

Testing Tomorrow's Technology

Application

For

Part 2, Subpart J, Paragraph 2.907 Equipment Authorization of Certification for an Intentional Radiator per Part 15 Subpart C, paragraphs 15.207, 15.209 and 15.249

And

IC Radio Standards Specification: RSS-210 Issue 9, Annex A 2.9

For the

**Scientific Games International
ASSY, PCB, ANALOG MODULE SRD
Model: PA25-0055**

**FCC ID: WRH-MOD01
IC: 2788A-MOD01**

**UST Project: 19-0050
Issue Date: May 30, 2019**

Total Pages in This Report: 30

**3505 Francis Circle Alpharetta, GA 30004
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Testing Tomorrow's Technology

I certify that I am authorized to sign for the Test Agency and that all of the statements in this report and in the Exhibits attached hereto are true and correct to the best of my knowledge and belief:

US TECH (Agent Responsible For Test):

By: George Yang

Name: 

Title: Laboratory Manager

Date: May 30, 2019



TESTING

NVLAP LAB CODE 200162-0

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MEASUREMENT TECHNICAL REPORT

COMPANY NAME: Scientific Games, International

MODEL: PA25-0055

FCC ID: WRH-MOD01

IC ID: 2788A-MOD01

DATE: May 30, 2019

This report concerns (check one): Original grant
Class II change

Equipment type: 902 – 928 MHz Transmitter Module

Deferred grant requested per 47 CFR 0.457(d)(1)(ii)? Yes _____ No X

If yes, defer until: N/A
date

agrees to notify the Commission by N/A
date

of the intended date of announcement of the product so that the grant can be issued on that date.

Report prepared by:

US Tech
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Alpharetta, GA 30004
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Theory of Operation
User's Manual

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1 General Information

1.1 Purpose of this Report

This report is prepared as a means of conveying test results and information concerning the suitability of this exact product for public distribution according to the FCC Rules and Regulations Part 15, Section 249 and IC Radio Standards Specification RSS-210 Issue, 9.

1.2 Characterization of Test Sample

The sample used for testing was received by US Tech on March 5, 2019 in good operating condition.

1.3 Product Description

The Equipment under Test (EUT) is the Scientific Games, International wireless radio module model ASSY,PCB,ANALOG MODULE SRD/PA25-0055. The EUT is an ISM band transceiver operating in the 902-928 MHz frequency band. The module is designed to be installed within a number of different host devices.

1.4 Configuration of Tested System

The Test Sample was tested per *ANSI C63.10.2013, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices* and *ANSI C63.4:2014, Methods of Measurement of Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz (2014)*.

A list of EUT and Peripherals is found in Table 1 below. A block diagram of the tested system is shown in Figure 1. Test configuration photographs are provided in separate Appendices

1.5 Test Facility

Testing was performed at US Tech's measurement facility at 3505 Francis Circle, Alpharetta, GA30004. This site has been fully described and registered with the FCC under designation number US5301. Additionally this site has also been fully described and submitted to Industry Canada (IC), and has been approved under file number 9900A-1.

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1.6 Related Submittals

The EUT is subject to the following FCC authorizations:

- a) Certification under section 15.249 as a transmitter.
- b) Verification under 15.101 as a digital device and receiver.

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Table 1. EUT and Peripherals

EUT	MODEL NUMBER	SERIAL NUMBER	FCC/IC ID	CABLES P/D
Radio module (EUT) Scientific Games, Intl	ASSY,PCB,AN ALOG MODULE SRD/PA25- 0055	CND	Pending FCC ID: WRH-MOD01 IC: 2788A-MOD01	None
PERIPHERAL MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	FCC/IC ID	CABLES P/D
BCR Board (Evaluation board)	PB20-0427_03	N/A	None	None

U= Unshielded S= Shielded P= Power D= Data

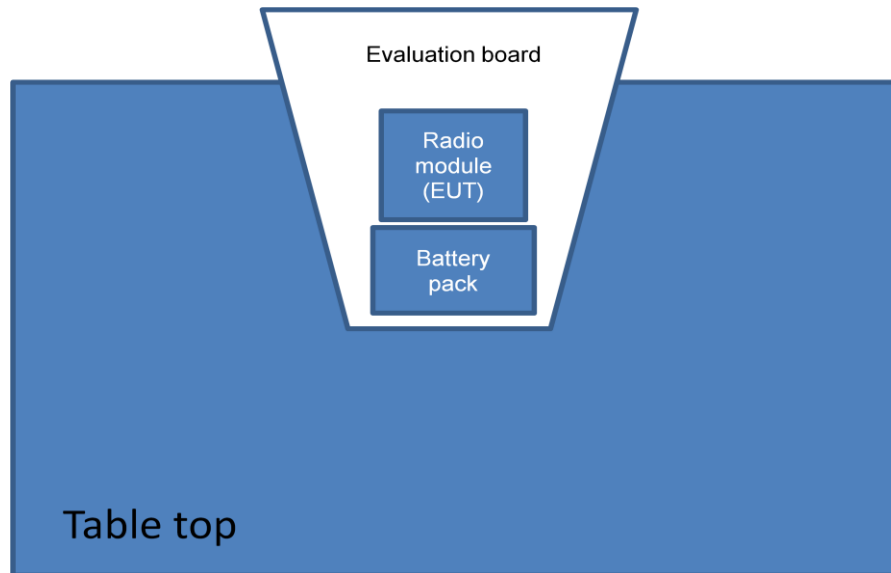


Figure 1. Block Diagram of Test Configuration

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2 Tests and Measurements

2.1 Test Equipment

The table below lists test equipment used to evaluate this product. Model numbers, serial numbers and their calibration status are indicated.

Table 2. Test Instruments

TEST INSTRUMENT	MODEL NUMBER	MANUFACTURER	SERIAL NUMBER	CALIBRATION DUE DATE
SPECTRUM ANALYZER	E4407B	AGILENT	US41442935	8/17/2020 2 yr.
BICONICAL ANTENNA	3110B	EMCO	9307-1431	10/23/2019 2 yr.
LOG PERIODIC ANTENNA	3146	EMCO	9305-3600	2/1/2021 2 yr.
HORN ANTENNA	3115	EMCO	9107-3723	11/28/2020 2 yr.
PRE-AMPLIFIER	8449B	HEWLETT-PACKARD	3008A00480	11/8/2019
PRE-AMPLIFIER	8477D	HEWLETT-PACKARD	1937A02980	05/07/2020
HIGH PASS FILTER	VHF-1320 15542	MICROWAVE CIRCUITS	30843	04/02/2020

Note: The calibration interval of the above test instruments are 12 months unless stated otherwise and all calibrations are traceable to NIST/USA.

