July 29, 2019

Harris Corp- Communication Systems
221 Jefferson Ridge Parkway,
Lynchburg, VA 24501

Dear Dave Scherer,

Enclosed is the EMC Wireless test report for compliance testing of the Harris Corp- Communication Systems, Harris RF-7800W Broadband Ethernet Radio, tested to the requirements of Title 47 of the Code of Federal Regulations (CFR), Part 90 Subpart Y for Land Mobile Radio Services.

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.

Mae Ramirez
Documentation Department

Reference: (\Harris Corp- Communication Systems\ EMC94059-FCC90Y Rev. 4)

Electromagnetic Compatibility Criteria Test Report

for the

Harris Corp- Communication Systems
Model Harris RF-7800W Broadband Ethernet Radio

Tested under
The FCC Certification Rules
contained in
Title 47 of the CFR
Part 90 Subpart Y

MET Report: EMC94059-FCC90Y Rev. 4

July 29, 2019

Prepared For:

Harris Corp- Communication Systems
221 Jefferson Ridge Parkway,
Lynchburg, VA 24501

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

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Title 47 of the CFR
Part 90 Subpart Y

Arsalan Hasan, Project Engineer
Electromagnetic Compatibility Lab

Mae Ramirez
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 Parts 15B, 15.407, of the FCC Rules under normal use and maintenance.

Benjamin Taylor,
Wireless Manager, Electromagnetic Compatibility Lab

Report Status Sheet

Revision	Report Date	Reason for Revision
∅	July 29, 2019	Initial Issue.
1	September 12, 2019	Added Spurious Emission & PAPR
2	September 16, 2019	Corrected Typos
3	November 3, 2019	TCB updates
4	November 6, 2019	TCB updates

Table of Contents

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
μ**H**	**Micro**h**enry
μ	**Micro**f**arad
μs	**Micro**s**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 Harris Corp- Communication Systems Harris RF-7800W Broadband Ethernet Radio, with the requirements of Part 90 Subpart Y. 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 Harris RF-7800W Broadband Ethernet Radio. Harris Corp- Communication Systems should retain a copy of this document which should be kept on file for at least two years after the manufacturing of the Harris RF-7800W Broadband Ethernet Radio, has been **permanently** discontinued.

B. Executive Summary

These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with Part 90, Subpart Y. All tests were conducted using measurement procedure ANSI C63.26 2015.

Title 47 of the CFR, Part 90, Subpart Y, and FCC Reference and Test Description	Compliance / Comments
2.1049; 90.1215(d) Occupied Bandwidth	Compliant
2.1046; 90.1215(a)(1) Peak Power Output	Compliant
2.1047(a) Modulation Characteristics	Not Applicable / The EUT is non-voice, data only.
2.1046; 90.1215(a)(2) Power Spectral Density	Compliant
2.1051; 90.210(m) Spurious Emissions (Mask)	Compliant
2.1053 radiated Emissions	Compliant
90.1215(e) Peak to Average Power Ratio	Compliant
90.1217 RF Exposure	Compliant
2.1055; 90.213(a) Frequency Stability	Compliant
90.214 Transient Frequency Behavior	Not Applicable / The EUT is not a keyed transmitter.

Table 1. Executive Summary of EMC Part 90Y ComplianceTesting

II. Equipment Configuration

A. Overview

MET Laboratories, Inc. was contracted by Harris Corp- Communication Systems to perform testing on the Harris RF-7800W Broadband Ethernet Radio, under Harris Corp- Communication Systems' purchase order number 67583.

This document describes the test setups, test methods, required test equipment, and the test limit criteria used to perform compliance testing of the Harris Corp- Communication Systems Harris RF-7800W Broadband Ethernet Radio.

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

Model(s) Tested:	Harris RF-7800W Broadband Ethernet Radio	
Model(s) Covered:	Harris RF-7800W Broadband Ethernet Radio	
Antennas Tested:	RF-7800W-AT202 RF-7800W-AT203 RF-7800W-AT206 RF-7800W-AT207	
Antennas Covered:	RF-7800W-AT201 RF-7800W-AT246	
EUT Specifications:	Primary Power: 52 VDC	
	FCC ID: AQZ-RF-7800W-RPG2	
	Type of Modulations:	QPSK 1/16, 16-QAM, 64-QAM, 256-QAM
	Equipment Code:	TNB
	Max. RF Output Power:	26.20 dBm (8dBi/5dBi Antenna) PTMP 26.20 dBm (13.5dBi Antenna) PTMP 26.23 dBm (26dBi/21dBi Antenna) PTP 26.21 dBm (30dBi Antenna) PTP
	EUT Frequency Ranges:	4940 – 4990 MHz
	Bandwidths:	5/10/20 MHz
Analysis:	The results obtained relate only to the item(s) tested.	
Duty Cycle Tested:	100%	
Environmental Test Conditions:	Temperature: 15-35° C	
	Relative Humidity: 30-60%	
	Barometric Pressure: 860-1060 mbar	
Type of Filing:	Original	
Evaluated by:	Arsalan Hasan	
Report Date(s):	July 10, 2019	

Table 2. EUT Summary

B. References

CFR 47, Part 90, Subpart Y	Private Land Mobile radio Services : Regulations governing licensing and use of frequencies in the 4940-4990MHz band.
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 C63.26:2015	American National Standard for Compliance testing of Transmitters Used in Liscensed Radio Services
KDB 971168 D01 Power Meas License Digital Systems v02r02	Measurement guidance for certification of licensed digital transmitters.
KDB 662911 D01 Multiple Transmitter Output v02r01	Missions Testing of Transmitters with Multiple Outputs in the same band.

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 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. Measurement Uncertainty

Test Method	Typical Expanded Uncertainty	K	Confidence Level
RF Frequencies	±4.52 Hz	2	95%
RF Power Conducted Emissions	±2.32 dB	2	95%
RF Power Conducted Spurious Emissions	±2.25 dB	2	95%
RF Power Radiated Emissions	±3.01 dB	2	95%

Table 4. Uncertainty Calculations Summary

E. Description of Test Sample

The Harris Corp- Communication Systems Harris RF-7800W Broadband Ethernet Radio, Equipment Under Test (EUT), is used to provide long-range, high-throughput Ethernet network backhaul in outdoor point-to-point and point-to-multipoint scenarios.

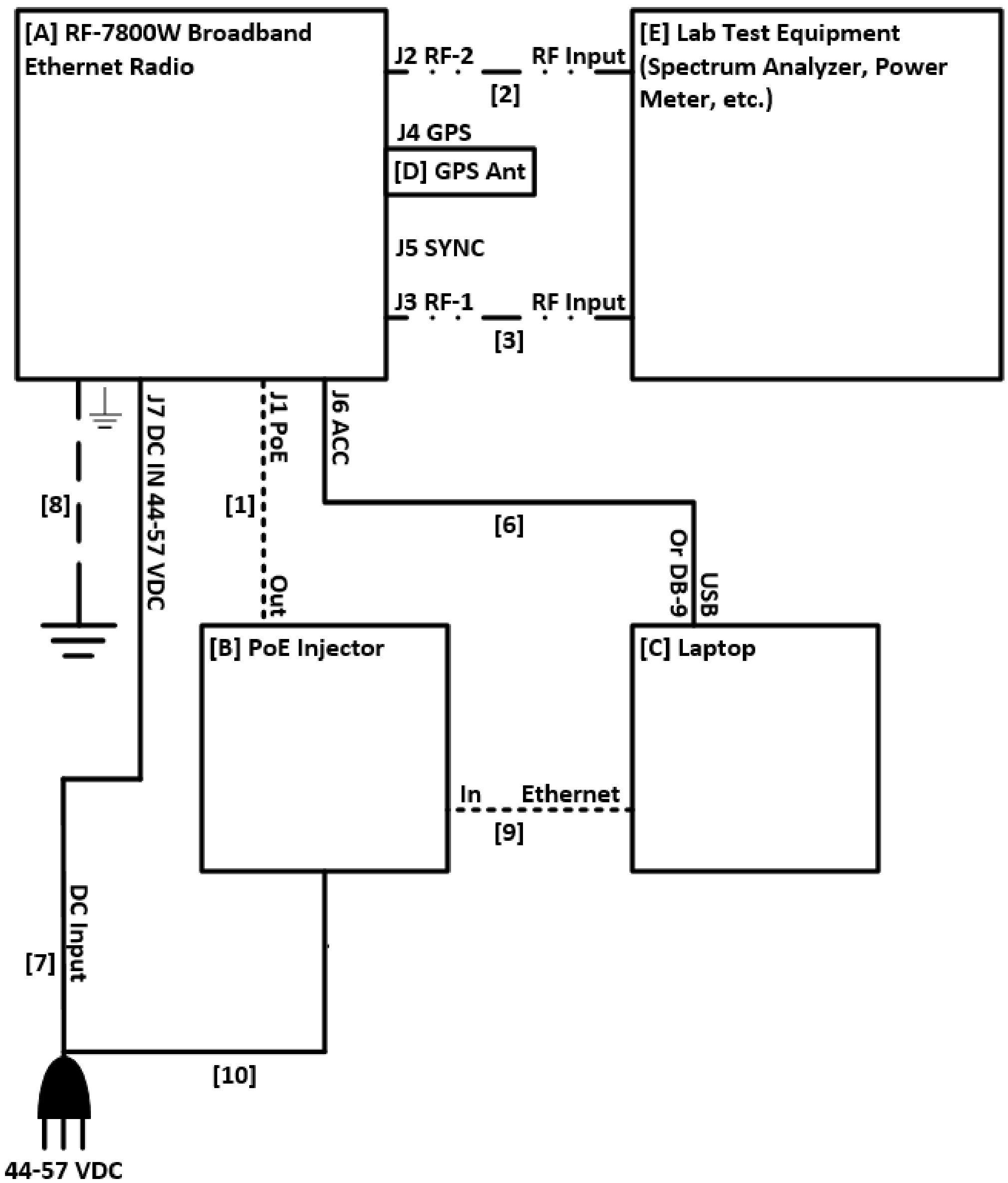


Figure 1. Block Diagram of Test Configuration

F. Equipment Configuration

The EUT was set up as outlined in Figure 1 and 2. All cards, racks, etc., incorporated as part of the EUT is included in the following list.

Ref. ID	Slot #	Name / Description	Model Number	Part Number	Serial Number	Rev. #
A		Broadband Ethernet Radio	RF-7800W-RP500	12069-5010-01	A01067 or A01056	T502C

Table 5. Equipment Configuration

G. 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
B	DC PoE Injector	L-Com		Not Applicable
C	Laptop	Panasonic	CF-29/CF-31	Not Applicable
D	GPS Antenna	Harris	12069-3160-01	Not Applicable
E	Lab Test Equipment (Spectrum Analyzer)			
F	Lab Test Equipment (Signal Generator)			
G	2-way Splitter	Narda	4314B-2	Not Available
H	30 dB Attenuator	Narda	Micro-Pad 4779-30	Not Available
K	N[M]-to-SMA[F] Adaptor			Not Available
L	N[F]-to-SMA[F] Adaptor			Not Available
M	SMA[M]-to-SMA[M] Adaptor			Not Available
N	Circulator	Narda	4924	Not Available
O	50 Ohm Terminator			Not Available

The 'Customer Supplied Calibration Data' column will be marked as either not applicable, not available, or will contain the calibration date supplied by the customer.

Table 6. Support Equipment

H. Ports and Cabling Information

Ref. ID	Port name on EUT	Cable Description or reason for no cable	Qty	Length as tested (m)	Max Length (m)	Shielded? (Y/N)	Termination Box ID & Port Name
1	J1 PoE	Power over Ethernet (Cat6)	1	~30	90	Yes	B.Out
2	J2 RF-2	Coaxial RF (SMA[M]-to-SMA[M])	2	0.91	0.5	Yes	E.RF Input
3	J3 RF-1	Coaxial RF (SMA[M]-to-SMA[M])	2	0.91	0.5	Yes	E.RF Input
4	J4 GPS	Direct connection to GPS Antenna (refer to Ref ID *D*)	1	N/A	N/A	N/A	D
5	J5 SYNC	Unused, future use	-	N/A	N/A	N/A	N/A
6	J6 ACC	Configuration/Monitoring (Serial Communications)	1	15	90	Yes	C.USB Or C.DB-9
7	J6 DC IN 44-57 VDC	DC Power	1		90	Yes	
8	⏚	Ground Strap	1	0.5	0.5	N/A	Ground
9	In	Ethernet (Cat6)	1	3	100 minus length of Ref ID *1*	Yes	C.Ethernet
10	N/A	DC Input (Barrel Connector)	1	1.8	2	No	44-57 V
11	N/A	Coaxial RF (SMA[M]-to-SMA[M])	3	1	N/A	Yes	N/A

Table 7. Ports and Cabling Information

I. Mode of Operation

Emissions:

The RF-7800W Broadband Ethernet Radio will be put into constant transmit mode and its RF transmissions will be measured on the lab test equipment (Spectrum Analyzer, Power Meter, etc.).

J. Method of Monitoring EUT Operation

Consistent with the Mode of Operation section above, there needs to be a means of continuously monitoring the operation of the EUT.

Emissions:

1. RF transmissions will be present on the lab test equipment (Spectrum Analyzer, Power Meter, etc.).
2. RF transmissions will not be present on the lab test equipment (Spectrum Analyzer, Power Meter, etc.).

K. 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 Harris Corp- Communication Systems upon completion of testing.

L. Antenna Key

The plots in this report reference the antennas' physical description. This table has been added in order to reference the antennas' model numbers.

Physical Description	Antenna	Type	Gain	Mode of Operation
1' Panel	RF-7800W-AT201	Panel	21 dBi	Point-to-Point (only)
2' Panel	RF-7800W-AT202	Panel	26 dBi	Point-to-Point (only)
3' Parabolic	RF-7800W-AT203	Dish	30 dBi	Point-to-Point (only)
8 Omni	RF-7800W-AT206	Omni	8 dBi	Point-to-Multipoint (only)
5 Omni	RF-7800W-AT246	Omni	5 dBi	Point-to-Multipoint (only)
90 degree sector	RF-7800W-AT207	Sector	13.5 dBi	Point-to-Multipoint (only)

Table 8. Antenna Key

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.

Antenna Requirement is met because the device and its antennas are going to be professionally installed

Physical Description	Antenna	Type	Gain	Mode of Operation
1’ Panel	RF-7800W-AT201	Panel	21 dBi	Point-to-Point (only)
2’ Panel	RF-7800W-AT202	Panel	26 dBi	Point-to-Point (only)
3’ Parabolic	RF-7800W-AT203	Dish	30 dBi	Point-to-Point (only)
8 Omni	RF-7800W-AT206	Omni	8 dBi	Point-to-Multipoint (only)
5 Omni	RF-7800W-AT246	Omni	5 dBi	Point-to-Multipoint (only)
90 degree sector	RF-7800W-AT207	Sector	13.5 dBi	Point-to-Multipoint (only)

Table 9. Antenna Key

Test Engineer(s): Arsalan Hasan

Test Date(s): May 10, 2019

Electromagnetic Compatibility Criteria for Intentional Radiators

§ 90.1215(d) 26 dB Bandwidth

Test Requirements: **§ 90.1215(d):** The peak power spectral density is measured as conducted emission by direct connection of a calibrated test instrument to the equipment under test. If the device cannot be connected directly, alternative techniques acceptable to the Commission may be used. Measurements are made over a bandwidth of one MHz or the 26 dB emission bandwidth of the device, whichever is less. A resolution bandwidth less than the measurement bandwidth can be used, provided that the measured power is integrated to show total power over the measurement bandwidth. If the resolution bandwidth is approximately equal to the measurement bandwidth, and much less than the emission bandwidth of the equipment under test, the measured results shall be corrected to account for any difference between the resolution bandwidth of the test instrument and its actual noise bandwidth.

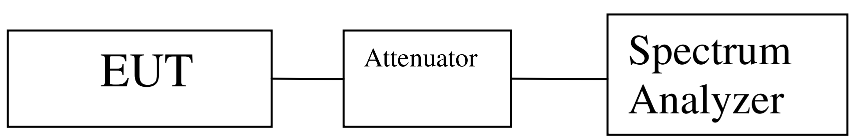
Test Procedure: The transmitter was set to low, mid, and high operating frequencies at the highest output power and connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured with the spectrum analyzer using a RBW approximately equal to 1% of the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

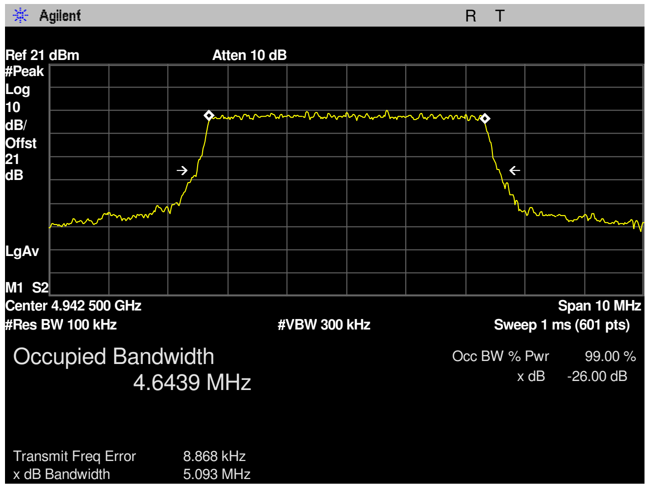
Test Engineer(s): Arsalan Hasan

Test Date(s): July 1, 2019

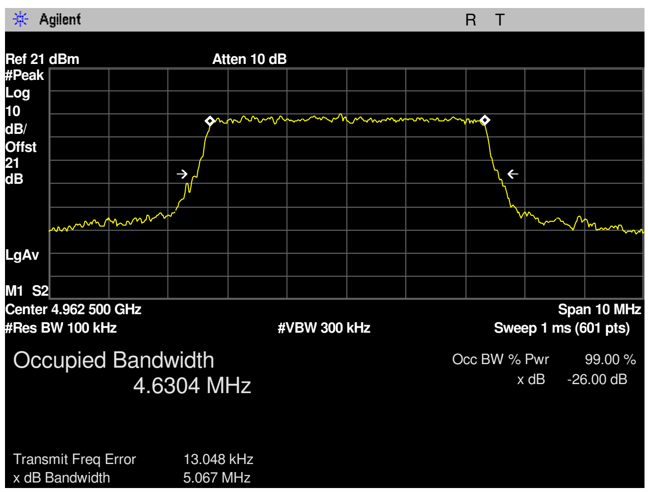


Bandwidth (MHz)	Frequency (MHz)	26dB Occupied Bandwidth (MHz)
5	4942.5	5.093
	4962.5	5.067
	4987.5	5.153
10	4945.0	9.981
	4965.0	10.155
	4985.0	10.118
20	4950.0	20.648
	4965.0	20.751
	4980.0	20.539

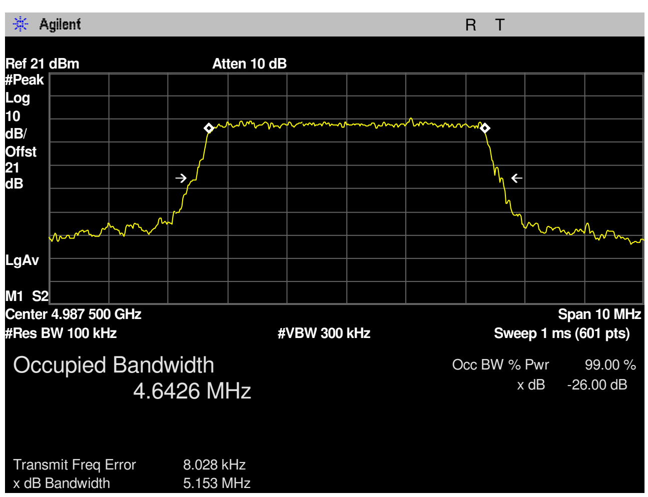
Table 10. 26 dB Occupied Bandwidth, Test Results



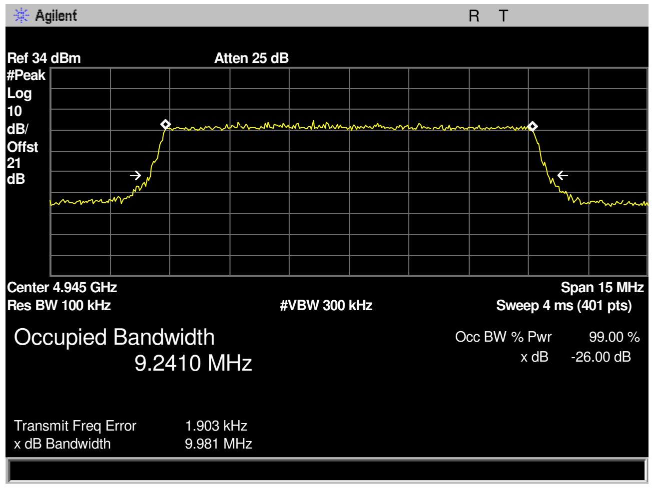
Plot 1. 26 dB Occupied Bandwidth, BW 5MHz, 4942.5MHz



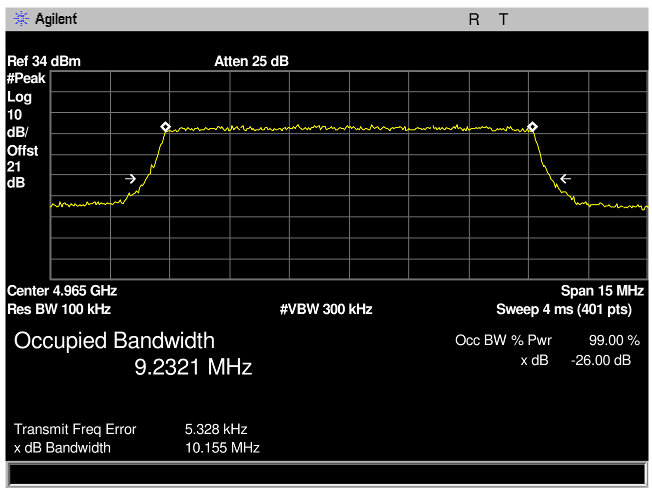
Plot 2. 26 dB Occupied Bandwidth, BW 5MHz, 4962.5MHz



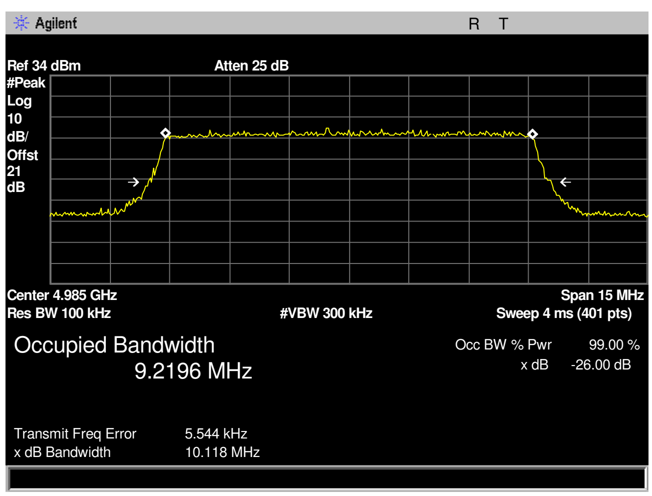
Plot 3. 26 dB Occupied Bandwidth, BW 5MHz, 4987.5MHz



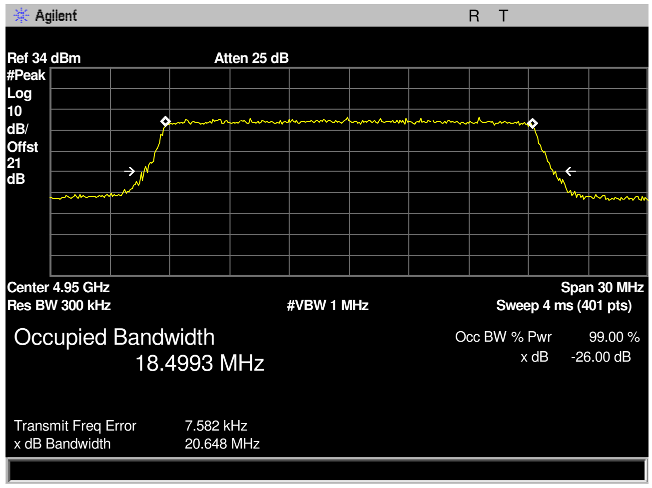
Plot 4. 26 dB Occupied Bandwidth, BW 10MHz, 4945MHz



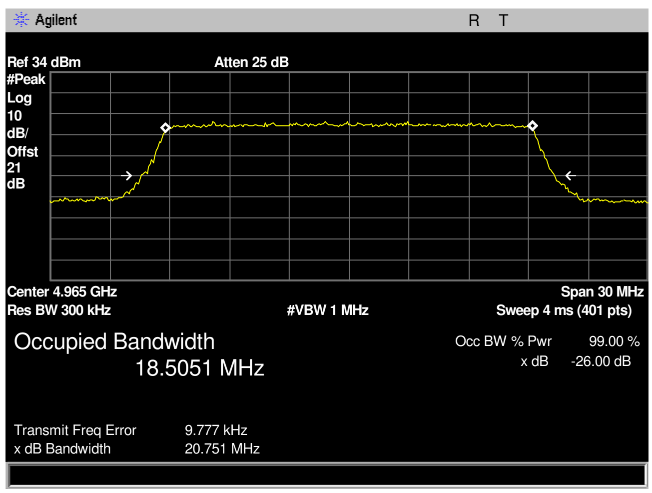
Plot 5. 26 dB Occupied Bandwidth, BW 10MHz, 4965MHz



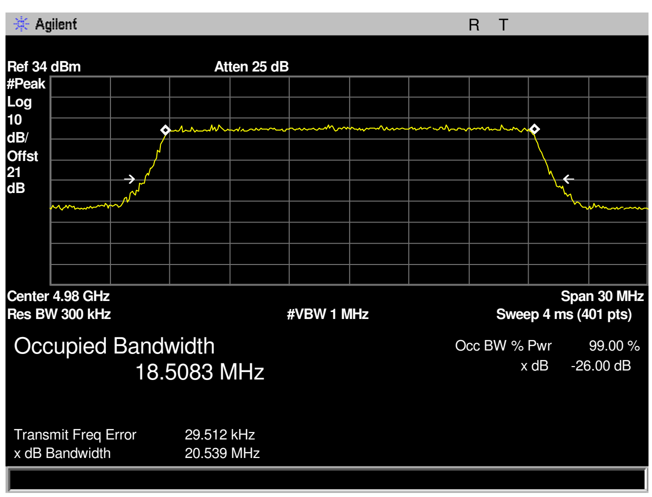
Plot 6. 26 dB Occupied Bandwidth, BW 10MHz, 4985MHz



Plot 7. 26 dB Occupied Bandwidth, BW 20MHz, 4950MHz



Plot 8. 26 dB Occupied Bandwidth, BW 20MHz, 4965MHz



Plot 9. 26 dB Occupied Bandwidth, BW 20MHz, 4980MHz

Electromagnetic Compatibility Criteria for Intentional Radiators

§90.1215(a)(1) Maximum Conducted Output Power

Test Requirements: **§90.1215(a):** The transmitting power of stations operating in the 4940-4990 MHz band must not exceed the maximum limits in this section.

