MET Laboratories, Inc. ***Safety Certification - EMI - Telecom Environmental Simulation***

914 WEST PATAPSCO AVENUE ● BALTIMORE, MARYLAND 21230-3432 ● PHONE (410) 354-3300 ● FAX (410) 354-3313
33439 WESTERN AVENUE ● UNION CITY, CALIFORNIA 94587 ● PHONE (510) 489-6300 ● FAX (510) 489-6372
3162 BELICK STREET ● SANTA CLARA, CALIFORNIA 95054 ● PHONE (408) 748-3585 ● FAX (510) 489-6372
13301 MCCALLEN PASS ● AUSTIN, TX 78753 ● PHONE (512) 287-2500 ● FAX (512) 287-2513

January 12, 2018

Ubiquiti Networks
1250 S. Grove Ave. Suite 100
Barrington, IL 60010

Dear Alex Pavlos,

Enclosed is the EMC Wireless test report for compliance testing of the Ubiquiti Networks, AF-LTU as tested to the requirements of Title 47 of the CFR, Ch. 1 (10-1-06 ed.), Title 47 of the CFR, Part 15.407, Subpart E (UNII 2).

Thank you for using the services of MET Laboratories, Inc. If you have any questions regarding these results or if MET can be of further service to you, please feel free to contact me.

Sincerely yours,
MET LABORATORIES, INC.

Joel Huna
Documentation Department

Reference: (\Ubiquiti Networks\EMC94936-FCC407 UNII 2)

ACCREDITED
TESTING CERT #0591.01

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Electromagnetic Compatibility Criteria
Test Report

for the

Ubiquiti Networks
Model AF-LTU

Tested under
theFCC Certification Rules
contained in
Title 47 of the CFR
15.407 Subpart E

MET Report: EMC94936-FCC407 UNII 2

January 12, 2018

Prepared For:

Ubiquiti Networks
1250 S. Grove Ave. Suite 100
Barrington, IL 60010

Prepared By:
MET Laboratories, Inc.
914 West Patapsco Avenue, Baltimore, MD 21230

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15.407 Subpart E

Donald Salguero, Project Engineer
Electromagnetic Compatibility Lab

Joel Huna
Documentation Department

Engineering Statement: The measurements shown in this report were made in accordance with the procedures indicated, and the emissions from this equipment were found to be within the limits applicable. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them. It is further stated that upon the basis of the measurements made, the equipment tested is capable of operation in accordance with the requirements of 15.407 of the FCC Rules under normal use and maintenance.

John Mason,
Director, Electromagnetic Compatibility Lab

Report Status Sheet

Revision	Report Date	Reason for Revision
∅	December 20, 2017	Initial Issue.

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List of Terms and Abbreviations

AC	**A**lternating **C**urrent
ACF	**A**ntenna **C**orrection **F**actor
Cal	**Cal**ibration
d	**M**easurement **D**istance
dB	**D**eci**b**els
dBµA	**D**eci**b**els above one **micro**amp
dBµV	**D**eci**b**els above one **micro**volt
dBµA/m	**D**eci**b**els above one **micro**amp **per m**eter
dBµV/m	**D**eci**b**els above one **micro**volt **per m**eter
DC	**D**irect **C**urrent
E	**E**lectric Field
DSL	**D**igital **S**ubscriber **L**ine
ESD	**E**lectro**s**tatic **D**ischarge
EUT	**E**quipment **U**nder **T**est
f	**F**requency
FCC	**F**ederal **C**ommunications **C**ommission
GRP	**G**round **R**eference **P**lane
H	Magnetic Field
HCP	**H**orizontal **C**oupling **P**lane
Hz	**H**ert**z**
IEC	**I**nternational **E**lectrotechnical **C**ommission
kHz	**k**ilo**h**ert**z**
kPa	**k**ilo**pa**scal
kV	**k**ilo**v**olt
LISN	**L**ine **I**mpedance **S**tabilization **N**etwork
MHz	**M**ega**h**ertz
µH	**microh**enry
µ	**microf**arad
µs	**micros**econds
PRF	**P**ulse **R**epetition **F**requency
RF	**R**adio **F**requency
RMS	**R**oot-**M**ean-**S**quare
TWT	**T**raveling **W**ave **T**ube
V/m	**V**olts **per m**eter
VCP	**V**ertical **C**oupling **P**lane

I. Executive Summary

A. Purpose of Test

An EMC evaluation was performed to determine compliance of the Ubiquiti Networks AF-LTU, with the requirements of Part 15, §15.407. All references are to the most current version of Title 47 of the Code of Federal Regulations in effect. In accordance with §2.1033, the following data is presented in support of the Certification of the AF-LTU. Ubiquiti Networks should retain a copy of this document which should be kept on file for at least two years after the manufacturing of the AF-LTU, has been **permanently** discontinued.

B. Executive Summary

The following tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with Part 15, §15.407, in accordance with Ubiquiti Networks, purchase order number US101476. All tests were conducted using measurement procedure ANSI C63.4-2014.

FCC Reference	Description	Results
§15.203	Antenna Requirement	Compliant
§15.403(i)	26 dB Occupied Bandwidth	Compliant
§15.407 (a)(2)	Maximum Conducted Output Power	Compliant
§15.407 (a)(1)(i)	EIRP above 30 degrees elevation	Not Applicable
§15.407 (a)(2)	Maximum Power Spectral Density	Compliant
§15.407 (b)(2 – 3)& (6 - 7)	Undesirable Emissions	Compliant
§15.407(b)(6)	Conducted Emission	Compliant
§15.407(f)	RF Exposure	Compliant

Table 1. Executive Summary of EMC Part 15.407 ComplianceTesting

II. Equipment Configuration

A. Overview

MET Laboratories, Inc. was contracted by Ubiquiti Networks to perform testing on the AF-LTU, under Ubiquiti Networks's purchase order number US101476.

This document describes the test setups, test methods, required test equipment, and the test limit criteria used to perform compliance testing of the Ubiquiti Networks AF-LTU.

The results obtained relate only to the item(s) tested.

Model(s) Tested:	AF-LTU	
Model(s) Covered:	AF-LTU	
EUT Specifications:	Primary Power: 120 VAC, 60Hz	
	FCC ID: SWX-AF5LTU	
	Type of Modulations:	OFDM
	Equipment Code:	NII
	Peak RF Output Power:	5255-5345MHz: 16.98 dBm with 13dBi antenna 10.996 dBm with 19dBi antenna 2.981 dBm with 27dBi antenna 5475-5270MHz: 16.96dBm with 13dBi antenna 10.96 dBm with 19dBi antenna 2.976 dBm with 27dBi antenna
	EUT Frequency Ranges:	5255 – 5345 MHz; 5475 – 5720 MHz
	Bandwidths:	10/20/30/40/50 MHz
Analysis:	The results obtained relate only to the item(s) tested.	
Environmental Test Conditions:	Temperature: 15-35º C	
	Relative Humidity: 30-60%	
	Barometric Pressure: 860-1060 mbar	
Type of Filing:	Original	
Evaluated by:	Donald Salguero	
Report Date(s):	January 12, 2018	

Table 2. EUT Summary

B. References

CFR 47, Part 15, Subpart E	Unlicensed National Information Infrastructure Devices (UNII)
ANSI C63.4:2014	Methods and Measurements of Radio-Noise Emissions from Low-Voltage Electrical And Electronic Equipment in the Range of 9 kHz to 40 GHz
ISO/IEC 17025:2005	General Requirements for the Competence of Testing and Calibration Laboratories
ANSI C63.10-2013	American National Standard for Testing Unlicensed Wireless Devices
789033 D02 General UNII Test Procedures New Rules v01	Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices Part 15, Subpart E
905462 DO2 UNII DFS Compliance Procedures New Rules v01r02	Compliance Measurement Procedures for Unlicensed-National Information Infrastructure Devices Operating in the 5250-5350 MHz and 5470-5725 MHz Bands Incorporating Dynamic Frequency Selection
662911 D02 v01	MIMO with Cross Polarized Antenna

Table 3. References

C. Test Site

All testing was performed at MET Laboratories, Inc., 914 West Patapsco Avenue, Baltimore, MD 21230. All equipment used in making physical determinations is accurate and bears recent traceability to the National Institute of Standards and Technology.

Radiated Emissions measurements were performed in a 3 meter semi-anechoic chamber (equivalent to an Open Area Test Site). In accordance with §2.948(a)(3), a complete site description is contained at MET Laboratories.

D. Description of Test Sample

The Ubiquiti Networks AF-LTU, Equipment Under Test (EUT), is a 5.150GHz – 5.850GHz, Digital Transmission radio that uses OFDM MIMO Uncorrelated Cross-Polarized communication with a 100/80/60/50MHz/40MHz/30MHz/28MHz/ 20MHz/10MHz/ 7MHz/5MHz/3.5MHz bandwidth configuration. The EUT would be used outdoors and pole mounted. It is powered from a PoE adapter. The reverse-polarized connectorized has the ability when professionally installed by a user with cross-polarized antennas. This is the only matter that would be able to create a functional link to work.

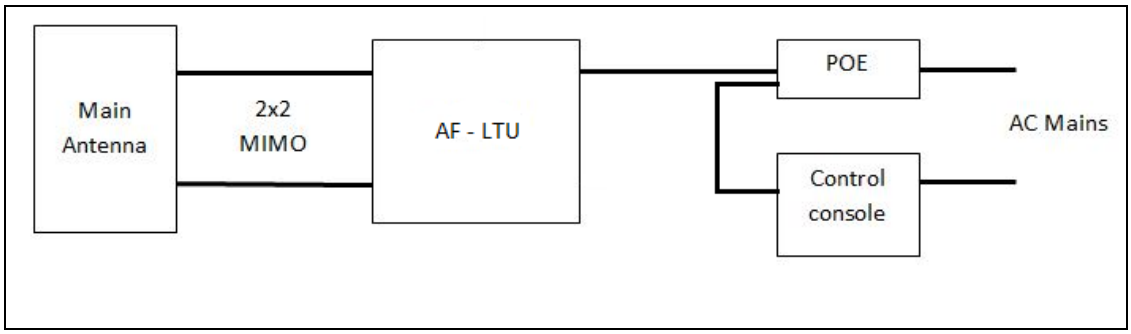


Figure 1. Block Diagram of Test Configuration

E. Equipment Configuration

The EUT was set up as outlined in Figure 1, Block Diagram of Test Setup. All cards, racks, etc., incorporated as part of the EUT is included in the following list.

Ref. ID	Name / Description	Model Number	Part Number	Serial Number	Revision
1	Switching Gigabit Power Supply	GP-H240-100G-4	1514	0000936	--
	Ethernet Cables	N/A	N/A	N/A	--
	13 dBi Asymmetrical horn	PrismAP-5-90	N/A	N/A	
	19 dBi symmetrical horn	PrismAP-5-30	N/A	N/A	
	27 dBi Slant Dish	LTU-Extend	N/A	N/A	

Table 4. Equipment Configuration

F. Support Equipment

Support equipment necessary for the operation and testing of the EUT is included in the following list.

Ref. ID	Name / Description	Manufacturer	Model Number	*Customer Supplied Calibration Data
1	Laptop	Apple	MacBook Pro	N/A

Table 5. Support Equipment

G. Ports and Cabling Information

Ref. ID	Port Name on EUT	Cable Description	Qty.	Length (m)	Shielded (Y/N)	Termination Point
1	Data Port	RJ45 Ethernet	1	2	Yes	

Table 6. Ports and Cabling Information

H. Mode of Operation

Using internal test modes only for testing purposes the radio is set up in a continuous transmit mode. This allows for frequency, power, and channel bandwidth to be adjusted for measurement purposes. Scripts and specific command line commands are used to manipulate the radio in test mode.

I. Method of Monitoring EUT Operation

1. A blinking green "Data" LED will indicate error-free data is being transferred on the test cable.

2. Any other LED status besides the blinking green LED (i.e. LED light off, etc.) will indicate error-free data is not being transferred on the test cable.

J. Modifications

a) Modifications to EUT

No modifications were made to the EUT.

b) Modifications to Test Standard

No modifications were made to the test standard.

K. Disposition of EUT

The test sample including all support equipment submitted to the Electro-Magnetic Compatibility Lab for testing was returned to Ubiquiti Networks upon completion of testing.

III. Electromagnetic Compatibility Criteria for Intentional Radiators

Electromagnetic Compatibility Criteria for Intentional Radiators

§ 15.203 Antenna Requirement

Test Requirement: **§ 15.203:** An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

The structure and application of the EUT were analyzed to determine compliance with Section 15.203 of the Rules. Section 15.203 states that the subject device must meet at least one of the following criteria:

a.) Antenna must be permanently attached to the unit.

b.) Antenna must use a unique type of connector to attach to the EUT.

c.) Unit must be professionally installed. Installer shall be responsible for verifying that the correct antenna is employed with the unit.

Results: The EUT as tested is compliant the criteria of §15.203. The antenna is professionally installed. The gains of the antennas are 13dBi, 19 dBi, and 27 dBi.

Gain	Model	Type
13 dBi	PrismAP-5-90	Asymmetrical horn
19 dBi	PrismAP-5-30	Symmetrical horn
27 dBi	LTU-Extend	Slant Dish

Table 7. Antenna List

Test Engineer(s): Donald Salguero

Test Date(s): October 25, 2017

Electromagnetic Compatibility Criteria for Intentional Radiators

§ 15. 403(i) 26dB Bandwidth

Test Requirements: **§ 15.403(i):** For purposes of this subpart the emission bandwidth shall be determined by measuring the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, that are 26 dB down relative to the maximum level of the modulated carrier. Determination of the emissions bandwidth is based on the use of measurement instrumentation employing a peak detector function with an instrument resolution bandwidth approximately equal to 1.0 percent of the emission bandwidth of the device under measurement.

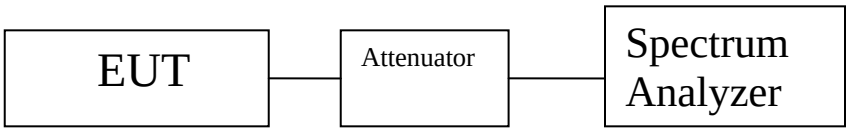
Test Procedure: The transmitter was set to low, mid, and high operating frequencies at the highest output power and connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured with the spectrum analyzer using a RBW approximately equal to 1% of the total emission bandwidth, VBW > RBW. The 26 dB Bandwidth was measured and recorded.

Test Results The 26 dB Bandwidth was compliant with the requirements of this section.

No anomalies detected.

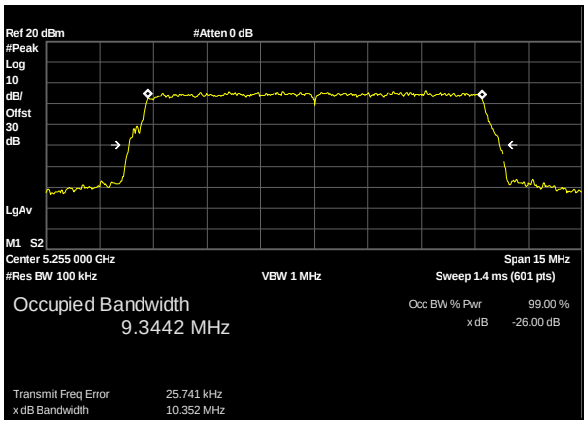
Test Engineer(s): Donald Salguero

Test Date(s): October 24, 2017

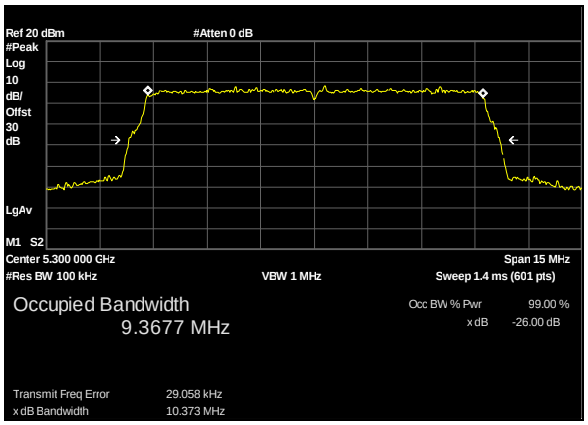


Nominal BW (MHz)	Center Freq (MHz)	26dB BW (MHz)
10	5255	10.352
	5300	10.373
	5345	10.393
20	5260	20.728
	5300	20.922
	5340	20.725
30	5265	30.941
	5300	30.996
	5335	31.244
40	5270	41.118
	5300	41.229
	5330	40.987
50	5275	52.096
	5300	52.272
	5325	52.321

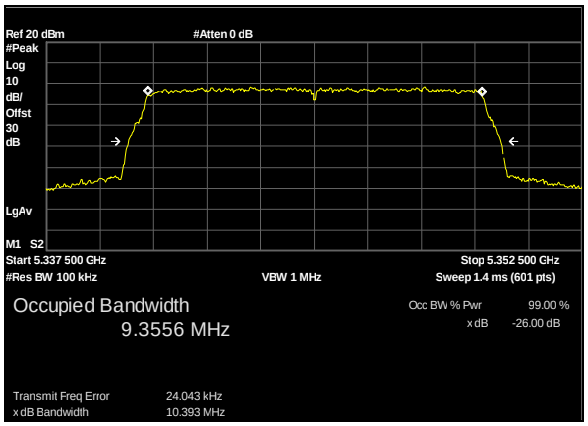
Table 8. 26 dB Occupied Bandwidth, UNII 2A, Test Results



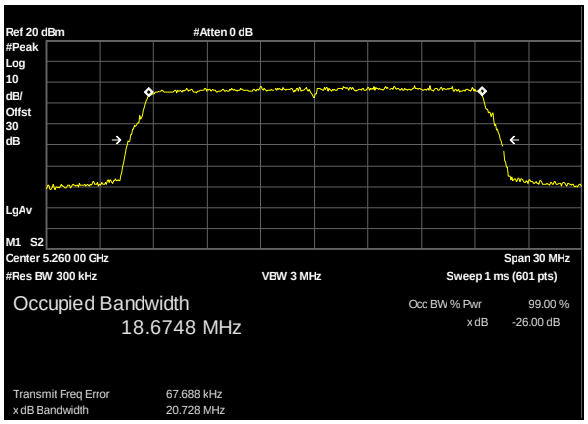
Plot 1. 26 dB Occupied Bandwidth, UNII 2A, 10M, 5255M, c1



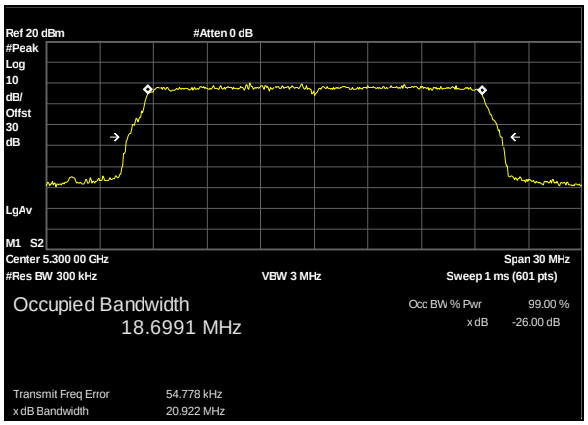
Plot 2. 26 dB Occupied Bandwidth, UNII 2A, 10M, 5300M, c1



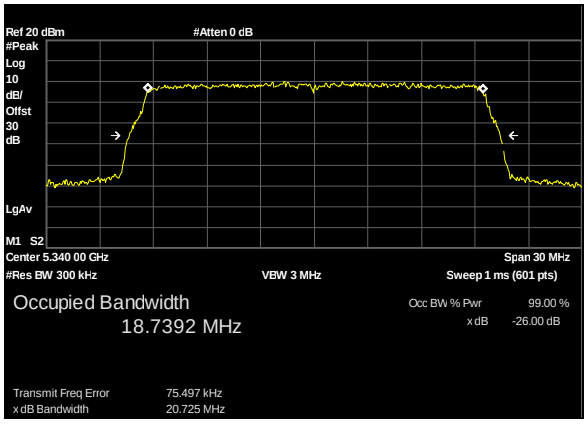
Plot 3. 26 dB Occupied Bandwidth, UNII 2A, 10M, 5345M, c1



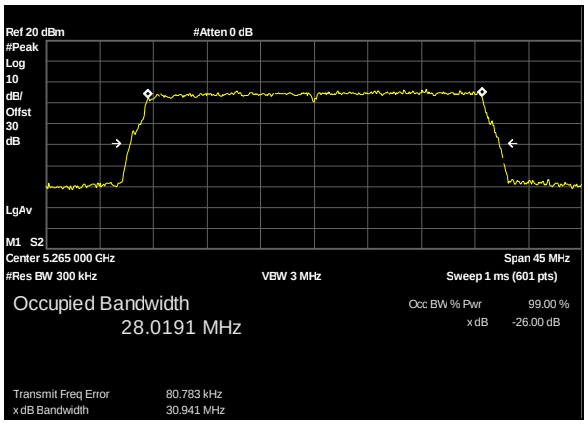
Plot 4. 26 dB Occupied Bandwidth, UNII 2A, 20M, 5260M, c1



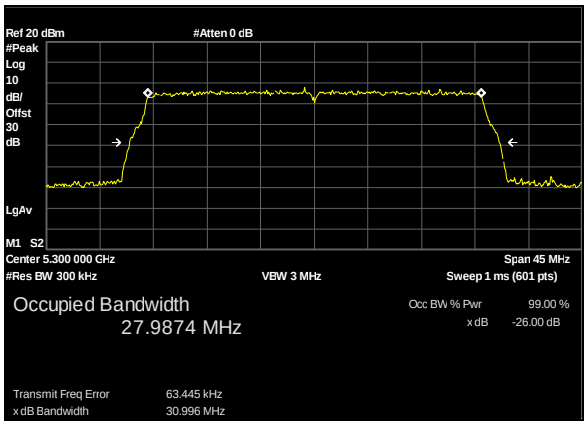
Plot 5. 26 dB Occupied Bandwidth, UNII 2A, 20M, 5300M, c1



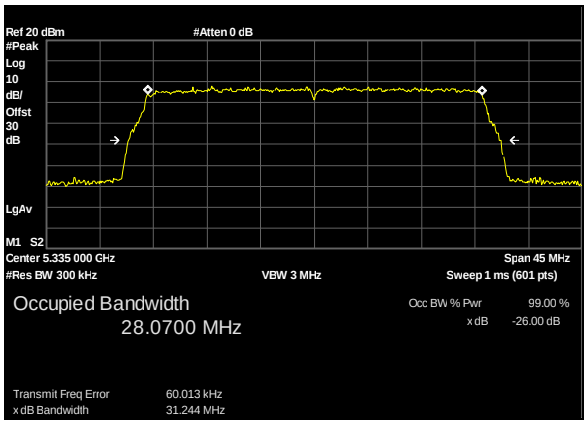
Plot 6. 26 dB Occupied Bandwidth, UNII 2A, 20M, 5340M, c1



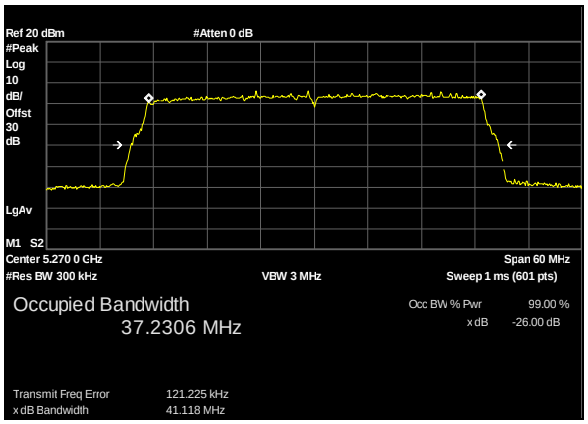
Plot 7. 26 dB Occupied Bandwidth, UNII 2A, 30M, 5265M, c1



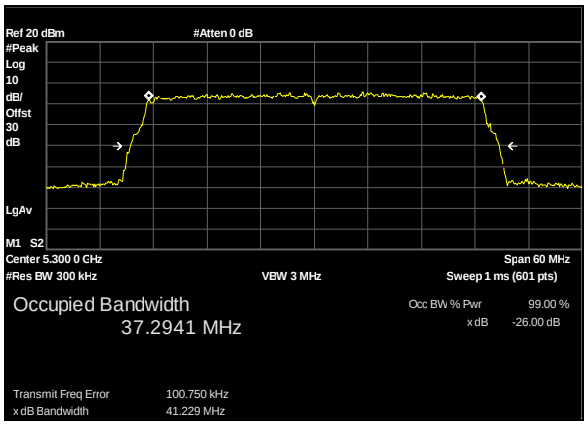
Plot 8. 26 dB Occupied Bandwidth, UNII 2A, 30M, 5300M, c1



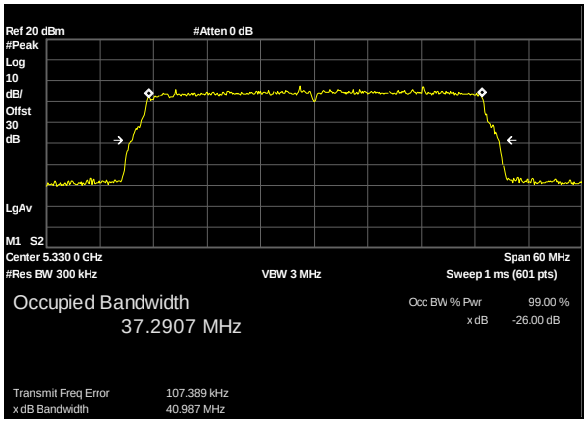
Plot 9. 26 dB Occupied Bandwidth, UNII 2A, 30M, 5335M, c1



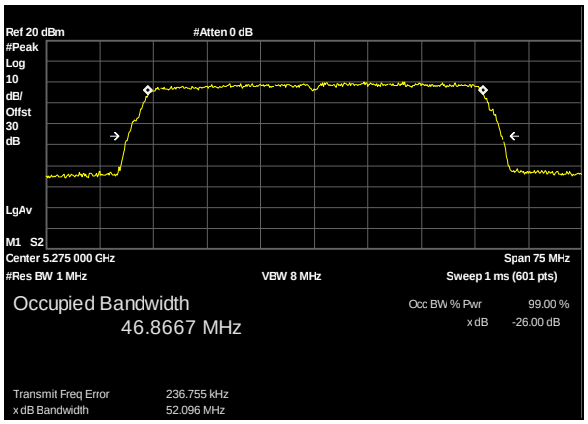
Plot 10. 26 dB Occupied Bandwidth, UNII 2A, 40M, 5270M, c1



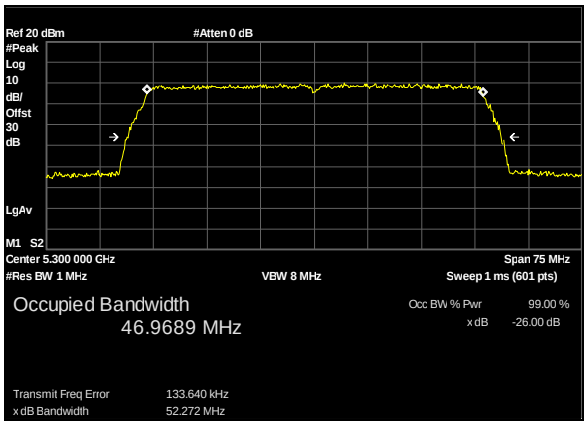
Plot 11. 26 dB Occupied Bandwidth, UNII 2A, 40M, 5300M, c1



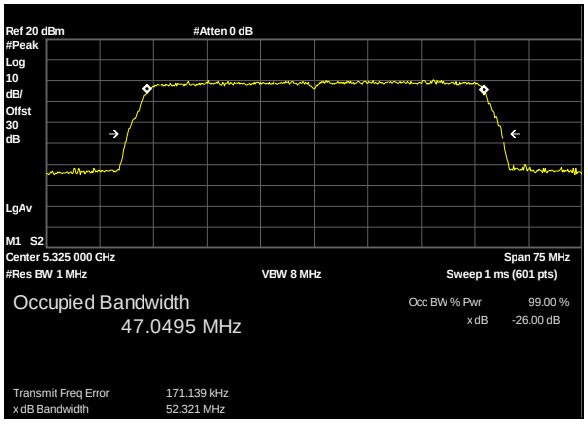
Plot 12. 26 dB Occupied Bandwidth, UNII 2A, 40M, 5330M, c1



Plot 13. 26 dB Occupied Bandwidth, UNII 2A, 50M, 5275M, c1



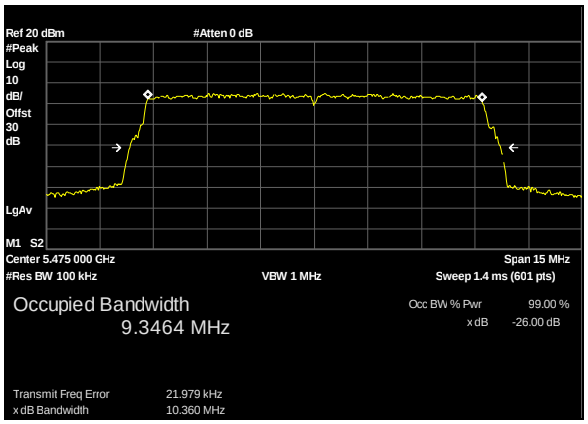
Plot 14. 26 dB Occupied Bandwidth, UNII 2A, 50M, 5300M, c1



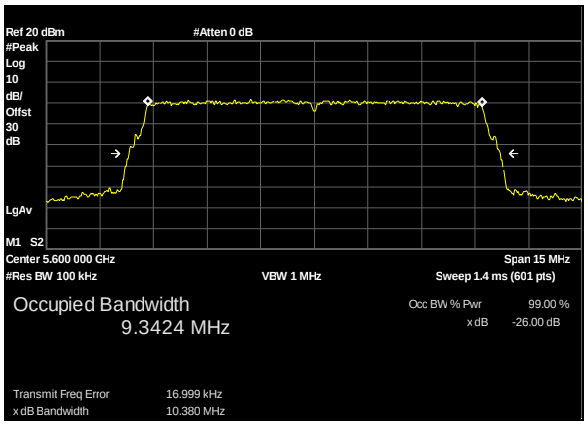
Plot 15. 26 dB Occupied Bandwidth, UNII 2A, 50M, 5325M, c1

Nominal BW (MHz)	Center Freq (MHz)	26dB BW (MHz)
10	5475	10.36
	5600	10.38
	5720	10.348
20	5480	20.757
	5600	20.713
	5715	20.777
30	5485	31.01
	5600	31.019
	5710	30.997
40	5490	41.246
	5600	41.074
	5705	41.252
50	5495	52.401
	5600	52.294
	5700	52.3

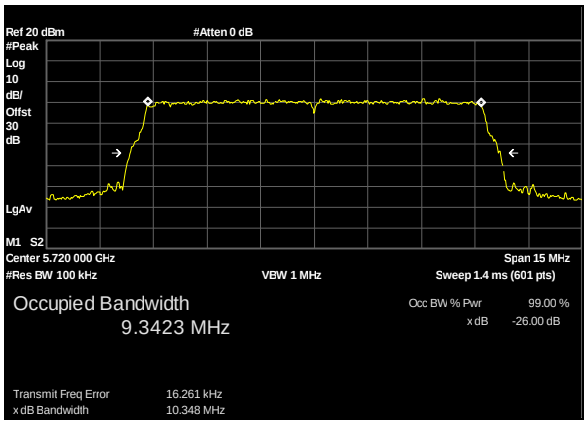
Table 9. 26 dB Occupied Bandwidth, UNII 2C, Test Results



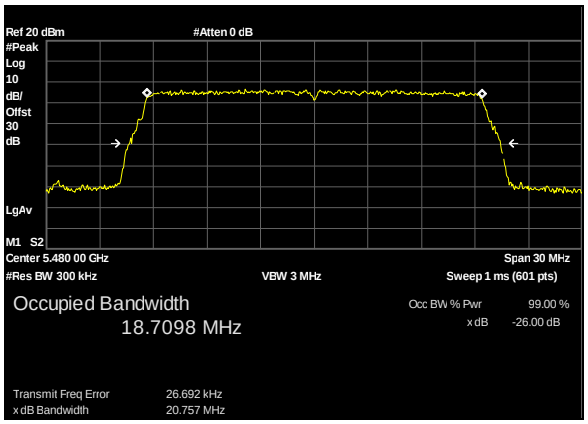
Plot 16. 26 dB Occupied Bandwidth, UNII 2C, 10M, 5475M, c1



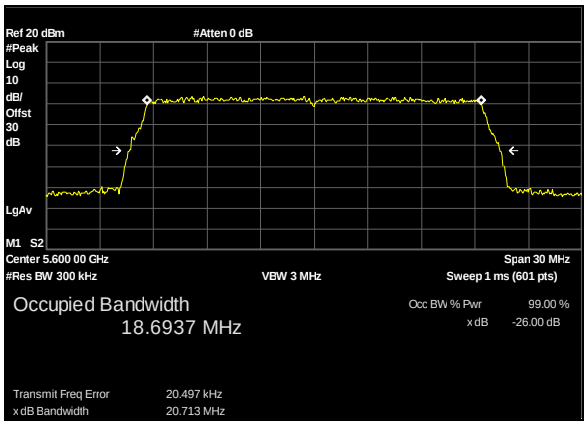
Plot 17. 26 dB Occupied Bandwidth, UNII 2C, 10M, 5600M, c1



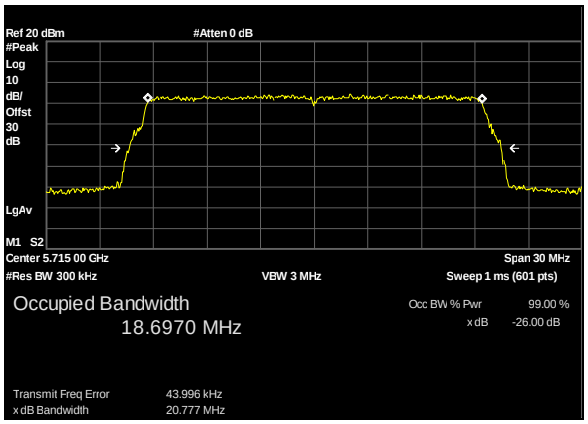
Plot 18. 26 dB Occupied Bandwidth, UNII 2C, 10M, 5720M, c1



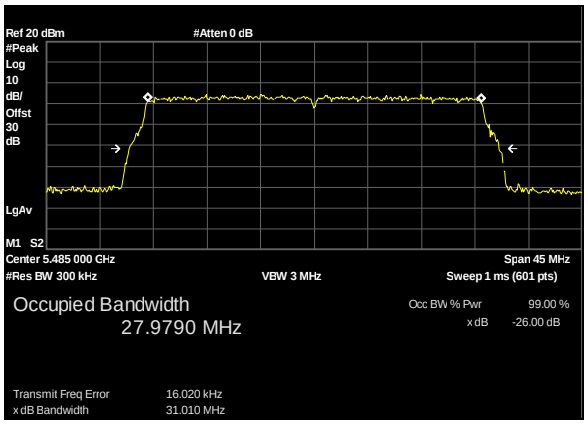
Plot 19. 26 dB Occupied Bandwidth, UNII 2C, 20M, 5480M, c1



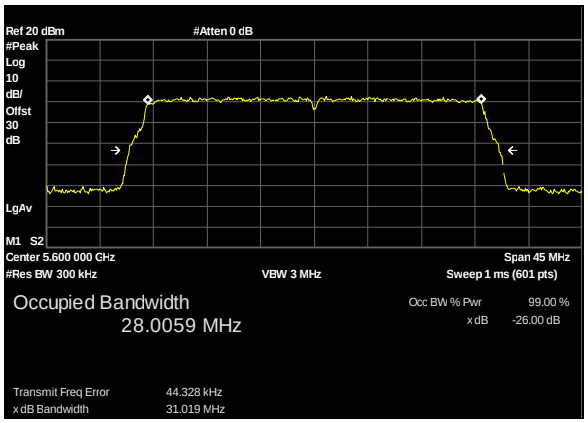
Plot 20. 26 dB Occupied Bandwidth, UNII 2C, 20M, 5600M, c1