2.2 Modifications to EUT Hardware

No physical modifications were made by US Tech in order to bring the EUT into compliance with FCC Part 15, Subpart C Intentional Radiator Limits for the transmitter portion of the EUT or the Subpart B Unintentional Radiator Limits (Receiver and Digital Device) Requirements.

2.3 Number of Measurements for Intentional Radiators (CFR 15.31(m), RSS-Gen 6.8)

Measurements of intentional radiators or receivers shall be performed and reported for each band in which the device can be operated with the device operating at the number of frequencies in each band specified in Table 3 below.

Table 3. Number of Test Frequencies for Intentional Radiators

Frequency Range over which the device operates	Number of Frequencies	Location in the Range of Operation
1 MHz or less	1	Middle
1 to 10 MHz	2	1 near the top 1 near the bottom
Greater than 10 MHz	3	1 near top 1 near middle 1 near bottom

Because the EUT operates at 902 MHz to 928 MHz, 3 test frequencies were used.

2.4 Frequency Range of Radiated Measurements (CFR 15.33, RSS-Gen 6.13)

2.4.1 Intentional Radiator

The spectrum was investigated for the intentional radiator from the lowest RF signal generated in the EUT, without going below 9 kHz to the 10th harmonic of the highest fundamental frequency generated or 40 GHz, whichever is the lowest.

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2.5 Measurement Detector Function and Bandwidth (CFR 15.35, RSS-Gen 6.9, 6.13)

The radiated and conducted emissions limits shown herein are based on the parameters listed below.

2.5.1 Detector Function and Associated Bandwidth

On frequencies below 1000 MHz, the limits herein are based upon measurement equipment employing a CISPR Quasi-peak detector function and related measurement bandwidths (i.e. 9 kHz from 150 kHz to 30 MHz and 120 kHz from 30 MHz to 1000 MHz). Alternatively, measurements may be made with equipment employing a peak detector function as long as the same bandwidths specified for the Quasi-peak device are used.

2.5.2 Corresponding Peak and Average Requirements

Above 1000 MHz, radiated limits are based on measuring instrumentation employing an average detector function. When average radiated emissions are specified there is also a corresponding Peak requirement, as measured using a peak detector, of 20 dB greater than the average limit. For all measurements above 1000 MHz the Resolution Bandwidth shall be at least 1 MHz.

2.5.3 Pulsed Transmitter Averaging

When the radiated emissions limit is expressed as an average value, and the transmitter is pulsed, the measured field strength shall be determined by applying a Duty Cycle Correction Factor based upon dividing the total ON time during the first 100 ms period by 100 ms (or by the period if less than 100 ms). The duty cycle may be expressed logarithmically in dB.

NOTE: If the transmitter was programmed to transmit at >98% duty cycle, then, wherever applicable (where the detection mode was AVG), the duty cycle factor calculated will be applied.

2.6 EUT Antenna Requirements (CFR 15.203, RSS-Gen 6.7)

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. Only the antenna(s) listed in Table 4 will be used with this device.

Table 4. Allowed Antenna(s)

REPORT REFERENCE	MANUFACTURER	TYPE OF ANTENNA	TECHNICAL SPEC	TYPE OF CONNECTOR
Antenna	Scientific Games International	wire antenna	8.3 cm 30 AWG	soldered

2.7 Restricted Bands of Operation (CFR 15.205, RSS-Gen 8.10)

Only spurious emissions can fall in the frequency bands of CFR 15.205. The field strength of these spurious emissions cannot exceed the limits of 15.209. Radiated harmonics and other spurious emissions are examined for this requirement see paragraph 2.1

2.8 Pulsed Operation, Average value(CFR 15.35(c), RSS-Gen 6.10)

The pulse train of the EUT did not exceed 0.1 seconds. Duty cycle plots are collected below to calculate the Duty Cycle factor to be employed in cases where the EUT was programmed to transmit at >98% Duty Cycle rate for testing purpose.

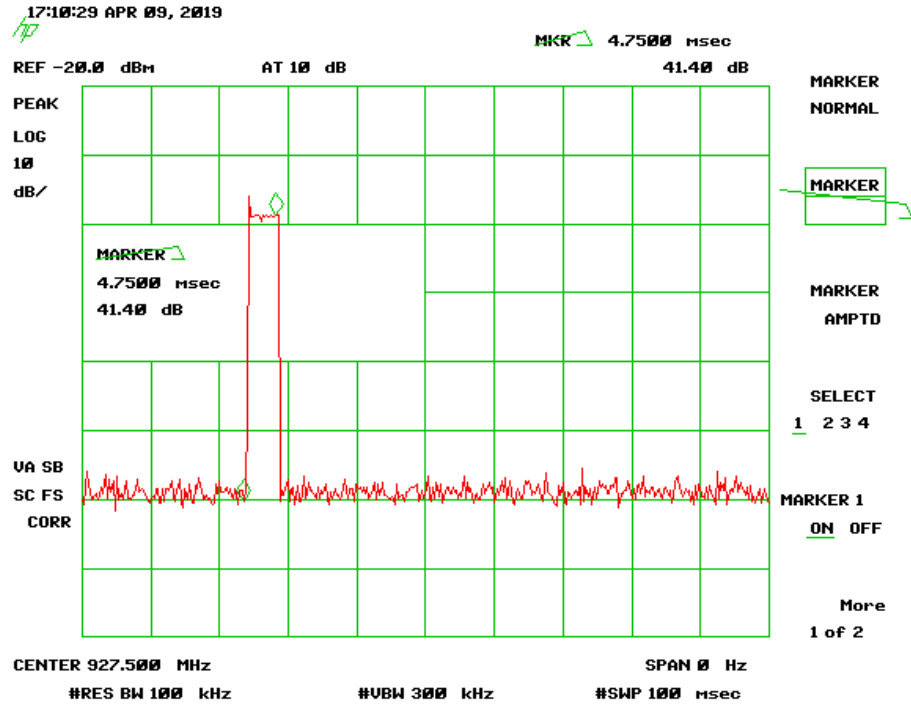


Figure 2. Pulse Width

Duty Cycle calculation:

TX On = 4.75 mSec

Observation time (T_{obs}) = 100 mSec

Duty Cycle (DC) factor = $20 \log (TX\ On / T_{obs}) = -26.47\ dB$ in this case -20 dB was used as the max DC factor applied.

