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
13501 MCCALLEN PASS ● AUSTIN, TX 78753 ● PHONE (512) 287-2500 ● FAX (512) 287-2513

July 15, 2015

CommScope
250 Apollo Drive
Chelmsford, MA 01824

Dear Gary Falk,

Enclosed is the EMC Wireless test report for compliance testing of the CommScope, Small Cell Type 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 for Intentional Radiators.

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.

Jennifer Warnell
Documentation Department

Reference: (\CommScope\EMC85068-FCC407 UNII 2 Rev. 1)

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Electromagnetic Compatibility Criteria
Test Report

for the

CommScope
Small Cell Type

Tested under
the Certification Rules
contained in
Title 47 of the CFR, Part 15, Subpart B
for Unintentional Radiators
and
Title 47 of the CFR, Part 15.407
for Intentional Radiators

MET Report: EMC85068-FCC407 UNII 2 Rev. 1

July 15, 2015

Prepared For:

CommScope
250 Apollo Drive
Chelmsford, MA 01824

Prepared By:
MET Laboratories, Inc.
914 W. Patapsco Ave
Baltimore, MD 21230

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for Intentional Radiators

Benjamin Taylor, Project Engineer
Electromagnetic Compatibility Lab

Jennifer Warnell
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.

Asad Bajwa, Director
Electromagnetic Compatibility Lab

Report Status Sheet

Revision	Report Date	Reason for Revision
∅	June 29, 2015	Initial Issue.
1	July 15, 2015	Engineer corrections.

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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**er**tz**
IEC	**I**nternational **E**lectrotechnical **C**ommission
kHz	**k**ilo**h**er**tz**
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	**micro**henry
µ	**micro**farad
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 CommScope Small Cell Type, 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 Small Cell Type. CommScope should retain a copy of this document which should be kept on file for at least two years after the manufacturing of the Small Cell Type, 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 CommScope, purchase order number 52229. All tests were conducted using measurement procedure ANSI C63.4-2003.

FCC Reference	Description	Results
15.203	Antenna Requirements	Compliant
15.207	AC Conducted Emissions 150KHz – 30MHz	Compliant
15.403 (i)	26dB Occupied Bandwidth	Compliant
15.407 (a)(2)	Conducted Transmitter Output Power	Compliant
15.407 (a)(2)	Power Spectral Density	Compliant
15.407 (b)(2), (3), (5), (6)	Undesirable Emissions (15.205/15.209 – General Field Strength Limits (Restricted Bands and Radiated Emission Limits)	Compliant
15.407(f)	RF Exposure	Compliant
15.407(h)(2)	DFS Channel Bandwidth	Compliant
15.407 (h)(2)(ii)	Initial Channel Availability Check Time (CACT)	Compliant
15.407 (h)(2)(ii)	Radar Burst at the Beginning of CACT	Compliant
15.407 (h)(2)(ii)	Radar Burst at the End of CACT	Compliant
15.407 (h)(2)(iii)	Channel Move and Closing Time	Compliant
15.407 (h)(2)(iv)	Non-Occupancy Period	Compliant
15.407 (h)(2)	Statistical Performance Check	Compliant

Table 1. Executive Summary of EMC Part 15.407 ComplianceTesting

II. Equipment Configuration

A. Overview

MET Laboratories, Inc. was contracted by CommScope to perform testing on the Small Cell Type, under CommScope's purchase order number 52229.

This document describes the test setups, test methods, required test equipment, and the test limit criteria used to perform compliance testing of the CommScope Small Cell Type.

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

Model(s) Tested:	Small Cell Type	
Model(s) Covered:	Small Cell Type	
EUT Specifications:	Primary Power: 120 VAC, 60 Hz	
	FCC ID: QHY-S1000C	
	Type of Modulations:	OFDM
	Equipment Code:	NII
	Peak RF Output Power:	23.90 dBm
	EUT Frequency Ranges:	5260 – 5320 MHz 5500-5700 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	
Evaluated by:	Djed Mouada and Benjamin Taylor	
Report Date(s):	July 15, 2015	

Table 2. EUT Summary

B. References

CFR 47, Part 15, Subpart E	Unlicensed National Information Infrastructure Devices (UNII)
ANSI C63.4:2003	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 C63.10-2009	American National Standard for Testing Unlicensed Wireless Devices
KDB 789033 D02	D02 General UNII Test Procedures New Rules v01

Table 3. References

C. Test Site

All testing was performed at MET Laboratories, Inc., 914 W. Patapsco Ave., 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 CommScope Small Cell Type, Equipment Under Test (EUT), is a small cell intended for small to medium size business and residential application. The EUT has uncorrelated data streams.

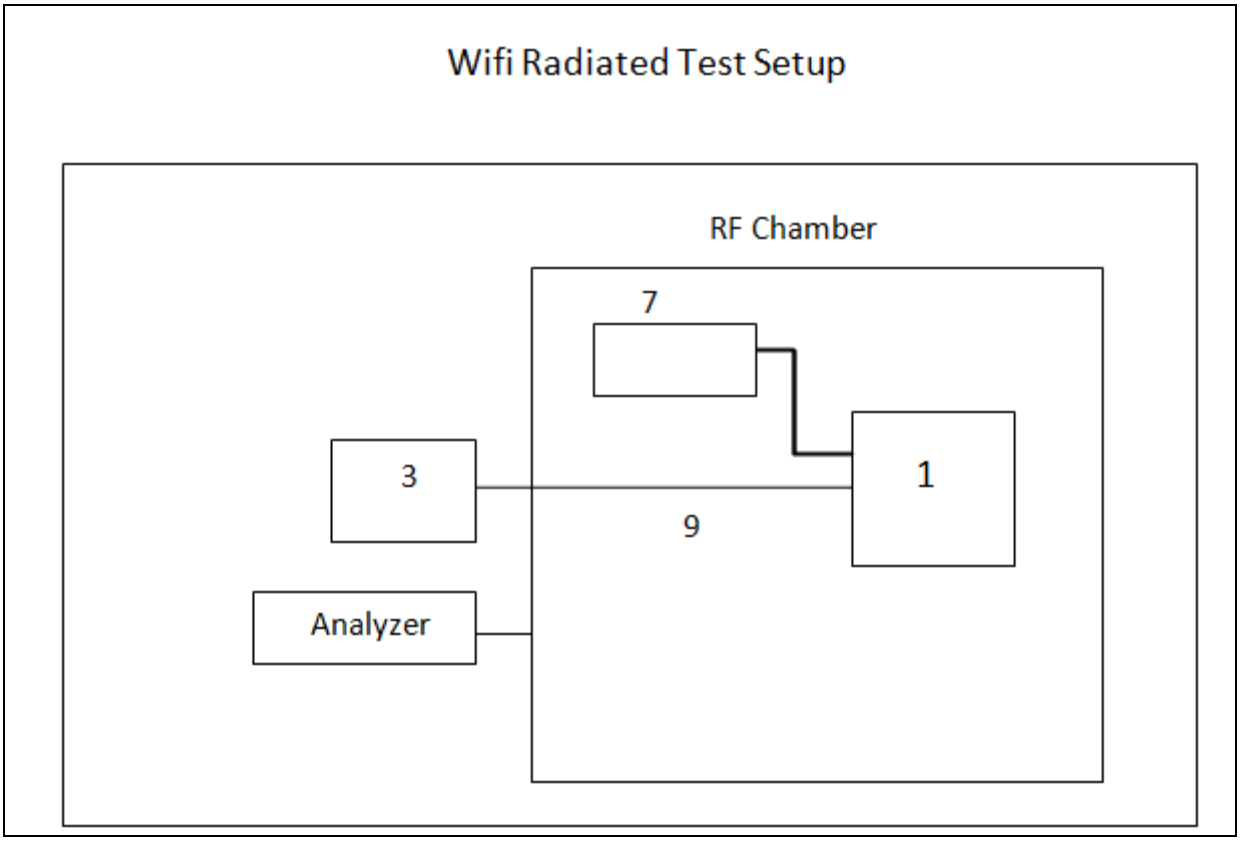


Figure 1. Block Diagram of Test Configuration

E. Equipment Configuration

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	NSC	--	800238	15046000032	--
7	MLF AC Adapter	--	(MLF -A0030120250000051)	--	--

Table 4. Equipment Configuration

F. Support Equipment

CommScope supplied support equipment necessary for the operation and testing of the Small Cell Type. All support equipment supplied is listed in the following Support Equipment List.

Ref. ID	Name / Description	Manufacturer	Model Number
3	Laptop (CommScope 02682)	Dell	Latitude 6410
4	Laptop (NTQALAPXP2)	Dell	Vostro 1510
5	AC Adapter for Dell Latitude 6410	Dell	DA130PE1-00
6	AC Adapter for Dell Vostro 1510	Dell	DA90PM130

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
8	Power Port (J10)	--	1	--	--	--
9	Ethernet Port (J1204/5)	--	2	--	--	--
10	Console Port (J1323)	--	1	--	--	--

Table 6. Ports and Cabling Information

H. Mode of Operation

2.4GHz - transmitter modes of operation supported:
1. 802.11 b (22MHz BW – CCK modulation)
2. 802.11g (20MHz BW – OFDM modulation)
3. 802.11 n (20 and 40MHz bandwidth, OFDM modulation)

5 GHz
1. 802.11n (20 and 40MHz bandwidth OFDM modulation)
2. 802.11ac (20, 40 and 80MHz bandwidths – BPSK, QPSK, 16QAM, 64QAM, 256QAM modulation)
3. DFS supported

Band 41 licensed spectrum LTE – Not being tested.
EMC testing is not being done.

I. Method of Monitoring EUT Operation

1. ART has software to support all operating modes. Console port access to laptops is supplied with scripts to set and monitor modes.
2. Same as above. Software will be monitored.

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 CommScope 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 EUT employs an integral antenna

Test Engineer(s): Benjamin Taylor

Test Date(s): 03/31/15

Electromagnetic Compatibility Criteria for Intentional Radiators

§ 15.207 Conducted Emissions Limits

Test Requirement(s): **§ 15.207 (a):** For an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30MHz, shall not exceed the limits in the following table, as measured using a 50 μH/50 Σ line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

Frequency range (MHz)	§ 15.207(a), Conducted Limit (dBμV)	
	Quasi-Peak	Average
* 0.15- 0.45	66 - 56	56 - 46
0.45 - 0.5	56	46
0.5 - 30	60	50

Table 7. Conducted Limits for Intentional Radiators from FCC Part 15 § 15.207(a)

Test Procedure: The EUT was placed on a 0.8 m-high wooden table inside a screen room. The EUT was situated such that the back of the EUT was 0.4 m from one wall of the vertical ground plane, and the remaining sides of the EUT were no closer than 0.8 m from any other conductive surface. The EUT was powered from a 50 Ω/50 μH Line Impedance Stabilization Network (LISN). The EMC receiver scanned the frequency range from 150 kHz to 30 MHz. Conducted Emissions measurements were made in accordance with *ANSI C63.4-2003 "Methods and Measurements of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9kHz to 40 GHz"*. The measurements were performed over the frequency range of 0.15 MHz to 30 MHz using a 50 Ω/50 μH LISN as the input transducer to an EMC/field intensity meter. For the purpose of this testing, the transmitter was turned on. Scans were performed with the transmitter on.

Test Results: The EUT was compliant with this requirement.

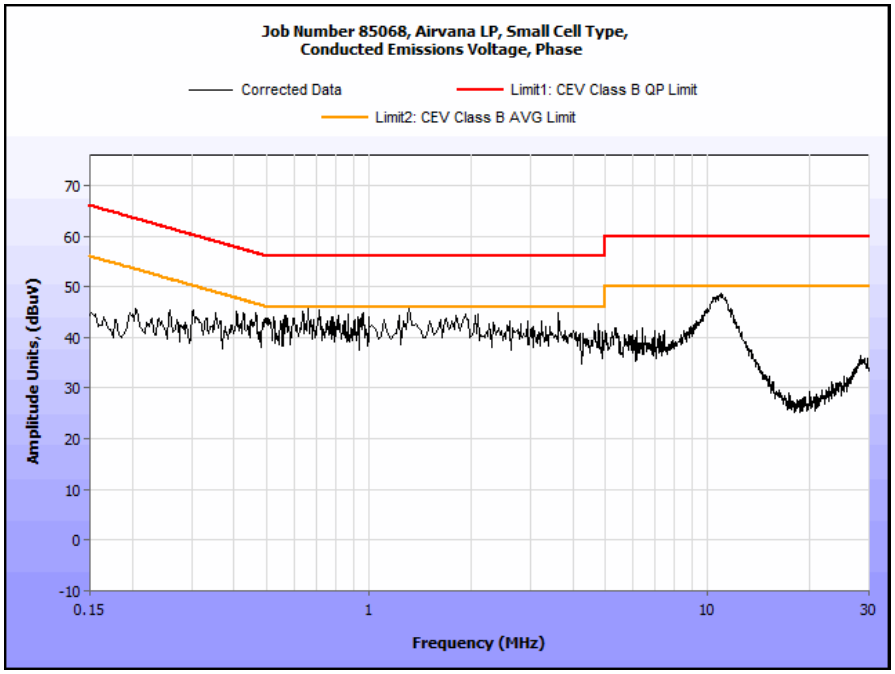
Test Engineer(s): Benjamin Taylor

Test Date(s): 05/01/15

15.207(a) Conducted Emissions Test Results

Frequency (MHz)	Uncorrected Meter Reading (dBµV) QP	Cable Loss (dB)	Corrected Measurement (dBµV) QP	Limit (dBµV) QP	Margin (dB) QP	Uncorrected Meter Reading (dBµV) Avg.	Cable Loss (dB)	Corrected Measurement (dBµV) AVG	Limit (dBµV) AVG	Margin (dB) AVG
0.248	43.61	0	43.61	79	-35.39	38.98	0	38.98	66	-27.02
0.441	45.19	0	45.19	79	-33.81	43.24	0	43.24	66	-22.76
0.559	49.51	0	49.51	73	-23.49	42.56	0	42.56	60	-17.44
1.32	48.68	0	48.68	73	-24.32	40.91	0	40.91	60	-19.09
5.67	49.12	0.17	49.29	73	-23.71	43.95	0.17	44.12	60	-15.88
11.91	50.5	0.17	50.67	73	-22.33	44.17	0.17	44.34	60	-15.66

Table 8. Conducted Emissions, 15.207(a), Phase Line, Test Results

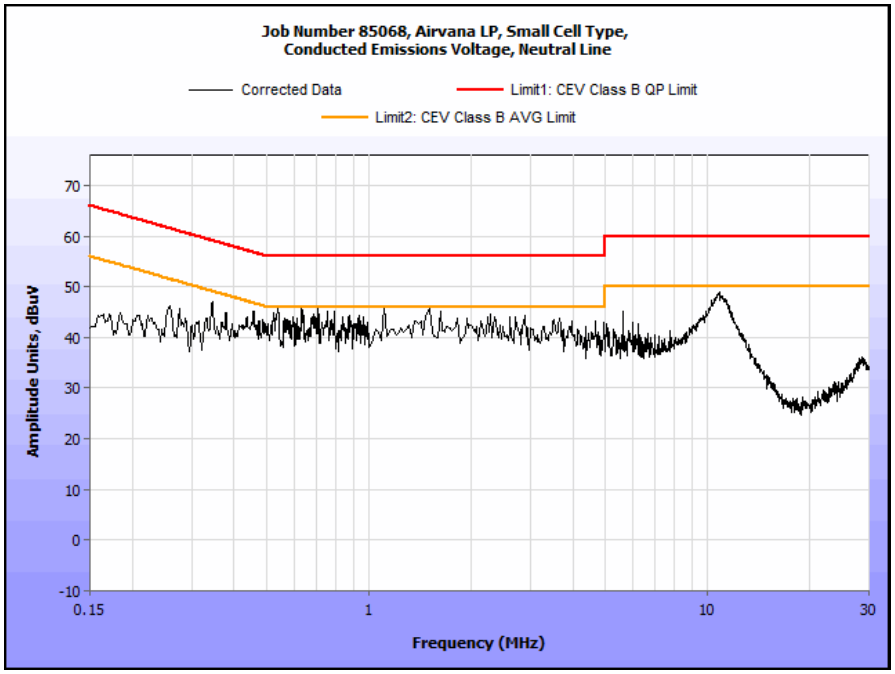


Plot 1. Conducted Emissions, 15.207(a), Phase Line

15.207(a) Conducted Emissions Test Results

Frequency (MHz)	Uncorrected Meter Reading (dBµV) QP	Cable Loss (dB)	Corrected Measurement (dBµV) QP	Limit (dBµV) QP	Margin (dB) QP	Uncorrected Meter Reading (dBµV) Avg.	Cable Loss (dB)	Corrected Measurement (dBµV) AVG	Limit (dBµV) AVG	Margin (dB) AVG
0.249	42.56	0	42.56	79	-36.44	39.45	0	39.45	66	-26.55
0.339	46.18	0	46.18	79	-32.82	42.34	0	42.34	66	-23.66
0.541	48.65	0	48.65	73	-24.35	41.57	0	41.57	60	-18.43
1.29	49.63	0	49.63	73	-23.37	41.54	0	41.54	60	-18.46
5.68	48.6	0.17	48.77	73	-24.23	41.6	0.17	41.77	60	-18.23
11.99	49.66	0.17	49.83	73	-23.17	45.45	0.17	45.62	60	-14.38

Table 9. Conducted Emissions, 15.207(a), Neutral Line, Test Results



Plot 2. Conducted Emissions, 15.207(a), Neutral Line

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 and was determined from the plots on the following pages.

Test Engineer(s): Benjamin Taylor

Test Date(s): 04/01/15

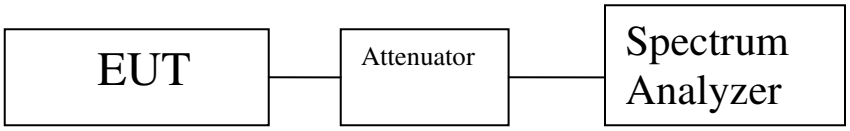
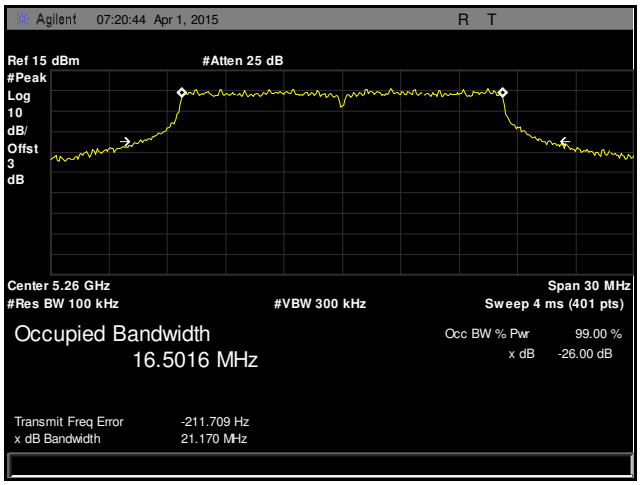


Figure 2. Occupied Bandwidth, Test Setup

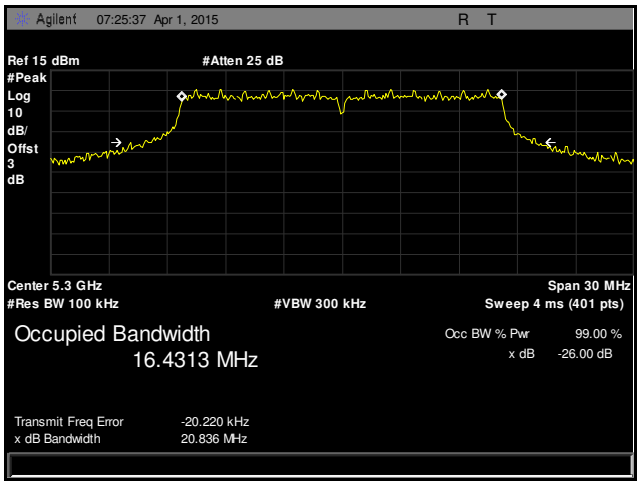
Occupied Bandwidth		
Carrier Channel Mode	**Frequency (MHz)**	**Measured 26 dB Bandwidth (MHz)**
802.11a 20MHz	5260	21.170
802.11a 20MHz	5300	20.836
802.11a 20MHz	5320	20.086
802.11ac 20MHz	5260	20.079
802.11ac 20MHz	5300	20.256
802.11ac 20MHz	5320	20.816
802.11n 20MHz	5260	20.993
802.11n 20MHz	5300	20.261
802.11n 20MHz	5320	20.795
802.11ac 40MHz	5270	43.791
802.11ac 40MHz	5310	43.442
802.11n 40MHz	5270	42.784
802.11n 40MHz	5310	42.045
802.11ac 80MHz	5290	88.768
802.11a 20MHz	5500	19.462
802.11a 20MHz	5580	19.540
802.11a 20MHz	5700	19.074
802.11ac 20MHz	5500	20.037
802.11ac 20MHz	5580	20.481
802.11ac 20MHz	5700	20.023
802.11n 20MHz	5500	20.525
802.11n 20MHz	5580	20.910
802.11n 20MHz	5700	20.499
802.11ac 40 MHz	5510	42.015
802.11ac 40 MHz	5550	42.987
802.11ac 40 MHz	5670	43.009
802.11n 40MHz	5510	42.471
802.11n 40MHz	5550	41.964
802.11n 40MHz	5670	42.271
802.11ac 80MHz	5530	95.117
802.11ac 80MHz	5610	94.403

Table 10. Occupied Bandwidth Test Results

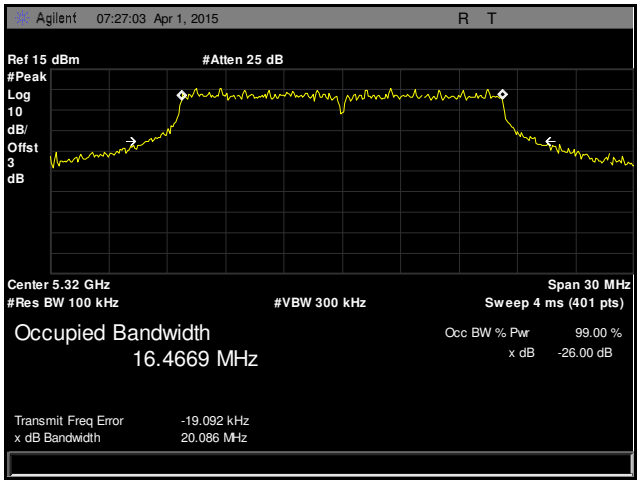
Occupied Bandwidth Test Results



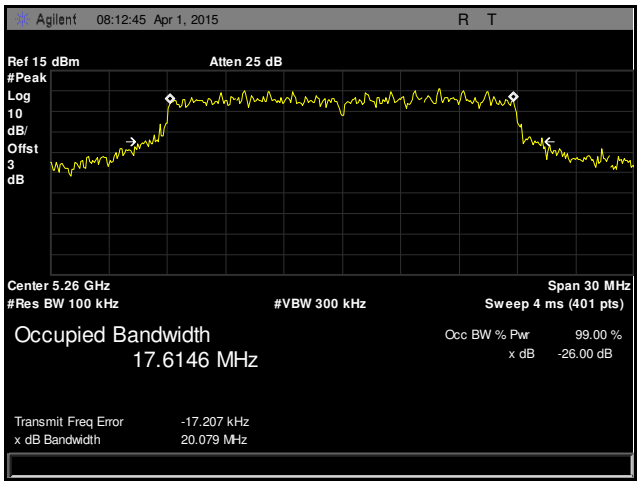
Plot 3. Occupied Bandwidth, 802.11a 20 MHz, Low Channel, 5260 MHz, Port A



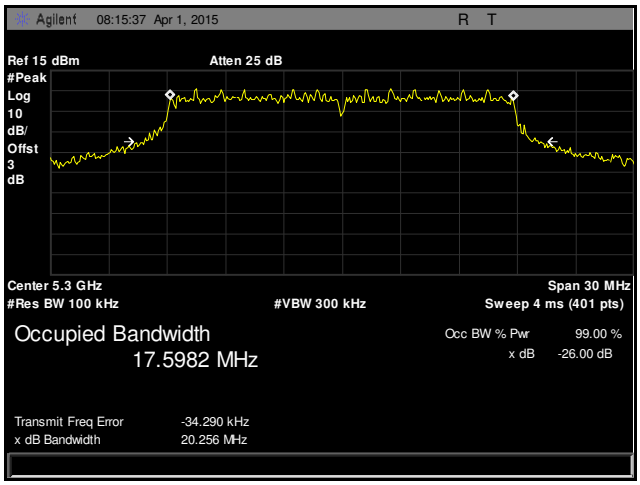
Plot 4. Occupied Bandwidth, 802.11a 20 MHz, Mid Channel, 5300 MHz, Port A



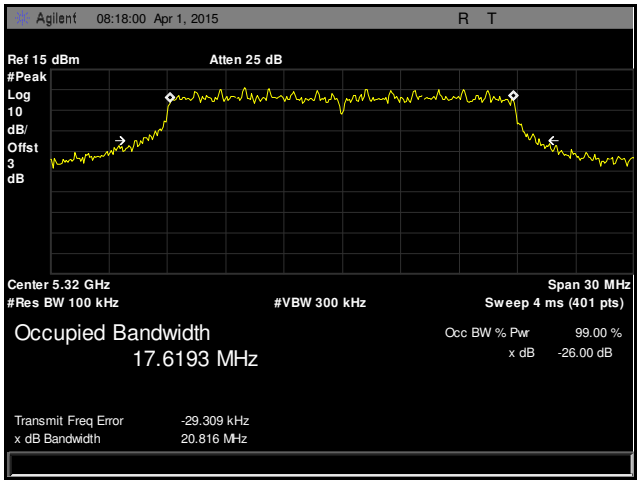
Plot 5. Occupied Bandwidth, 802.11a 20 MHz, High Channel, 5320 MHz, Port A



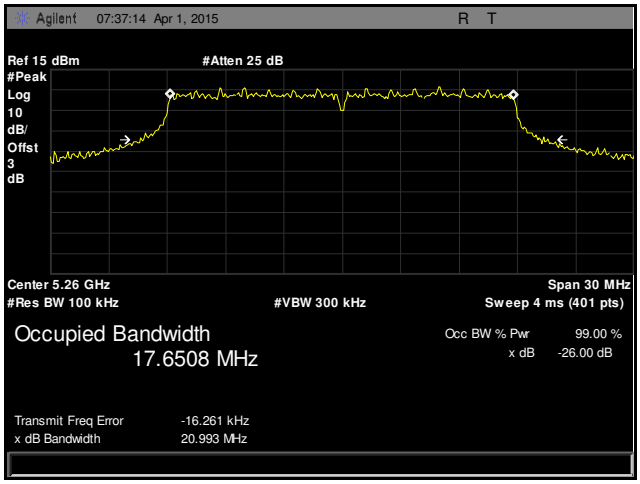
Plot 6. Occupied Bandwidth, 802.11ac 20 MHz, Low Channel, 5260 MHz, Port A



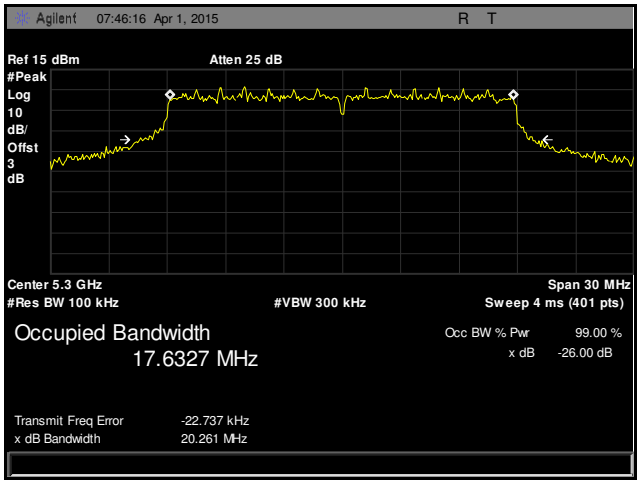
Plot 7. Occupied Bandwidth, 802.11ac 20 MHz, Mid Channel, 5300 MHz, Port A



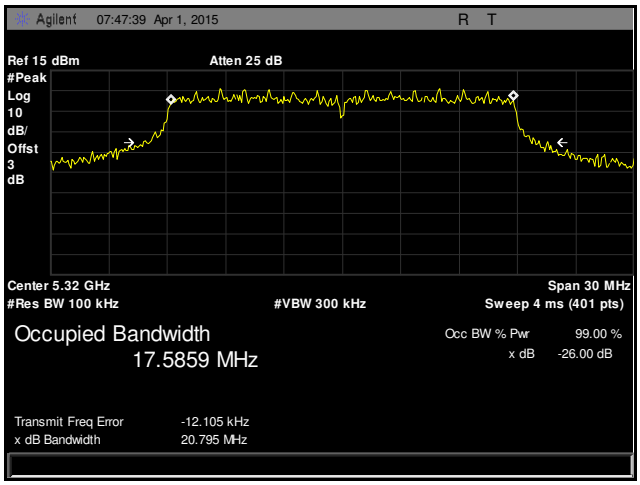
Plot 8. Occupied Bandwidth, 802.11ac 20 MHz, High Channel, 5320 MHz, Port A



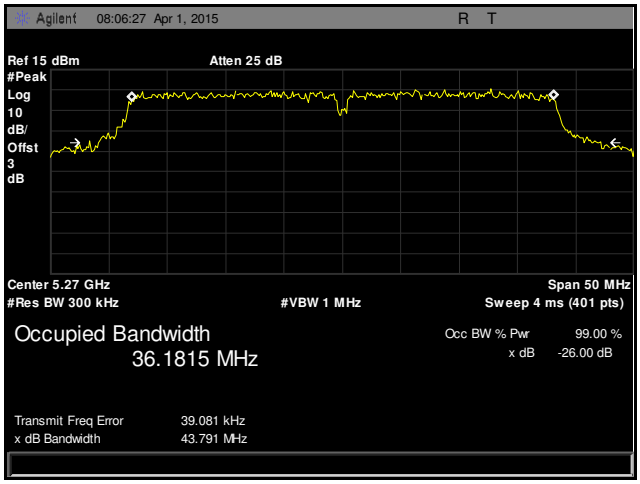
Plot 9. Occupied Bandwidth, 802.11n 20 MHz, Low Channel, 5260 MHz, Port A



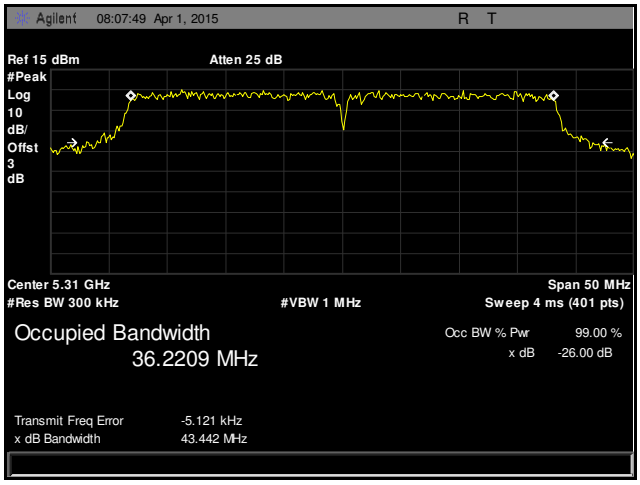
Plot 10. Occupied Bandwidth, 802.11n 20 MHz, Mid Channel, 5300 MHz, Port A



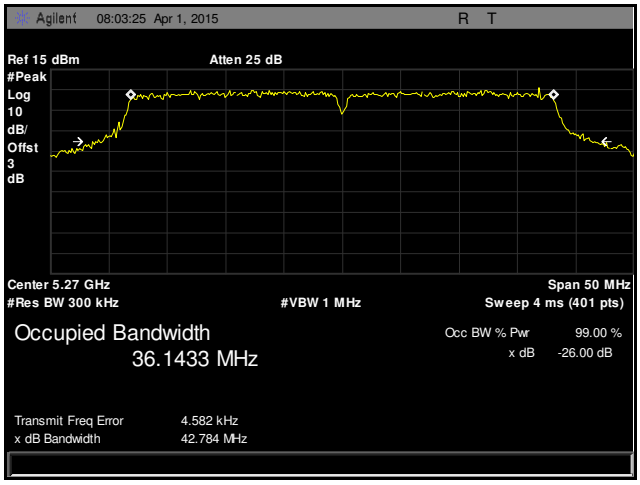
Plot 11. Occupied Bandwidth, 802.11n 20 MHz, High Channel, 5320 MHz, Port A



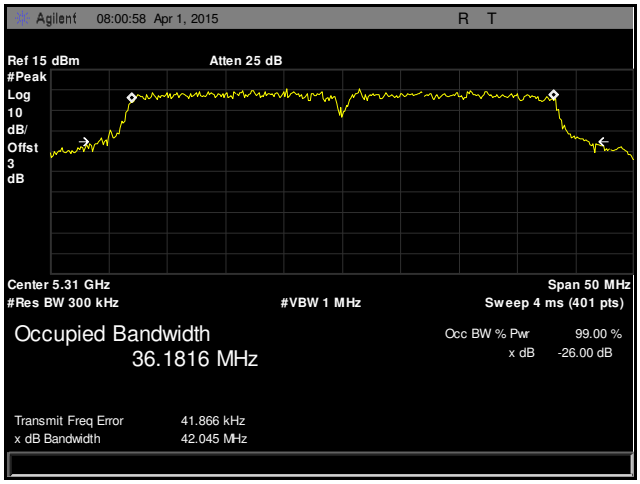
Plot 12. Occupied Bandwidth, 802.11ac 40 MHz, Low Channel, 5270 MHz, Port A



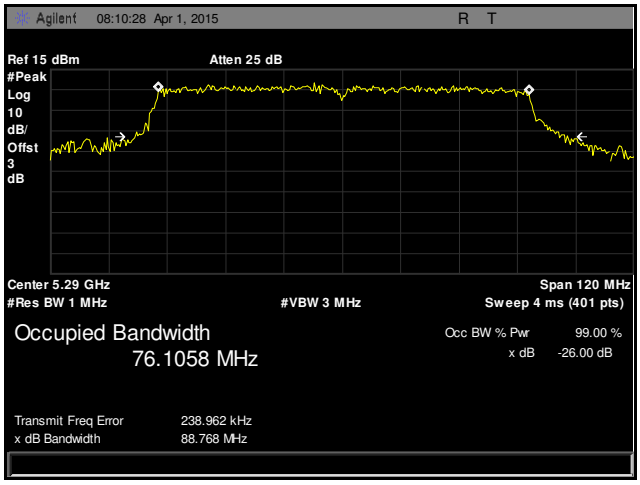
Plot 13. Occupied Bandwidth, 802.11ac 40 MHz, High Channel, 5310 MHz, Port A



Plot 14. Occupied Bandwidth, 802.11n 40 MHz, Low Channel, 5270 MHz, Port A

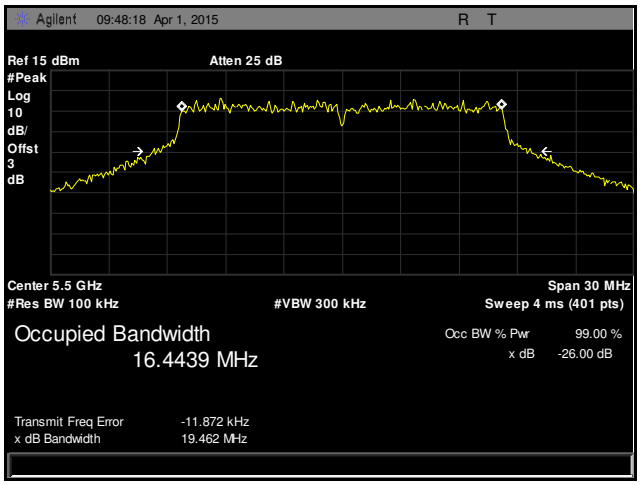


Plot 15. Occupied Bandwidth, 802.11n 40 MHz, High Channel, 5310 MHz, Port A

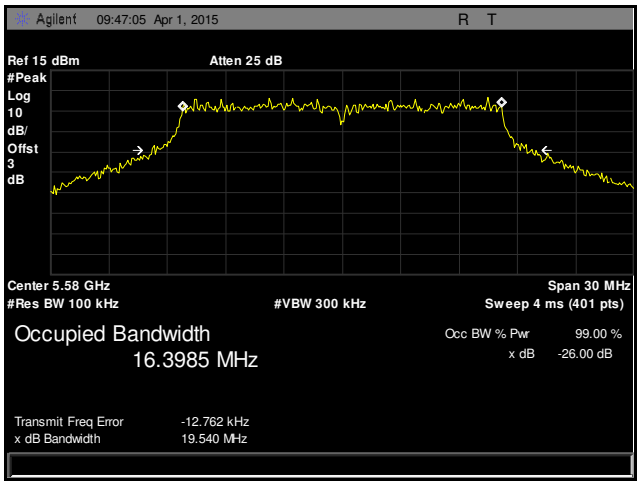


Plot 16. Occupied Bandwidth, 802.11ac 80 MHz, 5290 MHz, Port A

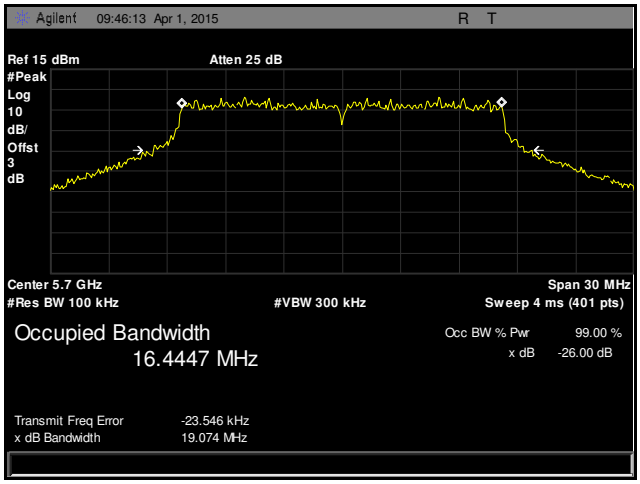
Occupied Bandwidth Test Results



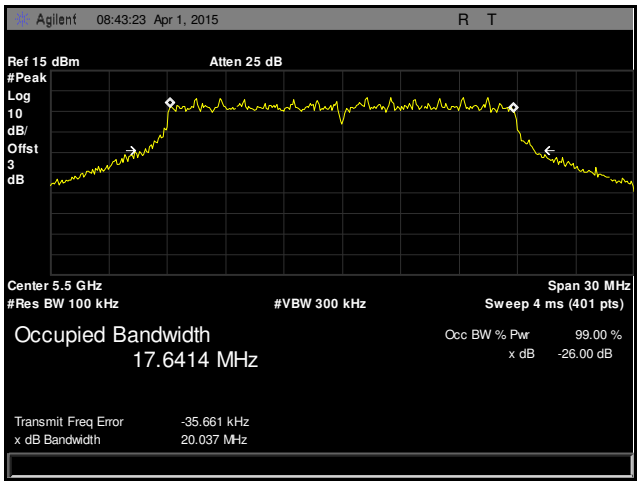
Plot 17. Occupied Bandwidth, 802.11a 20 MHz, Low Channel, 5500 MHz, Port A



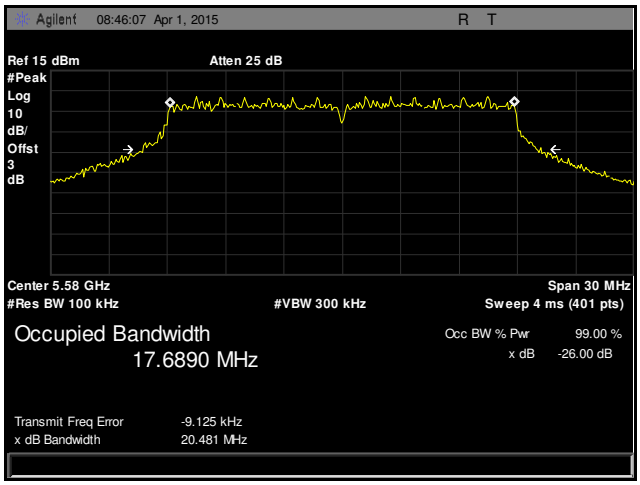
Plot 18. Occupied Bandwidth, 802.11a 20 MHz, Mid Channel, 5580 MHz, Port A



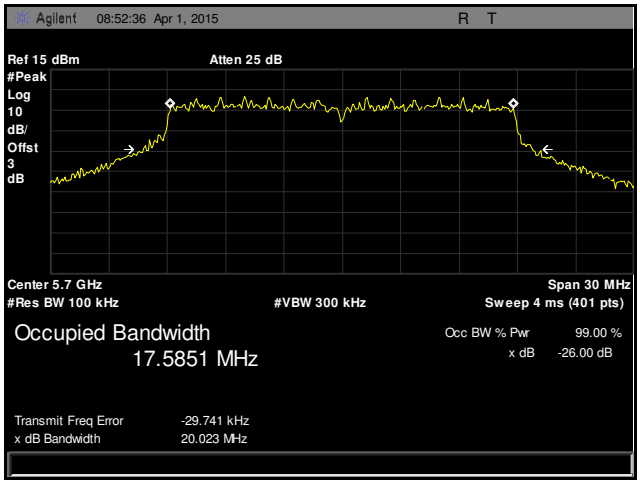
Plot 19. Occupied Bandwidth, 802.11a 20 MHz, High Channel, 5700 MHz, Port A



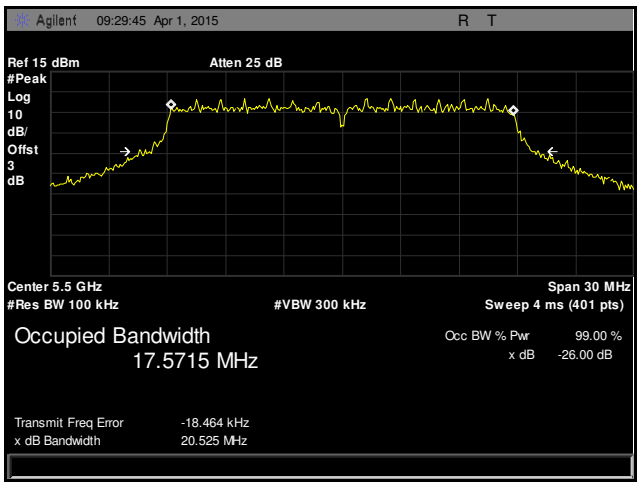
Plot 20. Occupied Bandwidth, 802.11ac 20 MHz, Low Channel, 5500 MHz, Port A



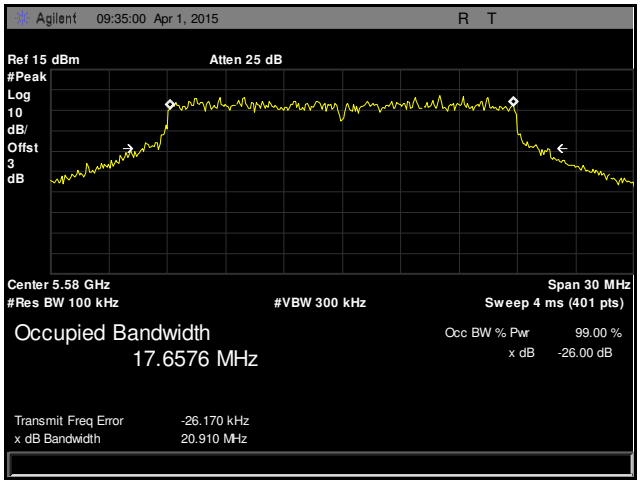
Plot 21. Occupied Bandwidth, 802.11ac 20 MHz, Mid Channel, 5580 MHz, Port A



