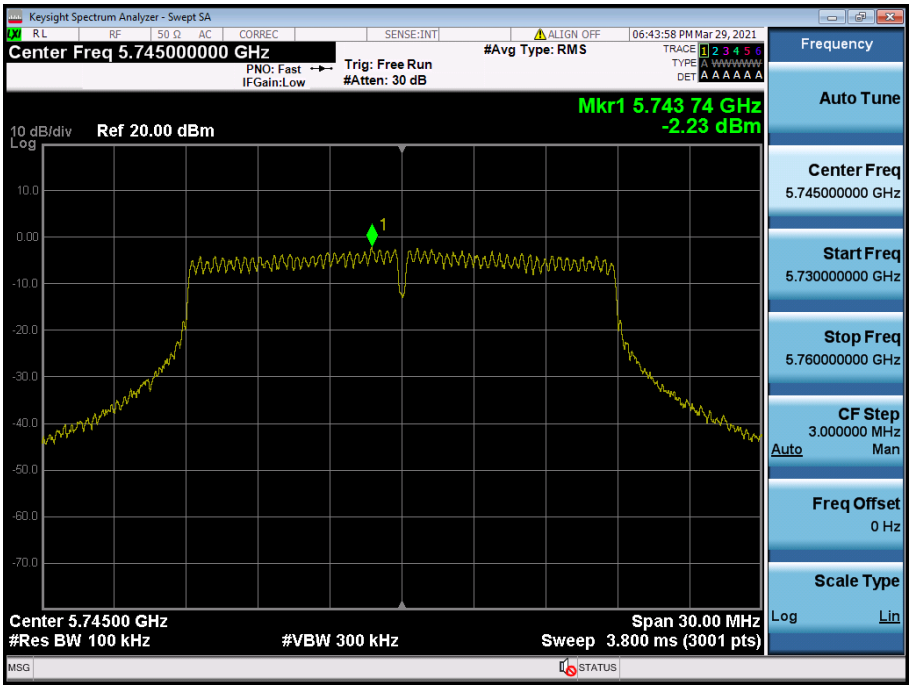


Maximum Power Spectral Density Test Mode: TM 2 & Ch.144



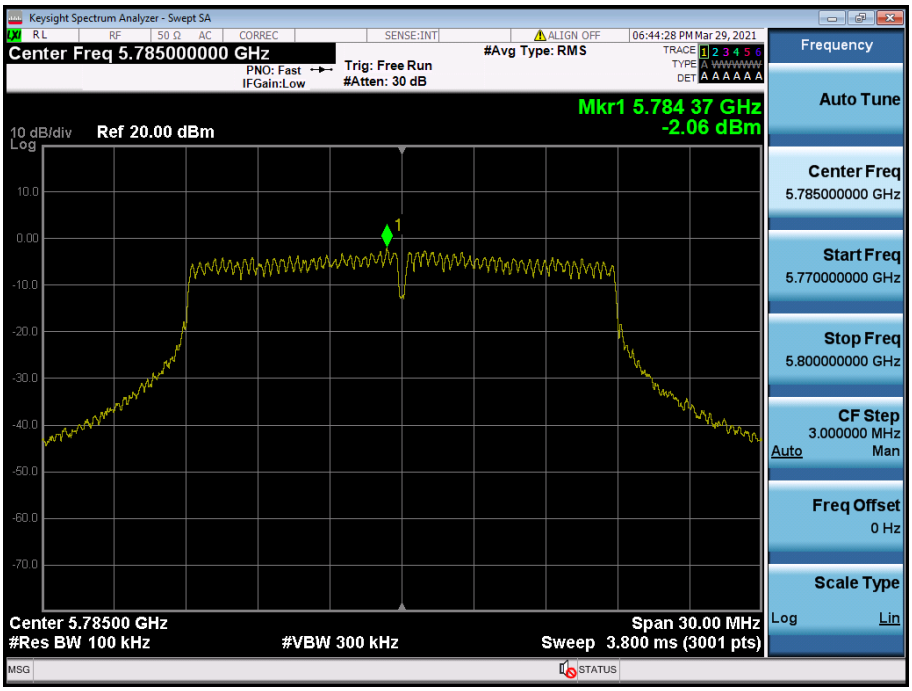
Maximum Power Spectral Density

Test Mode: TM 2 & Ch.149



Maximum Power Spectral Density