(a)(1) The maximum conducted output power should not exceed:

Channel Bandwidth (MHz)	Low Power Maximum Conducted Output Power (dBm)	High Power Maximum Conducted Output Power (dBm)
1	7	20
5	14	27
10	17	30
15	18.8	31.8
20	20	33

Table 11. Output power limits

(2) High power devices are also limited to a peak power spectral density of 21 dBm per one MHz. High power devices using channel bandwidths other than those listed above are permitted; however, they are limited to peak power spectral density of 21 dBm/MHz. If transmitting antennas of directional gain greater than 9 dBi are used, both the maximum conducted output power and the peak power spectral density should be reduced by the amount in decibels that the directional gain of the antenna exceeds 9 dBi. However, high power point-to-point and point-to-multipoint operations (both fixed and temporary-fixed rapid deployment) may employ transmitting antennas with directional gain up to 26 dBi without any corresponding reduction in the maximum conducted output power or spectral density. Corresponding reduction in the maximum conducted output power and peak power spectral density should be the amount in decibels that the directional gain of the antenna exceeds 26 dBi.

(b) Low power devices are also limited to a peak power spectral density of 8 dBm per one MHz. Low power devices using channel bandwidths other than those listed above are permitted; however, they are limited to a peak power spectral density of 8 dBm/MHz. If transmitting antennas of directional gain greater than 9 dBi are used, both the maximum conducted output power and the peak power spectral density should be reduced by the amount in decibels that the directional gain of the antenna exceeds 9 dBi.

Test Procedure: The EUT was tested according to the average power integration procedures of ANSI C63.26 5.2.4.4.1. The power measurement function of spectrum analyzer was used and configured in the following manner.

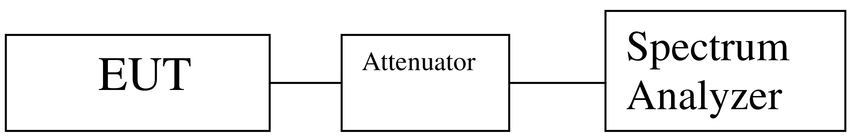
(a) Frequency = channel cf
(b) Span = 2-5 x the OBW
(c) RBW = 1-5 % of the OBW
(d) VBW 1-3 x the RBW
(e) Sweep Time = Auto
(f) Detector = Average

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

No anomalies detected.

Test Engineer(s): Arsalan Hasan

Test Date(s): July 8, 2019



Frequency (MHz)	Power Port 1 (dBm)	Power Port 2 (dBm)	Sum (dBm)	Limit (dBm)	Antenna Gain (dBi)	Power Limit (dBm)	Power Margin (dB)
5 MHz							
4942.5	20.18	20.25	23.23	27.00	8.00	27.00	-3.77
4962.5	20.61	20.55	23.59	27.00	8.00	27.00	-3.41
4987.5	20.65	20.67	23.67	27.00	8.00	27.00	-3.33
10 MHz							
4945.0	21.08	21.12	24.11	30.00	8.00	30.00	-5.89
4965.0	20.82	20.85	23.85	30.00	8.00	30.00	-6.15
4985.0	21.26	20.91	24.10	30.00	8.00	30.00	-5.90
20 MHz							
4950.0	23.11	23.15	26.14	33.00	8.00	33.00	-6.86
4965.0	22.75	22.86	25.82	33.00	8.00	33.00	-7.18
4980.0	23.42	22.95	26.20	33.00	8.00	33.00	-6.80

Table 12. Maximum Conducted Transmitter Power, 8 Omni, Test Results (Point-to-multipoint)

Frequency (MHz)	Power Port 1 (dBm)	Power Port 2 (dBm)	Sum (dBm)	Limit (dBm)	Antenna Gain (dBi)	Power Limit (dBm)	Power Margin (dB)
5 MHz							
4942.5	20.16	20.37	23.28	27.00	13.50	27.00	-3.72
4962.5	20.68	20.61	23.66	27.00	13.50	27.00	-3.34
4987.5	20.76	20.67	23.73	27.00	13.50	27.00	-3.27
10 MHz							
4945.0	21.14	20.94	24.05	30.00	13.50	30.00	-5.95
4965.0	20.88	20.61	23.76	30.00	13.50	30.00	-6.24
4985.0	21.36	21.29	24.34	30.00	13.50	30.00	-5.66
20 MHz							
4950.0	22.82	22.68	25.76	33.00	13.50	33.00	-7.24
4965.0	22.88	23.13	26.02	33.00	13.50	33.00	-6.98
4980.0	23.03	23.35	26.20	33.00	13.50	33.00	-6.80

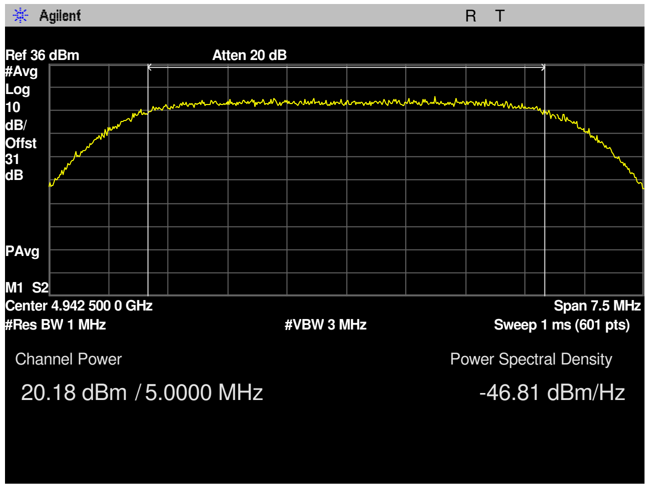
Table 13. Maximum Conducted Transmitter Power, 90 Sector, Test Results (Point-to-multipoint)

Frequency (MHz)	Power Port 1 (dBm)	Power Port 2 (dBm)	Sum (dBm)	Limit (dBm)	Antenna Gain (dBi)	Power Limit (dBm)	Power Margin (dB)
5 MHz							
4942.5	20.25	20.3	23.29	27.00	26.00	27.00	-3.71
4962.5	20.54	20.65	23.61	27.00	26.00	27.00	-3.39
4987.5	20.66	20.61	23.65	27.00	26.00	27.00	-3.35
10 MHz							
4945.0	20.85	20.63	23.75	30.00	26.00	30.00	-6.25
4965.0	20.87	20.67	23.78	30.00	26.00	30.00	-6.22
4985.0	21.07	21.32	24.21	30.00	26.00	30.00	-5.79
20 MHz							
4950.0	22.91	23.23	26.08	33.00	26.00	33.00	-6.92
4965.0	22.96	22.56	25.77	33.00	26.00	33.00	-7.23
4980.0	23.08	23.36	26.23	33.00	26.00	33.00	-6.77

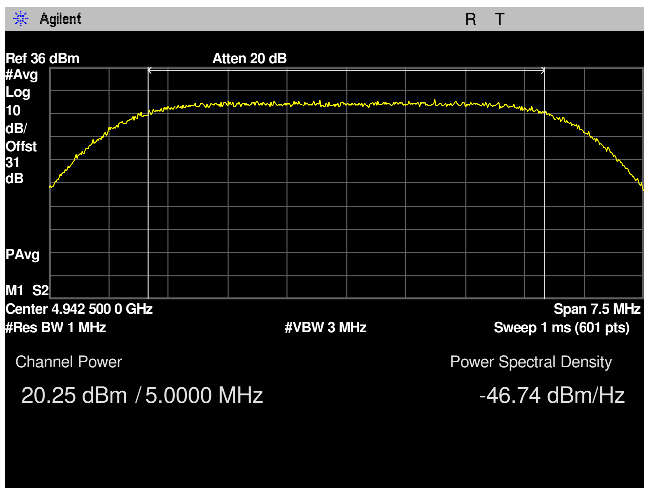
Table 14. Maximum Conducted Transmitter Power, 2' Panel, Test Results (Point-to-point)

Frequency (MHz)	Power Port 1 (dBm)	Power Port 2 (dBm)	Sum (dBm)	Limit (dBm)	Antenna Gain (dBi)	Power Limit (dBm)	Power Margin (dB)
5 MHz							
4942.5	18.38	18.55	21.48	27.00	30.00	23.00	-1.52
4962.5	18.7	18.64	21.68	27.00	30.00	23.00	-1.32
4987.5	17.75	17.68	20.73	27.00	30.00	23.00	-2.27
10 MHz							
4945.0	20.45	20.53	23.50	30.00	30.00	26.00	-2.50
4965.0	20.91	20.64	23.79	30.00	30.00	26.00	-2.21
4985.0	21.36	21.43	24.41	30.00	30.00	26.00	-1.59
20 MHz							
4950.0	22.64	22.49	25.58	33.00	30.00	29.00	-3.42
4965.0	22.77	22.74	25.77	33.00	30.00	29.00	-3.23
4980.0	23.26	23.13	26.21	33.00	30.00	29.00	-2.79

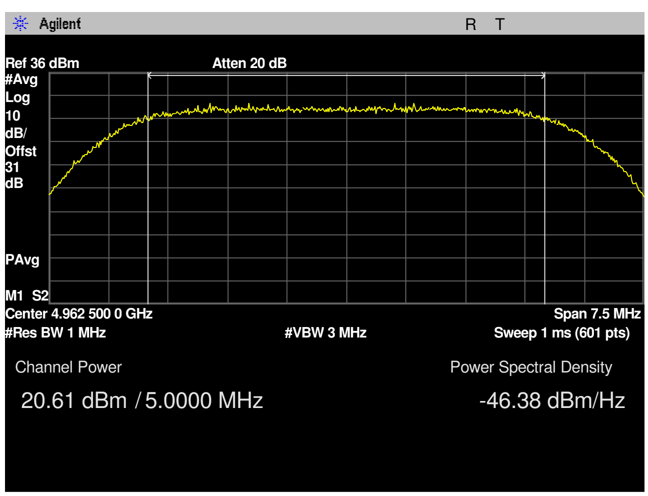
Table 15. Maximum Conducted Transmitter Power, 3' Para, Test Results (Point-to-point)



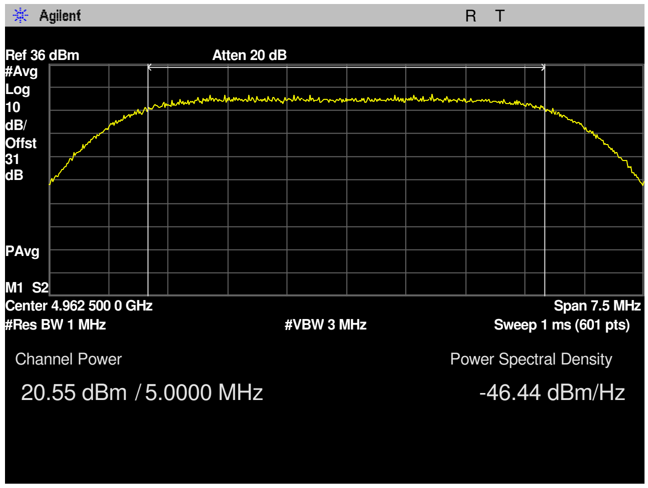
Plot 10. Maximum Conducted Output Power, 5MHz, 4942.5MHz, 8Omni, Port 1



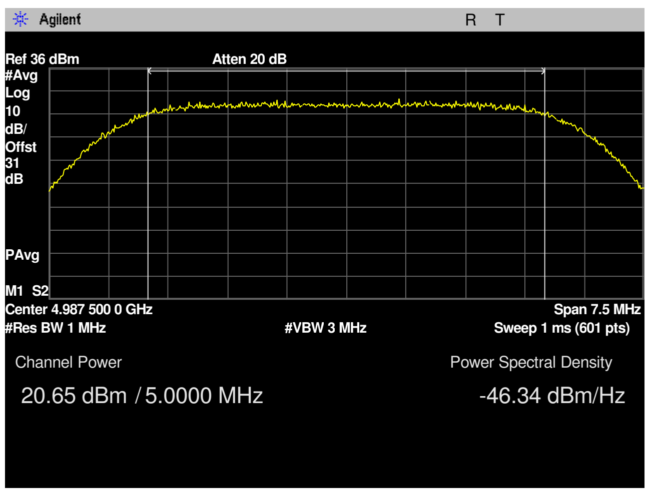
Plot 11. Maximum Conducted Output Power, 5MHz, 4942.5MHz, 8Omni, Port 2



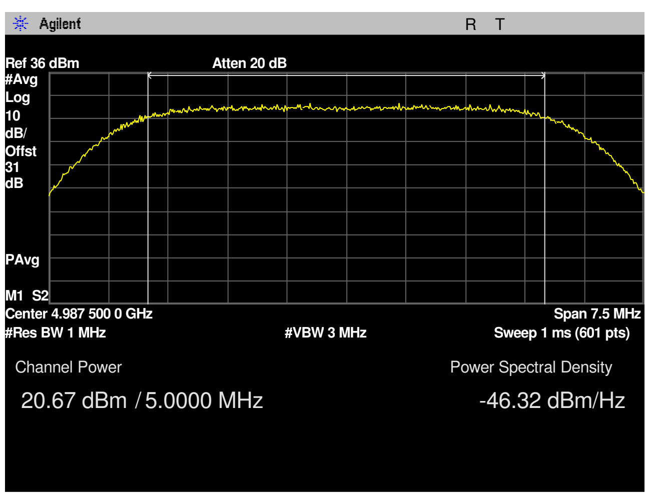
Plot 12. Maximum Conducted Output Power, 5MHz, 4962.5MHz, 8Omni, Port 1



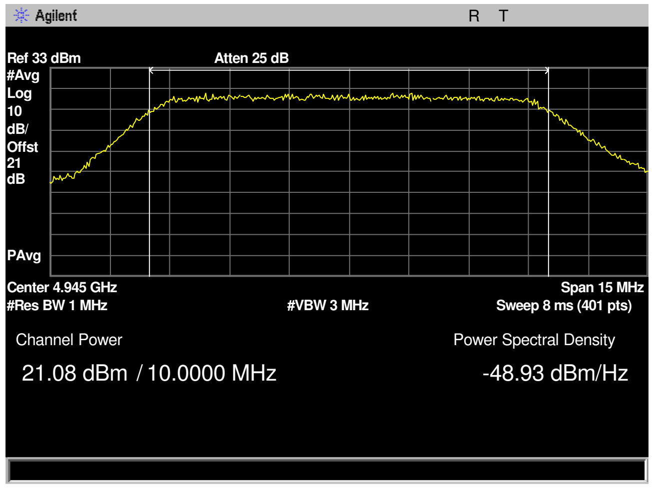
Plot 13. Maximum Conducted Output Power, 5MHz, 4962.5MHz, 8Omni, Port 2



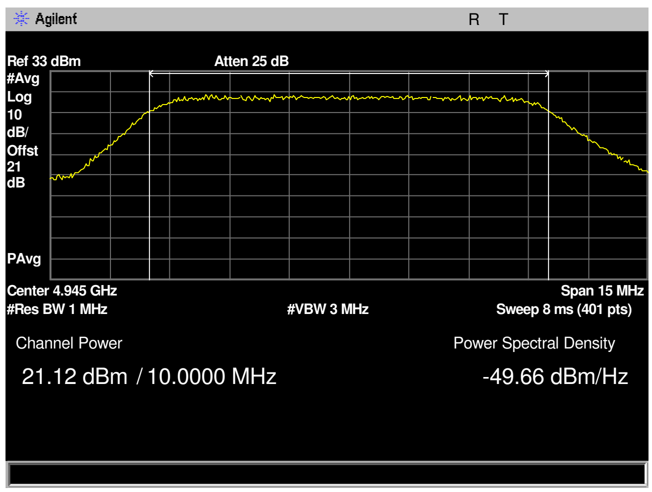
Plot 14. Maximum Conducted Output Power, 5MHz, 4987.5MHz, 8Omni, Port 1



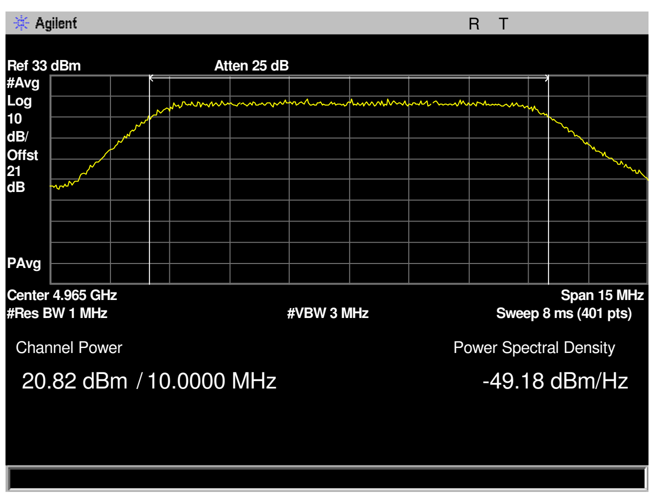
Plot 15. Maximum Conducted Output Power, 5MHz, 4987.5MHz, 8Omni, Port 2



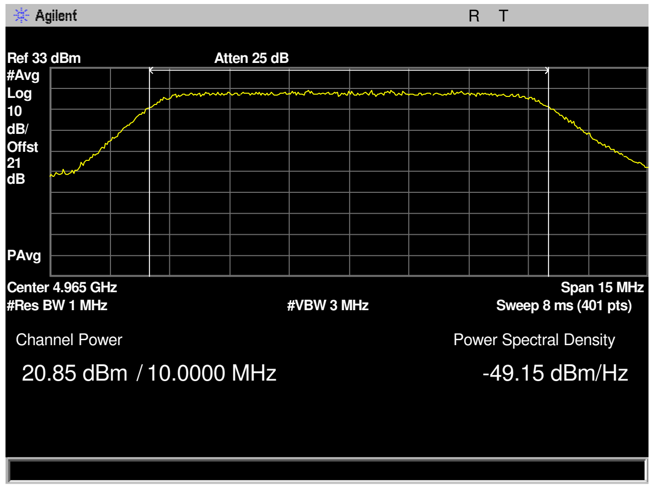
Plot 16. Maximum Conducted Output Power, 10MHz, 4945MHz, 8Omni, Port 1



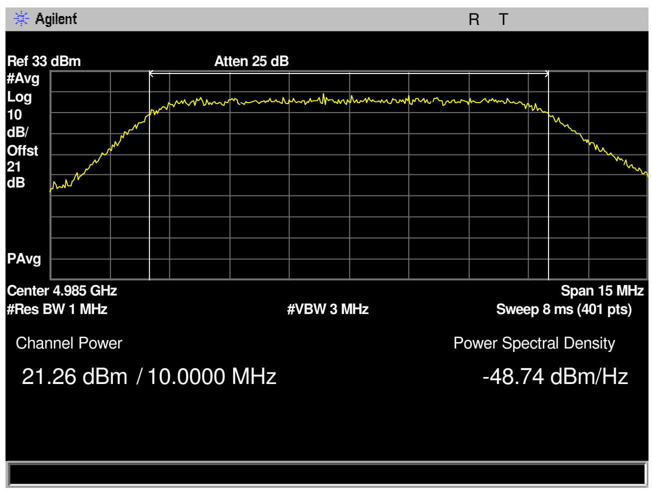
Plot 17. Maximum Conducted Output Power, 10MHz, 4945MHz, 8Omni, Port 2



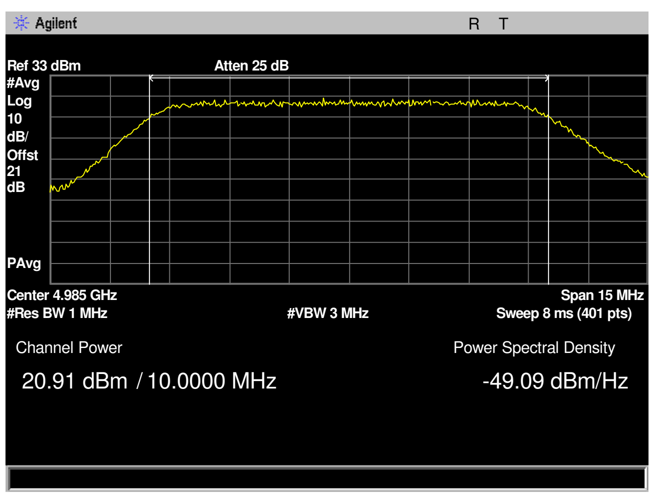
Plot 18. Maximum Conducted Output Power, 10MHz, 4965MHz, 8Omni, Port 1



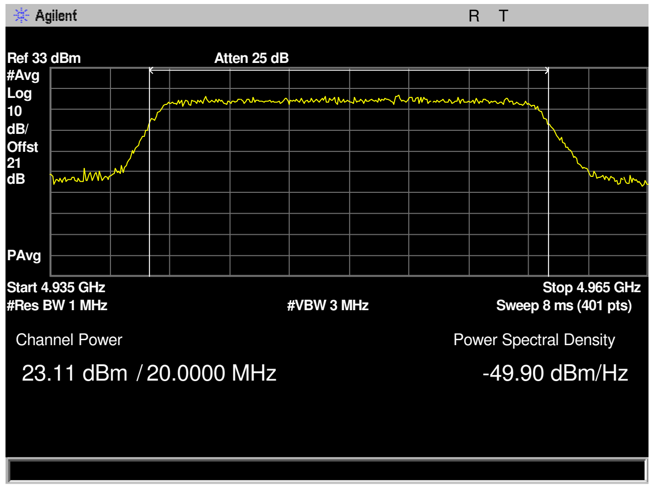
Plot 19. Maximum Conducted Output Power, 10MHz, 4965MHz, 8Omni, Port 2



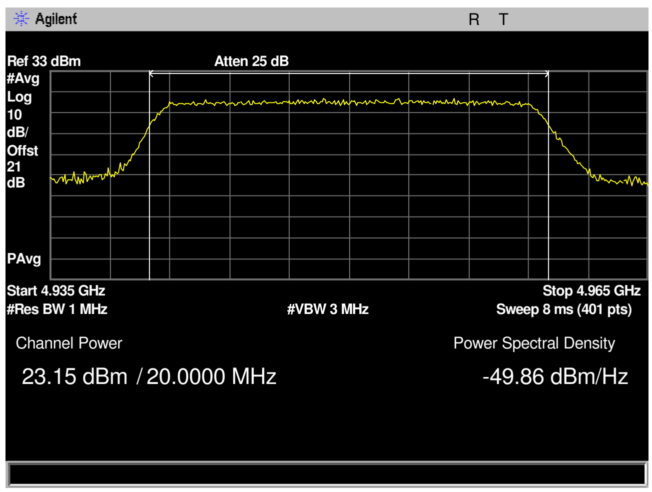
Plot 20. Maximum Conducted Output Power, 10MHz, 4985MHz, 8Omni, Port 1



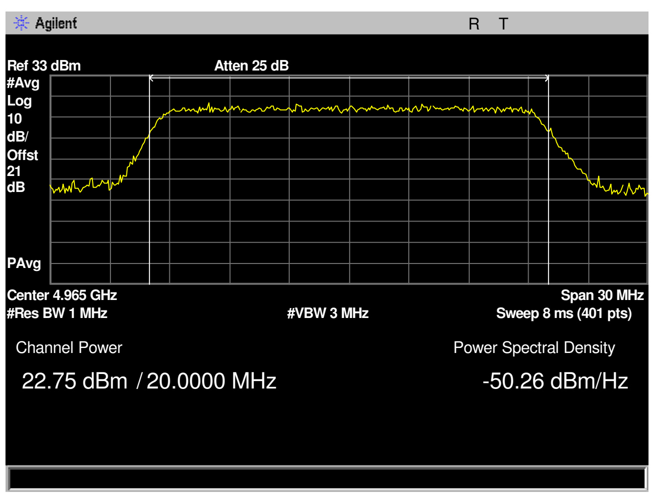
Plot 21. Maximum Conducted Output Power, 10MHz, 4985MHz, 8Omni, Port 2



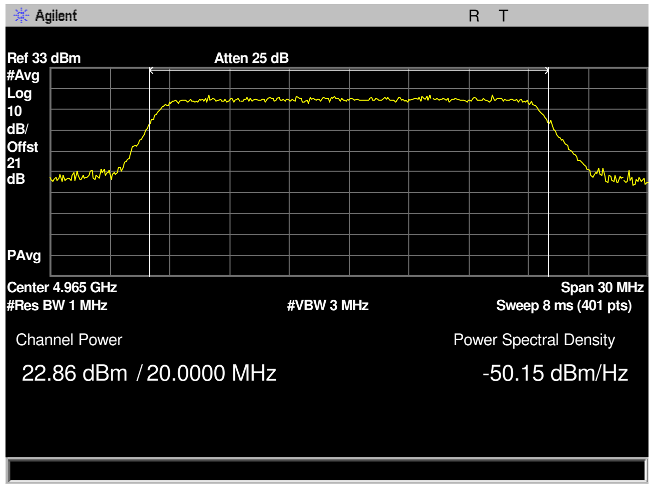
Plot 22. Maximum Conducted Output Power, 20MHz, 4950MHz, 8Omni, Port 1



