



# element

**PCTEST Engineering Laboratory, LLC**

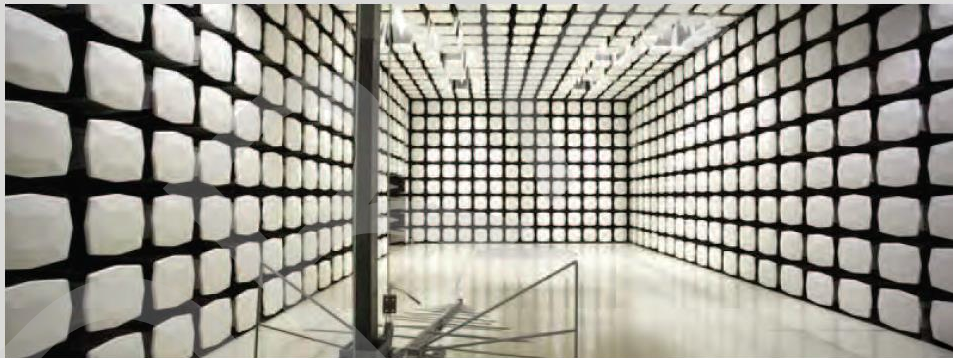
**Samsung Model SM-H204V**

**FCC ID: A3LSMH204V**

**FCC 15.407:2020**

**802.11an, ac 4x4 MIMO Radio**

**Report: PCTE0004 Rev. 2, Issue Date: September 30, 2020**



NVLAP LAB CODE: 201049-0



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# CERTIFICATE OF TEST



Last Date of Test: September 17, 2020  
PCTEST Engineering Laboratory, LLC  
EUT: Samsung Model SM-H204V

## Radio Equipment Testing

### Standards

Specification	Method
FCC 15.407:2020	ANSI C63.10:2013, KDB 789033, KDB 905462

### Results

Method Clause	Test Description	Applied	Results	Comments
KDB 905462 - 7.5	DFS Testing - Test Signal Level	Yes	Pass	
KDB 905462 - 7.7	DFS Testing - Channel Loading/Channel Utilization	Yes	Pass	
KDB 905462 - 7.8.1	DFS Testing - Detection Bandwidth	Yes	Pass	
KDB 905462 - 7.8.2	DFS Testing - Channel Availability Check	Yes	Pass	
KDB 905462 - 7.8.3	DFS Testing - Move Time	Yes	Pass	
KDB 905462 - 7.8.3	DFS Testing - Closing Time	Yes	Pass	
KDB 905462 - 7.8.3	DFS Testing - Non Occupancy Period	Yes	Pass	
KDB 905462 - 7.8.4	DFS Testing - Statistical Performance	Yes	Pass	
N/A	DFS Testing - DFS Product Information	No	N/A	This section is not contained within the test report. The reporting information required by FCC KDB 905462 D02 UNII DFS Compliance Procedures New Rules v02, April 8, 2016 Section 8.1 will be included in the application documents.

### Deviations From Test Standards

None

### Approved By:

Eric Brandon, Department Manager

*Product compliance is the responsibility of the client; therefore, the tests and equipment modes of operation represented in this report were agreed upon by the client, prior to testing. The results of this test pertain only to the sample(s) tested. The specific description is noted in each of the individual sections of the test report supporting this certificate of test. This report reflects only those tests from the referenced standards shown in the certificate of test. It does not include inspection or verification of labels, identification, marking or user information. As indicated in the Statement of Work sent with the quotation, Element's standard process is to always use the latest published version of the test methods even when earlier versions are cited in the test specification. Issuance of a purchase order was de facto acceptance of this approach. Otherwise, the client would have advised Element in writing of the specific version of the test methods they wanted applied to the subject testing.*

# REVISION HISTORY



Revision Number	Description	Date (yyyy-mm-dd)	Page Number
01	Updated EUT name from "4x4 MiMo" to "Samsung Model SM-H204V."	2020-08-17	1, 2, 8, 9, 12, 18, 23, 30, 34, 37, 40, 43
	Added FCC ID to cover page.	2020-08-17	1
	Updated test date on Statistical Performance	2020-08-18	2, 8, 10, 43
02	Updated last dates of test on Certificate of Test, Product Description, and Modifications pages.	2020-09-30	2, 8, 10
	Added Test Signal Levels 5.7GHz data	2020-09-30	17-22
	Added Closing Time 5.7GHz data	2020-09-30	45-54

DRAFT

# ACCREDITATIONS AND AUTHORIZATIONS



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## United States

**FCC** - Designated by the FCC as a Telecommunications Certification Body (TCB). Certification chambers, Open Area Test Sites, and conducted measurement facilities are listed with the FCC.

**A2LA** - Accredited by A2LA to ISO / IEC 17065 as a product certifier. This allows Element to certify transmitters to FCC and IC specifications.

**NVLAP** - Each laboratory is accredited by NVLAP to ISO 17025

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## Canada

**ISED** - Recognized by Innovation, Science and Economic Development Canada as a Certification Body (CB) and as a CAB for the acceptance of test data.

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## European Union

**European Commission** – Within Element, we have a EU Notified Body validated for the EMCD and RED Directives.

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## Australia/New Zealand

**ACMA** - Recognized by ACMA as a CAB for the acceptance of test data.

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## Korea

**MSIT / RRA** - Recognized by KCC's RRA as a CAB for the acceptance of test data.

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## Japan

**VCCI** - Associate Member of the VCCI. Conducted and radiated measurement facilities are registered.

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## Taiwan

**BSMI** – Recognized by BSMI as a CAB for the acceptance of test data.

**NCC** - Recognized by NCC as a CAB for the acceptance of test data.

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## Singapore

**IDA** – Recognized by IDA as a CAB for the acceptance of test data.

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## Israel

**MOC** – Recognized by MOC as a CAB for the acceptance of test data.

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## Hong Kong

**OFCA** – Recognized by OFCA as a CAB for the acceptance of test data.

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## Vietnam

**MIC** – Recognized by MIC as a CAB for the acceptance of test data.

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## SCOPE

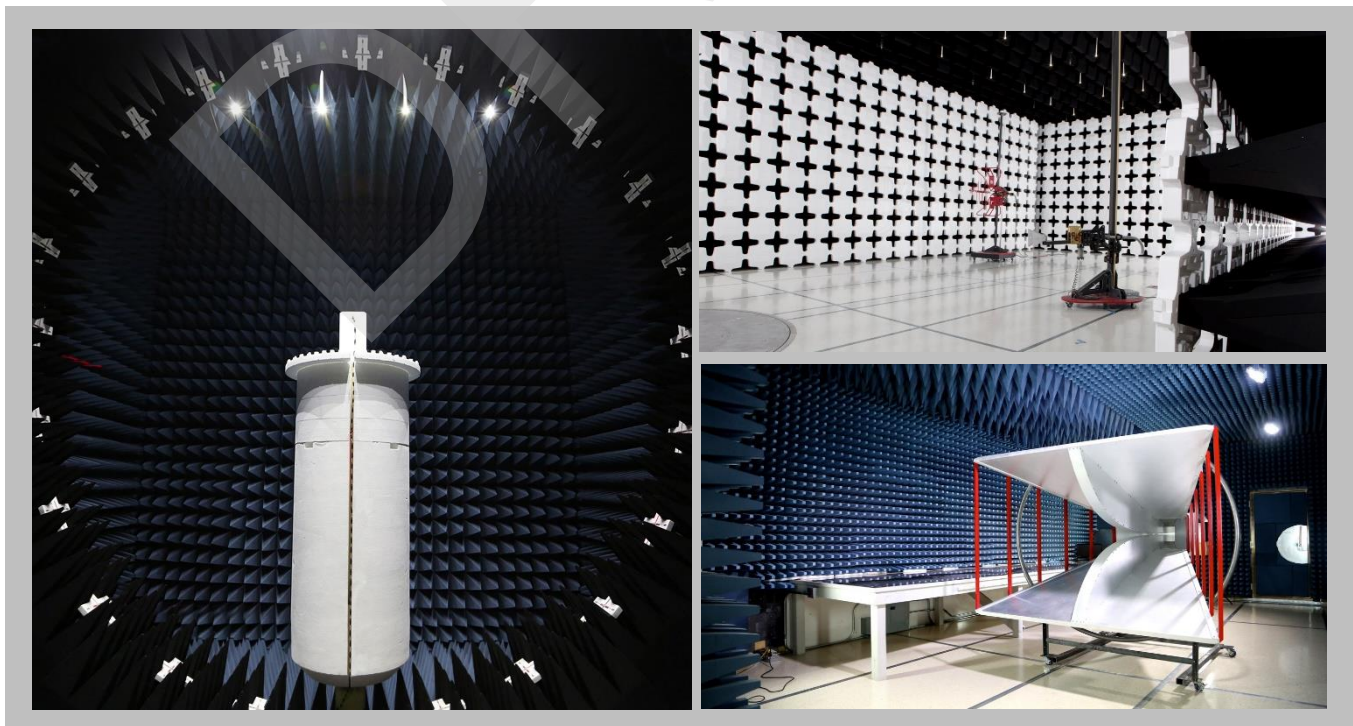
For details on the Scopes of our Accreditations, please visit:

<https://www.nwemc.com/emc-testing-accreditations>

# FACILITIES



<b>California</b> Labs OC01-17 41 Tesla Irvine, CA 92618 (949) 861-8918	<b>Minnesota</b> Labs MN01-10 9349 W Broadway Ave. Brooklyn Park, MN 55445 (612)-638-5136	<b>Oregon</b> Labs EV01-12 6775 NE Evergreen Pkwy #400 Hillsboro, OR 97124 (503) 844-4066	<b>Texas</b> Labs TX01-09 3801 E Plano Pkwy Plano, TX 75074 (469) 304-5255	<b>Washington</b> Labs NC01-05 19201 120 <sup>th</sup> Ave NE Bothell, WA 98011 (425)984-6600
<b>NVLAP</b>				
NVLAP Lab Code: 200676-0	NVLAP Lab Code: 200881-0	NVLAP Lab Code: 200630-0	NVLAP Lab Code:201049-0	NVLAP Lab Code: 200629-0
<b>Innovation, Science and Economic Development Canada</b>				
2834B-1, 2834B-3	2834E-1, 2834E-3	2834D-1	2834G-1	2834F-1
<b>BSMI</b>				
SL2-IN-E-1154R	SL2-IN-E-1152R	SL2-IN-E-1017	SL2-IN-E-1158R	SL2-IN-E-1153R
<b>VCCI</b>				
A-0029	A-0109	A-0108	A-0201	A-0110
<b>Recognized Phase I CAB for ISED, ACMA, BSMI, IDA, KCC/RRA, MIC, MOC, NCC, OFCA</b>				
US0158	US0175	US0017	US0191	US0157





# MEASUREMENT UNCERTAINTY



## Measurement Uncertainty

When a measurement is made, the result will be different from the true or theoretically correct value. The difference is the result of tolerances in the measurement system that cannot be completely eliminated. To the extent that technology allows us, it has been our aim to minimize this error. Measurement uncertainty is a statistical expression of measurement error qualified by a probability distribution.

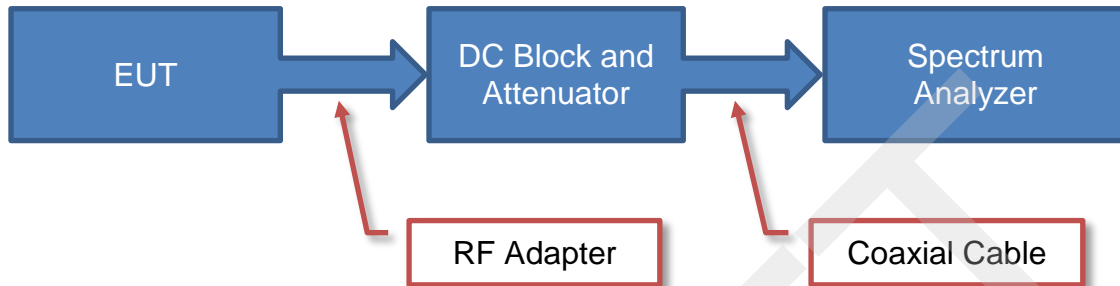
A measurement uncertainty estimation has been performed for each test per our internal quality document QM205.4.6. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty (K=2) can be found included as part of the applicable test description page. Our measurement data meets or exceeds the measurement uncertainty requirements of the applicable specification; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for estimating measurement uncertainty are based upon ETSI TR 100 028 (or CISPR 16-4-2 as applicable), and are available upon request.

The following table represents the Measurement Uncertainty (MU) budgets for each of the tests that may be contained in this report.

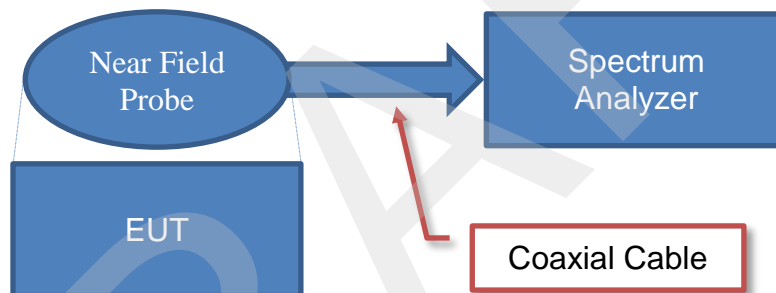
<b>Test</b>	<b>+ MU</b>	<b>- MU</b>
Frequency Accuracy	0.0007%	-0.0007%
Amplitude Accuracy (dB)	1.2 dB	-1.2 dB
Conducted Power (dB)	1.2 dB	-1.2 dB
Radiated Power via Substitution (dB)	0.7 dB	-0.7 dB
Temperature (degrees C)	0.7°C	-0.7°C
Humidity (% RH)	2.5% RH	-2.5% RH
Voltage (AC)	1.0%	-1.0%
Voltage (DC)	0.7%	-0.7%
Field Strength (dB)	5.1 dB	-5.1 dB
AC Powerline Conducted Emissions (dB)	2.6 dB	-2.6 dB

# Test Setup Block Diagrams

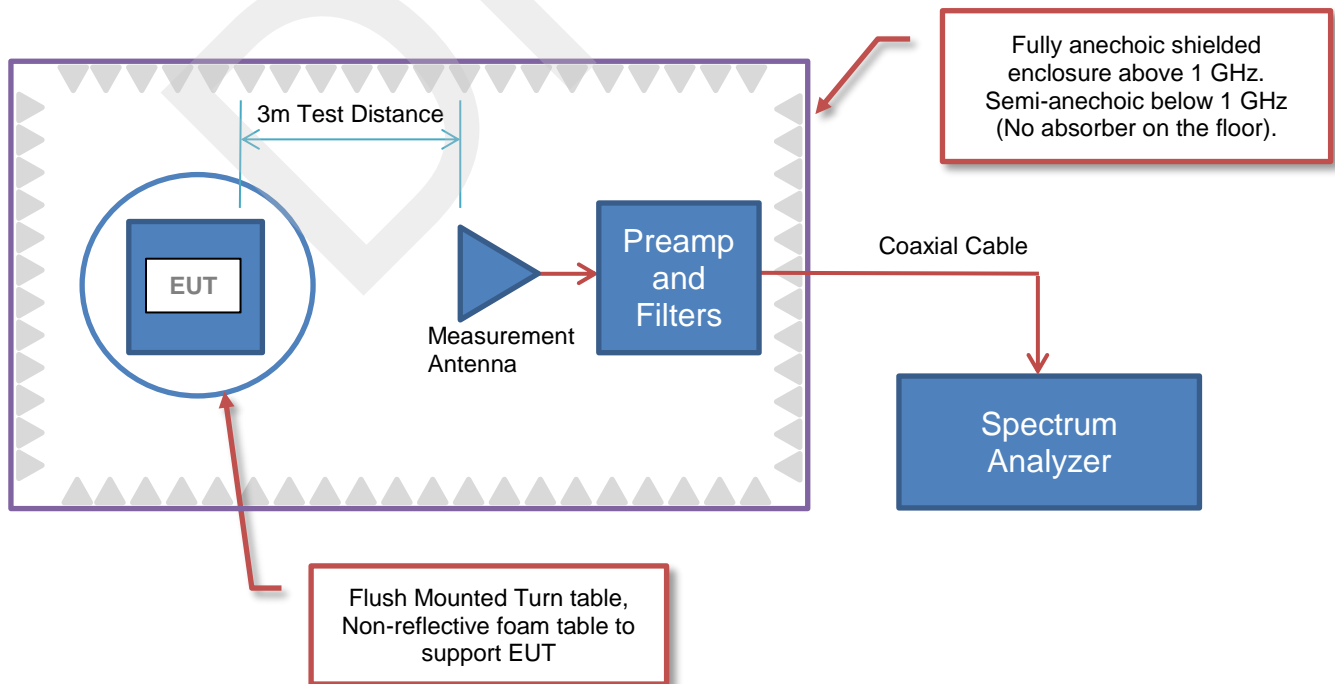
## Antenna Port Conducted Measurements



## Near Field Test Fixture Measurements



## Spurious Radiated Emissions



# PRODUCT DESCRIPTION

## Client and Equipment Under Test (EUT) Information

<b>Company Name:</b>	PCTEST Engineering Laboratory, LLC
<b>Address:</b>	7185 Oakland Mills Rd
<b>City, State, Zip:</b>	Columbia, MD 21046
<b>Test Requested By:</b>	Dan Pino
<b>EUT:</b>	Samsung Model SM-H204V
<b>First Date of Test:</b>	July 25, 2020
<b>Last Date of Test:</b>	September 30, 2020
<b>Receipt Date of Samples:</b>	July 25, 2020
<b>Equipment Design Stage:</b>	Production
<b>Equipment Condition:</b>	No Damage
<b>Purchase Authorization:</b>	Verified

## Information Provided by the Party Requesting the Test

<b>Functional Description of the EUT:</b>
Samsung Model SM-H204V
<b>Testing Objective:</b>
To demonstrate compliance of the 802.11 radio under FCC 15.407 for operation in the 5.2 GHz, 5.3 GHz, 5.6 GHz and 5.8 GHz band(s).



# CONFIGURATIONS



## Configuration PCTE0004- 1

Software/Firmware Running during test	
Description	Version
Iperf	2.0.9

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
Wireless 4x4 MiMo	Samsung	SM-H204V	None

Peripherals in test setup boundary			
Description	Manufacturer	Model/Part Number	Serial Number
Server Laptop	Lenovo	20308	QV07240618
Mouse (Server Laptop)	Lenovo	MOEUUO	4454328
AC/DC Adapter (Sever Laptop)	Insignia	NSPWLC563	None
Power Brick	Samsung	W18-065N1E	PD-65AWHUS
Anyway Com Jig	Samsung	MULTI	S 56621
Power Brick Anyway Jig	YOUNG	SM-H204V	None
Client Laptop	Lenovo	81VS	R90YGNE6

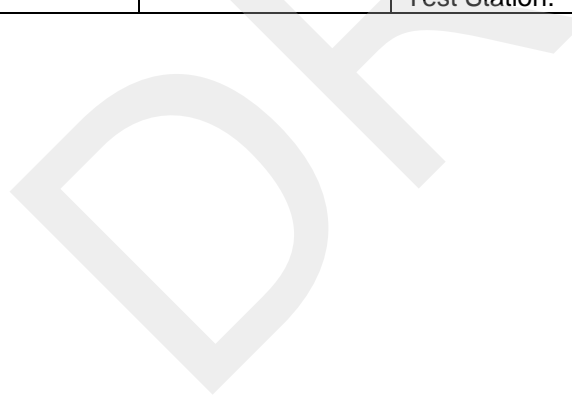
Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
Mouse USB	Yes	1.8m	No	mouse	Server Laptop
USB C Power Cable	Yes	2.0m	No	Power Brick MiMo	Samsung Model SM-H204V
DC cable (Sever Laptop)	No	1.3m	No	AC/DC Adapter	Server Laptop
AC cable (Sever Laptop)	No	1.8m	No	AC/DC Adapter	AC main
Ethernet Cable	No	1.5m	No	Server Laptop	Samsung Model SM-H204V
RG 232 to USB	Yes	1.8m	No	Anyway Com Jig	Server Laptop
I/O Cable	Unknown	0.3m	No	Anyway Com Jig	Samsung Model SM-H204V
DC Power Cable	No	1.5m	No	Power Brick Anyway Jig	Anyway Com Jig

# MODIFICATIONS



## Equipment Modifications

Item	Date	Test	Modification	Note	Disposition of EUT
1	2020-07-25	DFS Testing - Channel Loading Channel Utilization	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
2	2020-07-25	DFS Testing - Detection Bandwidth	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
3	2020-07-25	DFS Testing - Channel Availability Check	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
4	2020-07-25	DFS Testing - Move Time	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
5	2020-07-25	DFS Testing - Non Occupancy Period	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
6	2020-07-28	DFS Testing - Statistical Performance	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
7	2020-09-17	DFS Testing - Closing Time	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
8	2020-09-17	Test Signal Levels	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.





# TEST SIGNAL LEVELS

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

## TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Cable	Micro-Coax	UFD150A-1-0720-200200	TXG	18-Sep-19	18-Sep-20
Block - DC	Fairview Microwave	SD3379	AMM	13-Mar-20	13-Mar-21
Attenuator	Fairview Microwave	SA4018-20	TYE	18-Sep-19	18-Sep-20
Power Divider/Combiner	Fairview Microwave	MP0208-2	PDI	NCR	NCR
Power Divider/Combiner	Fairview Microwave	MP0208-2	PDF	NCR	NCR
Attenuator	Fairview Microwave	SA1501SMA	RKV	NCR	NCR
Analyzer - Spectrum Analyzer	Agilent	N9010A	AFL	27-Feb-20	27-Feb-21
Generator - Signal	Keysight	N5182B-506	TEV	23-Apr-18	23-Apr-21
Generator - Signal	Benchforge Manufacturing	Colt	TIN	NCR	NCR

## TEST DESCRIPTION

FCC KDB 905462 describes the compliance measurement procedures including acceptable instrument system configurations for performing Dynamic Frequency Selection (DFS) tests under FCC Part 15 Subpart E Rules required for Unlicensed - National Information Infrastructure (U-NII) equipment that operates in the frequency bands 5.25 GHz to 5.35 GHz and/or 5.47 GHz to 5.725 GHz. The master and client were connected using the conducted method described in the procedure via a series of splitters and attenuators which allows the radar signals to be injected and monitored. A spectrum analyzer was used to measure and record the test signal level for each radar type (0-6) as defined in the test procedure.

RBW: ≥ 3MHz

VBW: ≥ 3MHz

Detector: Peak

SPAN: Zero

The measurement was taken using the transmission path from the signal generator to the master. The test signal level was then set equal to the DFS Detection Threshold that is required for testing.

$-64\text{dBm} + 1\text{dB}(\text{spec allowance}) + -0.5\text{dBi}(\text{minimum antenna gain}) + 3.13\text{dBm}(\text{measured splitter loss}) + .18\text{dBm}(\text{u.fl measurement cable loss}) = -60.19\text{dBm}$  final threshold level.

# TEST SIGNAL LEVELS



XMI 2020.03.25.0

EUT: Samsung Model SM-H204V		Work Order: PCTE0004	
Serial Number: None		Date: 25-Jul-20	
Customer: PCTEST Engineering Laboratory, LLC		Temperature: 24.7 °C	
Attendees: None		Humidity: 53.6% RH	
Project: None		Barometric Pres.: 1017 mbar	
Tested by: Brandon Hobbs		Power: 110VAC/60Hz	
		Job Site: TX05	
TEST SPECIFICATIONS			
FCC 15.407:2020		Test Method	
		ANSI C63.10:2013	
COMMENTS			
Radar was split across two of the four MIMO ports to more closely represent real world operation and was also client requested. Losses seen at the splitter in the measurement path were account for in the radar calibration leveling. Reference the DFS setup and master attenuation documentation for the attenuators used while under test. Ports 2 and 4 were tested. Per the DFS requirements any single bandwidth can be tested. Internal Attn was reduced for better dynamic range.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	1	Signature	

	Measured Value (dBm)	Target Value (dBm)	Result
802.11ac 5.3 GHz			
20 MHz Channel Bandwidth			
Ch.60, 5300 MHz			
Radar Type 0	-60.7	-60.2	N/A
Radar Type 1A	-60.6	-60.2	N/A
Radar Type 1B	-60.7	-60.2	N/A
Radar Type 2	-60.7	-60.2	N/A
Radar Type 3	-60.6	-60.2	N/A
Radar Type 4	-60.6	-60.2	N/A
Radar Type 5	-60.8	-60.2	N/A
Radar Type 6	-60.7	-60.2	N/A

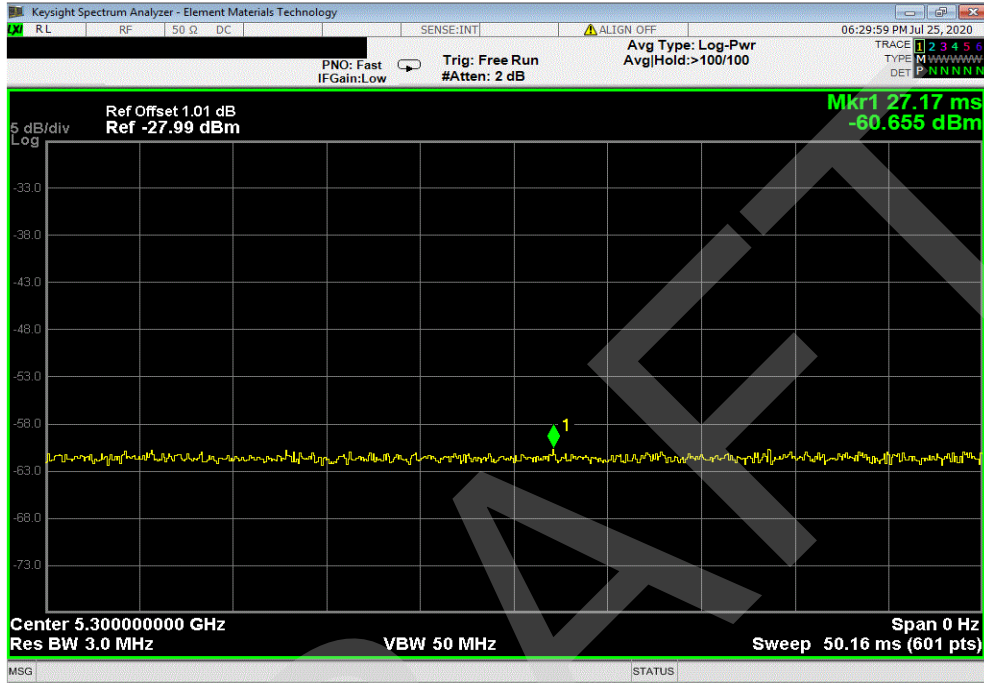
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# TEST SIGNAL LEVELS

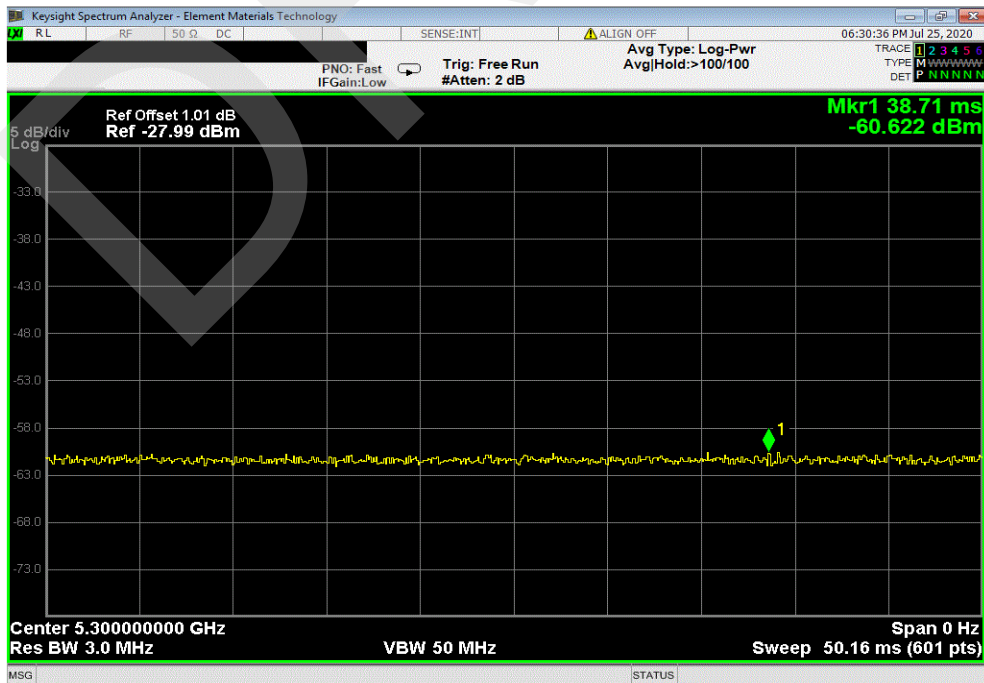


XMI 2020.03.25.0

802.11ac 5.3 GHz , 20 MHz Channel Bandwidth, Ch.60, 5300 MHz, Radar Type 0						
				Measured Value (dBm)	Target Value (dBm)	Result
				-60.7	-60.2	N/A