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2.9 Intentional Radiator, Radiated Emissions (CFR 15.209, 15.249(a)(c), RSS 210, A2.9 (a))

Radiated Spurious measurements: the EUT was placed into a continuous transmit mode of operation transmitting at >98% duty cycle and tested per ANSI C63.10:2013. A preliminary scan was performed on the EUT to find signal frequencies that were caused by the transmitter part of the device. To obtain worst case results the EUT was tested in X, Y and Z axes or in the orientation of normal operation if the device is designed to operation in a fixed position.

Radiated measurements were then conducted between the frequency range of 9KHz (or lowest frequency used/generated by the device) up to the tenth harmonic of the device (no greater than 40 GHz). In the band below 30 MHz a resolution bandwidth (RBW) of 9 kHz was used; emissions below 1 GHz were tested with a RBW of 100/120 KHz and emissions above 1 GHz were tested with a RBW of 1 MHz. All video bandwidth settings were at least three times the RBW value.

The EUT was investigated to CFR 15.209, General requirements for unwanted spurious emissions as well as CFR 15.249 for operation in the 902-928 MHz band.

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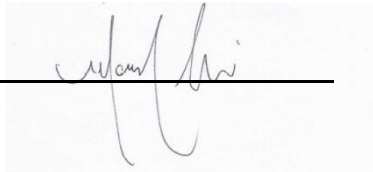
Table 5. Spurious Radiated Emissions Below 30 MHz

150 kHz to 30 MHz, 15.209 limits							
Test: Radiated Emissions							
Frequency (MHz)	Test Data (dBuv)	AF+CA-AMP (dB/m)	Results (dBuV/m)	QP Limits (dBuV/m)	Antenna Distance/ Polarization	Margin (dB)	Detector PK, or AVG
All emissions detected were more than 20 dB below the applicable limit.							

Sample Calculation at: N/A

Test Date: March 18-19, 2019 & April 5, 2019

Tested By
 Signature:



Name: Mark Afroozi

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Table 6. Spurious Radiated Emissions 30MHz to 25 GHz(other than Fundamental & Harmonics)

Test: Radiated Emissions								
Frequency (MHz)	Test Data (dBuV)	Factor (dB)	AF+CA -AMP (dB/m)	Results (dBuV/m)	Limits (dBuV/m)	Antenna Distance/ Polarization	Margin (dB)	Detector Mode
100.13	51.75	--	-16.46	35.29	43.5	3m./HORZ	8.2	QP
150.00	47.84	--	-13.63	34.21	43.5	3m./HORZ	9.3	PK
200.00	50.70	--	-10.54	40.16	43.5	3m./HORZ	3.3	QP
200.00	42.12	--	-10.54	31.58	43.5	3m./HORZ	11.9	PK
100.13	39.42	--	-15.46	23.96	43.5	3m./VERT	19.5	PK
150.00	39.87	--	-13.03	26.84	43.5	3m./VERT	16.7	PK
200.00	41.61	--	-9.94	31.67	43.5	3m./VERT	11.8	PK
325.00	53.58	--	-10.73	42.85	46.0	3m./HORZ	3.2	QP
366.00	52.77	--	-10.14	42.63	46.0	3m./HORZ	3.4	PK
438.00	46.44	--	-8.63	37.81	46.0	3m./HORZ	8.2	PK
596.00	45.79	--	-5.36	40.43	46.0	3m./HORZ	5.6	PK
325.00	49.91	--	-10.73	39.18	46.0	3m./VERT	6.8	PK
366.00	48.55	--	-10.14	38.41	46.0	3m./VERT	7.6	PK
438.00	45.25	--	-9.13	36.12	46.0	3m./VERT	9.9	PK
596.00	43.10	--	-5.56	37.54	46.0	3m./VERT	8.5	PK
All other emissions detected were more than 20 dB BELOW the applicable limit.								

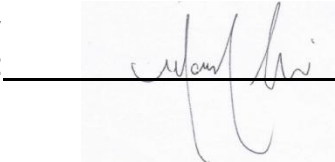
Notes:

1. The EUT was placed in three orthogonal positions and the transmitter was in constant broadcast mode, with the duty cycle programmed for >98% ON time in continuous transmit mode.
2. The emissions were measured with the receive antenna in vertical and horizontal polarizations. The data listed in the above table was worst case.

Sample Calculation at:100.13 MHz

Magnitude of Measured Frequency	51.75	dBuV
+Antenna Factor + Cable Loss+ Amplifier Gain	-16.46	dB/m
Duty Cycle Correction Factor	0.00	dB
Corrected Result	35.29	dBuV/m

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Tested By
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Table 7. Fundamental Emissions (Peak & AVG)

Test: FCC Part 15, Paragraph 15.209, 15.249(a)								
Frequency (MHz)	Test Data (dBuV)	Factor (dB)	AF+CA -AMP (dB/m)	Results (dBuV/m)	Limits (dBuV/m)	Antenna Distance/ Polarization	Margin (dB)	Detector Mode
Low - Channel								
902.50	105.30	-	-1.63	103.67	114.0	3.0m./VERT	10.3	PK
902.50	102.30	-20.00	-1.63	80.67	94.0	3.0m./VERT	13.3	AVG
Mid - Channel								
915.50	90.19	-	-1.03	89.16	114.0	3m./HORZ	24.8	PK
915.50	88.19	-20.00	-1.03	67.16	94.0	3m./HORZ	26.8	AVG
High - Channel								
927.50	106.80	-	-1.72	106.80	114.0	3m./VERT	7.2	PK
927.50	104.80	-20.00	-1.72	83.08	94.0	3m./VERT	10.9	AVG

Notes:

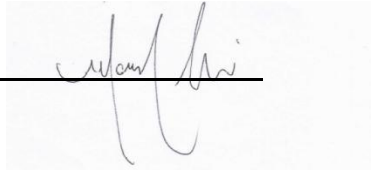
1. No other signals detected within 20 dB of specification limit. Harmonics investigated up to the 10th harmonic
2. The EUT was placed in three orthogonal positions and the transmitter was in constant broadcast mode, with the duty cycle programmed for >98% ON time in continuous transmit mode.
3. The emissions were measured with the receive antenna in vertical and horizontal polarizations. The data listed in the above table was worst case.