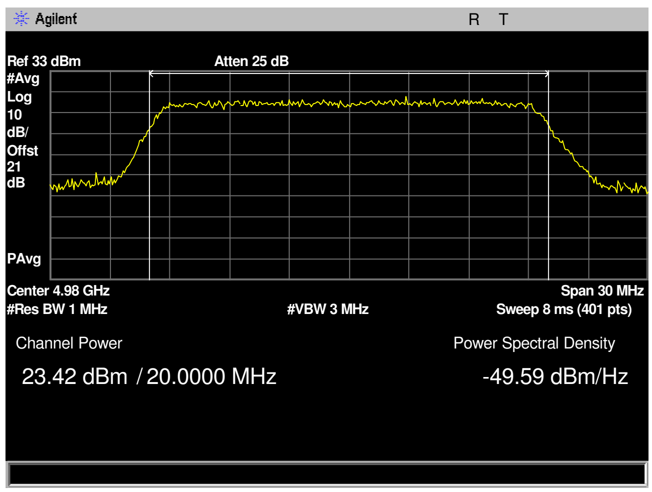
Plot 23. Maximum Conducted Output Power, 20MHz, 4950MHz, 8Omni, Port 2



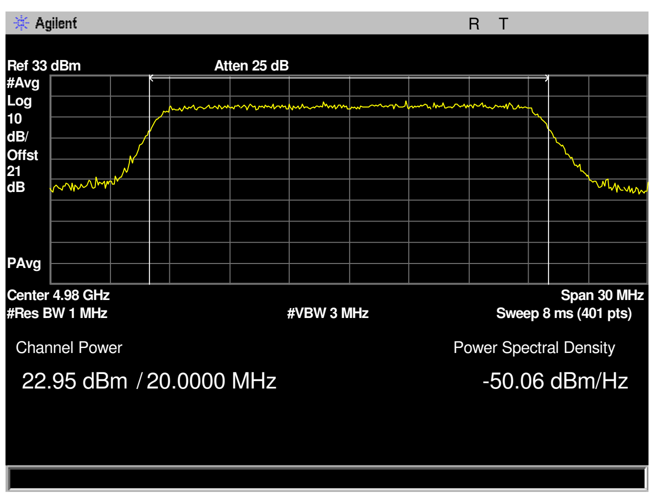
Plot 24. Maximum Conducted Output Power, 20MHz, 4965MHz, 8Omni, Port 1



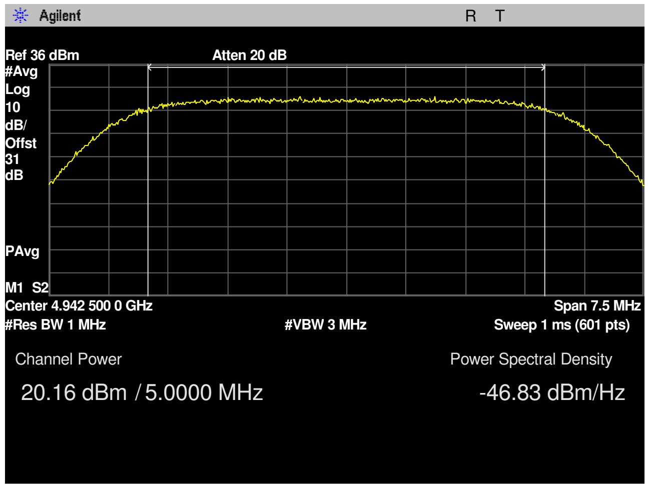
Plot 25. Maximum Conducted Output Power, 20MHz, 4965MHz, 8Omni, Port 2



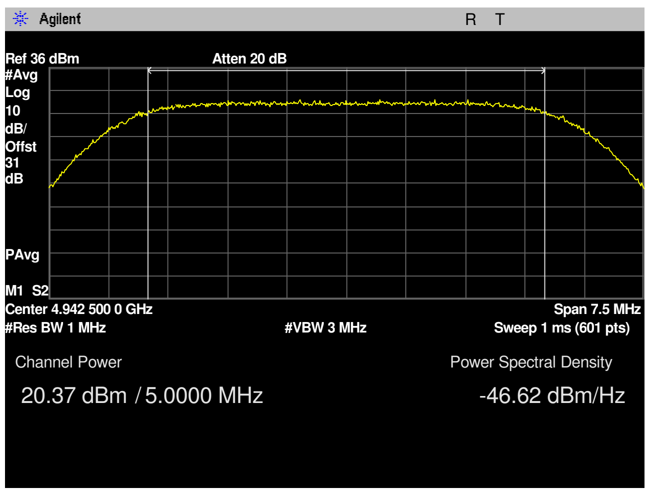
Plot 26. Maximum Conducted Output Power, 20MHz, 4980MHz, 8Omni, Port 1



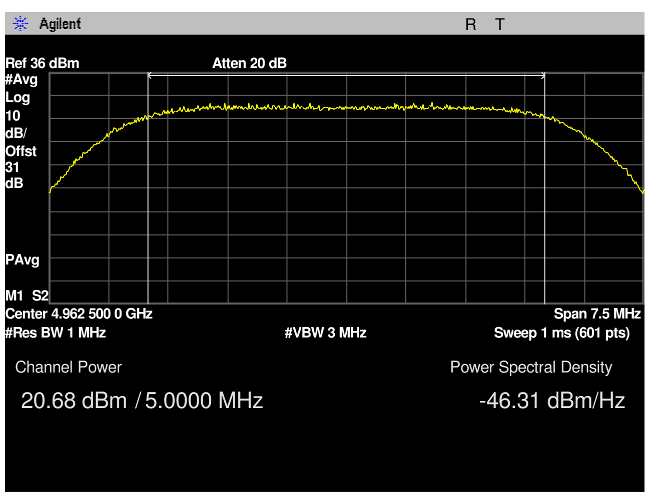
Plot 27. Maximum Conducted Output Power, 20MHz, 4980MHz, 8Omni, Port 2



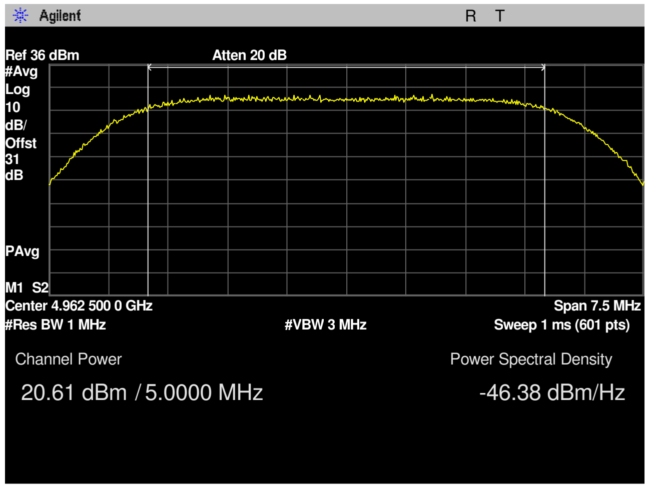
Plot 28. Maximum Conducted Output Power, 5MHz, 4942.5MHz, 90Sector, Port 1



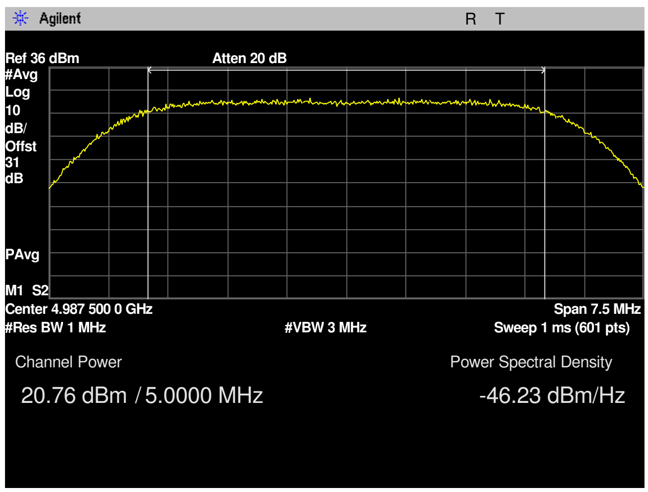
Plot 29. Maximum Conducted Output Power, 5MHz, 4942.5MHz, 90Sector, Port 2



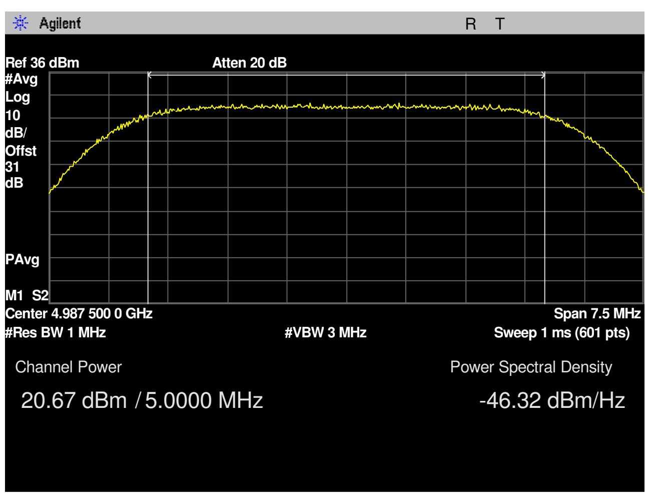
Plot 30. Maximum Conducted Output Power, 5MHz, 4962.5MHz, 90Sector, Port 1



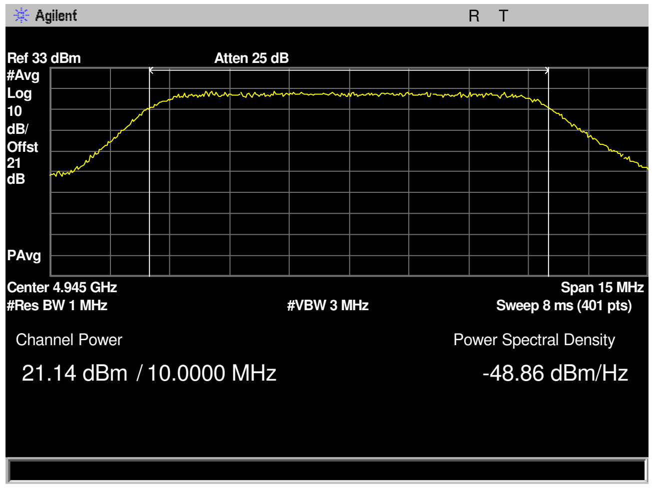
Plot 31. Maximum Conducted Output Power, 5MHz, 4962.5MHz, 90Sector, Port 1



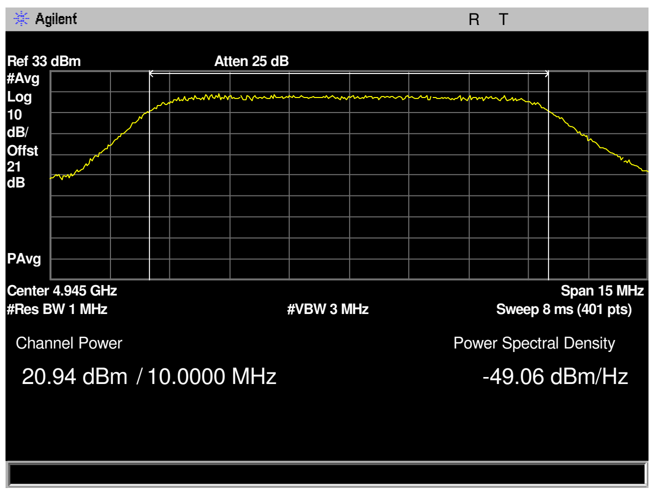
Plot 32. Maximum Conducted Output Power, 5MHz, 4987.5MHz, 90Sector, Port 1



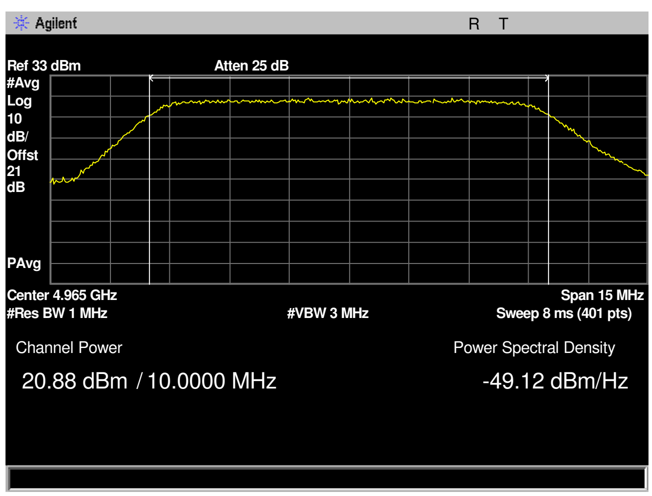
Plot 33. Maximum Conducted Output Power, 5MHz, 4987.5MHz, 90Sector, Port 2



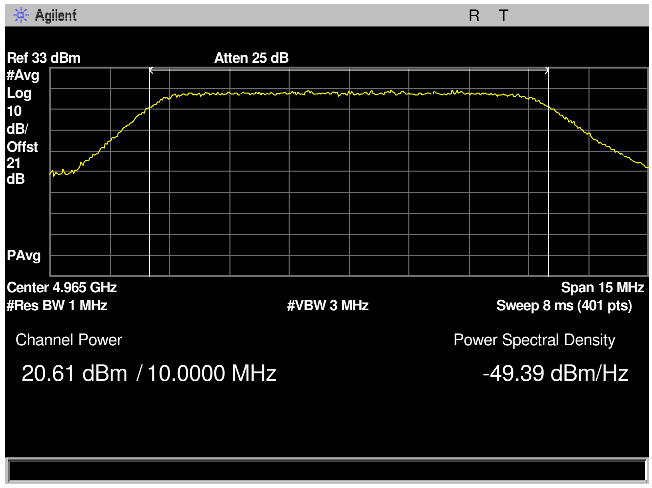
Plot 34. Maximum Conducted Output Power, 10MHz, 4945MHz, 90Sector, Port 1



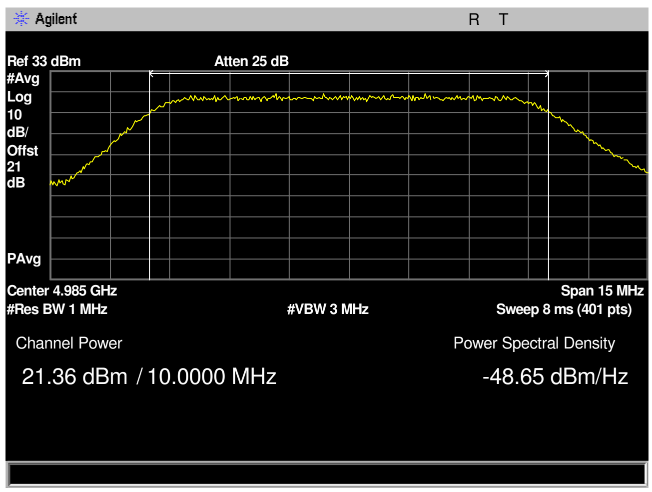
Plot 35. Maximum Conducted Output Power, 10MHz, 4945MHz, 90Sector, Port 2



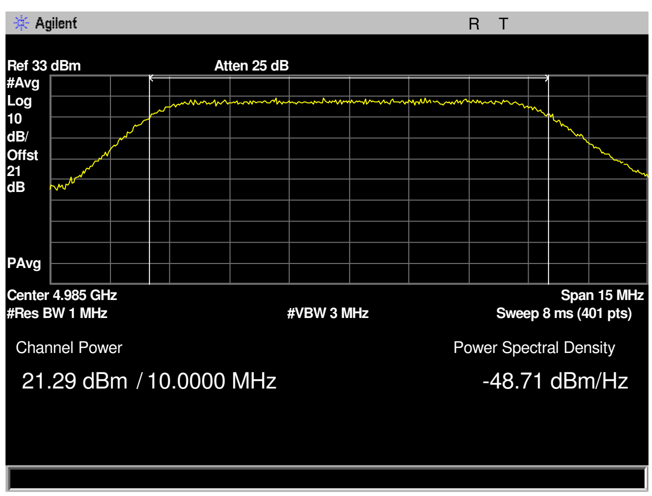
Plot 36. Maximum Conducted Output Power, 10MHz, 4965MHz, 90Sector, Port 1



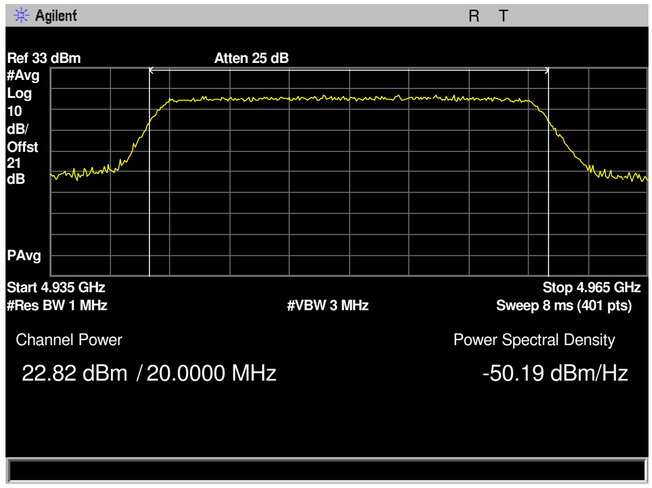
Plot 37. Maximum Conducted Output Power, 10MHz, 4965MHz, 90Sector, Port 2



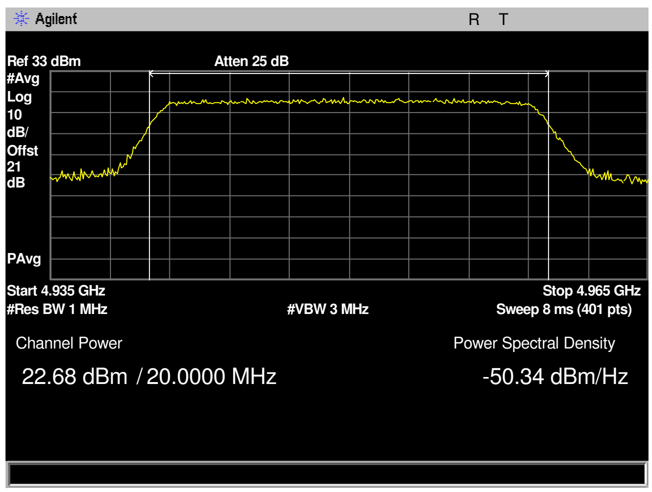
Plot 38. Maximum Conducted Output Power, 10MHz, 4985MHz, 90Sector, Port 1



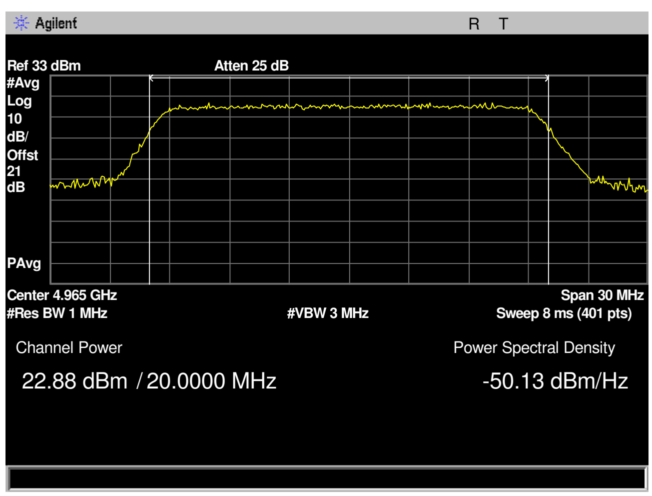
Plot 39. Maximum Conducted Output Power, 10MHz, 4985MHz, 90Sector, Port 2



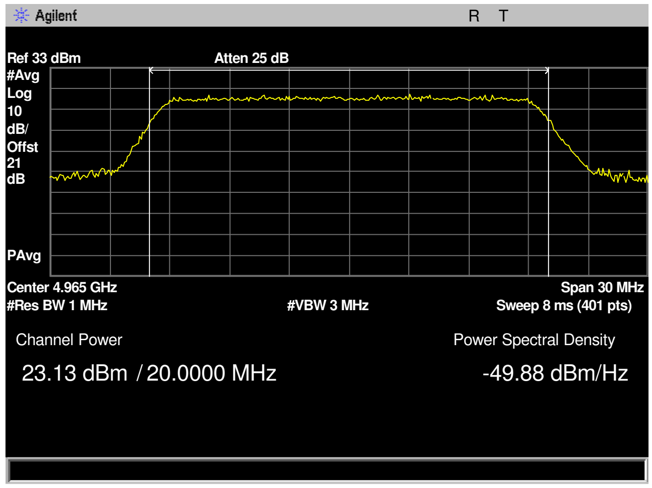
Plot 40. Maximum Conducted Output Power, 20MHz, 4950MHz, 90Sector, Port 1



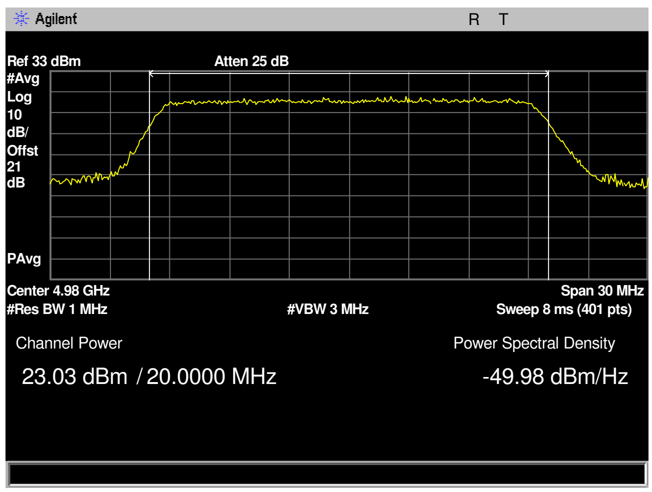
Plot 41. Maximum Conducted Output Power, 20MHz, 4950MHz, 90Sector, Port 2



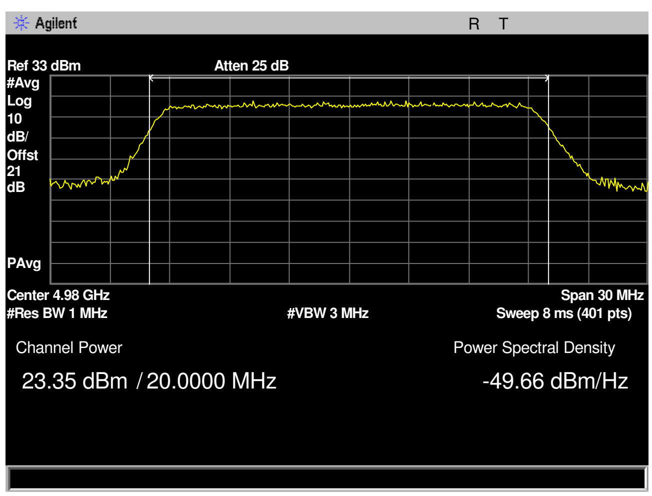
Plot 42. Maximum Conducted Output Power, 20MHz, 4965MHz, 90Sector, Port 1



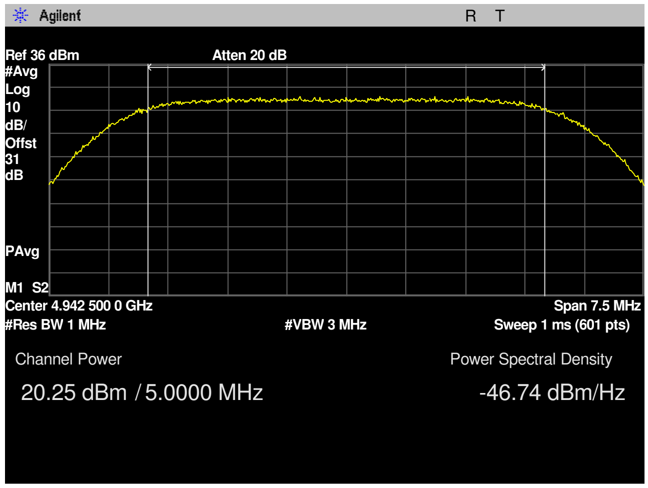
Plot 43. Maximum Conducted Output Power, 20MHz, 4965MHz, 90Sector, Port 2



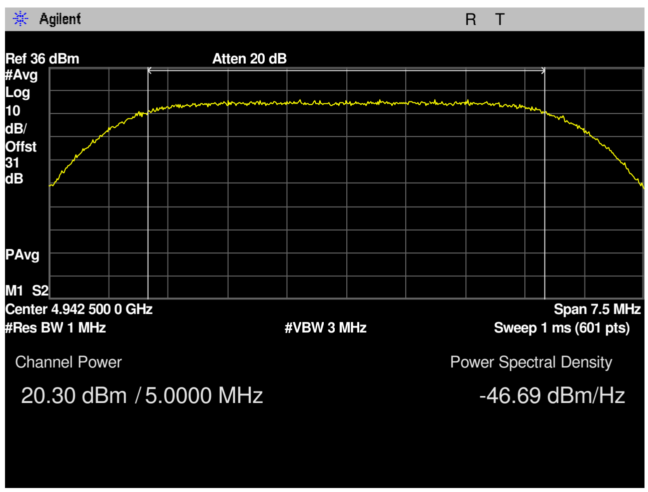
Plot 44. Maximum Conducted Output Power, 20MHz, 4980MHz, 90Sector, Port 1