802.11ac 5.3 GHz , 20 MHz Channel Bandwidth, Ch.60, 5300 MHz, Radar Type 1A						
				Measured Value (dBm)	Target Value (dBm)	Result
				-60.6	-60.2	N/A

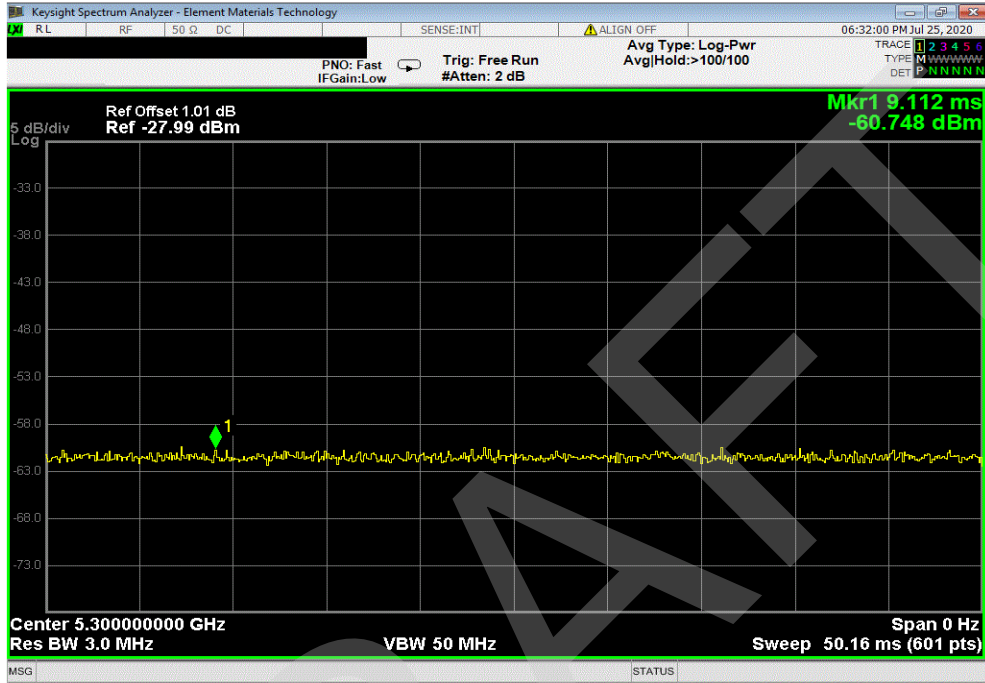


# TEST SIGNAL LEVELS



XMI 2020.03.25.0

802.11ac 5.3 GHz , 20 MHz Channel Bandwidth, Ch.60, 5300 MHz, Radar Type 1B						
		Measured Value (dBm)	Target Value (dBm)	Result		
		-60.74	-60.2	N/A		



802.11ac 5.3 GHz , 20 MHz Channel Bandwidth, Ch.60, 5300 MHz, Radar Type 2						
		Measured Value (dBm)	Target Value (dBm)	Result		
		-60.7	-60.2	N/A		



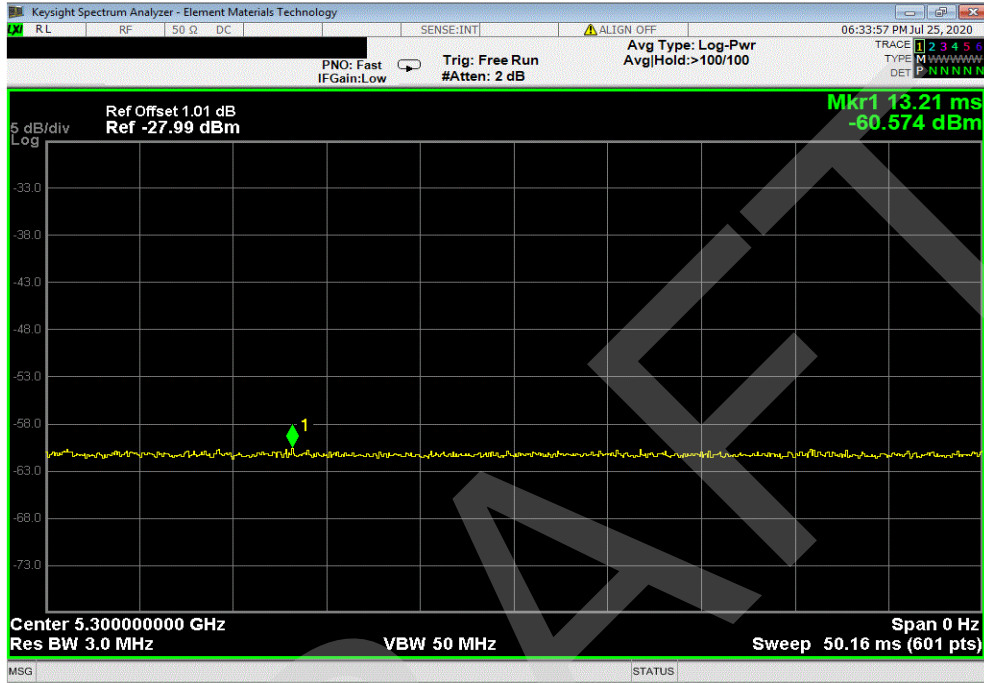


# TEST SIGNAL LEVELS

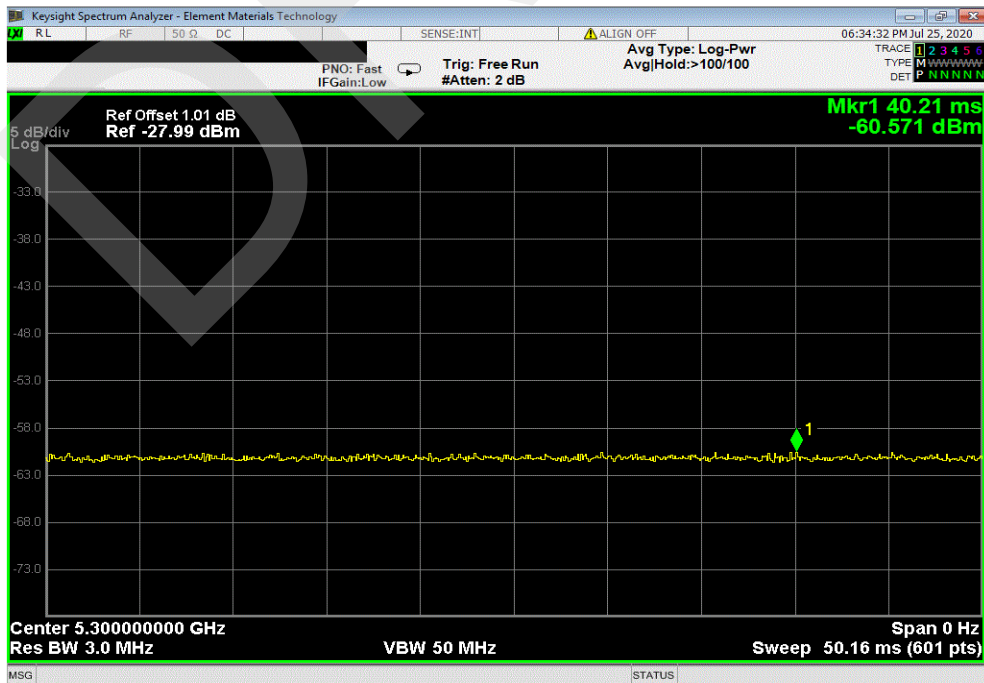


XMI 2020.03.25.0

802.11ac 5.3 GHz , 20 MHz Channel Bandwidth, Ch.60, 5300 MHz, Radar Type 3						
	Measured Value (dBm)	Target Value (dBm)	Result			
	-60.6	-60.2	N/A			



802.11ac 5.3 GHz , 20 MHz Channel Bandwidth, Ch.60, 5300 MHz, Radar Type 4						
	Measured Value (dBm)	Target Value (dBm)	Result			
	-60.6	-60.2	N/A			

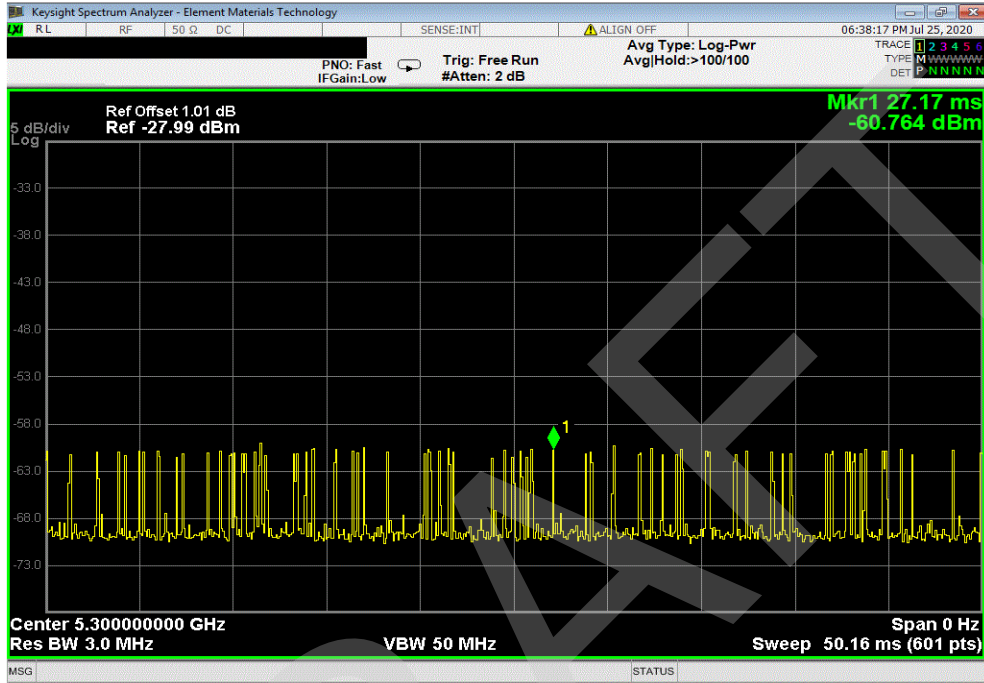


# TEST SIGNAL LEVELS

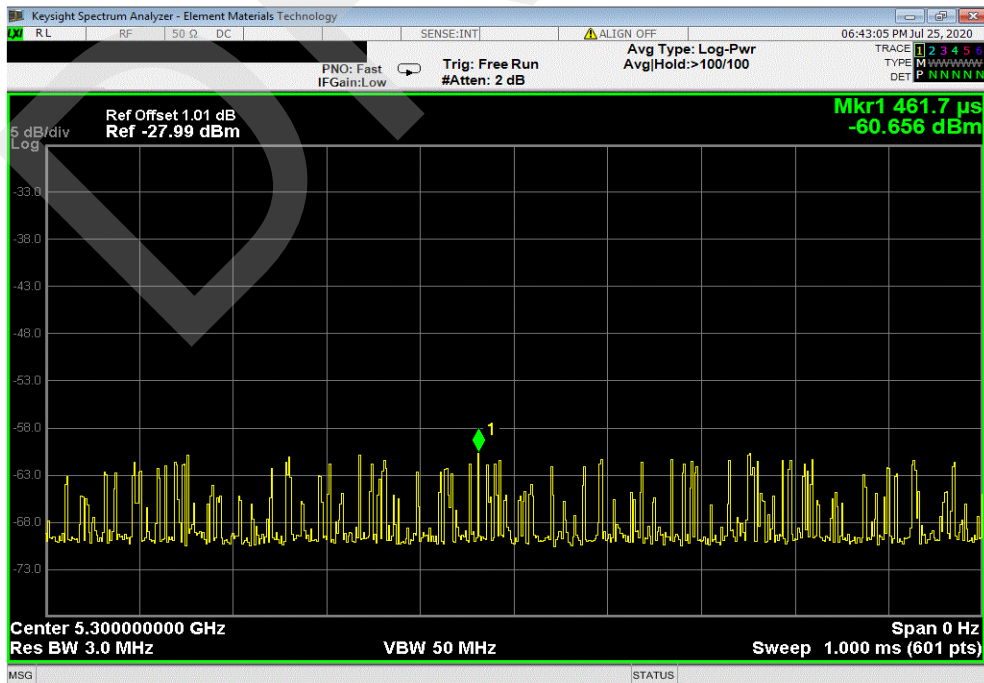


XMI 2020.03.25.0

802.11ac 5.3 GHz , 20 MHz Channel Bandwidth, Ch.60, 5300 MHz, Radar Type 5						
				Measured Value (dBm)	Target Value (dBm)	Result
				-60.8	-60.2	N/A



802.11ac 5.3 GHz , 20 MHz Channel Bandwidth, Ch.60, 5300 MHz, Radar Type 6						
				Measured Value (dBm)	Target Value (dBm)	Result
				-60.7	-60.2	N/A





# TEST SIGNAL LEVELS - 5.7 GHz

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

## TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Generator - Signal	Keysight	N5182B-506	TEV	23-Apr-18	23-Apr-21
Analyzer - Spectrum Analyzer	Agilent	N9010A	AFL	27-Feb-20	27-Feb-21
Attenuator	Fairview Microwave	SA1501SMA	RKV	NCR	NCR
Power Divider/Combiner	Fairview Microwave	MP0208-2	PDF	NCR	NCR
Power Divider/Combiner	Fairview Microwave	MP0208-2	PDI	NCR	NCR
Attenuator	Fairview Microwave	SA4018-20	TYE	18-Sep-19	18-Sep-20
Block - DC	Fairview Microwave	SD3379	AMT	18-Sep-19	18-Sep-20
Cable	Micro-Coax	UFD150A-1-0720-200200	TXG	18-Sep-19	18-Sep-20

## TEST DESCRIPTION

FCC KDB 905462 describes the compliance measurement procedures including acceptable instrument system configurations for performing Dynamic Frequency Selection (DFS) tests under FCC Part 15 Subpart E Rules required for Unlicensed - National Information Infrastructure (U-NII) equipment that operates in the frequency bands 5.25 GHz to 5.35 GHz and/or 5.47 GHz to 5.725 GHz. The master and client were connected using the conducted method described in the procedure via a series of splitters and attenuators which allows the radar signals to be injected and monitored. A spectrum analyzer was used to measure and record the test signal level for each radar type (0-6) as defined in the test procedure.

RBW: ≥ 3MHz

VBW: ≥ 3MHz

Detector: Peak

SPAN: Zero


The measurement was taken using the transmission path from the signal generator to the master. The test signal level was then set equal to the DFS Detection Threshold that is required for testing.

-64dBm + 1dB(spec allowance) + -2.7dBi(minimum antenna gain) + 3.13dBm(measured splitter loss) + .18dBm (u.fl measurement cable loss) = -63.39dBm final threshold level.

# TEST SIGNAL LEVELS - 5.7 GHz



XMI 2020.03.25.0

EUT: Samsung Model SM-H204V		Work Order: PCTE0004	
Serial Number: None		Date: 17-Sep-20	
Customer: PCTEST Engineering Laboratory, LLC		Temperature: 22.2 °C	
Attendees: None		Humidity: 49.3% RH	
Project: None		Barometric Pres.: 1020 mbar	
Tested by: Brandon Hobbs		Power: 110VAC/60Hz	Job Site: TX05
TEST SPECIFICATIONS			
FCC 15.407:2020		Test Method	
		ANSI C63.10:2013	
COMMENTS			
Radar was split across two of the four MIMO ports to more closely represent real world operation and was also client requested. Losses seen at the splitter in the measurement path were account for in the radar calibration leveling. Reference the DFS setup and master attenuation documentation for the attenuators used while under test. Ports 2 and 4 were tested.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	1	Signature 	

	Measured Value (dBm)	Target Value (dBm)	Result
802.11ac, UNII-2c Extended			
20 MHz Channel Bandwidth			
Ch.140, 5700 MHz			
Radar Type 0	-63.40	-63.39	N/A
Radar Type 1A	-63.48	-63.39	N/A
Radar Type 1B	-63.38	-63.39	N/A
Radar Type 2	-63.39	-63.39	N/A
Radar Type 3	-63.37	-63.39	N/A
Radar Type 4	-63.44	-63.39	N/A
Radar Type 5	-63.42	-63.39	N/A
Radar Type 6	-63.60	-63.39	N/A

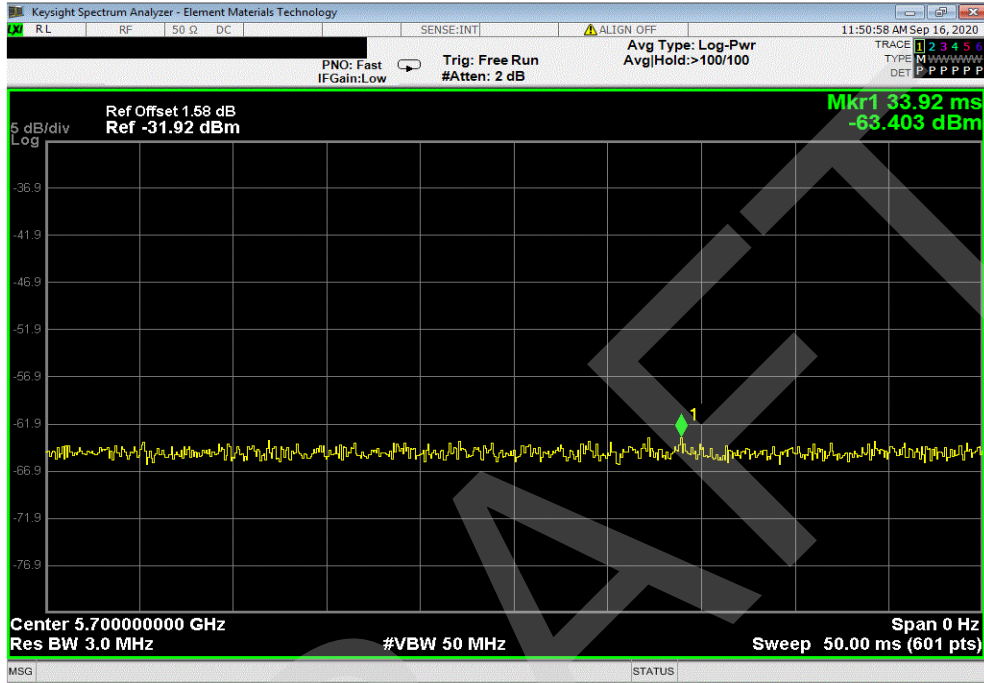
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# TEST SIGNAL LEVELS - 5.7 GHz

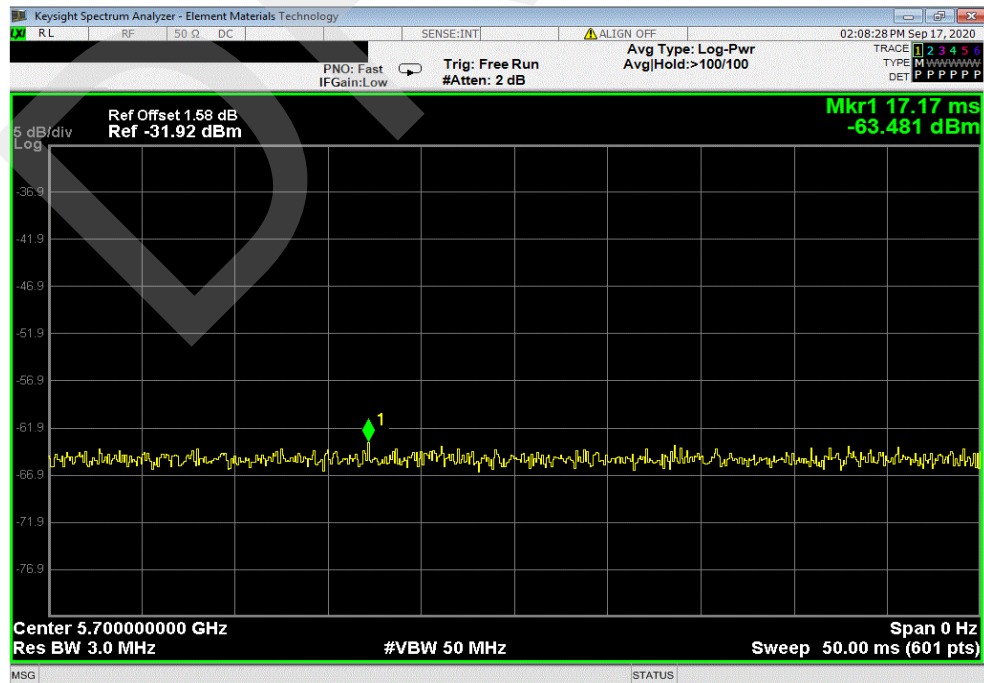


XMI 2020.03.25.0

802.11ac, UNII-2c Extended, 20 MHz Channel Bandwidth, Ch.140, 5700 MHz, Radar Type 0						
		Measured Value (dBm)	Target Value (dBm)	Result		
		-63.403	-63.39	N/A		



802.11ac, UNII-2c Extended, 20 MHz Channel Bandwidth, Ch.140, 5700 MHz, Radar Type 1A						
		Measured Value (dBm)	Target Value (dBm)	Result		
		-63.481	-63.39	N/A		

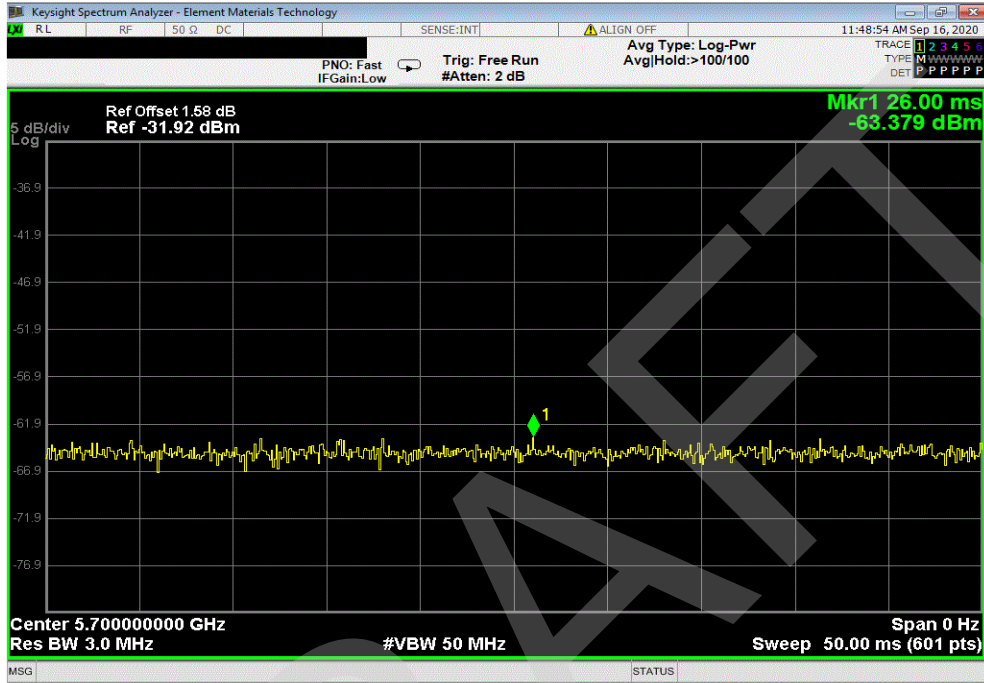


# TEST SIGNAL LEVELS - 5.7 GHz

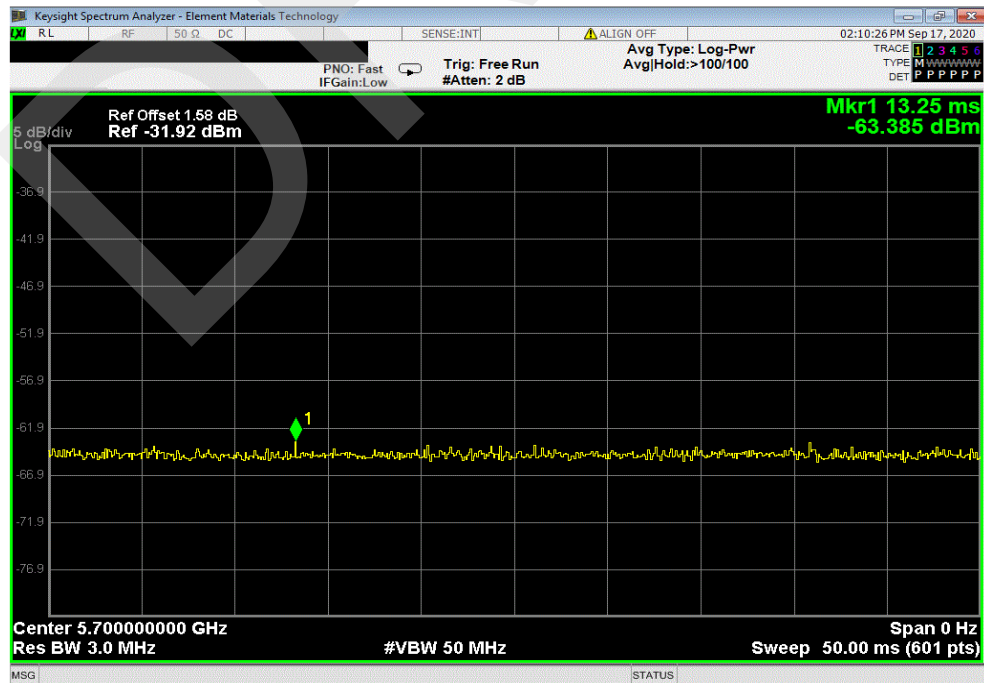


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802.11ac, UNII-2c Extended, 20 MHz Channel Bandwidth, Ch.140, 5700 MHz, Radar Type 1B						
		Measured Value (dBm)	Target Value (dBm)	Result		
		-63.379	-63.39	N/A		



802.11ac, UNII-2c Extended, 20 MHz Channel Bandwidth, Ch.140, 5700 MHz, Radar Type 2						
		Measured Value (dBm)	Target Value (dBm)	Result		
		-63.385	-63.39	N/A		



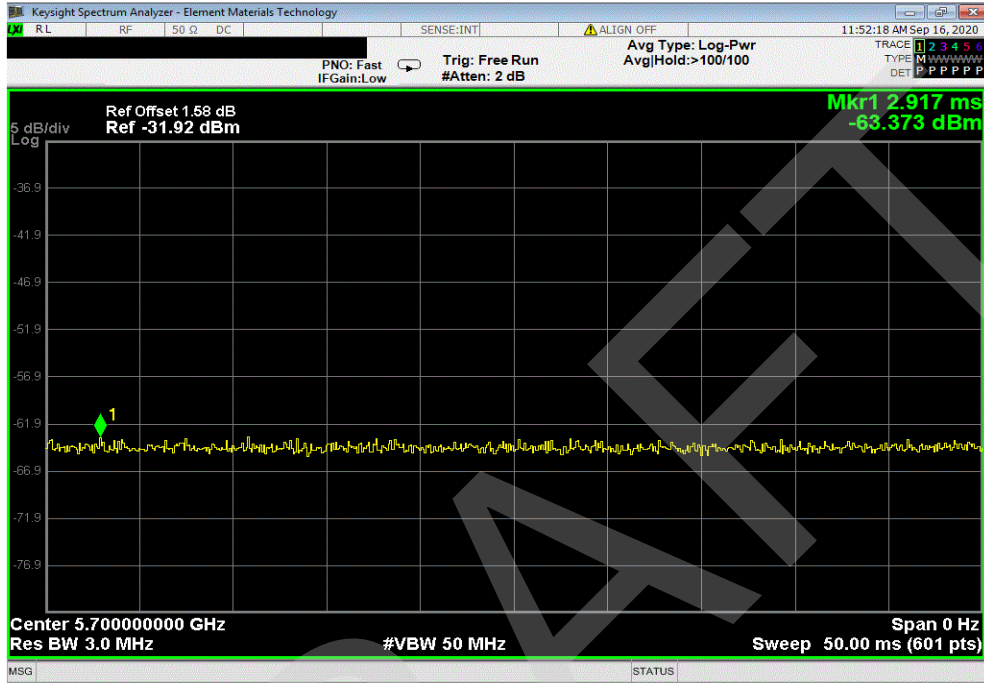


# TEST SIGNAL LEVELS - 5.7 GHz

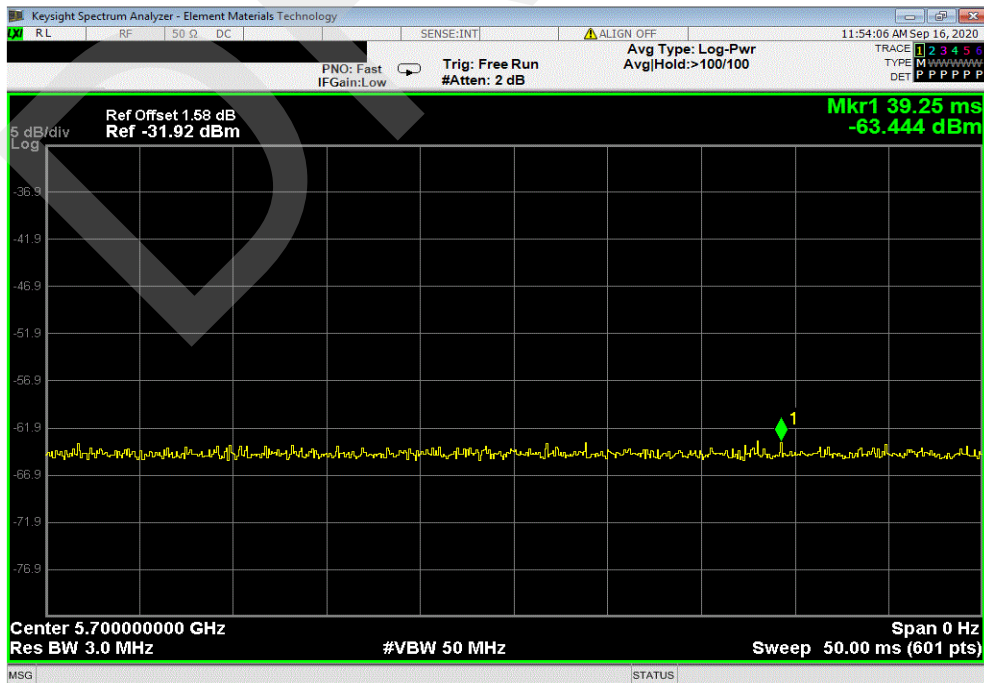


XMI 2020.03.25.0

802.11ac, UNII-2c Extended, 20 MHz Channel Bandwidth, Ch.140, 5700 MHz, Radar Type 3						
		Measured Value (dBm)	Target Value (dBm)	Result		
		-63.373	-63.39	N/A		



802.11ac, UNII-2c Extended, 20 MHz Channel Bandwidth, Ch.140, 5700 MHz, Radar Type 4						
		Measured Value (dBm)	Target Value (dBm)	Result		
		-63.444	-63.39	N/A		





# CHANNEL LOADING/CHANNEL UTILIZATION



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Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

## TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Cable	Micro-Coax	UFD150A-1-0720-200200	TXG	18-Sep-19	18-Sep-20
Block - DC	Fairview Microwave	SD3379	AMM	13-Mar-20	13-Mar-21
Attenuator	Fairview Microwave	SA4018-20	TYE	18-Sep-19	18-Sep-20
Power Divider/Combiner	Fairview Microwave	MP0208-2	PDI	NCR	NCR
Power Divider/Combiner	Fairview Microwave	MP0208-2	PDF	NCR	NCR
Attenuator	Fairview Microwave	SA1501SMA	RKV	NCR	NCR
Analyzer - Spectrum Analyzer	Agilent	N9010A	AFL	27-Feb-20	27-Feb-21
Generator - Signal	Keysight	N5182B-506	TEV	23-Apr-18	23-Apr-21

## TEST DESCRIPTION

The measurements were made using a zero span on the spectrum analyzer to see the pulses in the time domain as further described by the sweep times listed in the test data. A direct connection was made between the RF output of the master and client system setup which used the conducted method described in the FCC KDB 905462 test procedure via a series of splitters and attenuators.