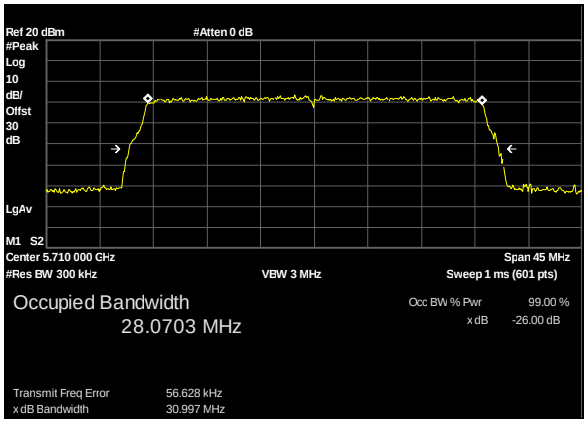
Plot 21. 26 dB Occupied Bandwidth, UNII 2C, 20M, 5715M, c1



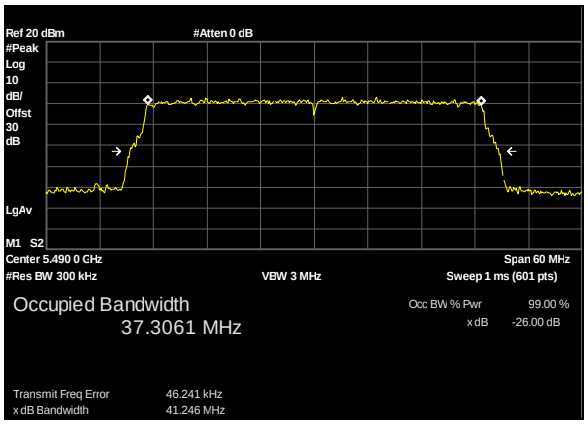
Plot 22. 26 dB Occupied Bandwidth, UNII 2C, 30M, 5485M, c1



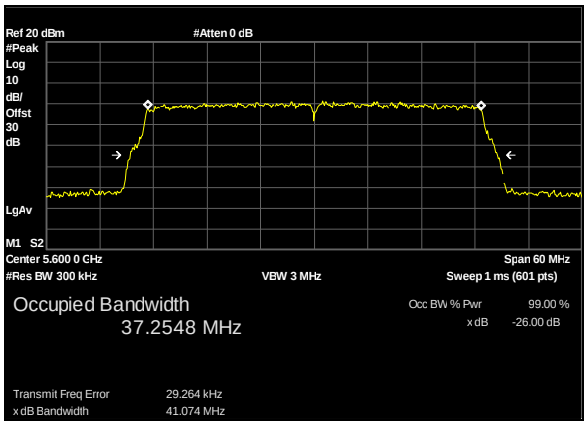
Plot 23. 26 dB Occupied Bandwidth, UNII 2C, 30M, 5600M, c1



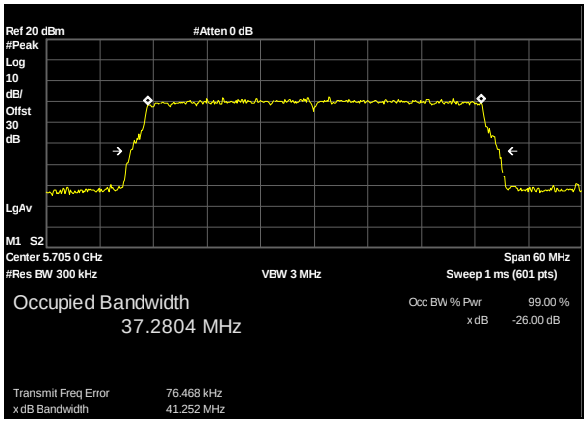
Plot 24. 26 dB Occupied Bandwidth, UNII 2C, 30M, 5710M, c1



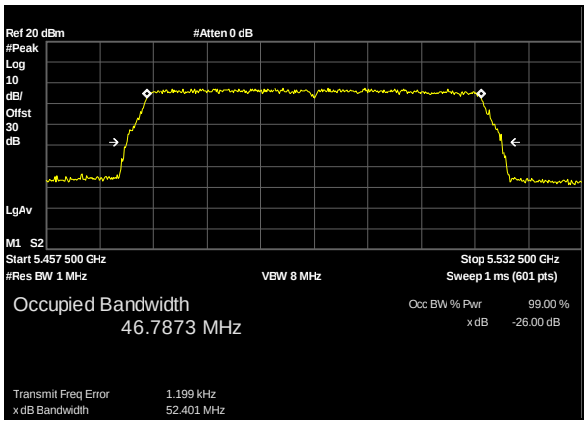
Plot 25. 26 dB Occupied Bandwidth, UNII 2C, 40M, 5490M, c1



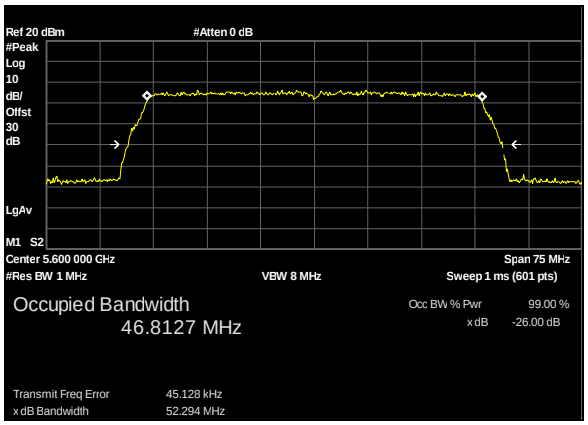
Plot 26. 26 dB Occupied Bandwidth, UNII 2C, 40M, 5600M, c1



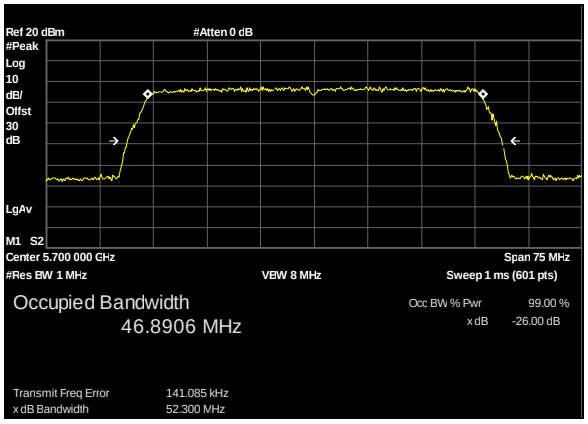
Plot 27. 26 dB Occupied Bandwidth, UNII 2C, 40M, 5705M, c1



Plot 28. 26 dB Occupied Bandwidth, UNII 2C, 50M, 5495M, c1



Plot 29. 26 dB Occupied Bandwidth, UNII 2C, 50M, 5600M, c1



Plot 30. 26 dB Occupied Bandwidth, UNII 2C, 50M, 5700M, c1

Electromagnetic Compatibility Criteria for Intentional Radiators

§15. 407(a)(2) Maximum Conducted Output Power

Test Requirements: **§15.407(a)(2):** 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.
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.

§15.407(h)(1): Transmit power control (TPC). U-NII devices operating in the 5.25-5.35 GHz band and the 5.47-5.725 GHz band shall employ a TPC mechanism. The U-NII device is required to have the capability to operate at least 6 dB below the mean EIRP value of 30 dBm. A TPC mechanism is not required for systems with an e.i.r.p. of less than 500 mW.

Test Procedure: The EUT was connected to a spectrum analyzer through a cable and attenuator. Measurements were taken with the EUT set to transmit continuously on its low, mid, and high channels. Its power was measured according to measurement method SA-1, as described in 789033 D02 General UNII Test Procedures v01.

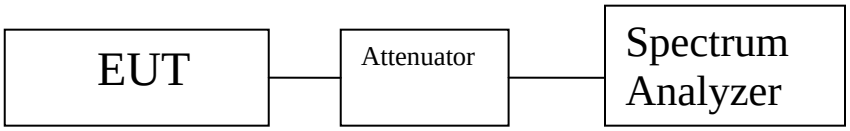
To verify the TPC requirement of the rule part, observations using the same measurement method were made with the EUT set to a lower power setting.

Test Results: The EUT as tested is compliant with the requirements of this section.

No anomalies detected.

Test Engineer(s): Donald Salguero

Test Date(s): October 26, 2017



Output Power, UNII 2A

Channel BW (MHz)	Frequency (MHz)	Chain 0 (dBm)	Chain 1 (dBm)	Sum (dBm)	Limit (dBm)	Directional Gain (dBi)	Final Limit (dBm)	Margin (dB)
10	5255	9.6	9.21	12.42	21.15	13	14.15	-1.73
	5300	9.83	9.96	12.91	21.16	13	14.16	-1.254
	5345	10.05	9.84	12.96	21.17	13	14.17	-1.213
20	5260	12.59	12.83	15.72	24	13	17	-1.278
	5300	12.92	12.91	15.93	24	13	17	-1.074
	5340	13.07	12.99	16.04	24	13	17	-0.959
30	5265	13.87	13.84	16.87	24	13	17	-0.134
	5300	13.97	13.88	16.94	24	13	17	-0.064
	5335	13.85	13.96	16.92	24	13	17	-0.084
40	5270	13.96	13.98	16.98	24	13	17	-0.019
	5300	13.89	13.98	16.95	24	13	17	-0.054
	5330	13.93	13.89	16.92	24	13	17	-0.079
50	5275	13.96	13.95	16.97	24	13	17	-0.034
	5300	13.85	13.96	16.92	24	13	17	-0.084
	5325	13.91	13.84	16.89	24	13	17	-0.114

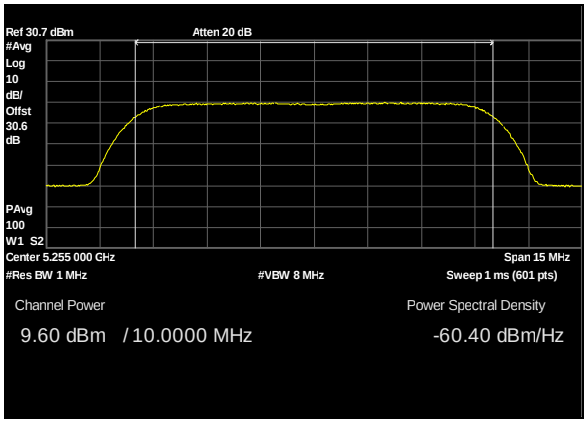
Table 10. Maximum Conducted Transmitter Output Power, UNII 2A, 13 dBi, 2x2, Test Results

Channel BW (MHz)	Frequency (MHz)	Chain 0 (dBm)	Chain 1 (dBm)	Sum (dBm)	Limit (dBm)	Directional Gain (dBi)	Final Limit (dBm)	Margin (dB)
10	5255	3.92	4.05	6.996	21.15	19	8.15	-1.154
	5300	4.03	4.09	7.071	21.16	19	8.16	-1.089
	5345	4.21	3.81	7.025	21.17	19	8.17	-1.145
20	5260	6.85	6.92	9.896	24	19	11	-1.104
	5300	6.97	6.99	9.991	24	19	11	-1.009
	5340	6.94	6.82	9.891	24	19	11	-1.109
30	5265	7.98	7.99	10.996	24	19	11	-0.004
	5300	7.91	8	10.966	24	19	11	-0.034
	5335	7.98	7.95	10.976	24	19	11	-0.024
40	5270	7.98	7.92	10.961	24	19	11	-0.039
	5300	7.93	7.97	10.961	24	19	11	-0.039
	5330	7.96	7.93	10.956	24	19	11	-0.044
50	5275	7.97	7.85	10.921	24	19	11	-0.079
	5300	7.87	7.98	10.936	24	19	11	-0.064
	5325	7.88	7.96	10.931	24	19	11	-0.069

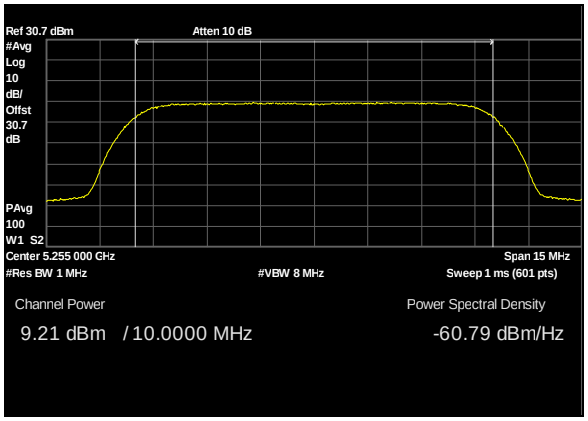
Table 11. Maximum Conducted Transmitter Output Power, UNII 2A, 19 dBi, 2x2, Test Results

Channel BW (MHz)	Frequency (MHz)	Chain 0 (dBm)	Chain 1 (dBm)	Sum (dBm)	Limit (dBm)	Directional Gain (dBi)	Final Limit (dBm)	Margin (dB)
10	5255	-3.92	-3.91	-0.904	21.15	27	0.15	-1.054
	5300	-3.91	-4.08	-0.983	21.16	27	0.16	-1.143
	5345	-3.88	-3.98	-0.919	21.17	27	0.17	-1.089
20	5260	-1.04	-1.36	1.814	24	27	3	-1.186
	5300	-1.08	-1.01	1.966	24	27	3	-1.034
	5340	-0.98	-1.13	1.956	24	27	3	-1.044
30	5265	-0.12	-0.03	2.936	24	27	3	-0.064
	5300	-0.02	-0.04	2.981	24	27	3	-0.019
	5335	-0.1	-0.04	2.941	24	27	3	-0.059
40	5270	-0.07	-0.05	2.951	24	27	3	-0.049
	5300	-0.08	-0.04	2.951	24	27	3	-0.049
	5330	-0.12	-0.03	2.936	24	27	3	-0.064
50	5275	-0.12	-0.08	2.911	24	27	3	-0.089
	5300	-0.09	-0.01	2.961	24	27	3	-0.039
	5325	-0.12	-0.15	2.876	24	27	3	-0.124

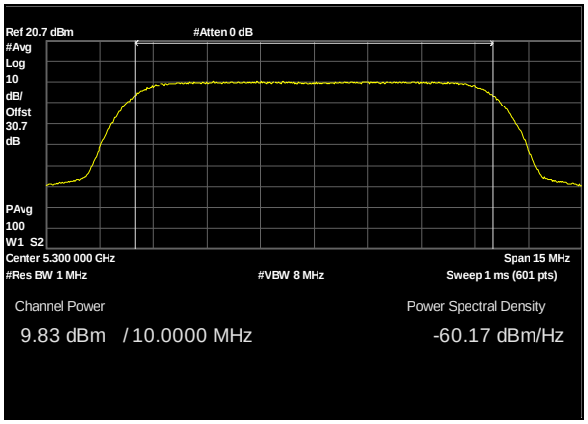
Table 12. Maximum Conducted Transmitter Output Power, UNII 2A, 27 dBi, 2x2, Test Results



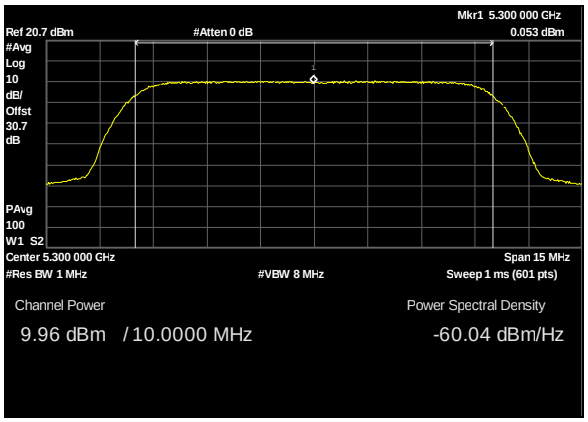
Plot 31. Conducted Transmitter Output Power, UNII 2A, BW 10M, CF 5255M, c0, 13dBi



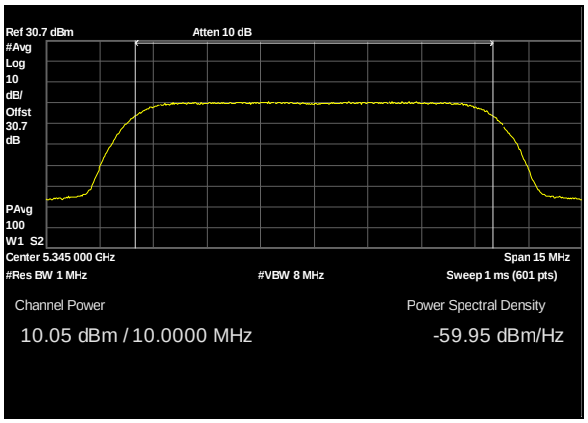
Plot 32. Conducted Transmitter Output Power, UNII 2A, BW 10M, CF 5255M, c1, 13dBi



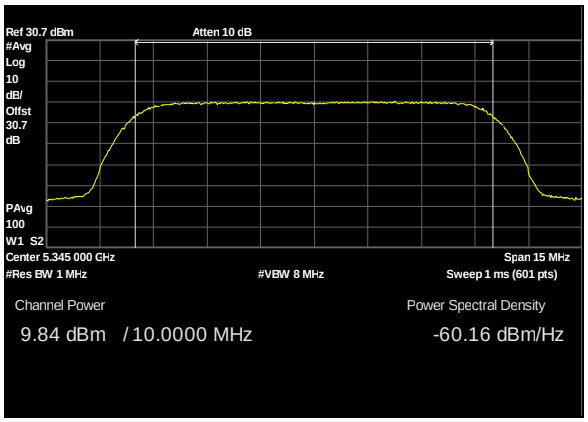
Plot 33. Conducted Transmitter Output Power, UNII 2A, BW 10M, CF 5300M, c0, 13dBi



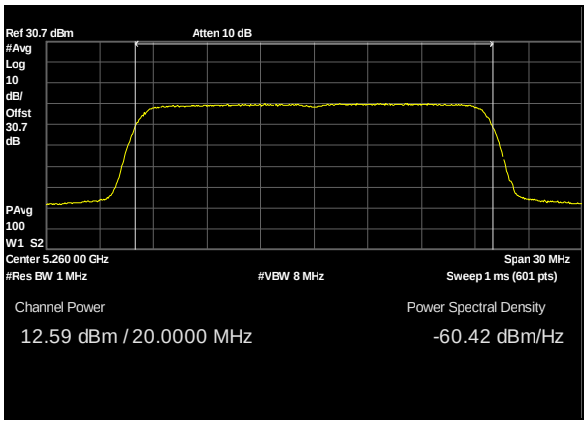
Plot 34. Conducted Transmitter Output Power, UNII 2A, BW 10M, CF 5300M, c1, 13dBi



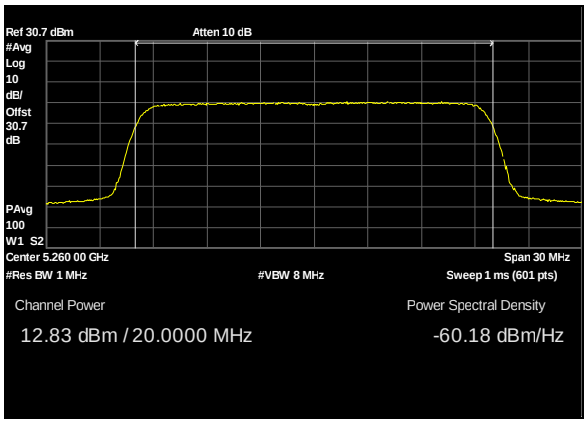
Plot 35. Conducted Transmitter Output Power, UNII 2A, BW 10M, CF 5345M, c0, 13dBi



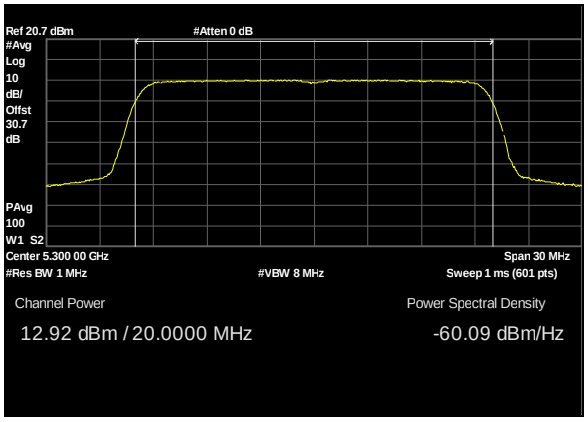
Plot 36. Conducted Transmitter Output Power, UNII 2A, BW 10M, CF 5345M, c1, 13dBi



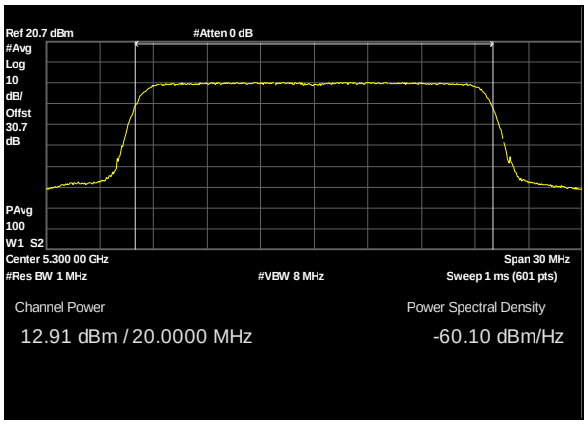
Plot 37. Conducted Transmitter Output Power, UNII 2A, BW 20M, CF 5260M, c0, 13dBi



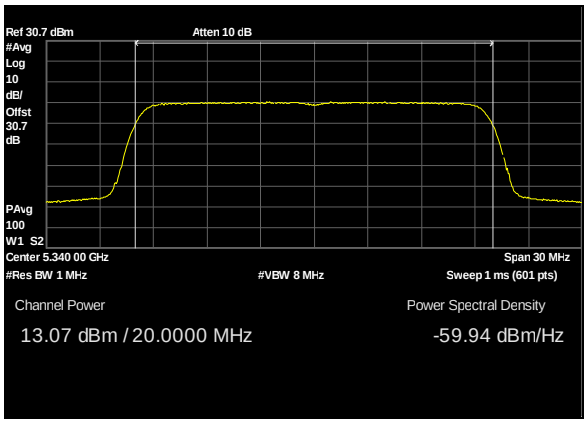
Plot 38. Conducted Transmitter Output Power, UNII 2A, BW 20M, CF 5260M, c1, 13dBi



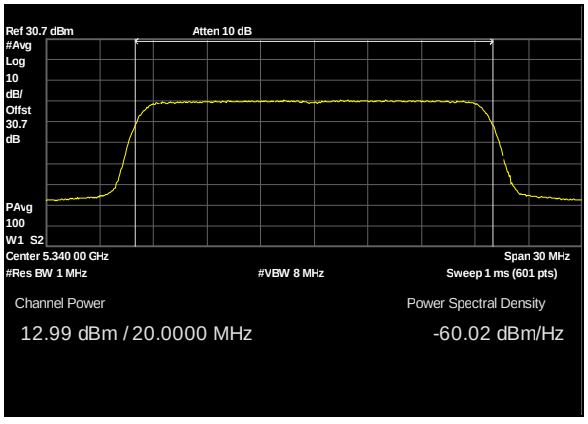
Plot 39. Conducted Transmitter Output Power, UNII 2A, BW 20M, CF 5300M, c0, 13dBi



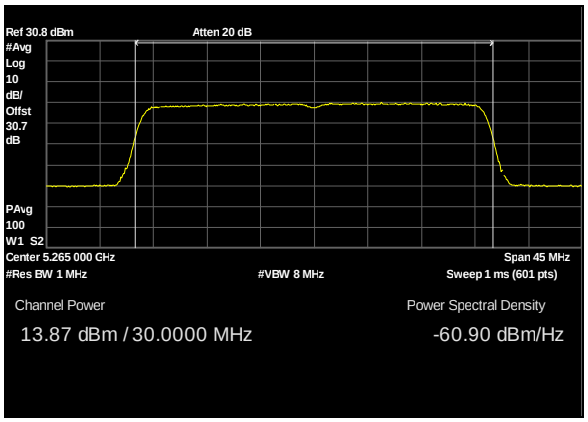
Plot 40. Conducted Transmitter Output Power, UNII 2A, BW 20M, CF 5300M, c1, 13dBi



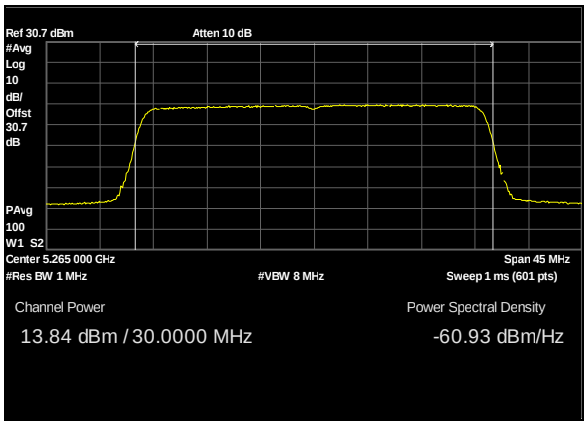
Plot 41. Conducted Transmitter Output Power, UNII 2A, BW 20M, CF 5340M, c0, 13dBi



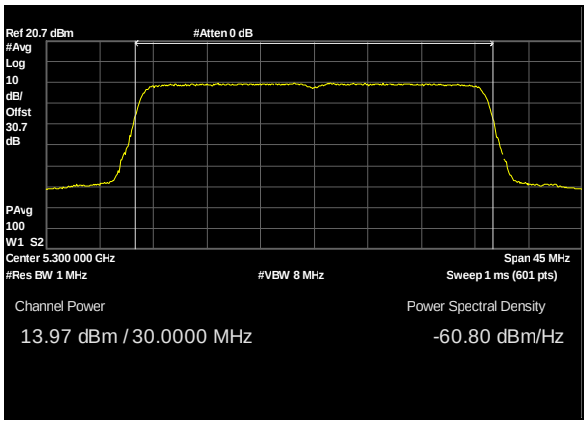
Plot 42. Conducted Transmitter Output Power, UNII 2A, BW 20M, CF 5340M, c1, 13dBi



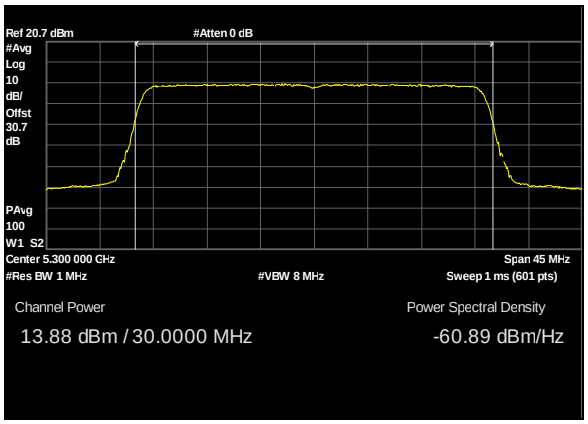
Plot 43. Conducted Transmitter Output Power, UNII 2A, BW 30M, CF 5265M, c0, 13dBi



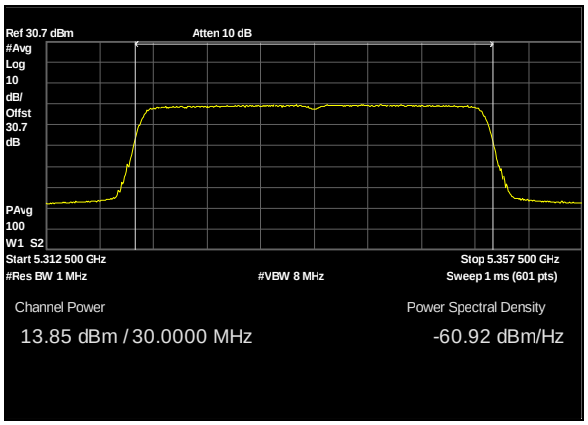
Plot 44. Conducted Transmitter Output Power, UNII 2A, BW 30M, CF 5265M, c1, 13dBi



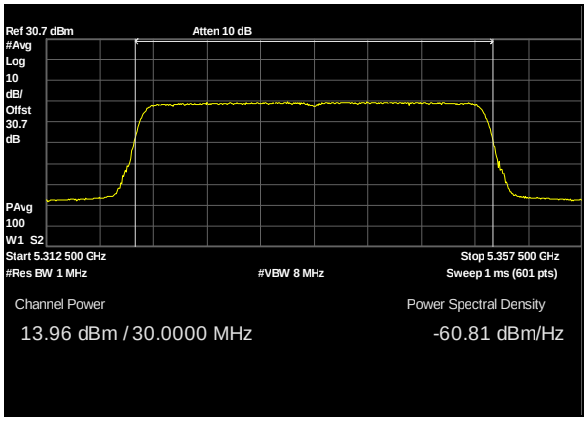
Plot 45. Conducted Transmitter Output Power, UNII 2A, BW 30M, CF 5300M, c0, 13dBi



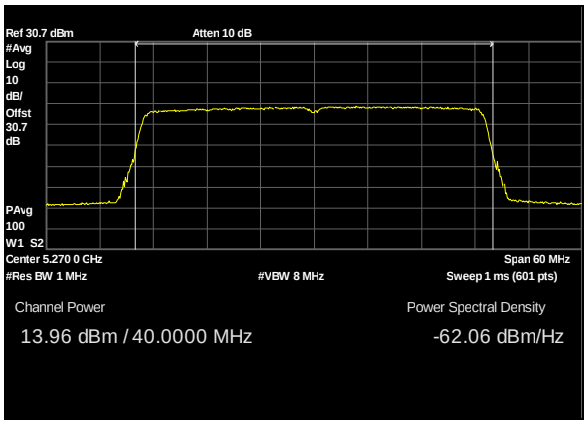
Plot 46. Conducted Transmitter Output Power, UNII 2A, BW 30M, CF 5300M, c1, 13dBi



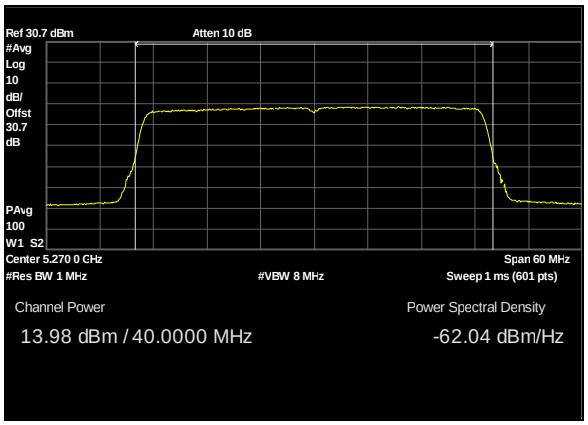
Plot 47. Conducted Transmitter Output Power, UNII 2A, BW 30M, CF 5335M, c0, 13dBi



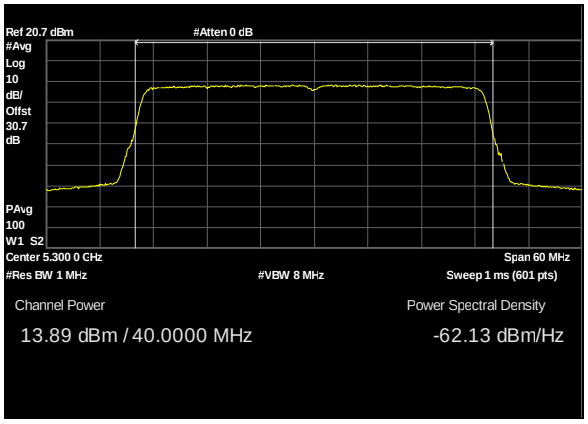
Plot 48. Conducted Transmitter Output Power, UNII 2A, BW 30M, CF 5335M, c1, 13dBi



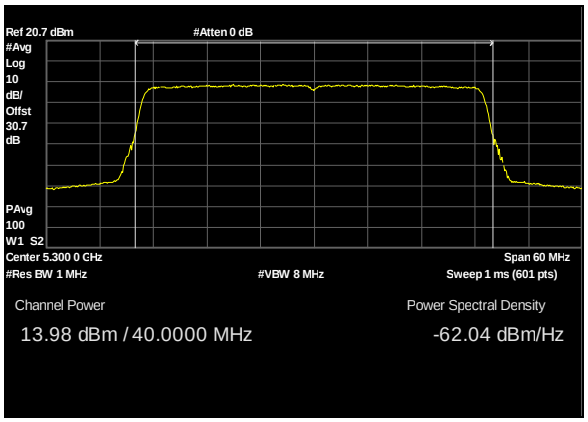
Plot 49. Conducted Transmitter Output Power, UNII 2A, BW 40M, CF 5270M, c0, 13dBi



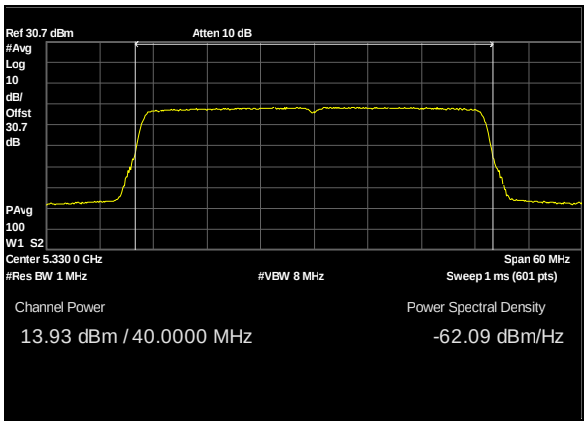
Plot 50. Conducted Transmitter Output Power, UNII 2A, BW 40M, CF 5270M, c1, 13dBi



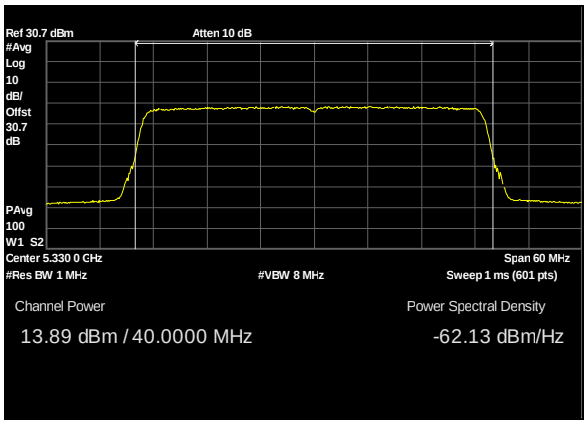
Plot 51. Conducted Transmitter Output Power, UNII 2A, BW 40M, CF 5300M, c0, 13dBi



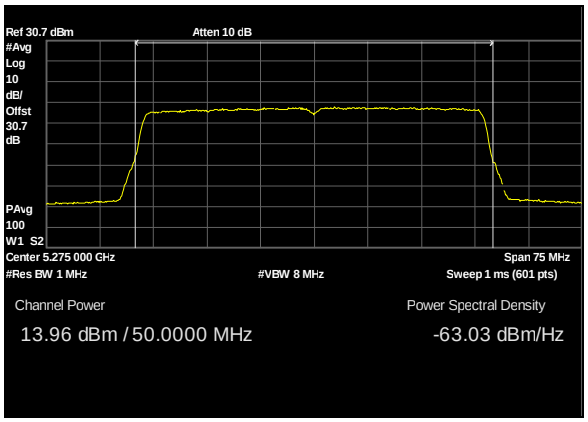
Plot 52. Conducted Transmitter Output Power, UNII 2A, BW 40M, CF 5300M, c1, 13dBi