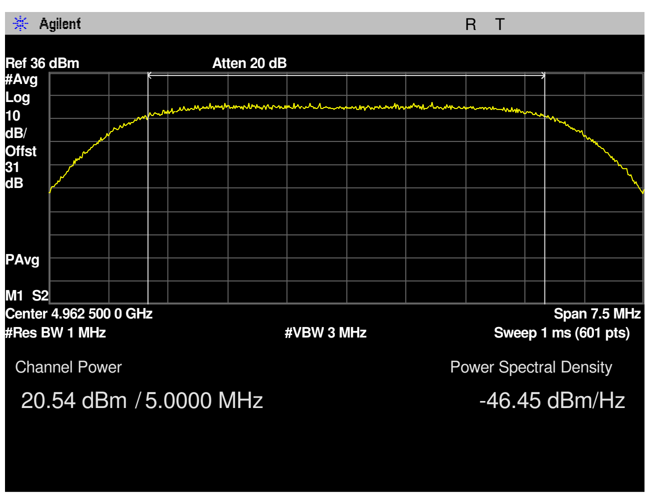
Plot 45. Maximum Conducted Output Power, 20MHz 4980MHz, 90Sector, Port 2



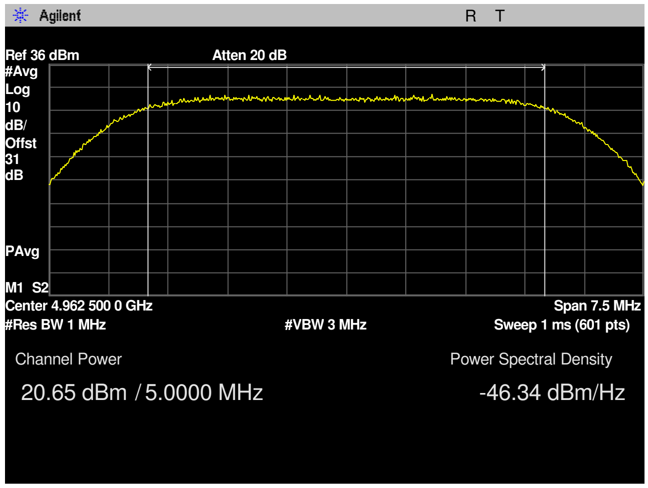
Plot 46. Maximum Conducted Output Power, 5MHz 4942.5MHz, 2Panel, Port 1



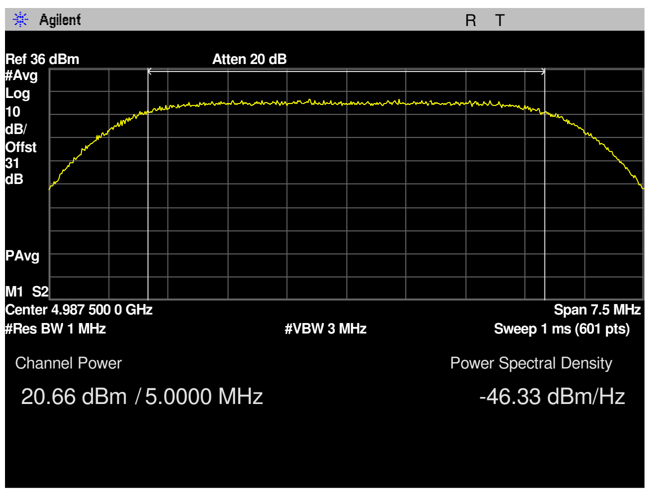
Plot 47. Maximum Conducted Output Power, 5MHz 4942.5MHz, 2Panel, Port 2



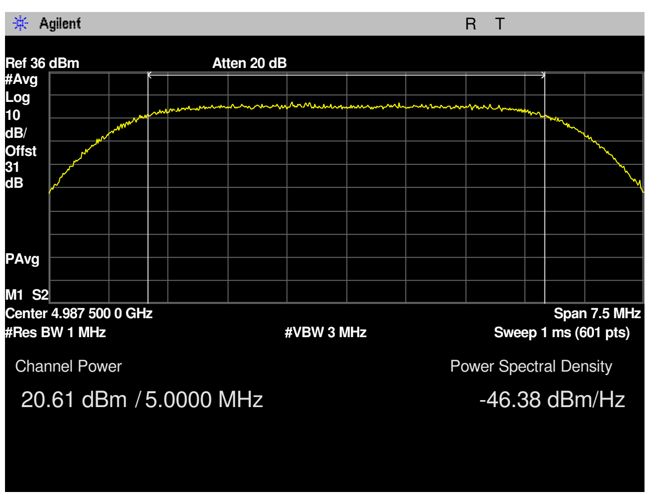
Plot 48. Maximum Conducted Output Power, 5MHz 4962.5MHz, 2Panel, Port 1



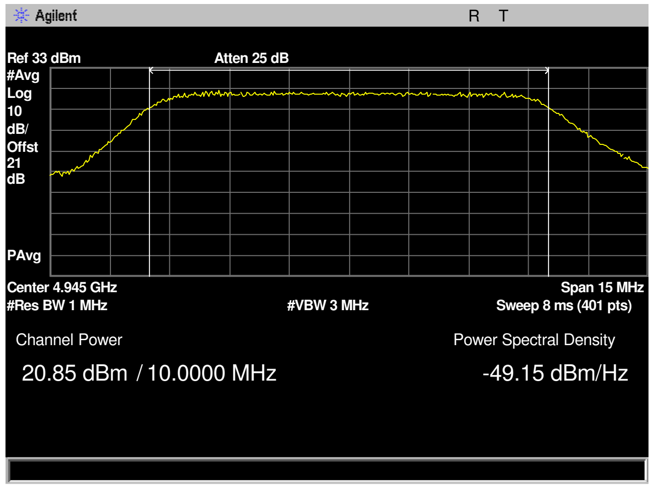
Plot 49. Maximum Conducted Output Power, 5MHz 4962.5MHz, 2Panel, Port 2



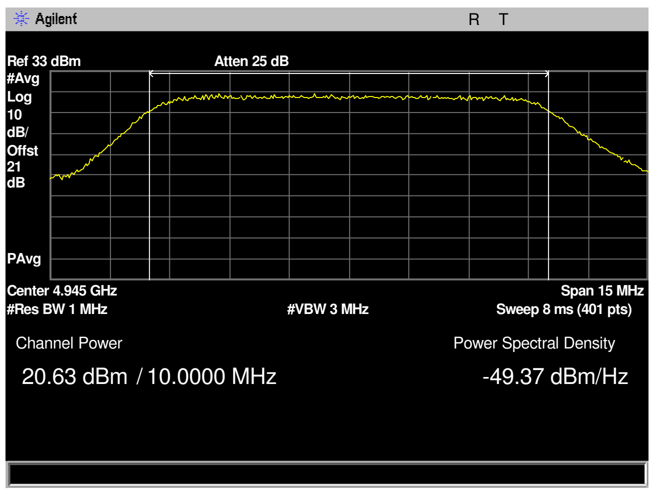
Plot 50. Maximum Conducted Output Power, 5MHz 4987.5MHz, 2Panel, Port 1



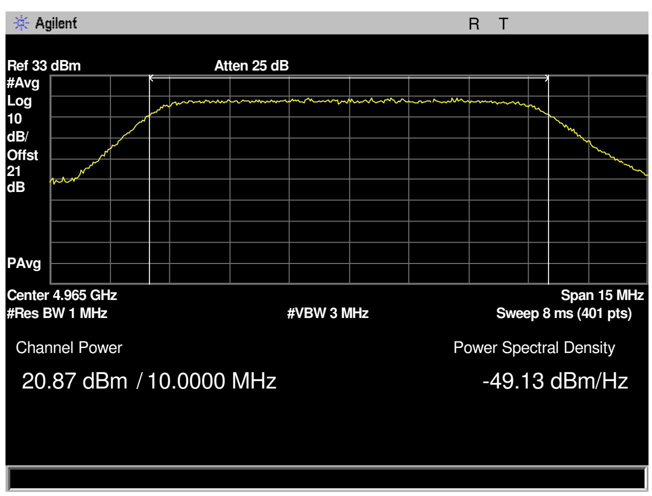
Plot 51. Maximum Conducted Output Power, 5MHz 4987.5MHz, 2Panel, Port 2



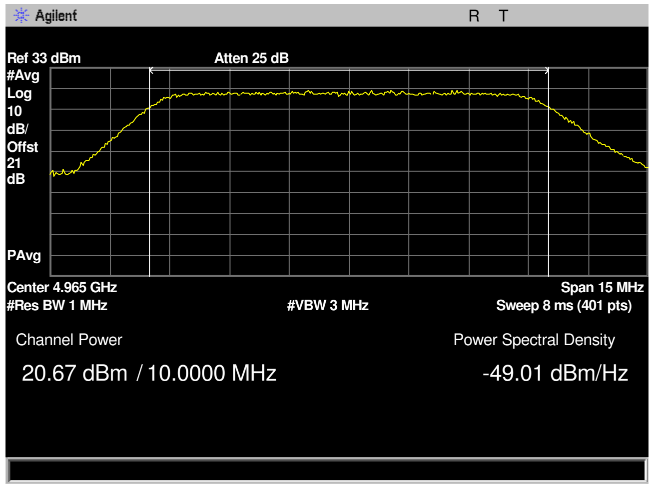
Plot 52. Maximum Conducted Output Power, 10MHz, 4945MHz, 2Panel, Port 1



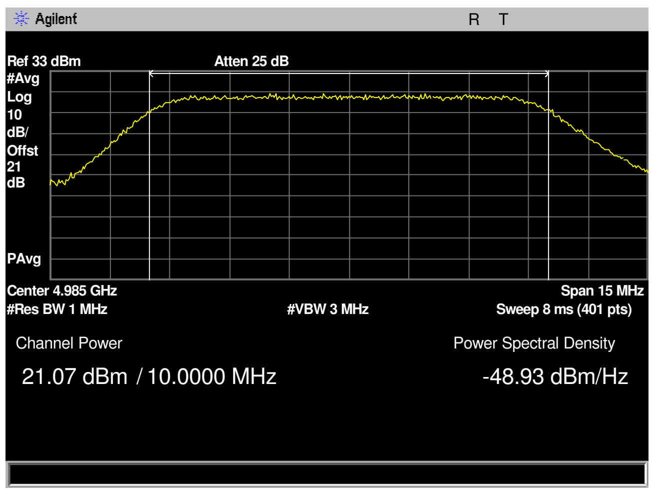
Plot 53. Maximum Conducted Output Power, 10MHz, 4945MHz, 2Panel, Port 2



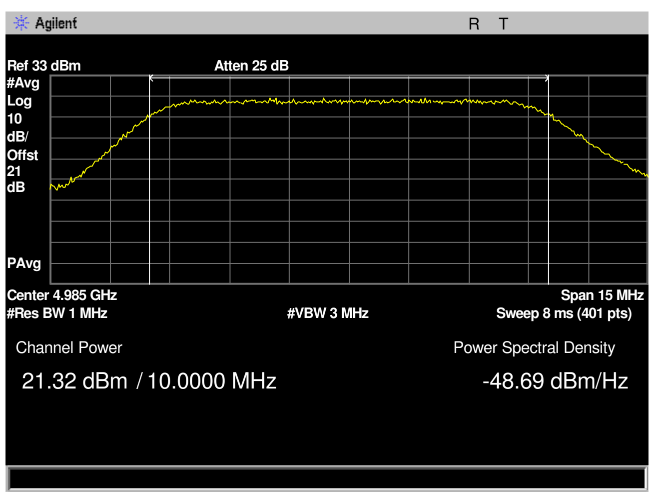
Plot 54. Maximum Conducted Output Power, 10MHz, 4965MHz, 2Panel, Port 1



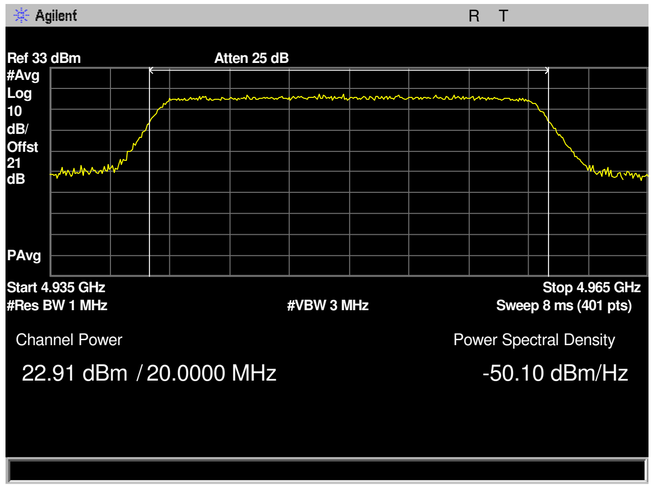
Plot 55. Maximum Conducted Output Power, 10MHz, 4965MHz, 2Panel, Port 2



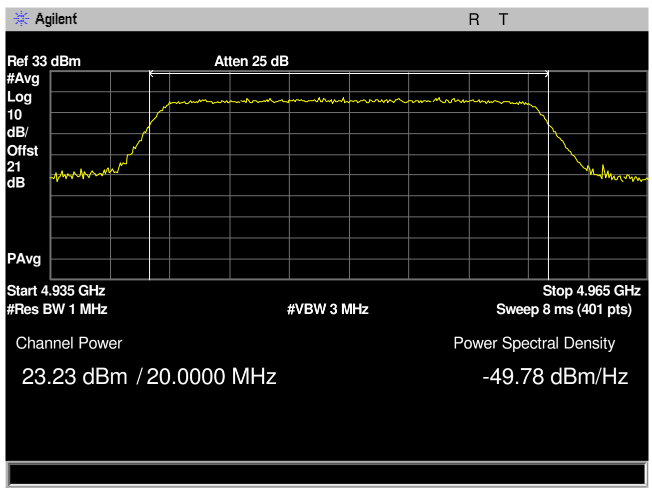
Plot 56. Maximum Conducted Output Power, 10MHz, 4985MHz, 2Panel, Port 1



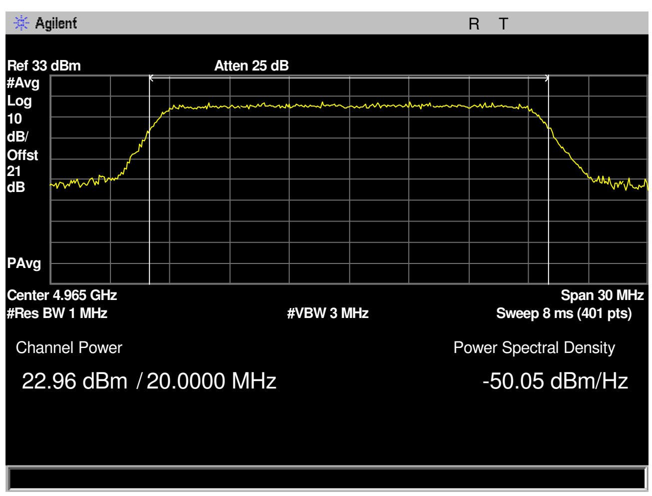
Plot 57. Maximum Conducted Output Power, 10MHz, 4985MHz, 2Panel, Port 2



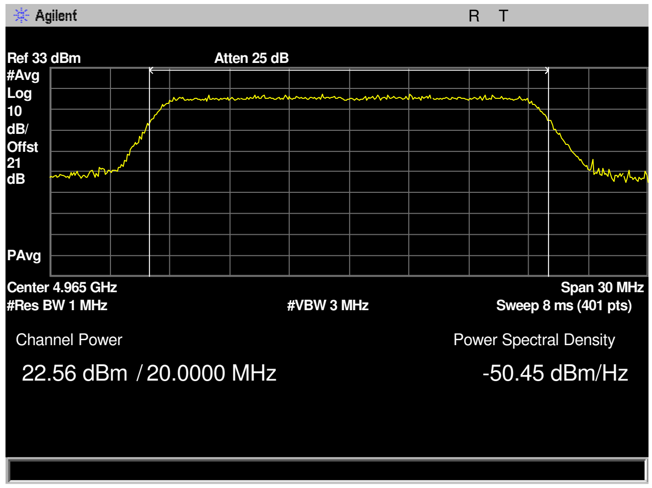
Plot 58. Maximum Conducted Output Power, 20MHz, 4950MHZ, 2Panel, Port 1



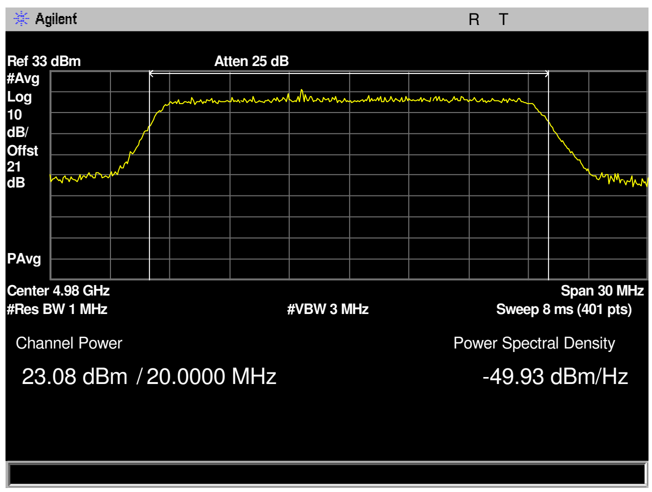
Plot 59. Maximum Conducted Output Power, 20MHz, 4950MHz, 2Panel, Port 2



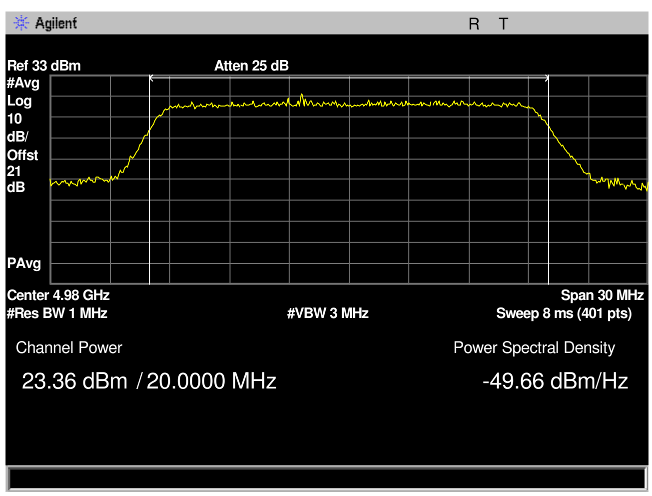
Plot 60. Maximum Conducted Output Power, 20MHz, 4965MHz, 2Panel, Port 1



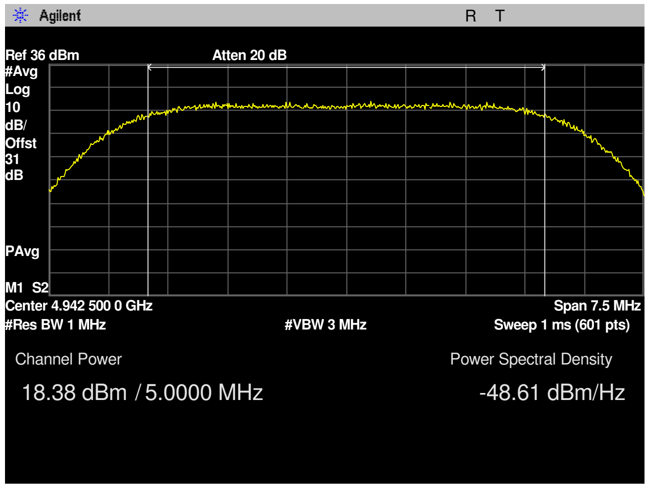
Plot 61. Maximum Conducted Output Power, 20MHz, 4965MHz, 2Panel, Port 2



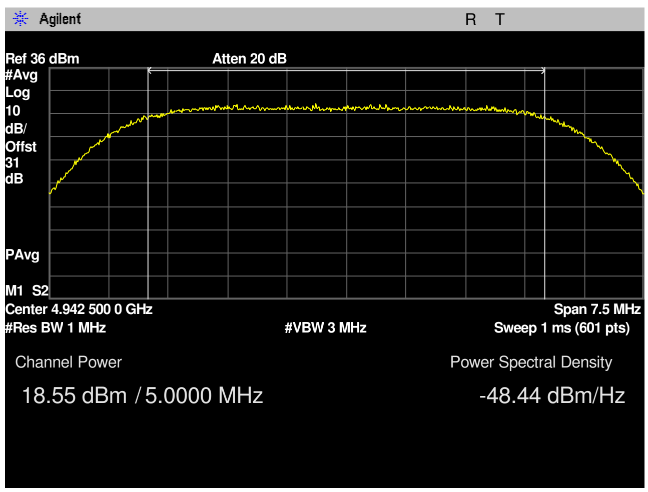
Plot 62. Maximum Conducted Output Power, 20MHz, 4980MHz, 2Panel, Port 1



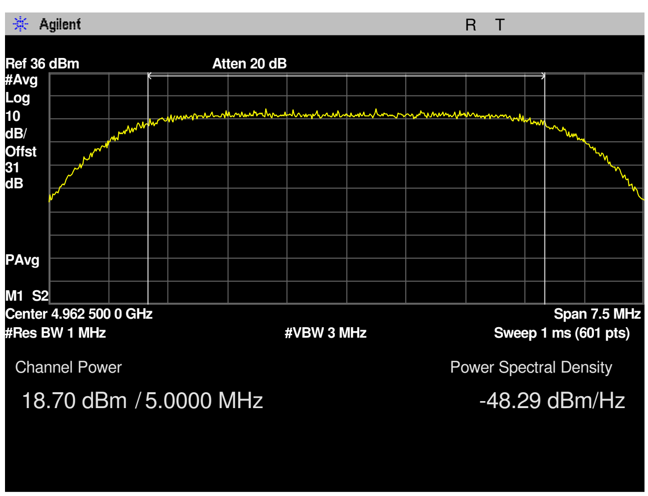
Plot 63. Maximum Conducted Output Power, 20MHz, 4980MHz, 2Panel, Port 2



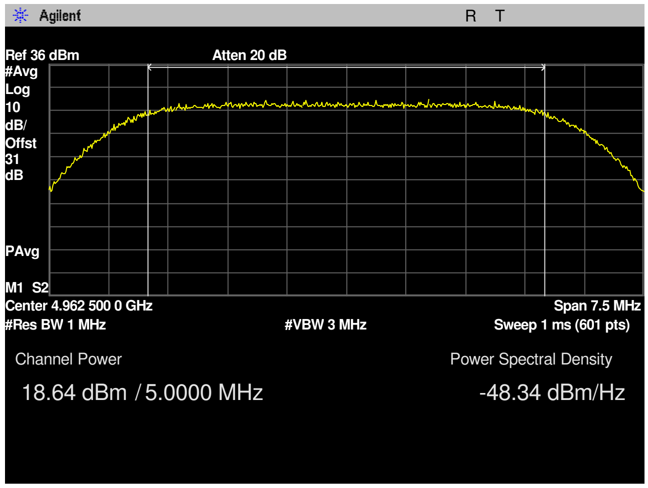
Plot 64. Maximum Conducted Output Power, 5MHz, 4942.5MHz, 3Para, Port 1



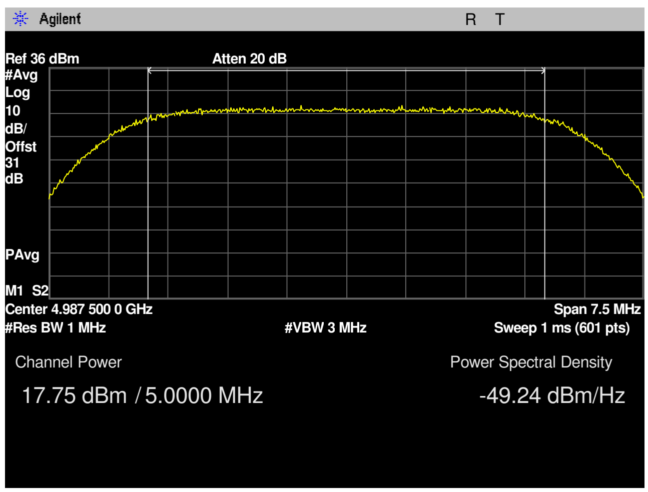
Plot 65. Maximum Conducted Output Power, 5MHz, 4942.5MHz, 3Para, Port 2



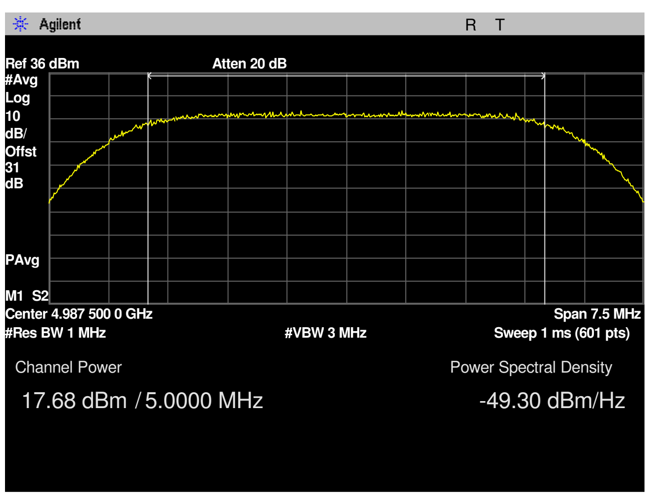
Plot 66. Maximum Conducted Output Power, 5MHz, 4962.5MHz, 3Para, Port 1