# CHANNEL LOADING/CHANNEL UTILIZATION



XMI 2020.03.25.0

EUT: Samsung Model SM-H204V		Work Order: PCTE0004	
Serial Number: None		Date: 25-Jul-20	
Customer: PCTEST Engineering Laboratory, LLC		Temperature: 25.1 °C	
Attendees: None		Humidity: 52.2% RH	
Project: None		Barometric Pres.: 1017 mbar	
Tested by: Brandon Hobbs		Power: 110VAC/60Hz	
		Job Site: TX05	
TEST SPECIFICATIONS			
FCC 15.407:2020		Test Method	
		ANSI C63.10:2013	
COMMENTS			
Radar was split across two of the four MIMO ports to more closely represent real world operation and was also client requested. Losses seen at the splitter in the measurement path were account for in the radar calibration leveling. Reference the DFS setup and master attenuation documentation for the attenuators used while under test. Ports 2 and 4 were tested. Per the DFS requirements any single bandwidth can be tested. Internal Attn was reduced for better dynamic range.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	1	Signature	

		Max Pulse On Times	Value	Limit	Result
MIMO Ports 2 and 4					
802.11ac 5.3 GHz					
20 MHz Channel Bandwidth					
Ch.60, 5300 MHz					
	1mS Pulse On Time	634	≥ 17%	≥ 17%	Pass
	2mS	1484	≥ 17%	≥ 17%	Pass
	10mS	1484	≥ 17%	≥ 17%	Pass
	25mS	1484	≥ 17%	≥ 17%	Pass
	100mS	1484	≥ 17%	≥ 17%	Pass
	10Sec	1484	≥ 17%	≥ 17%	Pass

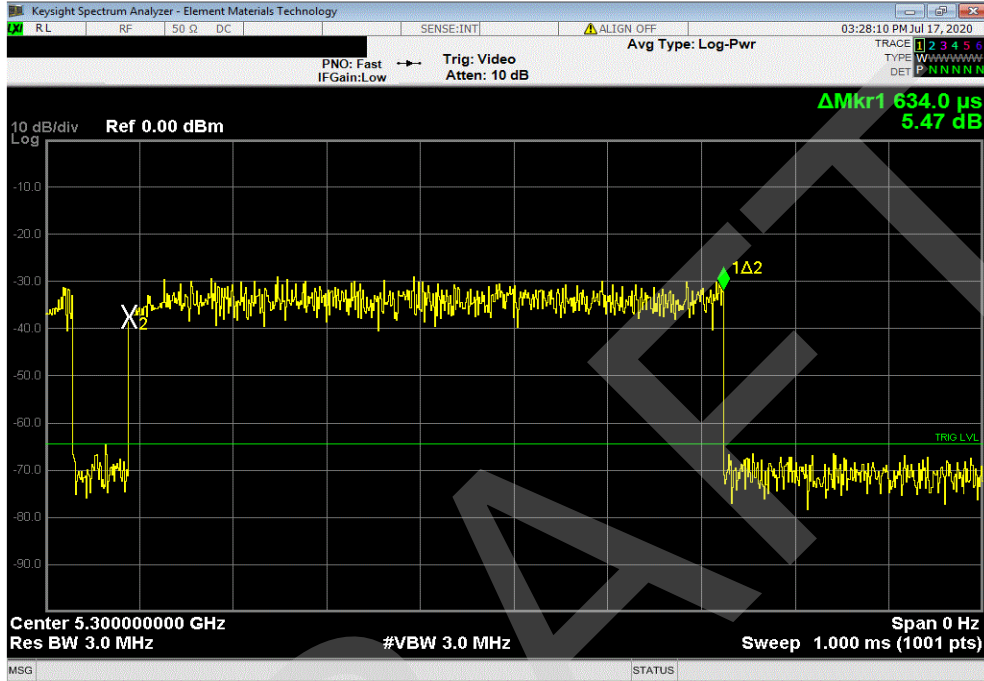
DRAFT

# CHANNEL LOADING/CHANNEL UTILIZATION

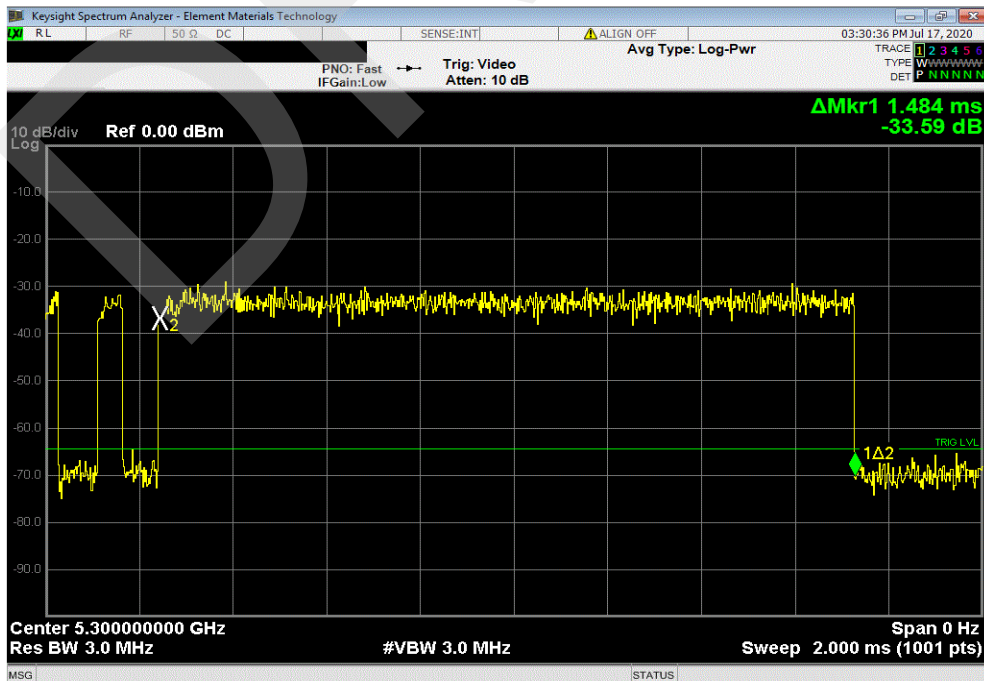


XMI 2020.03.25.0

MIMO Ports 2 and 4, 802.11ac 5.3 GHz , 20 MHz Channel Bandwidth, Ch.60, 5300 MHz, 1mS Pulse On Time						
Max Pulse						
	On Times	Value	Limit	Result		
	634	≥ 17%	≥ 17%	Pass		



MIMO Ports 2 and 4, 802.11ac 5.3 GHz , 20 MHz Channel Bandwidth, Ch.60, 5300 MHz, 2mS						
Max Pulse						
	On Times	Value	Limit	Result		
	1484	≥ 17%	≥ 17%	Pass		



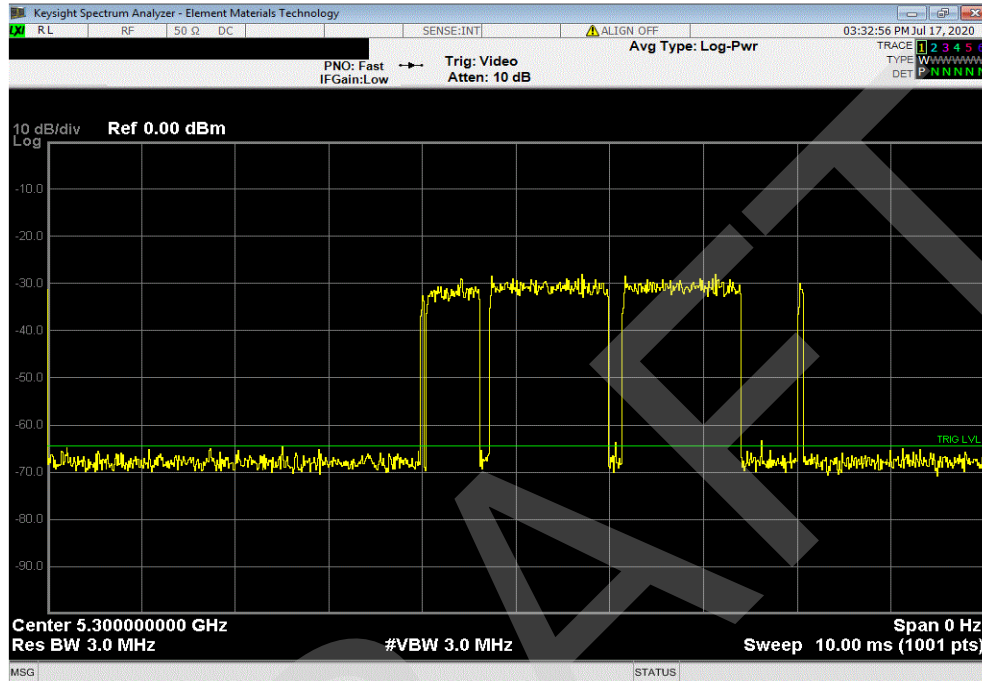
# CHANNEL LOADING/CHANNEL UTILIZATION



XMI 2020.03.25.0

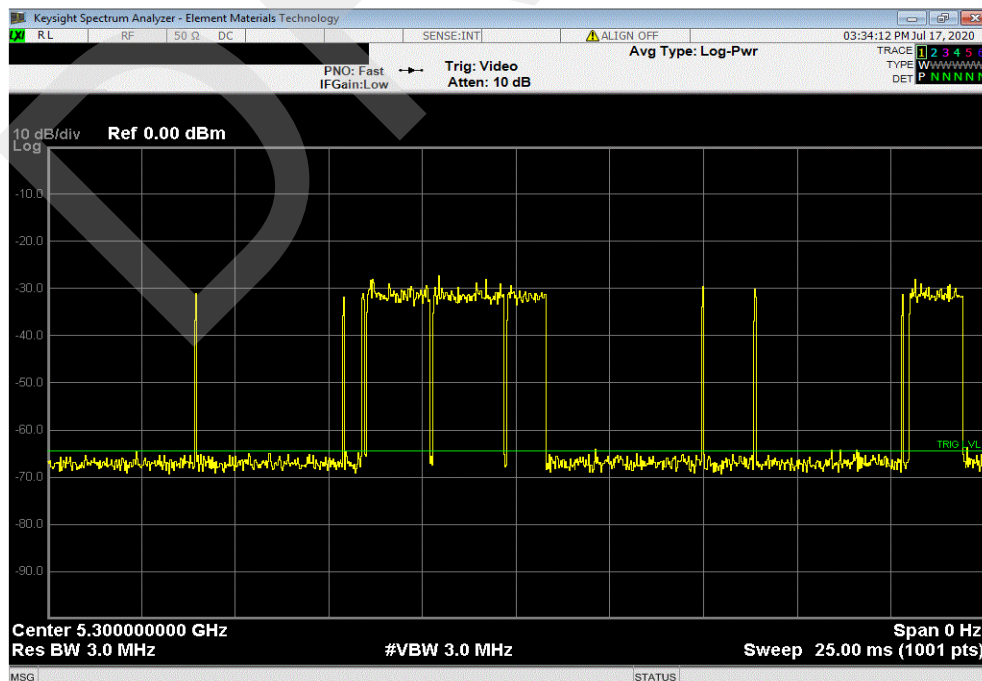
MIMO Ports 2 and 4, 802.11ac 5.3 GHz, 20 MHz Channel Bandwidth, Ch.60, 5300 MHz, 10mS

Max Pulse			
On Times	Value	Limit	Result
1484	≥ 17%	≥ 17%	Pass



MIMO Ports 2 and 4, 802.11ac 5.3 GHz, 20 MHz Channel Bandwidth, Ch.60, 5300 MHz, 25mS

Max Pulse			
On Times	Value	Limit	Result
1484	≥ 17%	≥ 17%	Pass



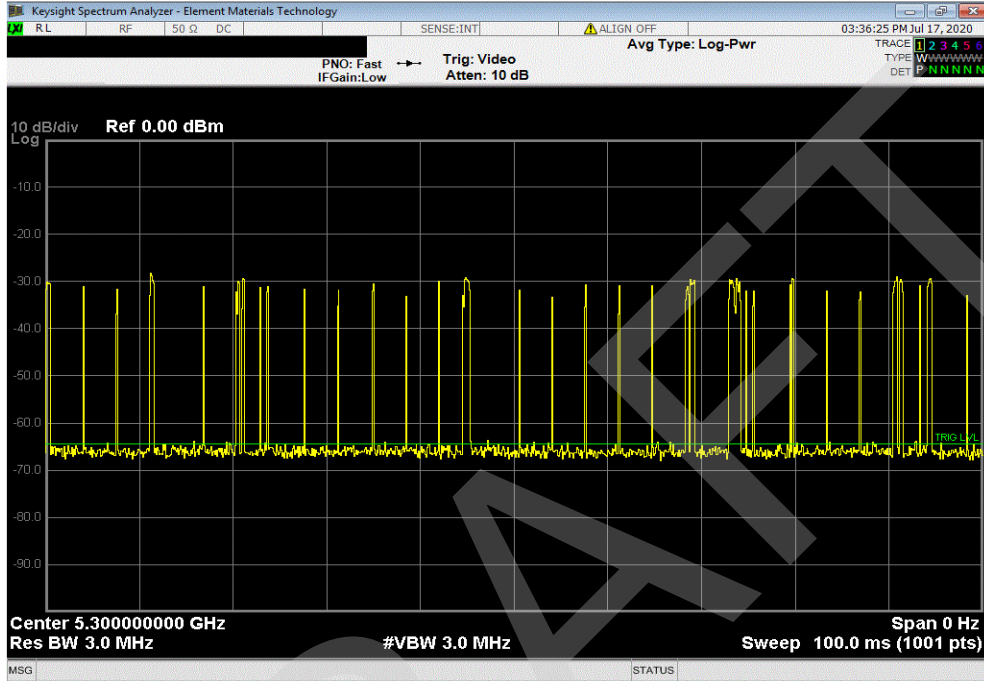


# CHANNEL LOADING/CHANNEL UTILIZATION

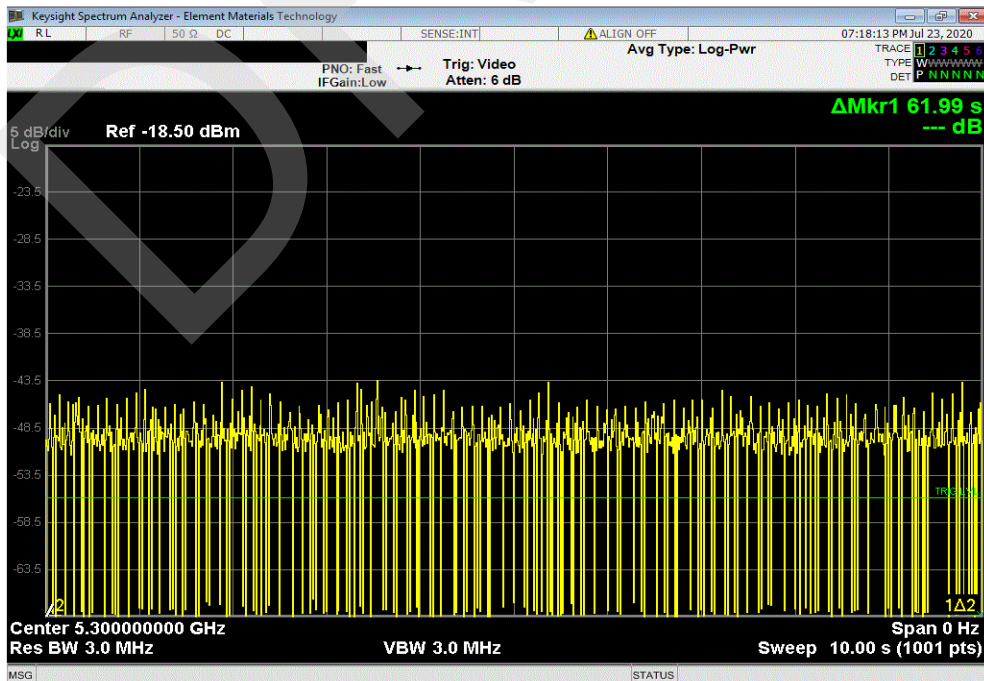


XMI 2020.03.25.0

MIMO Ports 2 and 4, 802.11ac 5.3 GHz, 20 MHz Channel Bandwidth, Ch.60, 5300 MHz, 100mS						
Max Pulse						
	On Times	Value	Limit	Result		
	1484	≥ 17%	≥ 17%	Pass		



MIMO Ports 2 and 4, 802.11ac 5.3 GHz, 20 MHz Channel Bandwidth, Ch.60, 5300 MHz, 10Sec						
Max Pulse						
	On Times	Value	Limit	Result		
	1484	≥ 17%	≥ 17%	Pass		





# DETECTION BANDWIDTH

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

## TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Cable	Micro-Coax	UFD150A-1-0720-200200	TXG	18-Sep-19	18-Sep-20
Block - DC	Fairview Microwave	SD3379	AMM	13-Mar-20	13-Mar-21
Attenuator	Fairview Microwave	SA4018-20	TYE	18-Sep-19	18-Sep-20
Power Divider/Combiner	Fairview Microwave	MP0208-2	PDI	NCR	NCR
Power Divider/Combiner	Fairview Microwave	MP0208-2	PDF	NCR	NCR
Attenuator	Fairview Microwave	SA1501SMA	RKV	NCR	NCR
Analyzer - Spectrum Analyzer	Agilent	N9010A	AFL	27-Feb-20	27-Feb-21
Generator - Signal	Keysight	N5182B-506	TEV	23-Apr-18	23-Apr-21
Generator - Signal	Benchforge Manufacturing	Colt	TIN	NCR	NCR
Chamber - Temperature/Humidity	Cincinnati Sub Zero (CSZ)	ZPH-8-2-SCT/AC	TBH	NCR	NCR

## TEST DESCRIPTION

The master was connected using the conducted method described in the FCC KDB procedure via a series of splitters and attenuators which allows the radar signals to be injected and monitored. The detection level was set prior to testing by temporarily replacing the master device with the analyzer and setting the power level according to Table 3 and Section 7.5. Configuration and status of the master device was then monitored using the spectrum analyzer (no association with client). The required radar signal was injected at the upper and lower band edge frequencies for ten trials each. If the detection percentage was not met, the upper and lower frequencies were reduced or increased by 1MHz and then injected again. This process is repeated until the frequency is found where the master detects the required number of trials. The upper and lower frequencies are subtracted and the resulting number is the U-NII Detection Bandwidth which must be greater than or equal to the 99% transmission power bandwidth used for data transmission.

As Fully described earlier in this report, the measured and verified -64dBm threshold short pulse radar type 0 was used to illustrate the detection bandwidth as define in the FCC KDB procedure.

# DETECTION BANDWIDTH



XMI 2020.03.25.0

EUT: Samsung Model SM-H204V		Work Order: PCTE0004	
Serial Number: None		Date: 25-Jul-20	
Customer: PCTEST Engineering Laboratory, LLC		Temperature: 24.7 °C	
Attendees: None		Humidity: 53% RH	
Project: None		Barometric Pres.: 1019 mbar	
Tested by: Brandon Hobbs		Power: 110VAC/60Hz	
		Job Site: TX05	
TEST SPECIFICATIONS		Test Method	
FCC 15.407:2020		ANSI C63.10:2013	
COMMENTS			
Radar was split across two of the four MIMO ports to more closely represent real world operation and was also client requested. Losses seen at the splitter in the measurement path were account for in the radar calibration leveling. Reference the DFS setup and master attenuation documentation for the attenuators used while under test. Ports 2 and 4 were tested. Per the DFS requirements all bandwidths were tested. The 99% power bandwidth of the channels measured can be found elsewhere in the part 15.407 report. Internal Attn was reduced for better dynamic range.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	1	Signature	

	Detected	Not Detected	% Decteted	Value	≥ 99% PBW Limit	Result
MIMO Ports 2 and 4						
802.11ac 5.3 GHz						
20 MHz Channel Bandwidth						
Ch.60, 5300 MHz						
Lowest Frequency	10	0	100	5290 MHz	N/A	N/A
Highest Frequency	10	0	100	5310 MHz	N/A	N/A
U-NII Dectection Bandwidt	N/A	N/A	N/A	20 MHz	18 MHz	Pass
40 MHz Channel Bandwidth						
Ch.62, 5310 MHz						
Lowest Frequency	10	0	100	5291.5 MHz	N/A	N/A
Highest Frequency	10	0	100	5328.5 MHz	N/A	N/A
U-NII Dectection Bandwidt	N/A	N/A	N/A	37 MHz	36.4 MHz	Pass
80 MHz Channel Bandwidth						
Ch.58, 5290 MHz						
Lowest Frequency	10	0	100	5252 MHz	N/A	N/A
Highest Frequency	10	0	100	5328 MHz	N/A	N/A
U-NII Dectection Bandwidt	N/A	N/A	N/A	76 MHz	75.6 MHz	Pass

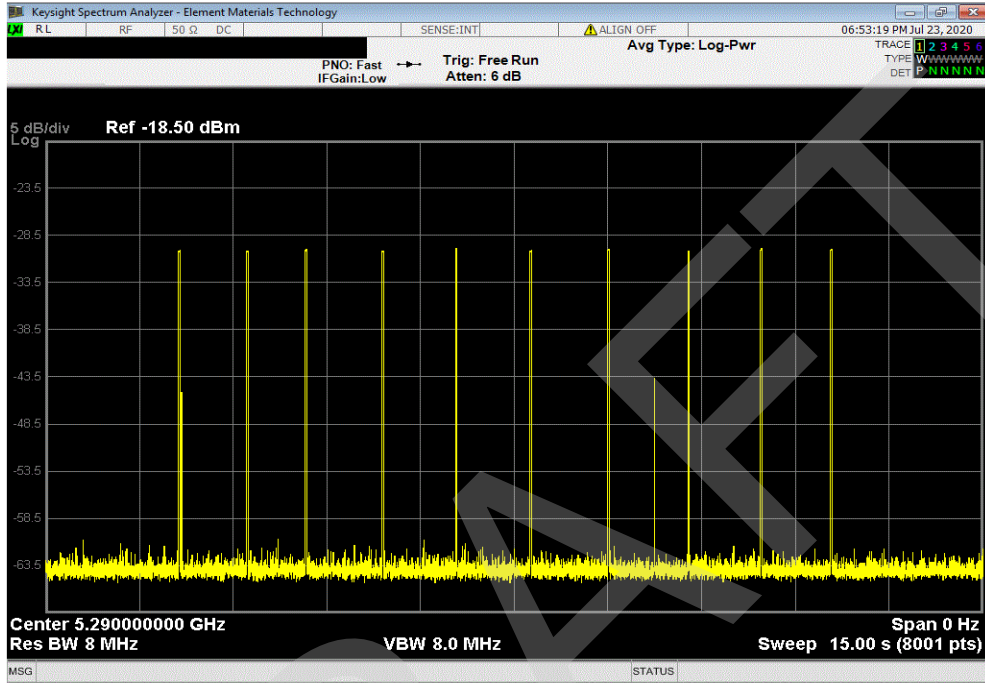
DRAFT

# DETECTION BANDWIDTH

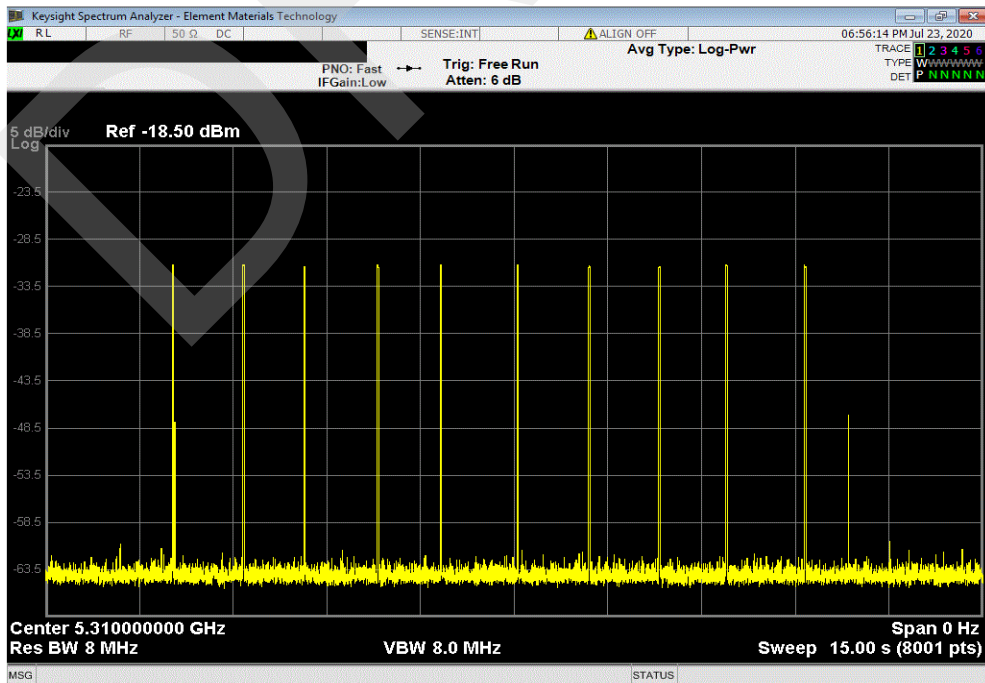


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MIMO Ports 2 and 4, 802.11ac 5.3 GHz , 20 MHz Channel Bandwidth, Ch.60, 5300 MHz, Lowest Frequency						
≥ 99% PBW						
Detected	Not Detected	% Decteted	Value	Limit	Result	
10	0	100	5290 MHz	N/A	N/A	