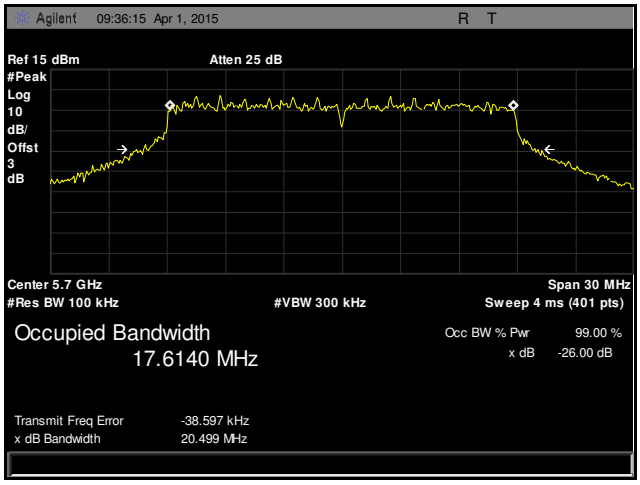
Plot 22. Occupied Bandwidth, 802.11ac 20 MHz, High Channel, 5700 MHz, Port A



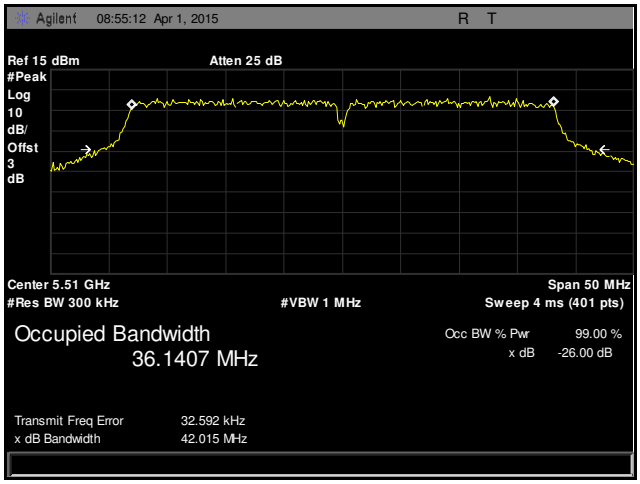
Plot 23. Occupied Bandwidth, 802.11n 20 MHz, Low Channel, 5500 MHz, Port A



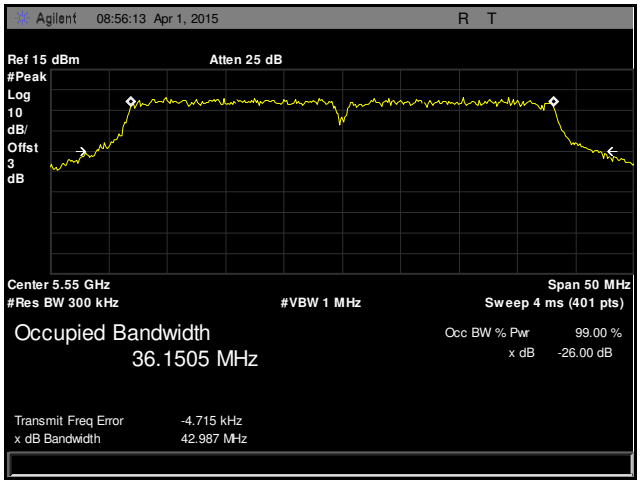
Plot 24. Occupied Bandwidth, 802.11n 20 MHz, Mid Channel, 5580 MHz, Port A



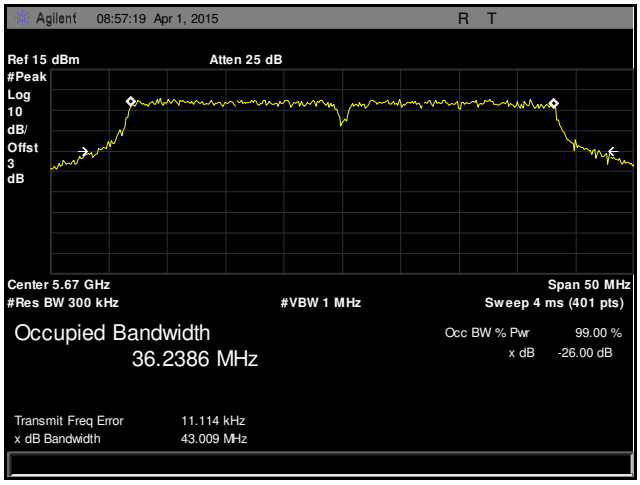
Plot 25. Occupied Bandwidth, 802.11n 20 MHz, High Channel, 5700 MHz, Port A



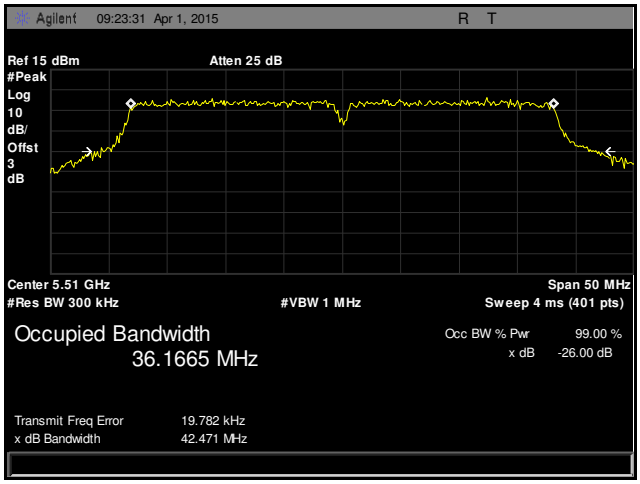
Plot 26. Occupied Bandwidth, 802.11ac 40 MHz, Low Channel, 5510 MHz, Port A



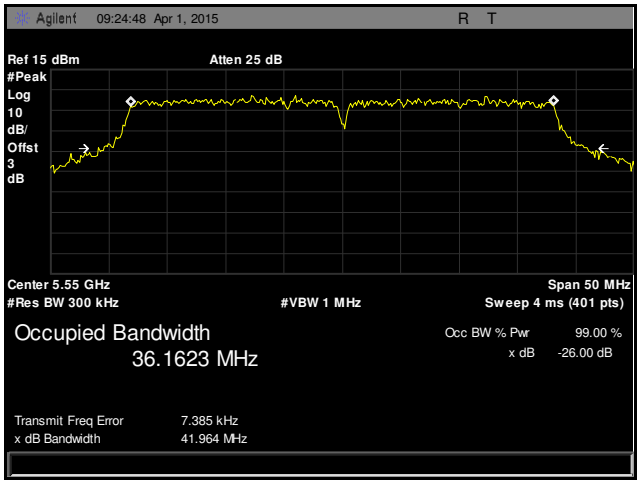
Plot 27. Occupied Bandwidth, 802.11ac 40 MHz, Mid Channel, 5550 MHz, Port A



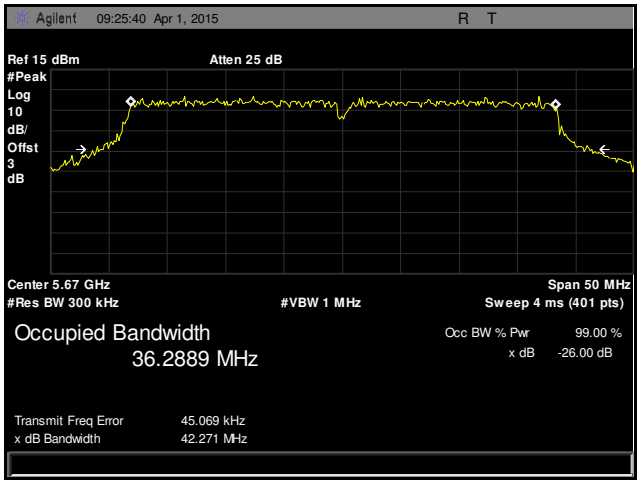
Plot 28. Occupied Bandwidth, 802.11ac 40 MHz, High Channel, 5670 MHz, Port A



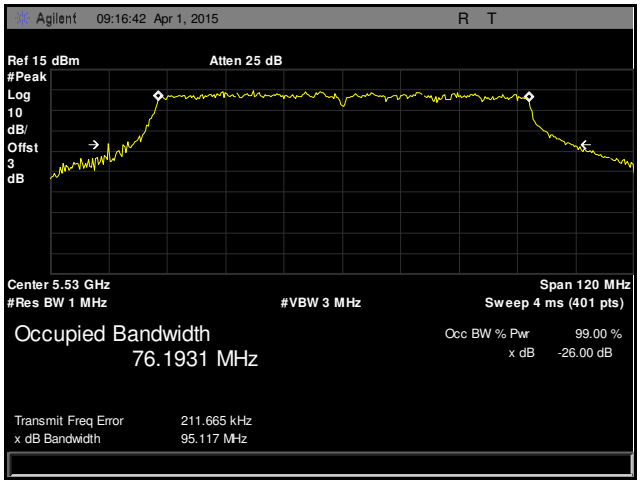
Plot 29. Occupied Bandwidth, 802.11n 40 MHz, Low Channel, 5510 MHz, Port A



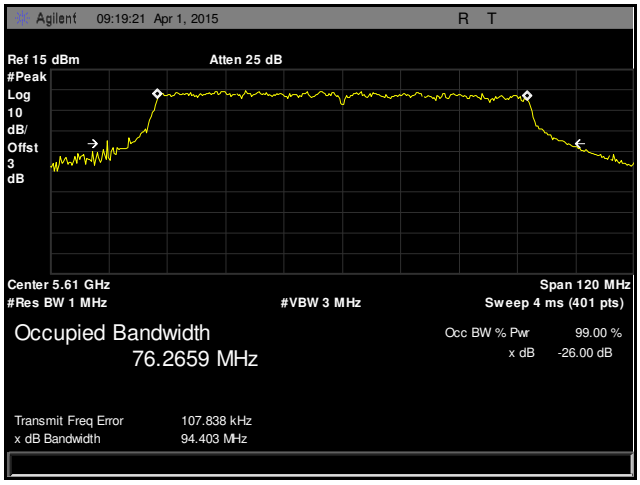
Plot 30. Occupied Bandwidth, 802.11n 40 MHz, Mid Channel, 5550 MHz, Port A



Plot 31. Occupied Bandwidth, 802.11n 40 MHz, High Channel, 5670 MHz, Port A



Plot 32. Occupied Bandwidth, 802.11ac 80 MHz, Low Channel, 5530 MHz, Port A



Plot 33. Occupied Bandwidth, 802.11ac 80 MHz, High Channel, 5610 MHz, Port A

Electromagnetic Compatibility Criteria for Intentional Radiators

§ 15. 407(a)(2) RF Power Output

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..

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

Test Engineer(s): Benjamin Taylor

Test Date(s): 05/01/15

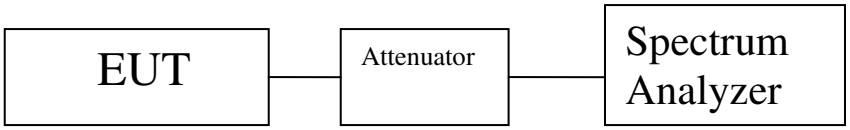


Figure 3. Power Output Test Setup

Average Conducted Output Power			
	Carrier Channel	**Frequency (MHz)**	**Measured Output Power dBm**
802.11a Port 5GHz	Low	5260	22.19
	Mid	5300	22.35
	High	5320	20.21
802.11n 20 MHz Port 5GHz-P1	Low	5260	20.99
	Mid	5300	20.78
	High	5320	20.20
802.11n 20 MHz Port 5GHz-P2	Low	5260	20.78
	Mid	5300	20.01
	High	5320	17.24
802.11n 40MHz Port 5GHz-P1	Low	5270	19.38
	High	5310	13.68
802.11n 40 MHz Port 5GHz-P2	Low	5270	18.99
	High	5310	14.00
802.11ac 20 MHz Port 5GHz-P1	Low	5260	20.73
	Mid	5300	21.10
	High	5320	19.54
802.11ac 20 MHz Port 5GHz-P2	Low	5260	20.64
	Mid	5300	20.01
	High	5320	19.1
802.11ac 40MHz Port 5GHz-P1	Low	5270	20.96
	High	5310	16.10
802.11ac 40 MHz Port 5GHz-P2	Low	5270	20.09
	High	5310	15.57
802.11ac 80MHz Port 5GHz-P1		5290	14.23
802.11ac 80MHz Port 5GHz-P2		5290	13.85
Summed Conducted Output Power			
	Carrier Channel	**Frequency (MHz)**	**Measured Output Power dBm**
802.11n 20 MHz Summed	Low	5260	23.90
	Mid	5300	23.42
	High	5320	21.98
802.11n 40 MHz Summed	Low	5270	22.20
	High	5310	16.85
802.11ac 20MHz Summed	Low	5260	23.70
	Mid	5300	23.60
	High	5320	22.34
802.11ac 40MHz Summed	Low	5270	23.56
	High	5310	18.85
802.11ac 80MHz Summed	High	5290	17.05

Table 11. RF Power Output, UNII 2A, Test Results

Average Conducted Output Power			
	Carrier Channel	**Frequency (MHz)**	**Measured Output Power dBm**
802.11a Port 5GHz	Low	5500	18.23
	Mid	5580	21.08
	High	5700	14.94
802.11n 20 MHz Port 5GHz-P1	Low	5500	17.44
	Mid	5580	20.01
	High	5700	15.10
802.11n 20 MHz Port 5GHz-P2	Low	5500	18.08
	Mid	5580	20.16
	High	5700	15.87
802.11n 40MHz Port 5GHz-P1	Low	5510	15.27
	Mid	5550	20.07
	High	5670	15.70
802.11n 40 MHz Port 5GHz-P2	Low	5510	14.78
	Mid	5550	20.22
	High	5670	15.98
802.11ac 20 MHz Port 5GHz-P1	Low	5500	20.08
	Mid	5580	20.01
	High	5700	17.78
802.11ac 20 MHz Port 5GHz-P2	Low	5500	21.45
	Mid	5580	20.97
	High	5700	18.07
802.11ac 40MHz Port 5GHz-P1	Low	5510	18.78
	Mid	5550	20.09
	High	5670	19.01
802.11ac 40 MHz Port 5GHz-P2	Low	5510	19.01
	Mid	5550	20.01
	High	5670	19.05
802.11ac 80MHz Port 5GHz-P1	Low	5530	13.98
	High	5610	15.21
802.11ac 80MHz Port 5GHz-P2	Low	5530	14.00
	High	5610	15.87
Summed Conducted Output Power			
	Carrier Channel	**Frequency (MHz)**	**Measured Output Power dBm**
802.11n 20 MHz Summed	Low	5500	20.78
	Mid	5600	23.09
	High	5700	18.51
802.11n 40 MHz Summed	Low	5510	18.04
	Mid	5590	23.16
	High	5670	18.85
802.11ac 20MHz Summed	Low	5500	23.83
	Mid	5600	23.53
	High	5700	20.94
802.11ac 40MHz Summed	Low	5510	21.91
	Mid	5590	23.15
	High	5670	22.04
802.11ac 80MHz Summed	Low	5530	17.00
	High	5610	18.56

Table 12. RF Power Output, UNII 2C, Test Results

Electromagnetic Compatibility Criteria for Intentional Radiators

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

Test Requirements: **§ 15.407(a)(2):** In addition, the peak power spectral density shall not exceed 11 dBm in any 1 megahertz band.

Test Procedure: The transmitter was connected directly to a Spectrum Analyzer through an attenuator. The power level was set to the maximum level on the EUT. The RBW was set to 1MHz and the VBW was set to 3MHz. The method of measurement used was from 789033 D01 General UNII Test Procedures New Rules v01.

Test Results: Equipment was compliant with the peak power spectral density limits of **§ 15.407 (a)(2).** The peak power spectral density was determined from plots on the following page(s).

The following table presents the 99% bandwidth measurements and their average peak spectral density per MHz.

Test Engineer(s): Benjamin Taylor

Test Date(s): 04/02/15

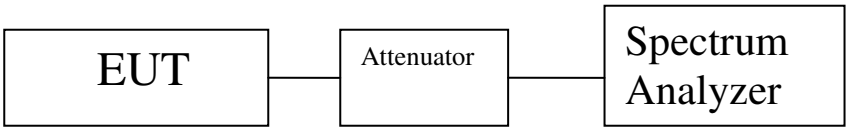


Figure 4. Power Spectral Density Test Setup

Frequency (MHz)	Mode	Port R1-A PSD (dBm)	Port R1-B PSD (dBm)	Summed PSD (dBm)	Antenna Gain (dBi)	Limit (dBm)	Margin (dB)
5260	802.11a 20MHz	10.98		10.98	3.20	11.00	-0.02
5300	802.11a 20MHz	10.79		10.79	3.20	11.00	-0.21
5320	802.11a 20MHz	10.93		10.93	3.20	11.00	-0.07
5260	802.11n 20MHz	8.01	7.78	10.91	3.20	11.00	-0.09
5300	802.11n 20MHz	7.98	7.87	10.94	3.20	11.00	-0.06
5320	802.11n 20MHz	7.79	8.01	10.91	3.20	11.00	-0.09
5270	802.11n 40MHz	7.51	8.41	10.99	3.20	11.00	-0.01
5310	802.11n 40MHz	7.43	8.26	10.87	3.20	11.00	-0.13
5260	802.11ac 20MHz	8.15	7.77	10.97	3.20	11.00	-0.03
5300	802.11ac 20MHz	8.57	7.27	10.98	3.20	11.00	-0.02
5320	802.11ac 20MHz	7.43	8.42	10.96	3.20	11.00	-0.04
5270	802.11ac 40MHz	8.00	7.98	11.00	3.20	11.00	0.00
5310	802.11ac 40MHz	7.94	7.31	10.65	3.20	11.00	-0.35
5290	802.11ac 80MHz	8.7	7.03	10.95508	3.20	11.00	-0.04492

Table 13. Peak Power Spectral Density, Test Results, Lower Bands

Frequency (MHz)	Mode	Port R1-A PSD (dBm)	Port R1-B PSD (dBm)	Summed PSD (dBm)	Antenna Gain (dBi)	Limit (dBm)	Margin (dB)
5500	802.11a 20MHz	10.79		10.79	3.20	11.00	-0.21
5580	802.11a 20MHz	10.85		10.85	3.20	11.00	-0.15
5700	802.11a 20MHz	10.96		10.96	3.20	11.00	-0.04
5500	802.11n 20MHz	9.53	9.53	9.53	3.20	11.00	-1.47
5580	802.11n 20MHz	10.29	9.97	10.29	3.20	11.00	-0.71
5700	802.11n 20MHz	7.79	8.07	10.94	3.20	11.00	-0.06
5510	802.11n 40MHz	6.94	7.84	10.42	3.20	11.00	-0.58
5550	802.11n 40MHz	6.90	7.05	9.98	3.20	11.00	-1.02
5670	802.11n 40MHz	8.12	7.32	10.75	3.20	11.00	-0.25
5500	802.11ac 20MHz	8.02	7.78	10.91	3.20	11.00	-0.09
5580	802.11ac 20MHz	7.63	8.27	10.97208	3.20	11.00	-0.02792
5700	802.11ac 20MHz	7.98	7.85	10.92579	3.20	11.00	-0.07421
5510	802.11ac 40MHz	7.252	6.972	10.12456	3.20	11.00	-0.87544
5550	802.11ac 40MHz	8.46	7.067	10.82941	3.20	11.00	-0.17059
5670	802.11ac 40MHz	8.178	7.684	10.94832	3.20	11.00	-0.05168
5530	802.11ac 80MHz	5.507	5.41	8.469071	3.20	11.00	-2.53093
5610	802.11ac 80MHz	5.507	5.596	8.562028	3.20	11.00	-2.43797

Table 14. Peak Power Spectral Density, Test Results, Upper Bands

Electromagnetic Compatibility Criteria for Intentional Radiators
§ 15.407(b)(2), (3), (7) Undesirable Emissions

Test Requirements: **§ 15.407(b)(2), (3), (7)**; **§15.205:** Emissions outside the frequency band.

§ 15.407(b)(2): For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

§ 15.407(b)(3): For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

§ 15.407(b)(7): The provisions of Section 15.205 of this part apply to intentional radiators operating under this section.

Test Procedure: The transmitter was placed on an 80cm table inside in a semi-anechoic chamber. Measurements were performed with the EUT rotated 360 degrees and varying the adjustable antenna mast height to determine worst case orientation for maximum emissions. A preamp was used in the range from 7-18GHz to improve noise floor. Plots were corrected for cable loss, antenna, and preamp gain.

For frequencies from 30 MHz to 1 GHz, measurements were made using a quasi-peak detector with a 120 kHz bandwidth.

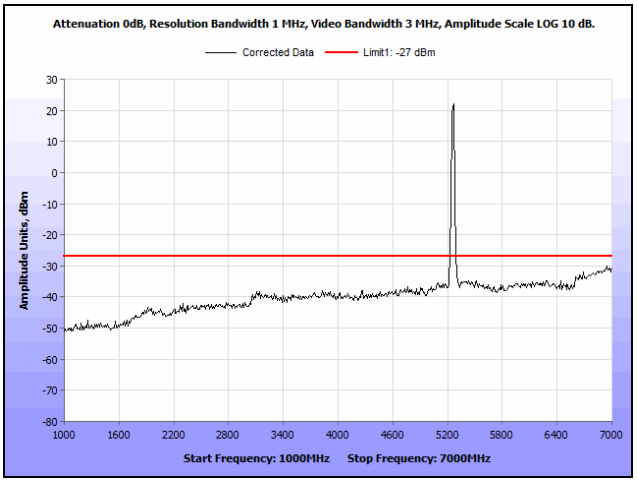
For measurements above 1 GHz, measurements were made with a Peak detector with 1 MHz resolution bandwidth. A notch filter was use to filter out the transmitting channel. Where the spurious emissions fell into a restricted band, measurements were also made with an average detector to make sure they complied with 15.209 limits. Only noise floor was seen above 18 GHz. Worst case emissions shown by antenna. Measurements in the 30 MHz to 1 GHz range proved to not change between different modes of operation; only the mid-channel per mode plots are displayed in this report.

Test Results: The EUT was compliant with the Radiated Emission limits for Intentional Radiators. See following pages for detailed test results.

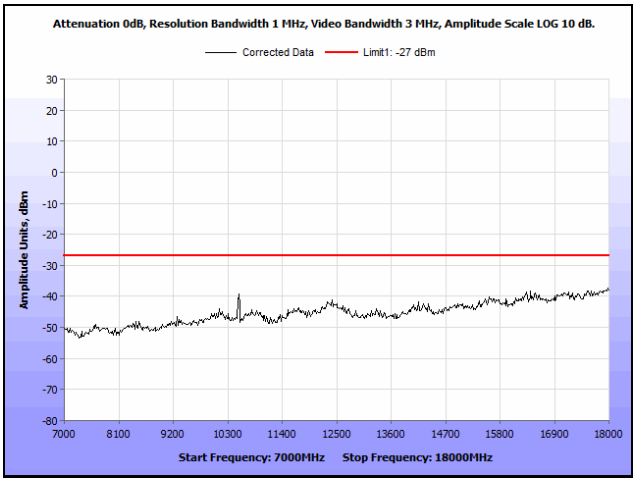
Test Engineer(s): Benjamin Taylor

Test Date(s): 05/01/15

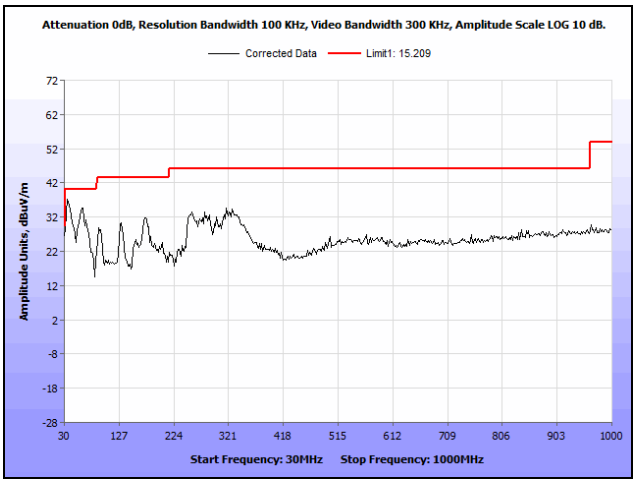
Radiated Spurious Emissions



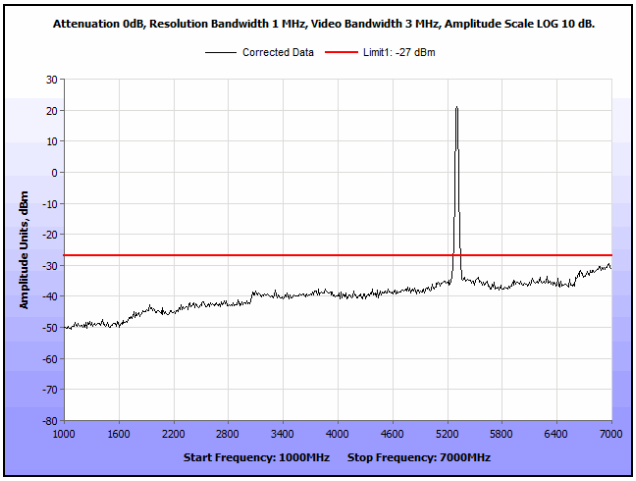
Plot 34. Radiated Spurious Emissions, 5260 MHz, 802.11a 20 MHz, 1 GHz – 7 GHz



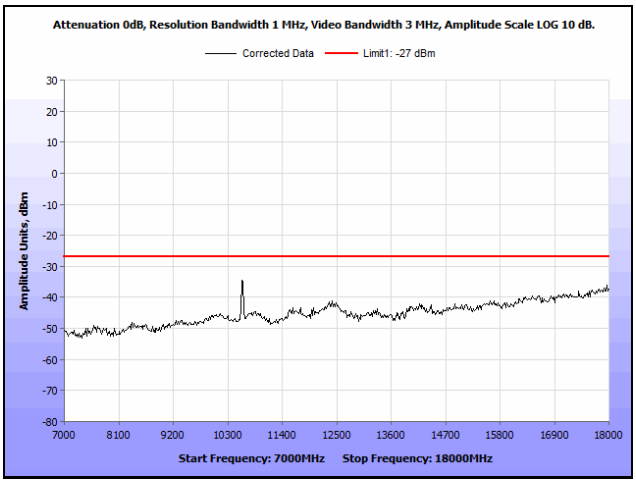
Plot 35. Radiated Spurious Emissions, 5260 MHz, 802.11a 20 MHz, 7 GHz – 18 GHz



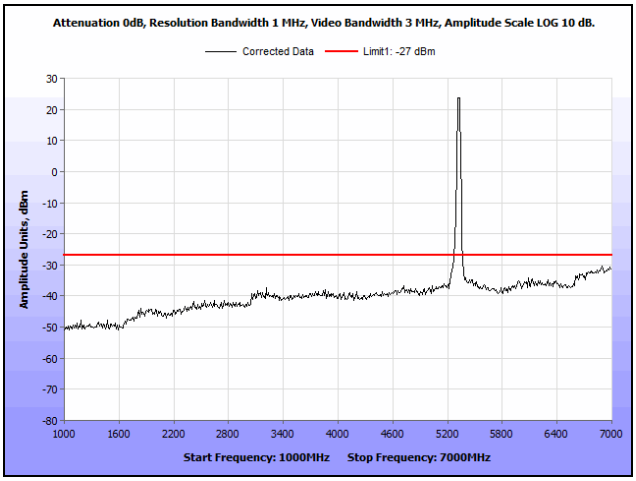
Plot 36. Radiated Spurious Emissions, 5300 MHz, 802.11a 20 MHz, 30 MHz – 1 GHz



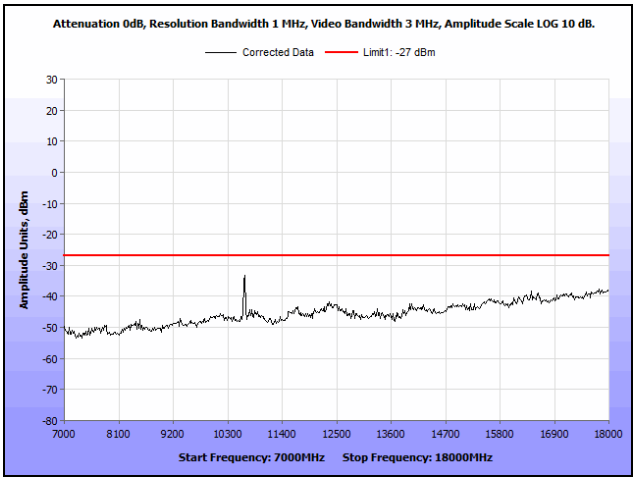
Plot 37. Radiated Spurious Emissions, 5300 MHz, 802.11a 20 MHz, 1 GHz – 7 GHz



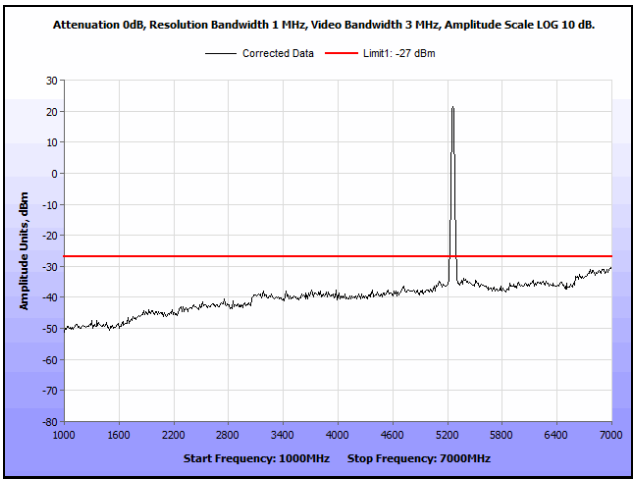
Plot 38. Radiated Spurious Emissions, 5300 MHz, 802.11a 20 MHz, 7 GHz – 18 GHz



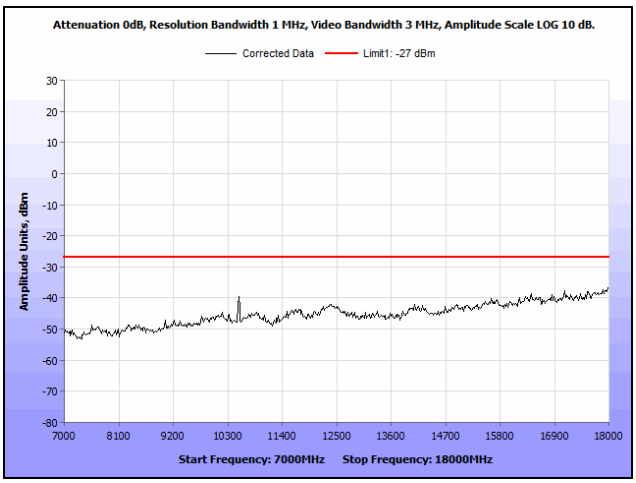
Plot 39. Radiated Spurious Emissions, 5320 MHz, 802.11a 20 MHz, 1 GHz – 7 GHz



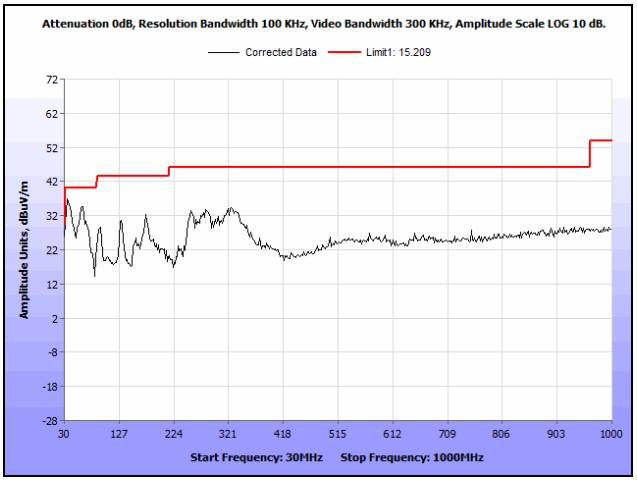
Plot 40. Radiated Spurious Emissions, 5320 MHz, 802.11a 20 MHz, 7 GHz – 18 GHz



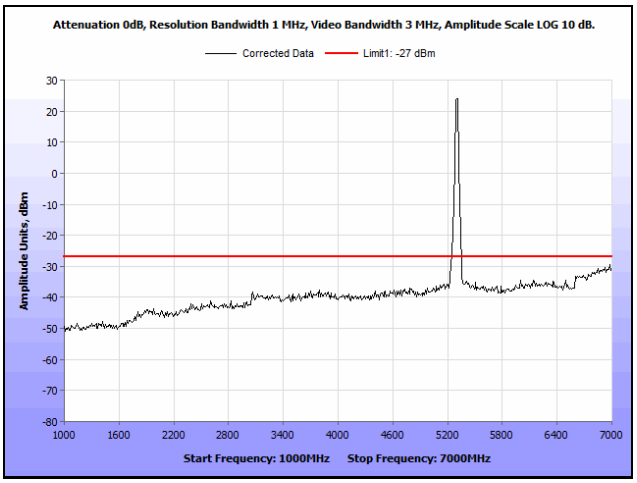
Plot 41. Radiated Spurious Emissions, 5260 MHz, 802.11ac 20 MHz, 1 GHz – 7 GHz



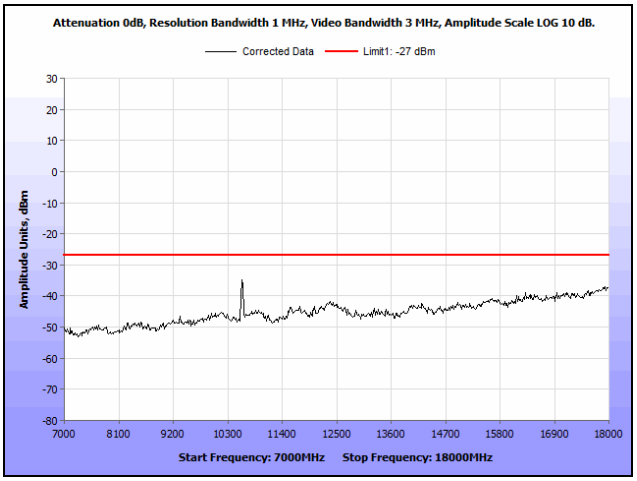
Plot 42. Radiated Spurious Emissions, 5260 MHz, 802.11ac 20 MHz, 7 GHz – 18 GHz



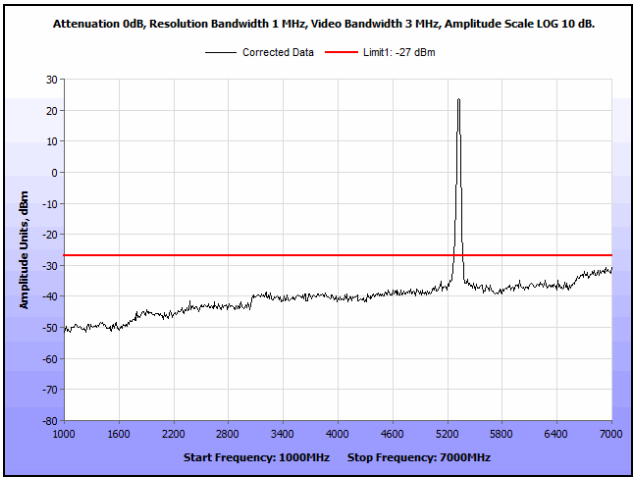
Plot 43. Radiated Spurious Emissions, 5300 MHz, 802.11ac 20 MHz, 30 MHz – 1 GHz



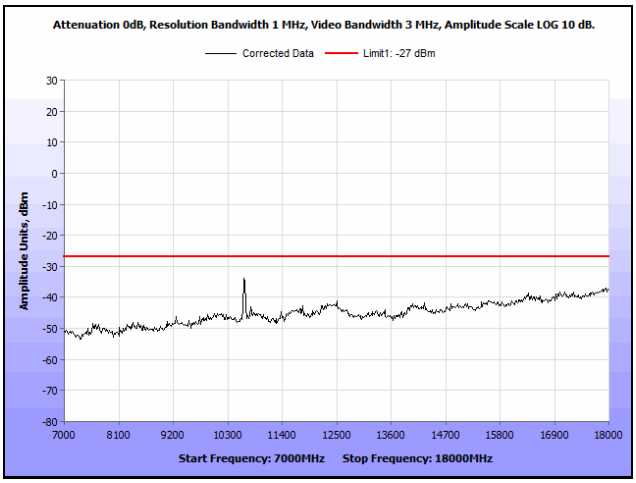
Plot 44. Radiated Spurious Emissions, 5300 MHz, 802.11ac 20 MHz, 1 GHz – 7 GHz



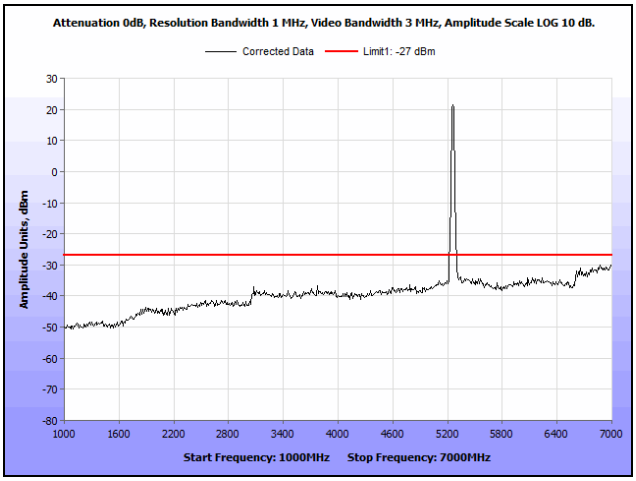
Plot 45. Radiated Spurious Emissions, 5300 MHz, 802.11ac 20 MHz, 7 GHz – 18 GHz



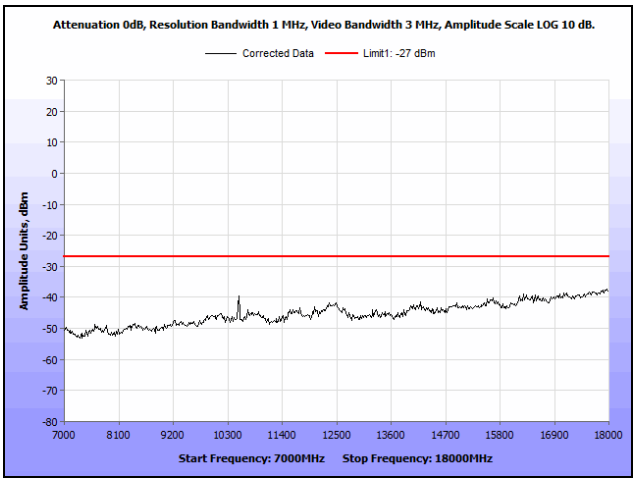
Plot 46. Radiated Spurious Emissions, 5320 MHz, 802.11ac 20 MHz, 1 GHz – 7 GHz



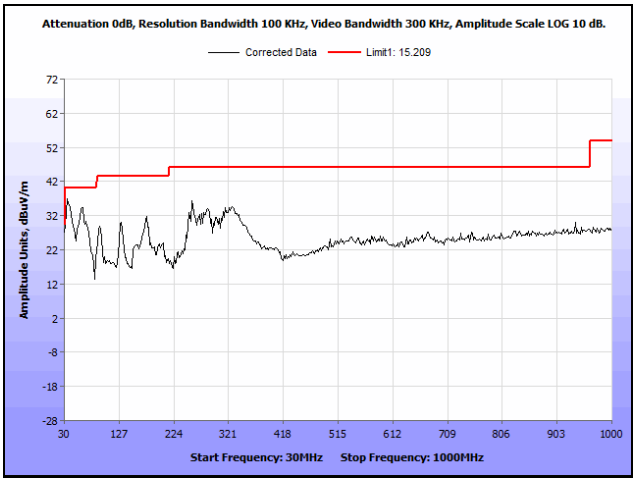
Plot 47. Radiated Spurious Emissions, 5320 MHz, 802.11ac 20 MHz, 7 GHz – 18 GHz



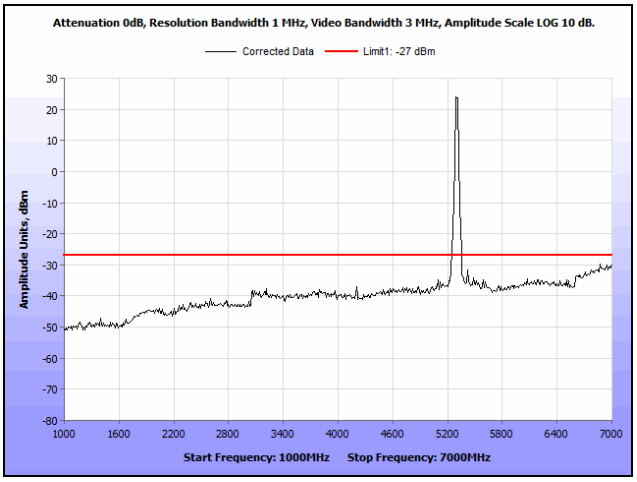
Plot 48. Radiated Spurious Emissions, 5260 MHz, 802.11n 20 MHz, 1 GHz – 7 GHz



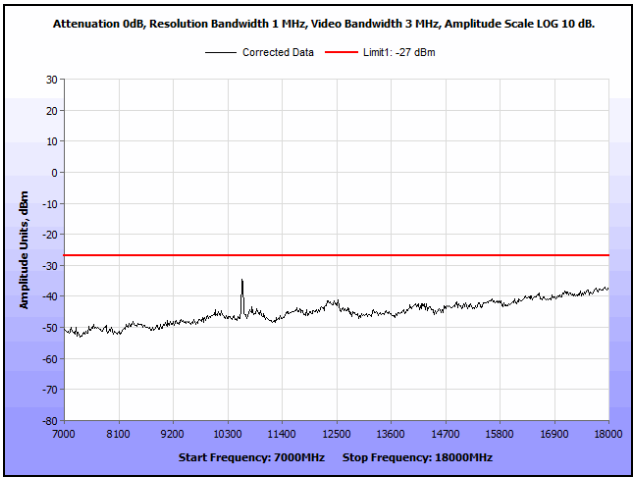
Plot 49. Radiated Spurious Emissions, 5260 MHz, 802.11n 20 MHz, 7 GHz – 18 GHz



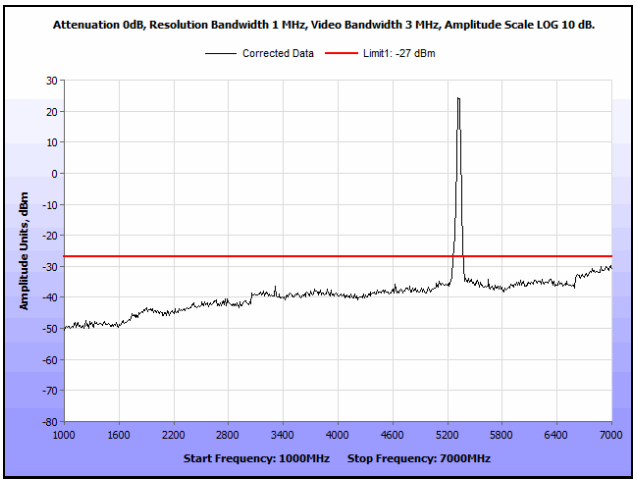
Plot 50. Radiated Spurious Emissions, 5300 MHz, 802.11n 20 MHz, 30 MHz – 1 GHz