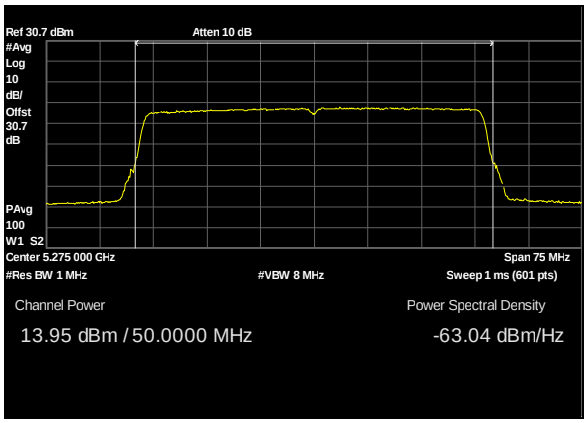
Plot 53. Conducted Transmitter Output Power, UNII 2A, BW 40M, CF 5330M, c0, 13dBi



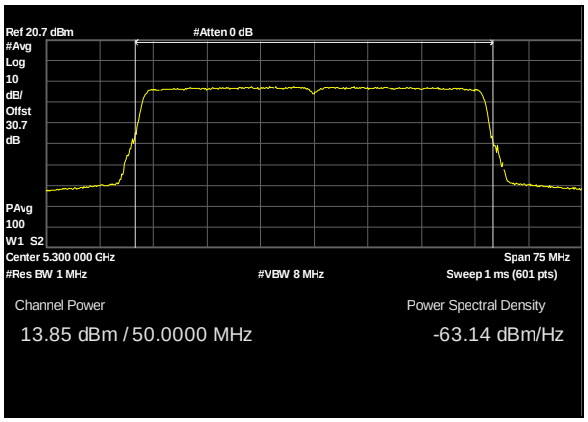
Plot 54. Conducted Transmitter Output Power, UNII 2A, BW 40M, CF 5330M, c1, 13dBi



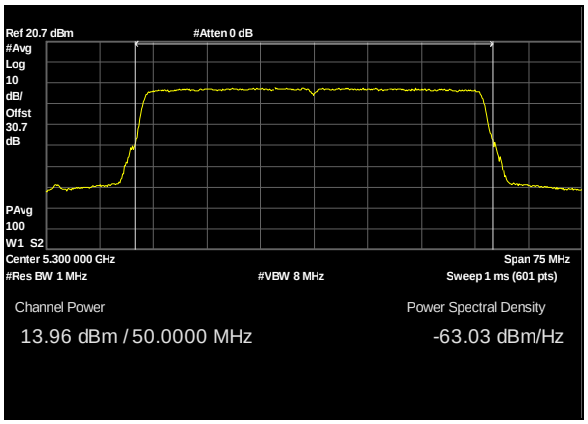
Plot 55. Conducted Transmitter Output Power, UNII 2A, BW 50M, CF 5275M, c0, 13dBi



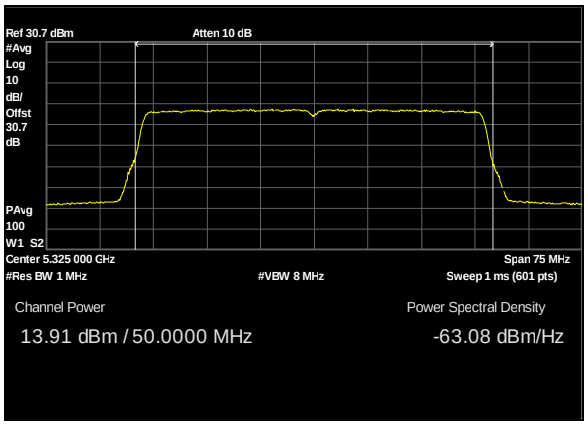
Plot 56. Conducted Transmitter Output Power, UNII 2A, BW 50M, CF 5275M, c1, 13dBi



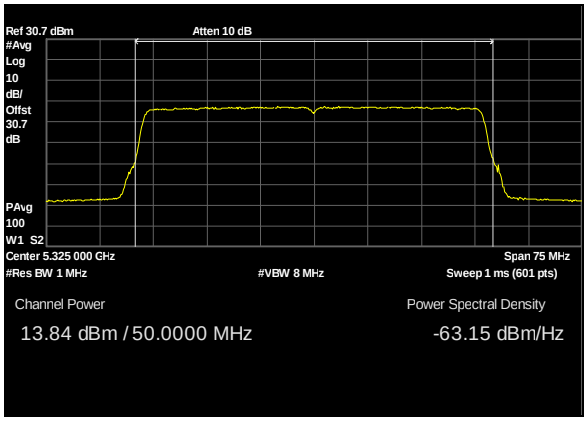
Plot 57. Conducted Transmitter Output Power, UNII 2A, BW 50M, CF 5300M, c0, 13dBi



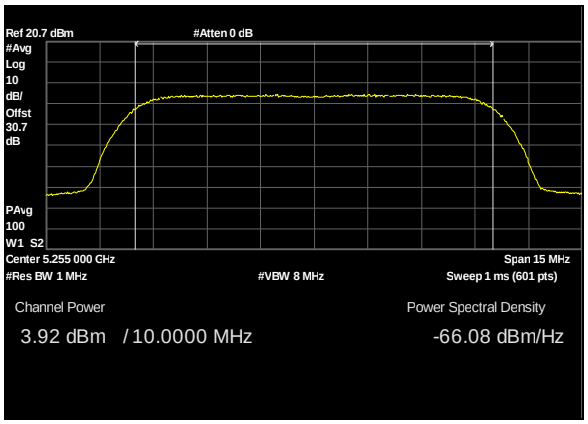
Plot 58. Conducted Transmitter Output Power, UNII 2A, BW 50M, CF 5300M, c1, 13dBi



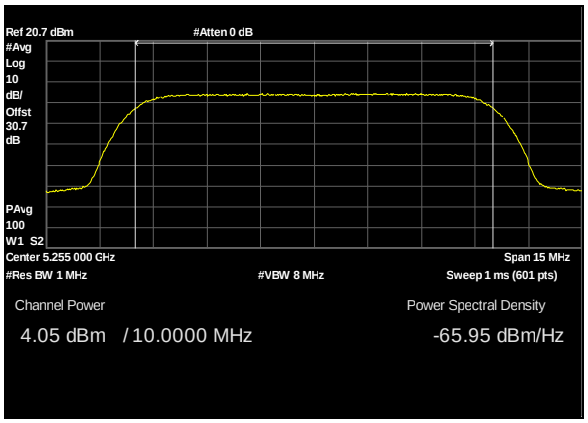
Plot 59. Conducted Transmitter Output Power, UNII 2A, BW 50M, CF 5325M, c0, 13dBi



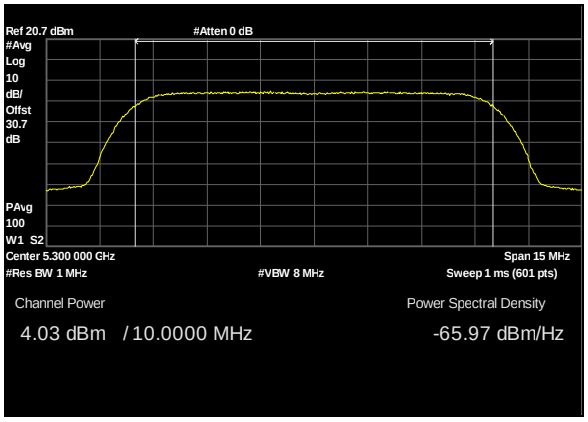
Plot 60. Conducted Transmitter Output Power, UNII 2A, BW 50M, CF 5325M, c1, 13dBi



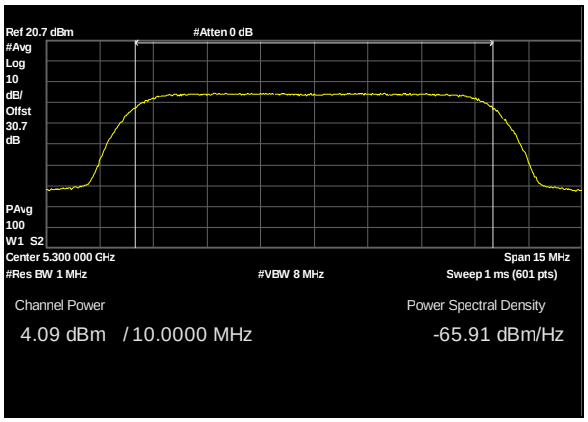
Plot 61. Conducted Transmitter Output Power, UNII 2A, BW 10M, CF 5255M, c0, 19dBi



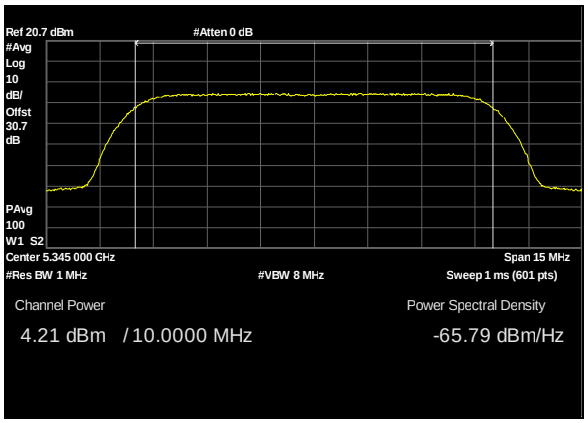
Plot 62. Conducted Transmitter Output Power, UNII 2A, BW 10M, CF 5255M, c1, 19dBi



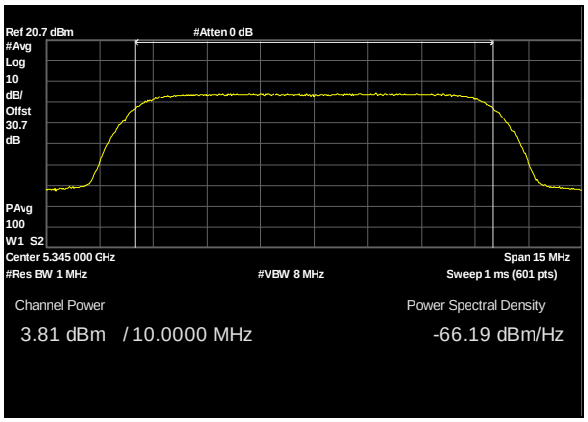
Plot 63. Conducted Transmitter Output Power, UNII 2A, BW 10M, CF 5300M, c0, 19dBi



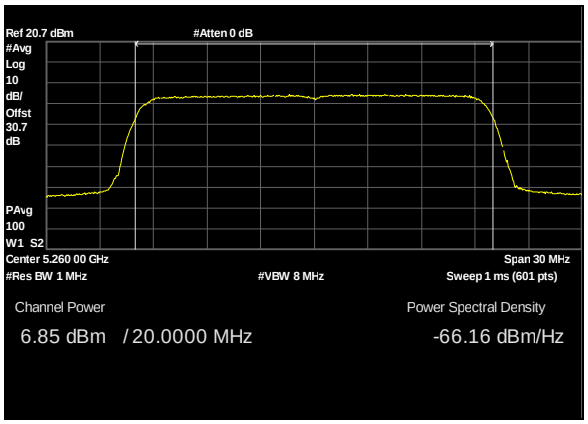
Plot 64. Conducted Transmitter Output Power, UNII 2A, BW 10M, CF 5300M, c1, 19dBi



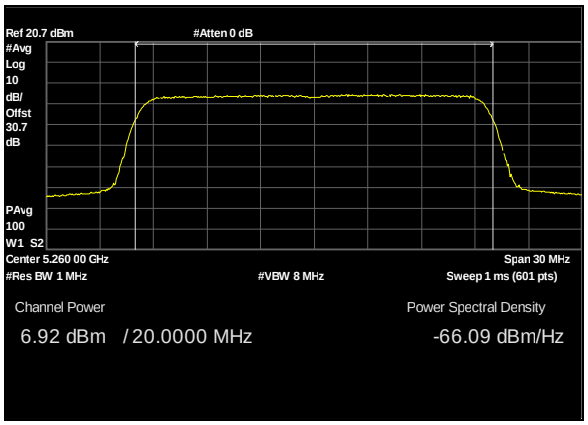
Plot 65. Conducted Transmitter Output Power, UNII 2A, BW 10M, CF 5345M, c0, 19dBi



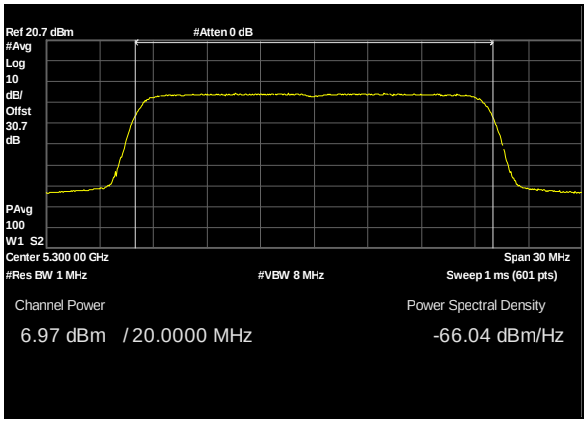
Plot 66. Conducted Transmitter Output Power, UNII 2A, BW 10M, CF 5345M, c1, 19dBi



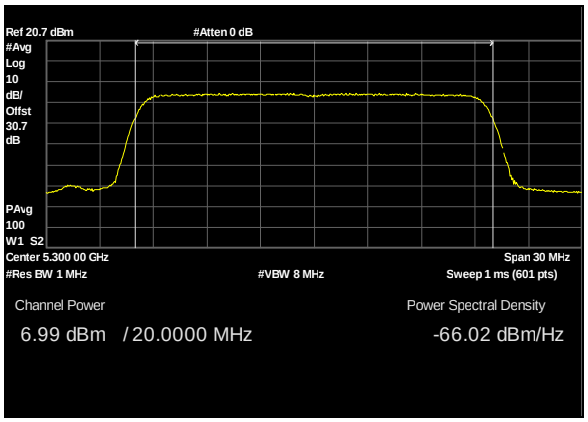
Plot 67. Conducted Transmitter Output Power, UNII 2A, BW 20M, CF 5260M, c0, 19dBi



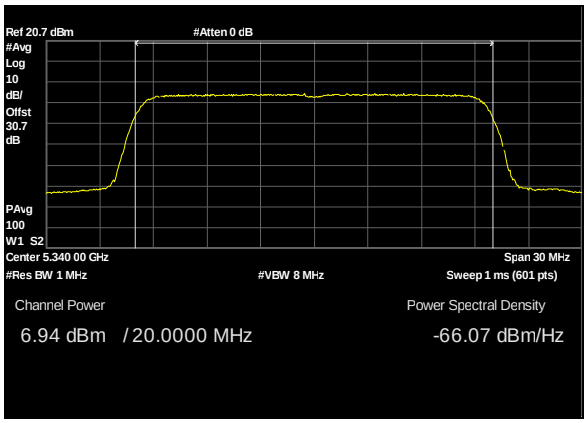
Plot 68. Conducted Transmitter Output Power, UNII 2A, BW 20M, CF 5260M, c1, 19dBi



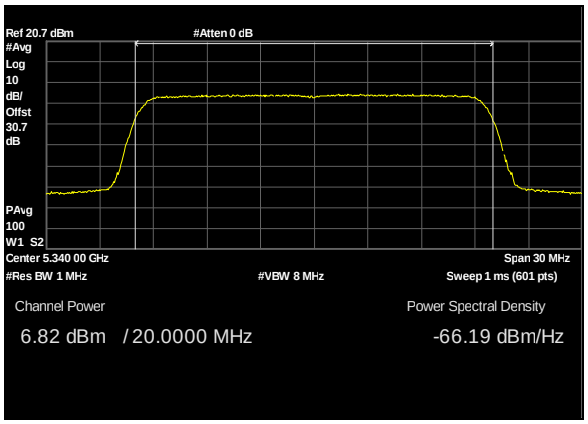
Plot 69. Conducted Transmitter Output Power, UNII 2A, BW 20M, CF 5300M, c0, 19dBi



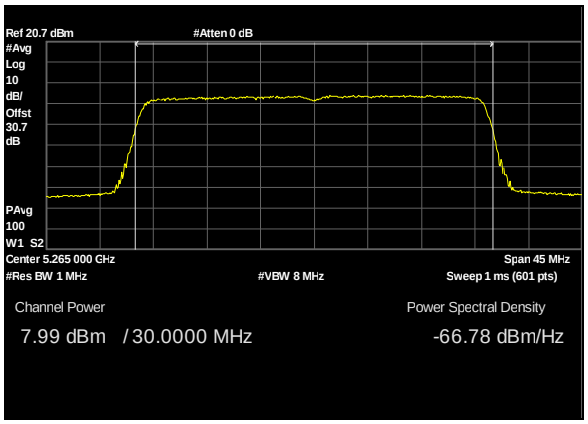
Plot 70. Conducted Transmitter Output Power, UNII 2A, BW 20M, CF 5300M, c1, 19dBi



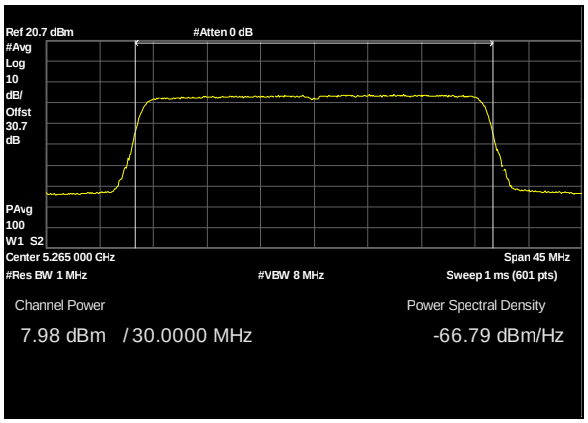
Plot 71. Conducted Transmitter Output Power, UNII 2A, BW 20M, CF 5340M, c0, 19dBi



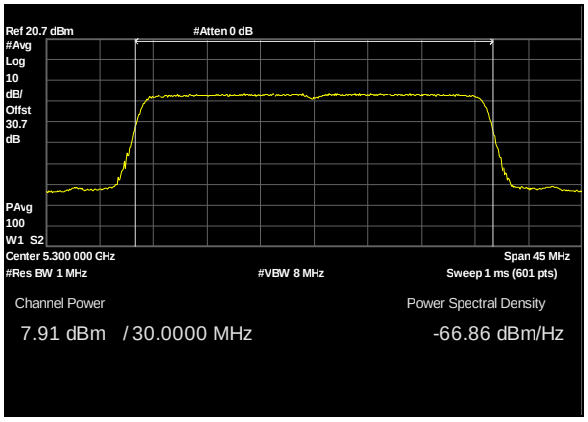
Plot 72. Conducted Transmitter Output Power, UNII 2A, BW 20M, CF 5340M, c1, 19dBi



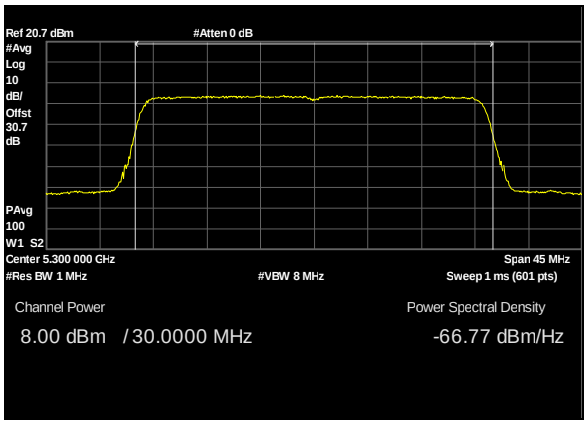
Plot 73. Conducted Transmitter Output Power, UNII 2A, BW 30M, CF 5265M, c0, 19dBi



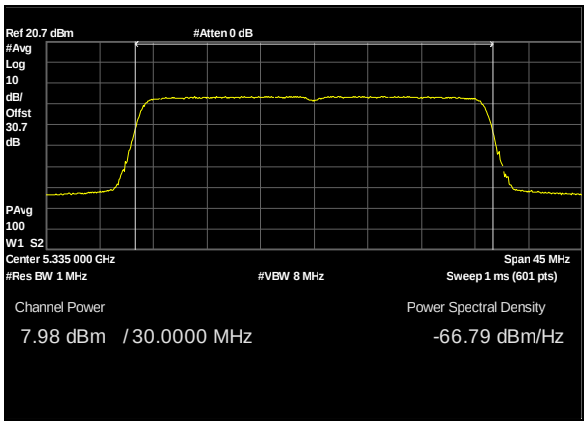
Plot 74. Conducted Transmitter Output Power, UNII 2A, BW 30M, CF 5265M, c1, 19dBi



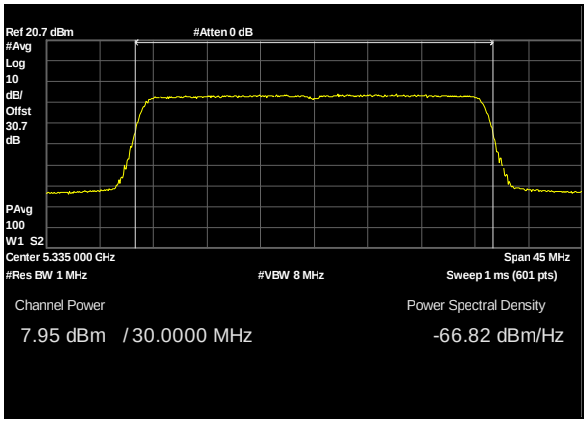
Plot 75. Conducted Transmitter Output Power, UNII 2A, BW 30M, CF 5300M, c0, 19dBi



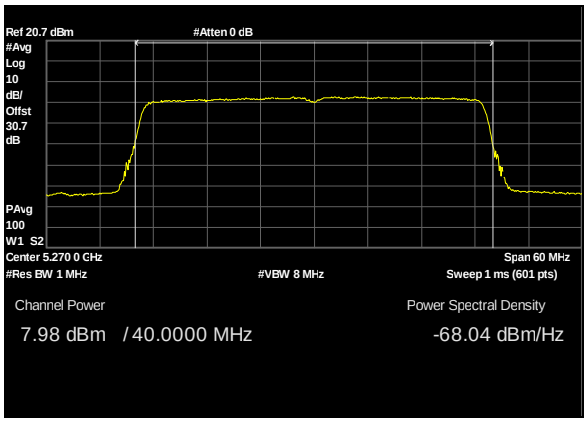
Plot 76. Conducted Transmitter Output Power, UNII 2A, BW 30M, CF 5300M, c1, 19dBi



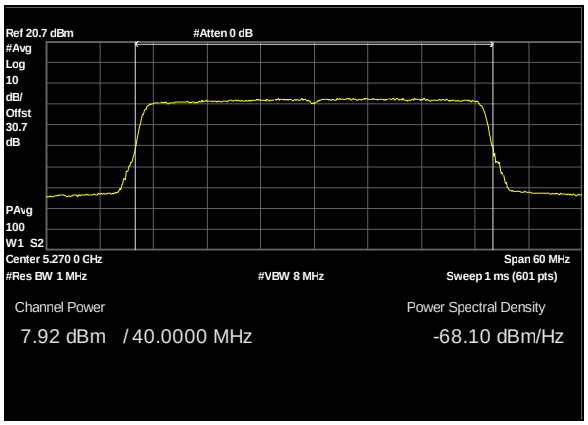
Plot 77. Conducted Transmitter Output Power, UNII 2A, BW 30M, CF 5335M, c0, 19dBi



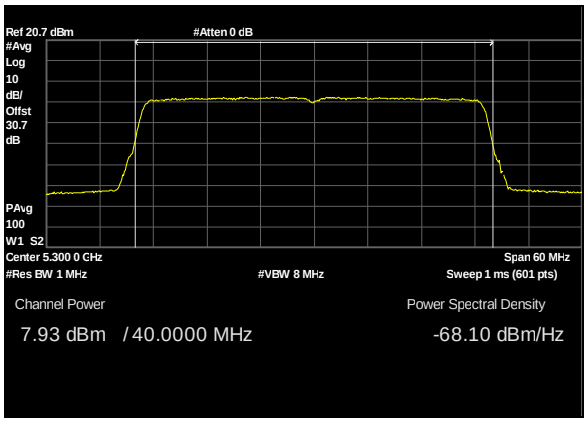
Plot 78. Conducted Transmitter Output Power, UNII 2A, BW 30M, CF 5335M, c1, 19dBi



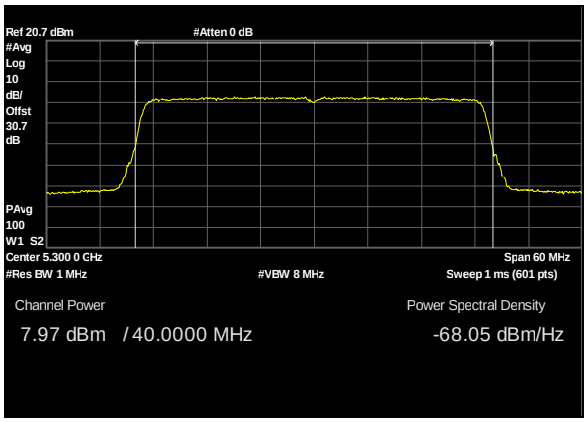
Plot 79. Conducted Transmitter Output Power, UNII 2A, BW 40M, CF 5270M, c0, 19dBi



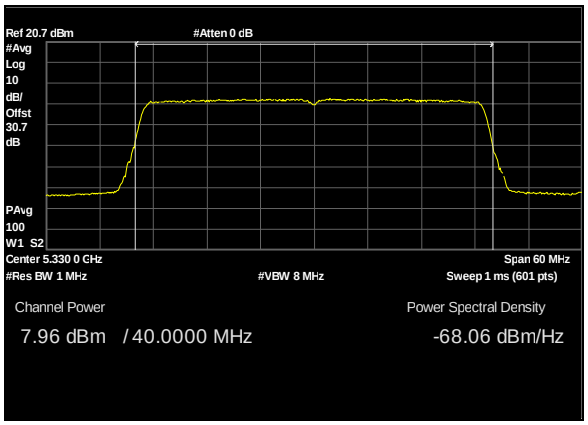
Plot 80. Conducted Transmitter Output Power, UNII 2A, BW 40M, CF 5270M, c1, 19dBi



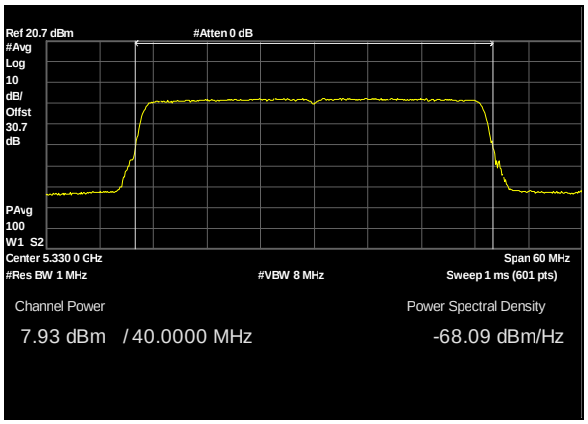
Plot 81. Conducted Transmitter Output Power, UNII 2A, BW 40M, CF 5300M, c0, 19dBi



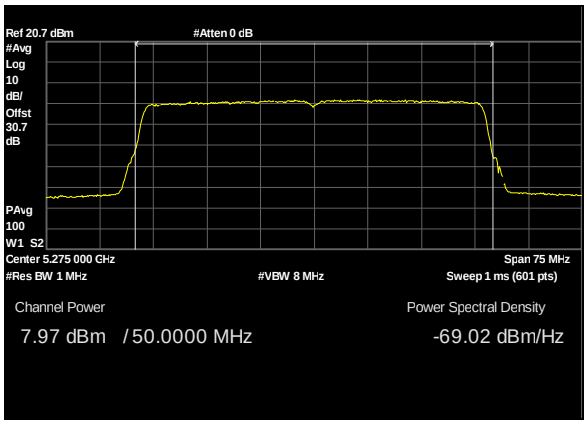
Plot 82. Conducted Transmitter Output Power, UNII 2A, BW 40M, CF 5300M, c1, 19dBi



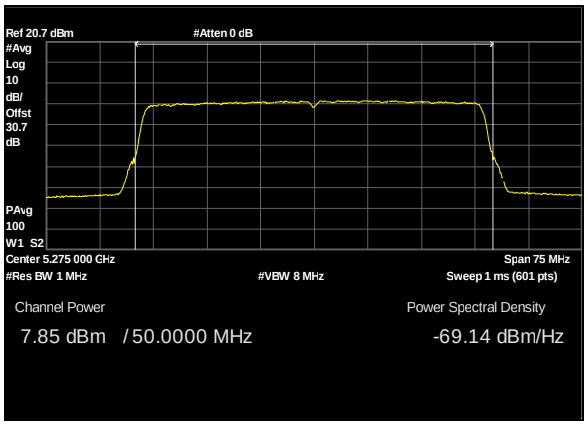
Plot 83. Conducted Transmitter Output Power, UNII 2A, BW 40M, CF 5330M, c0, 19dBi



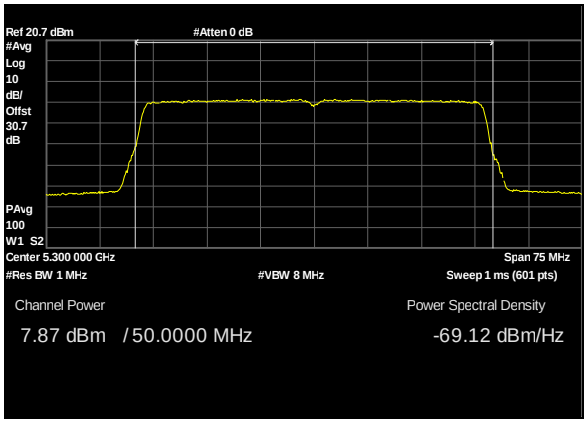
Plot 84. Conducted Transmitter Output Power, UNII 2A, BW 40M, CF 5330M, c1, 19dBi



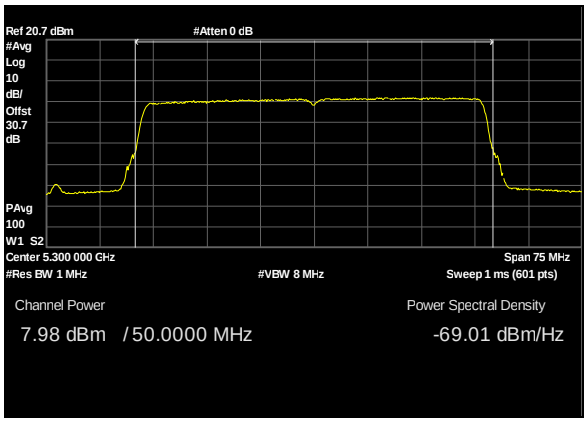
Plot 85. Conducted Transmitter Output Power, UNII 2A, BW 50M, CF 5275M, c0, 19dBi



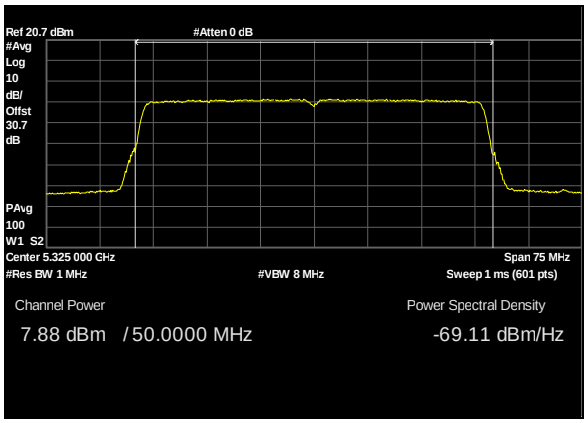
Plot 86. Conducted Transmitter Output Power, UNII 2A, BW 50M, CF 5275M, c1, 19dBi



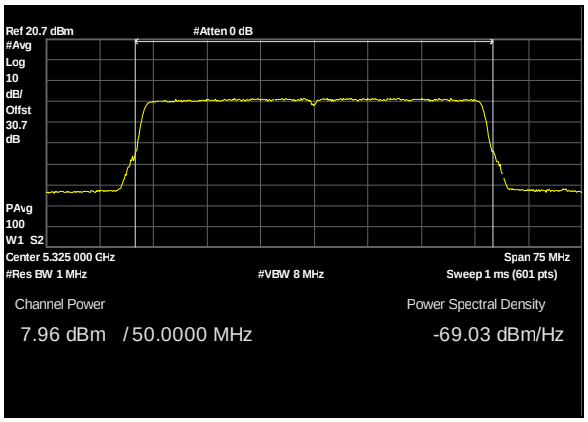
Plot 87. Conducted Transmitter Output Power, UNII 2A, BW 50M, CF 5300M, c0, 19dBi



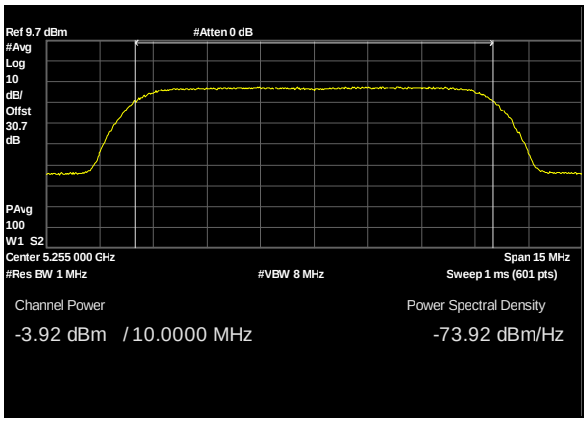
Plot 88. Conducted Transmitter Output Power, UNII 2A, BW 50M, CF 5300M, c1, 19dBi



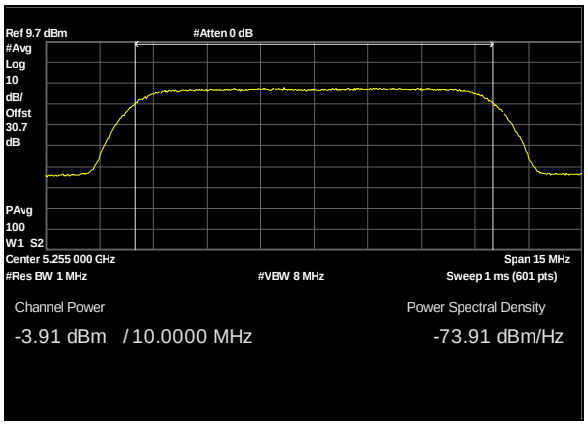
Plot 89. Conducted Transmitter Output Power, UNII 2A, BW 50M, CF 5325M, c0, 19dBi



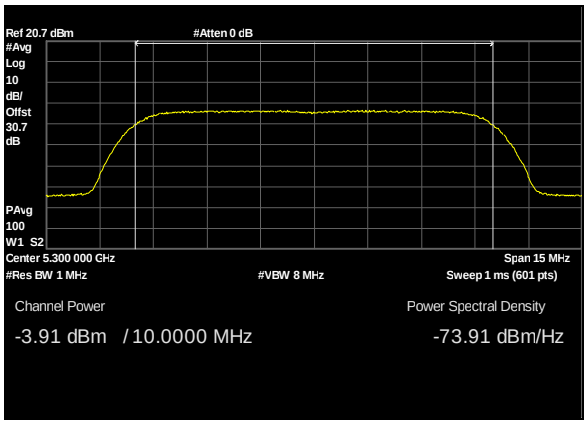
Plot 90. Conducted Transmitter Output Power, UNII 2A, BW 50M, CF 5325M, c1, 19dBi



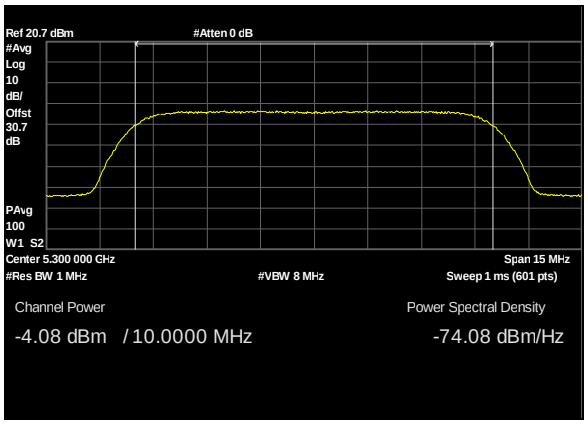
Plot 91. Conducted Transmitter Output Power, UNII 2A, BW 10M, CF 5255M, c0, 27dBi