MIMO Ports 2 and 4, 802.11ac 5.3 GHz , 20 MHz Channel Bandwidth, Ch.60, 5300 MHz, Highest Frequency						
≥ 99% PBW						
Detected	Not Detected	% Decteted	Value	Limit	Result	
10	0	100	5310 MHz	N/A	N/A	



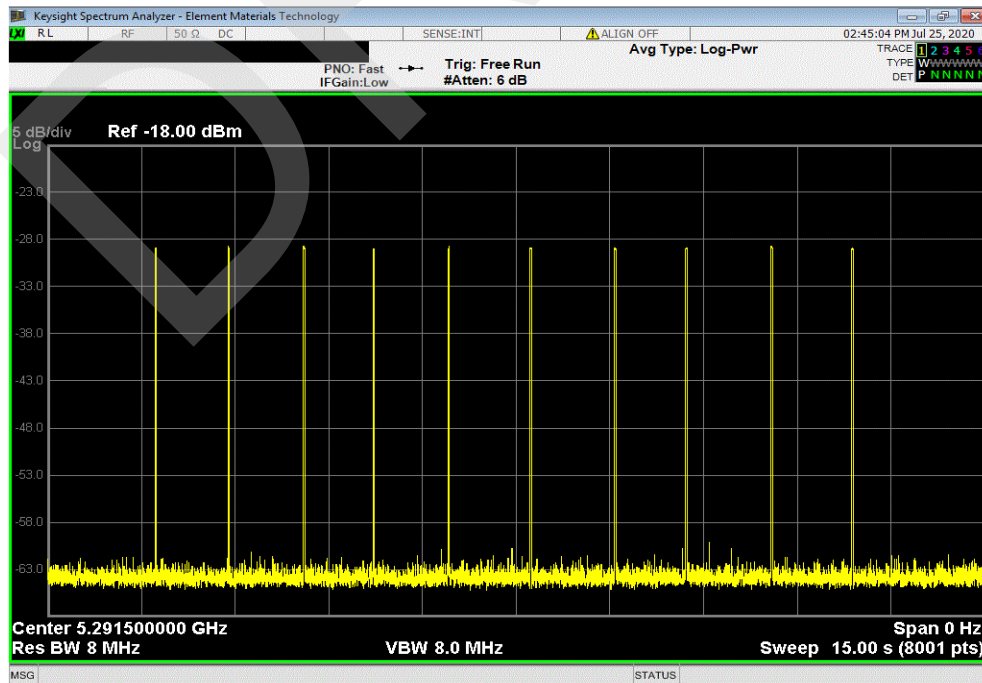
# DETECTION BANDWIDTH



XMI 2020.03.25.0

MIMO Ports 2 and 4, 802.11ac 5.3 GHz , 20 MHz Channel Bandwidth, Ch.60, 5300 MHz, U-NII Detection Bandwidth						
≥ 99% PBW						
	Detected	Not Detected	% Decteted	Value	Limit	Result
	N/A	N/A	N/A	20 MHz	18 MHz	Pass

MIMO Ports 2 and 4, 802.11ac 5.3 GHz , 40 MHz Channel Bandwidth, Ch.62, 5310 MHz, Lowest Frequency						
≥ 99% PBW						
	Detected	Not Detected	% Decteted	Value	Limit	Result
	10	0	100	5291.5 MHz	N/A	N/A

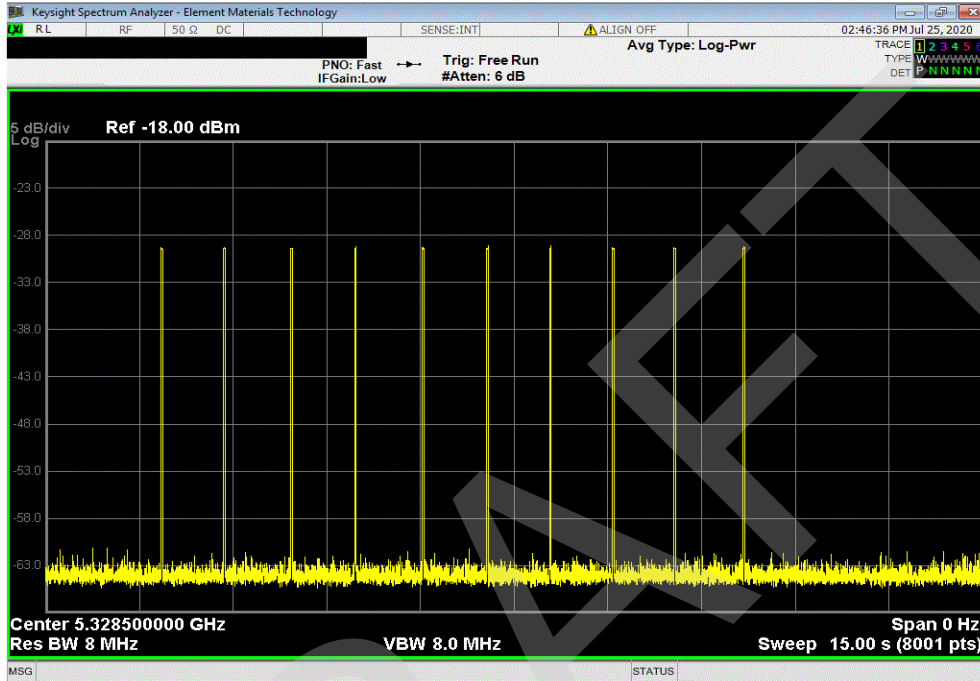


# DETECTION BANDWIDTH



XMI 2020.03.25.0

MIMO Ports 2 and 4, 802.11ac 5.3 GHz , 40 MHz Channel Bandwidth, Ch.62, 5310 MHz, Highest Frequency						
≥ 99% PBW						
Detected	Not Detected	% Decteted	Value	Limit	Result	
10	0	100	5328.5 MHz	N/A	N/A	



MIMO Ports 2 and 4, 802.11ac 5.3 GHz , 40 MHz Channel Bandwidth, Ch.62, 5310 MHz, U-NII Dection Bandwidth						
≥ 99% PBW						
Detected	Not Detected	% Decteted	Value	Limit	Result	
N/A	N/A	N/A	37 MHz	36.4 MHz	Pass	

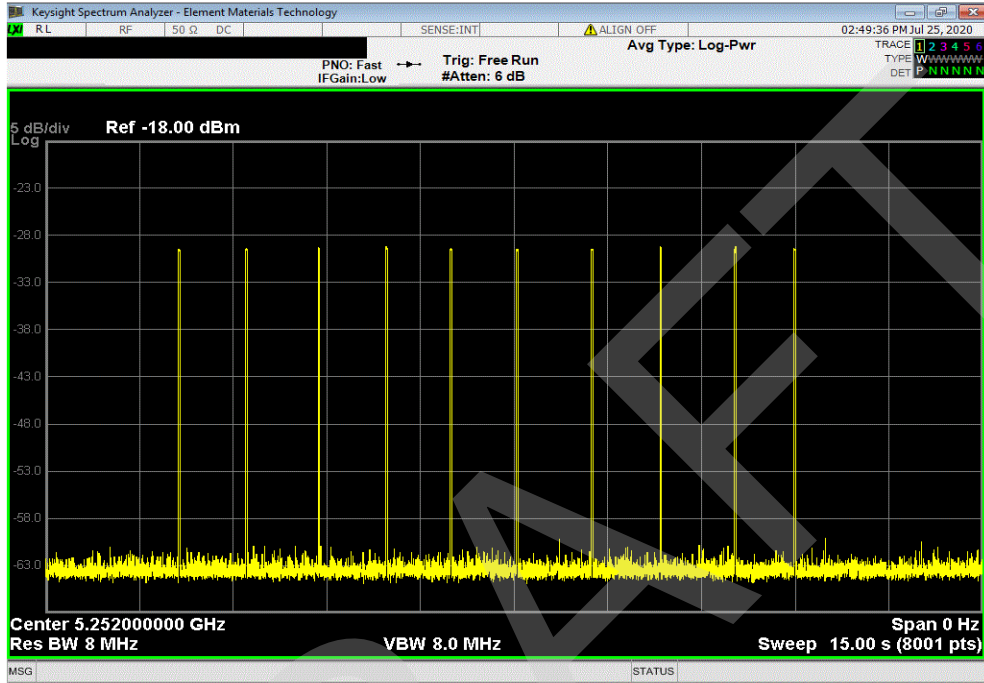


# DETECTION BANDWIDTH

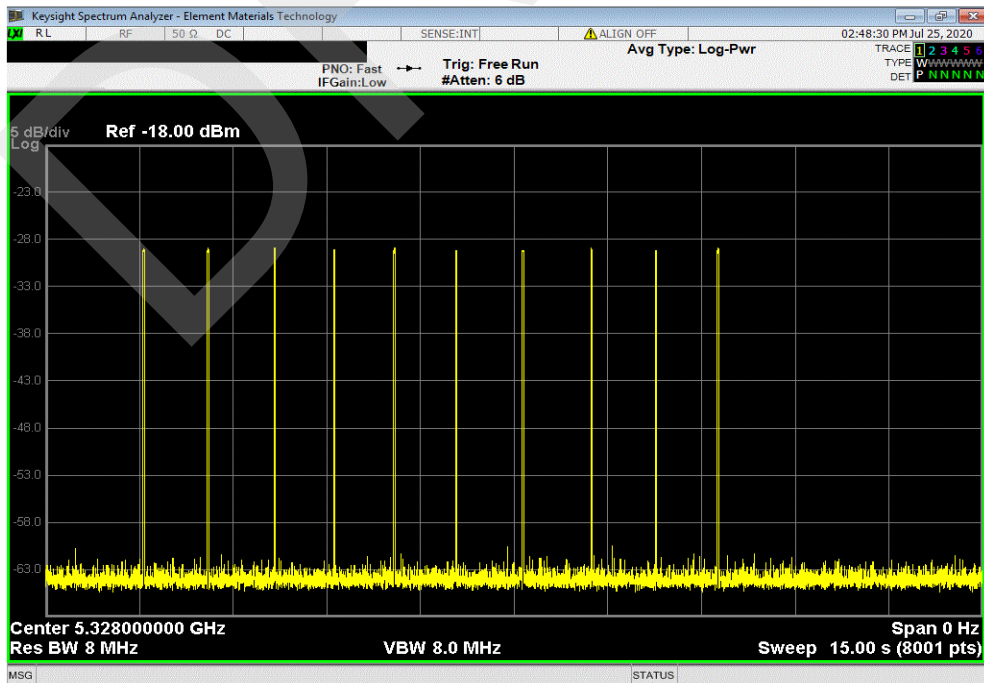


XMI 2020.03.25.0

MIMO Ports 2 and 4, 802.11ac 5.3 GHz , 80 MHz Channel Bandwidth, Ch.58, 5290 MHz, Lowest Frequency						
≥ 99% PBW						
Detected	Not Detected	% Decteted	Value	Limit	Result	
10	0	100	5252 MHz	N/A	N/A	



MIMO Ports 2 and 4, 802.11ac 5.3 GHz , 80 MHz Channel Bandwidth, Ch.58, 5290 MHz, Highest Frequency						
≥ 99% PBW						
Detected	Not Detected	% Decteted	Value	Limit	Result	
10	0	100	5328 MHz	N/A	N/A	



# DETECTION BANDWIDTH



XMI 2020.03.25.0

MIMO Ports 2 and 4, 802.11ac 5.3 GHz , 80 MHz Channel Bandwidth, Ch.58, 5290 MHz, U-NII Dection Bandwidth						
≥ 99% PBW						
	Detected	Not Detected	% Decteted	Value	Limit	Result
	N/A	N/A	N/A	76 MHz	75.6 MHz	Pass

DRAFT



# CHANNEL AVAILABILITY CHECK

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

## TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Cable	Micro-Coax	UFD150A-1-0720-200200	TXG	18-Sep-19	18-Sep-20
Block - DC	Fairview Microwave	SD3379	AMM	13-Mar-20	13-Mar-21
Attenuator	Fairview Microwave	SA4018-20	TYE	18-Sep-19	18-Sep-20
Power Divider/Combiner	Fairview Microwave	MP0208-2	PDI	NCR	NCR
Power Divider/Combiner	Fairview Microwave	MP0208-2	PDF	NCR	NCR
Attenuator	Fairview Microwave	SA1501SMA	RKV	NCR	NCR
Analyzer - Spectrum Analyzer	Agilent	N9010A	AFL	27-Feb-20	27-Feb-21
Generator - Signal	Keysight	N5182B-506	TEV	23-Apr-18	23-Apr-21
Generator - Signal	Benchforge Manufacturing	Colt	TIN	NCR	NCR
Chamber - Temperature/Humidity	Cincinnati Sub Zero (CSZ)	ZPH-8-2-SCT/AC	TBH	NCR	NCR


## TEST DESCRIPTION

The master and client were connected using the conducted method described in the FCC KDB procedure via a series of splitters and attenuators which allows the radar signals to be injected and monitored. The master detection level was set prior to testing by temporarily replacing the master device with the analyzer and setting the power level according to Table 3 and Section 7.5. In addition, a specified time or indicator was used to determine when the master finishes its power up cycle and begins its channel availability check. Configuration and status of the master and client devices were then monitored using the spectrum analyzer. Three tests were performed on the necessary modes of the device: initial CAC, beginning CAC, and ending CAC. For initial CAC, using the analyzer settings specified in the procedure, the master is monitored to make sure it does not transmit or emit beacons for at least 60 seconds or more after the initial power up cycle. For beginning CAC, the required radar pulse is injected within the first 6 seconds of the channel availability check time, and the channel is monitored to make sure the master detects the radar and does not use the channel. For ending CAC, the required radar pulse is injected within the last 6 seconds of the channel availability check time, and the channel is monitored to make sure the master detects the radar and does not use the channel.

# CHANNEL AVAILABILITY CHECK



XMI: 2020.03.25.0

EUT: Samsung Model SM-H204V		Work Order: PCTE0004	
Serial Number: None		Date: 25-Jul-20	
Customer: PCTEST Engineering Laboratory, LLC		Temperature: 24.9 °C	
Attendees: None		Humidity: 52.2% RH	
Project: None		Barometric Pres.: 1018 mbar	
Tested by: Brandon Hobbs		Power: 110VAC/60Hz	Job Site: TX05
TEST SPECIFICATIONS			
FCC 15.407:2020		Test Method	
		ANSI C63.10:2013	
COMMENTS			
Radar was split across two of the four MIMO ports to more closely represent real world operation and was also client requested. Losses seen at the splitter in the measurement path were account for in the radar calibration leveling. Reference the DFS setup and master attenuation documentation for the attenuators used while under test. Ports 2 and 4 were tested. Per the DFS requirements any single bandwidth can be tested. Internal Attn was reduced for better dynamic range.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	1	Signature 	
		Value (Sec)	Limit (Sec)
MIMO Ports 2 and 4			
	802.11ac 5.3 GHz		
	20 MHz Channel Bandwidth		
	Ch.60, 5300 MHz		
	Initial CAC	62.15	≥ 60
	Beginning CAC	≥ 150	≥ 150
	Ending CAC	≥ 150	≥ 150
			Pass
			Pass
			Pass

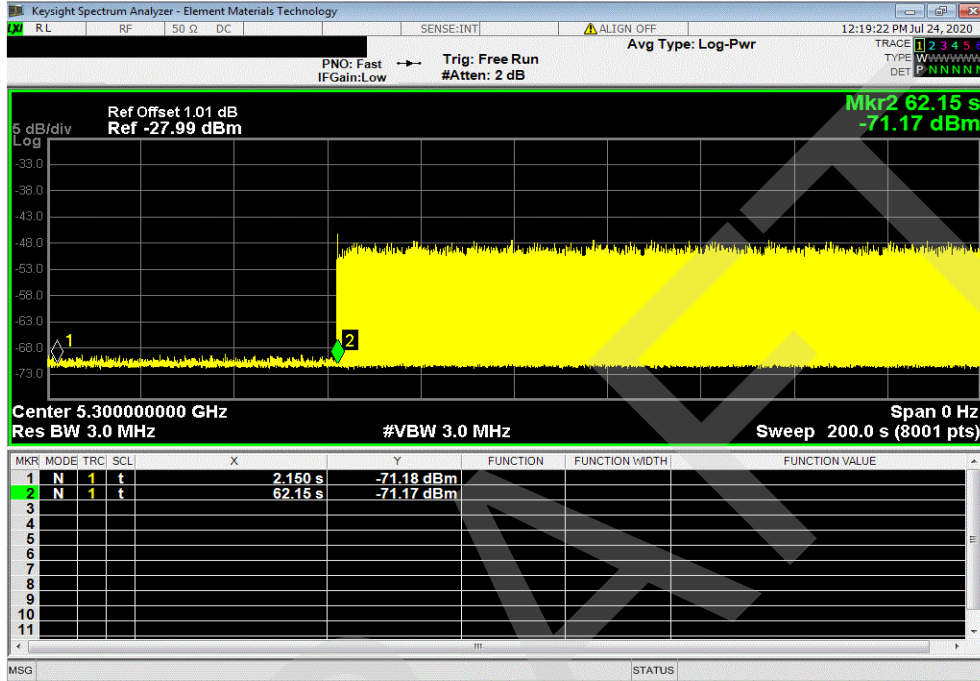
DRAFT

# CHANNEL AVAILABILITY CHECK

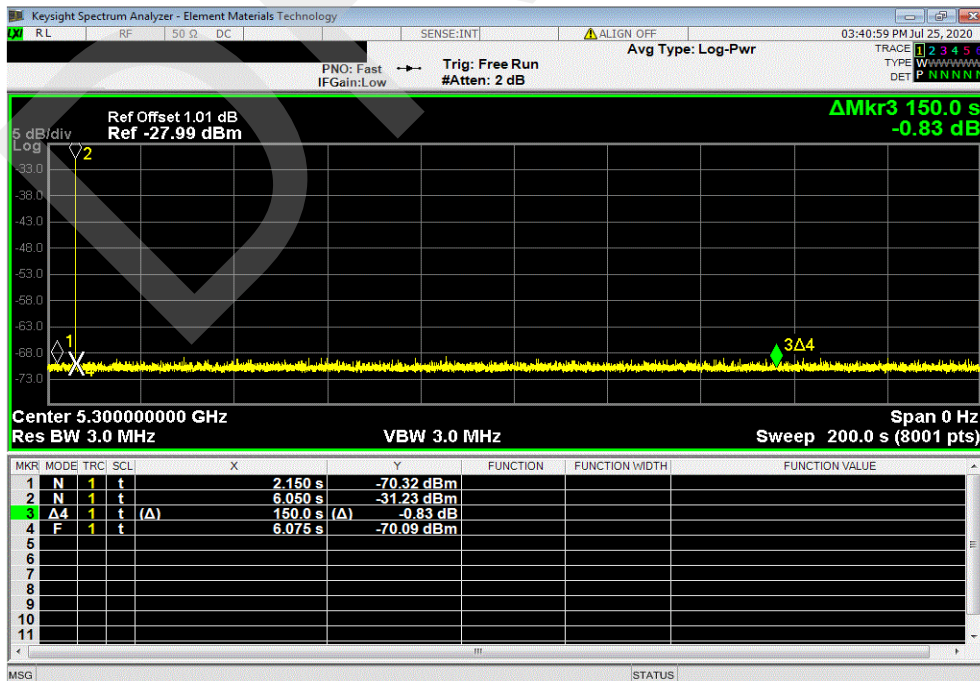


XMI 2020.03.25.0

MIMO Ports 2 and 4, 802.11ac 5.3 GHz , 20 MHz Channel Bandwidth, Ch.60, 5300 MHz, Initial CAC						
				Value (Sec)	Limit (Sec)	Result
				62.15	≥ 60	Pass



MIMO Ports 2 and 4, 802.11ac 5.3 GHz , 20 MHz Channel Bandwidth, Ch.60, 5300 MHz, Beginning CAC						
				Value (Sec)	Limit (Sec)	Result
				≥ 150	≥ 150	Pass



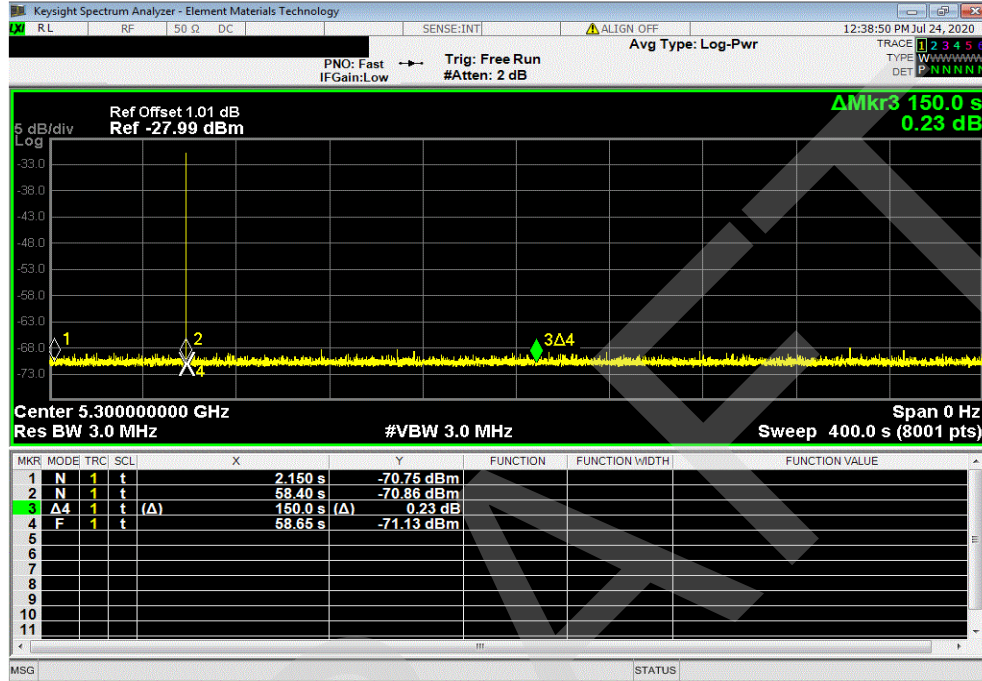
# CHANNEL AVAILABILITY CHECK



XMI 2020.03.25.0

MIMO Ports 2 and 4, 802.11ac 5.3 GHz, 20 MHz Channel Bandwidth, Ch.60, 5300 MHz, Ending CAC

Value (Sec)	Limit (Sec)	Result
≥ 150	≥ 150	Pass



# MOVE TIME



XMI 2020.03.25.0

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

## TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Cable	Micro-Coax	UFD150A-1-0720-200200	TXG	18-Sep-19	18-Sep-20
Block - DC	Fairview Microwave	SD3379	AMM	13-Mar-20	13-Mar-21
Attenuator	Fairview Microwave	SA4018-20	TYE	18-Sep-19	18-Sep-20
Power Divider/Combiner	Fairview Microwave	MP0208-2	PDI	NCR	NCR
Power Divider/Combiner	Fairview Microwave	MP0208-2	PDF	NCR	NCR
Attenuator	Fairview Microwave	SA1501SMA	RKV	NCR	NCR
Analyzer - Spectrum Analyzer	Agilent	N9010A	AFL	27-Feb-20	27-Feb-21
Generator - Signal	Keysight	N5182B-506	TEV	23-Apr-18	23-Apr-21
Generator - Signal	Benchforge Manufacturing	Colt	TIN	NCR	NCR
Chamber - Temperature/Humidity	Cincinnati Sub Zero (CSZ)	ZPH-8-2-SCT/AC	TBH	NCR	NCR

## TEST DESCRIPTION

The master and client were connected using the conducted method described in the FCC KDB procedure via a series of splitters and attenuators which allows the radar signals to be injected and monitored. For master devices, the detection level was set prior to testing by temporarily replacing the master device with the analyzer and setting the power level according to Table 3 and Section 7.5. Where required, an approved Media file was streamed between the master and client or an alternative method to load the channel may be used instead. Channel loading requirements were also verified prior to testing. Configuration and status of the master and client devices were then monitored using the spectrum analyzer. The Move Time test was performed by starting a transmission between the master and client device, and then injecting the appropriate radar signals and making sure both the master and client device vacate the DFS channel within the time specified by the standard.



# MOVE TIME



XMI 2020.03.25.0

EUT: Samsung Model SM-H204V		Work Order: PCTE0004	
Serial Number: None		Date: 25-Jul-20	
Customer: PCTEST Engineering Laboratory, LLC		Temperature: 24.6 °C	
Attendees: None		Humidity: 54.4% RH	
Project: None		Barometric Pres.: 1017 mbar	
Tested by: Brandon Hobbs	Power: 110VAC/60Hz	Job Site: TX05	
TEST SPECIFICATIONS		Test Method	
FCC 15.407:2020	ANSI C63.10:2013		
COMMENTS			
Radar was split across two of the four MIMO ports to more closely represent real world operation and was also client requested. Losses seen at the splitter in the measurement path were account for in the radar calibration leveling. Reference the DFS setup and master attenuation documentation for the attenuators used while under test. Ports 2 and 4 were tested. Per the DFS requirements only the widest bandwidth was tested. Internal Attn was reduced for better dynamic range.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	1	Signature	
		Value Limit Result	
MIMO Ports 2 and 4	802.11ac 5.3 GHz		
	80 MHz Channel Bandwidth		
	Ch.58, 5290 MHz		
	Short Pulse Radar Type 0	≤ 10 Sec	≤ 10 Sec Pass

DRAFT

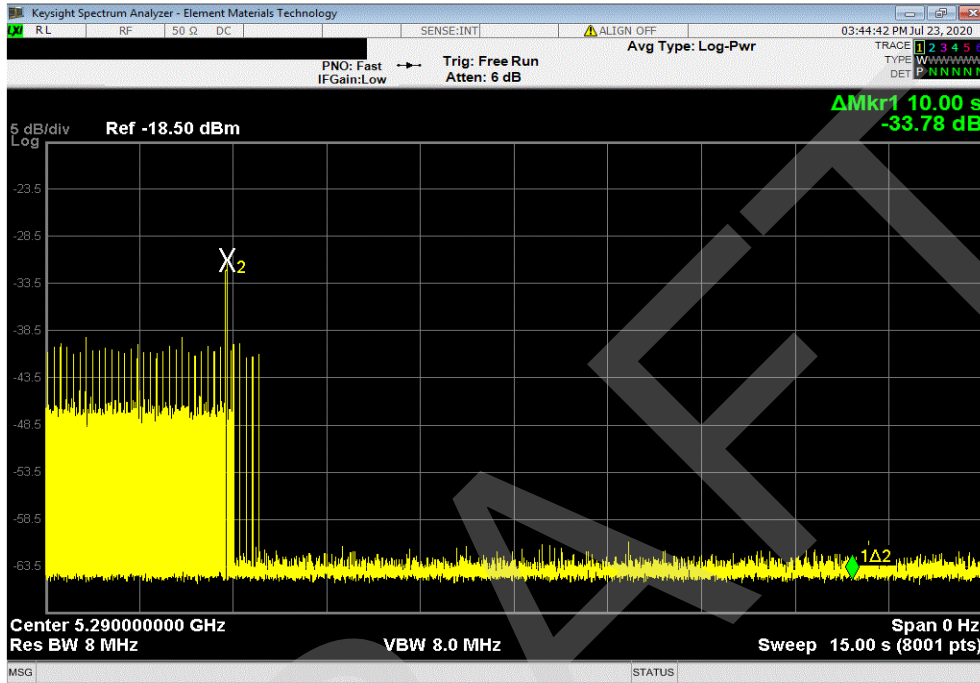
# MOVE TIME



XMI 2020.03.25.0

MIMO Ports 2 and 4, 802.11ac 5.3 GHz , 80 MHz Channel Bandwidth, Ch.58, 5290 MHz, Short Pulse Radar Type 0

	Value	Limit	Result
	≤ 10 Sec	≤ 10 Sec	Pass



# CLOSING TIME



element

XMIT 2020.03.25.0

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

## TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Cable	Micro-Coax	UFD150A-1-0720-200200	TXG	18-Sep-19	18-Sep-20
Block - DC	Fairview Microwave	SD3379	AMM	13-Mar-20	13-Mar-21
Attenuator	Fairview Microwave	SA4018-20	TYE	18-Sep-19	18-Sep-20
Power Divider/Combiner	Fairview Microwave	MP0208-2	PDI	NCR	NCR
Power Divider/Combiner	Fairview Microwave	MP0208-2	PDF	NCR	NCR
Attenuator	Fairview Microwave	SA1501SMA	RKV	NCR	NCR
Analyzer - Spectrum Analyzer	Agilent	N9010A	AFL	27-Feb-20	27-Feb-21
Generator - Signal	Keysight	N5182B-506	TEV	23-Apr-18	23-Apr-21
Generator - Signal	Benchforge Manufacturing	Colt	TIN	NCR	NCR
Chamber - Temperature/Humidity	Cincinnati Sub Zero (CSZ)	ZPH-8-2-SCT/AC	TBH	NCR	NCR


## TEST DESCRIPTION

The master and client were connected using the conducted method described in the FCC KDB procedure via a series of splitters and attenuators which allows the radar signals to be injected and monitored. For master devices, the detection level was set prior to testing by temporarily replacing the master device with the analyzer and setting the power level according to Table 3 and Section 7.5. Where required, an approved Media file was streamed through the master and client or an alternative method to load the channel may be used instead. Channel loading requirements were also verified prior to testing. Configuration and status of the master and client devices were then monitored using the spectrum analyzer. The Closing Time test was performed by starting a transmission between the master and client device, and then injecting the appropriate radar signals. All transmission signals between the master and client in the first 200mS are allowed. After this time period, the number of transmissions signals are counted and multiplied by the pulse width value(s). This aggregate is then added to the 200mS allowance for the final value and compared to the specified limit.