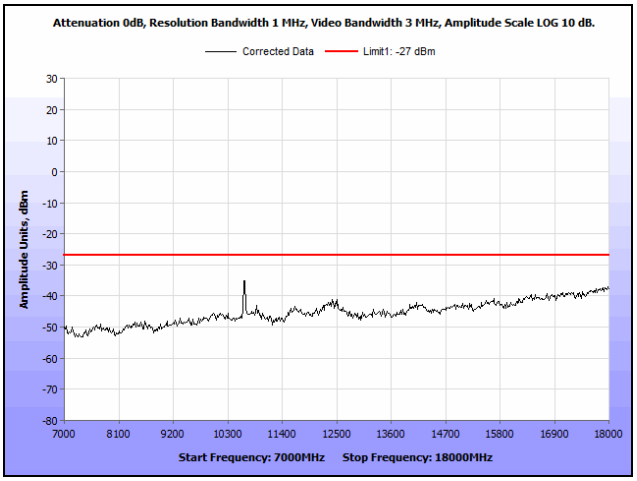
Plot 51. Radiated Spurious Emissions, 5300 MHz, 802.11n 20 MHz, 1 GHz – 7 GHz



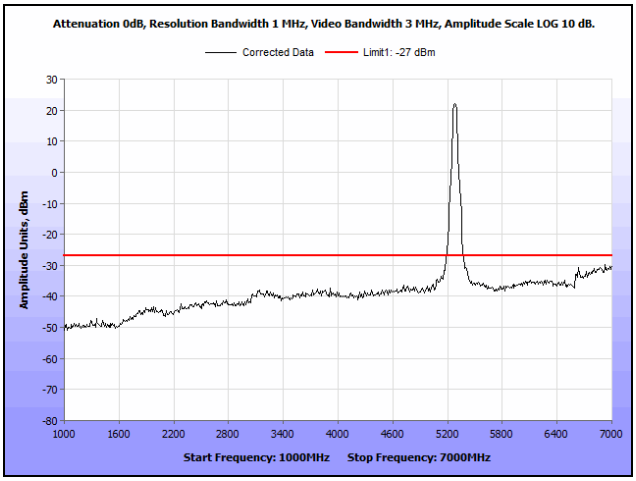
Plot 52. Radiated Spurious Emissions, 5300 MHz, 802.11n 20 MHz, 7 GHz – 18 GHz



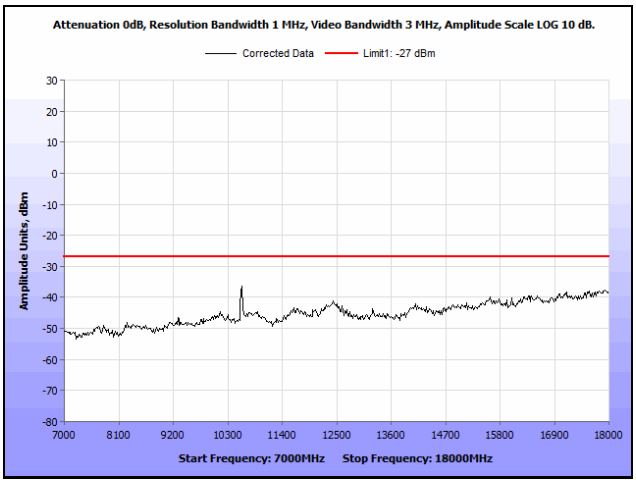
Plot 53. Radiated Spurious Emissions, 5320 MHz, 802.11n 20 MHz, 1 GHz – 7 GHz



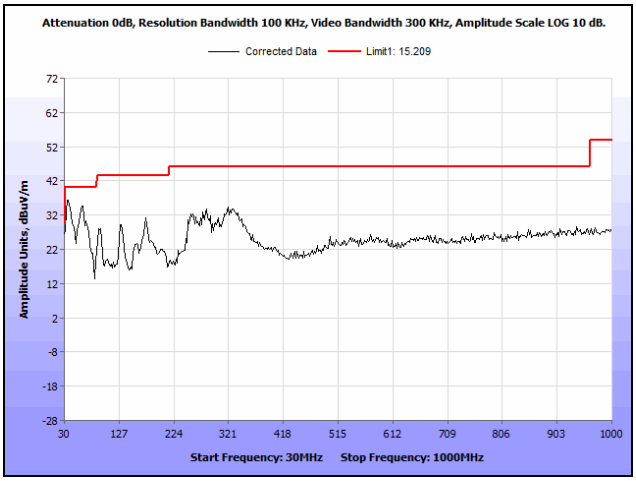
Plot 54. Radiated Spurious Emissions, 5320 MHz, 802.11n 20 MHz, 7 GHz – 18 GHz



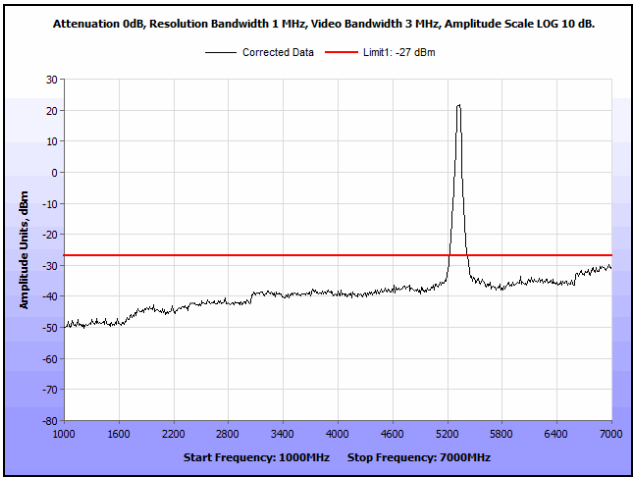
Plot 55. Radiated Spurious Emissions, 5270 MHz, 802.11ac 40 MHz, 1 GHz – 7 GHz



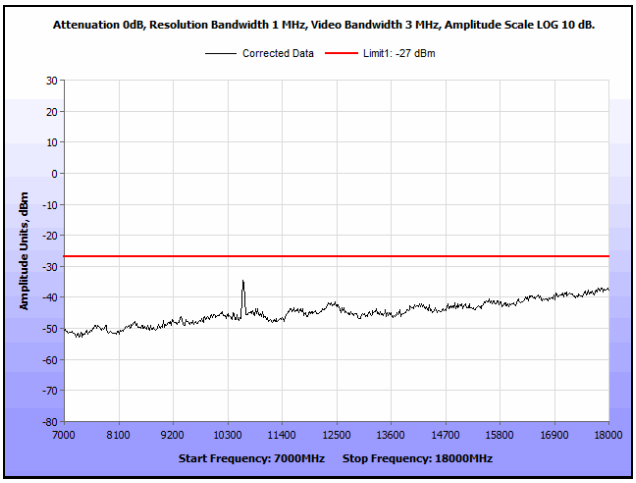
Plot 56. Radiated Spurious Emissions, 5270 MHz, 802.11ac 40 MHz, 7 GHz – 18 GHz



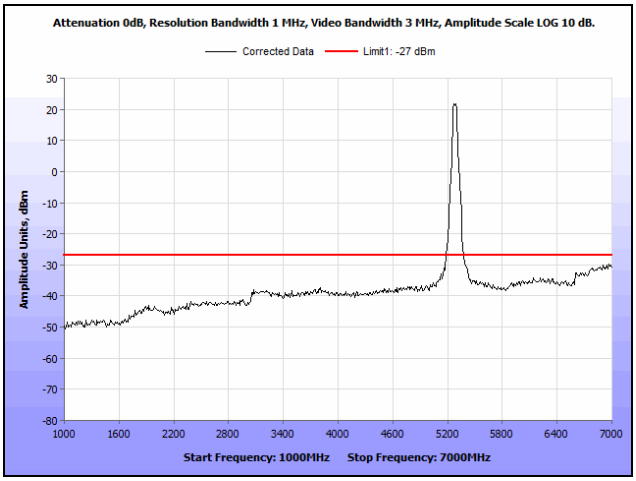
Plot 57. Radiated Spurious Emissions, 5310 MHz, 802.11ac 40 MHz, 30 MHz – 1 GHz



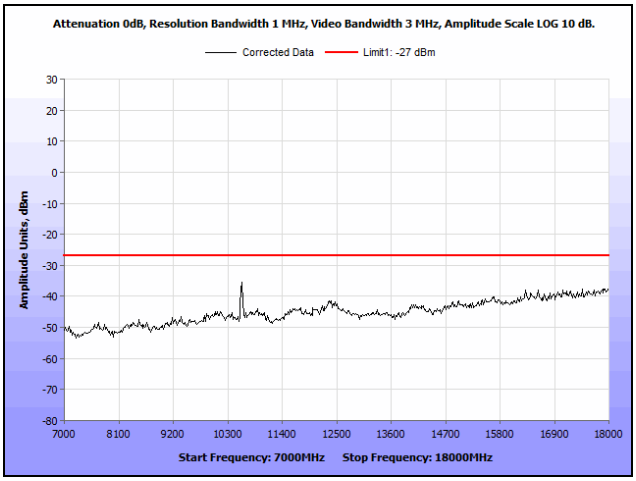
Plot 58. Radiated Spurious Emissions, 5310 MHz, 802.11ac 40 MHz, 1 GHz – 7 GHz



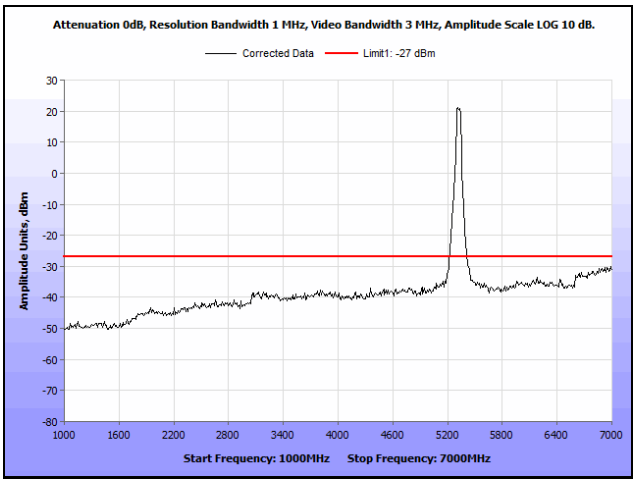
Plot 59. Radiated Spurious Emissions, 5310 MHz, 802.11ac 40 MHz, 7 GHz – 18 GHz



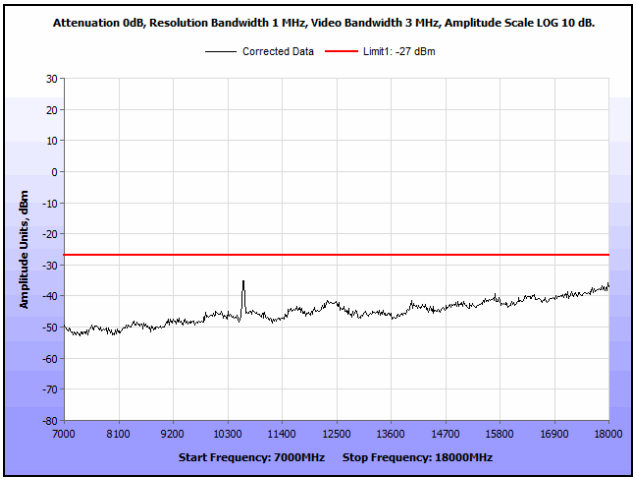
Plot 60. Radiated Spurious Emissions, 5270 MHz, 802.11n 40 MHz, 1 GHz – 7 GHz



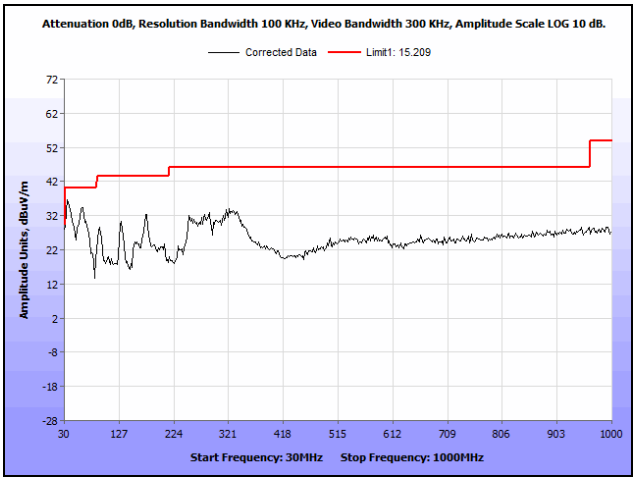
Plot 61. Radiated Spurious Emissions, 5270 MHz, 802.11n 40 MHz, 7 GHz – 18 GHz



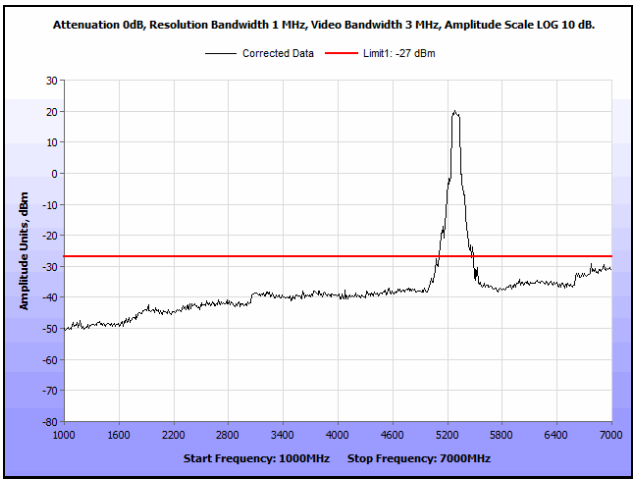
Plot 62. Radiated Spurious Emissions, 5310 MHz, 802.11n 40 MHz, 1 GHz – 7 GHz



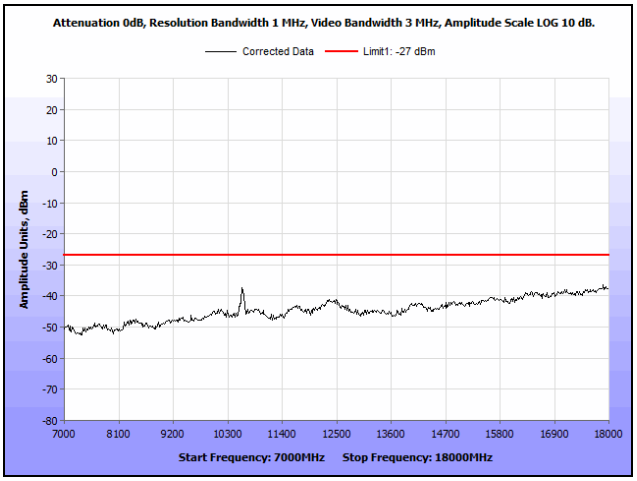
Plot 63. Radiated Spurious Emissions, 5310 MHz, 802.11n 40 MHz, 7 GHz – 18 GHz



Plot 64. Radiated Spurious Emissions, 5290 MHz, 802.11ac 80 MHz, 30 MHz – 1 GHz

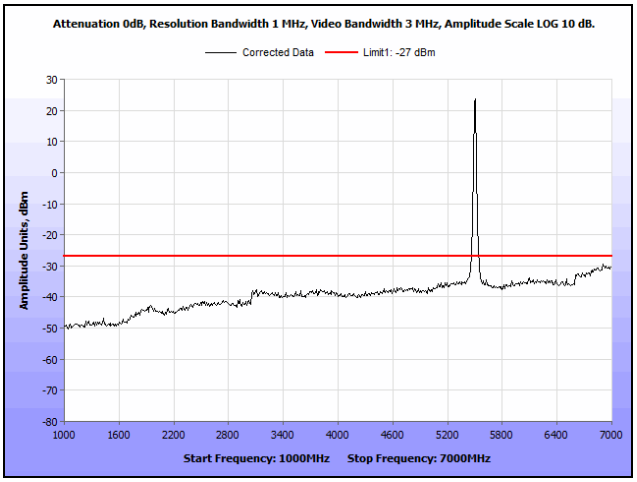


Plot 65. Radiated Spurious Emissions, 5290 MHz, 802.11ac 80 MHz, 1 GHz – 7 GHz

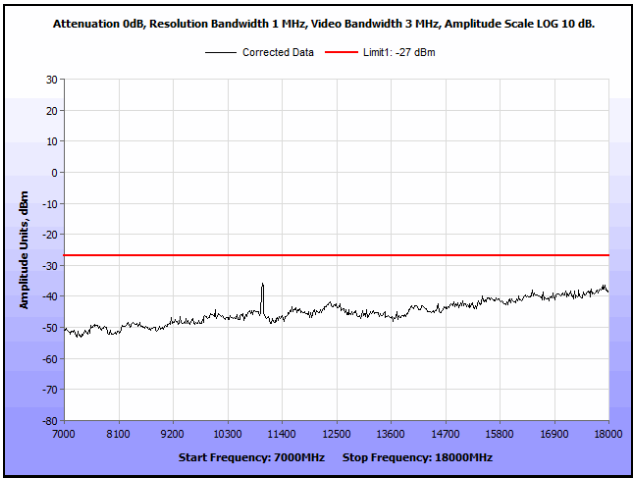


Plot 66. Radiated Spurious Emissions, 5290 MHz, 802.11ac 80 MHz, 7 GHz – 18 GHz

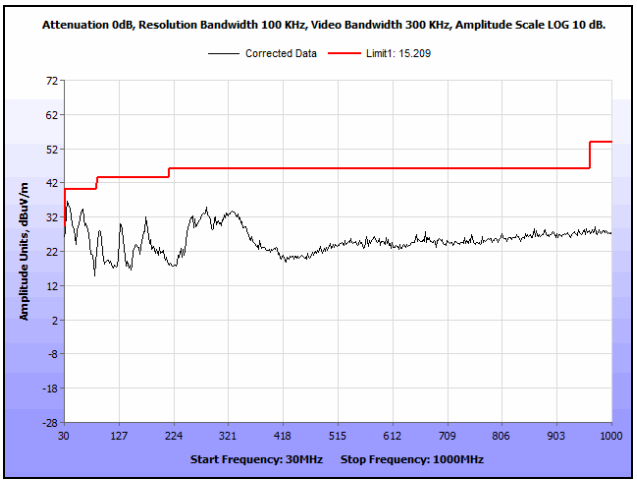
Radiated Spurious Emissions



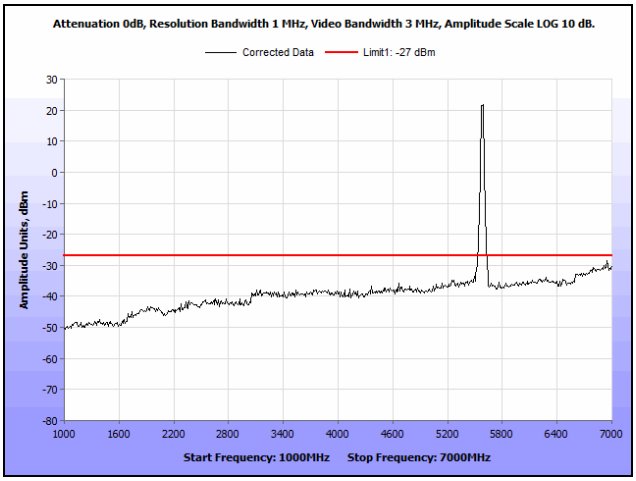
Plot 67. Radiated Spurious Emissions, 5500 MHz, 802.11a 20 MHz, 1 GHz – 7 GHz



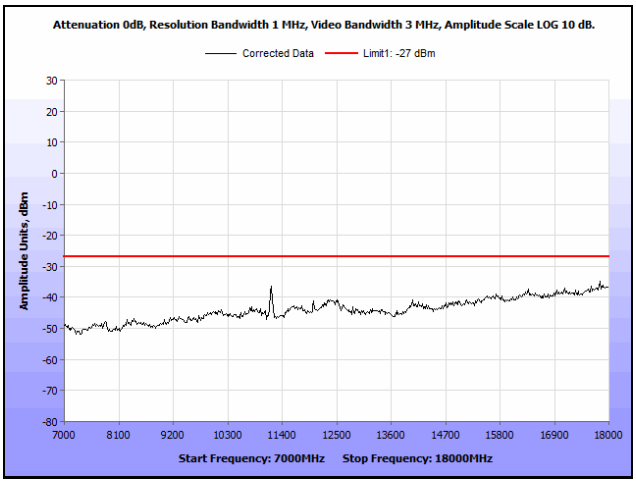
Plot 68. Radiated Spurious Emissions, 5500 MHz, 802.11a 20 MHz, 7 GHz – 18 GHz



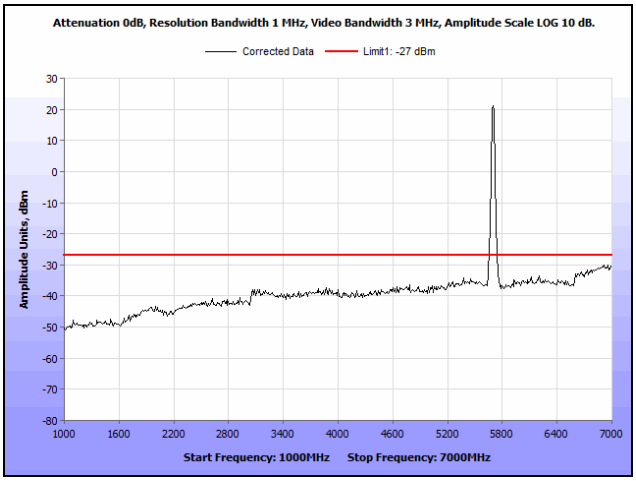
Plot 69. Radiated Spurious Emissions, 5580 MHz, 802.11a 20 MHz, 30 MHz – 1 GHz



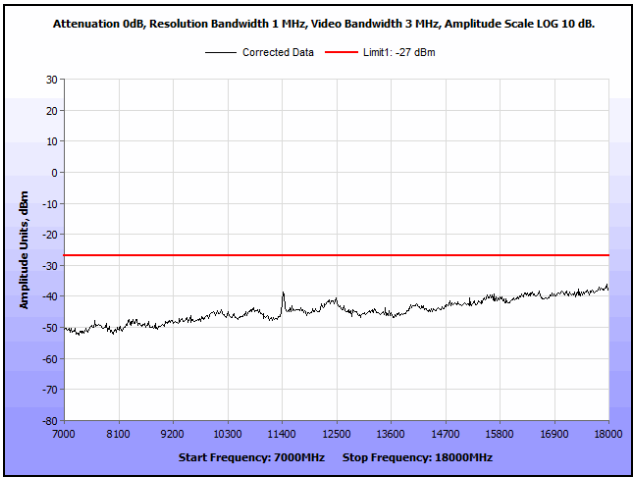
Plot 70. Radiated Spurious Emissions, 5580 MHz, 802.11a 20 MHz, 1 GHz – 7 GHz



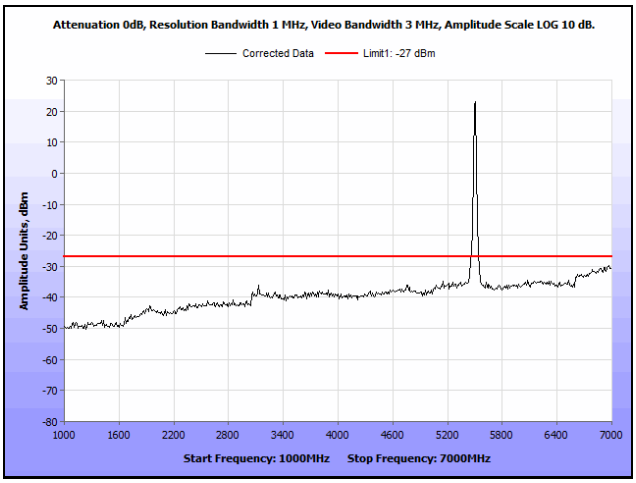
Plot 71. Radiated Spurious Emissions, 5580 MHz, 802.11a 20 MHz, 7 GHz – 18 GHz



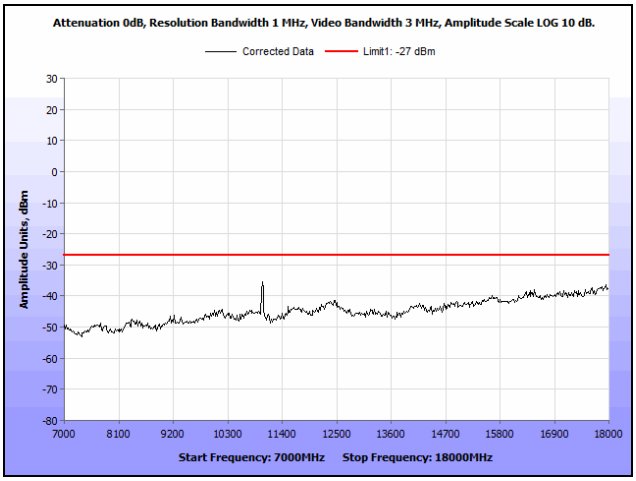
Plot 72. Radiated Spurious Emissions, 5700 MHz, 802.11a 20 MHz, 1 GHz – 7 GHz



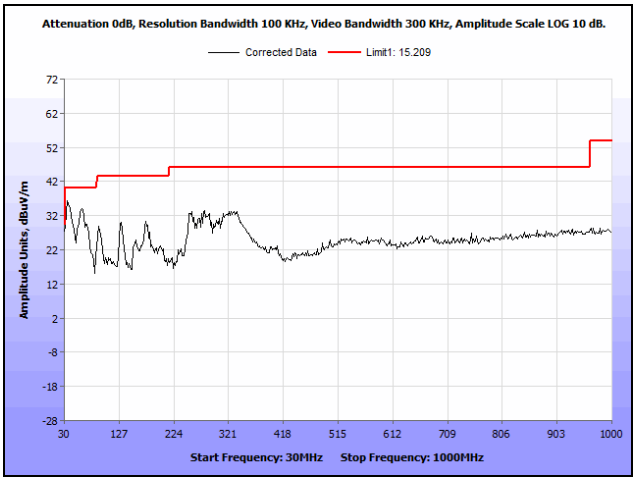
Plot 73. Radiated Spurious Emissions, 5700 MHz, 802.11a 20 MHz, 7 GHz – 18 GHz



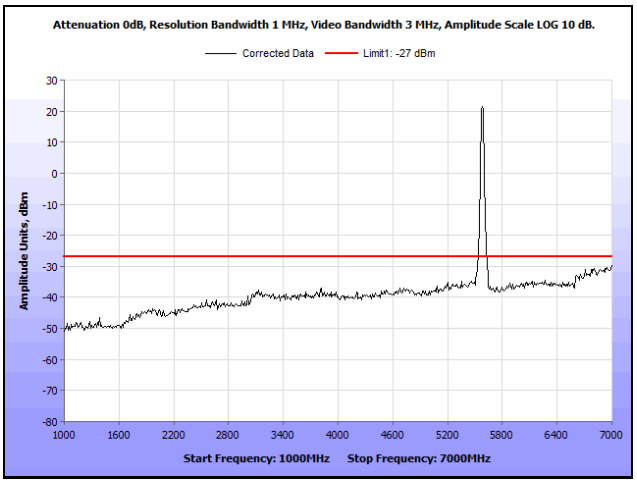
Plot 74. Radiated Spurious Emissions, 5500 MHz, 802.11ac 20 MHz, 1 GHz – 7 GHz



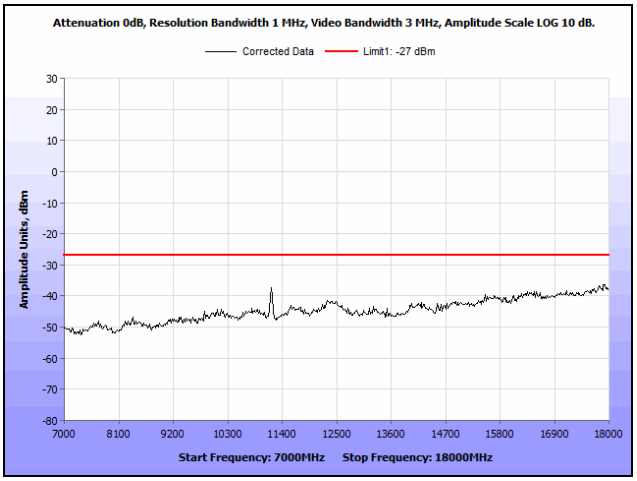
Plot 75. Radiated Spurious Emissions, 5500 MHz, 802.11ac 20 MHz, 7 GHz – 18 GHz



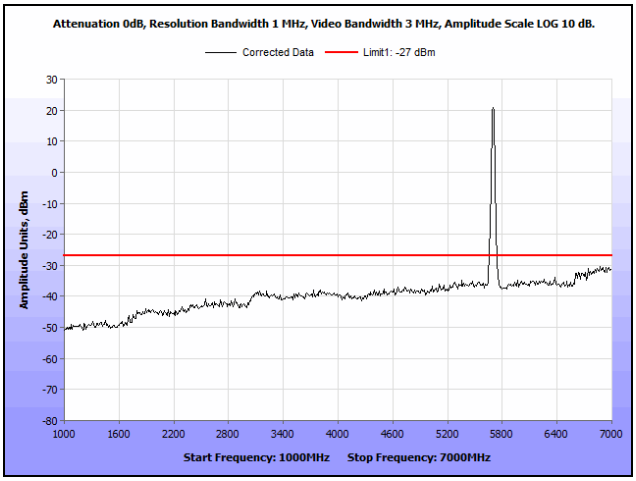
Plot 76. Radiated Spurious Emissions, 5580 MHz, 802.11ac 20 MHz, 30 MHz – 1 GHz



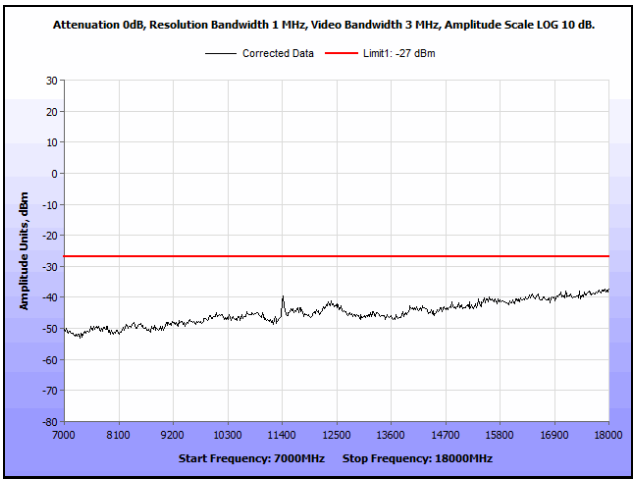
Plot 77. Radiated Spurious Emissions, 5580 MHz, 802.11ac 20 MHz, 1 GHz – 7 GHz



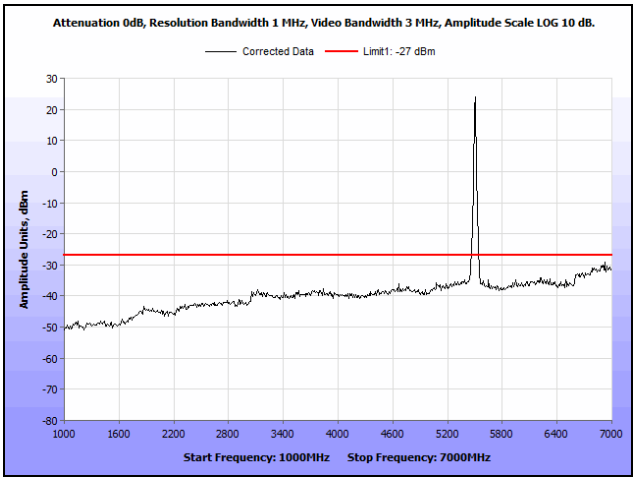
Plot 78. Radiated Spurious Emissions, 5580 MHz, 802.11ac 20 MHz, 7 GHz – 18 GHz



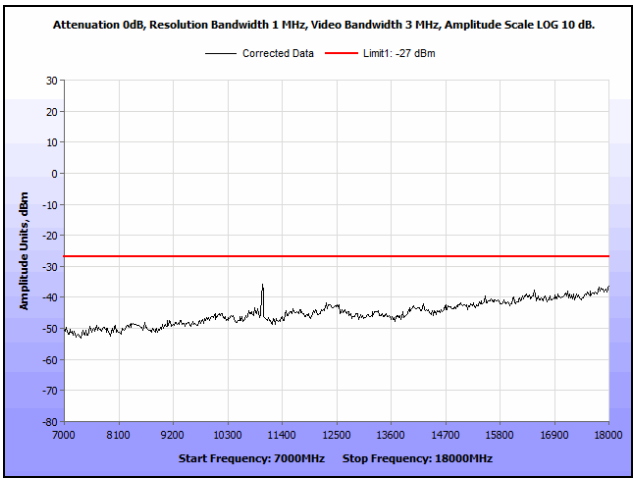
Plot 79. Radiated Spurious Emissions, 5700 MHz, 802.11ac 20 MHz, 1 GHz – 7 GHz



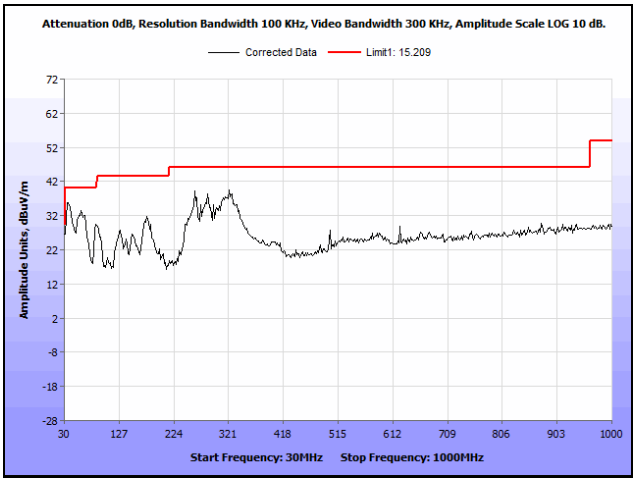
Plot 80. Radiated Spurious Emissions, 5700 MHz, 802.11ac 20 MHz, 7 GHz – 18 GHz



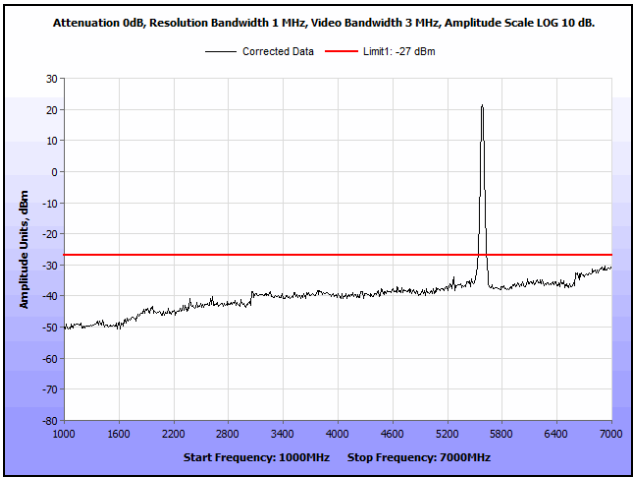
Plot 81. Radiated Spurious Emissions, 5500 MHz, 802.11n 20 MHz, 1 GHz – 7 GHz



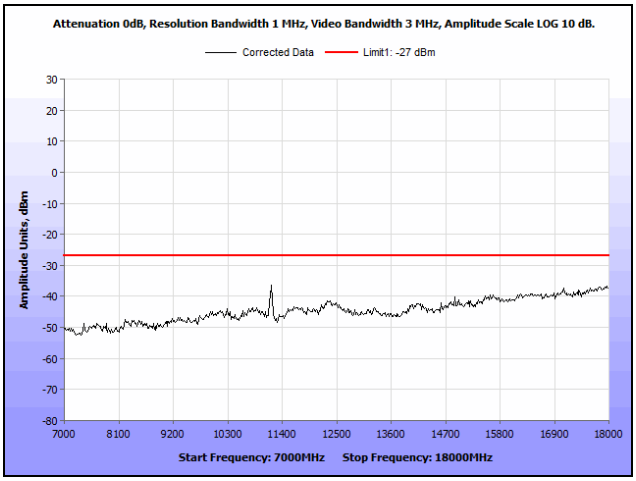
Plot 82. Radiated Spurious Emissions, 5500 MHz, 802.11n 20 MHz, 7 GHz – 18 GHz



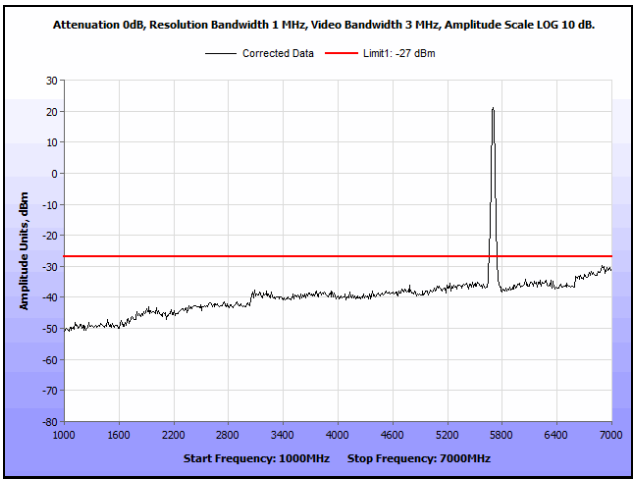
Plot 83. Radiated Spurious Emissions, 5580 MHz, 802.11n 20 MHz, 30 MHz – 1 GHz



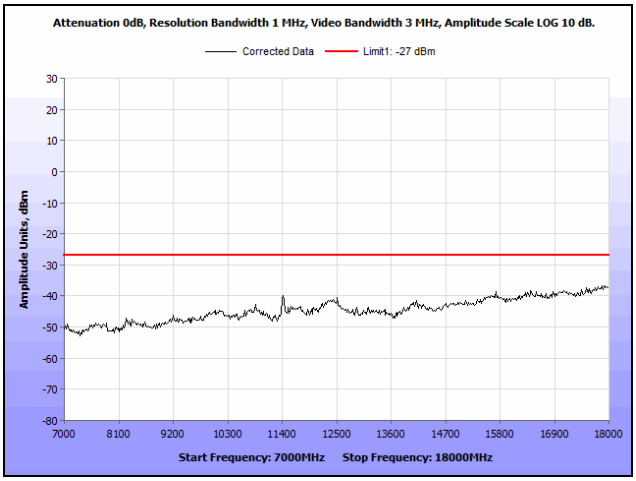
Plot 84. Radiated Spurious Emissions, 5580 MHz, 802.11n 20 MHz, 1 GHz – 7 GHz



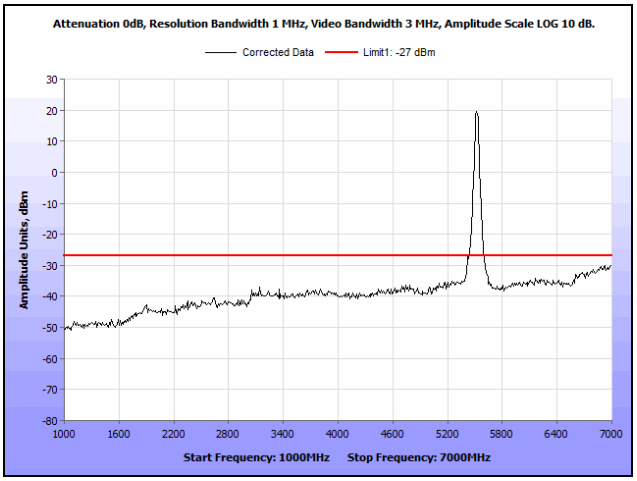
Plot 85. Radiated Spurious Emissions, 5580 MHz, 802.11n 20 MHz, 7 GHz – 18 GHz



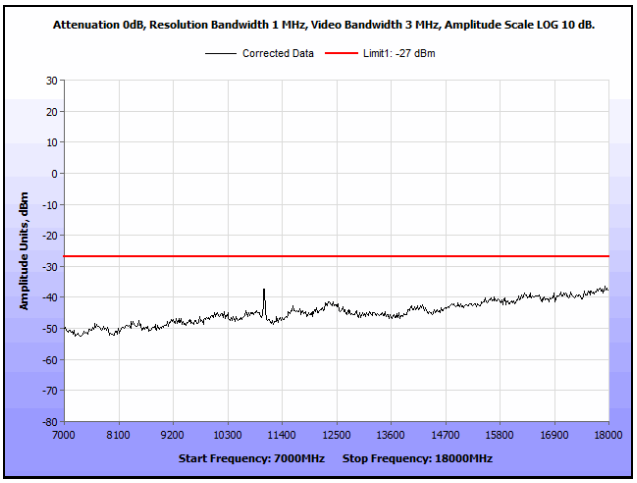
Plot 86. Radiated Spurious Emissions, 5700 MHz, 802.11n 20 MHz, 1 GHz – 7 GHz



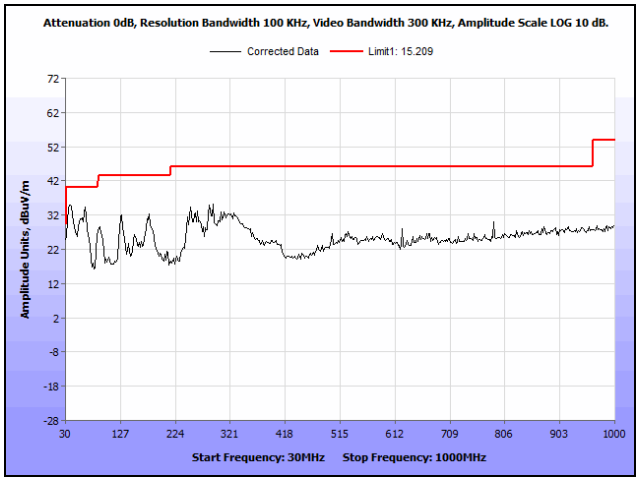
Plot 87. Radiated Spurious Emissions, 5700 MHz, 802.11n 20 MHz, 7 GHz – 18 GHz



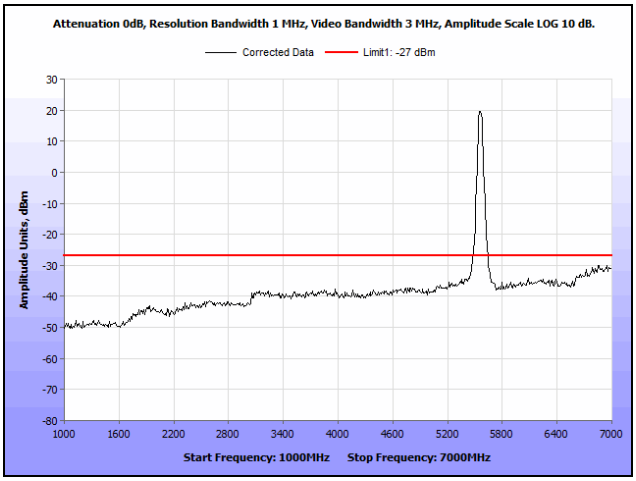
Plot 88. Radiated Spurious Emissions, 5510 MHz, 802.11ac 40 MHz, 1 GHz – 7 GHz



