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United States of America
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CERTIFICATION TEST REPORT

Manufacturer: PCTEL, Inc
471 Brighton Drive
Bloomington, Illinois 60108-3102 USA

Applicant: Same as Above

Product Name: Industrial IoT Radio Module

Product Description: 2x2, 802.11ac, 5 GHz, mPCIe radio module

**Operating Voltage/Freq.
of EUT During Testing:** 120V/60 Hz; PoE 48VDC

Model: RM-WIFI-AC-2X2-HP-US

FCC ID: NYPRMWIFIAC2X2

Testing Commenced: 2021-09-07

Testing Ended: 2022-04-28

Summary of Test Results: In Compliance

The EUT complies with the EMC requirements when manufactured identically as the unit tested in this report, including any required modifications. Any changes to the design or build of this unit subsequent to this testing may deem it non-compliant.

Rule(s):

- **FCC Part 15 Subpart E – Unlicensed National Information Infrastructure Devices, Section 15.407 General technical requirements**
- **FCC15.207 - Conducted Limits**



Order Number: F2P19924D

Applicant: PCTEL, Inc
FCC ID: NYPRMWIFIAC2X2

A handwritten signature in black ink, appearing to read 'Julius Chiller'.

Evaluation Conducted by:

Julius Chiller, EMC/Wireless Engineer

A handwritten signature in black ink, appearing to read 'Ken Littell'.

Report Reviewed by:

Ken Littell, Vice President of EMC

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1 ADMINISTRATIVE INFORMATION

1.1 Measurement Location:

F2 Labs in Middlefield, Ohio. Site description and attenuation data are on file with the FCC's Sampling and Measurement Branch at the FCC Laboratory in Columbia, MD.

1.2 Measurement Procedure:

All measurements were performed according to ANSI C63.10:2013 and recommended FCC procedure of measurement of devices operating under Section 15.407 and in KDB789033 v02r01. A list of the measurement equipment can be found in Section 6.



1.3 Uncertainty Budget:

The uncertainty in EMC measurements arises from several factors which affect the results, some associated with environmental conditions in the measurement room, the test equipment being used, and the measurement techniques adopted.

The measurement uncertainty budgets detailed below are calculated from the test and calibration data and are expressed with a 95% confidence factor using a coverage factor of $k=2$. The Uncertainty for a laboratory are referred to as U_{lab} . For Radiated and Conducted Emissions, the Expanded Uncertainty is compared to the U_{cispr} values to determine if a specific margin is required to deem compliance.

U_{lab}

Measurement Range	Combined Uncertainty	Expanded Uncertainty
Radiated Emissions <1 GHz @ 3m	2.54	5.07dB
Radiated Emissions <1 GHz @ 10m	2.55	5.09dB
Radiated Emissions 1 GHz to 2.7 GHz	1.81	3.62dB
Radiated Emissions 2.7 GHz to 18 GHz	1.55	3.10dB
AC Power Line Conducted Emissions, 150kHz to 30 MHz	1.38	2.76dB
AC Power Line Conducted Emissions, 9kHz to 150kHz	1.66	3.32dB

U_{cispr}

Measurement Range	Expanded Uncertainty
Radiated Emissions <1 GHz @ 3m	5.2dB
Radiated Emissions <1 GHz @ 10m	5.2dB
Radiated Emissions 1 GHz to 2.7 GHz	Under Consideration
Radiated Emissions 2.7 GHz to 18 GHz	Under Consideration
AC Power Line Conducted Emissions, 150kHz to 30 MHz	3.6dB
AC Power Line Conducted Emissions, 9kHz to 150kHz	4.0dB

If U_{lab} is less than or equal to U_{cispr} , then:

- compliance is deemed to occur if no measured disturbance exceeds the disturbance limit;
- non-compliance is deemed to occur if any measured disturbance exceeds the disturbance limit.

If U_{lab} is greater than U_{cispr} in table 1, then:

- compliance is deemed to occur if no measured disturbance, increased by ($U_{lab} - U_{cispr}$), exceeds the disturbance limit;
- non-compliance is deemed to occur if any measured disturbance, increased by ($U_{lab} - U_{cispr}$), exceeds the disturbance limit.

Note: Only measurements listed in the tables above that relate to tests included in this Test Report are applicable.



Order Number: F2P19924D

Applicant: PCTEL, Inc
FCC ID: NYPRMWIFIAC2X2

1.4 Document History

Document Number	Description	Issue Date	Approved By
F2P19924D-01E	First Issue	2022-05-02	K. Littell

**2 SUMMARY OF TEST RESULTS/MODIFICATIONS**

Note: Results below apply to UNII-1, UNII-2A, UNII-2C, and UNII-3.

Test Name	Standard(s)	Results
Radiated Spurious Emissions	CFR 47 Part 15.205 / KDB789033	Complies
Occupied Bandwidth	CFR 47 Part 15.407(e) / Part 15.209 / KDB789033	Complies
Output Power	CFR 47 Part 15.407(a)(1)(iv) / Part 15.407(a)(3) / KDB789033	Complies
Power Spectral Density	CFR 47 Part 15.407(a)(1)(iv) / Part 15.407(a)(3) / KDB789033	Complies
Conducted Spurious Emissions	CFR 47 Part 15.407(b)(1,4)	Complies
Voltage Variations (Frequency Stability)	CFR 47 Part 15.31(e)	*
Conducted Emissions	CFR 47 Part 15.207(a)	Complies

**Not required in test report per KDB 789033 Sec II A 3.*

Modifications Made to the Equipment
None



3 ENGINEERING STATEMENT

This report has been prepared on behalf of PCTEL, Inc to provide documentation for the testing described herein. This equipment has been tested and found to comply with Part 15.407 of the FCC Rules using ANSI C63.10 and KDB789033 standards. The test results found in this test report relate only to the items tested.



4 EUT INFORMATION AND DATA

4.1 Equipment Under Test:

Product: **Industrial IoT Radio Module**

Model: **RM-WIFI-AC-2X2-HP-US**

Serial No.: 928504a24210004

Software Version: *Manufacturer documentation states there is no software for this device (refer to Section 7 of document titled "RM-WIFI-AC-2x2-HP FCC Theory of Operation."*

FCC ID: **NYPRMWIFIAC2X2**

4.2 Trade Name:

PCTEL, Inc

4.3 Power Supply:

PhiHong PSAC60W-120

4.4 Applicable Rules:

CFR 47, Part 15.407, subpart E

4.5 Equipment Category:

Radio Transmitter-UNII

4.6 Antenna:

External, Detachable 7dBi Dipole. NOTE : 3dB as worse case aggregate gain, the total Output Power and PSD is calculated by summing the measured value in linear power from both output ports. The max antenna gain for this device is 7dBi, and so the total directional gain is 10dB, therefore the maximum Output Power and PSD limit is reduced by 4 dB when in beamforming mode.

4.7 Accessories:

Device	Manufacturer	Model Number	Serial Number
Access Point	Qualcomm	None Specified	None Specified
Laptop	Hewlett Packard	G42	None Specified
Power Supply	PhiHong	PSAC60W-120	P73102761A1
Accessory Software/ Version	Qualcomm	Procomm Plus v4.8, Qualcomm QRCT v4.0.00050	

4.8 Testing Algorithm:

EUT was controlled with client-supplied Qualcomm software to provide output in the 5 GHz UNII 1, 2A, 2C and 3 Wi-Fi bands at various modulations and data rates.

**5 LIST OF MEASUREMENT INSTRUMENTATION**

Equipment Type	Asset Number	Manufacturer	Model	Serial Number	Calibration Due Date
Shielded Chamber	CL166-E	Albatross Projects	B83117-DF435-T261	US140023	2022-03-09
Temp/Hum. Recorder	CL233	Extech	445814	02	2022-03-04
Temp/Hum. Recorder	CL234	Extech	445814	03	2022-03-08
Receiver	CL151	Rohde & Schwarz	ESU40	100319	2022-07-08
Transient Limiter	CL102	Hewlett Packard	11947A	3107A03325	2023-03-29
LISN	CL184	Com-Power	LI-125A	191213	2023-11-02
LISN	CL185	Com-Power	LI-125A	191214	2023-11-02
Antenna, Bilog	CL211	Sunol Sciences, Inc.	JB1	A021017	2022-09-28
Low Loss Cable Set	--	Pasternack	PE3C0666-252 / PE3C066-50CM	None Spec.	2023-10-12
Antenna, Horn 18-26 GHz	CL114	A. H. Systems, Inc.	SAS-572	237	2023-07-30
Antenna, Horn 26-40 GHz	CL188	Com-Power	AH-640 Horn	091065	2023-07-29
Pre-Amplifier	CL153	Keysight Tech.	83006A	MY39500791	2022-02-12
Pre-Amplifier	CL285	Com-Power	PAM-0207	322	2022-07-08
Horn Antenna 1-18 GHz	CL098	Emco	3115	9809-5580	2022-01-08
Amplifier w/Monopole & 18" Loop	CL163-Loop	A.H. Systems, Inc.	EHA-52B	100	2022-09-14
Software:	Tile Version 3.4.B.3		Software Verified: 2021-09-07 to 2021-09-15		
Software:	EMC 32, Version 8.53.0		Software Verified: 2021-09-07 to 2021-09-15		
Spectrum Analyzer	0204	Hewlett Packard	HP8591A	3149A02546	2023-03-29
Software:	EMC Analyzer 85712D Rev. A.00.01			Date Verified:	2022-04-28



6.0 OCCUPIED BANDWIDTH

Requirements:

Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the -26dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated. The requirement to contain the designated bandwidth of the emission within the specified frequency band includes the effects from frequency sweeping, frequency hopping and other modulation techniques that may be employed as well as the frequency stability of the transmitter over expected variations in temperature and supply voltage.

Bandwidth measurements were made at the low, mid and high frequencies. The bandwidth was measured using the analyzer's marker function.



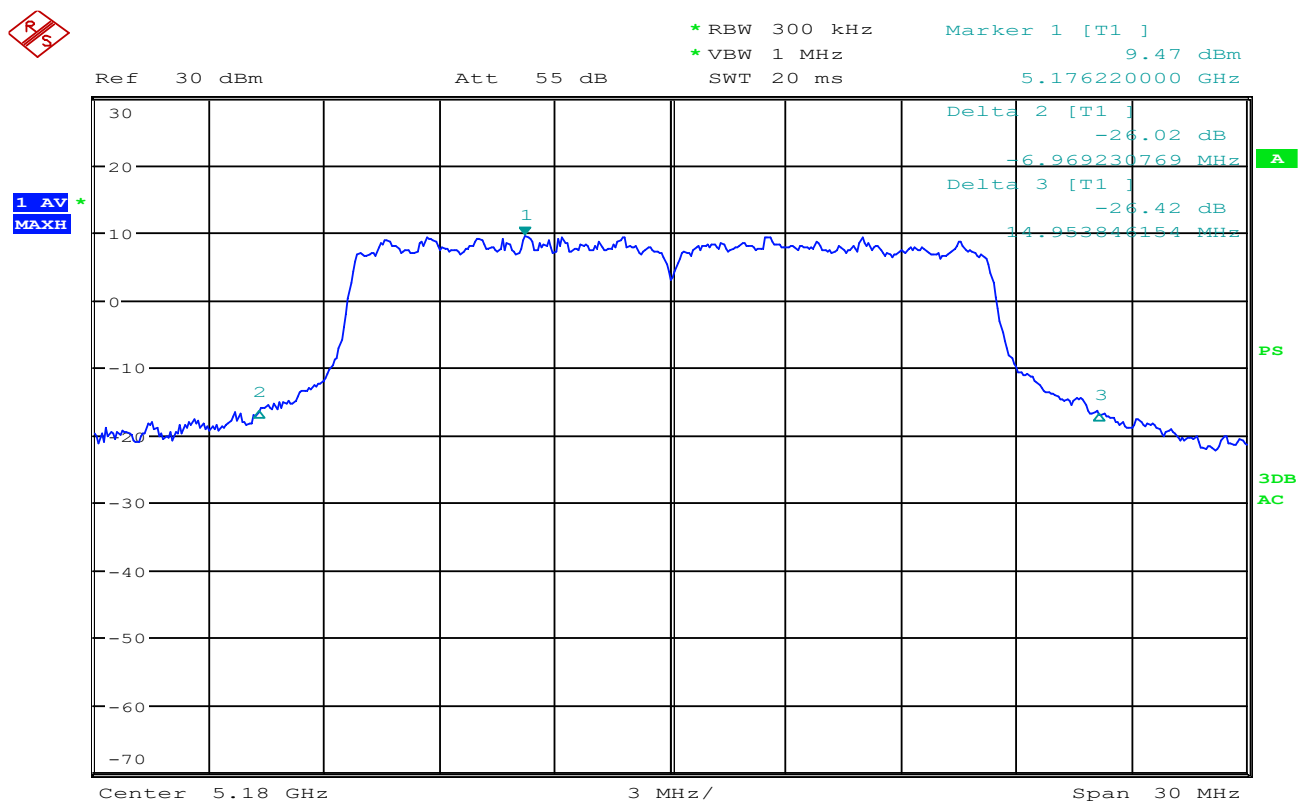
7.1 Occupied Bandwidth Test Data and Graphs Of Results

Test Date(s):	2021-09-07	Test Engineer(s):	J. Chiller
Standards:	CFR 47 Part 15.215(c)	Air Temperature:	22.3°C
		Relative Humidity:	40%

UNII 1, OFDM

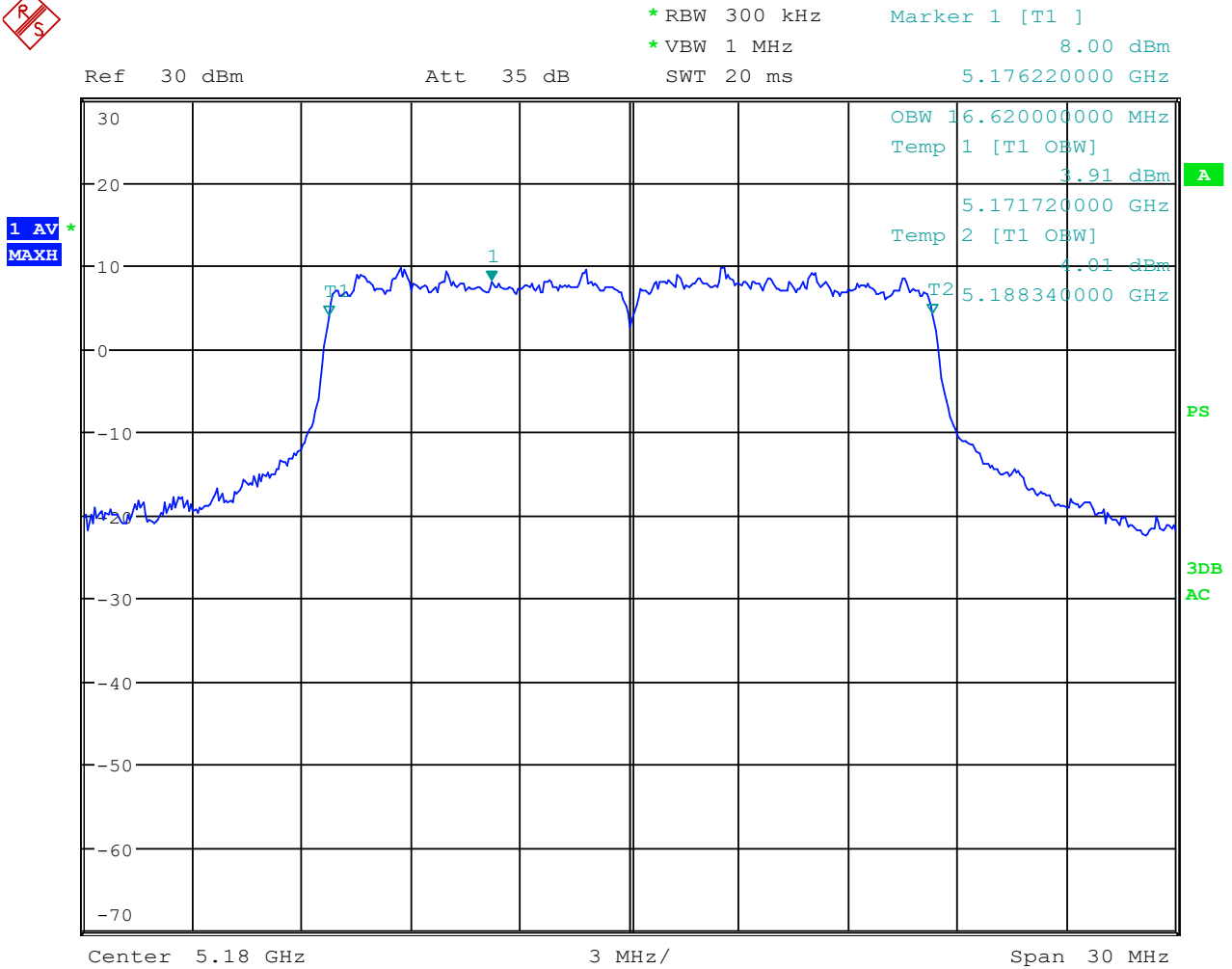
Channel	Frequency (MHz)	-26dB (MHz)	99% (MHz)	Limit
Modulation: OFDM				
Low	5180	21.922	16.620	>.500
Mid	5220	21.634	16.620	>.500
High	5240	21.586	16.620	>.500

UNII 1, OFDM: -26dB, Low Channel





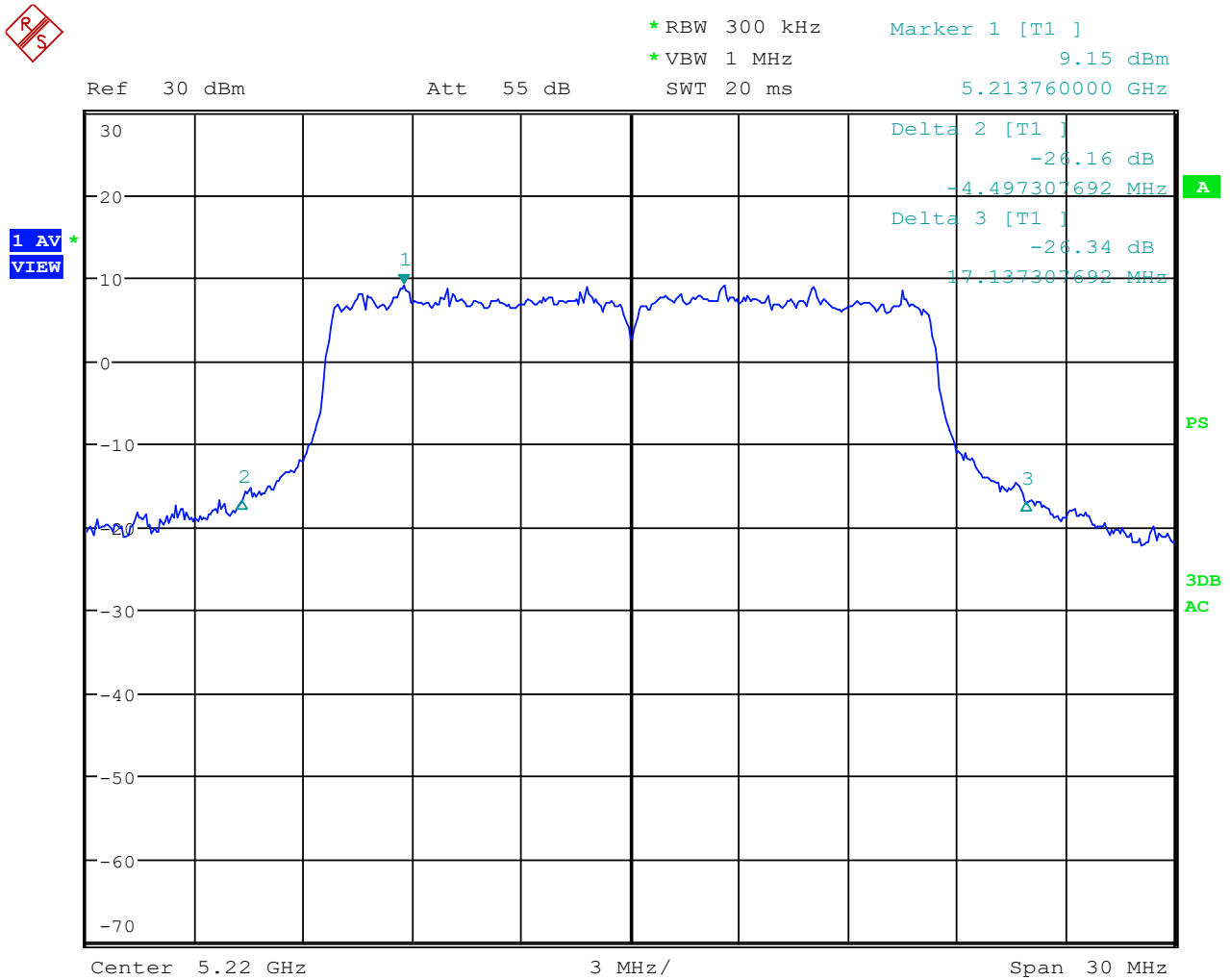
UNII 1, OFDM: 99%, Low Channel



Date: 7.SEP.2021 14:32:52



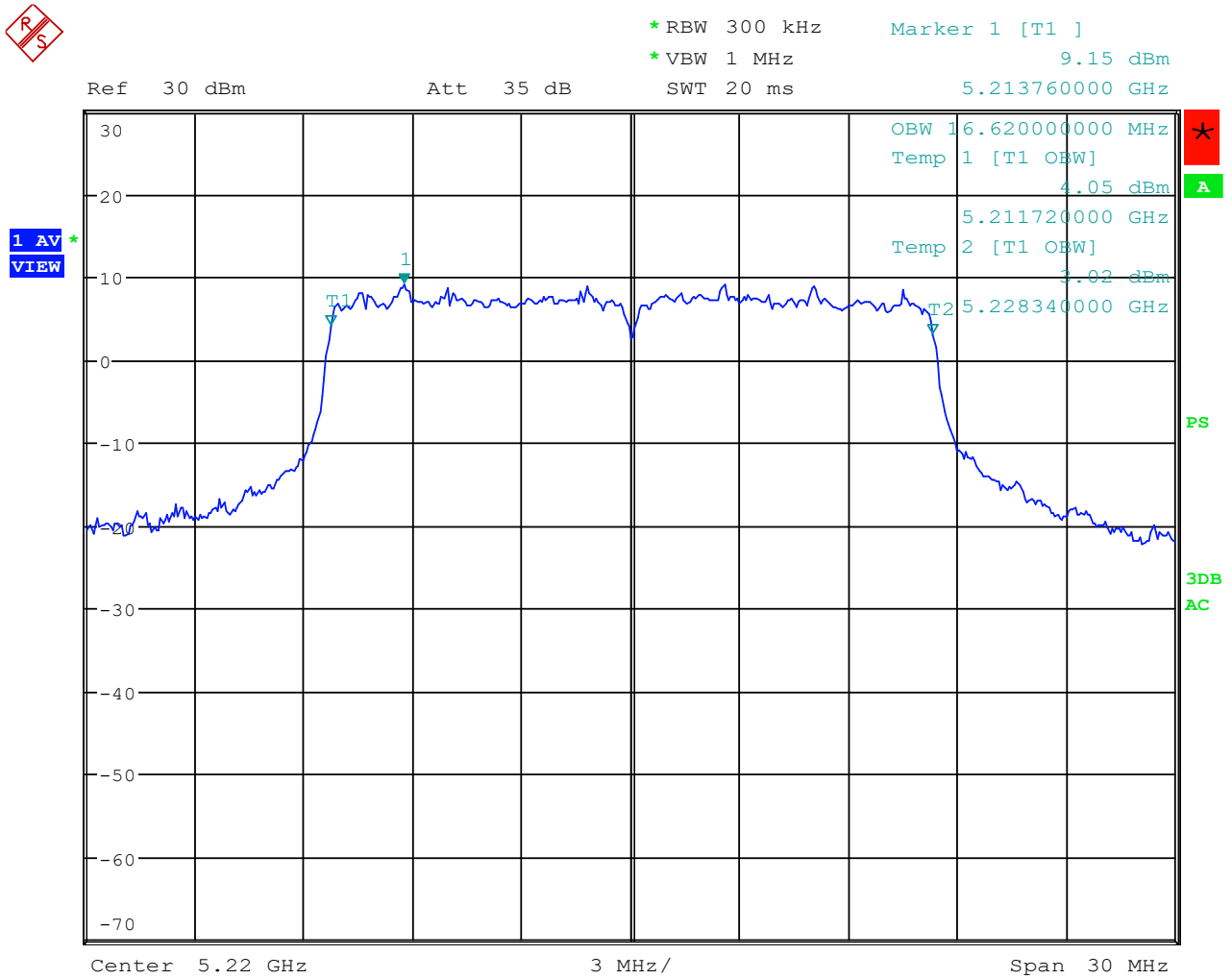
UNII 1, OFDM: -26dB, Mid Channel



Date: 7.SEP.2021 14:35:22



UNII 1, OFDM: 99%, Mid Channel



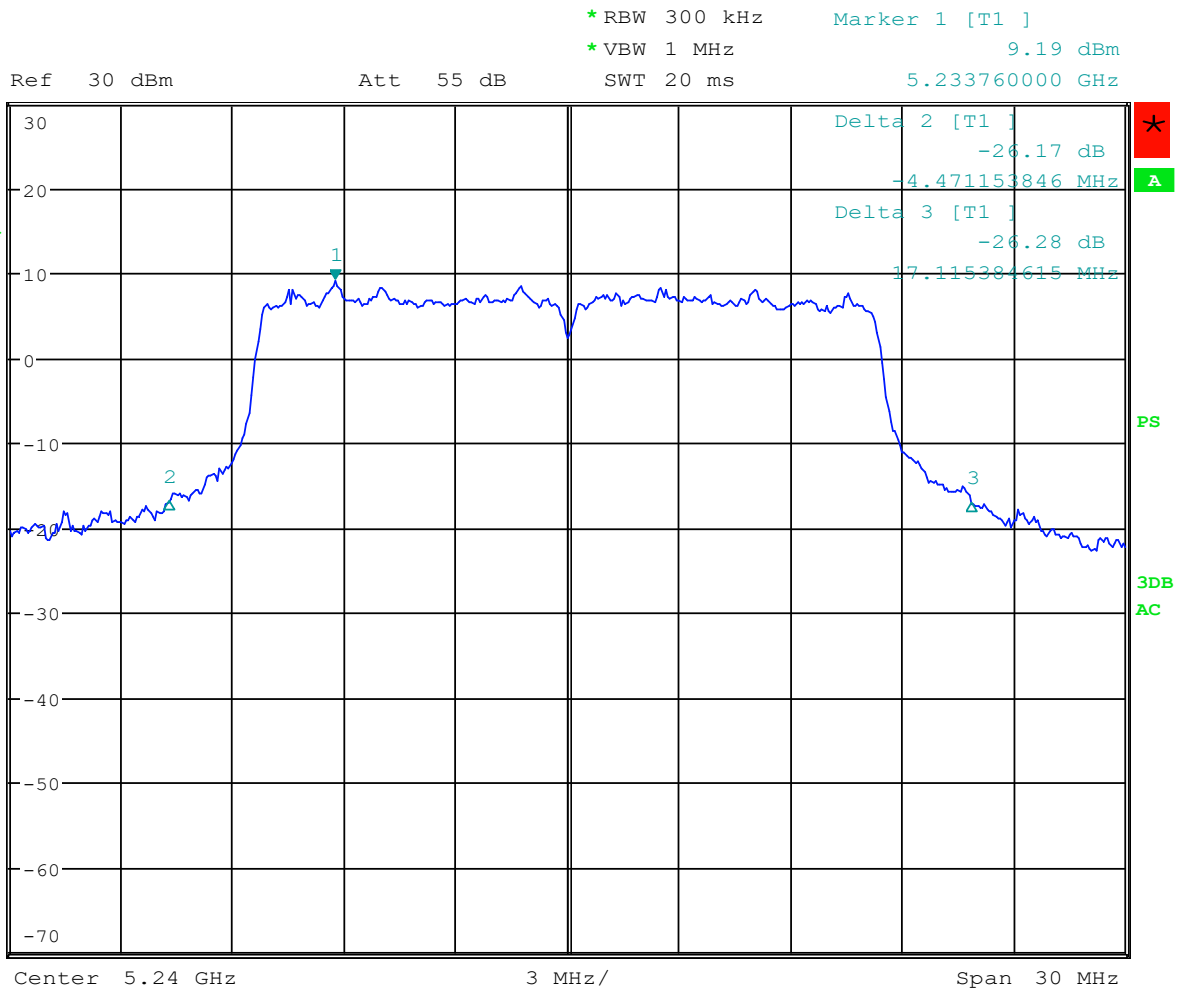
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UNI 1, OFDM: -26dB, High Channel



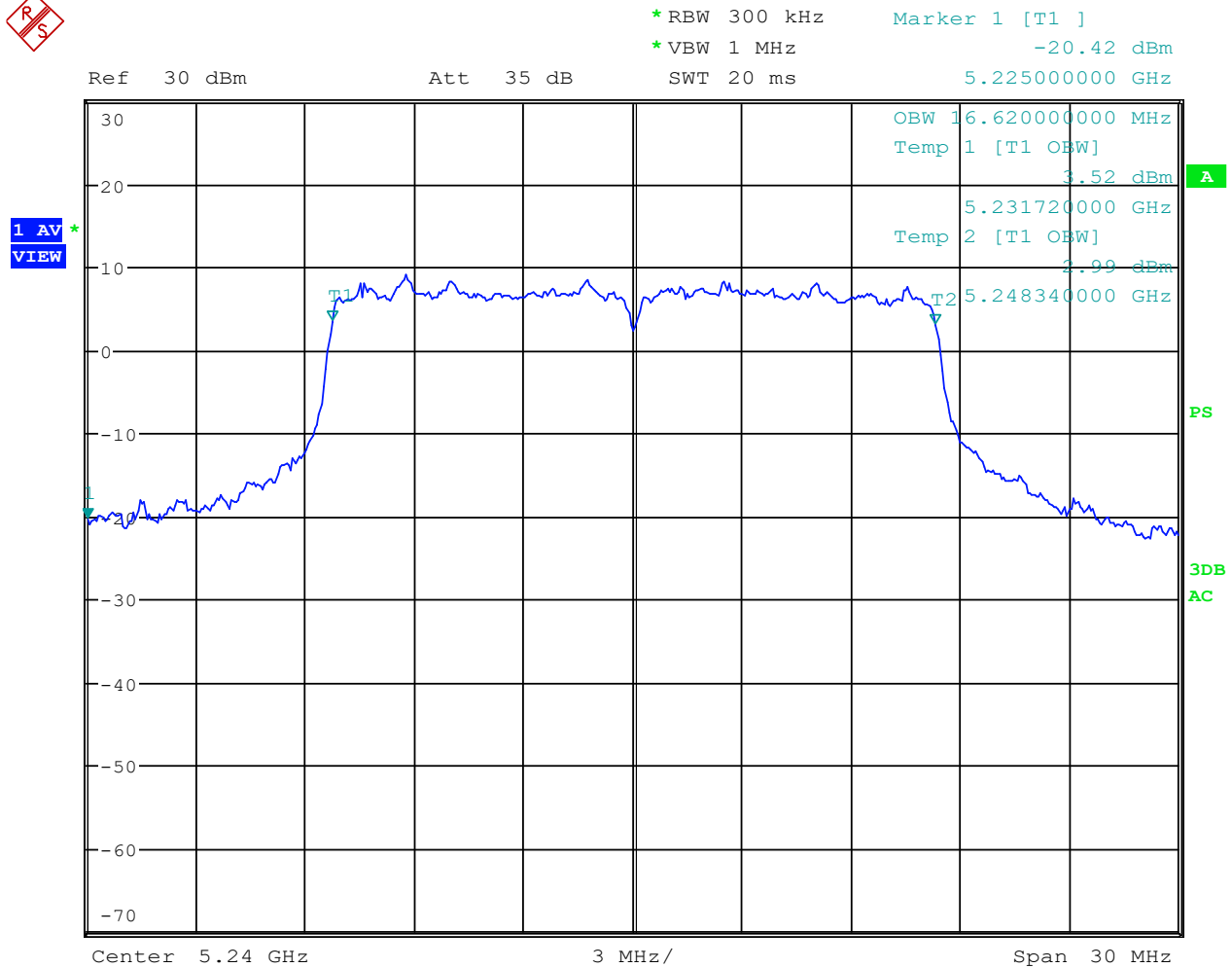
1 AV
VIEW



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UNI 1, OFDM: 99% High Channel



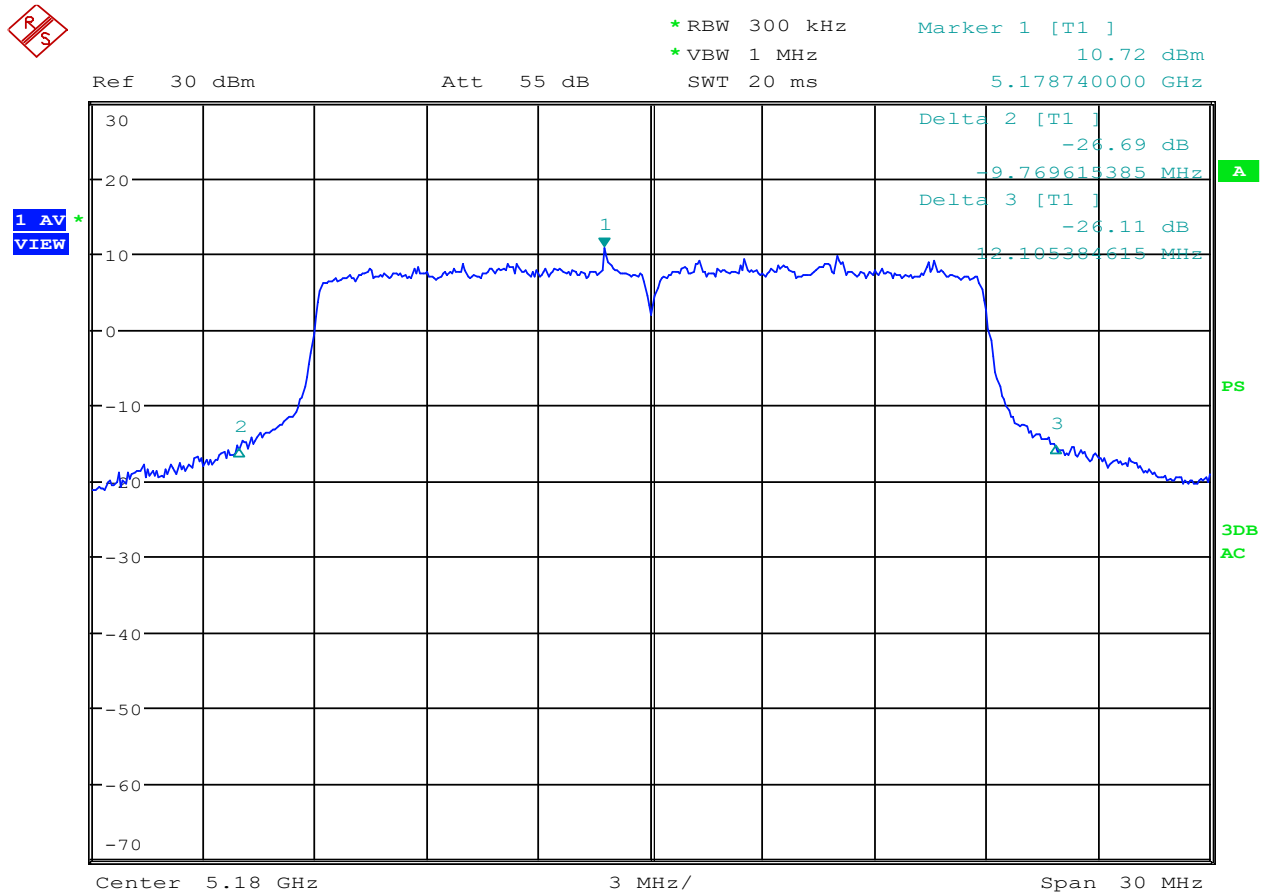
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UNII 1, HT20

Channel	Frequency (MHz)	-26dB (MHz)	99% (MHz)	Limit
Modulation: HT20				
Low	5180	21.874	17.880	>.500
Mid	5220	22.884	17.880	>.500
High	5240	22.548	17.880	>.500

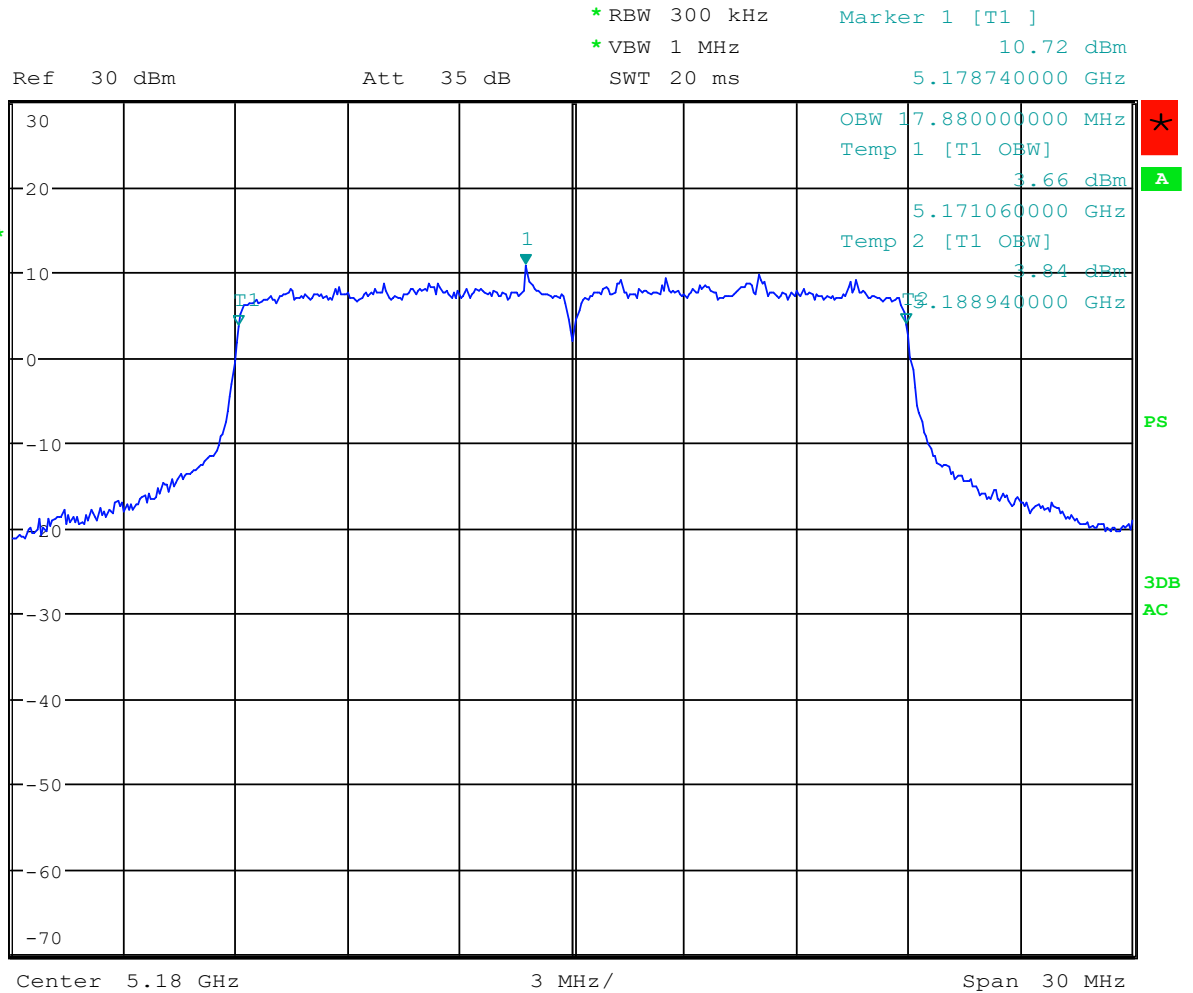
UNII 1, HT20: -26dB, Low Channel



Date: 7.SEP.2021 14:42:44



UNII 1, HT20: 99%, Low Channel

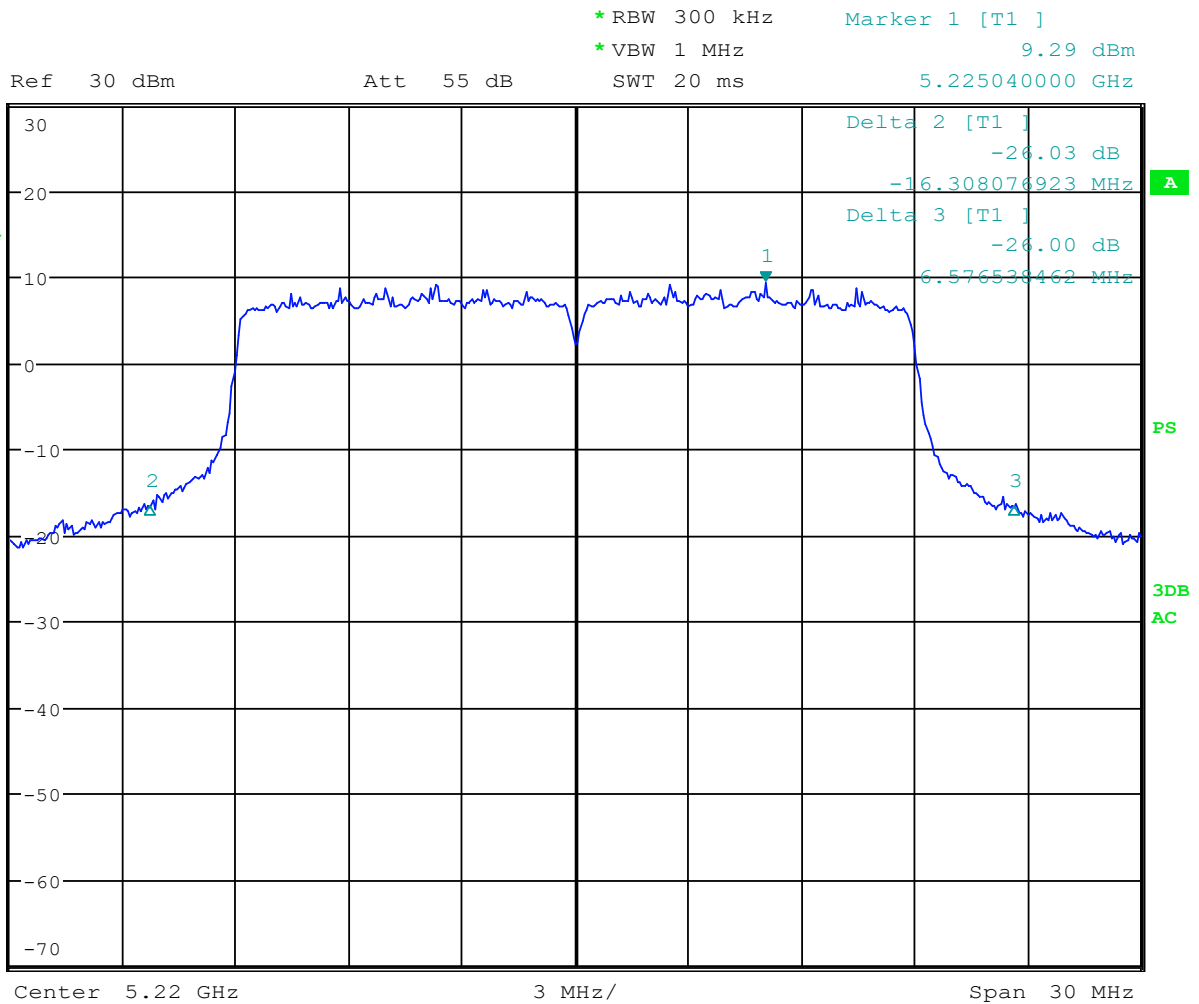




UNII 1, HT20: -26dB, Mid Channel



1 AV
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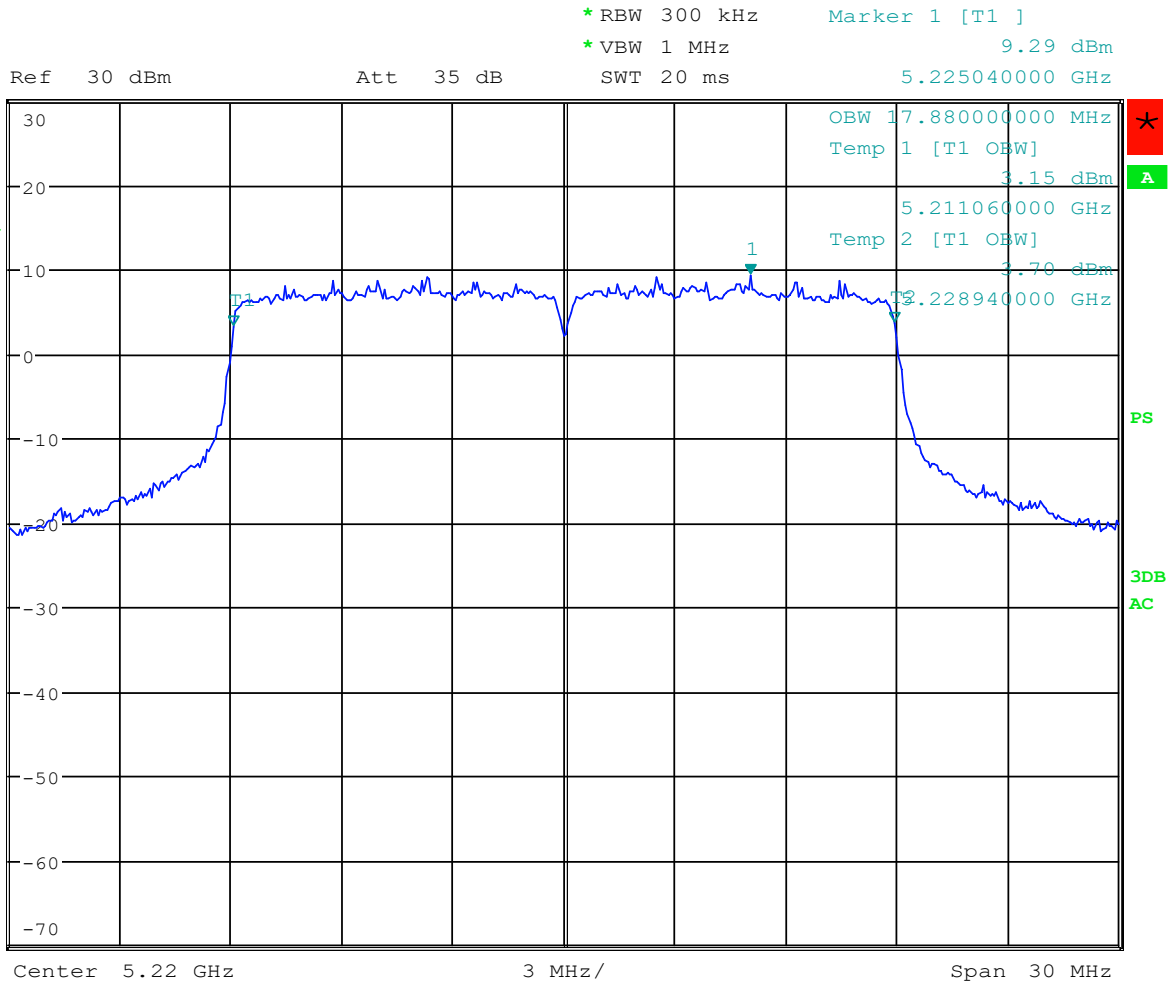




UNII 1, HT20: 99%, Mid Channel



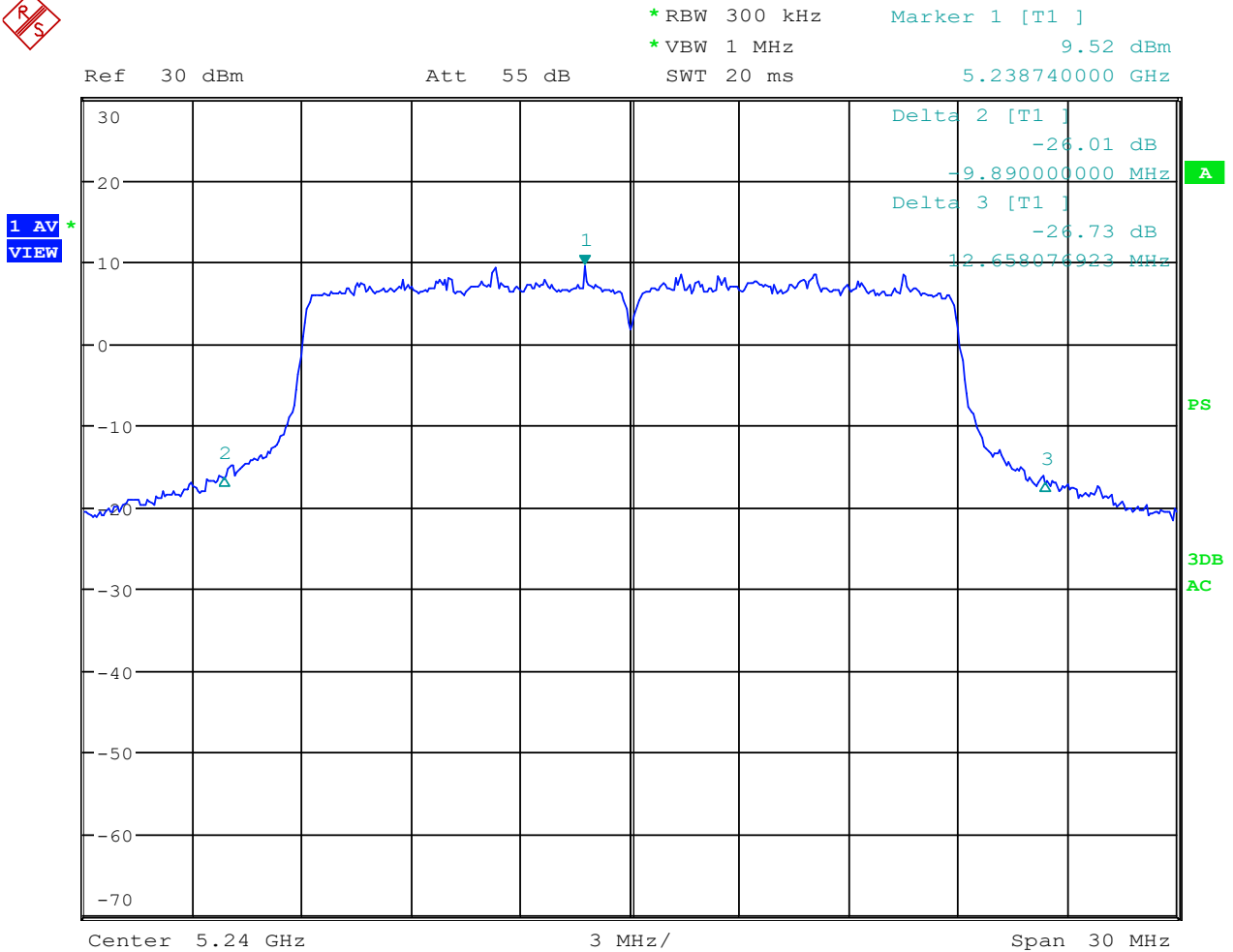
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UNII 1, HT20: -26dB, High Channel



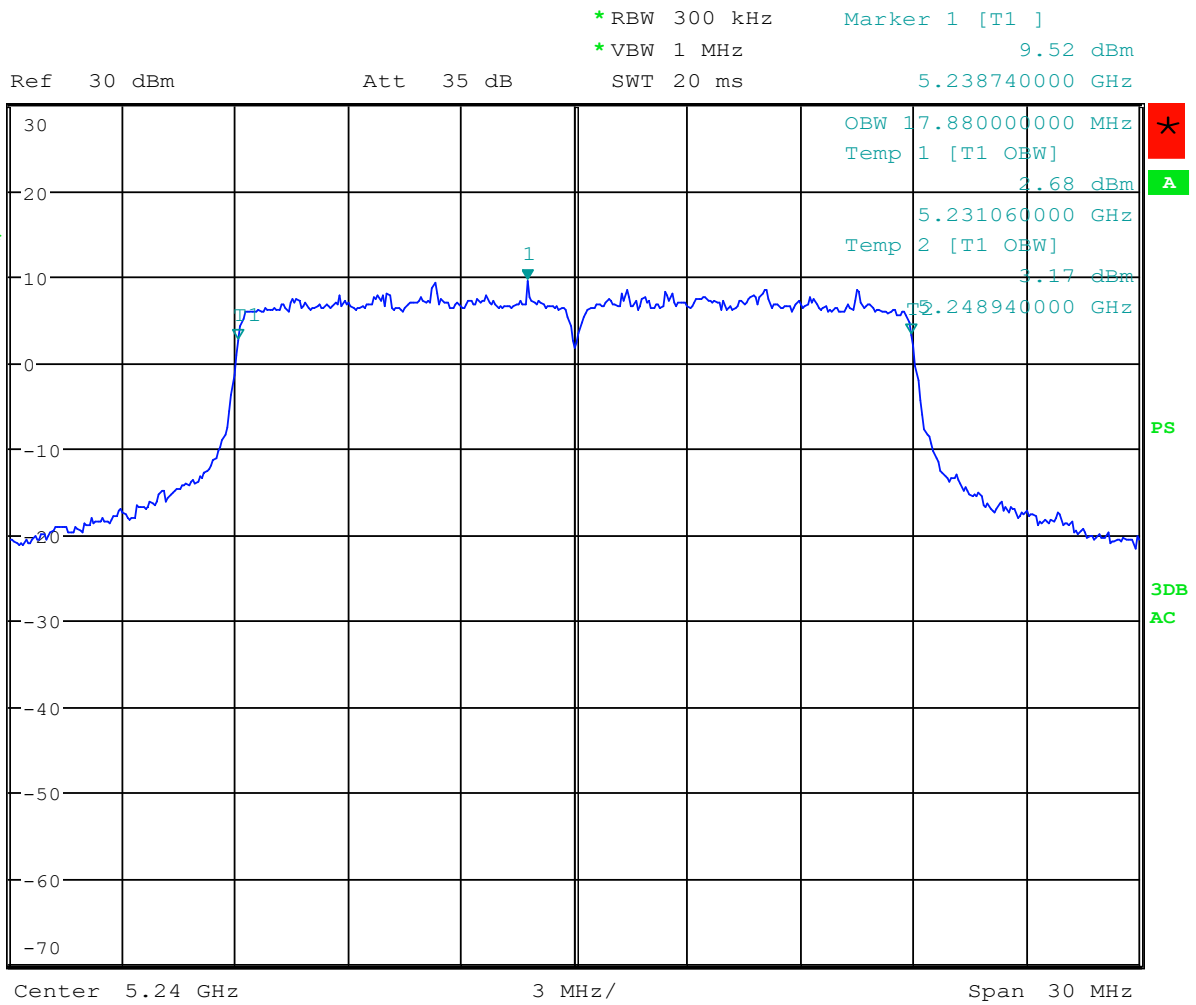
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UNII 1, HT20: 99%, High Channel



1 AV *
VIEW



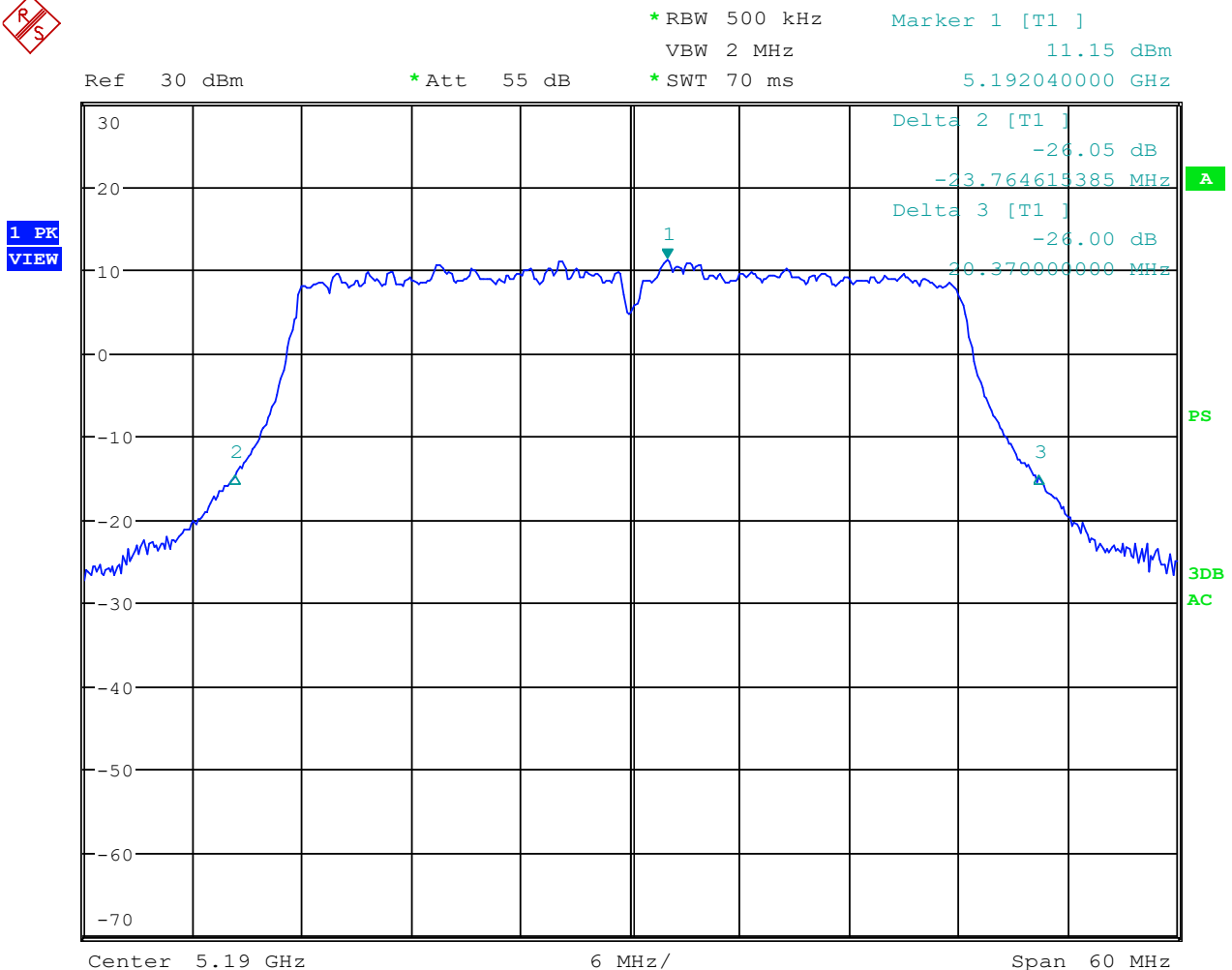
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UNII 1, HT40

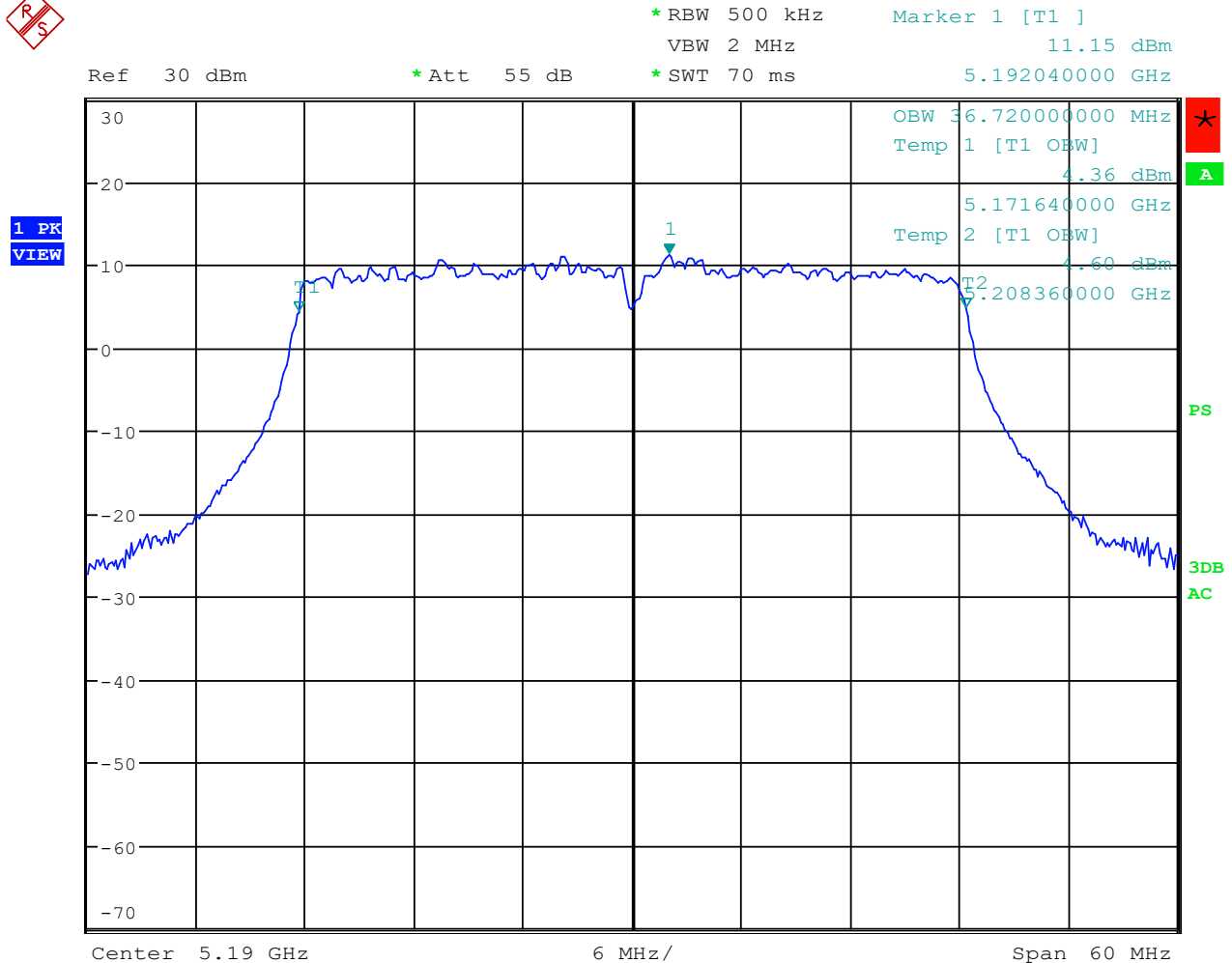
Channel	Frequency (MHz)	-26dB (MHz)	99% (MHz)	Limit
Modulation: HT40				
Low	5190	44.134	36.720	>.500
High	5230	44.230	36.720	>.500