# CLOSING TIME



XMIT 2020.03.25.0

EUT: Samsung Model SM-H204V		Work Order: PCTE0004						
Serial Number: None		Date: 25-Jul-20						
Customer: PCTEST Engineering Laboratory, LLC		Temperature: 24.6 °C						
Attendees: None		Humidity: 53.1% RH						
Project: None		Barometric Pres.: 1018 mbar						
Tested by: Brandon Hobbs	Power: 110VAC/60Hz	Job Site: TX05						
TEST SPECIFICATIONS								
FCC 15.407:2020		ANSI C63.10:2013						
TEST METHOD								
COMMENTS								
Radar was split across two of the four MIMO ports to more closely represent real world operation and was also client requested. Losses seen at the splitter in the measurement path were account for in the radar calibration leveling. Reference the DFS setup and master attenuation documentation for the attenuators used while under test. Ports 2 and 4 were tested. Per the DFS requirements only the widest bandwidth was tested. Internal Attn was reduced for better dynamic range.								
DEVIATIONS FROM TEST STANDARD								
None								
Configuration #	1	Signature 						
		# of Signals	Pulse Width (mS)	Initial Closing Time (mS)	Final Closing Time (mS)	Limit (mS)	Result	
MIMO Ports 2 and 4								
802.11ac 5.3 GHz								
80 MHz Channel Bandwidth								
Ch.58, 5290 MHz								
		Radar Type 0 200mS	5	N/A	105	N/A	200	Pass
		Radar Type 0 Aggregate	5	0.569	105	107.8	260	Pass

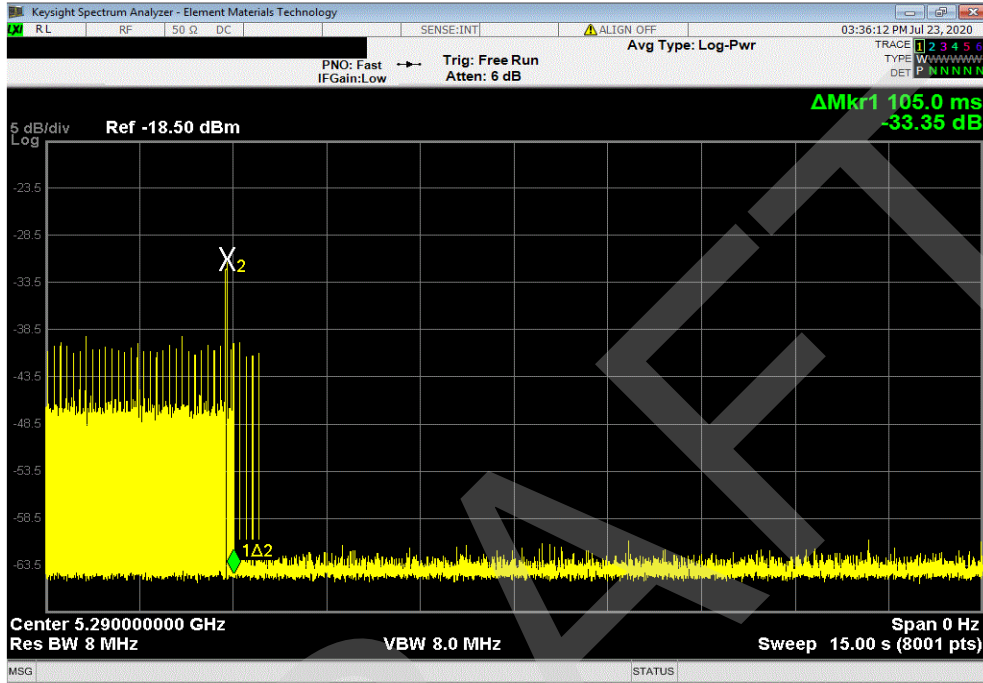
DRAFT

# CLOSING TIME

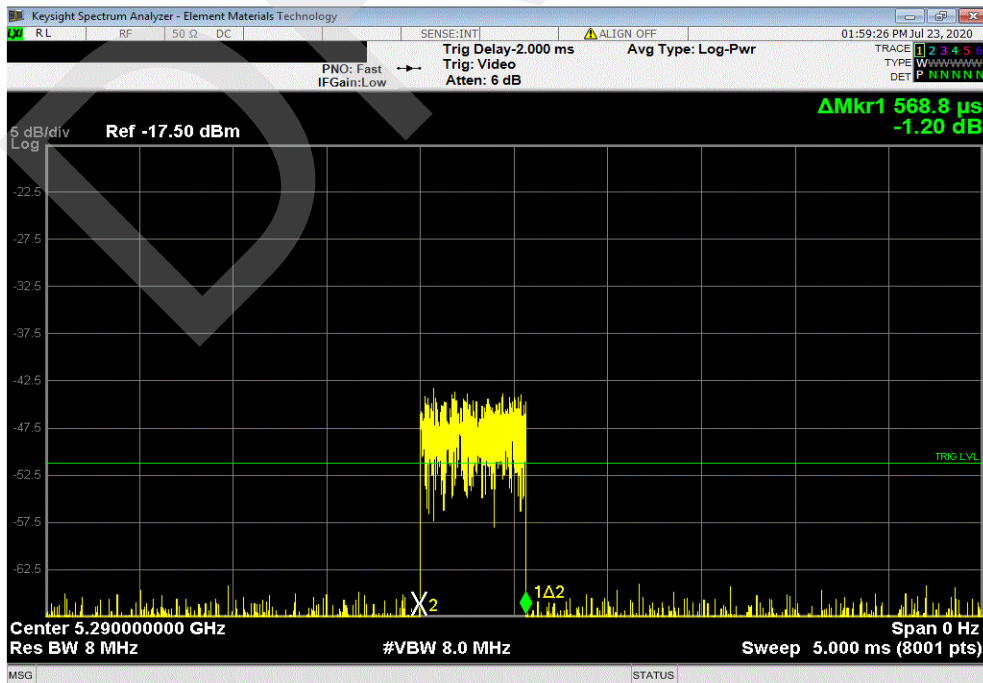


XMI 2020.03.25.0

MIMO Ports 2 and 4, 802.11ac 5.3 GHz , 80 MHz Channel Bandwidth, Ch.58, 5290 MHz, Radar Type 0 200mS						
	# of Signals	Pulse Width (mS)	Initial Closing Time (mS)	Final Closing Time (mS)	Limit (mS)	Result
	5	N/A	105	N/A	200	Pass



MIMO Ports 2 and 4, 802.11ac 5.3 GHz , 80 MHz Channel Bandwidth, Ch.58, 5290 MHz, Radar Type 0 Aggregate						
	# of Signals	Pulse Width (mS)	Initial Closing Time (mS)	Final Closing Time (mS)	Limit (mS)	Result
	5	0.569	105	107.8	260	Pass



# CLOSING TIME - 5.7 GHz

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

## TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Chamber - Temperature/Humidity	Cincinnati Sub Zero (CSZ)	ZPH-8-2-SCT/AC	TBH	NCR	NCR
Probe - Near Field Set	ETS Lindgren	7405	IPS	NCR	NCR
Generator - Signal	Keysight	N5182B-506	TEV	23-Apr-18	23-Apr-21
Analyzer - Spectrum Analyzer	Agilent	N9010A	AFL	27-Feb-20	27-Feb-21
Attenuator	Fairview Microwave	SA1501SMA	RKV	NCR	NCR
Power Divider/Combiner	Fairview Microwave	MP0208-2	PDF	NCR	NCR
Power Divider/Combiner	Fairview Microwave	MP0208-2	PDI	NCR	NCR
Attenuator	Fairview Microwave	SA4018-20	TYE	18-Sep-19	18-Sep-20
Block - DC	Fairview Microwave	SD3379	AMT	18-Sep-19	18-Sep-20
Cable	Micro-Coax	UFD150A-1-0720-200200	TXG	18-Sep-19	18-Sep-20


## TEST DESCRIPTION

The master and client were connected using the conducted method described in the FCC KDB procedure via a series of splitters and attenuators which allows the radar signals to be injected and monitored. For master devices, the detection level was set prior to testing by temporarily replacing the master device with the analyzer and setting the power level according to Table 3 and Section 7.5. Where required, an approved Media file was streamed through the master and client or an alternative method to load the channel may be used instead. Channel loading requirements were also verified prior to testing. Configuration and status of the master and client devices were then monitored using the spectrum analyzer. The Closing Time test was performed by starting a transmission between the master and client device, and then injecting the appropriate radar signals. All transmission signals between the master and client in the first 200mS are allowed. After this time period, the number of transmissions signals are counted and multiplied by the pulse width value(s). This aggregate is then added to the 200mS allowance for the final value and compared to the specified limit.

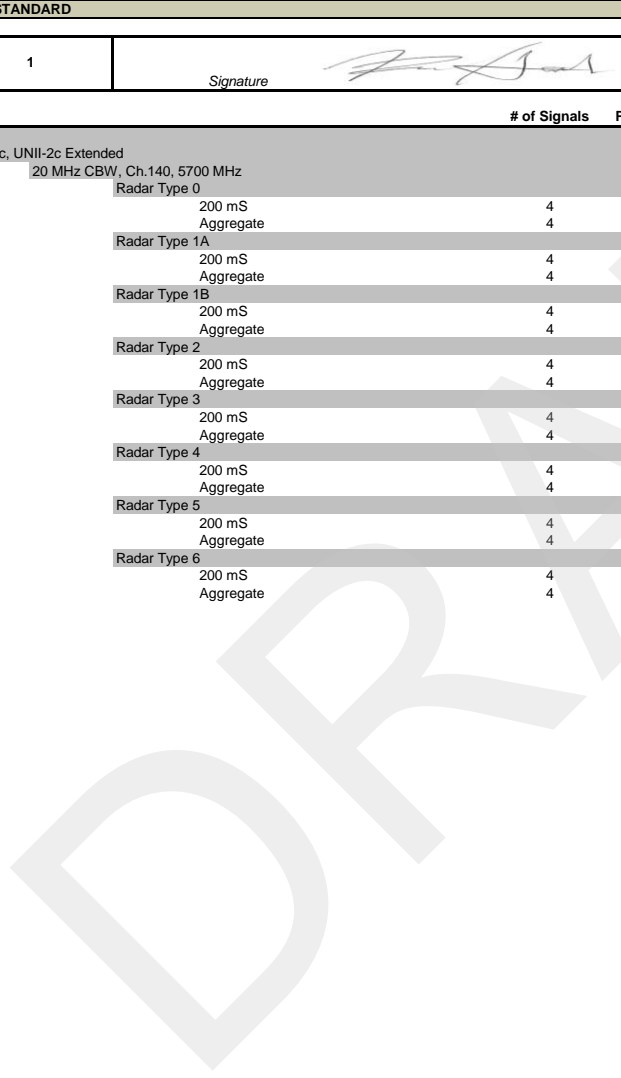
# CLOSING TIME - 5.7 GHz



XMI 2020.03.25.0

EUT: Samsung Model SM-H204V		Work Order: PCTE0004	
Serial Number: None		Date: 17-Sep-20	
Customer: PCTEST Engineering Laboratory, LLC		Temperature: 22.3 °C	
Attendees: None		Humidity: 49.3% RH	
Project: None		Barometric Pres.: 1020 mbar	
Tested by: Brandon Hobbs		Power: 110VAC/60Hz	
		Job Site: TX05	
TEST SPECIFICATIONS		Test Method	
FCC 15.407:2020		ANSI C63.10:2013	
COMMENTS			
Radar was split across two of the four MIMO ports to more closely represent real world operation and was also client requested. Losses seen at the splitter in the measurement path were account for in the radar calibration leveling. Reference the DFS setup and master attenuation documentation for the attenuators used while under test. Ports 2 and 4 were tested. Verifying radar detection on channel frequency with the lowest possible gain.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	1	Signature 	

		# of Signals	Pulse Width (mS)	Initial Closing Time (mS)	Final Closing Time (mS)	Limit (mS)	Result
MIMO Ports 2 and 4							
802.11ac, UNII-2c Extended							
20 MHz CBW, Ch.140, 5700 MHz							
Radar Type 0							
	200 mS	4	N/A	99.37	N/A	200	Pass
	Aggregate	4	0.567	99.37	101.64	260	Pass
Radar Type 1A							
	200 mS	4	N/A	90.00	N/A	200	Pass
	Aggregate	4	0.567	90.00	92.27	260	Pass
Radar Type 1B							
	200 mS	4	N/A	166.90	N/A	200	Pass
	Aggregate	4	0.567	166.90	169.17	260	Pass
Radar Type 2							
	200 mS	4	N/A	65.63	N/A	200	Pass
	Aggregate	4	0.567	65.63	67.90	260	Pass
Radar Type 3							
	200 mS	4	N/A	76.88	N/A	200	Pass
	Aggregate	4	0.567	76.88	79.15	260	Pass
Radar Type 4							
	200 mS	4	N/A	69.38	N/A	200	Pass
	Aggregate	4	0.567	69.38	71.65	260	Pass
Radar Type 5							
	200 mS	4	N/A	131.30	N/A	200	Pass
	Aggregate	4	0.567	131.30	133.57	260	Pass
Radar Type 6							
	200 mS	4	N/A	101.30	N/A	200	Pass
	Aggregate	4	0.567	101.30	103.57	260	Pass



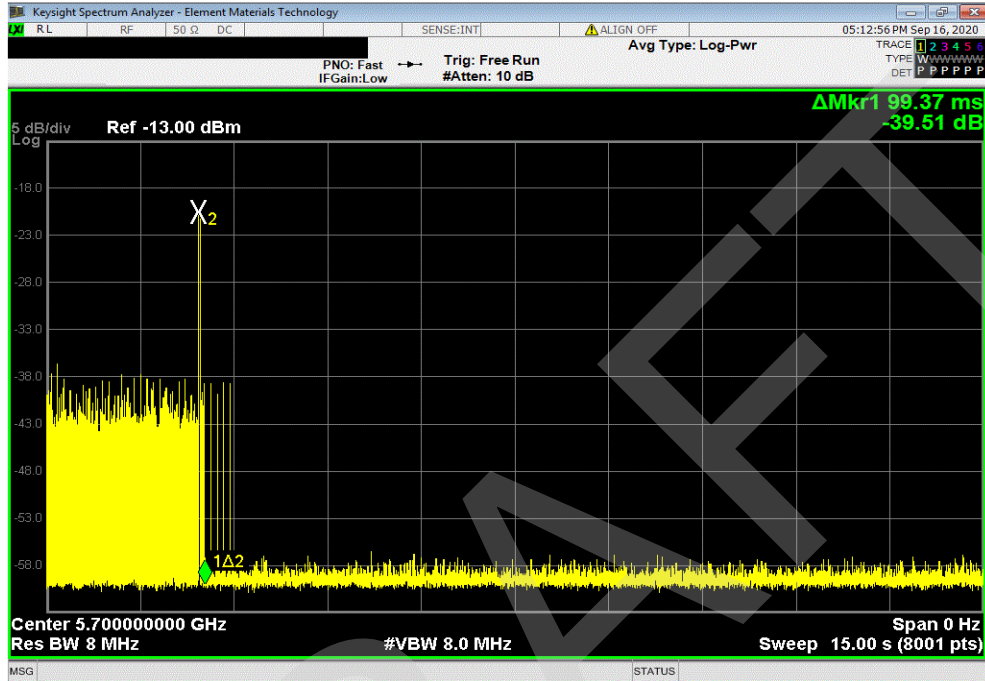


# CLOSING TIME - 5.7 GHz

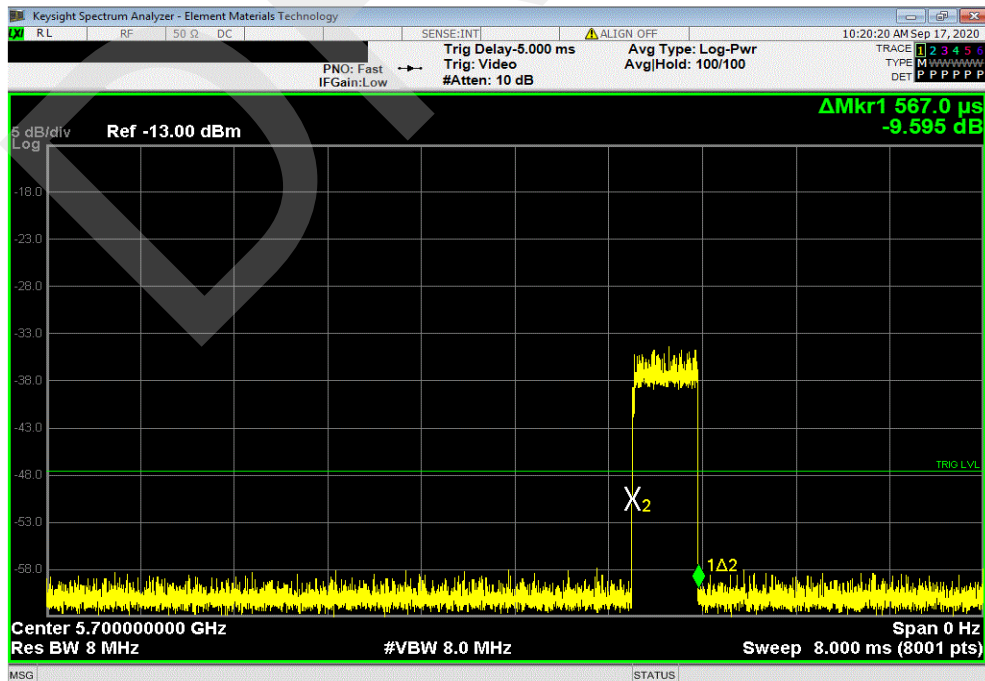


XMI 2020.03.25.0

MIMO Ports 2 and 4, 802.11ac, UNII-2c Extended, 20 MHz CBW, Ch.140, 5700 MHz, Radar Type 0, 200 mS						
	# of Signals	Pulse Width (mS)	Initial Closing Time (mS)	Final Closing Time (mS)	Limit (mS)	Result
	4	N/A	99.37	N/A	200	Pass



MIMO Ports 2 and 4, 802.11ac, UNII-2c Extended, 20 MHz CBW, Ch.140, 5700 MHz, Radar Type 0, Aggregate						
	# of Signals	Pulse Width (mS)	Initial Closing Time (mS)	Final Closing Time (mS)	Limit (mS)	Result
	4	0.567	99.37	101.638	260	Pass



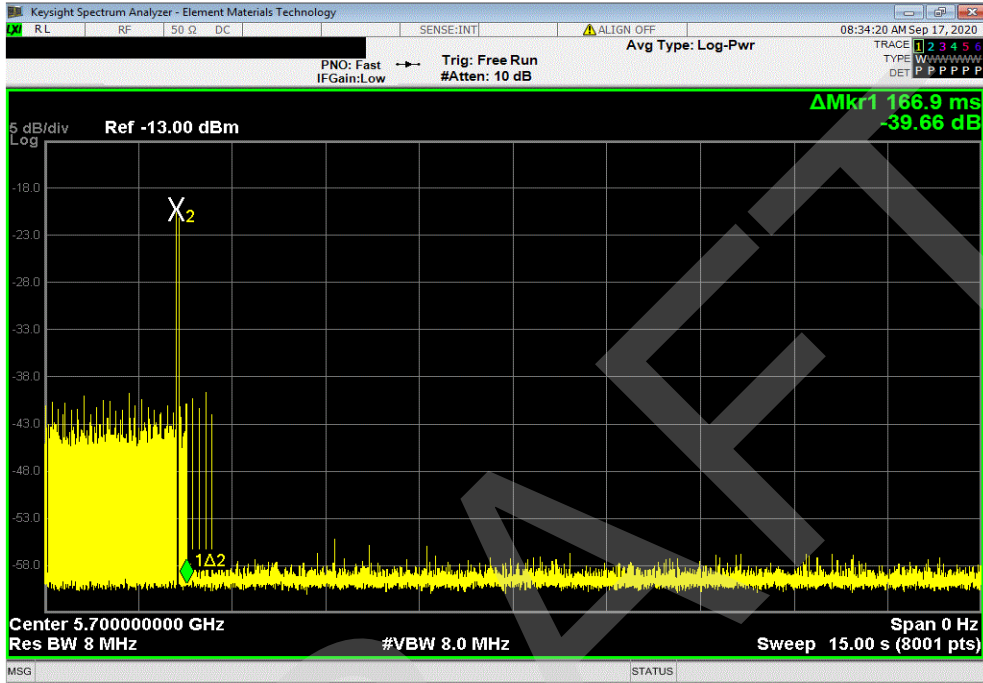


# CLOSING TIME - 5.7 GHz

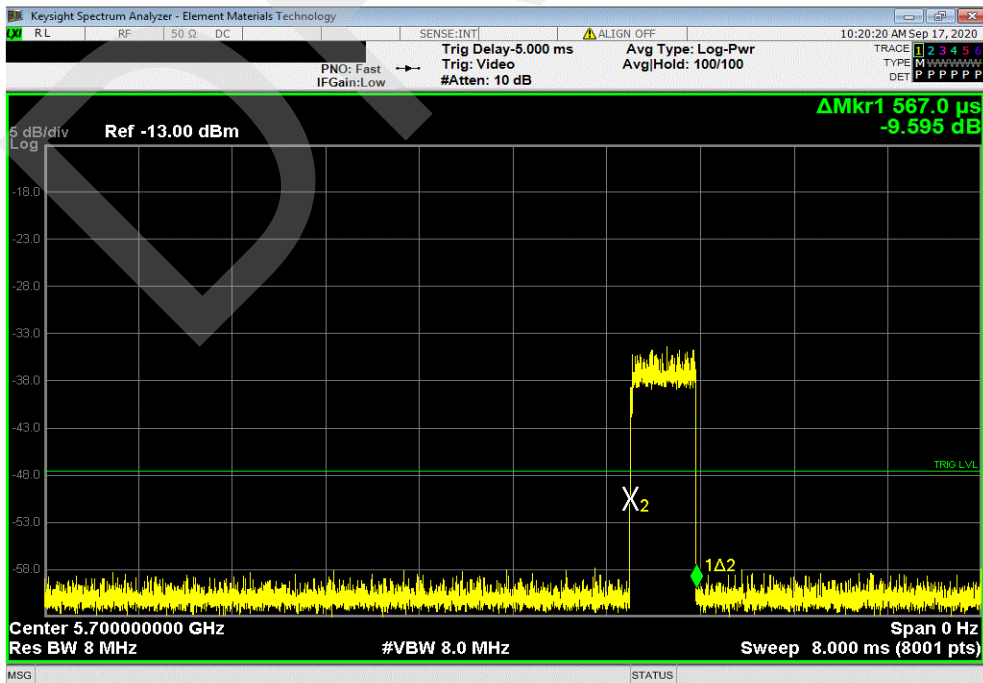


XMI 2020.03.25.0

MIMO Ports 2 and 4, 802.11ac, UNII-2c Extended, 20 MHz CBW, Ch.140, 5700 MHz, Radar Type 1B, 200 mS						
	# of Signals	Pulse Width (mS)	Initial Closing Time (mS)	Final Closing Time (mS)	Limit (mS)	Result
	4	N/A	166.9	N/A	200	Pass



MIMO Ports 2 and 4, 802.11ac, UNII-2c Extended, 20 MHz CBW, Ch.140, 5700 MHz, Radar Type 1B, Aggregate						
	# of Signals	Pulse Width (mS)	Initial Closing Time (mS)	Final Closing Time (mS)	Limit (mS)	Result
	4	0.567	166.9	169.168	260	Pass









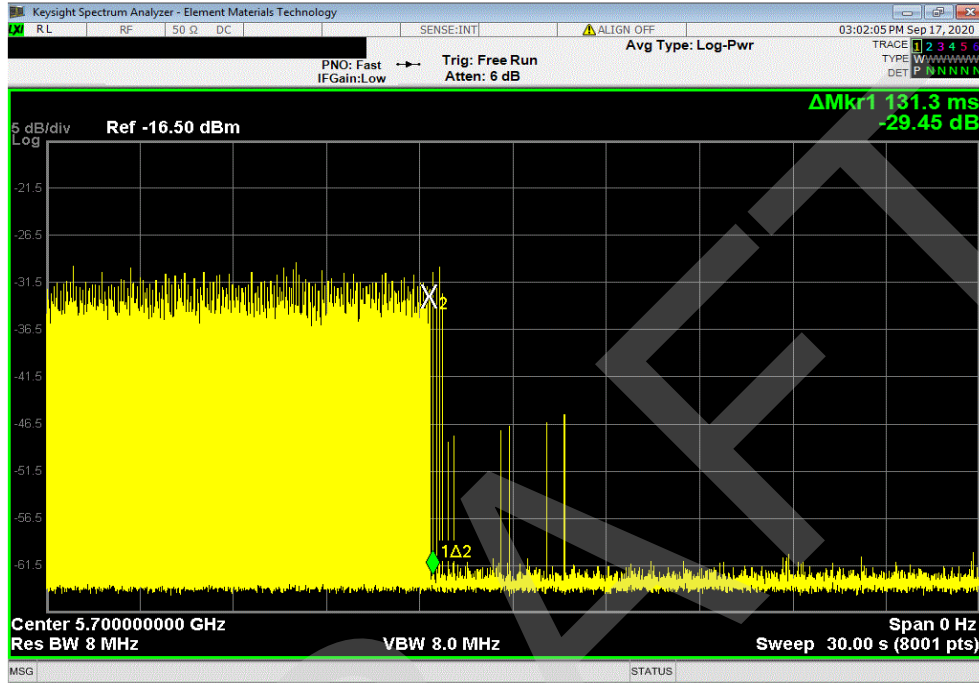


# CLOSING TIME - 5.7 GHz

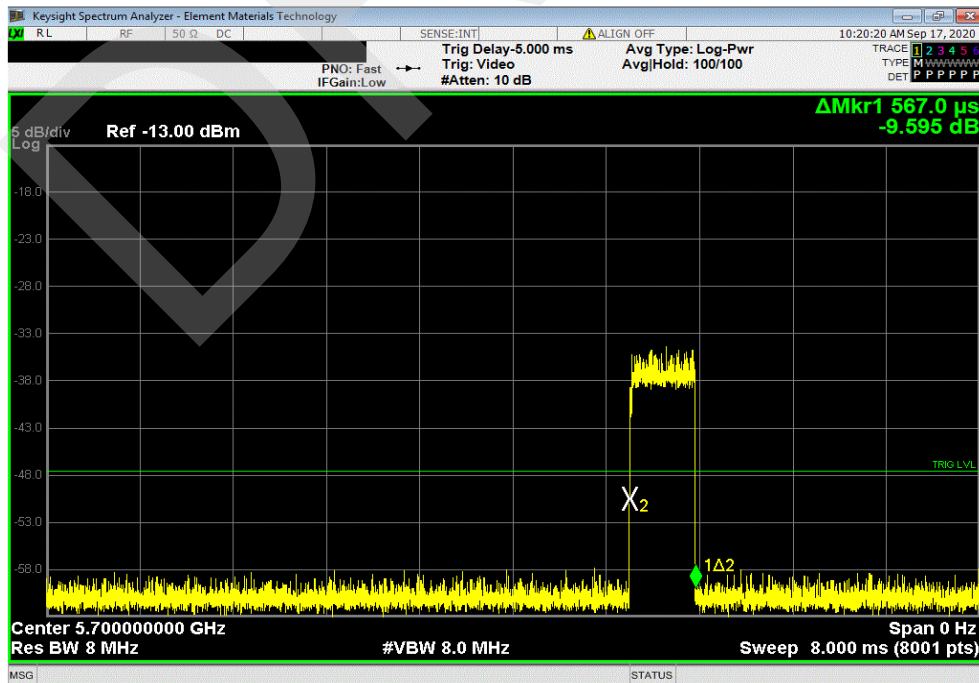


XMI 2020.03.25.0

MIMO Ports 2 and 4, 802.11ac, UNII-2c Extended, 20 MHz CBW, Ch.140, 5700 MHz, Radar Type 5, 200 mS						
	# of Signals	Pulse Width (mS)	Initial Closing Time (mS)	Final Closing Time (mS)	Limit (mS)	Result
	4	N/A	131.3	N/A	200	Pass



