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ELECTRICAL TESTING
0839.01

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TEST REPORT

ACCORDING TO:

FCC 47CFR part 15 subpart C §15.247 (DTS),
RSS-247 Issue 2:2017, ICES-003 Issue 6:2016

FOR:

Wireless Systems Solutions LLC

AIRBORNE USER-EQUIPMENT BASE RADIO (ABR)

Part Number: ABR-0385

FCC ID: 2AWXX-ABR0385CRM

This report is in conformity with ISO/ IEC 17025. The "A2LA Accredited" symbol endorsement applies only to the tests and calibrations that are listed in the scope of Hermon Laboratories accreditation. The test results relate only to the items tested. This test report shall not be reproduced in any form except in full with the written approval of Hermon Laboratories Ltd.

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1 Applicant information

Client name:	Wireless Systems Solutions LLC
Address:	630 Davis Dr Suite 250, Morrisville, North Carolina 27703, USA
Telephone:	+972-55-9206877
Fax:	NA
E-mail:	boaz@wirelesss2.net
Contact name:	Mr. Boaz Reuven

2 Equipment under test attributes

Product name:	AIRBORNE USER-EQUIPMENT BASE RADIO (ABR)
Product type:	Transceiver
Part Number:	ABR-0385
Serial number:	00023
Hardware version:	C0
Software release:	1.2.13
Receipt date	20-Mar-20

3 Manufacturer information

Manufacturer name:	MC Assembly*
Manufacturer name*:	SMTC Corporation Acquires MC Assembly Holdings, Inc.
Address:	425 North Dr, Melbourne, FL 32934, USA
Telephone:	321-253-0541
Fax:	NA
E-Mail:	blair.chandler@smtc.com
Contact name:	Mr. Blair Chandler

4 Test details

Project ID:	31957
Location:	Hermon Laboratories Ltd. P.O. Box 23, Binyamina 3055001, Israel
Test started:	05-Apr-20
Test completed:	29-Jul-20
Test specification(s):	FCC 47CFR part 15 subpart C §15.247 (DTS), RSS-247 Issue 2:2017, ICES-003 Issue 6:2016

5 Tests summary

Test	
Transmitter characteristics	
FCC section 15.247(a)2 / RSS-247 section 5.2(1), 6 dB bandwidth	Pass
FCC section 15.247(b)3/ RSS-247 section 5.4(4), Peak output power	Pass*
FCC section 15.247(i) / RSS-102 section 2.5.2, RF exposure	Pass, the exhibit to the application of certification is provided
FCC section 15.247(d) / RSS-247 section 5.5, Radiated spurious emissions	Pass*
FCC section 15.247(d)/ RSS-247 section 5.5, Emissions at band edges	Pass
FCC section 15.247(e) / RSS-247 section 5.2(2), Peak power density	Pass
FCC section 15.203 / RSS-Gen section 8.3, Antenna requirement	Pass
FCC section 15.207(a) / RSS-Gen section 8.8, Conducted emission	Pass

*Only the above tests were performed for both transmitters, which confirms that the transmitters are completely identical and have exactly the same parameters.

This test report supersedes the previously issued test report identified by Doc ID: DAGRAD_FCC.31957.ABR_Rev1

Testing was completed against all relevant requirements of the test standard. The results obtained indicate that the product under test complies in full with the requirements tested.
The test results relate only to the items tested. Pass/ fail decision was based on nominal values.

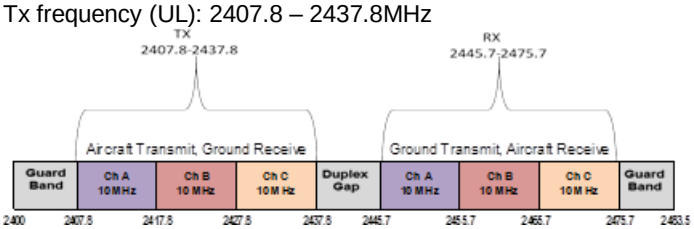
	Name and Title	Date	Signature
Tested by:	Mr. A. Morozov, test engineer, EMC & Radio	05-Apr-20 – 29-Jul-20	
Reviewed by:	Mrs. S. Peysahov Sheynin, test engineer, EMC & Radio	07-Aug-20	
Approved by:	Mr. S. Samokha, technical manager, EMC & Radio	11-Aug-20	

6 EUT description

Note: The following data in this clause is provided by the customer and represents his sole responsibility

6.1 General information

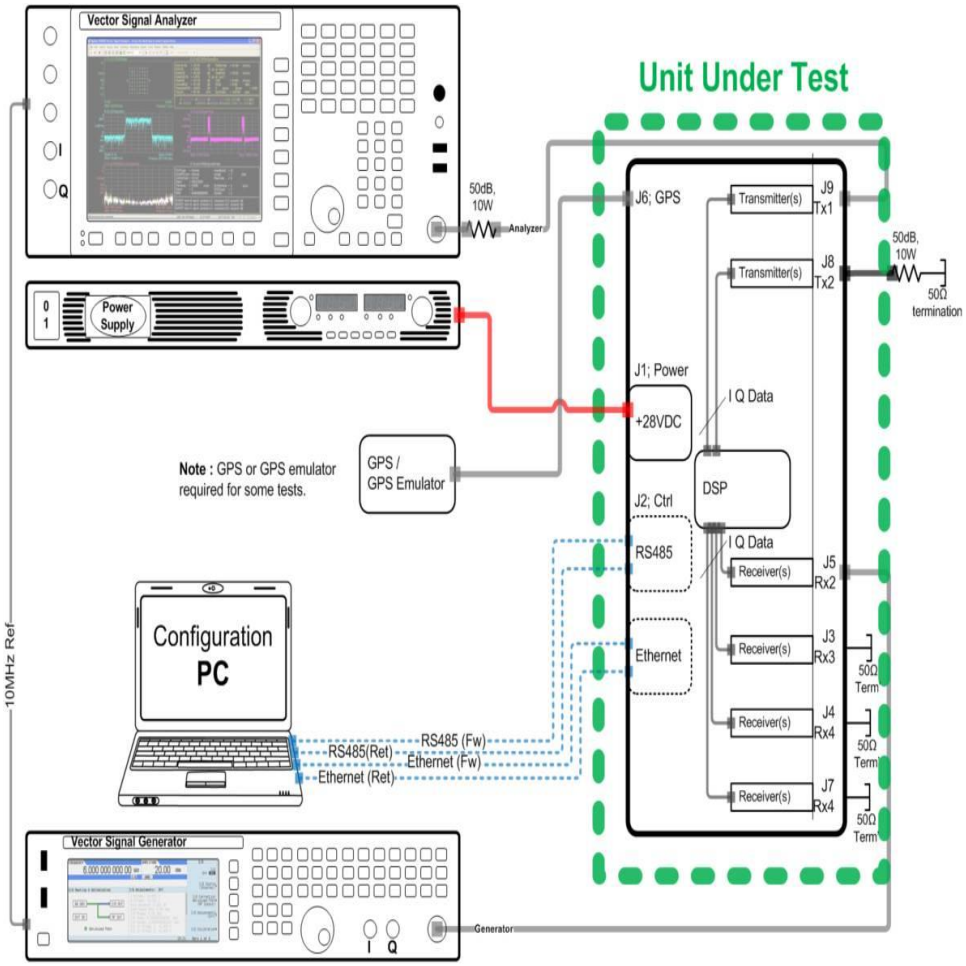
The System is intended for In-Flight Entertainment (IFE) and does not include any flight-critical data.
The system provides a broadband air to ground connectivity within the network, providing a multi-megabit, bi-directional throughput with low latency.
Rx frequency (DL): 2445.7 – 2475.7MHz
Tx frequency (UL): 2407.8 – 2437.8MHz



	(UL) ABR Transmit QPSK or 16QAM		(DL) RRH Transmit QPSK or 16QAM or 64QA	
Channel	Center Frequency	BW	Center Frequency	BW
A1	2410.3MHz	5MHz	2448.2MHz	5MHz
A2	2415.3MHz	5MHz	2453.2MHz	5MHz
B1	2420.3MHz	5MHz	2458.2MHz	5MHz
B2	2425.3MHz	5MHz	2463.2MHz	5MHz
C1	2430.3MHz	5MHz	2468.2MHz	5MHz
C2	2435.3MHz	5MHz	2473.2MHz	5MHz
A	2412.8MHz	10MHz	2450.7MHz	10MHz
B	2422.8MHz	10MHz	2460.7MHz	10MHz
C	2432.8MHz	10MHz	2470.7MHz	10MHz

The system generates the LTE signal(s) in two modes, loopback and streamed data.
In loopback mode, the IQ data from the Rx port loops back (inside the FPGA) to the Tx while the other mode takes the streamed IQ (inside the FPGA).
Tx unit can transmit up to 34dBm at its Tx port.