Sample Calculation at: 902.50:

Magnitude of Measured Frequency	105.30	dBuV
+Antenna Factor + Cable Loss - Amplifier Gain	-1.63	dB/m
Corrected Result	103.67	dBuV/m

Test Date: March 18-19, 2019 & April 5, 2019

Tested By
 Signature: _____



Name: Mark Afroozi

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Table 8. Harmonics Emissions (Peak & AVG)

Test: FCC Part 15, Paragraph 15.209, 15.249(a)								
Frequency (MHz)	Test Data (dBuV)	Factor (dB)	AF+CA -AMP (dB/m)	Results (dBuV/m)	Limits (dBuV/m)	Antenna Distance/ Polarization	Margin (dB)	Detector Mode
Low - Channel								
2707.50	63.99	-	-2.98	61.01	74.0	3.0m./HORZ	13.0	PK
2707.50	61.15	-20.00	-2.98	38.17	54.0	3.0m./HORZ	15.8	AVG
3610.00	58.63	-	2.17	60.80	74.0	3.0m./HORZ	13.2	PK
3610.00	54.14	-20.00	2.17	36.31	54.0	3.0m./HORZ	17.7	AVG
4512.50	64.14	-	4.49	68.63	74.0	3.0m./HORZ	5.4	PK
4512.50	61.95	-20.00	4.49	46.44	54.0	3.0m./HORZ	7.6	AVG
8122.50	53.19	-	13.03	66.22	74.0	3.0m./HORZ	7.8	PK
8122.50	40.73	-20.00	13.03	33.76	54.0	3.0m./HORZ	20.2	AVG
Mid - Channel								
2746.50	60.68	-	9.32	57.11	74.0	3.0m./VERT	16.9	PK
2746.50	58.06	-20.00	9.32	52.50	54.0	3.0m./VERT	1.5	AVG
3662.00	55.90	-	-3.16	57.52	74.0	3.0m./VERT	16.5	PK
3662.00	53.33	-20.00	-3.16	35.90	54.0	3.0m./VERT	18.1	AVG
4577.50	57.82	-	3.31	59.21	74.0	3.0m./VERT	14.8	PK
4577.50	55.70	-20.00	3.31	36.64	54.0	3.0m./VERT	17.4	AVG
7324.00	48.69	-	3.04	60.86	74.0	3.0m./VERT	13.1	PK
7324.00	43.10	-20.00	3.04	38.74	54.0	3.0m./VERT	15.3	AVG
8239.50	46.38	-	12.24	60.93	74.0	3.0m./VERT	13.1	PK
8239.50	39.61	-20.00	12.24	35.34	54.0	3.0m./VERT	18.7	AVG
9155.00	49.81	-	12.87	59.25	74.0	3.0m./VERT	14.8	PK
9155.00	44.45	-20.00	12.87	32.48	54.0	3.0m./VERT	21.5	AVG
High - Channel								
2782.50	62.61	-	-2.97	59.64	74.0	3.0m./HORZ	14.4	PK
2782.50	61.00	-20.00	-2.97	38.03	54.0	3.0m./HORZ	16.0	AVG
3710.00	51.92	-	4.08	56.00	74.0	3.0m./HORZ	18.0	PK
3710.00	47.65	-20.00	4.08	31.73	54.0	3.0m./HORZ	22.3	AVG
4637.50	59.51	-	2.33	61.84	74.0	3.0m./HORZ	12.2	PK
4637.50	57.84	-20.00	2.33	40.17	54.0	3.0m./HORZ	13.8	AVG
8347.50	47.62	-	13.46	61.08	74.0	1.0m./HORZ	12.9	PK
8347.50	41.05	-20.00	13.46	34.51	54.0	1.0m./HORZ	19.5	AVG
9275.00	44.39	-	14.32	58.71	74.0	1.0m./HORZ	15.3	PK
9275.00	35.66	-20.00	14.32	29.98	54.0	1.0m./HORZ	24.0	AVG

Notes:

1. No other signals detected within 20 dB of specification limit. Harmonics investigated up to the 10th harmonic
2. The EUT was placed in three orthogonal positions and the transmitter was in constant broadcast mode, with the duty cycle programmed for >98% ON time in continuous transmit mode.
3. The emissions were measured with the receive antenna in vertical and horizontal polarizations. The data listed in the above table was worst case.

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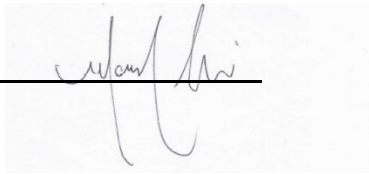
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Sample Calculation at: 2707.50 MHz

Magnitude of Measured Frequency	63.99	dBuV
+Antenna Factor + Cable Loss+ Amplifier Gain – Duty Cycle	-2.98	dB/m
<u>Duty Cycle Correction Factor</u>	<u>0.00</u>	<u>dB</u>
Corrected Result	61.01	dBuV/m

Test Date: March 22 – April 5, 2019

Tested By
Signature: _____



Name: Mark Afroozi

2.10 Band Edge Measurements – (CFR 15.249(d), RSS-Gen 8.10)

Band Edge measurements are made following the guidelines in FCC KDB Publication No. 558074 with the EUT initially operating on the Lowest Channel and then operating on the Highest Channel within its band of operation. Radiated measurements are performed to demonstrate compliance with the requirement of 15.249(d) that all emissions outside of the band edges be attenuated by at least 50 dB or 15.209 limits, when compared to its highest in-band value (contained in a 100 kHz band).

To capture the band edge, set the Spectrum Analyzer frequency span to 2 MHz to capture the peak level of the emission operating on the channel closest to the band edge as well as any modulation products falling outside of the authorized band of operation. See figure and calculations following for more detail.