Test Mode: TM 2 & Ch.157



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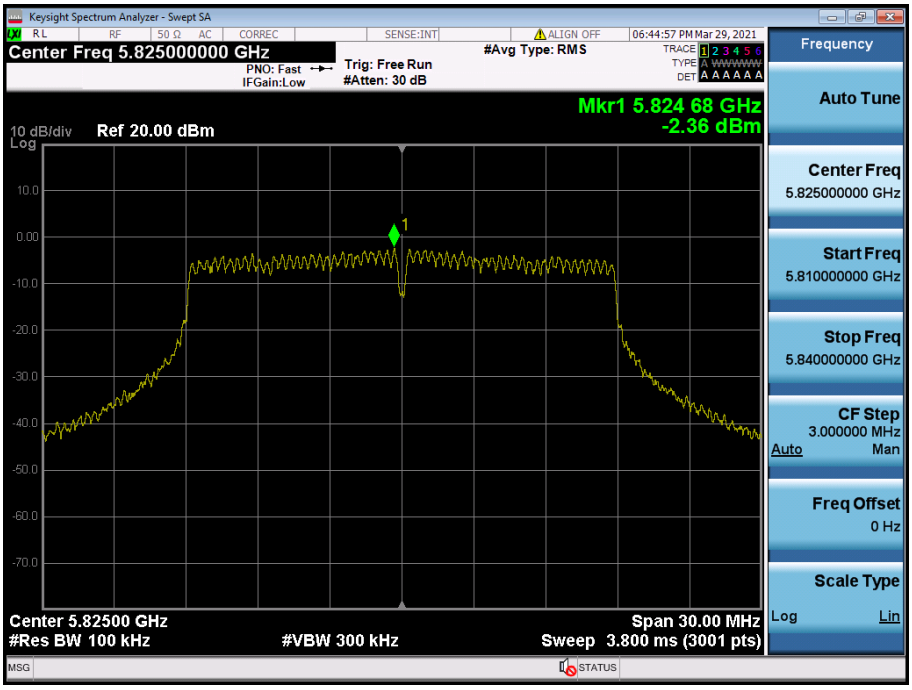
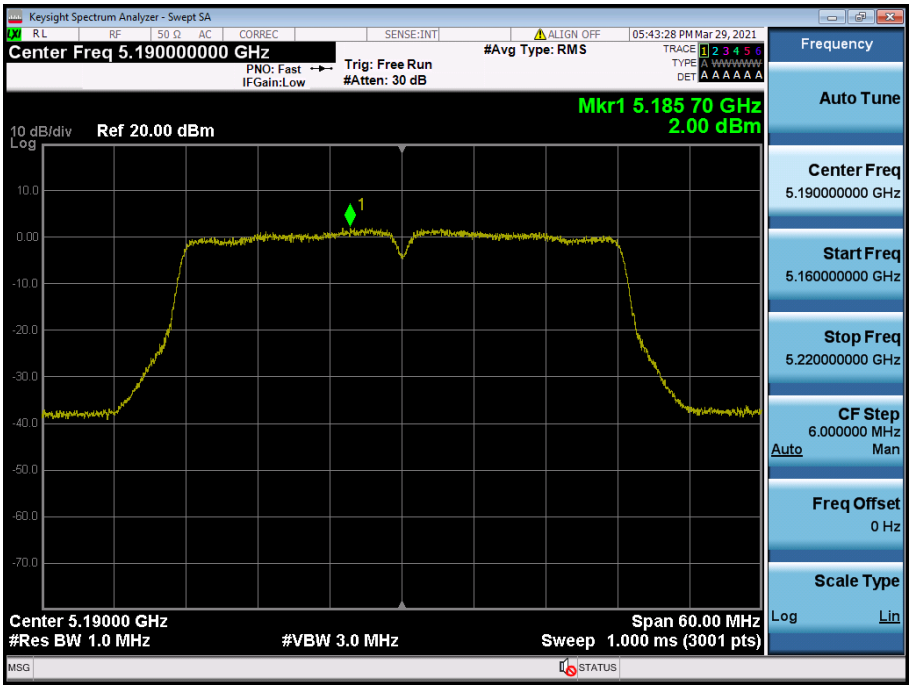
Maximum Power Spectral Density Test Mode: TM 2 & Ch.165