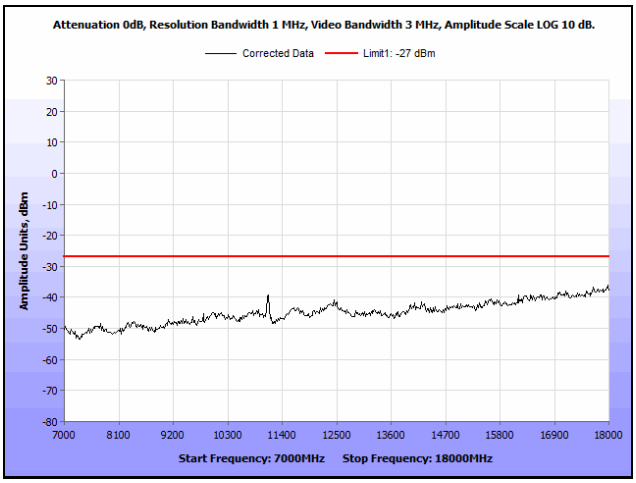
Plot 89. Radiated Spurious Emissions, 5510 MHz, 802.11ac 40 MHz, 7 GHz – 18 GHz



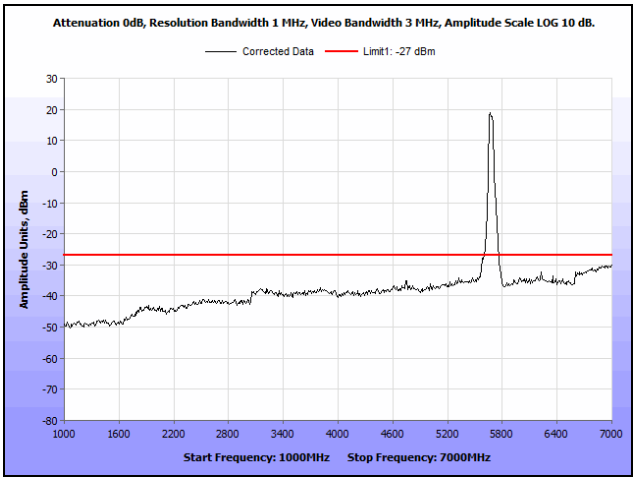
Plot 90. Radiated Spurious Emissions, 5550 MHz, 802.11ac 40 MHz, 30 MHz – 1 GHz



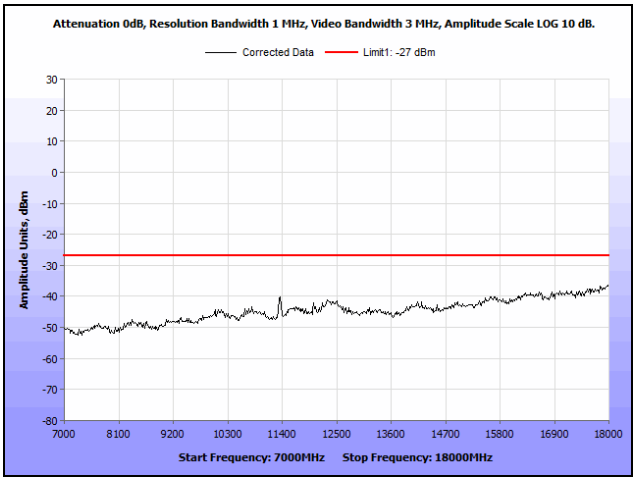
Plot 91. Radiated Spurious Emissions, 5550 MHz, 802.11ac 40 MHz, 1 GHz – 7 GHz



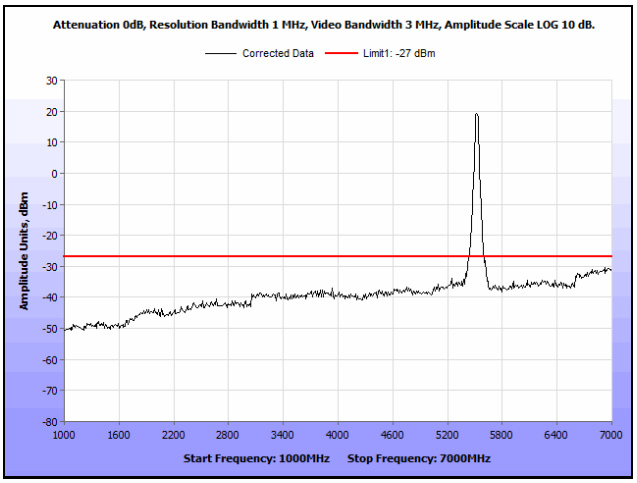
Plot 92. Radiated Spurious Emissions, 5550 MHz, 802.11ac 40 MHz, 7 GHz – 18 GHz



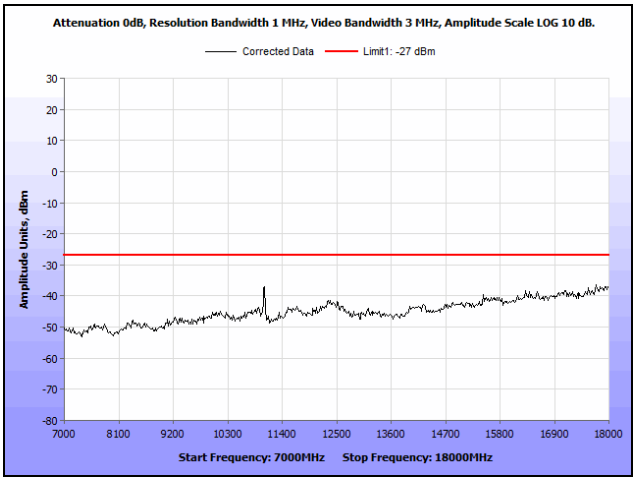
Plot 93. Radiated Spurious Emissions, 5670 MHz, 802.11ac 40 MHz, 1 GHz – 7 GHz



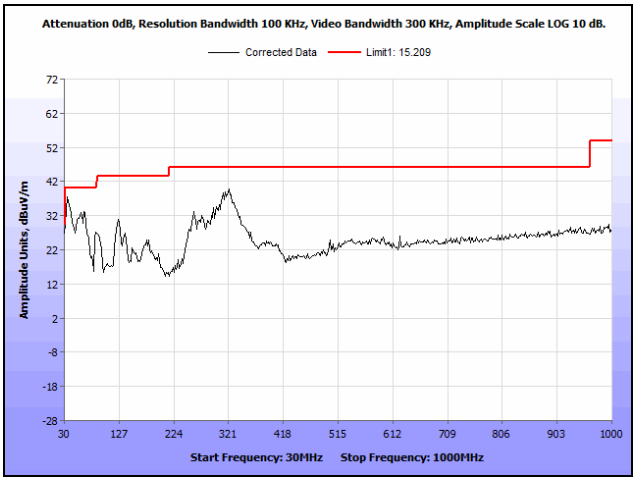
Plot 94. Radiated Spurious Emissions, 5670 MHz, 802.11ac 40 MHz, 7 GHz – 18 GHz



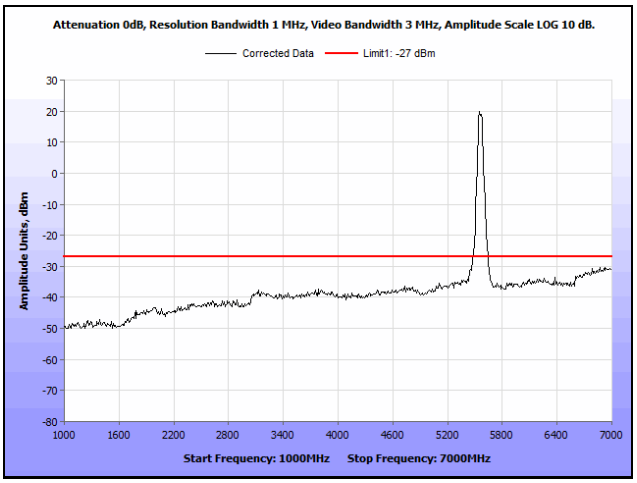
Plot 95. Radiated Spurious Emissions, 5510 MHz, 802.11n 40 MHz, 1 GHz – 7 GHz



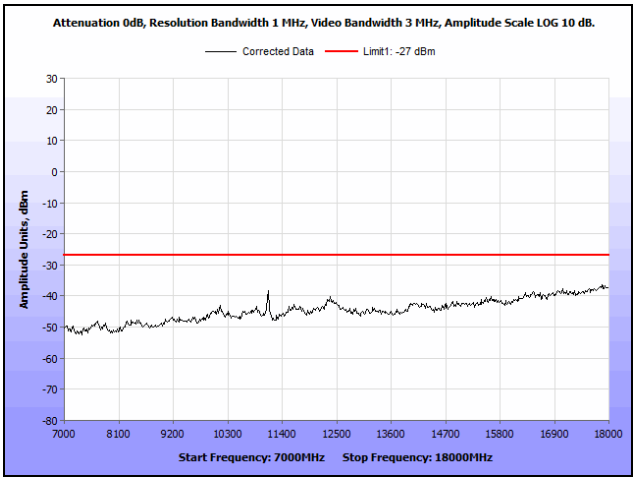
Plot 96. Radiated Spurious Emissions, 5510 MHz, 802.11n 40 MHz, 7 GHz – 18 GHz



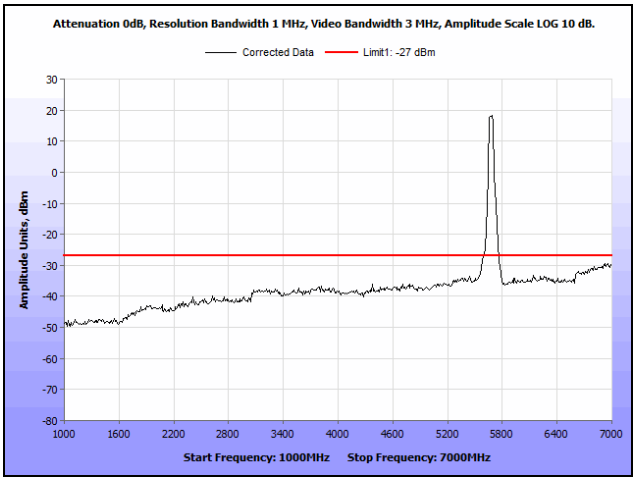
Plot 97. Radiated Spurious Emissions, 5550 MHz, 802.11n 40 MHz, 30 MHz – 1 GHz



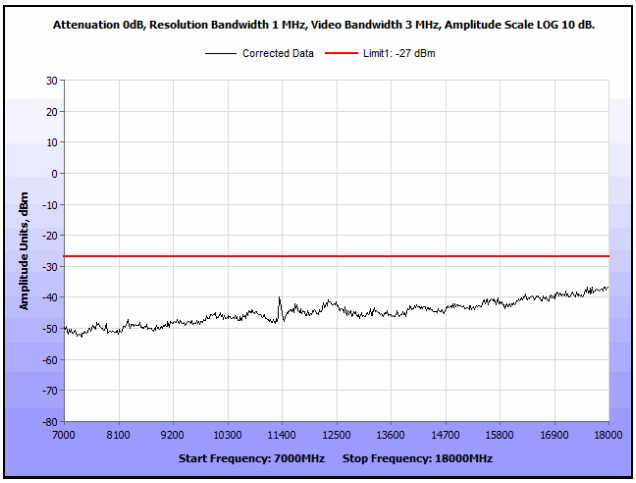
Plot 98. Radiated Spurious Emissions, 5550 MHz, 802.11n 40 MHz, 1 GHz – 7 GHz



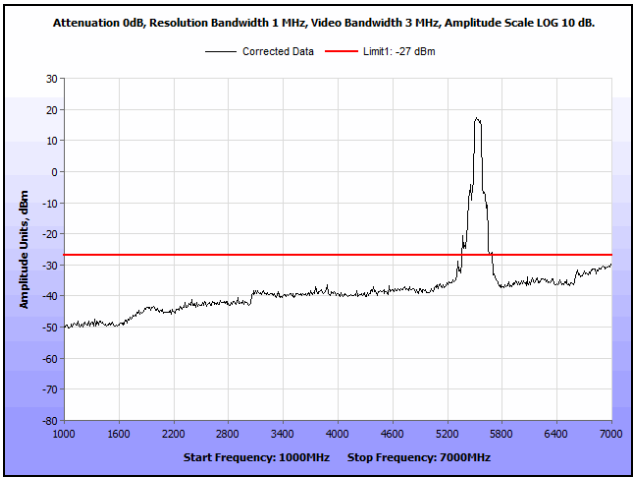
Plot 99. Radiated Spurious Emissions, 5550 MHz, 802.11n 40 MHz, 7 GHz – 18 GHz



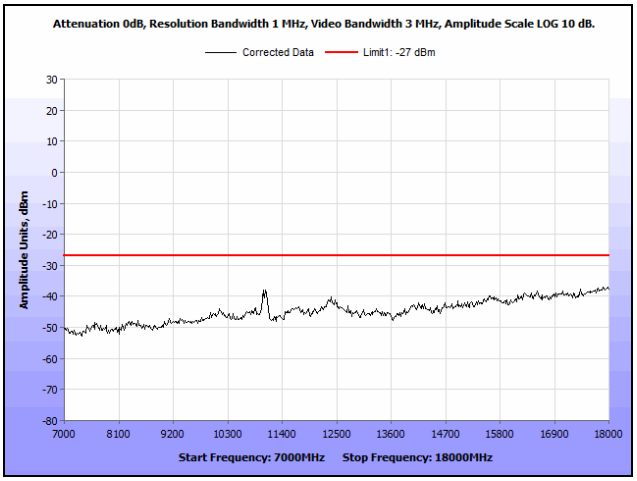
Plot 100. Radiated Spurious Emissions, 5670 MHz, 802.11n 40 MHz, 1 GHz – 7 GHz



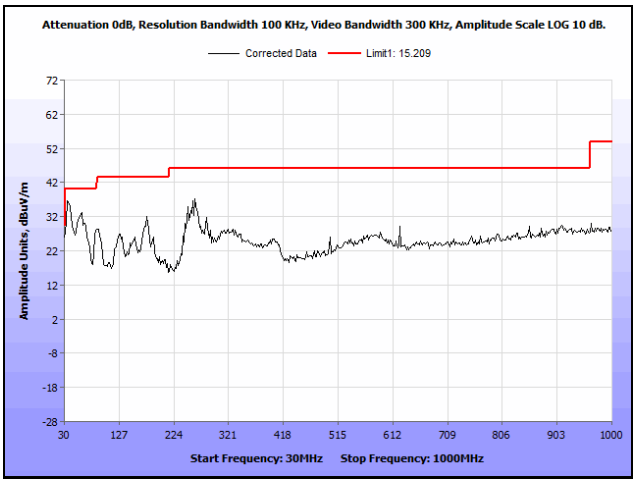
Plot 101. Radiated Spurious Emissions, 5670 MHz, 802.11n 40 MHz, 7 GHz – 18 GHz



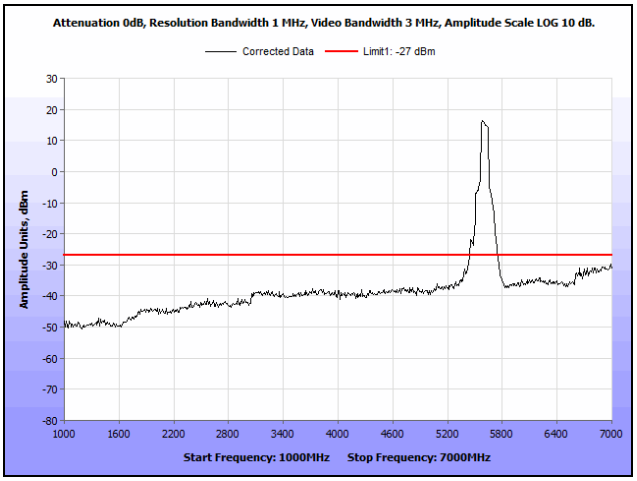
Plot 102. Radiated Spurious Emissions, 5530 MHz, 802.11ac 80 MHz, 1 GHz – 7 GHz



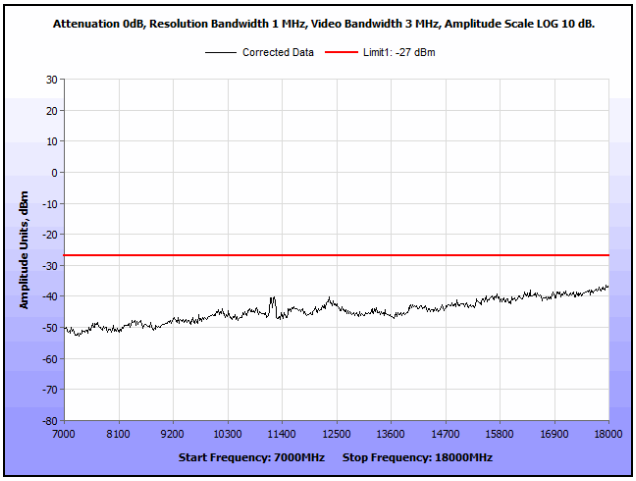
Plot 103. Radiated Spurious Emissions, 5530 MHz, 802.11ac 80 MHz, 7 GHz – 18 GHz



Plot 104. Radiated Spurious Emissions, 5610 MHz, 802.11ac 80 MHz, 30 MHz – 1 GHz

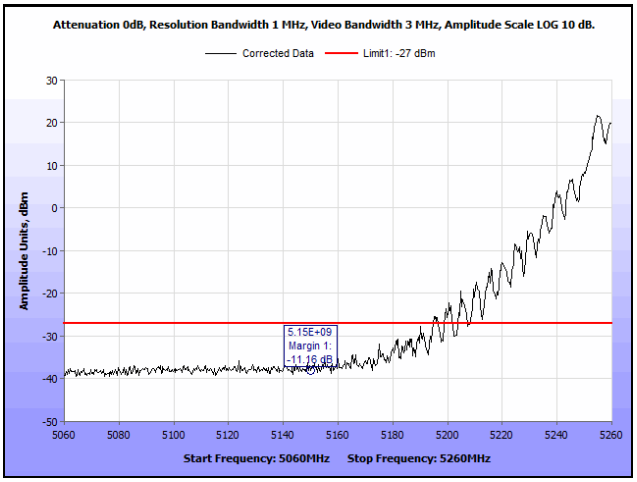


Plot 105. Radiated Spurious Emissions, 5610 MHz, 802.11ac 80 MHz, 1 GHz – 7 GHz

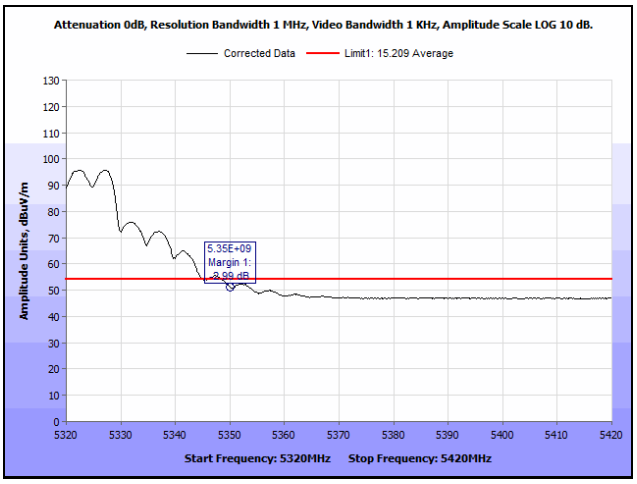


Plot 106. Radiated Spurious Emissions, 5610 MHz, 802.11ac 80 MHz, 7 GHz – 18 GHz

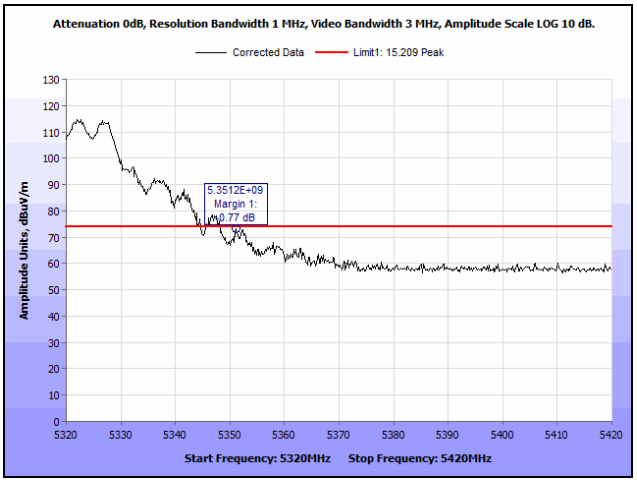
Radiated Band Edge



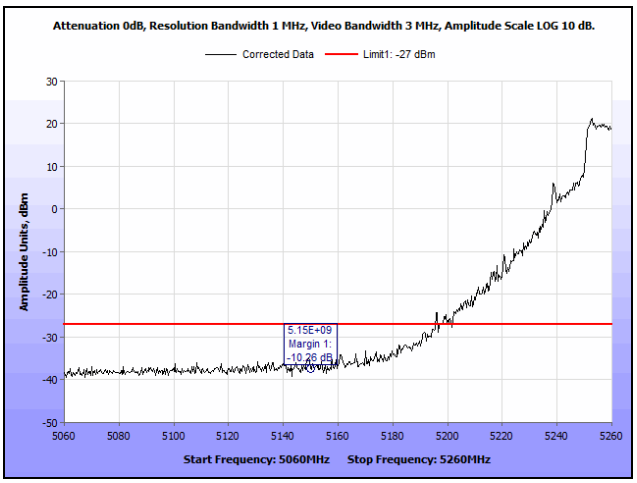
Plot 107. Radiated Band Edge, 802.11a 20 MHz, Low Channel, 5260 MHz @ 5150 MHz Edge



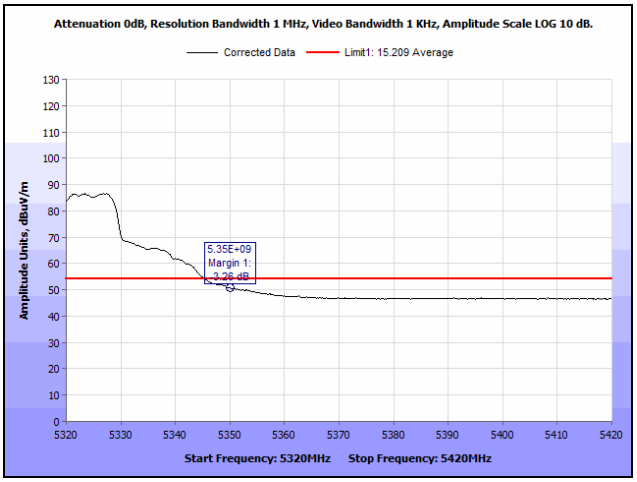
Plot 108. Radiated Band Edge, 802.11a 20 MHz, High Channel, 5320 MHz @ 5350 MHz Edge, Average



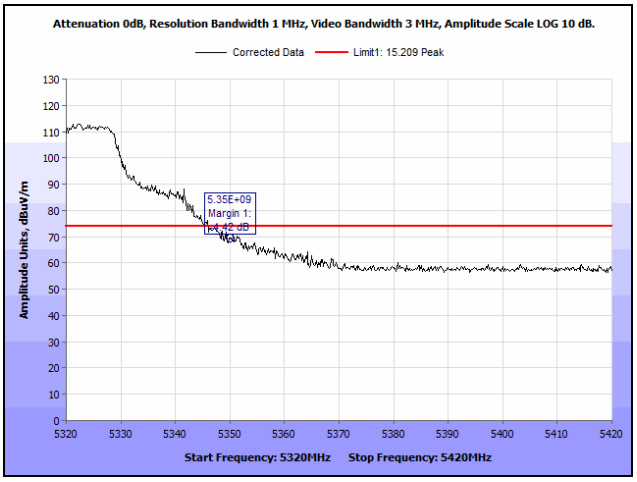
Plot 109. Radiated Band Edge, 802.11a 20 MHz, High Channel, 5320 MHz @ 5350 MHz Edge, Average



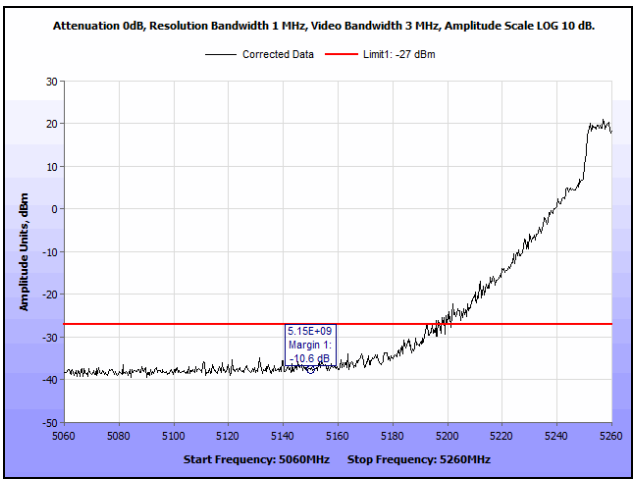
Plot 110. Radiated Band Edge, 802.11ac 20 MHz, Low Channel, 5260 MHz @ 5150 MHz Edge



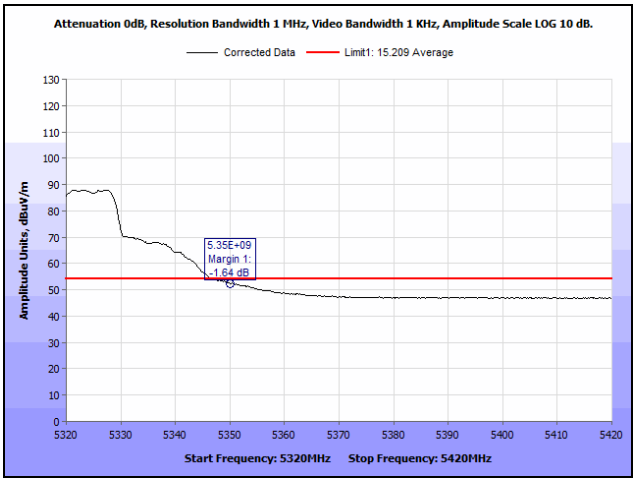
Plot 111. Radiated Band Edge, 802.11ac 20 MHz, High Channel, 5320 MHz @ 5350 MHz Edge, Average



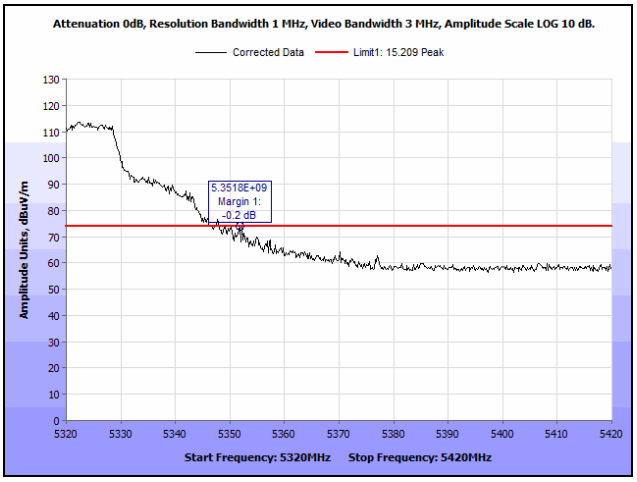
Plot 112. Radiated Band Edge, 802.11ac 20 MHz, High Channel, 5320 MHz @ 5350 MHz Edge, Average



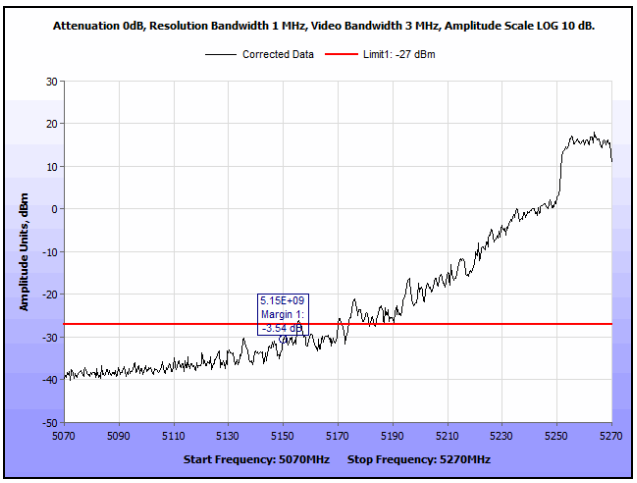
Plot 113. Radiated Band Edge, 802.11n 20 MHz, Low Channel, 5260 MHz @ 5150 MHz Edge



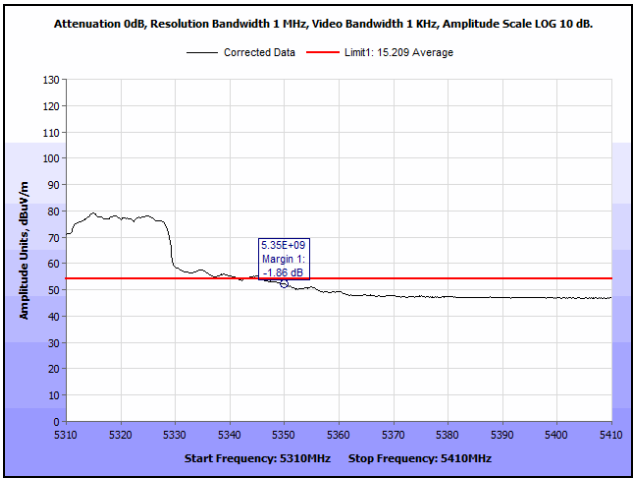
Plot 114. Radiated Band Edge, 802.11n 20 MHz, High Channel, 5320 MHz @ 5350 MHz Edge, Average



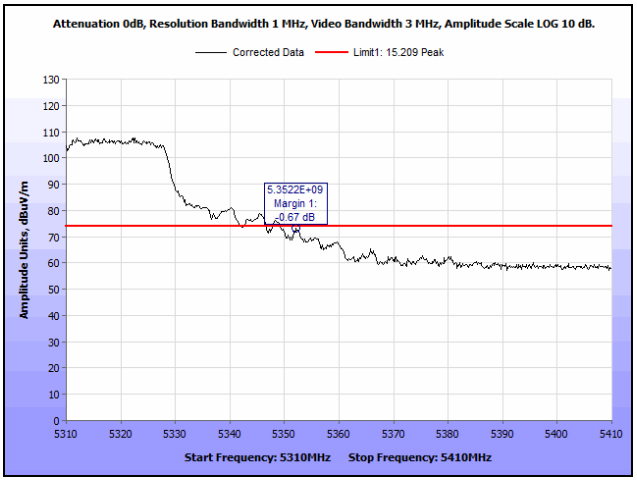
Plot 115. Radiated Band Edge, 802.11n 20 MHz, High Channel, 5320 MHz @ 5350 MHz Edge, Average



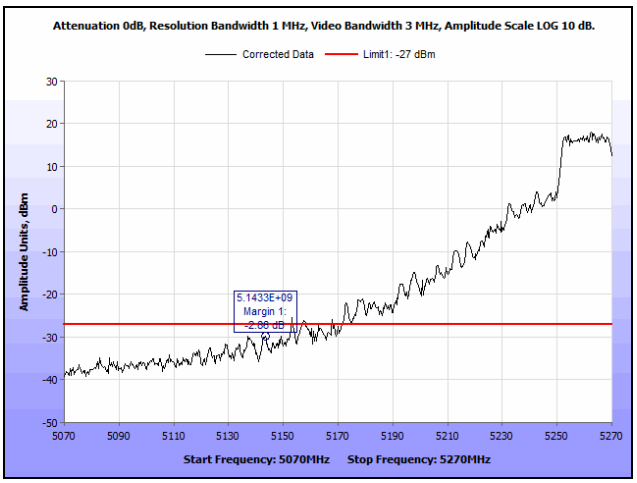
Plot 116. Radiated Band Edge, 802.11ac 40 MHz, Low Channel, 5270 MHz @ 5150 MHz Edge



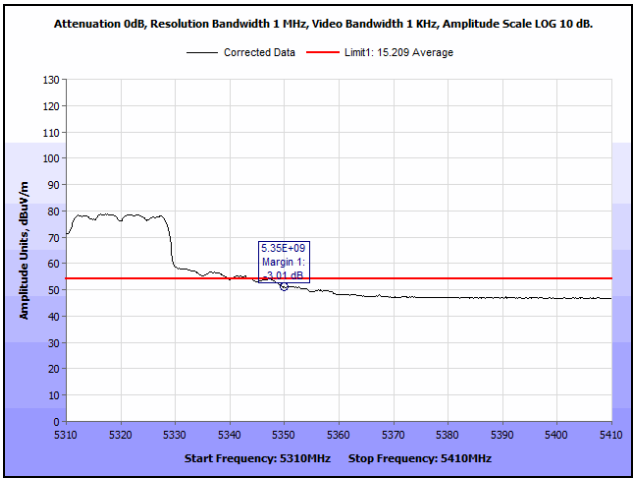
Plot 117. Radiated Band Edge, 802.11ac 40 MHz, High Channel, 5310 MHz @ 5350 MHz Edge, Average



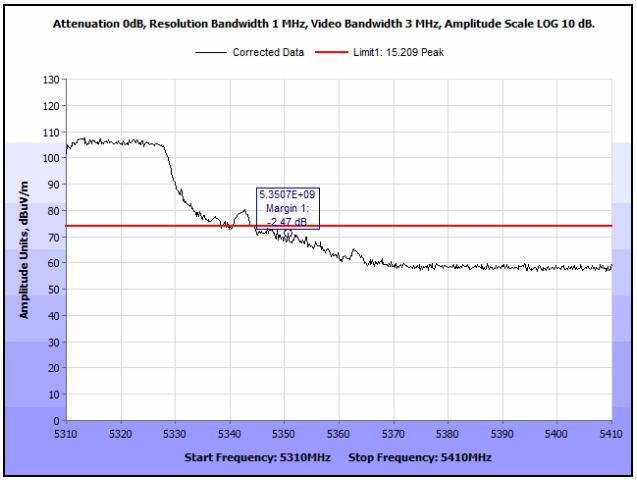
Plot 118. Radiated Band Edge, 802.11ac 40 MHz, High Channel, 5310 MHz @ 5350 MHz Edge, Average



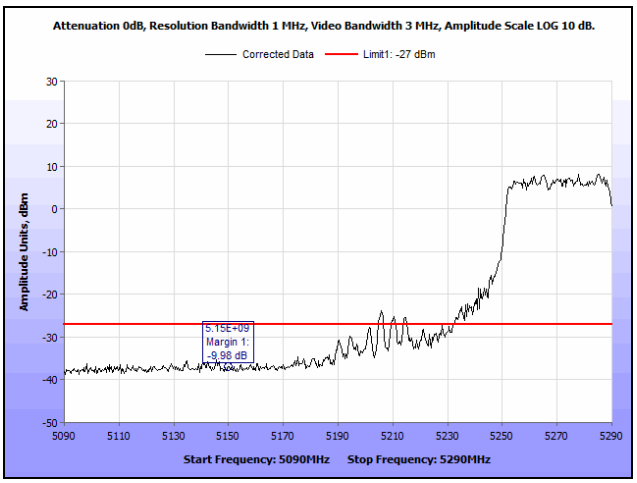
Plot 119. Radiated Band Edge, 802.11n 40 MHz, Low Channel, 5270 MHz @ 5150 MHz Edge



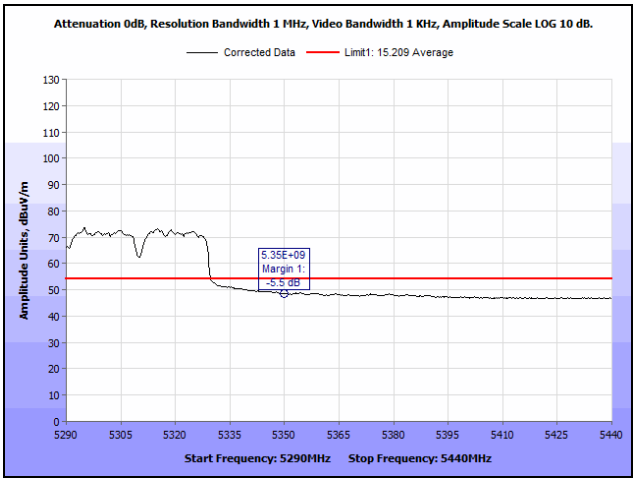
Plot 120. Radiated Band Edge, 802.11n 40 MHz, High Channel, 5310 MHz @ 5350 MHz Edge, Average



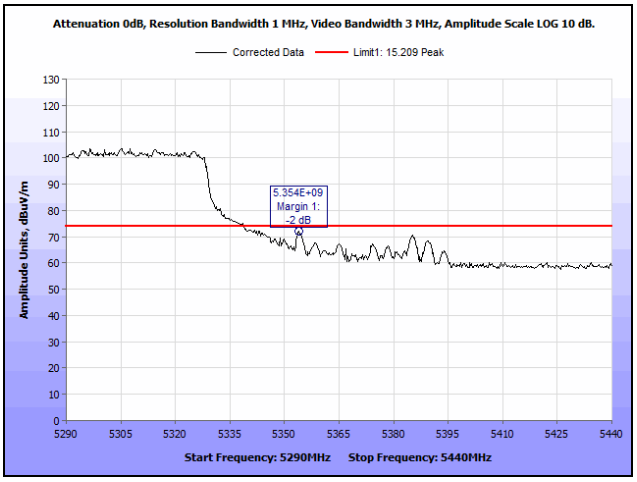
Plot 121. Radiated Band Edge, 802.11n 40 MHz, High Channel, 5310 MHz @ 5350 MHz Edge, Average



Plot 122. Radiated Band Edge, 802.11ac 80 MHz, Low Channel, 5290 MHz @ 5150 MHz Edge

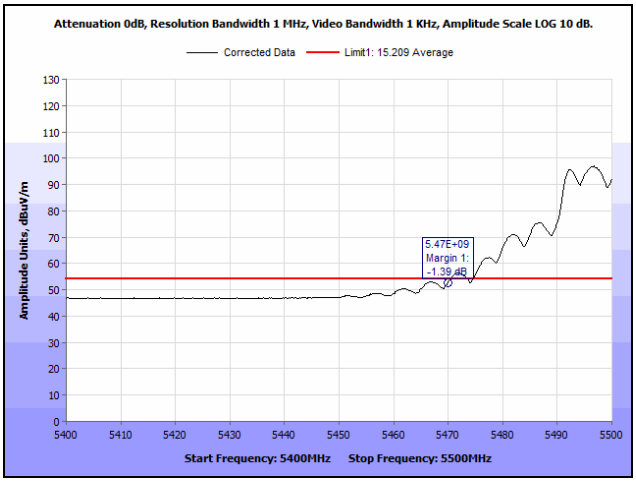


Plot 123. Radiated Band Edge, 802.11ac 80 MHz, High Channel, 5290 MHz @ 5350 MHz Edge, Average

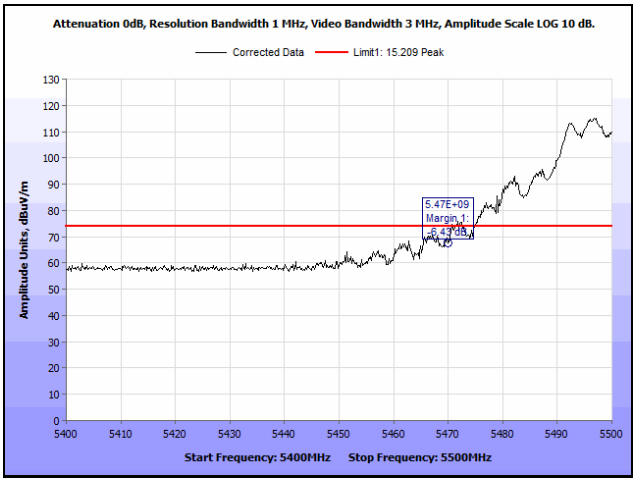


Plot 124. Radiated Band Edge, 802.11ac 80 MHz, High Channel, 5290 MHz @ 5350 MHz Edge, Average

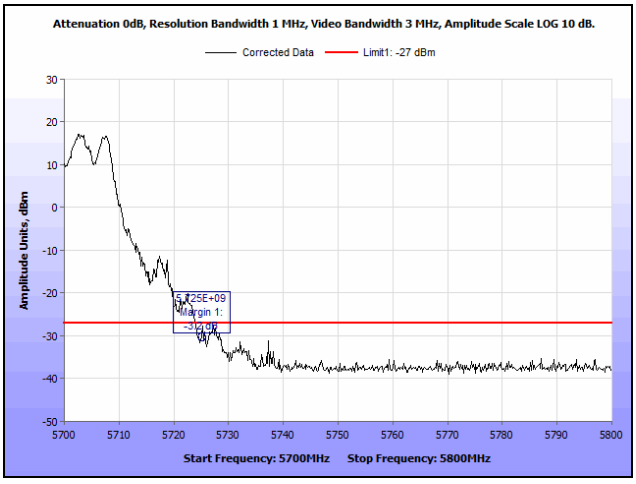
Radiated Band Edge



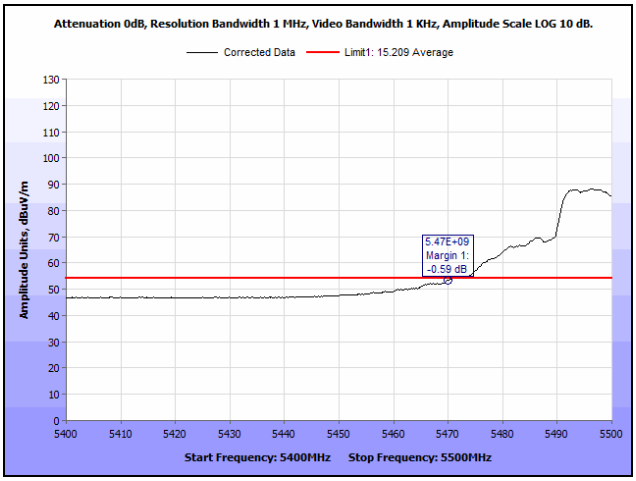
Plot 125. Radiated Band Edge, 802.11a 20 MHz, Low Channel, 5500 MHz @ 5470 MHz Edge, Average



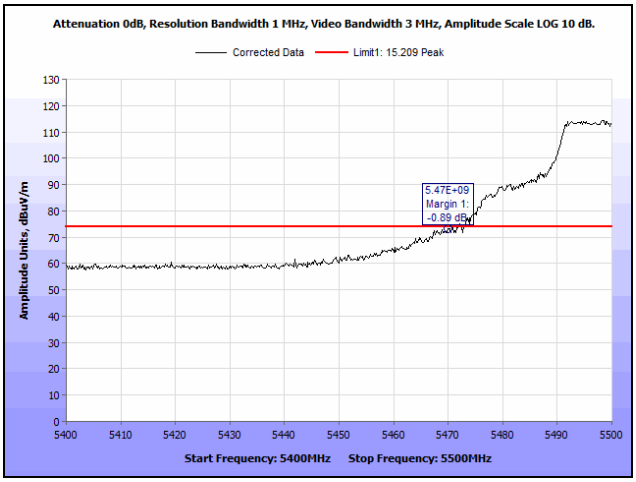
Plot 126. Radiated Band Edge, 802.11a 20 MHz, Low Channel, 5500 MHz @ 5470 MHz Edge, Peak



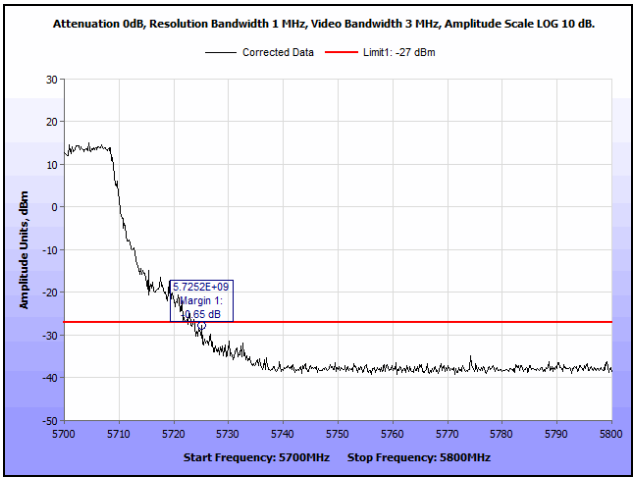
Plot 127. Radiated Band Edge, 802.11a 20 MHz, High Channel, 5700 MHz @ 5725 MHz Edge