MIMO Ports 2 and 4, 802.11ac, UNII-2c Extended, 20 MHz CBW, Ch.140, 5700 MHz, Radar Type 5, Aggregate						
	# of Signals	Pulse Width (mS)	Initial Closing Time (mS)	Final Closing Time (mS)	Limit (mS)	Result
	4	0.567	131.3	133.568	260	Pass



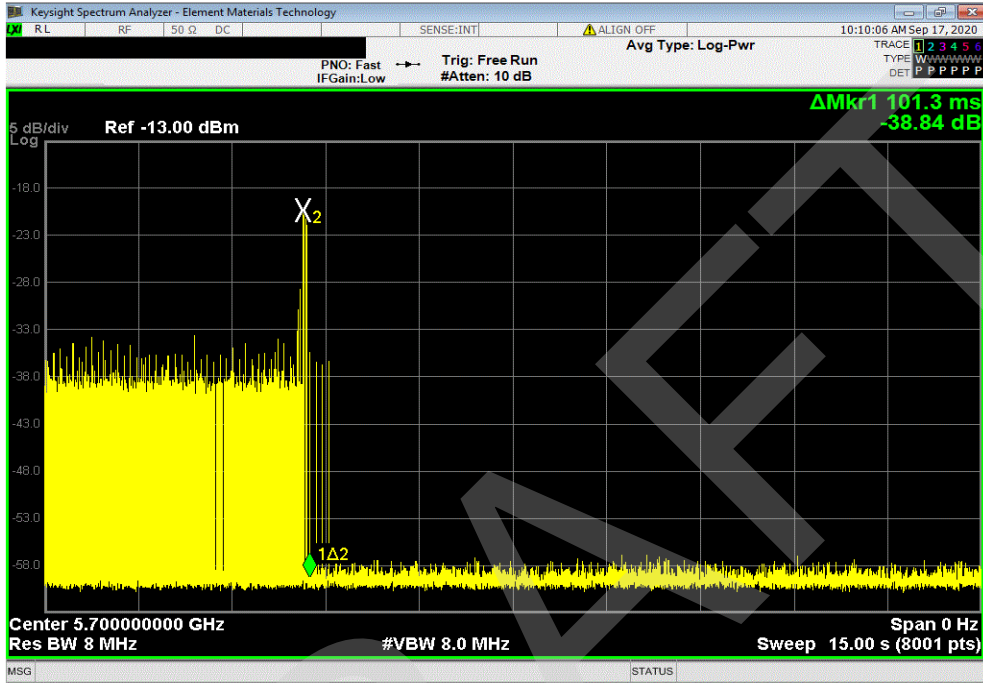


# CLOSING TIME - 5.7 GHz

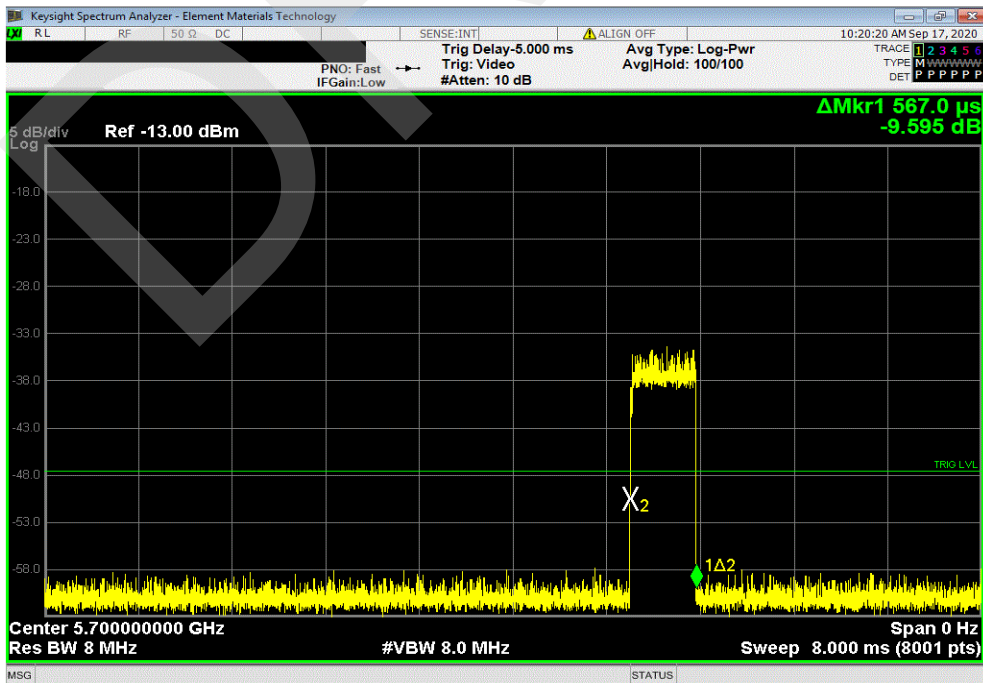


XMI 2020.03.25.0

MIMO Ports 2 and 4, 802.11ac, UNII-2c Extended, 20 MHz CBW, Ch.140, 5700 MHz, Radar Type 6, 200 mS						
	# of Signals	Pulse Width (mS)	Initial Closing Time (mS)	Final Closing Time (mS)	Limit (mS)	Result
	4	N/A	101.3	N/A	200	Pass



MIMO Ports 2 and 4, 802.11ac, UNII-2c Extended, 20 MHz CBW, Ch.140, 5700 MHz, Radar Type 6, Aggregate						
	# of Signals	Pulse Width (mS)	Initial Closing Time (mS)	Final Closing Time (mS)	Limit (mS)	Result
	4	0.567	101.3	103.568	260	Pass



# NON OCCUPANCY PERIOD

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

## TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Cable	Micro-Coax	UFD150A-1-0720-200200	TXG	18-Sep-19	18-Sep-20
Block - DC	Fairview Microwave	SD3379	AMM	13-Mar-20	13-Mar-21
Attenuator	Fairview Microwave	SA4018-20	TYE	18-Sep-19	18-Sep-20
Power Divider/Combiner	Fairview Microwave	MP0208-2	PDI	NCR	NCR
Power Divider/Combiner	Fairview Microwave	MP0208-2	PDF	NCR	NCR
Attenuator	Fairview Microwave	SA1501SMA	RKV	NCR	NCR
Analyzer - Spectrum Analyzer	Agilent	N9010A	AFL	27-Feb-20	27-Feb-21
Generator - Signal	Keysight	N5182B-506	TEV	23-Apr-18	23-Apr-21
Generator - Signal	Benchforge Manufacturing	Colt	TIN	NCR	NCR
Chamber - Temperature/Humidity	Cincinnati Sub Zero (CSZ)	ZPH-8-2-SCT/AC	TBH	NCR	NCR

## TEST DESCRIPTION

The master and client were connected using the conducted method described in the FCC KDB procedure via a series of splitters and attenuators which allows the communication and injected radar signals to be monitored simultaneously. The spectrum analyzer was configured to sweep the frequency for at least 30 minutes. The appropriate radar signal was injected and the channel was monitored to make sure the master and client devices vacated the channel and did not use it again for a period of time equal to or greater than 30 minutes.

# NON OCCUPANCY PERIOD



XMM 2020.03.25.0

EUT: Samsung Model SM-H204V		Work Order: PCTE0004	
Serial Number: None		Date: 25-Jul-20	
Customer: PCTEST Engineering Laboratory, LLC		Temperature: 24.6 °C	
Attendees: None		Humidity: 53.6% RH	
Project: None		Barometric Pres.: 1017 mbar	
Tested by: Brandon Hobbs		Power: 110VAC/60Hz	
		Job Site: TX05	
TEST SPECIFICATIONS		Test Method	
FCC 15.407:2020		ANSI C63.10:2013	
COMMENTS			
Radar was split across two of the four MIMO ports to more closely represent real world operation and was also client requested. Losses seen at the splitter in the measurement path were account for in the radar calibration leveling. Reference the DFS setup and master attenuation documentation for the attenuators used while under test. Ports 2 and 4 were tested. Per the DFS requirements any single bandwidth can be tested. Internal Attn was reduced for better dynamic range. Converting 30 minute limit to seconds: 30 minutes x 60 sec / minute = 1800 second limit			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	1	Signature	
		Value (Sec)	Limit (Sec) Result
MIMO Ports 2 and 4	802.11ac 5.3 GHz		
	20 MHz Channel Bandwidth		
	Ch.60, 5300 MHz		
	30min Non Occupancy Period	≥ 1800	≥ 1800 Pass

DRAFT

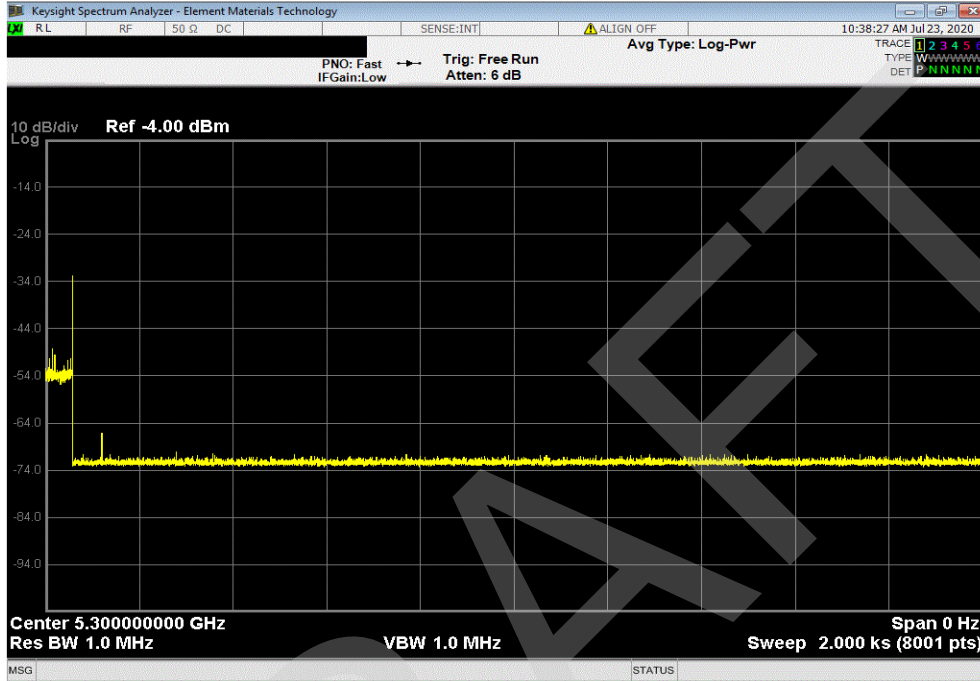
# NON OCCUPANCY PERIOD



XMI 2020.03.25.0

MIMO Ports 2 and 4, 802.11ac 5.3 GHz, 20 MHz Channel Bandwidth, Ch.60, 5300 MHz, 30min Non Occupancy Period

Value (Sec)	Limit (Sec)	Result
≥ 1800	≥ 1800	Pass





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# STATISTICAL PERFORMANCE CHECK

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

## TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Cable	Micro-Coax	UFD150A-1-0720-200200	TXG	18-Sep-19	18-Sep-20
Block - DC	Fairview Microwave	SD3379	AMM	13-Mar-20	13-Mar-21
Attenuator	Fairview Microwave	SA4018-20	TYE	18-Sep-19	18-Sep-20
Power Divider/Combiner	Fairview Microwave	MP0208-2	PDI	NCR	NCR
Power Divider/Combiner	Fairview Microwave	MP0208-2	PDF	NCR	NCR
Attenuator	Fairview Microwave	SA1501SMA	RKV	NCR	NCR
Analyzer - Spectrum Analyzer	Agilent	N9010A	AFL	27-Feb-20	27-Feb-21
Generator - Signal	Keysight	N5182B-506	TEV	23-Apr-18	23-Apr-21
Probe - Near Field Set	ETS Lindgren	7405	IPS	NCR	NCR
Generator - Signal	Benchforge Manufacturing	Colt	TIN	NCR	NCR
Chamber - Temperature/Humidity	Cincinnati Sub Zero (CSZ)	ZPH-8-2-SCT/AC	TBH	NCR	NCR


## TEST DESCRIPTION

The master and client were connected using the conducted method described in the FCC KDB procedure via a series of splitters and attenuators which allows the radar signals to be injected and monitored. For master devices, the detection level was set prior to testing by temporarily replacing the master device with the analyzer and setting the power level according to Table 3 and Section 7.5. Where required, an approved Media file can be streamed between the master and client or an alternative random ping method to load the channel may be used instead. Channel loading requirements were also verified prior to testing. Configuration and status of the master and client devices were then monitored with the spectrum analyzer. Essentially, a move time test is performed on all the necessary radar types to make sure the master and client vacate the channel when a radar signal is injected. Numerous trials are performed for each radar type to establish a statistical analysis of detection probability, and the guidelines of section 7.8.4 of the procedure were used to calculate the data and determine if the results passed.

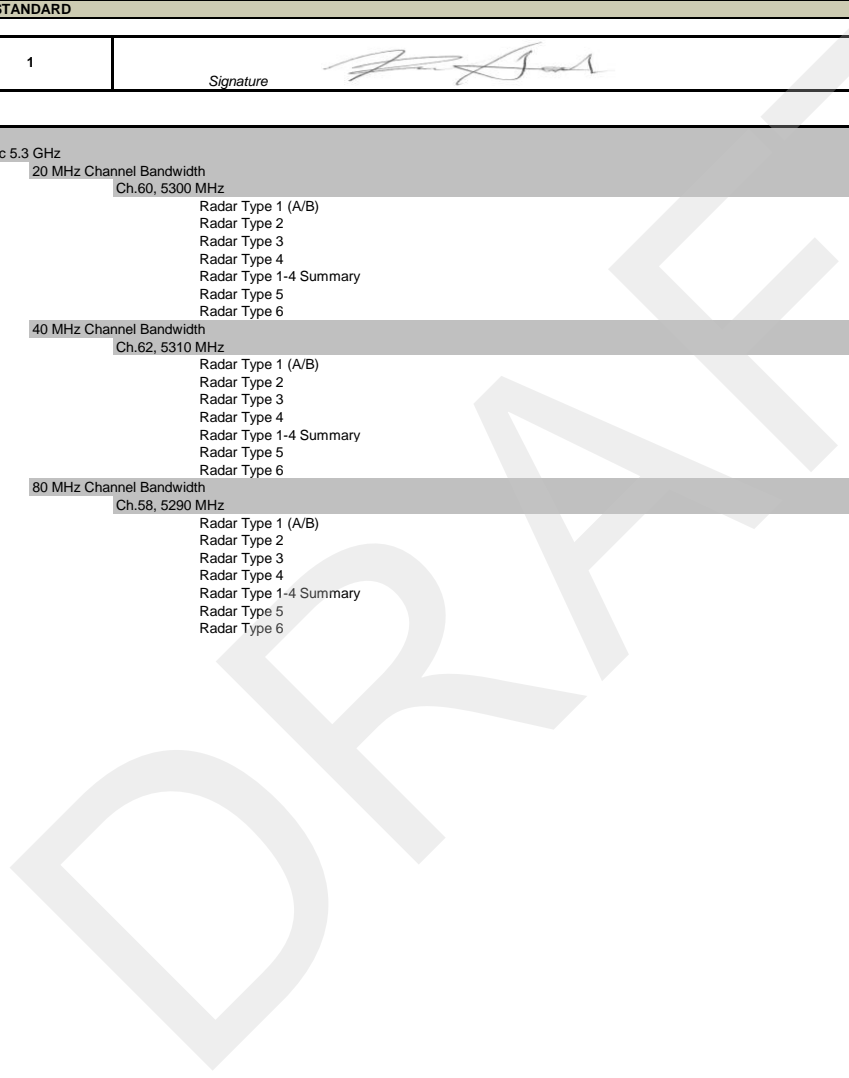
# STATISTICAL PERFORMANCE CHECK



XMI 2020.03.25.0

EUT: Samsung Model SM-H204V		Work Order: PCTE0004	
Serial Number: None		Date: 28-Jul-20	
Customer: PCTEST Engineering Laboratory, LLC		Temperature: 24.6 °C	
Attendees: None		Humidity: 51.9% RH	
Project: None		Barometric Pres.: 1017 mbar	
Tested by: Brandon Hobbs		Power: 110VAC/60Hz	
		Job Site: TX05	
TEST SPECIFICATIONS		Test Method	
FCC 15.407:2020		ANSI C63.10:2013	
COMMENTS			
Radar was split across two of the four MIMO ports to more closely represent real world operation and was also client requested. Losses seen at the splitter in the measurement path were account for in the radar calibration leveling. Reference the DFS setup and master attenuation documentation for the attenuators used while under test. Ports 2 and 4 were tested. Per the DFS requirements all bandwidths were tested.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	1	Signature 	

	Value	Limit	Result
MIMO Ports 2 and 4			
802.11ac 5.3 GHz			
20 MHz Channel Bandwidth			
Ch.60, 5300 MHz			
Radar Type 1 (A/B)	86.7%	60.0%	Pass
Radar Type 2	90.0%	60.0%	Pass
Radar Type 3	86.7%	60.0%	Pass
Radar Type 4	90.0%	60.0%	Pass
Radar Type 1-4 Summary	87.5%	80.0%	Pass
Radar Type 5	100.0%	80.0%	Pass
Radar Type 6	100.0%	70.0%	Pass
40 MHz Channel Bandwidth			
Ch.62, 5310 MHz			
Radar Type 1 (A/B)	100.0%	60.0%	Pass
Radar Type 2	100.0%	60.0%	Pass
Radar Type 3	80.0%	60.0%	Pass
Radar Type 4	90.0%	60.0%	Pass
Radar Type 1-4 Summary	92.5%	80.0%	Pass
Radar Type 5	100.0%	80.0%	Pass
Radar Type 6	93.3%	70.0%	Pass
80 MHz Channel Bandwidth			
Ch.58, 5290 MHz			
Radar Type 1 (A/B)	93.3%	60.0%	Pass
Radar Type 2	90.0%	60.0%	Pass
Radar Type 3	96.7%	60.0%	Pass
Radar Type 4	100.0%	60.0%	Pass
Radar Type 1-4 Summary	95.0%	80.0%	Pass
Radar Type 5	100.0%	80.0%	Pass
Radar Type 6	100.0%	70.0%	Pass



# STATISTICAL PERFORMANCE CHECK



XMM 2020.03.25.0

MIMIO Ports 2 and 4, 802.11ac 5.3 GHz , 20 MHz Channel Bandwidth, Ch.60, 5300 MHz, Radar Type 1 (A/B)						
				Value	Limit	Result
				86.7%	60.0%	Pass

Trial #	Detected
1	PASS
2	PASS
3	PASS
4	PASS
5	FAIL
6	PASS
7	PASS
8	PASS
9	PASS
10	PASS
11	PASS
12	PASS
13	FAIL
14	PASS
15	PASS
16	PASS
17	PASS
18	FAIL
19	PASS
20	FAIL
21	PASS
22	PASS
23	PASS
24	PASS
25	PASS
26	PASS
27	PASS
28	PASS
29	PASS
30	PASS

MIMIO Ports 2 and 4, 802.11ac 5.3 GHz , 20 MHz Channel Bandwidth, Ch.60, 5300 MHz, Radar Type 2						
				Value	Limit	Result
				90.0%	60.0%	Pass

Trial #	Detected	No. of Pulses Per Burst	Pulse Width (us)	PRI (us)
1	PASS	pulses per burst: 23	tpw: 1.600 us	tpri: 159.000 us
2	FAIL	pulses per burst: 26	tpw: 2.500 us	tpri: 214.000 us
3	PASS	pulses per burst: 28	tpw: 3.700 us	tpri: 196.000 us
4	PASS	pulses per burst: 25	tpw: 1.700 us	tpri: 205.000 us
5	PASS	pulses per burst: 26	tpw: 4.400 us	tpri: 194.000 us
6	PASS	pulses per burst: 23	tpw: 4.500 us	tpri: 190.000 us
7	PASS	pulses per burst: 26	tpw: 2.600 us	tpri: 209.000 us
8	PASS	pulses per burst: 23	tpw: 4.200 us	tpri: 184.000 us
9	FAIL	pulses per burst: 24	tpw: 1.200 us	tpri: 160.000 us
10	PASS	pulses per burst: 29	tpw: 5.000 us	tpri: 182.000 us
11	PASS	pulses per burst: 26	tpw: 3.900 us	tpri: 182.000 us
12	PASS	pulses per burst: 28	tpw: 4.400 us	tpri: 167.000 us
13	PASS	pulses per burst: 25	tpw: 3.800 us	tpri: 170.000 us
14	PASS	pulses per burst: 24	tpw: 4.100 us	tpri: 150.000 us
15	PASS	pulses per burst: 29	tpw: 2.800 us	tpri: 170.000 us
16	PASS	pulses per burst: 27	tpw: 1.400 us	tpri: 207.000 us
17	FAIL	pulses per burst: 24	tpw: 2.400 us	tpri: 209.000 us
18	PASS	pulses per burst: 24	tpw: 4.000 us	tpri: 201.000 us
19	PASS	pulses per burst: 29	tpw: 2.000 us	tpri: 214.000 us
20	PASS	pulses per burst: 24	tpw: 3.100 us	tpri: 225.000 us
21	PASS	pulses per burst: 27	tpw: 4.900 us	tpri: 160.000 us
22	PASS	pulses per burst: 23	tpw: 4.300 us	tpri: 153.000 us
23	PASS	pulses per burst: 28	tpw: 3.500 us	tpri: 190.000 us
24	FAIL	pulses per burst: 25	tpw: 1.000 us	tpri: 188.000 us
25	PASS	pulses per burst: 26	tpw: 1.700 us	tpri: 197.000 us
26	PASS	pulses per burst: 27	tpw: 1.400 us	tpri: 202.000 us
27	PASS	pulses per burst: 27	tpw: 4.700 us	tpri: 196.000 us
28	PASS	pulses per burst: 25	tpw: 2.900 us	tpri: 212.000 us
29	PASS	pulses per burst: 28	tpw: 2.000 us	tpri: 153.000 us
30	PASS	pulses per burst: 28	tpw: 2.300 us	tpri: 174.000 us



# STATISTICAL PERFORMANCE CHECK



MMI 2020.03.25.0

MIMIO Ports 2 and 4, 802.11ac 5.3 GHz , 20 MHz Channel Bandwidth, Ch.60, 5300 MHz, Radar Type 3						
				Value	Limit	Result
				86.7%	60.0%	Pass

Trial #	Detected	No. of Pulses Per Burst	Pulse Width (us)	PRI (us)
1	PASS	pulses per burst: 16	tpw: 9.600 us	tpri: 340.000 us
2	FAIL	pulses per burst: 16	tpw: 6.300 us	tpri: 355.000 us
3	PASS	pulses per burst: 17	tpw: 9.800 us	tpri: 225.000 us
4	PASS	pulses per burst: 18	tpw: 7.900 us	tpri: 358.000 us
5	PASS	pulses per burst: 16	tpw: 7.900 us	tpri: 386.000 us
6	PASS	pulses per burst: 18	tpw: 7.800 us	tpri: 486.000 us
7	PASS	pulses per burst: 16	tpw: 9.000 us	tpri: 425.000 us
8	PASS	pulses per burst: 17	tpw: 7.700 us	tpri: 337.000 us
9	PASS	pulses per burst: 18	tpw: 8.400 us	tpri: 387.000 us
10	PASS	pulses per burst: 17	tpw: 6.900 us	tpri: 330.000 us
11	PASS	pulses per burst: 16	tpw: 7.600 us	tpri: 337.000 us
12	FAIL	pulses per burst: 17	tpw: 6.100 us	tpri: 403.000 us
13	PASS	pulses per burst: 17	tpw: 9.200 us	tpri: 439.000 us
14	PASS	pulses per burst: 18	tpw: 9.200 us	tpri: 261.000 us
15	PASS	pulses per burst: 18	tpw: 6.000 us	tpri: 441.000 us
16	PASS	pulses per burst: 18	tpw: 9.000 us	tpri: 491.000 us
17	FAIL	pulses per burst: 18	tpw: 6.200 us	tpri: 210.000 us
18	PASS	pulses per burst: 17	tpw: 9.100 us	tpri: 441.000 us
19	PASS	pulses per burst: 17	tpw: 9.500 us	tpri: 327.000 us
20	PASS	pulses per burst: 16	tpw: 9.900 us	tpri: 216.000 us
21	PASS	pulses per burst: 16	tpw: 7.600 us	tpri: 253.000 us
22	PASS	pulses per burst: 18	tpw: 8.800 us	tpri: 474.000 us
23	PASS	pulses per burst: 16	tpw: 7.700 us	tpri: 377.000 us
24	PASS	pulses per burst: 16	tpw: 7.200 us	tpri: 440.000 us
25	FAIL	pulses per burst: 18	tpw: 9.100 us	tpri: 200.000 us
26	PASS	pulses per burst: 27	tpw: 1.400 us	tpri: 202.000 us
27	PASS	pulses per burst: 27	tpw: 4.700 us	tpri: 196.000 us
28	PASS	pulses per burst: 25	tpw: 2.900 us	tpri: 212.000 us
29	PASS	pulses per burst: 28	tpw: 2.000 us	tpri: 153.000 us
30	PASS	pulses per burst: 28	tpw: 2.300 us	tpri: 174.000 us

MIMIO Ports 2 and 4, 802.11ac 5.3 GHz , 20 MHz Channel Bandwidth, Ch.60, 5300 MHz, Radar Type 4						
				Value	Limit	Result
				90.0%	60.0%	Pass

Trial #	Detected	No. of Pulses Per Burst	Pulse Width (us)	PRI (us)
1	FAIL	pulses per burst: 16	tpw: 15.500 us	tpri: 231.000 us
2	PASS	pulses per burst: 16	tpw: 12.300 us	tpri: 371.000 us
3	PASS	pulses per burst: 15	tpw: 15.800 us	tpri: 376.000 us
4	PASS	pulses per burst: 16	tpw: 14.300 us	tpri: 278.000 us
5	FAIL	pulses per burst: 16	tpw: 15.600 us	tpri: 247.000 us
6	PASS	pulses per burst: 15	tpw: 17.300 us	tpri: 366.000 us
7	PASS	pulses per burst: 15	tpw: 19.600 us	tpri: 232.000 us
8	PASS	pulses per burst: 16	tpw: 14.200 us	tpri: 211.000 us
9	PASS	pulses per burst: 16	tpw: 12.100 us	tpri: 203.000 us
10	FAIL	pulses per burst: 16	tpw: 14.400 us	tpri: 270.000 us
11	PASS	pulses per burst: 16	tpw: 15.700 us	tpri: 480.000 us
12	PASS	pulses per burst: 15	tpw: 16.600 us	tpri: 249.000 us
13	PASS	pulses per burst: 14	tpw: 14.900 us	tpri: 362.000 us
14	PASS	pulses per burst: 13	tpw: 17.300 us	tpri: 394.000 us
15	PASS	pulses per burst: 16	tpw: 12.300 us	tpri: 412.000 us
16	PASS	pulses per burst: 16	tpw: 12.500 us	tpri: 354.000 us
17	PASS	pulses per burst: 15	tpw: 18.300 us	tpri: 269.000 us
18	PASS	pulses per burst: 14	tpw: 19.000 us	tpri: 242.000 us
19	PASS	pulses per burst: 15	tpw: 14.600 us	tpri: 292.000 us
20	PASS	pulses per burst: 13	tpw: 11.100 us	tpri: 211.000 us
21	PASS	pulses per burst: 12	tpw: 19.200 us	tpri: 296.000 us
22	PASS	pulses per burst: 13	tpw: 17.000 us	tpri: 213.000 us
23	PASS	pulses per burst: 14	tpw: 15.100 us	tpri: 460.000 us
24	PASS	pulses per burst: 14	tpw: 18.000 us	tpri: 411.000 us
25	PASS	pulses per burst: 14	tpw: 16.300 us	tpri: 247.000 us
26	PASS	pulses per burst: 15	tpw: 19.800 us	tpri: 459.000 us
27	PASS	pulses per burst: 14	tpw: 15.300 us	tpri: 378.000 us
28	PASS	pulses per burst: 13	tpw: 18.500 us	tpri: 498.000 us
29	PASS	pulses per burst: 15	tpw: 14.600 us	tpri: 346.000 us
30	PASS	pulses per burst: 14	tpw: 17.900 us	tpri: 269.000 us

# STATISTICAL PERFORMANCE CHECK



XMI 2020.03.25.0

MIMIO Ports 2 and 4, 802.11ac 5.3 GHz , 20 MHz Channel Bandwidth, Ch.60, 5300 MHz, Radar Type 1-4 Summary						
				Value	Limit	Result
				87.5%	80.0%	Pass