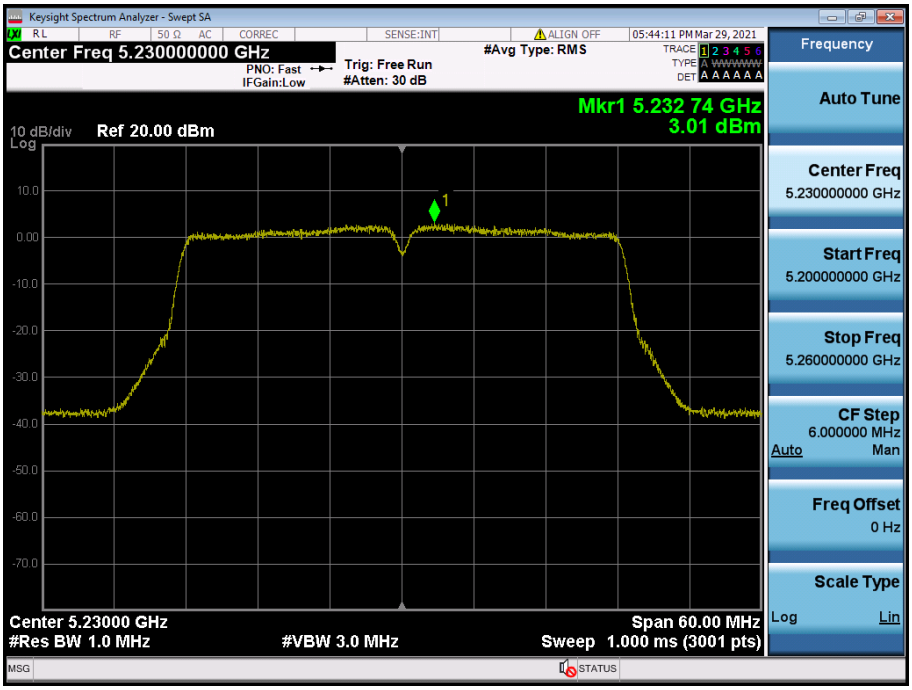
Maximum Power Spectral Density

Test Mode: TM 3 & Ch.38



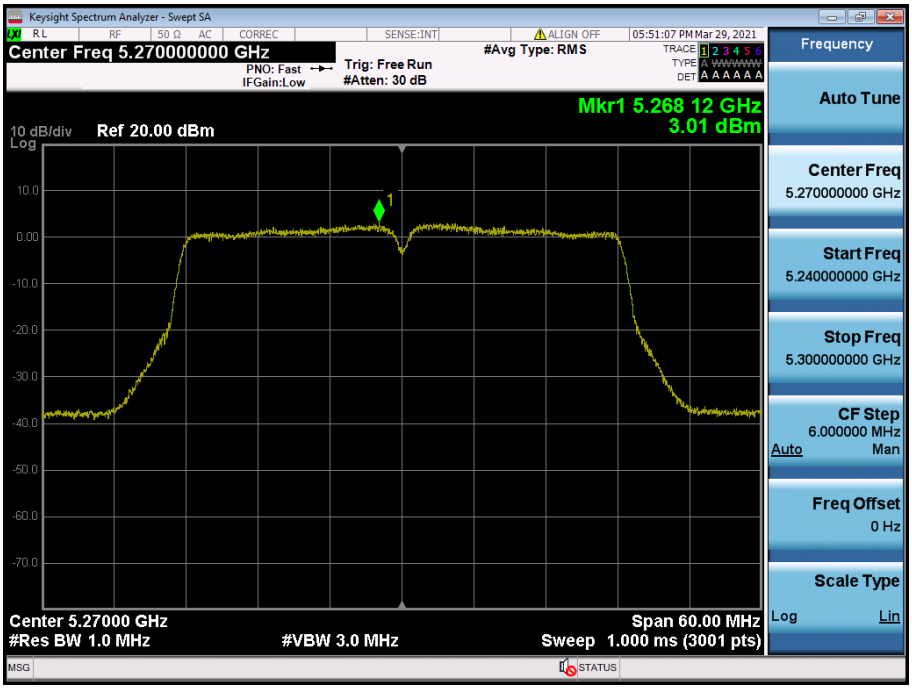
Maximum Power Spectral Density

Test Mode: TM 3 & Ch.46



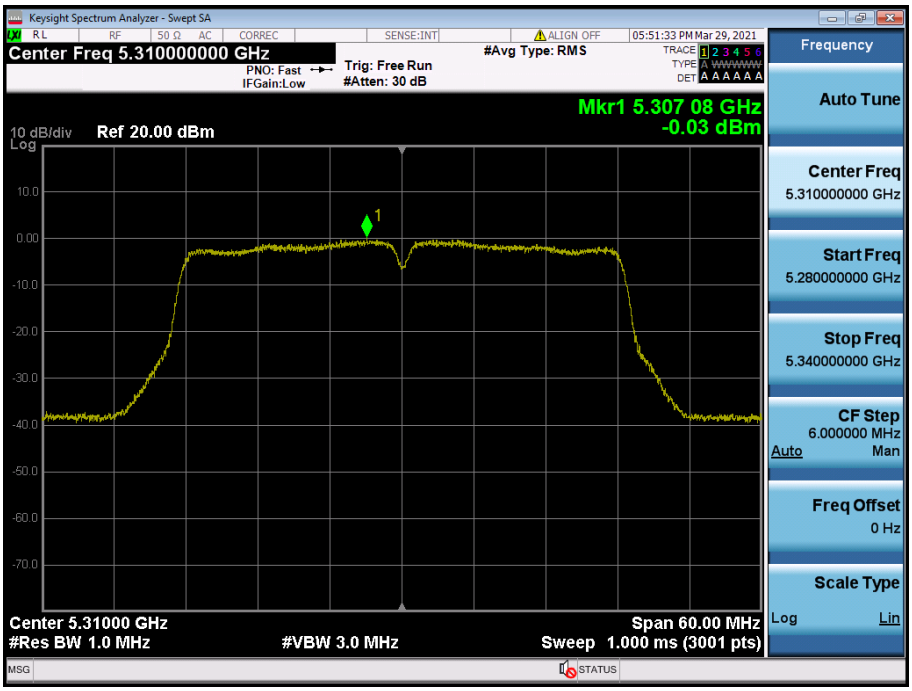