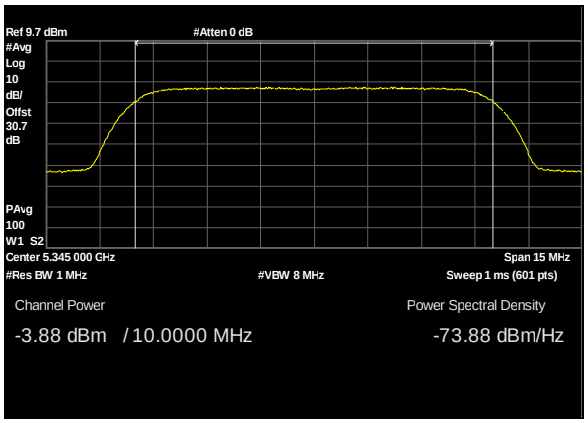
Plot 92. Conducted Transmitter Output Power, UNII 2A, BW 10M, CF 5255M, c1, 27dBi



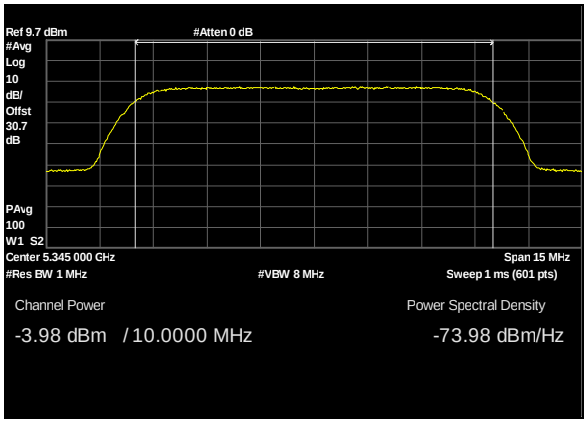
Plot 93. Conducted Transmitter Output Power, UNII 2A, BW 10M, CF 5300M, c0, 27dBi



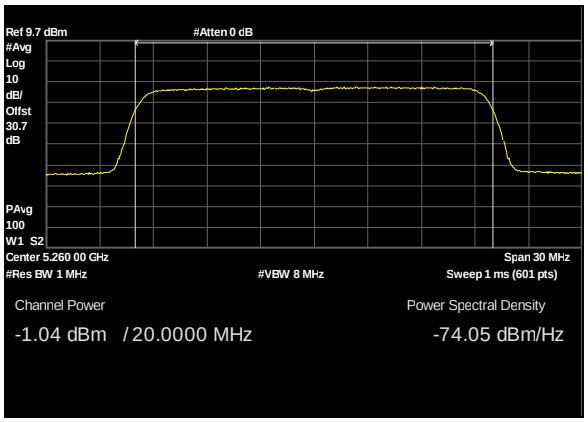
Plot 94. Conducted Transmitter Output Power, UNII 2A, BW 10M, CF 5300M, c1, 27dBi



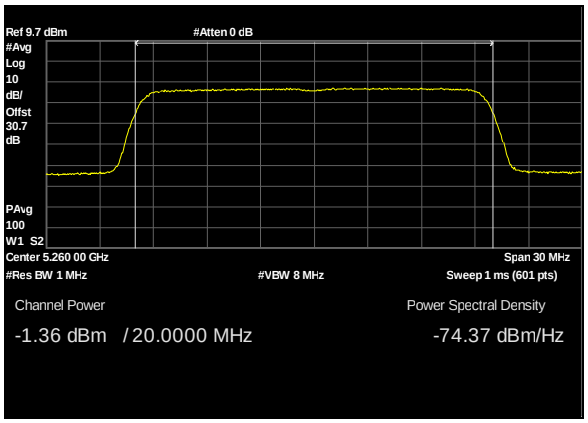
Plot 95. Conducted Transmitter Output Power, UNII 2A, BW 10M, CF 5345M, c0, 27dBi



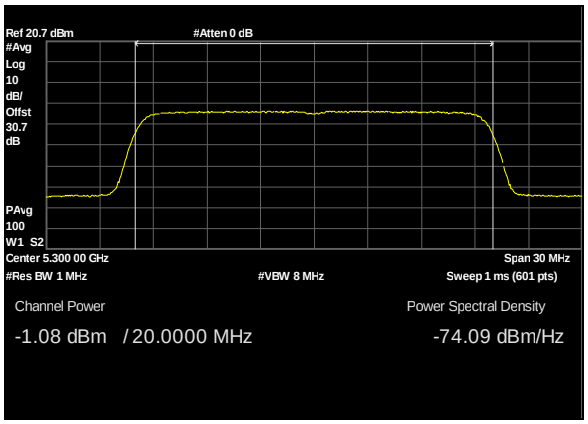
Plot 96. Conducted Transmitter Output Power, UNII 2A, BW 10M, CF 5345M, c1, 27dBi



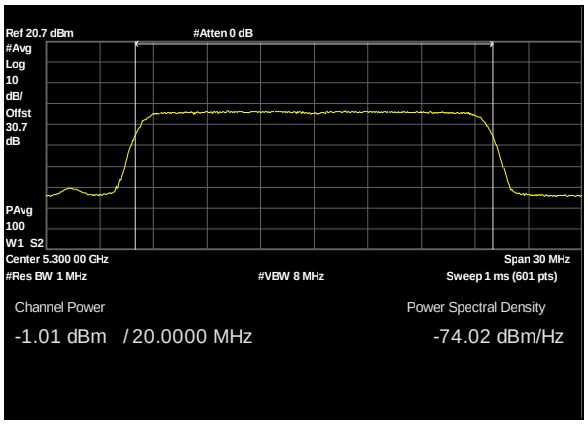
Plot 97. Conducted Transmitter Output Power, UNII 2A, BW 20M, CF 5260M, c0, 27dBi



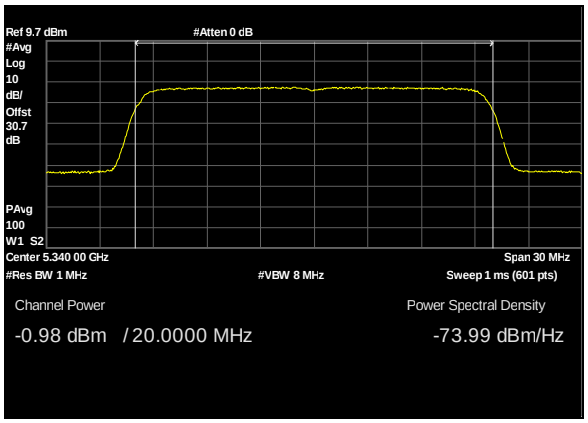
Plot 98. Conducted Transmitter Output Power, UNII 2A, BW 20M, CF 5260M, c1, 27dBi



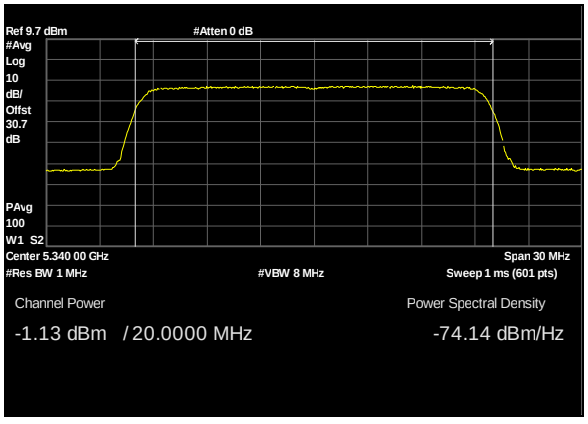
Plot 99. Conducted Transmitter Output Power, UNII 2A, BW 20M, CF 5300M, c0, 27dBi



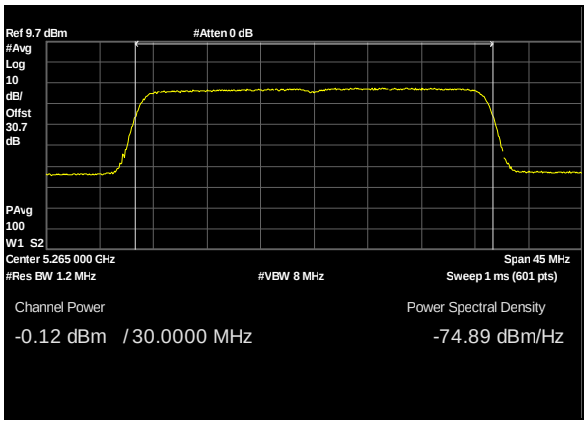
Plot 100. Conducted Transmitter Output Power, UNII 2A, BW 20M, CF 5300M, c1, 27dBi



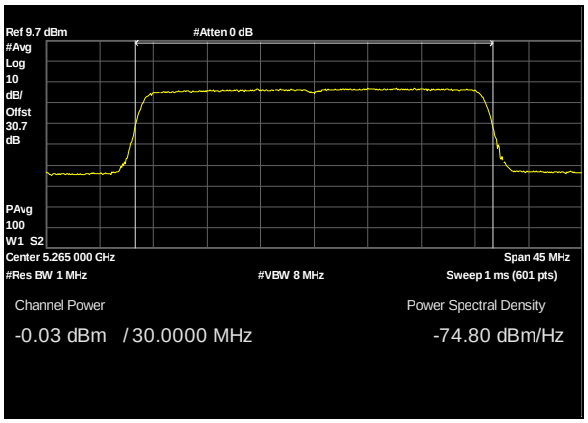
Plot 101. Conducted Transmitter Output Power, UNII 2A, BW 20M, CF 5340M, c0, 27dBi



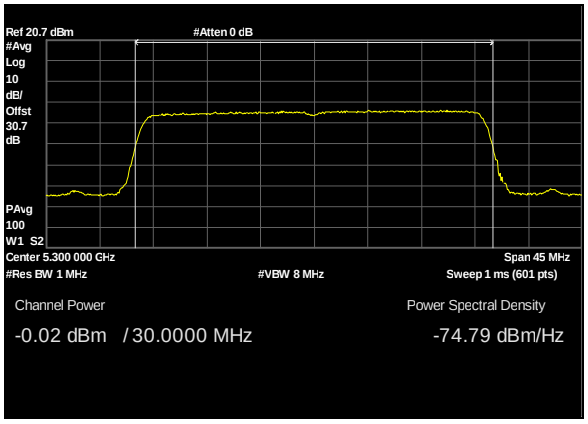
Plot 102. Conducted Transmitter Output Power, UNII 2A, BW 20M, CF 5340M, c1, 27dBi



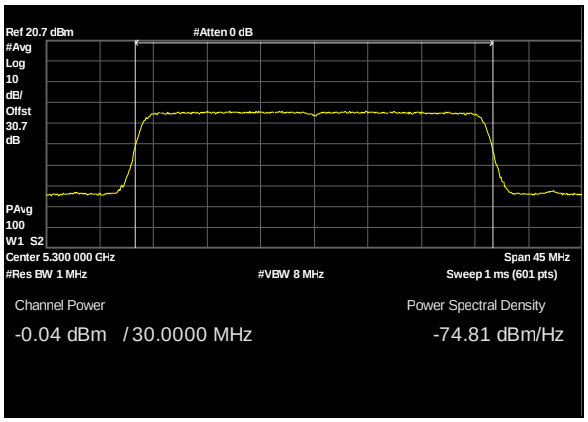
Plot 103. Conducted Transmitter Output Power, UNII 2A, BW 30M, CF 5265M, c0, 27dBi



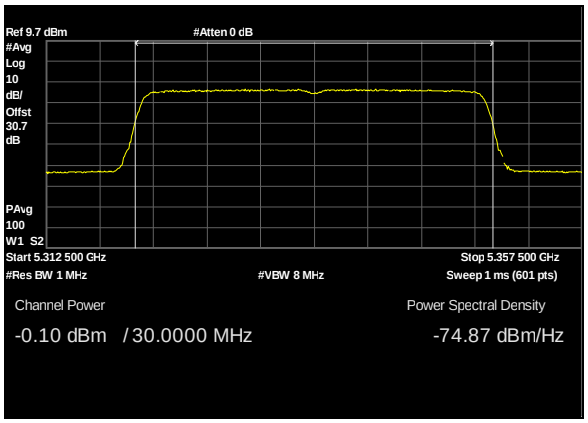
Plot 104. Conducted Transmitter Output Power, UNII 2A, BW 30M, CF 5265M, c1, 27dBi



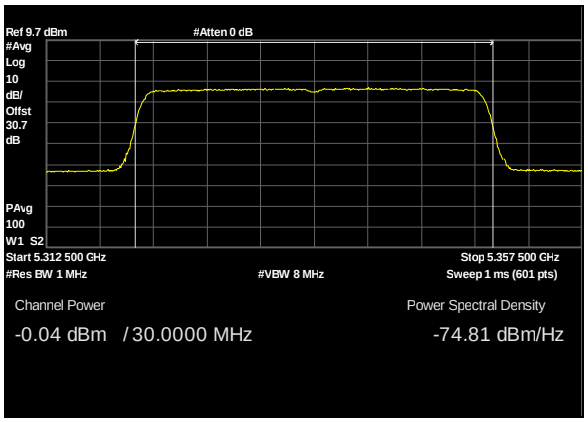
Plot 105. Conducted Transmitter Output Power, UNII 2A, BW 30M, CF 5300M, c0, 27dBi



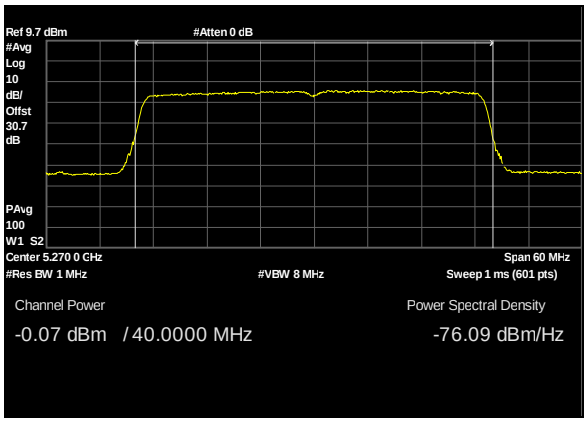
Plot 106. Conducted Transmitter Output Power, UNII 2A, BW 30M, CF 5300M, c1, 27dBi



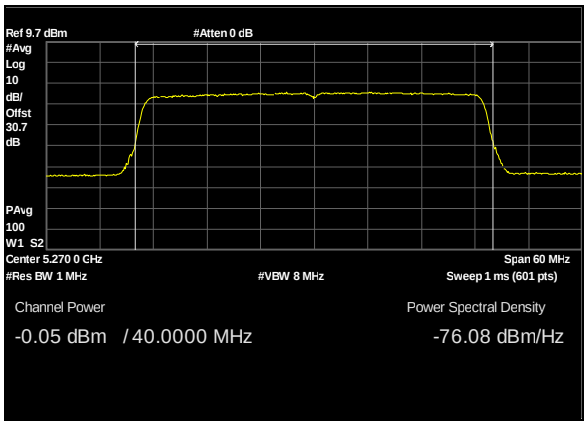
Plot 107. Conducted Transmitter Output Power, UNII 2A, BW 30M, CF 5335M, c0, 27dBi



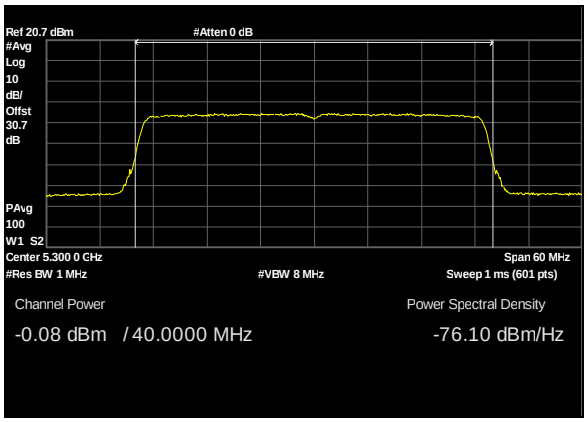
Plot 108. Conducted Transmitter Output Power, UNII 2A, BW 30M, CF 5335M, c1, 27dBi



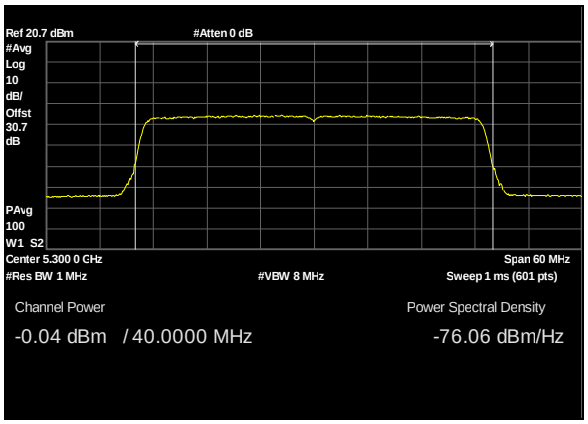
Plot 109. Conducted Transmitter Output Power, UNII 2A, BW 40M, CF 5270M, c0, 27dBi



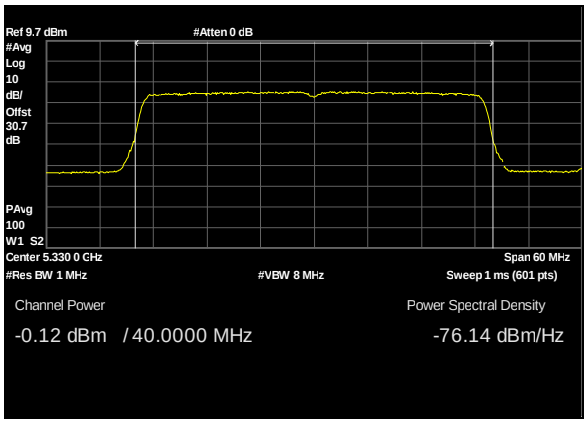
Plot 110. Conducted Transmitter Output Power, UNII 2A, BW 40M, CF 5270M, c1, 27dBi



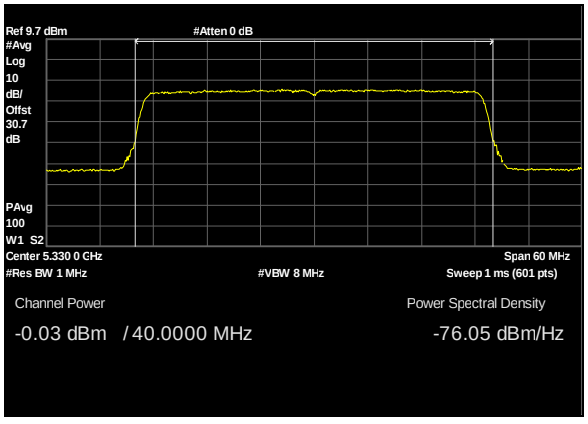
Plot 111. Conducted Transmitter Output Power, UNII 2A, BW 40M, CF 5300M, c0, 27dBi



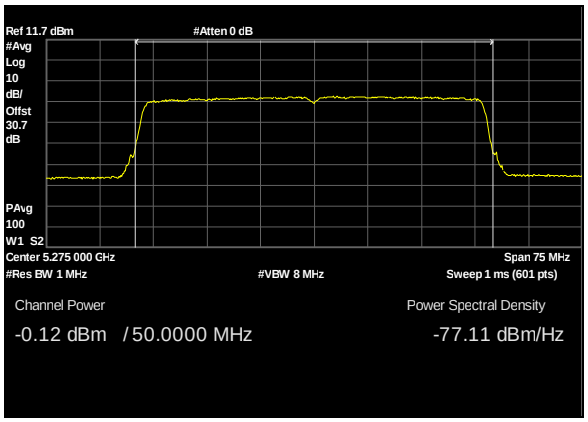
Plot 112. Conducted Transmitter Output Power, UNII 2A, BW 40M, CF 5300M, c1, 27dBi



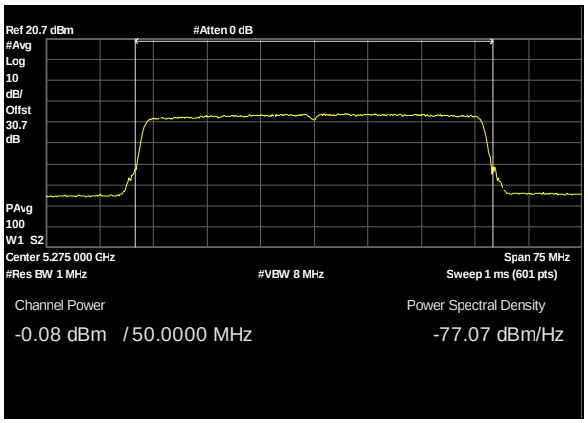
Plot 113. Conducted Transmitter Output Power, UNII 2A, BW 40M, CF 5330M, c0, 27dBi



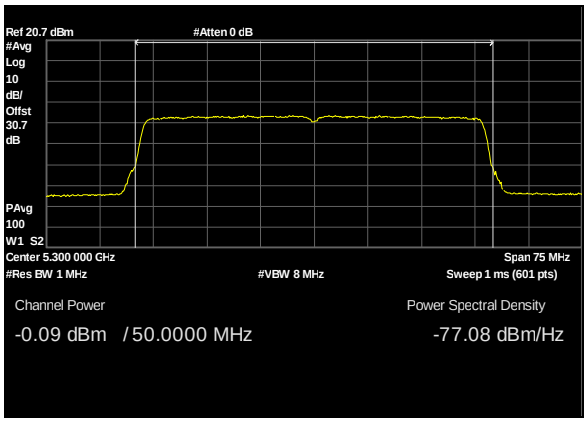
Plot 114. Conducted Transmitter Output Power, UNII 2A, BW 40M, CF 5330M, c1, 27dBi



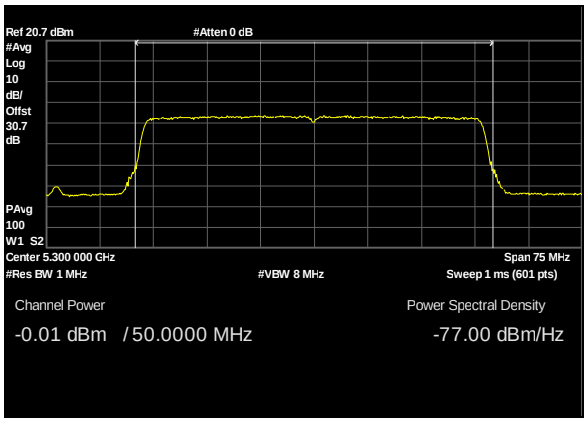
Plot 115. Conducted Transmitter Output Power, UNII 2A, BW 50M, CF 5275M, c0, 27dBi



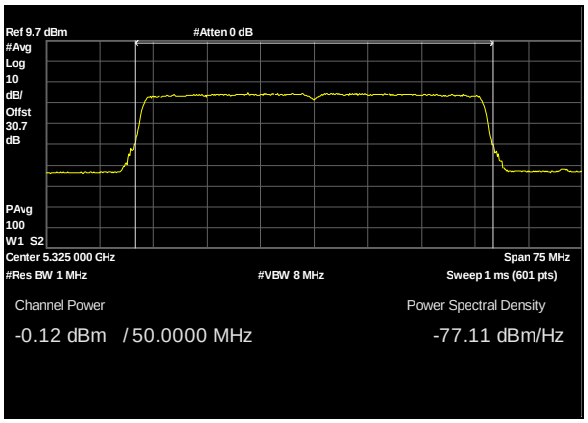
Plot 116. Conducted Transmitter Output Power, UNII 2A, BW 50M, CF 5275M, c1, 27dBi



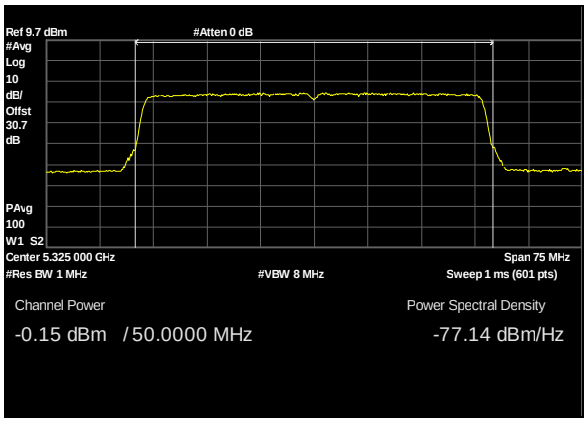
Plot 117. Conducted Transmitter Output Power, UNII 2A, BW 50M, CF 5300M, c0, 27dBi



Plot 118. Conducted Transmitter Output Power, UNII 2A, BW 50M, CF 5300M, c1, 27dBi



Plot 119. Conducted Transmitter Output Power, UNII 2A, BW 50M, CF 5325M, c0, 27dBi



Plot 120. Conducted Transmitter Output Power, UNII 2A, BW 50M, CF 5325M, c1, 27dBi

Output Power, UNII2C

Channel BW (MHz)	Frequency (MHz)	Chain 0 (dBm)	Chain 1 (dBm)	Sum (dBm)	Limit (dBm)	Directional Gain (dBi)	Final Limit (dBm)	Margin (dB)
10	5475	9.99	10.15	13.08	21.15	13	14.15	-1.068
	5600	9.81	10.12	12.98	21.16	13	14.16	-1.181
	5720	9.86	10.01	12.95	21.15	13	14.15	-1.204
20	5480	12.58	12.68	15.64	24	13	17	-1.359
	5600	12.37	13.49	15.98	24	13	17	-1.023
	5715	12.61	13.07	15.86	24	13	17	-1.143
30	5485	13.93	13.6	16.78	24	13	17	-0.221
	5600	14.06	13.83	16.96	24	13	17	-0.043
	5710	13.98	13.9	16.95	24	13	17	-0.049
40	5490	13.69	13.24	16.48	24	13	17	-0.518
	5600	13.89	13.83	16.87	24	13	17	-0.129
	5705	13.94	13.93	16.95	24	13	17	-0.054
50	5495	14.64	13.01	16.91	24	13	17	-0.088
	5600	13.92	13.98	16.96	24	13	17	-0.039
	5700	13.82	13.9	16.87	24	13	17	-0.129

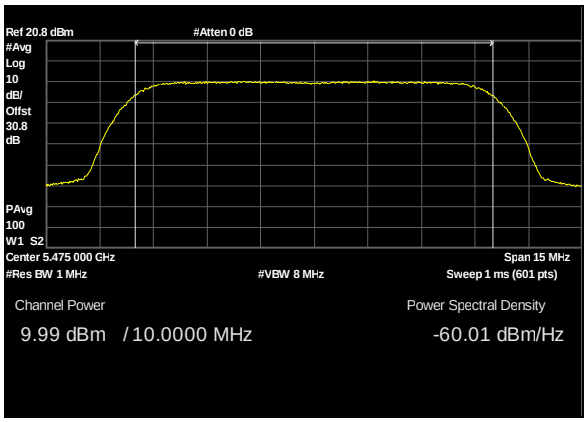
Table 13. Maximum Conducted Transmitter Output Power, UNII 2C, 13 dBi, 2x2, Test Results

Channel BW (MHz)	Frequency (MHz)	Chain 0 (dBm)	Chain 1 (dBm)	Sum (dBm)	Limit (dBm)	Directional Gain (dBi)	Final Limit (dBm)	Margin (dB)
10	5475	4.02	3.76	6.903	21.161	19	8.161	-1.258
	5600	4.15	3.88	7.028	21.149	19	8.149	-1.121
	5720	4.13	4.02	7.086	21.146	19	8.146	-1.06
20	5480	7.16	7.06	10.12	24	19	11	-0.879
	5600	6.91	7.02	9.976	24	19	11	-1.024
	5715	7.29	7.03	10.17	24	19	11	-0.827
30	5485	7.92	7.96	10.95	24	19	11	-0.049
	5600	7.97	7.89	10.94	24	19	11	-0.059
	5710	7.98	7.86	10.93	24	19	11	-0.069
40	5490	7.95	7.94	10.96	24	19	11	-0.044
	5600	8.01	7.87	10.95	24	19	11	-0.049
	5705	7.85	7.98	10.93	24	19	11	-0.074
50	5495	7.86	7.95	10.92	24	19	11	-0.084
	5600	7.92	7.98	10.96	24	19	11	-0.039
	5700	7.87	7.99	10.94	24	19	11	-0.059

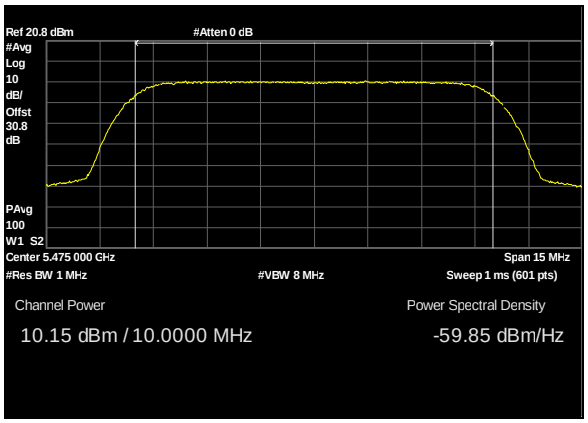
Table 14. Maximum Conducted Transmitter Output Power, UNII 2C, 19 dBi, 2x2, Test Results

Channel BW (MHz)	Frequency (MHz)	Chain 0 (dBm)	Chain 1 (dBm)	Sum (dBm)	Limit (dBm)	Directional Gain (dBi)	Final Limit (dBm)	Margin (dB)
10	5475	-3.76	-4.04	-0.887	21.15	27	0.15	-1.037
	5600	-3.77	-4.16	-0.95	21.16	27	0.16	-1.11
	5720	-3.71	-3.91	-0.798	21.15	27	0.15	-0.948
20	5480	-0.63	-1.07	2.166	24	27	3	-0.834
	5600	-0.74	-1.25	2.023	24	27	3	-0.977
	5715	-0.68	-0.93	2.208	24	27	3	-0.792
30	5485	-0.05	-0.09	2.941	24	27	3	-0.059
	5600	-0.08	-0.09	2.926	24	27	3	-0.074
	5710	-0.08	-0.06	2.941	24	27	3	-0.059
40	5490	-0.04	-0.11	2.936	24	27	3	-0.064
	5600	-0.09	-0.12	2.906	24	27	3	-0.094
	5705	-0.15	-0.03	2.921	24	27	3	-0.079
50	5495	-0.05	-0.02	2.976	24	27	3	-0.024
	5600	-0.06	-0.13	2.916	24	27	3	-0.084
	5700	-0.05	-0.08	2.946	24	27	3	-0.054

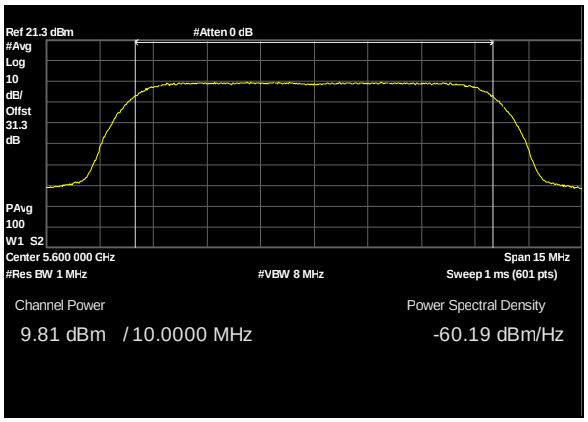
Table 15. Maximum Conducted Transmitter Output Power, UNII 2C, 27 dBi, 2x2, Test Results



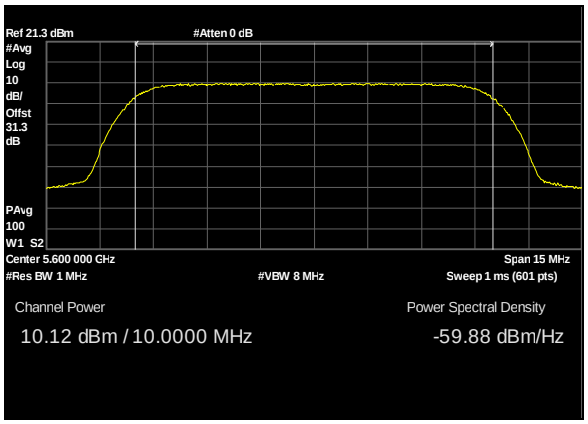
Plot 121. Conducted Transmitter Output Power, UNII 2C, BW 10M, CF 5475M, c0, 13dBi



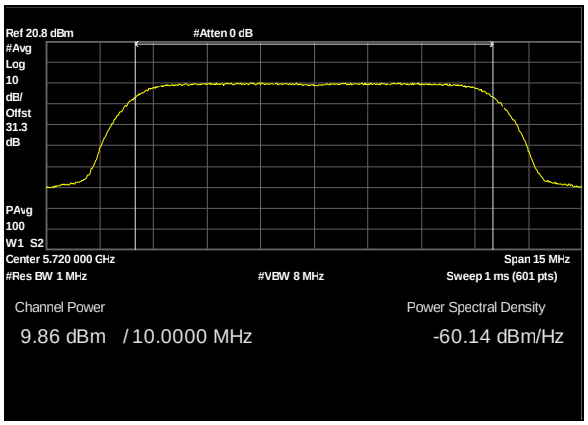
Plot 122. Conducted Transmitter Output Power, UNII 2C, BW 10M, CF 5475M, c1, 13dBi



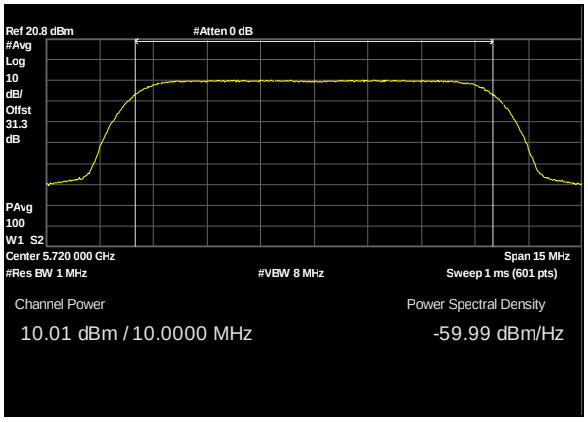
Plot 123. Conducted Transmitter Output Power, UNII 2C, BW 10M, CF 5600M, c0, 13dBi



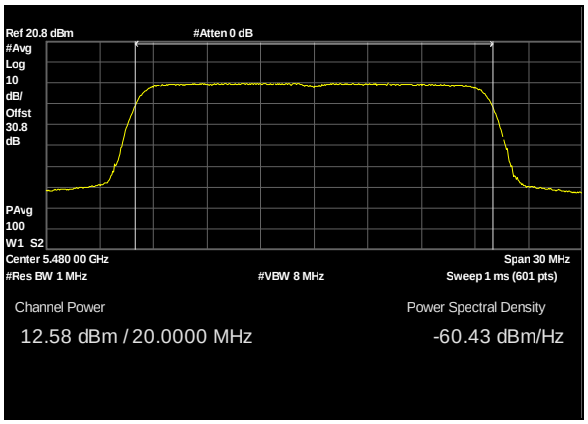
Plot 124. Conducted Transmitter Output Power, UNII 2C, BW 10M, CF 5600M, c1, 13dBi



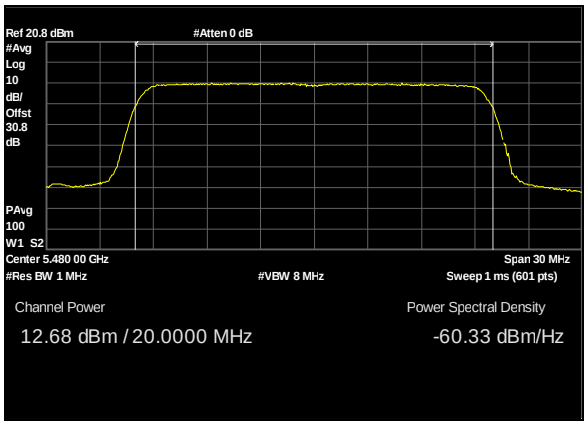
Plot 125. Conducted Transmitter Output Power, UNII 2C, BW 10M, CF 5720M, c0, 13dBi