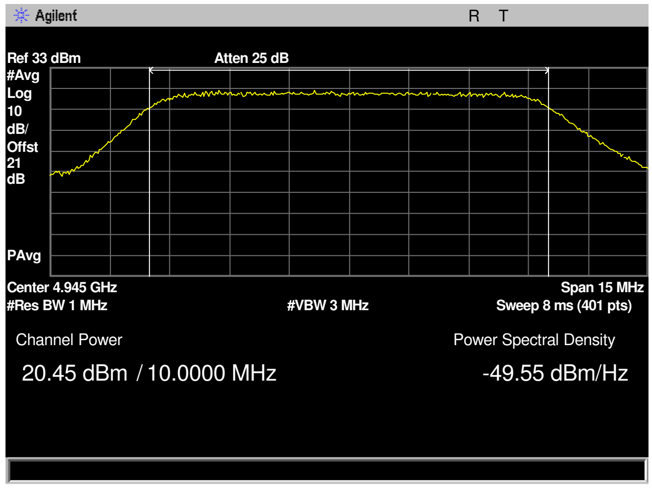
Plot 67. Maximum Conducted Output Power, 5MHz, 4962.5MHz, 3Para, Port 2



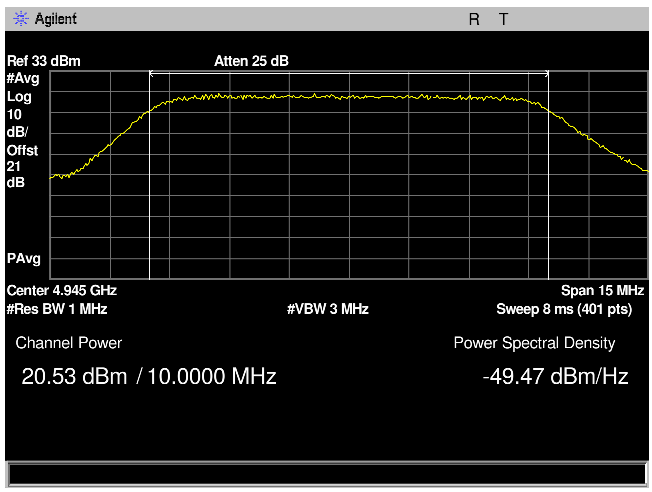
Plot 68. Maximum Conducted Output Power, 5MHz, 4987.5MHz, 3Para, Port 1



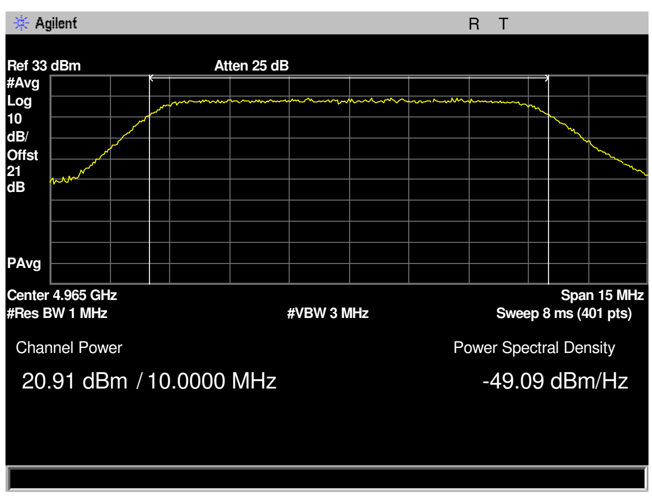
Plot 69. Maximum Conducted Output Power, 5MHz, 4987.5MHz, 3Para, Port 2



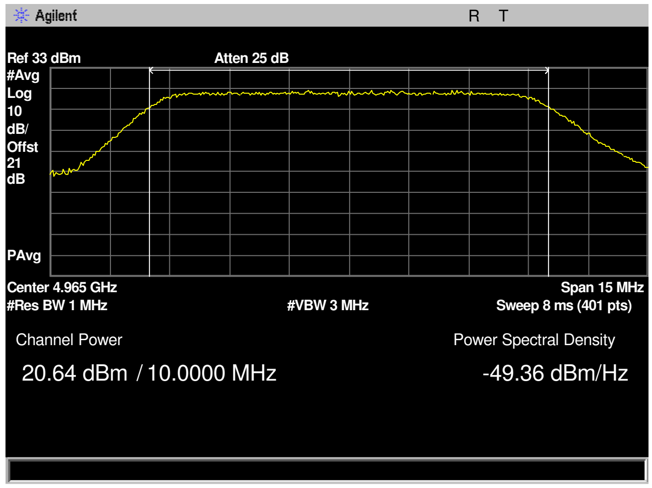
Plot 70. Maximum Conducted Output Power, 10MHz, 4945MHz, 3Para, Port 1



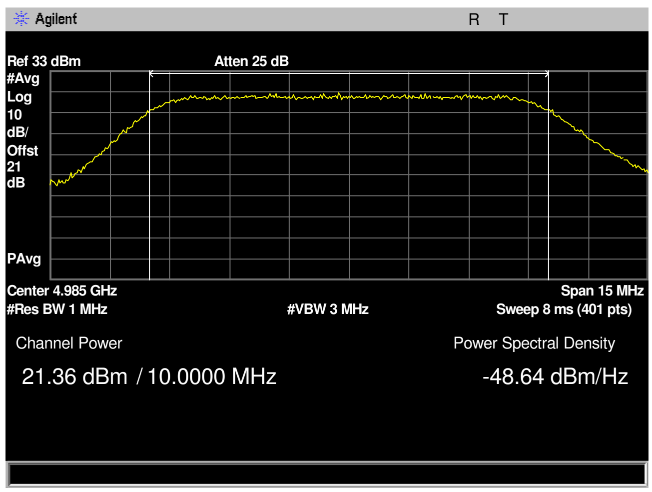
Plot 71. Maximum Conducted Output Power, 10MHz, 4945MHz, 3Para, Port 2



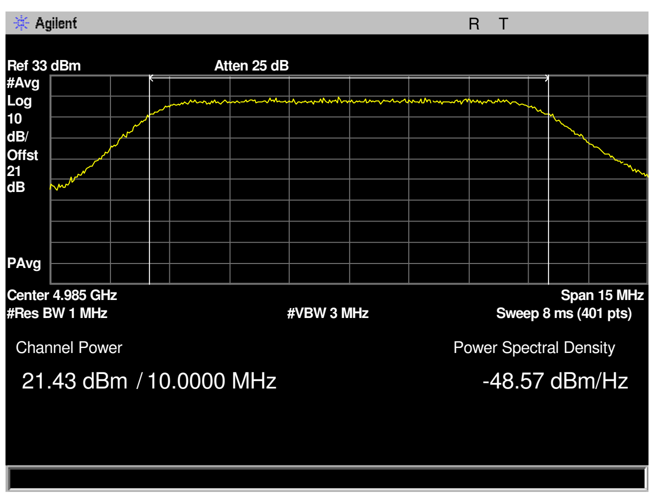
Plot 72. Maximum Conducted Output Power, 10MHz, 4965MHz, 3Para, Port 1



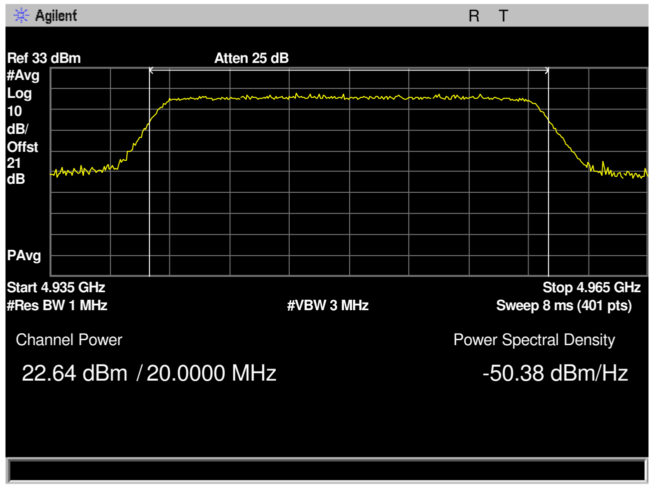
Plot 73. Maximum Conducted Output Power, 10MHz, 4965MHz, 3Para, Port 2



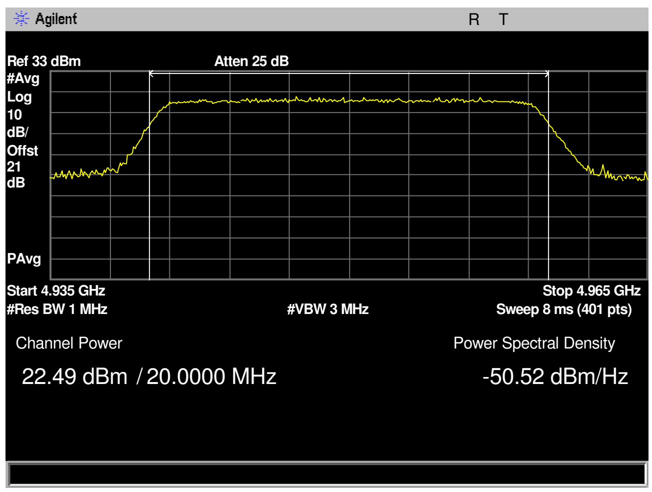
Plot 74. Maximum Conducted Output Power, 10MHz, 4985MHz, 3Para, Port 1



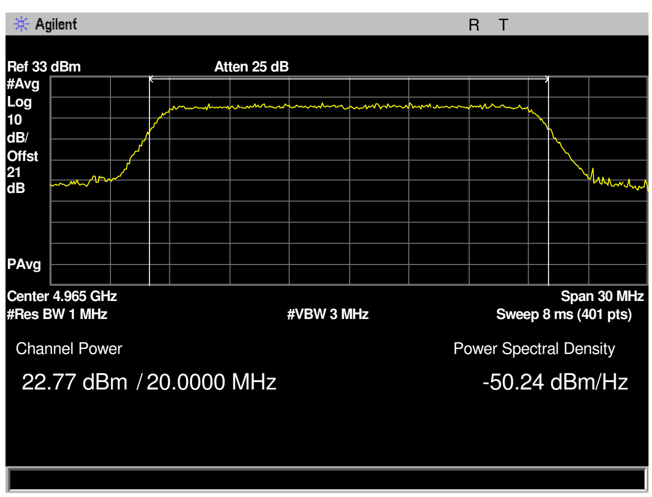
Plot 75. Maximum Conducted Output Power, 10MHz, 4985MHz, 3Para, Port 2



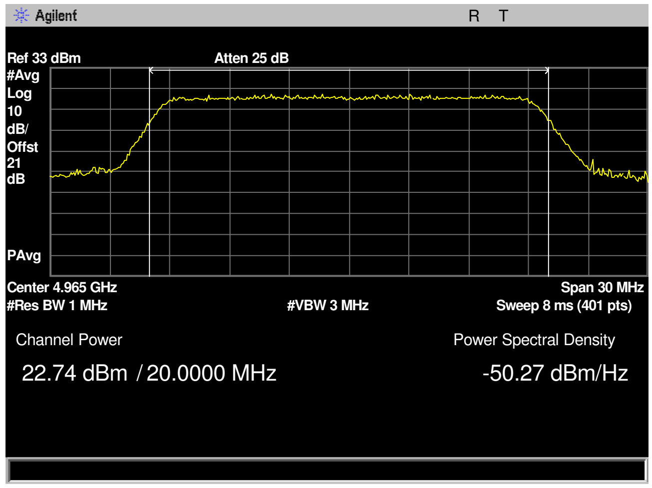
Plot 76. Maximum Conducted Output Power, 20MHz, 4950MHz, 3Para, Port 1



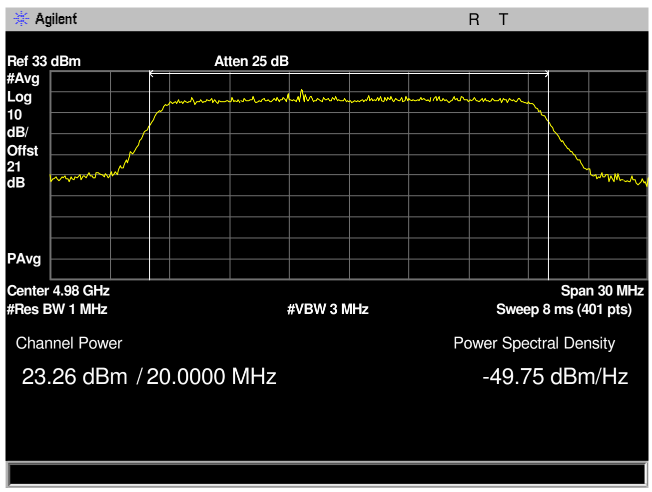
Plot 77. Maximum Conducted Output Power, 20MHz, 4950MHz, 3Para, Port 2



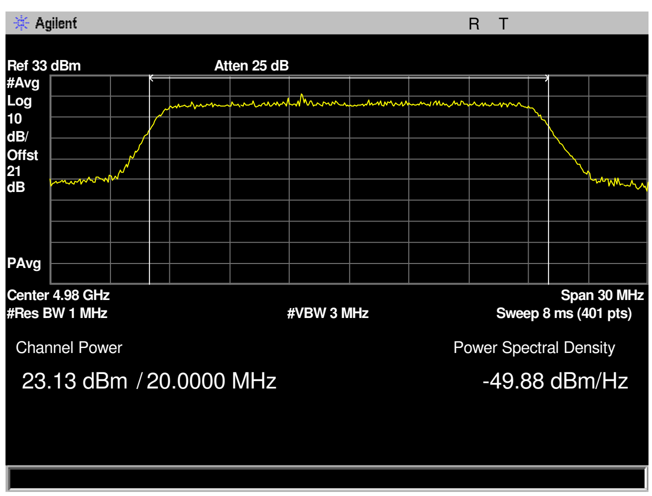
Plot 78. Maximum Conducted Output Power, 20MHz, 4965MHz, 3Para, Port 1



Plot 79. Maximum Conducted Output Power, 20MHz, 4965MHz, 3Para, Port 2



Plot 80. Maximum Conducted Output Power, 20MHz, 4980MHz, 3Para, Port 1



Plot 81. Maximum Conducted Output Power, 20MHz, 4980MHz, 3Para, Port 2

Electromagnetic Compatibility Criteria for Intentional Radiators

§90.1215(a)(2) Maximum Power Spectral Density

Test Requirements: **§90.1215(a)(2):** High power devices are also limited to a peak power spectral density of 21 dBm per one MHz. High power devices using channel bandwidths other than those listed above are permitted; however, they are limited to peak power spectral density of 21 dBm/MHz. If transmitting antennas of directional gain greater than 9 dBi are used, both the maximum conducted output power and the peak power spectral density should be reduced by the amount in decibels that the directional gain of the antenna exceeds 9 dBi. However, high power point-to-point and point-to-multipoint operations (both fixed and temporary-fixed rapid deployment) may employ transmitting antennas with directional gain up to 26 dBi without any corresponding reduction in the maximum conducted output power or spectral density. Corresponding reduction in the maximum conducted output power and peak power spectral density should be the amount in decibels that the directional gain of the antenna exceeds 26 dBi.

(b) Low power devices are also limited to a peak power spectral density of 8 dBm per one MHz. Low power devices using channel bandwidths other than those listed above are permitted; however, they are limited to a peak power spectral density of 8 dBm/MHz. If transmitting antennas of directional gain greater than 9 dBi are used, both the maximum conducted output power and the peak power spectral density should be reduced by the amount in decibels that the directional gain of the antenna exceeds 9 dBi.

Test Procedure: The EUT was tested according to the average power integration procedures of ANSI C63.26 5.2.4.4.1. The power measurement function of spectrum analyzer was used and configured in the following manner.

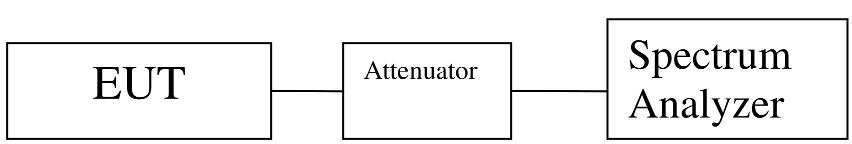
(a) Frequency = channel cf
(b) Span = 2-5 x the OBW
(c) RBW = 1-5 % of the OBW
(d) VBW 1-3 x the RBW
(e) Sweep Time = Auto
(f) Detector = Average

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

No anomalies detected.

Test Engineer(s): Arsalan Hasan

Test Date(s): July 10, 2019



Frequency (MHz)	PSD Port 1 (dBm)	PSD Port 2 (dBm)	Sum (dBm)	Limit (dBm)	Antenna Gain (dBi)	PSD Limit (dBm)	PSD Margin (dB)
5 MHz							
4942.5	15.84	15.97	18.92	21.00	8.00	21.00	-2.08
4962.5	16.31	16.44	19.39	21.00	8.00	21.00	-1.61
4987.5	16.05	16.24	19.16	21.00	8.00	21.00	-1.84
10 MHz							
4945.0	15.76	16.28	19.04	21.00	8.00	21.00	-1.96
4965.0	14.62	15.38	18.03	21.00	8.00	21.00	-2.97
4985.0	14.47	15.94	18.28	21.00	8.00	21.00	-2.72
20 MHz							
4950.0	11.51	12.74	15.18	21.00	8.00	21.00	-5.82
4965.0	11.43	12.52	15.02	21.00	8.00	21.00	-5.98
4980.0	11.97	12.79	15.41	21.00	8.00	21.00	-5.59

Table 17. Maximum Conducted Transmitter Power, 8 Omni, Test Results (Point-to-multipoint)

Frequency (MHz)	PSD Port 1 (dBm)	PSD Port 2 (dBm)	Sum (dBm)	Limit (dBm)	Antenna Gain (dBi)	PSD Limit (dBm)	PSD Margin (dB)
5 MHz							
4942.5	16.28	15.94	19.12	21.00	13.50	21.00	-1.88
4962.5	16.58	16.39	19.50	21.00	13.50	21.00	-1.50
4987.5	16.12	16.72	19.44	21.00	13.50	21.00	-1.56
10 MHz							
4945.0	14.71	15.4	18.08	21.00	13.50	21.00	-2.92
4965.0	15.4	15.52	18.47	21.00	13.50	21.00	-2.53
4985.0	14.44	16.23	18.44	21.00	13.50	21.00	-2.56
20 MHz							
4950.0	12.92	11.49	15.27	21.00	13.50	21.00	-5.73
4965.0	11.84	11.93	14.90	21.00	13.50	21.00	-6.10
4980.0	11.51	13	15.33	21.00	13.50	21.00	-5.67

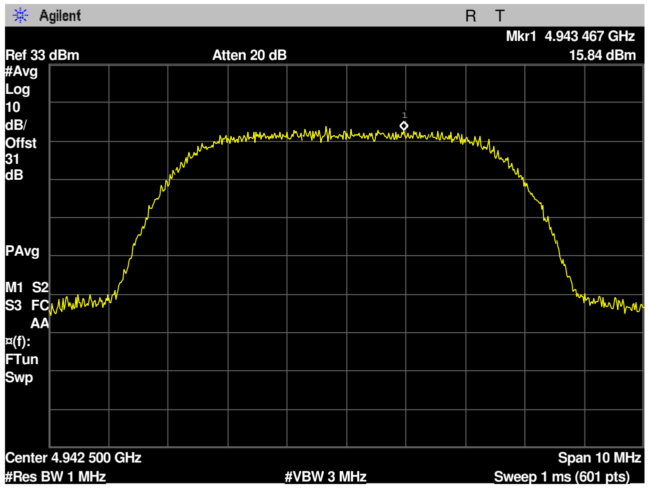
Table 18. Maximum Conducted Transmitter Power, 90 Sector, Test Results (Point-to-multipoint)

Frequency (MHz)	PSD Port 1 (dBm)	PSD Port 2 (dBm)	Sum (dBm)	Limit (dBm)	Antenna Gain (dBi)	PSD Limit (dBm)	PSD Margin (dB)
5 MHz							
4942.5	16.17	16.61	19.41	21.00	26.00	21.00	-1.59
4962.5	16.21	15.98	19.11	21.00	26.00	21.00	-1.89
4987.5	16.08	16.85	19.49	21.00	26.00	21.00	-1.51
10 MHz							
4945.0	15.39	15.64	18.53	21.00	26.00	21.00	-2.47
4965.0	14.31	15.24	17.81	21.00	26.00	21.00	-3.19
4985.0	15.88	15.43	18.67	21.00	26.00	21.00	-2.33
20 MHz							
4950.0	11.61	12.98	15.36	21.00	26.00	21.00	-5.64
4965.0	11.65	11.85	14.76	21.00	26.00	21.00	-6.24
4980.0	11.25	12.28	14.81	21.00	26.00	21.00	-6.19

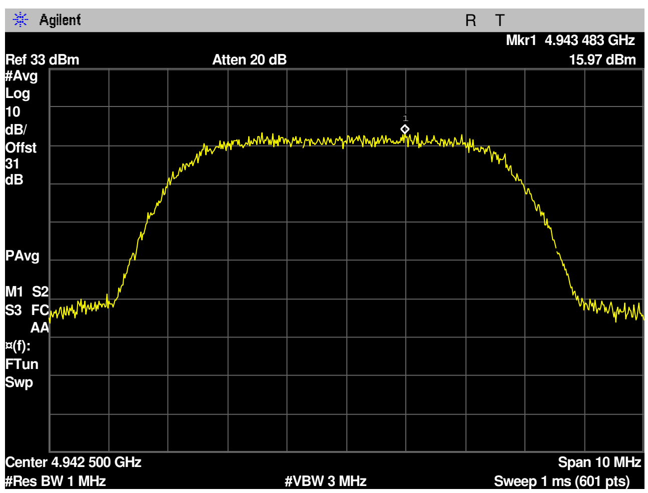
Table 19. Maximum Conducted Transmitter Power, 2' Panel, Test Results (Point-to-point)

Frequency (MHz)	PSD Port 1 (dBm)	PSD Port 2 (dBm)	Sum (dBm)	Limit (dBm)	Antenna Gain (dBi)	PSD Limit (dBm)	PSD Margin (dB)
5 MHz							
4942.5	12.11	11.75	14.94	21.00	30.00	17.00	-2.06
4962.5	12.37	12.96	15.69	21.00	30.00	17.00	-1.31
4987.5	12.09	12.86	15.50	21.00	30.00	17.00	-1.50
10 MHz							
4945.0	11.64	11.9	14.78	21.00	30.00	17.00	-2.22
4965.0	11.42	12.99	15.29	21.00	30.00	17.00	-1.71
4985.0	12.28	11.17	14.77	21.00	30.00	17.00	-2.23
20 MHz							
4950.0	8.12	7.55	10.85	21.00	30.00	17.00	-6.15
4965.0	7.63	9.35	11.58	21.00	30.00	17.00	-5.42
4980.0	7.18	8.53	10.92	21.00	30.00	17.00	-6.08

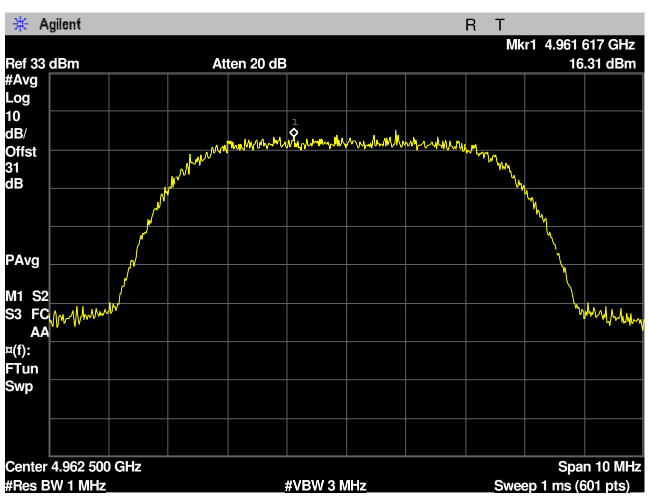
Table 20. Maximum Conducted Transmitter Power, 3' Para, Test Results (Point-to-point)



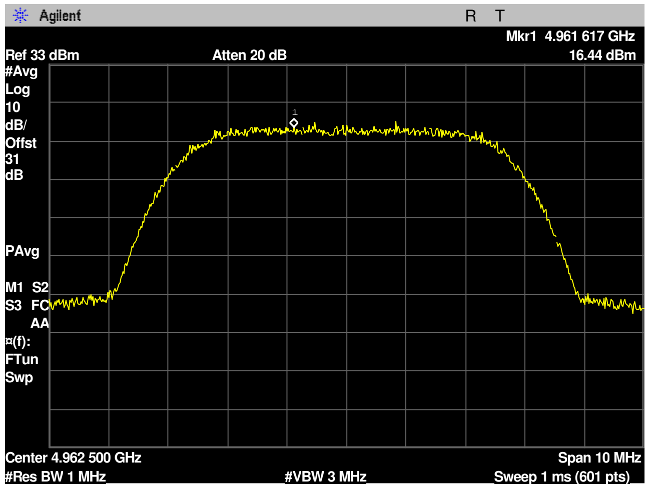
Plot 82. Power Spectral Density, 5MHz, 4942.5MHz, 8Omni, Port 1



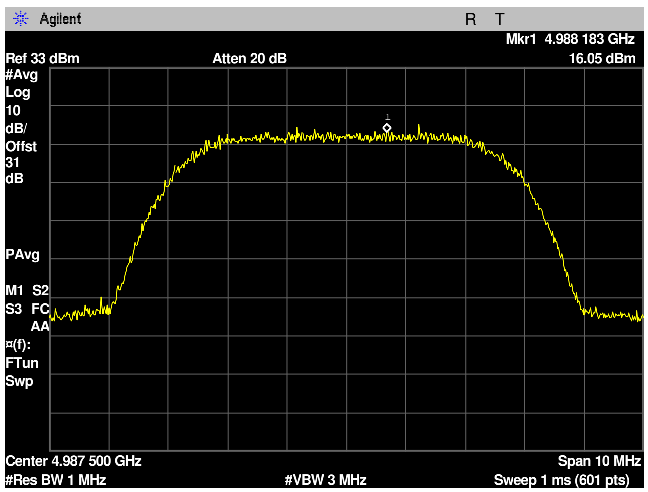
Plot 83. Power Spectral Density, 5MHz, 4942.5MHz, 8Omni, Port 2