Maximum Power Spectral Density

Test Mode: TM 3 & Ch.54



Maximum Power Spectral Density

Test Mode: TM 3 & Ch.62



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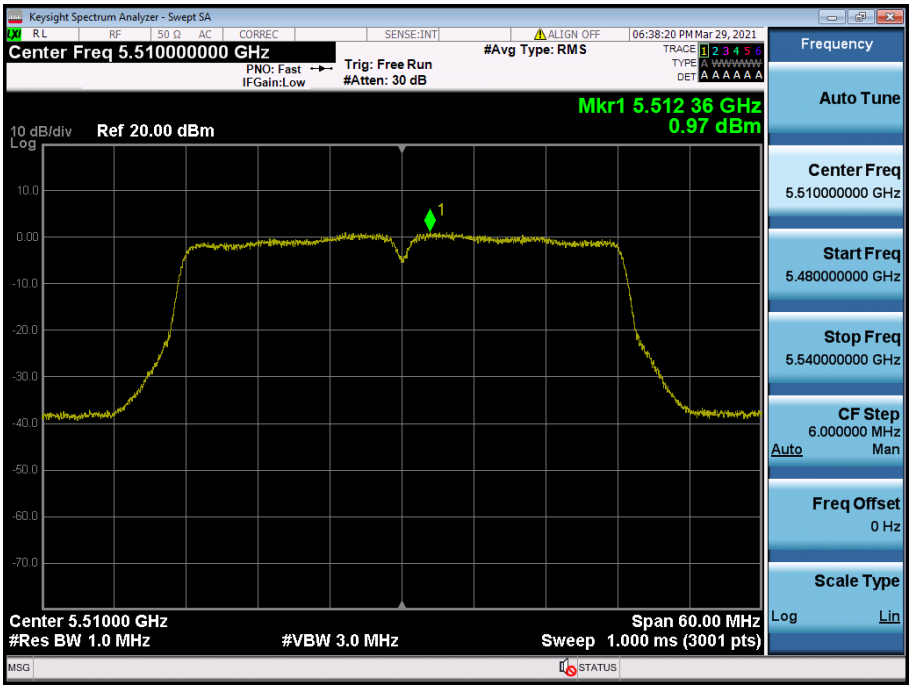
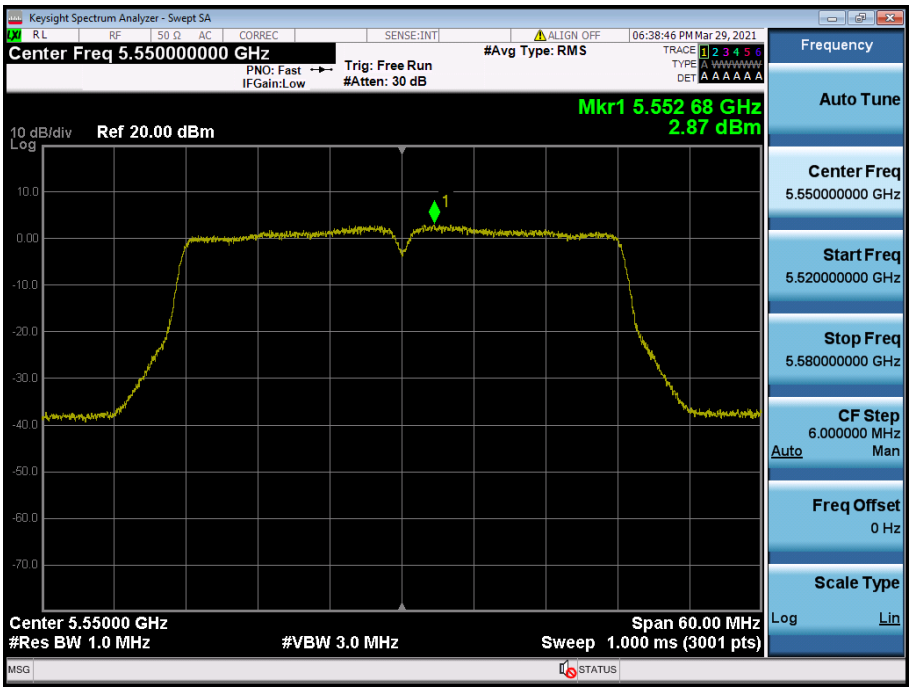
Maximum Power Spectral Density

Test Mode: TM 3 & Ch.102



Maximum Power Spectral Density

Test Mode: TM 3 & Ch.110



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Maximum Power Spectral Density

Test Mode: TM 3 & Ch.142