6.2 Test configuration



6.3 Changes made in EUT

No changes were implemented in the EUT during testing.

6.4 Transmitter characteristics

Type of equipment	
X	Stand-alone (Equipment with or without its own control provisions)
	Combined equipment (Equipment where the radio part is fully integrated within another type of equipment)
	Plug-in card (Equipment intended for a variety of host systems)

Intended use		**Condition of use**
X	fixed	Always at a distance more than 2 m from all people
	mobile	Always at a distance more than 20 cm from all people
	portable	May operate at a distance closer than 20 cm to human body

Assigned frequency range	2400-2483.5 MHz
Operating frequency	2410.3-2435.3 MHz

Maximum rated output power	**Peak output power**	29.99 dBm

Is transmitter output power variable?	X	No		
		Yes		continuous variable
				stepped variable with stepsize dB
			minimum RF power	dBm
			maximum RF power	dBm

Antenna connection				
unique coupling	standard connector	X	integral	with temporary RF connector
				X without temporary RF connector

Antenna/s technical characteristics			
Type	Manufacturer	Model number	Gain
External	AeroAntenna Technology, Inc.	AT2450-2	4.7 dBi

Modulation	QPSK / 16QAM
Transmitter aggregate data rate/s	31.7Mbps
Modulating test signal (baseband)	OFDM

Transmitter power source					
	Battery	**Nominal rated voltage**	VDC	Battery type	
X	DC	**Nominal rated voltage**	28 VDC		
	AC mains	**Nominal rated voltage**		Frequency	

Spread spectrum technique used		Frequency hopping (FHSS)
	X	Digital transmission system (DTS)
		Hybrid

Test specification:	**Section 15.247(a)2 / RSS-247 section 5.2(1), 6 dB bandwidth**		
Test procedure:	ANSI C63.10 section 11.8.1		
Test mode:	Compliance	**Verdict:**	PASS
Date(s):	22-Jun-20		
Temperature: 24.6 ºC	**Relative Humidity:** 39 %	**Air Pressure:** 1024 hPa	**Power:** 28 VDC
Remarks:			

7 Transmitter tests according to 47CFR part 15 subpart C requirements

7.1 Minimum 6 dB bandwidth

7.1.1 General

This test was performed to measure 6 dB bandwidth of the EUT carrier frequency. Specification test limits are given in Table 7.1.1.

Table 7.1.1 6 dB bandwidth limits

Assigned frequency, MHz	Modulation envelope reference points*, dBc	Minimum bandwidth, kHz
902.0 – 928.0	**6.0**	**500.0**
2400.0 – 2483.5		
5725.0 – 5850.0		

* - Modulation envelope reference points provided in terms of attenuation below the peak of modulated carrier.

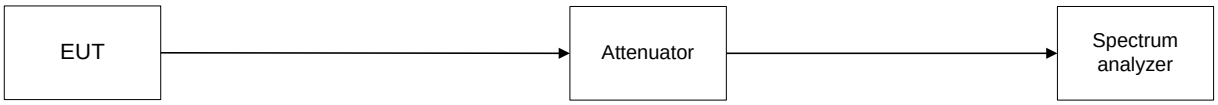
7.1.2 Test procedure

7.1.2.1 The EUT was set up as shown in Figure 7.1.1, energized and its proper operation was checked.

7.1.2.2 The EUT was set to transmit modulated carrier.

7.1.2.3 The transmitter minimum 6 dB bandwidth was measured with spectrum analyzer RBW=100 kHz as frequency delta between reference points on modulation envelope and provided in Table 7.1.2 and associated plot.

Figure 7.1.1 6 dB bandwidth test setup



Test specification:	**Section 15.247(a)2 / RSS-247 section 5.2(1), 6 dB bandwidth**		
Test procedure:	ANSI C63.10 section 11.8.1		
Test mode:	Compliance	**Verdict:**	PASS
Date(s):	22-Jun-20		
Temperature: 24.6 ºC	**Relative Humidity:** 39 %	**Air Pressure:** 1024 hPa	**Power:** 28 VDC
Remarks:			

Table 7.1.2 6 dB bandwidth test results

ASSIGNED FREQUENCY BAND: 2400.0 – 2483.5 MHz
DETECTOR USED: Peak
SWEEP MODE: Max hold
SWEEP TIME: Auto
RESOLUTION BANDWIDTH: 100 kHz
VIDEO BANDWIDTH: 300 kHz
MODULATION ENVELOPE REFERENCE POINTS: 6.0 dBc

EMISSION BANDWIDTH: 5MHz

Carrier frequency, MHz	6 dB bandwidth, kHz	Limit, kHz	Margin, kHz*	Verdict
QPSK				
2410.3	4524	500	4024	Pass
2420.3	4532	500	4032	Pass
2435.3	4526	500	4026	Pass
16QAM				
2410.3	4530	500	4030	Pass
2420.3	4556	500	4056	Pass
2435.3	4548	500	4048	Pass

EMISSION BANDWIDTH: 10MHz

Carrier frequency, MHz	6 dB bandwidth, kHz	Limit, kHz	Margin, kHz*	Verdict
QPSK				
2412.8	8999	500	8499	Pass
2422.8	9024	500	8524	Pass
2432.8	9021	500	8521	Pass
16QAM				
2412.8	9037	500	8537	Pass
2422.8	9020	500	8520	Pass
2432.8	9017	500	8517	Pass

* - Margin = 6 dB bandwidth – Specification limit

Reference numbers of test equipment used

HL 1809	HL 2909	HL 3901	HL 4366					

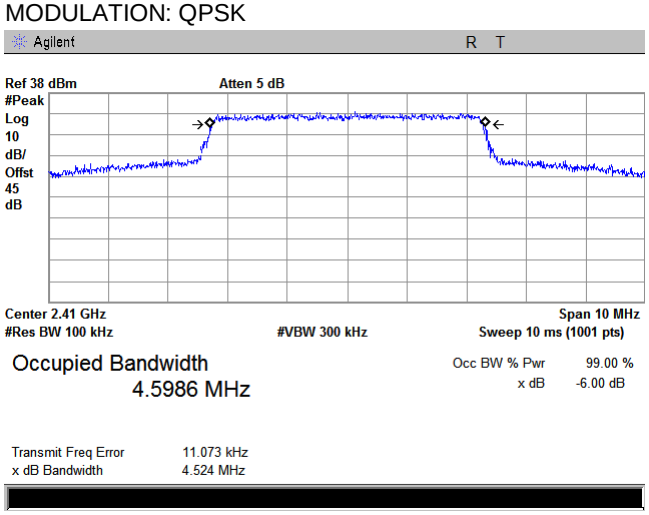
Full description is given in Appendix A.

Test specification:	**Section 15.247(a)2 / RSS-247 section 5.2(1), 6 dB bandwidth**		
Test procedure:	ANSI C63.10 section 11.8.1		
Test mode:	Compliance	**Verdict:**	PASS
Date(s):	22-Jun-20		
Temperature: 24.6 ºC	**Relative Humidity:** 39 %	**Air Pressure:** 1024 hPa	**Power:** 28 VDC
Remarks:			

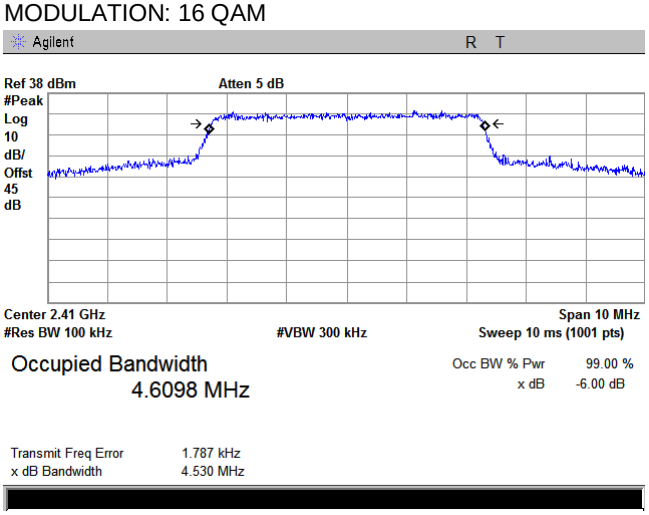
Plot 7.1.1 6 dB bandwidth test result at low frequency