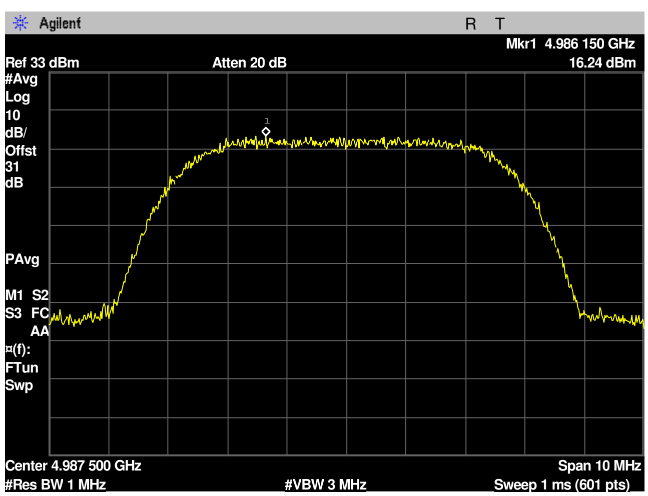
Plot 84. Power Spectral Density, 5MHz, 4962.5MHz, 8Omni, Port 1



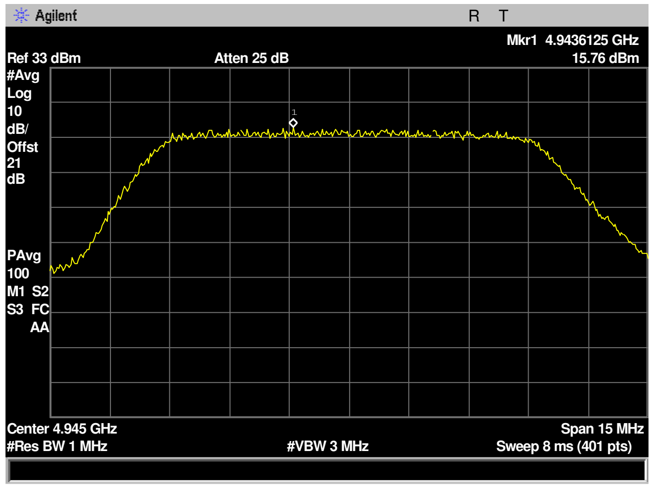
Plot 85. Power Spectral Density, 5MHz, 4962.5MHz, 8Omni, Port 2



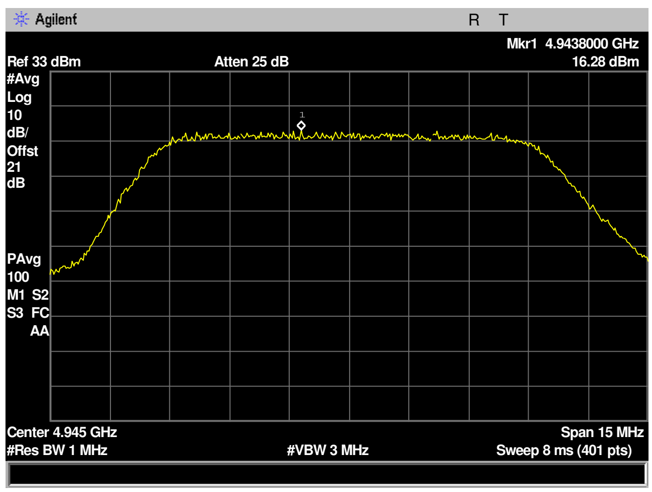
Plot 86. Power Spectral Density, 5MHz, 4987.5MHz, 8Omni, Port 1



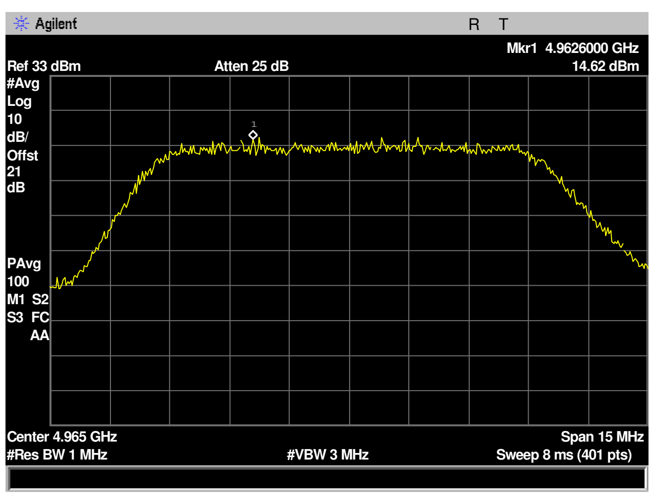
Plot 87. Power Spectral Density, 5MHz, 4987.5MHz, 8Omni, Port 2



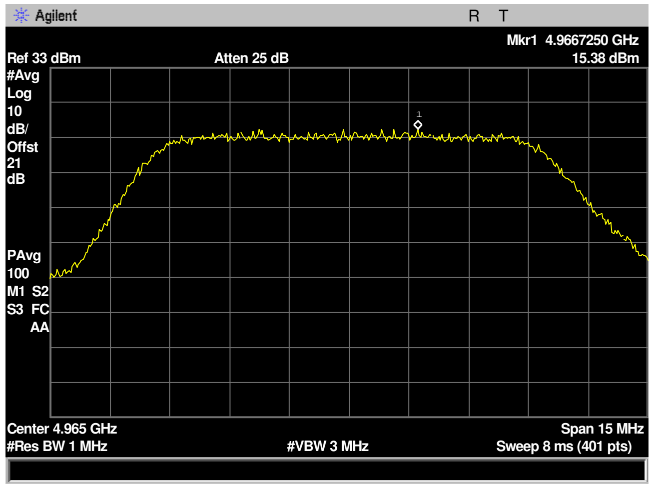
Plot 88. Power Spectral Density, 10MHz, 4945MHz, 8Omni, Port 1



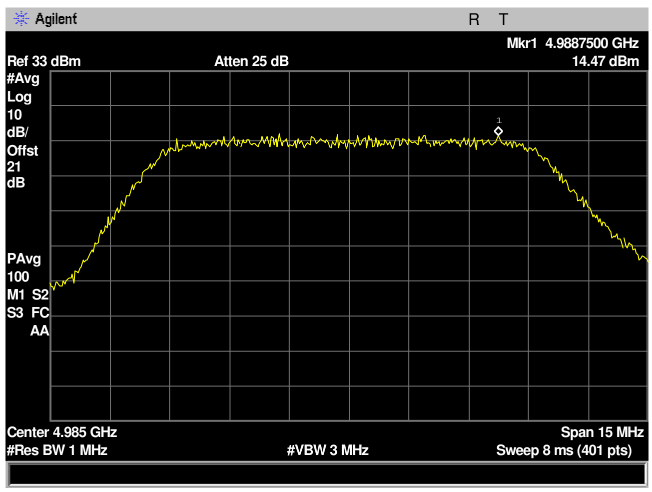
Plot 89. Power Spectral Density, 10MHz, 4945MHz, 8Omni, Port 2



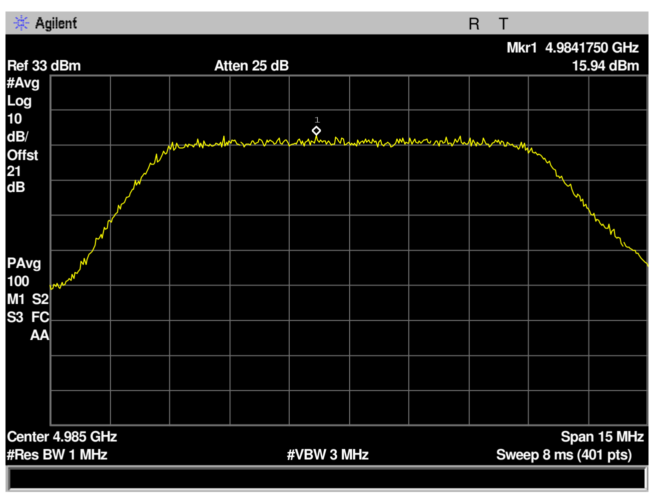
Plot 90. Power Spectral Density, 10MHz, 4965MHz, 8Omni, Port 1



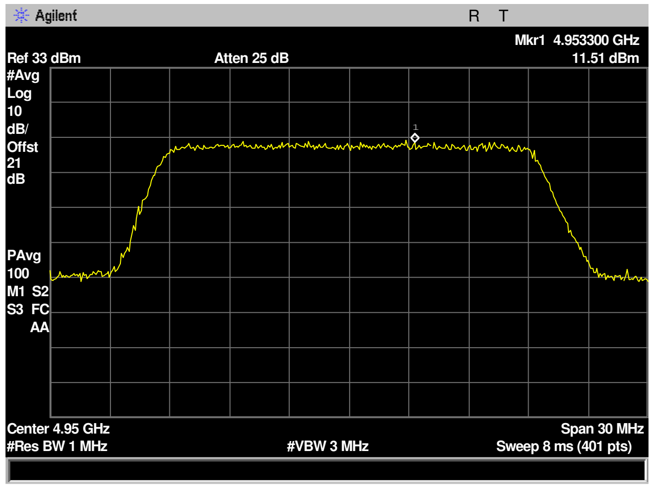
Plot 91. Power Spectral Density, 10MHz, 4965MHz, 8Omni, Port 2



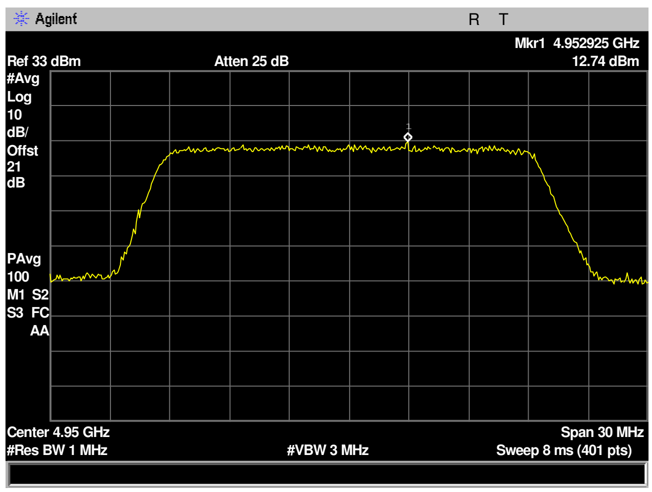
Plot 92. Power Spectral Density, 10MHz, 4985MHz, 8Omni, Port 1



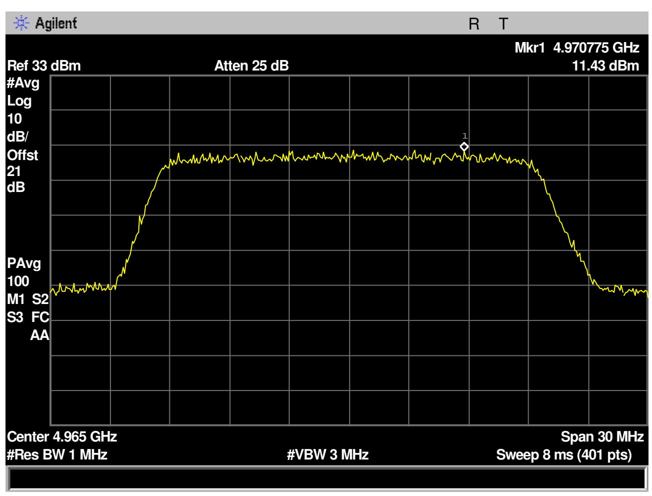
Plot 93. Power Spectral Density, 10MHz, 4985MHz, 8Omni, Port 2



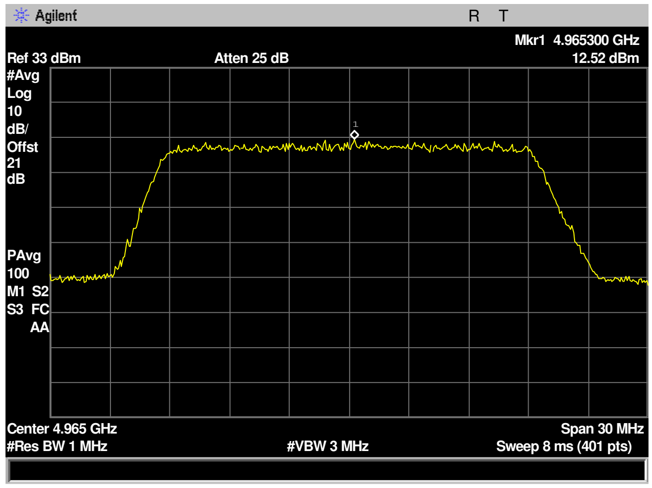
Plot 94. Power Spectral Density, 20MHz, 4950MHz, 8Omni, Port 1



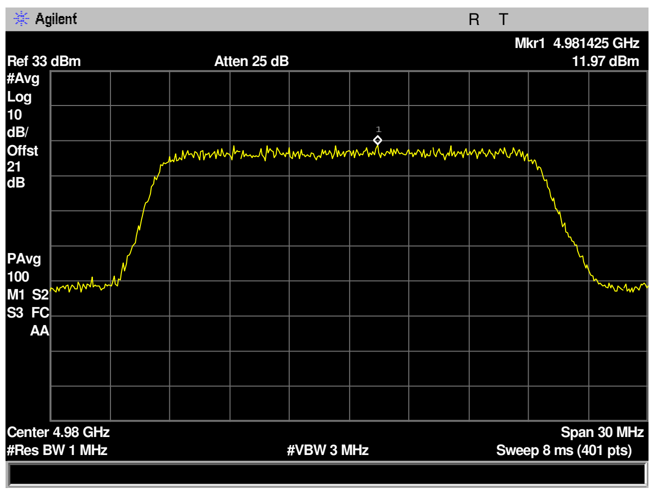
Plot 95. Power Spectral Density, 20MHz, 4950MHz, 8Omni, Port 2



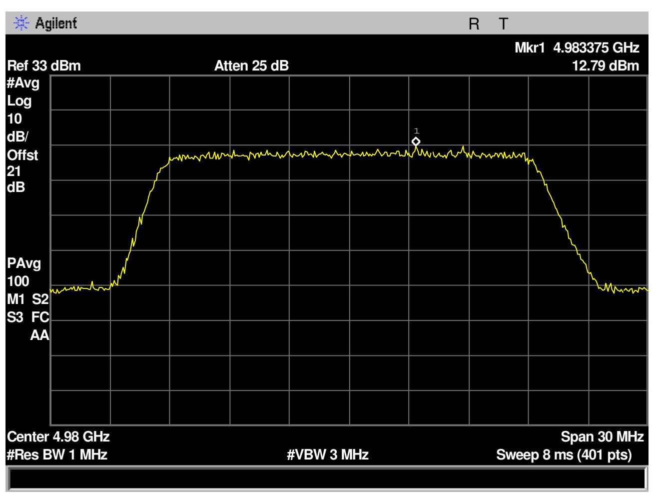
Plot 96. Power Spectral Density, 20MHz, 4965MHz, 8Omni, Port 1



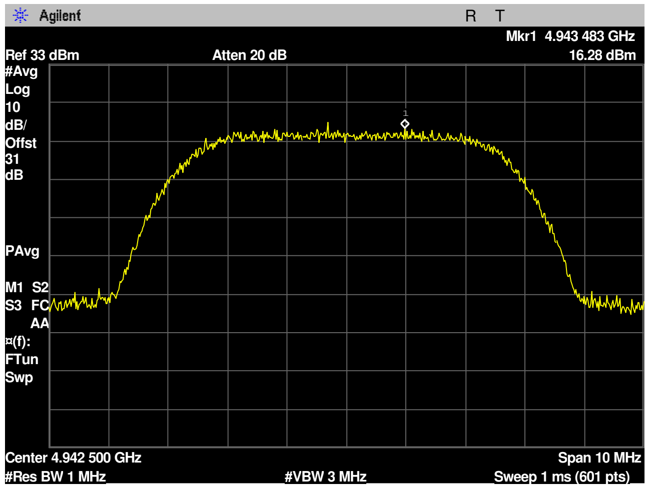
Plot 97. Power Spectral Density, 20MHz, 4965MHz, 8Omni, Port 2



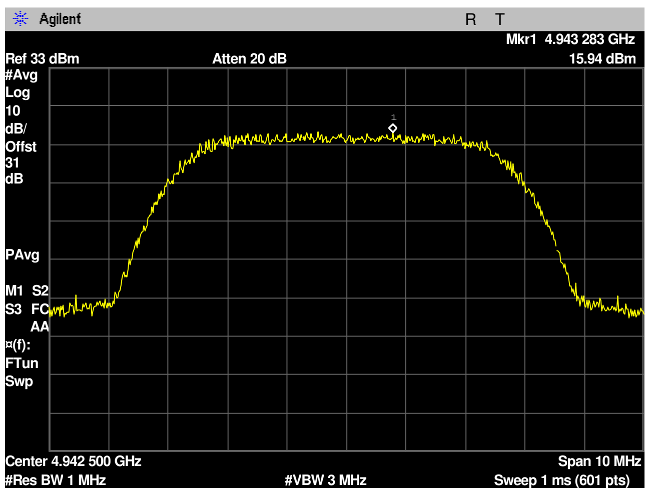
Plot 98. Power Spectral Density, 20MHz, 4980MHz, 8Omni, Port 1



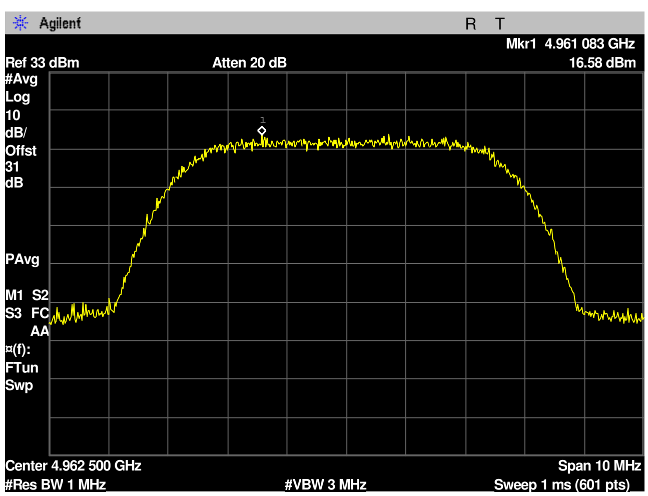
Plot 99. Power Spectral Density, 20MHz, 4980MHz, 8Omni, Port 2



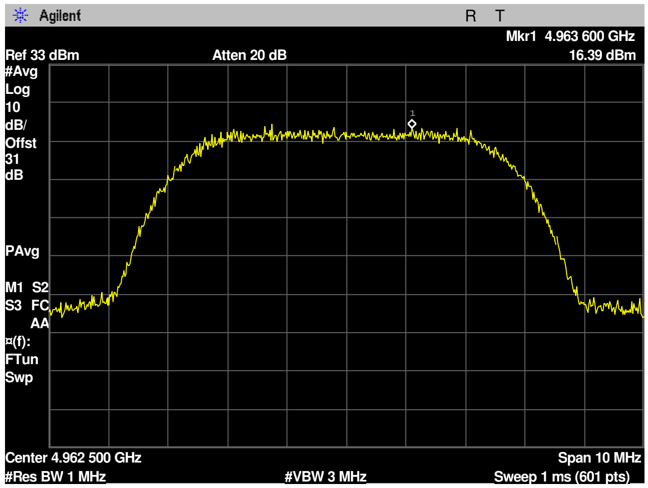
Plot 100. Power Spectral Density, 5M, 4942.5, 90Sector, Port 1



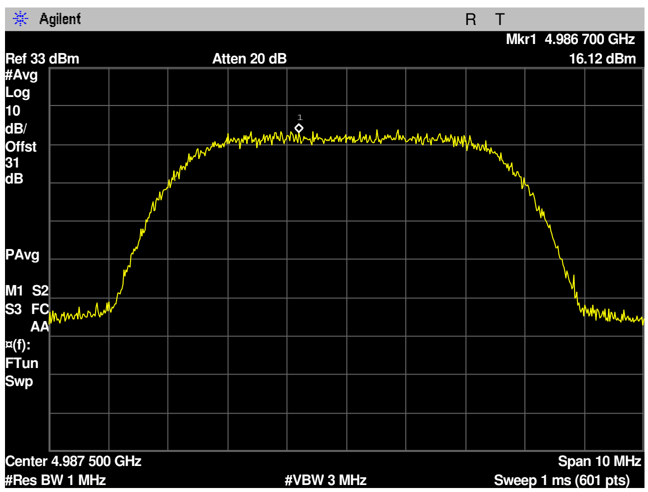
Plot 101. Power Spectral Density, 5M, 4942.5, 90Sector, Port 2



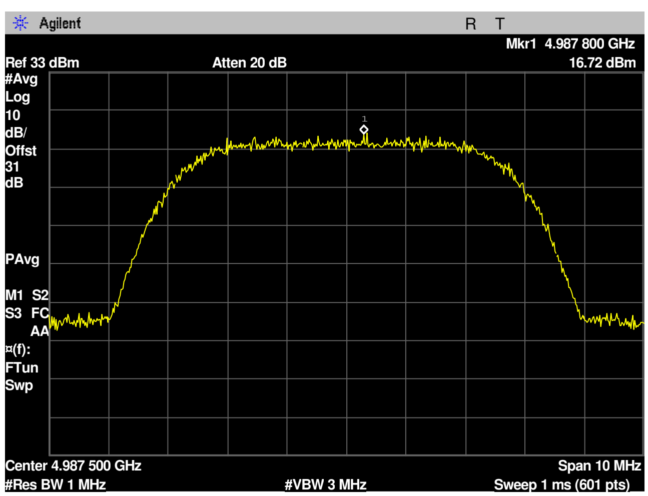
Plot 102. Power Spectral Density, 5M, 4962.5, 90Sector, Port 1



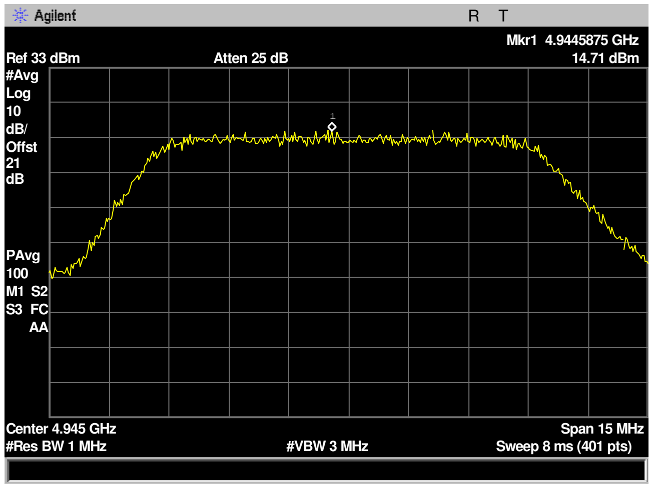
Plot 103. Power Spectral Density, 5M, 4962.5, 90Sector, Port 2



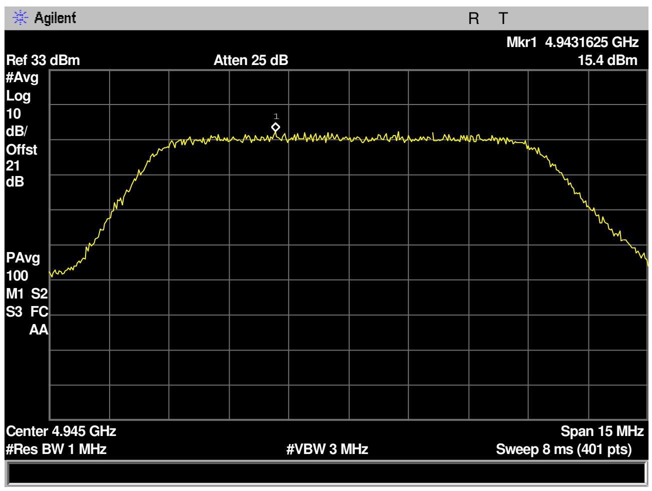
Plot 104. Power Spectral Density, 5M, 4987.5, 90Sector, Port 1



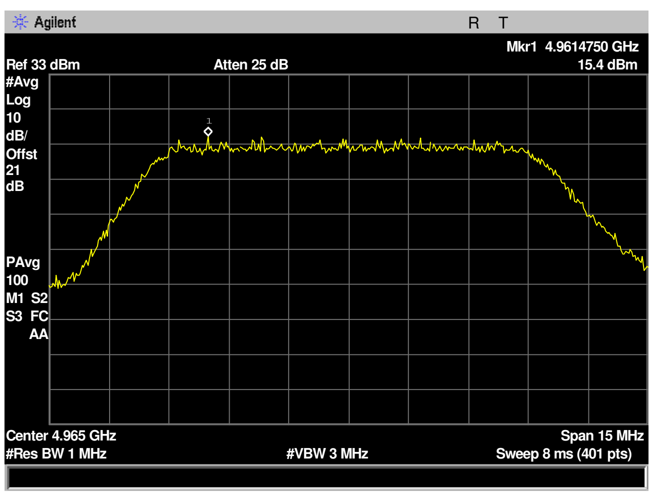
Plot 105. Power Spectral Density, 5M, 4987.5, 90Sector, Port 2