MIMIO Ports 2 and 4, 802.11ac 5.3 GHz , 20 MHz Channel Bandwidth, Ch.60, 5300 MHz, Radar Type 5						
				Value	Limit	Result
				100.0%	80.0%	Pass

Trial #	Detected
1	PASS
2	PASS
3	PASS
4	PASS
5	PASS
6	PASS
7	PASS
8	PASS
9	PASS
10	PASS
11	PASS
12	PASS
13	PASS
14	PASS
15	PASS
16	PASS
17	PASS
18	PASS
19	PASS
20	PASS
21	PASS
22	PASS
23	PASS
24	PASS
25	PASS
26	PASS
27	PASS
28	PASS
29	PASS
30	PASS

# STATISTICAL PERFORMANCE CHECK



XMI 2020.03.25.0

MIMIO Ports 2 and 4, 802.11ac 5.3 GHz , 20 MHz Channel Bandwidth, Ch.60, 5300 MHz, Radar Type 6						
				Value	Limit	Result
				100.0%	70.0%	Pass

Trial #	Detected
1	PASS
2	PASS
3	PASS
4	PASS
5	PASS
6	PASS
7	PASS
8	PASS
9	PASS
10	PASS
11	PASS
12	PASS
13	PASS
14	PASS
15	PASS
16	PASS
17	PASS
18	PASS
19	PASS
20	PASS
21	PASS
22	PASS
23	PASS
24	PASS
25	PASS
26	PASS
27	PASS
28	PASS
29	PASS
30	PASS

MIMIO Ports 2 and 4, 802.11ac 5.3 GHz , 40 MHz Channel Bandwidth, Ch.62, 5310 MHz, Radar Type 1 (A/B)						
				Value	Limit	Result
				100.0%	60.0%	Pass

Trial #	Detected
1	PASS
2	PASS
3	PASS
4	PASS
5	PASS
6	PASS
7	PASS
8	PASS
9	PASS
10	PASS
11	PASS
12	PASS
13	PASS
14	PASS
15	PASS
16	PASS
17	PASS
18	PASS
19	PASS
20	PASS
21	PASS
22	PASS
23	PASS
24	PASS
25	PASS
26	PASS
27	PASS
28	PASS
29	PASS
30	PASS

# STATISTICAL PERFORMANCE CHECK



XM4 2020.03.25.0

MIMIO Ports 2 and 4, 802.11ac 5.3 GHz , 40 MHz Channel Bandwidth, Ch.62, 5310 MHz, Radar Type 2						
				Value	Limit	Result
				100.0%	60.0%	Pass

Trial #	Detected	No. of Pulses Per Burst	Pulse Width (us)	PRI (us)
1	PASS	pulses per burst: 23	tpw: 4.200 us	tpri: 177.000 us
2	PASS	pulses per burst: 23	tpw: 4.100 us	tpri: 206.000 us
3	PASS	pulses per burst: 24	tpw: 1.100 us	tpri: 178.000 us
4	PASS	pulses per burst: 27	tpw: 4.700 us	tpri: 193.000 us
5	PASS	pulses per burst: 23	tpw: 4.000 us	tpri: 184.000 us
6	PASS	pulses per burst: 23	tpw: 3.400 us	tpri: 170.000 us
7	PASS	pulses per burst: 29	tpw: 1.900 us	tpri: 205.000 us
8	PASS	pulses per burst: 27	tpw: 2.700 us	tpri: 153.000 us
9	PASS	pulses per burst: 27	tpw: 1.600 us	tpri: 197.000 us
10	PASS	pulses per burst: 28	tpw: 2.300 us	tpri: 182.000 us
11	PASS	pulses per burst: 23	tpw: 4.600 us	tpri: 181.000 us
12	PASS	pulses per burst: 26	tpw: 4.400 us	tpri: 172.000 us
13	PASS	pulses per burst: 29	tpw: 3.900 us	tpri: 163.000 us
14	PASS	pulses per burst: 27	tpw: 4.900 us	tpri: 177.000 us
15	PASS	pulses per burst: 26	tpw: 2.400 us	tpri: 223.000 us
16	PASS	pulses per burst: 26	tpw: 1.400 us	tpri: 194.000 us
17	PASS	pulses per burst: 28	tpw: 1.600 us	tpri: 186.000 us
18	PASS	pulses per burst: 27	tpw: 2.700 us	tpri: 150.000 us
19	PASS	pulses per burst: 27	tpw: 1.600 us	tpri: 216.000 us
20	PASS	pulses per burst: 23	tpw: 4.000 us	tpri: 183.000 us
21	PASS	pulses per burst: 25	tpw: 2.500 us	tpri: 225.000 us
22	PASS	pulses per burst: 28	tpw: 1.000 us	tpri: 213.000 us
23	PASS	pulses per burst: 29	tpw: 3.400 us	tpri: 187.000 us
24	PASS	pulses per burst: 26	tpw: 3.600 us	tpri: 216.000 us
25	PASS	pulses per burst: 26	tpw: 2.600 us	tpri: 203.000 us
26	PASS	pulses per burst: 28	tpw: 3.200 us	tpri: 154.000 us
27	PASS	pulses per burst: 27	tpw: 4.100 us	tpri: 218.000 us
28	PASS	pulses per burst: 23	tpw: 2.500 us	tpri: 156.000 us
29	PASS	pulses per burst: 23	tpw: 4.000 us	tpri: 169.000 us
30	PASS	pulses per burst: 27	tpw: 3.000 us	tpri: 164.000 us

MIMIO Ports 2 and 4, 802.11ac 5.3 GHz , 40 MHz Channel Bandwidth, Ch.62, 5310 MHz, Radar Type 3						
				Value	Limit	Result
				80.0%	60.0%	Pass

Trial #	Detected	No. of Pulses Per Burst	Pulse Width (us)	PRI (us)
1	PASS	pulses per burst: 16	tpw: 7.000 us	tpri: 233.000 us
2	PASS	pulses per burst: 18	tpw: 8.000 us	tpri: 444.000 us
3	PASS	pulses per burst: 17	tpw: 7.000 us	tpri: 385.000 us
4	PASS	pulses per burst: 18	tpw: 6.400 us	tpri: 412.000 us
5	PASS	pulses per burst: 16	tpw: 9.200 us	tpri: 218.000 us
6	PASS	pulses per burst: 16	tpw: 6.800 us	tpri: 480.000 us
7	FAIL	pulses per burst: 18	tpw: 8.100 us	tpri: 371.000 us
8	PASS	pulses per burst: 16	tpw: 6.300 us	tpri: 301.000 us
9	FAIL	pulses per burst: 18	tpw: 7.600 us	tpri: 486.000 us
10	PASS	pulses per burst: 18	tpw: 6.800 us	tpri: 205.000 us
11	FAIL	pulses per burst: 16	tpw: 7.800 us	tpri: 282.000 us
12	PASS	pulses per burst: 16	tpw: 6.700 us	tpri: 328.000 us
13	PASS	pulses per burst: 18	tpw: 7.700 us	tpri: 445.000 us
14	PASS	pulses per burst: 17	tpw: 7.600 us	tpri: 412.000 us
15	PASS	pulses per burst: 18	tpw: 7.100 us	tpri: 211.000 us
16	PASS	pulses per burst: 18	tpw: 6.200 us	tpri: 334.000 us
17	PASS	pulses per burst: 17	tpw: 6.400 us	tpri: 267.000 us
18	FAIL	pulses per burst: 17	tpw: 8.800 us	tpri: 286.000 us
19	PASS	pulses per burst: 16	tpw: 9.900 us	tpri: 452.000 us
20	PASS	pulses per burst: 17	tpw: 9.600 us	tpri: 205.000 us
21	FAIL	pulses per burst: 18	tpw: 9.500 us	tpri: 244.000 us
22	FAIL	pulses per burst: 17	tpw: 9.100 us	tpri: 455.000 us
23	PASS	pulses per burst: 16	tpw: 6.700 us	tpri: 280.000 us
24	PASS	pulses per burst: 17	tpw: 6.100 us	tpri: 291.000 us
25	PASS	pulses per burst: 18	tpw: 9.200 us	tpri: 363.000 us
26	PASS	pulses per burst: 18	tpw: 8.700 us	tpri: 386.000 us
27	PASS	pulses per burst: 16	tpw: 9.000 us	tpri: 220.000 us
28	PASS	pulses per burst: 17	tpw: 9.500 us	tpri: 439.000 us
29	PASS	pulses per burst: 17	tpw: 6.400 us	tpri: 238.000 us
30	PASS	pulses per burst: 16	tpw: 6.300 us	tpri: 220.000 us

# STATISTICAL PERFORMANCE CHECK



XMH 2020.03.25.0

MIMIO Ports 2 and 4, 802.11ac 5.3 GHz , 40 MHz Channel Bandwidth, Ch.62, 5310 MHz, Radar Type 4						
				Value	Limit	Result
				90.0%	60.0%	Pass

Trial #	Detected	No. of Pulses Per Burst	Pulse Width (us)	PRI (us)
1	PASS	pulses per burst: 16	tpw: 19.700 us	tpri: 369.000 us
2	FAIL	pulses per burst: 15	tpw: 19.900 us	tpri: 200.000 us
3	PASS	pulses per burst: 12	tpw: 12.800 us	tpri: 266.000 us
4	PASS	pulses per burst: 13	tpw: 19.600 us	tpri: 362.000 us
5	PASS	pulses per burst: 14	tpw: 13.800 us	tpri: 335.000 us
6	PASS	pulses per burst: 15	tpw: 13.800 us	tpri: 478.000 us
7	FAIL	pulses per burst: 14	tpw: 15.700 us	tpri: 485.000 us
8	PASS	pulses per burst: 12	tpw: 19.100 us	tpri: 398.000 us
9	PASS	pulses per burst: 13	tpw: 19.000 us	tpri: 435.000 us
10	FAIL	pulses per burst: 16	tpw: 16.600 us	tpri: 427.000 us
11	PASS	pulses per burst: 13	tpw: 13.700 us	tpri: 239.000 us
12	PASS	pulses per burst: 16	tpw: 11.800 us	tpri: 253.000 us
13	PASS	pulses per burst: 13	tpw: 20.000 us	tpri: 424.000 us
14	PASS	pulses per burst: 13	tpw: 16.200 us	tpri: 202.000 us
15	PASS	pulses per burst: 15	tpw: 11.400 us	tpri: 250.000 us
16	PASS	pulses per burst: 15	tpw: 16.500 us	tpri: 369.000 us
17	PASS	pulses per burst: 13	tpw: 11.000 us	tpri: 316.000 us
18	PASS	pulses per burst: 16	tpw: 15.600 us	tpri: 201.000 us
19	PASS	pulses per burst: 15	tpw: 17.500 us	tpri: 358.000 us
20	PASS	pulses per burst: 12	tpw: 17.200 us	tpri: 267.000 us
21	PASS	pulses per burst: 13	tpw: 15.500 us	tpri: 468.000 us
22	PASS	pulses per burst: 12	tpw: 11.100 us	tpri: 249.000 us
23	PASS	pulses per burst: 16	tpw: 12.600 us	tpri: 482.000 us
24	PASS	pulses per burst: 14	tpw: 17.400 us	tpri: 209.000 us
25	PASS	pulses per burst: 16	tpw: 15.100 us	tpri: 219.000 us
26	PASS	pulses per burst: 14	tpw: 12.100 us	tpri: 401.000 us
27	PASS	pulses per burst: 12	tpw: 18.700 us	tpri: 273.000 us
28	PASS	pulses per burst: 14	tpw: 15.200 us	tpri: 487.000 us
29	PASS	pulses per burst: 14	tpw: 16.600 us	tpri: 288.000 us
30	PASS	pulses per burst: 12	tpw: 13.400 us	tpri: 453.000 us

MIMIO Ports 2 and 4, 802.11ac 5.3 GHz , 40 MHz Channel Bandwidth, Ch.62, 5310 MHz, Radar Type 1-4 Summary						
				Value	Limit	Result
				92.5%	80.0%	Pass

# STATISTICAL PERFORMANCE CHECK



XMI 2020.03.25.0

MIMIO Ports 2 and 4, 802.11ac 5.3 GHz , 40 MHz Channel Bandwidth, Ch.62, 5310 MHz, Radar Type 5						
				Value	Limit	Result
				100.0%	80.0%	Pass

Trial #	Detected
1	PASS
2	PASS
3	PASS
4	PASS
5	PASS
6	PASS
7	PASS
8	PASS
9	PASS
10	PASS
11	PASS
12	PASS
13	PASS
14	PASS
15	PASS
16	PASS
17	PASS
18	PASS
19	PASS
20	PASS
21	PASS
22	PASS
23	PASS
24	PASS
25	PASS
26	PASS
27	PASS
28	PASS
29	PASS
30	PASS

MIMIO Ports 2 and 4, 802.11ac 5.3 GHz , 40 MHz Channel Bandwidth, Ch.62, 5310 MHz, Radar Type 6						
				Value	Limit	Result
				93.3%	70.0%	Pass

Trial #	Detected
1	PASS
2	PASS
3	PASS
4	FAIL
5	PASS
6	PASS
7	PASS
8	PASS
9	PASS
10	PASS
11	PASS
12	FAIL
13	PASS
14	PASS
15	PASS
16	PASS
17	PASS
18	PASS
19	PASS
20	PASS
21	PASS
22	PASS
23	PASS
24	PASS
25	PASS
26	PASS
27	PASS
28	PASS
29	PASS
30	PASS

# STATISTICAL PERFORMANCE CHECK



XMM 2020.03.25.0

MIMIO Ports 2 and 4, 802.11ac 5.3 GHz , 80 MHz Channel Bandwidth, Ch.58, 5290 MHz, Radar Type 1 (A/B)						
				Value	Limit	Result
				93.3%	60.0%	Pass

Trial #	Detected
1	PASS
2	PASS
3	PASS
4	PASS
5	PASS
6	PASS
7	PASS
8	PASS
9	FAIL
10	PASS
11	PASS
12	PASS
13	PASS
14	PASS
15	PASS
16	PASS
17	PASS
18	PASS
19	PASS
20	PASS
21	PASS
22	PASS
23	PASS
24	PASS
25	PASS
26	PASS
27	FAIL
28	PASS
29	PASS
30	PASS

MIMIO Ports 2 and 4, 802.11ac 5.3 GHz , 80 MHz Channel Bandwidth, Ch.58, 5290 MHz, Radar Type 2						
				Value	Limit	Result
				90.0%	60.0%	Pass

Trial #	Detected	No. of Pulses Per Burst	Pulse Width (us)	PRI (us)
1	PASS	pulses per burst: 29	tpw: 3.700 us	tpri: 163.000 us
2	PASS	pulses per burst: 24	tpw: 1.900 us	tpri: 151.000 us
3	PASS	pulses per burst: 29	tpw: 4.100 us	tpri: 170.000 us
4	PASS	pulses per burst: 25	tpw: 5.000 us	tpri: 168.000 us
5	FAIL	pulses per burst: 25	tpw: 1.000 us	tpri: 215.000 us
6	PASS	pulses per burst: 24	tpw: 2.100 us	tpri: 153.000 us
7	PASS	pulses per burst: 24	tpw: 2.200 us	tpri: 151.000 us
8	PASS	pulses per burst: 28	tpw: 4.900 us	tpri: 209.000 us
9	PASS	pulses per burst: 23	tpw: 2.600 us	tpri: 171.000 us
10	PASS	pulses per burst: 27	tpw: 4.500 us	tpri: 221.000 us
11	PASS	pulses per burst: 28	tpw: 4.600 us	tpri: 175.000 us
12	PASS	pulses per burst: 23	tpw: 1.200 us	tpri: 163.000 us
13	FAIL	pulses per burst: 25	tpw: 4.100 us	tpri: 203.000 us
14	PASS	pulses per burst: 29	tpw: 4.400 us	tpri: 206.000 us
15	PASS	pulses per burst: 24	tpw: 4.100 us	tpri: 206.000 us
16	PASS	pulses per burst: 28	tpw: 1.900 us	tpri: 206.000 us
17	PASS	pulses per burst: 23	tpw: 4.900 us	tpri: 226.000 us
18	PASS	pulses per burst: 29	tpw: 3.600 us	tpri: 222.000 us
19	PASS	pulses per burst: 29	tpw: 1.700 us	tpri: 157.000 us
20	PASS	pulses per burst: 25	tpw: 3.600 us	tpri: 189.000 us
21	PASS	pulses per burst: 27	tpw: 1.300 us	tpri: 198.000 us
22	PASS	pulses per burst: 26	tpw: 1.800 us	tpri: 216.000 us
23	PASS	pulses per burst: 26	tpw: 4.400 us	tpri: 224.000 us
24	FAIL	pulses per burst: 27	tpw: 2.300 us	tpri: 214.000 us
25	PASS	pulses per burst: 23	tpw: 3.000 us	tpri: 226.000 us
26	PASS	pulses per burst: 27	tpw: 1.800 us	tpri: 171.000 us
27	PASS	pulses per burst: 25	tpw: 4.600 us	tpri: 213.000 us
28	PASS	pulses per burst: 29	tpw: 3.100 us	tpri: 223.000 us
29	PASS	pulses per burst: 27	tpw: 1.000 us	tpri: 218.000 us
30	PASS	pulses per burst: 25	tpw: 3.300 us	tpri: 187.000 us



# STATISTICAL PERFORMANCE CHECK



XMt 2020.03.25.0

MIMIO Ports 2 and 4, 802.11ac 5.3 GHz , 80 MHz Channel Bandwidth, Ch.58, 5290 MHz, Radar Type 3						
				Value	Limit	Result
				96.7%	60.0%	Pass

Trial #	Detected	No. of Pulses Per Burst	Pulse Width (us)	PRI (us)
1	PASS	pulses per burst: 18	tpw: 7.600 us	tpri: 229.000 us
2	FAIL	pulses per burst: 18	tpw: 8.300 us	tpri: 321.000 us
3	PASS	pulses per burst: 18	tpw: 9.000 us	tpri: 292.000 us
4	PASS	pulses per burst: 18	tpw: 8.200 us	tpri: 375.000 us
5	PASS	pulses per burst: 16	tpw: 7.400 us	tpri: 210.000 us
6	PASS	pulses per burst: 16	tpw: 8.500 us	tpri: 409.000 us
7	PASS	pulses per burst: 17	tpw: 8.900 us	tpri: 275.000 us
8	PASS	pulses per burst: 18	tpw: 8.200 us	tpri: 422.000 us
9	PASS	pulses per burst: 18	tpw: 7.100 us	tpri: 390.000 us
10	PASS	pulses per burst: 18	tpw: 6.000 us	tpri: 420.000 us
11	PASS	pulses per burst: 16	tpw: 7.200 us	tpri: 397.000 us
12	PASS	pulses per burst: 18	tpw: 7.300 us	tpri: 499.000 us
13	PASS	pulses per burst: 16	tpw: 7.300 us	tpri: 355.000 us
14	PASS	pulses per burst: 16	tpw: 6.600 us	tpri: 374.000 us
15	PASS	pulses per burst: 18	tpw: 8.100 us	tpri: 486.000 us
16	PASS	pulses per burst: 16	tpw: 8.800 us	tpri: 224.000 us
17	PASS	pulses per burst: 16	tpw: 6.500 us	tpri: 315.000 us
18	PASS	pulses per burst: 17	tpw: 9.400 us	tpri: 253.000 us
19	PASS	pulses per burst: 17	tpw: 7.100 us	tpri: 421.000 us
20	PASS	pulses per burst: 16	tpw: 7.000 us	tpri: 211.000 us
21	PASS	pulses per burst: 17	tpw: 6.300 us	tpri: 461.000 us
22	PASS	pulses per burst: 17	tpw: 9.900 us	tpri: 500.000 us
23	PASS	pulses per burst: 17	tpw: 8.500 us	tpri: 355.000 us
24	PASS	pulses per burst: 18	tpw: 7.800 us	tpri: 239.000 us
25	PASS	pulses per burst: 18	tpw: 9.600 us	tpri: 271.000 us
26	PASS	pulses per burst: 17	tpw: 8.800 us	tpri: 344.000 us
27	PASS	pulses per burst: 16	tpw: 9.200 us	tpri: 430.000 us
28	PASS	pulses per burst: 17	tpw: 9.200 us	tpri: 344.000 us
29	PASS	pulses per burst: 17	tpw: 7.700 us	tpri: 259.000 us
30	PASS	pulses per burst: 18	tpw: 9.200 us	tpri: 433.000 us

MIMIO Ports 2 and 4, 802.11ac 5.3 GHz , 80 MHz Channel Bandwidth, Ch.58, 5290 MHz, Radar Type 4						
				Value	Limit	Result
				100.0%	60.0%	Pass

Trial #	Detected	No. of Pulses Per Burst	Pulse Width (us)	PRI (us)
1	PASS	pulses per burst: 14	tpw: 18.300 us	tpri: 391.000 us
2	PASS	pulses per burst: 12	tpw: 16.100 us	tpri: 433.000 us
3	PASS	pulses per burst: 14	tpw: 14.900 us	tpri: 278.000 us
4	PASS	pulses per burst: 14	tpw: 12.800 us	tpri: 484.000 us
5	PASS	pulses per burst: 14	tpw: 11.500 us	tpri: 274.000 us
6	PASS	pulses per burst: 14	tpw: 12.100 us	tpri: 419.000 us
7	PASS	pulses per burst: 15	tpw: 18.700 us	tpri: 329.000 us
8	PASS	pulses per burst: 13	tpw: 14.300 us	tpri: 307.000 us
9	PASS	pulses per burst: 15	tpw: 15.100 us	tpri: 469.000 us
10	PASS	pulses per burst: 14	tpw: 15.500 us	tpri: 378.000 us
11	PASS	pulses per burst: 15	tpw: 11.100 us	tpri: 434.000 us
12	PASS	pulses per burst: 15	tpw: 19.700 us	tpri: 265.000 us
13	PASS	pulses per burst: 15	tpw: 14.100 us	tpri: 208.000 us
14	PASS	pulses per burst: 14	tpw: 18.700 us	tpri: 324.000 us
15	PASS	pulses per burst: 14	tpw: 16.800 us	tpri: 376.000 us
16	PASS	pulses per burst: 12	tpw: 17.500 us	tpri: 241.000 us
17	PASS	pulses per burst: 12	tpw: 15.900 us	tpri: 257.000 us
18	PASS	pulses per burst: 15	tpw: 16.200 us	tpri: 206.000 us
19	PASS	pulses per burst: 12	tpw: 19.700 us	tpri: 477.000 us
20	PASS	pulses per burst: 14	tpw: 16.500 us	tpri: 255.000 us
21	PASS	pulses per burst: 14	tpw: 17.400 us	tpri: 301.000 us
22	PASS	pulses per burst: 16	tpw: 17.800 us	tpri: 344.000 us
23	PASS	pulses per burst: 14	tpw: 15.200 us	tpri: 407.000 us
24	PASS	pulses per burst: 13	tpw: 17.200 us	tpri: 344.000 us
25	PASS	pulses per burst: 12	tpw: 11.700 us	tpri: 401.000 us
26	PASS	pulses per burst: 12	tpw: 12.500 us	tpri: 314.000 us
27	PASS	pulses per burst: 14	tpw: 19.100 us	tpri: 229.000 us
28	PASS	pulses per burst: 13	tpw: 16.500 us	tpri: 386.000 us
29	PASS	pulses per burst: 14	tpw: 18.800 us	tpri: 337.000 us
30	PASS	pulses per burst: 14	tpw: 16.900 us	tpri: 336.000 us

# STATISTICAL PERFORMANCE CHECK



XMI 2020.03.25.0

MIMIO Ports 2 and 4, 802.11ac 5.3 GHz , 80 MHz Channel Bandwidth, Ch.58, 5290 MHz, Radar Type 1-4 Summary						
				Value	Limit	Result
				95.0%	80.0%	Pass

MIMIO Ports 2 and 4, 802.11ac 5.3 GHz , 80 MHz Channel Bandwidth, Ch.58, 5290 MHz, Radar Type 5						
				Value	Limit	Result
				100.0%	80.0%	Pass

Trial #	Detected
1	PASS
2	PASS
3	PASS
4	PASS
5	PASS
6	PASS
7	PASS
8	PASS
9	PASS
10	PASS
11	PASS
12	PASS
13	PASS
14	PASS
15	PASS
16	PASS
17	PASS
18	PASS
19	PASS
20	PASS
21	PASS
22	PASS
23	PASS
24	PASS
25	PASS
26	PASS
27	PASS
28	PASS
29	PASS
30	PASS

# STATISTICAL PERFORMANCE CHECK



XMI 2020.03.25.0

MIMIO Ports 2 and 4, 802.11ac 5.3 GHz , 80 MHz Channel Bandwidth, Ch.58, 5290 MHz, Radar Type 6

	Value	Limit	Result
	100.0%	70.0%	Pass

Trial #	Detected
1	PASS
2	PASS
3	PASS
4	PASS
5	PASS
6	PASS
7	PASS
8	PASS
9	PASS
10	PASS
11	PASS
12	PASS
13	PASS
14	PASS
15	PASS
16	PASS
17	PASS
18	PASS
19	PASS
20	PASS
21	PASS
22	PASS
23	PASS
24	PASS
25	PASS
26	PASS
27	PASS
28	PASS
29	PASS
30	PASS

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# STATISTICAL PERFORMANCE CHECK



Trial #1  
PASS  
Time: 28/07/2020 14:07:00  
Channel Frequency: 5300  
Channel BW: 20  
Occupied BW (MHz): 20  
Extern SG Frequency: 5300  
--- Bin5RandParmGen Output ---

Random DFS waveform parameters (NewBin5) 7/28/2020 2:07:00 PM

Bin #                      Pulse Width( Pri(us))              Pulses/Burst  
Waveform Num = 1  
Num of Bursts = 11  
Burst Interval (us) = 1090909

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse1 Pri(us)	Pulse2 Pri(us)	Pulse3 Pri(us)	Start Loc (us)	Start Burst Ir	End Burst	Interval(us)
1	210744	2	6	80	1866	1966	0	210744	0		1090908
2	1912198	2	6	65	1229	1987	0	2126774	1090909		2181817
3	367872	2	6	55	1604	1902	0	2497862	2181818		3272726
4	1337694	3	6	100	1383	1964	1088	3839062	3272727		4363635

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# STATISTICAL PERFORMANCE CHECK



Trial #4  
PASS  
Time: 28/07/2020 14:08:29  
Channel Frequency: 5300  
Channel BW: 20  
Occupied BW (MHz): 20  
Extern SG Frequency: 5300  
Waveform Num = 4  
Num of Bursts = 11  
Burst Interval (us) = 1090909

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse1 Pri(us)	Pulse2 Pri(us)	Pulse3 Pri(us)	Start Loc (us)	Start Burst Ir	End Burst Interval(us)
1	21877	3	19	50	1232	1836	1726	21877	0	1090908
2	1485385	3	19	55	1724	1660	1949	1512056	1090909	2181817
3	1261414	1	19	70	1421	0	0	2778803	2181818	3272726
4	889447	3	19	65	1912	1726	1069	3669671	3272727	4363635
5	1206781	1	19	70	1044	0	0	4881159	4363636	5454544
6	651668	2	19	90	1836	1229	0	5533871	5454545	6545453
7	1273091	2	19	90	1422	1272	0	6810027	6545454	7636362
8	1609263	1	19	55	1656	0	0	8421984	7636363	8727271

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# STATISTICAL PERFORMANCE CHECK



Trial #7  
PASS  
Time: 28/07/2020 14:09:31  
Channel Frequency: 5300  
Channel BW: 20  
Occupied BW (MHz): 20  
Extern SG Frequency: 5300  
Waveform Num = 7  
Num of Bursts = 20  
Burst Interval (us) = 600000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse1 Pri(us)	Pulse2 Pri(us)	Pulse3 Pri(us)	Start Loc (us)	Start Burst Ir	End Burst Interval(us)
1	455881	1	14	90	1158	0	0	455881	0	599999
2	593273	1	14	55	1710	0	0	1050312	600000	1199999
3	356143	1	14	95	1388	0	0	1408165	1200000	1799999
4	522087	2	14	80	1180	1586	0	1931640	1800000	2399999
5	673963	1	14	75	1704	0	0	2608369	2400000	2999999
6	869648	2	14	85	1639	1304	0	3479721	3000000	3599999
7	462846	3	14	100	1290	1492	1059	3945510	3600000	4199999

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# STATISTICAL PERFORMANCE CHECK