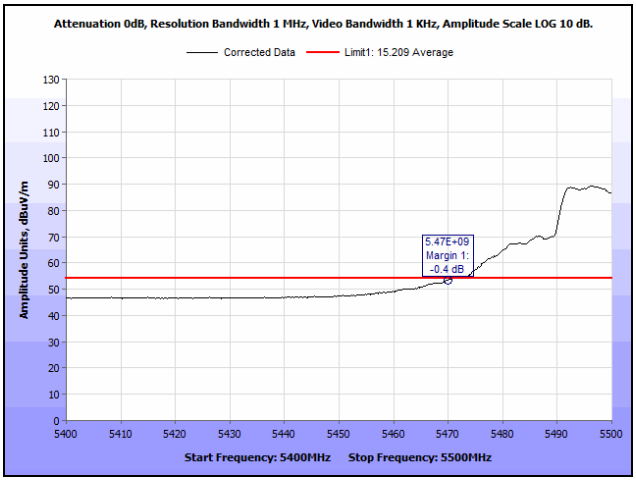
Plot 128. Radiated Band Edge, 802.11ac 20 MHz, Low Channel, 5500 MHz @ 5470 MHz Edge, Average



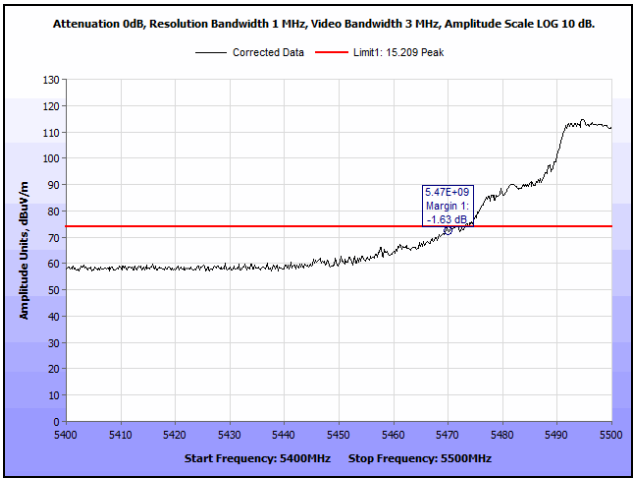
Plot 129. Radiated Band Edge, 802.11ac 20 MHz, Low Channel, 5500 MHz @ 5470 MHz Edge, Peak



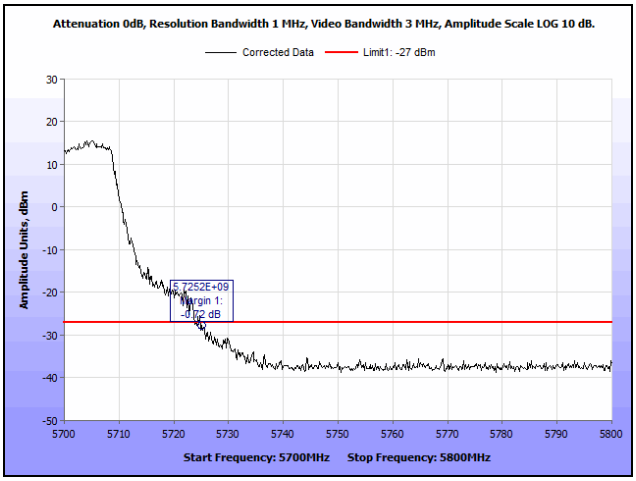
Plot 130. Radiated Band Edge, 802.11ac 20 MHz, High Channel, 5700 MHz @ 5725 MHz Edge



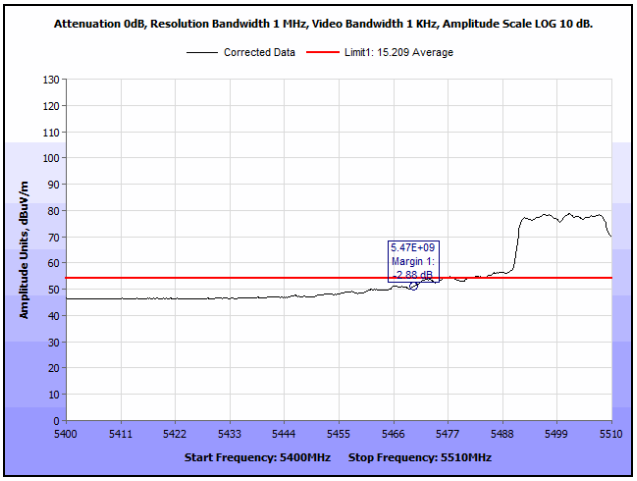
Plot 131. Radiated Band Edge, 802.11n 20 MHz, Low Channel, 5500 MHz @ 5470 MHz Edge, Average



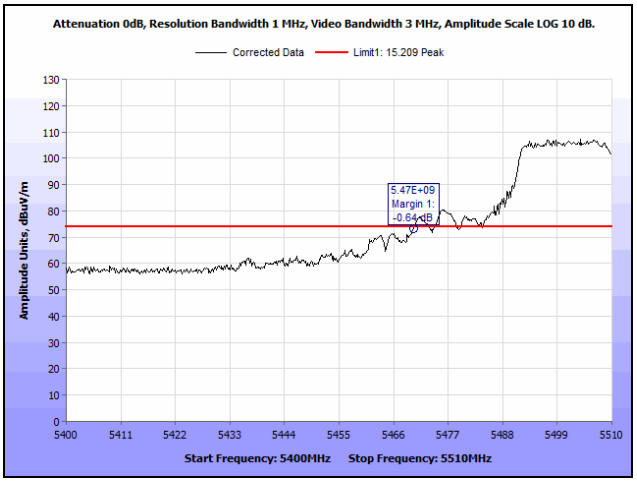
Plot 132. Radiated Band Edge, 802.11n 20 MHz, Low Channel, 5500 MHz @ 5470 MHz Edge, Peak



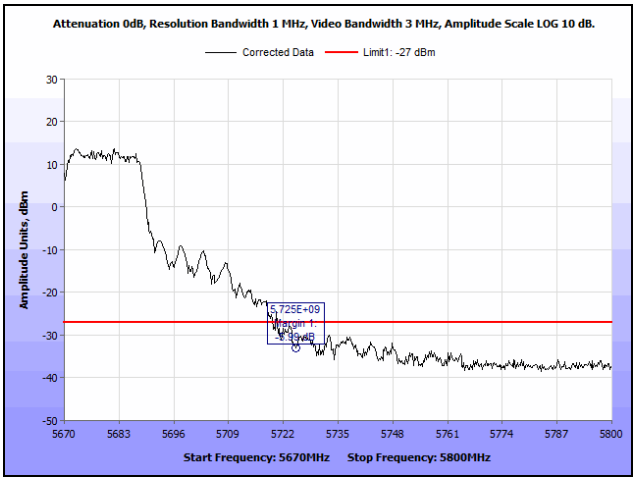
Plot 133. Radiated Band Edge, 802.11n 20 MHz, High Channel, 5700 MHz @ 5725 MHz Edge



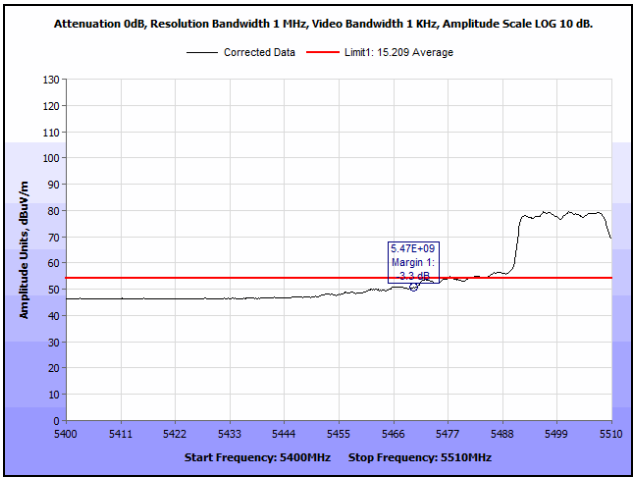
Plot 134. Radiated Band Edge, 802.11ac 40 MHz, Low Channel, 5510 MHz @ 5470 MHz Edge, Average



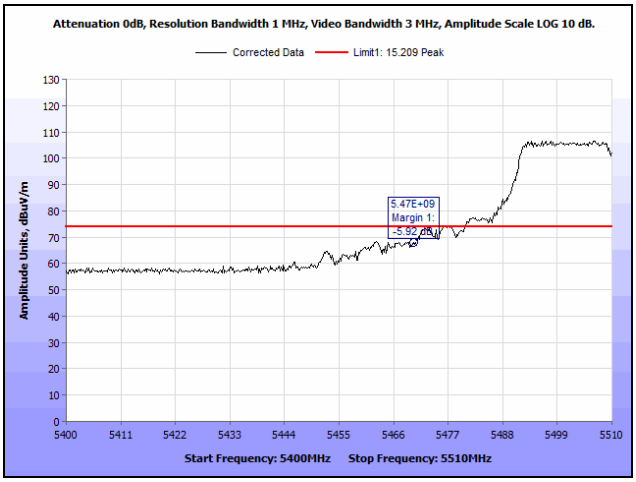
Plot 135. Radiated Band Edge, 802.11ac 40 MHz, Low Channel, 5510 MHz @ 5470 MHz Edge, Peak



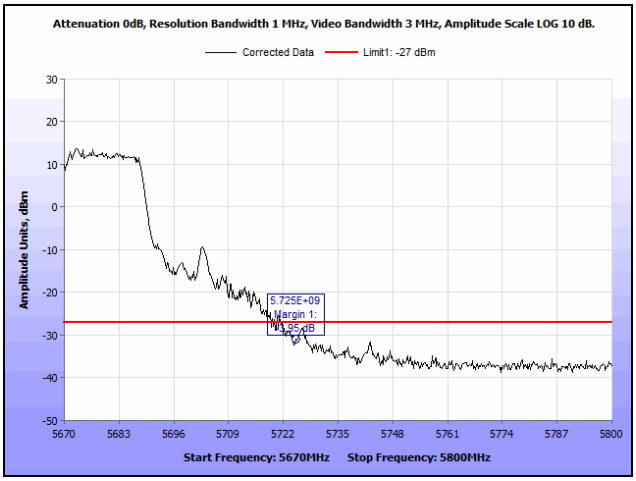
Plot 136. Radiated Band Edge, 802.11ac 40 MHz, High Channel, 5670 MHz @ 5725 MHz Edge



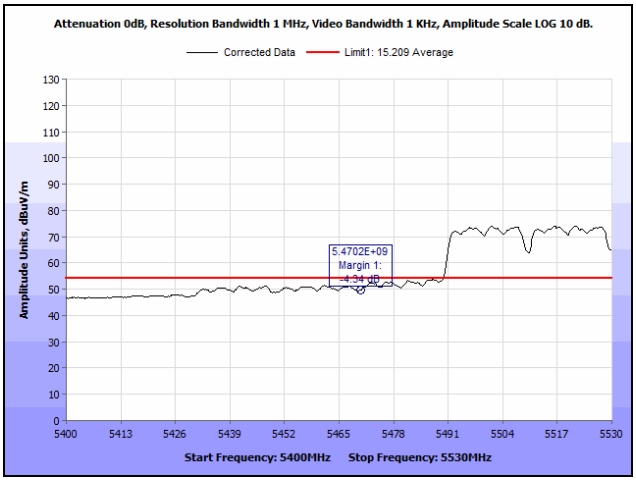
Plot 137. Radiated Band Edge, 802.11n 40 MHz, Low Channel, 5510 MHz @ 5470 MHz Edge, Average



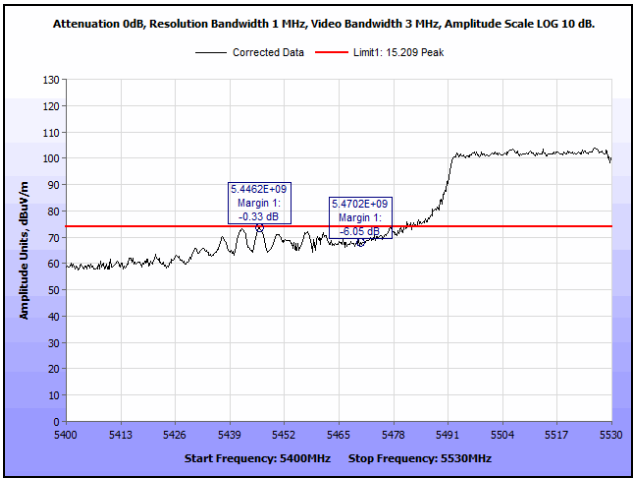
Plot 138. Radiated Band Edge, 802.11n 40 MHz, Low Channel, 5510 MHz @ 5470 MHz Edge, Peak



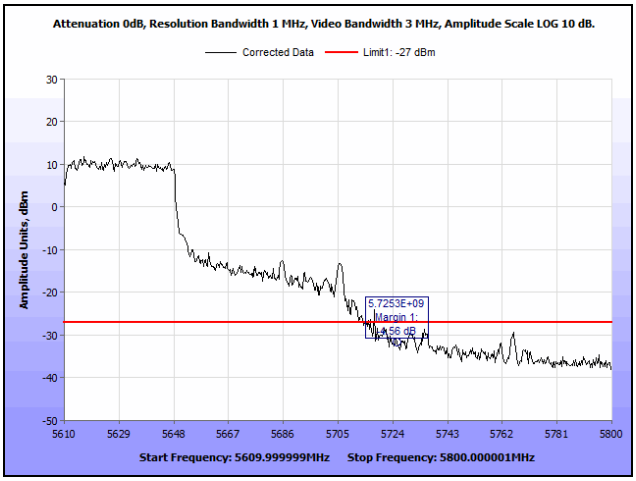
Plot 139. Radiated Band Edge, 802.11n 40 MHz, High Channel, 5670 MHz @ 5725 MHz Edge



Plot 140. Radiated Band Edge, 802.11n 80 MHz, Low Channel, 5530 MHz @ 5470 MHz Edge, Average



Plot 141. Radiated Band Edge, 802.11n 80 MHz, Low Channel, 5530 MHz @ 5470 MHz Edge, Peak



Plot 142. Radiated Band Edge, 802.11n 80 MHz, High Channel, 5610 MHz @ 5725 MHz Edge

Electromagnetic Compatibility Criteria for Intentional Radiators

§ 15.407(f) RF Exposure

RF Exposure Requirements: **§1.1307(b)(1) and §1.1307(b)(2):** Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the Commission's guidelines.

RF Radiation Exposure Limit: **§1.1310:** As specified in this section, the Maximum Permissible Exposure (MPE) Limit shall be used to evaluate the environmental impact of human exposure to radiofrequency (RF) radiation as specified in Sec. 1.1307(b), except in the case of portable devices which shall be evaluated according to the provisions of Sec. 2.1093 of this chapter.

MPE Limit Calculation: EUT's operating frequencies @ 5.25-5.35 GHz and 5.47-5.725 GHz; highest conducted power = 23.90dBm (Avg) therefore, **Limit for Uncontrolled exposure: 1 mW/cm^2 or 10 W/m^2**

Equation from page 18 of OET 65, Edition 97-01

$S = PG / 4\pi R^2$ or $R = \sqrt{PG / 4\pi S}$

where, S = Power Density (<1 mW/cm^2)
P = Power Input to antenna (245.47 mW)
G = Antenna Gain (3.2 dBi, 2.09 numeric)
R = Minimum Distance between User and Antenna (20 cm)

$S = (245.47*2.09)/ (4*3.14*20^2) = 0.102$ mW/cm^2

Since S < 1 mW/cm^2, the minimum distance (R) is 20cm

IV. DFS Requirements and Radar Waveform Description & Calibration

A. DFS Requirements

Requirement	Operational Mode		
	Master	Client Without Radar Detection	Client With Radar Detection
Non-Occupancy Period	Yes	Not required	Yes
DFS Detection Threshold	Yes	Not required	Yes
Channel Availability Check Time	Yes	Not required	Not required
Uniform Spreading	Yes	Not required	Not required
U-NII Detection Bandwidth	Yes	Not required	Yes

Table 15. Applicability of DFS Requirements Prior to Use of a Channel

Requirement	Operational Mode		
	Master	Client Without Radar Detection	Client With Radar Detection
DFS Detection Threshold	Yes	Not required	Yes
Channel Closing Transmission Time	Yes	Yes	Yes
Channel Move Time	Yes	Yes	Yes
U-NII Detection Bandwidth	Yes	Not required	Yes

Table 16. Applicability of DFS Requirements During Normal Operation

Maximum Transmit Power	Value
≥ 200 milliwatt	-64 dBm
< 200 milliwatt	-62 dBm
Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna **Note 2:** Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response.	

Table 17. DFS Detection Thresholds for Master or Client Devices Incorporating DFS

Parameter	Value
Non-occupancy period	Minimum 30 minutes
Channel Availability Check Time	60 seconds
Channel Move Time	10 seconds See Note 1
Channel Closing Transmission Time	200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period. See Notes 1 and 2
U-NII Detection Bandwidth	Minimum 80% of the 99% power bandwidth. See Note 3.

Note 1: The instant that the *Channel Move Time* and the *Channel Closing Transmission Time* begins is as follows:
- For the Short pulse radar Test Signals this instant is the end of the *Burst*.
- For the Frequency Hopping radar Test Signal, this instant is the end of the last radar *Burst* generated.
- For the Long Pulse radar Test Signal this instant is the end of the 12 second period defining the radar transmission.

Note 2: The *Channel Closing Transmission Time* is comprised of 200 milliseconds starting at the beginning of the *Channel Move Time* plus any additional intermittent control signals required facilitating *Channel* changes (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions.

Note 3: During the *U-NII Detection Bandwidth* detection test, radar type 1 is used and for each frequency step the minimum percentage of detection is 90%. Measurements are performed with no data traffic.

Table 18. DFS Response Requirement Values

B. Radar Test Waveforms

This section provides the parameters for required test waveforms, minimum percentage of successful detections, and the minimum number of trials that must be used for determining DFS conformance. Step intervals of 0.1 microsecond for Pulse Width, 1 microsecond for PRI, 1 MHz for chirp width and 1 for the number of pulses will be utilized for the random determination of specific test waveforms.

Short Pulse Radar Test Waveforms

Radar Type	Pulse Width (µsec)	PRI (µsec)	Number of Pulses	Minimum Percentage of Successful Detection	Minimum Trials
1	1	1428	18	60%	30
2	1-5	150-230	23-29	60%	30
3	6-10	200-500	16-18	60%	30
4	11-20	200-500	12-16	60%	30
Aggregate (Radar Types 1-4)				80%	120

A minimum of 30 unique waveforms are required for each of the short pulse radar types 2 through 4. For short pulse radar type 1, the same waveform is used a minimum of 30 times. If more than 30 waveforms are used for short pulse radar types 2 through 4, then each additional waveform must also be unique and not repeated from the previous waveforms. The aggregate is the average of the percentage of successful detections of short pulse radar types 1-4.

Long Pulse Radar Test Waveform

Radar Type	Pulse Width (µsec)	Chirp Width (MHz)	PRI (µsec)	Number of Pulses per Bursts	Number of Bursts	Minimum Percentage of Successful Detection	Minimum Trials
5	50-100	5-20	1000-2000	1-3	8-20	80%	30

The parameters for this waveform are randomly chosen. Thirty unique waveforms are required for the Long Pulse radar test signal. If more than 30 waveforms are used for the Long Pulse radar test signal, then each additional waveform must also be unique and not repeated from the previous waveforms.

Each waveform is defined as follows:

1) The transmission period for the Long Pulse Radar test signal is 12 seconds.
2) There are a total of 8 to 20 Bursts in the 12 second period, with the number of Bursts being randomly chosen. This number is Burst_Count.
3) Each Burst consists of 1 to 3 pulses, with the number of pulses being randomly chosen. Each Burst within the 12 second sequence may have a different number of pulses.
4) The pulse width is between 50 and 100 microseconds, with the pulse width being randomly chosen. Each pulse within a Burst will have the same pulse width. Pulses in different Bursts may have different pulse widths.
5) Each pulse has a linear FM chirp between 5 and 20 MHz, with the chirp width being randomly chosen. Each pulse within a Burst will have the same chirp width. Pulses in different Bursts may have different chirp widths. The chirp is centered on the pulse. For example, with radar frequency of 5300 MHz and a 20 MHz chirped signal, the chirp starts at 5290 MHz and ends at 5310 MHz.
6) If more than one pulse is present in a Burst, the time between the pulses will be between 1000 and 2000 microseconds, with the time being randomly chosen. If three pulses are present in a Burst, the time between the first and second pulses is chosen independently of the time between the second and third pulses.
7) The 12 second transmission period is divided into even intervals. The number of intervals is equal to Burst_Count. Each interval is of length (12,000,000 / Burst_Count) microseconds. Each interval contains one Burst. The start time for the Burst, relative to the beginning of the interval, is between 1 and [(12,000,000 / Burst_Count) – (Total Burst Length) + (One Random PRI Interval)] microseconds, with the start time being randomly chosen. The step interval for the start time is 1 microsecond. The start time for each Burst is chosen independently.

A representative example of a Long Pulse radar test waveform:

1) The total test signal length is 12 seconds.
2) 8 Bursts are randomly generated for the Burst_Count.
3) Burst 1 has 2 randomly generated pulses.
4) The pulse width (for both pulses) is randomly selected to be 75 microseconds.
5) The PRI is randomly selected to be at 1213 microseconds.
6) Bursts 2 through 8 are generated using steps 3 – 5.
7) Each Burst is contained in even intervals of 1,500,000 microseconds. The starting location for Pulse 1, Burst 1 is randomly generated (1 to 1,500,000 minus the total Burst 1 length + 1 random PRI interval) at the 325,001 microsecond step. Bursts 2 through 8 randomly fall in successive 1,500,000 microsecond intervals (i.e. Burst 2 falls in the 1,500,001 – 3,000,000 microsecond range).

Graphical Representation of a Long Pulse radar Test Waveform

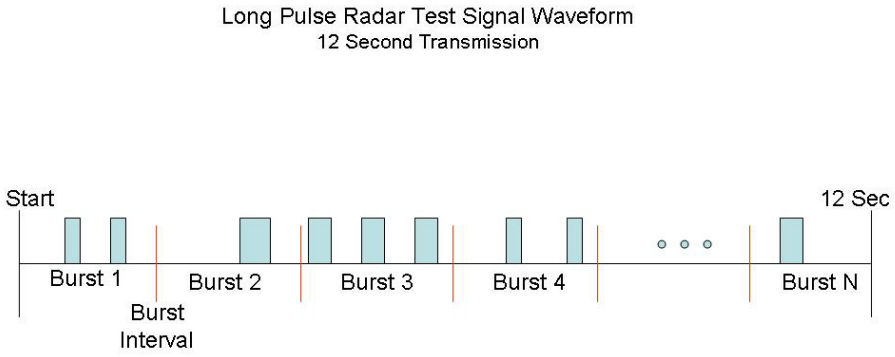


Figure 5. Long Pulse Radar Test Signal Waveform

Frequency Hopping Radar Test Waveform

Radar Type	Pulse Width (µsec)	PRI (µsec)	Pulses per Hop	Hopping Rate (kHz)	Hopping Sequence Length (msec)	Minimum Percentage of Successful Detection	Minimum Trials
6	1	333	9	.333	300	70%	30

For the Frequency Hopping Radar Type, the same *Burst* parameters are used for each waveform. The hopping sequence is different for each waveform and a 100-length segment is selected1 from the hopping sequence defined by the following algorithm:

The first frequency in a hopping sequence is selected randomly from the group of 475 integer frequencies from 5250 – 5724 MHz. Next, the frequency that was just chosen is removed from the group and a frequency is randomly selected from the remaining 474 frequencies in the group. This process continues until all 475 frequencies are chosen for the set. For selection of a random frequency, the frequencies remaining within the group are always treated as equally likely.

C. Radar Waveform Calibration

The following equipment setup was used to calibrate the radiated Radar Waveform. A spectrum analyzer was used to establish the test signal level for each radar type. During this process there were no transmissions by either the Master or Client Device. The spectrum analyzer was switched to the zero span (Time Domain) mode at the frequency of the Radar Waveform generator. Peak detection was utilized. The spectrum analyzer's resolution bandwidth (RBW) was set to 3 MHz and the video bandwidth (VBW) was set to 3 MHz. The calibration setup is diagrammed in Figure 6, and the radar test signal generator is shown in Photograph 1.

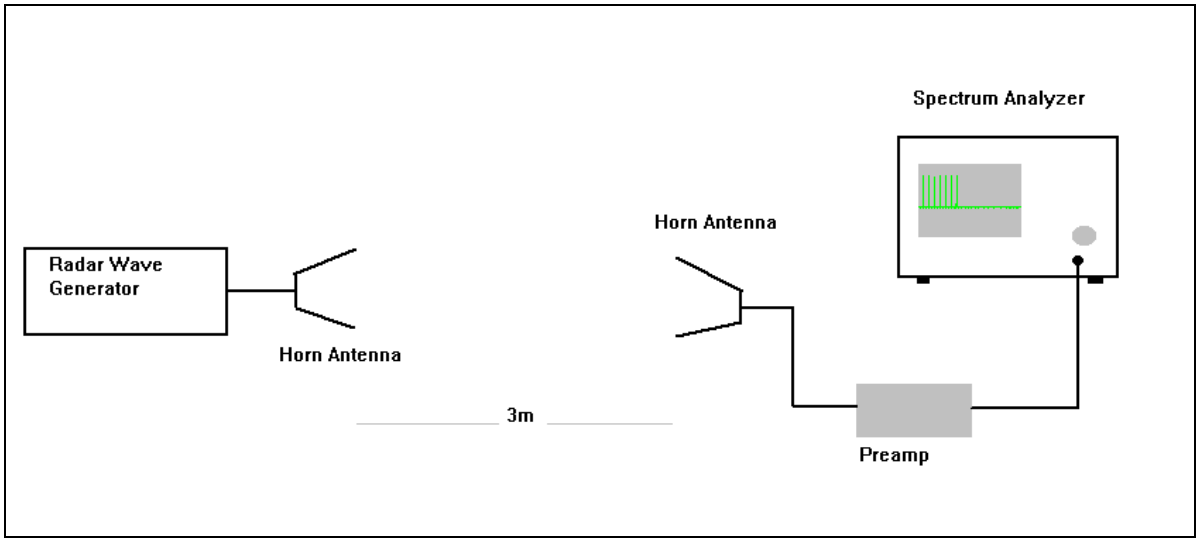
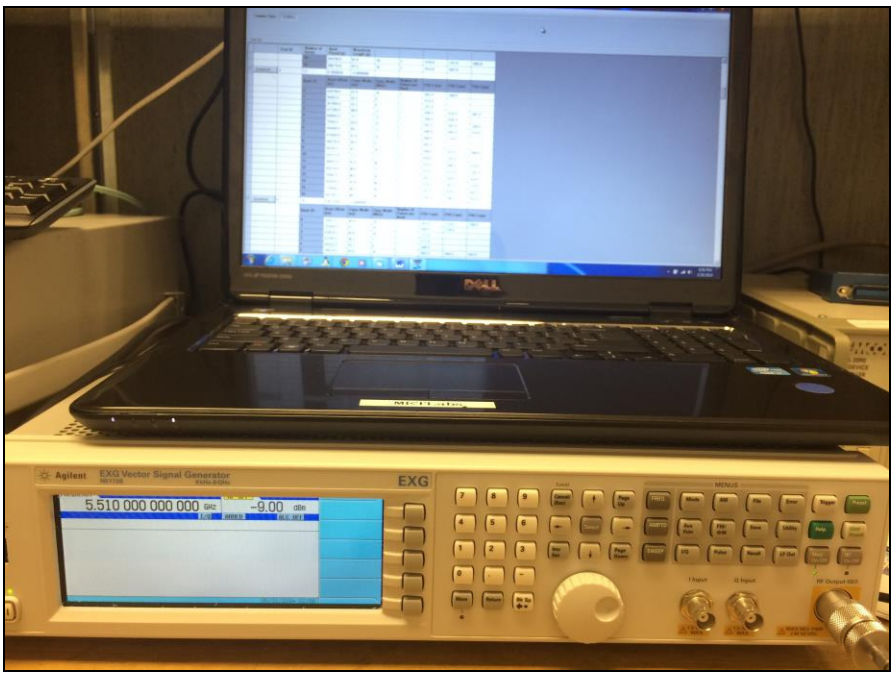
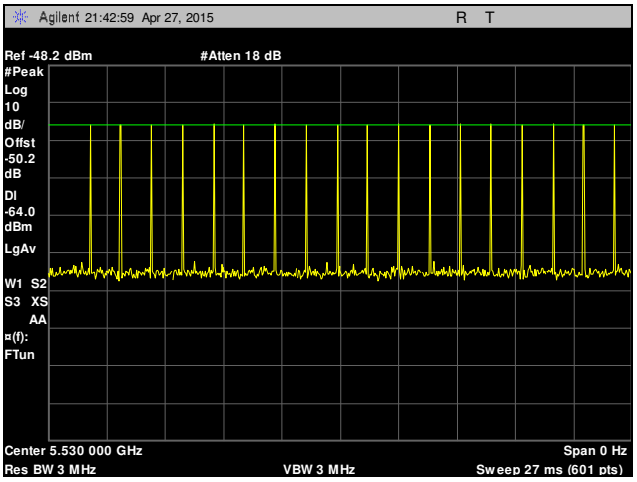


Figure 6. Calibration Test setup

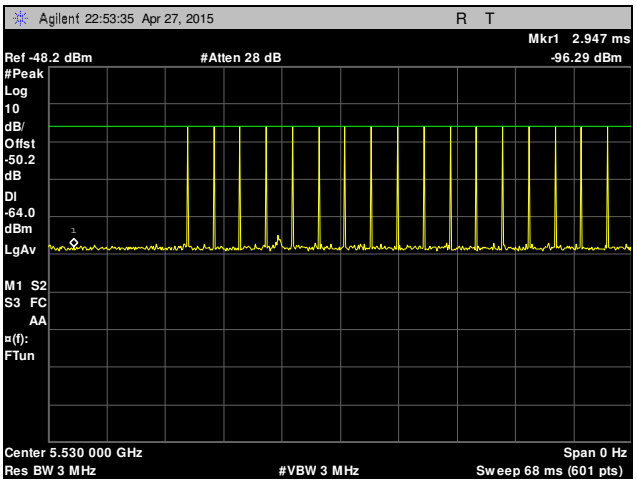


Photograph 1. DFS Radar Test Signal Generator

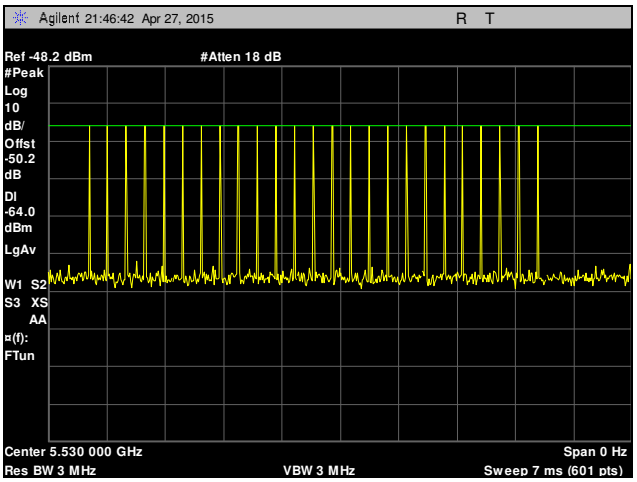
Radar Waveform Calibration



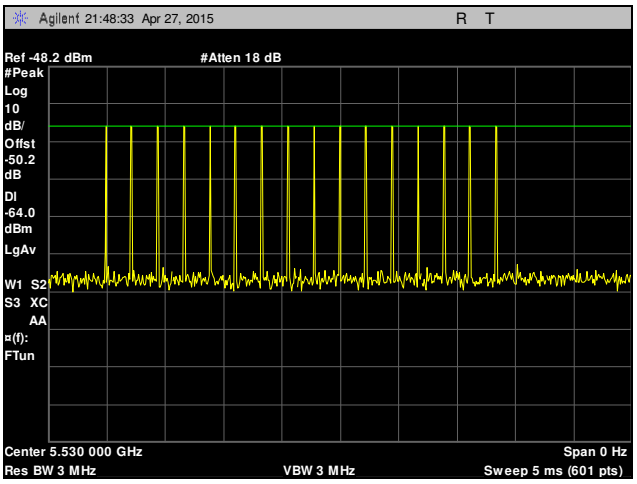
Plot 143. Calibration, Type 0



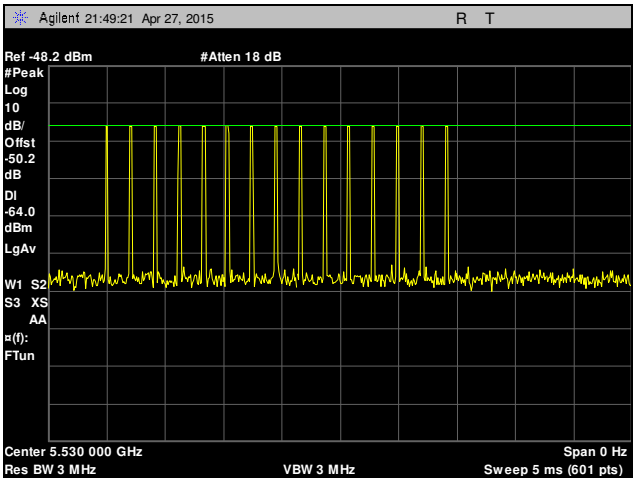
Plot 144. Calibration, Type 1



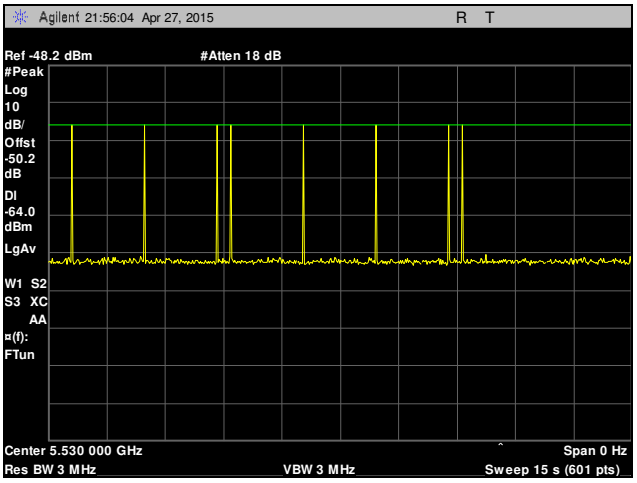
Plot 145. Calibration, Type 2



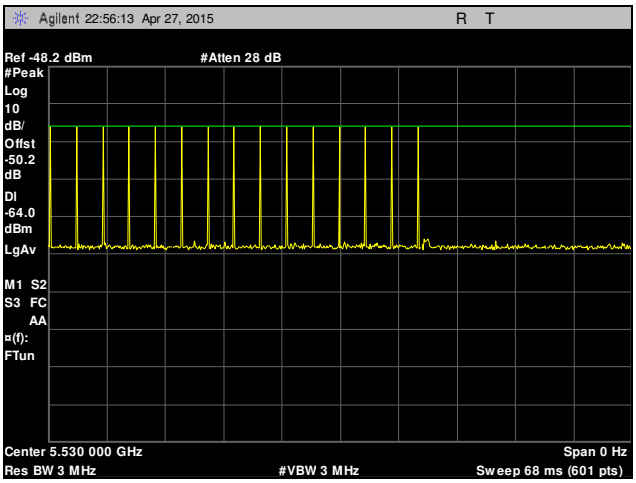
Plot 146. Calibration, Type3



Plot 147. Calibration, Type 4



Plot 148. Calibration, Type 5



Plot 149. Calibration, Type 6

V. DFS Test Procedure and Test Results

A. DFS Test Setup

1. A spectrum analyzer is used as a monitor to verify that the Unit Under Test (UUT) has vacated the Channel within the Channel Closing Transmission Time and Channel Move Time, and does not transmit on a Channel during the Non-Occupancy Period after the detection and subsequent Channel move. It is also used to monitor UUT transmissions during the Channel Availability Check Time.
2. The test setup, which consists of test equipment and equipment under test (EUT), is diagrammed in Figure 7.

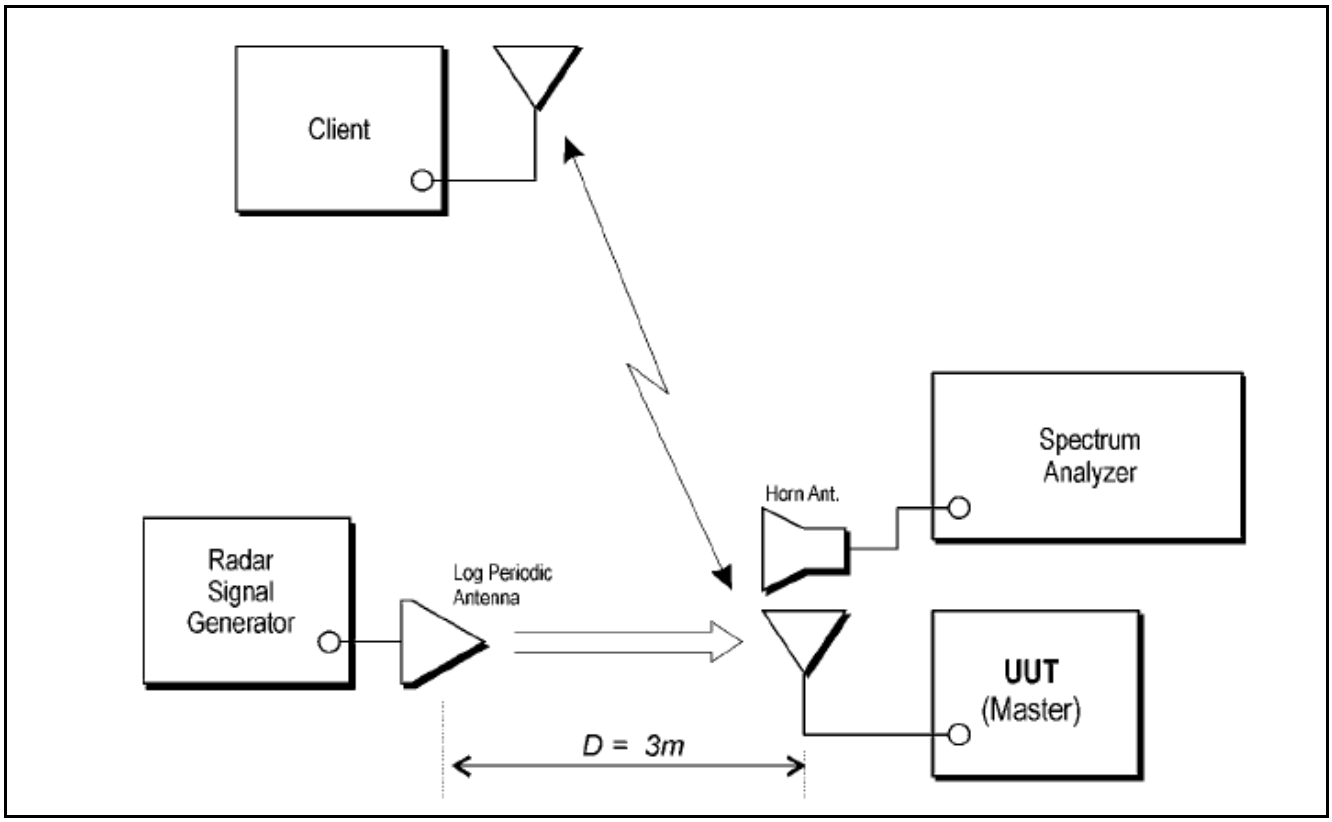


Figure 7. Test Setup Diagram

B. EUT Information

1. Operating Frequency Range: 5260 MHz – 5320 MHz 5500 MHz – 5700 MHz
2. Modes of Operation: Master Device
3. List all antennas and associated gains: See Antenna Datasheet
4. List output power ranges: 13.68 / 24.39 dBm
5. List antenna impedance: 50 Ohms
6. Antenna gain verification: See Antenna Datasheet
7. State test file that is transmitted: 6.5half magical hours
8. TCP description: Radios when receiving signal is greater than -30dBm and the highest modulation is unable to be maintained will cause the transmitter of the radio to back the power down by 1dB increments as much as 6dB total to maintain the TPC requirement.
9. Time for master to complete its power-on-cycle:See dataSheet
10. Describe EUT's uniform channel spreading: The manufacturer provided special software that over-rode the non-occupancy mechanism (allowing return to the same channel) for the purposes of determining the probability of detection. The streamed file was the "FCC" test file as required by FCC Part 15 Subpart E. During the in-service monitoring detection probability and channel moving tests the system was configured with a streaming video file. The radio also provided sudo random data to simulate uniform traffic loading along with the "FCC" test file.

C. UNII Detection Bandwidth

Test Requirement(s): **§ 15.407** A minimum 100% detection rate is required across an EUT's 99% bandwidth.

Test Procedure: All UNII channels for this device have identical channel bandwidths.

A single burst of the short pulse radar type 1 is produced at 5530 MHz, 5550MHz, and 5580MHz. at the -63dBm test level. The UUT is set up as a standalone device (no associated client, and no data traffic).

A single radar burst is generated for a minimum of 10 trials, and the response of the UUT is recorded. The UUT must detect the radar waveform 90% or more of the time.

The radar frequency is increased in 1 MHz steps, repeating the above test sequence, until the detection rate falls below 90%. The highest frequency at which detection is greater than or equal to 90% is denoted F_H.

The radar frequency is decreased in 1 MHz steps, repeating the above test sequence, until the detection rate falls below 90%. The lowest frequency at which detection is greater than or equal to 90% is denoted F_L.