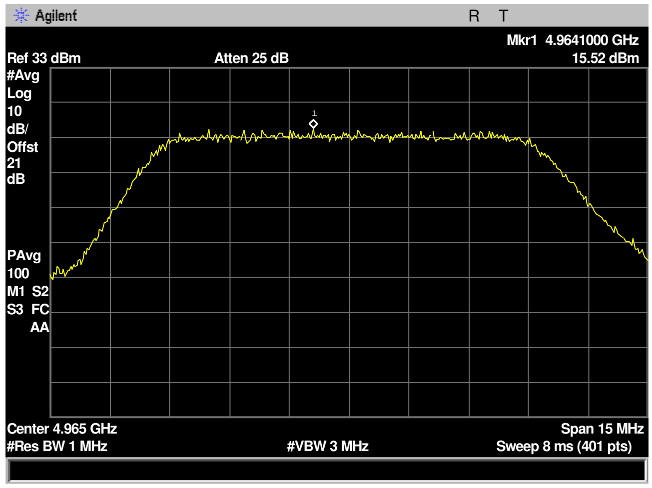
Plot 106. Power Spectral Density, 10MHz, 4945MHz, 90Sector, Port 1



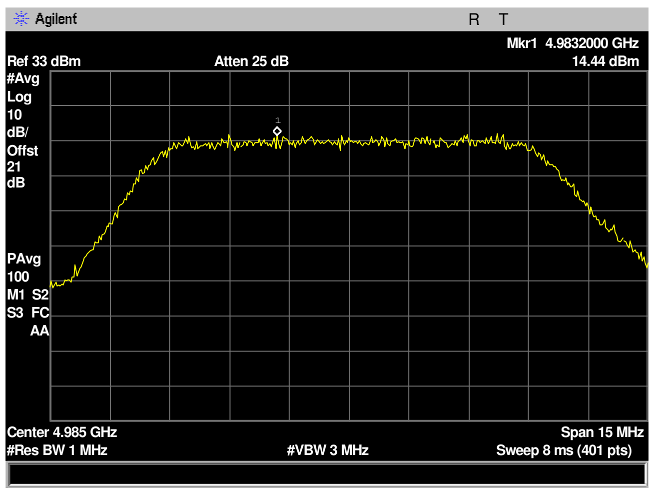
Plot 107. Power Spectral Density, 10MHz, 4945MHz, 90Sector, Port 2



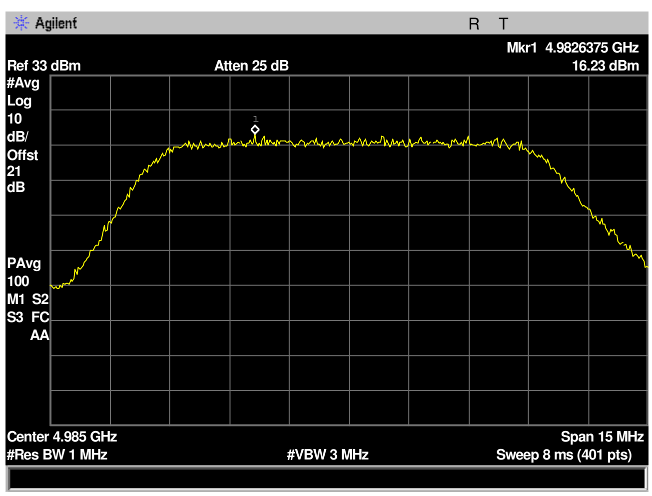
Plot 108. Power Spectral Density, 10MHz, 4965MHz, 90Sector, Port 1



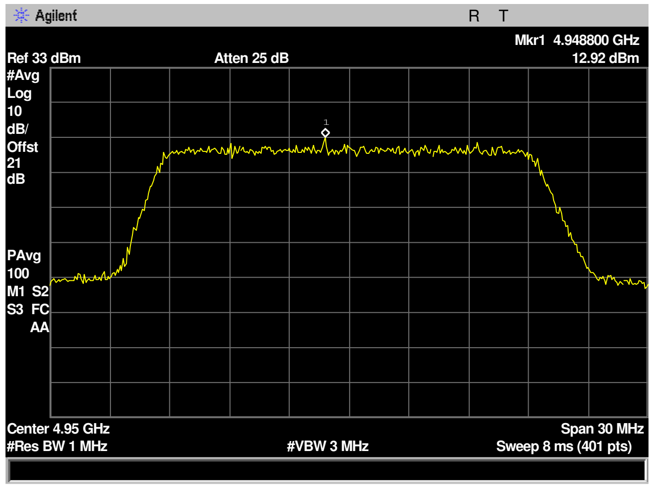
Plot 109. Power Spectral Density, 10MHz, 4965MHz, 90Sector, Port 2



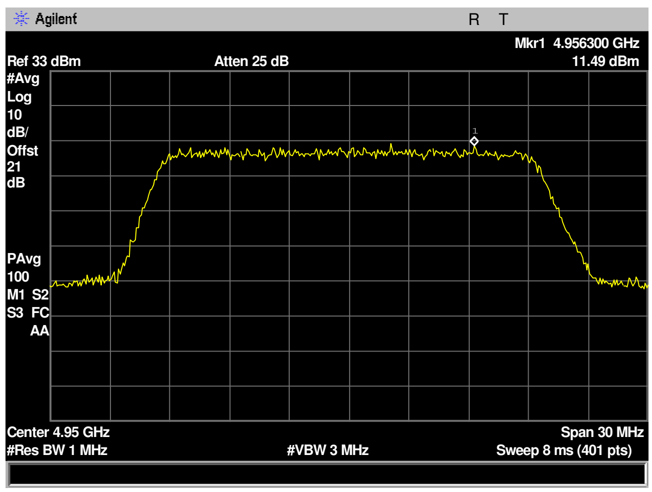
Plot 110. Power Spectral Density, 10MHz, 4985MHz, 90Sector, Port 1



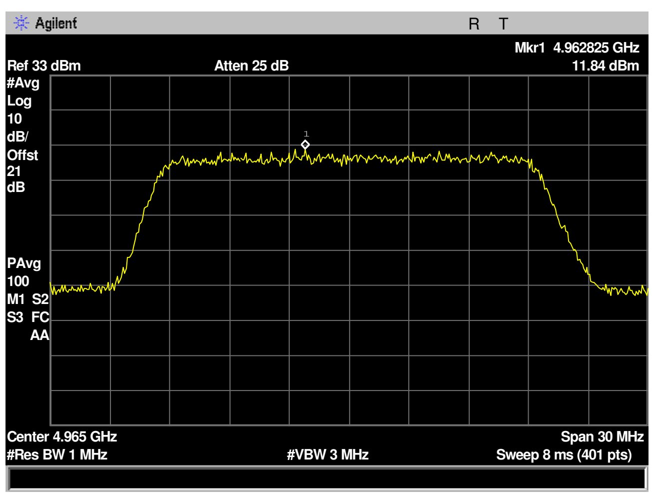
Plot 111. Power Spectral Density, 10MHz, 4985MHz, 90Sector, Port 2



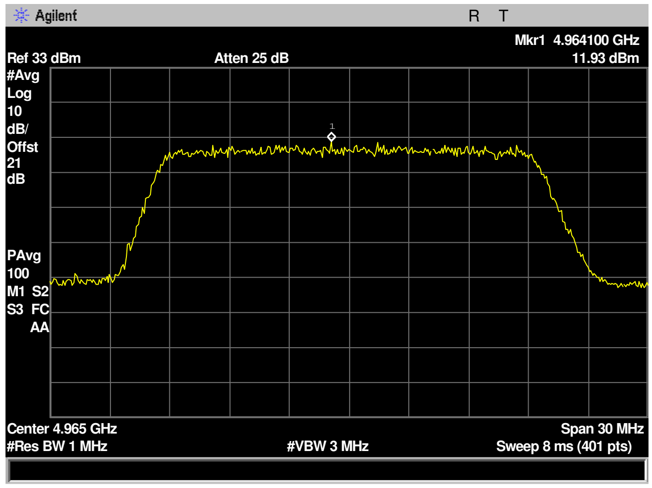
Plot 112 Power Spectral Density, 20MHz, 4950MHz, 90Sector, Port 1



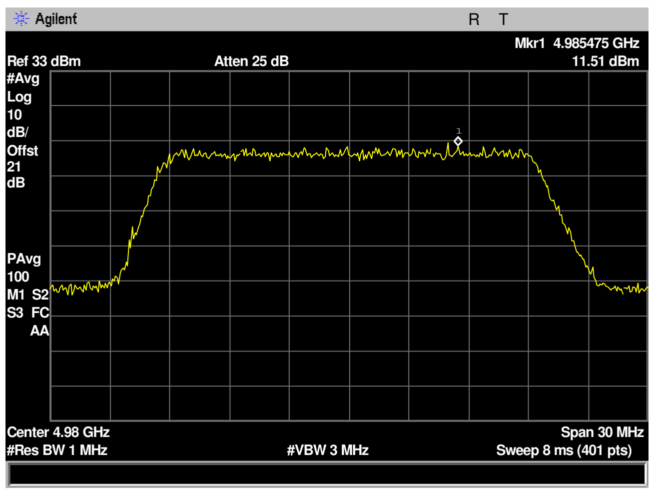
Plot 113. Power Spectral Density, 20MHz, 4950MHz, 90Sector, Port 2



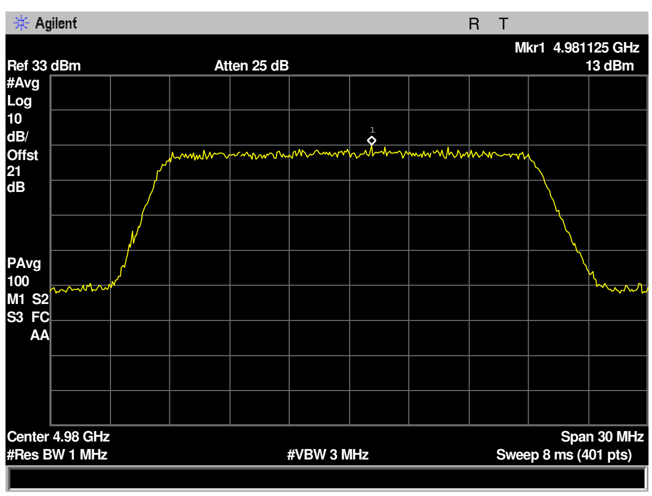
Plot 114. Power Spectral Density, 20MHz, 4965MHz, 90Sector, Port 1



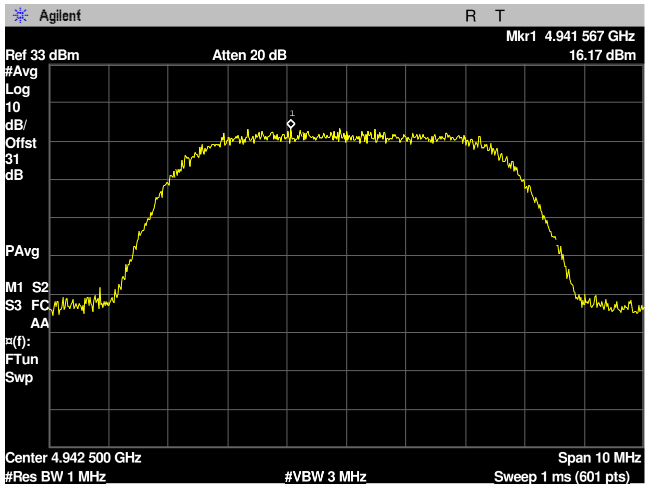
Plot 115. Power Spectral Density, 20MHz, 4965MHz, 90Sector, Port 2



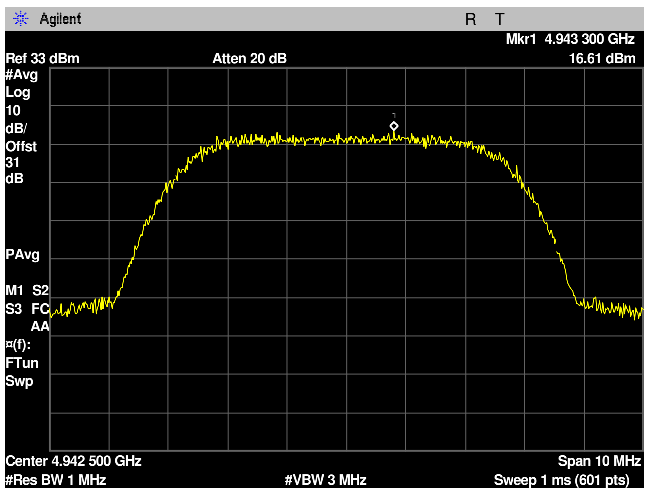
Plot 116. Power Spectral Density, 20MHz, 4980MHz, 90Sector, Port 1



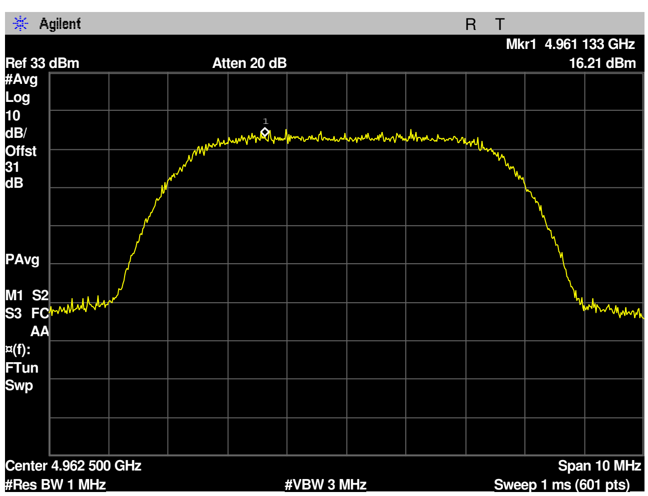
Plot 117. Power Spectral Density, 20MHz, 4980MHz, 90Sector, Port 2



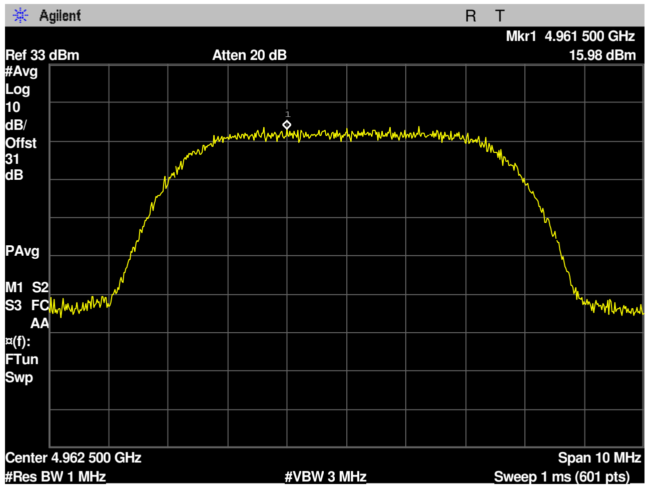
Plot 118. Power Spectral Density, 5MHz, 4942.5MHz, 2Panel, Port 1



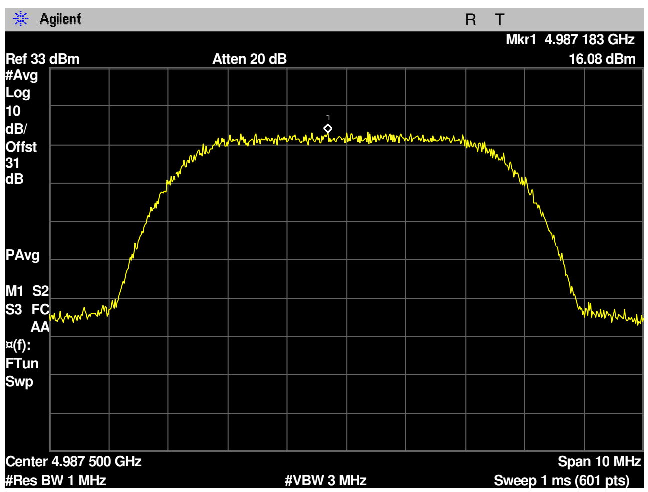
Plot 119. Power Spectral Density, 5MHz, 4942.5MHz, 2Panel, Port 2



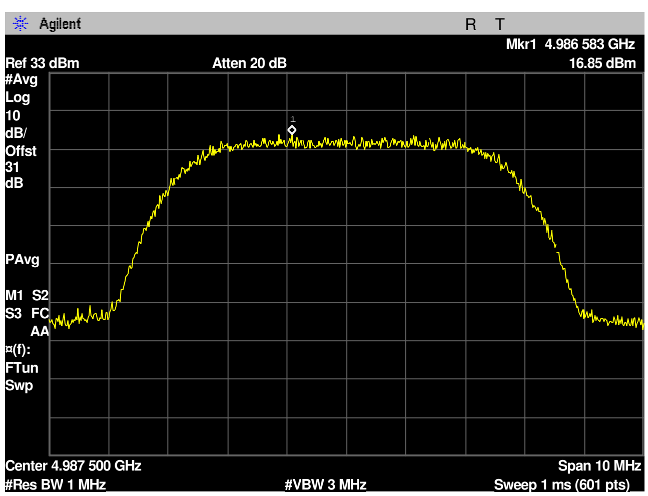
Plot 120. Power Spectral Density, 5MHz, 4962.5MHz, 2Panel, Port 1



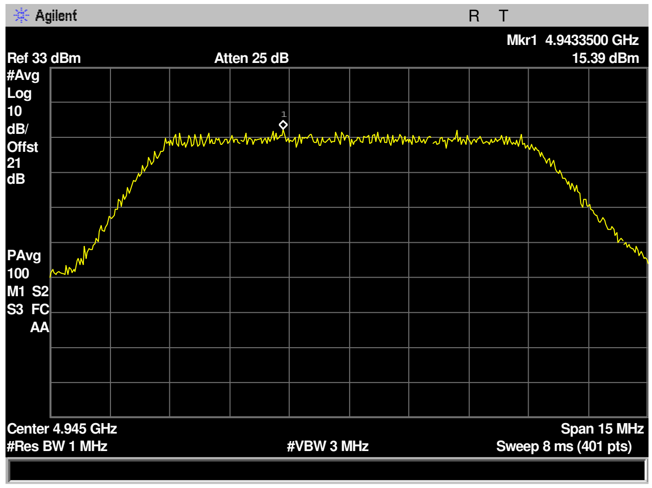
Plot 121. Power Spectral Density, 5MHz, 4962.5MHz, 2Panel, Port 2



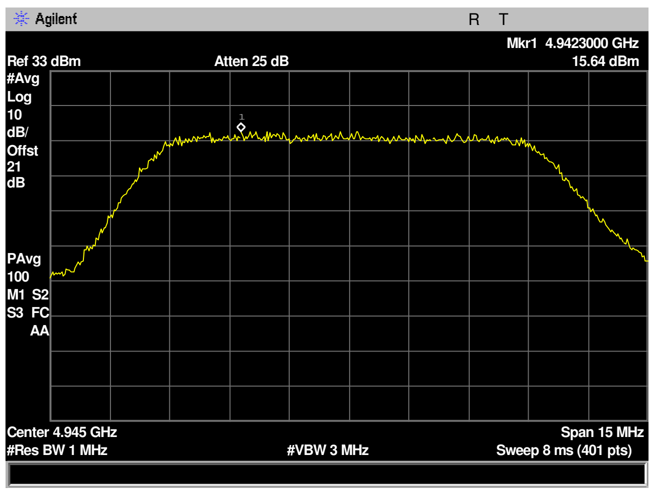
Plot 122. Power Spectral Density, 5MHz, 4987.5MHz, 2Panel, Port 1



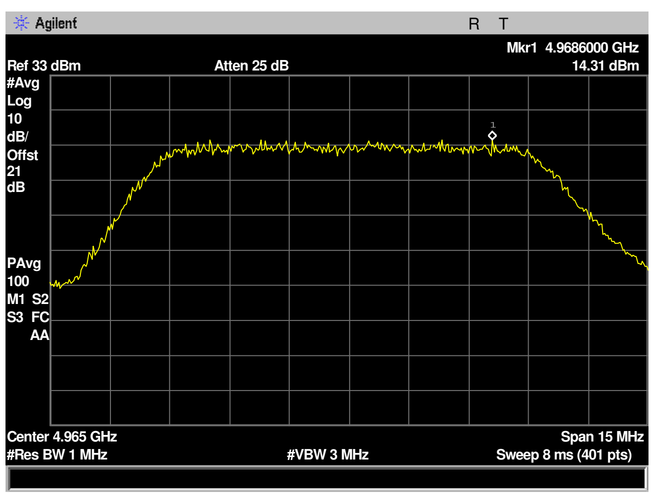
Plot 123. Power Spectral Density, 5MHz, 4987.5MHz, 2Panel, Port 2



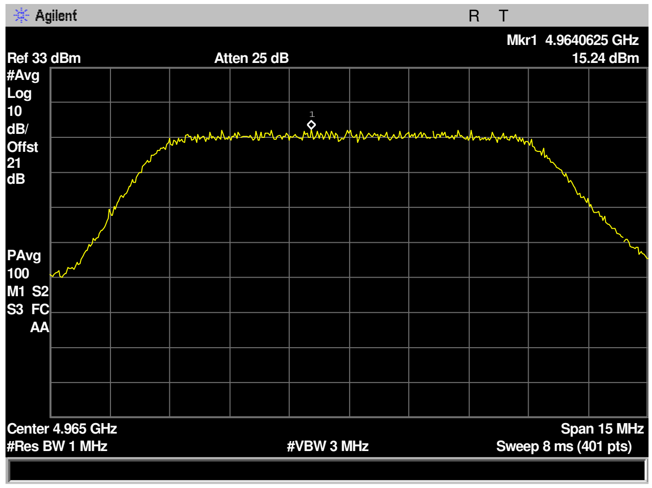
Plot 124. Power Spectral Density, 10MHz, 4945MHz, 2Panel, Port 1



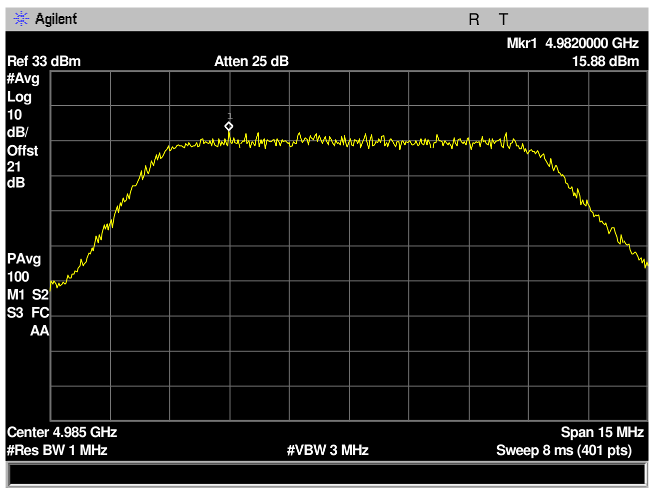
Plot 125. Power Spectral Density, 10MHz, 4945MHz, 2Panel, Port 2



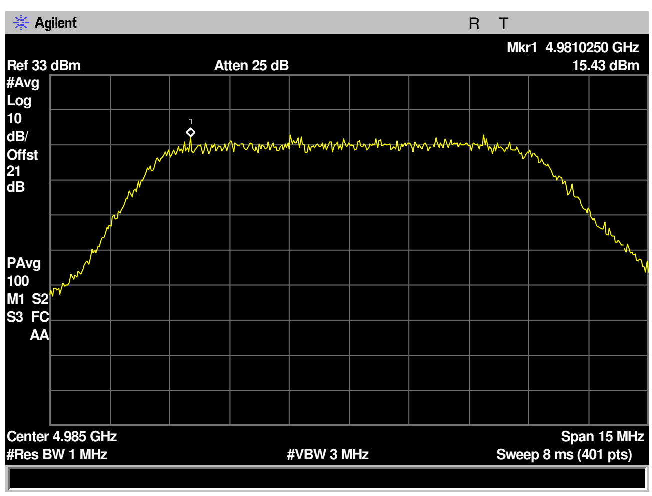
Plot 126. Power Spectral Density, 10MHz, 4965MHz, 2Panel, Port 1



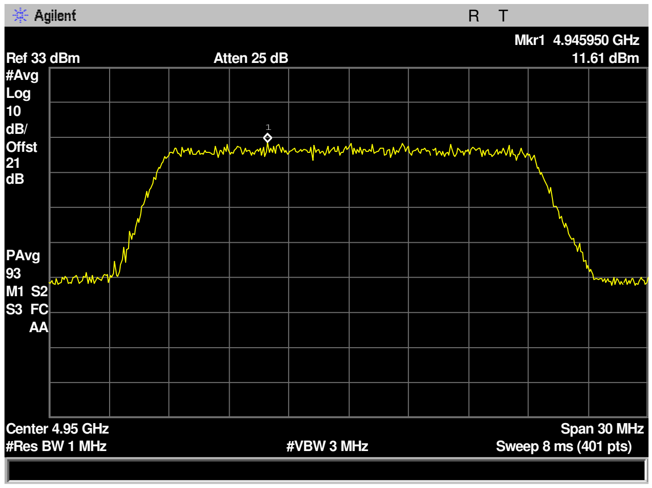
Plot 127. Power Spectral Density, 10MHz, 4965MHz, 2Panel, Port 2



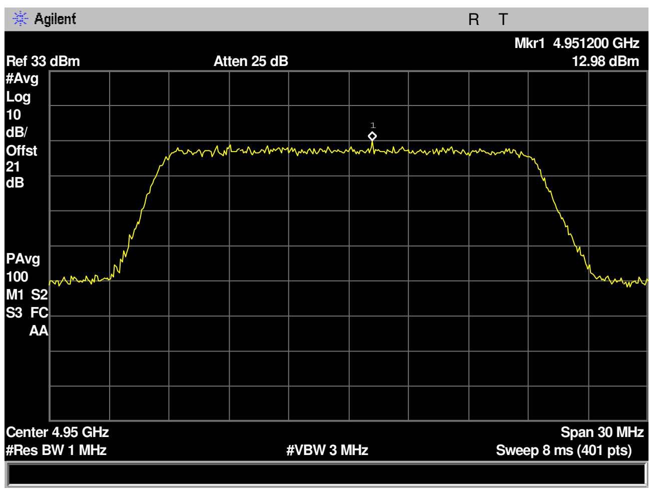
Plot 128. Power Spectral Density, 10MHz, 4985MHz, 2Panel, Port 1