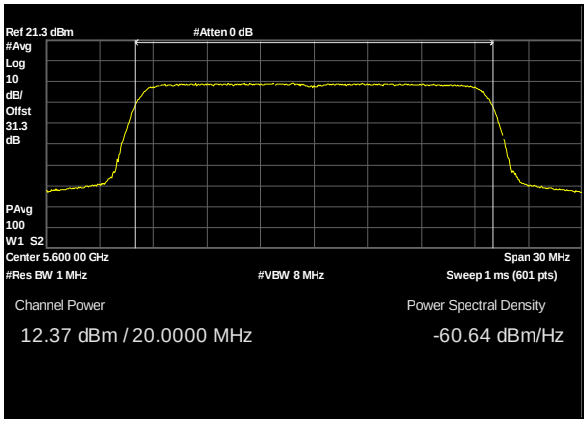
Plot 126. Conducted Transmitter Output Power, UNII 2C, BW 10M, CF 5720M, c1, 13dBi



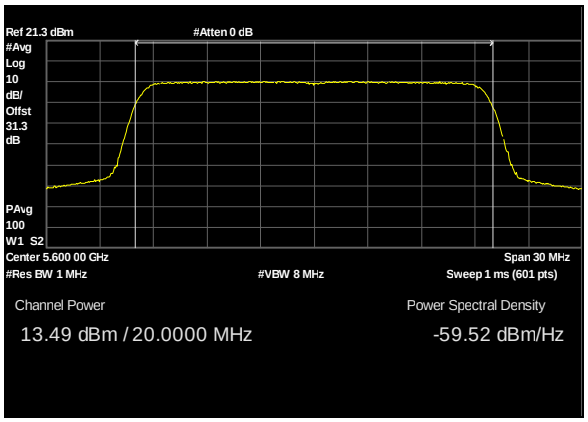
Plot 127. Conducted Transmitter Output Power, UNII 2C, BW 20M, CF 5480M, c0, 13dBi



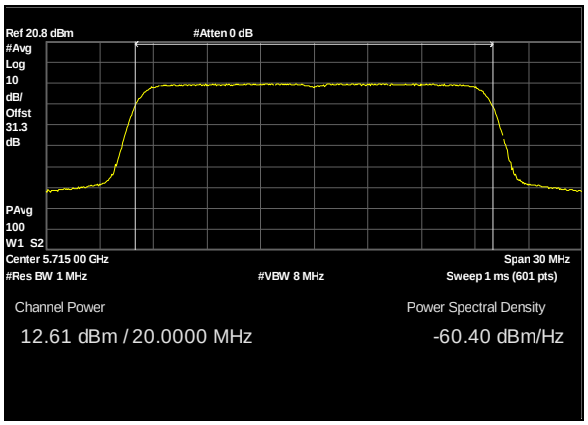
Plot 128. Conducted Transmitter Output Power, UNII 2C, BW 20M, CF 5480M, c1, 13dBi



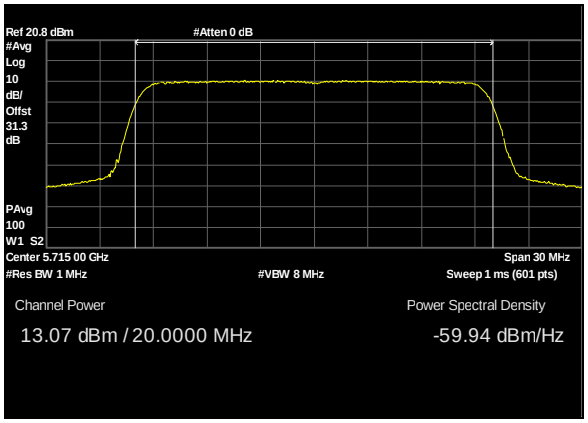
Plot 129. Conducted Transmitter Output Power, UNII 2C, BW 20M, CF 5600M, c0, 13dBi



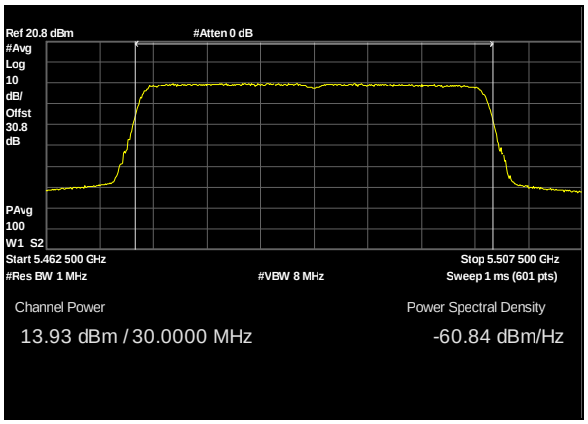
Plot 130. Conducted Transmitter Output Power, UNII 2C, BW 20M, CF 5600M, c1, 13dBi



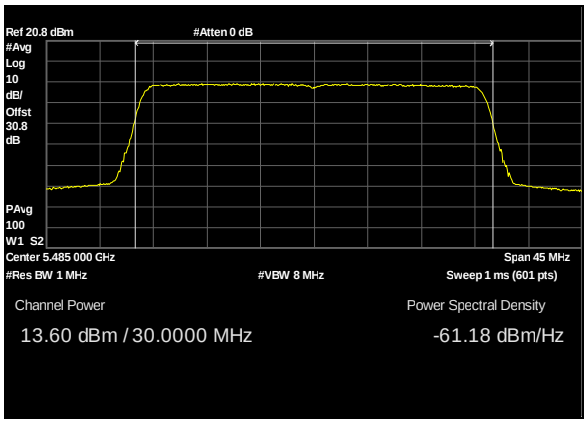
Plot 131. Conducted Transmitter Output Power, UNII 2C, BW 20M, CF 5715M, c0, 13dBi



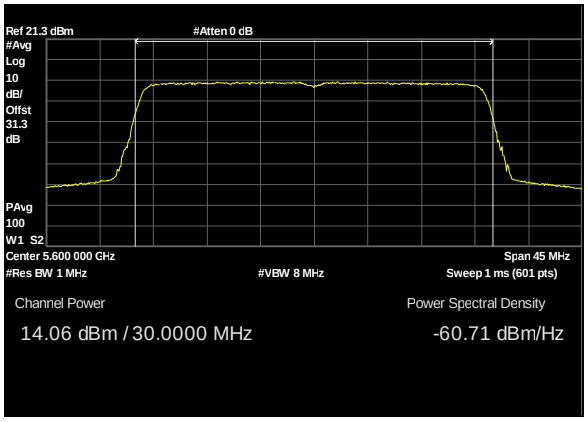
Plot 132. Conducted Transmitter Output Power, UNII 2C, BW 20M, CF 5715M, c1, 13dBi



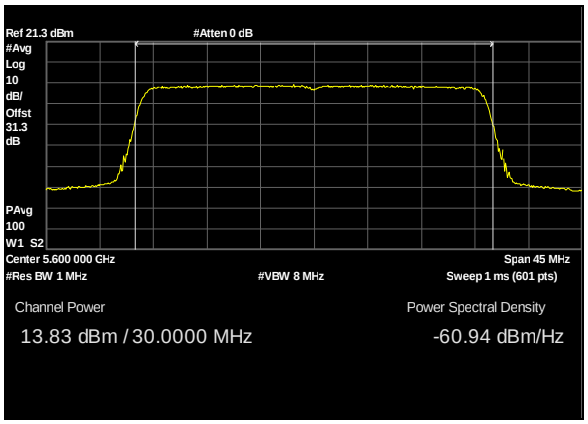
Plot 133. Conducted Transmitter Output Power, UNII 2C, BW 30M, CF 5485M, c0, 13dBi



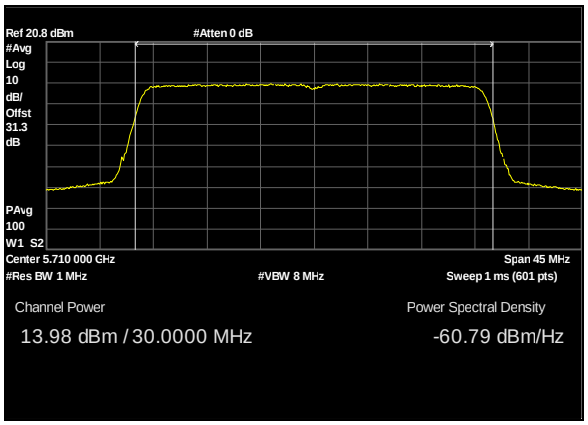
Plot 134. Conducted Transmitter Output Power, UNII 2C, BW 30M, CF 5485M, c1, 13dBi



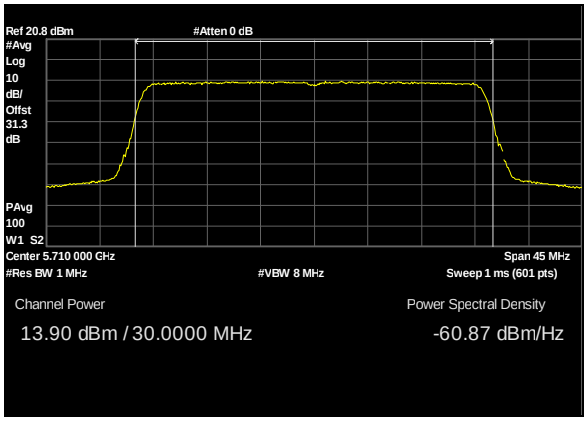
Plot 135. Conducted Transmitter Output Power, UNII 2C, BW 30M, CF 5600M, c0, 13dBi



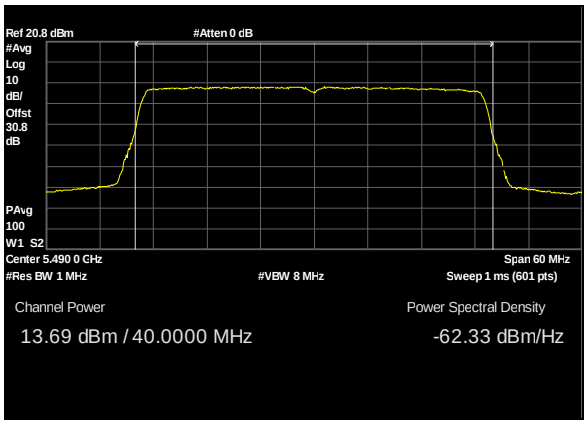
Plot 136. Conducted Transmitter Output Power, UNII 2C, BW 30M, CF 5600M, c1, 13dBi



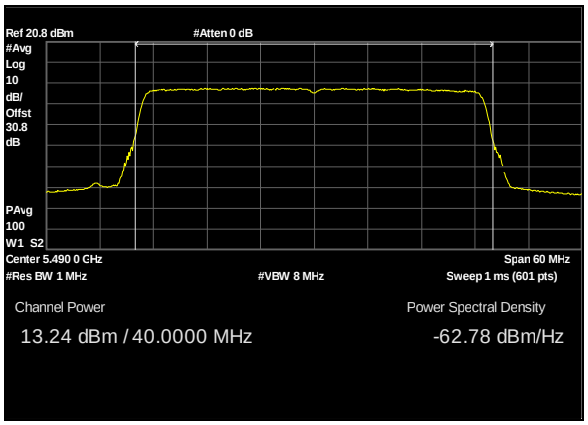
Plot 137. Conducted Transmitter Output Power, UNII 2C, BW 30M, CF 5710M, c0, 13dBi



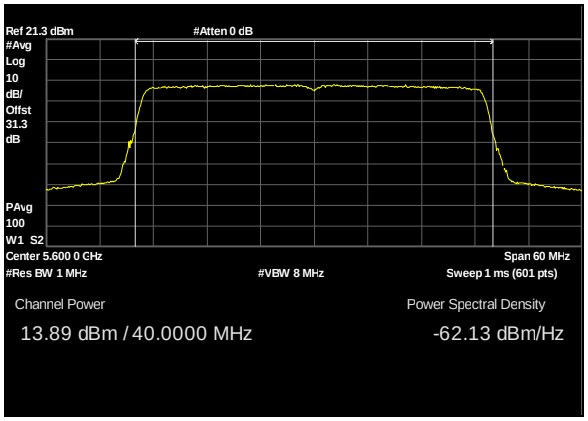
Plot 138. Conducted Transmitter Output Power, UNII 2C, BW 30M, CF 5710M, c1, 13dBi



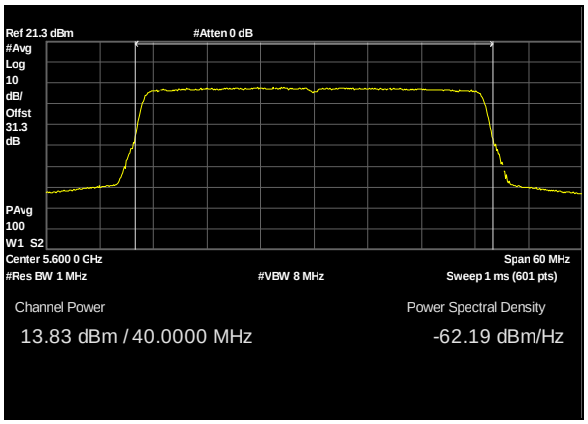
Plot 139. Conducted Transmitter Output Power, UNII 2C, BW 40M, CF 5490M, c0, 13dBi



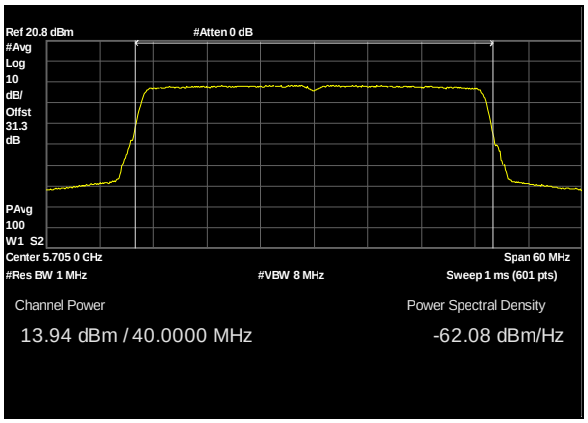
Plot 140. Conducted Transmitter Output Power, UNII 2C, BW 40M, CF 5490M, c1, 13dBi



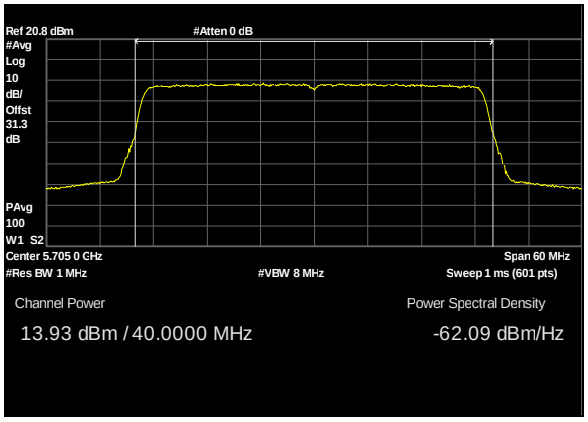
Plot 141. Conducted Transmitter Output Power, UNII 2C, BW 40M, CF 5600M, c0, 13dBi



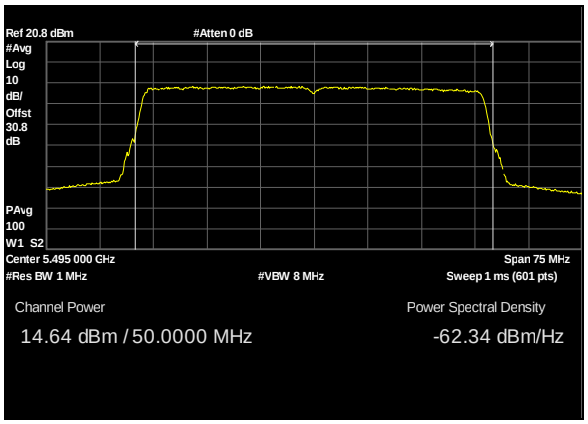
Plot 142. Conducted Transmitter Output Power, UNII 2C, BW 40M, CF 5600M, c1, 13dBi



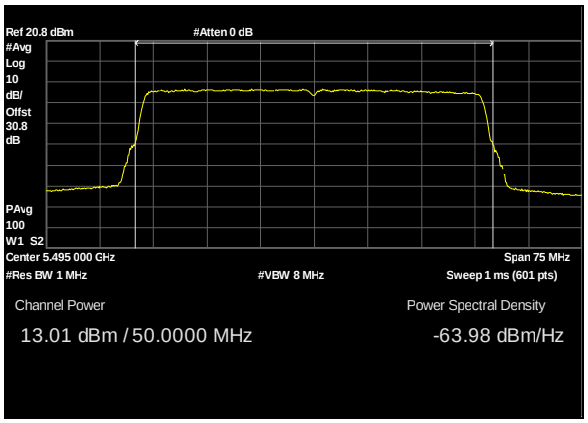
Plot 143. Conducted Transmitter Output Power, UNII 2C, BW 40M, CF 5705M, c0, 13dBi



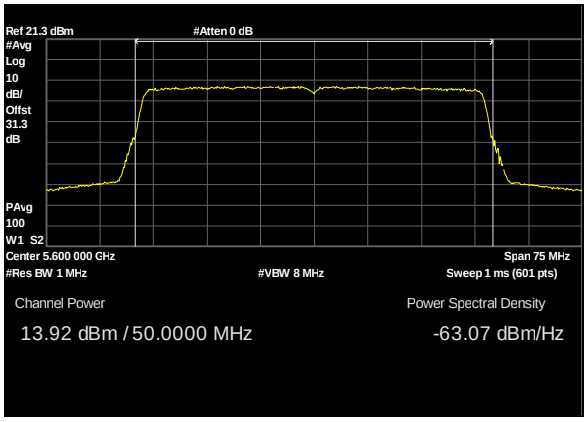
Plot 144. Conducted Transmitter Output Power, UNII 2C, BW 40M, CF 5705M, c1, 13dBi



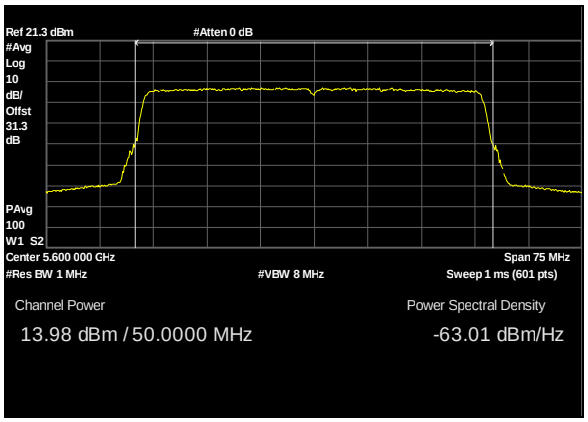
Plot 145. Conducted Transmitter Output Power, UNII 2C, BW 50M, CF 5495M, c0, 13dBi



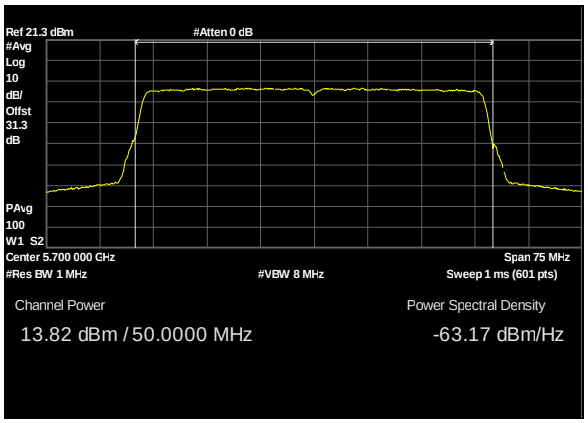
Plot 146. Conducted Transmitter Output Power, UNII 2C, BW 50M, CF 5495M, c1, 13dBi



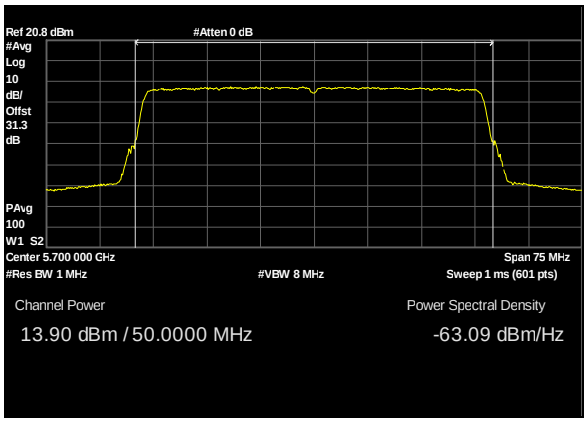
Plot 147. Conducted Transmitter Output Power, UNII 2C, BW 50M, CF 5600M, c0, 13dBi



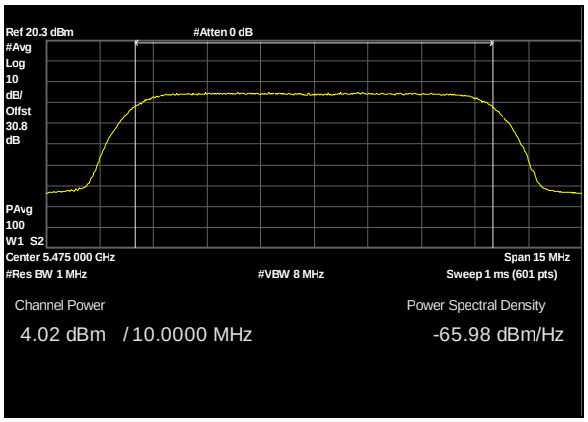
Plot 148. Conducted Transmitter Output Power, UNII 2C, BW 50M, CF 5600M, c1, 13dBi



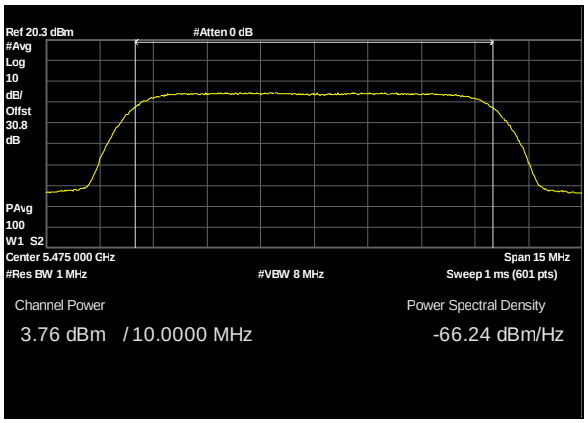
Plot 149. Conducted Transmitter Output Power, UNII 2C, BW 50M, CF 5700M, c0, 13dBi



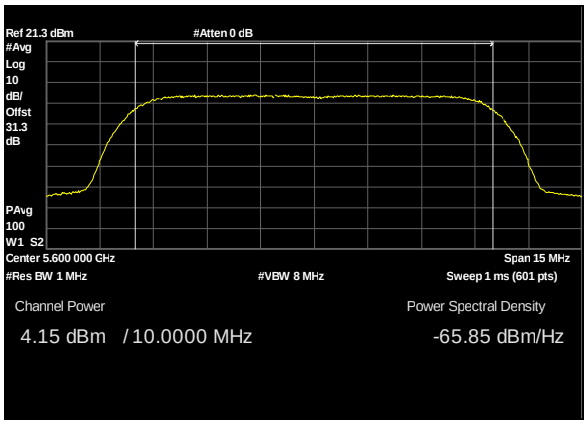
Plot 150. Conducted Transmitter Output Power, UNII 2C, BW 50M, CF 5700M, c1, 13dBi



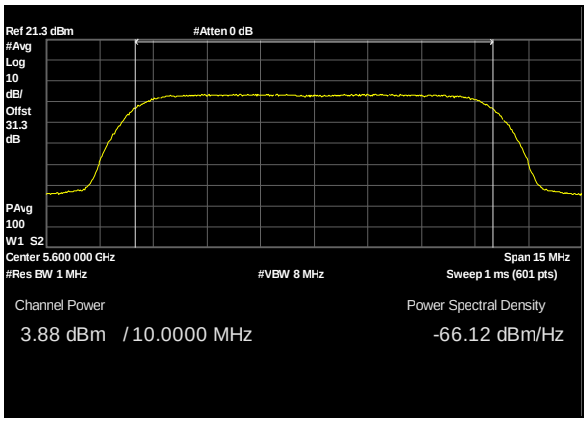
Plot 151. Conducted Transmitter Output Power, UNII 2C, BW 10M, CF 5475M, c0, 19dBi



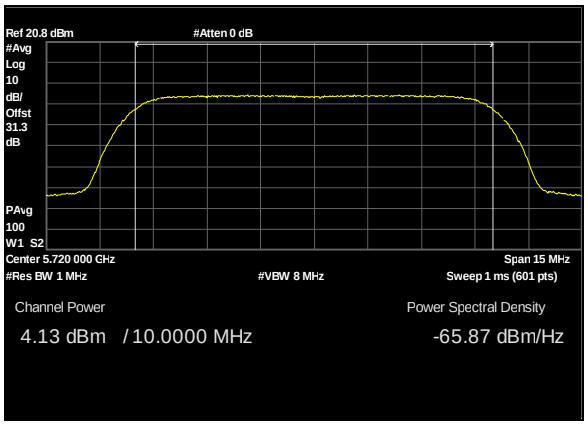
Plot 152. Conducted Transmitter Output Power, UNII 2C, BW 10M, CF 5475M, c1, 19dBi



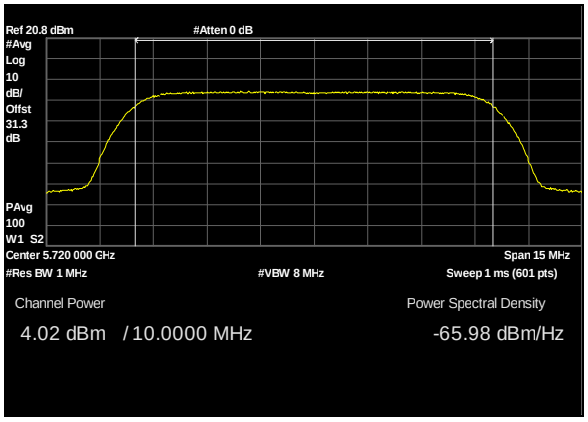
Plot 153. Conducted Transmitter Output Power, UNII 2C, BW 10M, CF 5600M, c0, 19dBi



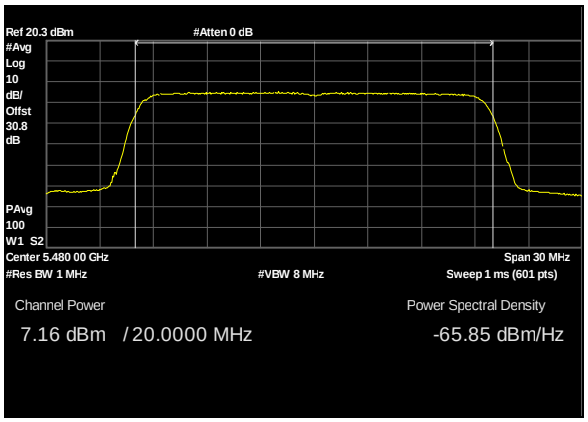
Plot 154. Conducted Transmitter Output Power, UNII 2C, BW 10M, CF 5600M, c1, 19dBi



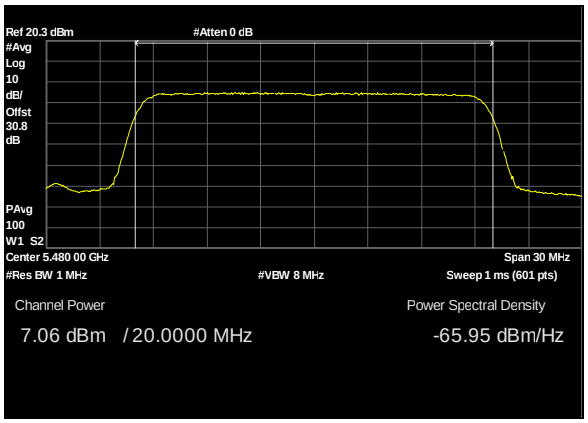
Plot 155. Conducted Transmitter Output Power, UNII 2C, BW 10M, CF 5720M, c0, 19dBi



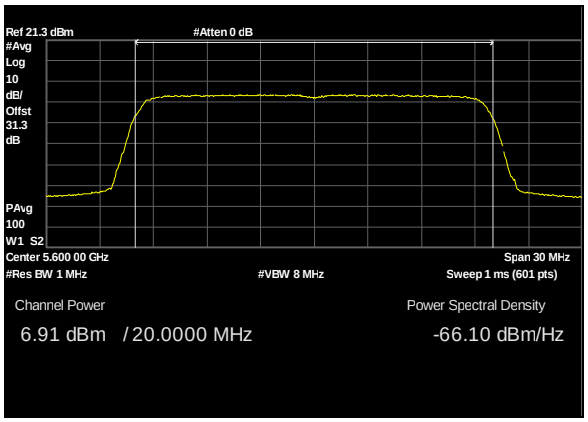
Plot 156. Conducted Transmitter Output Power, UNII 2C, BW 10M, CF 5720M, c1, 19dBi



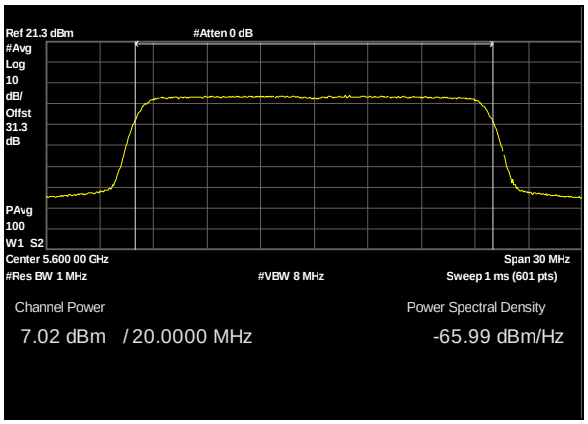
Plot 157. Conducted Transmitter Output Power, UNII 2C, BW 20M, CF 5480M, c0, 19dBi



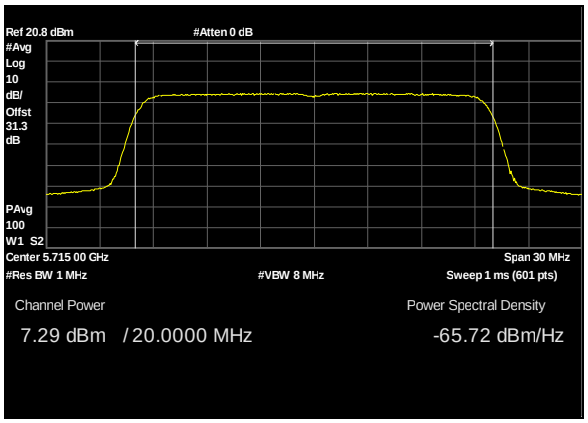
Plot 158. Conducted Transmitter Output Power, UNII 2C, BW 20M, CF 5480M, c1, 19dBi



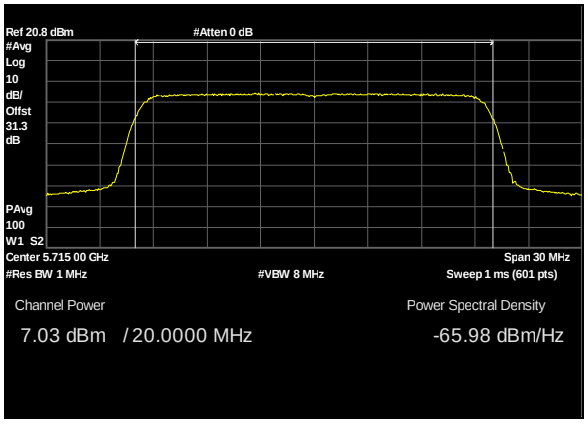
Plot 159. Conducted Transmitter Output Power, UNII 2C, BW 20M, CF 5600M, c0, 19dBi



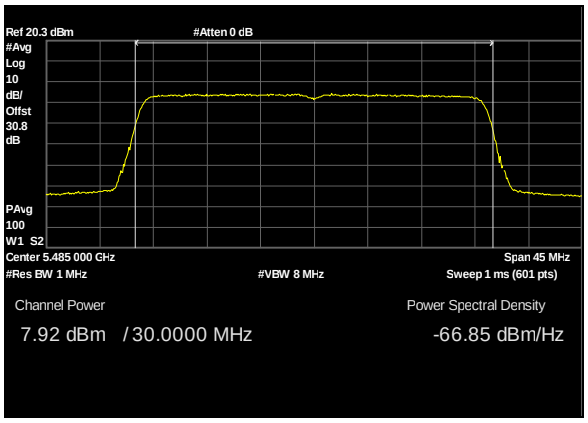
Plot 160. Conducted Transmitter Output Power, UNII 2C, BW 20M, CF 5600M, c1, 19dBi



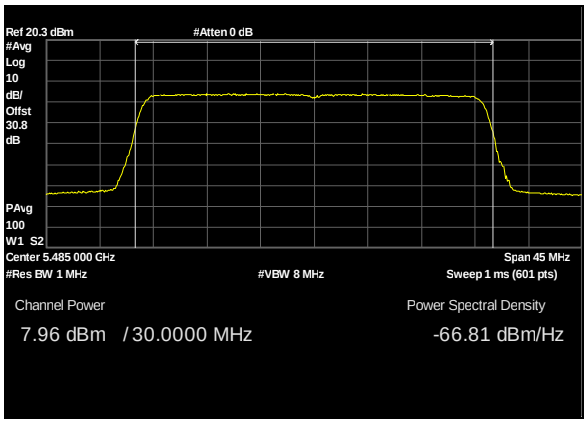
Plot 161. Conducted Transmitter Output Power, UNII 2C, BW 20M, CF 5715M, c0, 19dBi



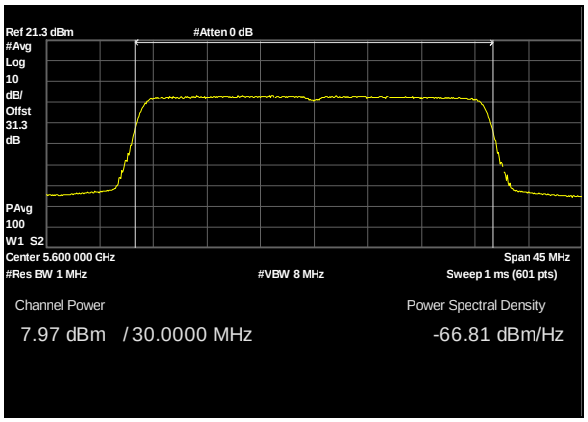
Plot 162. Conducted Transmitter Output Power, UNII 2C, BW 20M, CF 5715M, c1, 19dBi



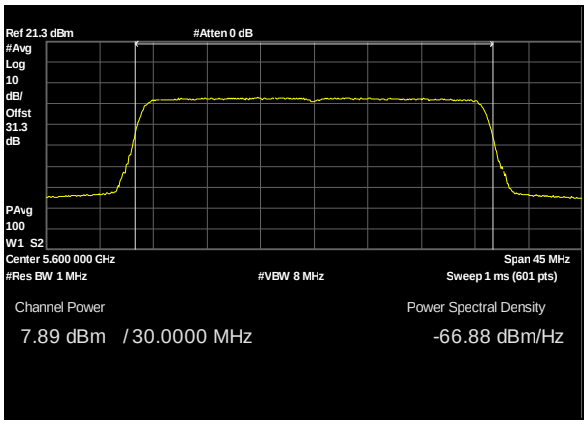
Plot 163. Conducted Transmitter Output Power, UNII 2C, BW 30M, CF 5485M, c0, 19dBi