UNII 1, HT40: -26dB, Low Channel





UNII 1, HT40: 99%, Low Channel



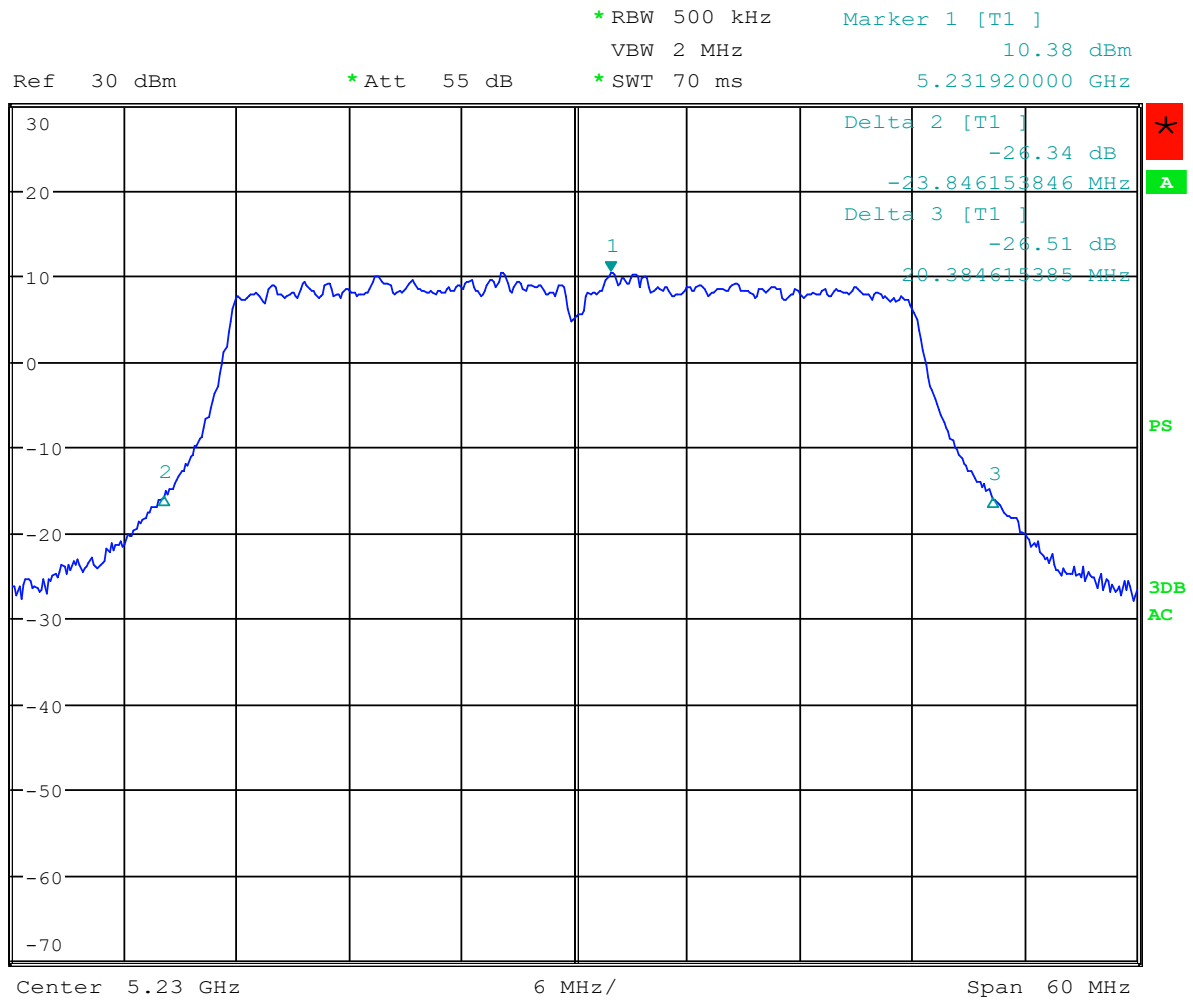
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UNII 1, HT40: -26dB, High Channel



1 PK
VIEW



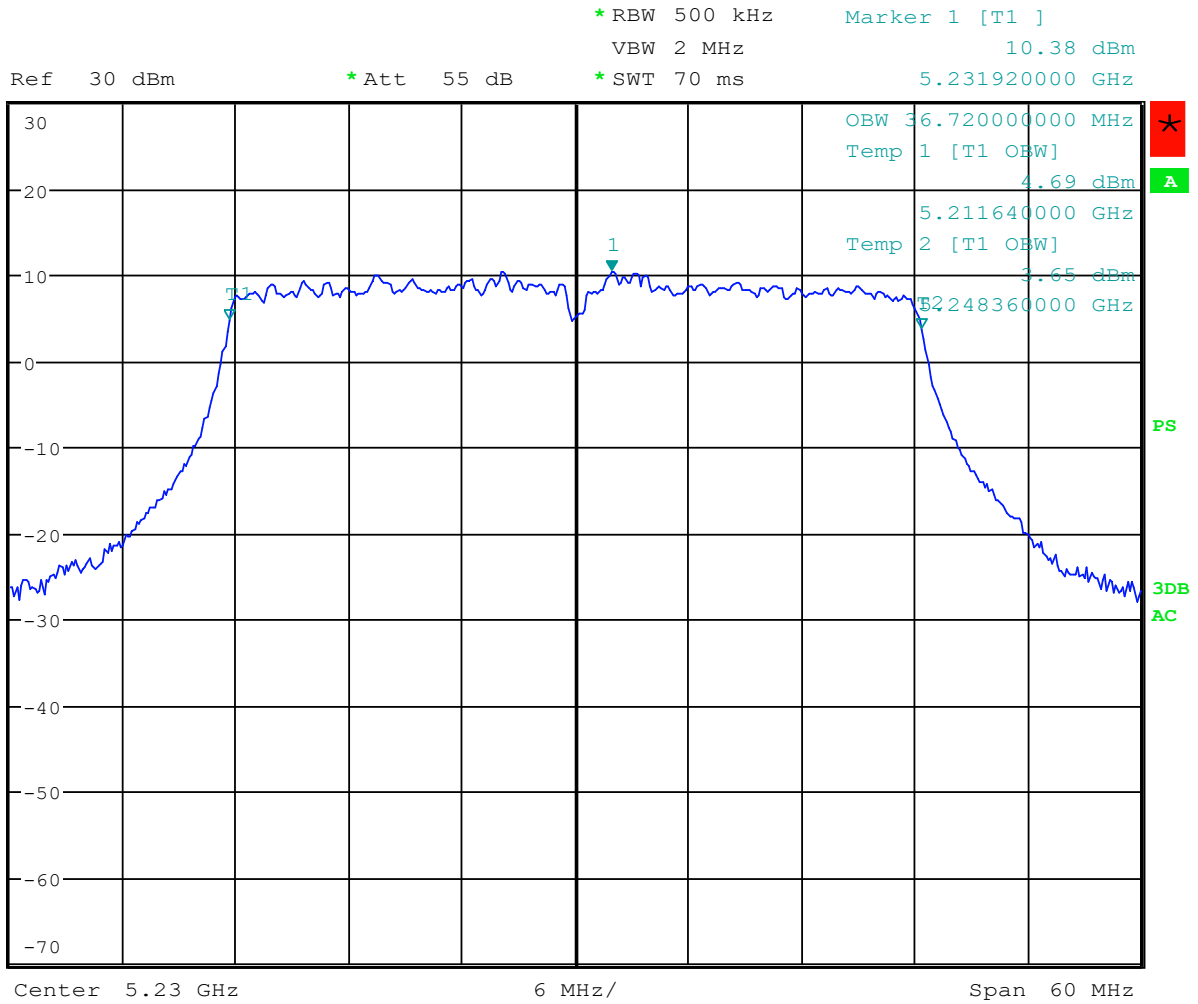
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UNII 1, HT40: 99%, High Channel



1 PK
VIEW



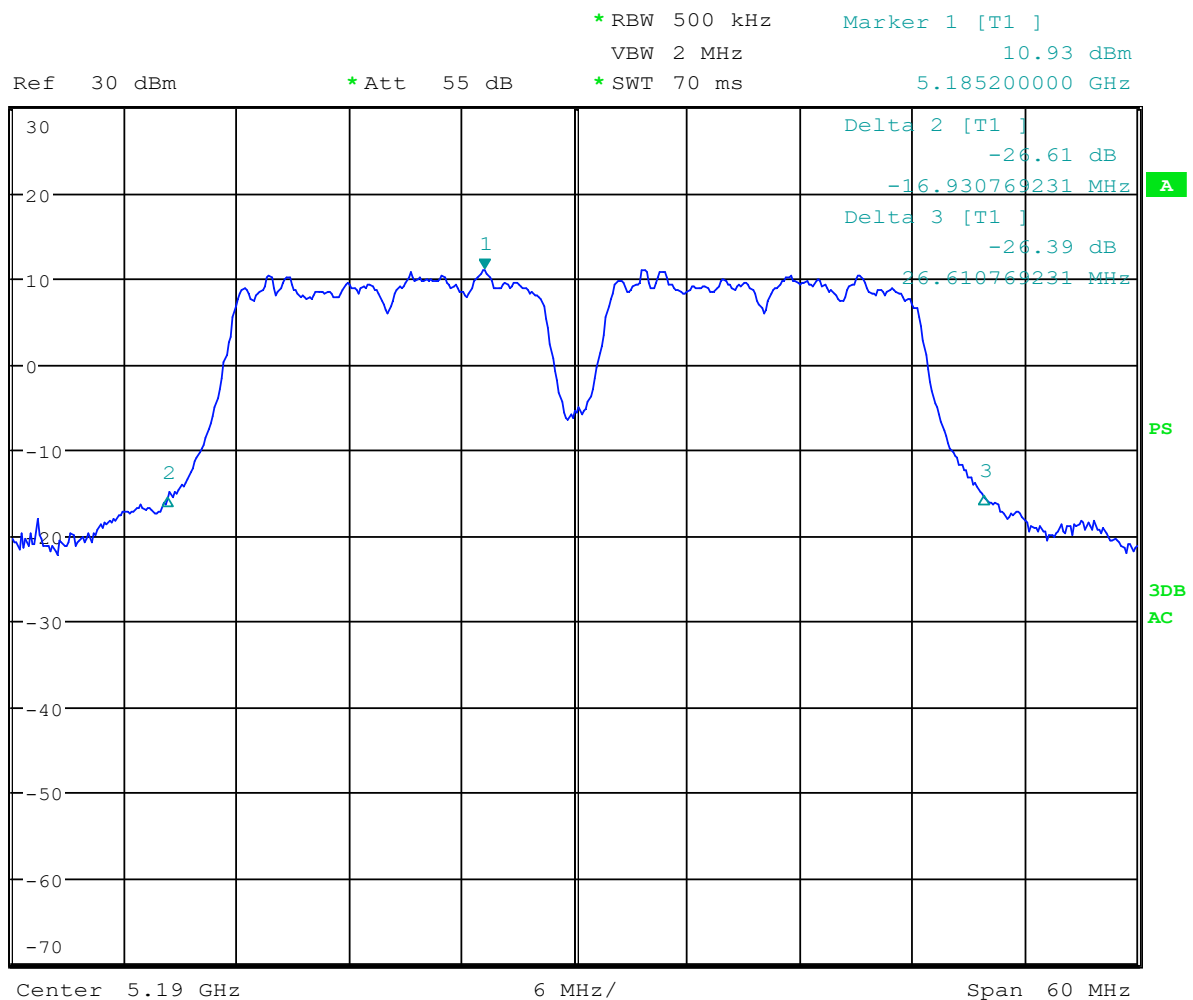
Date: 7.SEP.2021 16:58:20



UNII 1, non HT40

Channel	Frequency (MHz)	-26dB (MHz)	99% (MHz)	Limit
Modulation: non-HT40				
Low	5190	43.540	36.720	>.500
High	5230	43.364	36.840	>.500

UNII 1, non HT40: -26dB, Low Channel

1 PK
VIEW

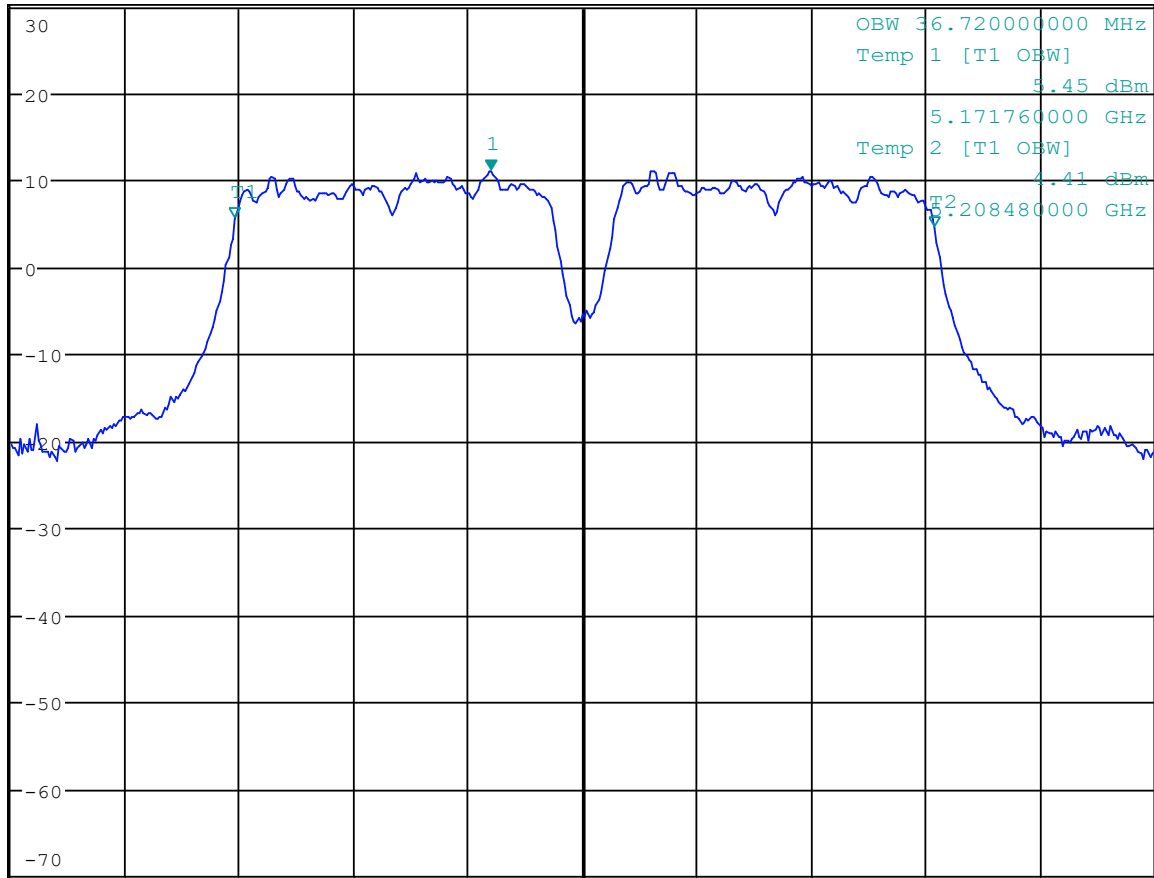


UNII 1, non HT40: 99%, Low Channel



*RBW 500 kHz Marker 1 [T1]
VBW 2 MHz 10.93 dBm
*Att 55 dB *SWT 70 ms 5.185200000 GHz
Ref 30 dBm

1 PK
VIEW

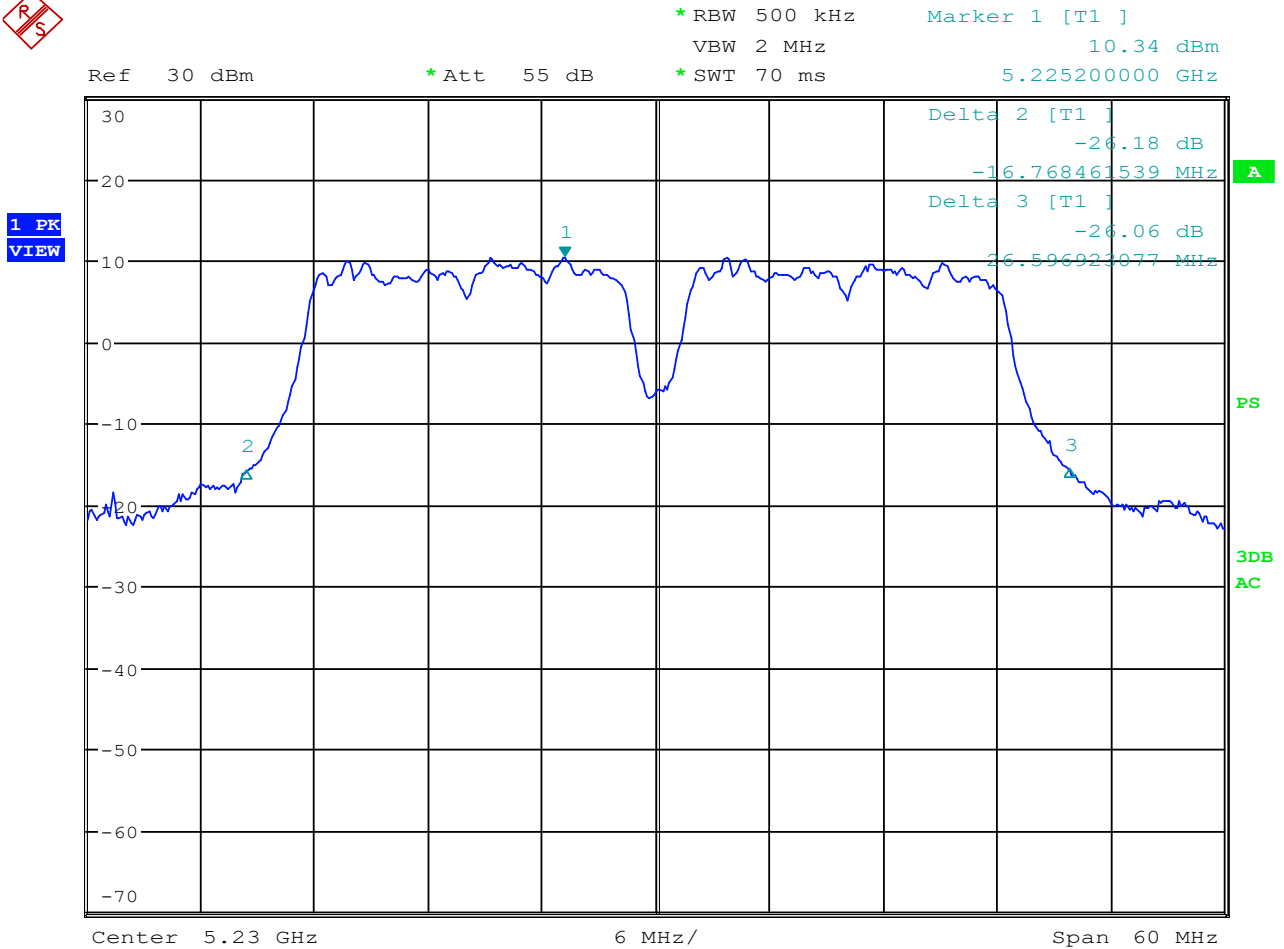


PS
3DB
AC

Date: 7.SEP.2021 16:49:06



UNII 1, non HT40: -26dB, High Channel



Date: 7.SEP.2021 16:50:35

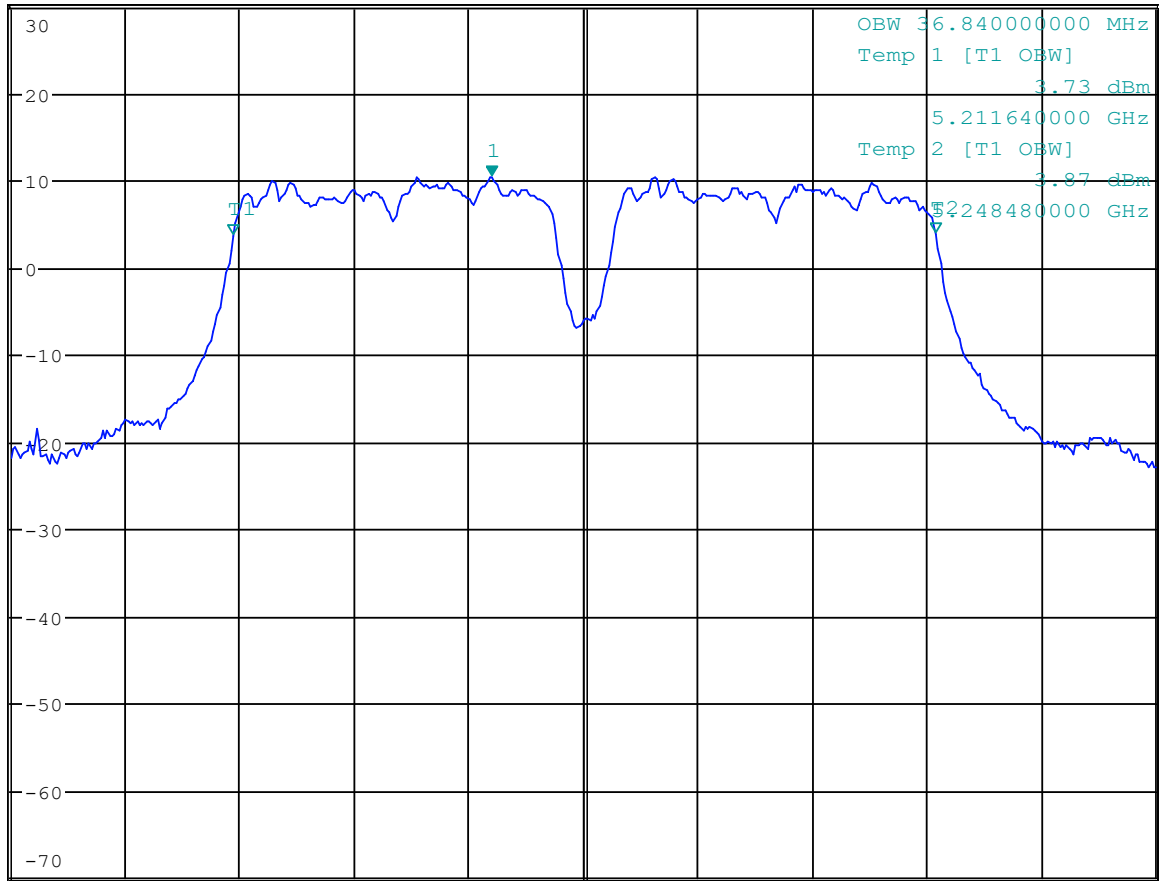


UNII 1, non HT40: 99%, High Channel



Ref 30 dBm *Att 55 dB *RBW 500 kHz VBW 2 MHz *SWT 70 ms Marker 1 [T1] 10.34 dBm
5.225200000 GHz

1 PK
VIEW



PS

3DB
AC

Center 5.23 GHz 6 MHz/ Span 60 MHz

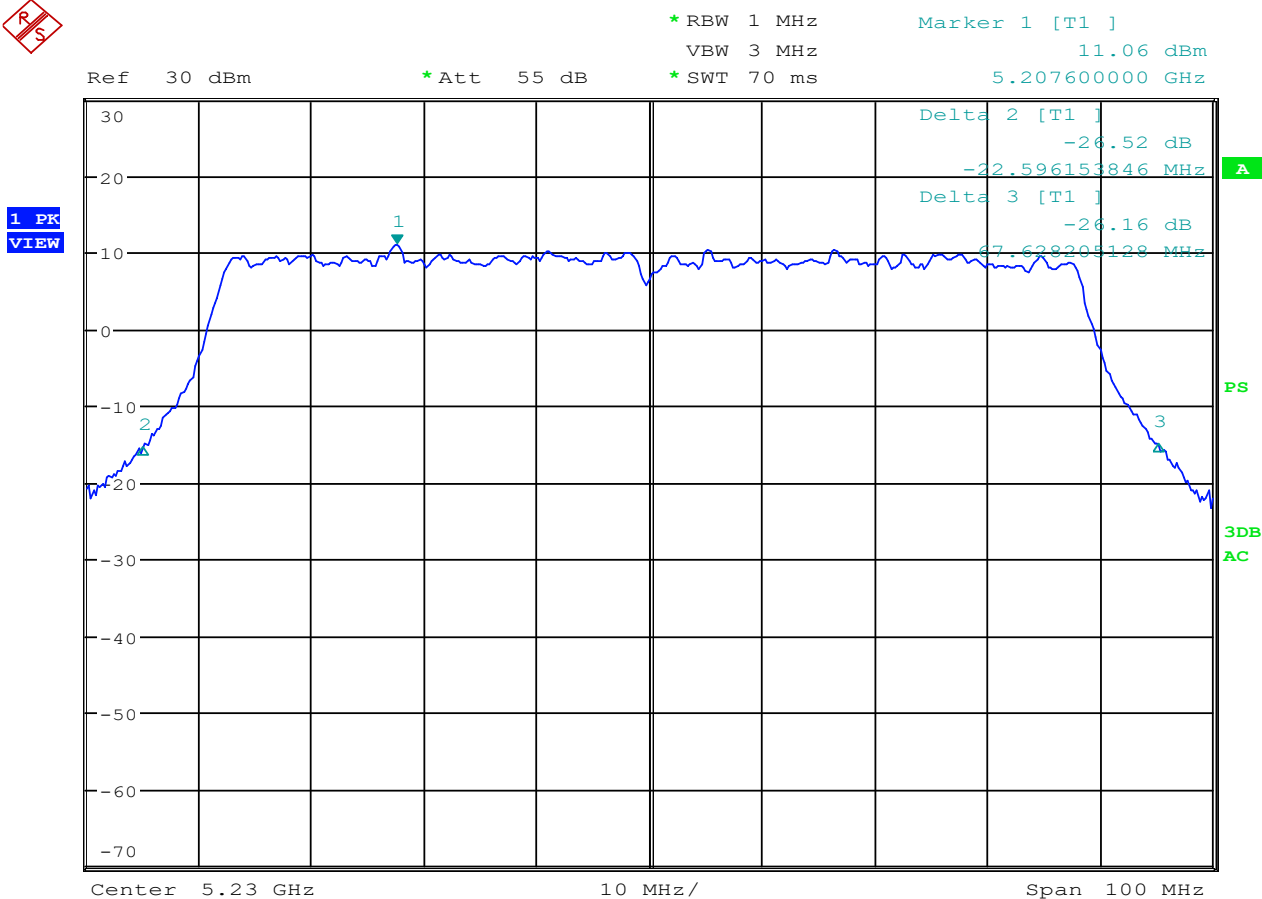
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UNII 1, HT80

Channel	Frequency (MHz)	-26dB (MHz)	99% (MHz)	Limit
Modulation HT80				
Mid	5210	90.224	76.800	>.500

UNII 1, HT80: -26dB, Mid Channel



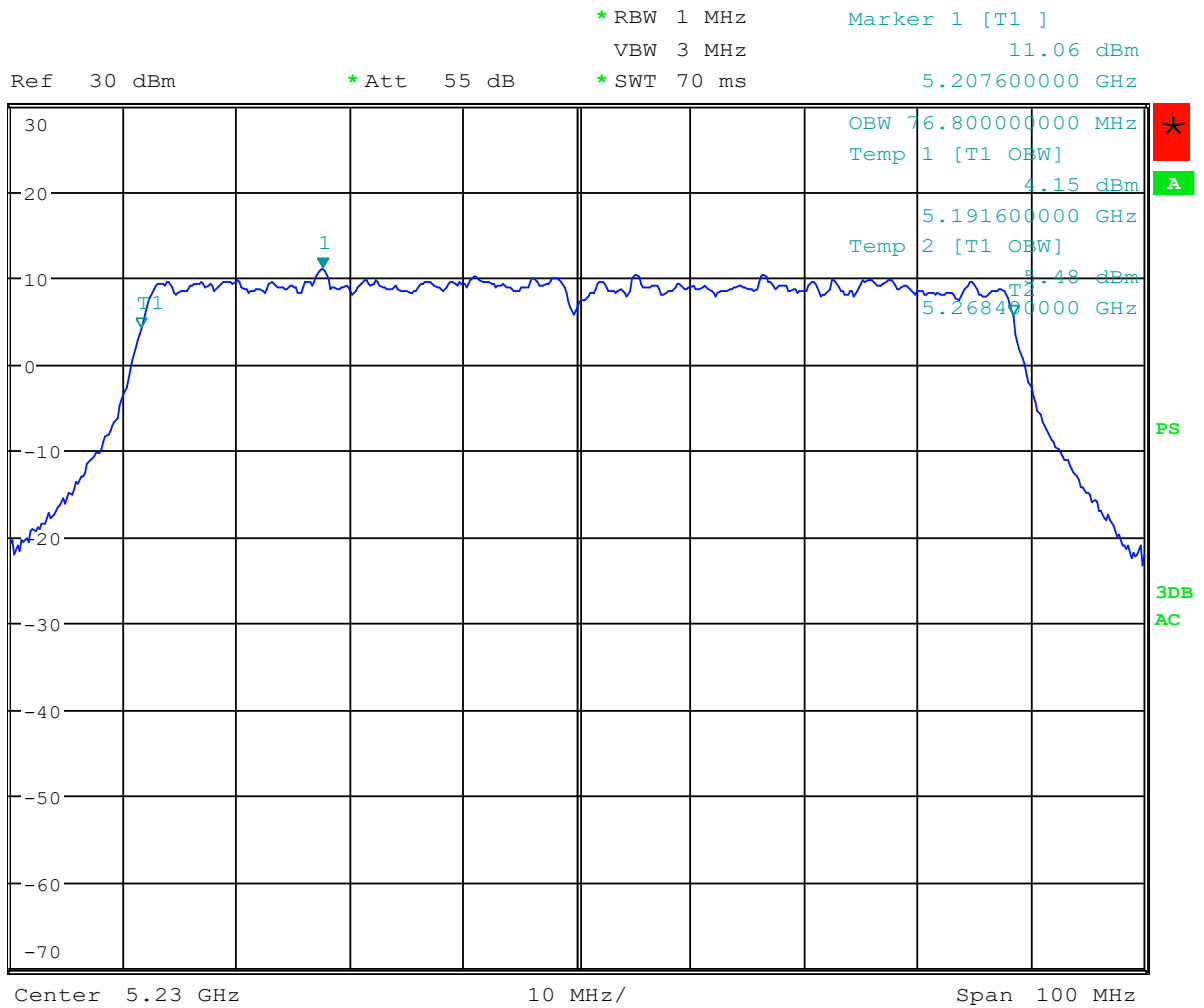
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UNII 1, HT80: 99%, Mid Channel



1 PK
VIEW



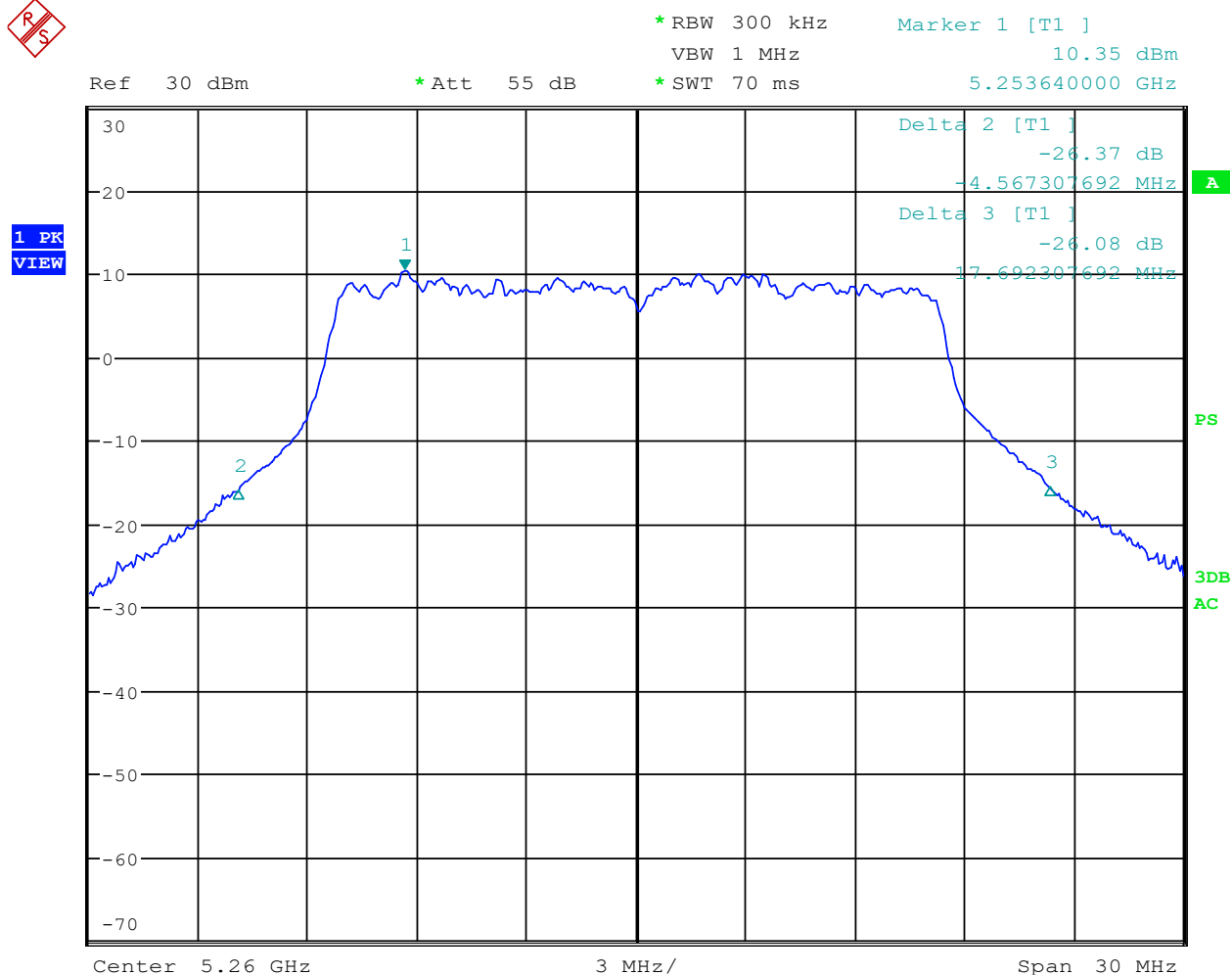
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UNII 2A, OFDM

OCCUPIED BANDWIDTH UNII 2A				
Channel	Frequency (MHz)	-26dB (MHz)	99% (MHz)	Limit
Modulation: OFDM				
Low	5260	22.259	16.920	>.500
Mid	5300	22.350	16.875	>.500
High	5320	22.451	16.860	>.500

UNII 2A, OFDM: -26dB, Low Channel

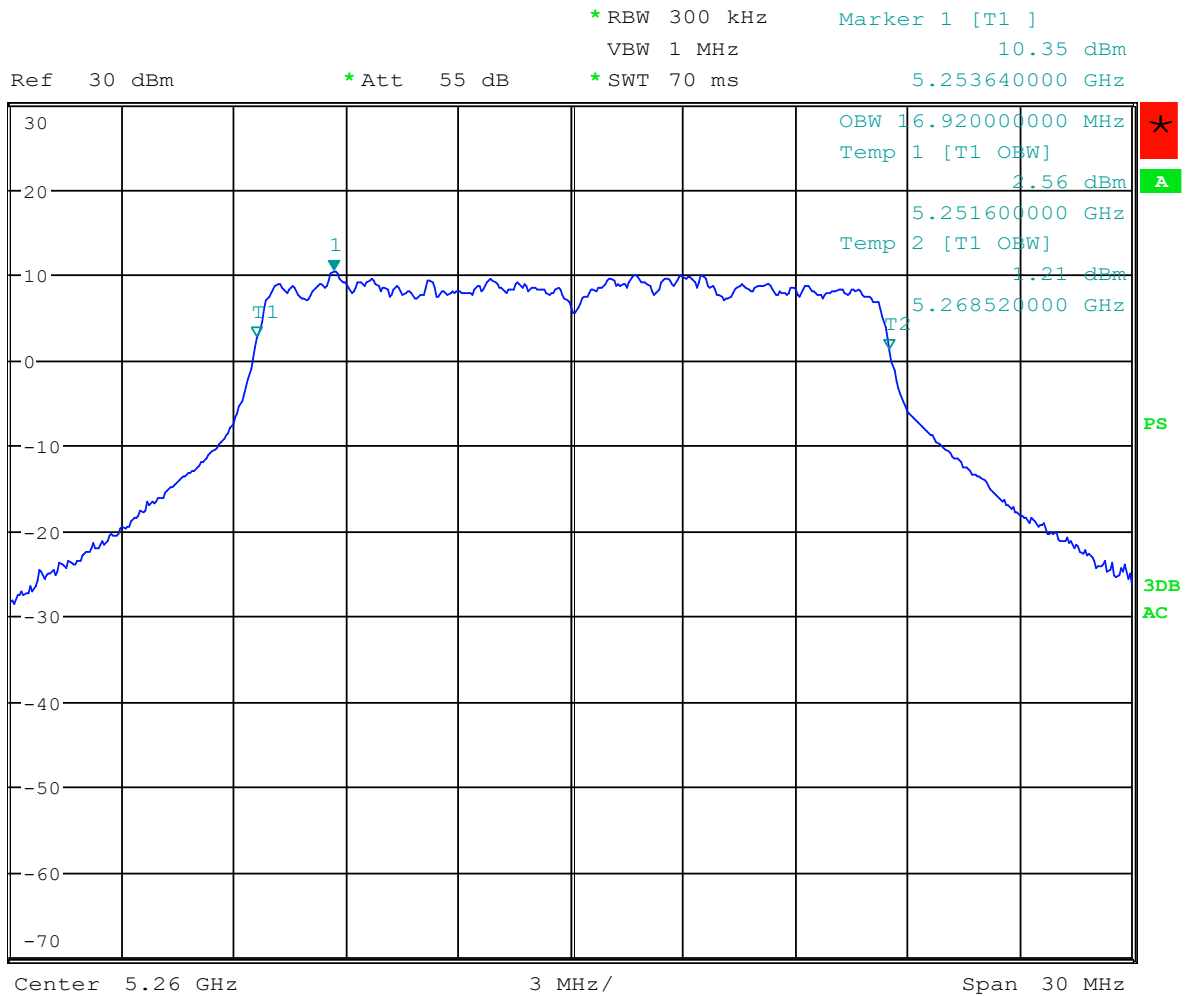




UNII 2A, OFDM: 99%, Low Channel



1 PK
VIEW



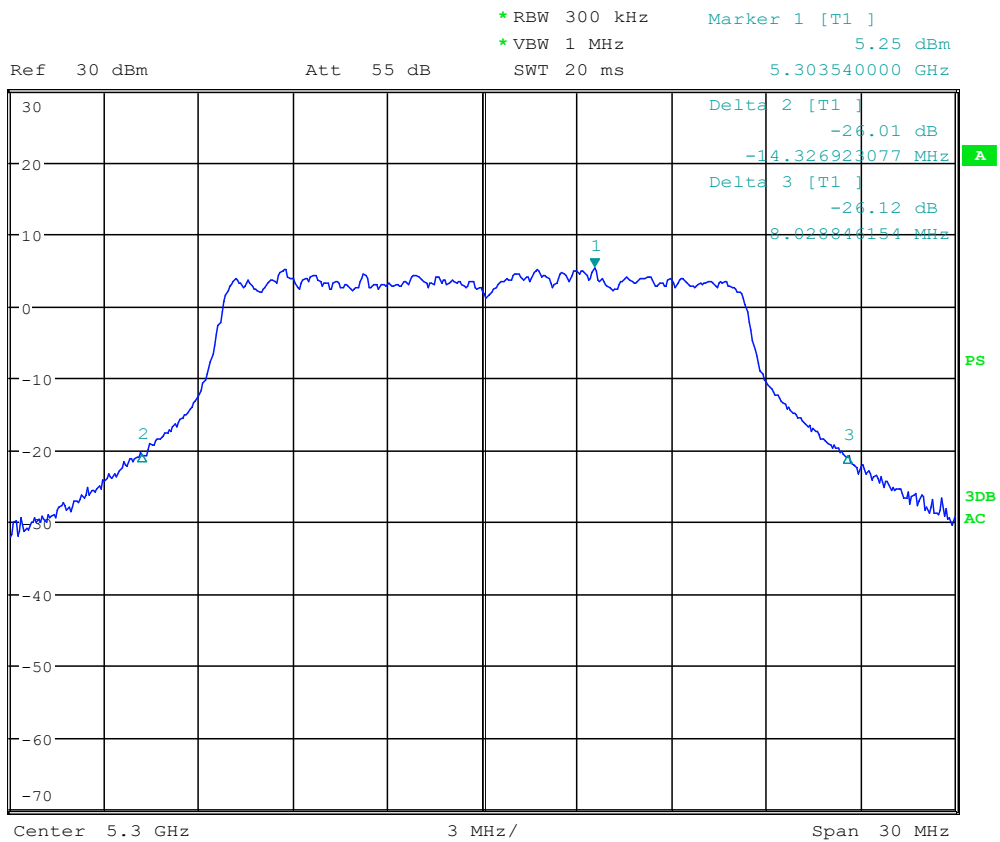
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UNII 2A, OFDM: -26dB, Mid Channel



1 PR
VIEW

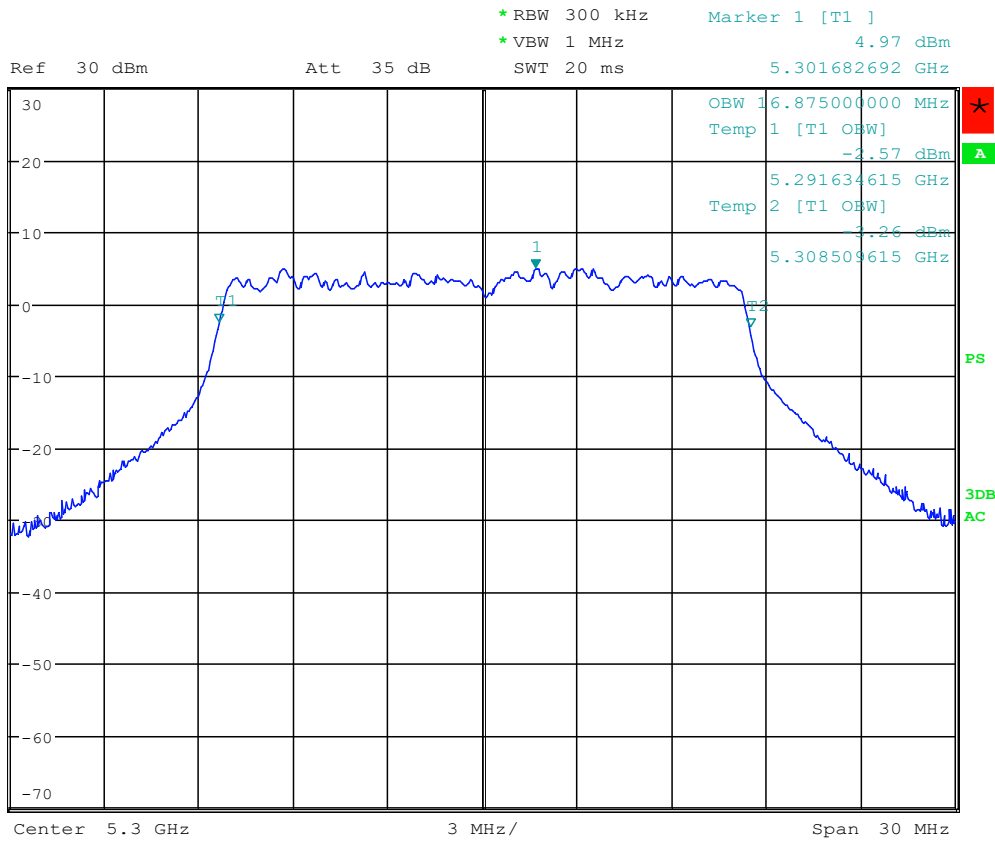




UNII 2A, OFDM: 99%, Mid Channel



1 PK
VIEW

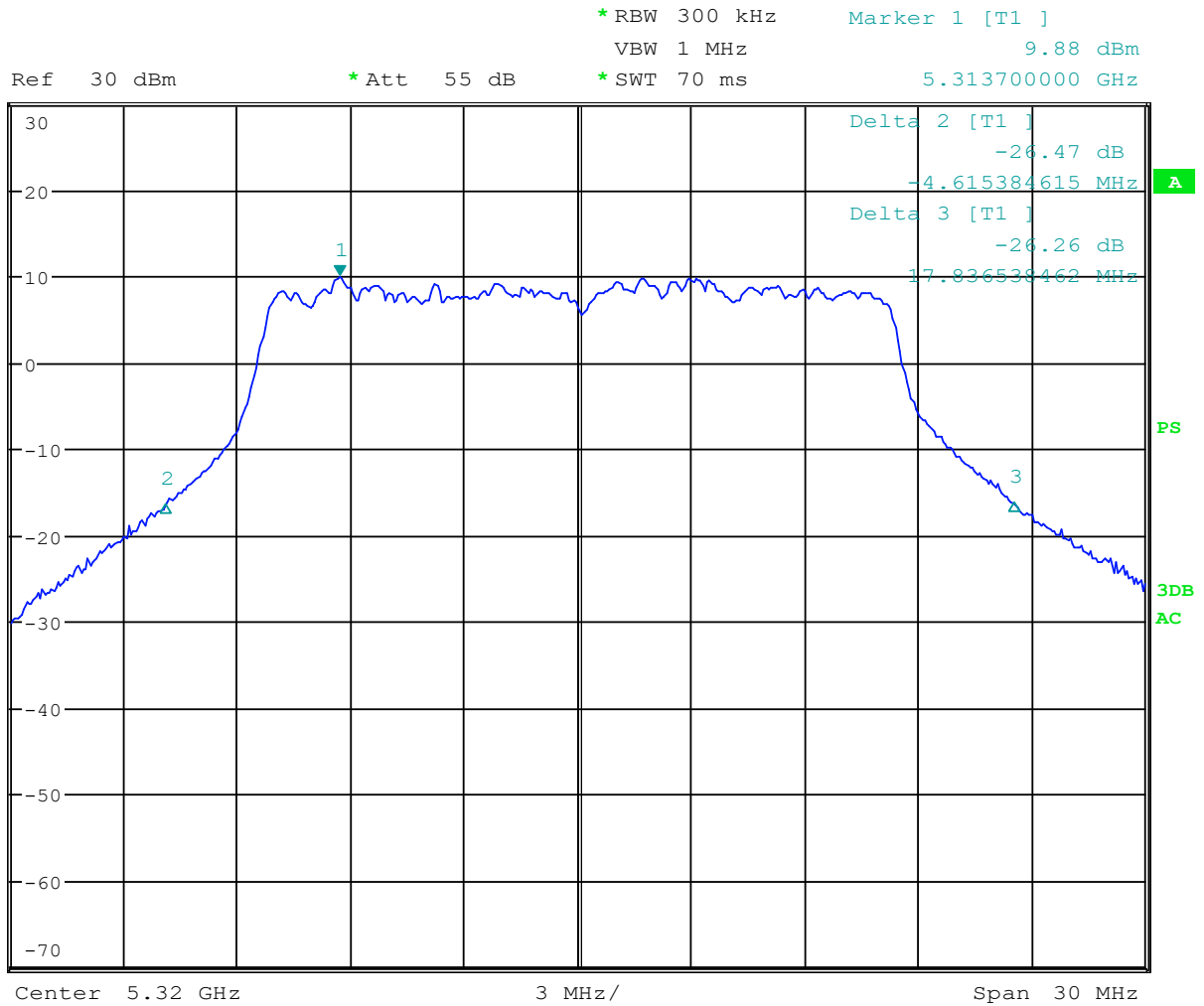




UNII 2A, OFDM: -26dB, High Channel



1 PK
VIEW

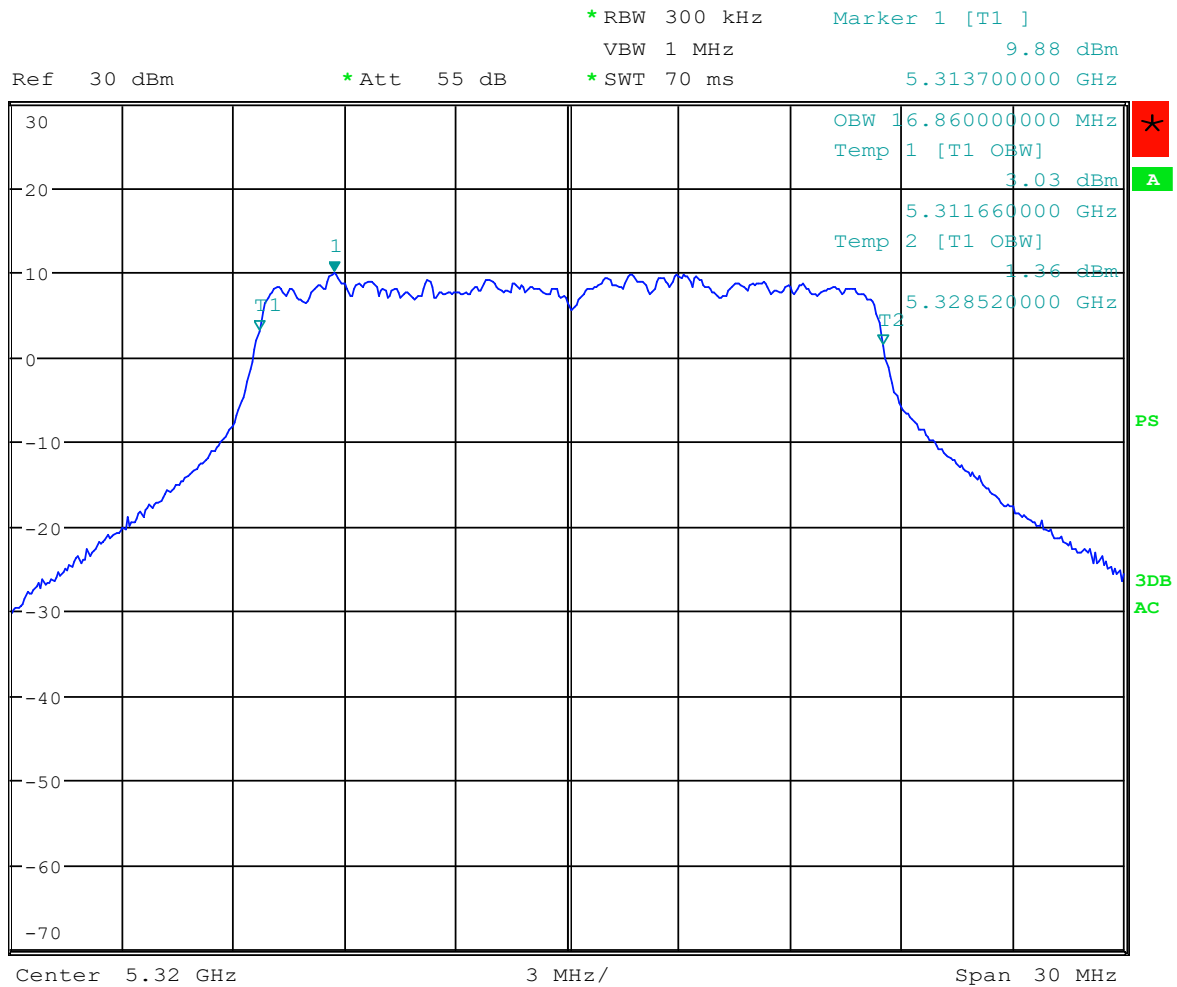




UNII 2A, OFDM: 99%, High Channel



1 PK
VIEW

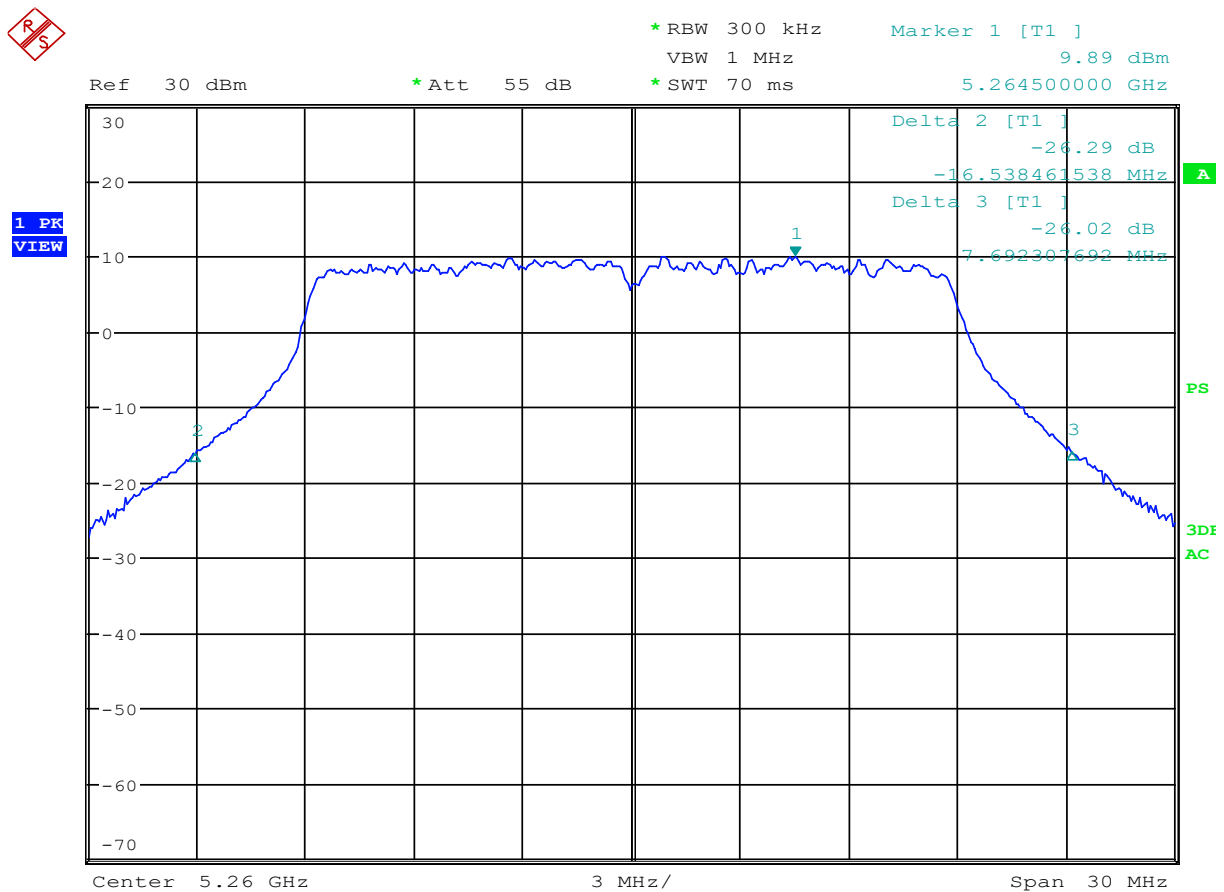


Date: 7.SEP.2021 17:16:15

UNII 2A, HT20

OCCUPIED BANDWIDTH UNII 2A				
Channel	Frequency (MHz)	-26dB (MHz)	99% (MHz)	Limit
Modulation: HT20				
Low	5260	24.23	18.240	>.500
Mid	5300	23.94	18.220	>.500
High	5320	24.28	18.240	>.500

UNII 2A, HT20: -26dB, Low Channel



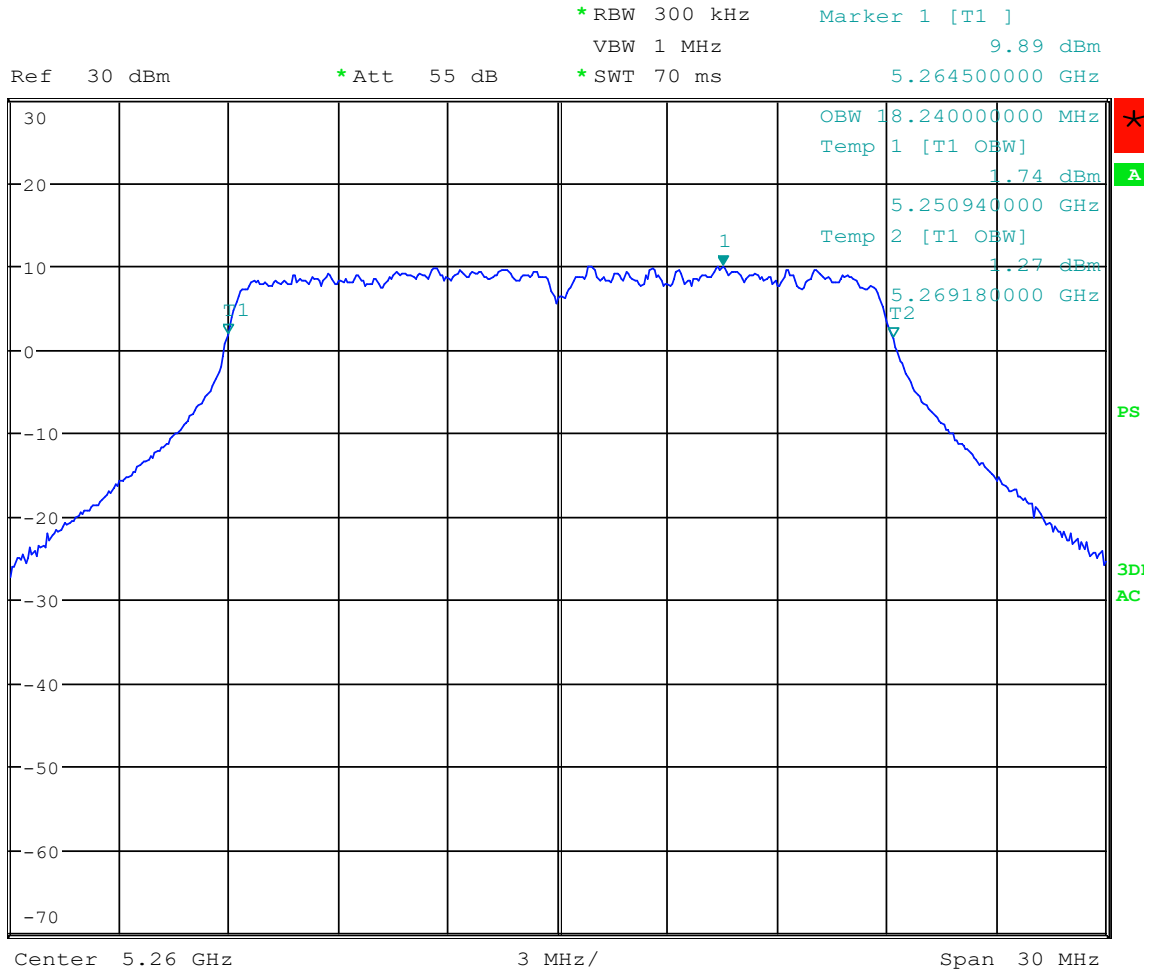
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UNII 2A, HT20: 99%, Low Channel