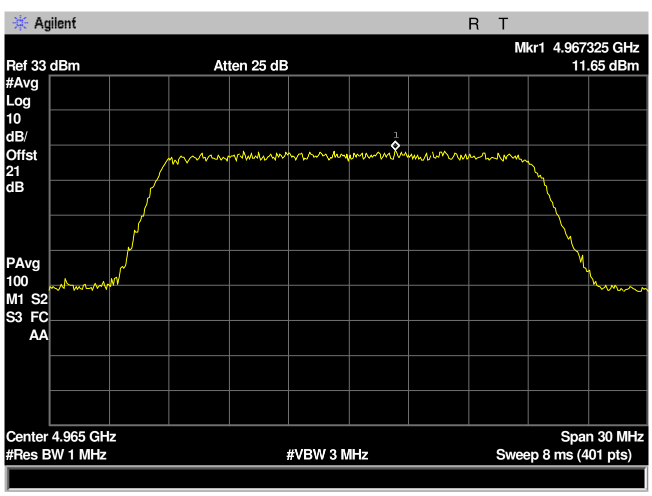
Plot 129. Power Spectral Density, 10MHz, 4985MHz, 2Panel, Port 2



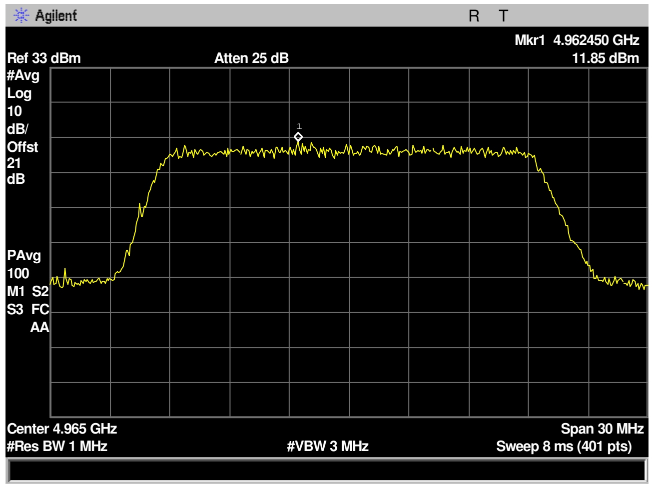
Plot 130. Power Spectral Density, 20MHz, 4950MHz, 2Panel, Port 1



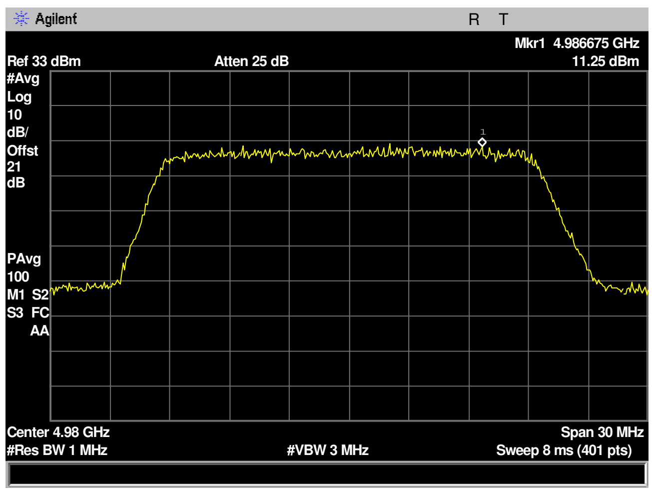
Plot 131. Power Spectral Density, 20MHz, 4950MHz, 2Panel, Port 2



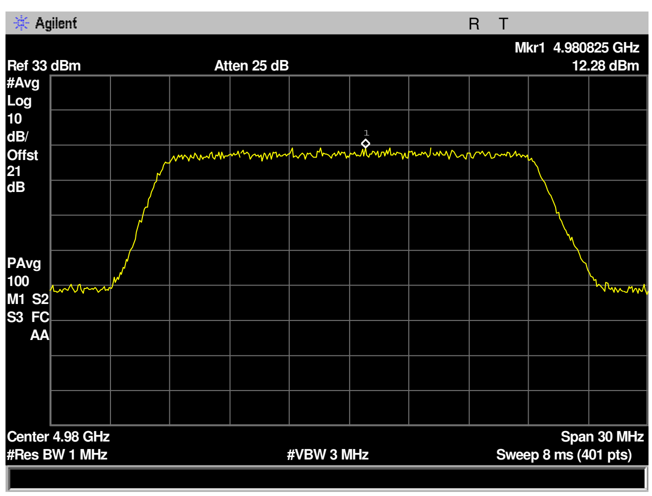
Plot 132. Power Spectral Density, 20MHz, 4965MHz, 2Panel, Port 1



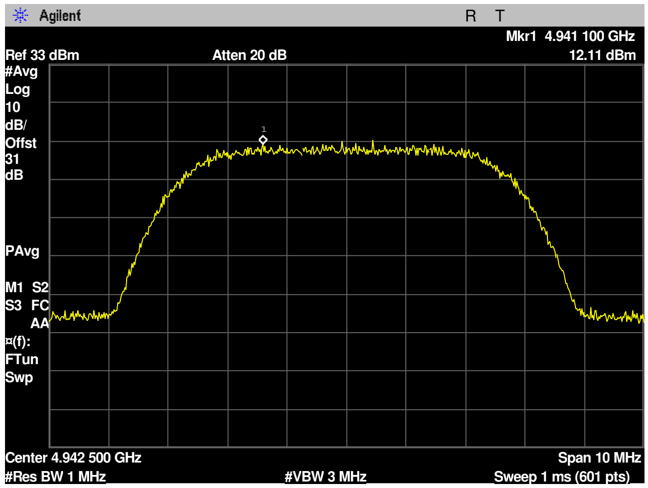
Plot 133. Power Spectral Density, 20MHz, 4965MHz, 2Panel, Port 2



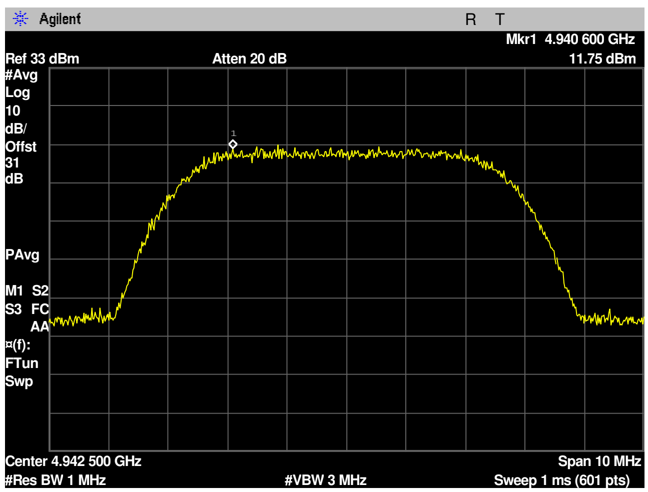
Plot 134. Power Spectral Density, 20MHz, 4980MHz, 2Panel, Port 1



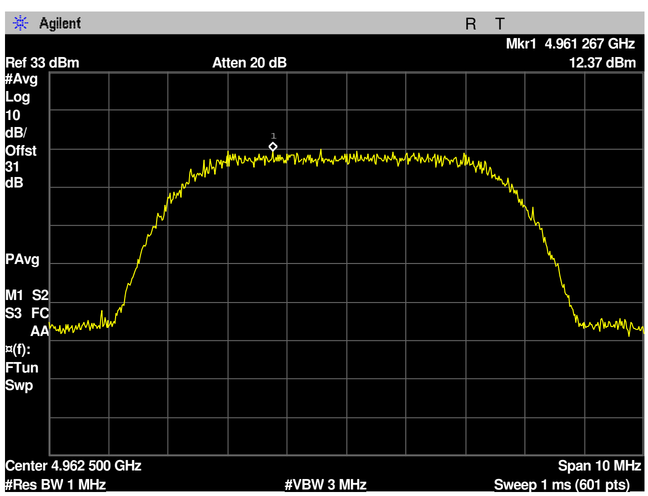
Plot 135. Power Spectral Density, 20MHz, 4980MHz, 2Panel, Port 2



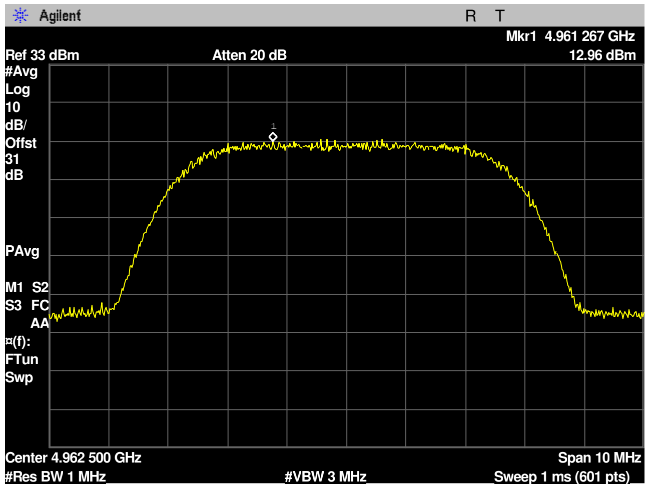
Plot 136. Power Spectral Density, 5MHz 4942.5MHz, 3Para, Port 1



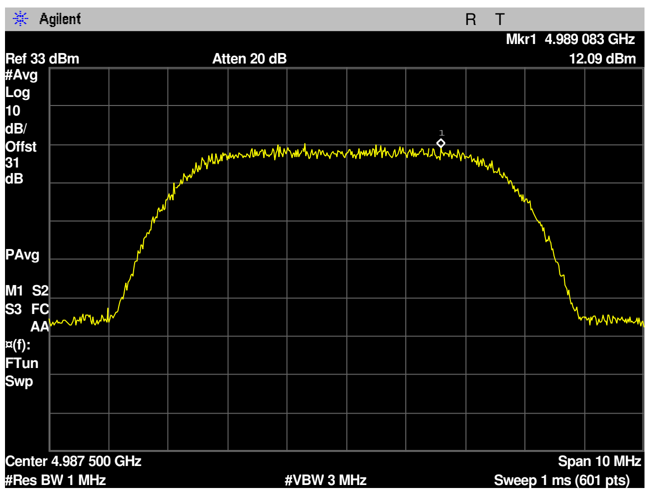
Plot 137. Power Spectral Density, 5MHz 4942.5MHz, 3Para, Port 2



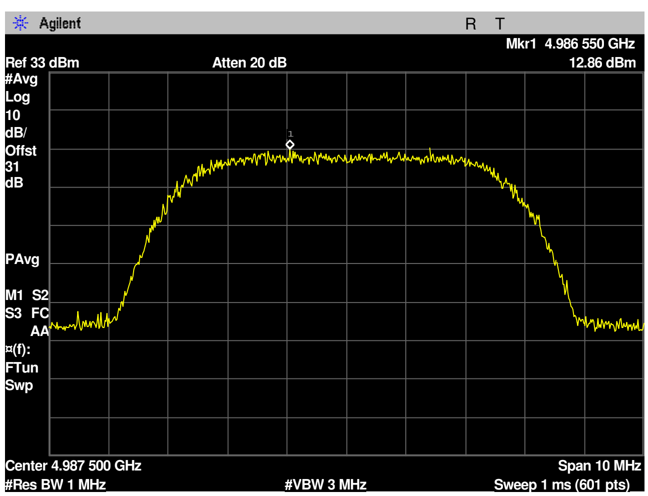
Plot 138. Power Spectral Density, 5MHz 4962.5MHz, 3Para, Port 1



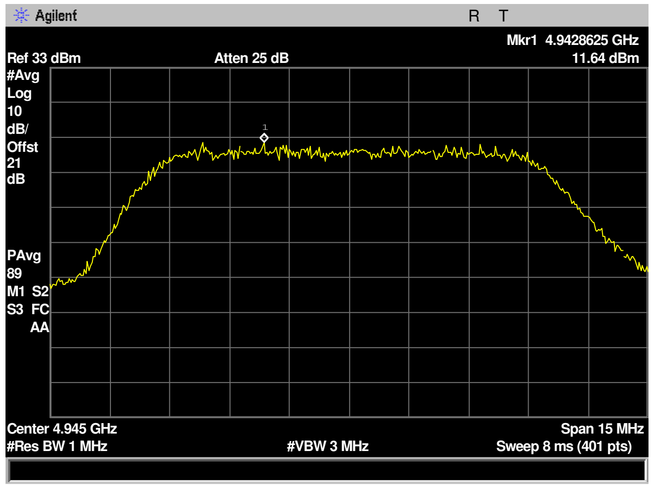
Plot 139. Power Spectral Density, 5MHz 4962.5MHz, 3Para, Port 2



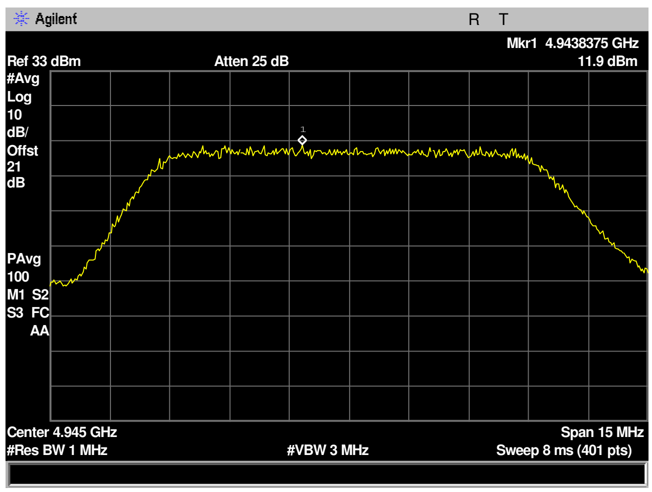
Plot 140. Power Spectral Density, 5MHz 4987.5MHz, 3Para, Port 1



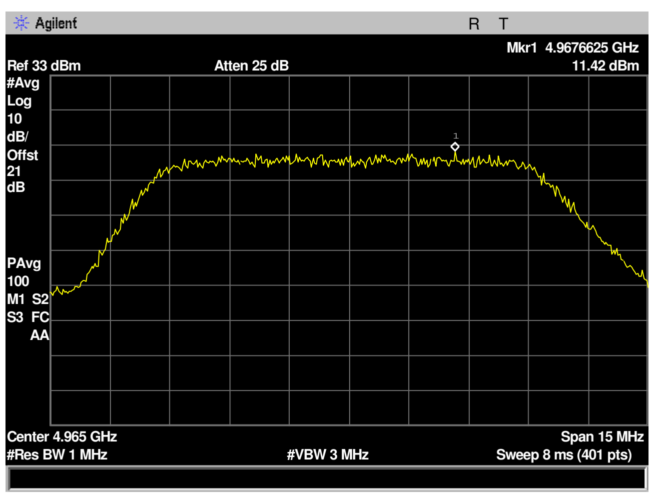
Plot 141. Power Spectral Density, 5MHz 4987.5MHz, 3Para, Port 2



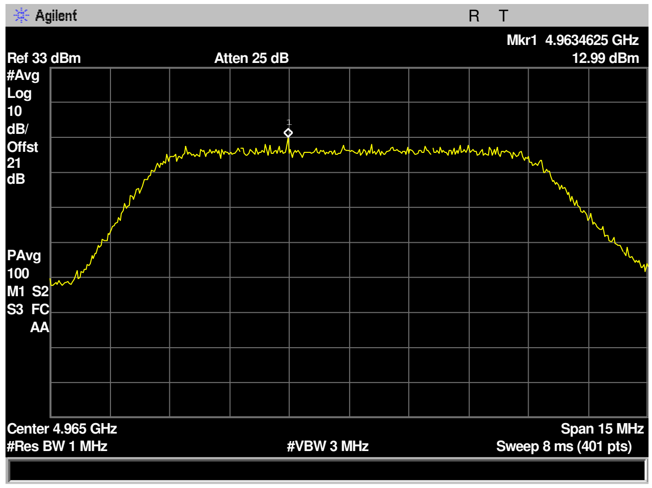
Plot 142. Power Spectral Density, 10MHz, 4945MHz, 3Para, Port 1



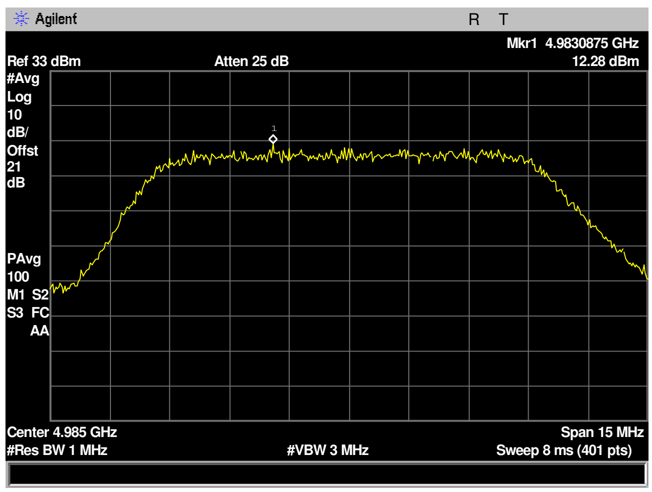
Plot 143. Power Spectral Density, 10MHz, 4945MHz, 3Para, Port 2



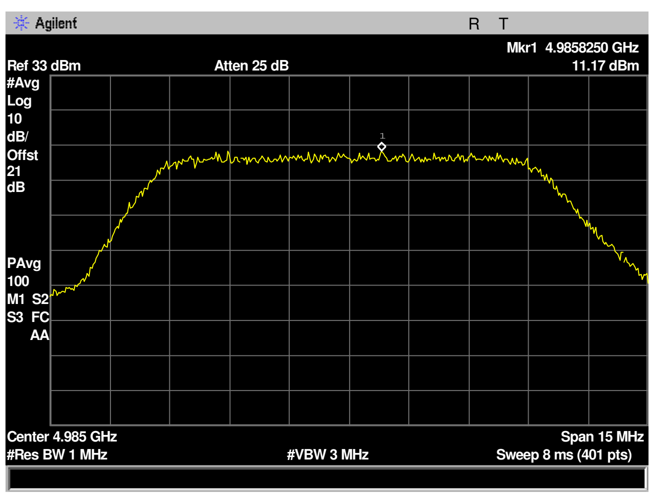
Plot 144. Power Spectral Density, 10MHz, 4965MHz, 3Para, Port 1



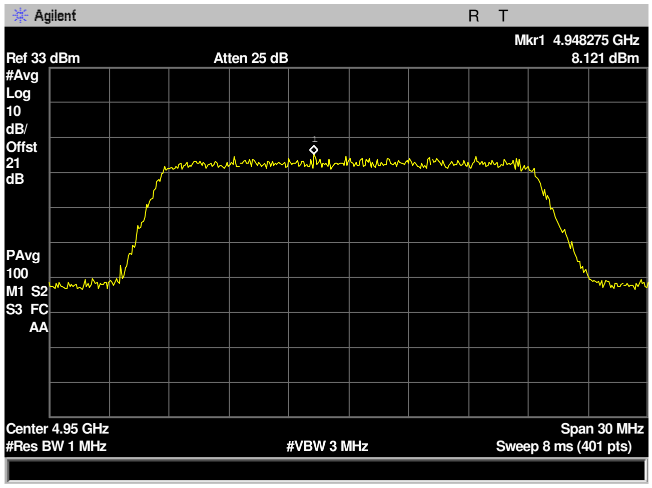
Plot 145 Power Spectral Density, 10MHz, 4965MHz, 3Para, Port 2



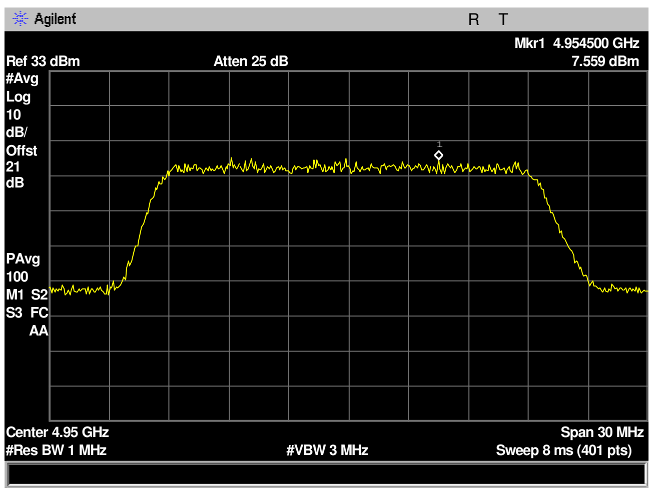
Plot 146. Power Spectral Density, 10MHz, 4985MHz, 3Para, Port 1



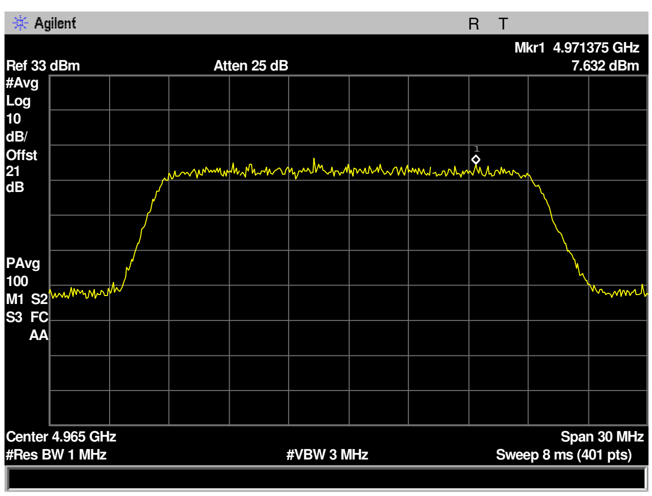
Plot 147. Power Spectral Density, 10MHz, 4985MHz, 3Para, Port 2



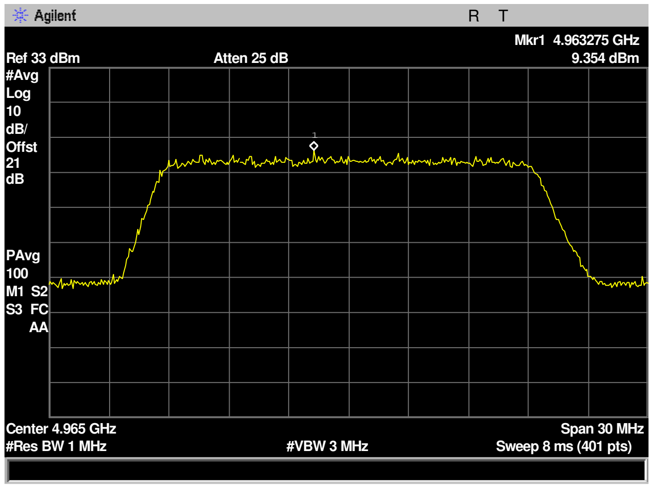
Plot 148. Power Spectral Density, 20MHz, 4950MHz, 3Para, Port 1



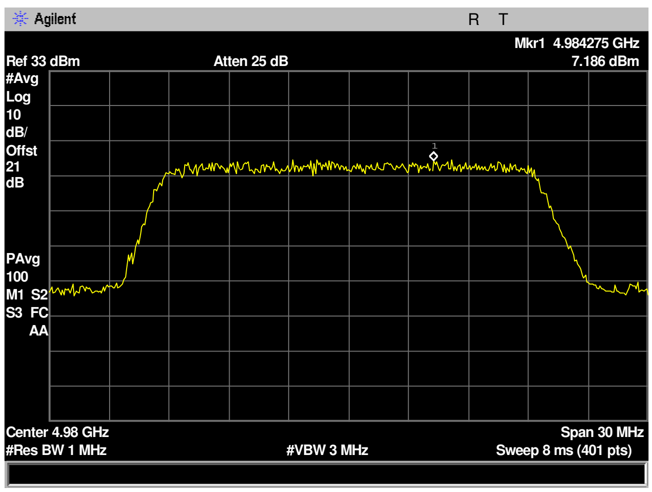
Plot 149. Power Spectral Density, 20MHz, 4950MHz, 3Para, Port 2



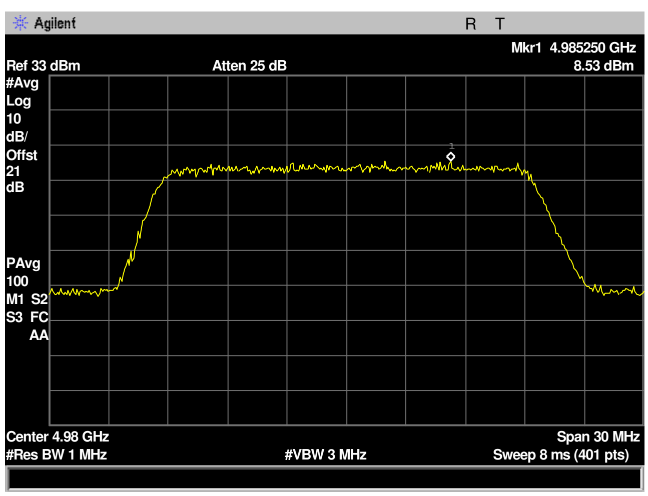
Plot 150. Power Spectral Density, 20MHz, 4965MHz, 3Para, Port 1



Plot 151. Power Spectral Density, 20MHz, 4965MHz, 3Para, Port 2



Plot 152. Power Spectral Density, 20MHz, 4980MHz, 3Para, Port 1



Plot 153. Power Spectral Density, 20MHz, 4980MHz, 3Para, Port 2

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