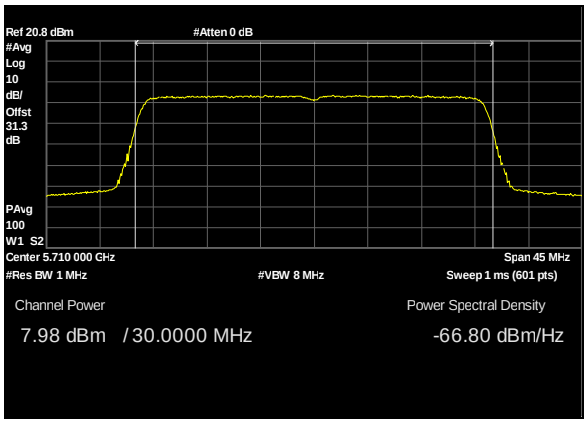
Plot 164. Conducted Transmitter Output Power, UNII 2C, BW 30M, CF 5485M, c1, 19dBi



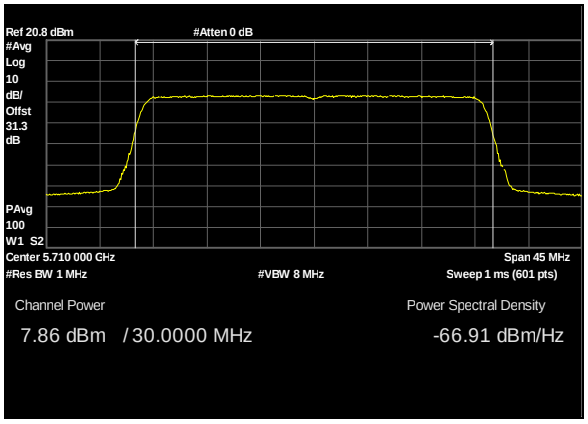
Plot 165. Conducted Transmitter Output Power, UNII 2C, BW 30M, CF 5600M, c0, 19dBi



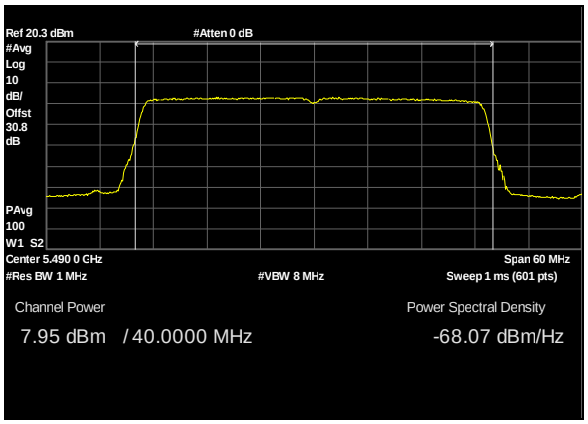
Plot 166. Conducted Transmitter Output Power, UNII 2C, BW 30M, CF 5600M, c1, 19dBi



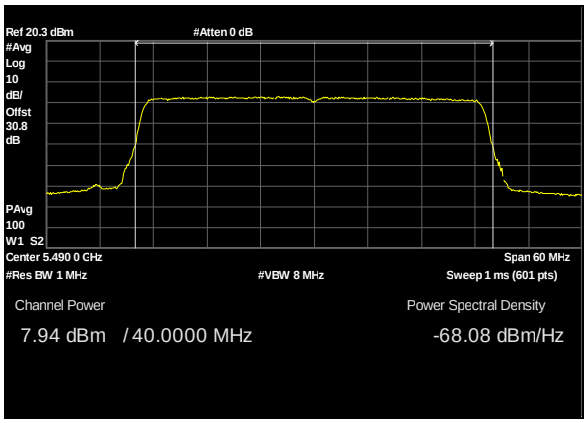
Plot 167. Conducted Transmitter Output Power, UNII 2C, BW 30M, CF 5710M, c0, 19dBi



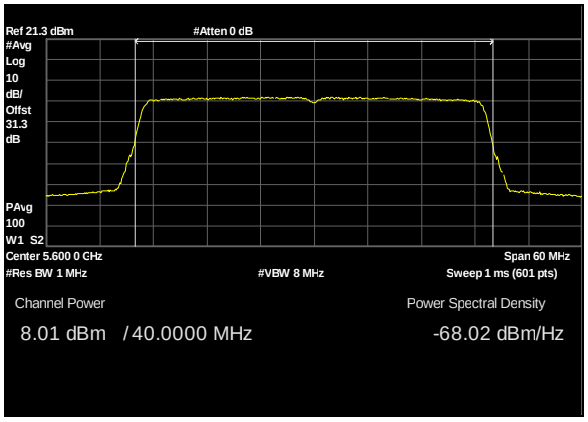
Plot 168. Conducted Transmitter Output Power, UNII 2C, BW 30M, CF 5710M, c1, 19dBi



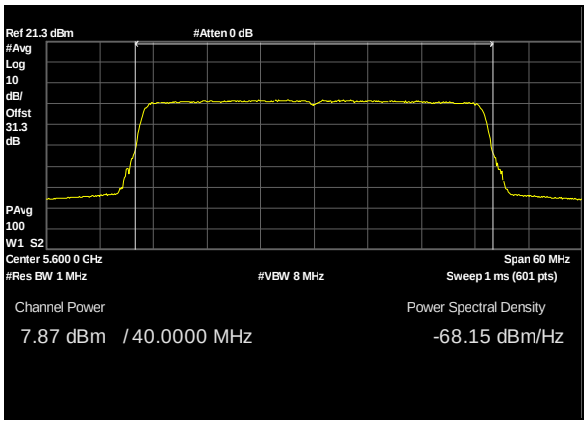
Plot 169. Conducted Transmitter Output Power, UNII 2C, BW 40M, CF 5490M, c0, 19dBi



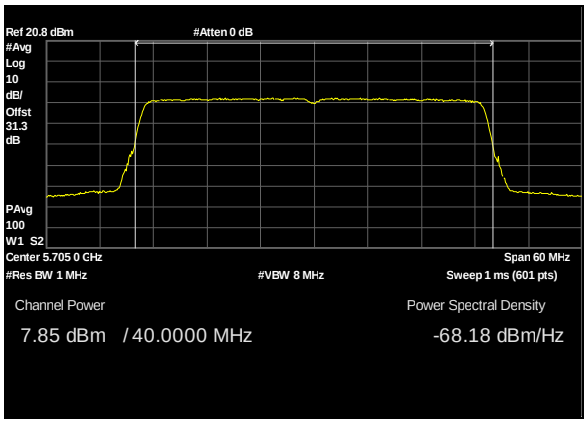
Plot 170. Conducted Transmitter Output Power, UNII 2C, BW 40M, CF 5490M, c1, 19dBi



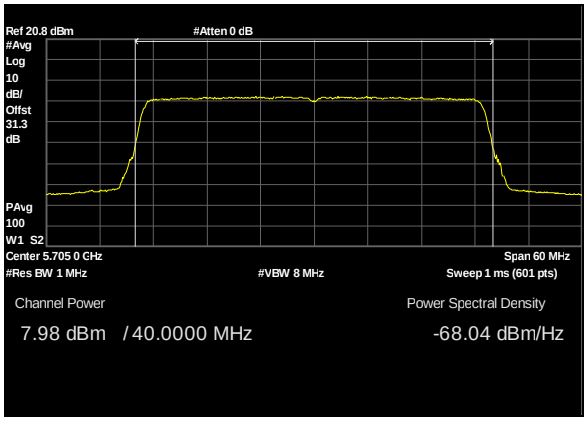
Plot 171.Conducted Transmitter Output Power, UNII 2C, BW 40M, CF 5600M, c0, 19dBi



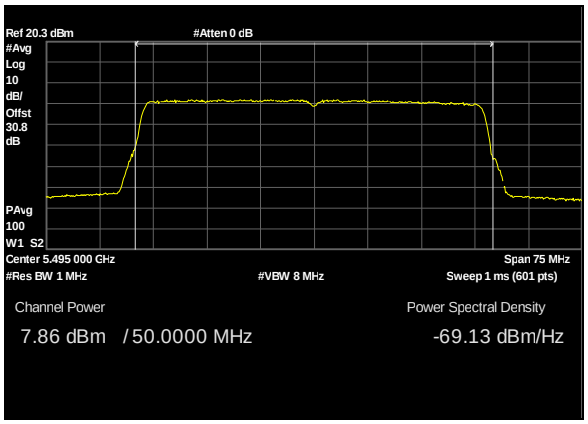
Plot 172. Conducted Transmitter Output Power, UNII 2C, BW 40M, CF 5600M, c1, 19dBi



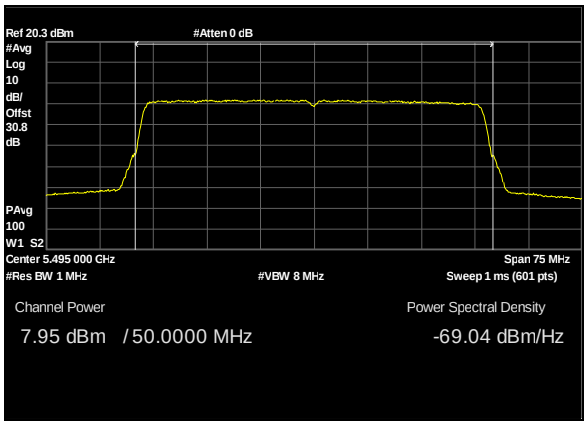
Plot 173. Conducted Transmitter Output Power, UNII 2C, BW 40M, CF 5705M, c0, 19dBi



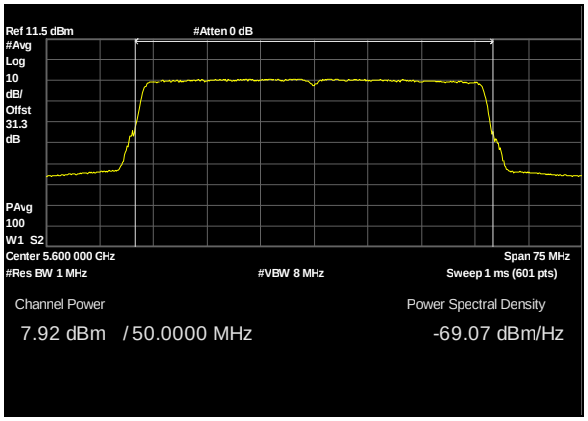
Plot 174. Conducted Transmitter Output Power, UNII 2C, BW 40M, CF 5705M, c1, 19dBi



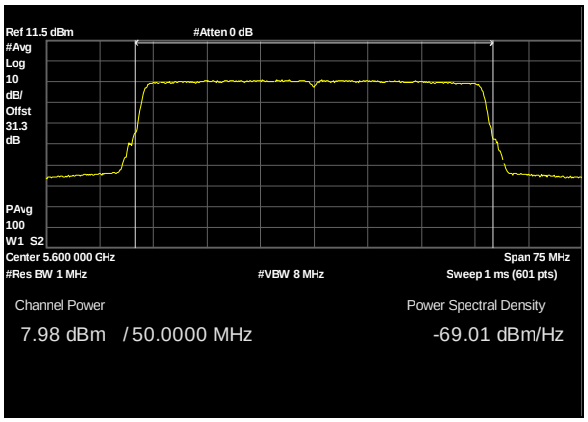
Plot 175. Conducted Transmitter Output Power, UNII 2C, BW 50M, CF 5495M, c0, 19dBi



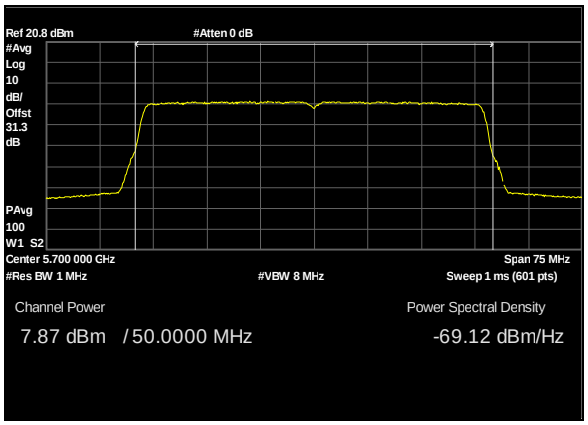
Plot 176. Conducted Transmitter Output Power, UNII 2C, BW 50M, CF 5495M, c1, 19dBi



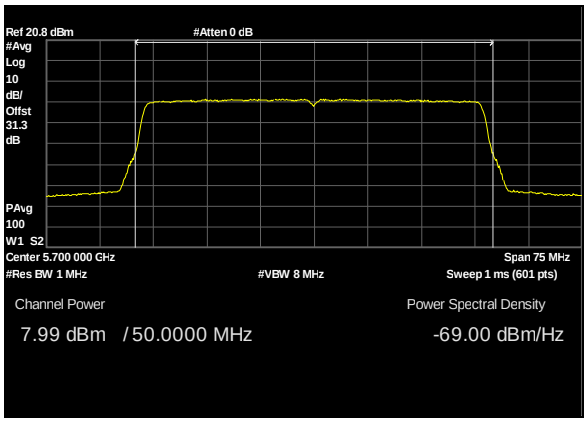
Plot 177. Conducted Transmitter Output Power, UNII 2C, BW 50M, CF 5600M, c0, 19dBi



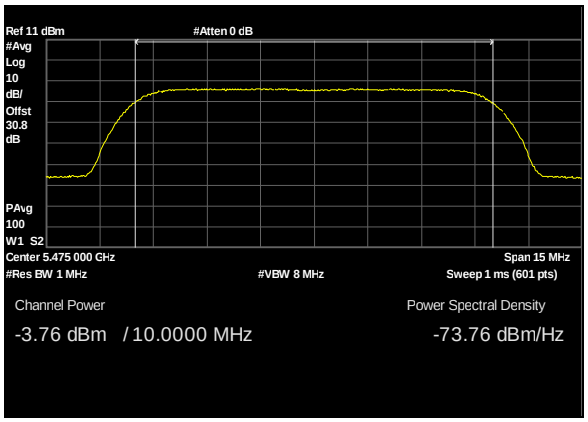
Plot 178. Conducted Transmitter Output Power, UNII 2C, BW 50M, CF 5600M, c1, 19dBi



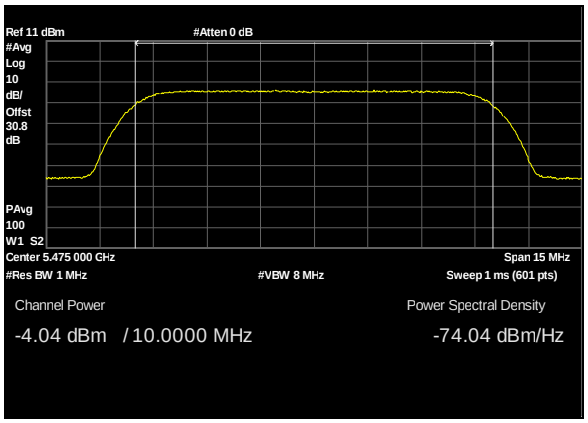
Plot 179. Conducted Transmitter Output Power, UNII 2C, BW 50M, CF 5700M, c0, 19dBi



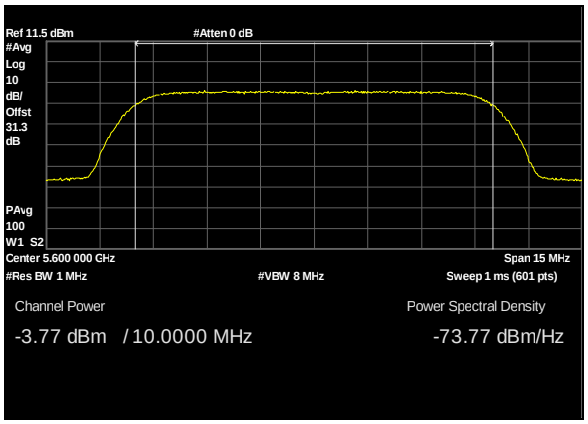
Plot 180. Conducted Transmitter Output Power, UNII 2C, BW 50M, CF 5700M, c1, 19dBi



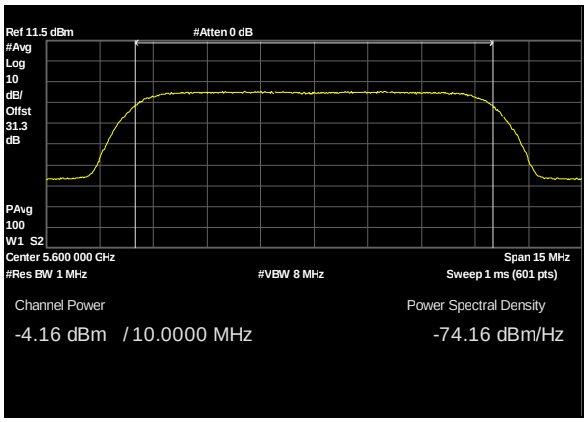
Plot 181. Conducted Transmitter Output Power, UNII 2C, BW 10W, CF 5475M, c0, 27dBi



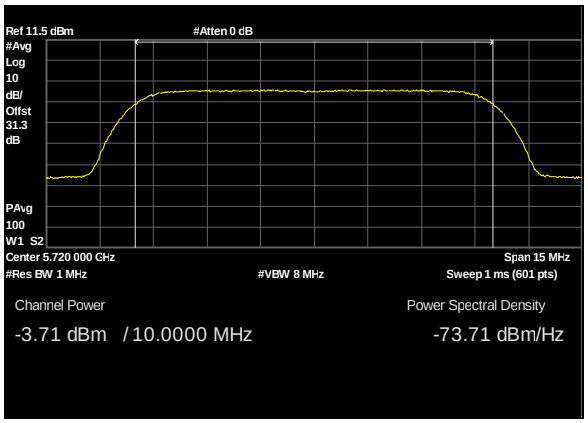
Plot 182. Conducted Transmitter Output Power, UNII 2C, BW 10W, CF 5475M, c1, 27dBi



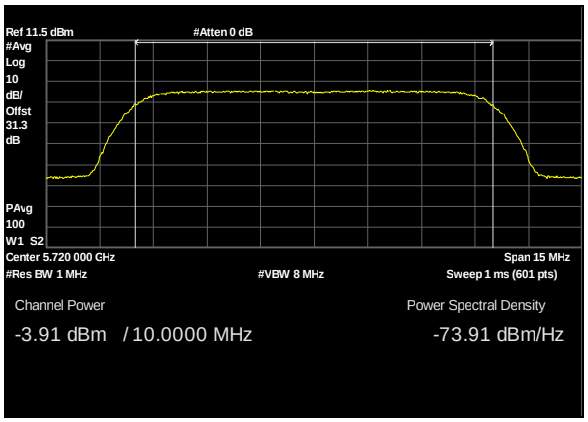
Plot 183. Conducted Transmitter Output Power, UNII 2C, BW 10W, CF 5600M, c0, 27dBi



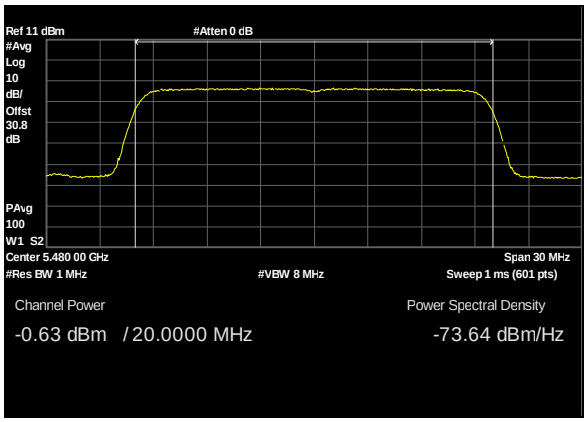
Plot 184. Conducted Transmitter Output Power, UNII 2C, BW 10W, CF 5600M, c1, 27dBi



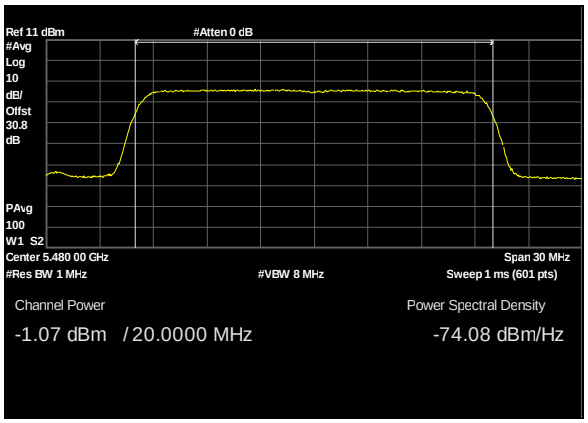
Plot 185. Conducted Transmitter Output Power, UNII 2C, BW 10W, CF 5720M, c0, 27dBi



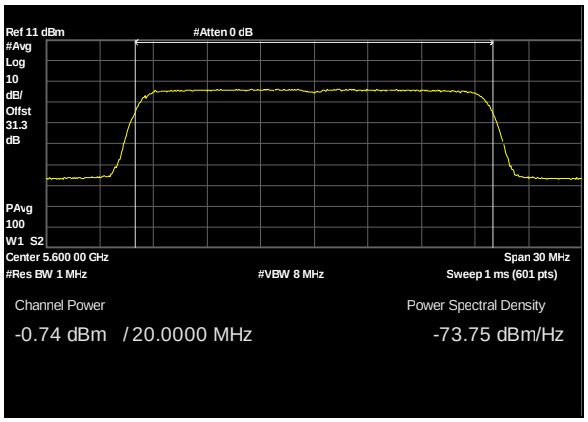
Plot 186. Conducted Transmitter Output Power, UNII 2C, BW 10W, CF 5720M, c1, 27dBi



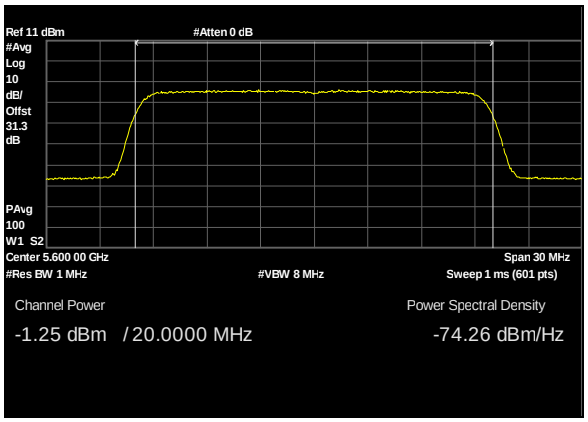
Plot 187. Conducted Transmitter Output Power, UNII 2C, BW 20W, CF 5480M, c0, 27dBi



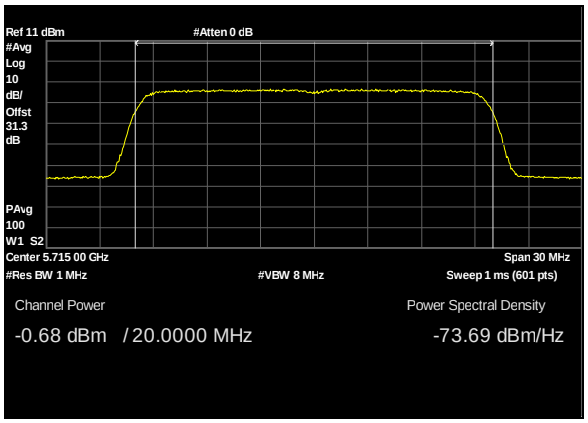
Plot 188. Conducted Transmitter Output Power, UNII 2C, BW 20W, CF 5480M, c1, 27dBi



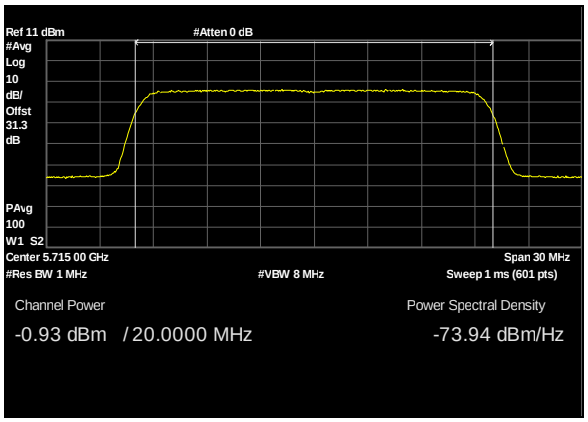
Plot 189. Conducted Transmitter Output Power, UNII 2C, BW 20W, CF 5600M, c0, 27dBi



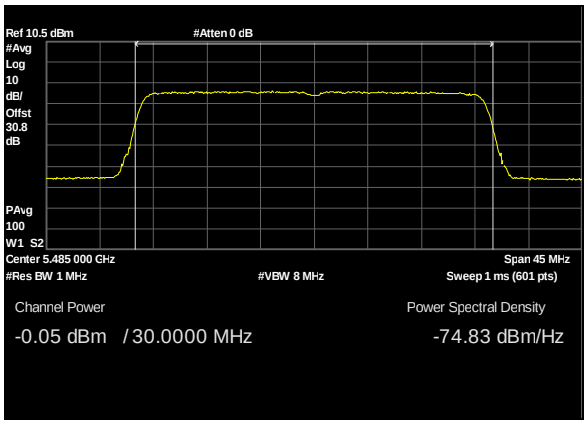
Plot 190. Conducted Transmitter Output Power, UNII 2C, BW 20W, CF 5600M, c1, 27dBi



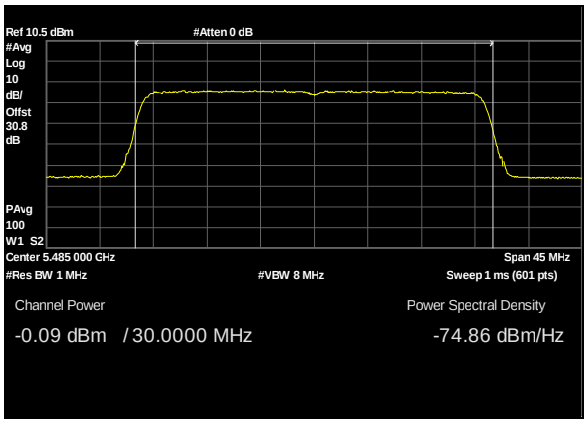
Plot 191. Conducted Transmitter Output Power, UNII 2C, BW 20W, CF 5715M, c0, 27dBi



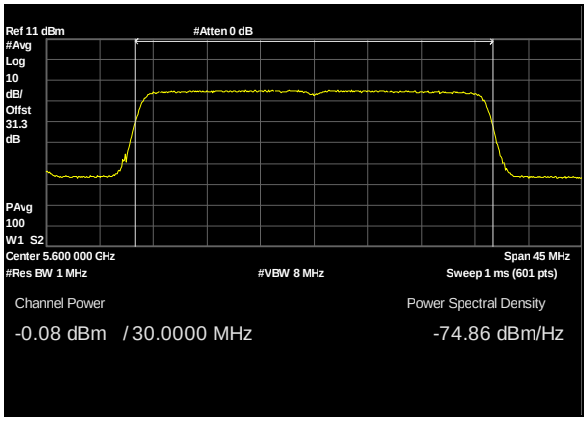
Plot 192. Conducted Transmitter Output Power, UNII 2C, BW 20W, CF 5715M, c1, 27dBi



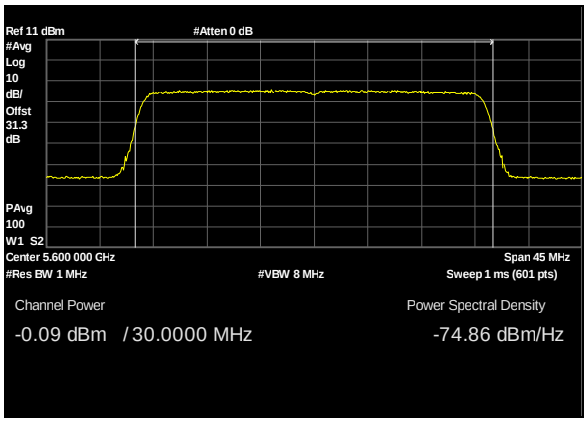
Plot 193. Conducted Transmitter Output Power, UNII 2C, BW 30W, CF 5485M, c0, 27dBi



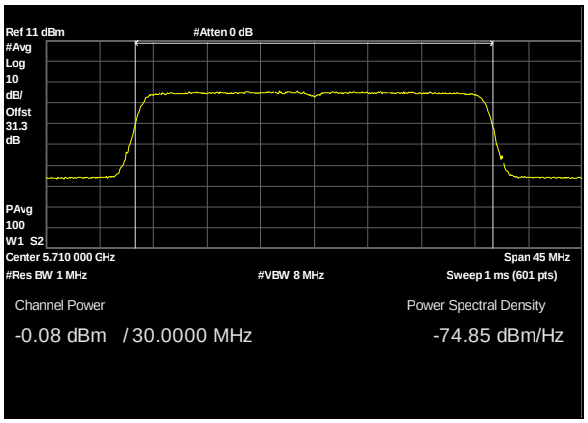
Plot 194. Conducted Transmitter Output Power, UNII 2C, BW 30W, CF 5485M, c1, 27dBi



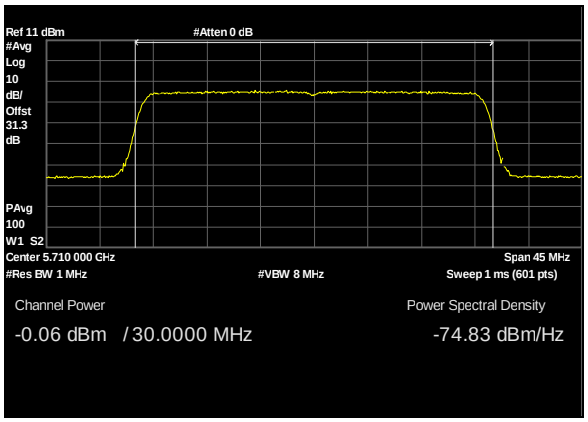
Plot 195. Conducted Transmitter Output Power, UNII 2C, BW 30W, CF 5600M, c0, 27dBi



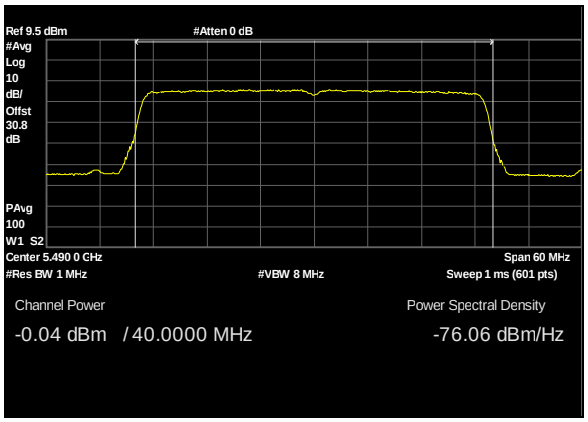
Plot 196. Conducted Transmitter Output Power, UNII 2C, BW 30W, CF 5600M, c1, 27dBi



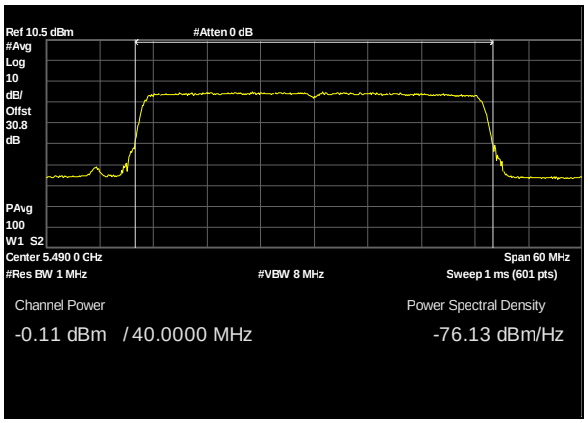
Plot 197. Conducted Transmitter Output Power, UNII 2C, BW 30W, CF 5710M, c0, 27dBi



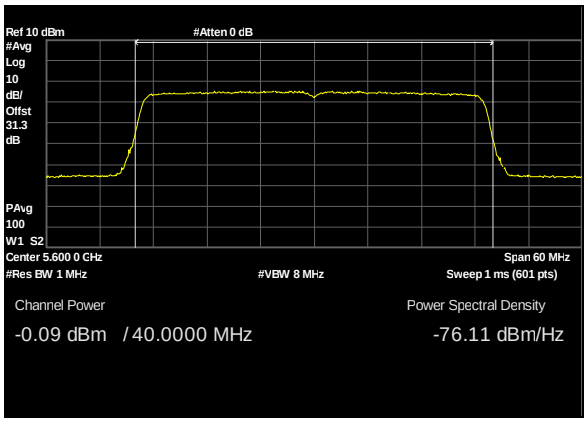
Plot 198. Conducted Transmitter Output Power, UNII 2C, BW 30W, CF 5710M, c1, 27dBi



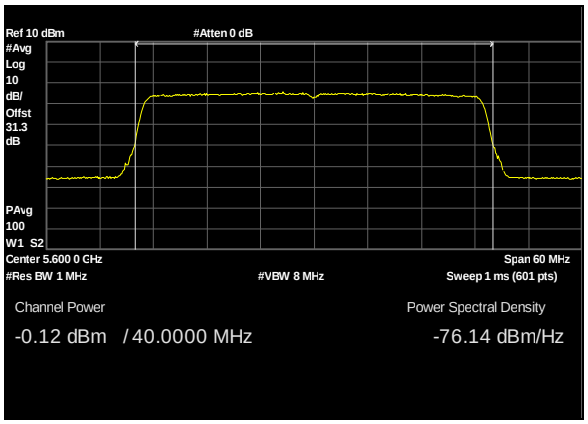
Plot 199. Conducted Transmitter Output Power, UNII 2C, BW 40W, CF 5490M, c0, 27dBi



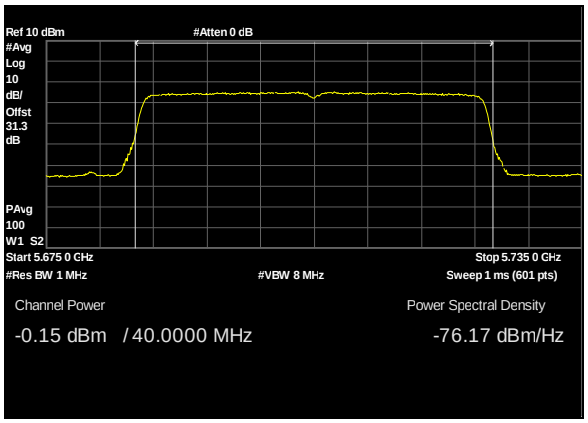
Plot 200. Conducted Transmitter Output Power, UNII 2C, BW 40W, CF 5490M, c1, 27dBi



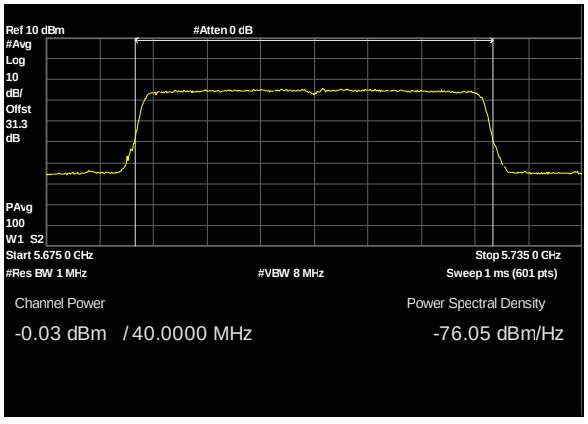
Plot 201. Conducted Transmitter Output Power, UNII 2C, BW 40W, CF 5600M, c0, 27dBi