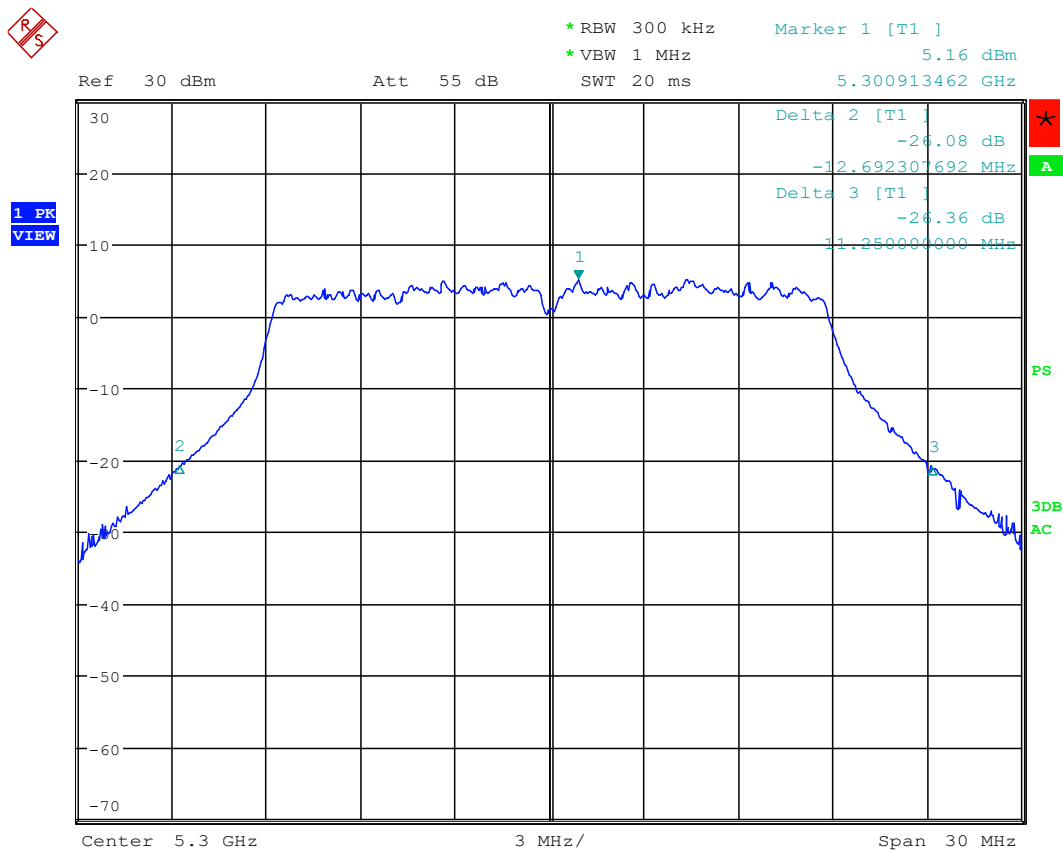


1 PK
VIEW





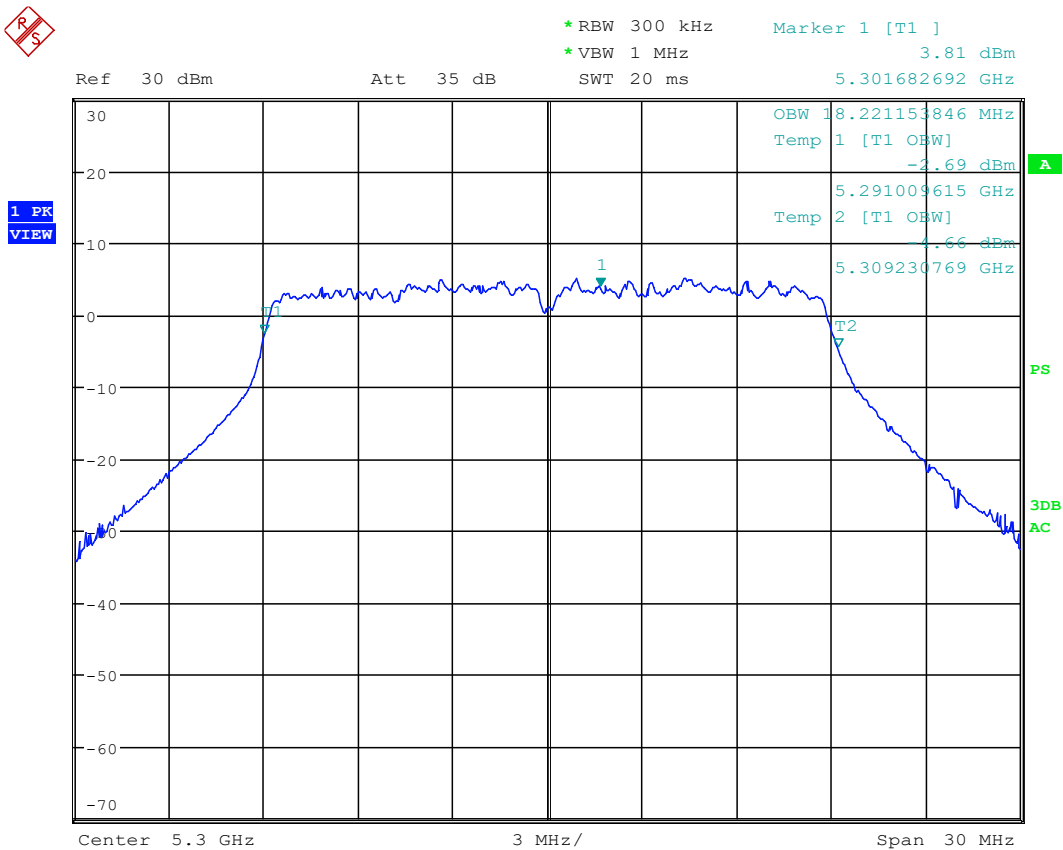
UNII 2A, HT20: -26dB, Mid Channel





Applicant: PCTEL, Inc
FCC ID: NYPRMWIFIAC2X2

UNII 2A, HT20: 99%, Mid Channel

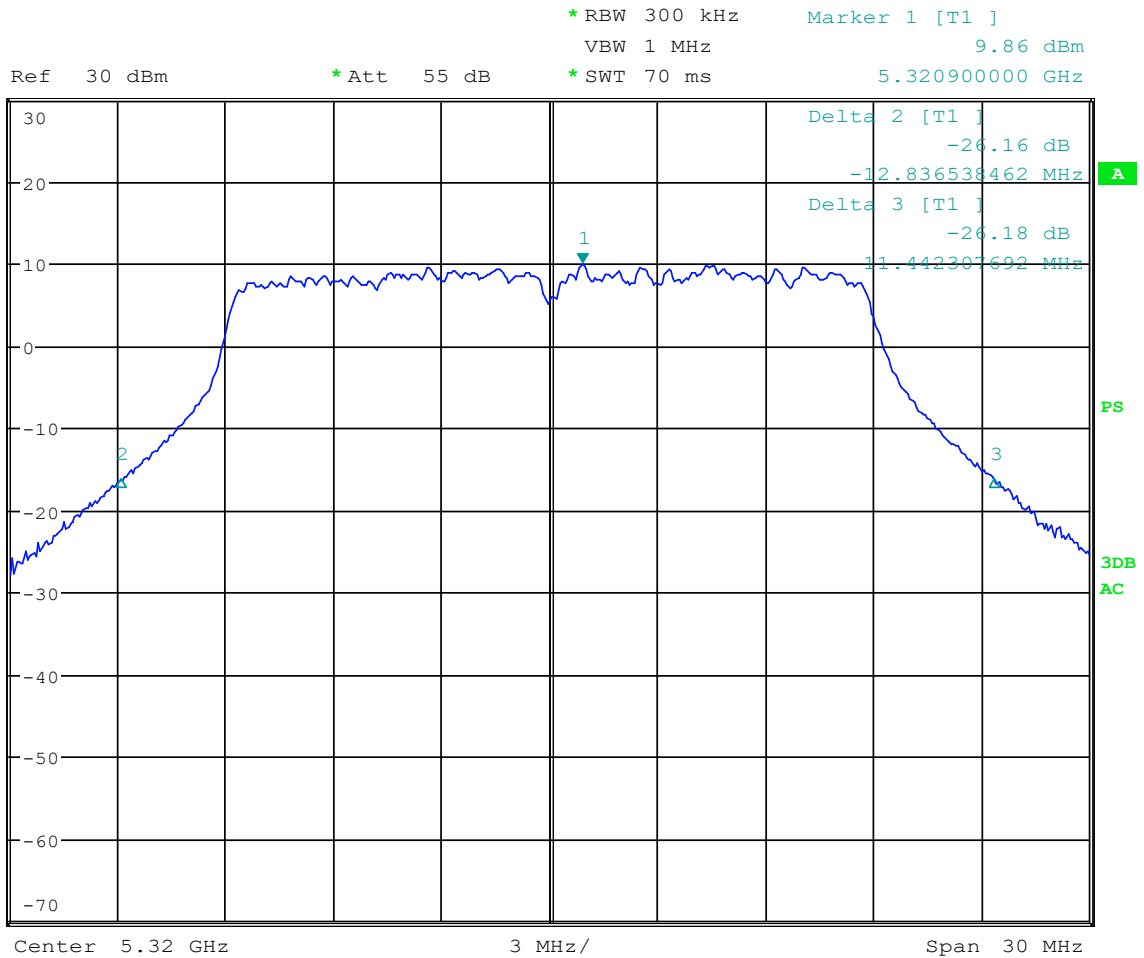




UNII 2A, HT20: -26dB, High Channel



1 PK
VIEW



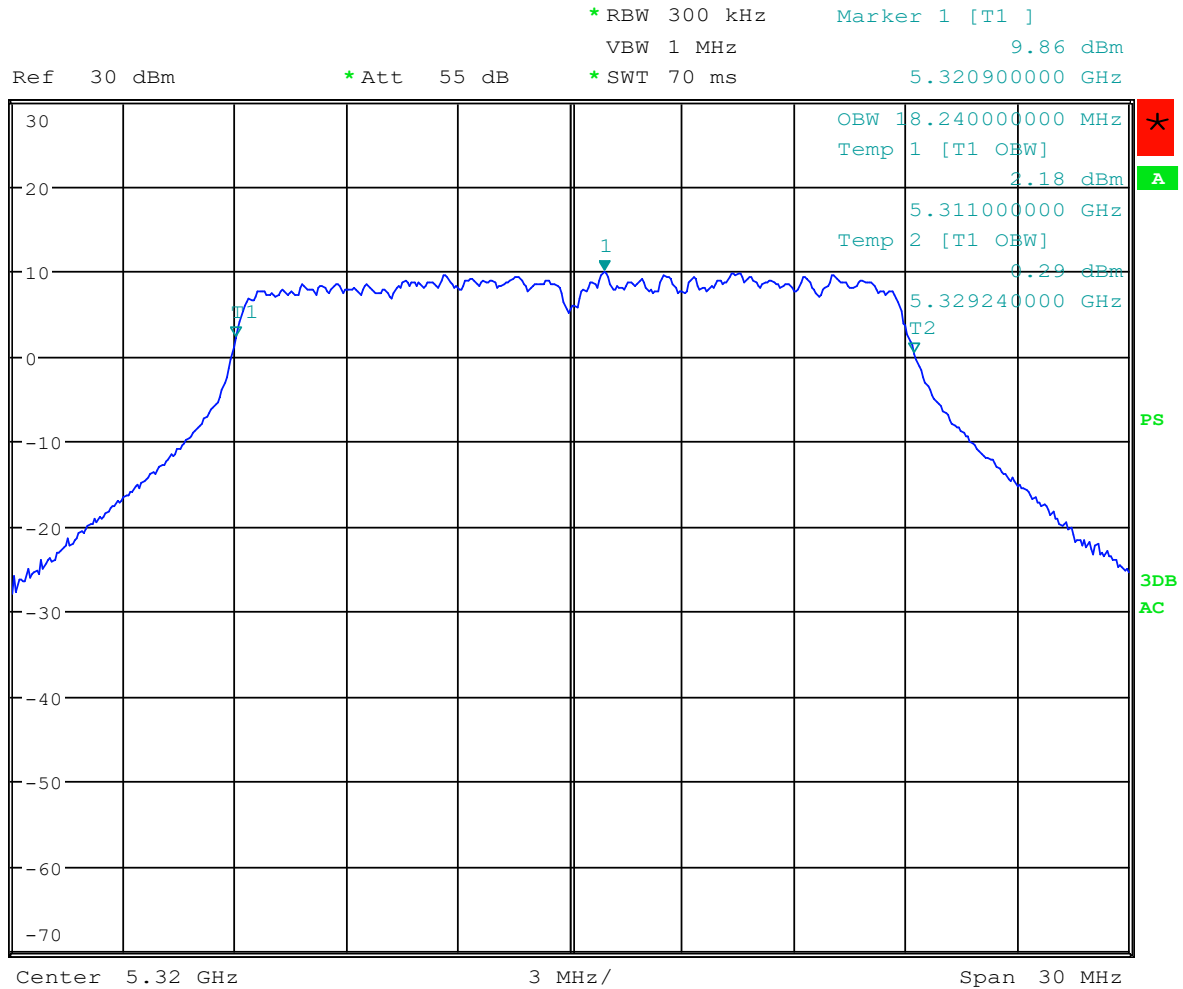
Date: 7.SEP.2021 17:20:19



UNII 2A, HT20: 99%, High Channel



1 PK
VIEW



Date: 7.SEP.2021 17:20:53



UNII 2A, HT40

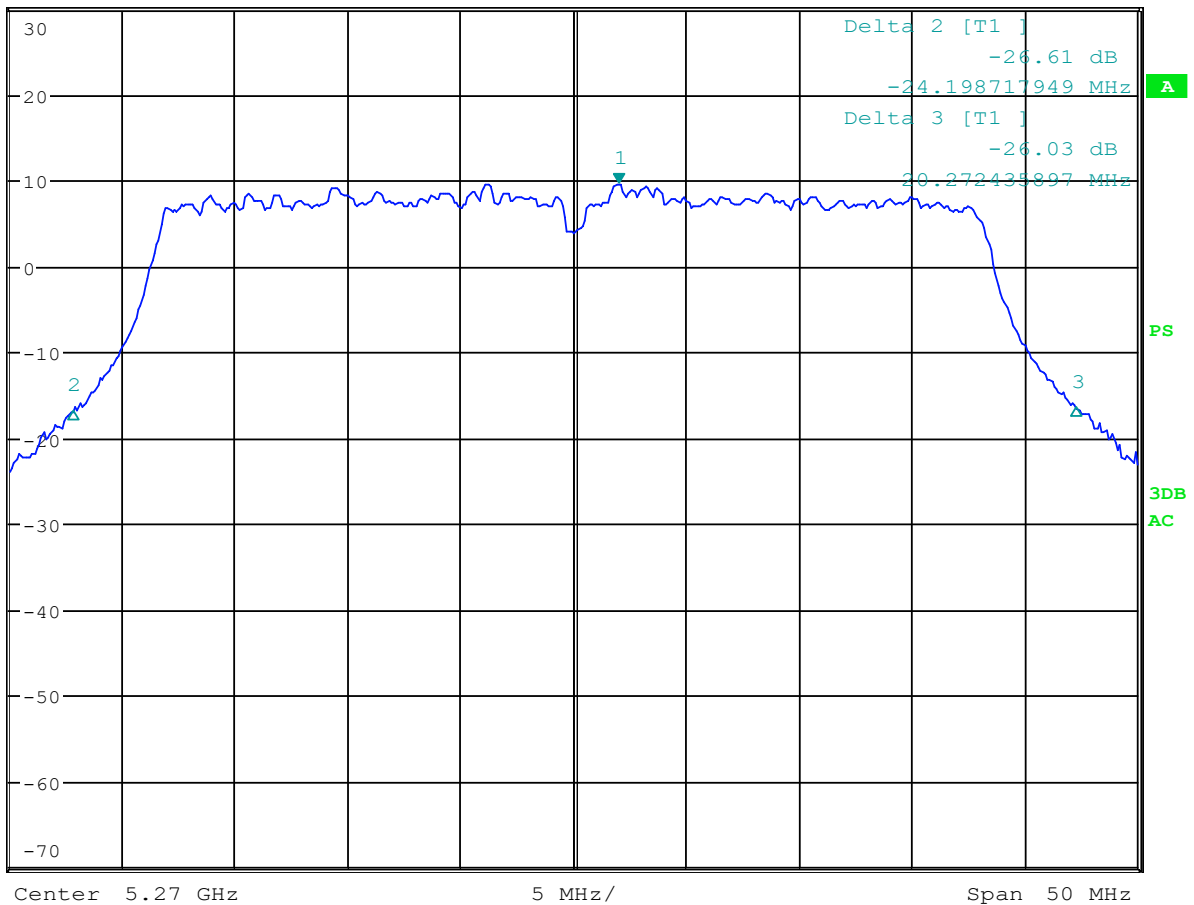
OCCUPIED BANDWIDTH UNII 2A				
Channel	Frequency (MHz)	-26dB (MHz)	99% (MHz)	Limit
Modulation: HT40				
Low	5270	44.47	36.800	>.500
High	5310	44.39	36.800	>.500

UNII 2A, HT40: -26dB, Low Channel



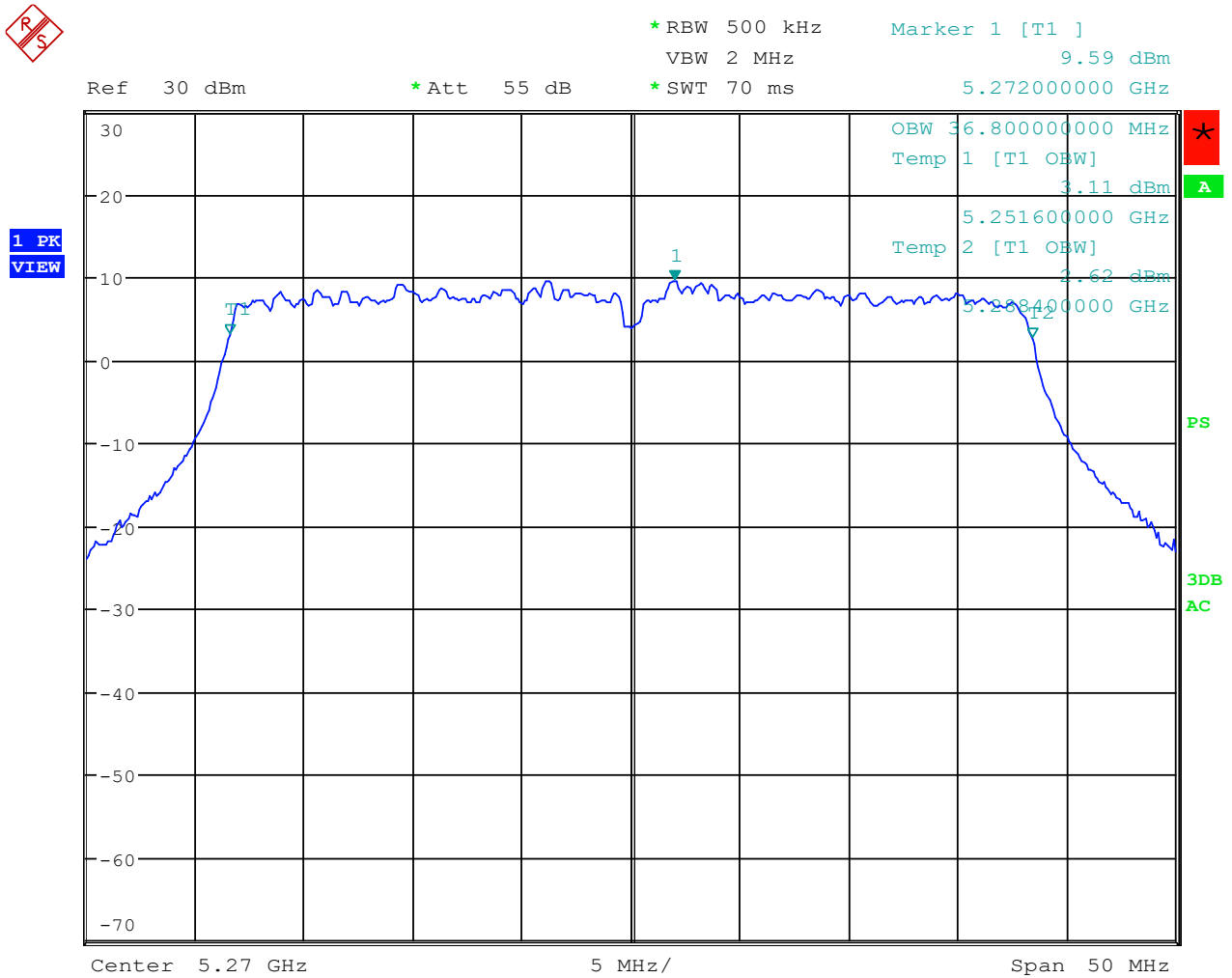
Ref 30 dBm * Att 55 dB * RBW 500 kHz Marker 1 [T1] 9.59 dBm
VBW 2 MHz * SWT 70 ms 5.272000000 GHz

1 PK
VIEW





UNII 2A, HT40: 99%, Low Channel



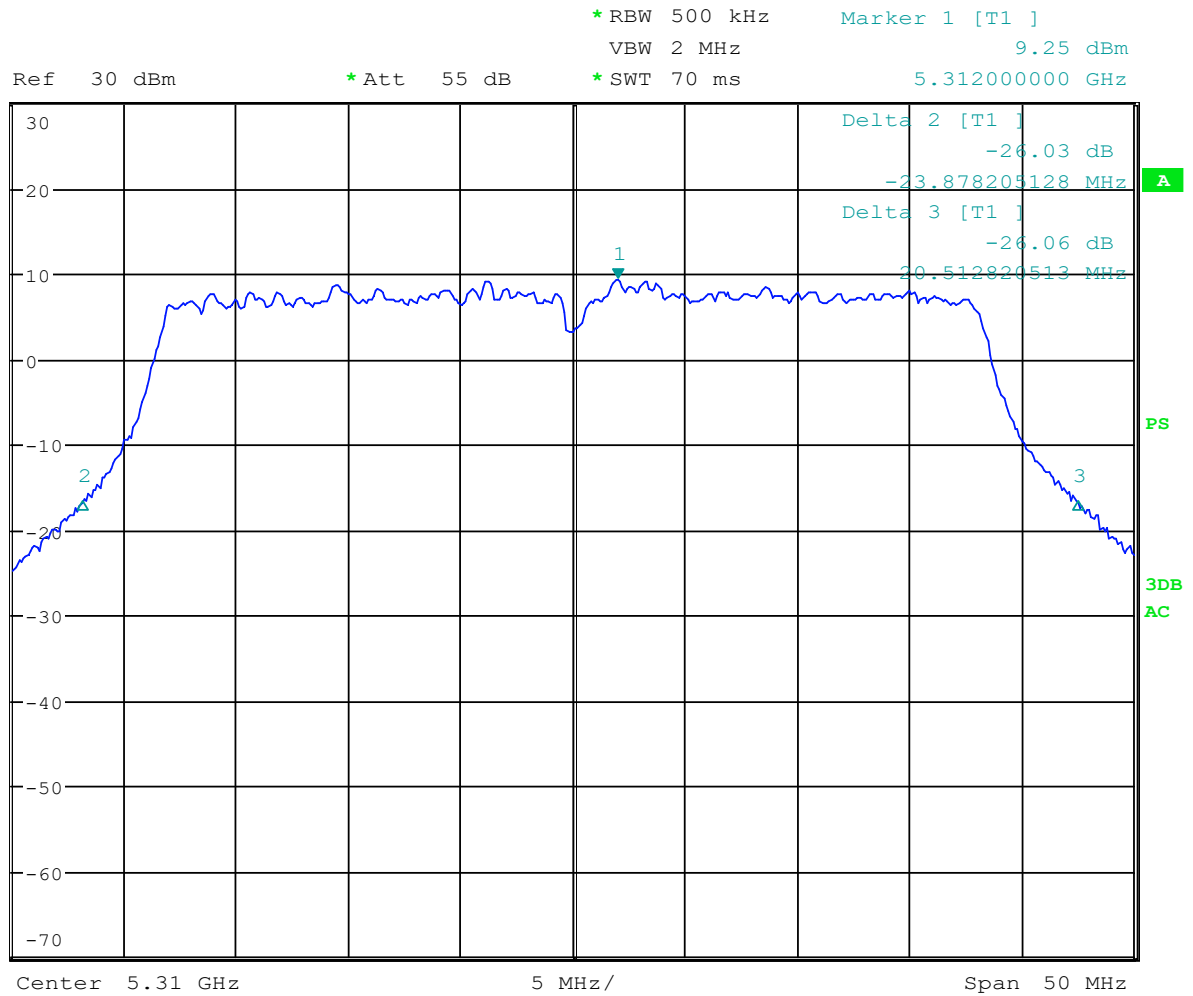
Date: 7.SEP.2021 17:33:21



UNII 2A, HT40: -26dB, High Channel



1 PK
VIEW

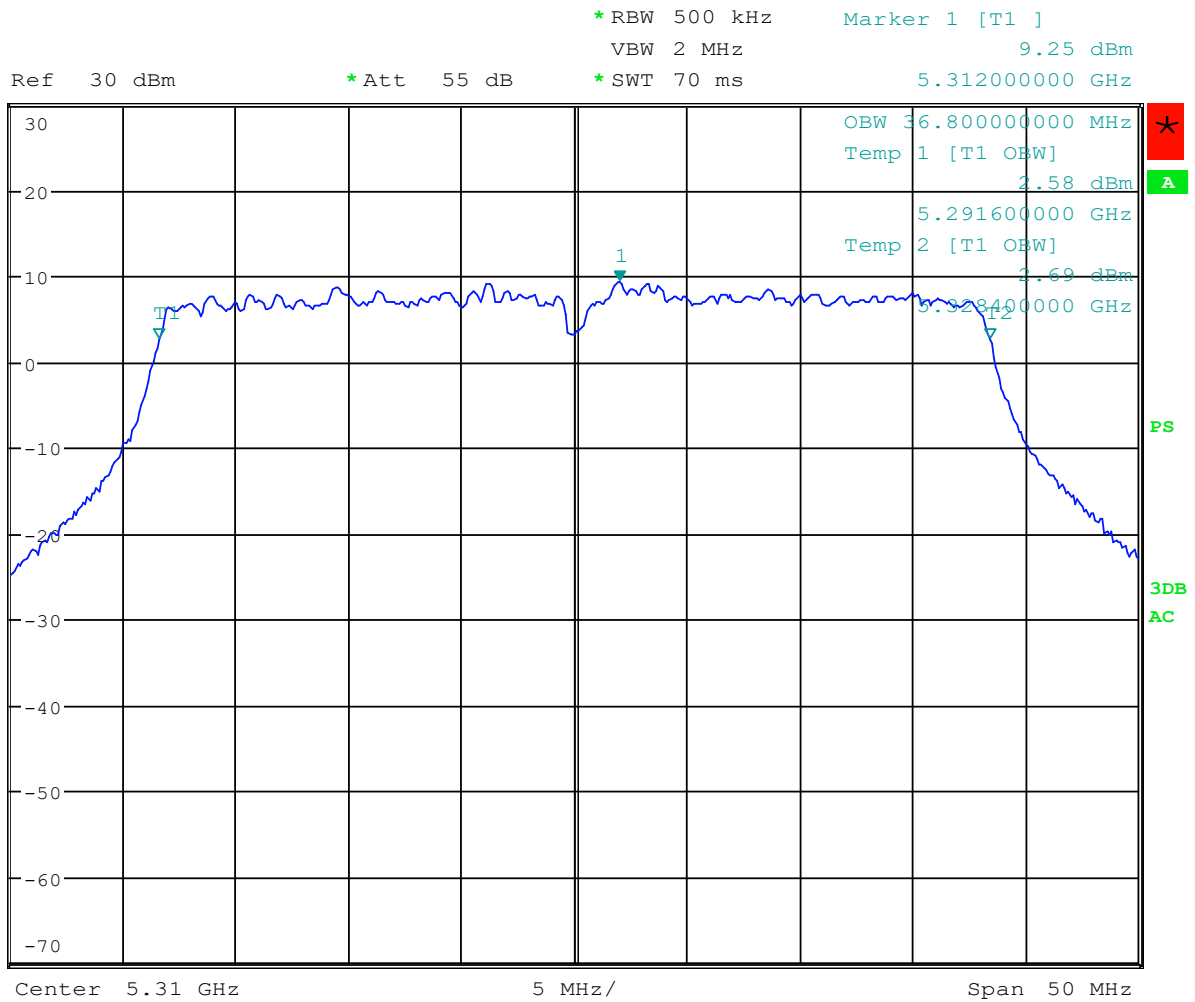




UNII 2A, HT40: 99%, High Channel



1 PK
VIEW

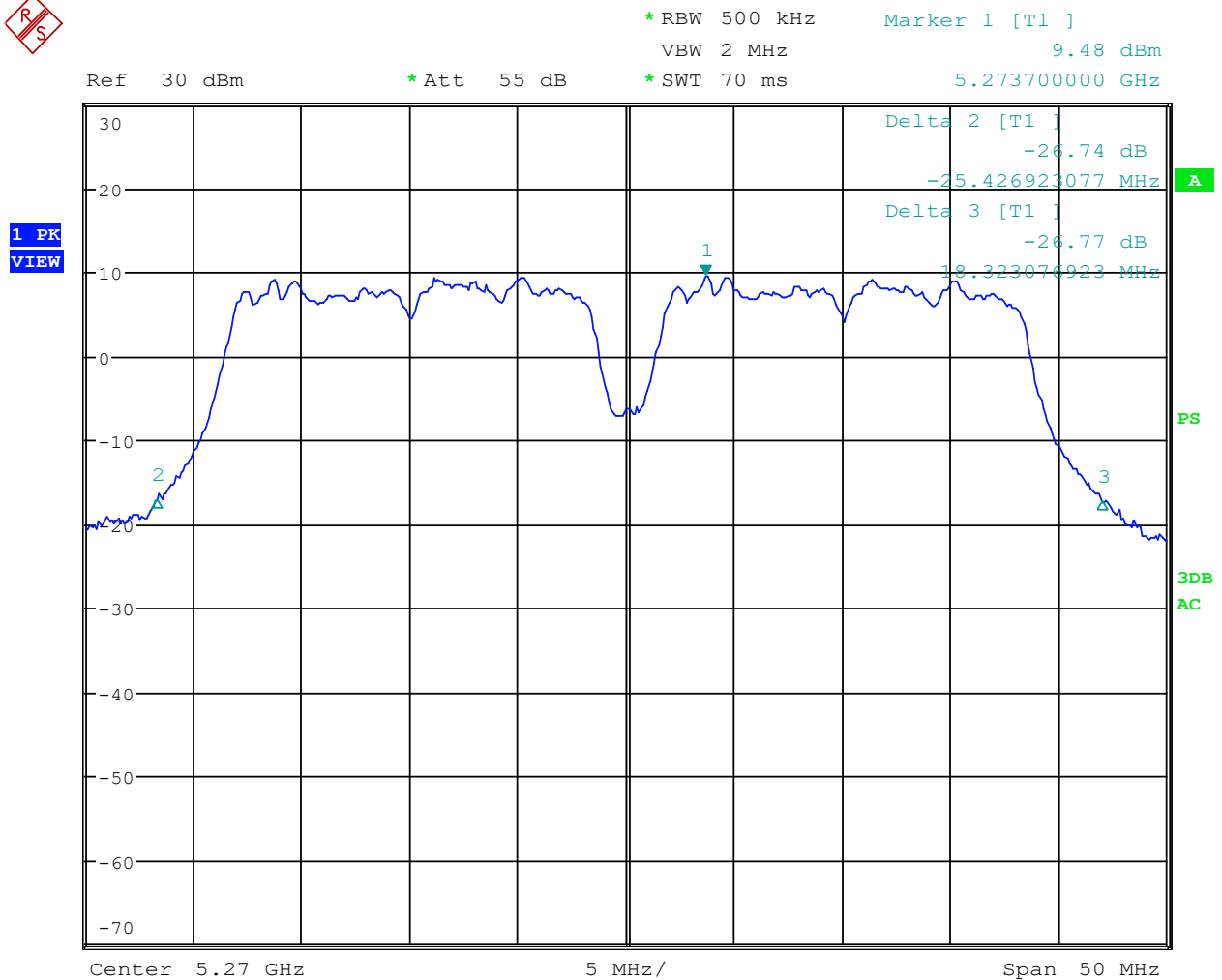




UNII 2A, non HT40

OCCUPIED BANDWIDTH UNII 2A				
Channel	Frequency (MHz)	-26dB (MHz)	99% (MHz)	Limit
Modulation: non HT40				
Low	5270	43.749	36.700	>.500
High	5310	43.429	36.800	>.500

UNII 2A, non HT40: -26dB, Low Channel

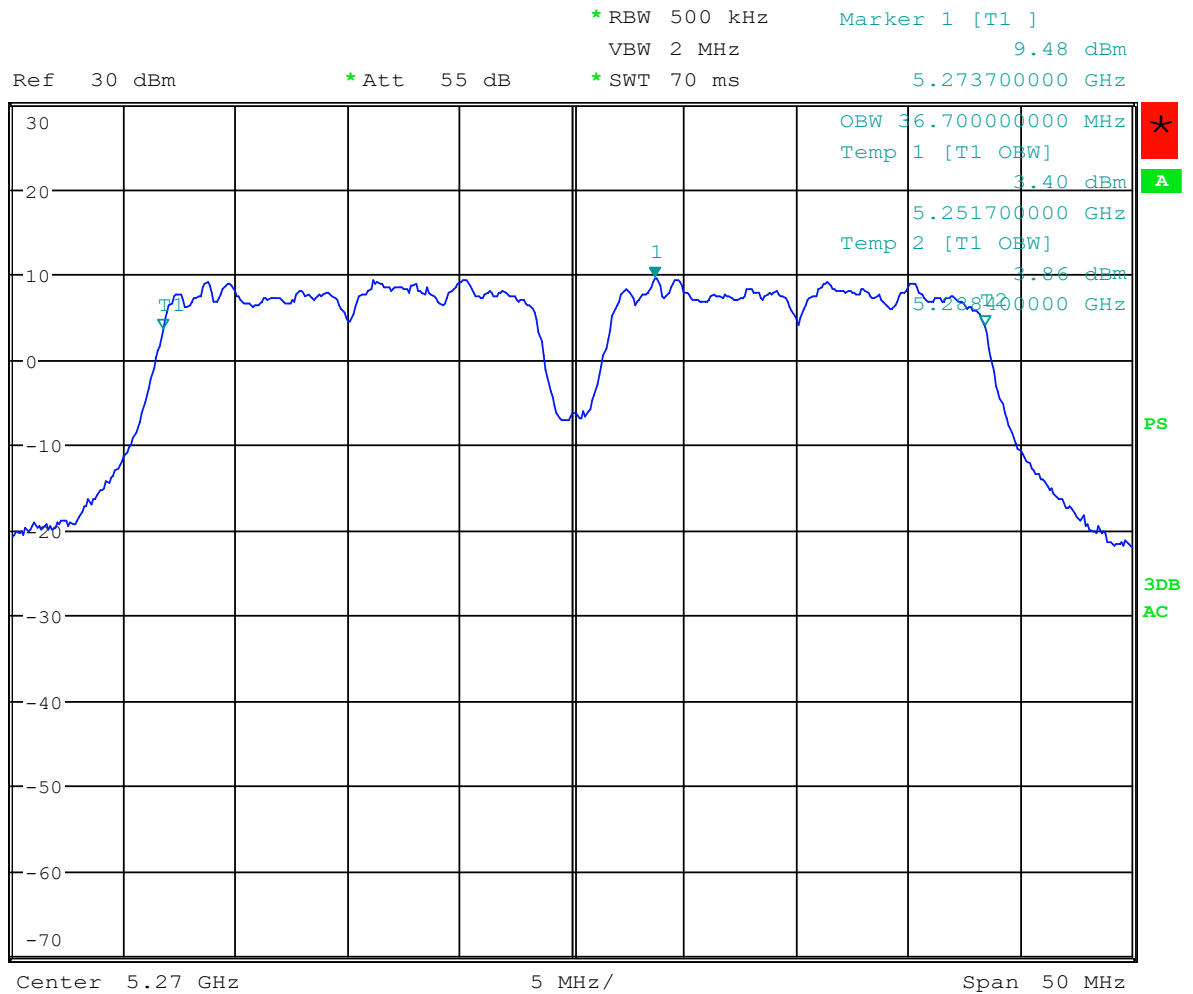




UNII 2A, non HT40: 99%, Low Channel



1 PK
VIEW



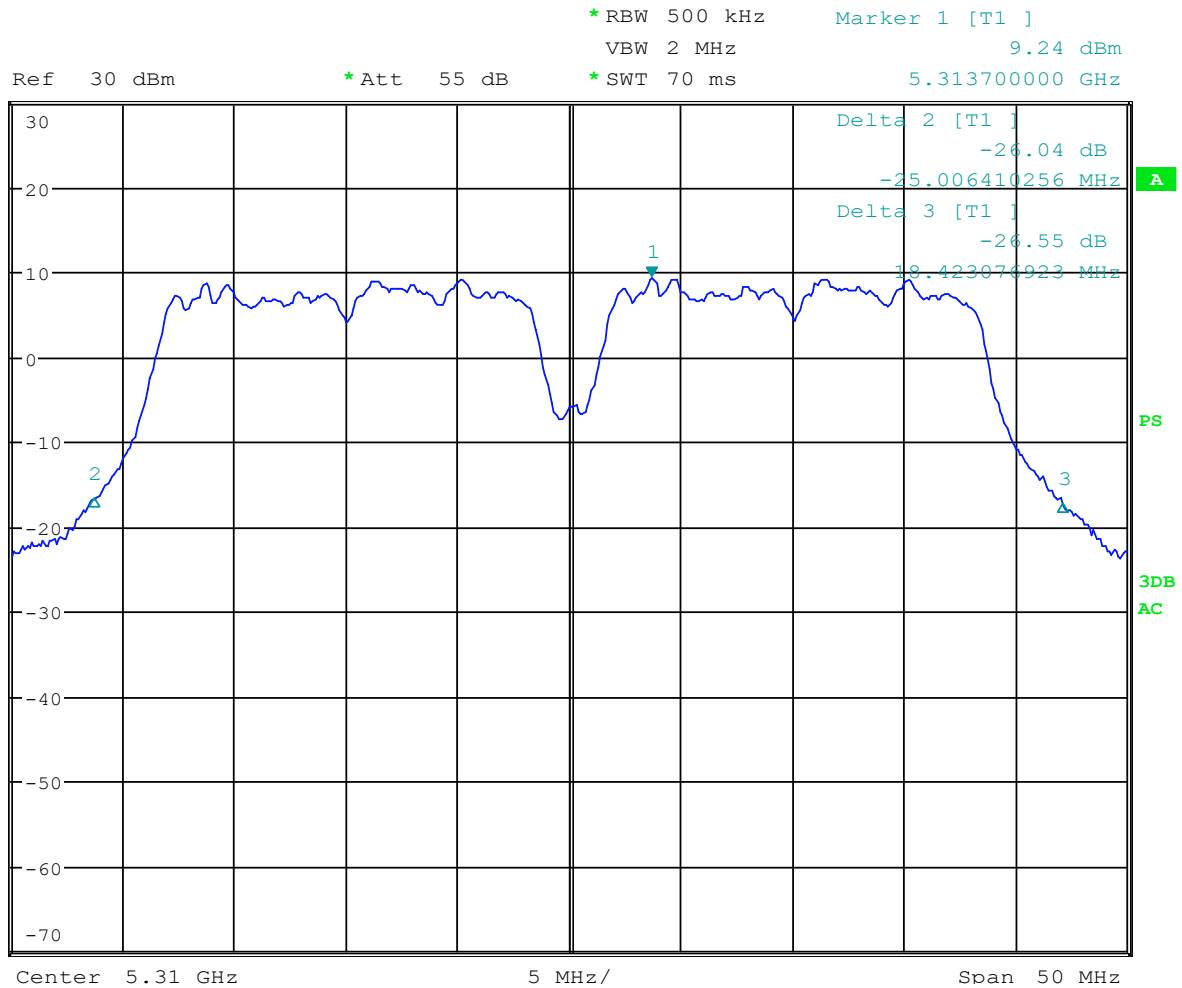
Date: 7.SEP.2021 17:24:21



UNII 2A, non HT40: -26dB, High Channel



1 PK
VIEW





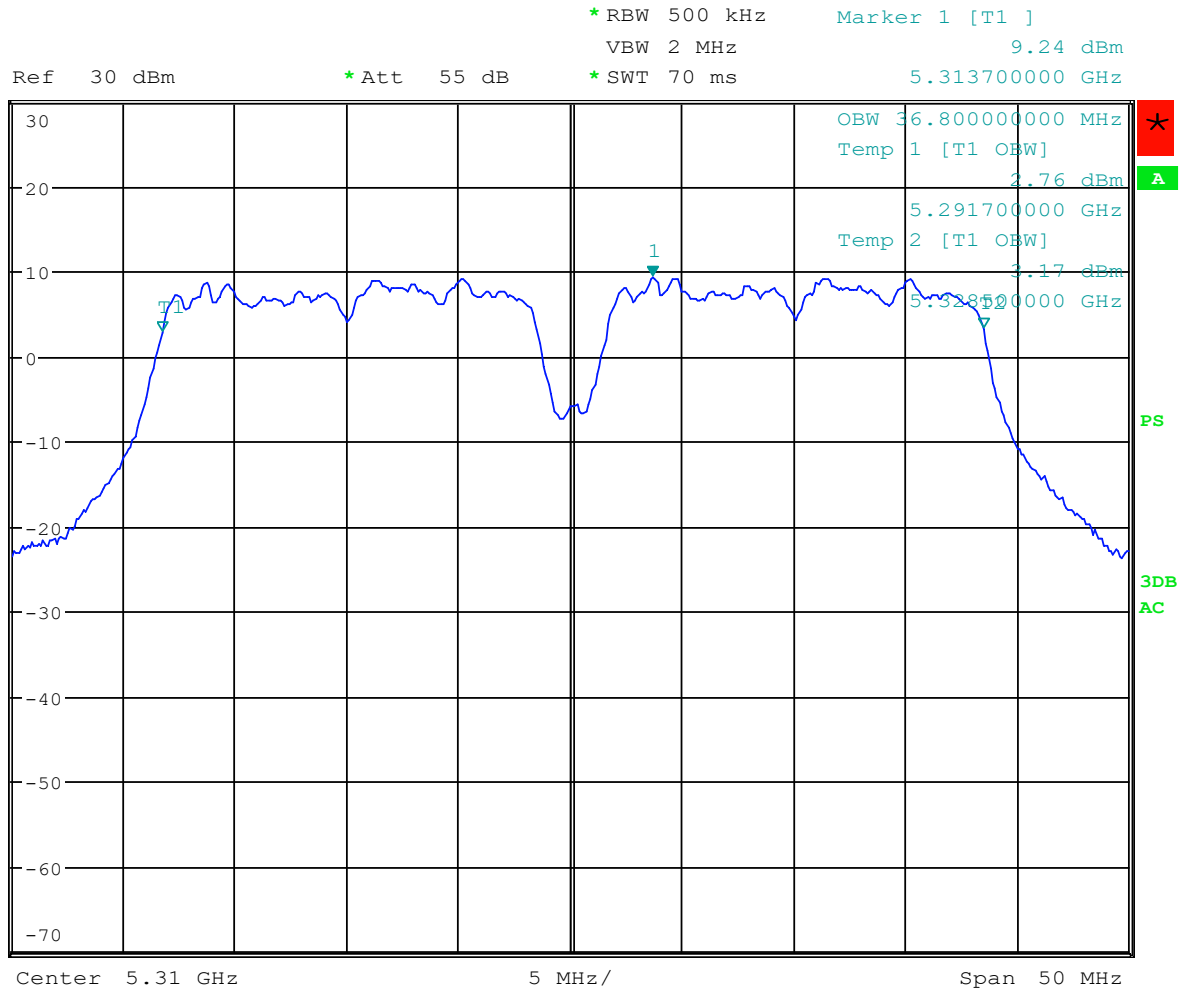
Order Number: F2P19924D

Applicant: PCTEL, Inc
FCC ID: NYPRMWIFIAC2X2

UNII 2A, non HT40: 99%, High Channel



1 PK
VIEW



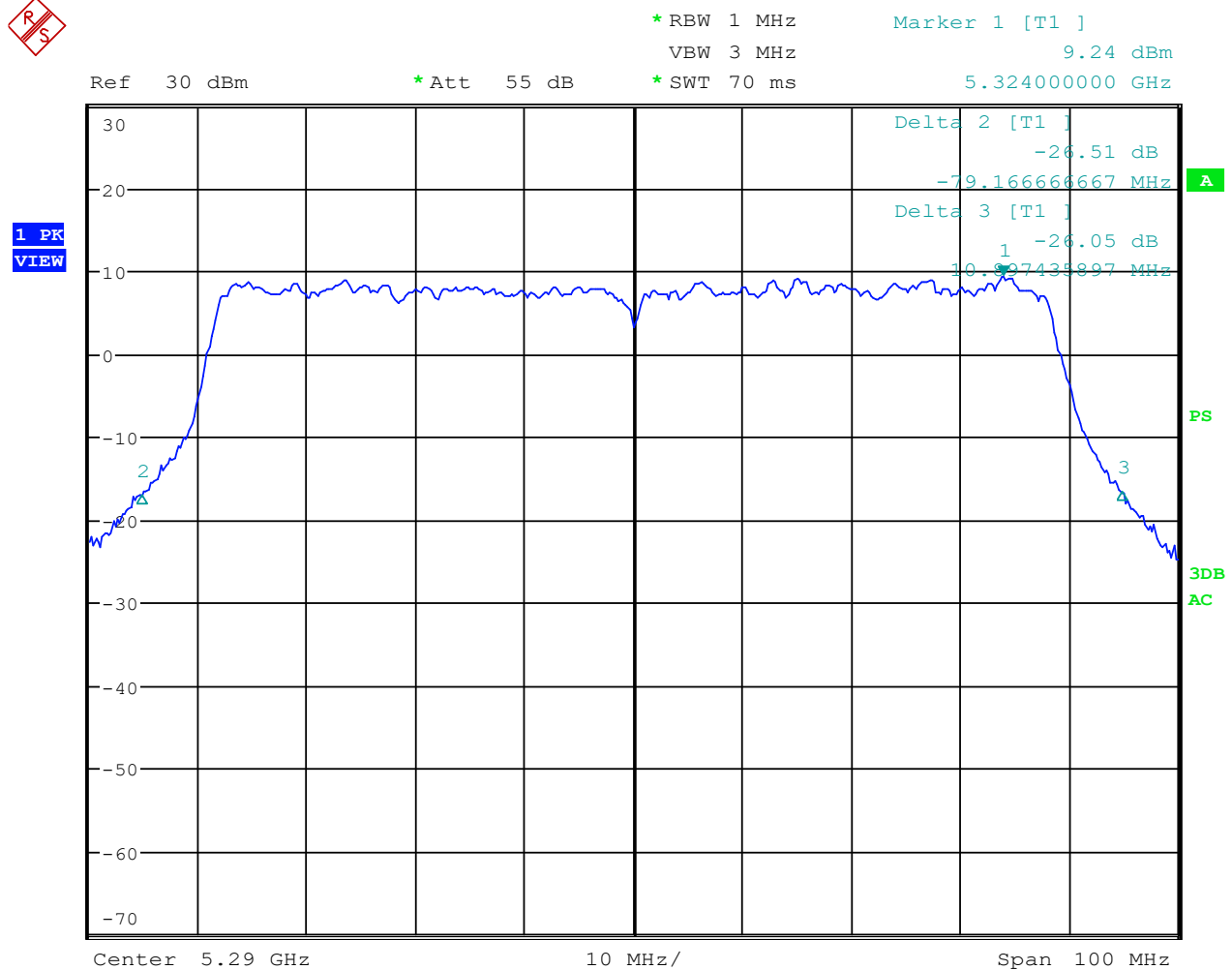
Date: 7.SEP.2021 17:26:30



UNII 2A, HT80

OCCUPIED BANDWIDTH UNII 2A				
Channel	Frequency (MHz)	-26dB (MHz)	99% (MHz)	Limit
Modulation: HT80				
Mid	5290	90.063	76.800	>.500

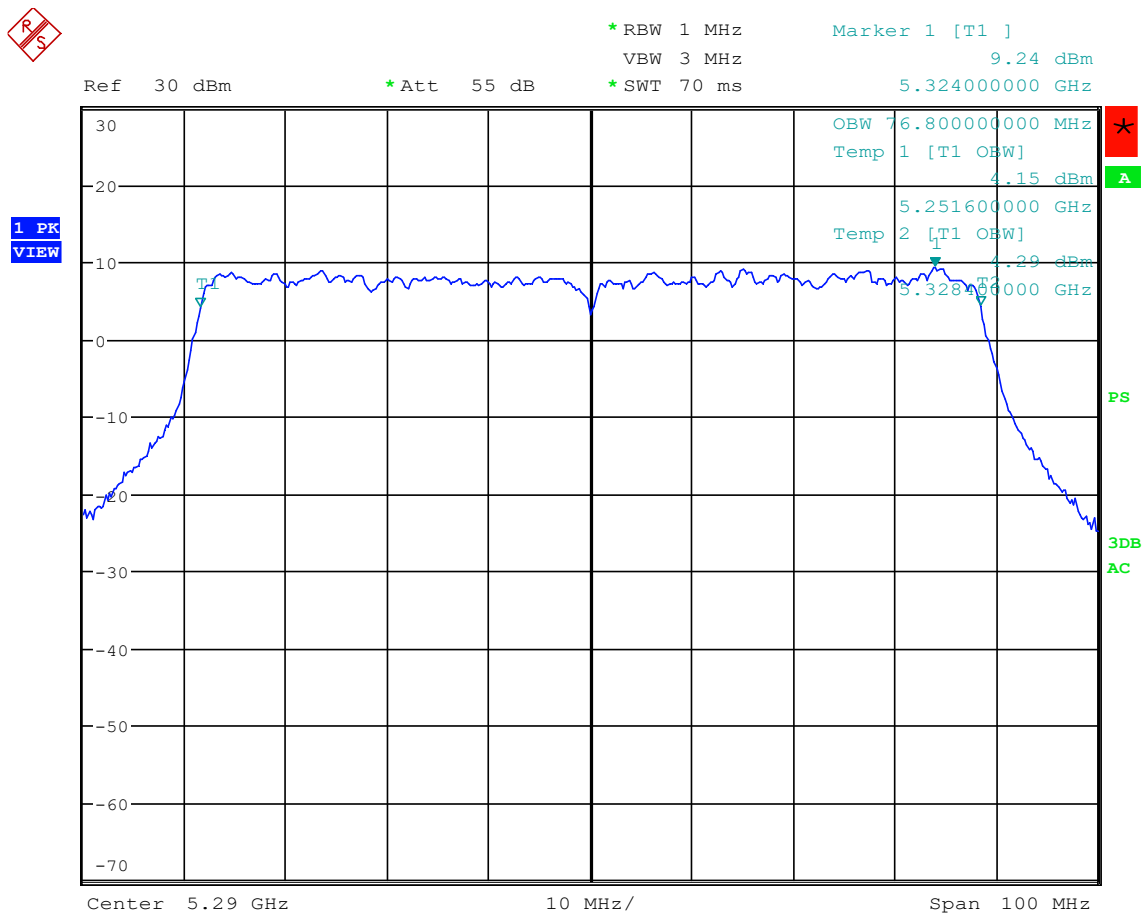
UNII 2A, HT80: -26dB



Date: 7.SEP.2021 17:37:32



UNII 2A, HT80: 99%



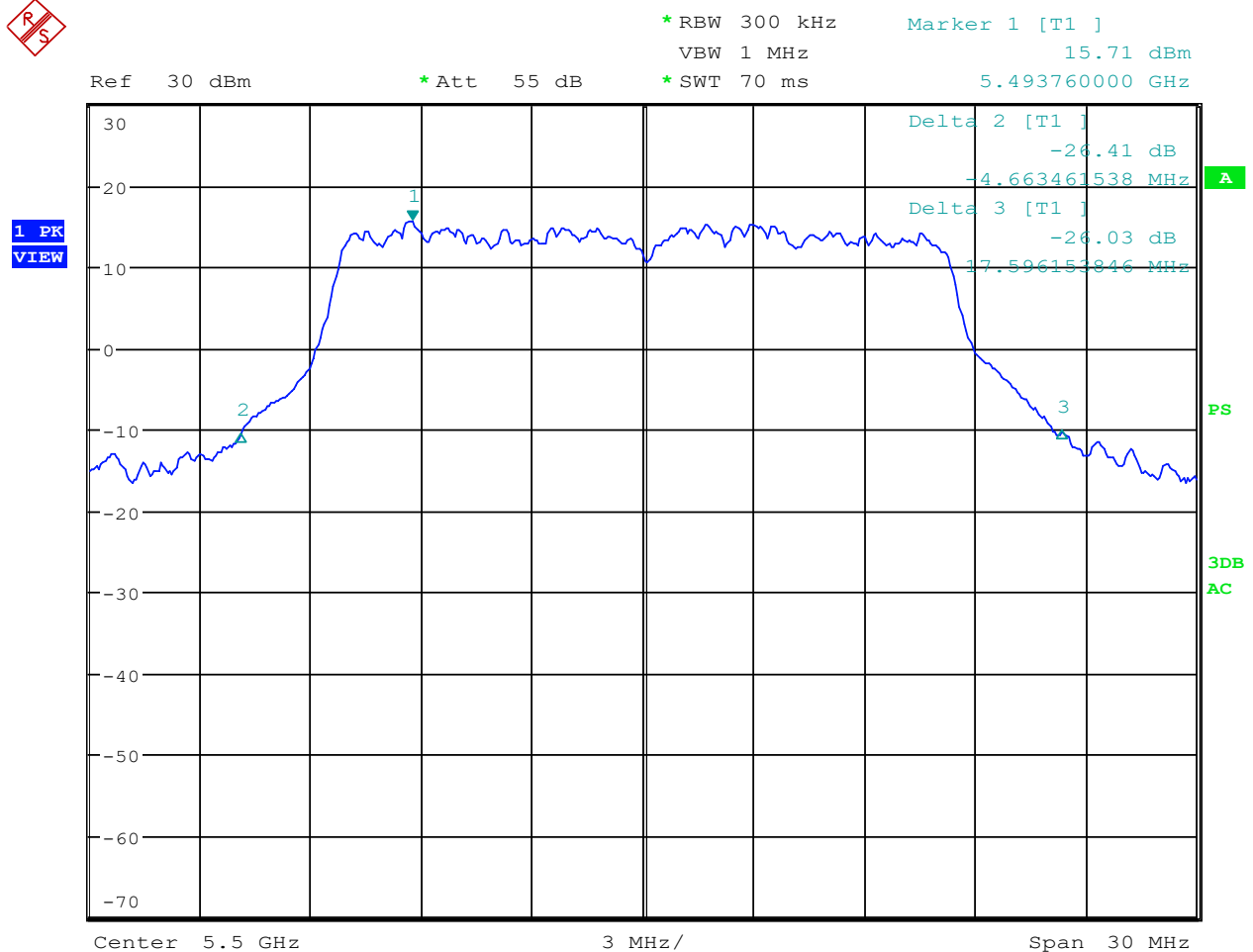
Date: 7.SEP.2021 17:38:18



UNII 2C, OFDM

OCCUPIED BANDWIDTH UNII 2C				
Channel	Frequency (MHz)	-26dB (MHz)	99% (MHz)	Limit
Modulation: OFDM				
Low	5500	22.262	16.860	>.500
Mid	5600	21.970	16.860	>.500
High	5700	22.115	16.860	>.500

UNII 2C, OFDM: -26dB, Low Channel

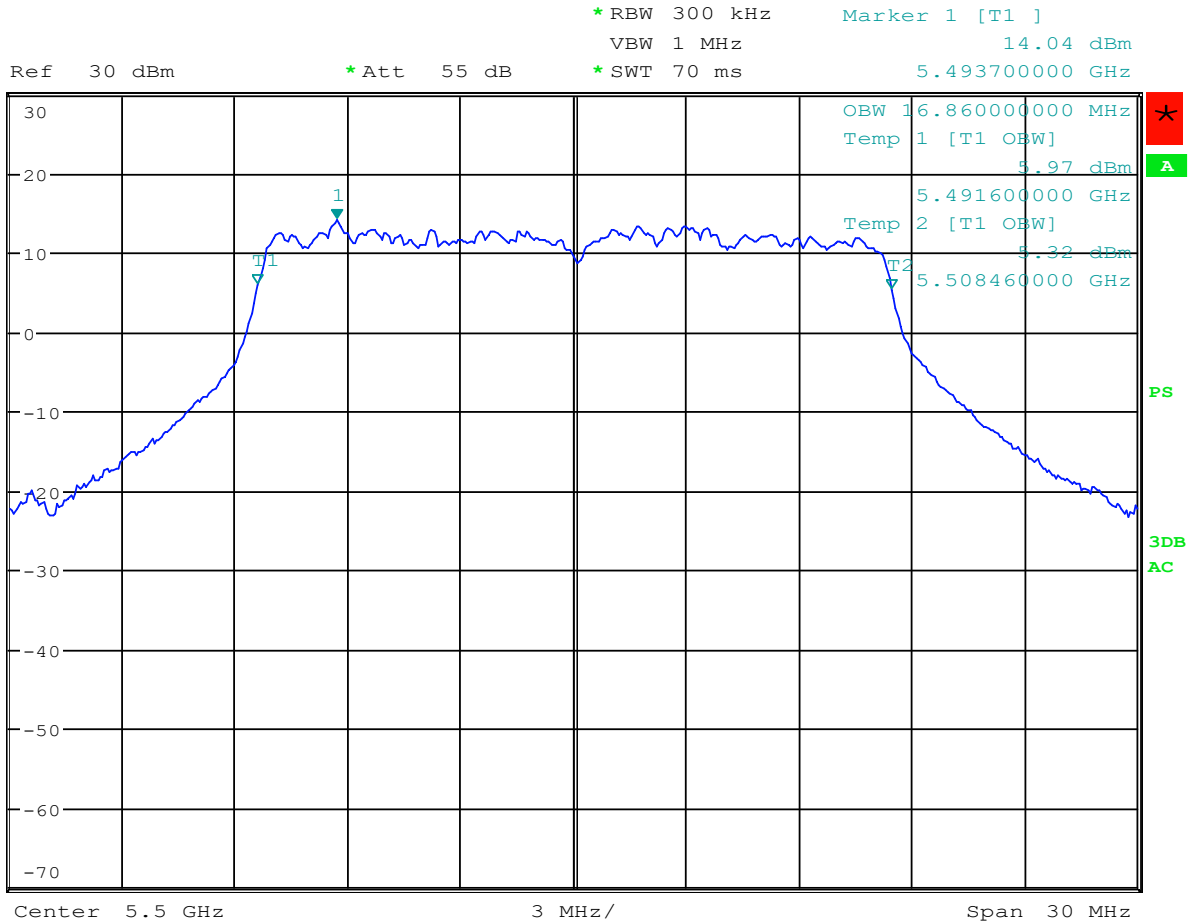




UNII 2C, OFDM: 99%, Low Channel



1 PK
VIEW



Date: 8.SEP.2021 10:50:08



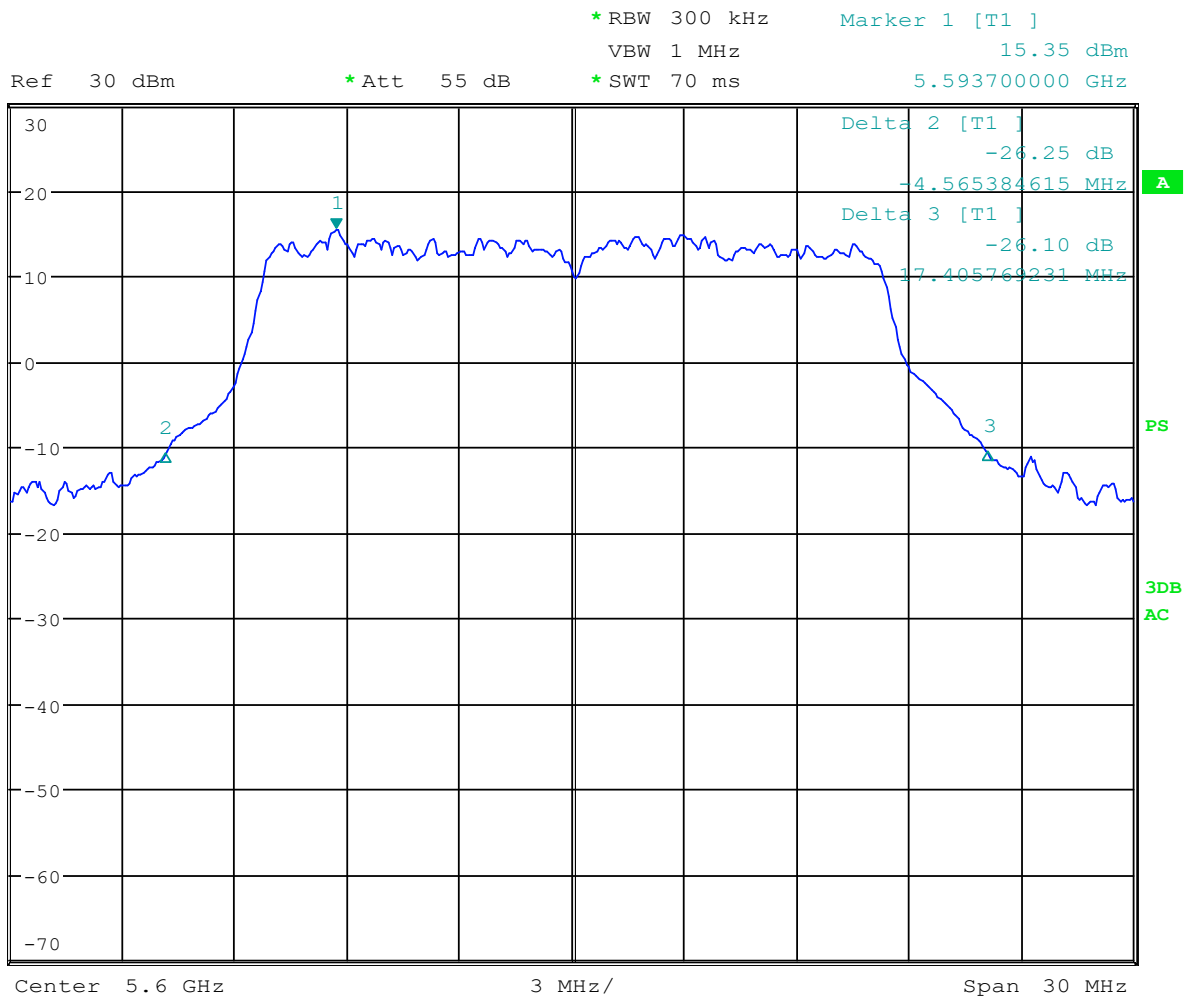
Order Number: F2P19924D

Applicant: PCTEL, Inc
FCC ID: NYPRMWIFIAC2X2

UNII 2C, OFDM: -26dB, Mid Channel



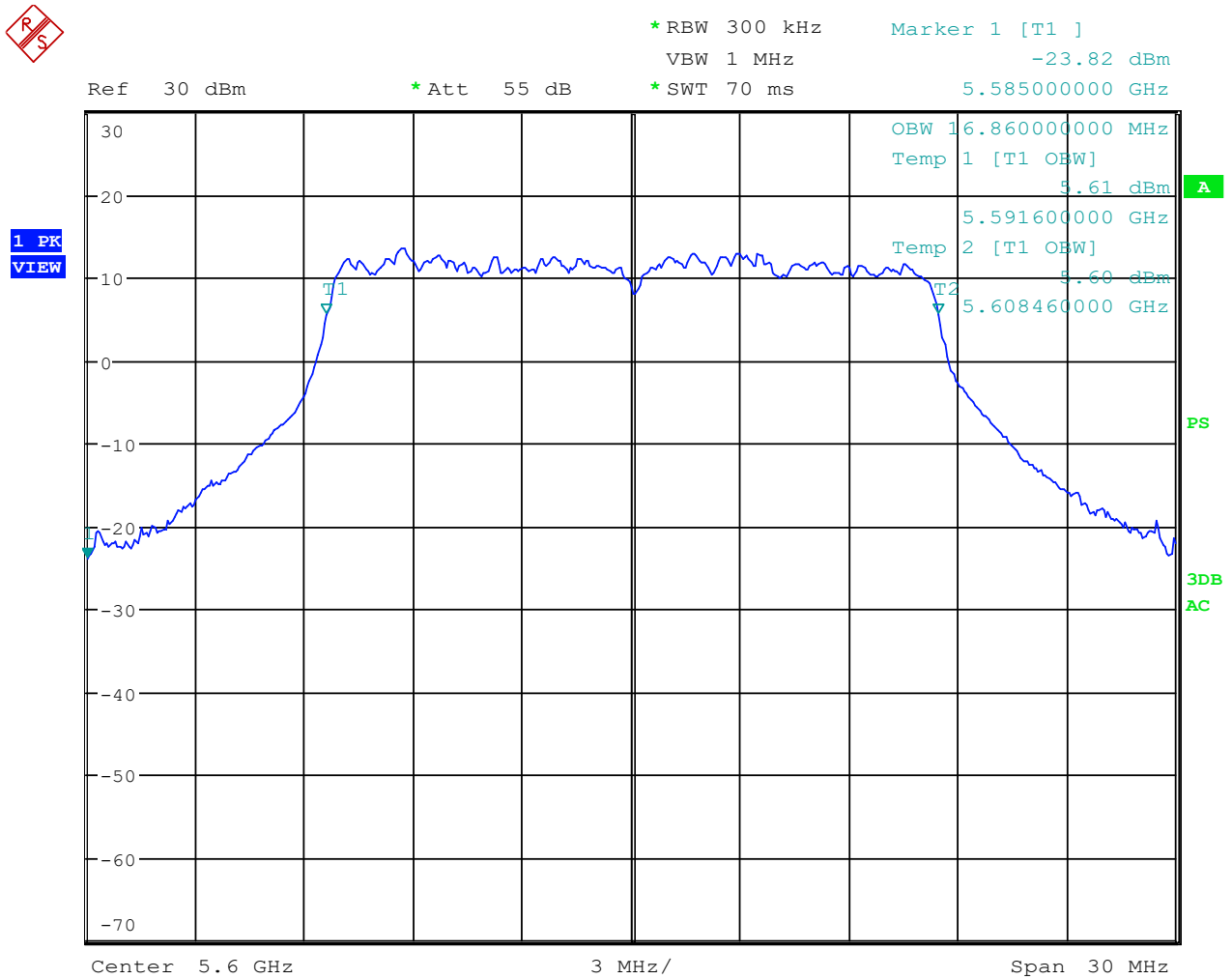
1 PK
VIEW



Date: 8.SEP.2021 10:45:09



UNII 2C, OFDM: 99% Mid Channel



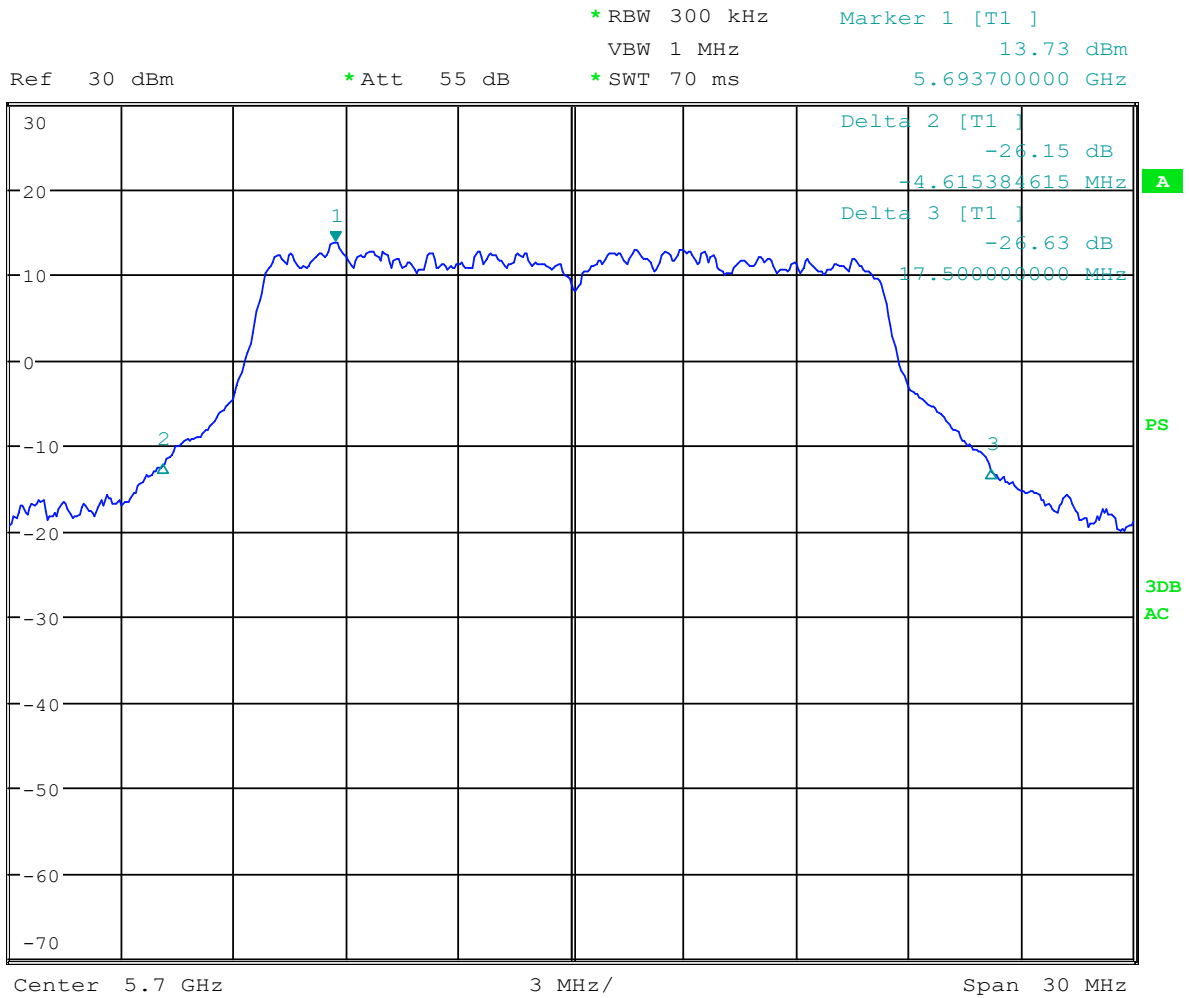
Date: 8.SEP.2021 10:50:53



UNII 2C, OFDM: -26dB, High Channel



1 PK
VIEW

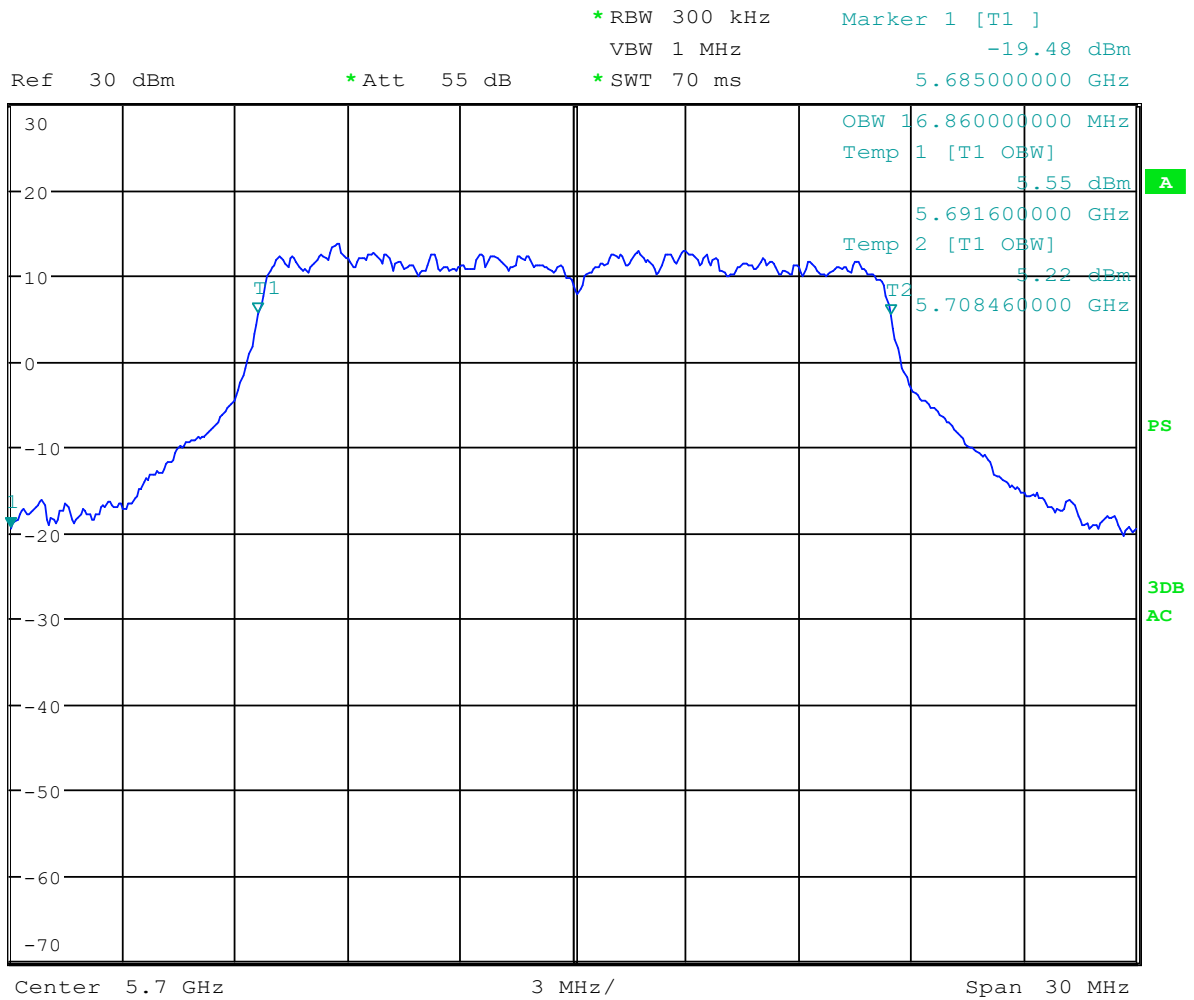




UNII 2C, OFDM: 99% High Channel



1 PK
VIEW

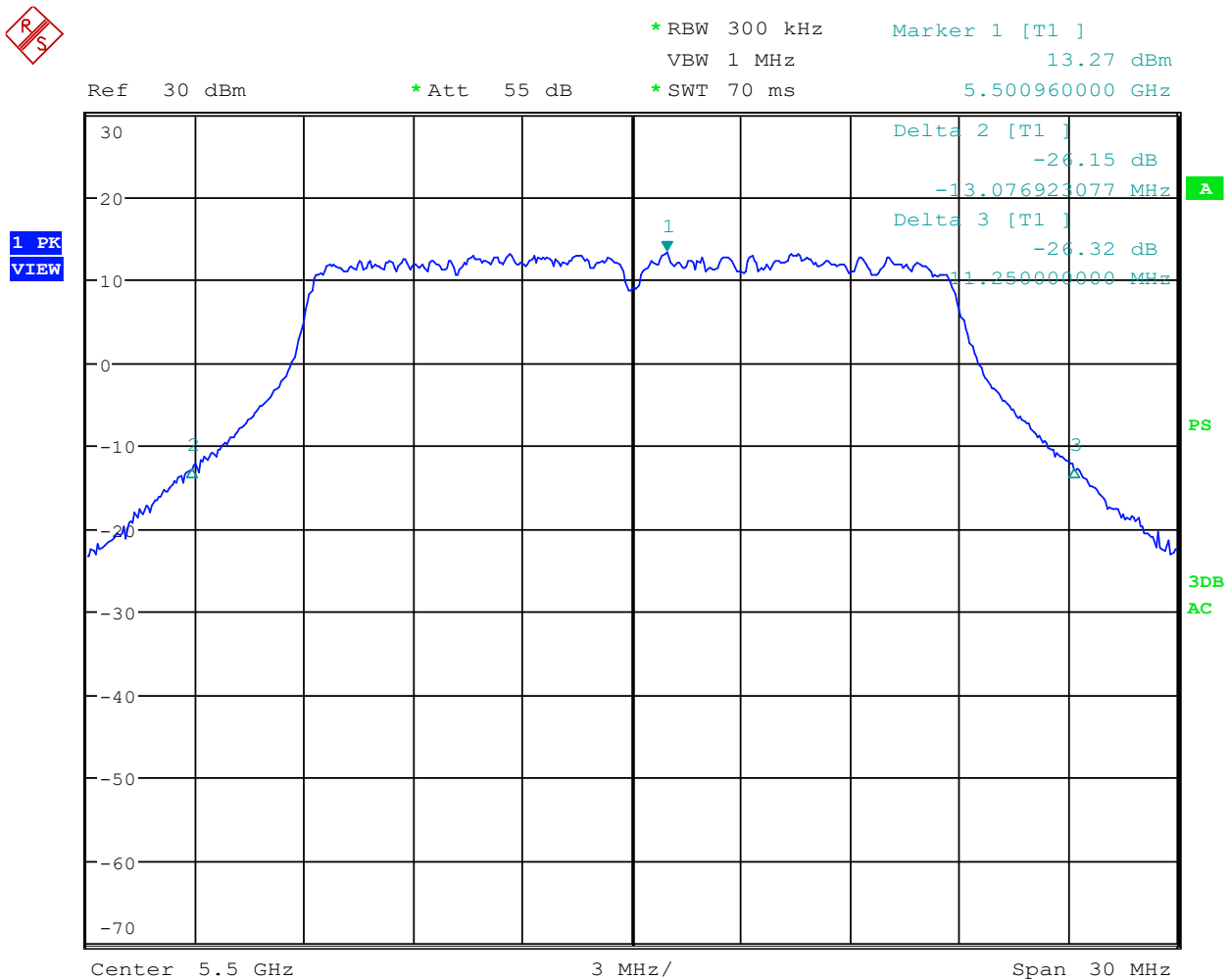




UNII 2C, HT20

OCCUPIED BANDWIDTH UNII 2C				
Channel	Frequency (MHz)	-26dB (MHz)	99% (MHz)	Limit
Modulation: HT20				
Low	5500	24.326	18.240	>.500
Mid	5600	24.471	18.240	>.500
High	5700	24.566	18.240	>.500