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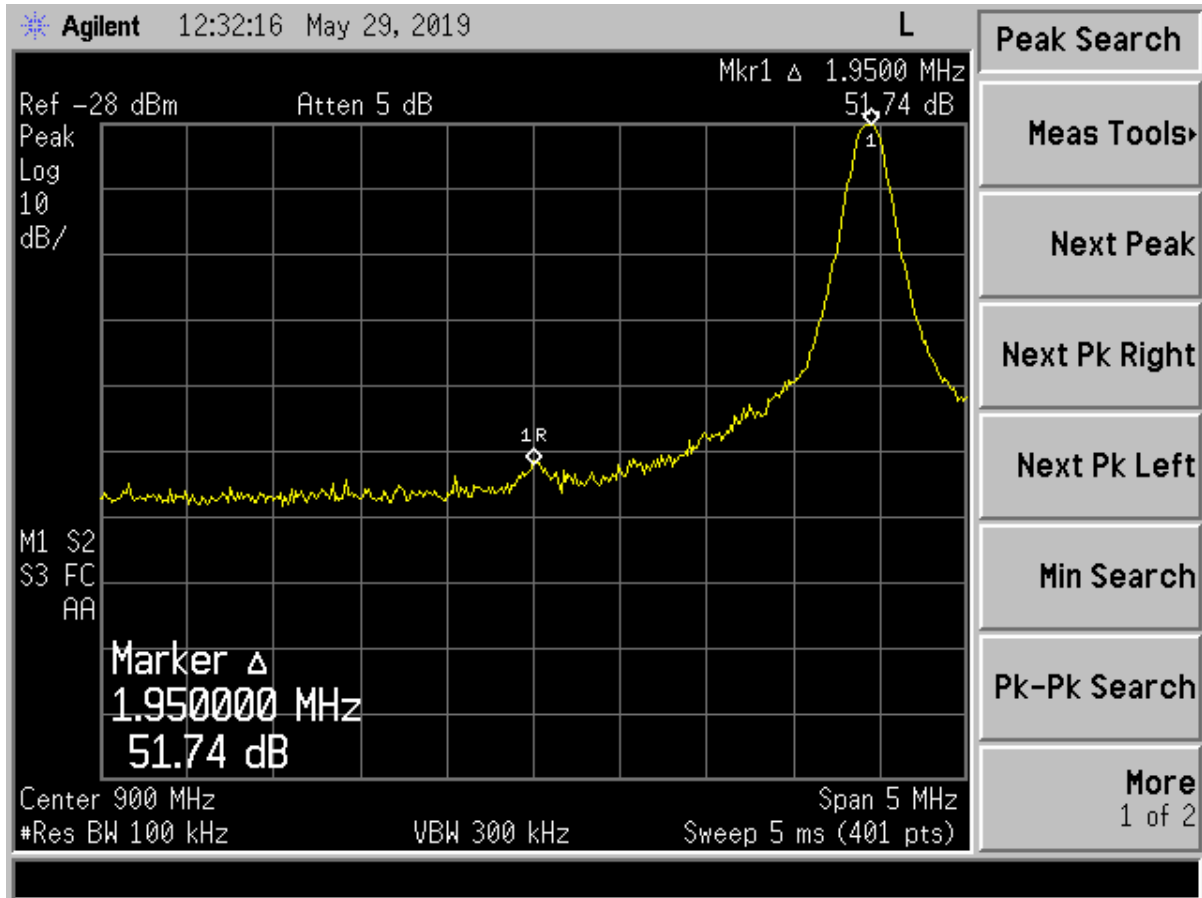
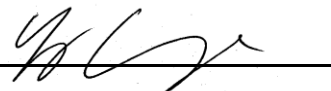


Figure 3. Band Edge Compliance, Low Channel Delta - Peak

Meets the limit of 50 dB less than the peak value of fundamental frequency.

Test Date: May 29, 2019

Tested By
Signature: 

Name: George Yang

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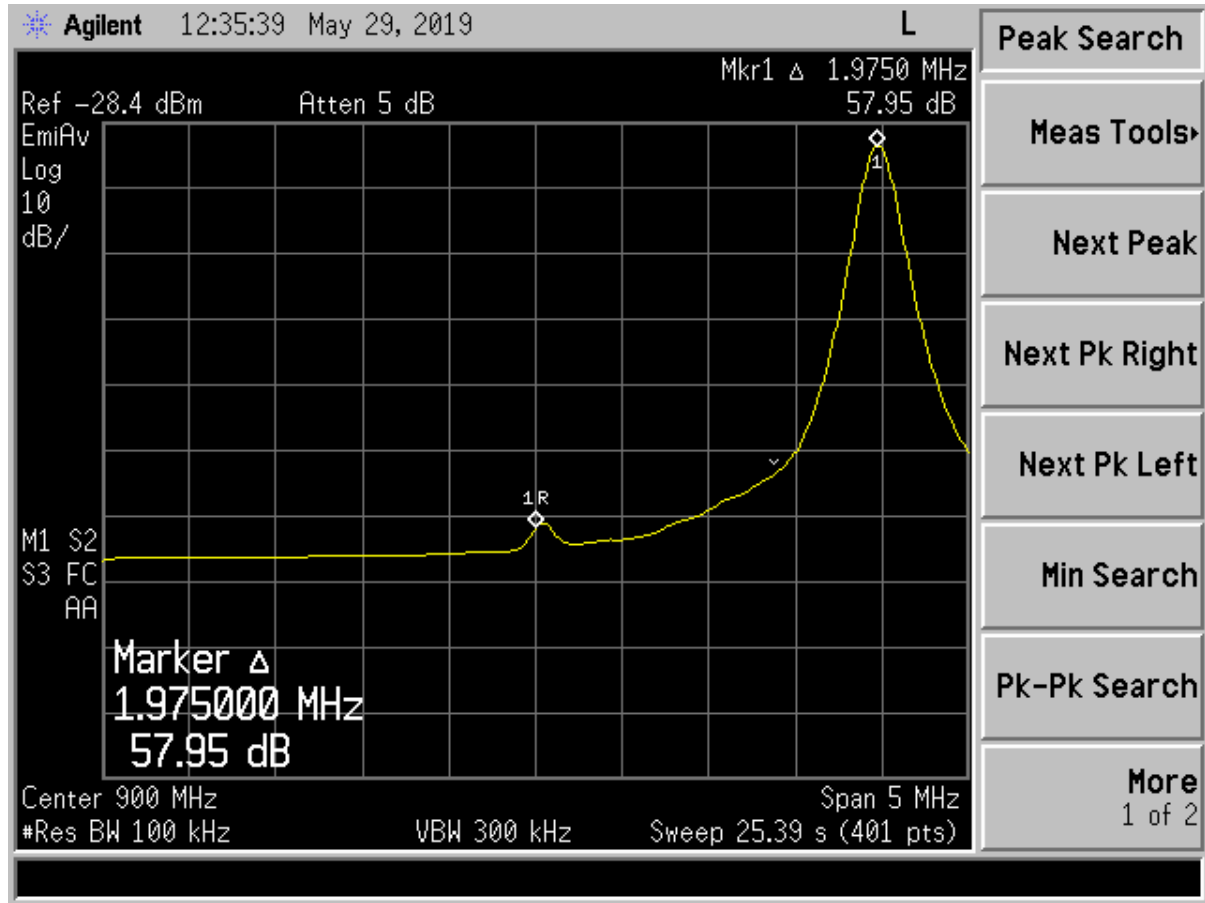
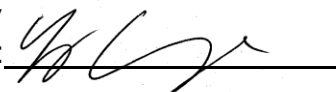


Figure 4. Band Edge Compliance, Low Channel Delta - Average

Meets the limit of 50 dB less than the AVG value of fundamental frequency.