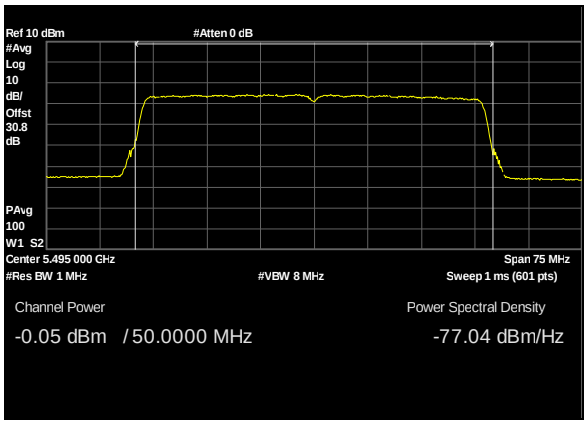
Plot 202. Conducted Transmitter Output Power, UNII 2C, BW 40W, CF 5600M, c1, 27dBi



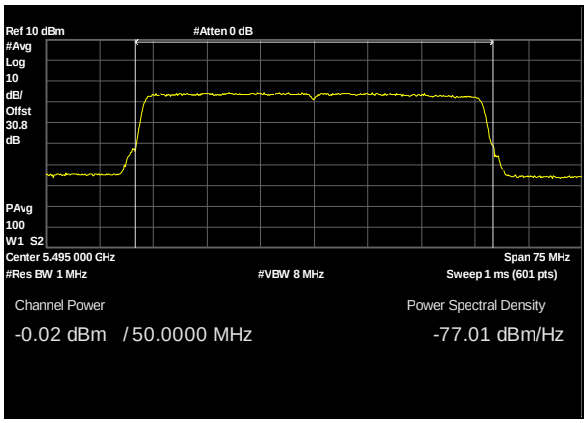
Plot 203. Conducted Transmitter Output Power, UNII 2C, BW 40W, CF 5705M, c0, 27dBi



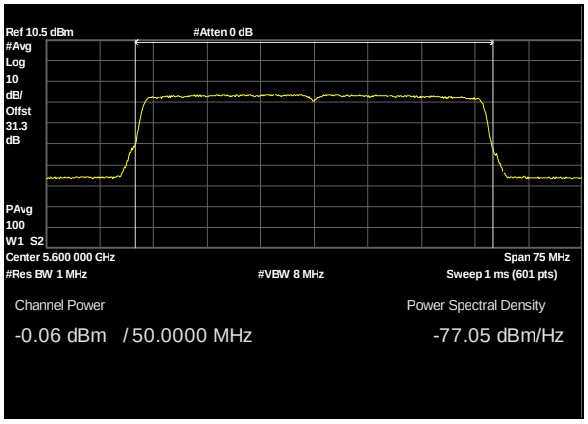
Plot 204. Conducted Transmitter Output Power, UNII 2C, BW 40W, CF 5705M, c1, 27dBi



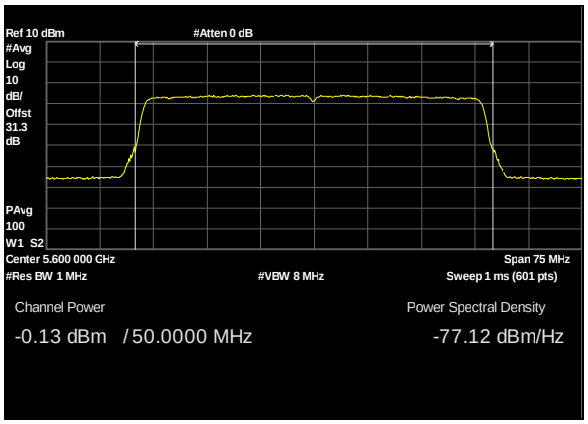
Plot 205. Conducted Transmitter Output Power, UNII 2C, BW 50W, CF 5495M, c0, 27dBi



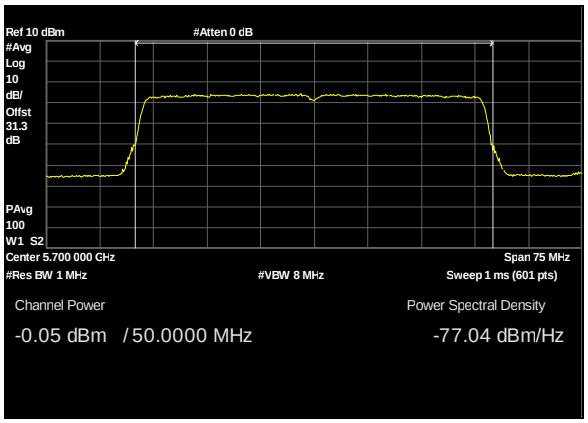
Plot 206. Conducted Transmitter Output Power, UNII 2C, BW 50W, CF 5495M, c1, 27dBi



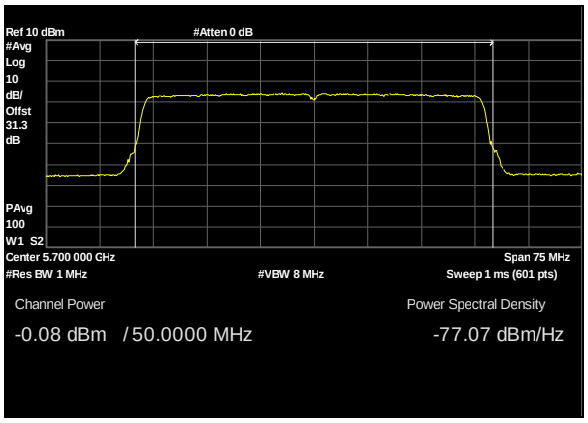
Plot 207. Conducted Transmitter Output Power, UNII 2C, BW 50W, CF 5600M, c0, 27dBi



Plot 208. Conducted Transmitter Output Power, UNII 2C, BW 50W, CF 5600M, c1, 27dBi



Plot 209. Conducted Transmitter Output Power, UNII 2C, BW 50W, CF 5700M, c0, 27dBi



Plot 210. Conducted Transmitter Output Power, UNII 2C, BW 50W, CF 5700M, c1, 27dBi

Electromagnetic Compatibility Criteria for Intentional Radiators

§15.407(a)(2) Maximum Power Spectral Density

Test Requirements: **§15.407(a)(2):** 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.

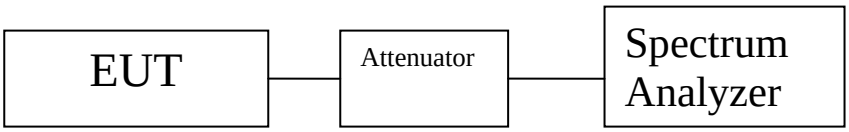
Test Procedure: The EUT was connected to a spectrum analyzer through a cable and attenuator. Measurements were taken with the EUT set to transmit continuously on its low, mid, and high channels. Its power was measured according KDB 789033 D02 General UNII Test Procedures v01.

Test Results: The EUT as tested is compliant with the requirements of this section.

No anomalies detected.

Test Engineer(s): Donald Salguero

Test Date(s): October 26, 2017



Power Spectral Density, UNII 2A

Channel BW (MHz)	Frequency (MHz)	Chain 0 (dBm)	Chain 1 (dBm)	Sum (dBm)	Limit (dBm)	Directional Gain (dBi)	Final Limit (dBm)	Margin (dB)
10	5255	0.746	0.395	3.585	11	13	4	-0.415
	5300	0.951	0.963	3.968	11	13	4	-0.032
	5345	0.969	0.879	3.935	11	13	4	-0.065
20	5260	0.955	0.908	3.942	11	13	4	-0.058
	5300	0.957	0.979	3.979	11	13	4	-0.021
	5340	0.912	0.949	3.941	11	13	4	-0.059
30	5265	0.058	0.538	3.315	11	13	4	-0.685
	5300	0.451	0.318	3.396	11	13	4	-0.604
	5335	0.443	0.36	3.412	11	13	4	-0.588
40	5270	-0.638	-0.492	2.446	11	13	4	-1.554
	5300	-0.888	-0.777	2.179	11	13	4	-1.821
	5330	-0.801	-0.862	2.179	11	13	4	-1.821
50	5275	-1.216	-1.748	1.537	11	13	4	-2.463
	5300	-1.78	-1.784	1.229	11	13	4	-2.771
	5325	-1.767	-1.926	1.165	11	13	4	-2.835

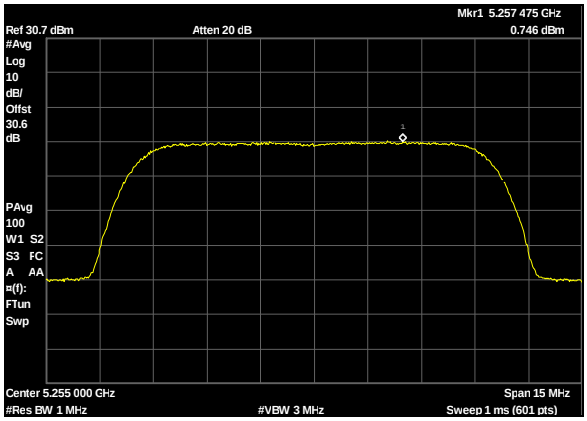
Table 16. Power Spectral Density, UNII 2A, 13 dBi, 2x2, Test Results

Channel BW (MHz)	Frequency (MHz)	Chain 0 (dBm)	Chain 1 (dBm)	Sum (dBm)	Limit (dBm)	Directional Gain (dBi)	Final Limit (dBm)	Margin (dB)
10	5255	-5.07	-5.122	-2.085	11	19	-2	-0.085
	5300	-5.064	-5.047	-2.045	11	19	-2	-0.045
	5345	-5.112	-5.104	-2.097	11	19	-2	-0.097
20	5260	-5.002	-5.157	-2.068	11	19	-2	-0.068
	5300	-5.003	-5.074	-2.028	11	19	-2	-0.028
	5340	-5.059	-5.022	-2.03	11	19	-2	-0.03
30	5265	-5.38	-5.795	-2.572	11	19	-2	-0.572
	5300	-5.714	-5.455	-2.572	11	19	-2	-0.572
	5335	-5.458	-5.81	-2.62	11	19	-2	-0.62
40	5270	-6.421	-6.45	-3.425	11	19	-2	-1.425
	5300	-6.785	-6.531	-3.645	11	19	-2	-1.645
	5330	-6.46	-7.098	-3.756	11	19	-2	-1.756
50	5275	-7.44	-7.63	-4.523	11	19	-2	-2.523
	5300	-7.686	-7.515	-4.589	11	19	-2	-2.589
	5325	-7.659	-7.753	-4.695	11	19	-2	-2.695

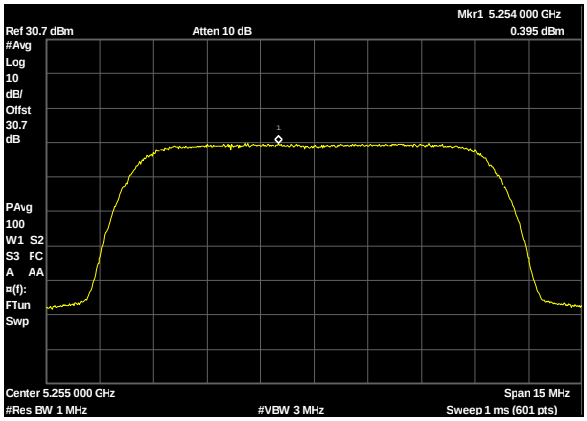
Table 17. Power Spectral Density, UNII 2A, 19 dBi, 2x2, Test Results

Channel BW (MHz)	Frequency (MHz)	Chain 0 (dBm)	Chain 1 (dBm)	Sum (dBm)	Limit (dBm)	Directional Gain (dBi)	Final Limit (dBm)	Margin (dB)
10	5255	-13.134	-13.049	-10.08	11	27	-10	-0.08
	5300	-13.054	-13.078	-10.055	11	27	-10	-0.055
	5345	-13.113	-13.125	-10.108	11	27	-10	-0.108
20	5260	-13.004	-13.201	-10.091	11	27	-10	-0.091
	5300	-13.113	-13.057	-10.074	11	27	-10	-0.074
	5340	-13.075	-13.154	-10.104	11	27	-10	-0.104
30	5265	-13.498	-13.421	-10.449	11	27	-10	-0.449
	5300	-13.275	-13.508	-10.379	11	27	-10	-0.379
	5335	-13.667	-13.696	-10.671	11	27	-10	-0.671
40	5270	-14.619	-14.621	-11.609	11	27	-10	-1.609
	5300	-14.872	-14.704	-11.776	11	27	-10	-1.776
	5330	-14.912	-14.694	-11.791	11	27	-10	-1.791
50	5275	-15.508	-15.355	-12.42	11	27	-10	-2.42
	5300	-15.722	-15.797	-12.749	11	27	-10	-2.749
	5325	-15.712	-16.001	-12.843	11	27	-10	-2.843

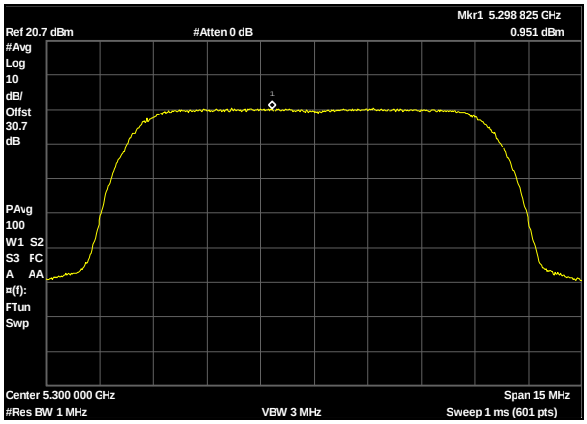
Table 18. Power Spectral Density, UNII 2A, 27 dBi, 2x2, Test Results



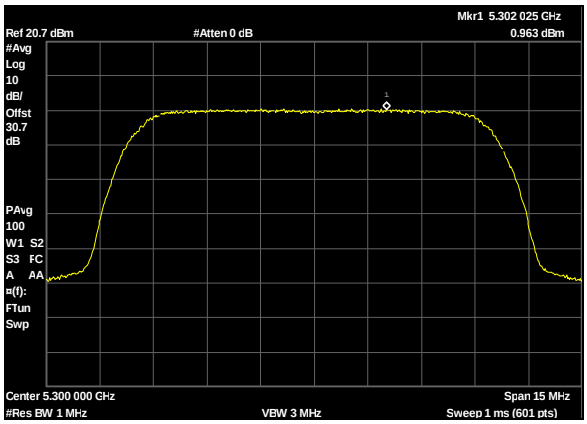
Plot 211. Power Spectral Density, UNII 2A, BW 10M, CF 5255M, c0, 13dBi



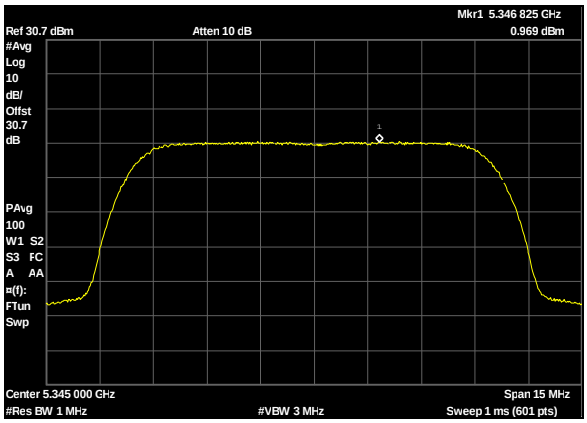
Plot 212. Power Spectral Density, UNII 2A, BW 10M, CF 5255M, c1, 13dBi



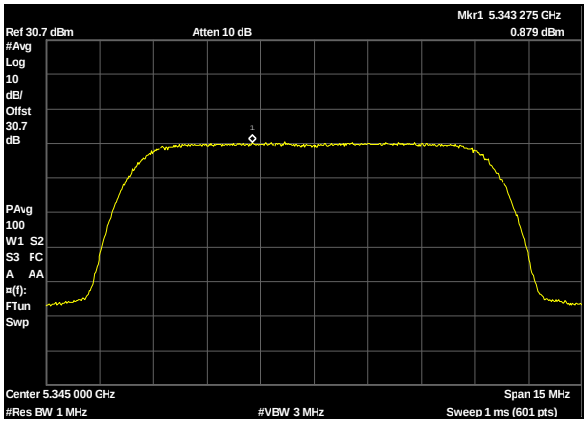
Plot 213. Power Spectral Density, UNII 2A, BW 10M, CF 5300M, c0, 13dBi



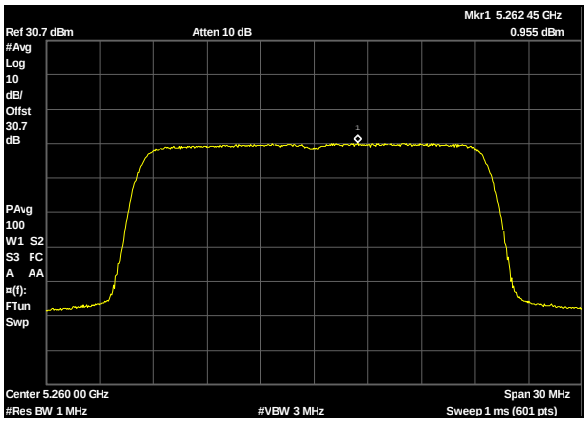
Plot 214. Power Spectral Density, UNII 2A, BW 10M, CF 5300M, c1, 13dBi



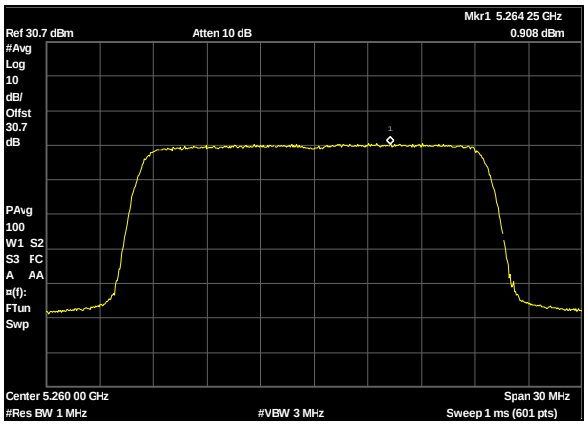
Plot 215. Power Spectral Density, UNII 2A, BW 10M, CF 5345M, c0, 13dBi



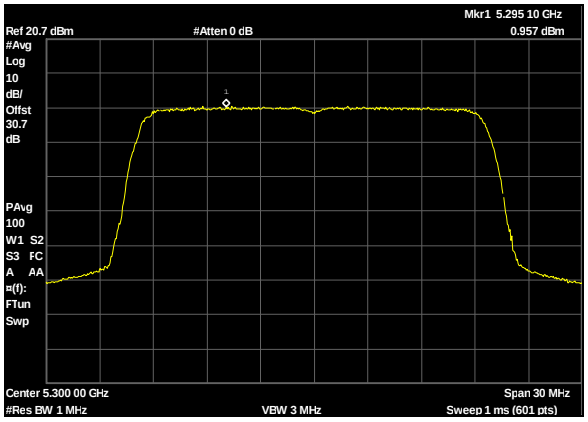
Plot 216. Power Spectral Density, UNII 2A, BW 10M, CF 5345M, c1, 13dBi



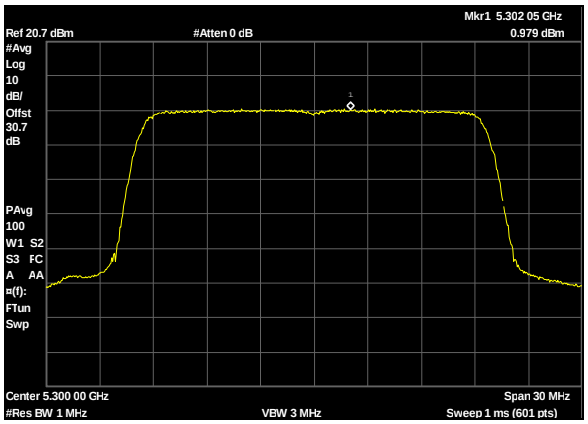
Plot 217. Power Spectral Density, UNII 2A, BW 20M, CF 5260M, c0, 13dBi



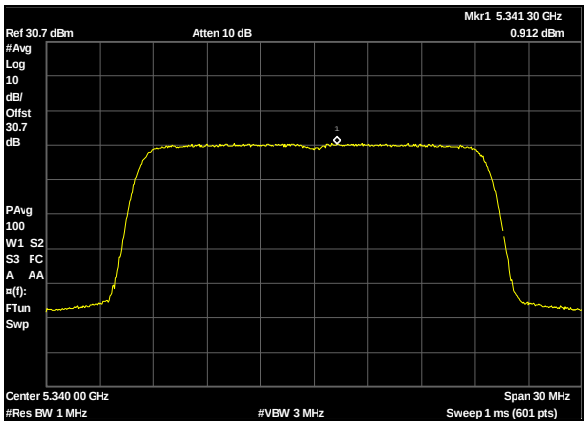
Plot 218. Power Spectral Density, UNII 2A, BW 20M, CF 5260M, c1, 13dBi



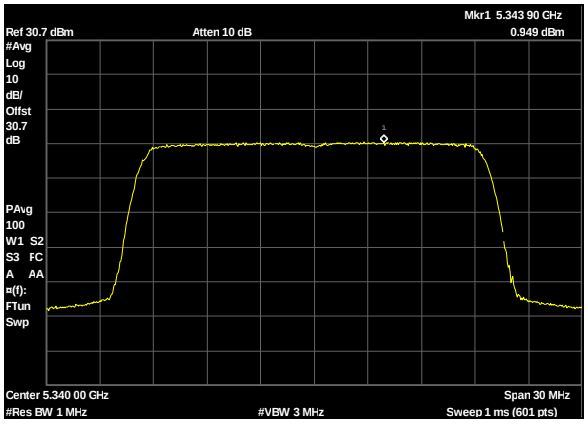
Plot 219. Power Spectral Density, UNII 2A, BW 20M, CF 5300M, c0, 13dBi



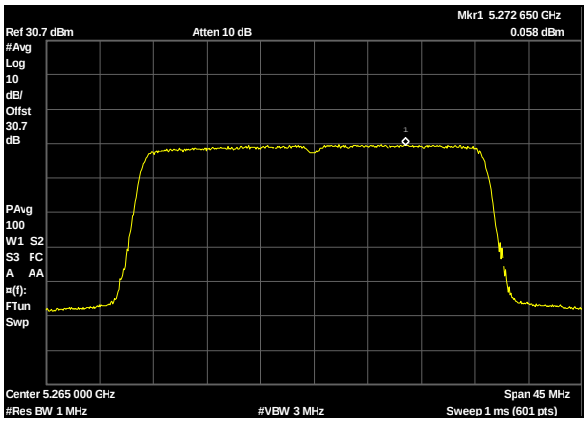
Plot 220. Power Spectral Density, UNII 2A, BW 20M, CF 5300M, c1, 13dBi



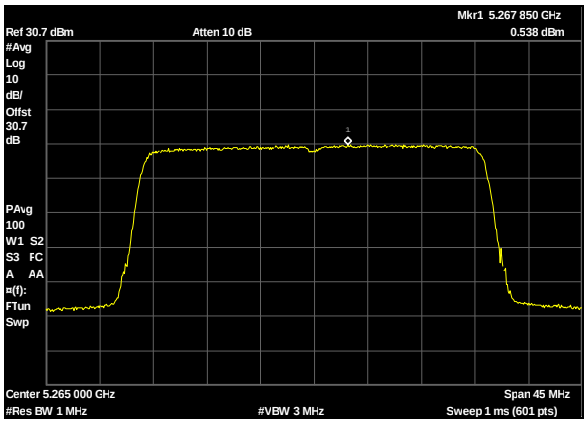
Plot 221. Power Spectral Density, UNII 2A, BW 20M, CF 5340M, c0, 13dBi



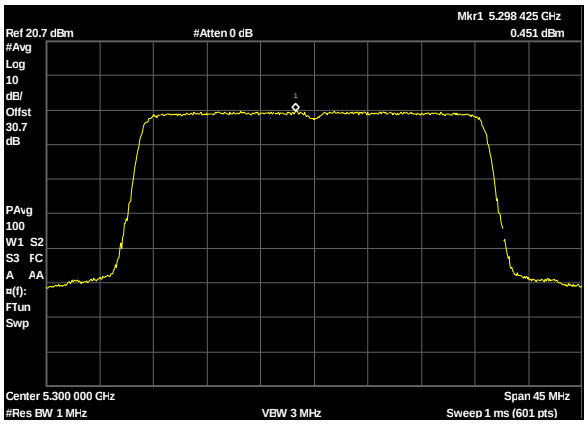
Plot 222. Power Spectral Density, UNII 2A, BW 20M, CF 5340M, c1, 13dBi



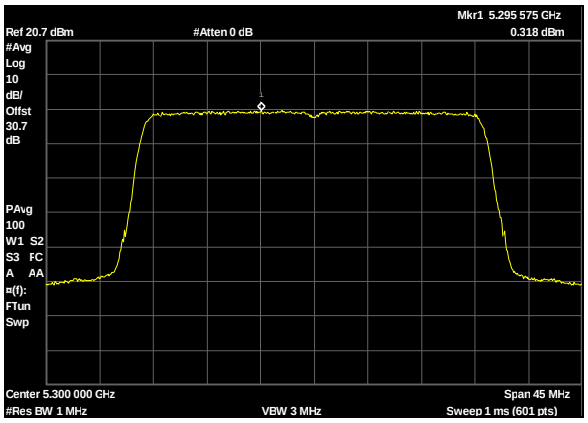
Plot 223. Power Spectral Density, UNII 2A, BW 30M, CF 5265M, c0, 13dBi



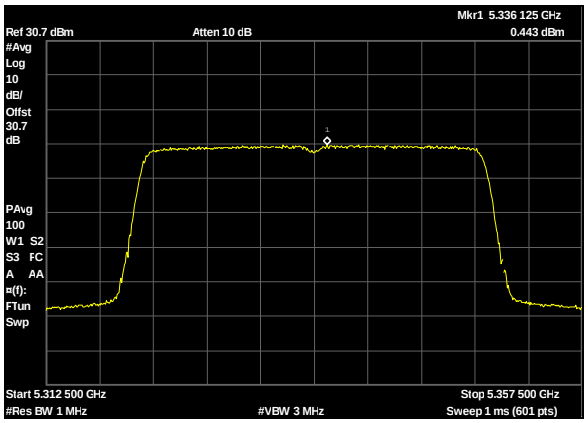
Plot 224. Power Spectral Density, UNII 2A, BW 30M, CF 5265M, c1, 13dBi



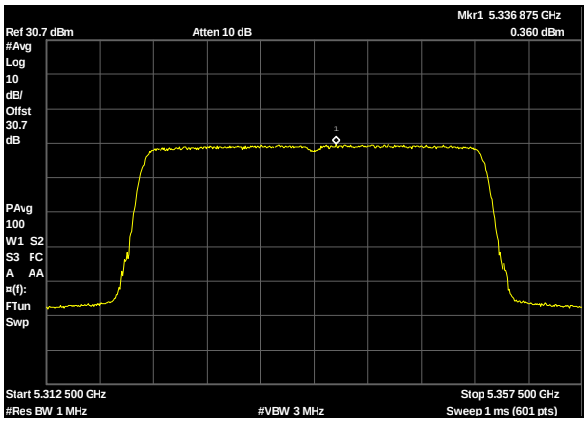
Plot 225. Power Spectral Density, UNII 2A, BW 30M, CF 5300M, c0, 13dBi



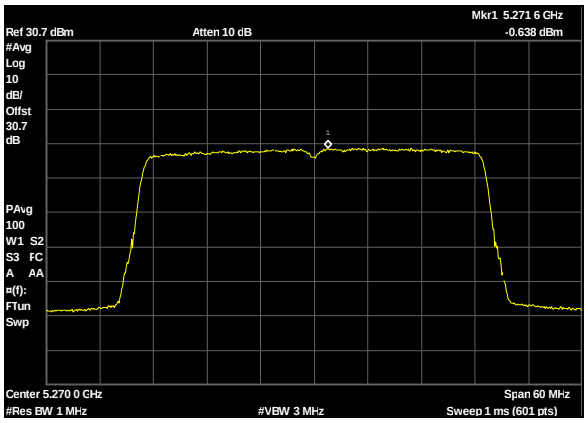
Plot 226. Power Spectral Density, UNII 2A, BW 30M, CF 5300M, c1, 13dBi



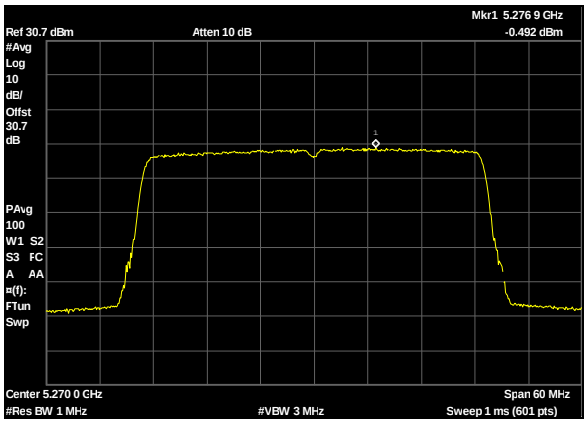
Plot 227. Power Spectral Density, UNII 2A, BW 30M, CF 5335M, c0, 13dBi



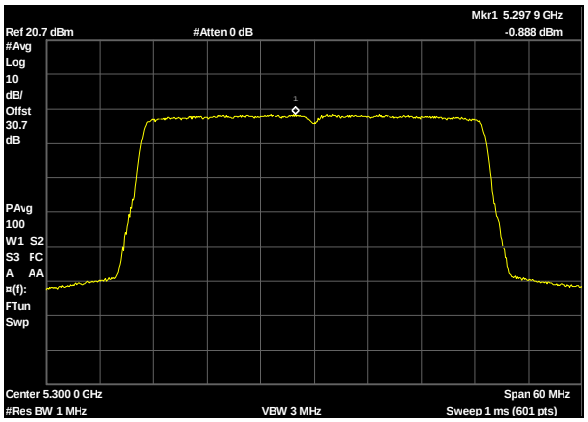
Plot 228. Power Spectral Density, UNII 2A, BW 30M, CF 5335M, c1, 13dBi



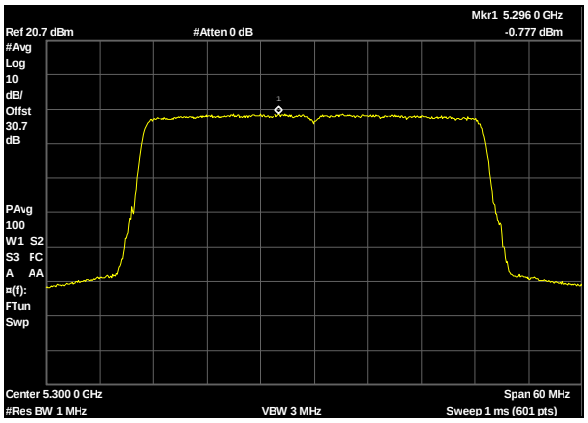
Plot 229. Power Spectral Density, UNII 2A, BW 40M, CF 5270M, c0, 13dBi



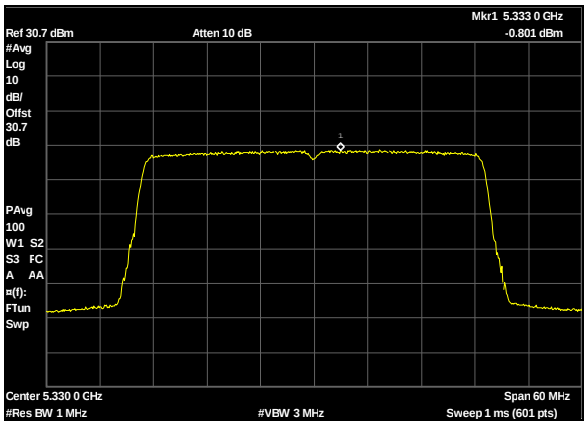
Plot 230. Power Spectral Density, UNII 2A, BW 40M, CF 5270M, c1, 13dBi



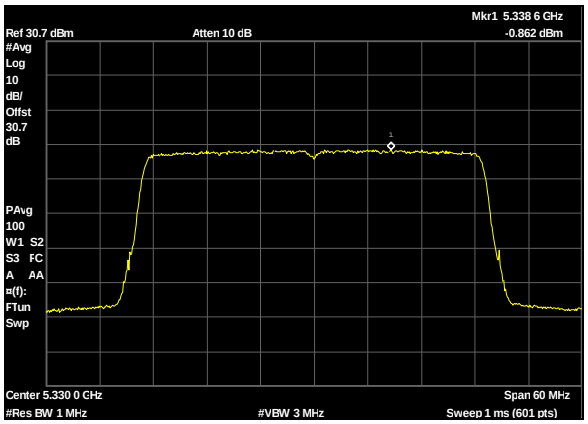
Plot 231. Power Spectral Density, UNII 2A, BW 40M, CF 5300M, c0, 13dBi



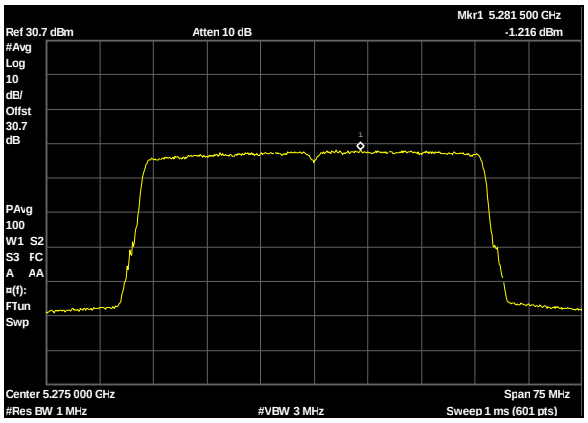
Plot 232. Power Spectral Density, UNII 2A, BW 40M, CF 5300M, c1, 13dBi



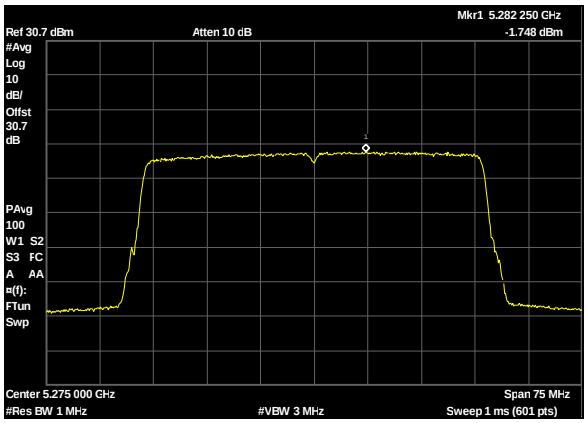
Plot 233. Power Spectral Density, UNII 2A, BW 40M, CF 5330M, c0, 13dBi



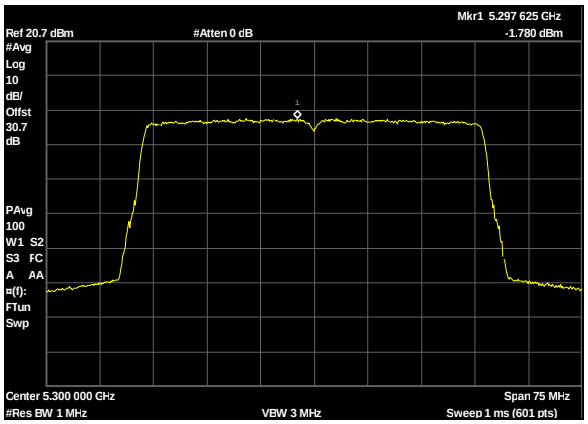
Plot 234. Power Spectral Density, UNII 2A, BW 40M, CF 5330M, c1, 13dBi