UNII 2C, HT20: -26dB, Low Channel

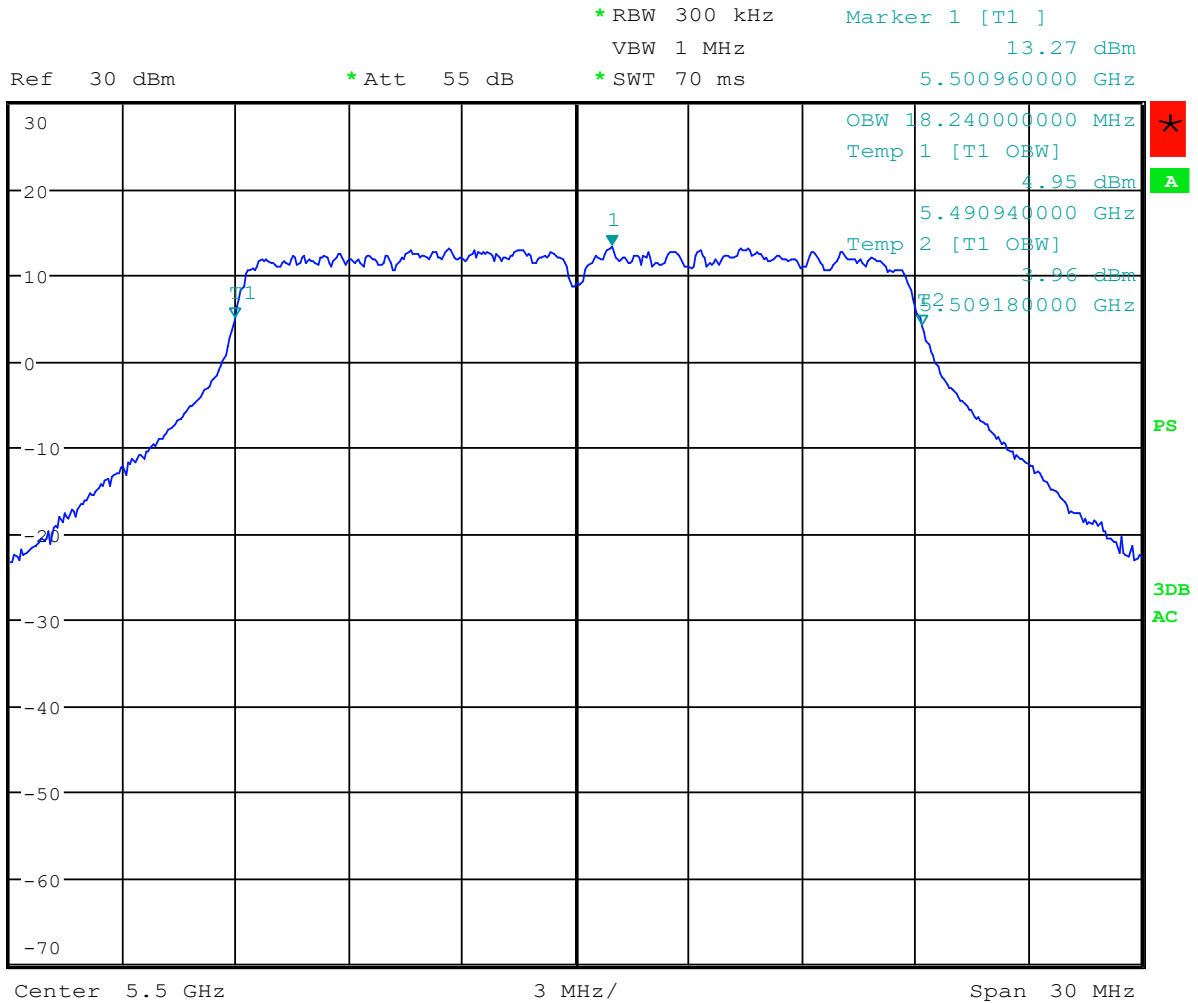




UNII 2C, HT20: 99%, Low Channel



1 PK
VIEW

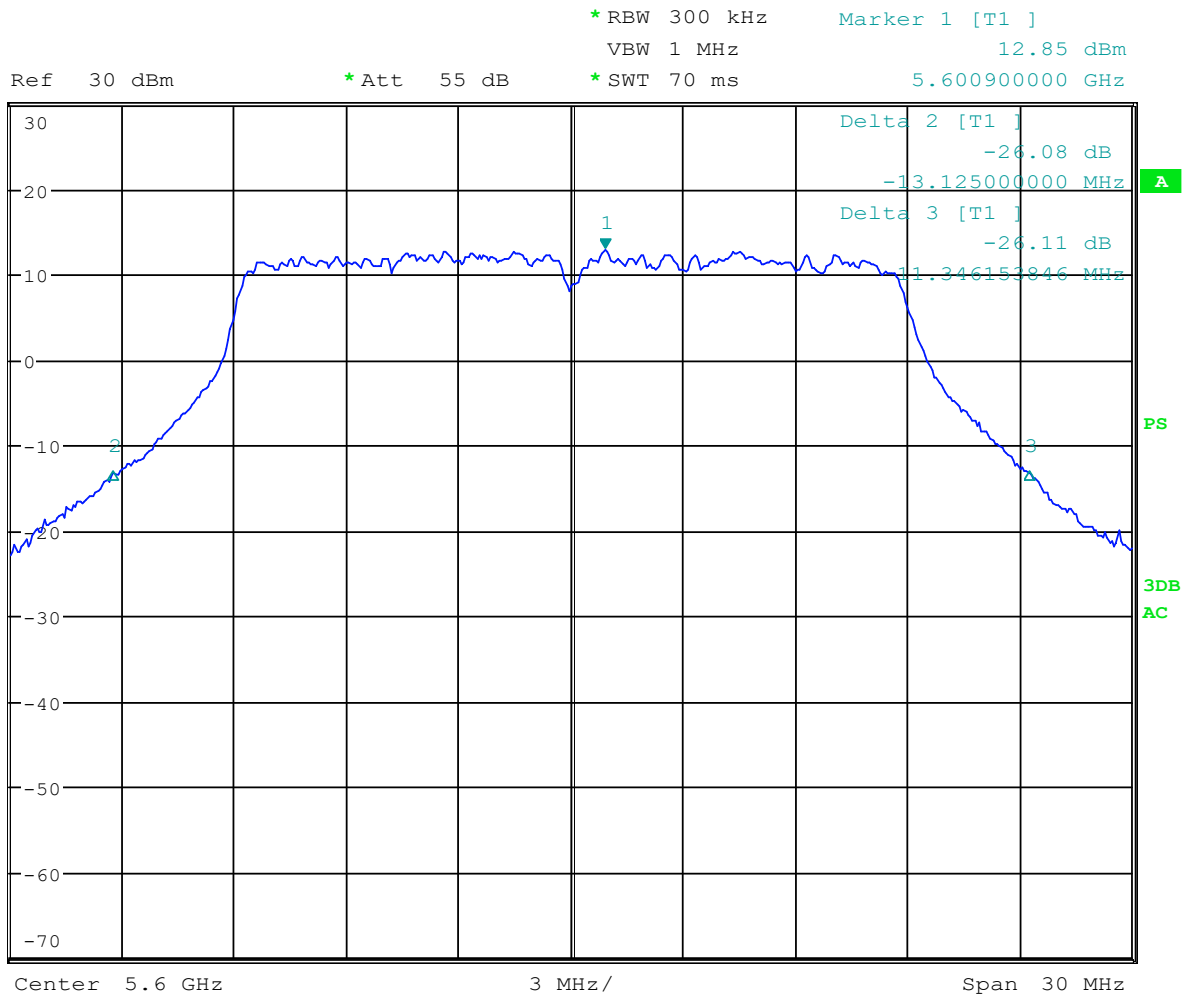




UNII 2C, HT20: -26dB, Mid Channel



1 PK
VIEW

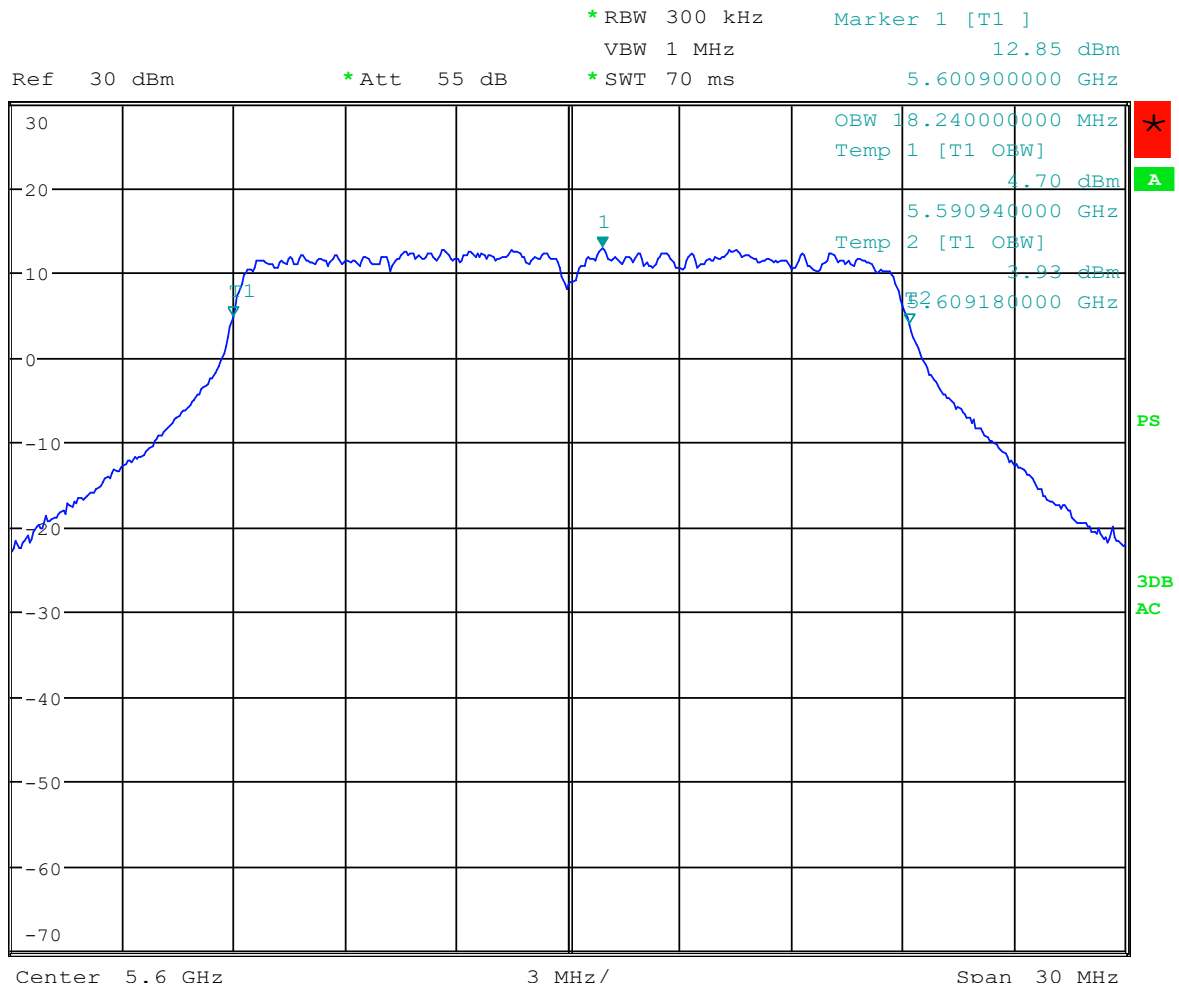




UNII 2C, HT20: 99% Mid Channel



1 PK
VIEW

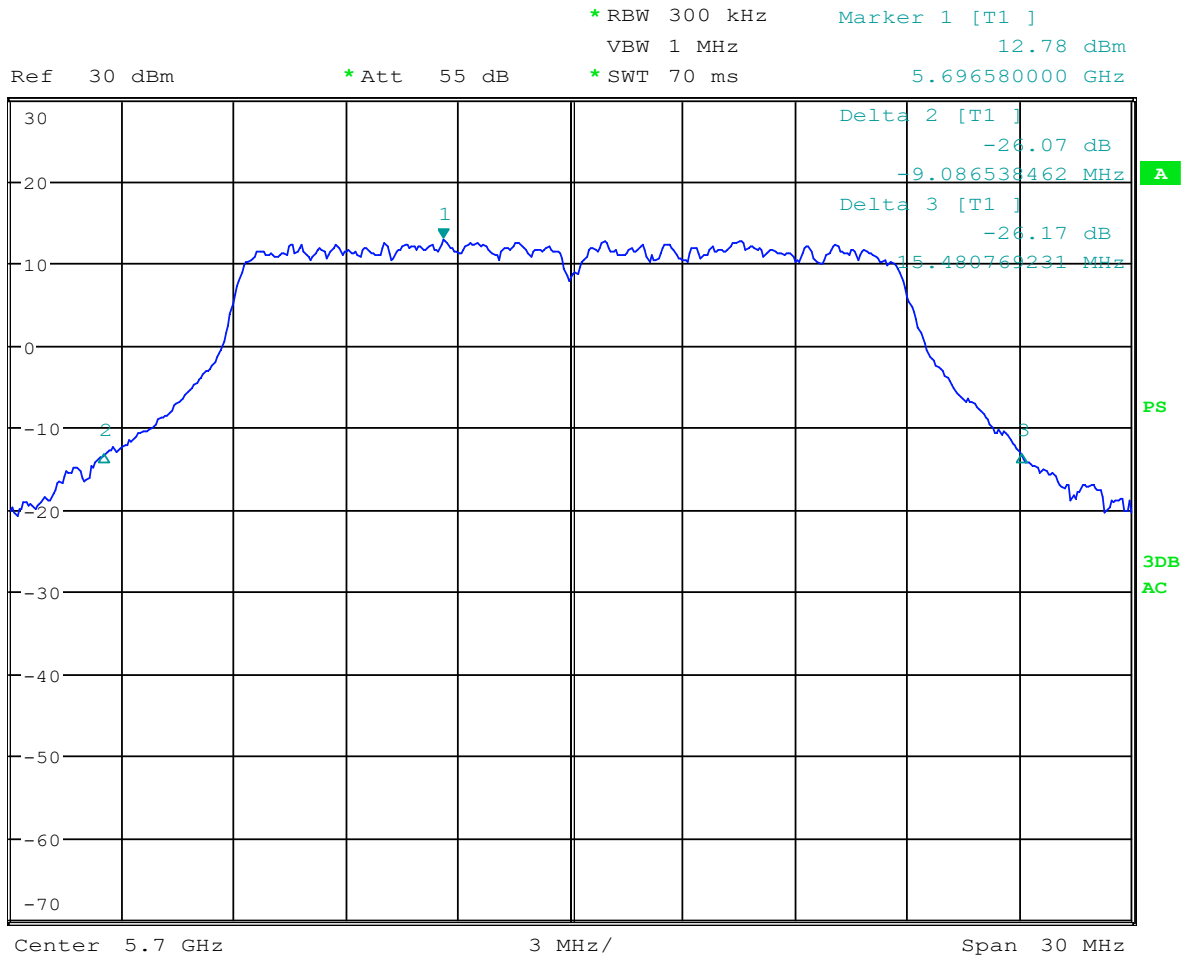




UNII 2C, HT20: -26dB, High Channel



1 PK
VIEW



Date: 8.SEP.2021 10:57:52

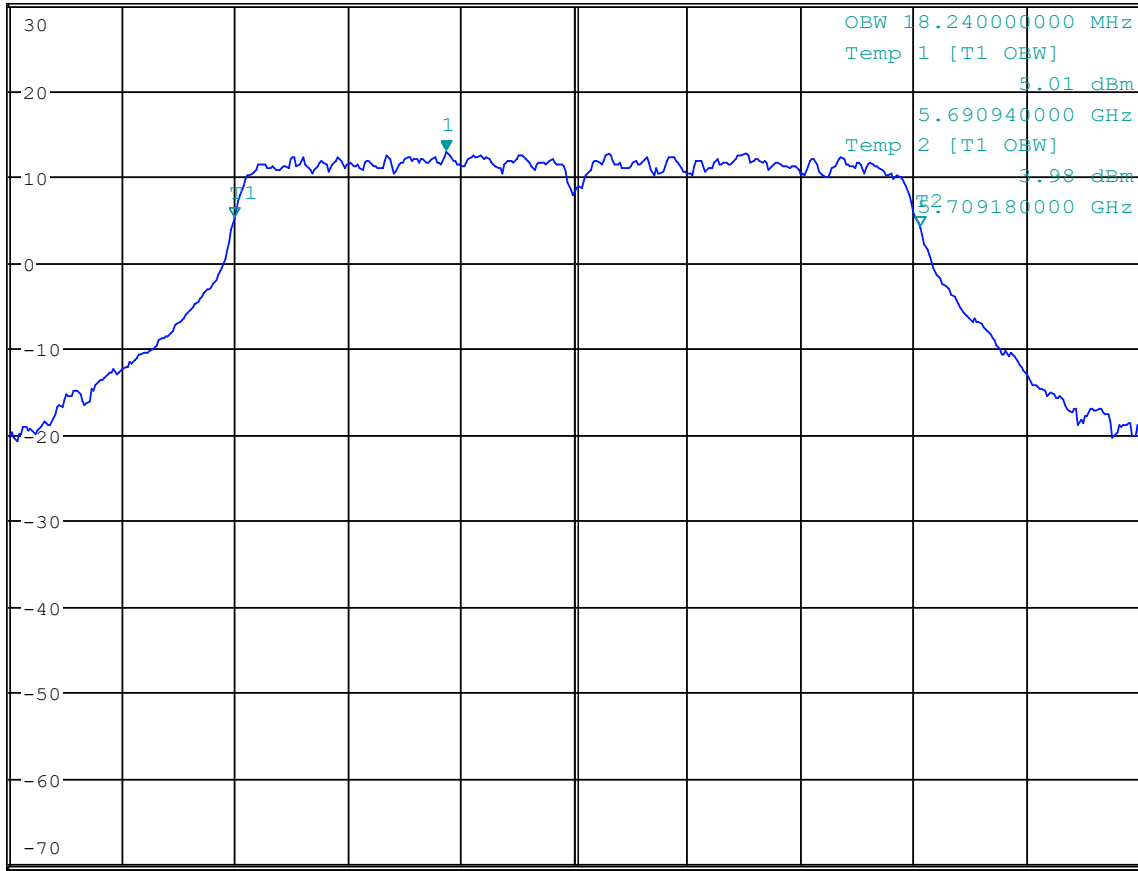


UNII 2C, HT20: 99% High Channel



Ref 30 dBm *Att 55 dB *RBW 300 kHz Marker 1 [T1] 12.78 dBm
VBW 1 MHz *SWT 70 ms 5.696580000 GHz

1 PK
VIEW



Center 5.7 GHz 3 MHz/ Span 30 MHz

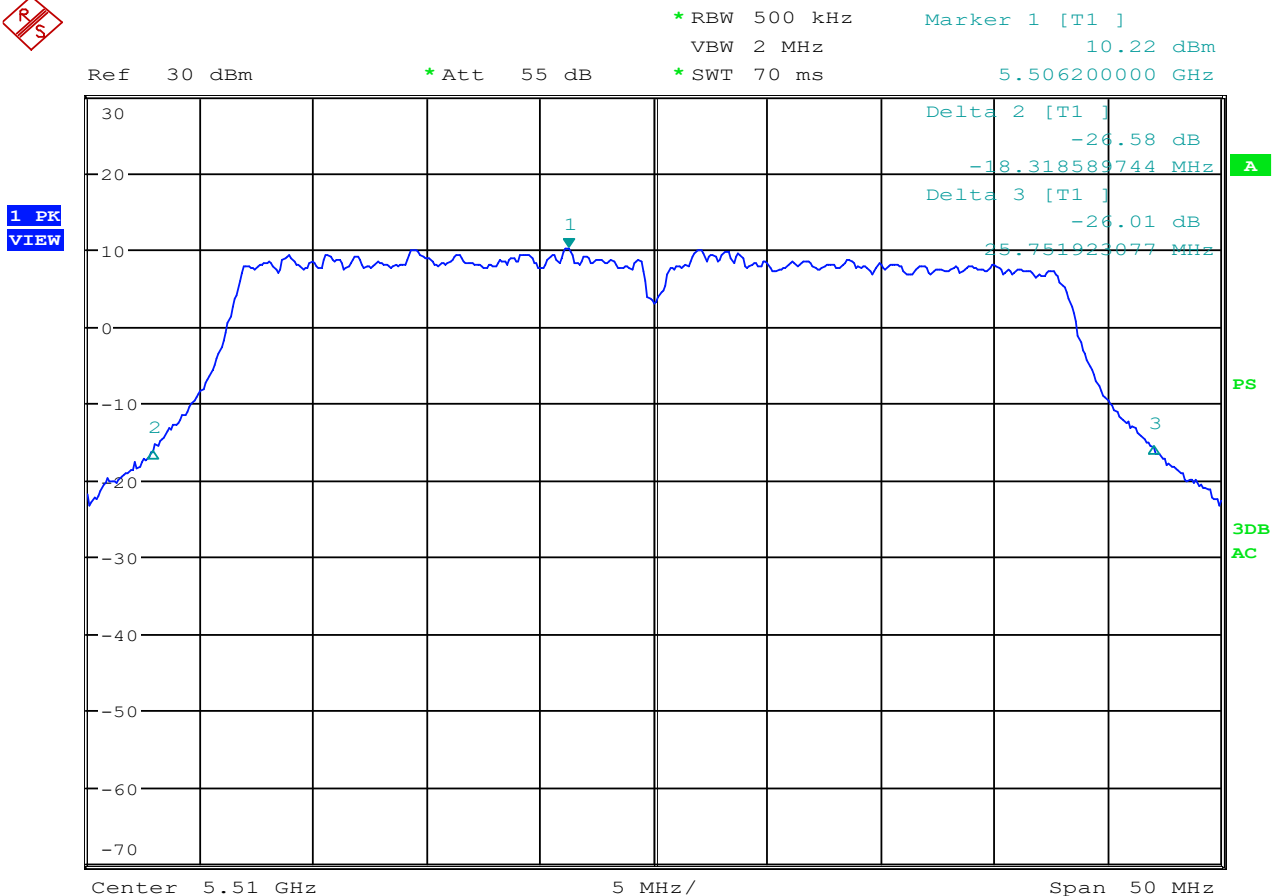
OBW 18.240000000 MHz
Temp 1 [T1 OBW] 5.01 dBm
5.690940000 GHz
Temp 2 [T1 OBW] 3.98 dBm
5.709180000 GHz
PS
3DB
AC



UNII 2C, HT40

OCCUPIED BANDWIDTH UNII 2C				
Channel	Frequency (MHz)	-26dB (MHz)	99% (MHz)	Limit
Modulation: HT40				
Low	5510	44.069	36.800	>.500
Mid	5590	44.070	36.800	>.500
High	5690	44.069	36.800	>.500

UNII 2C, HT40: -26dB, Low Channel



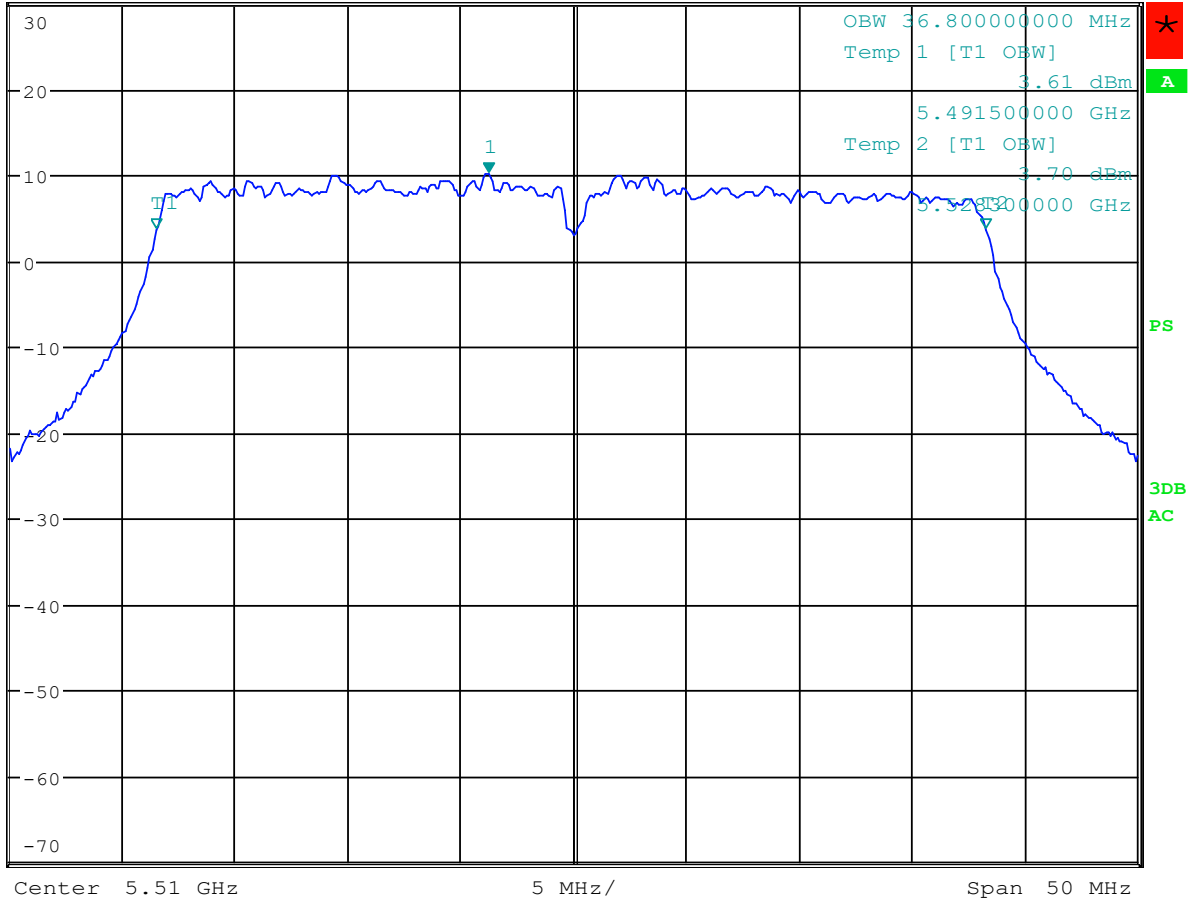


UNII 2C, HT40: 99%, Low Channel



Ref 30 dBm *Att 55 dB *RBW 500 kHz Marker 1 [T1]
VBW 2 MHz 10.22 dBm
*SWT 70 ms 5.506200000 GHz

1 PK
VIEW

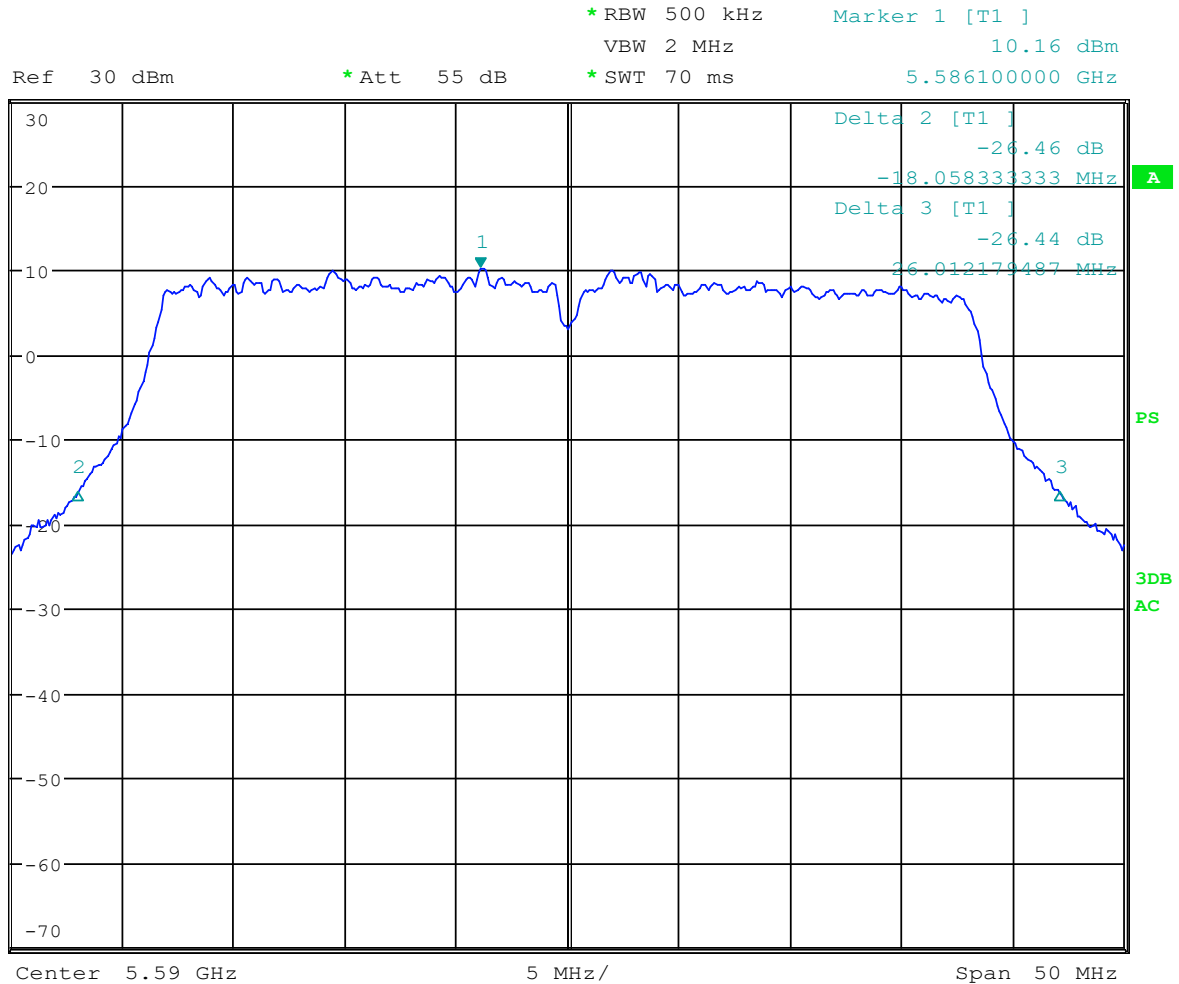




UNII 2C, HT40: -26dB, Mid Channel



1 PK
VIEW

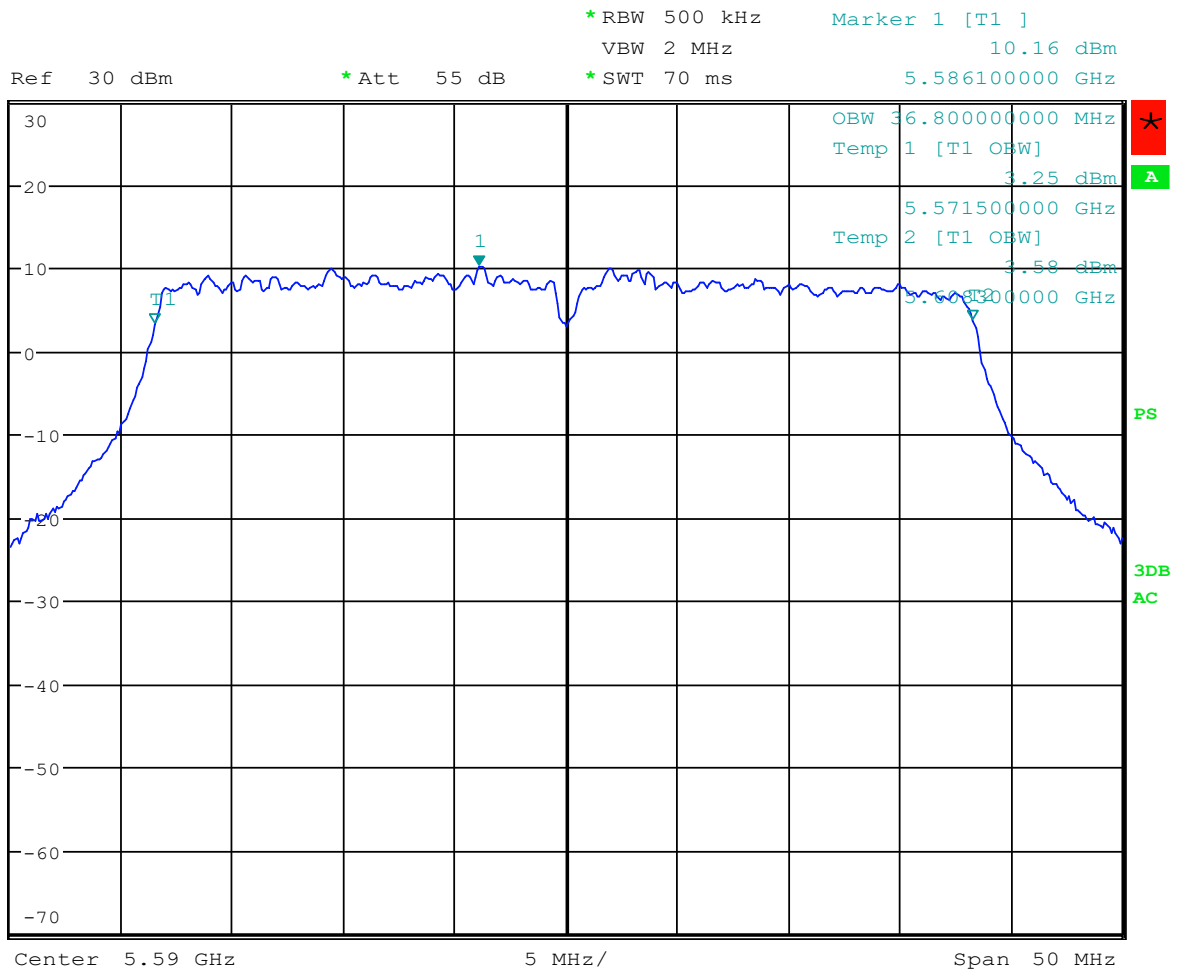




UNII 2C, HT40: 99% Mid Channel



1 PK
VIEW



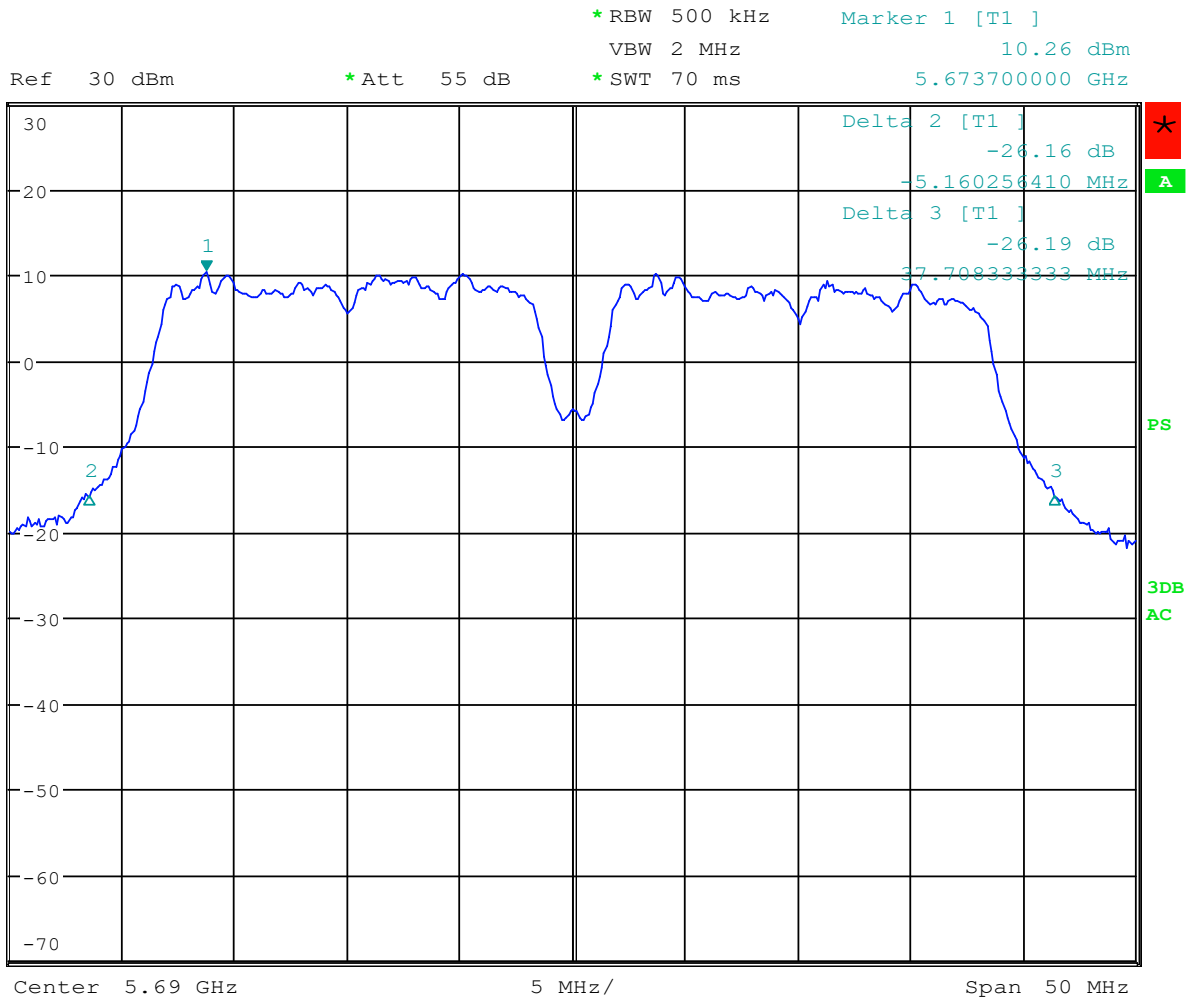
Date: 8.SEP.2021 11:11:42



UNII 2C, HT40: -26dB, High Channel

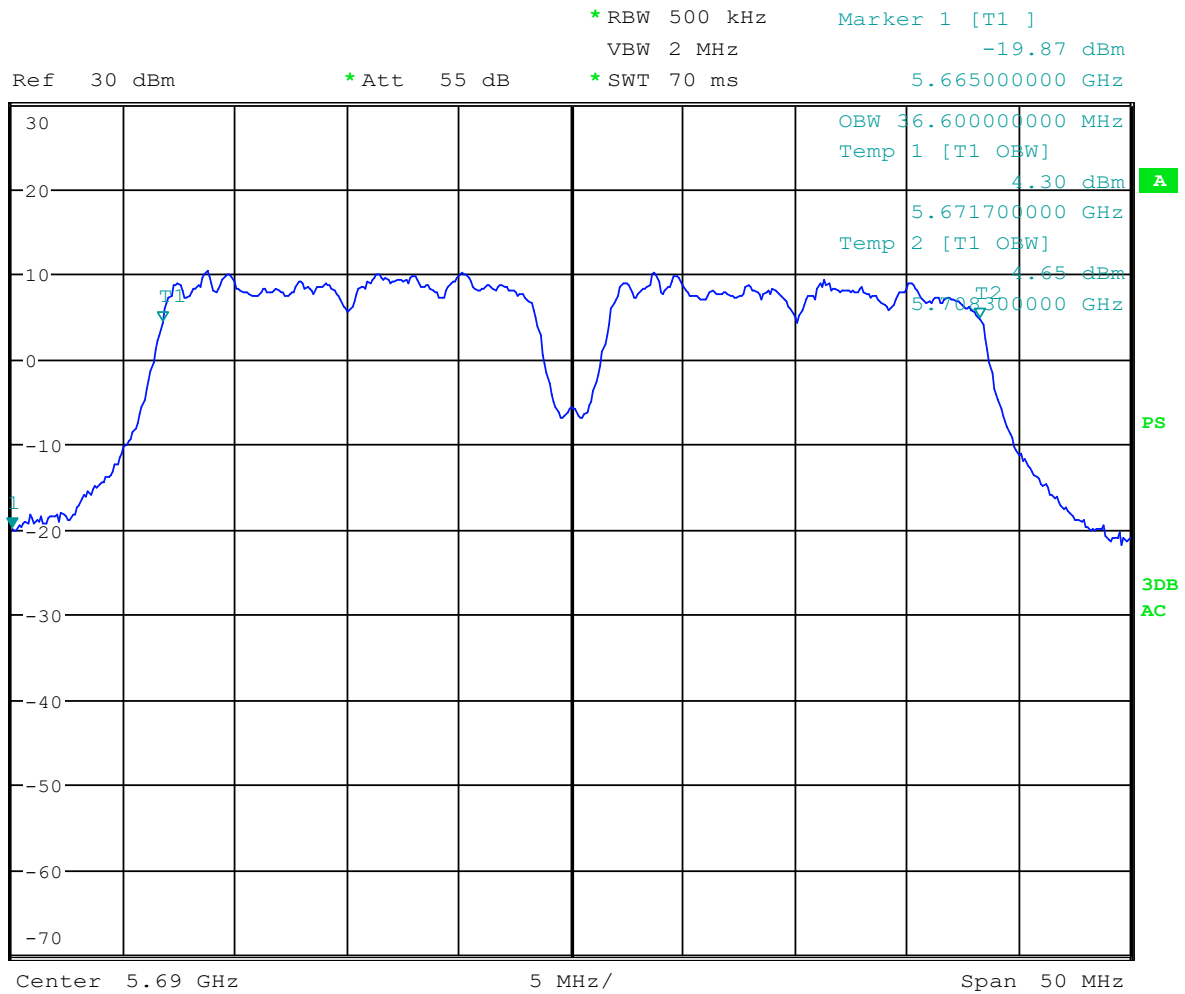


1 PK
VIEW





UNII 2C, HT40: 99% High Channel

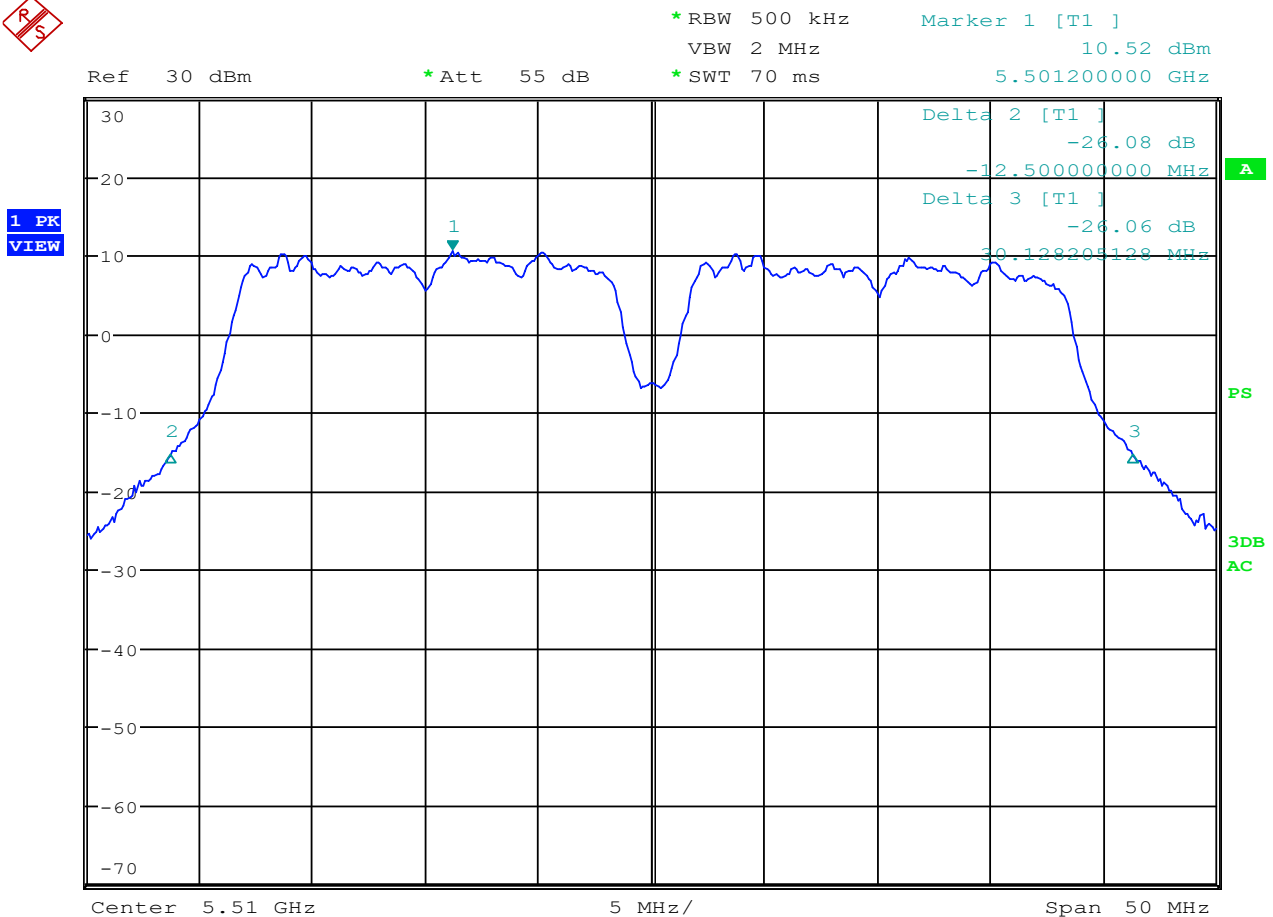




UNII 2C, non HT40

OCCUPIED BANDWIDTH UNII 2C				
Channel	Frequency (MHz)	-26dB (MHz)	99% (MHz)	Limit
Modulation: non HT40				
Low	5510	42.628	36.600	>.500
Mid	5590	43.348	36.700	>.500
High	5690	42.88	36.600	>.500

UNII 2C, non HT40: -26dB, Low Channel





Order Number: F2P19924D

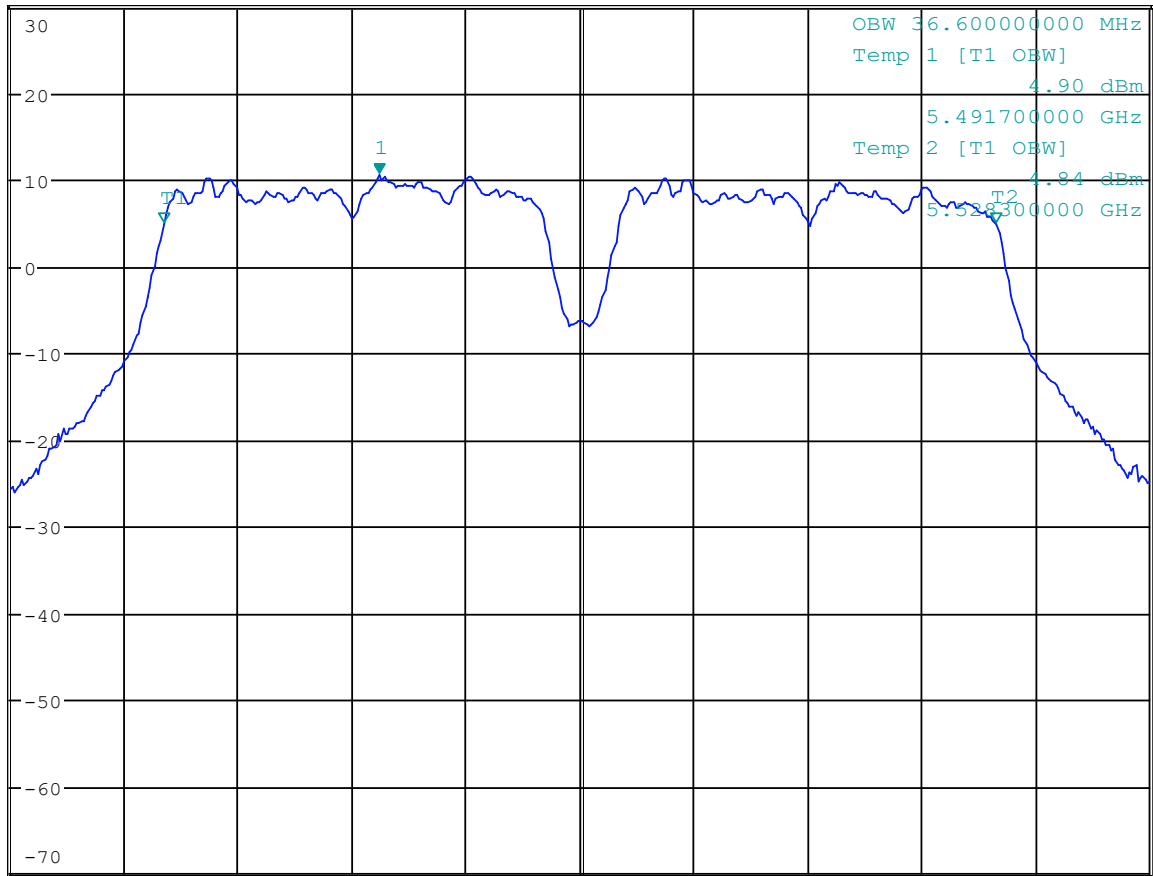
Applicant: PCTEL, Inc
FCC ID: NYPRMWIFIAC2X2

UNII 2C, non HT40: 99%, Low Channel



* RBW 500 kHz Marker 1 [T1]
VBW 2 MHz 10.52 dBm
* Att 55 dB * SWT 70 ms 5.501200000 GHz
Ref 30 dBm

1 PK
VIEW



★
A

PS

3DB
AC

Center 5.51 GHz 5 MHz/ Span 50 MHz

Date: 8.SEP.2021 11:02:00

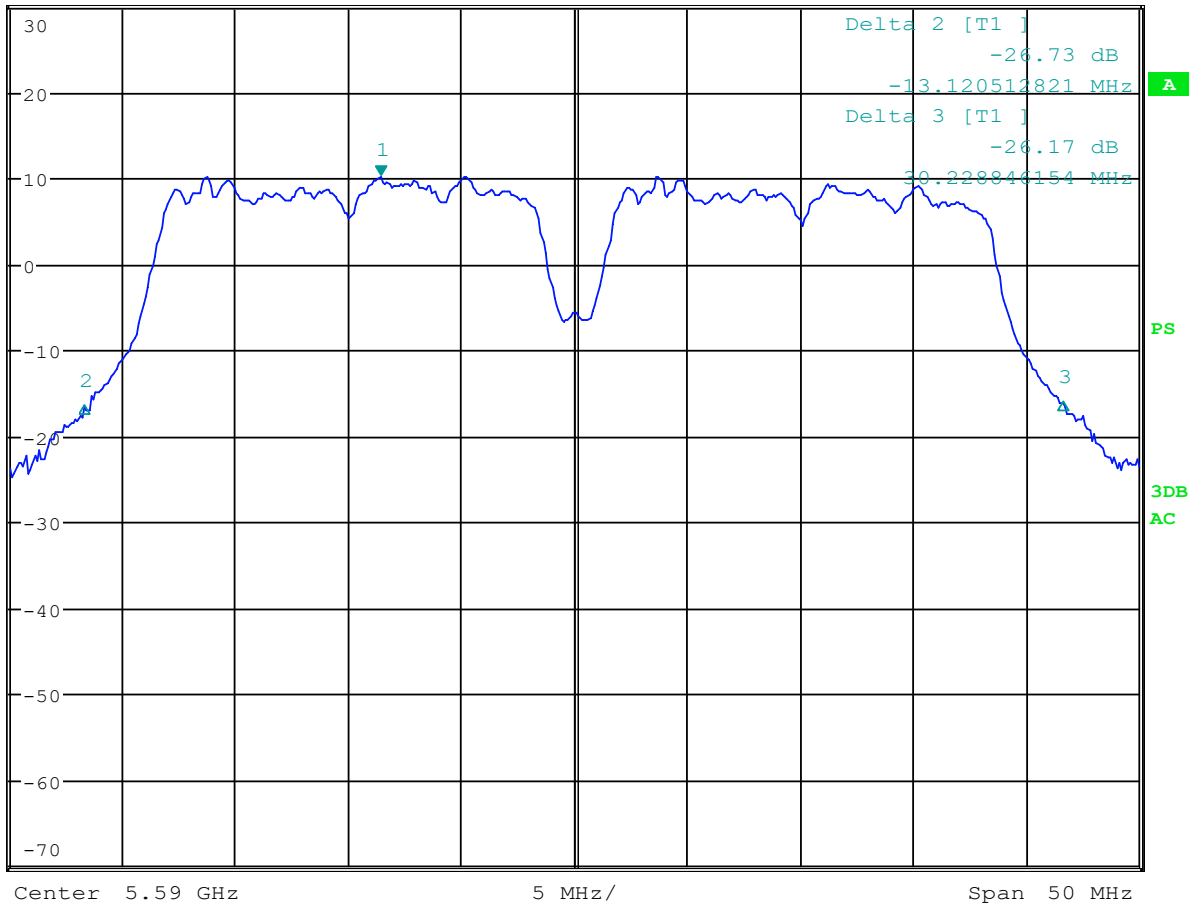


UNII 2C, non HT40: -26dB, Mid Channel



Ref 30 dBm *Att 55 dB *RBW 500 kHz Marker 1 [T1] 10.13 dBm
*SWT 70 ms 5.581400000 GHz