CHANNEL BANDWIDTH: 5 MHz

MODULATION: QPSK



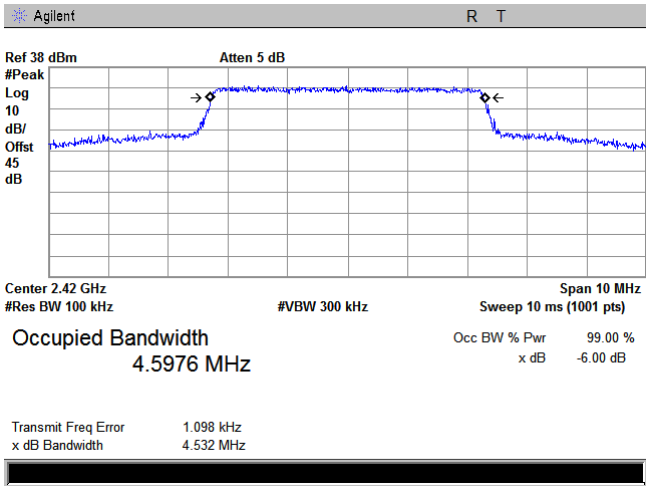
MODULATION: 16 QAM



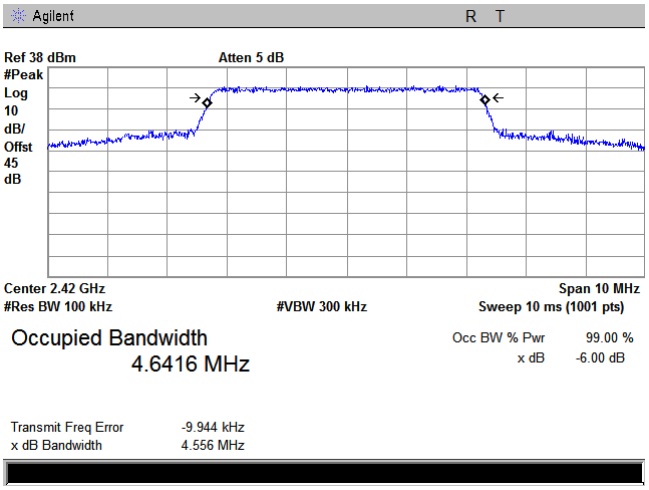
Plot 7.1.2 6 dB bandwidth test result at mid frequency

CHANNEL BANDWIDTH: 5 MHz

MODULATION: QPSK



MODULATION: 16 QAM

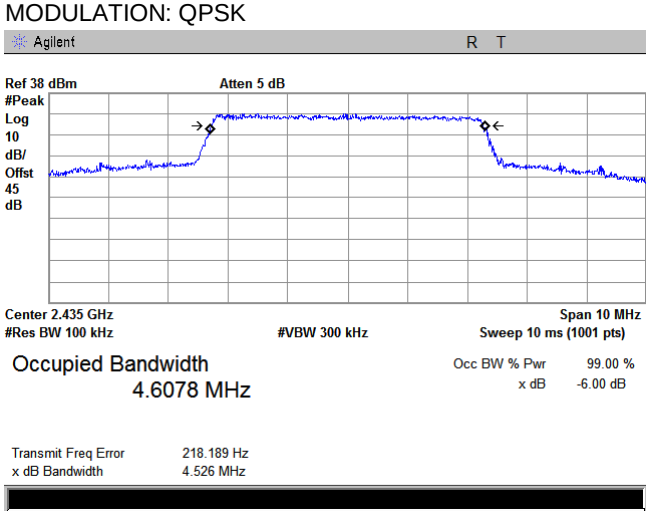


Test specification:	**Section 15.247(a)2 / RSS-247 section 5.2(1), 6 dB bandwidth**		
Test procedure:	ANSI C63.10 section 11.8.1		
Test mode:	Compliance	**Verdict:**	PASS
Date(s):	22-Jun-20		
Temperature: 24.6 ºC	**Relative Humidity:** 39 %	**Air Pressure:** 1024 hPa	**Power:** 28 VDC
Remarks:			

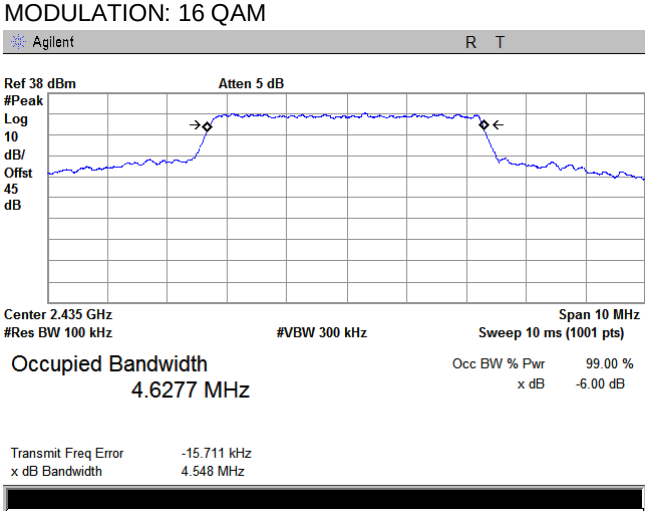
Plot 7.1.3 6 dB bandwidth test result at high frequency

CHANNEL BANDWIDTH: 5 MHz

MODULATION: QPSK



MODULATION: 16 QAM

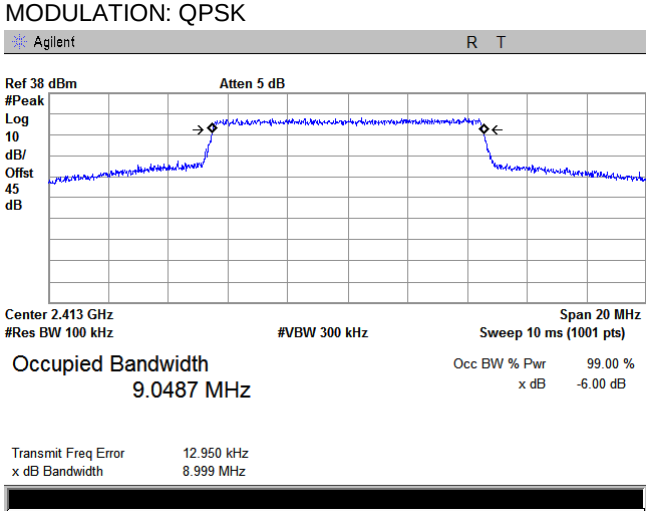


Test specification:	**Section 15.247(a)2 / RSS-247 section 5.2(1), 6 dB bandwidth**		
Test procedure:	ANSI C63.10 section 11.8.1		
Test mode:	Compliance	**Verdict:**	PASS
Date(s):	22-Jun-20		
Temperature: 24.6 ºC	**Relative Humidity:** 39 %	**Air Pressure:** 1024 hPa	**Power:** 28 VDC
Remarks:			

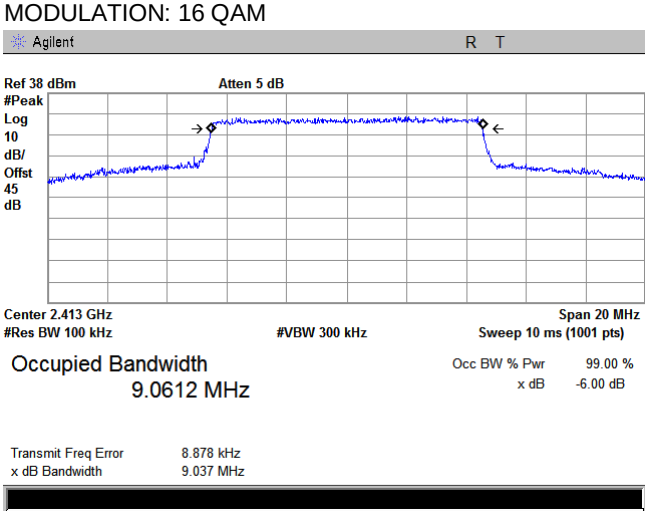
Plot 7.1.4 6 dB bandwidth test result at low frequency