The U-NII Detection Bandwidth is calculated as follows:

$$\text{U-NII Detection Bandwidth} = F_H - F_L$$

Test Engineer: Djed Mouada

Test Date: 04/27/15

UNII Detection Bandwidth – Test Results

EUT Frequency- 5580MHz											
	DFS Detection Trials (1=Detection, 0= No Detection)										
Radar Frequency (MHz)	1	2	3	4	5	6	7	8	9	10	Detection Rate (%)
5570	1	1	1	1	1	1	1	1	1	1	100
5575	1	1	1	1	1	1	1	1	1	1	100
5580	1	1	1	1	1	1	1	1	1	1	100
5585	1	1	1	1	1	1	1	1	1	1	100
5590	1	1	1	1	1	1	1	1	1	1	100
Detection Bandwidth = f_h - f_l = 5350 – 5330 = 20 MHz											
OBW* 100% = 20 MHz											
Type 0											

Table 19. UNII Detection Bandwidth, Test Results, 20 MHz

EUT Frequency- 5550MHz											
	DFS Detection Trials (1=Detection, 0= No Detection)										
Radar Frequency (MHz)	1	2	3	4	5	6	7	8	9	10	Detection Rate (%)
5530	1	1	1	1	1	1	1	1	1	1	100
5535	1	1	1	1	1	1	1	1	1	1	100
5540	1	1	1	1	1	1	1	1	1	1	100
5545	1	1	1	1	1	1	1	1	1	1	100
5550	1	1	1	1	1	1	1	1	1	1	100
5555	1	1	1	1	1	1	1	1	1	1	100
5560	1	1	1	1	1	1	1	1	1	1	100
5565	1	1	1	1	1	1	1	1	1	1	100
5566	1	1	1	1	1	1	1	1	1	1	100
5567	1	1	1	1	1	1	1	1	1	1	100
Detection Bandwidth = f_h - f_l = 5567 – 5530 = 37MHz											
OBW* 100% = 36.2 MHz											
Type 0											

Table 20. UNII Detection Bandwidth, Test Results, 40 MHz

EUT Frequency- 5530MHz											
	DFS Detection Trials (1=Detection, 0= No Detection)										
Radar Frequency (MHz)	1	2	3	4	5	6	7	8	9	10	Detection Rate (%)
5570	1	1	1	1	1	1	1	1	1	1	100
5565	1	1	1	1	1	1	1	1	1	1	100
5560	1	1	1	1	1	1	1	1	1	1	100
5555	1	1	1	1	1	1	1	1	1	1	100
5550	1	1	1	1	1	1	1	1	1	1	100
5545	1	1	1	1	1	1	1	1	1	1	100
5540	1	1	1	1	1	1	1	1	1	1	100
5535	1	1	1	1	1	1	1	1	1	1	100
5530	1	1	1	1	1	1	1	1	1	1	100
5525	1	1	1	1	1	1	1	1	1	1	100
5520	1	1	1	1	1	1	1	1	1	1	100
5515	1	1	1	1	1	1	1	1	1	1	100
5510	1	1	1	1	1	1	1	1	1	1	100
5505	1	1	1	1	1	1	1	1	1	1	100
5500	1	1	1	1	1	1	1	1	1	1	100
5495	1	1	1	1	1	1	1	1	1	1	100
5490	1	1	1	1	1	1	1	1	1	1	100
Detection Bandwidth = f_h - f_l = 5570 – 5490 = 80 MHz											
OBW* 100% = 80 MHz											
Type 0											

Table 21. UNII Detection Bandwidth, Test Results, 80 MHz

D. Initial Channel Availability Check Time

Test Requirements: **§ 15.407** The Initial Channel Availability Check Time tests that the UUT does not emit beacon, control, or data signals on the test channel until the power-up sequence has been completed and the U-NII device has checked for radar waveforms, for one minute, on the test channel. This test does not use any of the radar waveforms and only needs to be performed once.

The UUT should not make any transmissions over the test channel, for at least 1 minute after completion of its power-on cycle.

Test Procedure: The U-NII device is powered on and instructed to operate at 5530 MHz. At the same time the UUT is powered on, the spectrum analyzer is set to 5530MHz with a zero span and a 2.5 minute sweep time. The analyzer is triggered at the same time power is applied to the U-NII device.

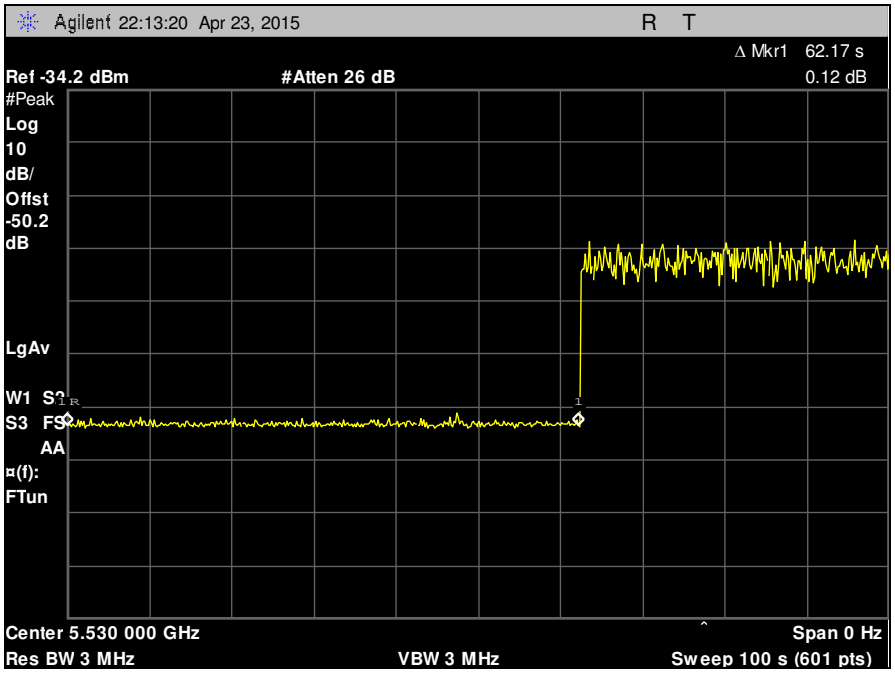
Test Results: Marker 1R on plot 170 indicate the start of the channel availability check time. Initial beacon/data transmission is indicated by marker 1.

The Equipment was compliant with § 15.407 Initial Channel Availability Check Time.

Test Engineer: Djed Mouada

Test Date: 04/23/15

Initial Channel Availability Check Time – Plot



Plot 150. Initial Channel Availability Check Time, No Radar

E. Radar Burst at the Beginning of Channel Availability Check Time

Test Requirements: **§ 15.407** A Radar Burst at the Beginning of the Channel Availability Check Time tests that the UUT does not emit beacon, control, or data signals on the test Channel if it has detected a radar burst during that time period until the power-up sequence has been completed and the U-NII device checks for Radar Waveforms for one minute on the test Channel. The steps below define the procedure to verify successful radar detection on the selected Channel during a period equal to the Channel Availability Check Time and avoidance of operation on that Channel when a radar Burst with a level equal to the DFS Detection Threshold + 1 dB (-63dBm) occurs at the beginning of the Channel Availability Check Time.

Test Procedure: The UUT is powered on at T0. T1 denotes the instant when the UUT has completed its power-up sequence. The Channel Availability Check Time commences at instant T1 and will end no sooner than T1 + 60 seconds.

A single Burst of short pulse radar type 1, at -63 dBm, will commence within a 6 second window starting at T1.

Visual indication of the UUT of successful detection of the radar Burst will be recorded and reported. Observation of transmission at 5530MHz will continue for 2.5 minutes after the radar Burst has been generated.

Verify that during the 2.5 minute measurement window, no UUT transmissions occur at 5530MHz.

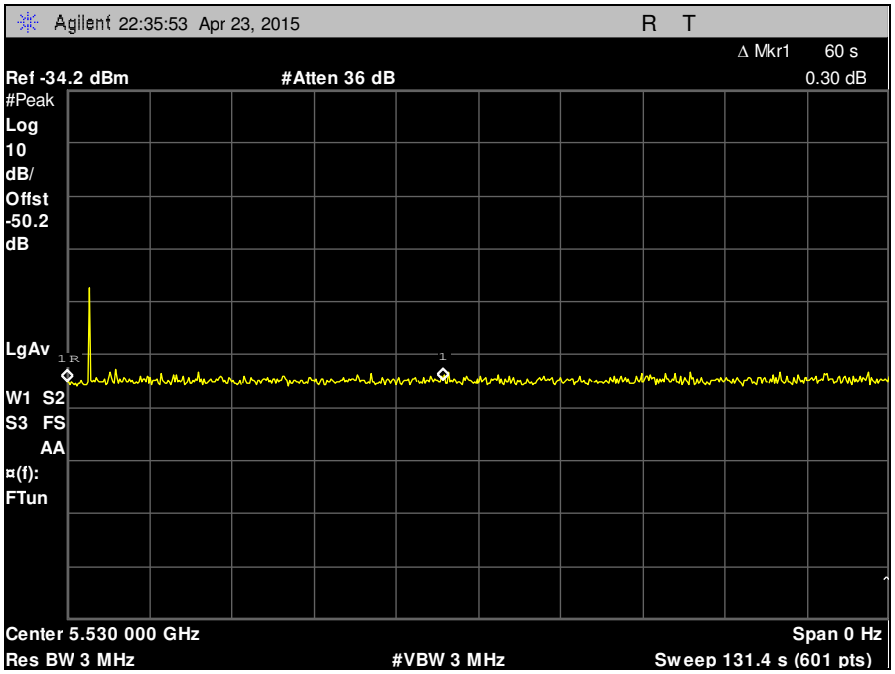
Test Results Plot 151 below indicates that there were no UUT transmissions during the 2.5 minute measurement window when a radar burst was injected 6 seconds into the CACT. Therefore, the UUT detected the presence of a radar during the CACT and moved away from that channel.

The equipment was compliant with § 15.407 Radar Burst at the Beginning of the Channel Availability Check Time.

Test Engineer: Djed Mouada

Test Date: 04/23/15

Radar Burst at the Beginning of Channel Availability Check Time – Plot



Plot 151. Radar Burst at the Beginning of CACT

F. Radar Burst at the End of Channel Availability Check Time

Test Requirements: **§ 15.407** A Radar Burst at the End of the Channel Availability Check Time tests that the UUT does not emit beacon, control, or data signals on the test Channel if it has detected a radar burst during that time period until the power-up sequence has been completed and the U-NII device checks for Radar Waveforms for one minute on the test Channel. The steps below define the procedure to verify successful radar detection on the selected Channel during a period equal to the Channel Availability Check Time and avoidance of operation on that Channel when a radar Burst with a level equal to the DFS Detection Threshold + 1 dB (-63dBm) occurs at the end of the Channel Availability Check Time.

Test Procedure: The steps below define the procedure to verify successful radar detection on the selected Channel during a period equal to the Channel Availability Check Time and avoidance of operation on that Channel when a radar Burst with a level equal to the DFS Detection Threshold + 1 dB (-63dBm) occurs at the end of the Channel Availability Check Time.

The UUT is powered on at T0. T1 denotes the instant when the UUT has completed its power-up sequence. The Channel Availability Check Time commences at instant T1 and will end no sooner than T1 + 60 seconds.

A single Burst of short pulse of radar type 1 at -63 dBm will commence within a 6 second window starting at T1+ 54 seconds.

Visual indication on the UUT of successful detection of the radar Burst will be recorded and reported. Observation of emissions at 5530MHz will continue for 2.5 minutes after the radar Burst has been generated.

Verify that during the 2.5 minute measurement window no UUT transmissions occurred at 5530MHz.

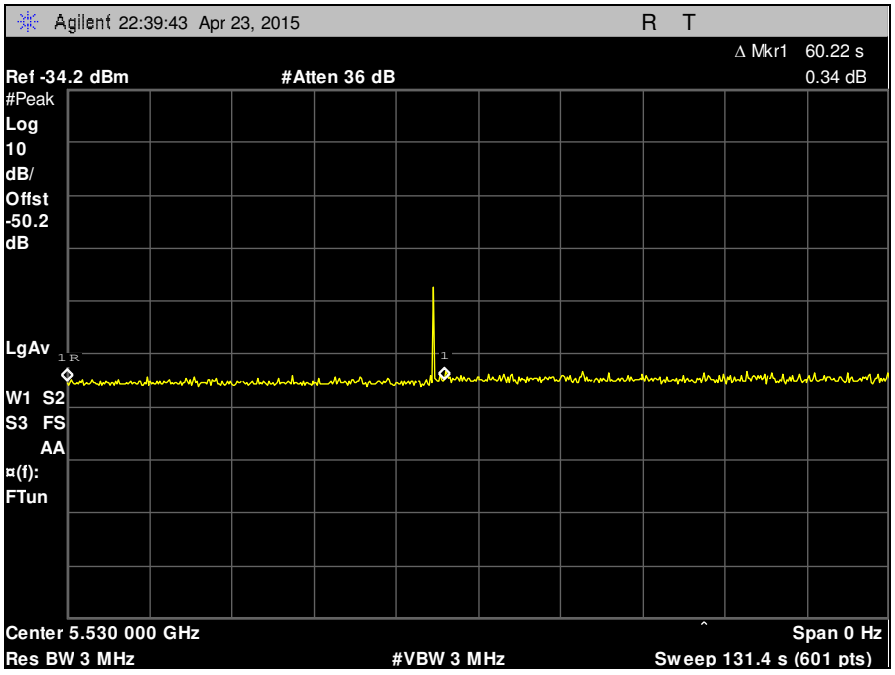
Test Results: Plot 152 indicates that no UUT transmissions occurred during the 2.5 minute measurement window when a radar burst was injected 6 seconds before the end of the CACT. Therefore, the UUT detected the presence of a radar and moved away from that channel.

The equipment was compliant with § 15.407 Radar Burst at the End of the Channel Availability Check Time.

Test Engineer: Djed Mouada

Test Date: 04/23/15

Radar Burst at the End of Channel Availability Check Time – Plot



Plot 152. Radar Burst at the End of CACT

G. In-Service Monitoring for Channel Move Time, Channel Closing Transmission Time, and Non-Occupancy Period

Test Requirements:

§ 15.407 (Refer to DFS Response Requirement Values table in section III-A of this report.) The UUT shall continuously monitor for radar transmissions in the operating test channel. When a radar burst occurs in the test channel, it has 10 seconds to move to another channel. This 10 second window is termed Channel Move Time (CMT).

When a radar burst occurs, the UUT has 200 milliseconds, plus an aggregate of 60 milliseconds over remaining 10 second period, to cease transmission in the operating test channel. This 200 ms + 60 ms over remaining 10 second period requirement is termed Channel Closing Transmission Time (CCT).

After radar burst and subsequent move to another channel, the UUT shall not resume transmission, on the channel it moved from, for a period of 30 minutes. This requirement is termed Non-Occupancy Period (NOP).

Test Procedure:

These tests define how the following DFS parameters are verified during In-Service Monitoring: Channel Closing Transmission Time, Channel Move Time, and Non-Occupancy Period.

The steps below define the procedure to determine the above mentioned parameters when a radar Burst with a level equal to the DFS Detection Threshold + 1dB (-63dBm) is generated on the Operating Channel of the U-NII device.

A U-NII device operating as a Client Device will associate with the UUT (Master) at 5530 MHz. Stream the MPEG test file from the Master Device to the Client Device on the selected Channel for the entire period of the test.

At time T0 the Radar Waveform generator sends a Burst of pulses for each of the radar types at -63dBm.

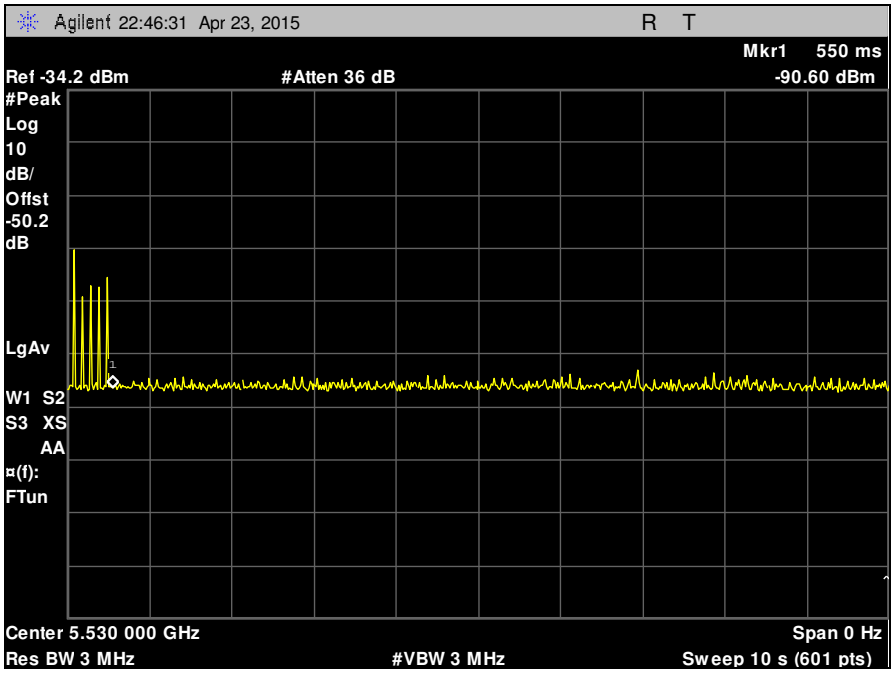
Observe the transmissions of the UUT at the end of the radar Burst on the Operating Channel for duration greater than 10 seconds. Measure and record the transmissions from the UUT during the observation time (Channel Move Time). Compare the Channel Move Time and Channel Closing Transmission Time results to the limits defined in the *DFS Response Requirement Values table*.

Test Results: The EUT was compliant with § 15.407 In-Service Monitoring for Channel Move Time, Channel Closing Transmission Time, and Non-Occupancy Period.

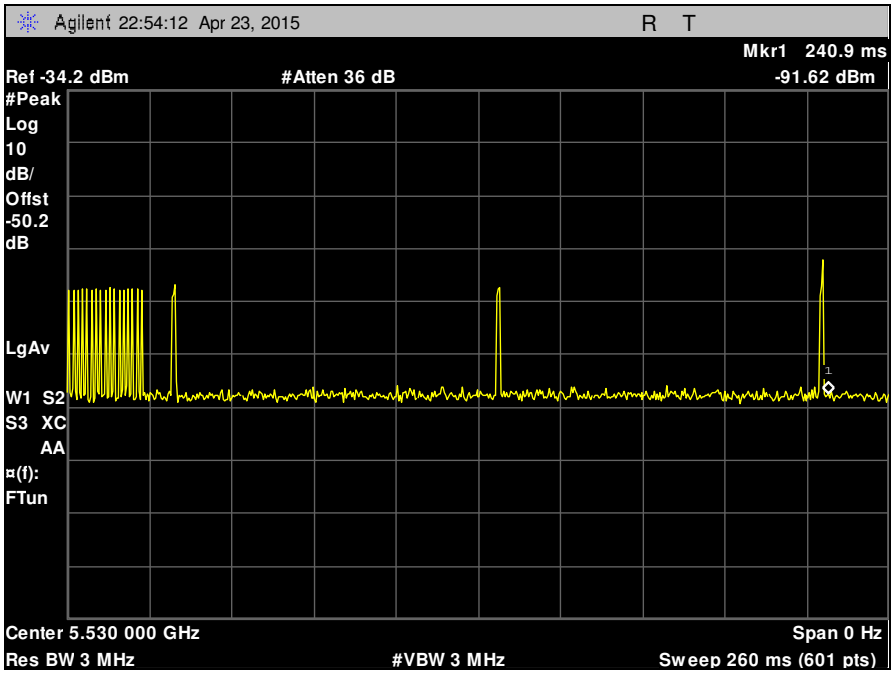
Test Engineer: Djed Mouada

Test Date: 04/27/15

Channel Move Time – Plots

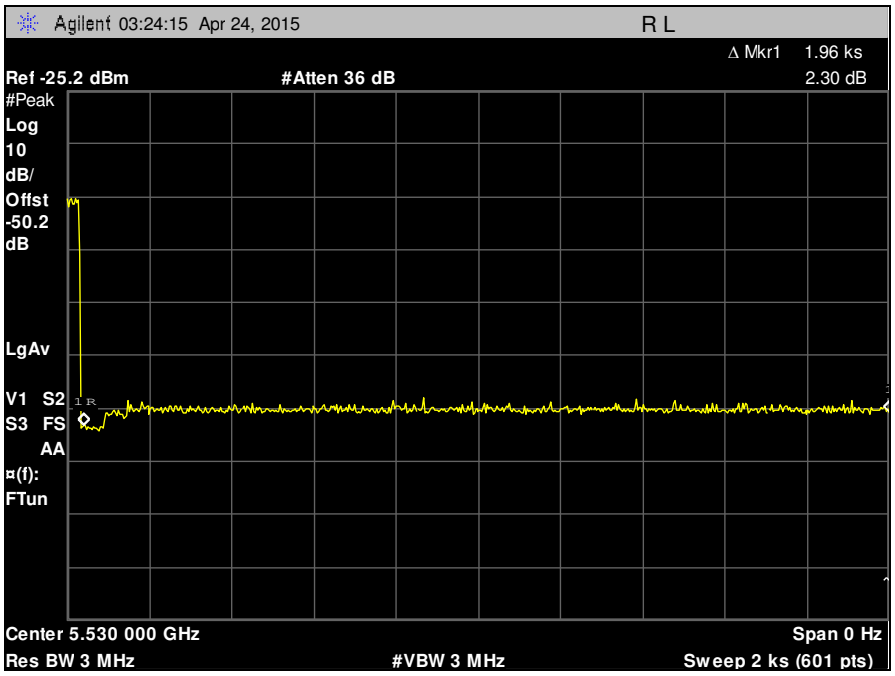


Plot 153. Channel Move Time



Plot 154. Channel Closing Transmission Time

Non-Occupancy Period – Plot



Plot 155. Non-Occupancy Period

H. Statistical Performance Check

Test Requirements: **§ 15.407** During In-Service Monitoring, the EUT requires a minimum percentage of successful radar detections from all required radar waveforms at a level equal to the DFS Detection Threshold + 1dB.

Test Procedure: Stream the MPEG test file from the Master Device to the Client Device on the selected Channel for the entire period of the test. The Radar Waveform generator sends the individual waveform for each of the radar types 1-6 at -63dbm. Statistical data is gathered to determine the ability of the device to detect the radar test waveforms. The device can utilize a test mode to demonstrate when detection occurs to prevent the need to reset the device between trial runs. The percentage of successful detection is calculated by:

$$\frac{TotalWaveformDetections}{TotalWaveformTrials} \times 100$$

The Minimum number of trails, minimum percentage of successful detection and the average minimum percentage of successful detection are found in the Radar Test Waveforms section.

Test Results: The equipment was compliant with § 15.407 Statistical Performance Check.

Test Engineer: Djed Mouada

Test Date: 04/27/15

Statistical Performance Check – Radar Type 0, 20 MHz

Radar Type	Trial #	Pulses per Burst	Pulse Width (µsec)	PRI (µsec)	Detection
					1 = Yes, 0 = No
0	0	18	1	1428	1
	1	18	1	1428	1
	2	18	1	1428	1
	3	18	1	1428	1
	4	18	1	1428	1
	5	18	1	1428	1
	6	18	1	1428	1
	7	18	1	1428	1
	8	18	1	1428	1
	9	18	1	1428	1
	10	18	1	1428	1
	11	18	1	1428	1
	12	18	1	1428	1
	13	18	1	1428	1
	14	18	1	1428	1
	15	18	1	1428	1
	16	18	1	1428	1
	17	18	1	1428	1
	18	18	1	1428	1
	19	18	1	1428	1
	20	18	1	1428	1
	21	18	1	1428	1
	22	18	1	1428	1
	23	18	1	1428	1
	24	18	1	1428	1
	25	18	1	1428	1
	26	18	1	1428	1
	27	18	1	1428	1
	28	18	1	1428	1
	29	18	1	1428	1
	Detection Percentage				100% (> 60%)

Table 22. Statistical Performance Check – Radar Type 0, 20 MHz

Statistical Performance Check – Radar Type 1, 20 MHz

Radar Type	Trial #	Pulses per Burst	Pulse Width (µsec)	PRI (µsec)	Detection
					1 = Yes, 0 = No
1	0	76	1	698	1
	1	70	1	758	1
	2	57	1	938	1
	3	61	1	878	1
	4	59	1	898	1
	5	83	1	638	1
	6	86	1	618	1
	7	92	1	578	1
	8	65	1	818	1
	9	99	1	538	1
	10	95	1	558	1
	11	81	1	658	1
	12	67	1	798	1
	13	74	1	718	1
	14	72	1	738	1
	15	53	1	1002	1
	16	34	1	1587	1
	17	25	1	2161	1
	18	18	1	2996	1
	19	29	1	1850	1
	20	73	1	733	1
	21	33	1	1608	1
	22	23	1	2309	1
	23	27	1	1980	1
	24	28	1	1952	1
	25	33	1	1645	1
	26	23	1	2324	1
	27	84	1	630	1
	28	42	1	1269	1
	29	41	1	1298	1
	Detection Percentage				100% (> 60%)

Table 23. Statistical Performance Check – Radar Type 1, 20 MHz

Statistical Performance Check – Radar Type 2, 20 MHz

Radar Type	Trial #	Pulse Width 1 to 5 µsec	PRI 150 to 230 µsec	Pulses per Burst 23 to 29	Detection 1 = Yes, 0 = No
2	0	3.2	179	26	1
	1	1.1	207	23	1
	2	2.1	230	24	1
	3	4.8	200	29	1
	4	3.9	214	28	1
	5	2.9	222	26	1
	6	3.2	204	26	1
	7	2.5	192	25	1
	8	3.1	164	26	1
	9	1.2	156	23	1
	10	3.9	210	27	1
	11	4.6	201	29	1
	12	3.2	162	26	1
	13	2.2	197	25	1
	14	4.5	163	29	1
	15	3	203	26	1
	16	5	168	29	1
	17	2.4	217	25	1
	18	2.9	191	26	1
	19	2.3	166	25	1
	20	3.7	150	27	1
	21	2.2	176	25	1
	22	4.9	195	29	1
	23	2.9	202	26	1
	24	2.5	178	25	1
	25	1.1	206	23	1
	26	3.8	155	27	1
	27	4.7	157	29	1
	28	2.4	224	25	1
	29	4.2	159	28	1
	Detection Percentage				100% (> 60%)

Table 24. Statistical Performance Check – Radar Type 2, 20 MHz

Statistical Performance Check – Radar Type 3, 20 MHz

Radar Type	Trial #	Pulses per Burst	Pulse Width 6 to 10 µsec	PRI (µsec) PRI 200 to 500 µsec	Detection 1 = Yes, 0 = No
3	17	17	8.2	355	1
	16	16	6.1	487	1
	16	16	7.1	344	1
	18	18	9.8	288	1
	18	18	8.9	230	1
	17	17	7.9	432	1
	17	17	8.2	207	1
	17	17	7.5	443	1
	17	17	8.1	439	1
	16	16	6.2	223	1
	18	18	8.9	208	1
	18	18	9.6	463	1
	17	17	8.2	441	1
	16	16	7.2	323	1
	18	18	9.5	297	1
	17	17	8	412	1
	18	18	10	324	1
	17	17	7.4	271	1
	17	17	7.9	349	1
	16	16	7.3	409	1
	18	18	8.7	373	1
	16	16	7.2	254	1
	18	18	9.9	274	1
	17	17	7.9	278	1
	17	17	7.5	317	1
	16	16	6.1	260	1
	18	18	8.8	211	1
	18	18	9.7	272	1
	17	17	7.4	264	1
	18	18	9.2	284	1
	Detection Percentage				**100% (> 60%)**

Table 25. Statistical Performance Check – Radar Type 3, 20 MHz

Statistical Performance Check – Radar Type 4, 20 MHz

Radar Type	Trial #	Pulses per Burst	Pulse Width 11 to 20 µsec	PRI (µsec) PRI 200 to 500 µsec	Detection 1 = Yes, 0 = No
4	0	14	16	355	1
	1	12	11.3	487	1
	2	13	13.5	344	1
	3	16	19.4	288	1
	4	15	17.5	230	1
	5	14	15.3	432	1
	6	14	15.9	207	1
	7	13	14.3	443	1
	8	14	15.8	439	1
	9	12	11.5	223	1
	10	15	17.4	208	1
	11	16	19	463	1
	12	14	16	441	1
	13	13	13.8	323	1
	14	16	18.9	297	1
	15	14	15.5	412	1
	16	16	19.9	324	1
	17	13	14.1	271	1
	18	14	15.2	349	1
	19	13	13.8	409	1
	20	15	17.1	373	1
	21	13	13.8	254	1
	22	16	19.8	274	1
	23	14	15.3	278	1
	24	13	14.5	317	1
	25	12	11.3	260	1
	26	15	17.3	211	1
	27	16	19.2	272	1
	28	13	14.2	264	1
	29	15	18.2	284	1
	Detection Percentage				**100% (> 60%)**

Table 26. Statistical Performance Check – Radar Type 4, 20 MHz

Statistical Performance Check – Radar Type 5, 20 MHz

Radar Type	Trial #	Pulses per Burst 8 to20	Pulse Width 50 to 100 µsec	PRI (µsec) PRI 1000 to 2000 µsec	Detection 1 = Yes, 0 = No
5	0	See table 1	See table 1	See table 1	1
	1	See table 2	See table 2	See table 2	1
	2	See table 3	See table 3	See table 3	1
	3	See table 4	See table 4	See table 4	1
	4	See table 5	See table 5	See table 5	1
	5	See table 6	See table 6	See table 6	1
	6	See table 7	See table 7	See table 7	1
	7	See table 8	See table 8	See table 8	1
	8	See table 9	See table 9	See table 9	1
	9	See table 10	See table 10	See table 10	1
	10	See table 11	See table 11	See table 11	1
	11	See table 12	See table 12	See table 12	1
	12	See table 13	See table 13	See table 13	1
	13	See table 14	See table 14	See table 14	1
	14	See table 15	See table 15	See table 15	1
	15	See table 16	See table 16	See table 16	1
	16	See table 17	See table 17	See table 17	1
	17	See table 18	See table 18	See table 18	1
	18	See table 19	See table 19	See table 19	1
	19	See table 20	See table 20	See table 20	1
	20	See table 21	See table 21	See table 21	1
	21	See table 22	See table 22	See table 22	1
	22	See table 23	See table 23	See table 23	1
	23	See table 24	See table 24	See table 24	1
	24	See table 25	See table 25	See table 25	1
	25	See table 26	See table 26	See table 26	1
	26	See table 27	See table 27	See table 27	1
	27	See table 28	See table 28	See table 28	1
	28	See table 29	See table 29	See table 29	1
	29	See table 30	See table 30	See table 30	1
	Detection Percentage				**100% (> 60%)**

Table 27. Statistical Performance Check – Radar Type 5, 20 MHz

See Appendix.

Statistical Performance Check – Radar Type 6, 20 MHz

Radar Type	Trial #	Frequency (MHz)	Pulses/Hop	Pulse Width (µsec)	PRI (µsec)	Detection
						1 = Yes, 0 = No
6	0	5580	9	1	333	1
	1	5580	9	1	333	1
	2	5580	9	1	333	1
	3	5580	9	1	333	1
	4	5580	9	1	333	1
	5	5580	9	1	333	1
	6	5580	9	1	333	1
	7	5580	9	1	333	1
	8	5580	9	1	333	1
	9	5580	9	1	333	1
	10	5580	9	1	333	1
	11	5580	9	1	333	1
	12	5580	9	1	333	1
	13	5580	9	1	333	1
	14	5580	9	1	333	1
	15	5580	9	1	333	1
	16	5580	9	1	333	1
	17	5580	9	1	333	1
	18	5580	9	1	333	1
	19	5580	9	1	333	1
	20	5580	9	1	333	1
	21	5580	9	1	333	1
	22	5580	9	1	333	1
	23	5580	9	1	333	1
	24	5580	9	1	333	1
	25	5580	9	1	333	1
	26	5580	9	1	333	1
	27	5580	9	1	333	1
	28	5580	9	1	333	1
	29	5580	9	1	333	1
	Detection Percentage					100% (> 70%)

Table 28. Statistical Performance Check – Radar Type 6, 20 MHz

Statistical Performance Check – Radar Type 0, 40 MHz

Radar Type	Trial #	Pulses per Burst	Pulse Width (µsec)	PRI (µsec)	Detection
					1 = Yes, 0 = No
0	0	18	1	1428	1
	1	18	1	1428	1
	2	18	1	1428	1
	3	18	1	1428	1
	4	18	1	1428	1
	5	18	1	1428	1
	6	18	1	1428	1
	7	18	1	1428	1
	8	18	1	1428	1
	9	18	1	1428	1
	10	18	1	1428	1
	11	18	1	1428	1
	12	18	1	1428	1
	13	18	1	1428	1
	14	18	1	1428	1
	15	18	1	1428	1
	16	18	1	1428	1
	17	18	1	1428	1
	18	18	1	1428	1
	19	18	1	1428	1
	20	18	1	1428	1
	21	18	1	1428	1
	22	18	1	1428	1
	23	18	1	1428	1
	24	18	1	1428	1
	25	18	1	1428	1
	26	18	1	1428	1
	27	18	1	1428	1
	28	18	1	1428	1
	29	18	1	1428	1
	Detection Percentage				100% (> 60%)

Table 29. Statistical Performance Check – Radar Type 0, 40 MHz

Statistical Performance Check – Radar Type 1, 40 MHz

Radar Type	Trial #	Pulses per Burst	Pulse Width (µsec)	PRI (µsec)	Detection
					1 = Yes, 0 = No
1	0	1	1	678	0
	1	1	1	638	1
	2	1	1	3066	1
	3	1	1	938	1
	4	1	1	758	1
	5	1	1	798	1
	6	1	1	658	1
	7	1	1	858	1
	8	1	1	718	1
	9	1	1	918	1
	10	1	1	618	1
	11	1	1	778	1
	12	1	1	538	1
	13	1	1	598	1
	14	1	1	518	1
	15	1	1	1595	1
	16	1	1	894	1
	17	1	1	1651	1
	18	1	1	645	1
	19	1	1	2470	1
	20	1	1	1404	1
	21	1	1	2880	1
	22	1	1	1804	1
	23	1	1	2223	1
	24	1	1	2859	1
	25	1	1	580	1
	26	1	1	934	1
	27	1	1	2576	1
	28	1	1	1556	1
	29	1	1	833	1
	Detection Percentage				100% (> 60%)

Table 30. Statistical Performance Check – Radar Type 1, 40 MHz

Statistical Performance Check – Radar Type 2, 40 MHz

Radar Type	Trial #	Pulse Width 1 to 5 µsec	PRI 150 to 230 µsec	Pulses per Burst 23 to 29	Detection 1 = Yes, 0 = No
2	0	3.2	179	26	1
	1	1.1	207	23	1
	2	2.1	230	24	1
	3	4.8	200	29	1
	4	3.9	214	28	1
	5	2.9	222	26	1
	6	3.2	204	26	1
	7	2.5	192	25	1
	8	3.1	164	26	1
	9	3.2	179	23	1
	10	1.1	207	27	1
	11	2.1	230	29	1
	12	4.8	200	26	1
	13	3.9	214	25	1
	14	2.9	222	29	1
	15	3.2	204	26	1
	16	2.5	192	29	1
	17	3.1	164	25	1
	18	1.2	156	26	1
	19	3.9	210	25	1
	20	4.6	201	27	1
	21	3.2	162	25	1
	22	2.2	197	29	1
	23	4.5	163	26	1
	24	3	203	25	1
	25	5	168	23	1
	26	2.4	217	27	1
	27	2.9	191	29	1
	28	2.3	166	25	1
	29	3.7	150	28	1
	Detection Percentage				100% (> 60%)

Table 31. Statistical Performance Check – Radar Type 2, 40 MHz

Statistical Performance Check – Radar Type 3, 40 MHz

Radar Type	Trial #	Pulses per Burst	Pulse Width 6 to 10 µsec	PRI (µsec) PRI 200 to 500 µsec	Detection 1 = Yes, 0 = No
3	0	17	8.2	355	1
	1	16	6.1	487	1
	2	16	7.1	344	1
	3	18	9.8	288	1
	4	18	8.9	230	1
	5	17	7.9	432	1
	6	17	8.2	207	1
	7	17	7.5	443	1
	8	17	8.1	439	1
	9	16	6.2	223	1
	10	18	8.9	208	1
	11	18	9.6	463	1
	12	17	8.2	441	1
	13	16	7.2	323	1
	14	18	9.5	297	1
	15	17	8	412	1
	16	18	10	324	1
	17	17	7.4	271	1
	18	17	7.9	349	1
	19	16	7.3	409	1
	20	18	8.7	373	1
	21	16	7.2	254	1
	22	18	9.9	274	1
	23	17	7.9	278	1
	24	17	7.5	317	1
	25	16	6.1	260	1
	26	18	8.8	211	1
	27	18	9.7	272	1
	28	17	7.4	264	1
	29	18	9.2	284	1
	Detection Percentage				100% (> 60%)

Table 32. Statistical Performance Check – Radar Type 3, 40 MHz

Statistical Performance Check – Radar Type 4, 40 MHz

Radar Type	Trial #	Pulses per Burst	Pulse Width 11 to 20 µsec	PRI (µsec) PRI 200 to 500 µsec	Detection 1 = Yes, 0 = No
4	0	14	16	355	1
	1	12	11.3	487	1
	2	13	13.5	344	1
	3	16	19.4	288	1
	4	15	17.5	230	1
	5	14	15.3	432	1
	6	14	15.9	207	1
	7	13	14.3	443	1
	8	14	15.8	439	1
	9	12	11.5	223	1
	10	15	17.4	208	1
	11	16	19	463	1
	12	14	16	441	1
	13	13	13.8	323	1
	14	16	18.9	297	1
	15	14	15.5	412	1
	16	16	19.9	324	1
	17	13	14.1	271	1
	18	14	15.2	349	1
	19	13	13.8	409	1
	20	15	17.1	373	1
	21	13	13.8	254	1
	22	16	19.8	274	1
	23	14	15.3	278	1
	24	13	14.5	317	1
	25	12	11.3	260	1
	26	15	17.3	211	1
	27	16	19.2	272	1
	28	13	14.2	264	1
	29	15	18.2	284	1
	Detection Percentage				**100% (> 60%)**

Table 33. Statistical Performance Check – Radar Type 4, 40 MHz

Statistical Performance Check – Radar Type 5, 40 MHz

Radar Type	Trial #	Pulses per Burst 8 to20	Pulse Width 50 to 100 µsec	PRI (µsec) PRI 1000 to 2000 µsec	Detection 1 = Yes, 0 = No
5	0	15	See table 1	See table 1	1
	1	8	See table 2	See table 2	1
	2	11	See table 3	See table 3	1
	3	20	See table 4	See table 4	1
	4	17	See table 5	See table 5	1
	5	14	See table 6	See table 6	1
	6	15	See table 7	See table 7	1
	7	12	See table 8	See table 8	1
	8	14	See table 9	See table 9	1
	9	8	See table 10	See table 10	1
	10	17	See table 11	See table 11	1
	11	19	See table 12	See table 12	1
	12	15	See table 13	See table 13	1
	13	12	See table 14	See table 14	1
	14	19	See table 15	See table 15	1
	15	14	See table 16	See table 16	1
	16	20	See table 17	See table 17	1
	17	12	See table 18	See table 18	1
	18	14	See table 19	See table 19	1
	19	12	See table 20	See table 20	1
	20	16	See table 21	See table 21	1
	21	12	See table 22	See table 22	1
	22	20	See table 23	See table 23	1
	23	14	See table 24	See table 24	1
	24	13	See table 25	See table 25	1
	25	8	See table 26	See table 26	1
	26	17	See table 27	See table 27	1
	27	19	See table 28	See table 28	1
	28	12	See table 29	See table 29	1
	29	18	See table 30	See table 30	1
	Detection Percentage				100% (> 60%)

Table 34. Statistical Performance Check – Radar Type 5, 40 MHz

See Appendix.

Statistical Performance Check – Radar Type 6, 40 MHz

Radar Type	Trial #	Frequency (MHz)	Pulses/Hop	Pulse Width (µsec)	PRI (µsec)	Detection 1 = Yes, 0 = No
6	0	5550	9	1	333	1
	1	5550	9	1	333	1
	2	5550	9	1	333	1
	3	5550	9	1	333	1
	4	5550	9	1	333	1
	5	5550	9	1	333	1
	6	5550	9	1	333	1
	7	5550	9	1	333	1
	8	5550	9	1	333	1
	9	5550	9	1	333	1
	10	5550	9	1	333	1
	11	5550	9	1	333	1
	12	5550	9	1	333	1
	13	5550	9	1	333	1
	14	5550	9	1	333	1
	15	5550	9	1	333	1
	16	5550	9	1	333	1
	17	5550	9	1	333	1
	18	5550	9	1	333	1
	19	5550	9	1	333	1
	20	5550	9	1	333	1
	21	5550	9	1	333	1
	22	5550	9	1	333	1
	23	5550	9	1	333	1
	24	5550	9	1	333	1
	25	5550	9	1	333	1
	26	5550	9	1	333	1
	27	5550	9	1	333	1
	28	5550	9	1	333	1
	29	5550	9	1	333	1
	Detection Percentage					100% (> 70%)

Table 35. Statistical Performance Check – Radar Type 6, 40 MHz

Statistical Performance Check – Radar Type 0, 80 MHz

Radar Type	Trial #	Pulses per Burst	Pulse Width (µsec)	PRI (µsec)	Detection
					1 = Yes, 0 = No
0	0	18	1	1428	1
	1	18	1	1428	1
	2	18	1	1428	1
	3	18	1	1428	1
	4	18	1	1428	1
	5	18	1	1428	1
	6	18	1	1428	1
	7	18	1	1428	1
	8	18	1	1428	1
	9	18	1	1428	1
	10	18	1	1428	1
	11	18	1	1428	1
	12	18	1	1428	1
	13	18	1	1428	1
	14	18	1	1428	1
	15	18	1	1428	1
	16	18	1	1428	1
	17	18	1	1428	1
	18	18	1	1428	1
	19	18	1	1428	1
	20	18	1	1428	1
	21	18	1	1428	1
	22	18	1	1428	1
	23	18	1	1428	1
	24	18	1	1428	1
	25	18	1	1428	1
	26	18	1	1428	1
	27	18	1	1428	1
	28	18	1	1428	1
	29	18	1	1428	1
	Detection Percentage				100% (> 60%)

Table 36. Statistical Performance Check – Radar Type 0, 80 MHz

Statistical Performance Check – Radar Type 1, 80 MHz

Radar Type	Trial #	Pulses per Burst	Pulse Width (µsec)	PRI (µsec)	Detection
					1 = Yes, 0 = No
1	0	74	1	718	1
	1	102	1	518	1
	2	99	1	538	1
	3	78	1	678	1
	4	95	1	558	1
	5	65	1	818	1
	6	83	1	638	1
	7	67	1	798	1
	8	18	1	3066	1
	9	72	1	738	1
	10	63	1	838	1
	11	76	1	698	1
	12	57	1	938	1
	13	70	1	758	1
	14	58	1	918	1
	15	19	1	2881	1
	16	61	1	877	1
	17	46	1	1168	1
	18	19	1	2779	1
	19	37	1	1459	1
	20	45	1	1189	1
	21	30	1	1786	1
	22	32	1	1650	1
	23	24	1	2207	1
	24	26	1	2085	1
	25	79	1	671	1
	26	27	1	1991	1
	27	67	1	788	1
	28	18	1	3061	1
	29	24	1	2226	1
	Detection Percentage				100% (> 60%)

Table 37. Statistical Performance Check – Radar Type 1, 80 MHz

Statistical Performance Check – Radar Type 2, 80 MHz

Radar Type	Trial #	Pulse Width 1 to 5 µsec	PRI 150 to 230 µsec	Pulses per Burst 23 to 29	Detection 1 = Yes, 0 = No
2	0	3.2	179	26	1
	1	1.1	207	23	1
	2	2.1	230	24	1
	3	4.8	200	29	1
	4	3.9	214	28	1
	5	2.9	222	26	1
	6	3.2	204	26	1
	7	2.5	192	25	1
	8	3.1	164	26	1
	9	1.2	156	23	1
	10	3.9	210	27	1
	11	4.6	201	29	1
	12	3.2	162	26	1
	13	2.2	197	25	1
	14	4.5	163	29	1
	15	3	203	26	1
	16	5	168	29	1
	17	2.4	217	25	1
	18	2.9	191	26	1
	19	2.3	166	25	1
	20	3.7	150	27	1
	21	2.2	176	25	1
	22	4.9	195	29	1
	23	2.9	202	26	1
	24	2.5	178	25	1
	25	1.1	206	23	1
	26	3.8	155	27	1
	27	4.7	157	29	1
	28	2.4	224	25	1
	29	4.2	159	28	1
	Detection Percentage				100% (> 60%)

Table 38. Statistical Performance Check – Radar Type 2, 80 MHz

Statistical Performance Check – Radar Type 3, 80 MHz

Radar Type	Trial #	Pulses per Burst	Pulse Width 6 to 10 µsec	PRI (µsec) PRI 200 to 500 µsec	Detection 1 = Yes, 0 = No
3	0	8.2	355	17	1
	1	6.1	487	16	1
	2	7.1	344	16	1
	3	9.8	288	18	1
	4	8.9	230	18	1
	5	7.9	432	17	1
	6	8.2	207	17	1
	7	7.5	443	17	1
	8	8.1	439	17	1
	9	6.2	223	16	1
	10	8.9	208	18	1
	11	9.6	463	18	1
	12	8.2	441	17	1
	13	7.2	323	16	1
	14	9.5	297	18	1
	15	8	412	17	1
	16	10	324	18	1
	17	7.4	271	17	1
	18	7.9	349	17	1
	19	7.3	409	16	1
	20	8.7	373	18	1
	21	7.2	254	16	1
	22	9.9	274	18	1
	23	7.9	278	17	1
	24	7.5	317	17	1
	25	6.1	260	16	1
	26	8.8	211	18	1
	27	9.7	272	18	1
	28	7.4	264	17	1
	29	9.2	284	18	1
	Detection Percentage				93% (> 60%)

Table 39. Statistical Performance Check – Radar Type 3, 80 MHz

Statistical Performance Check – Radar Type 4, 80 MHz

Radar Type	Trial #	Pulses per Burst	Pulse Width 11 to 20 µsec	PRI (µsec) PRI 200 to 500 µsec	Detection 1 = Yes, 0 = No
4	0	14	16	355	1
	1	12	11.3	487	1
	2	13	13.5	344	1
	3	16	19.4	288	1
	4	15	17.5	230	1
	5	14	15.3	432	1
	6	14	15.9	207	1
	7	13	14.3	443	1
	8	14	15.8	439	1
	9	12	11.5	223	1
	10	15	17.4	208	1
	11	16	19	463	1
	12	14	16	441	1
	13	13	13.8	323	1
	14	16	18.9	297	1
	15	14	15.5	412	1
	16	16	19.9	324	1
	17	13	14.1	271	1
	18	14	15.2	349	1
	19	13	13.8	409	1
	20	15	17.1	373	1
	21	13	13.8	254	1
	22	16	19.8	274	1
	23	14	15.3	278	1
	24	13	14.5	317	1
	25	12	11.3	260	1
	26	15	17.3	211	1
	27	16	19.2	272	1
	28	13	14.2	264	1
	29	15	18.2	284	1
	Detection Percentage				**90% (> 60%)**

Table 40. Statistical Performance Check – Radar Type 4, 80 MHz

Statistical Performance Check – Radar Type 5, 80 MHz

Radar Type	Trial #	Pulses per Burst 8 to20	Pulse Width 50 to 100 µsec	PRI (µsec) PRI 1000 to 2000 µsec	Detection 1 = Yes, 0 = No
5	0	See table 1	See table 1	See table 1	1
	1	See table 2	See table 2	See table 2	1
	2	See table 3	See table 3	See table 3	1
	3	See table 4	See table 4	See table 4	1
	4	See table 5	See table 5	See table 5	1
	5	See table 6	See table 6	See table 6	1
	6	See table 7	See table 7	See table 7	1
	7	See table 8	See table 8	See table 8	1
	8	See table 9	See table 9	See table 9	1
	9	See table 10	See table 10	See table 10	1
	10	See table 11	See table 11	See table 11	1
	11	See table 12	See table 12	See table 12	1
	12	See table 13	See table 13	See table 13	1
	13	See table 14	See table 14	See table 14	1
	14	See table 15	See table 15	See table 15	1
	15	See table 16	See table 16	See table 16	1
	16	See table 17	See table 17	See table 17	1
	17	See table 18	See table 18	See table 18	1
	18	See table 19	See table 19	See table 19	1
	19	See table 20	See table 20	See table 20	1
	20	See table 21	See table 21	See table 21	1
	21	See table 22	See table 22	See table 22	1
	22	See table 23	See table 23	See table 23	1
	23	See table 24	See table 24	See table 24	1
	24	See table 25	See table 25	See table 25	1
	25	See table 26	See table 26	See table 26	1
	26	See table 27	See table 27	See table 27	1
	27	See table 28	See table 28	See table 28	1
	28	See table 29	See table 29	See table 29	1
	29	See table 30	See table 30	See table 30	1
	Detection Percentage				**100% (> 60%)**

Table 41. Statistical Performance Check – Radar Type 5, 80 MHz

See Appendix.