1 PK
VIEW



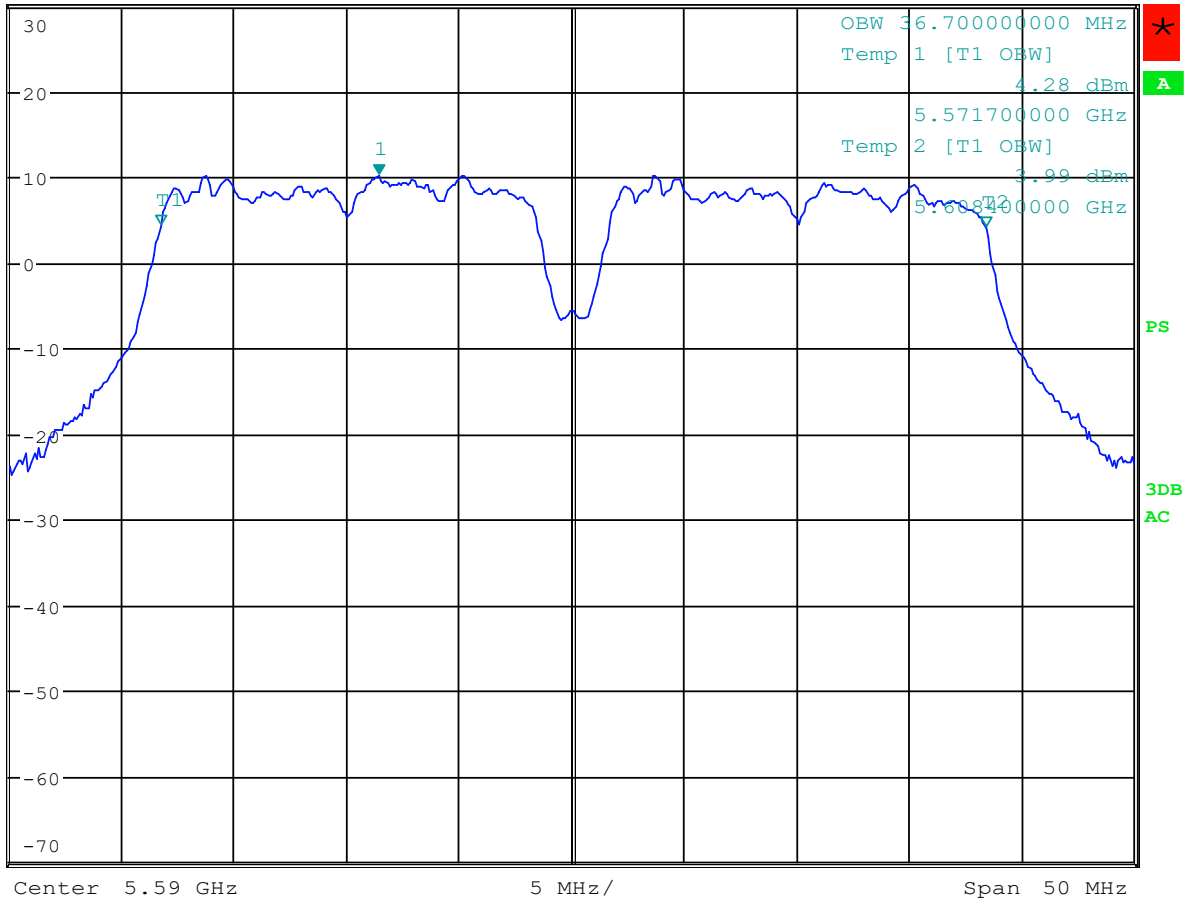


UNII 2C, non HT40: 99% Mid Channel



Ref 30 dBm * Att 55 dB * RBW 500 kHz Marker 1 [T1]
VBW 2 MHz 10.13 dBm
* SWT 70 ms 5.581400000 GHz

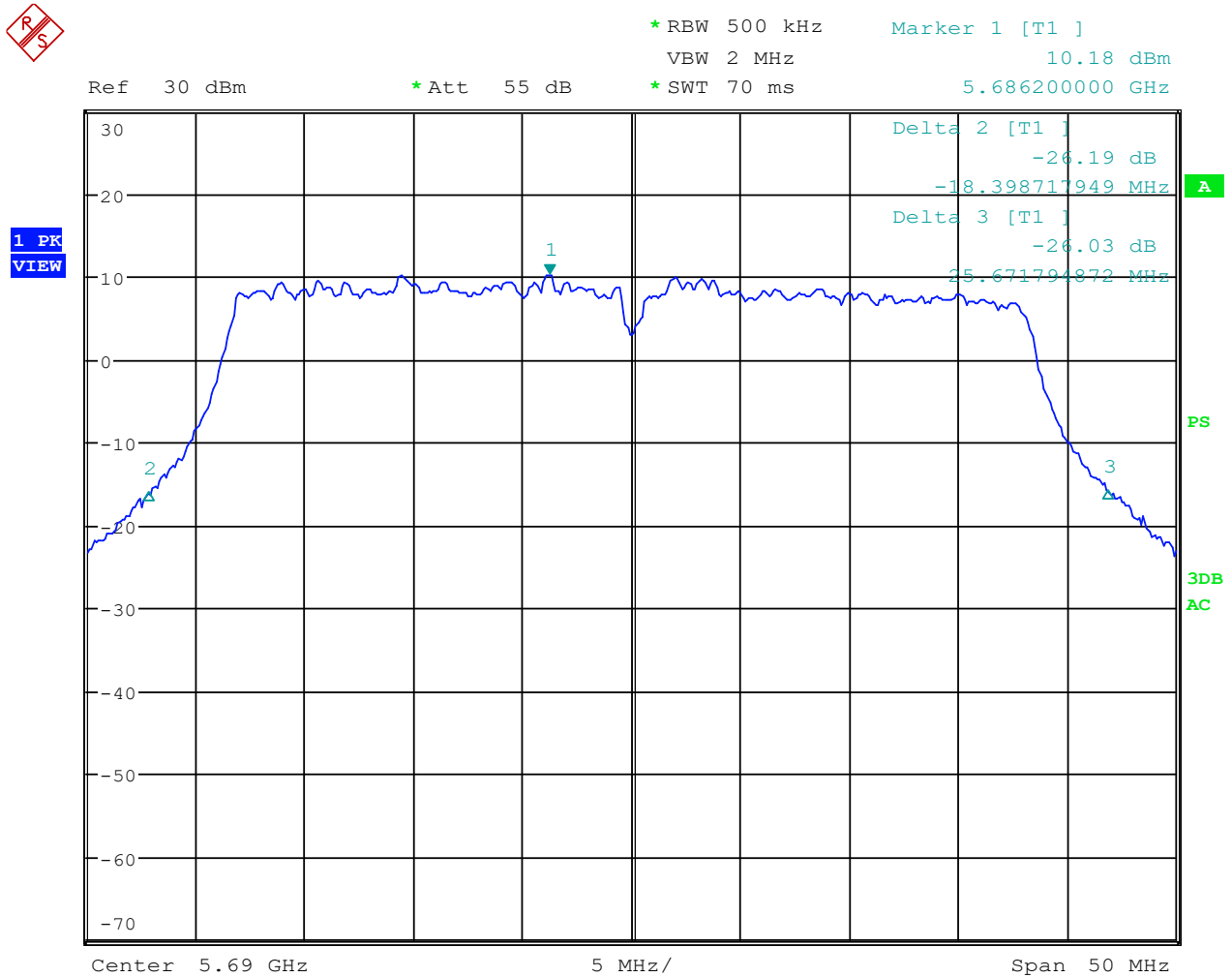
1 PK
VIEW



Date: 8.SEP.2021 11:04:12



UNII 2C, non HT40: -26dB, High Channel



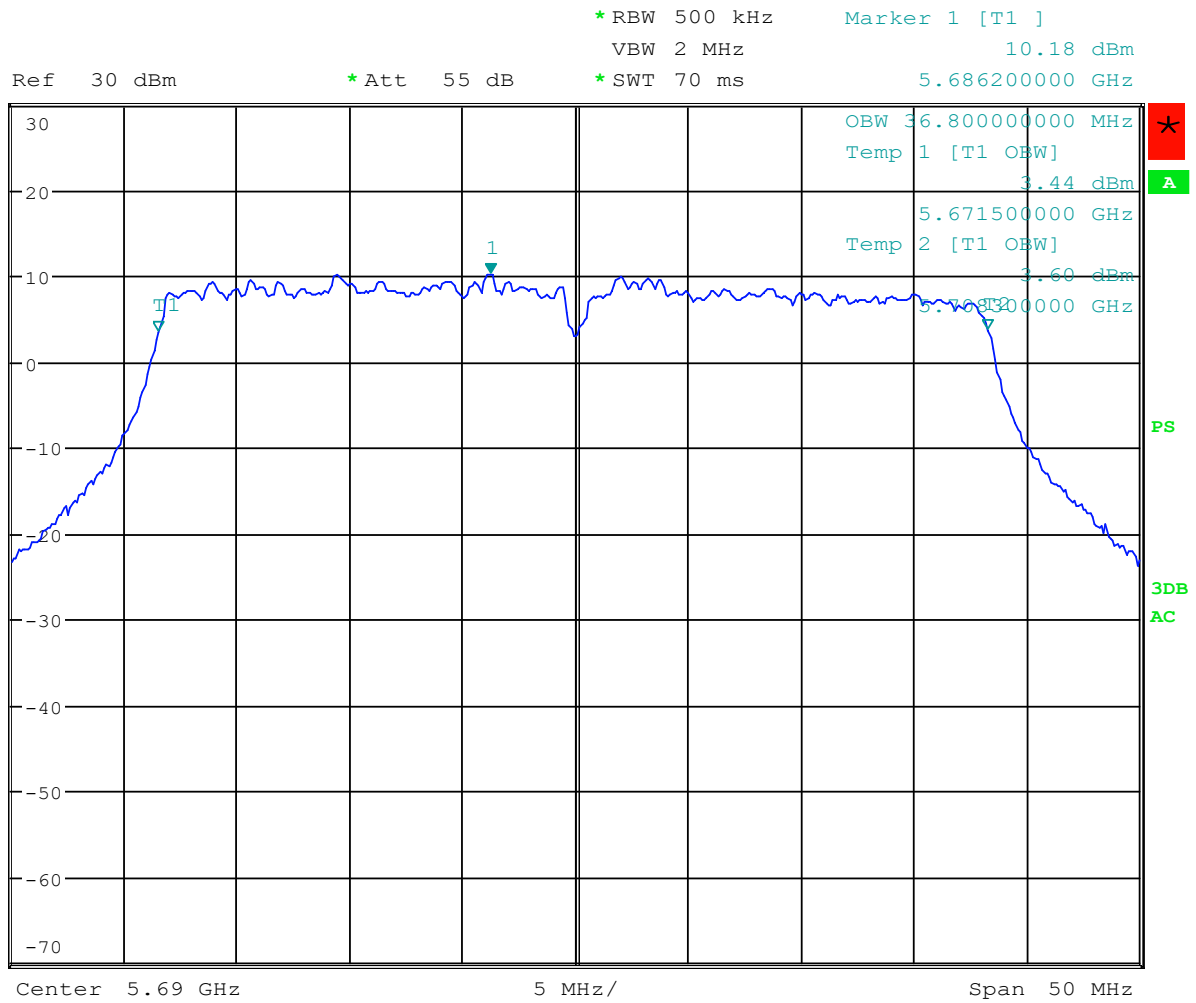
Date: 8.SEP.2021 11:13:00



UNII 2C, non HT40: 99% High Channel



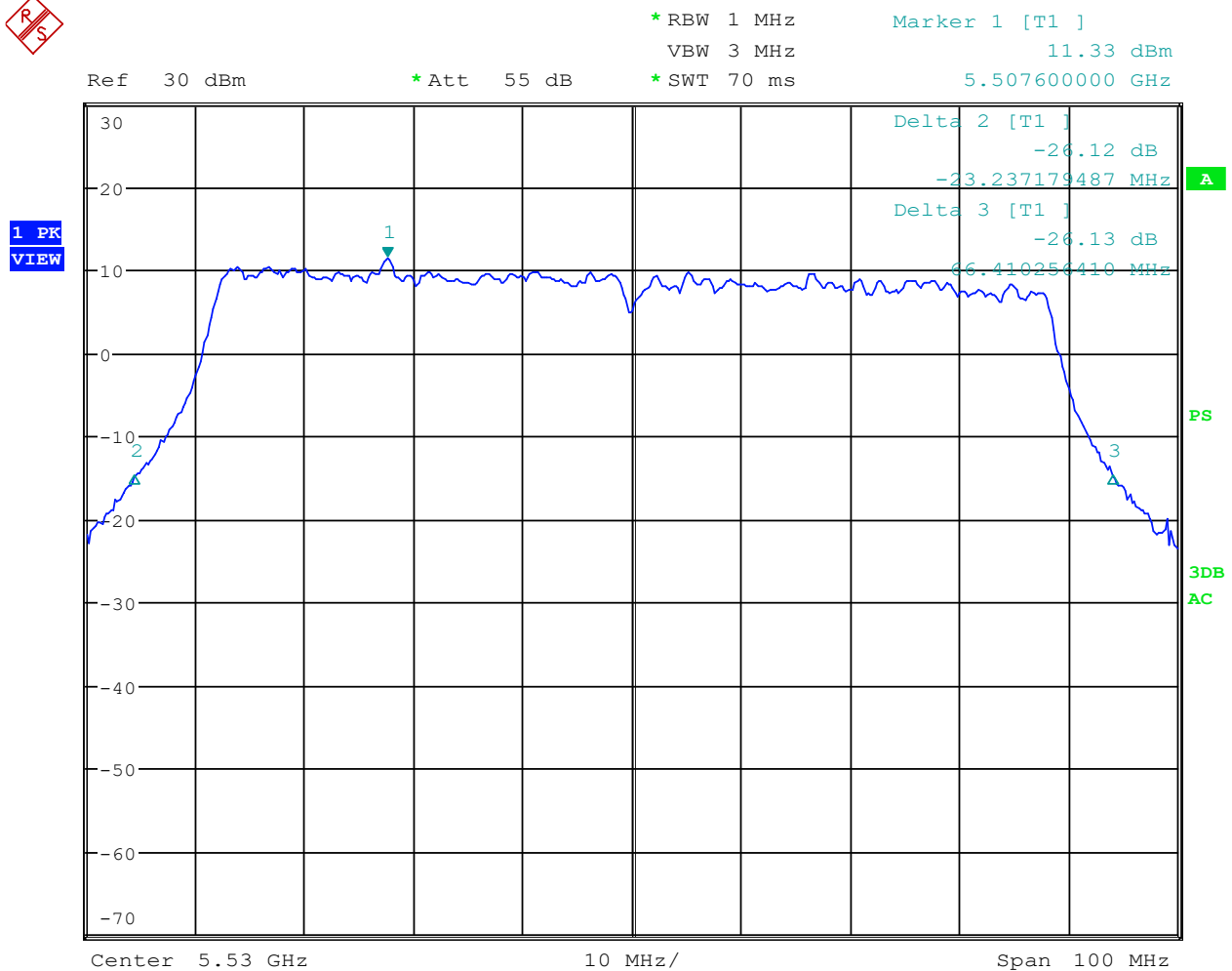
1 PK
VIEW





OCCUPIED BANDWIDTH UNII 2C				
Channel	Frequency (MHz)	-26dB (MHz)	99% (MHz)	Limit
Modulation: HT80				
Low	5530	89.647	76.800	>.500
Mid	5610	90.198	76.800	>.500
High	5690	89.557	76.800	>.500

UNII 2C, HT80: -26dB, Low Channel

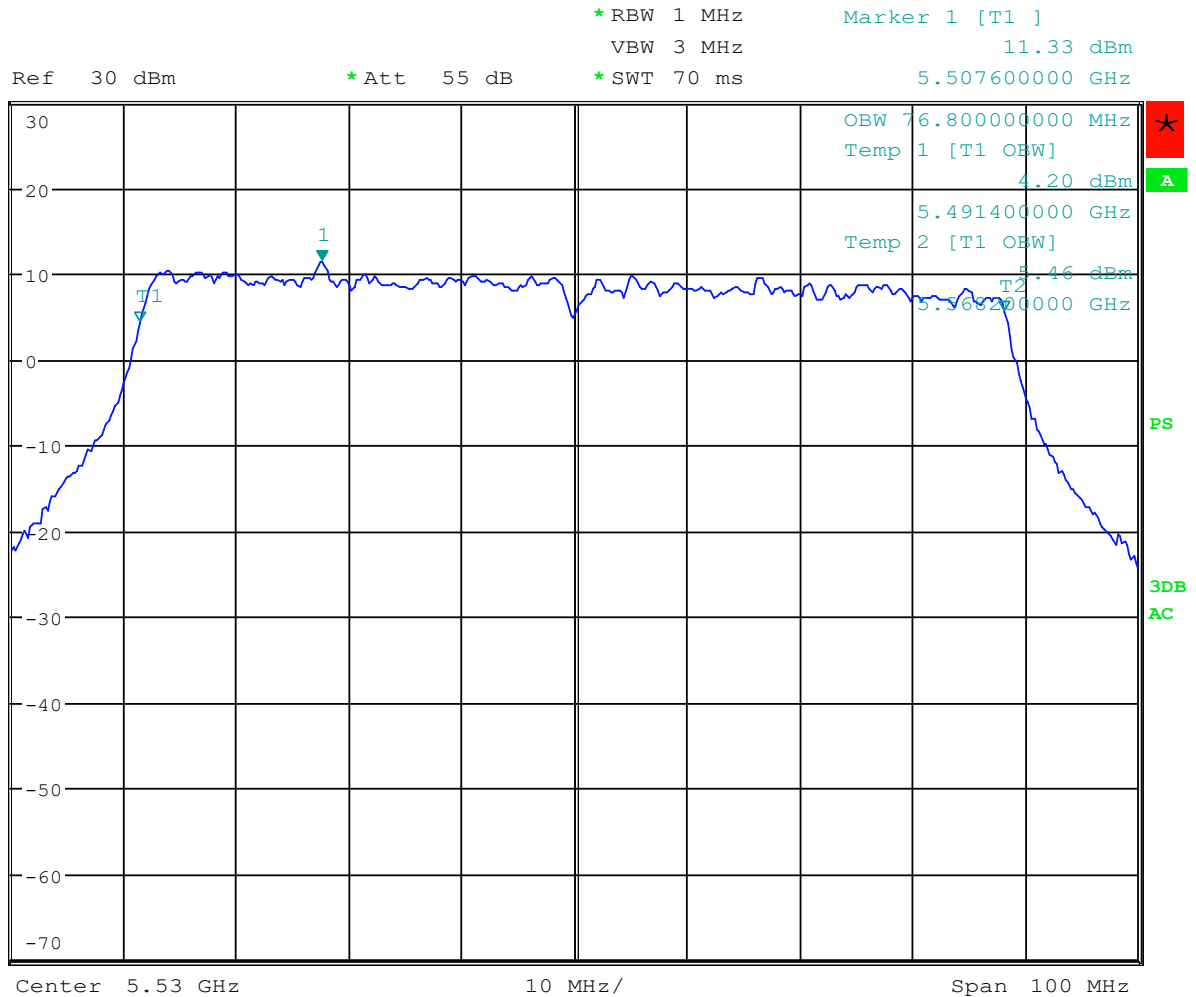




UNII 2C, HT80: 99%, Low Channel



1 PK
VIEW

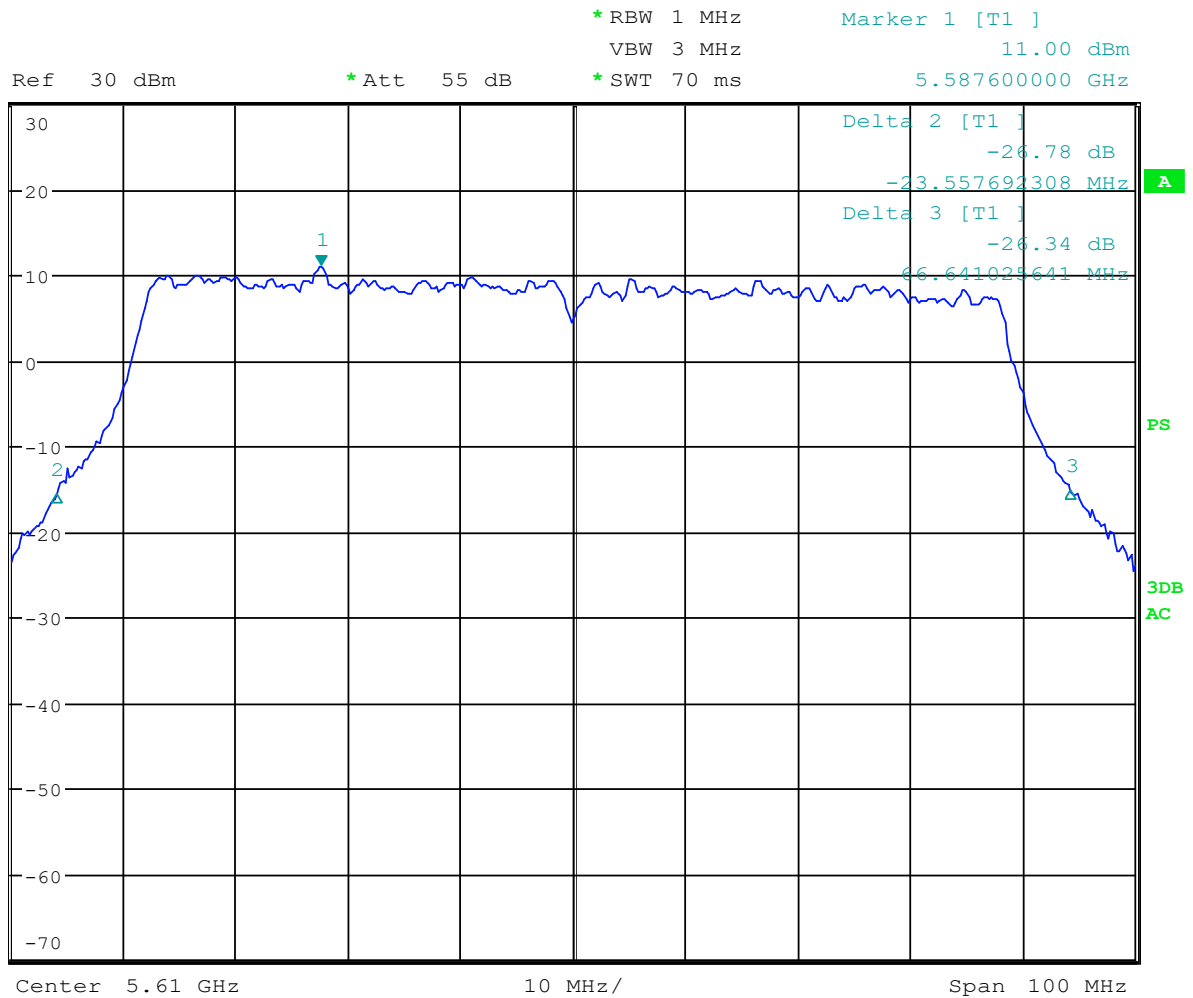




UNII 2C, HT80: -26dB, Mid Channel



1 PK
VIEW

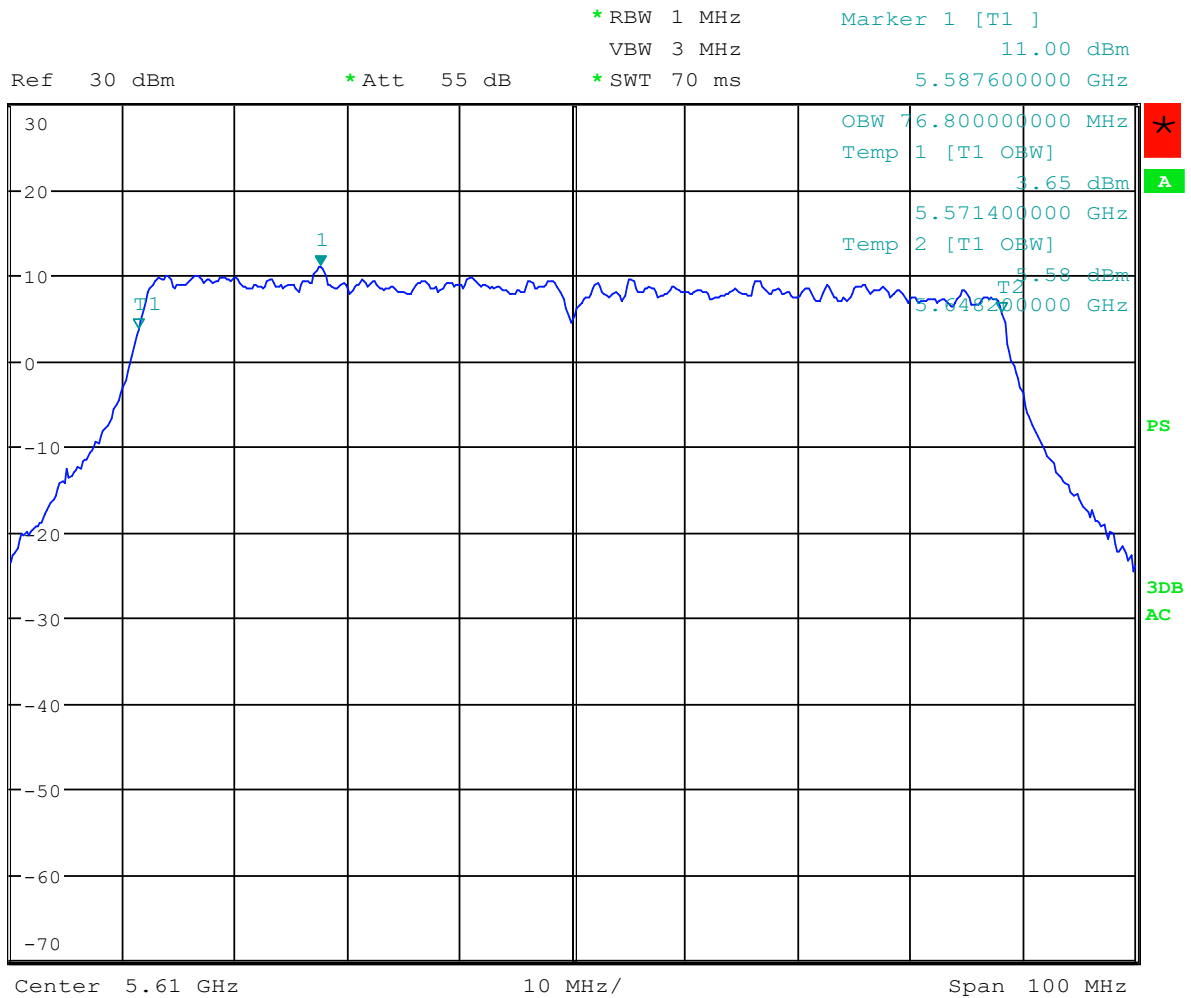




UNII 2C, HT80: 99% Mid Channel



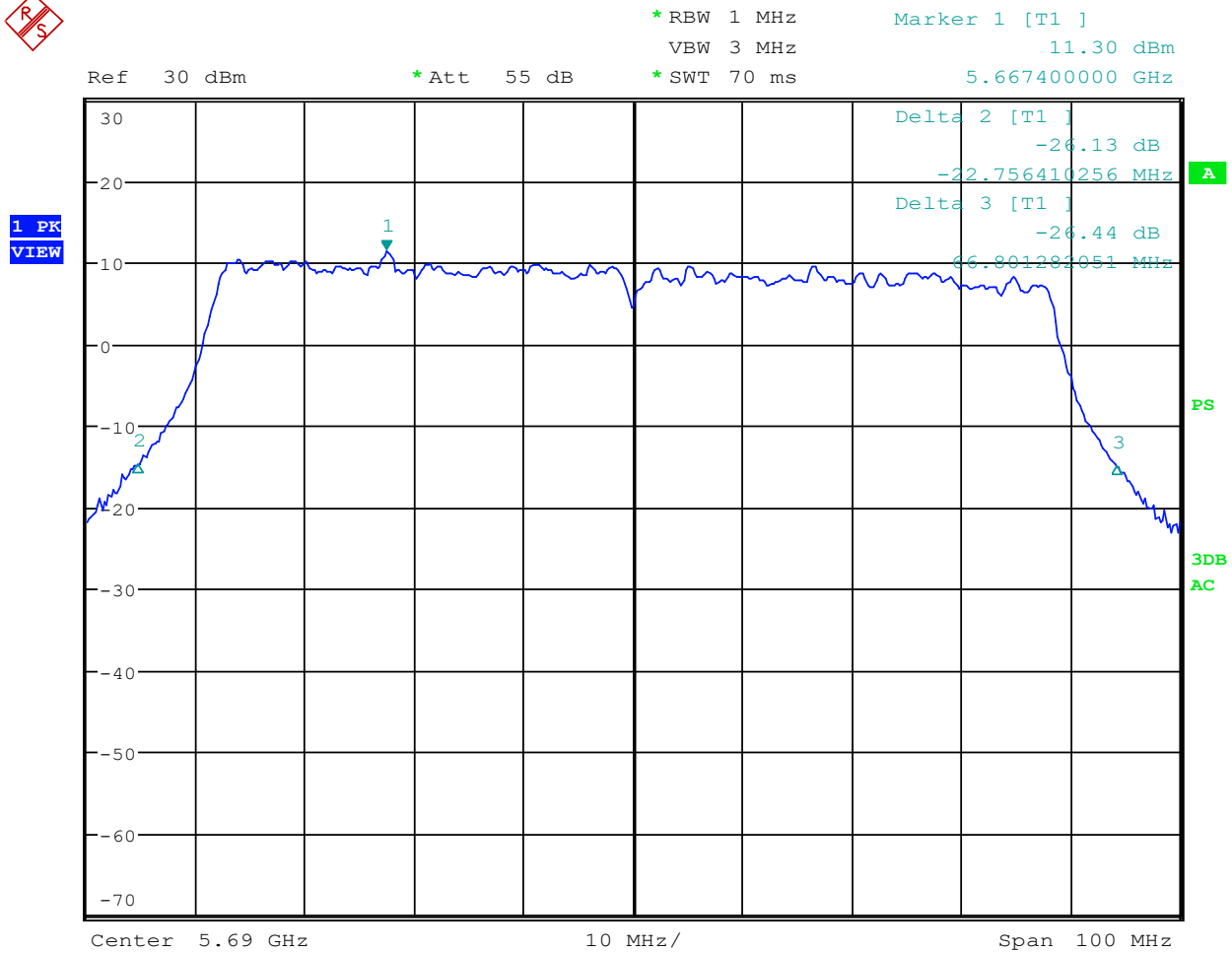
1 PK
VIEW



Date: 8.SEP.2021 11:19:15



UNII 2C, HT80: -26dB, High Channel



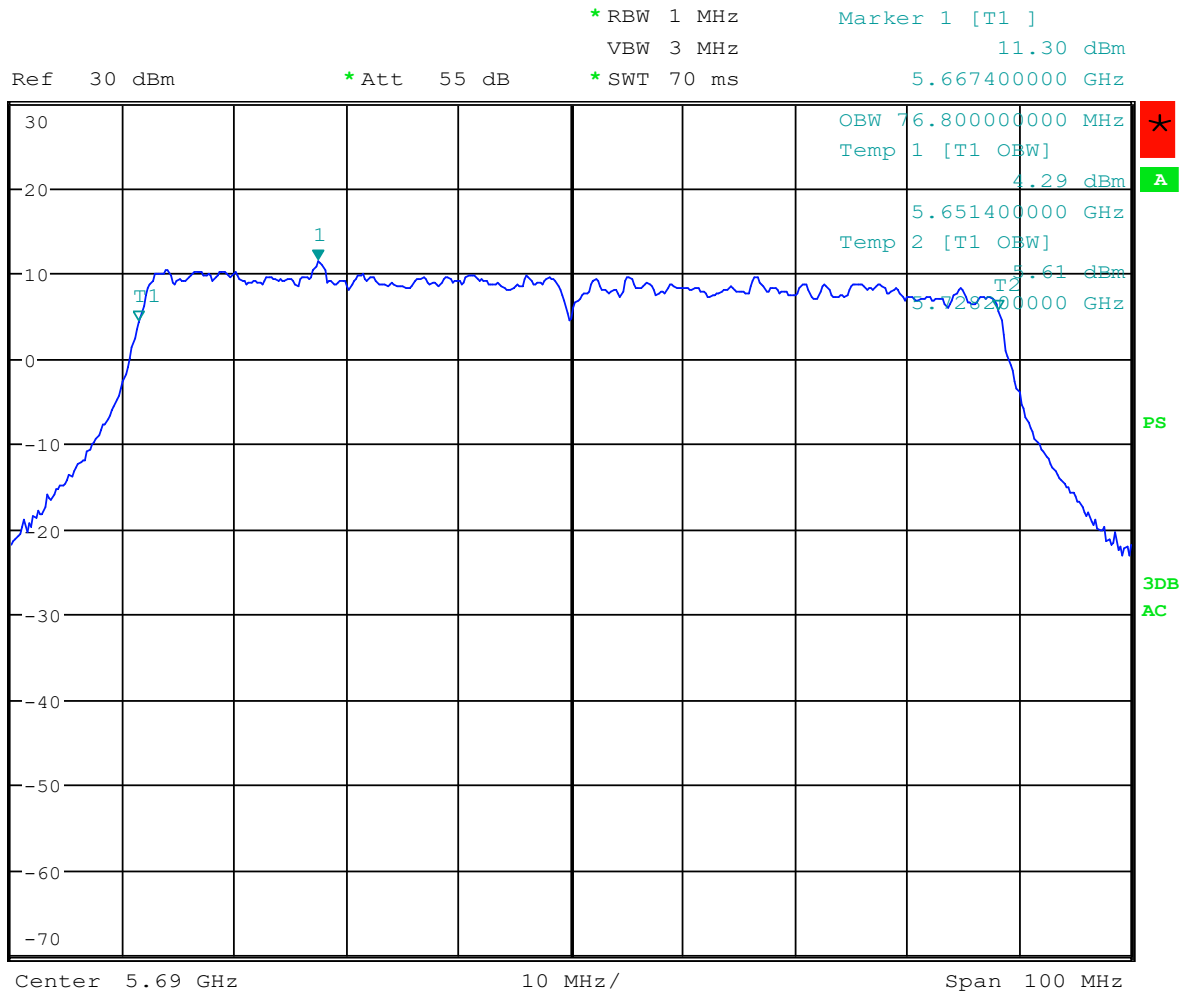
Date: 8.SEP.2021 11:20:41



UNII 2C, HT80: 99% High Channel



1 PK
VIEW



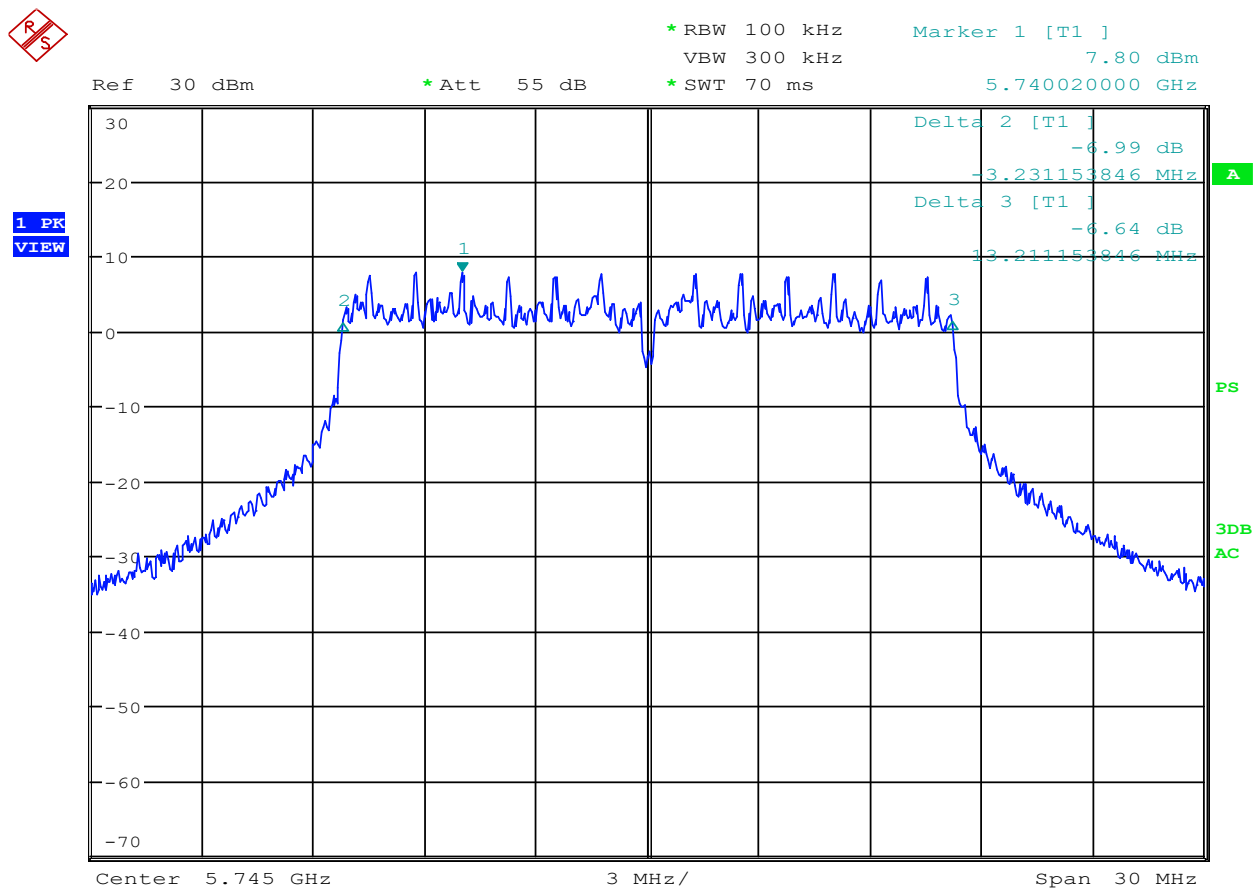
Date: 8.SEP.2021 11:21:15



UNII 3, OFDM

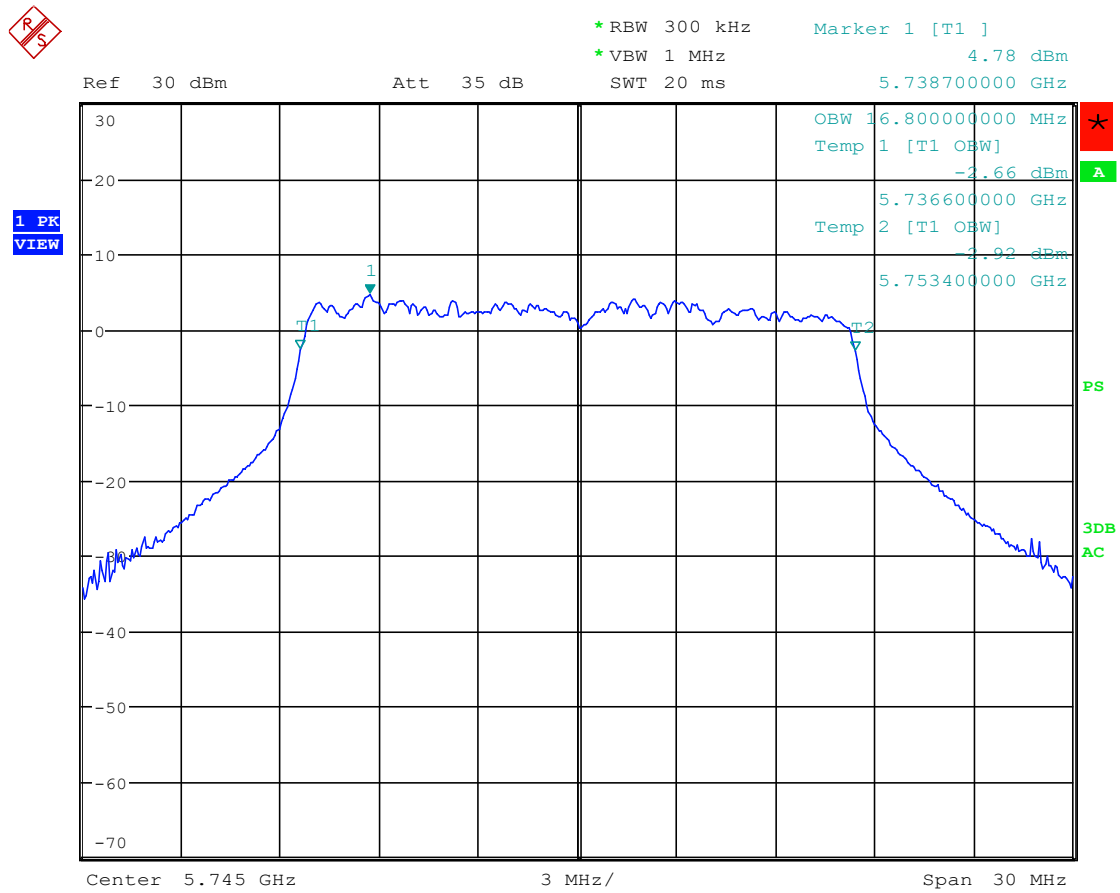
OCCUPIED BANDWIDTH UNII 3				
Channel	Frequency (MHz)	-6dB (MHz)	99% (MHz)	Limit
Modulation: OFDM				
Low	5745	16.442	16.800	>.500
Mid	5785	16.442	16.860	>.500
High	5825	16.442	16.860	>.500

UNII 3, OFDM: -6dB, Low Channel





UNII 3, OFDM: 99%, Low Channel

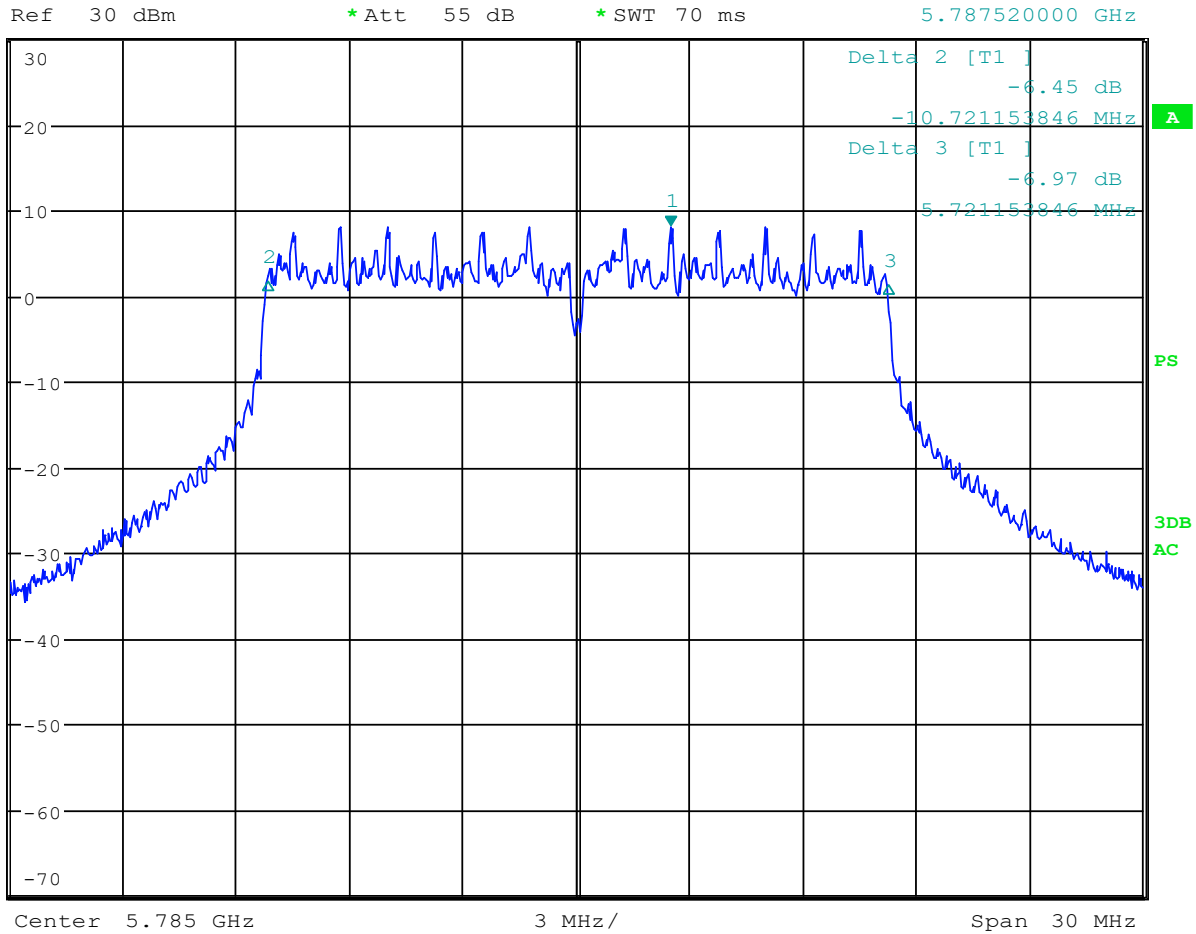




UNII 3, OFDM: -6dB, Mid Channel

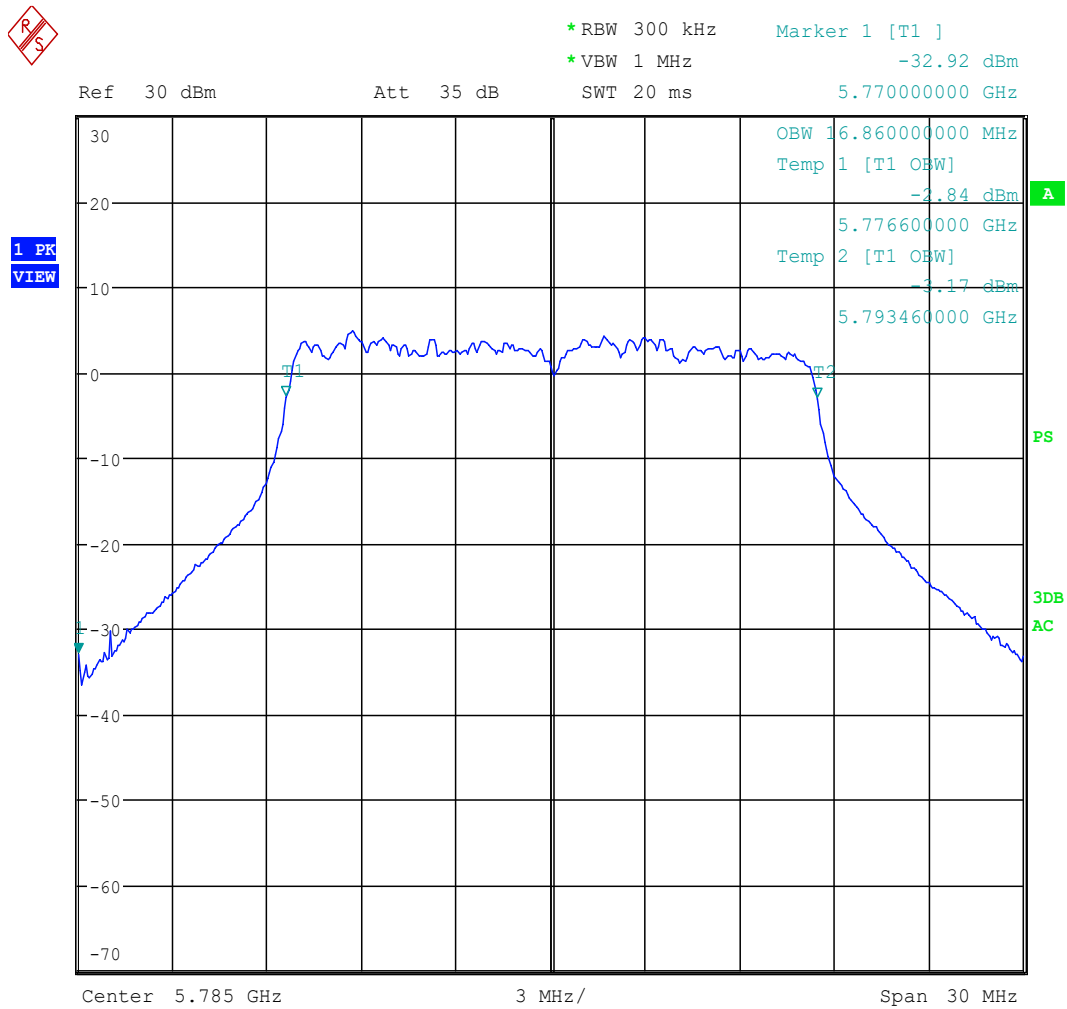


*RBW 100 kHz Marker 1 [T1]
VBW 300 kHz 8.06 dBm
*SWT 70 ms 5.787520000 GHz





UNII 3, OFDM: 99%, Mid Channel





UNII 3, OFDM: -6dB, High Channel

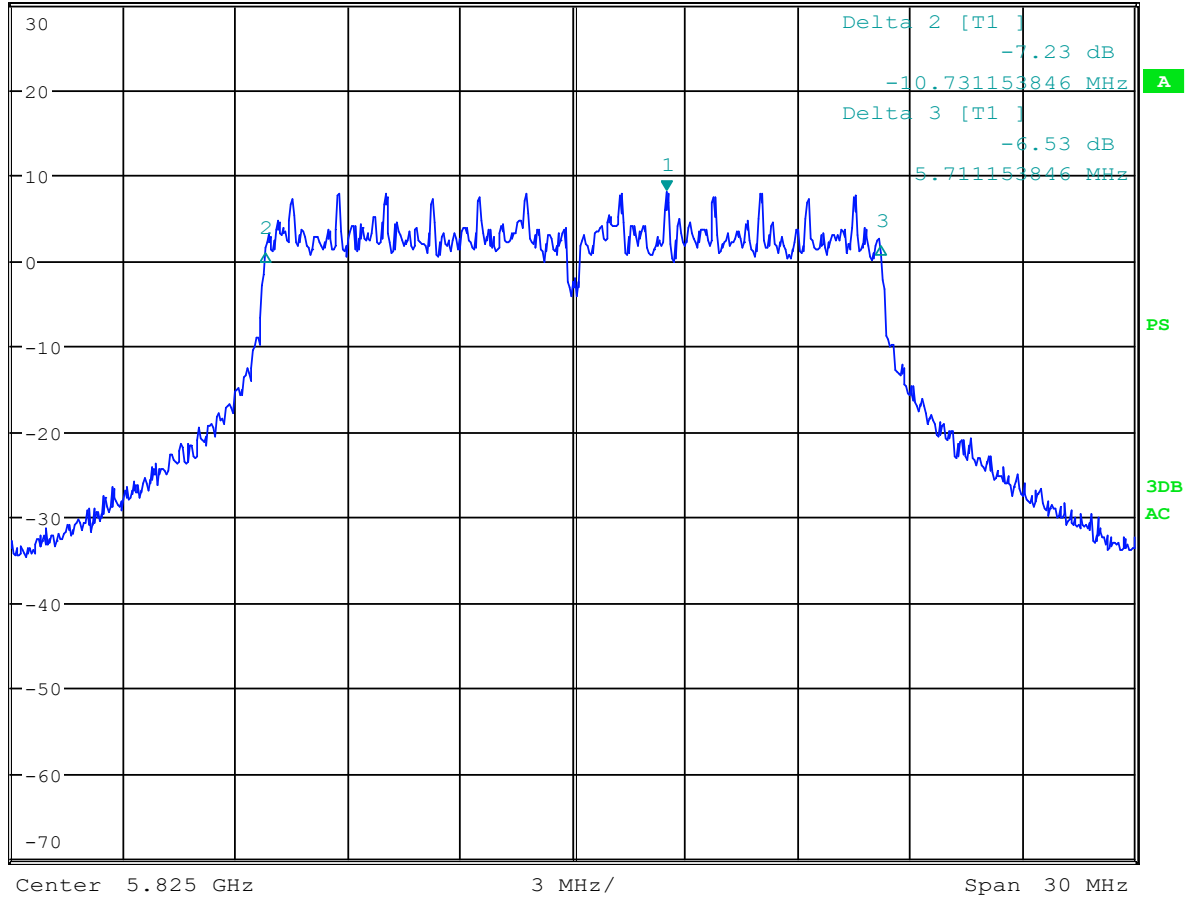


*RBW 100 kHz Marker 1 [T1]
VBW 300 kHz 8.00 dBm
*SWT 70 ms 5.827520000 GHz

Ref 30 dBm

*Att 55 dB

1 PK
VIEW

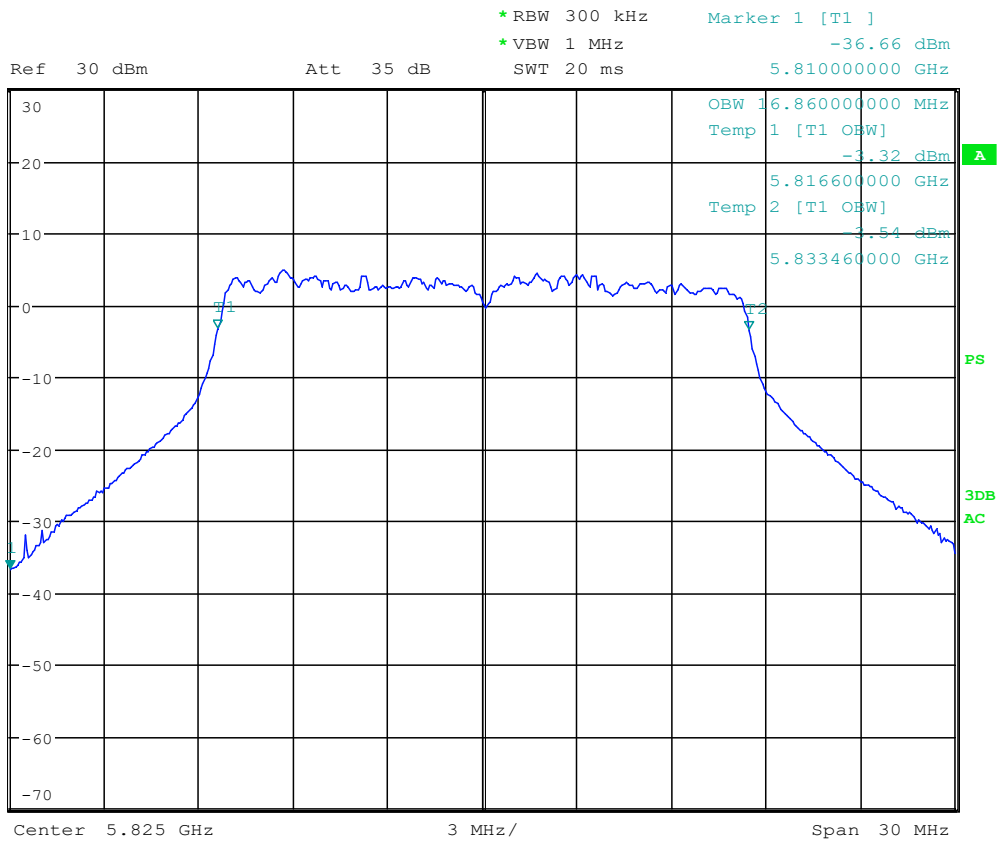




UNII 3, OFDM: 99%, High Channel



1 PK
VIEW

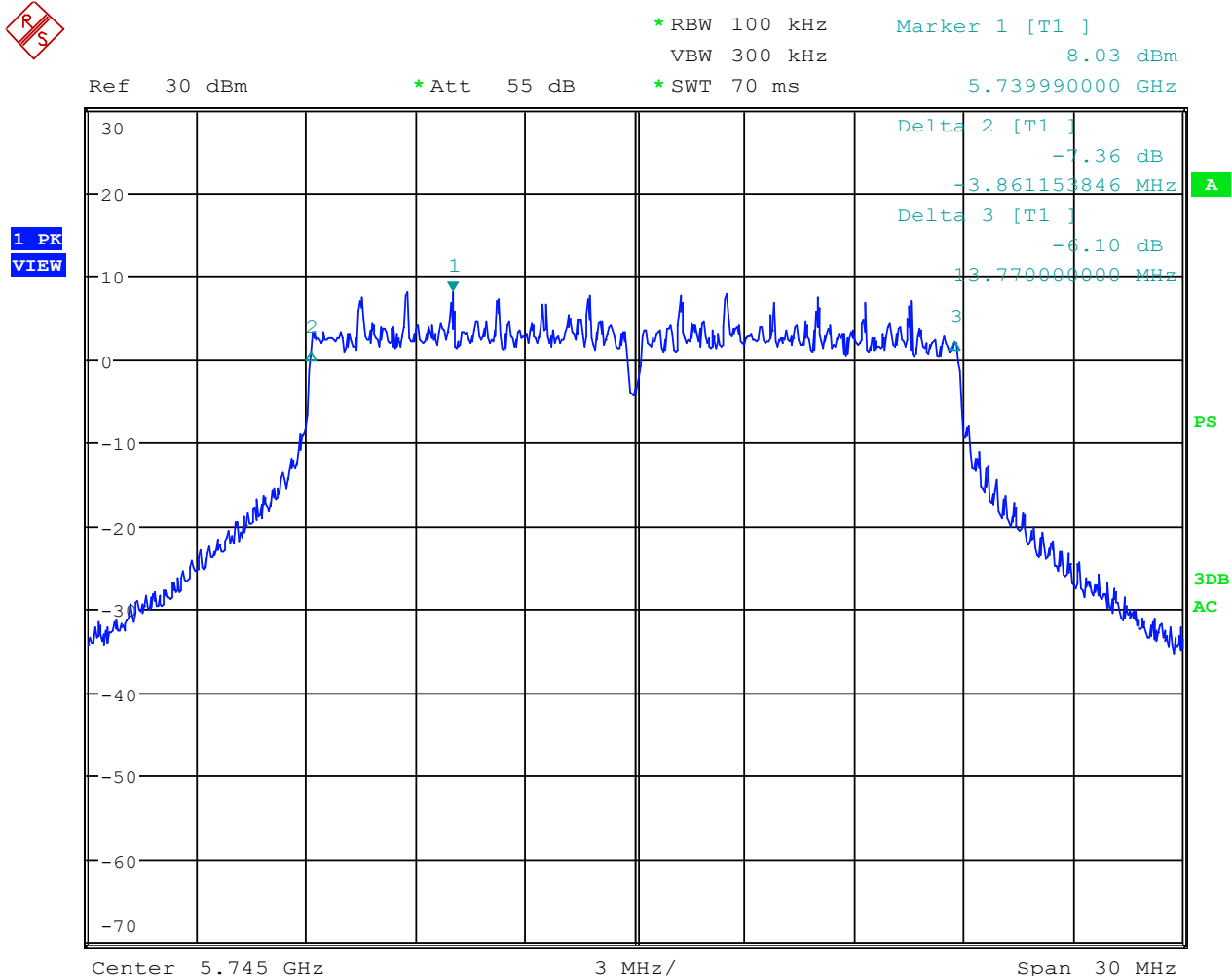




UNII 3, HT20

OCCUPIED BANDWIDTH UNII 3				
Channel	Frequency (MHz)	-6dB (MHz)	99% (MHz)	Limit
Modulation: HT20				
Low	5745	17.631	18.120	>.500
Mid	5785	17.692	18.180	>.500
High	5825	17.692	18.180	>.500