CHANNEL BANDWIDTH: 10 MHz

MODULATION: QPSK



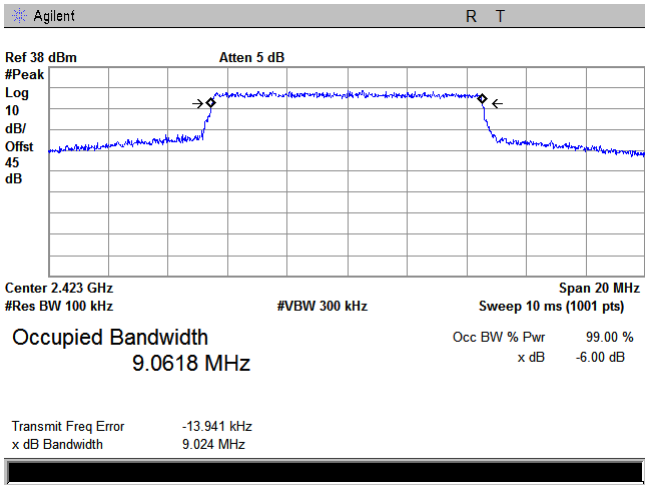
MODULATION: 16 QAM



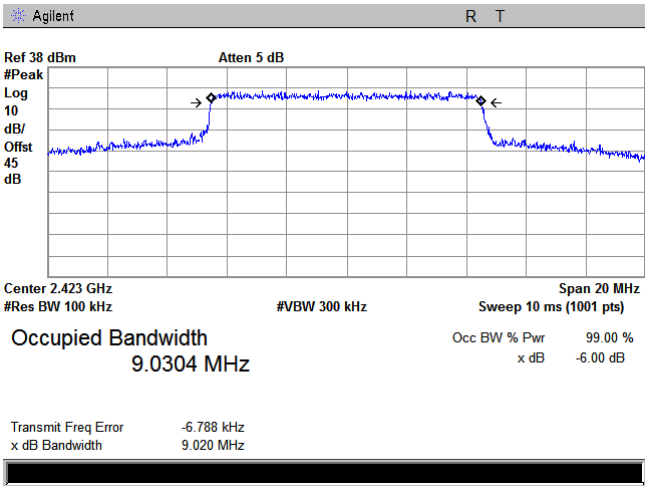
Plot 7.1.5 6 dB bandwidth test result at mid frequency

CHANNEL BANDWIDTH: 10 MHz

MODULATION: QPSK



MODULATION: 16 QAM

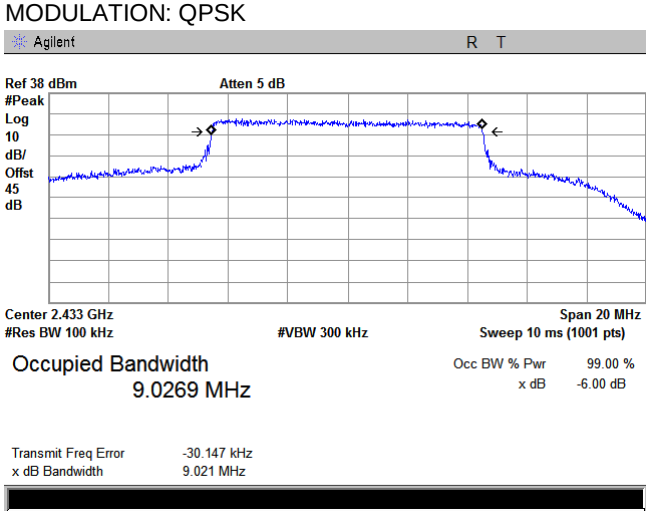


Test specification:	**Section 15.247(a)2 / RSS-247 section 5.2(1), 6 dB bandwidth**		
Test procedure:	ANSI C63.10 section 11.8.1		
Test mode:	Compliance	**Verdict:**	PASS
Date(s):	22-Jun-20		
Temperature: 24.6 ºC	**Relative Humidity:** 39 %	**Air Pressure:** 1024 hPa	**Power:** 28 VDC
Remarks:			

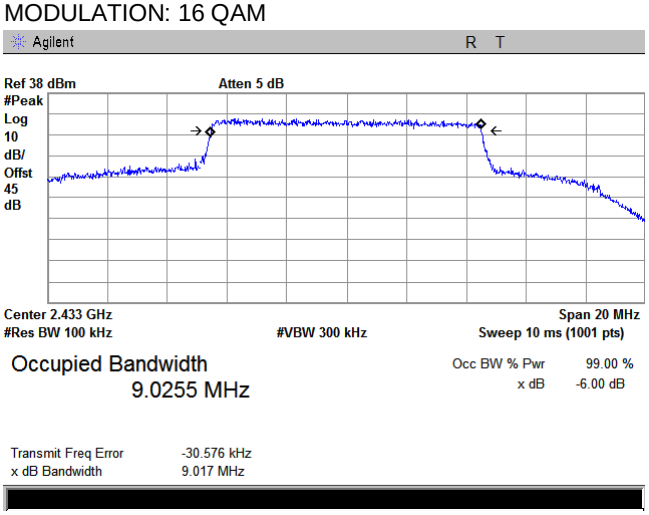
Plot 7.1.6 6 dB bandwidth test result at high frequency

CHANNEL BANDWIDTH: 10 MHz

MODULATION: QPSK



MODULATION: 16 QAM



Test specification:	**Section 15.247(b)3 / RSS-247 section 5.4(4), Peak output power**		
Test procedure:	ANSI C63.10 section 11.9		
Test mode:	Compliance	**Verdict:**	PASS
Date(s):	29-Jul-20		
Temperature: 26 ºC	**Relative Humidity:** 38 %	**Air Pressure:** 1003 hPa	**Power:** 28 VDC
Remarks:			

7.2 Peak output power

7.2.1 General

This test was performed to measure the maximum peak output power at the transmitter RF antenna connector. Specification test limits are given in Table 7.2.1.

Table 7.2.1 Peak output power limits

Assigned frequency range, MHz	Maximum antenna gain, dBi	Peak output power*	
		W	dBm
902.0 – 928.0	**6.0**	**1.0**	**30.0**
2400.0 – 2483.5			
5725.0 – 5850.0			

*- If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power limit shall be reduced below the stated value as follows:

by 1 dB for every 3 dB that the directional gain of antenna exceeds 6 dBi for fixed point-to-point transmitters operate in 2400-2483.5 MHz band;

without any corresponding reduction for fixed point-to-point transmitters operate in 5725-5850 MHz band;

by the amount in dB that the directional gain of antenna exceeds 6 dBi for the rest of transmitters.

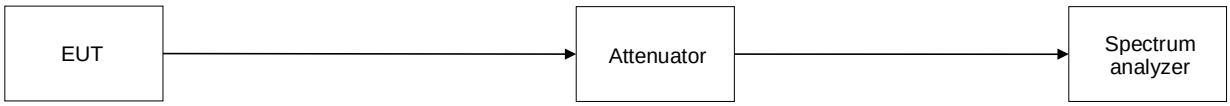
7.2.2 Test procedure

7.2.2.1 The EUT was set up as shown in Figure 7.2.1, energized and its proper operation was checked.

7.2.2.2 The EUT was adjusted to produce maximum available for end user RF output power.

7.2.2.3 The peak output power was measured used Power meter and test results were provided in Table 7.2.2.

Figure 7.2.1 Peak output power test setup



Test specification:	**Section 15.247(b)3 / RSS-247 section 5.4(4), Peak output power**		
Test procedure:	ANSI C63.10 section 11.9		
Test mode:	Compliance	**Verdict:**	PASS
Date(s):	29-Jul-20		
Temperature: 26 ºC	**Relative Humidity:** 38 %	**Air Pressure:** 1003 hPa	**Power:** 28 VDC
Remarks:			

Table 7.2.2 Peak output power test results for one beam

ASSIGNED FREQUENCY: 2400.0 - 2483.5 MHz
MODULATING SIGNAL: PRBS
TRANSMITTER OUTPUT POWER SETTINGS: Maximum
DETECTOR USED: Average
TRANSMITTER 1
CHANNEL BANDWIDTH: 5 MHz

Carrier frequency, MHz	Power meter reading, dBm	External attenuation, dB	Feeder loss, dB	Total output power, dBm**	Limit, dBm	Margin*, dB	Verdict
Modulation QPSK							
2410.3	33.95	Included	4.0	29.95	30.0	-0.05	Pass
2420.3	33.95	Included	4.0	29.95	30.0	-0.05	Pass
2435.3	33.96	Included	4.0	29.96	30.0	-0.04	Pass
Modulation 16QAM							
2410.3	33.95	Included	4.0	29.95	30.0	-0.05	Pass
2420.3	33.95	Included	4.0	29.95	30.0	-0.05	Pass
2435.3	33.96	Included	4.0	29.96	30.0	-0.04	Pass