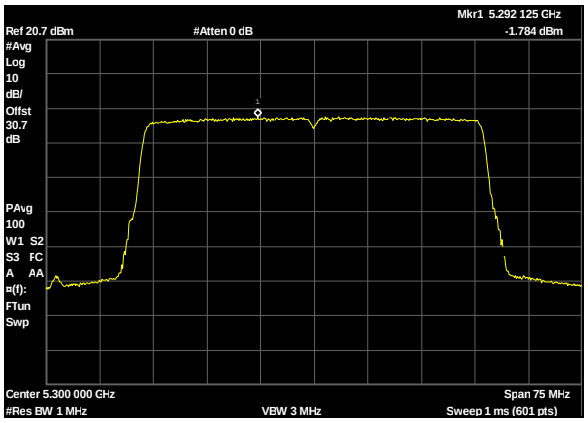
Plot 235. Power Spectral Density, UNII 2A, BW 50M, CF 5275M, c0, 13dBi



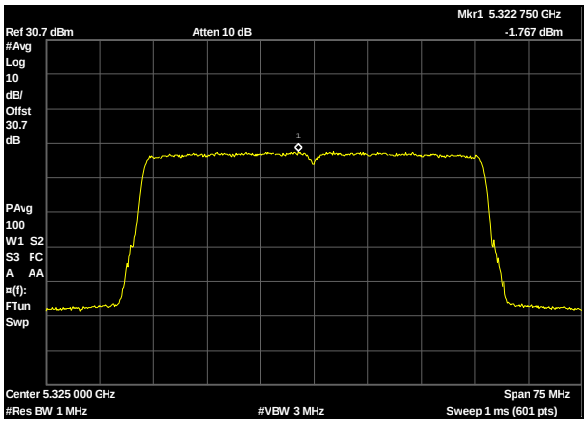
Plot 236. Power Spectral Density, UNII 2A, BW 50M, CF 5275M, c1, 13dBi



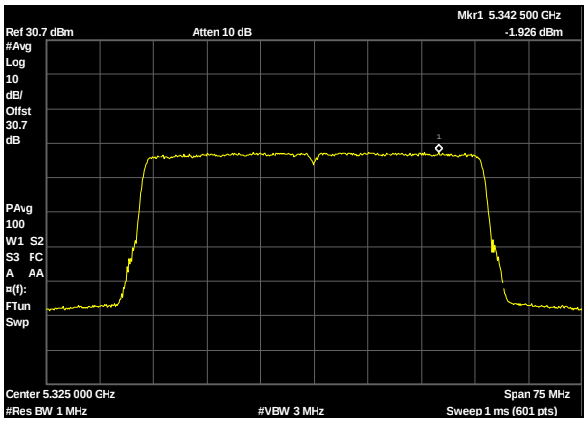
Plot 237. Power Spectral Density, UNII 2A, BW 50M, CF 5300M, c0, 13dBi



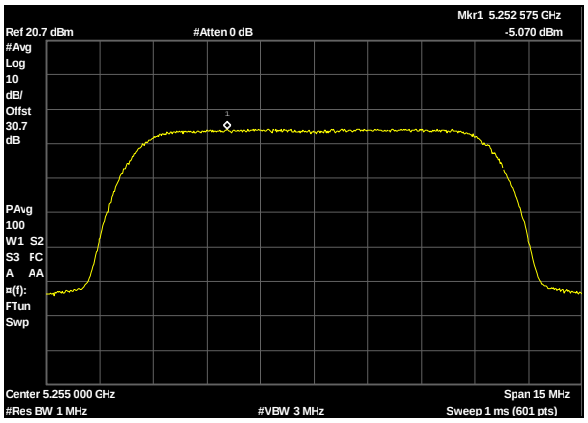
Plot 238. Power Spectral Density, UNII 2A, BW 50M, CF 5300M, c1, 13dBi



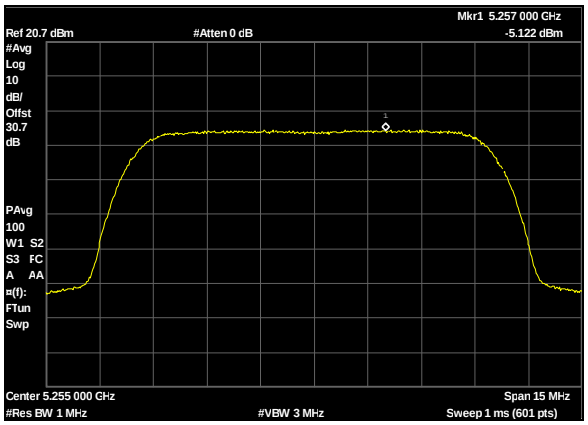
Plot 239. Power Spectral Density, UNII 2A, BW 50M, CF 5325M, c0, 13dBi



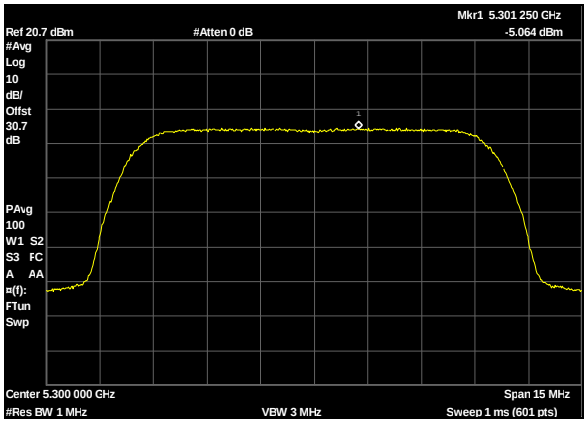
Plot 240. Power Spectral Density, UNII 2A, BW 50M, CF 5325M, c1, 13dBi



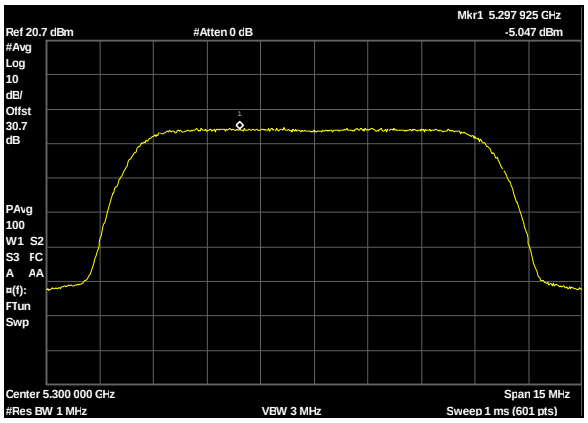
Plot 241. Power Spectral Density, UNII 2A, BW 10M, CF 5255M, c0, 19dBi



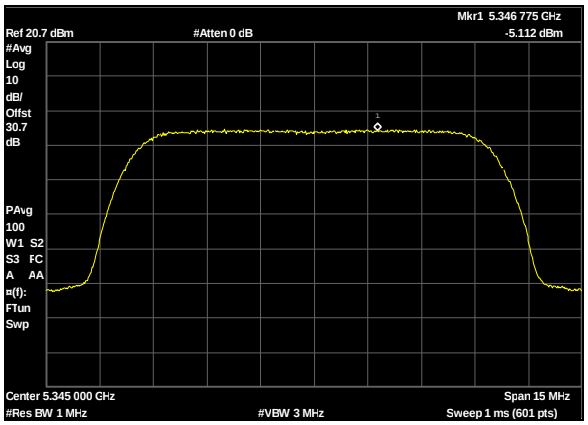
Plot 242. Power Spectral Density, UNII 2A, BW 10M, CF 5255M, c1, 19dBi



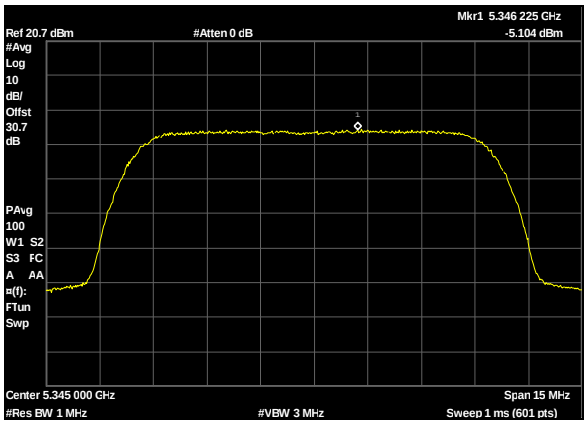
Plot 243. Power Spectral Density, UNII 2A, BW 10M, CF 5300M, c0, 19dBi



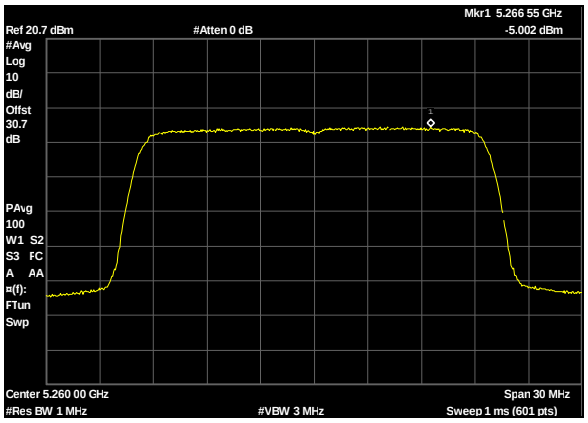
Plot 244. Power Spectral Density, UNII 2A, BW 10M, CF 5300M, c1, 19dBi



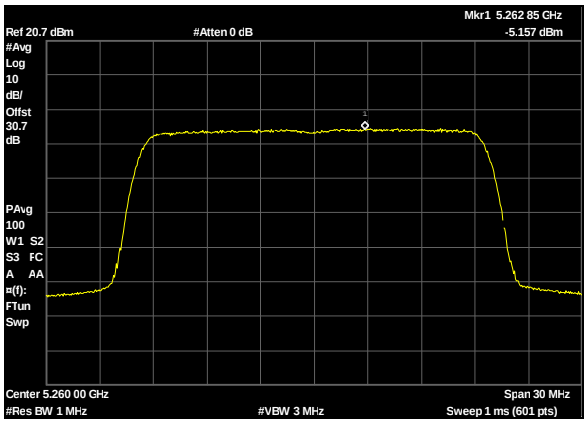
Plot 245. Power Spectral Density, UNII 2A, BW 10M, CF 5345M, c0, 19dBi



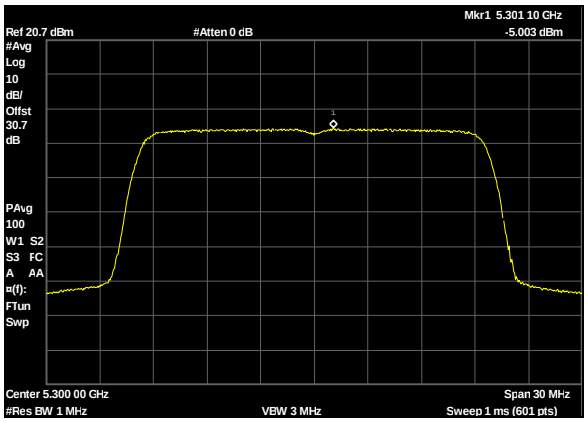
Plot 246. Power Spectral Density, UNII 2A, BW 10M, CF 5345M, c1, 19dBi



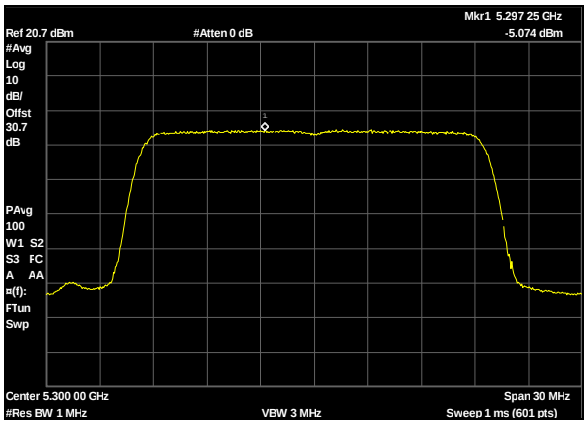
Plot 247. Power Spectral Density, UNII 2A, BW 20M, CF 5260M, c0, 19dBi



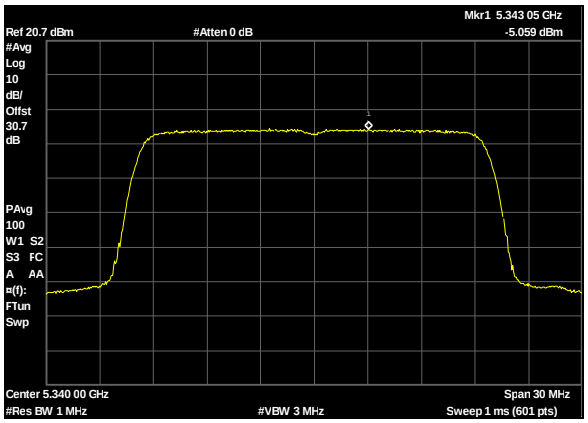
Plot 248. Power Spectral Density, UNII 2A, BW 20M, CF 5260M, c1, 19dBi



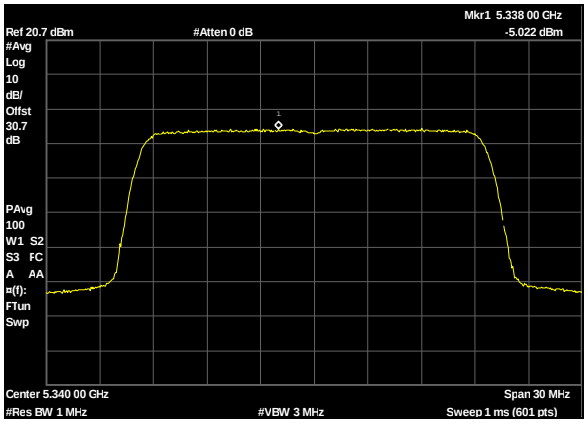
Plot 249. Power Spectral Density, UNII 2A, BW 20M, CF 5300M, c0, 19dBi



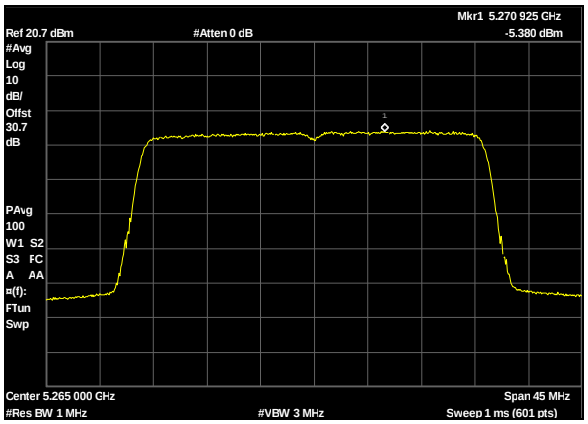
Plot 250. Power Spectral Density, UNII 2A, BW 20M, CF 5300M, c1, 19dBi



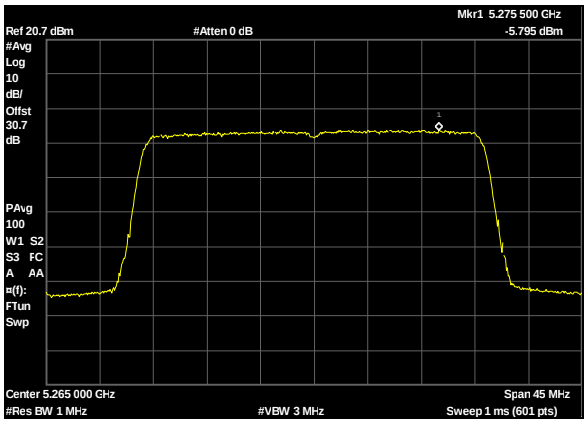
Plot 251. Power Spectral Density, UNII 2A, BW 20M, CF 5340M, c0, 19dBi



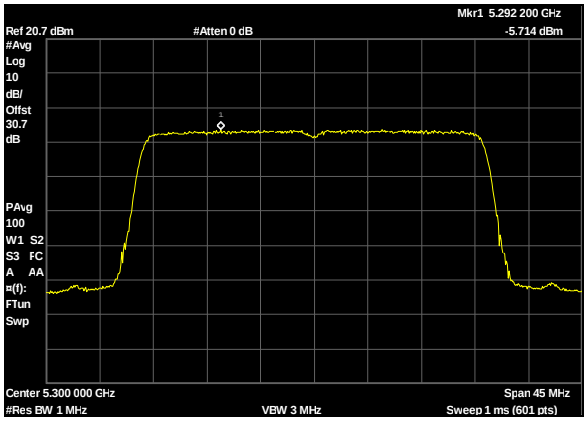
Plot 252. Power Spectral Density, UNII 2A, BW 20M, CF 5340M, c1, 19dBi



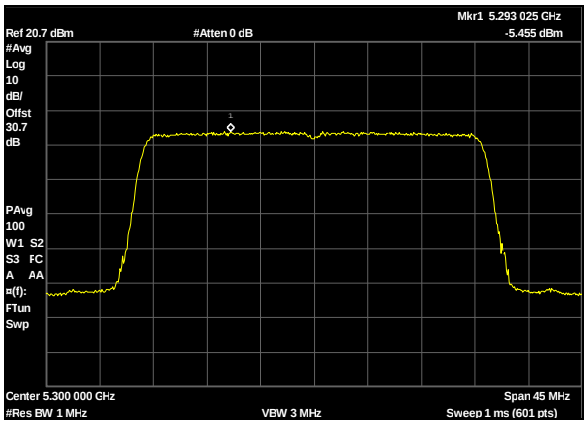
Plot 253. Power Spectral Density, UNII 2A, BW 30M, CF 5265M, c0, 19dBi



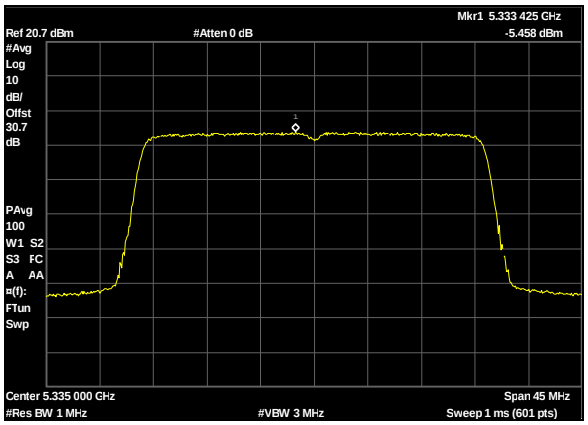
Plot 254. Power Spectral Density, UNII 2A, BW 30M, CF 5265M, c1, 19dBi



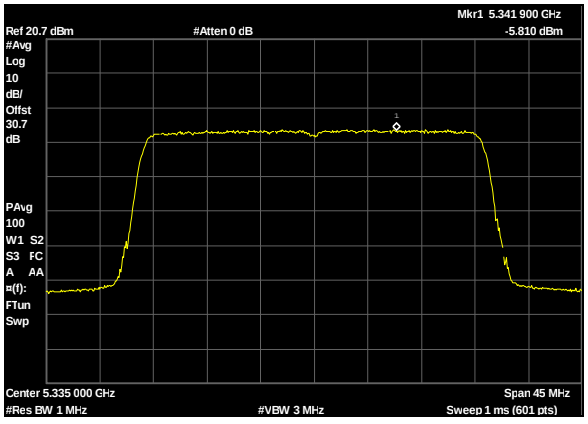
Plot 255. Power Spectral Density, UNII 2A, BW 30M, CF 5300M, c0, 19dBi



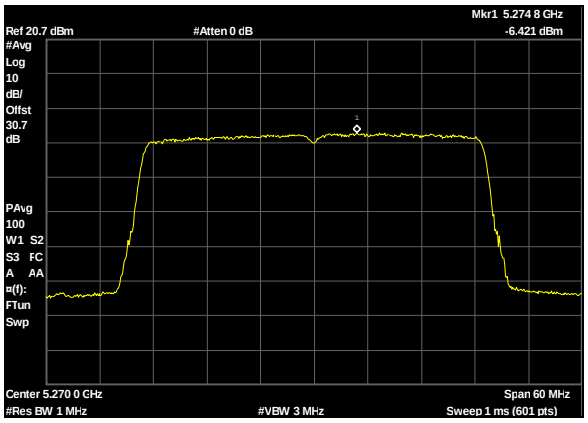
Plot 256. Power Spectral Density, UNII 2A, BW 30M, CF 5300M, c1, 19dBi



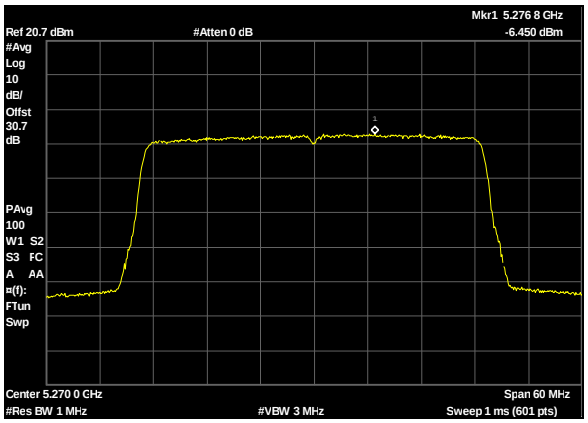
Plot 257. Power Spectral Density, UNII 2A, BW 30M, CF 5335M, c0, 19dBi



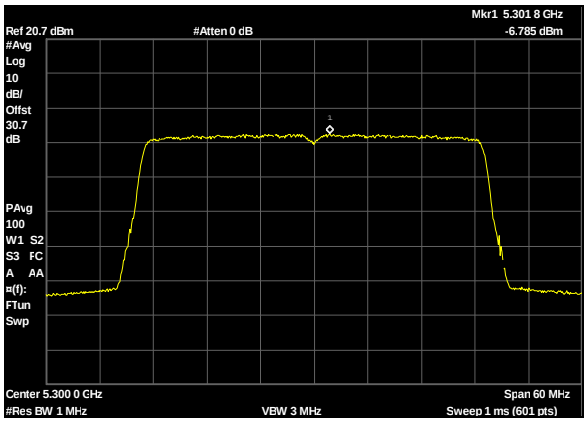
Plot 258. Power Spectral Density, UNII 2A, BW 30M, CF 5335M, c1, 19dBi



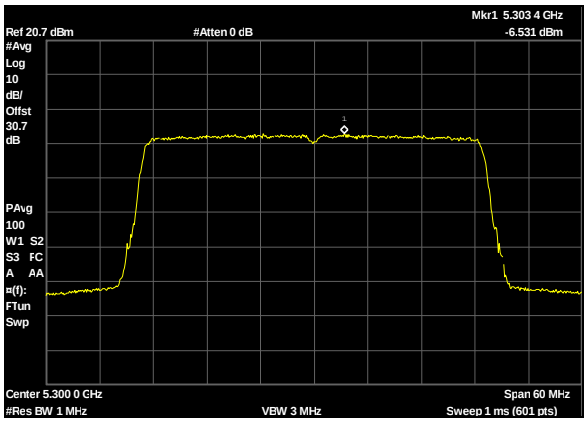
Plot 259. Power Spectral Density, UNII 2A, BW 40M, CF 5270M, c0, 19dBi



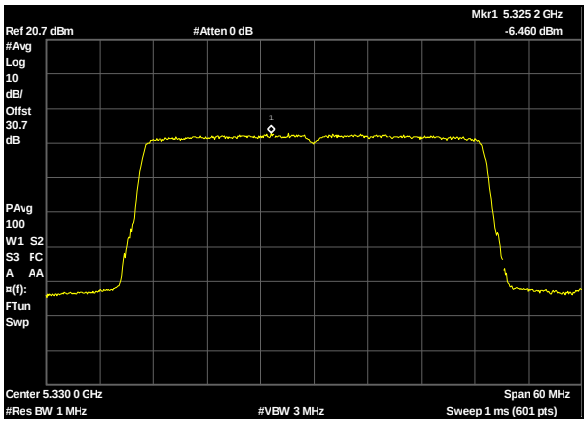
Plot 260. Power Spectral Density, UNII 2A, BW 40M, CF 5270M, c1, 19dBi



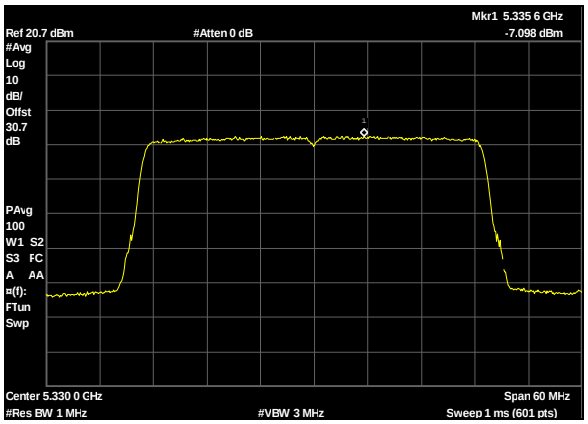
Plot 261. Power Spectral Density, UNII 2A, BW 40M, CF 5300M, c0, 19dBi



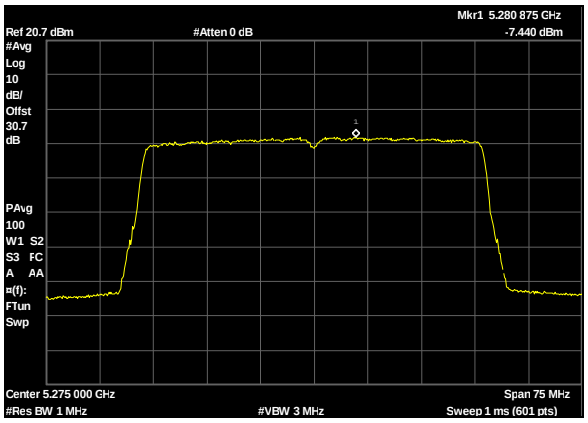
Plot 262. Power Spectral Density, UNII 2A, BW 40M, CF 5300M, c1, 19dBi



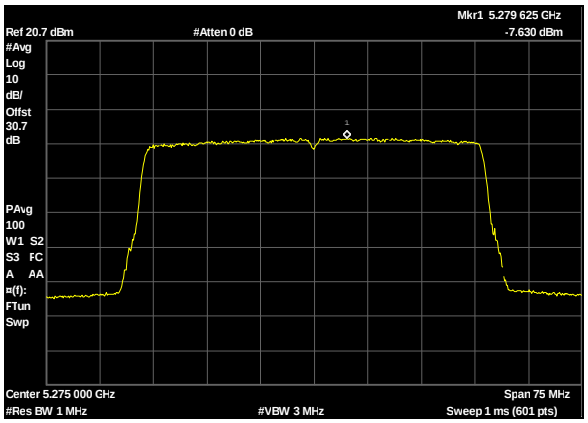
Plot 263. Power Spectral Density, UNII 2A, BW 40M, CF 5330M, c0, 19dBi



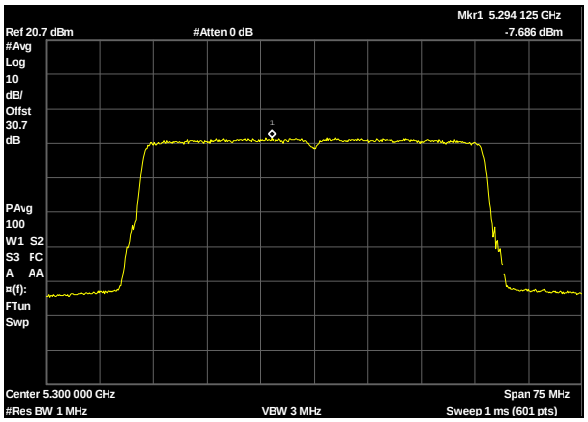
Plot 264. Power Spectral Density, UNII 2A, BW 40M, CF 5330M, c1, 19dBi



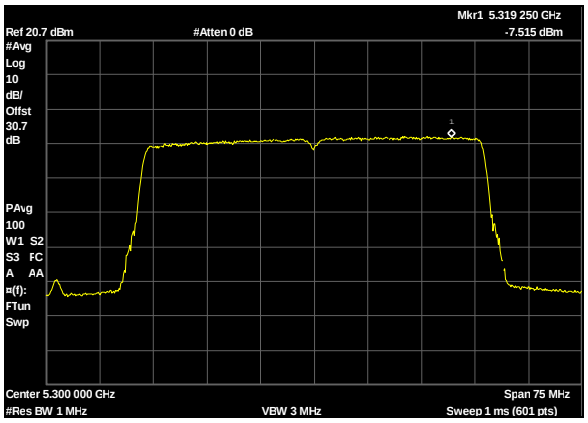
Plot 265. Power Spectral Density, UNII 2A, BW 50M, CF 5275M, c0, 19dBi



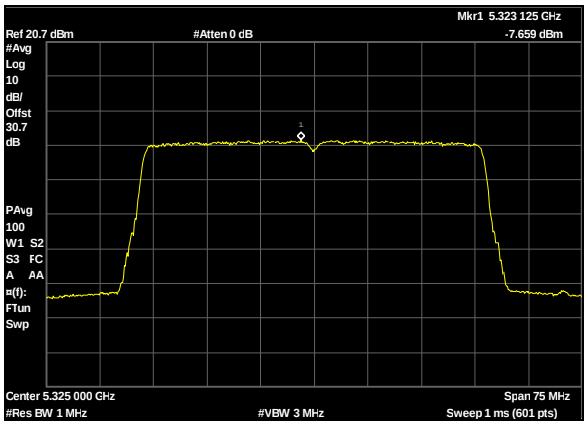
Plot 266. Power Spectral Density, UNII 2A, BW 50M, CF 5275M, c1, 19dBi



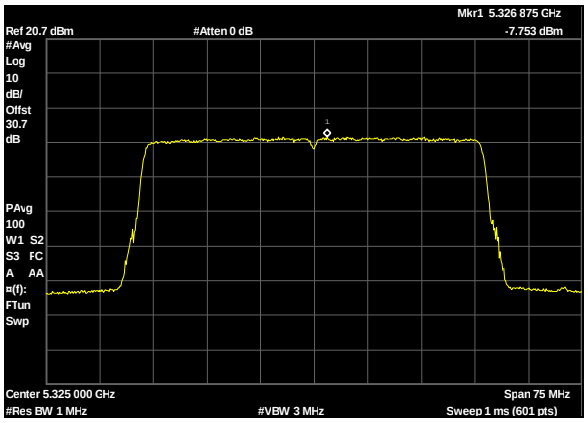
Plot 267. Power Spectral Density, UNII 2A, BW 50M, CF 5300M, c0, 19dBi



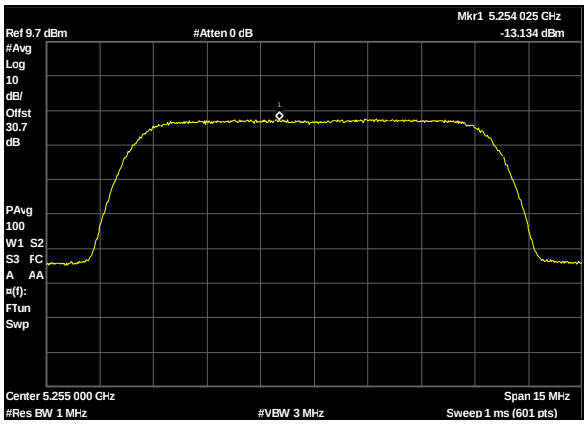
Plot 268. Power Spectral Density, UNII 2A, BW 50M, CF 5300M, c1, 19dBi



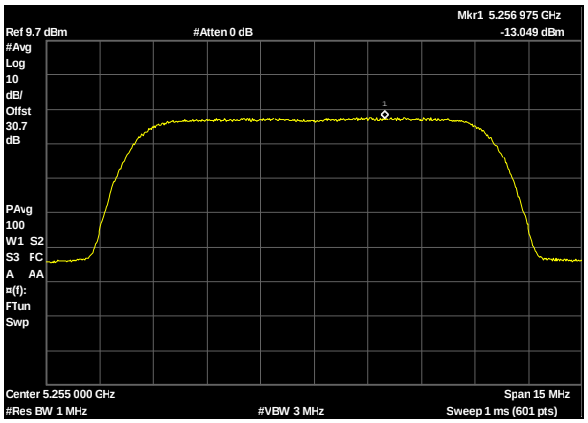
Plot 269. Power Spectral Density, UNII 2A, BW 50M, CF 5325M, c0, 19dBi



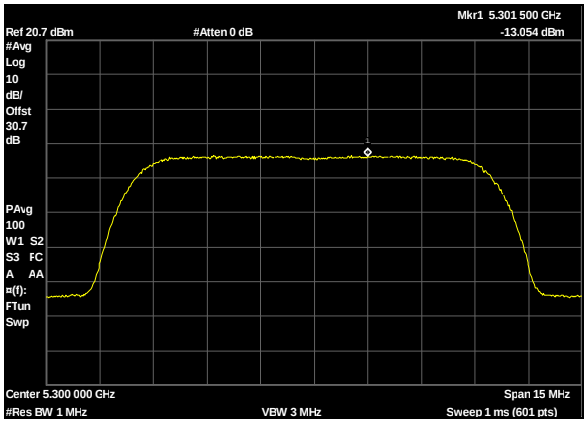
Plot 270. Power Spectral Density, UNII 2A, BW 50M, CF 5325M, c1, 19dBi



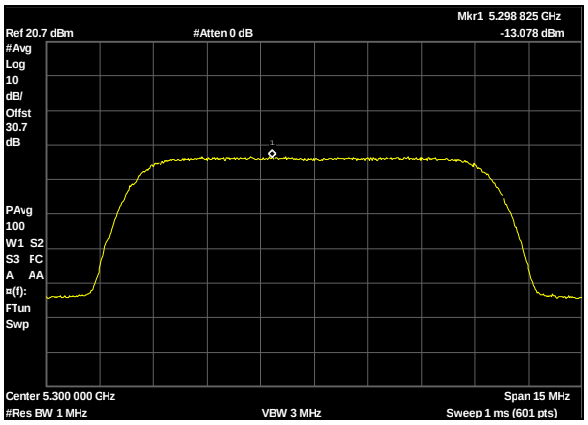
Plot 271. Power Spectral Density, UNII 2A, BW 10M, CF 5255M, c0, 27dBi



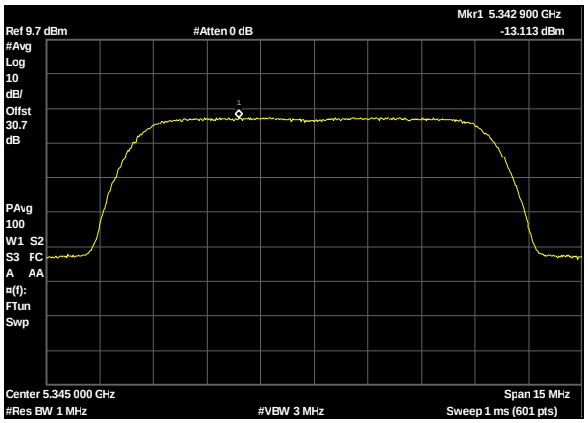
Plot 272. Power Spectral Density, UNII 2A, BW 10M, CF 5255M, c1, 27dBi



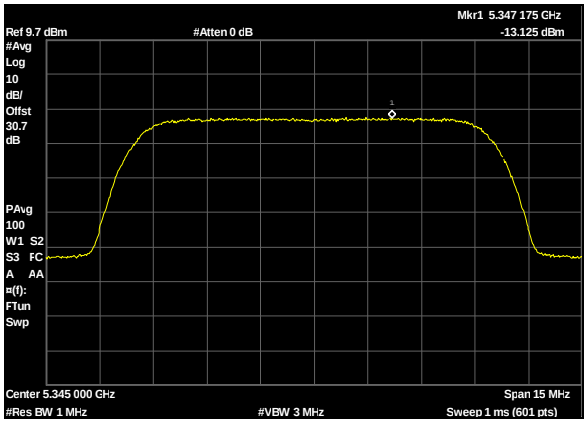
Plot 273. Power Spectral Density, UNII 2A, BW 10M, CF 5300M, c0, 27dBi



Plot 274. Power Spectral Density, UNII 2A, BW 10M, CF 5300M, c1, 27dBi



Plot 275. Power Spectral Density, UNII 2A, BW 10M, CF 5345M, c0, 27dBi



Plot 276. Power Spectral Density, UNII 2A, BW 10M, CF 5345M, c1, 27dBi