UNII 3, HT20: -6dB, Low Channel

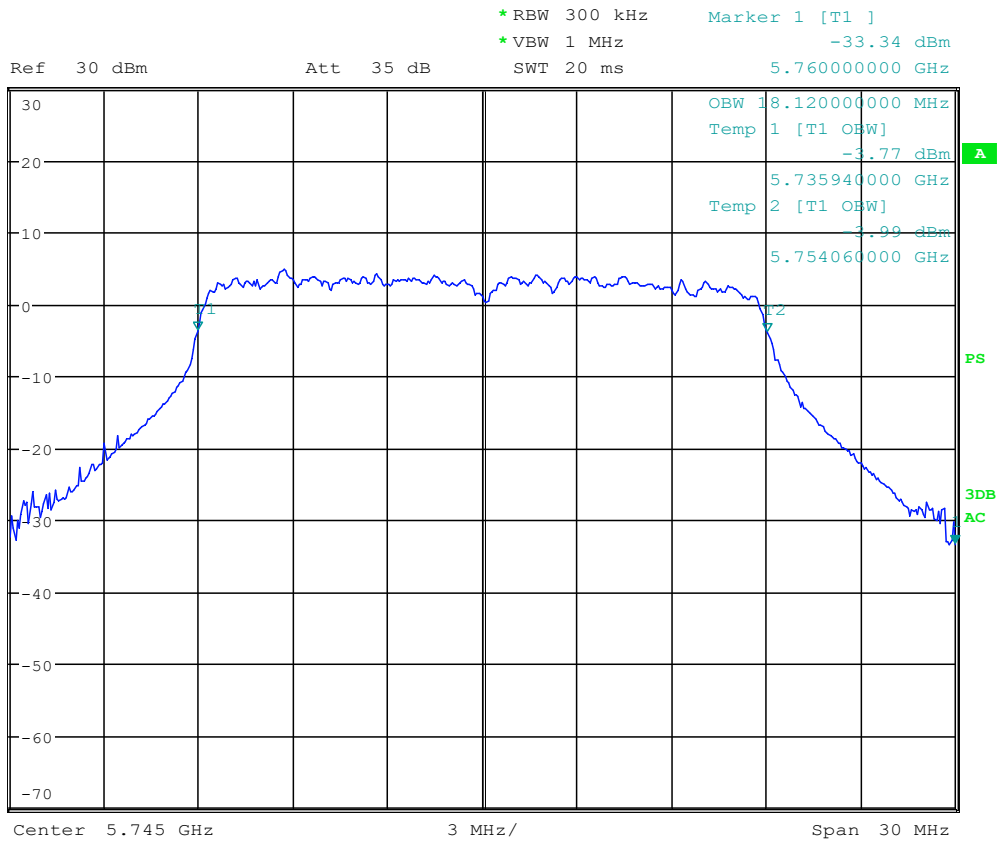




UNII 3, HT20: 99%, Low Channel

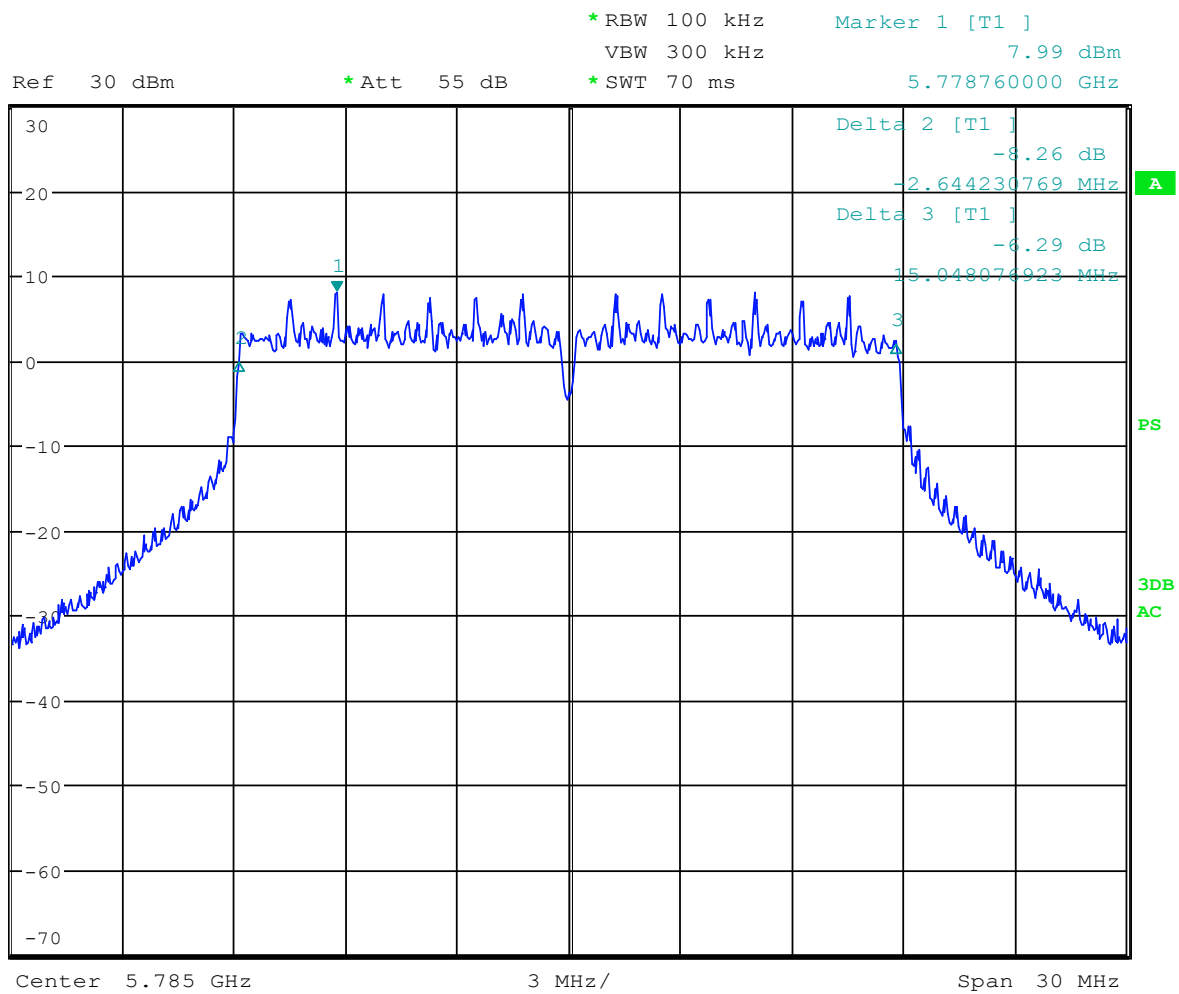


1 PK
VIEW



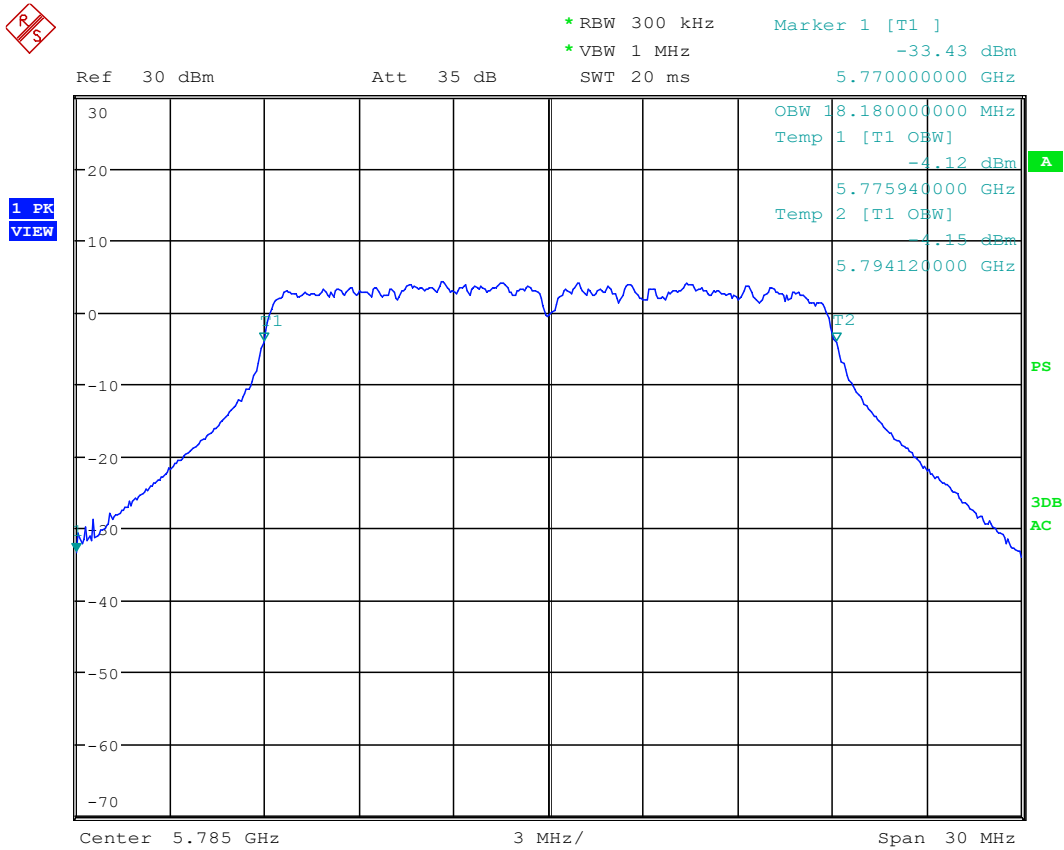


UNII 3, HT20: -6dB, Mid Channel





UNII 3, HT20: 99%, Mid Channel

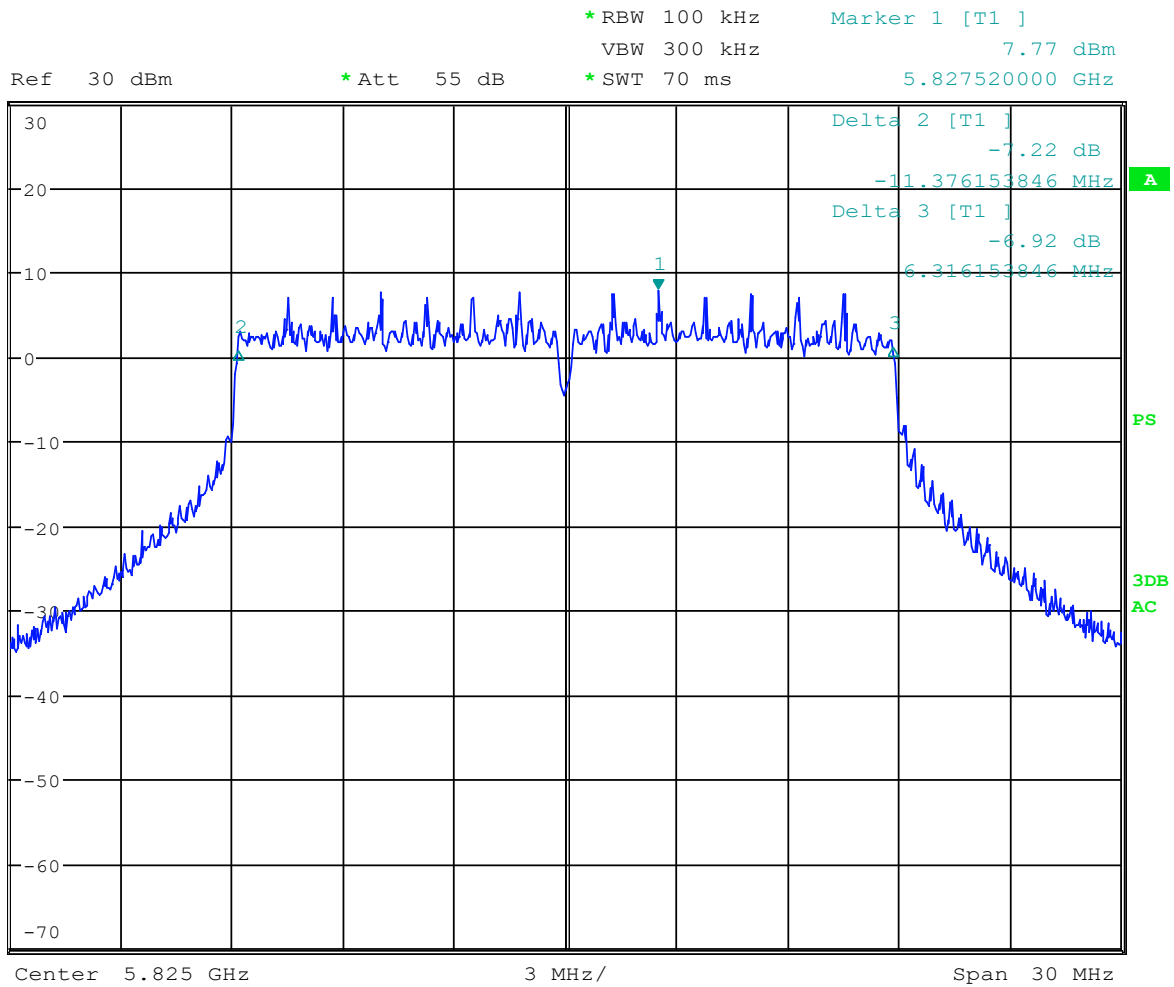




UNII 3, HT20: -6dB, High Channel



1 PK
VIEW

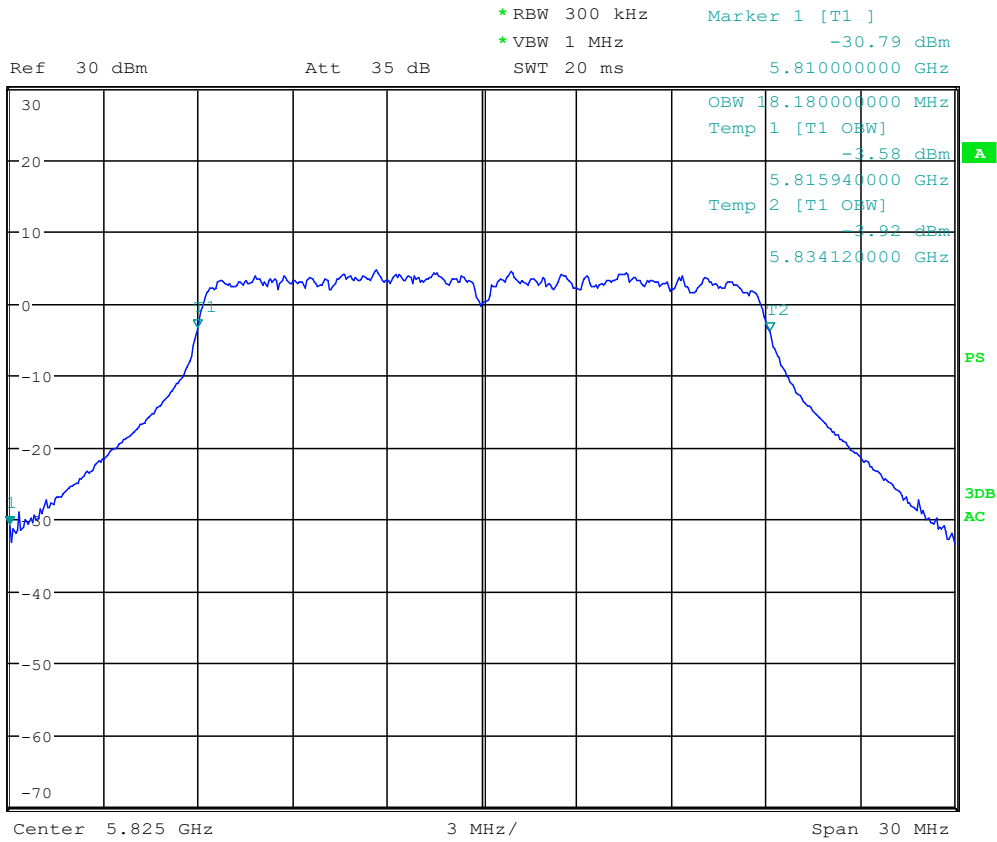




UNII 3, HT20: 99%, High Channel



1 PK
VIEW

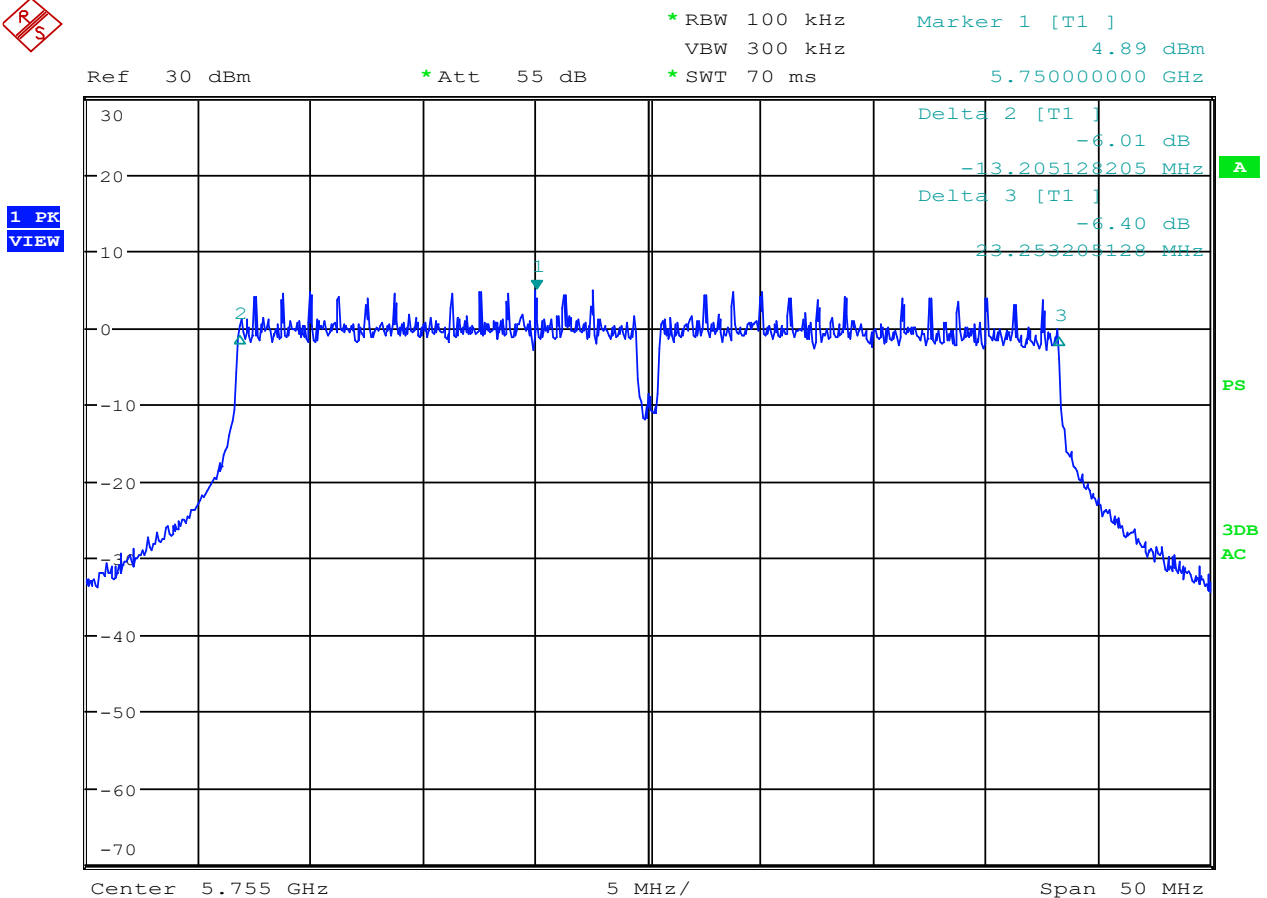




UNII 3, HT40

OCCUPIED BANDWIDTH UNII 3				
Channel	Frequency (MHz)	-6dB (MHz)	99% (MHz)	Limit
Modulation: HT40				
Low	5755	36.458	36.700	>.500
High	5795	36.458	36.700	>.500

UNII 3, HT40: -6dB, Low Channel

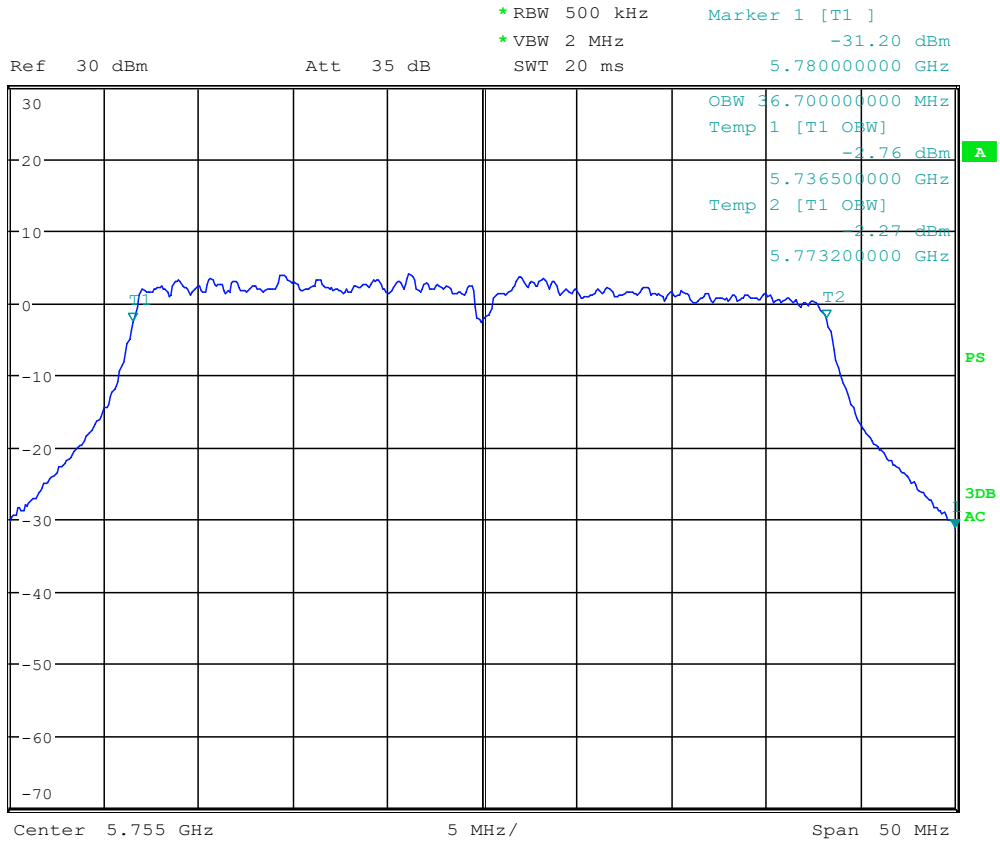




UNII 3, HT40: 99%, Low Channel



1 PK
VIEW





UNII 3, HT40: -6dB, High Channel

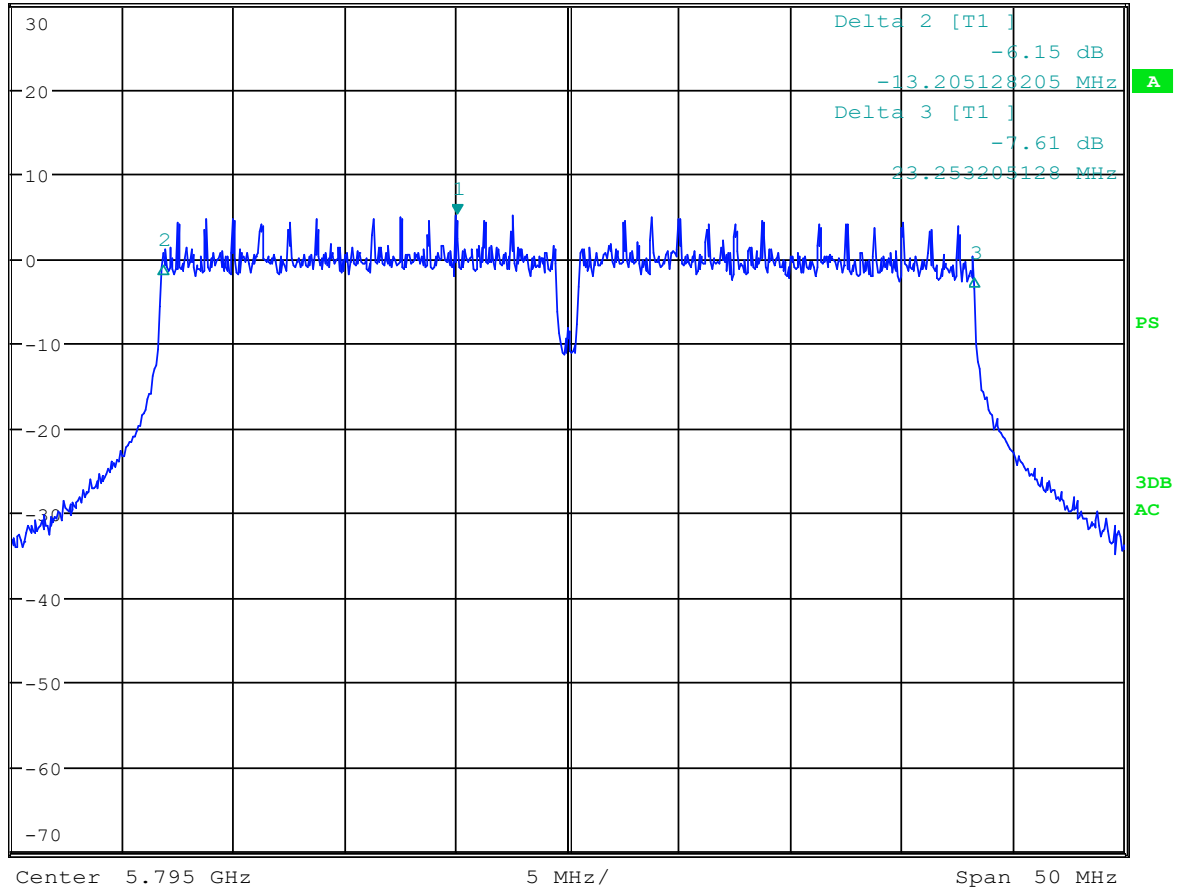


* RBW 100 kHz Marker 1 [T1]
VBW 300 kHz 5.14 dBm
* SWT 70 ms 5.790000000 GHz

Ref 30 dBm

* Att 55 dB

1 PK
VIEW

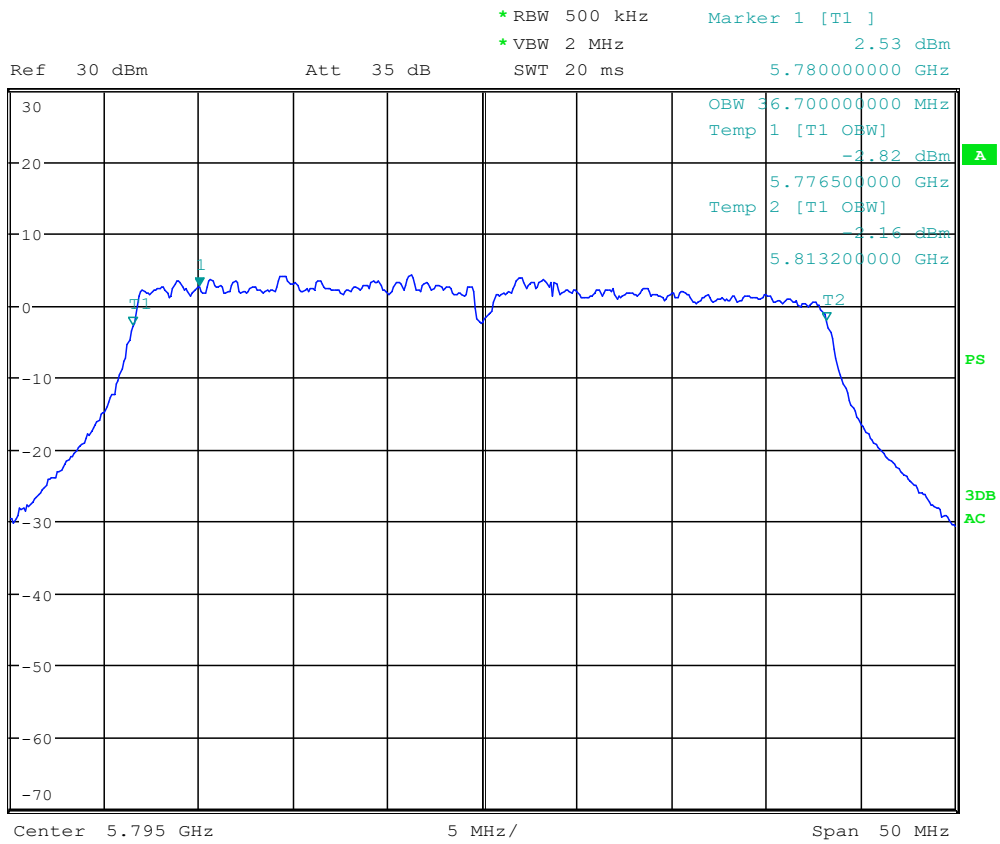




UNII 3, HT40: 99%, High Channel



1 PK
VIEW

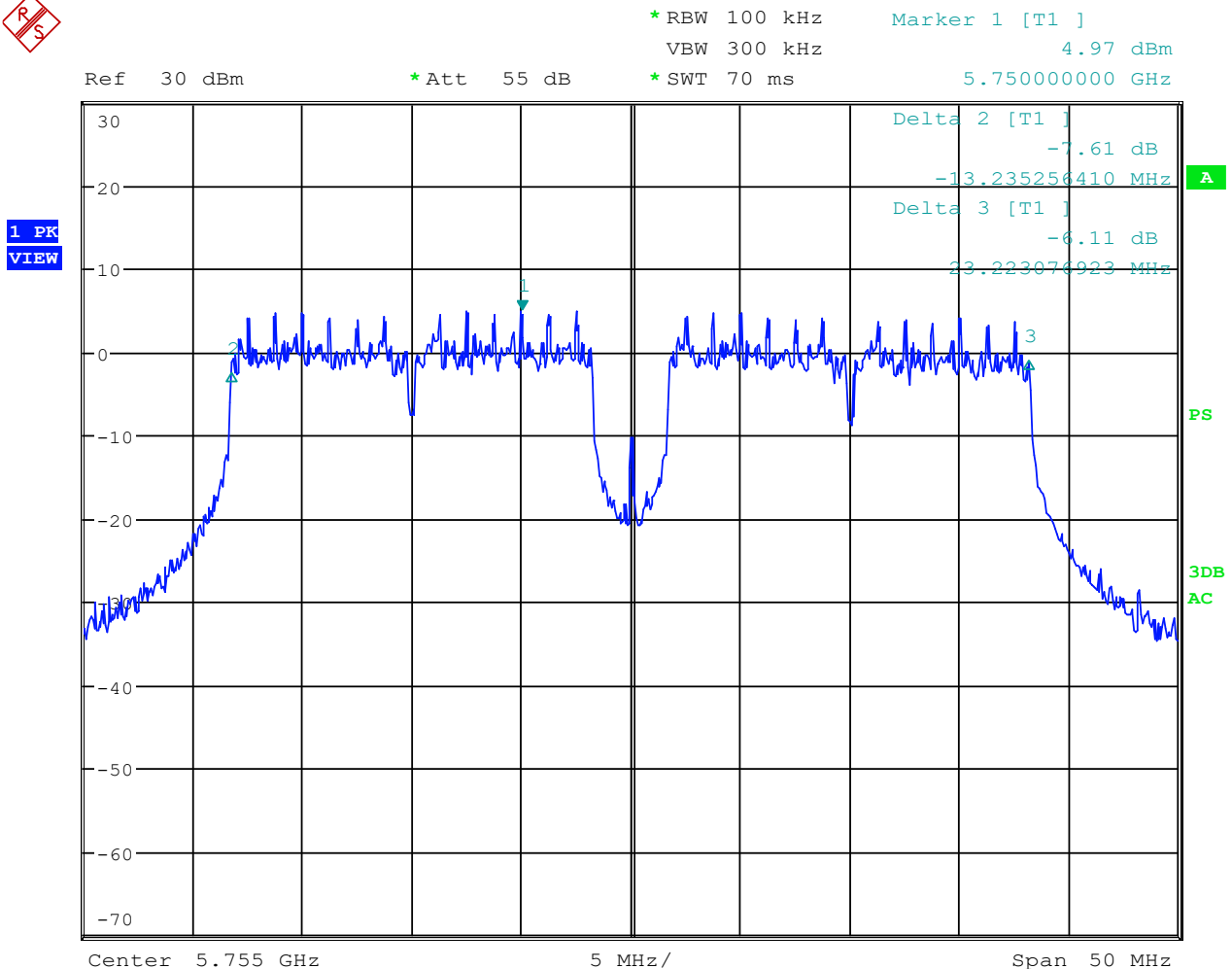




UNII 3, non HT40

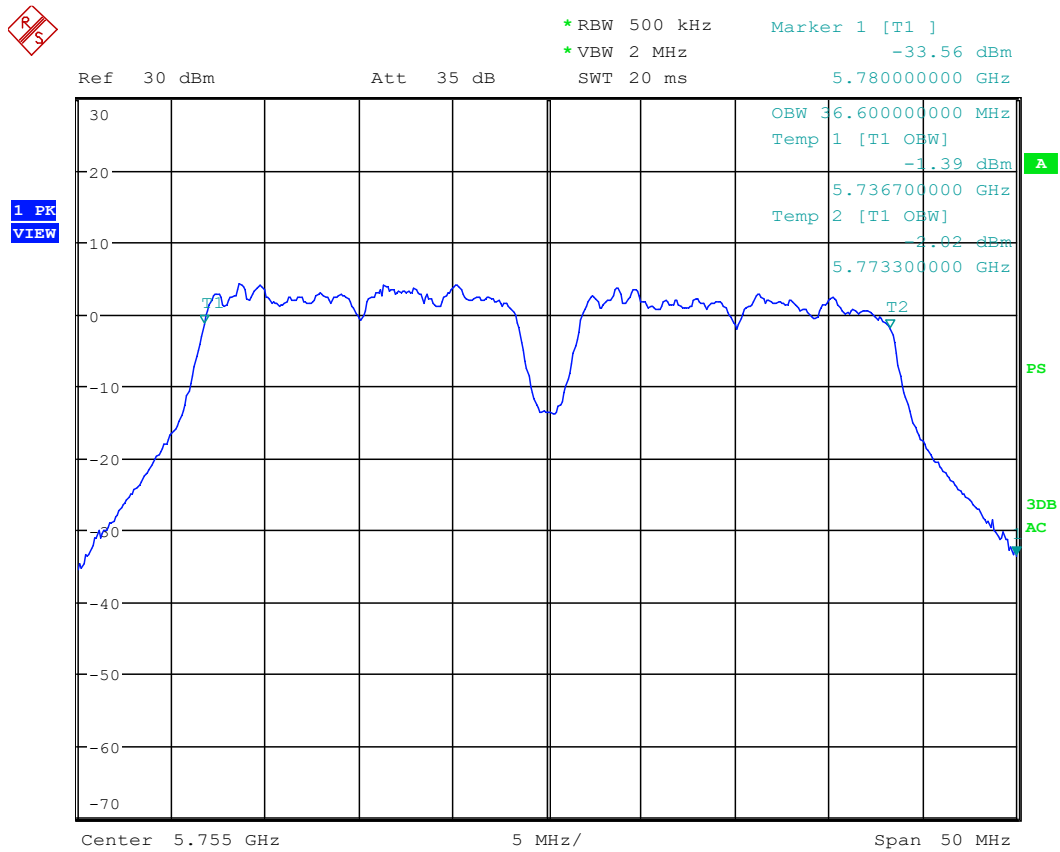
OCCUPIED BANDWIDTH UNII 3				
Channel	Frequency (MHz)	-6dB (MHz)	99% (MHz)	Limit
Modulation: non HT40				
Low	5755	36.458	36.600	>.500
High	5795	36.378	36.600	>.500

UNII 3, non HT40: -6dB, Low Channel





UNII 3, non HT40: 99%, Low Channel





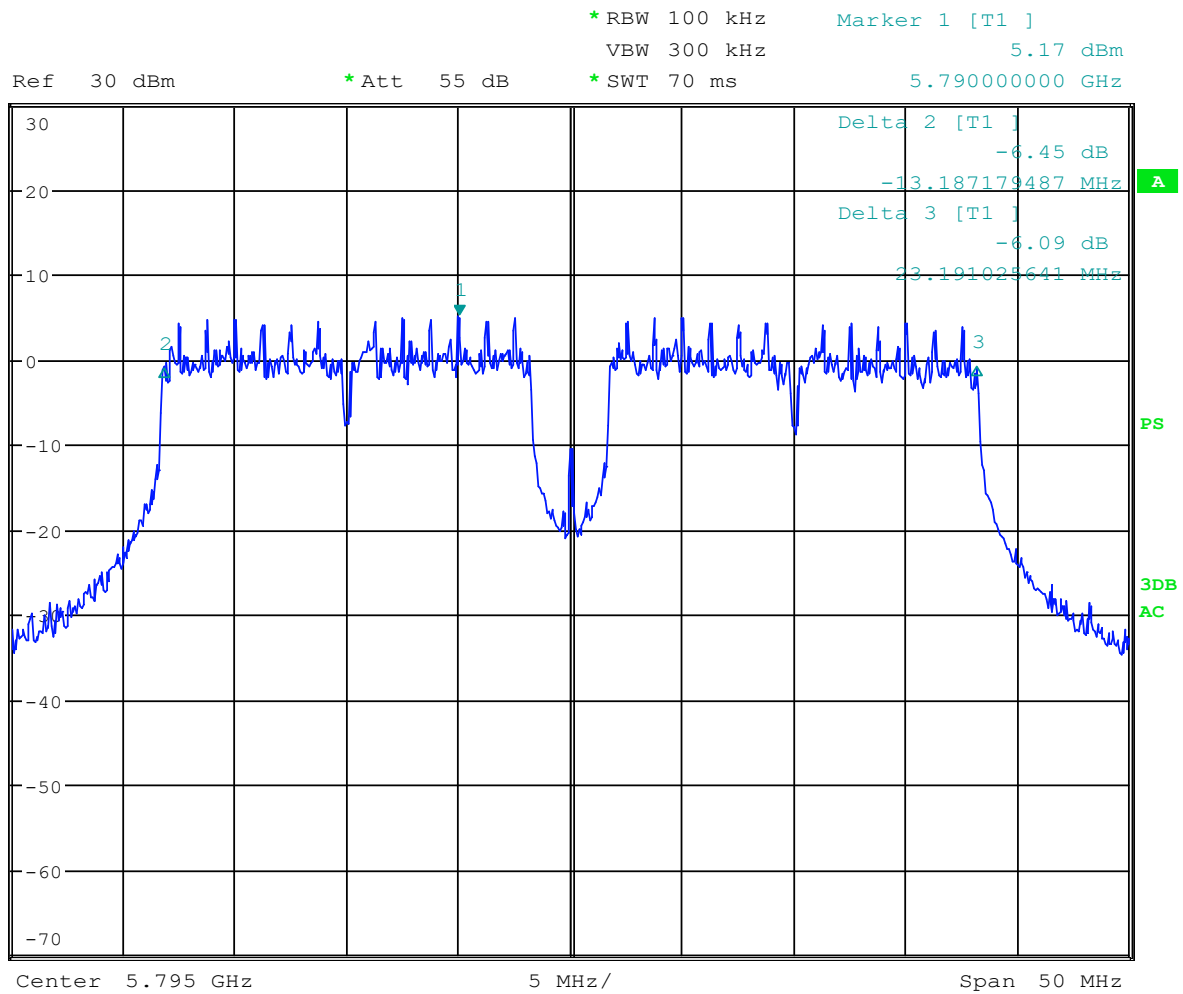
Order Number: F2P19924D

Applicant: PCTEL, Inc
FCC ID: NYPRMWIFIAC2X2

UNII 3, non HT40: -6dB, High Channel

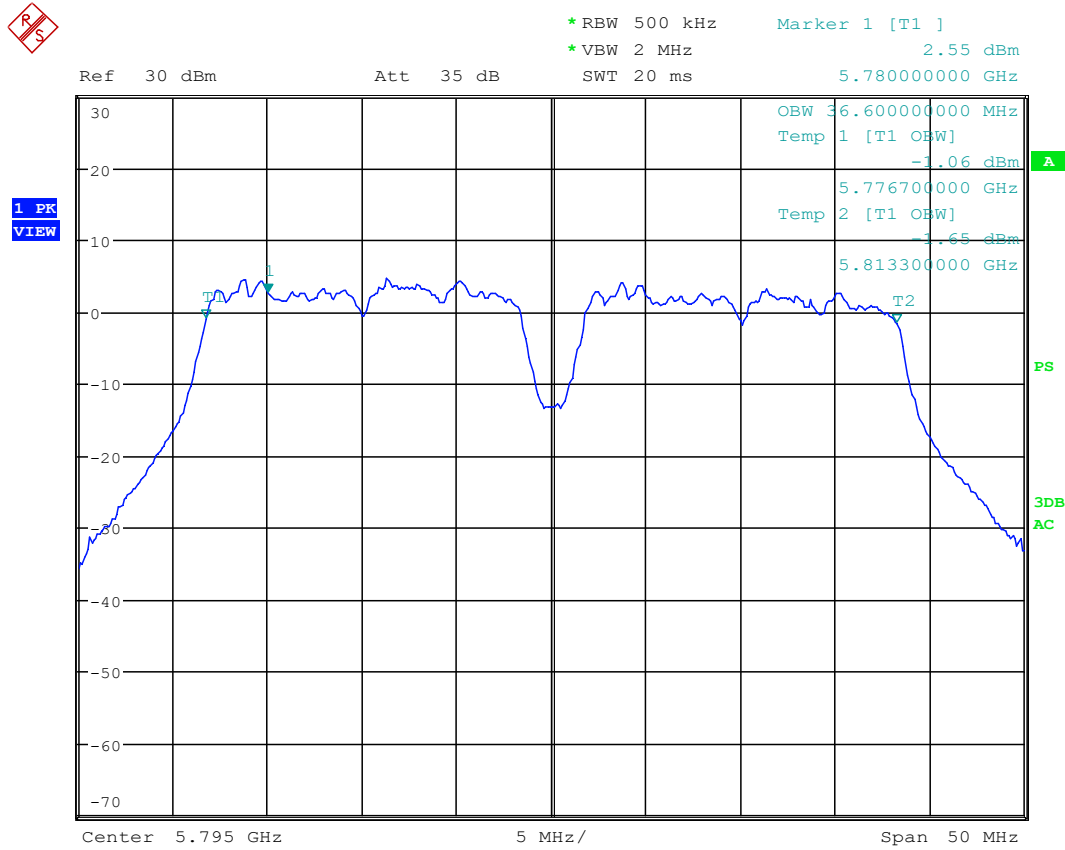


1 PK
VIEW





UNII 3, non HT40: 99% High Channel





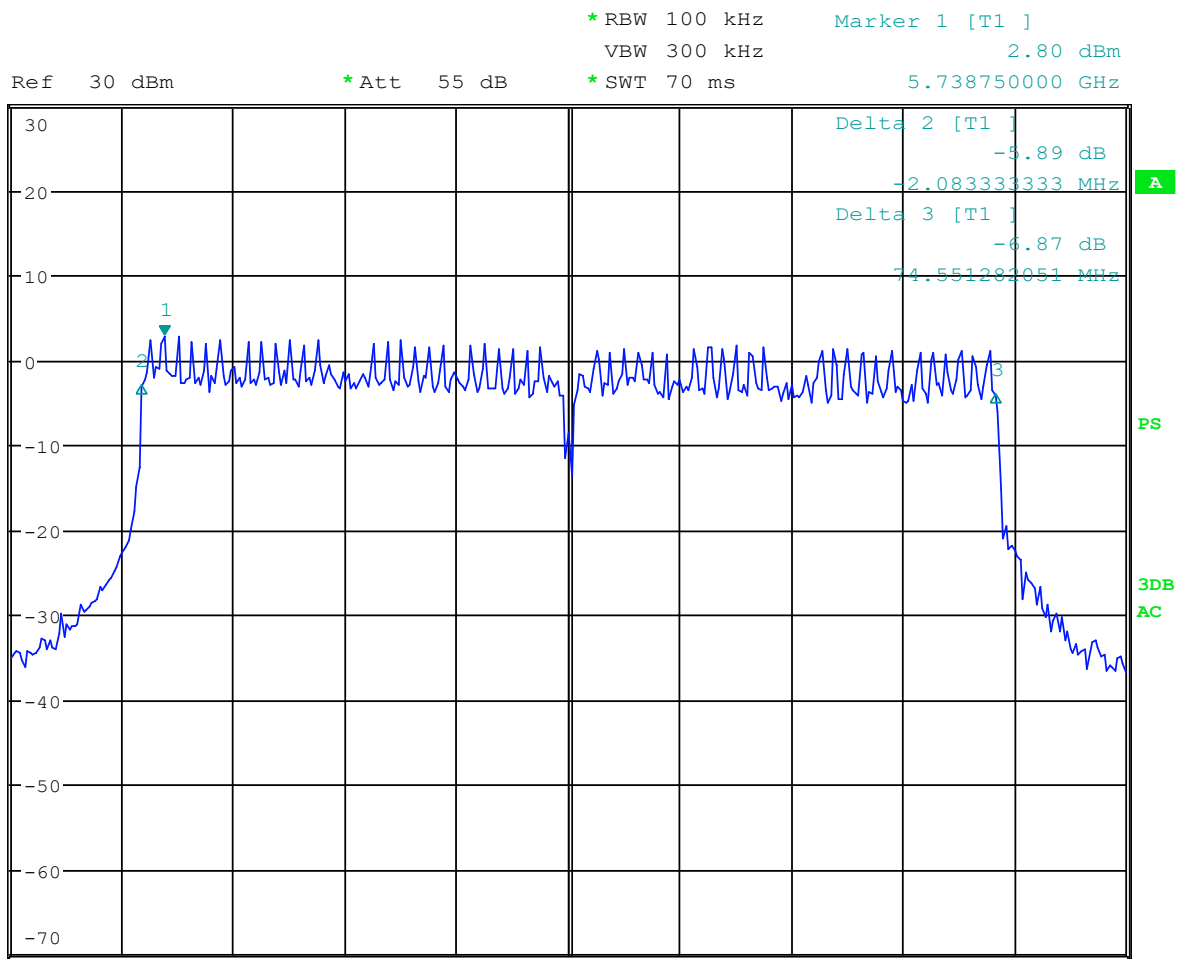
UNII 3, HT80

OCCUPIED BANDWIDTH UNII 3				
Channel	Frequency (MHz)	-6dB (MHz)	99% (MHz)	Limit
Modulation: HT80				
Mid	5775	76.634	76.800	>.500

UNII 3, HT80: -6dB



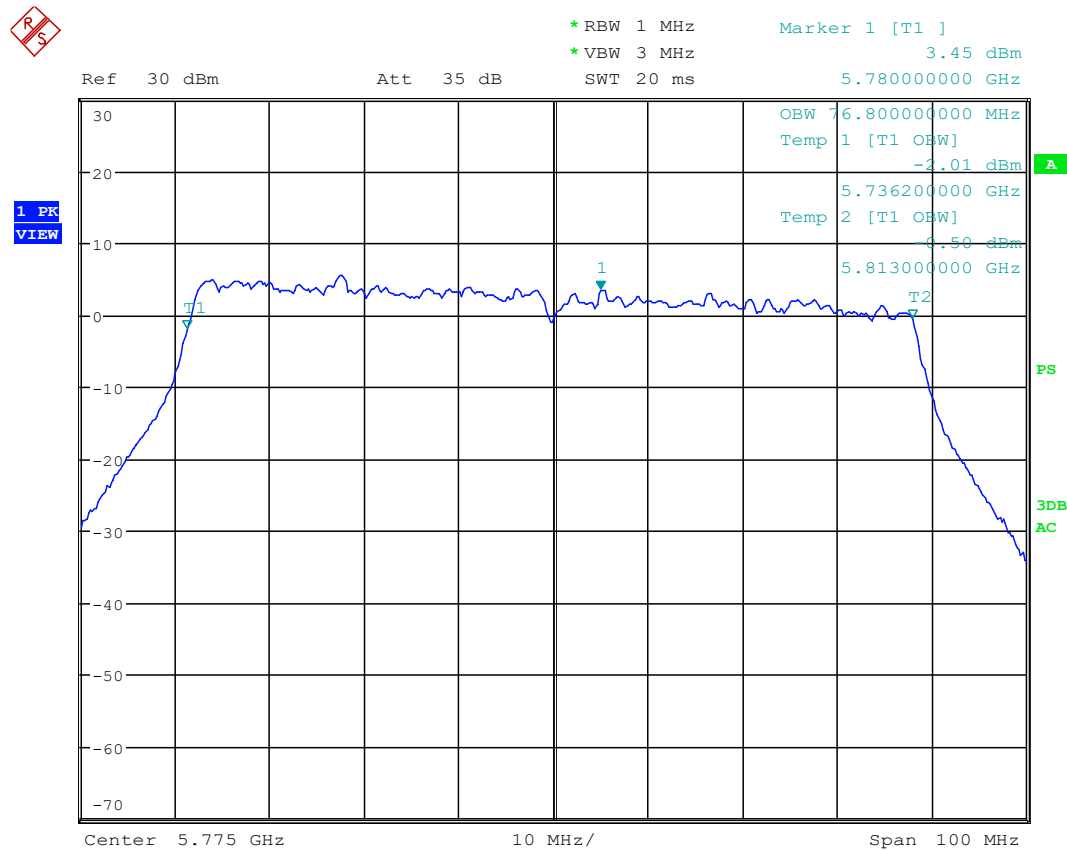
1 PK
VIEW





Applicant: PCTEL, Inc
FCC ID: NYPRMWIFIAC2X2

UNII 3, HT80: 99%





7 OUTPUT POWER

The EUT antenna ports were fitted with Type N connectors and directly connected to the input of the receiver.

Requirements:

For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW (24 dBm) 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).

For the 5.25-5.35 GHz and 5.47-5.725 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. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. 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.

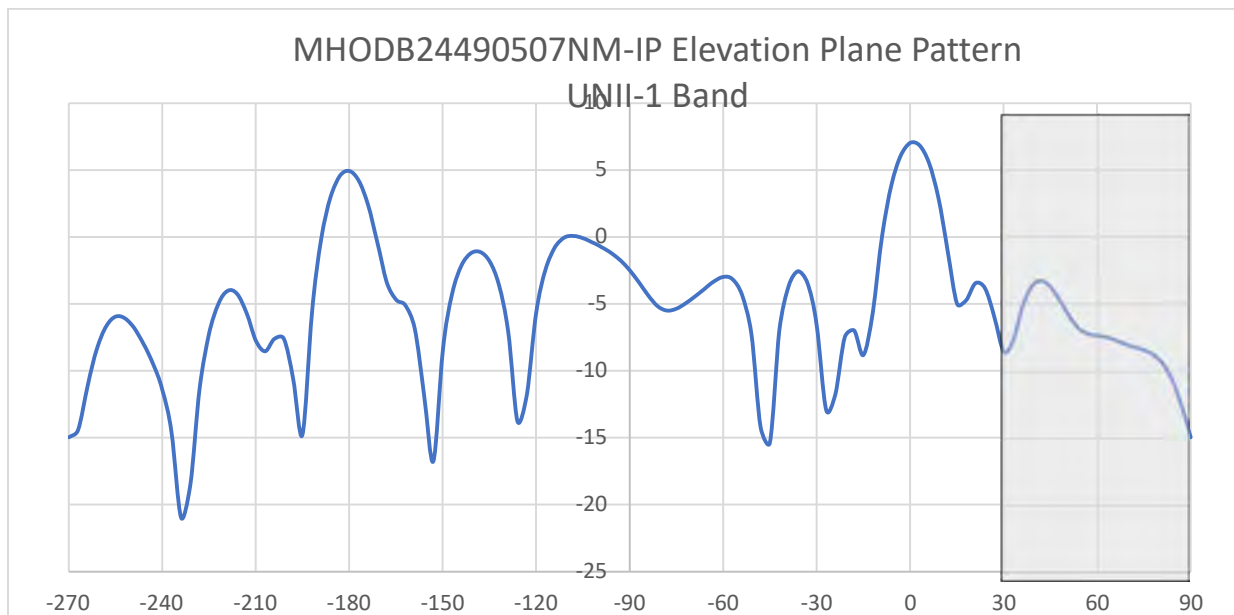
For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W (30 dBm). If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

**ABOVE 30 DEGREES AS MEASURED FROM THE HORIZON****§15.407(a)(1)(i)**

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). The elevation angle was where 0° was horizontal and 90° was straight-up.

As seen in the table of measurement results in this report, the maximum recorded power from either port was 14.92dBm (31.05mW). The maximum summed power when in Beamforming mode was 17.61dBm (57.78mW). That would allow the max antenna gain to be +3.3dBi in order to comply with the maximum allowed e.i.r.p. of 125 mW (21 dBm).

Per KDB 789033 D02, the indicated radiation pattern between 30° and 90° is in the highlighted area of the graph. The peak gain was -3.28 dBi and therefore, the maximum E.I.R.P is well below 125 mW (21 dBm). 17.61dBm -3.28 dBi for antenna gain = 14.43 dBm (27.10 mW).

**8.2 Output Power Test Data**

Test Date(s):	2021-09-08 to 2021-09-09; 2022-03-21	Test Engineer:	J. Chiller
Standards:	CFR 47 Part 15.407(a)(1,2,3);KDB789033	Air Temperature:	22.4°C; 20.3°C
		Relative Humidity:	39%; 37%

**RF OUTPUT POWER UNII 1 Port 1 (Beamforming and Non-Beamforming Mode)****Modulation: OFDM**

Channel	Frequency (MHz) / Power Setting	Measured Power		Limit		Limit for Client Devices		E.I.R.P.		Limit	
		mW	dBm	mW	dBm	mW	dBm	mW	dBm	E.I.R.P (mW)	E.I.R.P (dBm)
Low	5180 (16)	30.62	14.86	794.0	29	199.53	23	153.4	21.86	4000	36
Mid	5220 (15.5)	27.73	14.43	794.0	29	199.53	23	139.0	21.43	4000	36
High	5240 (15)	26.79	14.28	794.0	29	199.53	23	134.3	21.28	4000	36

Modulation: HT20

Channel	Frequency (MHz) / Power Setting	Measured Power		Limit		Limit for Client Devices		E.I.R.P.		Limit	
		mW	dBm	mW	dBm	mW	dBm	mW	dBm	E.I.R.P (mW)	E.I.R.P (dBm)
Low	5180 (16)	31.05	14.92	794.0	29	199.53	23	155.6	21.92	4000	36
Mid	5220 (15.5)	28.44	14.54	794.0	29	199.53	23	142.6	21.54	4000	36
High	5240 (15)	26.36	14.21	794.0	29	199.53	23	132.1	21.21	4000	36

Modulation: non HT40

Channel	Frequency (MHz) / Power Setting	Measured Power		Limit		Limit for Client Devices		E.I.R.P.		Limit	
		mW	dBm	mW	dBm	mW	dBm	mW	dBm	E.I.R.P (mW)	E.I.R.P (dBm)
Low	5190 (16)	28.97	14.62	794.0	29	199.53	23	141.7	21.81	4000	36
High	5230 (15.5)	25.94	14.14	794.0	29	199.53	23	130.1	21.14	4000	36

Modulation: HT40

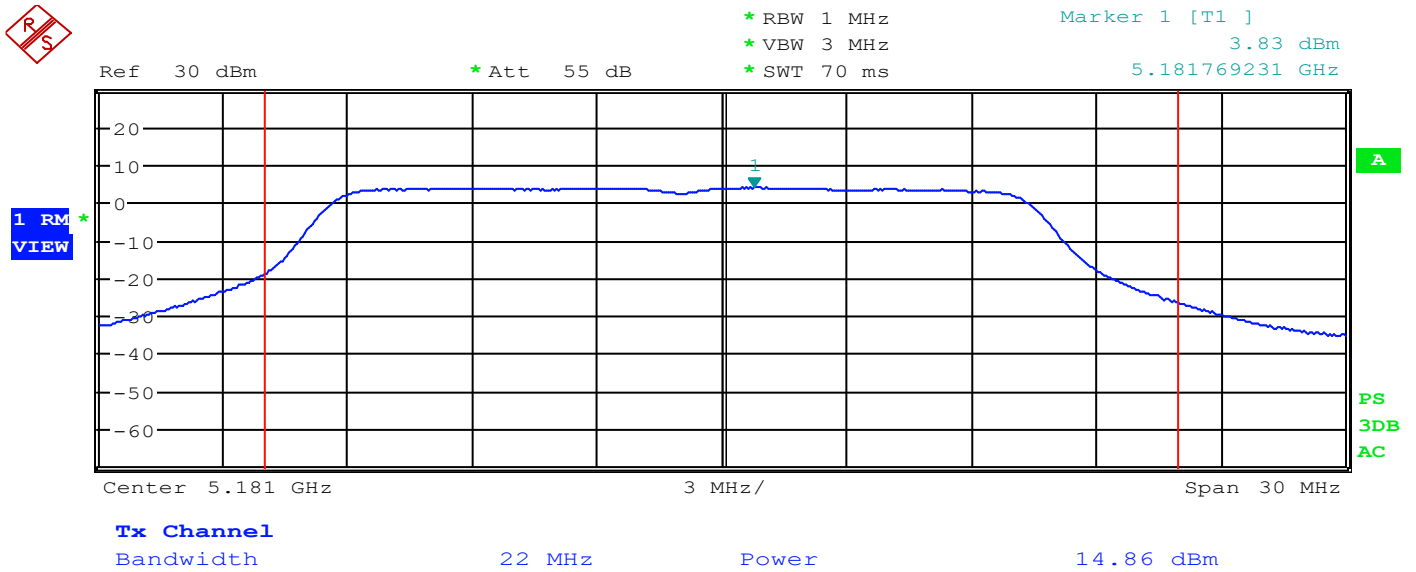
Channel	Frequency (MHz) / Power Setting	Measured Power		Limit		Limit for Client Devices		E.I.R.P.		Limit	
		mW	dBm	mW	dBm	mW	dBm	mW	dBm	E.I.R.P (mW)	E.I.R.P (dBm)
Low	5190 (16)	30.27	14.81	794.0	29	199.53	23	151.7	21.81	4000	36
High	5230 (15)	27.29	14.36	794.0	29	199.53	23	136.8	21.36	4000	36

Modulation: HT80

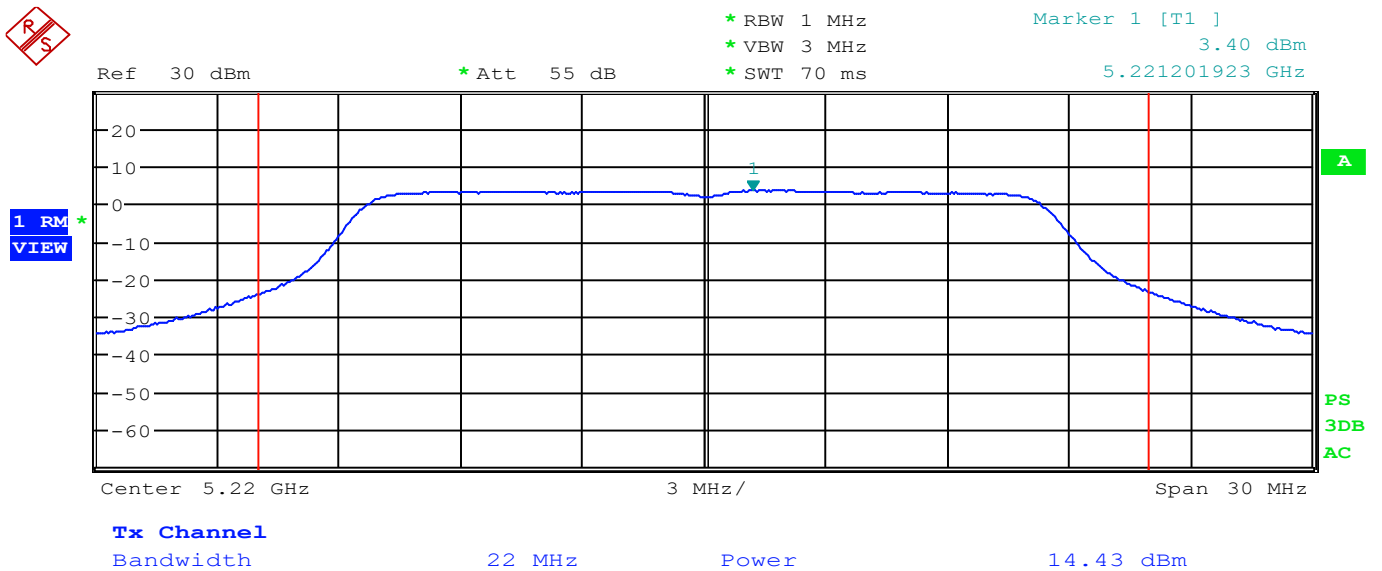
Channel	Frequency (MHz) / Power Setting	Measured Power		Limit		Limit for Client Devices		E.I.R.P.		Limit	
		mW	dBm	mW	dBm	mW	dBm	mW	dBm	E.I.R.P (mW)	E.I.R.P (dBm)
Mid	5210 (15)	29.17	14.65	794.0	29	199.53	23	146.2	21.65	4000	36