* - Margin = Total output power – specification limit.
** - Total output power = PM reading – Cable loss

CHANNEL BANDWIDTH: 10 MHz

Carrier frequency, MHz	Power meter reading, dBm	External attenuation, dB	Feeder loss, dB	Total power, dBm	Limit, dBm	Margin*, dB	Verdict
Modulation QPSK							
2412.8	33.98	Included	4.0	29.98	30.0	-0.02	Pass
2422.8	33.96	Included	4.0	29.96	30.0	-0.04	Pass
2432.8	33.92	Included	4.0	29.92	30.0	-0.08	Pass
Modulation 16QAM							
2412.8	33.99	Included	4.0	29.99	30.0	-0.01	Pass
2422.8	33.95	Included	4.0	29.95	30.0	-0.05	Pass
2432.8	33.92	Included	4.0	29.92	30.0	-0.08	Pass

* - Margin = Total output power – specification limit.
** - Total output power = PM reading – Cable loss

Test specification:	**Section 15.247(b)3 / RSS-247 section 5.4(4), Peak output power**		
Test procedure:	ANSI C63.10 section 11.9		
Test mode:	Compliance	**Verdict:**	PASS
Date(s):	29-Jul-20		
Temperature: 26 ºC	**Relative Humidity:** 38 %	**Air Pressure:** 1003 hPa	**Power:** 28 VDC
Remarks:			

Table 7.2.3 Peak output power test results for one beam

ASSIGNED FREQUENCY: 2400.0 - 2483.5 MHz
MODULATING SIGNAL: PRBS
TRANSMITTER OUTPUT POWER SETTINGS: Maximum
DETECTOR USED: Average
TRANSMITTER 2
CHANNEL BANDWIDTH: 5 MHz

Carrier frequency, MHz	Power meter reading, dBm	External attenuation, dB	Feeder loss, dB	Total output power, dBm**	Limit, dBm	Margin*, dB	Verdict
Modulation QPSK							
2410.3	33.95	Included	4.0	29.95	30.0	-0.05	Pass
2420.3	33.98	Included	4.0	29.98	30.0	-0.02	Pass
2435.3	33.97	Included	4.0	29.97	30.0	-0.03	Pass
Modulation 16QAM							
2410.3	33.98	Included	4.0	29.98	30.0	-0.02	Pass
2420.3	33.99	Included	4.0	29.99	30.0	-0.01	Pass
2435.3	33.98	Included	4.0	29.98	30.0	-0.02	Pass

* - Margin = Total output power – specification limit.
** - Total output power = PM reading – Cable loss

CHANNEL BANDWIDTH: 10 MHz

Carrier frequency, MHz	Power meter reading, dBm	External attenuation, dB	Feeder loss, dB	Total power, dBm	Limit, dBm	Margin*, dB	Verdict
Modulation QPSK							
2412.8	33.98	Included	4.0	29.98	30.0	-0.02	Pass
2422.8	33.98	Included	4.0	29.98	30.0	-0.02	Pass
2432.8	33.98	Included	4.0	29.98	30.0	-0.02	Pass
Modulation 16QAM							
2412.8	33.99	Included	4.0	29.99	30.0	-0.01	Pass
2422.8	33.98	Included	4.0	29.98	30.0	-0.02	Pass
2432.8	33.97	Included	4.0	29.97	30.0	-0.03	Pass

* - Margin = Total output power – specification limit.
** - Total output power = PM reading – Cable loss

Reference numbers of test equipment used

HL 3301	HL 3302	HL 5174	HL 5175				

Full description is given in Appendix A.

Test specification:	**Section 15.247(d) / RSS-247 section 5.5, Radiated spurious emissions**		
Test procedure:	ANSI C63.10 section 11.12.1		
Test mode:	Compliance	**Verdict:**	PASS
Date(s):	29-Jul-20		
Temperature: 26 ºC	**Relative Humidity:** 38 %	**Air Pressure:** 1003 hPa	**Power:** 28 VDC
Remarks:			

7.3 Field strength of spurious emissions

7.3.1 General

This test was performed to measure field strength of spurious emissions from the EUT. Specification test limits are given in Table 7.3.1.

Table 7.3.1 Radiated spurious emissions limits

Frequency, MHz	Field strength at 3 m within restricted bands, dB(μV/m)*			Attenuation of field strength of spurious versus carrier outside restricted bands, dBc***
	Peak	Quasi Peak	Average	
0.009 – 0.090	148.5 – 128.5	NA	128.5 – 108.5**	20.0
0.090 – 0.110	NA	108.5 – 106.8**	NA	
0.110 – 0.490	126.8 – 113.8	NA	106.8 – 93.8**	
0.490 – 1.705	NA	73.8 – 63.0**	NA	
1.705 – 30.0*		69.5		
30 – 88		40.0		
88 – 216		43.5		
216 – 960		46.0		
960 - 1000		54.0		
1000 – 10th harmonic	74.0	NA	54.0	

*- The limit for 3 m test distance was calculated using the inverse square distance extrapolation factor as follows:

$$Lim_{S2} = Lim_{S1} + 40 \log (S_1/S_2),$$

where S_1 and S_2 – standard defined and test distance respectively in meters.
**- The limit decreases linearly with the logarithm of frequency.
*** - The field strength limits applied from the lowest radio frequency generated in the device, without going below 9 kHz up to the tenth harmonic of the highest fundamental frequency.

7.3.2 Test procedure for spurious emission field strength measurements in 9 kHz to 30 MHz band

7.3.2.1 The EUT was set up as shown in Figure 7.3.1, energized and the performance check was conducted.

7.3.2.2 The specified frequency range was investigated with antenna connected to spectrum analyzer/ EMI receiver. To find maximum radiation the turntable was rotated 360^0 and the measuring antenna was rotated around its vertical axis.

7.3.2.3 The worst test results (the lowest margins) were recorded and shown in the associated plots.

7.3.3 Test procedure for spurious emission field strength measurements above 30 MHz

7.3.3.1 The EUT was set up as shown in Figure 7.3.2, Figure 1.1.3, energized and the performance check was conducted.

7.3.3.2 The specified frequency range was investigated with antenna connected to spectrum analyzer/ EMI receiver. To find maximum radiation the turntable was rotated 360^0, the measuring antenna height was changed from 1 to 4 m, its polarization was switched from vertical to horizontal.

7.3.3.3 The worst test results (the lowest margins) were recorded and shown in the associated plots.

Test specification:	**Section 15.247(d) / RSS-247 section 5.5, Radiated spurious emissions**		
Test procedure:	ANSI C63.10 section 11.12.1		
Test mode:	Compliance	**Verdict:**	PASS
Date(s):	29-Jul-20		
Temperature: 26 ºC	**Relative Humidity:** 38 %	**Air Pressure:** 1003 hPa	**Power:** 28 VDC
Remarks:			

Figure 7.3.1 Setup for spurious emission field strength measurements below 30 MHz