Test Date: May 29, 2019

Tested By
Signature: 

Name: George Yang

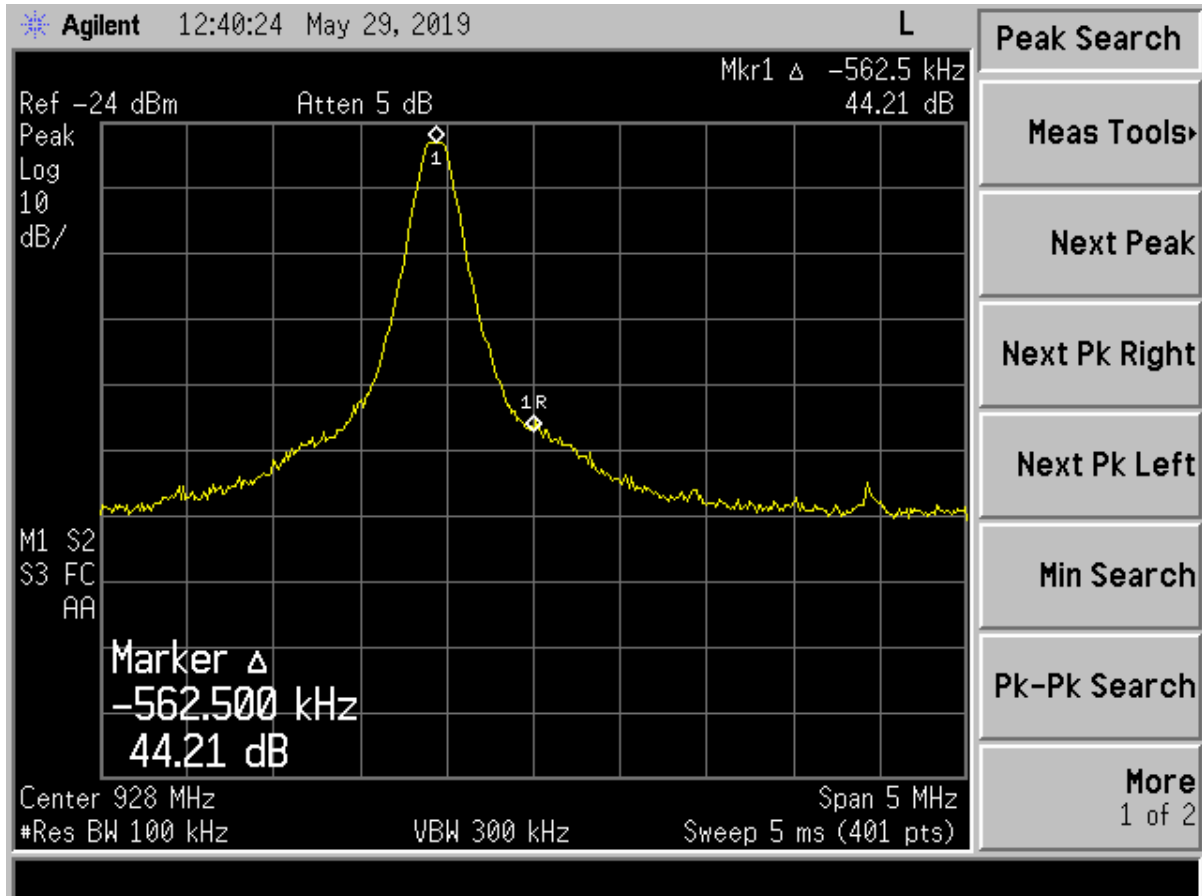
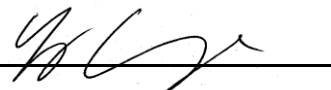


Figure 5. Band Edge Compliance, High Channel Delta – Peak

High Channel Corrected Measured Value from Table 8	106.80	dBuV
High Channel Band Edge Delta from Figure 6	-44.21	dB
Calculated Result	62.59	dBuV/m
Band Edge Limit	74.00	dBuV/m
Calculated Result	62.59	dBuV/m
Band Edge Margin	11.41	dBuV/m

Test Date: May 29, 2019

Tested By
 Signature: 