Trial #10  
 PASS  
 Time: 28/07/2020 14:10:23  
 Channel Frequency: 5300  
 Channel BW: 20  
 Occupied BW (MHz): 20  
 Extern SG Frequency: 5300  
 Waveform Num = 10  
 Num of Bursts = 20  
 Burst Interval (us) = 600000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse1 Pri(us)	Pulse2 Pri(us)	Pulse3 Pri(us)	Start Loc (us)	Start Burst Ir	End Burst Interval(us)
1	97501	1	6	60	1897	0	0	97501	0	599999
2	518360	3	6	100	1197	1483	1598	617758	600000	1199999
3	874711	3	6	55	1754	1064	1604	1496747	1200000	1799999
4	315087	1	6	95	1039	0	0	1816256	1800000	2399999
5	813470	1	6	60	1090	0	0	2630765	2400000	2999999
6	435811	3	6	90	1623	1166	1530	3067666	3000000	3599999
7	868765	3	6	80	1210	1098	1672	3940750	3600000	4199999
8	554216	2	6	80	1189	1093	0	4498946	4200000	4799999
9	698444	1	6	75	1861	0	0	5199672	4800000	5399999
10	488993	2	6	85	1489	1306	0	5690526	5400000	5999999
11	817274	2	6	70	1855	1978	0	6510595	6000000	6599999
12	401248	3	6	55	1430	1324	1693	6915676	6600000	7199999

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# STATISTICAL PERFORMANCE CHECK



Trial #13

PASS

Time: 28/07/2020 14:11:07

Channel Frequency: 5300

Channel BW: 20

Occupied BW (MHz): 20

Extern SG Frequency: 5294.0

Waveform Num = 13

Num of Bursts = 9

Burst Interval (us) = 1333333

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse1 Pri(us)	Pulse2 Pri(us)	Pulse3 Pri(us)	Start Loc (us)	End Burst	Interval(us)
1	263267	3	11	95	1531	1106	1413	263267	0	1333332
2	1317160	1	11	100	1348	0	0	1584477	1333333	2666665
3	1264809	2	11	70	1528	1991	0	2850634	2666666	3999998
4	1191718	2	11	85	1158	1036	0	4045871	3999999	5333331
5	2365060	2	11	70	1831	1199	0	6413125	5333332	6666664
6	1325110	1	11	55	1969	0	0	7741265	6666665	7999997
7	1127995	2	11	90	1697	1455	0	8871229	7999998	9333330
8	1286027	2	11	70	1664	1618	0	10160408	9333331	10666663
9	1459876	3	11	60	1685	1634	1328	11623566	10666664	11999996

Total number of pulses in waveform = 18

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# STATISTICAL PERFORMANCE CHECK



Trial #16

PASS

Time: 28/07/2020 14:12:05

Channel Frequency: 5300

Channel BW: 20

Occupied BW (MHz): 20

Extern SG Frequency: 5293.2

Waveform Num = 16

Num of Bursts = 8

Burst Interval (us) = 1500000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse1 Pri(us)	Pulse2 Pri(us)	Pulse3 Pri(us)	Start Loc (us)	Start Burst Ir	End Burst	Interval(us)
1	1491454	1	12	70	1332	0	0	1491454	0	1499999	1499999
2	806154	1	12	50	1103	0	0	2298940	1500000	2999999	2999999
3	1514803	1	12	60	1022	0	0	3814846	3000000	4499999	4499999
4	1357568	1	12	55	1140	0	0	5173436	4500000	5999999	5999999
5	1633044	1	12	95	1924	0	0	6807620	6000000	7499999	7499999
6	1641300	1	12	70	1314	0	0	8450844	7500000	8999999	8999999

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# STATISTICAL PERFORMANCE CHECK



Trial #19

PASS

Time: 28/07/2020 14:13:12

Channel Frequency: 5300

Channel BW: 20

Occupied BW (MHz): 20

Extern SG Frequency: 5294.4

Waveform Num = 19

Num of Bursts = 8

Burst Interval (us) = 1500000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse1 Pri(us)	Pulse2 Pri(us)	Pulse3 Pri(us)	Start Loc (us)	Start Burst	Ir	End Burst	Interval(us)
1	947608	1	12	55	1667	0	0	947608	0		1499999	
2	1535234	1	12	80	1794	0	0	2484509	1500000		2999999	
3	1446017	1	12	95	1609	0	0	3932320	3000000		4499999	
4	1916755	3	12	85	1506	1164	1155	5850684	4500000		5999999	
5	250074	1	12	85	1335	0	0	6104583	6000000		7499999	
6	1716465	2	12	65	1628	1164	0	7822383	7500000		8999999	
7	2638818	3	12	100	1592	1270	1541	10463993	9000000		10499999	
8	1079769	3	12	55	1611	1916	1730	11548165	10500000		11999999	

Total number of pulses in waveform = 15

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# STATISTICAL PERFORMANCE CHECK



Trial #22  
 PASS  
 Time: 28/07/2020 14:14:09  
 Channel Frequency: 5300  
 Channel BW: 20  
 Occupied BW (MHz): 20  
 Extern SG Frequency: 5304.0  
 Waveform Num = 22  
 Num of Bursts = 11  
 Burst Interval (us) = 1090909

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse1 Pri(us)	Pulse2 Pri(us)	Pulse3 Pri(us)	Start Loc (us)	Start Burst Ir	End Burst Interval(us)
1	1062244	1	13	80	1735	0	0	1062244	0	1090908
2	105686	3	13	85	1788	1609	1923	1169665	1090909	2181817
3	1665759	3	13	70	1087	1220	1225	2840744	2181818	3272726
4	607845	3	13	60	1870	1778	1111	3452121	3272727	4363635
5	1886160	2	13	65	1585	1938	0	5343040	4363636	5454544
6	555340	1	13	85	1599	0	0	5901903	5454545	6545453
7	776600	1	13	75	1098	0	0	6680102	6545454	7636362
8	1920877	2	13	65	1067	1770	0	8602077	7636363	8727271
9	883164	3	13	55	1228	1919	1082	9488078	8727272	9818180
10	602483	3	13	80	1538	1669	1611	10094790	9818181	10909089
11	947910	2	13	60	1377	1262	0	11047518	10909090	11999998

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# STATISTICAL PERFORMANCE CHECK



Trial #25

PASS

Time: 28/07/2020 14:15:32

Channel Frequency: 5300

Channel BW: 20

Occupied BW (MHz): 20

Extern SG Frequency: 5306.0

Waveform Num = 25

Num of Bursts = 17

Burst Interval (us) = 705882

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse1 Pri(us)	Pulse2 Pri(us)	Pulse3 Pri(us)	Start Loc (us)	Start Burst Ir	End Burst Interval(us)
1	568102	2	14	90	1989	1558	0	568102	0	705881
2	178324	1	14	95	1631	0	0	749973	705882	1411763
3	737512	2	14	80	1871	1526	0	1489116	1411764	2117645
4	1054306	3	14	65	1665	1625	1481	2546819	2117646	2823527
5	656778	2	14	60	1147	1112	0	3208368	2823528	3529409
6	749931	2	14	65	1449	1407	0	3960558	3529410	4235291

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# STATISTICAL PERFORMANCE CHECK



Trial #28

PASS

Time: 28/07/2020 14:17:13

Channel Frequency: 5300

Channel BW: 20

Occupied BW (MHz): 20

Extern SG Frequency: 5306.8

Waveform Num = 28

Num of Bursts = 10

Burst Interval (us) = 1200000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse1 Pri(us)	Pulse2 Pri(us)	Pulse3 Pri(us)	Start Loc (us)	Start Burst Ir	End Burst	Interval(us)
1	60577	3	11	50	1262	1705	1746	60577	0		1199999
2	1787037	1	11	55	1072	0	0	1852327	1200000		2399999
3	1608506	2	11	85	1145	1822	0	3461905	2400000		3599999
4	749853	2	11	75	1900	1908	0	4214725	3600000		4799999
5	1618281	3	11	70	1719	1653	1827	5836814	4800000		5999999
6	794994	2	11	100	1117	1568	0	6637007	6000000		7199999

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# STATISTICAL PERFORMANCE CHECK



Trial #1  
PASS  
Time: 28/07/2020 13:26:17  
Channel Frequency: 5310  
Channel BW: 40  
Occupied BW (MHz): 40.00  
Extern SG Frequency: 5310  
--- Bin5RandParmGen Output ---

Random DFS waveform parameters (NewBin5) 7/28/2020 1:26:17 PM

Bin #                      Pulse Width( Pri(us))              Pulses/Burst  
Waveform Num = 1  
Num of Bursts = 8  
Burst Interval (us) = 1500000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse1 Pri(us)	Pulse2 Pri(us)	Pulse3 Pri(us)	Start Loc (us)	Start Burst Ir	End Burst	Interval(us)
1	1475464	1	11	55	1952	0	0	1475464	0		1499999
2	438438	3	11	75	1472	1758	1940	1915854	1500000		2999999
3	2382690	1	11	85	1096	0	0	4303714	3000000		4499999
4	361635	3	11	100	1416	1212	1699	4666445	4500000		5999999
5	1789794	1	11	85	1815	0	0	6460566	6000000		7499999
6	2189078	1	11	65	1799	0	0	8651459	7500000		8999999

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# STATISTICAL PERFORMANCE CHECK



Trial #4  
PASS  
Time: 28/07/2020 13:28:04  
Channel Frequency: 5310  
Channel BW: 40  
Occupied BW (MHz): 40.00  
Extern SG Frequency: 5310  
Waveform Num = 4  
Num of Bursts = 10  
Burst Interval (us) = 1200000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse1 Pri(us)	Pulse2 Pri(us)	Pulse3 Pri(us)	Start Loc (us)	Start Burst	Ir	End Burst	Interval(us)
1	326437	2	18	70	1454	1473	0	326437	0			1199999
2	1579749	3	18	80	1804	1299	1783	1909113	1200000			2399999
3	1160228	2	18	70	1786	1890	0	3074227	2400000			3599999
4	1041070	1	18	90	1771	0	0	4118973	3600000			4799999
5	1553293	1	18	50	1050	0	0	5674037	4800000			5999999
6	1388536	2	18	100	1125	1344	0	7063623	6000000			7199999
7	223409	2	18	60	1183	1766	0	7289501	7200000			8399999
8	1904677	1	18	50	1420	0	0	9197127	8400000			9599999

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# STATISTICAL PERFORMANCE CHECK



Trial #7  
PASS  
Time: 28/07/2020 13:29:13  
Channel Frequency: 5310  
Channel BW: 40  
Occupied BW (MHz): 40.00  
Extern SG Frequency: 5310  
Waveform Num = 7  
Num of Bursts = 19  
Burst Interval (us) = 631579

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse1 Pri(us)	Pulse2 Pri(us)	Pulse3 Pri(us)	Start Loc (us)	Start Burst Ir	End Burst Interval(us)
1	173049	3	6	55	1650	1586	1581	173049	0	631578
2	696323	3	6	50	1062	1022	1620	874189	631579	1263157
3	669212	2	6	75	1458	1261	0	1547105	1263158	1894736
4	478609	1	6	90	1772	0	0	2028433	1894737	2526315
5	774425	3	6	100	1130	1225	1638	2804630	2526316	3157894
6	476682	2	6	100	1250	1781	0	3285305	3157895	3789473
7	801151	1	6	75	1242	0	0	4089487	3789474	4421052
8	464167	3	6	90	1257	1883	1822	4554896	4421053	5052631

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# STATISTICAL PERFORMANCE CHECK



Trial #10

PASS

Time: 28/07/2020 13:31:00

Channel Frequency: 5310

Channel BW: 40

Occupied BW (MHz): 40.00

Extern SG Frequency: 5310

Waveform Num = 10

Num of Bursts = 8

Burst Interval (us) = 1500000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse1 Pri(us)	Pulse2 Pri(us)	Pulse3 Pri(us)	Start Loc (us)	Start Burst Ir	End Burst	Interval(us)
1	970830	3	5	85	1545	1549	1730	970830	0		1499999
2	605035	3	5	80	1483	1045	1772	1580689	1500000		2999999
3	2045796	3	5	85	1903	1422	1195	3630785	3000000		4499999
4	1331484	2	5	90	1644	1880	0	4966789	4500000		5999999
5	1938526	1	5	100	1890	0	0	6908839	6000000		7499999
6	1986762	2	5	100	1410	1062	0	8897491	7500000		8999999

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# STATISTICAL PERFORMANCE CHECK



Trial #13

PASS

Time: 28/07/2020 13:32:20

Channel Frequency: 5310

Channel BW: 40

Occupied BW (MHz): 40.00

Extern SG Frequency: 5292.0

Waveform Num = 13

Num of Bursts = 9

Burst Interval (us) = 1333333

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse1 Pri(us)	Pulse2 Pri(us)	Pulse3 Pri(us)	Start Loc (us)	End Burst Interval(us)
1	185540	3	8	95	1123	1004	1349	185540	1333332
2	1306012	3	8	100	1088	1500	1517	1495028	2666665
3	1247220	1	8	85	1608	0	0	2746353	3999998
4	1405372	1	8	75	1786	0	0	4153333	5333331
5	1288440	3	8	60	1380	1967	1044	5443559	6666664
6	2003252	3	8	85	1136	1648	1891	7451202	7999997
7	1154439	2	8	80	1986	1722	0	8610316	9333330
8	1594238	3	8	80	1280	1286	1258	10208262	10666663

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# STATISTICAL PERFORMANCE CHECK



Trial #16

PASS

Time: 28/07/2020 13:33:24

Channel Frequency: 5310

Channel BW: 40

Occupied BW (MHz): 40.00

Extern SG Frequency: 5294.0

Waveform Num = 16

Num of Bursts = 9

Burst Interval (us) = 1333333

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse1 Pri(us)	Pulse2 Pri(us)	Pulse3 Pri(us)	Start Loc (us)	End Burst Interval(us)
1	647158	3	13	85	1382	1592	1359	647158	1333332
2	1367502	2	13	95	1988	1491	0	2018993	2666665
3	836871	2	13	80	1233	1444	0	2859343	3999998
4	2283632	2	13	50	1954	1252	0	5145652	5333331

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# STATISTICAL PERFORMANCE CHECK



Trial #19

PASS

Time: 28/07/2020 13:34:27

Channel Frequency: 5310

Channel BW: 40

Occupied BW (MHz): 40.00

Extern SG Frequency: 5294.8

Waveform Num = 19

Num of Bursts = 16

Burst Interval (us) = 750000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse1 Pri(us)	Pulse2 Pri(us)	Pulse3 Pri(us)	Start Loc (us)	Start Burst Ir	End Burst Interval(us)
1	263744	2	15	55	1017	1395	0	263744	0	749999
2	697738	2	15	55	1798	1075	0	963894	750000	1499999
3	712416	1	15	75	1271	0	0	1679183	1500000	2249999
4	936009	3	15	75	1539	1576	1759	2616463	2250000	2999999
5	853018	2	15	85	1023	1783	0	3474355	3000000	3749999
6	798638	1	15	70	1155	0	0	4275799	3750000	4499999

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# STATISTICAL PERFORMANCE CHECK



Trial #22

PASS

Time: 28/07/2020 13:35:41

Channel Frequency: 5310

Channel BW: 40

Occupied BW (MHz): 40.00

Extern SG Frequency: 5327.6

Waveform Num = 22

Num of Bursts = 11

Burst Interval (us) = 1090909

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse1 Pri(us)	Pulse2 Pri(us)	Pulse3 Pri(us)	Start Loc (us)	Start Burst Ir	End Burst Interval(us)
1	920909	3	13	80	1525	1586	1527	920909	0	1090908
2	572038	3	13	90	1756	1962	1337	1497585	1090909	2181817
3	1154903	3	13	90	1008	1126	1985	2657543	2181818	3272726
4	1592735	1	13	90	1482	0	0	4254397	3272727	4363635
5	884666	3	13	95	1131	1590	1951	5140545	4363636	5454544
6	823361	3	13	65	1438	1831	1188	5968578	5454545	6545453
7	1331683	1	13	100	1476	0	0	7304718	6545454	7636362
8	1291588	2	13	75	1519	1106	0	8597782	7636363	8727271
9	507768	2	13	60	1052	1900	0	9108175	8727272	9818180
10	1461363	1	13	70	1047	0	0	10572490	9818181	10909089
11	1367049	3	13	95	1277	1928	1411	11940586	10909090	11999998

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# STATISTICAL PERFORMANCE CHECK



Trial #25

PASS

Time: 28/07/2020 13:38:26

Channel Frequency: 5310

Channel BW: 40

Occupied BW (MHz): 40.00

Extern SG Frequency: 5327.2

Waveform Num = 25

Num of Bursts = 18

Burst Interval (us) = 666667

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse1 Pri(us)	Pulse2 Pri(us)	Pulse3 Pri(us)	Start Loc (us)	Start Burst Ir	End Burst Interval(us)
1	88106	1	14	55	1328	0	0	88106	0	666666
2	769799	3	14	80	1197	1706	1759	859233	666667	1333333

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# STATISTICAL PERFORMANCE CHECK



Trial #28

PASS

Time: 28/07/2020 13:41:35

Channel Frequency: 5310

Channel BW: 40

Occupied BW (MHz): 40.00

Extern SG Frequency: 5325.2

Waveform Num = 18

Num of Bursts = 18

Burst Interval (us) = 666667

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse1 Pri(us)	Pulse2 Pri(us)	Pulse3 Pri(us)	Start Loc (us)	Start Burst Ir	End Burst Interval(us)
1	475733	2	19	70	1401	1279	0	475733	0	666666
2	340840	1	19	80	1778	0	0	819253	666667	1333333
3	1040824	3	19	80	1145	1503	1722	1861855	1333334	2000000
4	399656	1	19	95	1972	0	0	2265881	2000001	2666667

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# STATISTICAL PERFORMANCE CHECK



Trial #1  
PASS  
Time: 28/07/2020 13:49:20  
Channel Frequency: 5290  
Channel BW: 80  
Occupied BW (MHz): 80  
Extern SG Frequency: 5290  
--- Bin5RandParmGen Output ---

Random DFS waveform parameters (NewBin5) 7/28/2020 1:49:20 PM

Bin #	Pulse Width( Pri(us)	Pulses/Burst
Waveform Num = 1		

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# STATISTICAL PERFORMANCE CHECK



Trial #4  
 PASS  
 Time: 28/07/2020 13:50:15  
 Channel Frequency: 5290  
 Channel BW: 80  
 Occupied BW (MHz): 80  
 Extern SG Frequency: 5290  
 Waveform Num = 4  
 Num of Bursts = 18  
 Burst Interval (us) = 666667

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse1 Pri(us)	Pulse2 Pri(us)	Pulse3 Pri(us)	Start Loc (us)	Start Burst Ir	End Burst Interval(us)
1	493602	2	6	85	1674	1201	0	493602	0	666666
2	541713	3	6	85	1108	1378	1762	1038190	666667	1333333
3	631981	3	6	90	1354	1901	1437	1674419	1333334	2000000
4	336890	3	6	65	1205	1724	1573	2016001	2000001	2666667
5	832310	2	6	75	1019	1899	0	2852813	2666668	3333334
6	685081	1	6	80	1005	0	0	3540812	3333335	4000001
7	909184	2	6	60	1995	1663	0	4451001	4000002	4666668
8	788503	1	6	75	1831	0	0	5243162	4666669	5333335
9	110086	3	6	100	1222	1847	1374	5355079	5333336	6000002
10	1131697	2	6	90	1525	1780	0	6491219	6000003	6666669

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# STATISTICAL PERFORMANCE CHECK



Trial #7  
PASS  
Time: 28/07/2020 13:51:25  
Channel Frequency: 5290  
Channel BW: 80  
Occupied BW (MHz): 80  
Extern SG Frequency: 5290  
Waveform Num = 7  
Num of Bursts = 13  
Burst Interval (us) = 923077

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse1 Pri(us)	Pulse2 Pri(us)	Pulse3 Pri(us)	Start Loc (us)	Start Burst Ir	End Burst	Interval(us)
1	30384	1	7	60	1850	0	0	30384	0	923076	
2	1029926	2	7	65	1844	1558	0	1062160	923077	1846153	
3	944804	1	7	55	1283	0	0	2010366	1846154	2769230	
4	1542498	2	7	95	1547	1210	0	3554147	2769231	3692307	
5	488595	3	7	100	1373	1202	1640	4045499	3692308	4615384	

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# STATISTICAL PERFORMANCE CHECK



Trial #10

PASS

Time: 28/07/2020 13:52:59

Channel Frequency: 5290

Channel BW: 80

Occupied BW (MHz): 80

Extern SG Frequency: 5290

Waveform Num = 10

Num of Bursts = 19

Burst Interval (us) = 631579

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse1 Pri(us)	Pulse2 Pri(us)	Pulse3 Pri(us)	Start Loc (us)	Start Burst Ir	End Burst	Interval(us)
1	110544	2	8	80	1245	1165	0	110544	0	631578	631578
2	1141897	3	8	55	1509	1872	1085	1254851	631579	1263157	1263157
3	577566	2	8	50	1806	1027	0	1836883	1263158	1894736	1894736
4	631986	2	8	65	1843	1494	0	2471702	1894737	2526315	2526315
5	463270	3	8	55	1872	1601	1177	2938309	2526316	3157894	3157894
6	503723	3	8	70	1940	1164	1825	3446682	3157895	3789473	3789473
7	640242	1	8	70	1822	0	0	4091853	3789474	4421052	4421052
8	829221	2	8	95	1471	1864	0	4922896	4421053	5052631	5052631
9	243193	2	8	100	1475	1690	0	5169424	5052632	5684210	5684210
10	1047956	3	8	55	1810	1937	1343	6220545	5684211	6315789	6315789
11	191089	3	8	65	1364	1674	1755	6416724	6315790	6947368	6947368
12	708246	1	8	90	1852	0	0	7129763	6947369	7578947	7578947

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# STATISTICAL PERFORMANCE CHECK



Trial #13

PASS

Time: 28/07/2020 13:54:29

Channel Frequency: 5290

Channel BW: 80

Occupied BW (MHz): 80

Extern SG Frequency: 5256.4

Waveform Num = 13

Num of Bursts = 13

Burst Interval (us) = 923077

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse1 Pri(us)	Pulse2 Pri(us)	Pulse3 Pri(us)	Start Loc (us)	End Burst Interval(us)
1	693885	1	19	65	1271	0	0	693885	923076
2	535857	1	19	95	1665	0	0	1231013	1846153
3	673630	1	19	80	1529	0	0	1906308	2769230
4	992333	1	19	65	1311	0	0	2900170	3692307
5	1654652	1	19	60	1957	0	0	4556133	4615384
6	954156	1	19	90	1512	0	0	5512246	5538461
7	117697	3	19	60	1348	1209	1421	5631455	6461538
8	1504519	1	19	50	1506	0	0	7139952	7384615

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# STATISTICAL PERFORMANCE CHECK



Trial #16

PASS

Time: 28/07/2020 13:56:49

Channel Frequency: 5290

Channel BW: 80

Occupied BW (MHz): 80

Extern SG Frequency: 5252.4

Waveform Num = 16

Num of Bursts = 14

Burst Interval (us) = 857143

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse1 Pri(us)	Pulse2 Pri(us)	Pulse3 Pri(us)	Start Loc (us)	Start Burst Ir	End Burst	Interval(us)
1	525805	1	5	95	1411	0	0	525805	0	857142	
2	744092	1	5	60	1448	0	0	1271308	857143	1714285	
3	844956	3	5	75	1836	1559	1738	2117712	1714286	2571428	
4	1090603	2	5	85	1537	1294	0	3213448	2571429	3428571	
5	499226	1	5	85	1533	0	0	3715505	3428572	4285714	
6	1286643	3	5	90	1561	1825	1633	5003681	4285715	5142857	
7	146949	3	5	55	1456	1107	1227	5155649	5142858	6000000	
8	1389105	2	5	65	1201	1627	0	6548544	6000001	6857143	
9	329191	2	5	70	1262	1830	0	6880563	6857144	7714286	

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# STATISTICAL PERFORMANCE CHECK



Trial #19  
 PASS  
 Time: 28/07/2020 13:57:49  
 Channel Frequency: 5290  
 Channel BW: 80  
 Occupied BW (MHz): 80  
 Extern SG Frequency: 5257.2  
 Waveform Num = 19  
 Num of Bursts = 17  
 Burst Interval (us) = 705882

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse1 Pri(us)	Pulse2 Pri(us)	Pulse3 Pri(us)	Start Loc (us)	Start Burst Ir	End Burst Interval(us)
1	133450	1	5	75	1960	0	0	133450	0	705881
2	1024611	2	5	65	1128	1029	0	1160021	705882	1411763
3	704180	1	5	95	1112	0	0	1866358	1411764	2117645
4	780881	1	5	50	1979	0	0	2648351	2117646	2823527
5	393285	3	5	80	1963	1239	1892	3043615	2823528	3529409
6	687545	3	5	100	1481	1064	1499	3736254	3529410	4235291
7	758108	3	5	75	1375	1756	1508	4498406	4235292	4941173
8	1089486	1	5	95	1796	0	0	5592531	4941174	5647055
9	264826	3	5	85	1389	1024	1989	5859153	5647056	6352937
10	894408	3	5	95	1066	1539	1757	6757963	6352938	7058819
11	516760	2	5	70	1183	1456	0	7279085	7058820	7764701
12	893483	1	5	65	1128	0	0	8175207	7764702	8470583
13	813020	2	5	60	1563	1275	0	8989355	8470584	9176465
14	566778	3	5	70	1895	1252	1273	9558971	9176466	9882347

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# STATISTICAL PERFORMANCE CHECK



Trial #22

PASS

Time: 28/07/2020 13:58:58

Channel Frequency: 5290

Channel BW: 80

Occupied BW (MHz): 80

Extern SG Frequency: 5327.6

Waveform Num = 22

Num of Bursts = 10

Burst Interval (us) = 1200000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse1 Pri(us)	Pulse2 Pri(us)	Pulse3 Pri(us)	Start Loc (us)	Start Burst Ir	End Burst	Interval(us)
1	1043362	3	5	95	1262	1834	1925	1043362	0		1199999
2	484435	1	5	85	1693	0	0	1532818	1200000		2399999
3	1033578	3	5	60	1773	1839	1703	2568089	2400000		3599999
4	1974386	2	5	55	1681	1300	0	4547790	3600000		4799999
5	372395	1	5	100	1357	0	0	4923166	4800000		5999999
6	1982907	2	5	100	1155	1214	0	6907430	6000000		7199999
7	1202739	3	5	60	1493	1471	1846	8112538	7200000		8399999
8	1396521	3	5	50	1776	1580	1788	9513869	8400000		9599999
9	182797	3	5	75	1214	1818	1069	9701810	9600000		10799999
10	1361333	2	5	75	1906	1935	0	11067244	10800000		11999999

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# STATISTICAL PERFORMANCE CHECK



Trial #25

PASS

Time: 28/07/2020 14:00:01

Channel Frequency: 5290

Channel BW: 80

Occupied BW (MHz): 80

Extern SG Frequency: 5326.4

Waveform Num = 25

Num of Bursts = 20

Burst Interval (us) = 600000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse1 Pri(us)	Pulse2 Pri(us)	Pulse3 Pri(us)	Start Loc (us)	Start Burst Ir	End Burst Interval(us)
1	107172	2	7	70	1762	1297	0	107172	0	599999
2	834598	3	7	70	1908	1416	1492	944829	600000	1199999
3	348353	2	7	75	1018	1240	0	1297998	1200000	1799999
4	515468	1	7	75	1239	0	0	1815724	1800000	2399999
5	736556	3	7	90	1069	1074	1748	2553519	2400000	2999999
6	567038	1	7	100	1179	0	0	3124448	3000000	3599999
7	589128	2	7	90	1739	1512	0	3714755	3600000	4199999

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# STATISTICAL PERFORMANCE CHECK



Trial #28  
 PASS  
 Time: 28/07/2020 14:00:55  
 Channel Frequency: 5290  
 Channel BW: 80  
 Occupied BW (MHz): 80  
 Extern SG Frequency: 5327.6  
 Waveform Num = 28  
 Num of Bursts = 13  
 Burst Interval (us) = 923077

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse1 Pri(us)	Pulse2 Pri(us)	Pulse3 Pri(us)	Start Loc (us)	Start Burst Ir	End Burst Interval(us)
1	273550	3	6	95	1127	1737	1243	273550	0	923076
2	1380429	1	6	90	1077	0	0	1658086	923077	1846153
3	956925	2	6	85	1308	1259	0	2616088	1846154	2769230
4	976058	2	6	100	1649	1825	0	3594713	2769231	3692307
5	389398	2	6	95	1178	1575	0	3987585	3692308	4615384
6	1149044	3	6	50	1566	1710	1632	5139382	4615385	5538461
7	1156763	1	6	60	1992	0	0	6301053	5538462	6461538
8	538479	2	6	95	1629	1387	0	6841524	6461539	7384615
9	929958	2	6	85	1609	1322	0	7774498	7384616	8307692
10	578778	3	6	100	1919	1150	1891	8356207	8307693	9230769
11	1781855	2	6	55	1355	1730	0	10143022	9230770	10153846
12	431762	2	6	75	1364	1102	0	10577869	10153847	11076923
13	1356939	2	6	90	1359	1854	0	11937274	11076924	12000000

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