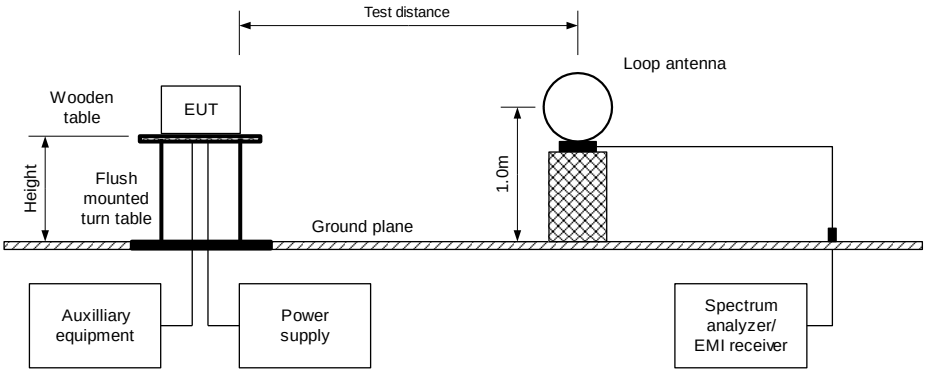
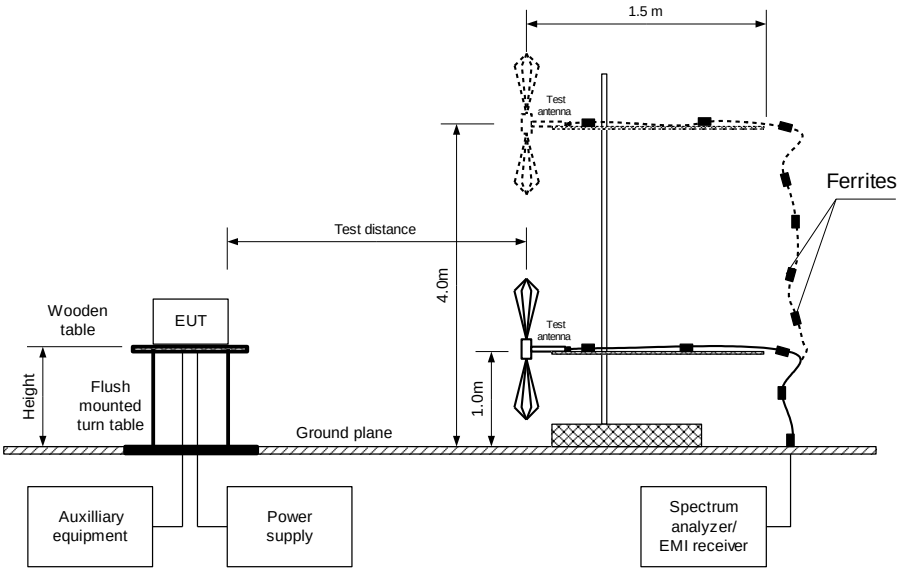
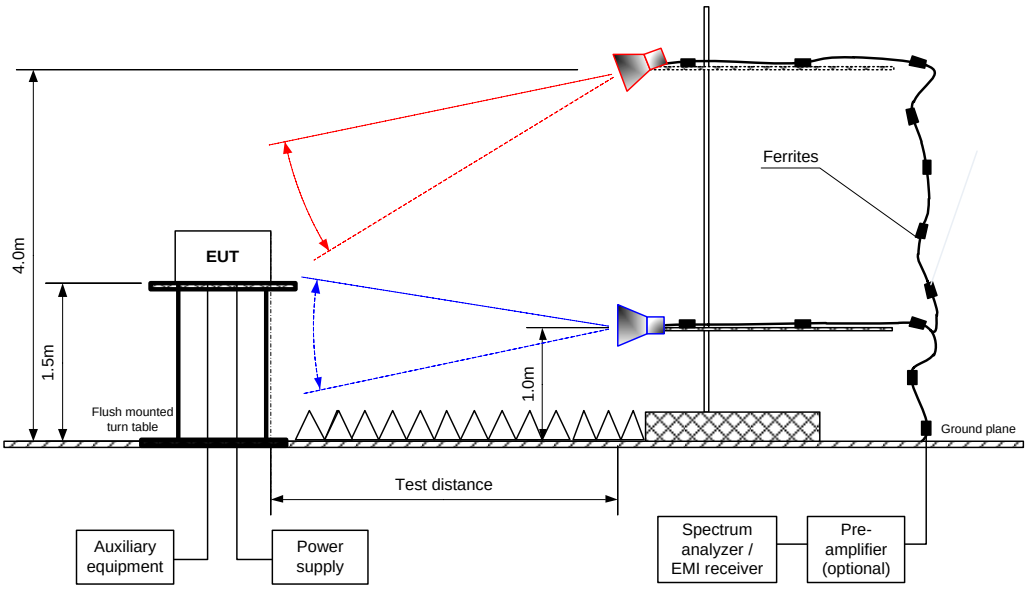


Figure 7.3.2 Setup for spurious emission field strength measurements in 30 – 1000 MHz



Test specification:	**Section 15.247(d) / RSS-247 section 5.5, Radiated spurious emissions**		
Test procedure:	ANSI C63.10 section 11.12.1		
Test mode:	Compliance	**Verdict:**	PASS
Date(s):	29-Jul-20		
Temperature: 26 ºC	**Relative Humidity:** 38 %	**Air Pressure:** 1003 hPa	**Power:** 28 VDC
Remarks:			

Figure 7.3.3 Setup for spurious emission field strength measurements above1000 MHz



Test specification:	**Section 15.247(d) / RSS-247 section 5.5, Radiated spurious emissions**		
Test procedure:	ANSI C63.10 section 11.12.1		
Test mode:	Compliance	**Verdict:**	PASS
Date(s):	29-Jul-20		
Temperature: 26 ºC	**Relative Humidity:** 38 %	**Air Pressure:** 1003 hPa	**Power:** 28 VDC
Remarks:			

Table 7.3.2 Field strength of emissions outside restricted bands

ASSIGNED FREQUENCY: 2400.0 - 2483.5 MHz
INVESTIGATED FREQUENCY RANGE: 0.009 – 25000 MHz
TEST DISTANCE: 3 m
MODULATION: QPSK 5 MHz
MODULATING SIGNAL: PRBS
DUTY CYCLE: 100 %
TRANSMITTER OUTPUT POWER SETTINGS: Maximum
DETECTOR USED: Peak
RESOLUTION BANDWIDTH: 100 kHz
VIDEO BANDWIDTH: 300 kHz
TEST ANTENNA TYPE: Active loop (9 kHz – 30 MHz)
Biconilog (30 MHz – 1000 MHz)
Double ridged guide (above 1000 MHz)
TRANSMITTER 1

Frequency, MHz	Field strength of spurious, dB(μV/m)	Antenna polarization	Antenna height, m	Azimuth, degrees*	Field strength of carrier, dB(μV/m)	Attenuation below carrier, dBc	Limit, dBc	Margin, dB**	Verdict
Low carrier frequency 2410.3 MHz									
7228.300	59.24	Vertical	1.00	144	122.63	63.39	20.0	43.39	Pass
Mid carrier frequency 2420.3 MHz									
No emission were found									Pass
High carrier frequency 2435.3 MHz									
9726.600	58.02	Vertical	2.13	50.0	124.03	66.01	20.0	46.01	Pass

*****- EUT front panel refers to 0 degrees position of turntable.
******- Margin = Attenuation below carrier – specification limit.

Table 7.3.3 Field strength of spurious emissions above 1 GHz within restricted bands

ASSIGNED FREQUENCY: 2400.0 - 2483.5 MHz
INVESTIGATED FREQUENCY RANGE: 1000 – 25000 MHz
TEST DISTANCE: 3 m
MODULATION: QPSK 5 MHz
MODULATING SIGNAL: PRBS
DUTY CYCLE: 100 %
TRANSMITTER OUTPUT POWER SETTINGS: Maximum
DETECTOR USED: Peak
RESOLUTION BANDWIDTH: 1000 kHz
TEST ANTENNA TYPE: Double ridged guide
TRANSMITTER 1

Frequency, MHz	Antenna		Azimuth, degrees*	Peak field strength(VBW=3 MHz)			Average field strength(VBW=10 Hz)				Verdict
	Polarization	Height, m		Measured, dB(μV/m)	Limit, dB(μV/m)	Margin, dB**	Measured, dB(μV/m)	Calculated, dB(μV/m)	Limit, dB(μV/m)	Margin, dB***	
Low carrier frequency 2410.3 MHz											
4820.967	Vertical	1.53	130	57.40	74.0	-16.60	36.14	NA	54.0	-17.86	Pass
Mid carrier frequency 2420.3 MHz											
4814.433	Horizontal	1.53	107	62.40	74.0	-11.60	45.04	NA	54.0	-8.96	Pass
High carrier frequency 2435.3 MHz											
4815.966	Horizontal	2.57	-130	56.76	74.0	-17.24	40.23	NA	54.0	-13.77	Pass

*****- EUT front panel refers to 0 degrees position of turntable.
******- Margin = Measured field strength - specification limit.
***- Margin = Calculated field strength - specification limit,
where Calculated field strength = Measured field strength + average factor.