UNII 1, Port 1: OFDM, Low Channel

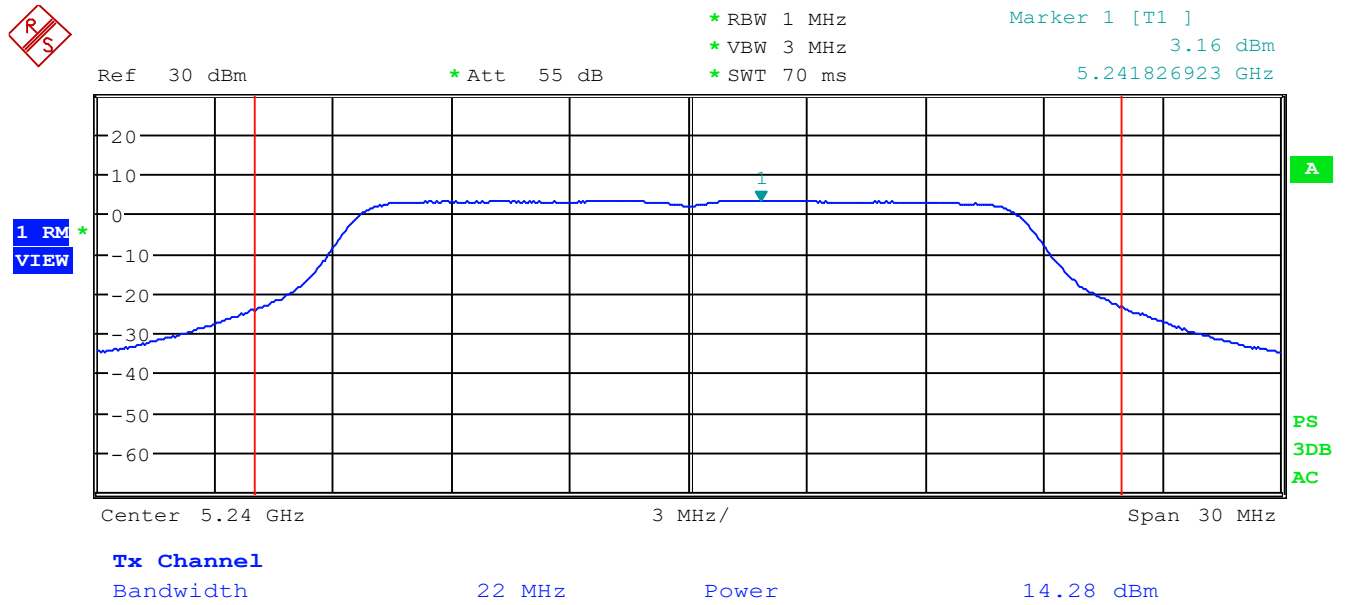


UNII 1, Port 1: OFDM, Mid Channel



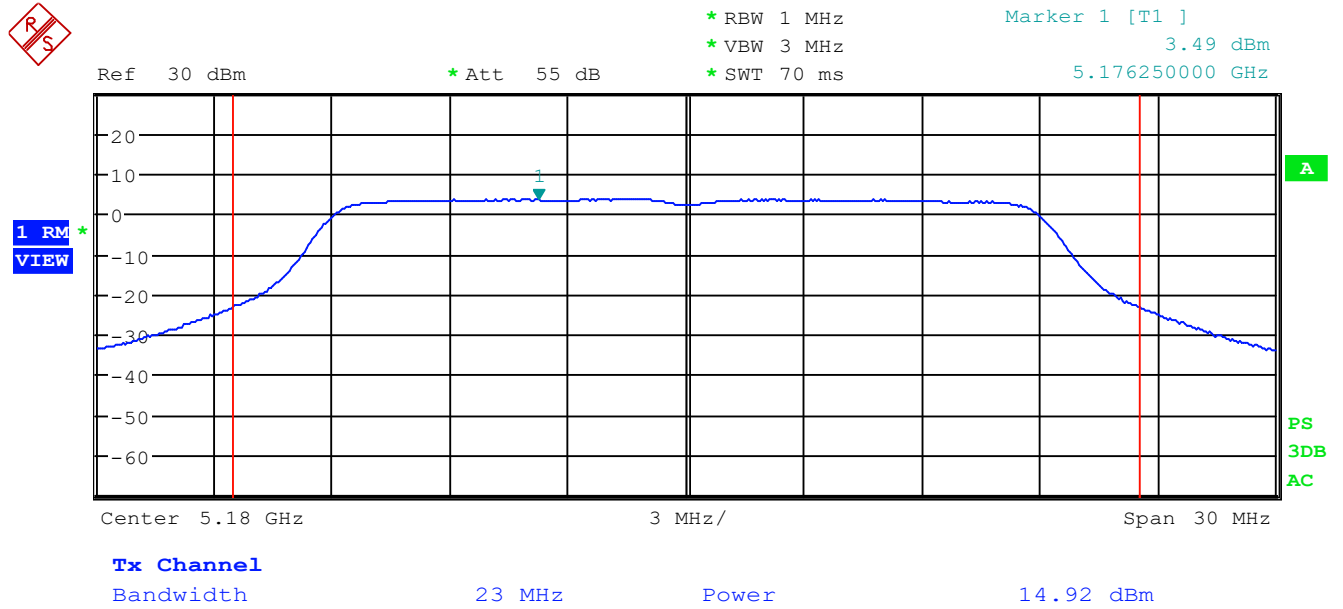


UNII 1, Port 1: OFDM, High Channel





UNII 1, Port 1: HT20, Low Channel

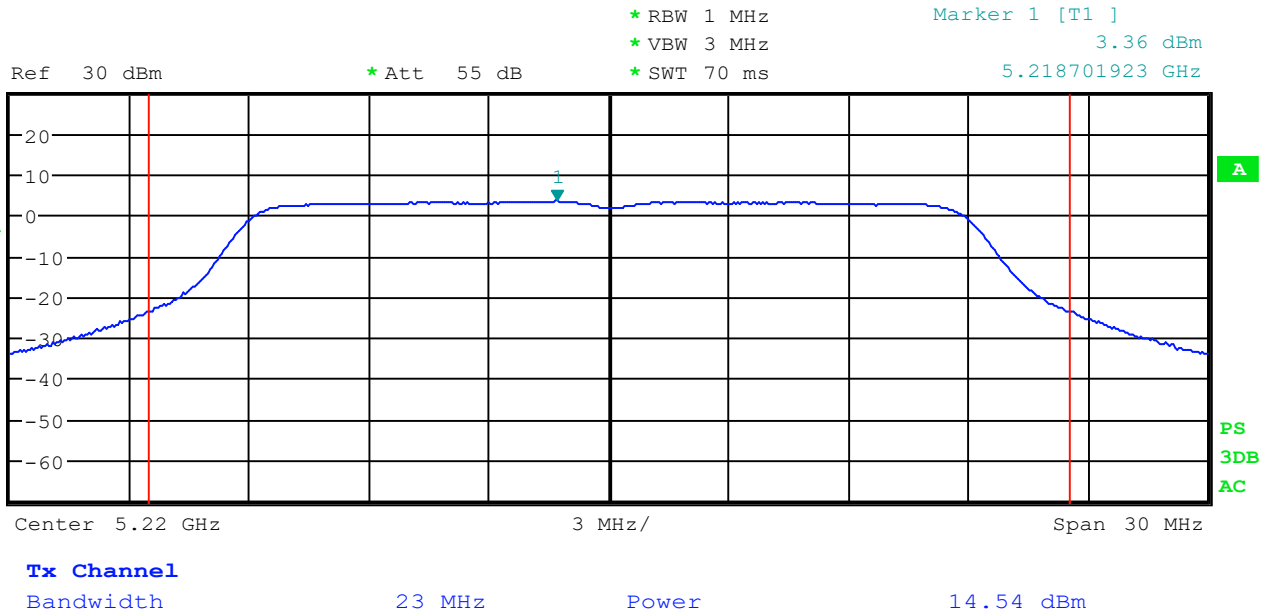




UNII 1, Port 1: HT20, Mid Channel



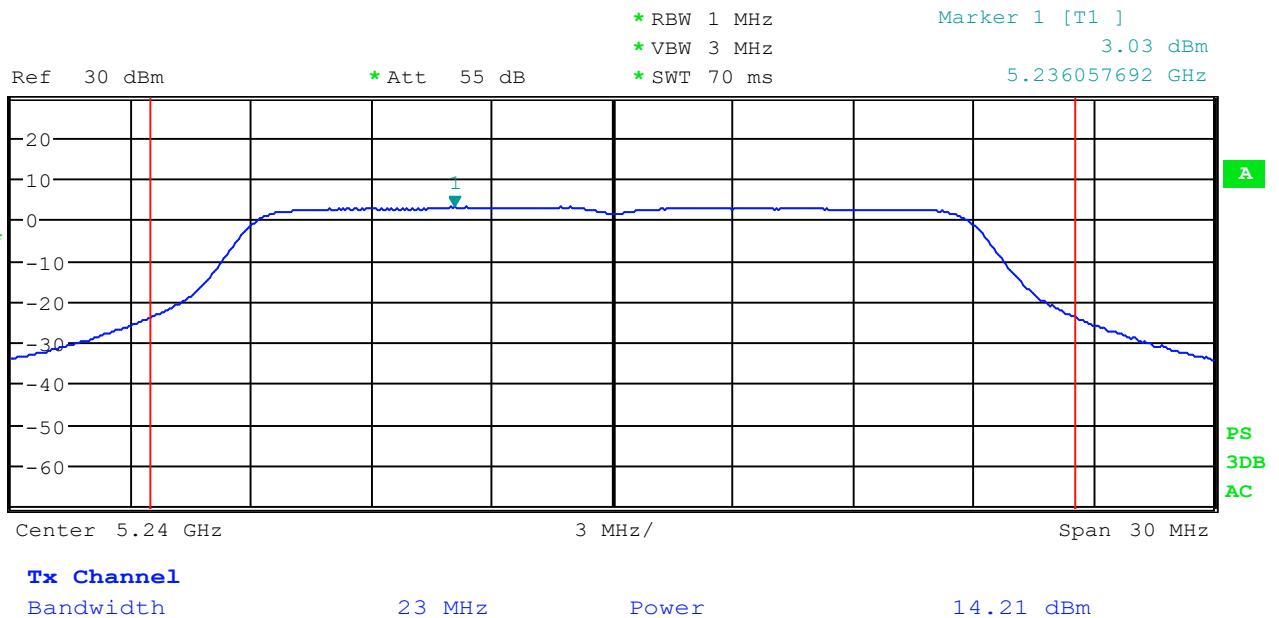
1 RM
VIEW



UNII 1, Port 1: HT20, High Channel

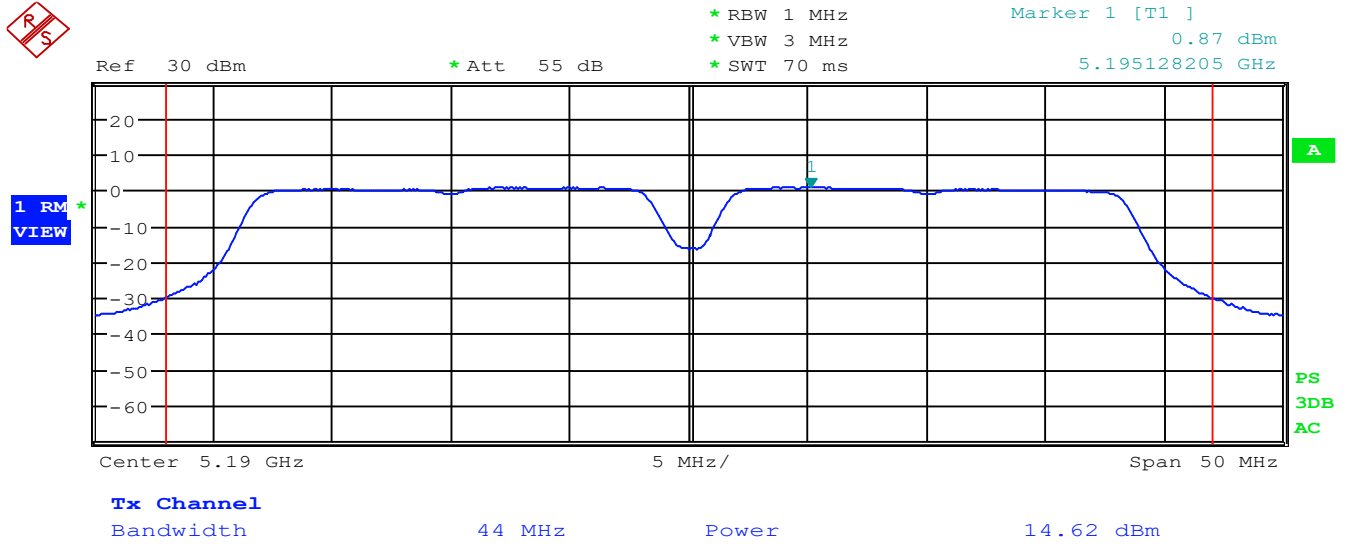


1 RM
VIEW

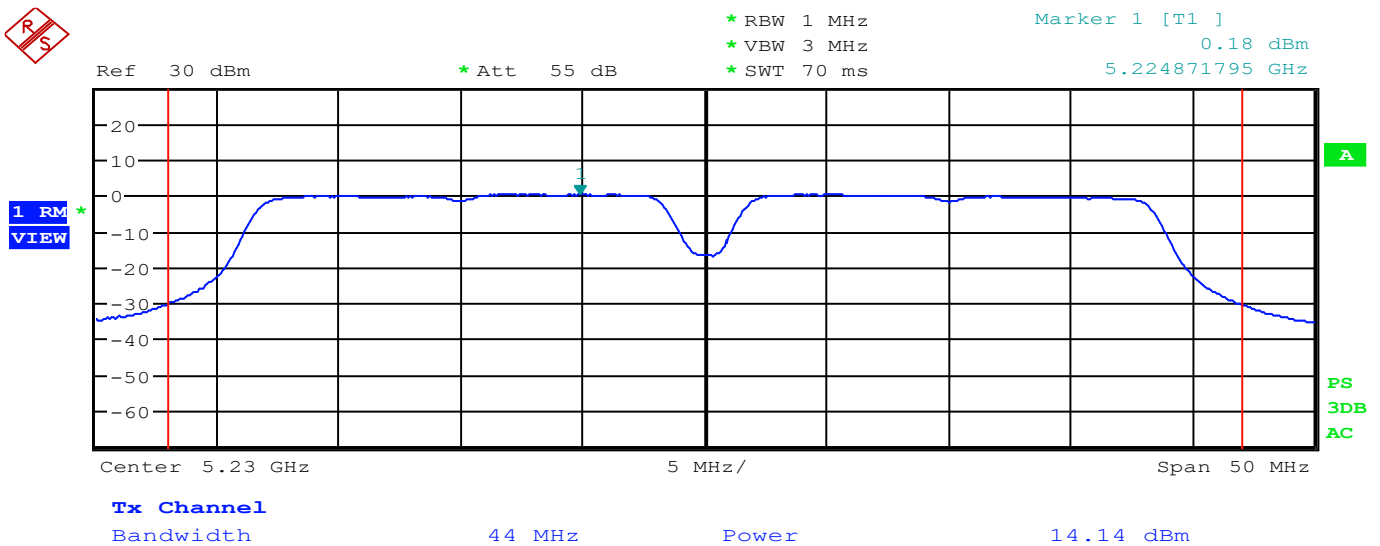




UNII 1, Port 1: non HT40, Low Channel

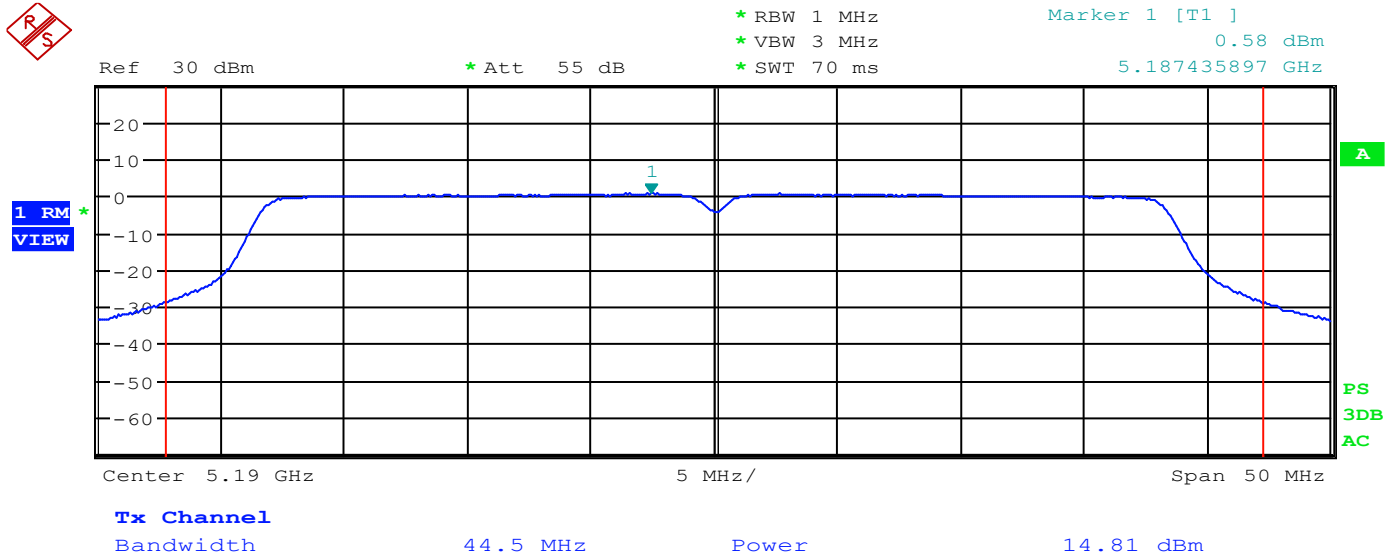


UNII 1, Port 1: non HT40, High Channel

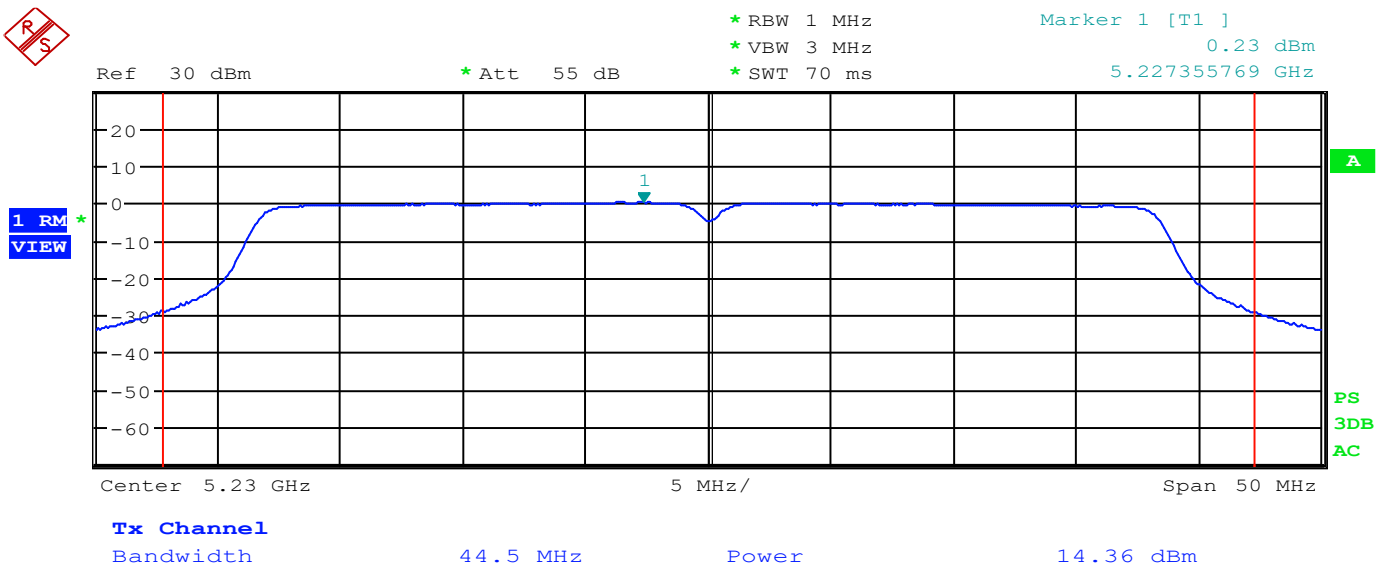




UNII 1, Port 1: HT40, Low Channel



UNII 1, Port 1: HT40, High Channel





Order Number: F2P19924D

Applicant: PCTEL, Inc
FCC ID: NYPRMWIFIAC2X2

UNII 1, Port 1: HT80



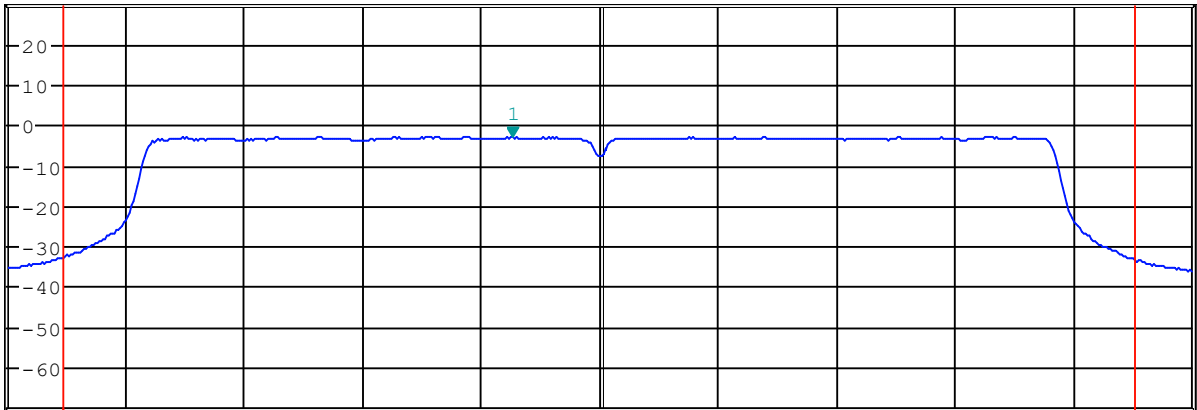
* RBW 1 MHz
* VBW 3 MHz
* SWT 70 ms

Marker 1 [T1]
-2.96 dBm
5.202628205 GHz

Ref 30 dBm

* Att 55 dB

1 RM
VIEW



Center 5.21 GHz

10 MHz/

Span 100 MHz

Tx Channel

Bandwidth

90.5 MHz

Power

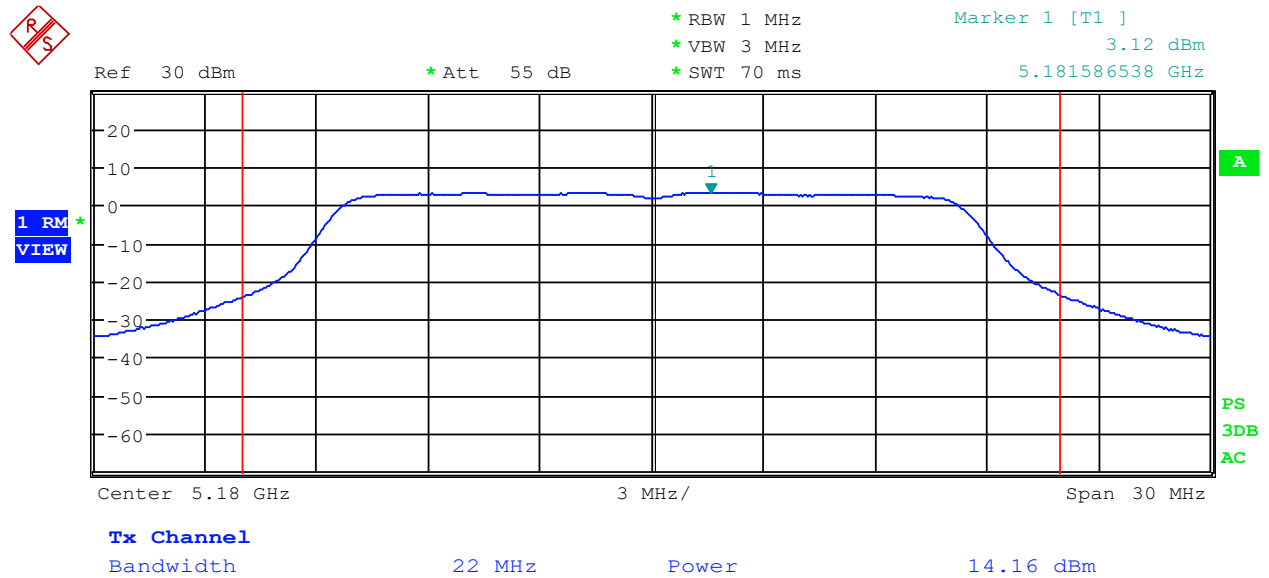
14.65 dBm



RF OUTPUT POWER UNII 1 Port 2 (Beamforming and Non-Beamforming Mode)											
Modulation: OFDM											
Channel	Frequency (MHz) / Power Setting	Measured Power		Limit		Limit for Client Devices		E.I.R.P.		Limit	
		mW	dBm	mW	dBm	mW	dBm	mW	dBm	E.I.R.P (mW)	E.I.R.P (dBm)
Low	5180 (15)	26.06	14.16	794.0	29	199.53	23	130.6	21.16	4000	36
Mid	5220 (15)	27.35	14.37	794.0	29	199.53	23	137.1	21.37	4000	36
High	5240 (15)	27.16	14.34	794.0	29	199.53	23	136.1	21.34	4000	36
Modulation: HT20											
Channel	Frequency (MHz) / Power Setting	Measured Power		Limit		Limit		E.I.R.P.		Limit	
		mW	dBm	mW	dBm	mW	dBm	mW	dBm	E.I.R.P (mW)	E.I.R.P (dBm)
Low	5180 (15)	26.73	14.27	794.0	29	199.53	23	134.0	21.27	4000	36
Mid	5220 (15.5)	28.31	14.52	794.0	29	199.53	23	141.9	21.52	4000	36
High	5240 (15.5)	27.93	14.46	794.0	29	199.53	23	140.0	21.46	4000	36
Modulation: non HT40											
Channel	Frequency (MHz) / Power Setting	Measured Power		Limit		Limit		E.I.R.P.		Limit	
		mW	dBm	mW	dBm	mW	dBm	mW	dBm	E.I.R.P (mW)	E.I.R.P (dBm)
Low	5190 (15)	24.89	13.96	794.0	29	199.53	23	124.7	20.96	4000	36
High	5230 (15)	25.76	14.11	794.0	29	199.53	23	129.1	21.11	4000	36
Modulation: HT40											
Channel	Frequency (MHz) / Power Setting	Measured Power		Limit		Limit		E.I.R.P.		Limit	
		mW	dBm	mW	dBm	mW	dBm	mW	dBm	E.I.R.P (mW)	E.I.R.P (dBm)
Low	5190 (15)	26.12	14.17	794.0	29	199.53	23	130.9	21.17	4000	36
High	5230 (15)	27.04	14.32	794.0	29	199.53	23	135.5	21.32	4000	36
Modulation: HT80											
Channel	Frequency (MHz) / Power Setting	Measured Power		Limit		Limit		E.I.R.P.		Limit	
		mW	dBm	mW	dBm	mW	dBm	mW	dBm	E.I.R.P (mW)	E.I.R.P (dBm)
Mid	5210 (15)	28.12	14.49	794.0	29	199.53	23	140.9	21.49	4000	36



UNII 1, Port 2: OFDM, Low Channel



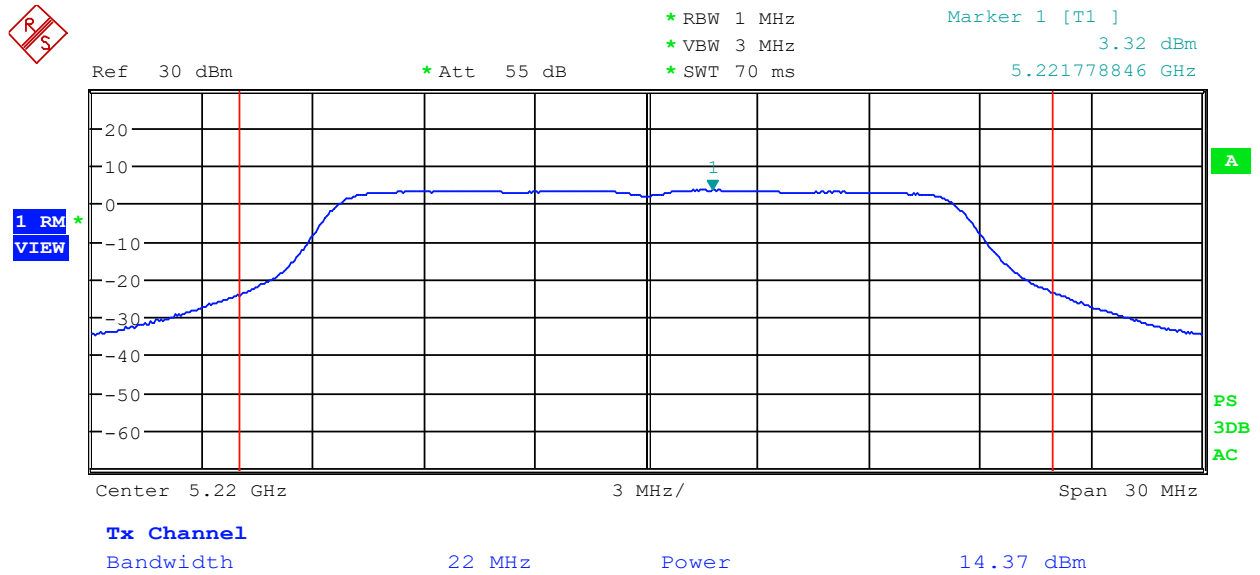
Date: 8.SEP.2021 16:41:03



Order Number: F2P19924D

Applicant: PCTEL, Inc
FCC ID: NYPRMWIFIAC2X2

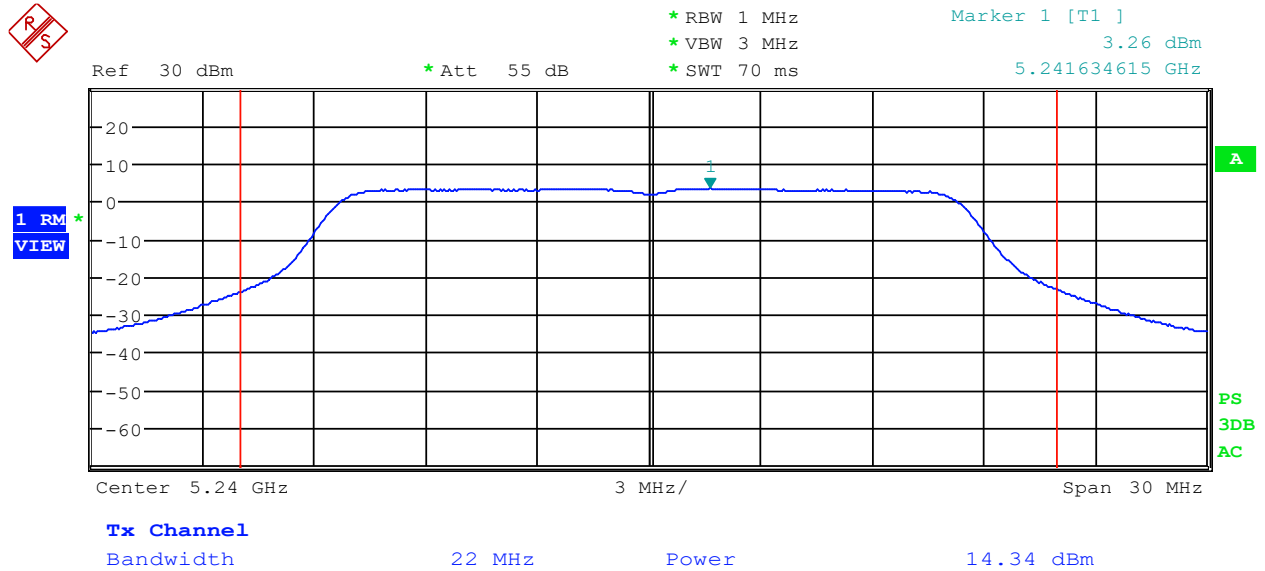
UNII 1, Port 2: OFDM, Mid Channel



Date: 8.SEP.2021 16:41:53



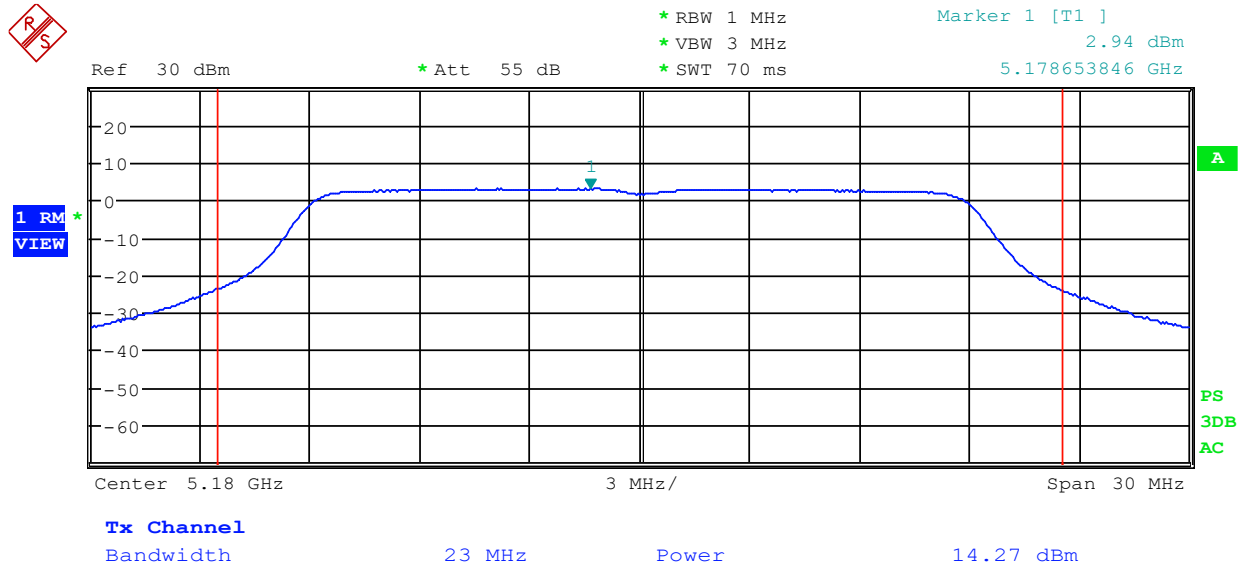
UNII 1, Port 2: OFDM, High Channel



Date: 8.SEP.2021 16:42:40



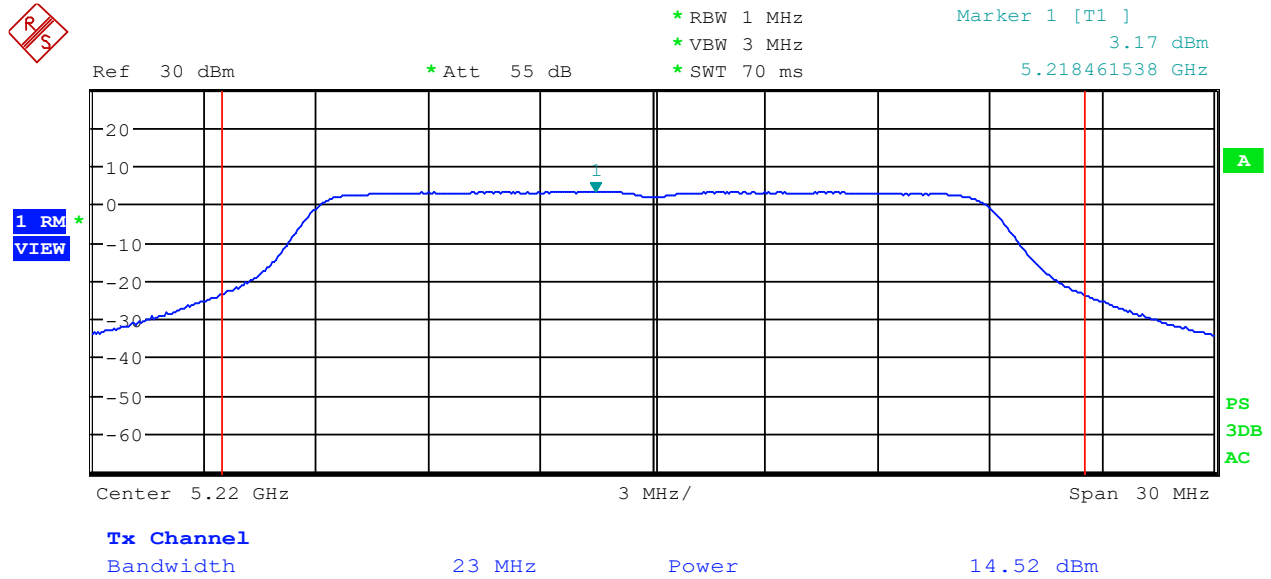
UNII 1, Port 2: HT20, Low Channel



Date: 8.SEP.2021 16:37:41



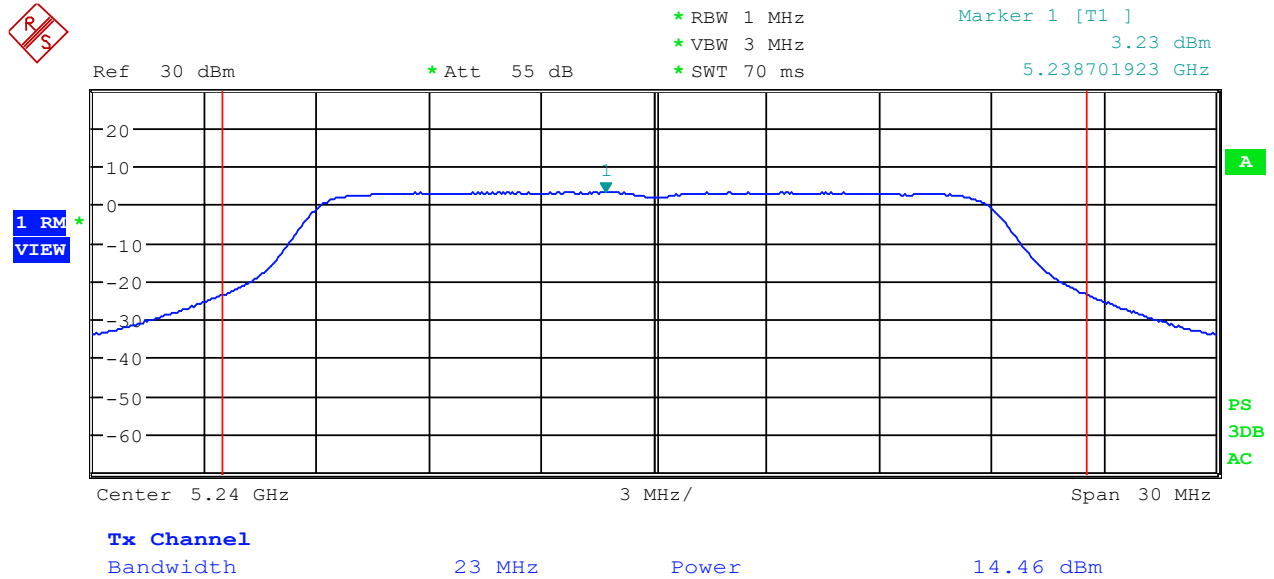
UNII 1, Port 2: HT20, Mid Channel



Date: 8.SEP.2021 16:38:35



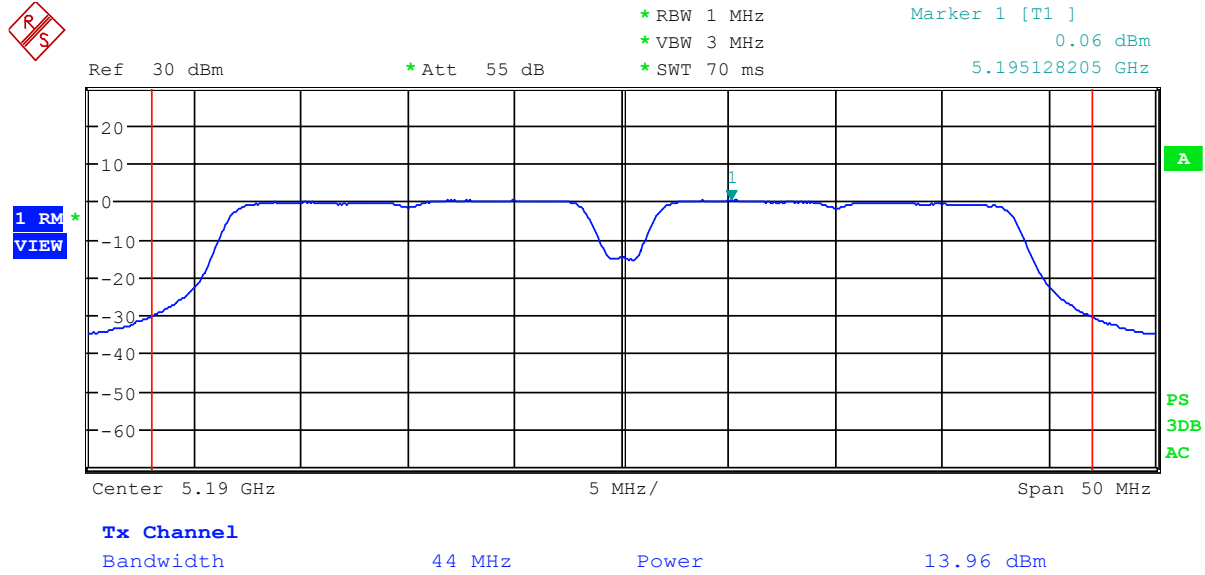
UNII 1, Port 2: HT20, High Channel



Date: 8.SEP.2021 16:39:28

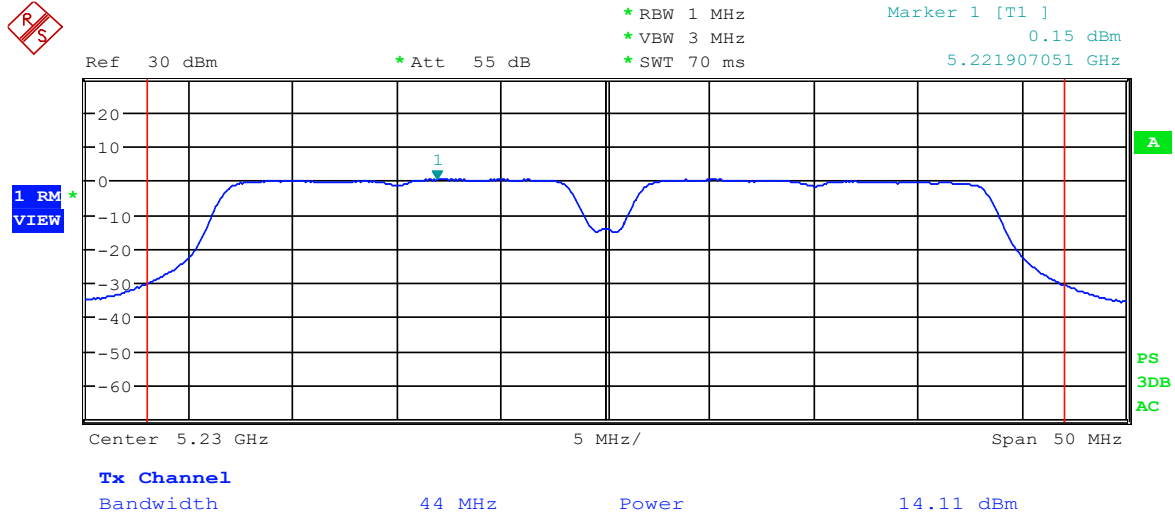


UNII 1, Port 2: non HT40, Low Channel





UNII 1, Port 2: non HT40, High Channel

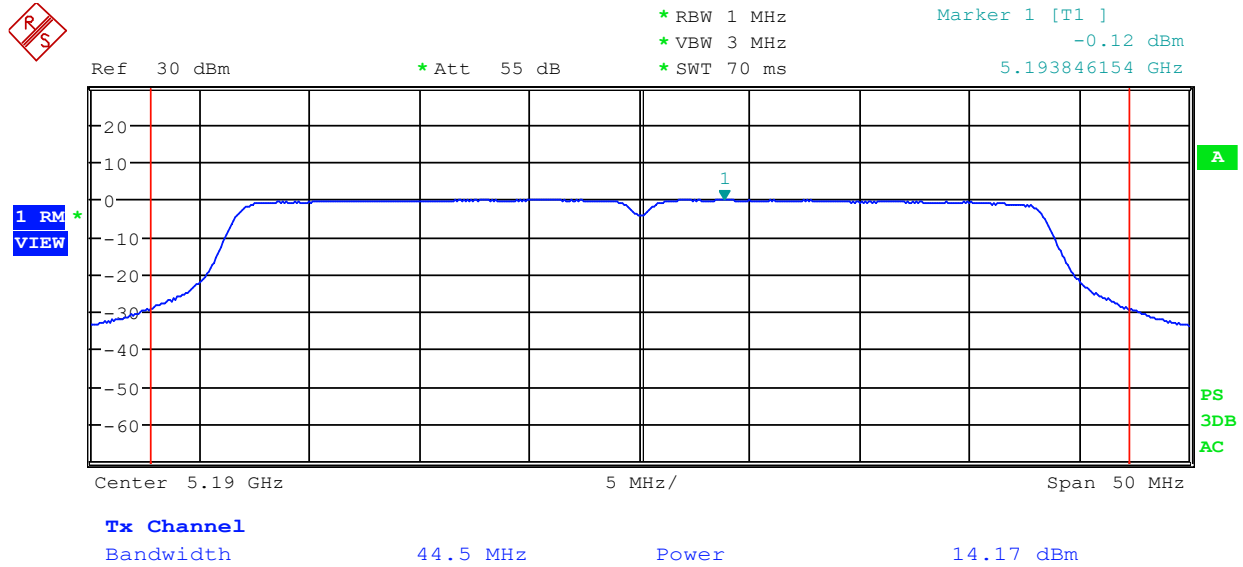




Order Number: F2P19924D

Applicant: PCTEL, Inc
FCC ID: NYPRMWIFIAC2X2

UNII 1, Port 2: HT40, Low Channel



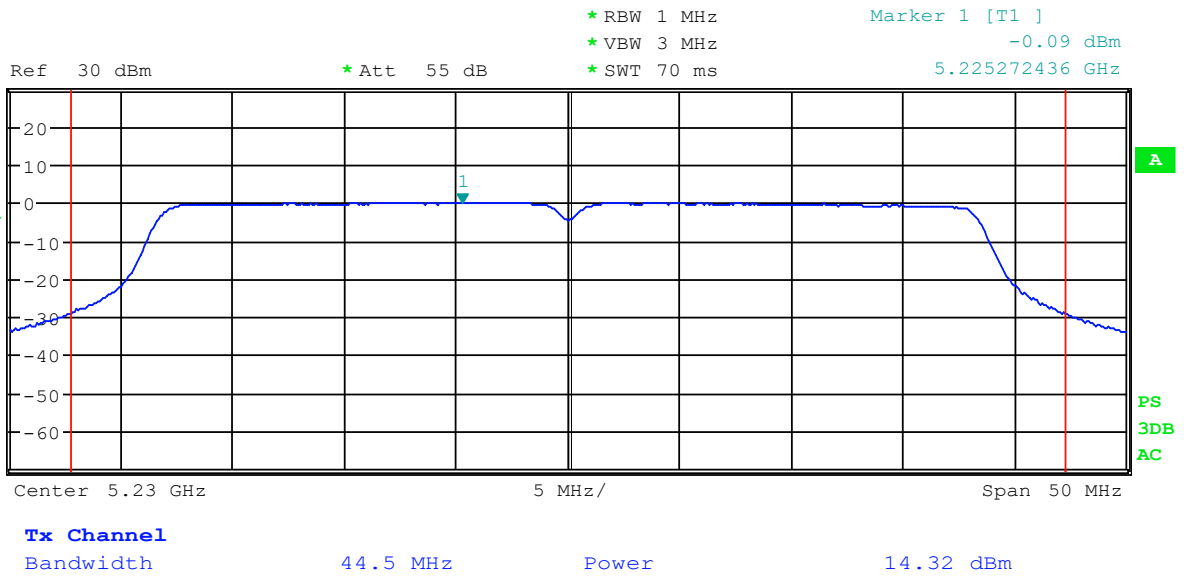
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Order Number: F2P19924D

Applicant: PCTEL, Inc
FCC ID: NYPRMWIFIAC2X2

UNII 1, Port 2: HT40, High Channel



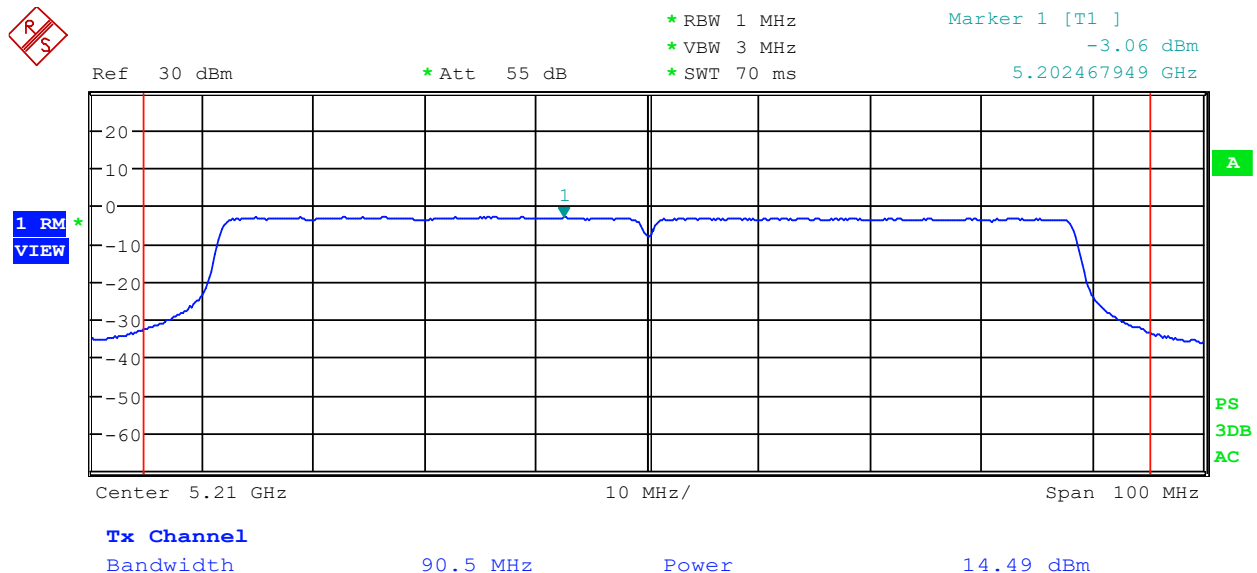
Date: 8.SEP.2021 16:32:29



Order Number: F2P19924D

Applicant: PCTEL, Inc
FCC ID: NYPRMWIFIAC2X2

UNII 1, Port 2: HT80



Date: 8.SEP.2021 16:28:59



RF OUTPUT POWER UNII 1 SUMMING PORT 1 AND PORT 2 (Beamforming)												
Modulation: OFDM												
Frequency (MHz) /	Measure and Sum (Summing port 1 and port 2)				Limit		Limit for Client Devices		E.I.R.P. (including 3dB aggregate gain)		Limit	
	Port 1 mW	Port 2 mW	Summed mW	Summed dBm	mW	dBm	mW	dBm	mW	dBm	mW	dBm
5180	30.62	26.06	56.68	17.53	398.1	26	199.53	23	566.24	27.53	4000	36
5220	27.73	27.35	55.08	17.41	398.1	26	199.53	23	550.80	27.41	4000	36
5240	26.79	27.16	53.95	17.32	398.1	26	199.53	23	539.51	27.32	4000	36
Modulation: HT20												
Frequency (MHz) /	Measure and Sum (Summing port 1 and port 2)				Limit		Limit for Client Devices		E.I.R.P. (including 3dB aggregate gain)		Limit	
	Port 1 mW	Port 2 mW	Summed mW	Summed dBm	mW	dBm	mW	dBm	mW	dBm	mW	dBm
5180	31.05	26.73	57.78	17.61	398.1	26	199.53	23	576.77	27.61	4000	36
5220	28.44	28.31	56.75	17.54	398.1	26	199.53	23	567.50	27.54	4000	36
5240	26.36	27.93	54.29	17.34	398.1	26	199.53	23	542.00	27.34	4000	36
Modulation: non HT40												
Frequency (MHz) /	Measure and Sum (Summing port 1 and port 2)				Limit		Limit for Client Devices		E.I.R.P. (including 3dB aggregate gain)		Limit	
	Port 1 mW	Port 2 mW	Summed mW	Summed dBm	mW	dBm	mW	dBm	mW	dBm	mW	dBm
5190	28.97	24.89	53.86	17.31	398.1	26	199.53	23	538.27	27.31	4000	36
5230	25.94	25.76	51.70	17.13	398.1	26	199.53	23	516.40	27.13	4000	36
Modulation: HT40												
Frequency (MHz) /	Measure and Sum (Summing port 1 and port 2)				Limit		Limit for Client Devices		E.I.R.P. (including 3dB aggregate gain)		Limit	
	Port 1 mW	Port 2 mW	Summed mW	Summed dBm	mW	dBm	mW	dBm	mW	dBm	mW	dBm
5190	30.27	26.12	56.39	17.51	398.1	26	199.53	23	563.64	27.51	4000	36
5230	27.29	27.04	54.33	17.35	398.1	26	199.53	23	543.25	27.35	4000	36
Modulation: HT80												
Frequency (MHz) /	Measure and Sum (Summing port 1 and port 2)				Limit		Limit for Client Devices		E.I.R.P. (including 3dB aggregate gain)		Limit	
	Port 1 mW	Port 2 mW	Summed mW	Summed dBm	mW	dBm	mW	dBm	mW	dBm	mW	dBm
5210	29.17	28.12	57.29	17.58	398.1	26	199.53	23	572.80	27.58	4000	36

**RF OUTPUT POWER UNII 2A Port 1 (Non-Beamforming Mode)****Modulation: OFDM**

Channel	Frequency (MHz) / Power Setting	Measured Power		Limit		E.I.R.P.		Limit	
		mW	dBm	mW	dBm	mW	dBm	E.I.R.P (mW)	E.I.R.P (dBm)
Low	5260 (22)	107.60	20.32	200	23	539.5	27.32	1000	30
Mid	5300 (22)	105.68	20.24	200	23	529.66	27.24	1000	30
High	5320 (22)	108.39	20.35	200	23	543.25	27.35	1000	30

Modulation: HT20

Channel	Frequency (MHz) / Power Setting	Measured Power		Limit		E.I.R.P.		Limit	
		mW	dBm	mW	dBm	mW	dBm	E.I.R.P (mW)	E.I.R.P (dBm)
Low	5260 (22)	112.2	20.50	200	23	562.3	27.5	1000	30
Mid	5300 (22)	107.15	20.30	200	23	537.03	27.30	1000	30
High	5320 (22)	108.14	20.34	200	23	542.00	27.34	1000	30

Modulation: NON HT40

Channel	Frequency (MHz) / Power Setting	Measured Power		Limit		E.I.R.P.		Limit	
		mW	dBm	mW	dBm	mW	dBm	E.I.R.P (mW)	E.I.R.P (dBm)
Low	5270 (23)	153.11	21.85	200	23	767.36	28.85	1000	30
High	5310 (23)	152.76	21.84	200	23	765.59	28.84	1000	30

Modulation: HT40

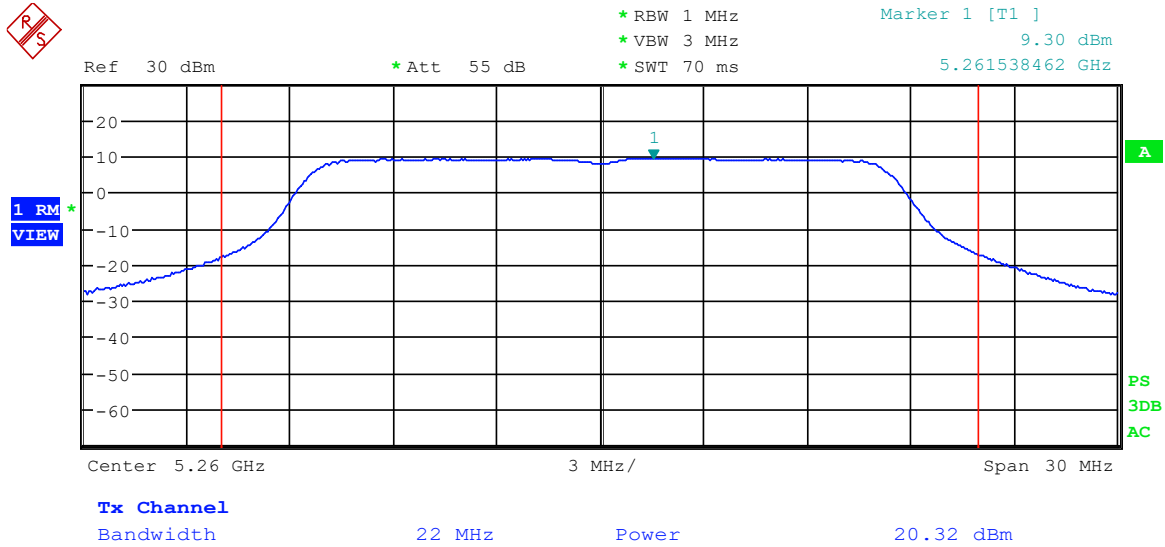
Channel	Frequency (MHz) / Power Setting	Measured Power		Limit		E.I.R.P.		Limit	
		mW	dBm	mW	dBm	mW	dBm	E.I.R.P (mW)	E.I.R.P (dBm)
Low	5270 (24)	171.0	22.33	200	23	857.03	29.33	1000	30
High	5310 (24)	167.11	22.23	200	23	837.52	29.23	1000	30

Modulation: HT80

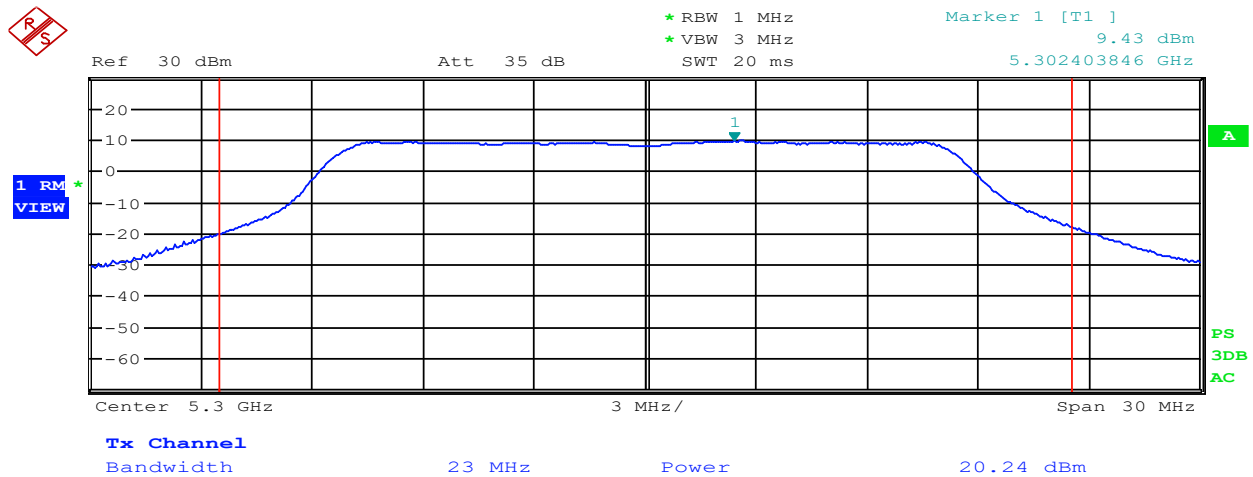
Channel	Frequency (MHz) / Power Setting	Measured Power		Limit		E.I.R.P.		Limit	
		mW	dBm	mW	dBm	mW	dBm	E.I.R.P (mW)	E.I.R.P (dBm)
Mid	5290 (24)	177.01	22.48	200	23	887.15	29.48	1000	30



UNII 2A, Port 1: OFDM, Low Channel (Non-Beamforming)

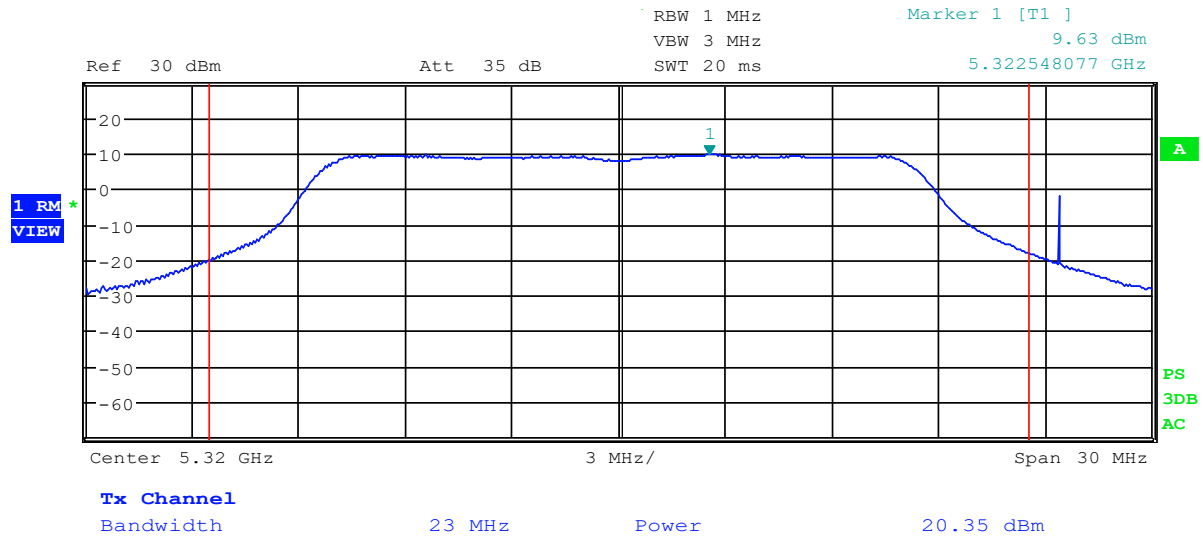


UNII 2A, Port 1: OFDM, Mid Channel (Non-Beamforming)

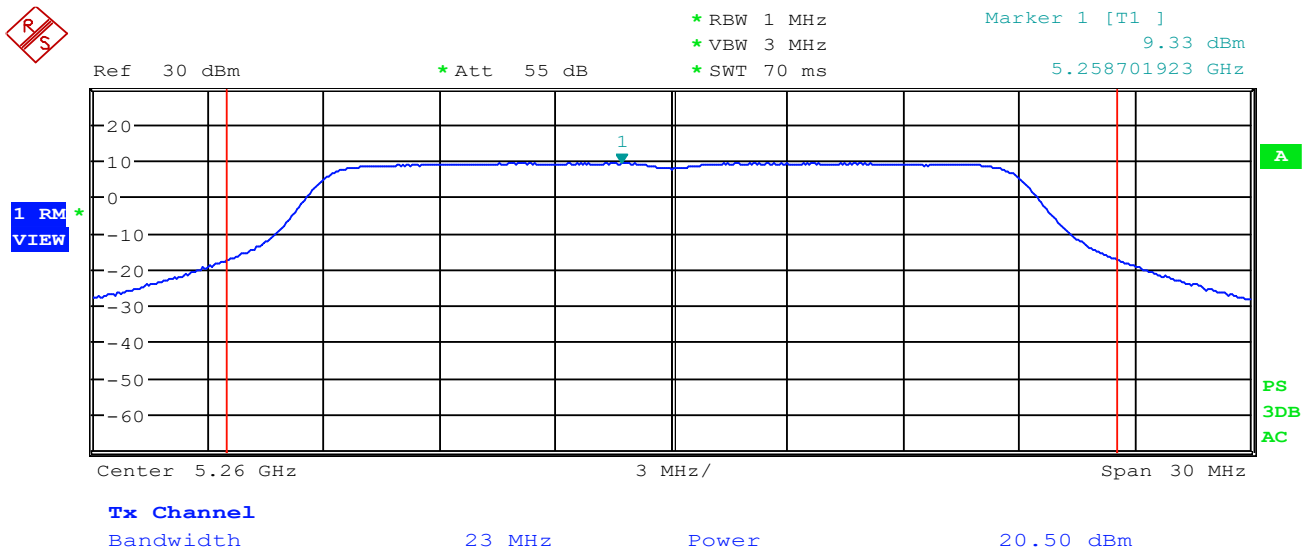




UNII 2A, Port 1: OFDM, High Channel (Non-Beamforming)

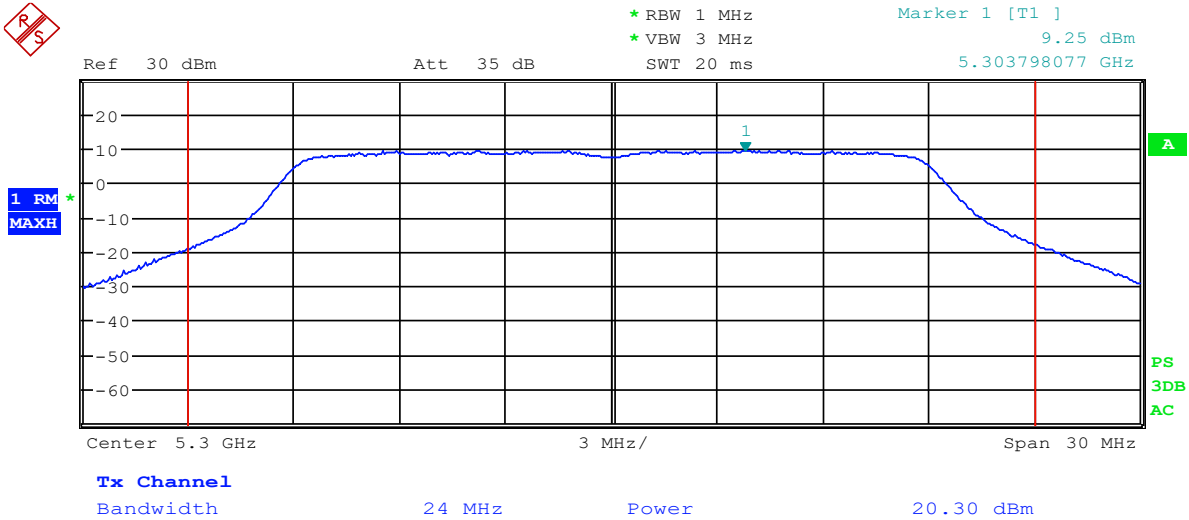


UNII 2A, Port 1: HT20, Low Channel (Non-Beamforming)

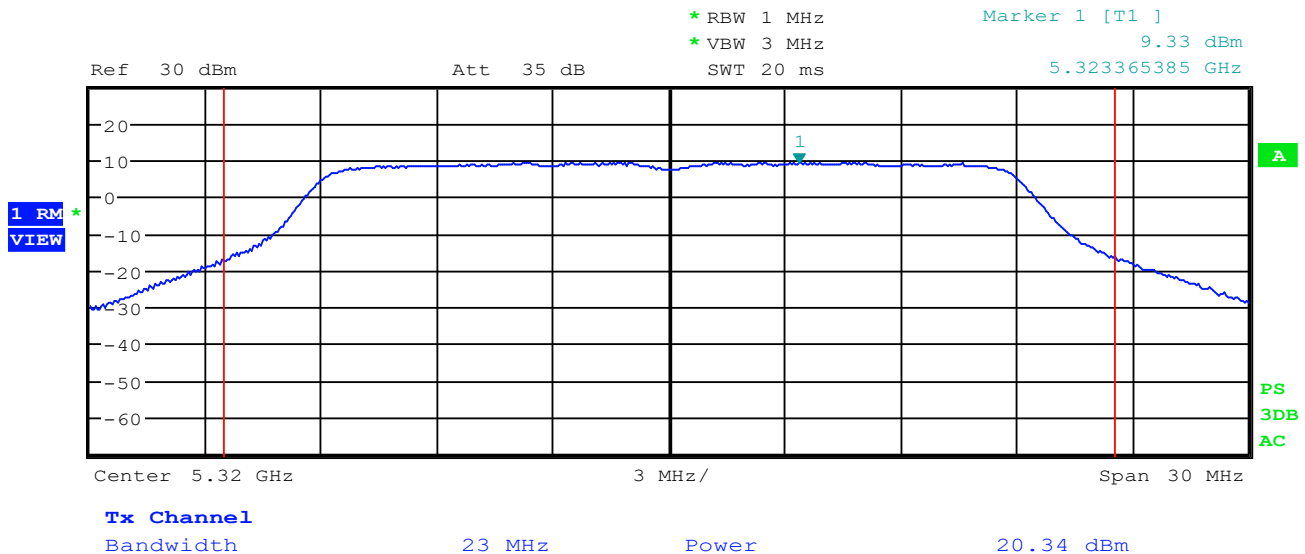




UNII 2A, Port 1: HT20, Mid Channel (Non-Beamforming)

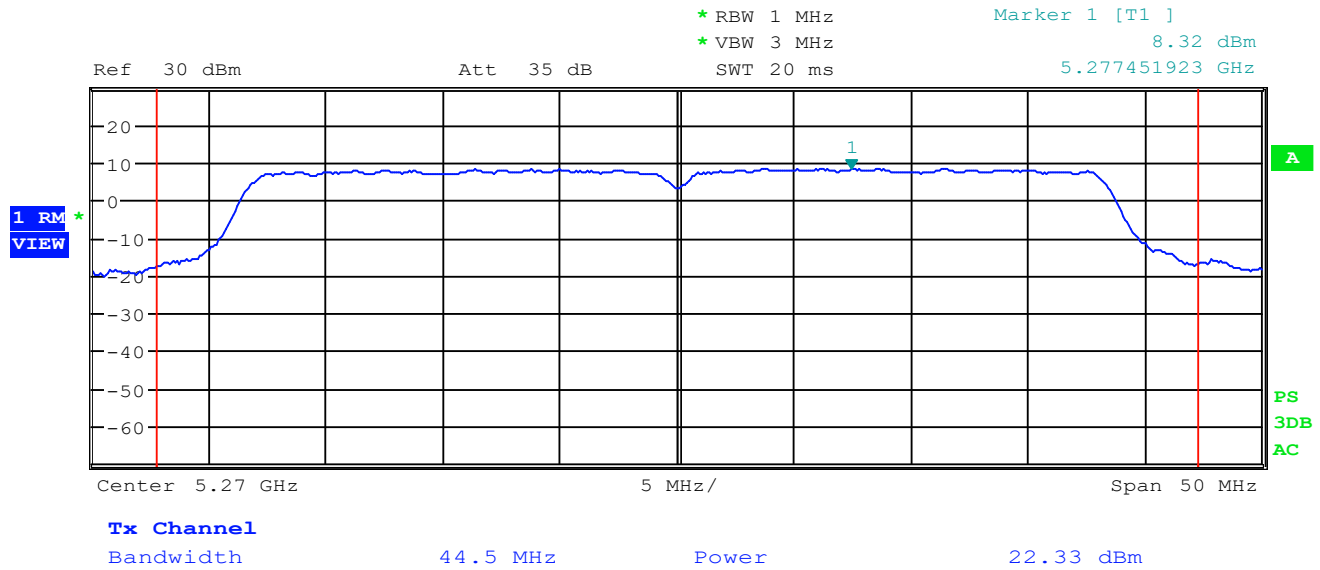


UNII 2A, Port 1: HT20, High Channel (Non-beamforming)