Name: George Yang

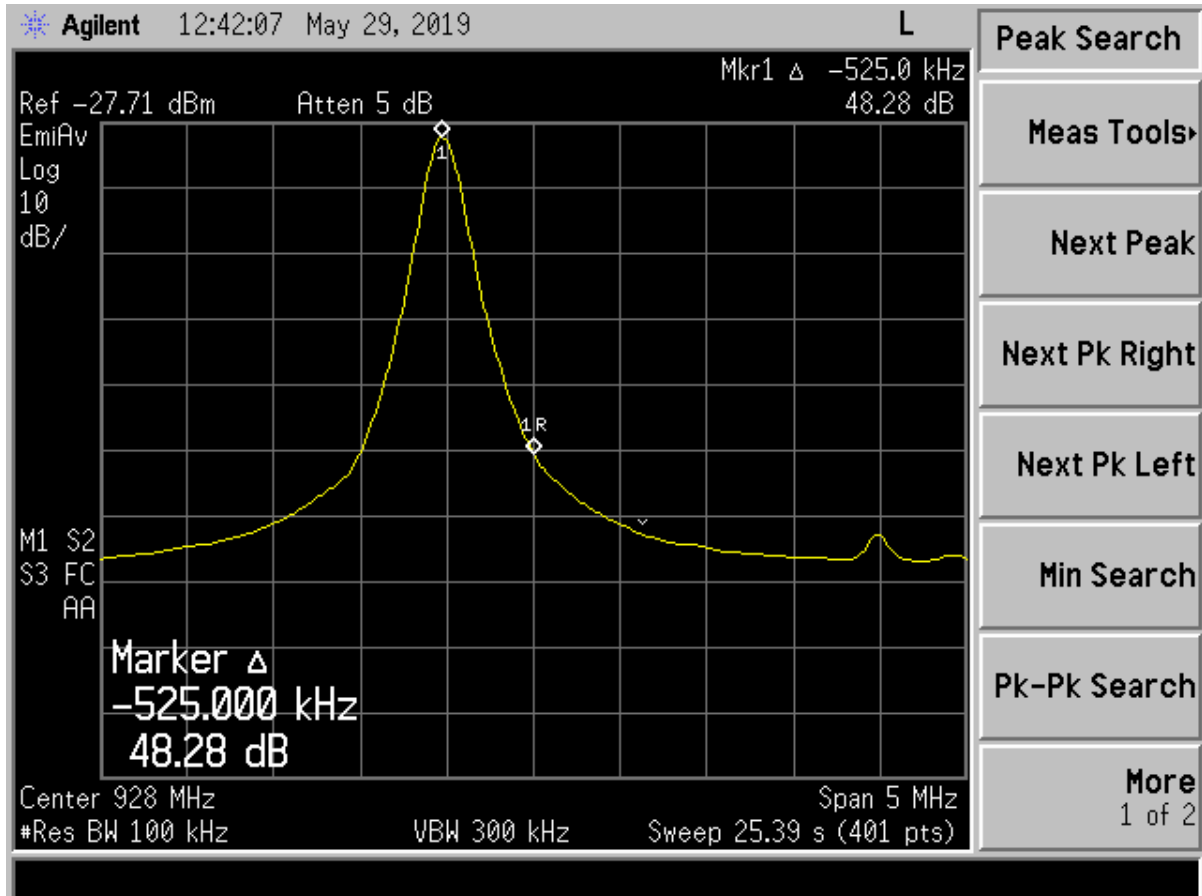


Figure 6. Band Edge Compliance, High Channel Delta –Average

Low Channel Corrected Measured Value	83.08	dBuV
Low Channel Band Edge Delta from Figure 4	-48.28	dB
Calculated Result	34.80	dBuV/m
Band Edge Limit	54.00	dBuV/m
Calculated Result	-34.80	dBuV/m
Band Edge Margin	19.20	dBuV/m

Test Date: May 29, 2019

Tested By
 Signature: 

Name: George Yang

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2.11 Occupied Bandwidth (CFR 2.1049, CFR 15.215(c), RSS-Gen 6.6)

These measurements were performed while the EUT was in a constant transmit mode. The 99% Occupied bandwidth measurement function of the spectrum analyzer/receiver was used to perform these measurements.

The 99% Occupied bandwidth and the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated. The results are presented below.

Table 9. 20 dB Bandwidth and 99% Occupied Bandwidth

Frequency (MHz)	20 dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
902.5	0.330	0.330
915.0	0.330	0.330
927.5	0.320	0.320

Note: 99% Occupied Bandwidth used to represent 20 dB Bandwidth respectively.

All emissions are

Test Date: April 9, 2019

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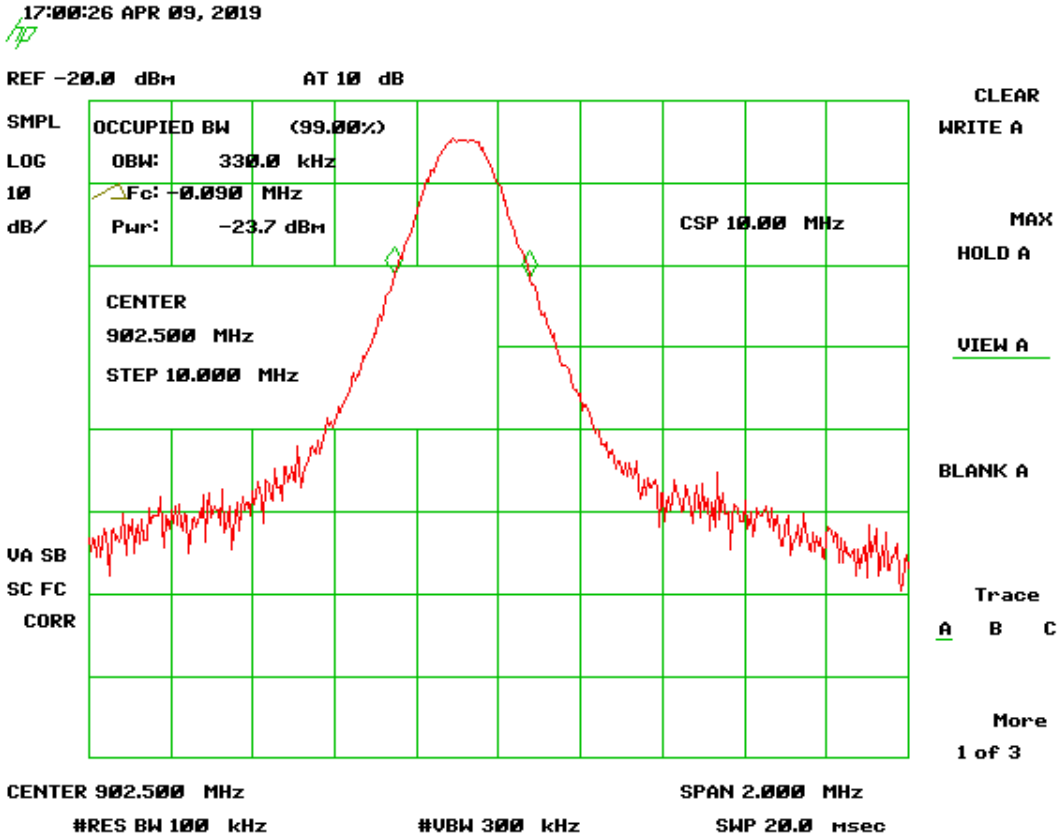


Figure 7. 99% Occupied Bandwidth – Low Channel

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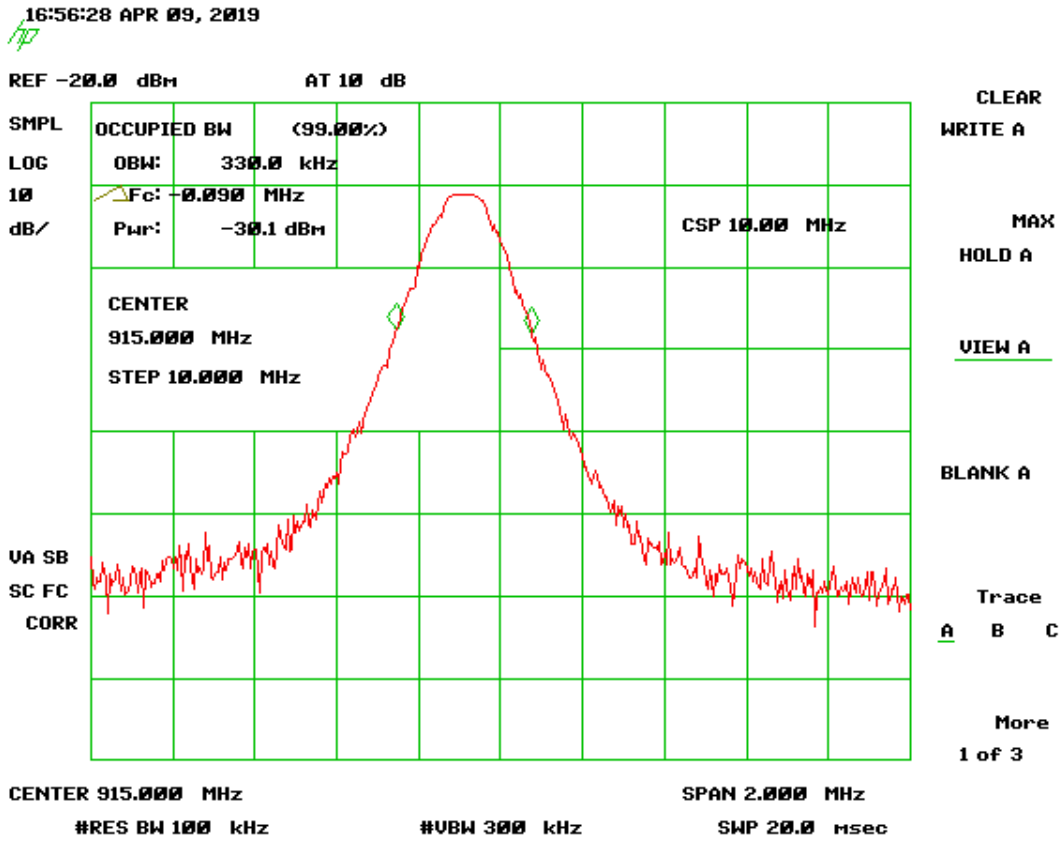