Test specification:	**Section 15.247(d) / RSS-247 section 5.5, Radiated spurious emissions**		
Test procedure:	ANSI C63.10 section 11.12.1		
Test mode:	Compliance	**Verdict:**	PASS
Date(s):	29-Jul-20		
Temperature: 26 ºC	**Relative Humidity:** 38 %	**Air Pressure:** 1003 hPa	**Power:** 28 VDC
Remarks:			

Table 7.3.4 Field strength of spurious emissions below 1 GHz within restricted bands

ASSIGNED FREQUENCY:	2400.0 - 2483.5 MHz
INVESTIGATED FREQUENCY RANGE:	0.009 – 1000 MHz
TEST DISTANCE:	3 m
MODULATION:	QPSK 5 MHz
MODULATING SIGNAL:	PRBS
DUTY CYCLE:	100 %
TRANSMITTER OUTPUT POWER SETTINGS:	Maximum
RESOLUTION BANDWIDTH:	0.2 kHz (9 kHz – 150 kHz) 9.0 kHz (150 kHz – 30 MHz) 120 kHz (30 MHz – 1000 MHz)
VIDEO BANDWIDTH:	> Resolution bandwidth
TEST ANTENNA TYPE:	Active loop (9 kHz – 30 MHz) Biconilog (30 MHz – 1000 MHz)
TRANSMITTER	1

Frequency, MHz	Peak emission, dB(μV/m)	Quasi-peak			Antenna polarization	Antenna height, m	Turn-table position**, degrees	Verdict
		Measured emission, dB(μV/m)	Limit, dB(μV/m)	Margin, dB*				
Low, mid, high carrier frequencies (were measured worst cases from all EUT positions and carrier frequencies)								
37.365	42.28	37.45	40.0	-2.55	Vertical	1.00	92	Pass
75.151	33.00	30.16	40.0	-9.84	Vertical	2.02	36	
108.776	35.90	33.37	43.5	-10.13	Vertical	1.02	360	
119.984	31.23	25.62	43.5	-17.88	Vertical	1.00	10	
149.991	31.42	28.69	43.5	-14.81	Vertical	1.04	207	
164.507	28.88	25.30	43.5	-18.20	Vertical	1.02	133	

*****- Margin = Measured emission - specification limit.
******- EUT front panel refer to 0 degrees position of turntable.

Test specification:	**Section 15.247(d) / RSS-247 section 5.5, Radiated spurious emissions**		
Test procedure:	ANSI C63.10 section 11.12.1		
Test mode:	Compliance	**Verdict:**	PASS
Date(s):	29-Jul-20		
Temperature: 26 ºC	**Relative Humidity:** 38 %	**Air Pressure:** 1003 hPa	**Power:** 28 VDC
Remarks:			

Table 7.3.5 Field strength of emissions outside restricted bands

ASSIGNED FREQUENCY:	2400.0 - 2483.5 MHz
INVESTIGATED FREQUENCY RANGE:	0.009 – 25000 MHz
TEST DISTANCE:	3 m
MODULATION:	QPSK 5 MHz
MODULATING SIGNAL:	PRBS
DUTY CYCLE:	100 %
TRANSMITTER OUTPUT POWER SETTINGS:	Maximum
DETECTOR USED:	Peak
RESOLUTION BANDWIDTH:	100 kHz
VIDEO BANDWIDTH:	300 kHz
TEST ANTENNA TYPE:	Active loop (9 kHz – 30 MHz) Biconilog (30 MHz – 1000 MHz) Double ridged guide (above 1000 MHz)
TRANSMITTER	2

Frequency, MHz	Field strength of spurious, dB(μV/m)	Antenna polarization	Antenna height, m	Azimuth, degrees*	Field strength of carrier, dB(μV/m)	Attenuation below carrier, dBc	Limit, dBc	Margin, dB**	Verdict
Low carrier frequency 2410.3 MHz									
2399.733	74.50	Vertical	1.79	151	119.22	44.72	20.0	24.72	Pass
7231.933	51.42	Horizontal	2.59	310		67.80	20.0	47.80	
Mid carrier frequency 2420.3 MHz									
2399.300	57.46	Vertical	1.79	159	118.39	60.93	20.0	40.93	Pass
High carrier frequency 2435.3 MHz									
2399.762	56.58	Vertical	1.79	171	118.47	61.89	20.0	41.89	Pass

*****- EUT front panel refers to 0 degrees position of turntable.
******- Margin = Attenuation below carrier – specification limit.

Test specification:	**Section 15.247(d) / RSS-247 section 5.5, Radiated spurious emissions**		
Test procedure:	ANSI C63.10 section 11.12.1		
Test mode:	Compliance	**Verdict:**	PASS
Date(s):	29-Jul-20		
Temperature: 26 ºC	**Relative Humidity:** 38 %	**Air Pressure:** 1003 hPa	**Power:** 28 VDC
Remarks:			

Table 7.3.6 Field strength of spurious emissions above 1 GHz within restricted bands

ASSIGNED FREQUENCY:	2400.0 - 2483.5 MHz
INVESTIGATED FREQUENCY RANGE:	1000 – 25000 MHz
TEST DISTANCE:	3 m
MODULATION:	QPSK 5 MHz
MODULATING SIGNAL:	PRBS
DUTY CYCLE:	100 %
TRANSMITTER OUTPUT POWER SETTINGS:	Maximum
DETECTOR USED:	Peak
RESOLUTION BANDWIDTH:	1000 kHz
TEST ANTENNA TYPE:	Double ridged guide
TRANSMITTER	2

Frequency, MHz	Antenna		Azimuth, degrees*	Peak field strength(VBW=3 MHz)			Average field strength(VBW=10 Hz)				Verdict
	Polarization	Height, m		Measured, dB(μV/m)	Limit, dB(μV/m)	Margin, dB**	Measured, dB(μV/m)	Calculated, dB(μV/m)	Limit, dB(μV/m)	Margin, dB***	
Low carrier frequency 2410.3 MHz											
4824.467	Horizontal	1.28	310	56.04	74.0	-17.96	36.76	NA	54.0	-17.24	Pass
Mid carrier frequency 2420.3 MHz											
4840.800	Horizontal	2.32	344	53.35	74.0	-20.65	39.42	NA	54.0	-14.58	Pass
7261.233	Horizontal	2.31	23	48.42	74.0	-25.58	35.20	NA	54.0	-18.80	
High carrier frequency 2435.3 MHz											
4867.523	Horizontal	2.33	314	53.59	74.0	-20.41	38.73	NA	54.0	-15.27	Pass
7305.063	Horizontal	2.32	23	49.89	74.0	-24.11	36.08	NA	54.0	-17.92	

*****- EUT front panel refers to 0 degrees position of turntable.
******- Margin = Measured field strength - specification limit.
***- Margin = Calculated field strength - specification limit,
where Calculated field strength = Measured field strength + average factor.

Test specification:	**Section 15.247(d) / RSS-247 section 5.5, Radiated spurious emissions**		
Test procedure:	ANSI C63.10 section 11.12.1		
Test mode:	Compliance	**Verdict:**	PASS
Date(s):	29-Jul-20		
Temperature: 26 ºC	**Relative Humidity:** 38 %	**Air Pressure:** 1003 hPa	**Power:** 28 VDC
Remarks:			

Table 7.3.7 Field strength of spurious emissions below 1 GHz within restricted bands

ASSIGNED FREQUENCY:	2400.0 - 2483.5 MHz
INVESTIGATED FREQUENCY RANGE:	0.009 – 1000 MHz
TEST DISTANCE:	3 m
MODULATION:	QPSK 5 MHz
MODULATING SIGNAL:	PRBS
DUTY CYCLE:	100 %
TRANSMITTER OUTPUT POWER SETTINGS:	Maximum
RESOLUTION BANDWIDTH:	0.2 kHz (9 kHz – 150 kHz) 9.0 kHz (150 kHz – 30 MHz) 120 kHz (30 MHz – 1000 MHz)
VIDEO BANDWIDTH:	> Resolution bandwidth
TEST ANTENNA TYPE:	Active loop (9 kHz – 30 MHz) Biconilog (30 MHz – 1000 MHz)
TRANSMITTER	2

Frequency, MHz	Peak emission, dB(µV/m)	Quasi-peak			Antenna polarization	Antenna height, m	Turn-table position**, degrees	Verdict
		Measured emission, dB(µV/m)	Limit, dB(µV/m)	Margin, dB*				
Low, mid, high carrier frequencies (were measured worst cases from all EUT positions and carrier frequencies)								
110.505	28.66	21.65	43.5	-21.85	Vertical	2.16	-44.00	Pass
123.335	26.96	20.91	43.5	-22.59	Vertical	1.54	-73.00	
150.020	33.53	29.69	43.5	-13.81	Horizontal	1.23	89.00	
155.347	25.98	19.97	43.5	-23.53	Vertical	4.00	-161.00	
170.774	26.62	20.57	43.5	-22.93	Vertical	3.47	-103.00	

*****- Margin = Measured emission - specification limit.
******- EUT front panel refer to 0 degrees position of turntable.