Statistical Performance Check – Radar Type 6, 80 MHz

Radar Type	Trial #	Frequency (MHz)	Pulses/Hop	Pulse Width (µsec)	PRI (µsec)	Detection
						1 = Yes, 0 = No
6	0	5530	9	1	333	1
	1	5530	9	1	333	1
	2	5530	9	1	333	1
	3	5530	9	1	333	1
	4	5530	9	1	333	1
	5	5530	9	1	333	1
	6	5530	9	1	333	1
	7	5530	9	1	333	1
	8	5530	9	1	333	1
	9	5530	9	1	333	1
	10	5530	9	1	333	1
	11	5530	9	1	333	1
	12	5530	9	1	333	1
	13	5530	9	1	333	1
	14	5530	9	1	333	1
	15	5530	9	1	333	1
	16	5530	9	1	333	1
	17	5530	9	1	333	1
	18	5530	9	1	333	1
	19	5530	9	1	333	1
	20	5530	9	1	333	1
	21	5530	9	1	333	1
	22	5530	9	1	333	1
	23	5530	9	1	333	1
	24	5530	9	1	333	1
	25	5530	9	1	333	1
	26	5530	9	1	333	1
	27	5530	9	1	333	1
	28	5530	9	1	333	1
	29	5530	9	1	333	1
	Detection Percentage					100% (> 70%)

Table 42. Statistical Performance Check – Radar Type 6, 80 MHz

IV. Test Equipment

Test Equipment

Calibrated test equipment utilized during testing was maintained in a current state of calibration per the requirements of ISO/IEC 17025:2005.

MET Asset #	Equipment	Manufacturer	Model	Last Cal Date	Cal Due Date
1T4409	EMI RECEIVER	ROHDE & SCHWARZ	ESIB7	10/29/2014	10/29/2016
1T4751	ANTENNA - BILOG	SUNOL SCIENCES	JB6	7/29/2014	1/29/2016
1T4771	PSA SPECTRUM ANALYZER	AGILENT TECHNOLOGIES	E4446A	11/25/2014	11/25/2015
1T4745	ANTENNA, HORN	ETS-LINDGREN	3116	11/14/2013	5/14/2015
1T4505	TEMPERATURE CHAMBER	TEST EQUITY	115	1/5/2014	1/5/2015
1T4377	TRUE RMS MULTIMETER	FLUKE	189	7/25/2013	1/25/2015
1T4612	SPECTRUM ANALYZER	AGILENT TECHNOLOGIES	E4407B	7/25/2014	7/25/2015
1T4483	ANTENNA; HORN	ETS-LINDGREN	3117	2/28/2014	8/28/2015
1T2665	ANTENNA; HORN	EMCO	3115	4/3/2014	10/3/2015
1T4565	LISN (24 AMP)	SOLAR ELECTRONICS	9252-50-R-24-BNC	6/26/2014	12/26/2015

Table 43. Test Equipment List

MET ASSET #	EQUIPMENT	MANUFACTURER	MODEL	LAST CAL DATE	CAL DUE DATE
1T4504	SHIELDED ROOM	UNIVERSAL SHIELDING CORP	N/A	SEE NOTE	
1T4752	PRE-AMPLIFIER	MITEQ	JS44-18004000-35-8P	SEE NOTE	
1S2602	DFS SIGNAL GENERATOR	NATIONAL INSTRUMENTS	NIPXI-1042	SEE NOTE	
1T4568	RADIATING NOISE SOURCE	MET LABORATORIES	N/A	SEE NOTE	
1T4814	COMB GENERATOR	COM-POWER	CGO-5100	SEE NOTE	

Table 44. DFS Test Equipment List

Note: Functionally tested equipment is verified using calibrated instrumentation at the time of testing.

V. Certification & User's Manual Information

Certification & User's Manual Information

A. Certification Information

The following is extracted from Title 47 of the Code of Federal Regulations, Part 2, Subpart I — Marketing of Radio frequency devices:

§ 2.801 Radio-frequency device defined.

As used in this part, a radio-frequency device is any device which in its operation is capable of Emitting radio-frequency energy by radiation, conduction, or other means. Radio- frequency devices include, but are not limited to:

(a) The various types of radio communication transmitting devices described throughout this chapter.

(b) The incidental, unintentional and intentional radiators defined in Part 15 of this chapter.

(c) The industrial, scientific, and medical equipment described in Part 18 of this chapter.

(d) Any part or component thereof which in use emits radio-frequency energy by radiation, conduction, or other means.

§ 2.803 Marketing of radio frequency devices prior to equipment authorization.

(a) Except as provided elsewhere in this chapter, no person shall sell or lease, or offer for sale or lease (including advertising for sale or lease), or import, ship or distribute for the purpose of selling or leasing or offering for sale or lease, any radio frequency device unless:

(1) In the case of a device subject to certification, such device has been authorized by the Commission in accordance with the rules in this chapter and is properly identified and labeled as required by §2.925 and other relevant sections in this chapter; or

(2) In the case of a device that is not required to have a grant of equipment authorization issued by the Commission, but which must comply with the specified technical standards prior to use, such device also complies with all applicable administrative (including verification of the equipment or authorization under a Declaration of Conformity, where required), technical, labeling and identification requirements specified in this chapter.

(d) Notwithstanding the provisions of paragraph (a) of this section, the offer for sale solely to business, commercial, industrial, scientific or medical users (but not an offer for sale to other parties or to end users located in a residential environment) of a radio frequency device that is in the conceptual, developmental, design or pre-production stage is permitted prior to equipment authorization or, for devices not subject to the equipment authorization requirements, prior to a determination of compliance with the applicable technical requirements *provided* that the prospective buyer is advised in writing at the time of the offer for sale that the equipment is subject to the FCC rules and that the equipment will comply with the appropriate rules before delivery to the buyer or to centers of distribution.

(e)(1) Notwithstanding the provisions of paragraph (a) of this section, prior to equipment authorization or determination of compliance with the applicable technical requirements any radio frequency device may be operated, but not marketed, for the following purposes and under the following conditions:

(i) Compliance testing;

(ii) Demonstrations at a trade show provided the notice contained in paragraph (c) of this section is displayed in a conspicuous location on, or immediately adjacent to, the device;

(iii) Demonstrations at an exhibition conducted at a business, commercial, industrial, scientific or medical location, but excluding locations in a residential environment, provided the notice contained in paragraphs (c) or (d) of this section, as appropriate, is displayed in a conspicuous location on, or immediately adjacent to, the device;

(iv) Evaluation of product performance and determination of customer acceptability, provided such operation takes place at the manufacturer's facilities during developmental, design or pre-production states; or

(v) Evaluation of product performance and determination of customer acceptability where customer acceptability of a radio frequency device cannot be determined at the manufacturer's facilities because of size or unique capability of the device, provided the device is operated at a business, commercial, industrial, scientific or medical user's site, but not at a residential site, during the development, design or pre-production stages.

(e)(2) For the purpose of paragraphs (e)(1)(iv) and (e)(1)(v) of this section, the term *manufacturer's facilities* includes the facilities of the party responsible for compliance with the regulations and the manufacturer's premises, as well as the facilities of other entities working under the authorization of the responsible party in connection with the development and manufacture, but not the marketing, of the equipment.

(f) For radio frequency devices subject to verification and sold solely to business, commercial, industrial, scientific and medical users (excluding products sold to other parties or for operation in a residential environment), parties responsible for verification of the devices shall have the option of ensuring compliance with the applicable technical specifications of this chapter at each end user's location after installation, provided that the purchase or lease agreement includes a proviso that such a determination of compliance be made and is the responsibility of the party responsible for verification of the equipment.

Certification & User's Manual Information

The following is extracted from Title 47 of the Code of Federal Regulations, Part 2, Subpart J — Equipment Authorization Procedures:

§ 2.901 Basis and Purpose

(a) In order to carry out its responsibilities under the Communications Act and the various treaties and international regulations, and in order to promote efficient use of the radio spectrum, the Commission has developed technical standards for radio frequency equipment and parts or components thereof. The technical standards applicable to individual types of equipment are found in that part of the rules governing the service wherein the equipment is to be operated.[1] *In addition to the technical standards provided, the rules governing the service may require that such equipment be verified by the manufacturer or importer*, be authorized under a Declaration of Conformity, or receive an equipment authorization from the Commission by one of the following procedures: certification or registration.

(b) The following sections describe the verification procedure, the procedure for a Declaration of Conformity, and the procedures to be followed in obtaining certification from the Commission and the conditions attendant to such a grant.

§ 2.907 Certification.

(a) Certification is an equipment authorization issued by the Commission, based on representation and test data submitted by the applicant.

(b) Certification attaches to all units subsequently marketed by the grantee which are identical (see Section 2.908) to the sample tested except for permissive changes or other variations authorized by the Commission pursuant to Section 2.1043.

[1] In this case, the equipment is subject to the rules of Part 15. More specifically, the equipment falls under Subpart B (of Part 15), which deals with unintentional radiators.

Certification & User's Manual Information

§ 2.948 Description of measurement facilities.

(a) Each party making measurements of equipment that is subject to an equipment authorization under Part 15 or Part 18 of this chapter, regardless of whether the measurements are filed with the Commission or kept on file by the party responsible for compliance of equipment marketed within the U.S. or its possessions, shall compile a description of the measurement facilities employed.

(1) If the measured equipment is subject to the verification procedure, the description of the measurement facilities shall be retained by the party responsible for verification of the equipment.

(i) If the equipment is verified through measurements performed by an independent laboratory, it is acceptable for the party responsible for verification of the equipment to rely upon the description of the measurement facilities retained by or placed on file with the Commission by that laboratory. In this situation, the party responsible for the verification of the equipment is not required to retain a duplicate copy of the description of the measurement facilities.

(ii) If the equipment is verified based on measurements performed at the installation site of the equipment, no specific site calibration data is required. It is acceptable to retain the description of the measurement facilities at the site at which the measurements were performed.

(2) If the equipment is to be authorized by the Commission under the certification procedure, the description of the measurement facilities shall be filed with the Commission's Laboratory in Columbia, Maryland. The data describing the measurement facilities need only be filed once but must be updated as changes are made to the measurement facilities or as otherwise described in this section. At least every three years, the organization responsible for filing the data with the Commission shall certify that the data on file is current.

Certification & User's Manual Information

Label and User's Manual Information

The following is extracted from Title 47 of the Code of Federal Regulations, Part 15, Subpart A — General:

§ 15.19 Labeling requirements.

(a) In addition to the requirements in Part 2 of this chapter, a device subject to certification or verification shall be labeled as follows:

(1) Receivers associated with the operation of a licensed radio service, e.g., FM broadcast under Part 73 of this chapter, land mobile operation under Part 90, etc., shall bear the following statement in a conspicuous location on the device:

This device complies with Part 15 of the FCC Rules. Operation is subject to the condition that this device does not cause harmful interference.

(2) A stand-alone cable input selector switch, shall bear the following statement in a conspicuous location on the device:

This device is verified to comply with Part 15 of the FCC Rules for use with cable television service.

(3) All other devices shall bear the following statement in a conspicuous location on the device:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

(4) Where a device is constructed in two or more sections connected by wires and marketed together, the statement specified under paragraph (a) of this section is required to be affixed only to the main control unit.

(5) When the device is so small or for such use that it is not practicable to place the statement specified under paragraph (a) of this section on it, the information required by this paragraph shall be placed in a prominent location in the instruction manual or pamphlet supplied to the user or, alternatively, shall be placed on the container in which the device is marketed. However, the FCC identifier or the unique identifier, as appropriate, must be displayed on the device.

§ 15.21 Information to user.

The users manual or instruction manual for an intentional or unintentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Verification & User's Manual Information

The following is extracted from Title 47 of the Code of Federal Regulations, Part 15, Subpart B — Unintentional Radiators:

§ 15.105 Information to the user.

(a) For a Class A digital device or peripheral, the instructions furnished the user shall include the following or similar statement, placed in a prominent location in the text of the manual:

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at own expense.

(b) For a Class B digital device or peripheral, the instructions furnished the user shall include the following or similar statement, placed in a prominent location in the text of the manual:

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

– Reorient or relocate the receiving antenna.

– Increase the separation between the equipment and receiver.

– Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

– Consult the dealer or an experienced radio/TV technician for help.

VI. Appendix

20 MHz

Table 1								
	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	636185	77.8	13	2	1665	1477	-
	1	32674	51.9	5	1	1074	-	-
	2	226294	63.8	9	1	1584	-	-
	3	417976	96.6	19	3	1682	1786	1843
	4	611152	85.9	16	3	1795	1215	1729
	5	8789	73.7	12	2	1198	1549	-
	6	201917	77.2	13	2	1837	1819	-
	7	395530	68.4	10	2	1587	1114	-
	8	588564	76.7	13	2	2000	1155	-
	9	783794	53.2	6	1	1147	-	-
	10	177933	85.7	16	3	1433	1695	1394
	11	370624	94.3	19	3	1670	1426	1935
	12	564893	77.6	13	2	1294	1671	-
	13	759583	65.7	10	1	1512	-	-
	14	154262	93.5	18	3	1444	1130	1468
				Table 2				
	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	653020	75	12	2	1880	1527	-
	1	1015643	99.4	20	3	1401	1262	1257
	2	1379398	67.4	10	2	1531	1403	-
	3	245489	73.6	12	2	1449	1041	-
	4	609113	65.9	10	1	1432	-	-
	5	970852	83.8	15	3	1356	1292	1419
	6	1335913	65.5	9	1	1543	-	-
	7	200406	98.6	20	3	1548	1796	1728
				Table 3				
	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	409565	73.8	12	2	1806	1538	-
	1	673692	69.5	11	2	1117	1649	-
	2	938562	51.9	5	1	1651	-	-

	3	113209	84.6	16	3	1976	1032	1271
	4	376726	95.4	19	3	1060	1903	1388
	5	641212	68	10	2	1368	1351	-
	6	903714	89.6	17	3	1338	1514	1573
	7	80863	81.9	15	2	1022	1689	-
	8	344067	88.3	17	3	1810	1330	1838
	9	609331	53.7	6	1	1597	-	-
	10	871542	91.3	18	3	1961	1106	1001
				Table 4				
	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	26541	68.1	10	2	1339	1355	-
	1	171821	58.7	7	1	1251	-	-
	2	316229	75.3	13	2	1136	1640	-
	3	461864	56.4	7	1	1753	-	-
	4	8677	99.7	20	3	1196	1708	1159
	5	153995	57.7	7	1	1013	-	-
	6	299238	59.5	8	1	1072	-	-
	7	443177	80	14	2	1482	1369	-
	8	587671	82	15	2	1993	1197	-
	9	135674	82.8	15	2	1883	1005	-
	10	279928	88	17	3	1061	1928	1101
	11	424279	93.2	18	3	1207	1907	1223
	12	570132	70.4	11	2	1526	1360	-
	13	117439	95.3	19	3	1171	1955	1775
	14	262502	81.9	15	2	1690	1545	-
	15	406573	98.5	20	3	1975	1169	1062
	16	553328	65	9	1	1767	-	-
	17	99799	85.4	16	3	1011	1637	1425
	18	244095	91.6	18	3	1878	1445	1325
	19	390012	67.3	10	2	1091	1218	-
				Table 5				
	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	629614	67.9	10	2	1320	1133	-
	1	96856	62.3	8	1	1957	-	-
	2	267719	53.3	6	1	1592	-	-

	3	436784	90	17	3	1900	1153	1346
	4	608289	77.1	13	2	1166	1646	-
	5	75610	83.9	15	3	1278	1232	1459
	6	245638	89.1	17	3	1240	1384	1939
	7	416355	81.8	15	2	1833	1676	-
	8	588736	50.3	5	1	1075	-	-
	9	54571	87.1	16	3	1116	1996	1756
	10	225175	71.3	11	2	1225	1815	-
	11	394825	97.5	20	3	1884	1465	1132
	12	565361	90.6	17	3	1561	1040	1354
	13	33643	86.3	16	3	1596	1183	1792
	14	203957	97.6	20	3	1365	1073	1361
	15	373812	84.7	16	3	1021	1718	1854
	16	544060	99.7	20	3	1150	1244	1988
				Table 6				
	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	15438	92.9	18	3	1085	1564	1407
	1	222486	67.7	10	2	1744	1747	-
	2	430731	65.8	10	1	1092	-	-
	3	637784	56.3	7	1	1851	-	-
	4	845342	53.7	6	1	1727	-	-
	5	196720	83.5	15	3	1679	1930	1025
	6	404955	65.8	10	1	1519	-	-
	7	610711	85.9	16	3	1134	1034	1808
	8	818057	76.3	13	2	1606	1926	-
	9	171459	81.5	15	2	1891	1714	-
	10	377969	89.4	17	3	1310	1594	1827
	11	586875	63.4	9	1	1568	-	-
	12	792834	69.6	11	2	1307	1925	-
	13	146044	74.5	12	2	1264	1846	-
				Table 7				
	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	329022	96.6	19	3	1182	1609	1581
	1	521718	96.7	19	3	1829	1799	1154
	2	714222	86.5	16	3	1923	1396	1865

	3	112450	73.3	12	2	1908	1318	-
	4	306283	55.8	6	1	1688	-	-
	5	500239	55.4	6	1	1145	-	-
	6	690932	85.3	16	3	1336	1504	1820
	7	88645	79.4	14	2	1344	1893	-
	8	282508	65.7	10	1	1476	-	-
	9	475842	68.6	10	2	1008	1028	-
	10	667887	77.7	13	2	1972	1835	-
	11	64845	79.6	14	2	1882	1331	-
	12	257755	94.9	19	3	1830	1070	1349
	13	452335	61.4	8	1	1451	-	-
	14	643395	90.6	17	3	1233	1562	1887
				Table 8				
	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	51446	52.6	5	1	1210	-	-
	1	292696	84.1	15	3	1314	1725	1529
	2	533989	97.7	20	3	1139	1868	1805
	3	775564	97.3	20	3	1341	1446	1755
	4	21542	98.8	20	3	1544	1386	1302
	5	263385	72.2	12	2	1771	1184	-
	6	505581	67.6	10	2	1175	1027	-
	7	747058	75.7	13	2	1026	1871	-
	8	989976	60.9	8	1	1798	-	-
	9	234024	64.2	9	1	1138	-	-
	10	475207	78.8	14	2	1784	1604	-
	11	715825	87.5	16	3	1511	1712	1683
				Table 9				
	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	823112	54.1	6	1	1415	-	-
	1	174965	50.7	5	1	1221	-	-
	2	382216	52.3	5	1	1974	-	-
	3	587395	99.8	20	3	1558	1696	1949
	4	796897	68.4	10	2	1014	1099	-
	5	149042	80.8	14	2	1736	1505	-
	6	356750	62.5	9	1	1778	-	-

	7	563824	74.8	12	2	1149	1204	-
	8	772314	50.8	5	1	1049	-	-
	9	123796	54	6	1	1417	-	-
	10	331215	63	9	1	1730	-	-
	11	537402	91.8	18	3	1143	1270	1347
	12	744805	79.3	14	2	1274	1992	-
	13	98172	64.3	9	1	1937	-	-
				Table 10				
	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	535615	63.4	9	1	1043	-	-
	1	898668	52	5	1	1863	-	-
	2	1259235	97.2	20	3	1973	1605	1583
	3	127106	78.7	14	2	1466	1743	-
	4	490358	74.2	12	2	1280	1219	-
	5	852409	88.7	17	3	1293	1934	1273
	6	1217152	54.3	6	1	1991	-	-
	7	82296	95.4	19	3	1580	1555	1791
				Table 11				
	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	209249	73.7	12	2	1208	1497	-
	1	378386	97.4	20	3	1942	1754	1613
	2	548411	91.7	18	3	1999	1702	1462
	3	17733	66.2	10	1	1393	-	-
	4	187952	70.8	11	2	1968	1821	-
	5	359277	52.3	5	1	1740	-	-
	6	528886	78.9	14	2	1308	1984	-
	7	700166	70.9	11	2	1050	1358	-
	8	167197	75.6	13	2	1437	1430	-
	9	338262	59.1	7	1	1697	-	-
	10	508324	77	13	2	1397	1304	-
	11	678689	67.9	10	2	1803	1083	-
	12	146031	81.2	14	2	1720	1932	-
	13	316923	78.7	14	2	1247	1121	-
	14	488056	63.3	9	1	1634	-	-
	15	657326	68.9	11	2	1849	1423	-

	16	125509	59.3	7	1	1093	-	-
				Table 12				
	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	263736	98.9	20	3	1381	1680	1488
	1	416459	82.3	15	2	1716	1855	-
	2	567902	86.7	16	3	1211	1400	1919
	3	92979	89.7	17	3	1861	1068	1282
	4	245155	98.6	20	3	1507	1194	1461
	5	397609	71.1	11	2	1921	1789	-
	6	551431	55.9	6	1	1947	-	-
	7	74413	67.9	10	2	1350	1372	-
	8	226559	84.4	16	3	1203	1107	1443
	9	380056	58.8	7	1	1715	-	-
	10	533408	65.6	9	1	1017	-	-
	11	55547	78.5	14	2	1911	1704	-
	12	207876	82.3	15	2	1845	1686	-
	13	359771	90.1	17	3	1938	1071	1266
	14	511297	90.2	17	3	1989	1089	1950
	15	36803	83.1	15	2	1943	1406	-
	16	189652	58.8	7	1	1742	-	-
	17	341809	77	13	2	1187	1657	-
	18	495737	55	6	1	1012	-	-
				Table 13				
	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	22911	58.1	7	1	1929	-	-
	1	216473	52.1	5	1	1910	-	-
	2	410004	59.9	8	1	1971	-	-
	3	603671	60.2	8	1	1812	-	-
	4	794160	95.9	19	3	1399	1906	1608
	5	192251	79.9	14	2	1626	1859	-
	6	385590	78.5	14	2	1238	1917	-
	7	579862	53.8	6	1	1763	-	-
	8	773423	64.7	9	1	1800	-	-
	9	168898	61.4	8	1	1390	-	-
	10	361606	83.2	15	2	1692	1858	-

	11	553866	84.7	16	3	1533	1677	1638
	12	747241	88.7	17	3	1703	1528	1058
	13	144710	78.3	14	2	1258	1951	-
	14	337856	69.3	11	2	1731	1717	-
				Table 14				
	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	664275	75.3	13	2	1994	1612	-
	1	907886	56.3	7	1	1456	-	-
	2	151316	67.7	10	2	1617	1185	-
	3	393746	55.6	6	1	1337	-	-
	4	635093	75.2	13	2	1421	1267	-
	5	876993	76.3	13	2	1359	1305	-
	6	121278	85.7	16	3	1547	1362	1924
	7	362696	98.4	20	3	1873	1550	1249
	8	604342	86.4	16	3	1779	1439	1046
	9	846453	93.6	18	3	1059	1031	1452
	10	91871	63.3	9	1	1328	-	-
	11	333050	92.4	18	3	1412	1673	1322
				Table 15				
	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	361323	93.3	18	3	1983	1912	1535
	1	515261	69.1	11	2	1102	1794	-
	2	39025	86.9	16	3	1044	1152	1148
	3	190900	84.9	16	3	1894	1948	1118
	4	343941	72.3	12	2	1094	1916	-
	5	497624	51.7	5	1	1447	-	-
	6	20319	58.3	7	1	1429	-	-
	7	172999	60.8	8	1	1979	-	-
	8	325872	57.1	7	1	1641	-	-
	9	475841	88.9	17	3	1886	1964	1489
	10	1489	72	12	2	1909	1297	-
	11	153647	90.9	18	3	1261	1566	1370
	12	307096	59.8	8	1	1552	-	-
	13	458804	70	11	2	1759	1291	-
	14	610798	67.2	10	2	1625	1881	-

	15	134759	91.2	18	3	1382	1832	1661
	16	288306	56.5	7	1	1483	-	-
	17	441296	51.2	5	1	1237	-	-
	18	592780	74.1	12	2	1471	1245	-
				Table 16				
	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	158286	76.9	13	2	1110	1140	-
	1	366024	50.2	5	1	1316	-	-
	2	573452	62.9	9	1	1520	-	-
	3	780619	64.7	9	1	1902	-	-
	4	132455	83.8	15	3	1410	1097	1621
	5	340207	65.4	9	1	1944	-	-
	6	548208	53.2	6	1	1024	-	-
	7	755333	51.7	5	1	1603	-	-
	8	107117	78.7	14	2	1804	1168	-
	9	314500	72.4	12	2	1030	1343	-
	10	522447	53.8	6	1	1327	-	-
	11	728517	73.6	12	2	1524	1553	-
	12	81611	66.7	10	2	1722	1122	-
	13	288948	82.5	15	2	1404	1019	-
				Table 17				
	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	345766	87.6	17	3	1565	1055	1840
	1	490019	85.2	16	3	1735	1541	1408
	2	39073	84.8	16	3	1534	1889	1463
	3	183923	77.9	13	2	1749	1460	-
	4	328777	76.5	13	2	1518	1485	-
	5	474728	60.9	8	1	1540	-	-
	6	21394	83	15	2	1080	1010	-
	7	165992	80.4	14	2	1824	1752	-
	8	310973	67.5	10	2	1764	1181	-
	9	456884	62.1	8	1	1495	-	-
	10	3515	86.4	16	3	1773	1966	1263
	11	147928	84.3	15	3	1593	1188	1788
	12	293225	76.9	13	2	1226	1537	-

	13	436922	95.8	19	3	1192	1298	1844
	14	584015	55.2	6	1	1644	-	-
	15	130832	59	7	1	1402	-	-
	16	274684	94.5	19	3	1296	1700	1283
	17	418579	91.9	18	3	1970	1978	1165
	18	563464	85.2	16	3	1732	1551	1189
	19	112787	69.5	11	2	1038	1224	-
				Table 18				
	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	429224	86.4	16	3	1259	1918	1455
	1	670241	92.2	18	3	1598	1719	1895
	2	912880	80.4	14	2	1816	1899	-
	3	158603	54.3	6	1	1335	-	-
	4	400824	53.1	5	1	1303	-	-
	5	641915	69.4	11	2	1503	1546	-
	6	883823	69.1	11	2	1279	1639	-
	7	128373	100	20	3	1375	1438	1595
	8	370379	79.6	14	2	1239	1705	-
	9	611194	88.4	17	3	1374	1579	1623
	10	855665	53.3	6	1	1016	-	-
	11	98897	65.3	9	1	1709	-	-
				Table 19				
	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	292143	55.3	6	1	1920	-	-
	1	499633	58.3	7	1	1797	-	-
	2	706377	72.3	12	2	1610	1039	-
	3	58989	84.8	16	3	1131	1761	1721
	4	266161	82.5	15	2	1875	1431	-
	5	474469	63.3	9	1	1095	-	-
	6	680544	80	14	2	1119	1913	-
	7	33519	90.3	17	3	1660	1853	1123
	8	240319	91.1	18	3	1539	1783	1172
	9	447400	96.6	19	3	1525	1036	1385
	10	654516	82.7	15	2	1710	1990	-
	11	8083	50.7	5	1	1234	-	-

	12	215435	78.4	14	2	1047	1109	-
	13	421325	99.5	20	3	1299	1965	1869
				Table 20				
	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	733725	88.6	17	3	1501	1067	1927
	1	977882	57.4	7	1	1723	-	-
	2	221197	96.6	19	3	1086	1658	1324
	3	462915	69.7	11	2	1751	1945	-
	4	705071	77.9	13	2	1642	1317	-
	5	947923	62	8	1	1866	-	-
	6	191373	88.4	17	3	1997	1077	1366
	7	432561	97.3	20	3	1790	1896	1367
	8	674004	96.2	19	3	1391	1787	1672
	9	915842	95.4	19	3	1020	1892	1414
	10	162176	54.8	6	1	1084	-	-
	11	403553	80.4	14	2	1850	1436	-
				Table 21				
	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	483470	74.7	12	2	1619	1611	-
	1	666072	57.1	7	1	1560	-	-
	2	98810	91.9	18	3	1392	1475	1276
	3	279914	83.1	15	2	1809	1772	-
	4	462536	50.7	5	1	1003	-	-
	5	642324	79.2	14	2	1574	1600	-
	6	76831	58.7	7	1	1186	-	-
	7	257785	71	11	2	1521	1567	-
	8	438554	79	14	2	1777	1960	-
	9	620397	68.5	10	2	1284	1428	-
	10	54310	73.5	12	2	1904	1352	-
	11	235506	70.5	11	2	1864	1115	-
	12	417036	76.6	13	2	1045	1300	-
	13	597974	81.2	14	2	1160	1675	-
	14	32086	61.8	8	1	1277	-	-
	15	212751	94.9	19	3	1450	1206	1860
				Table 22				

	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	526149	78.5	14	2	1653	1698	-
	1	767135	89.8	17	3	1174	1962	1167
	2	12955	59.4	8	1	1982	-	-
	3	254612	79.6	14	2	1633	1890	-
	4	496588	76	13	2	1112	1811	-
	5	739728	53.6	6	1	1144	-	-
	6	980872	80.9	14	2	1220	1053	-
	7	225249	61.6	8	1	1724	-	-
	8	467279	53.4	6	1	1901	-	-
	9	709720	59.9	8	1	1379	-	-
	10	951847	60.4	8	1	1453	-	-
	11	194839	91.4	18	3	1768	1726	1227
				Table 23				
	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	261690	77	13	2	1730	1206	-
	1	407496	58.1	7	1	1468	-	-
	2	553039	62.1	8	1	1057	-	-
	3	98971	76.9	13	2	1466	1926	-
	4	243693	80	14	2	1841	1488	-
	5	389821	52	5	1	1153	-	-
	6	531723	88.6	17	3	2000	1481	1407
	7	81080	72.9	12	2	1935	1952	-
	8	225051	98.5	20	3	1689	1898	1899
	9	371684	57.9	7	1	1550	-	-
	10	513892	95.9	19	3	1339	1731	1878
	11	63543	53.5	6	1	1336	-	-
	12	207470	92	18	3	1916	1909	1146
	13	353593	57.3	7	1	1910	-	-
	14	497722	70.5	11	2	1889	1132	-
	15	45525	70	11	2	1619	1464	-
	16	189563	84	15	3	1968	1995	1419
	17	334977	76.1	13	2	1488	1756	-
	18	478188	93.2	18	3	1828	1610	1697
	19	27659	96.8	19	3	1462	1116	1215

				Table 24				
	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	247117	50.1	5	1	1841	-	-
	1	453362	93.5	18	3	1590	1081	1413
	2	660875	68.8	11	2	1707	1577	-
	3	14140	56.3	7	1	1056	-	-
	4	220734	86	16	3	1953	1108	1987
	5	428367	75.2	13	2	1572	1536	-
	6	636681	54.4	6	1	1517	-	-
	7	843157	71.1	11	2	1329	1243	-
	8	195585	76.2	13	2	1940	1770	-
	9	403231	80.2	14	2	1098	1209	-
	10	610202	79.7	14	2	1588	1214	-
	11	815229	90.9	18	3	1615	1862	1601
	12	170267	68.7	10	2	1377	1441	-
	13	377306	67.4	10	2	1872	1313	-
				Table 25				
	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	628071	94	19	3	1643	1748	1941
	1	853391	70.8	11	2	1177	1201	-
	2	156223	56.3	7	1	1006	-	-
	3	378734	96.7	19	3	1230	1163	1332
	4	601331	90.6	17	3	1217	1582	1498
	5	825462	74.5	12	2	1569	1281	-
	6	128265	92.6	18	3	1065	1669	1222
	7	351161	89	17	3	1493	1135	1380
	8	573425	96.5	19	3	1607	1822	1602
	9	798431	70.5	11	2	1141	1178	-
	10	100737	94	19	3	1009	1629	1956
	11	324661	55.8	6	1	1290	-	-
	12	546278	87.7	17	3	1435	1963	1164
				Table 26				

	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	1253842	68.6	10	2	1306	1161	-
	1	119486	83.1	15	2	1420	1315	-
	2	482958	60.9	8	1	1687	-	-
	3	845641	77.7	13	2	1776	1158	-
	4	1208428	77.4	13	2	1793	1510	-
	5	74748	66.8	10	2	1576	1323	-
	6	438300	63.7	9	1	1333	-	-
	7	800152	91.2	18	3	1409	1681	1275
				Table 27				
	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	545865	83.6	15	3	1632	1195	1000
	1	14067	89.4	17	3	1173	1627	1656
	2	184953	55.8	6	1	1532	-	-
	3	353759	90.9	18	3	1981	1554	1998
	4	526388	54.7	6	1	1825	-	-
	5	694806	97.7	20	3	1734	1202	1250
	6	163568	67.5	10	2	1571	1434	-
	7	333410	96.7	19	3	1589	1469	1268
	8	504006	68.3	10	2	1750	1954	-
	9	675297	78.3	14	2	1591	1082	-
	10	142890	55	6	1	1427	-	-
	11	312479	84.9	16	3	1129	1936	1199
	12	482953	74.6	12	2	1959	1856	-
	13	655022	63.3	9	1	1885	-	-
	14	121457	99.8	20	3	1035	1515	1120
	15	292606	63.6	9	1	1647	-	-
	16	461322	87.3	16	3	1931	1051	1831
				Table 28				
	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	545865	83.6	15	3	1632	1195	1000
	1	14067	89.4	17	3	1173	1627	1656
	2	184953	55.8	6	1	1532	-	-

	3	353759	90.9	18	3	1981	1554	1998
	4	526388	54.7	6	1	1825	-	-
	5	694806	97.7	20	3	1734	1202	1250
	6	163568	67.5	10	2	1571	1434	-
	7	333410	96.7	19	3	1589	1469	1268
	8	504006	68.3	10	2	1750	1954	-
	9	675297	78.3	14	2	1591	1082	-
	10	142890	55	6	1	1427	-	-
	11	312479	84.9	16	3	1129	1936	1199
	12	482953	74.6	12	2	1959	1856	-
	13	655022	63.3	9	1	1885	-	-
	14	121457	99.8	20	3	1035	1515	1120
	15	292606	63.6	9	1	1647	-	-
	16	461322	87.3	16	3	1931	1051	1831
	17	14858	60.4	8	1	1758	-	-
	18	167387	81.5	15	2	1491	1103	-
				Table 29				
	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	507709	50.5	5	1	1857	-	-
	1	750249	55.7	6	1	1246	-	-
	2	989003	85.8	16	3	1774	1002	1967
	3	235634	76.9	13	2	1125	1474	-
	4	477675	75.1	13	2	1254	1052	-
	5	718312	92.3	18	3	1180	1486	1492
	6	960895	78.1	14	2	1301	1757	-
	7	205370	92.2	18	3	1898	1252	1713
	8	446940	89	17	3	1260	1706	1411
	9	689225	70.9	11	2	1578	1620	-
	10	932305	63.1	9	1	1782	-	-
	11	176231	55.3	6	1	1522	-	-
				Table 30				
	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	277485	83.4	15	3	1454	1205	1801
	1	437880	97.3	20	3	1319	1826	1635
	2	598445	90.4	17	3	1079	1986	1674

	3	97088	91.8	18	3	1563	1151	1802
	4	257251	98.2	20	3	1876	1977	1766
	5	419893	59.5	8	1	1952	-	-
	6	580724	80	14	2	1253	1137	-
	7	77366	86.5	16	3	1054	1128	1828
	8	238032	91.1	18	3	1105	1599	1442
	9	398605	93.5	18	3	1867	1373	1087
	10	562025	60.7	8	1	1033	-	-
	11	57684	67.2	10	2	1288	1405	-
	12	219083	61.8	8	1	1585	-	-
	13	379234	79.4	14	2	1933	1667	-
	14	540896	81.4	15	2	1096	1464	-
	15	37916	65.7	10	1	1496	-	-
	16	198794	76	13	2	1733	1255	-
	17	359754	81	14	2	1326	1668	-

40 MHz

Table 1								
	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	636185	77.8	13	2	1665	1477	-
	1	32674	51.9	5	1	1074	-	-
	2	226294	63.8	9	1	1584	-	-
	3	417976	96.6	19	3	1682	1786	1843
	4	611152	85.9	16	3	1795	1215	1729
	5	8789	73.7	12	2	1198	1549	-
	6	201917	77.2	13	2	1837	1819	-
	7	395530	68.4	10	2	1587	1114	-
	8	588564	76.7	13	2	2000	1155	-
	9	783794	53.2	6	1	1147	-	-
	10	177933	85.7	16	3	1433	1695	1394
	11	370624	94.3	19	3	1670	1426	1935
	12	564893	77.6	13	2	1294	1671	-
	13	759583	65.7	10	1	1512	-	-
	14	154262	93.5	18	3	1444	1130	1468
Table 2								
	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	653020	75	12	2	1880	1527	-
	1	1015643	99.4	20	3	1401	1262	1257
	2	1379398	67.4	10	2	1531	1403	-
	3	245489	73.6	12	2	1449	1041	-
	4	609113	65.9	10	1	1432	-	-
	5	970852	83.8	15	3	1356	1292	1419
	6	1335913	65.5	9	1	1543	-	-
	7	200406	98.6	20	3	1548	1796	1728
Table 3								
	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	409565	73.8	12	2	1806	1538	-
	1	673692	69.5	11	2	1117	1649	-
	2	938562	51.9	5	1	1651	-	-

	3	113209	84.6	16	3	1976	1032	1271
	4	376726	95.4	19	3	1060	1903	1388
	5	641212	68	10	2	1368	1351	-
	6	903714	89.6	17	3	1338	1514	1573
	7	80863	81.9	15	2	1022	1689	-
	8	344067	88.3	17	3	1810	1330	1838
	9	609331	53.7	6	1	1597	-	-
	10	871542	91.3	18	3	1961	1106	1001

Table 4

	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	26541	68.1	10	2	1339	1355	-
	1	171821	58.7	7	1	1251	-	-
	2	316229	75.3	13	2	1136	1640	-
	3	461864	56.4	7	1	1753	-	-
	4	8677	99.7	20	3	1196	1708	1159
	5	153995	57.7	7	1	1013	-	-
	6	299238	59.5	8	1	1072	-	-
	7	443177	80	14	2	1482	1369	-
	8	587671	82	15	2	1993	1197	-
	9	135674	82.8	15	2	1883	1005	-
	10	279928	88	17	3	1061	1928	1101
	11	424279	93.2	18	3	1207	1907	1223
	12	570132	70.4	11	2	1526	1360	-
	13	117439	95.3	19	3	1171	1955	1775
	14	262502	81.9	15	2	1690	1545	-
	15	406573	98.5	20	3	1975	1169	1062
	16	553328	65	9	1	1767	-	-
	17	99799	85.4	16	3	1011	1637	1425
	18	244095	91.6	18	3	1878	1445	1325
	19	390012	67.3	10	2	1091	1218	-

Table 5

	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	629614	67.9	10	2	1320	1133	-
	1	96856	62.3	8	1	1957	-	-
	2	267719	53.3	6	1	1592	-	-