Figure 8. 99% Occupied Bandwidth—Mid Channel

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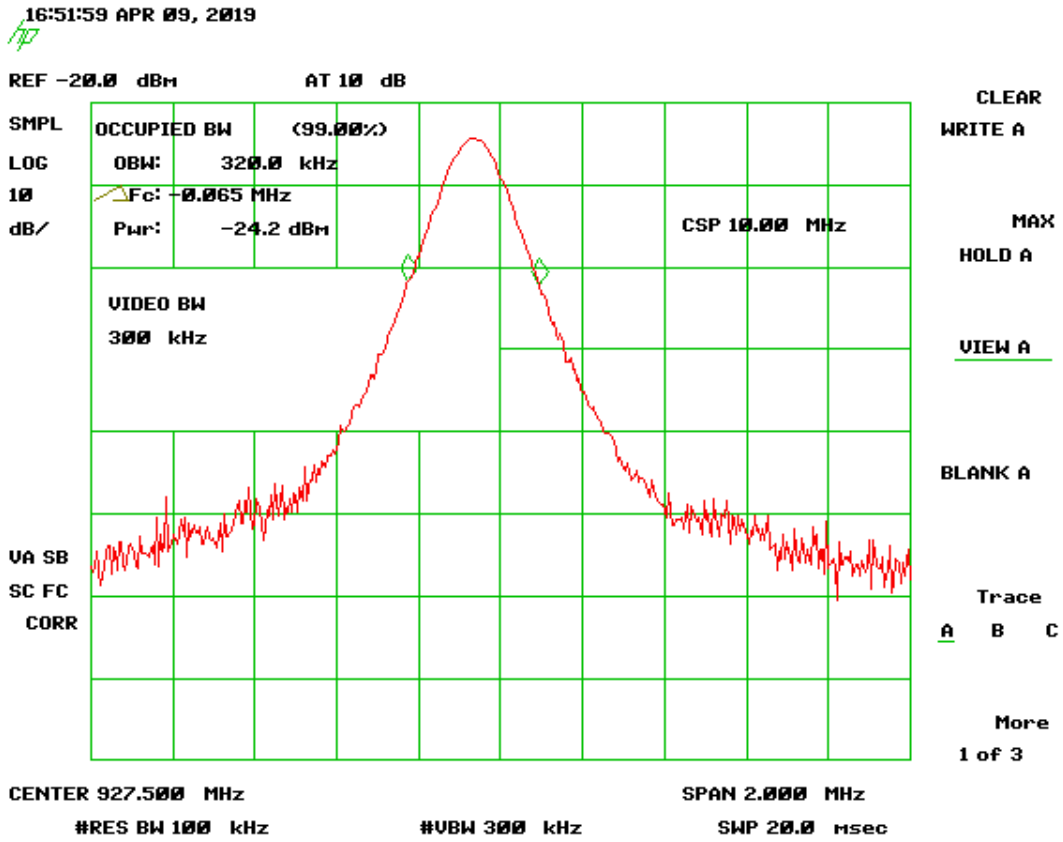


Figure 9. 99% Occupied Bandwidth – High Channel

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2.12 Power Line Conducted Emissions (CFR 15.207, RSS-Gen)

2.12.1 Power Line Conducted Emissions

Measurements to demonstrate compliance with the conducted limits are not required for devices which only employ battery power for operation and which do not operate from the AC power lines or contain provisions for operation while connected to the AC power lines.

Table 10. Power line Conducted Emissions

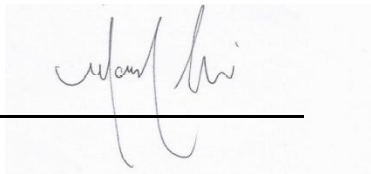
Test: Conducted Emissions Class A limits							
Frequency (MHz)	Test Data (dBuV)	LISN+CL-PA (dB)	Results (dBuV)	Limits AVG (dBuV)	Phase/Neutral	Margin (dB)	DET PK/QP/AVG
The radio module is DC powered ONLY.							

Sample Calculation at: N/A

Test Date: March 14, 2019

Tested By

Tested By
 Signature: _____



Name: Mark Afroozi

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2.13 Measurement Uncertainty

The measurement uncertainties given were calculated using the method detailed in CISPR 16-4-2:2011. A coverage factor of $k=2$ was used to give a level of confidence of approximately 95%.

2.13.1 Conducted Emissions Measurement Uncertainty

Measurement Uncertainty (within a 95% confidence level) for this test is ± 2.78 dB.

2.13.2 Radiated Emissions Measurement Uncertainty

For a measurement distance of 3 m the measurement uncertainty (with a 95% confidence level) for this test using a Biconical Antenna (30 MHz to 200 MHz) is ± 5.39 dB. This value includes all elements of measurement.

The measurement uncertainty (with a 95% confidence level) for this test using a Log Periodic Antenna (200 MHz to 1000 MHz) is ± 5.18 dB.

The measurement uncertainty (with a 95% confidence level) for this test using a Horn Antenna is ± 5.21 dB.

3 Conclusions

The EUT is deemed to meet the requirements of the test standards cited herein when tested in the configuration detailed in this test report.