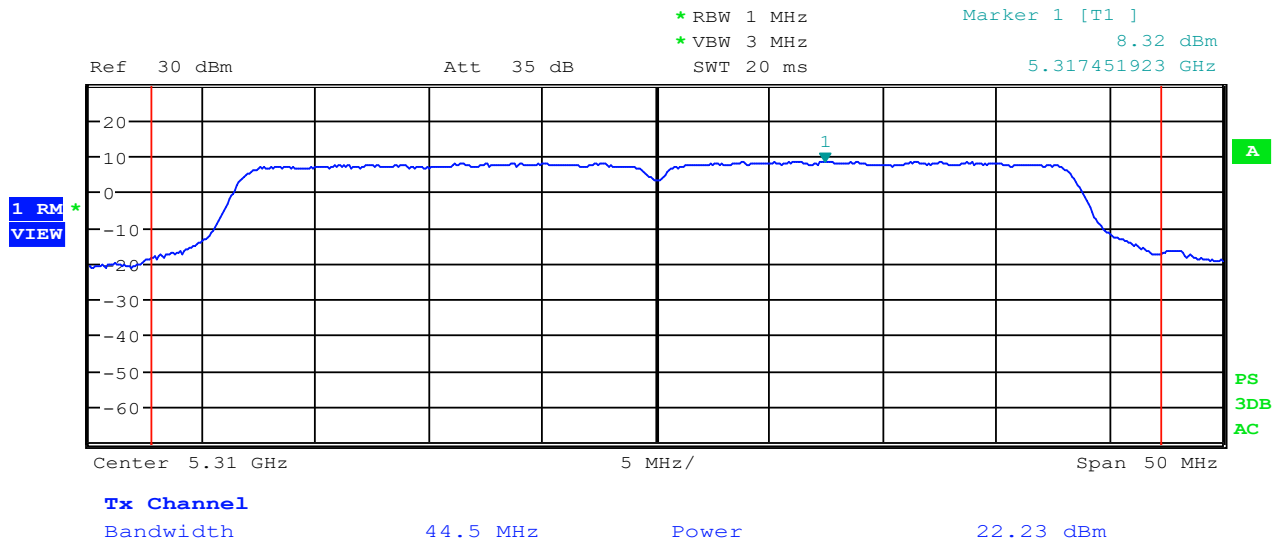




UNII 2A, Port 1: HT40, Low Channel (Non-Beamforming)

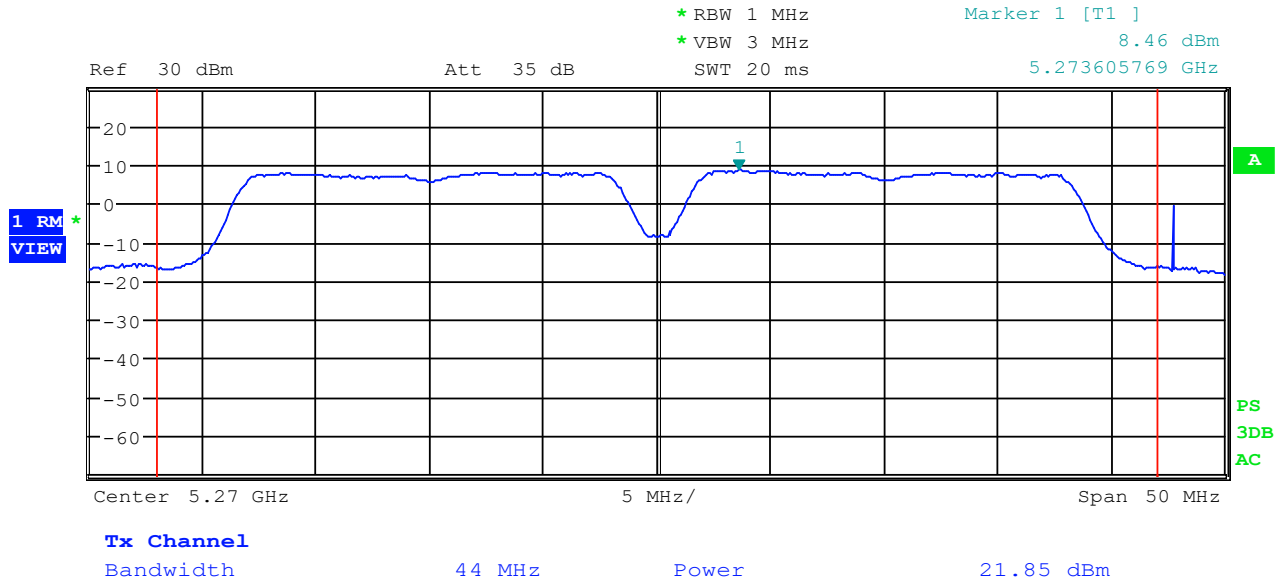


UNII 2A, Port 1: HT40, High Channel (Non-beamforming)

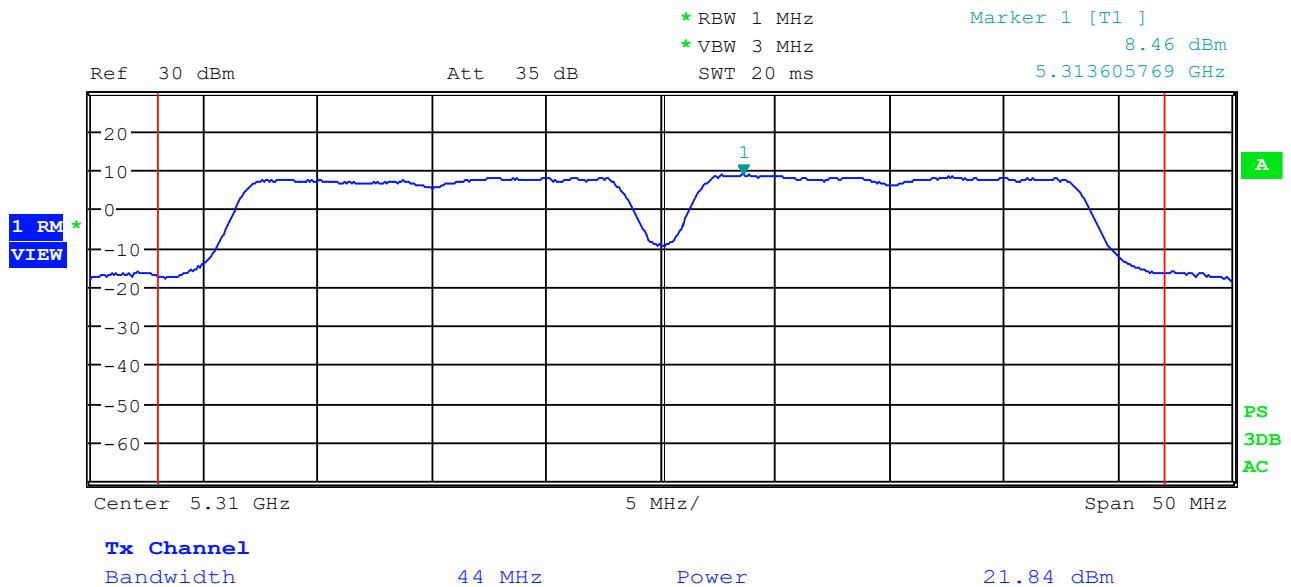




UNII 2A, Port 1: non HT40, Low Channel (Non-Beamforming)

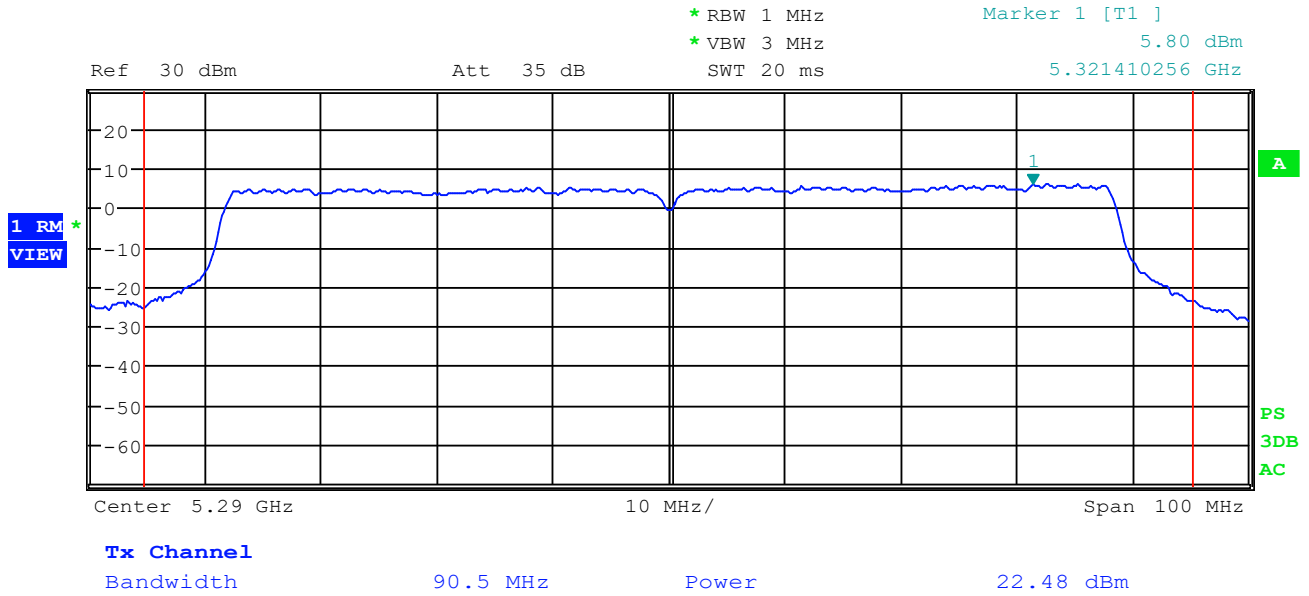


UNII 2A, Port 1: non HT40, High Channel (Non-beamforming)





UNII 2A, Port 1: HT80 (Non-beamforming)



**RF OUTPUT POWER UNII 2A Port 2 (Non-Beamforming Mode)****Modulation: OFDM**

Channel	Frequency (MHz) / Power Setting	Measured Power		Limit		E.I.R.P.		Limit	
		mW	dBm	mW	dBm	mW	dBm	E.I.R.P (mW)	E.I.R.P (dBm)
Low	5260 (22)	109.9	20.41	200	23	550.80	27.41	1000	30
Mid	5300 (22)	116.95	20.68	200	23	586.14	27.68	1000	30
High	5320 (22)	114.29	20.58	200	23	572.79	27.58	1000	30

Modulation: HT20

Channel	Frequency (MHz) / Power Setting	Measured Power		Limit		E.I.R.P.		Limit	
		mW	dBm	mW	dBm	mW	dBm	E.I.R.P (mW)	E.I.R.P (dBm)
Low	5260 (22)	100.23	20.01	200	23	502.34	27.01	1000	30
Mid	5300 (22)	117.22	20.69	200	23	587.49	27.69	1000	30
High	5320 (22)	114.55	20.59	200	23	574.11	27.59	1000	30

Modulation: NON HT40

Channel	Frequency (MHz) / Power Setting	Measured Power		Limit		E.I.R.P.		Limit	
		mW	dBm	mW	dBm	mW	dBm	E.I.R.P (mW)	E.I.R.P (dBm)
Low	5270 (23)	160.32	22.05	200	23	803.52	29.05	1000	30
High	5310 (23)	167.88	22.25	200	23	841.39	29.25	1000	30

Modulation: HT40

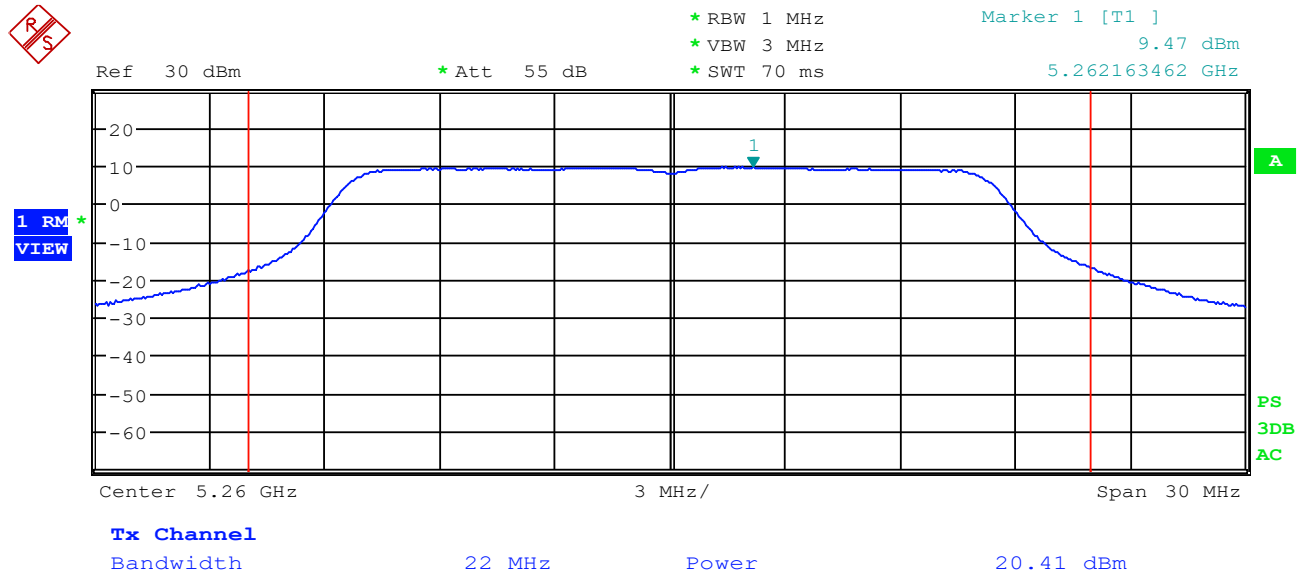
Channel	Frequency (MHz) / Power Setting	Measured Power		Limit		E.I.R.P.		Limit	
		mW	dBm	mW	dBm	mW	dBm	E.I.R.P (mW)	E.I.R.P (dBm)
Low	5270 (24)	159.59	22.03	200	23	799.83	29.03	1000	30
High	5310 (24)	184.08	22.65	200	23	922.57	29.65	1000	30

Modulation: HT80

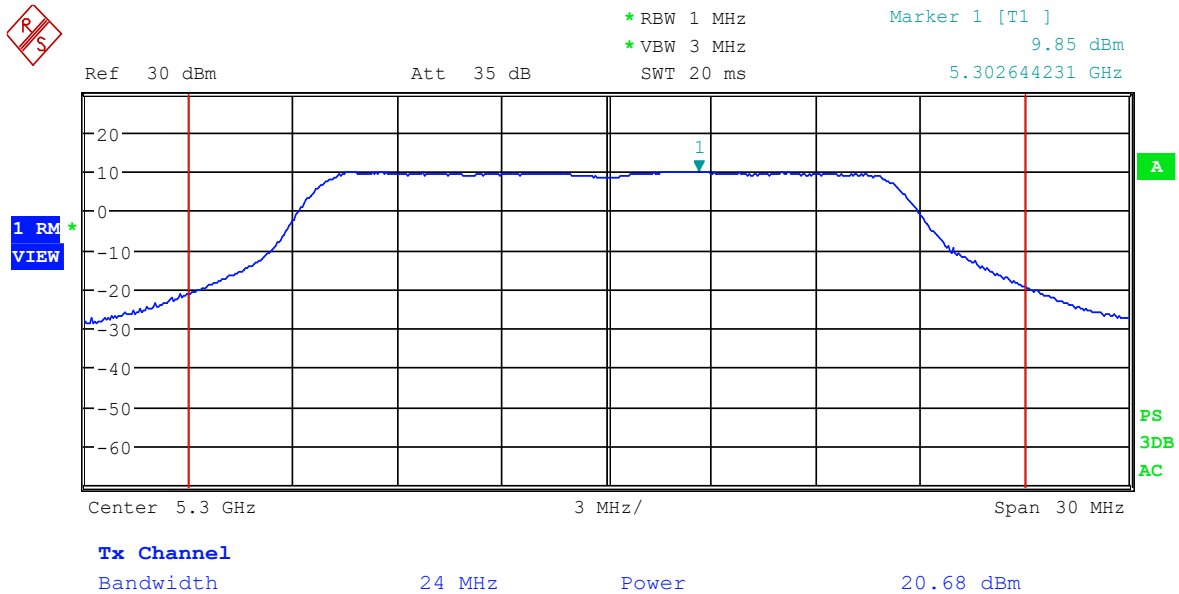
Channel	Frequency (MHz) / Power Setting	Measured Power		Limit		E.I.R.P.		Limit	
		mW	dBm	mW	dBm	mW	dBm	E.I.R.P (mW)	E.I.R.P (dBm)
Mid	5290 (24)	178.24	22.51	200	23	893.30	29.51	1000	30



UNII 2A, Port 2: OFDM, Low Channel (Non-beamforming)

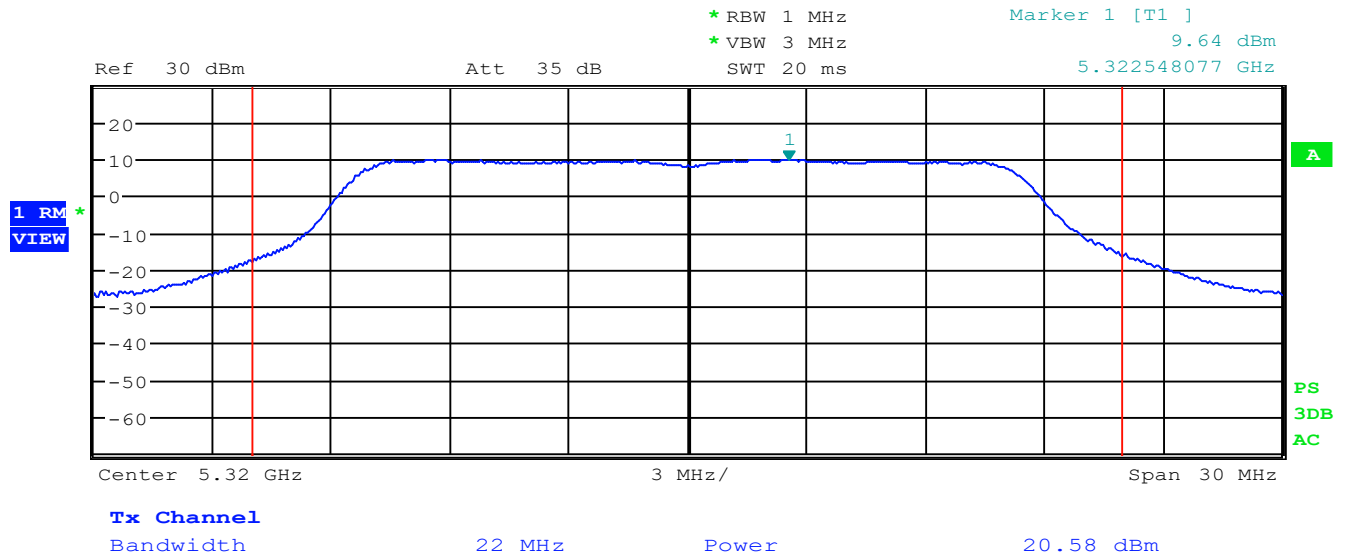


UNII 2A, Port 2: OFDM, Mid Channel (Non-beamforming)

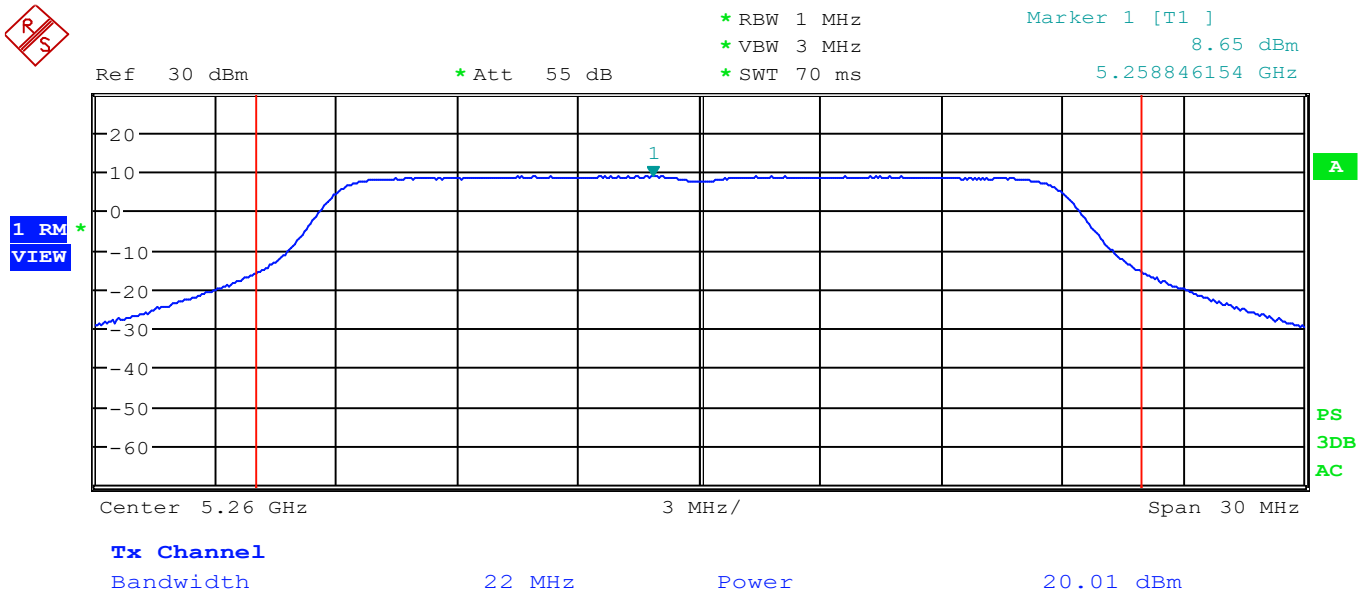




UNII 2A, Port 2: OFDM, High Channel (Non-beamforming)



UNII 2A, Port 2: HT20, Low Channel (Non-Beamforming)

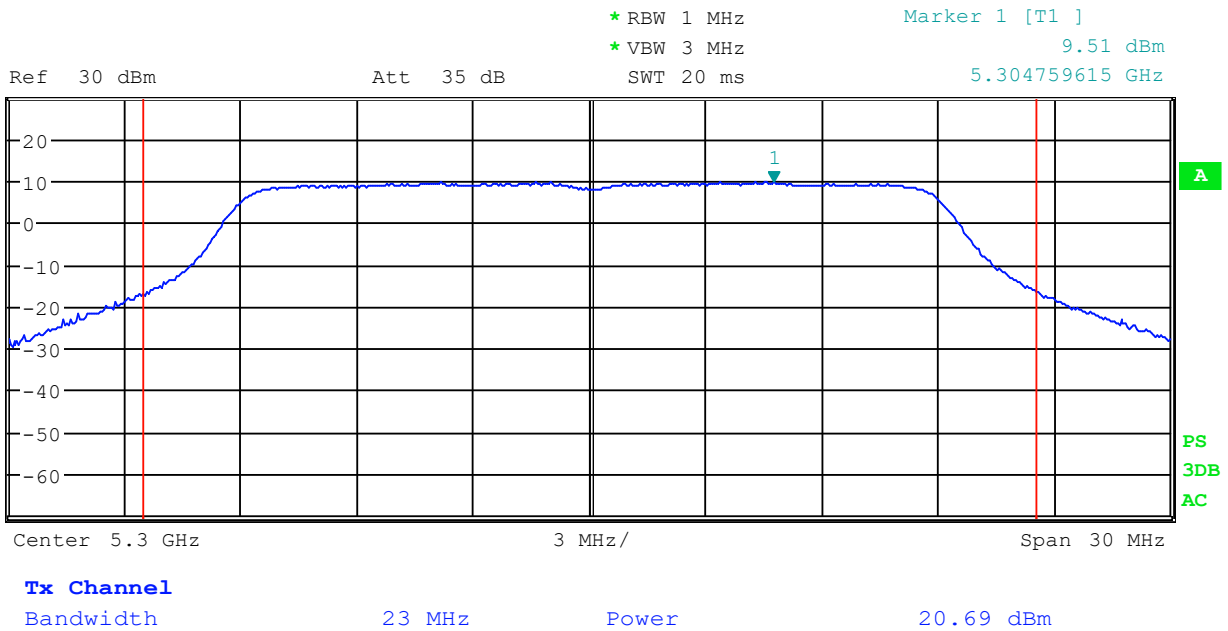




UNII 2A, Port 2: HT20, Mid Channel (Non-Beamforming)

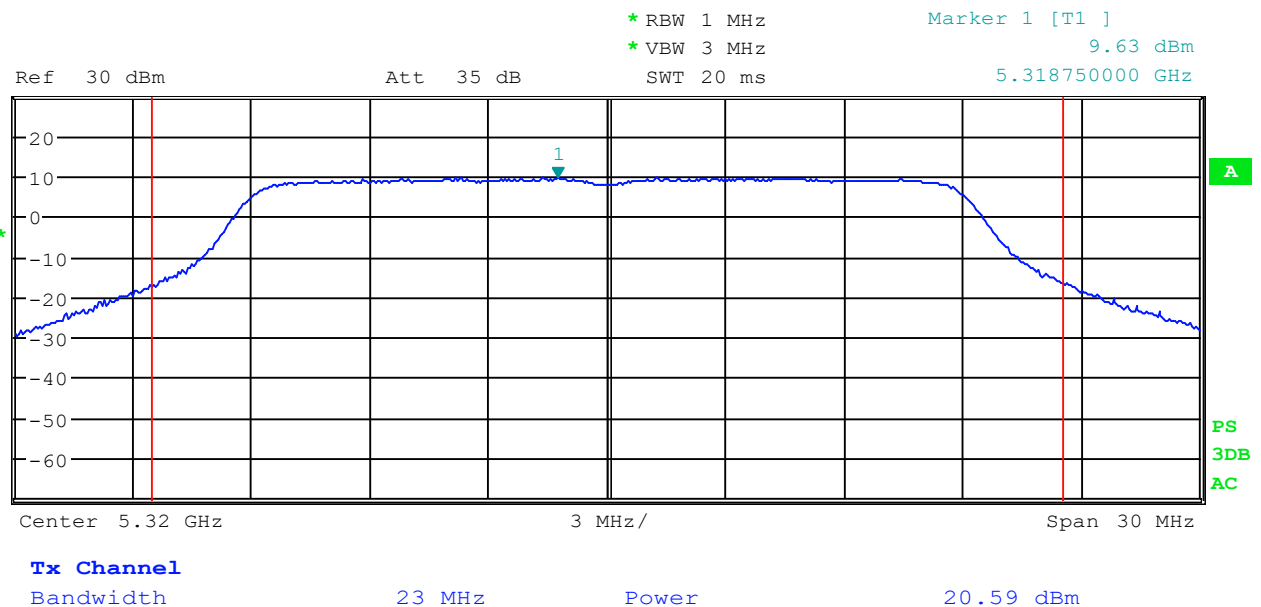


1 RM
VIEW



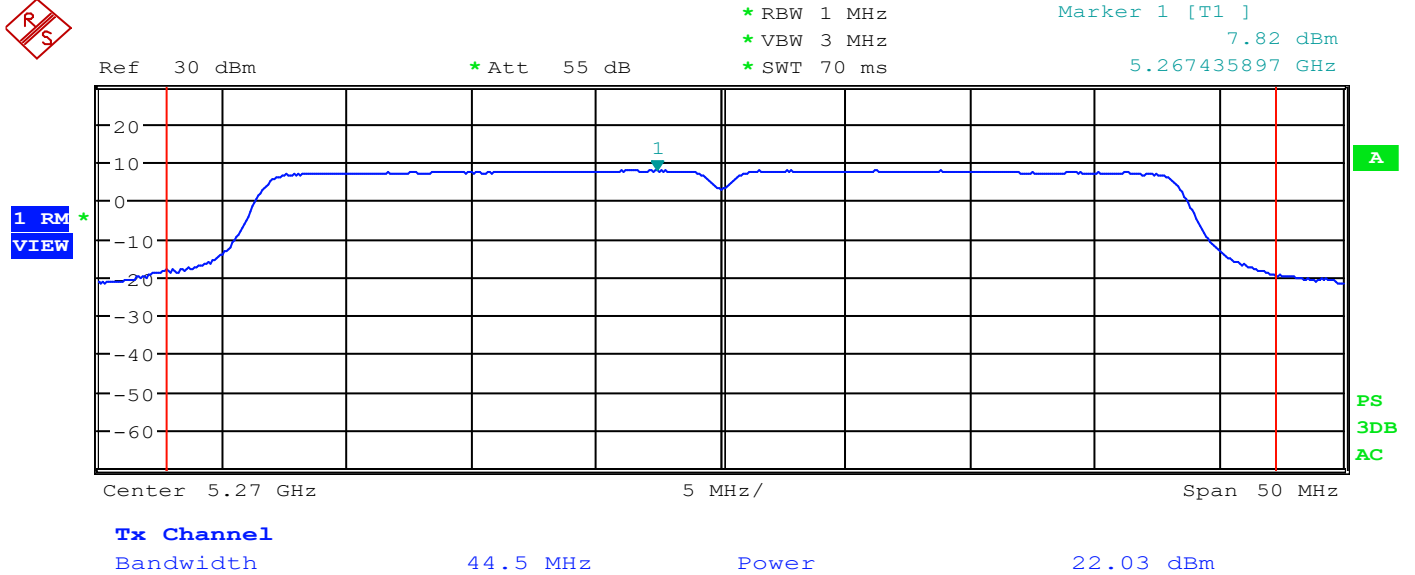
UNII 2A, Port 2: HT20, High Channel (Non-beamforming)

1 RM
VIEW

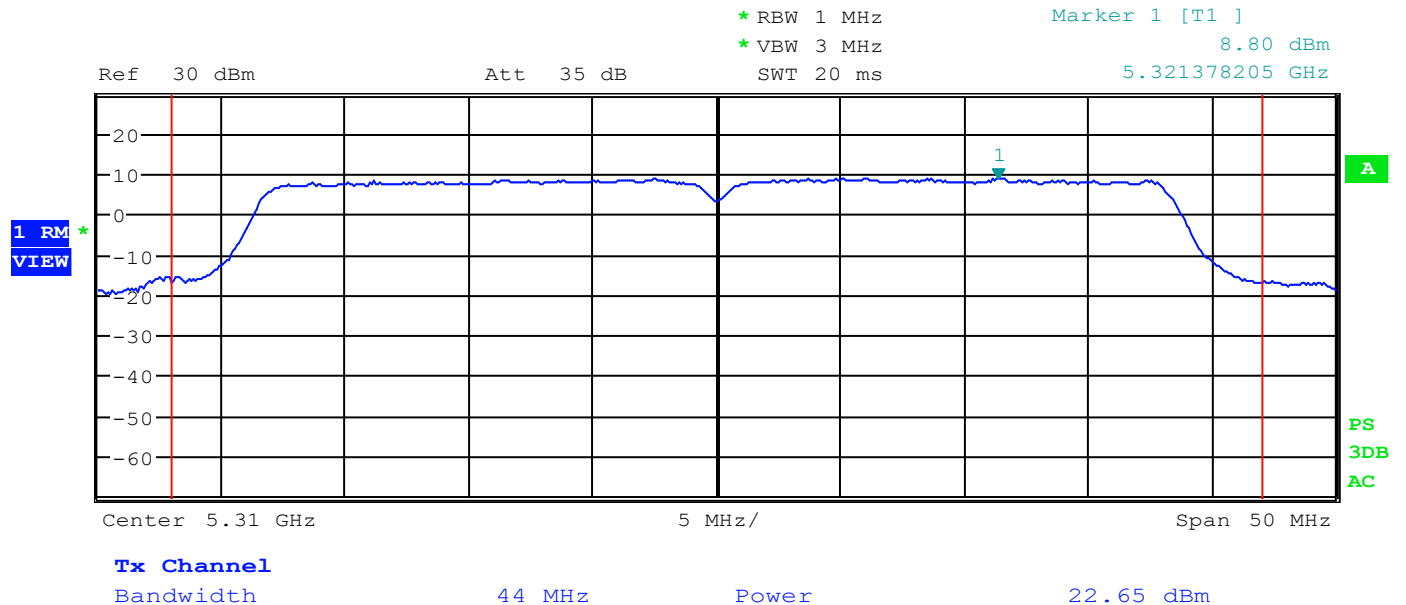




UNII 2A, Port 2: HT40, Low Channel (Non-Beamforming)

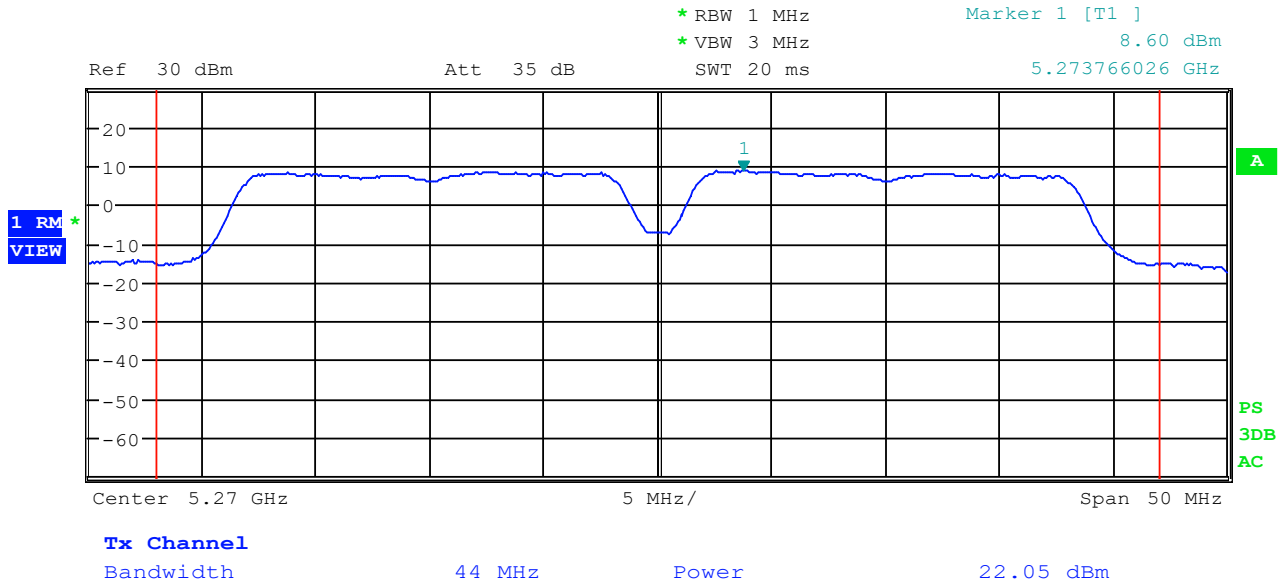


UNII 2A, Port 2: HT40, High Channel (Non-beamforming)

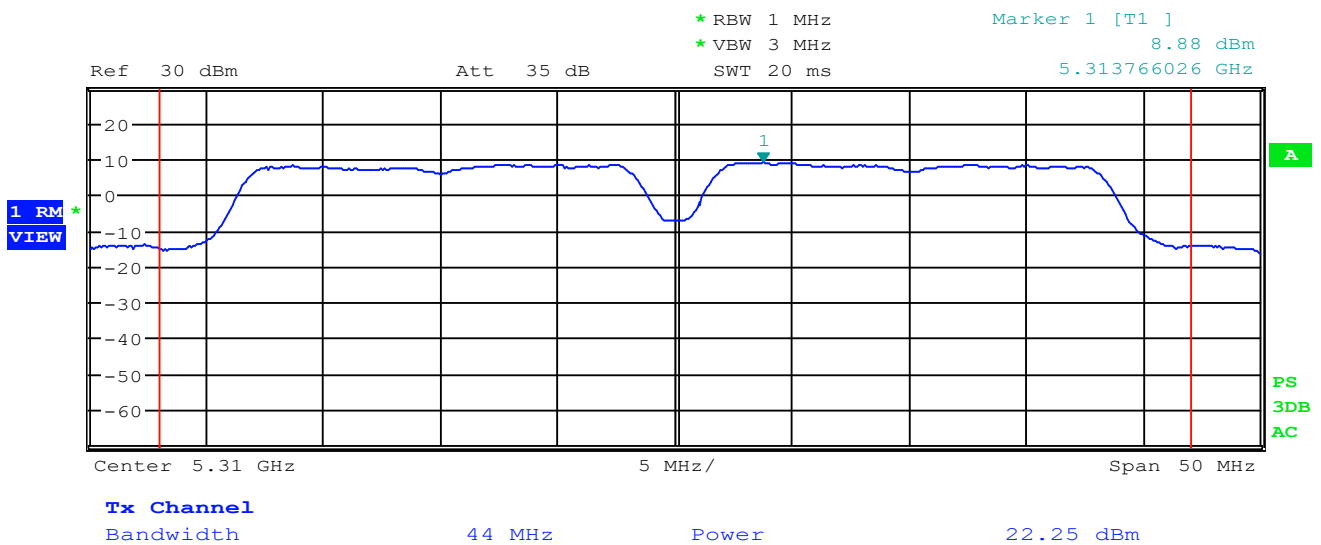




UNII 2A, Port 2: non HT40, Low Channel (Non-Beamforming)

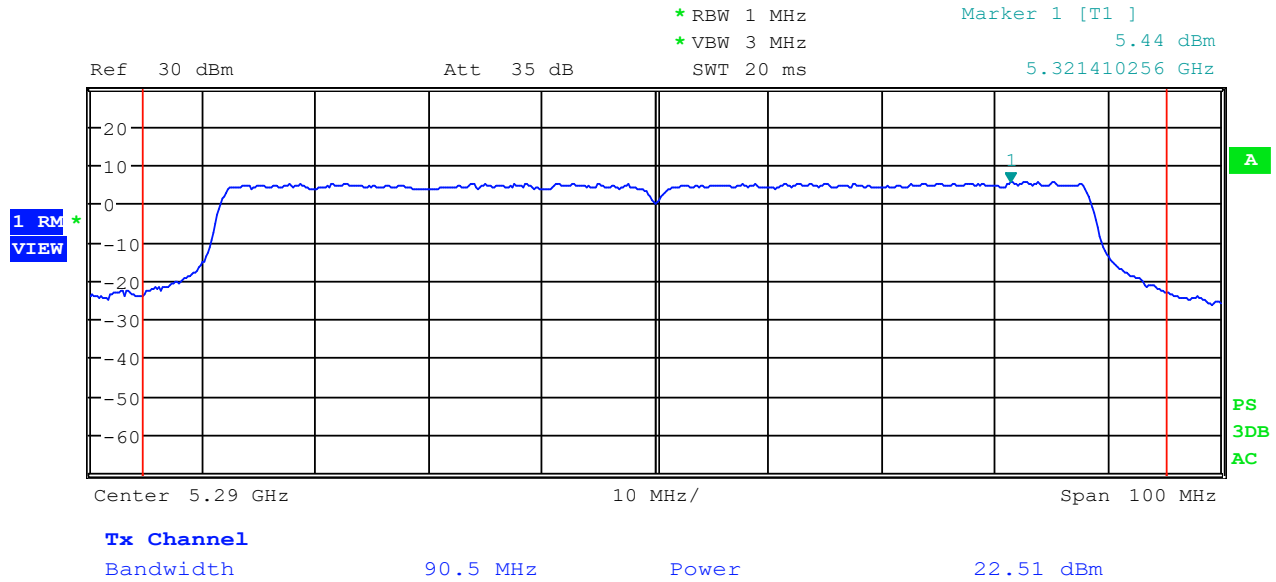


UNII 2A, Port 2: non HT40, High Channel (Non-beamforming)





UNII 2A, Port 2: HT80 (Non-beamforming)



**RF OUTPUT POWER UNII 2A Port 1 (Lower Power for Beamforming Mode)****Modulation: OFDM**

Channel	Frequency (MHz) / Power Setting	Measured Power		Limit		E.I.R.P.		Limit	
		mW	dBm	mW	dBm	mW	dBm	E.I.R.P (mW)	E.I.R.P (dBm)
Low	5260 (16)	29.37	14.68	200	23	147.23	21.68	1000	30
Mid	5300 (16)	27.61	14.41	200	23	138.36	21.41	1000	30
High	5320 (16)	28.31	14.52	200	23	141.91	21.52	1000	30

Modulation: HT20

Channel	Frequency (MHz) / Power Setting	Measured Power		Limit		E.I.R.P.		Limit	
		mW	dBm	mW	dBm	mW	dBm	E.I.R.P (mW)	E.I.R.P (dBm)
Low	5260 (16)	30.27	14.81	200	23	151.70	21.81	1000	30
Mid	5300 (16)	27.48	14.39	200	23	137.72	21.39	1000	30
High	5320 (16)	29.65	14.72	200	23	148.59	21.72	1000	30

Modulation: NON HT40

Channel	Frequency (MHz) / Power Setting	Measured Power		Limit		E.I.R.P.		Limit	
		mW	dBm	mW	dBm	mW	dBm	E.I.R.P (mW)	E.I.R.P (dBm)
Low	5270 (17)	40.83	16.11	200	23	204.64	23.11	1000	30
High	5310 (16.5)	35.70	15.53	200	23	177.8	22.50	1000	30

Modulation: HT40

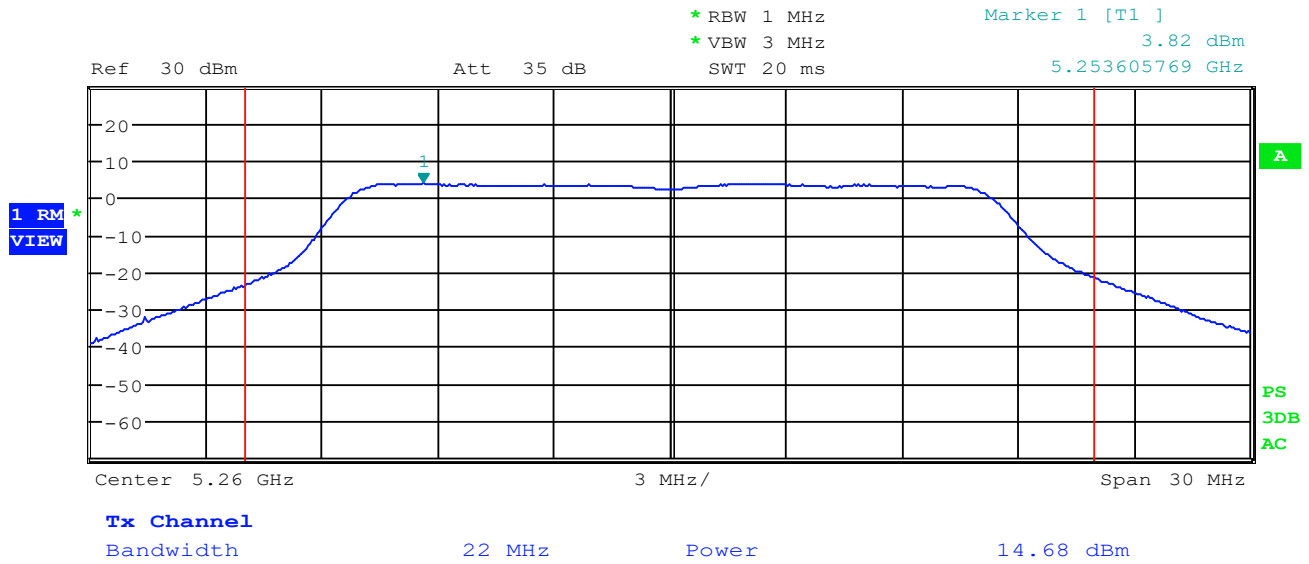
Channel	Frequency (MHz) / Power Setting	Measured Power		Limit		E.I.R.P.		Limit	
		mW	dBm	mW	dBm	mW	dBm	E.I.R.P (mW)	E.I.R.P (dBm)
Low	5270 (17)	41.30	16.16	200	23	207.01	23.16	1000	30
High	5310 (16.5)	37.32	15.72	200	23	186.2	22.70	1000	30

Modulation: HT80

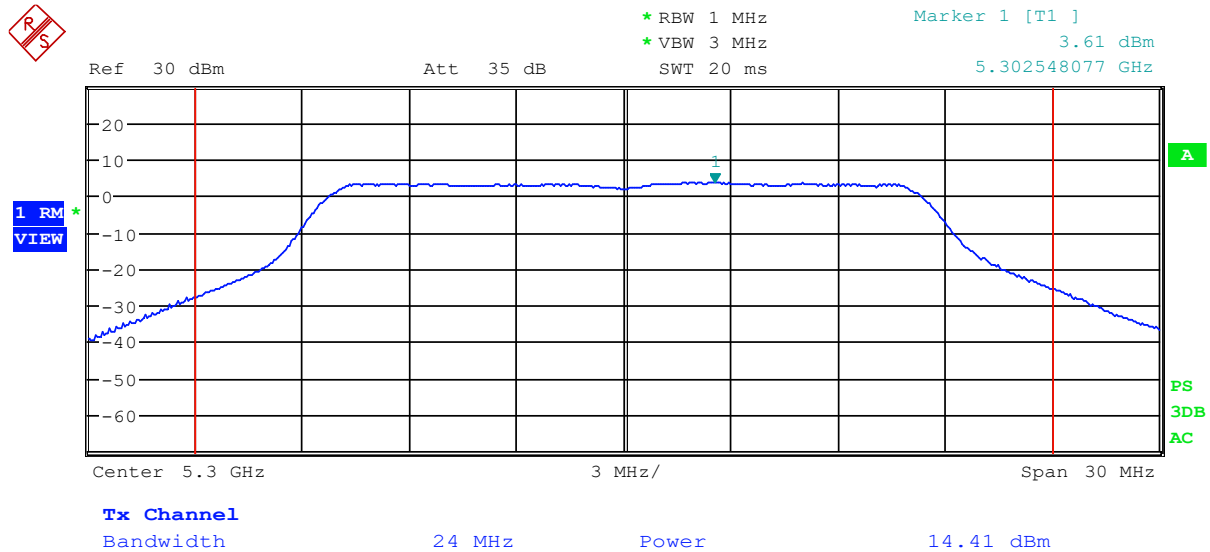
Channel	Frequency (MHz) / Power Setting	Measured Power		Limit		E.I.R.P.		Limit	
		mW	dBm	mW	dBm	mW	dBm	E.I.R.P (mW)	E.I.R.P (dBm)
Mid	5290 (17)	39.17	15.93	200	23	195.0	22.90	1000	30



UNII 2A, Port 1: OFDM, Low Channel (Beamforming)

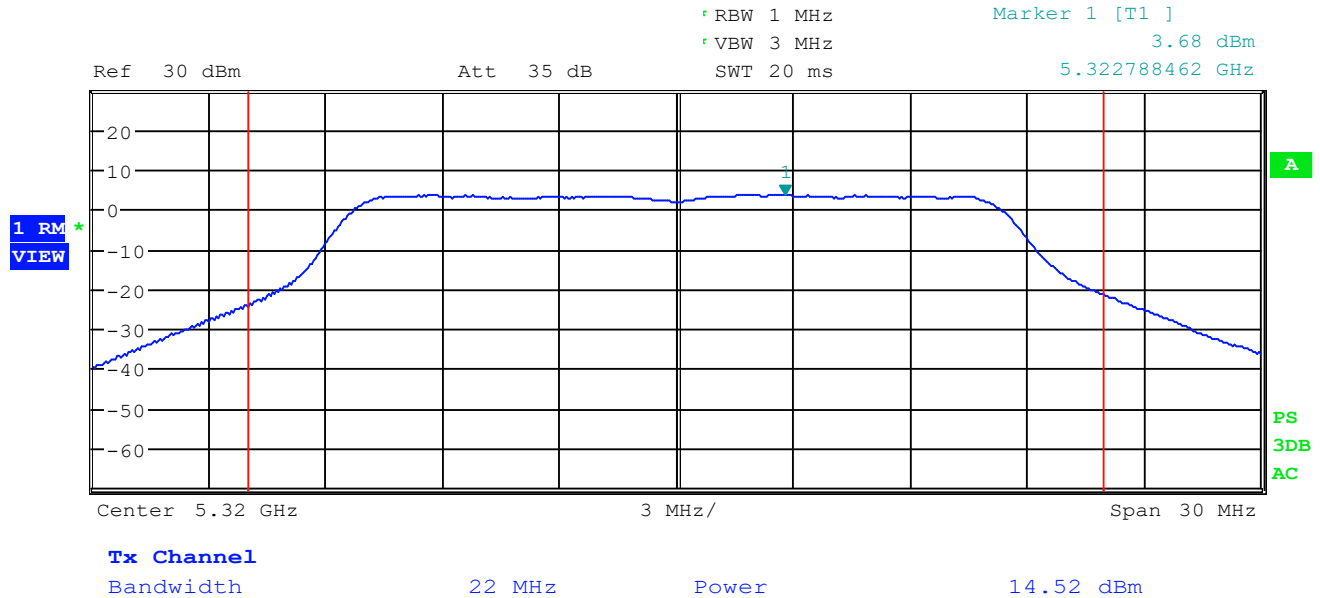


UNII 2A, Port 1: OFDM, Mid Channel (Beamforming)

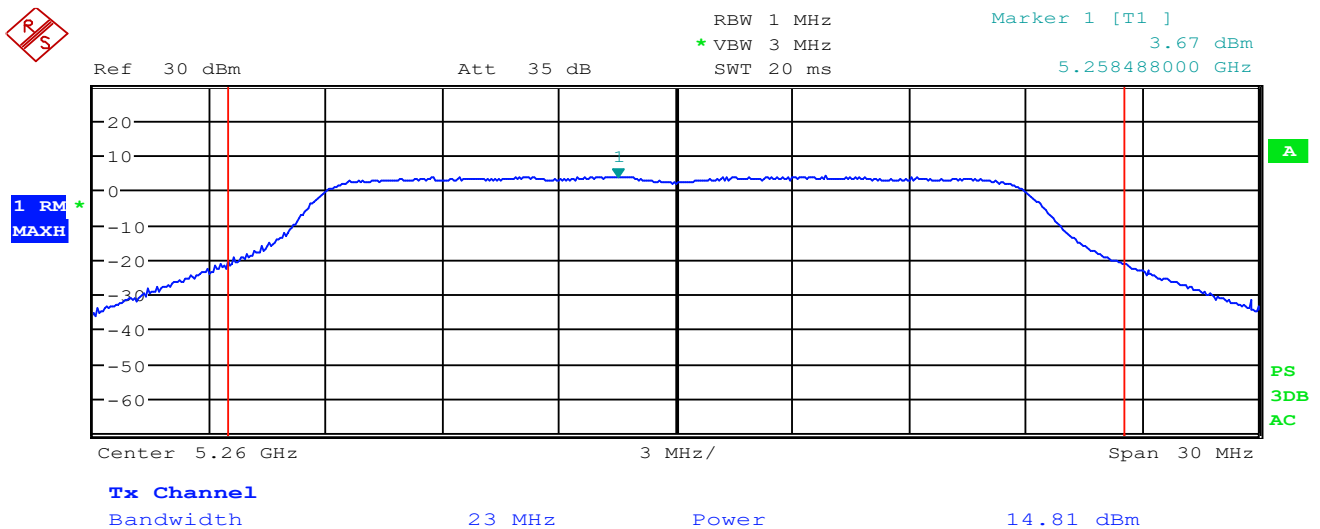




UNII 2A, Port 1: OFDM, High Channel (Beamforming)

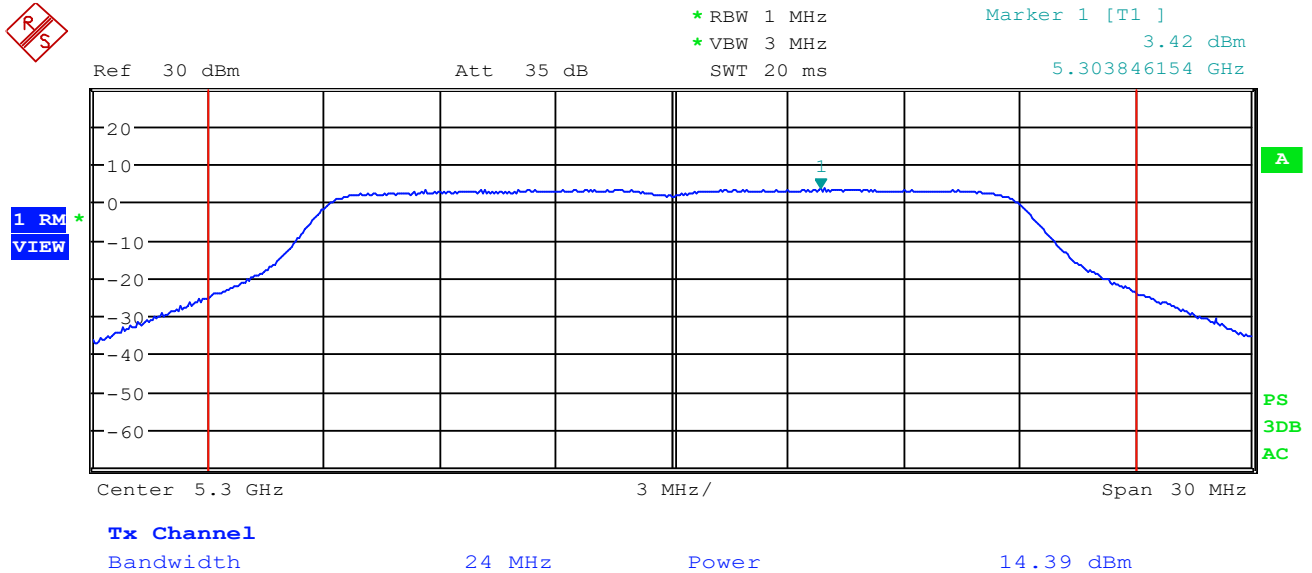


UNII 2A, Port 1: HT20, Low Channel (Beamforming)

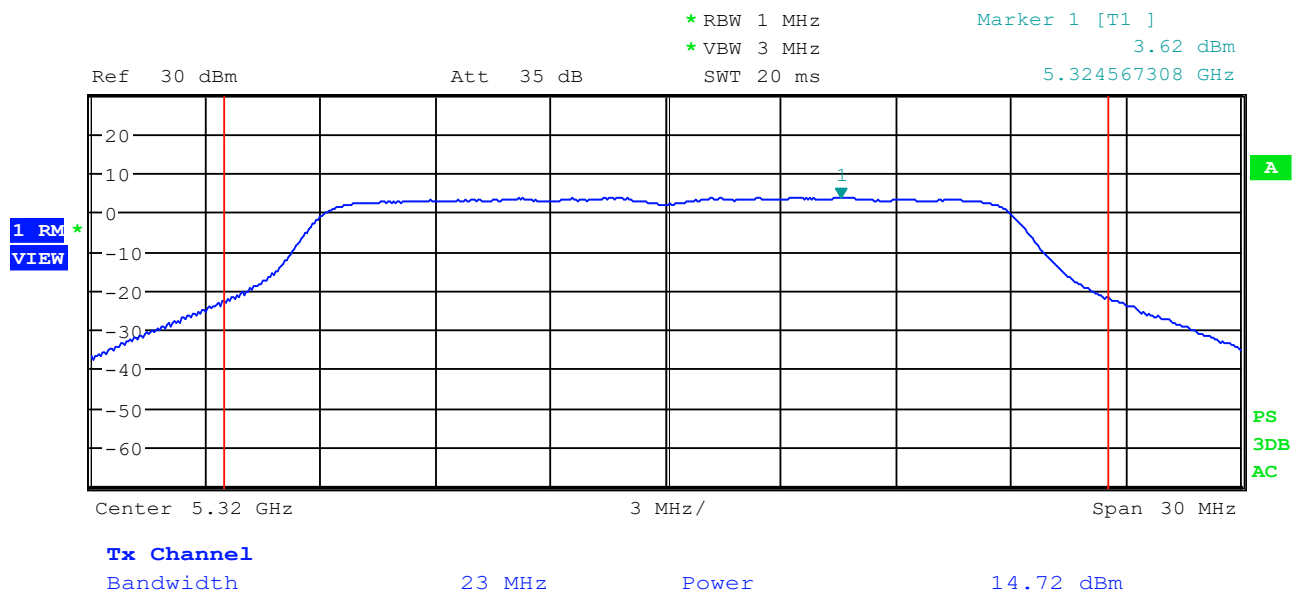




UNII 2A, Port 1: HT20, Mid Channel (Beamforming)

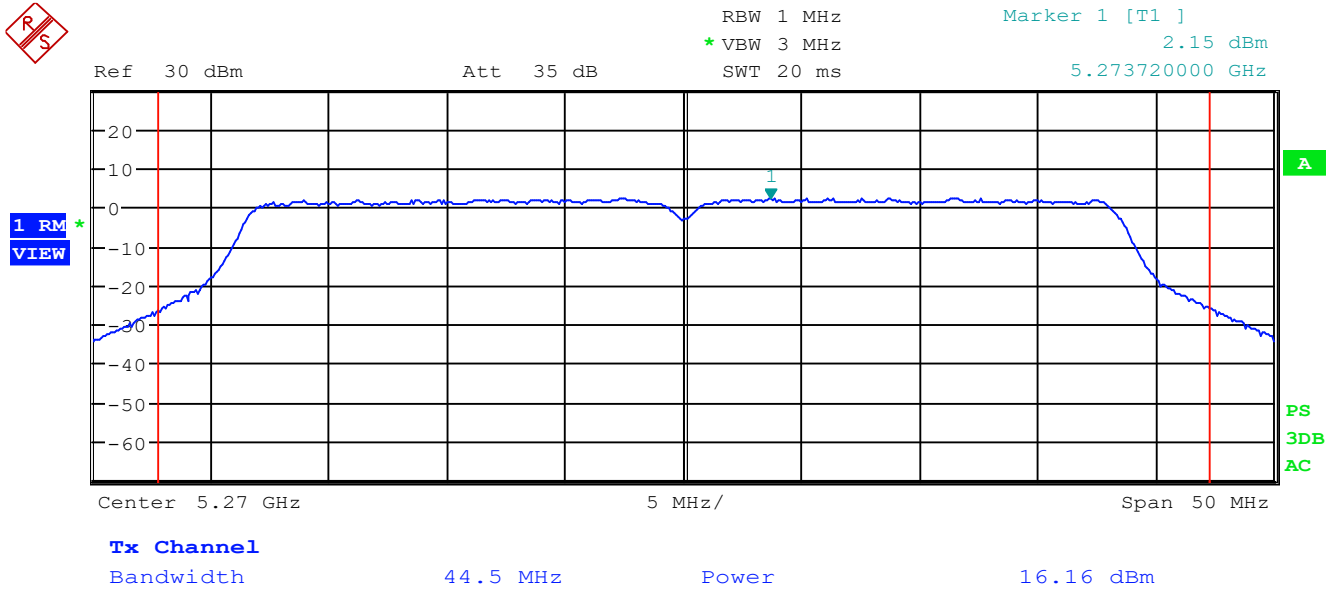


UNII 2A, Port 1: HT20, High Channel (Beamforming)

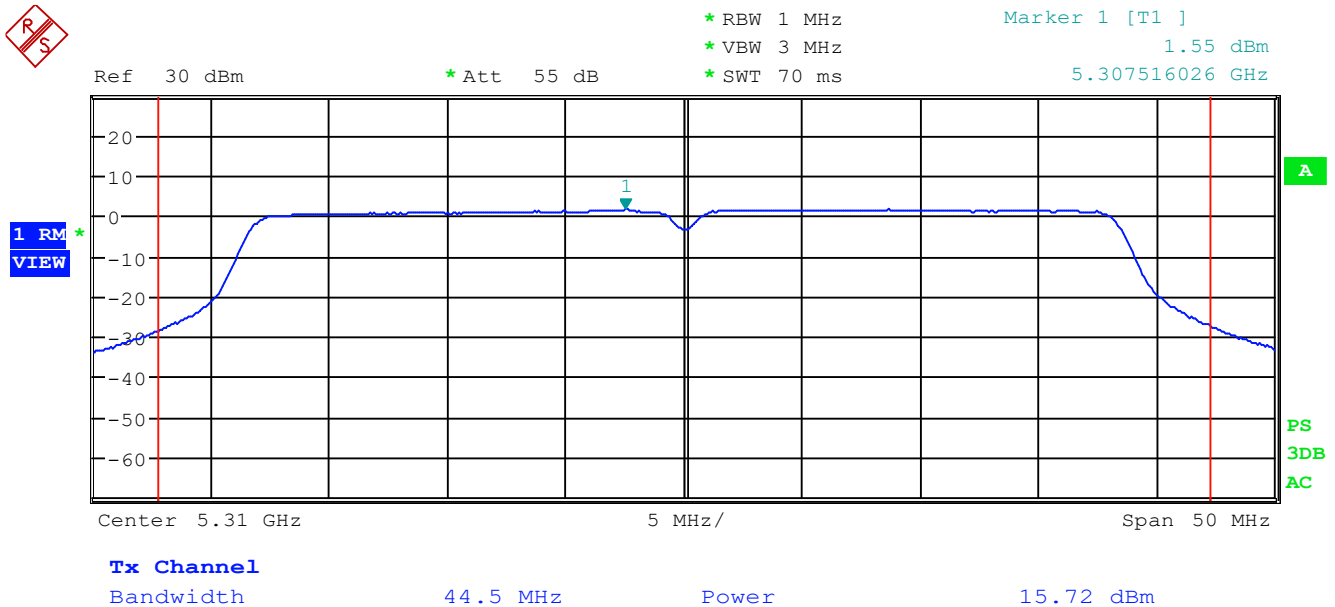




UNII 2A, Port 1: HT40, Low Channel (Beamforming)

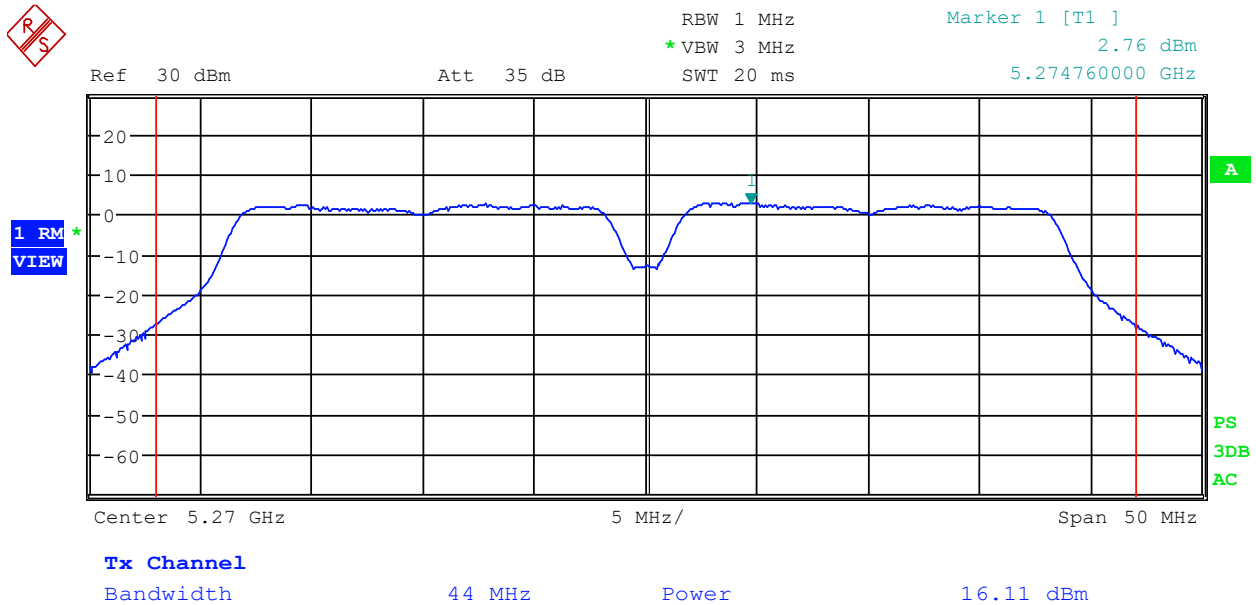


UNII 2A, Port 1: HT40, High Channel (Beamforming)





UNII 2A, Port 1: non HT40, Low Channel (Beamforming)



UNII 2A, Port 1: non HT40, High Channel (Beamforming)