	3	436784	90	17	3	1900	1153	1346
	4	608289	77.1	13	2	1166	1646	-
	5	75610	83.9	15	3	1278	1232	1459
	6	245638	89.1	17	3	1240	1384	1939
	7	416355	81.8	15	2	1833	1676	-
	8	588736	50.3	5	1	1075	-	-
	9	54571	87.1	16	3	1116	1996	1756
	10	225175	71.3	11	2	1225	1815	-
	11	394825	97.5	20	3	1884	1465	1132
	12	565361	90.6	17	3	1561	1040	1354
	13	33643	86.3	16	3	1596	1183	1792
	14	203957	97.6	20	3	1365	1073	1361
	15	373812	84.7	16	3	1021	1718	1854
	16	544060	99.7	20	3	1150	1244	1988

Table 6

	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	15438	92.9	18	3	1085	1564	1407
	1	222486	67.7	10	2	1744	1747	-
	2	430731	65.8	10	1	1092	-	-
	3	637784	56.3	7	1	1851	-	-
	4	845342	53.7	6	1	1727	-	-
	5	196720	83.5	15	3	1679	1930	1025
	6	404955	65.8	10	1	1519	-	-
	7	610711	85.9	16	3	1134	1034	1808
	8	818057	76.3	13	2	1606	1926	-
	9	171459	81.5	15	2	1891	1714	-
	10	377969	89.4	17	3	1310	1594	1827
	11	586875	63.4	9	1	1568	-	-
	12	792834	69.6	11	2	1307	1925	-
	13	146044	74.5	12	2	1264	1846	-

Table 7

	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	329022	96.6	19	3	1182	1609	1581
	1	521718	96.7	19	3	1829	1799	1154
	2	714222	86.5	16	3	1923	1396	1865

	3	112450	73.3	12	2	1908	1318	-
	4	306283	55.8	6	1	1688	-	-
	5	500239	55.4	6	1	1145	-	-
	6	690932	85.3	16	3	1336	1504	1820
	7	88645	79.4	14	2	1344	1893	-
	8	282508	65.7	10	1	1476	-	-
	9	475842	68.6	10	2	1008	1028	-
	10	667887	77.7	13	2	1972	1835	-
	11	64845	79.6	14	2	1882	1331	-
	12	257755	94.9	19	3	1830	1070	1349
	13	452335	61.4	8	1	1451	-	-
	14	643395	90.6	17	3	1233	1562	1887

Table 8

	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	51446	52.6	5	1	1210	-	-
	1	292696	84.1	15	3	1314	1725	1529
	2	533989	97.7	20	3	1139	1868	1805
	3	775564	97.3	20	3	1341	1446	1755
	4	21542	98.8	20	3	1544	1386	1302
	5	263385	72.2	12	2	1771	1184	-
	6	505581	67.6	10	2	1175	1027	-
	7	747058	75.7	13	2	1026	1871	-
	8	989976	60.9	8	1	1798	-	-
	9	234024	64.2	9	1	1138	-	-
	10	475207	78.8	14	2	1784	1604	-
	11	715825	87.5	16	3	1511	1712	1683

Table 9

	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	823112	54.1	6	1	1415	-	-
	1	174965	50.7	5	1	1221	-	-
	2	382216	52.3	5	1	1974	-	-
	3	587395	99.8	20	3	1558	1696	1949
	4	796897	68.4	10	2	1014	1099	-
	5	149042	80.8	14	2	1736	1505	-
	6	356750	62.5	9	1	1778	-	-

	7	563824	74.8	12	2	1149	1204	-
	8	772314	50.8	5	1	1049	-	-
	9	123796	54	6	1	1417	-	-
	10	331215	63	9	1	1730	-	-
	11	537402	91.8	18	3	1143	1270	1347
	12	744805	79.3	14	2	1274	1992	-
	13	98172	64.3	9	1	1937	-	-

Table 10

	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	535615	63.4	9	1	1043	-	-
	1	898668	52	5	1	1863	-	-
	2	1259235	97.2	20	3	1973	1605	1583
	3	127106	78.7	14	2	1466	1743	-
	4	490358	74.2	12	2	1280	1219	-
	5	852409	88.7	17	3	1293	1934	1273
	6	1217152	54.3	6	1	1991	-	-
	7	82296	95.4	19	3	1580	1555	1791

Table 11

	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	209249	73.7	12	2	1208	1497	-
	1	378386	97.4	20	3	1942	1754	1613
	2	548411	91.7	18	3	1999	1702	1462
	3	17733	66.2	10	1	1393	-	-
	4	187952	70.8	11	2	1968	1821	-
	5	359277	52.3	5	1	1740	-	-
	6	528886	78.9	14	2	1308	1984	-
	7	700166	70.9	11	2	1050	1358	-
	8	167197	75.6	13	2	1437	1430	-
	9	338262	59.1	7	1	1697	-	-
	10	508324	77	13	2	1397	1304	-
	11	678689	67.9	10	2	1803	1083	-
	12	146031	81.2	14	2	1720	1932	-
	13	316923	78.7	14	2	1247	1121	-
	14	488056	63.3	9	1	1634	-	-
	15	657326	68.9	11	2	1849	1423	-

	16	125509	59.3	7	1	1093	-	-

Table 12

	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	263736	98.9	20	3	1381	1680	1488
	1	416459	82.3	15	2	1716	1855	-
	2	567902	86.7	16	3	1211	1400	1919
	3	92979	89.7	17	3	1861	1068	1282
	4	245155	98.6	20	3	1507	1194	1461
	5	397609	71.1	11	2	1921	1789	-
	6	551431	55.9	6	1	1947	-	-
	7	74413	67.9	10	2	1350	1372	-
	8	226559	84.4	16	3	1203	1107	1443
	9	380056	58.8	7	1	1715	-	-
	10	533408	65.6	9	1	1017	-	-
	11	55547	78.5	14	2	1911	1704	-
	12	207876	82.3	15	2	1845	1686	-
	13	359771	90.1	17	3	1938	1071	1266
	14	511297	90.2	17	3	1989	1089	1950
	15	36803	83.1	15	2	1943	1406	-
	16	189652	58.8	7	1	1742	-	-
	17	341809	77	13	2	1187	1657	-
	18	495737	55	6	1	1012	-	-

Table 13

	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	22911	58.1	7	1	1929	-	-
	1	216473	52.1	5	1	1910	-	-
	2	410004	59.9	8	1	1971	-	-
	3	603671	60.2	8	1	1812	-	-
	4	794160	95.9	19	3	1399	1906	1608
	5	192251	79.9	14	2	1626	1859	-
	6	385590	78.5	14	2	1238	1917	-
	7	579862	53.8	6	1	1763	-	-
	8	773423	64.7	9	1	1800	-	-
	9	168898	61.4	8	1	1390	-	-
	10	361606	83.2	15	2	1692	1858	-

	11	553866	84.7	16	3	1533	1677	1638
	12	747241	88.7	17	3	1703	1528	1058
	13	144710	78.3	14	2	1258	1951	-
	14	337856	69.3	11	2	1731	1717	-

Table 14

	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	664275	75.3	13	2	1994	1612	-
	1	907886	56.3	7	1	1456	-	-
	2	151316	67.7	10	2	1617	1185	-
	3	393746	55.6	6	1	1337	-	-
	4	635093	75.2	13	2	1421	1267	-
	5	876993	76.3	13	2	1359	1305	-
	6	121278	85.7	16	3	1547	1362	1924
	7	362696	98.4	20	3	1873	1550	1249
	8	604342	86.4	16	3	1779	1439	1046
	9	846453	93.6	18	3	1059	1031	1452
	10	91871	63.3	9	1	1328	-	-
	11	333050	92.4	18	3	1412	1673	1322

Table 15

	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	361323	93.3	18	3	1983	1912	1535
	1	515261	69.1	11	2	1102	1794	-
	2	39025	86.9	16	3	1044	1152	1148
	3	190900	84.9	16	3	1894	1948	1118
	4	343941	72.3	12	2	1094	1916	-
	5	497624	51.7	5	1	1447	-	-
	6	20319	58.3	7	1	1429	-	-
	7	172999	60.8	8	1	1979	-	-
	8	325872	57.1	7	1	1641	-	-
	9	475841	88.9	17	3	1886	1964	1489
	10	1489	72	12	2	1909	1297	-
	11	153647	90.9	18	3	1261	1566	1370
	12	307096	59.8	8	1	1552	-	-
	13	458804	70	11	2	1759	1291	-
	14	610798	67.2	10	2	1625	1881	-

	15	134759	91.2	18	3	1382	1832	1661
	16	288306	56.5	7	1	1483	-	-
	17	441296	51.2	5	1	1237	-	-
	18	592780	74.1	12	2	1471	1245	-

Table 16

	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	158286	76.9	13	2	1110	1140	-
	1	366024	50.2	5	1	1316	-	-
	2	573452	62.9	9	1	1520	-	-
	3	780619	64.7	9	1	1902	-	-
	4	132455	83.8	15	3	1410	1097	1621
	5	340207	65.4	9	1	1944	-	-
	6	548208	53.2	6	1	1024	-	-
	7	755333	51.7	5	1	1603	-	-
	8	107117	78.7	14	2	1804	1168	-
	9	314500	72.4	12	2	1030	1343	-
	10	522447	53.8	6	1	1327	-	-
	11	728517	73.6	12	2	1524	1553	-
	12	81611	66.7	10	2	1722	1122	-
	13	288948	82.5	15	2	1404	1019	-

Table 17

	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	345766	87.6	17	3	1565	1055	1840
	1	490019	85.2	16	3	1735	1541	1408
	2	39073	84.8	16	3	1534	1889	1463
	3	183923	77.9	13	2	1749	1460	-
	4	328777	76.5	13	2	1518	1485	-
	5	474728	60.9	8	1	1540	-	-
	6	21394	83	15	2	1080	1010	-
	7	165992	80.4	14	2	1824	1752	-
	8	310973	67.5	10	2	1764	1181	-
	9	456884	62.1	8	1	1495	-	-
	10	3515	86.4	16	3	1773	1966	1263
	11	147928	84.3	15	3	1593	1188	1788
	12	293225	76.9	13	2	1226	1537	-

	13	436922	95.8	19	3	1192	1298	1844
	14	584015	55.2	6	1	1644	-	-
	15	130832	59	7	1	1402	-	-
	16	274684	94.5	19	3	1296	1700	1283
	17	418579	91.9	18	3	1970	1978	1165
	18	563464	85.2	16	3	1732	1551	1189
	19	112787	69.5	11	2	1038	1224	-

Table 18

	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	429224	86.4	16	3	1259	1918	1455
	1	670241	92.2	18	3	1598	1719	1895
	2	912880	80.4	14	2	1816	1899	-
	3	158603	54.3	6	1	1335	-	-
	4	400824	53.1	5	1	1303	-	-
	5	641915	69.4	11	2	1503	1546	-
	6	883823	69.1	11	2	1279	1639	-
	7	128373	100	20	3	1375	1438	1595
	8	370379	79.6	14	2	1239	1705	-
	9	611194	88.4	17	3	1374	1579	1623
	10	855665	53.3	6	1	1016	-	-
	11	98897	65.3	9	1	1709	-	-

Table 19

	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	292143	55.3	6	1	1920	-	-
	1	499633	58.3	7	1	1797	-	-
	2	706377	72.3	12	2	1610	1039	-
	3	58989	84.8	16	3	1131	1761	1721
	4	266161	82.5	15	2	1875	1431	-
	5	474469	63.3	9	1	1095	-	-
	6	680544	80	14	2	1119	1913	-
	7	33519	90.3	17	3	1660	1853	1123
	8	240319	91.1	18	3	1539	1783	1172
	9	447400	96.6	19	3	1525	1036	1385
	10	654516	82.7	15	2	1710	1990	-
	11	8083	50.7	5	1	1234	-	-

	12	215435	78.4	14	2	1047	1109	-
	13	421325	99.5	20	3	1299	1965	1869

Table 20

	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	733725	88.6	17	3	1501	1067	1927
	1	977882	57.4	7	1	1723	-	-
	2	221197	96.6	19	3	1086	1658	1324
	3	462915	69.7	11	2	1751	1945	-
	4	705071	77.9	13	2	1642	1317	-
	5	947923	62	8	1	1866	-	-
	6	191373	88.4	17	3	1997	1077	1366
	7	432561	97.3	20	3	1790	1896	1367
	8	674004	96.2	19	3	1391	1787	1672
	9	915842	95.4	19	3	1020	1892	1414
	10	162176	54.8	6	1	1084	-	-
	11	403553	80.4	14	2	1850	1436	-

Table 21

	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	483470	74.7	12	2	1619	1611	-
	1	666072	57.1	7	1	1560	-	-
	2	98810	91.9	18	3	1392	1475	1276
	3	279914	83.1	15	2	1809	1772	-
	4	462536	50.7	5	1	1003	-	-
	5	642324	79.2	14	2	1574	1600	-
	6	76831	58.7	7	1	1186	-	-
	7	257785	71	11	2	1521	1567	-
	8	438554	79	14	2	1777	1960	-
	9	620397	68.5	10	2	1284	1428	-
	10	54310	73.5	12	2	1904	1352	-
	11	235506	70.5	11	2	1864	1115	-
	12	417036	76.6	13	2	1045	1300	-
	13	597974	81.2	14	2	1160	1675	-
	14	32086	61.8	8	1	1277	-	-
	15	212751	94.9	19	3	1450	1206	1860

Table 22

	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	526149	78.5	14	2	1653	1698	-
	1	767135	89.8	17	3	1174	1962	1167
	2	12955	59.4	8	1	1982	-	-
	3	254612	79.6	14	2	1633	1890	-
	4	496588	76	13	2	1112	1811	-
	5	739728	53.6	6	1	1144	-	-
	6	980872	80.9	14	2	1220	1053	-
	7	225249	61.6	8	1	1724	-	-
	8	467279	53.4	6	1	1901	-	-
	9	709720	59.9	8	1	1379	-	-
	10	951847	60.4	8	1	1453	-	-
	11	194839	91.4	18	3	1768	1726	1227

Table 23

	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	261858	77	13	2	1191	1363	-
	1	407646	58.1	7	1	1248	-	-
	2	552319	62.1	8	1	1836	-	-
	3	99107	76.9	13	2	1334	1236	-
	4	243514	80	14	2	1914	1852	-
	5	389464	52	5	1	1701	-	-
	6	531093	88.6	17	3	1693	1995	1905
	7	81159	72.9	12	2	1922	1387	-
	8	225245	98.5	20	3	1839	1746	1389
	9	371906	57.9	7	1	1193	-	-
	10	514197	95.9	19	3	1659	1870	1066
	11	63561	53.5	6	1	1162	-	-
	12	207510	92	18	3	1745	1654	1458
	13	353638	57.3	7	1	1834	-	-
	14	497515	70.5	11	2	1684	1586	-
	15	45553	70	11	2	1042	1664	-
	16	189821	84	15	3	1765	1630	1176
	17	335330	76.1	13	2	1557	1057	-
	18	478825	93.2	18	3	1985	1018	1340
	19	27594	96.8	19	3	1760	1614	1817

Table 24								
	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	247117	50.1	5	1	1841	-	-
	1	453362	93.5	18	3	1590	1081	1413
	2	660875	68.8	11	2	1707	1577	-
	3	14140	56.3	7	1	1056	-	-
	4	220734	86	16	3	1953	1108	1987
	5	428367	75.2	13	2	1572	1536	-
	6	636681	54.4	6	1	1517	-	-
	7	843157	71.1	11	2	1329	1243	-
	8	195585	76.2	13	2	1940	1770	-
	9	403231	80.2	14	2	1098	1209	-
	10	610202	79.7	14	2	1588	1214	-
	11	815229	90.9	18	3	1615	1862	1601
	12	170267	68.7	10	2	1377	1441	-
	13	377306	67.4	10	2	1872	1313	-

Table 25								
	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	628071	94	19	3	1643	1748	1941
	1	853391	70.8	11	2	1177	1201	-
	2	156223	56.3	7	1	1006	-	-
	3	378734	96.7	19	3	1230	1163	1332
	4	601331	90.6	17	3	1217	1582	1498
	5	825462	74.5	12	2	1569	1281	-
	6	128265	92.6	18	3	1065	1669	1222
	7	351161	89	17	3	1493	1135	1380
	8	573425	96.5	19	3	1607	1822	1602
	9	798431	70.5	11	2	1141	1178	-
	10	100737	94	19	3	1009	1629	1956
	11	324661	55.8	6	1	1290	-	-
	12	546278	87.7	17	3	1435	1963	1164

Table 26

	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	1253842	68.6	10	2	1306	1161	-
	1	119486	83.1	15	2	1420	1315	-
	2	482958	60.9	8	1	1687	-	-
	3	845641	77.7	13	2	1776	1158	-
	4	1208428	77.4	13	2	1793	1510	-
	5	74748	66.8	10	2	1576	1323	-
	6	438300	63.7	9	1	1333	-	-
	7	800152	91.2	18	3	1409	1681	1275

Table 27

	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	545865	83.6	15	3	1632	1195	1000
	1	14067	89.4	17	3	1173	1627	1656
	2	184953	55.8	6	1	1532	-	-
	3	353759	90.9	18	3	1981	1554	1998
	4	526388	54.7	6	1	1825	-	-
	5	694806	97.7	20	3	1734	1202	1250
	6	163568	67.5	10	2	1571	1434	-
	7	333410	96.7	19	3	1589	1469	1268
	8	504006	68.3	10	2	1750	1954	-
	9	675297	78.3	14	2	1591	1082	-
	10	142890	55	6	1	1427	-	-
	11	312479	84.9	16	3	1129	1936	1199
	12	482953	74.6	12	2	1959	1856	-
	13	655022	63.3	9	1	1885	-	-
	14	121457	99.8	20	3	1035	1515	1120
	15	292606	63.6	9	1	1647	-	-
	16	461322	87.3	16	3	1931	1051	1831

Table 28

	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	565136	85.6	16	3	1946	1078	1015
	1	89970	68.6	10	2	1029	1780	-
	2	243121	54.2	6	1	1111	-	-

	3	396034	61.2	8	1	1104	-	-
	4	546225	97.1	20	3	1157	1969	1100
	5	70998	98.3	20	3	1142	1699	1622
	6	224093	62.4	8	1	1655	-	-
	7	376127	80.2	14	2	1126	1769	-
	8	527806	87.5	17	3	1216	1448	1179
	9	52247	85.8	16	3	1847	1348	1472
	10	204582	88.1	17	3	1023	1124	1631
	11	357941	65.3	9	1	1848	-	-
	12	510977	52.5	5	1	1470	-	-
	13	33698	52.3	5	1	1312	-	-
	14	186023	74.1	12	2	1915	1200	-
	15	339327	54.9	6	1	1479	-	-
	16	491053	76.2	13	2	1376	1502	-
	17	14858	60.4	8	1	1758	-	-
	18	167387	81.5	15	2	1491	1103	-

Table 29

	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	507709	50.5	5	1	1857	-	-
	1	750249	55.7	6	1	1246	-	-
	2	989003	85.8	16	3	1774	1002	1967
	3	235634	76.9	13	2	1125	1474	-
	4	477675	75.1	13	2	1254	1052	-
	5	718312	92.3	18	3	1180	1486	1492
	6	960895	78.1	14	2	1301	1757	-
	7	205370	92.2	18	3	1898	1252	1713
	8	446940	89	17	3	1260	1706	1411
	9	689225	70.9	11	2	1578	1620	-
	10	932305	63.1	9	1	1782	-	-
	11	176231	55.3	6	1	1522	-	-

Table 30

	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	277485	83.4	15	3	1454	1205	1801
	1	437880	97.3	20	3	1319	1826	1635
	2	598445	90.4	17	3	1079	1986	1674

	3	97088	91.8	18	3	1563	1151	1802
	4	257251	98.2	20	3	1876	1977	1766
	5	419893	59.5	8	1	1952	-	-
	6	580724	80	14	2	1253	1137	-
	7	77366	86.5	16	3	1054	1128	1828
	8	238032	91.1	18	3	1105	1599	1442
	9	398605	93.5	18	3	1867	1373	1087
	10	562025	60.7	8	1	1033	-	-
	11	57684	67.2	10	2	1288	1405	-
	12	219083	61.8	8	1	1585	-	-
	13	379234	79.4	14	2	1933	1667	-
	14	540896	81.4	15	2	1096	1464	-
	15	37916	65.7	10	1	1496	-	-
	16	198794	76	13	2	1733	1255	-
	17	359754	81	14	2	1326	1668	-

80 MHz

Table 1								
	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	636185	77.8	13	2	1665	1477	-
	1	32674	51.9	5	1	1074	-	-
	2	226294	63.8	9	1	1584	-	-
	3	417976	96.6	19	3	1682	1786	1843
	4	611152	85.9	16	3	1795	1215	1729
	5	8789	73.7	12	2	1198	1549	-
	6	201917	77.2	13	2	1837	1819	-
	7	395530	68.4	10	2	1587	1114	-
	8	588564	76.7	13	2	2000	1155	-
	9	783794	53.2	6	1	1147	-	-
	10	177933	85.7	16	3	1433	1695	1394
	11	370624	94.3	19	3	1670	1426	1935
	12	564893	77.6	13	2	1294	1671	-
	13	759583	65.7	10	1	1512	-	-
	14	154262	93.5	18	3	1444	1130	1468
Table 2								
	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	653020	75	12	2	1880	1527	-
	1	1015643	99.4	20	3	1401	1262	1257
	2	1379398	67.4	10	2	1531	1403	-
	3	245489	73.6	12	2	1449	1041	-
	4	609113	65.9	10	1	1432	-	-
	5	970852	83.8	15	3	1356	1292	1419
	6	1335913	65.5	9	1	1543	-	-
	7	200406	98.6	20	3	1548	1796	1728
Table 3								
	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	409565	73.8	12	2	1806	1538	-
	1	673692	69.5	11	2	1117	1649	-
	2	938562	51.9	5	1	1651	-	-

	3	113209	84.6	16	3	1976	1032	1271
	4	376726	95.4	19	3	1060	1903	1388
	5	641212	68	10	2	1368	1351	-
	6	903714	89.6	17	3	1338	1514	1573
	7	80863	81.9	15	2	1022	1689	-
	8	344067	88.3	17	3	1810	1330	1838
	9	609331	53.7	6	1	1597	-	-
	10	871542	91.3	18	3	1961	1106	1001

Table 4

	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	26541	68.1	10	2	1339	1355	-
	1	171821	58.7	7	1	1251	-	-
	2	316229	75.3	13	2	1136	1640	-
	3	461864	56.4	7	1	1753	-	-
	4	8677	99.7	20	3	1196	1708	1159
	5	153995	57.7	7	1	1013	-	-
	6	299238	59.5	8	1	1072	-	-
	7	443177	80	14	2	1482	1369	-
	8	587671	82	15	2	1993	1197	-
	9	135674	82.8	15	2	1883	1005	-
	10	279928	88	17	3	1061	1928	1101
	11	424279	93.2	18	3	1207	1907	1223
	12	570132	70.4	11	2	1526	1360	-
	13	117439	95.3	19	3	1171	1955	1775
	14	262502	81.9	15	2	1690	1545	-
	15	406573	98.5	20	3	1975	1169	1062
	16	553328	65	9	1	1767	-	-
	17	99799	85.4	16	3	1011	1637	1425
	18	244095	91.6	18	3	1878	1445	1325
	19	390012	67.3	10	2	1091	1218	-

Table 5

	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	629614	67.9	10	2	1320	1133	-
	1	96856	62.3	8	1	1957	-	-
	2	267719	53.3	6	1	1592	-	-

	3	436784	90	17	3	1900	1153	1346
	4	608289	77.1	13	2	1166	1646	-
	5	75610	83.9	15	3	1278	1232	1459
	6	245638	89.1	17	3	1240	1384	1939
	7	416355	81.8	15	2	1833	1676	-
	8	588736	50.3	5	1	1075	-	-
	9	54571	87.1	16	3	1116	1996	1756
	10	225175	71.3	11	2	1225	1815	-
	11	394825	97.5	20	3	1884	1465	1132
	12	565361	90.6	17	3	1561	1040	1354
	13	33643	86.3	16	3	1596	1183	1792
	14	203957	97.6	20	3	1365	1073	1361
	15	373812	84.7	16	3	1021	1718	1854
	16	544060	99.7	20	3	1150	1244	1988

Table 6

	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	15438	92.9	18	3	1085	1564	1407
	1	222486	67.7	10	2	1744	1747	-
	2	430731	65.8	10	1	1092	-	-
	3	637784	56.3	7	1	1851	-	-
	4	845342	53.7	6	1	1727	-	-
	5	196720	83.5	15	3	1679	1930	1025
	6	404955	65.8	10	1	1519	-	-
	7	610711	85.9	16	3	1134	1034	1808
	8	818057	76.3	13	2	1606	1926	-
	9	171459	81.5	15	2	1891	1714	-
	10	377969	89.4	17	3	1310	1594	1827
	11	586875	63.4	9	1	1568	-	-
	12	792834	69.6	11	2	1307	1925	-
	13	146044	74.5	12	2	1264	1846	-

Table 7

	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	329022	96.6	19	3	1182	1609	1581
	1	521718	96.7	19	3	1829	1799	1154
	2	714222	86.5	16	3	1923	1396	1865

	3	112450	73.3	12	2	1908	1318	-
	4	306283	55.8	6	1	1688	-	-
	5	500239	55.4	6	1	1145	-	-
	6	690932	85.3	16	3	1336	1504	1820
	7	88645	79.4	14	2	1344	1893	-
	8	282508	65.7	10	1	1476	-	-
	9	475842	68.6	10	2	1008	1028	-
	10	667887	77.7	13	2	1972	1835	-
	11	64845	79.6	14	2	1882	1331	-
	12	257755	94.9	19	3	1830	1070	1349
	13	452335	61.4	8	1	1451	-	-
	14	643395	90.6	17	3	1233	1562	1887

Table 8

	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	51446	52.6	5	1	1210	-	-
	1	292696	84.1	15	3	1314	1725	1529
	2	533989	97.7	20	3	1139	1868	1805
	3	775564	97.3	20	3	1341	1446	1755
	4	21542	98.8	20	3	1544	1386	1302
	5	263385	72.2	12	2	1771	1184	-
	6	505581	67.6	10	2	1175	1027	-
	7	747058	75.7	13	2	1026	1871	-
	8	989976	60.9	8	1	1798	-	-
	9	234024	64.2	9	1	1138	-	-
	10	475207	78.8	14	2	1784	1604	-
	11	715825	87.5	16	3	1511	1712	1683

Table 9

	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	823112	54.1	6	1	1415	-	-
	1	174965	50.7	5	1	1221	-	-
	2	382216	52.3	5	1	1974	-	-
	3	587395	99.8	20	3	1558	1696	1949
	4	796897	68.4	10	2	1014	1099	-
	5	149042	80.8	14	2	1736	1505	-
	6	356750	62.5	9	1	1778	-	-

	7	563824	74.8	12	2	1149	1204	-
	8	772314	50.8	5	1	1049	-	-
	9	123796	54	6	1	1417	-	-
	10	331215	63	9	1	1730	-	-
	11	537402	91.8	18	3	1143	1270	1347
	12	744805	79.3	14	2	1274	1992	-
	13	98172	64.3	9	1	1937	-	-

Table 10

	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	535615	63.4	9	1	1043	-	-
	1	898668	52	5	1	1863	-	-
	2	1259235	97.2	20	3	1973	1605	1583
	3	127106	78.7	14	2	1466	1743	-
	4	490358	74.2	12	2	1280	1219	-
	5	852409	88.7	17	3	1293	1934	1273
	6	1217152	54.3	6	1	1991	-	-
	7	82296	95.4	19	3	1580	1555	1791

Table 11

	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	209249	73.7	12	2	1208	1497	-
	1	378386	97.4	20	3	1942	1754	1613
	2	548411	91.7	18	3	1999	1702	1462
	3	17733	66.2	10	1	1393	-	-
	4	187952	70.8	11	2	1968	1821	-
	5	359277	52.3	5	1	1740	-	-
	6	528886	78.9	14	2	1308	1984	-
	7	700166	70.9	11	2	1050	1358	-
	8	167197	75.6	13	2	1437	1430	-
	9	338262	59.1	7	1	1697	-	-
	10	508324	77	13	2	1397	1304	-
	11	678689	67.9	10	2	1803	1083	-
	12	146031	81.2	14	2	1720	1932	-
	13	316923	78.7	14	2	1247	1121	-
	14	488056	63.3	9	1	1634	-	-
	15	657326	68.9	11	2	1849	1423	-

	16	125509	59.3	7	1	1093	-	-

Table 12

	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	263736	98.9	20	3	1381	1680	1488
	1	416459	82.3	15	2	1716	1855	-
	2	567902	86.7	16	3	1211	1400	1919
	3	92979	89.7	17	3	1861	1068	1282
	4	245155	98.6	20	3	1507	1194	1461
	5	397609	71.1	11	2	1921	1789	-
	6	551431	55.9	6	1	1947	-	-
	7	74413	67.9	10	2	1350	1372	-
	8	226559	84.4	16	3	1203	1107	1443
	9	380056	58.8	7	1	1715	-	-
	10	533408	65.6	9	1	1017	-	-
	11	55547	78.5	14	2	1911	1704	-
	12	207876	82.3	15	2	1845	1686	-
	13	359771	90.1	17	3	1938	1071	1266
	14	511297	90.2	17	3	1989	1089	1950
	15	36803	83.1	15	2	1943	1406	-
	16	189652	58.8	7	1	1742	-	-
	17	341809	77	13	2	1187	1657	-
	18	495737	55	6	1	1012	-	-

Table 13

	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	22911	58.1	7	1	1929	-	-
	1	216473	52.1	5	1	1910	-	-
	2	410004	59.9	8	1	1971	-	-
	3	603671	60.2	8	1	1812	-	-
	4	794160	95.9	19	3	1399	1906	1608
	5	192251	79.9	14	2	1626	1859	-
	6	385590	78.5	14	2	1238	1917	-
	7	579862	53.8	6	1	1763	-	-
	8	773423	64.7	9	1	1800	-	-
	9	168898	61.4	8	1	1390	-	-
	10	361606	83.2	15	2	1692	1858	-

	11	553866	84.7	16	3	1533	1677	1638
	12	747241	88.7	17	3	1703	1528	1058
	13	144710	78.3	14	2	1258	1951	-
	14	337856	69.3	11	2	1731	1717	-

Table 14

	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	664275	75.3	13	2	1994	1612	-
	1	907886	56.3	7	1	1456	-	-
	2	151316	67.7	10	2	1617	1185	-
	3	393746	55.6	6	1	1337	-	-
	4	635093	75.2	13	2	1421	1267	-
	5	876993	76.3	13	2	1359	1305	-
	6	121278	85.7	16	3	1547	1362	1924
	7	362696	98.4	20	3	1873	1550	1249
	8	604342	86.4	16	3	1779	1439	1046
	9	846453	93.6	18	3	1059	1031	1452
	10	91871	63.3	9	1	1328	-	-
	11	333050	92.4	18	3	1412	1673	1322

Table 15

	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	361323	93.3	18	3	1983	1912	1535
	1	515261	69.1	11	2	1102	1794	-
	2	39025	86.9	16	3	1044	1152	1148
	3	190900	84.9	16	3	1894	1948	1118
	4	343941	72.3	12	2	1094	1916	-
	5	497624	51.7	5	1	1447	-	-
	6	20319	58.3	7	1	1429	-	-
	7	172999	60.8	8	1	1979	-	-
	8	325872	57.1	7	1	1641	-	-
	9	475841	88.9	17	3	1886	1964	1489
	10	1489	72	12	2	1909	1297	-
	11	153647	90.9	18	3	1261	1566	1370
	12	307096	59.8	8	1	1552	-	-
	13	458804	70	11	2	1759	1291	-
	14	610798	67.2	10	2	1625	1881	-

	15	134759	91.2	18	3	1382	1832	1661
	16	288306	56.5	7	1	1483	-	-
	17	441296	51.2	5	1	1237	-	-
	18	592780	74.1	12	2	1471	1245	-

Table 16

	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	158286	76.9	13	2	1110	1140	-
	1	366024	50.2	5	1	1316	-	-
	2	573452	62.9	9	1	1520	-	-
	3	780619	64.7	9	1	1902	-	-
	4	132455	83.8	15	3	1410	1097	1621
	5	340207	65.4	9	1	1944	-	-
	6	548208	53.2	6	1	1024	-	-
	7	755333	51.7	5	1	1603	-	-
	8	107117	78.7	14	2	1804	1168	-
	9	314500	72.4	12	2	1030	1343	-
	10	522447	53.8	6	1	1327	-	-
	11	728517	73.6	12	2	1524	1553	-
	12	81611	66.7	10	2	1722	1122	-
	13	288948	82.5	15	2	1404	1019	-

Table 17

	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	345766	87.6	17	3	1565	1055	1840
	1	490019	85.2	16	3	1735	1541	1408
	2	39073	84.8	16	3	1534	1889	1463
	3	183923	77.9	13	2	1749	1460	-
	4	328777	76.5	13	2	1518	1485	-
	5	474728	60.9	8	1	1540	-	-
	6	21394	83	15	2	1080	1010	-
	7	165992	80.4	14	2	1824	1752	-
	8	310973	67.5	10	2	1764	1181	-
	9	456884	62.1	8	1	1495	-	-
	10	3515	86.4	16	3	1773	1966	1263
	11	147928	84.3	15	3	1593	1188	1788
	12	293225	76.9	13	2	1226	1537	-

	13	436922	95.8	19	3	1192	1298	1844
	14	584015	55.2	6	1	1644	-	-
	15	130832	59	7	1	1402	-	-
	16	274684	94.5	19	3	1296	1700	1283
	17	418579	91.9	18	3	1970	1978	1165
	18	563464	85.2	16	3	1732	1551	1189
	19	112787	69.5	11	2	1038	1224	-

Table 18

	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	429224	86.4	16	3	1259	1918	1455
	1	670241	92.2	18	3	1598	1719	1895
	2	912880	80.4	14	2	1816	1899	-
	3	158603	54.3	6	1	1335	-	-
	4	400824	53.1	5	1	1303	-	-
	5	641915	69.4	11	2	1503	1546	-
	6	883823	69.1	11	2	1279	1639	-
	7	128373	100	20	3	1375	1438	1595
	8	370379	79.6	14	2	1239	1705	-
	9	611194	88.4	17	3	1374	1579	1623
	10	855665	53.3	6	1	1016	-	-
	11	98897	65.3	9	1	1709	-	-

Table 19

	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	292143	55.3	6	1	1920	-	-
	1	499633	58.3	7	1	1797	-	-
	2	706377	72.3	12	2	1610	1039	-
	3	58989	84.8	16	3	1131	1761	1721
	4	266161	82.5	15	2	1875	1431	-
	5	474469	63.3	9	1	1095	-	-
	6	680544	80	14	2	1119	1913	-
	7	33519	90.3	17	3	1660	1853	1123
	8	240319	91.1	18	3	1539	1783	1172
	9	447400	96.6	19	3	1525	1036	1385
	10	654516	82.7	15	2	1710	1990	-
	11	8083	50.7	5	1	1234	-	-

	12	215435	78.4	14	2	1047	1109	-
	13	421325	99.5	20	3	1299	1965	1869

Table 20

	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	733725	88.6	17	3	1501	1067	1927
	1	977882	57.4	7	1	1723	-	-
	2	221197	96.6	19	3	1086	1658	1324
	3	462915	69.7	11	2	1751	1945	-
	4	705071	77.9	13	2	1642	1317	-
	5	947923	62	8	1	1866	-	-
	6	191373	88.4	17	3	1997	1077	1366
	7	432561	97.3	20	3	1790	1896	1367
	8	674004	96.2	19	3	1391	1787	1672
	9	915842	95.4	19	3	1020	1892	1414
	10	162176	54.8	6	1	1084	-	-
	11	403553	80.4	14	2	1850	1436	-

Table 21

	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	483470	74.7	12	2	1619	1611	-
	1	666072	57.1	7	1	1560	-	-
	2	98810	91.9	18	3	1392	1475	1276
	3	279914	83.1	15	2	1809	1772	-
	4	462536	50.7	5	1	1003	-	-
	5	642324	79.2	14	2	1574	1600	-
	6	76831	58.7	7	1	1186	-	-
	7	257785	71	11	2	1521	1567	-
	8	438554	79	14	2	1777	1960	-
	9	620397	68.5	10	2	1284	1428	-
	10	54310	73.5	12	2	1904	1352	-
	11	235506	70.5	11	2	1864	1115	-
	12	417036	76.6	13	2	1045	1300	-
	13	597974	81.2	14	2	1160	1675	-
	14	32086	61.8	8	1	1277	-	-
	15	212751	94.9	19	3	1450	1206	1860

Table 22

	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	526149	78.5	14	2	1653	1698	-
	1	767135	89.8	17	3	1174	1962	1167
	2	12955	59.4	8	1	1982	-	-
	3	254612	79.6	14	2	1633	1890	-
	4	496588	76	13	2	1112	1811	-
	5	739728	53.6	6	1	1144	-	-
	6	980872	80.9	14	2	1220	1053	-
	7	225249	61.6	8	1	1724	-	-
	8	467279	53.4	6	1	1901	-	-
	9	709720	59.9	8	1	1379	-	-
	10	951847	60.4	8	1	1453	-	-
	11	194839	91.4	18	3	1768	1726	1227

Table 23

	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	261858	77	13	2	1191	1363	-
	1	407646	58.1	7	1	1248	-	-
	2	552319	62.1	8	1	1836	-	-
	3	99107	76.9	13	2	1334	1236	-
	4	243514	80	14	2	1914	1852	-
	5	389464	52	5	1	1701	-	-
	6	531093	88.6	17	3	1693	1995	1905
	7	81159	72.9	12	2	1922	1387	-
	8	225245	98.5	20	3	1839	1746	1389
	9	371906	57.9	7	1	1193	-	-
	10	514197	95.9	19	3	1659	1870	1066
	11	63561	53.5	6	1	1162	-	-
	12	207510	92	18	3	1745	1654	1458
	13	353638	57.3	7	1	1834	-	-
	14	497515	70.5	11	2	1684	1586	-
	15	45553	70	11	2	1042	1664	-
	16	189821	84	15	3	1765	1630	1176
	17	335330	76.1	13	2	1557	1057	-
	18	478825	93.2	18	3	1985	1018	1340
	19	27594	96.8	19	3	1760	1614	1817

Table 24								
	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	247117	50.1	5	1	1841	-	-
	1	453362	93.5	18	3	1590	1081	1413
	2	660875	68.8	11	2	1707	1577	-
	3	14140	56.3	7	1	1056	-	-
	4	220734	86	16	3	1953	1108	1987
	5	428367	75.2	13	2	1572	1536	-
	6	636681	54.4	6	1	1517	-	-
	7	843157	71.1	11	2	1329	1243	-
	8	195585	76.2	13	2	1940	1770	-
	9	403231	80.2	14	2	1098	1209	-
	10	610202	79.7	14	2	1588	1214	-
	11	815229	90.9	18	3	1615	1862	1601
	12	170267	68.7	10	2	1377	1441	-
	13	377306	67.4	10	2	1872	1313	-

Table 25								
	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	628071	94	19	3	1643	1748	1941
	1	853391	70.8	11	2	1177	1201	-
	2	156223	56.3	7	1	1006	-	-
	3	378734	96.7	19	3	1230	1163	1332
	4	601331	90.6	17	3	1217	1582	1498
	5	825462	74.5	12	2	1569	1281	-
	6	128265	92.6	18	3	1065	1669	1222
	7	351161	89	17	3	1493	1135	1380
	8	573425	96.5	19	3	1607	1822	1602
	9	798431	70.5	11	2	1141	1178	-
	10	100737	94	19	3	1009	1629	1956
	11	324661	55.8	6	1	1290	-	-
	12	546278	87.7	17	3	1435	1963	1164

Table 26

	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	1253842	68.6	10	2	1306	1161	-
	1	119486	83.1	15	2	1420	1315	-
	2	482958	60.9	8	1	1687	-	-
	3	845641	77.7	13	2	1776	1158	-
	4	1208428	77.4	13	2	1793	1510	-
	5	74748	66.8	10	2	1576	1323	-
	6	438300	63.7	9	1	1333	-	-
	7	800152	91.2	18	3	1409	1681	1275

Table 27

	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	545865	83.6	15	3	1632	1195	1000
	1	14067	89.4	17	3	1173	1627	1656
	2	184953	55.8	6	1	1532	-	-
	3	353759	90.9	18	3	1981	1554	1998
	4	526388	54.7	6	1	1825	-	-
	5	694806	97.7	20	3	1734	1202	1250
	6	163568	67.5	10	2	1571	1434	-
	7	333410	96.7	19	3	1589	1469	1268
	8	504006	68.3	10	2	1750	1954	-
	9	675297	78.3	14	2	1591	1082	-
	10	142890	55	6	1	1427	-	-
	11	312479	84.9	16	3	1129	1936	1199
	12	482953	74.6	12	2	1959	1856	-
	13	655022	63.3	9	1	1885	-	-
	14	121457	99.8	20	3	1035	1515	1120
	15	292606	63.6	9	1	1647	-	-
	16	461322	87.3	16	3	1931	1051	1831

Table 28

	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	565136	85.6	16	3	1946	1078	1015
	1	89970	68.6	10	2	1029	1780	-
	2	243121	54.2	6	1	1111	-	-

	3	396034	61.2	8	1	1104	-	-
	4	546225	97.1	20	3	1157	1969	1100
	5	70998	98.3	20	3	1142	1699	1622
	6	224093	62.4	8	1	1655	-	-
	7	376127	80.2	14	2	1126	1769	-
	8	527806	87.5	17	3	1216	1448	1179
	9	52247	85.8	16	3	1847	1348	1472
	10	204582	88.1	17	3	1023	1124	1631
	11	357941	65.3	9	1	1848	-	-
	12	510977	52.5	5	1	1470	-	-
	13	33698	52.3	5	1	1312	-	-
	14	186023	74.1	12	2	1915	1200	-
	15	339327	54.9	6	1	1479	-	-
	16	491053	76.2	13	2	1376	1502	-
	17	14858	60.4	8	1	1758	-	-
	18	167387	81.5	15	2	1491	1103	-

Table 29

	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	507709	50.5	5	1	1857	-	-
	1	750249	55.7	6	1	1246	-	-
	2	989003	85.8	16	3	1774	1002	1967
	3	235634	76.9	13	2	1125	1474	-
	4	477675	75.1	13	2	1254	1052	-
	5	718312	92.3	18	3	1180	1486	1492
	6	960895	78.1	14	2	1301	1757	-
	7	205370	92.2	18	3	1898	1252	1713
	8	446940	89	17	3	1260	1706	1411
	9	689225	70.9	11	2	1578	1620	-
	10	932305	63.1	9	1	1782	-	-
	11	176231	55.3	6	1	1522	-	-

Table 30

	Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
	0	277485	83.4	15	3	1454	1205	1801
	1	437880	97.3	20	3	1319	1826	1635
	2	598445	90.4	17	3	1079	1986	1674

	3	97088	91.8	18	3	1563	1151	1802
	4	257251	98.2	20	3	1876	1977	1766
	5	419893	59.5	8	1	1952	-	-
	6	580724	80	14	2	1253	1137	-
	7	77366	86.5	16	3	1054	1128	1828
	8	238032	91.1	18	3	1105	1599	1442
	9	398605	93.5	18	3	1867	1373	1087
	10	562025	60.7	8	1	1033	-	-
	11	57684	67.2	10	2	1288	1405	-
	12	219083	61.8	8	1	1585	-	-
	13	379234	79.4	14	2	1933	1667	-
	14	540896	81.4	15	2	1096	1464	-
	15	37916	65.7	10	1	1496	-	-
	16	198794	76	13	2	1733	1255	-
	17	359754	81	14	2	1326	1668	-