Test specification:	**Section 15.247(d) / RSS-247 section 5.5, Radiated spurious emissions**		
Test procedure:	ANSI C63.10 section 11.12.1		
Test mode:	Compliance	**Verdict:**	PASS
Date(s):	29-Jul-20		
Temperature: 26 ºC	**Relative Humidity:** 38 %	**Air Pressure:** 1003 hPa	**Power:** 28 VDC
Remarks:			

Table 7.3.8 Restricted bands according to FCC section 15.205

MHz	MHz	MHz	MHz	MHz	GHz
0.09 - 0.11	8.37625 - 8.38675	73 - 74.6	399.9 - 410	2690 - 2900	10.6 - 12.7
0.495 - 0.505	8.41425 - 8.41475	74.8 - 75.2	608 - 614	3260 - 3267	13.25 - 13.4
2.1735 - 2.1905	12.29 - 12.293	108 - 121.94	960 - 1240	3332 - 3339	14.47 - 14.5
4.125 - 4.128	12.51975 - 12.52025	123 - 138	1300 - 1427	3345.8 - 3358	15.35 - 16.2
4.17725 - 4.17775	12.57675 - 12.57725	149.9 - 150.05	1435 - 1626.5	3600 - 4400	17.7 - 21.4
4.20725 - 4.20775	13.36 - 13.41	156.52475 - 156.52525	1645.5 - 1646.5	4500 - 5150	22.01 - 23.12
6.215 - 6.218	16.42 - 16.423	156.7 - 156.9	1660 - 1710	5350 – 5460	23.6 - 24
6.26775 - 6.26825	16.69475 - 16.69525	162.0125 - 167.17	1718.8 - 1722.2	7250 - 7750	31.2 - 31.8
6.31175 - 6.31225	16.80425 - 16.80475	167.72 - 173.2	2200 - 2300	8025 – 8500	36.43 - 36.5
8.291 - 8.294	25.5 - 25.67	240 - 285	2310 - 2390	9000 - 9200	Above 38.6
8.362 - 8.366	37.5 - 38.25	322 - 335.4	2483.5 - 2500	9300 - 9500	

Table 7.3.9 Restricted bands according to RSS-Gen

MHz	MHz	MHz	MHz	MHz	GHz
0.09 - 0.11	8.291 - 8.294	16.80425 - 16.80475	399.9 - 410	3260 - 3267	10.6 - 12.7
2.1735 - 2.1905	8.362 - 8.366	25.5 - 25.67	608 - 614	3332 – 3339	13.25 - 13.4
3.020 – 3.026	8.37625 - 8.38675	37.5 - 38.25	960 – 1427	3345.8 – 3358	14.47 – 14.5
4.125 – 4.128	8.41425 - 8.41475	73 - 74.6	1435 – 1626.5	3500 – 4400	15.35 – 16.2
4.17725 – 4.17775	12.29 – 12.293	74.8 - 75.2	1645.5 – 1646.5	4500 – 5150	17.7 – 21.4
4.20725 – 4.20775	12.51975 – 12.52025	108 – 138	1660 - 1710	5350 – 5460	22.01 – 23.12
5.677 – 5.683	12.57675 – 12.57725	156.52475 – 156.52525	1718.8 - 1722.2	7250 - 7750	23.6 - 24
6.215 - 6.218	13.36 – 13.41	156.7 - 156.9	2200 - 2300	8025 – 8500	31.2 - 31.8
6.26775 - 6.26825	16.42 - 16.423	240 - 285	2310 - 2390	9000 - 9200	36.43 - 36.5
6.31175 - 6.31225	16.69475 - 16.69525	322 - 335.4	2655 - 2900	9300 - 9500	Above 38.6

Reference numbers of test equipment used

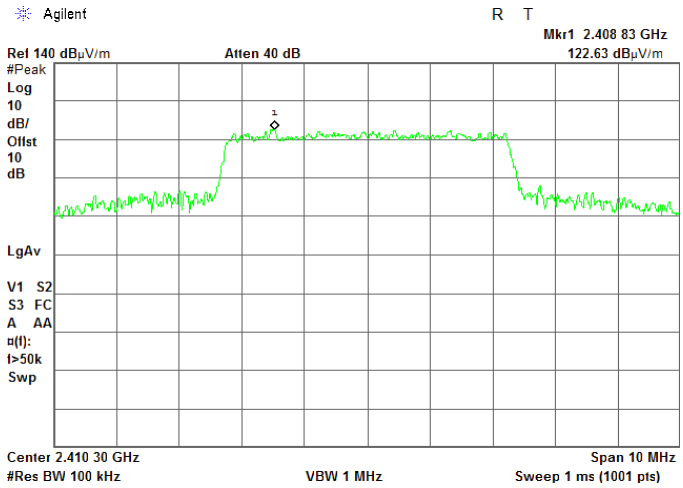
HL 0446	HL 3818	HL 3901	HL 3903	HL 5665	HL 4338	HL 4360	HL 4933
HL 5309	HL 5311	HL 4956	HL 5288				

Full description is given in Appendix A.

Test specification:	**Section 15.247(d) / RSS-247 section 5.5, Radiated spurious emissions**		
Test procedure:	ANSI C63.10 section 11.12.1		
Test mode:	Compliance	**Verdict:**	PASS
Date(s):	29-Jul-20		
Temperature: 26 ºC	**Relative Humidity:** 38 %	**Air Pressure:** 1003 hPa	**Power:** 28 VDC
Remarks:			

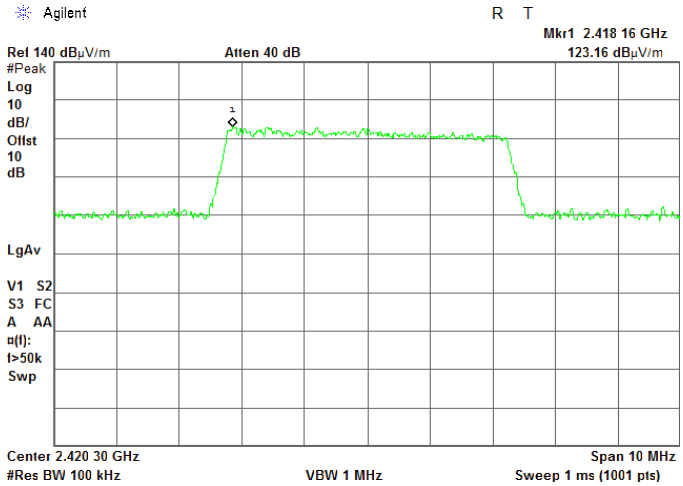
Plot 7.3.1 Radiated emission measurements at the low carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and horizontal
TRANSMITTER 1



Plot 7.3.2 Radiated emission measurements at the mid carrier frequency

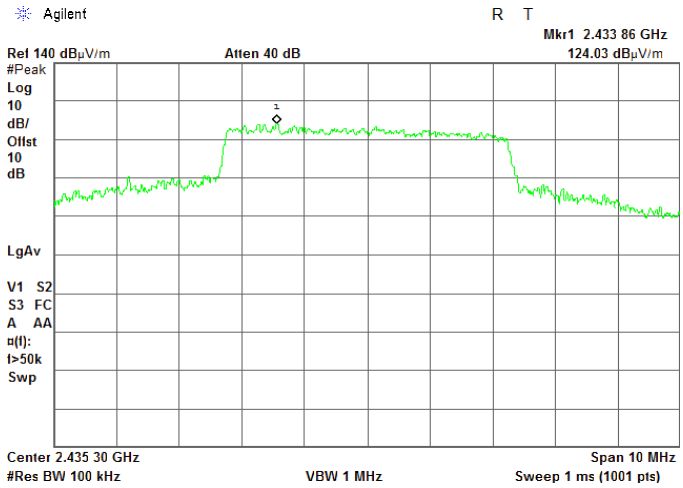
TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and horizontal
TRANSMITTER 1



Test specification:	**Section 15.247(d) / RSS-247 section 5.5, Radiated spurious emissions**		
Test procedure:	ANSI C63.10 section 11.12.1		
Test mode:	Compliance	**Verdict:**	PASS
Date(s):	29-Jul-20		
Temperature: 26 ºC	**Relative Humidity:** 38 %	**Air Pressure:** 1003 hPa	**Power:** 28 VDC
Remarks:			

Plot 7.3.3 Radiated emission measurements at the high carrier frequency

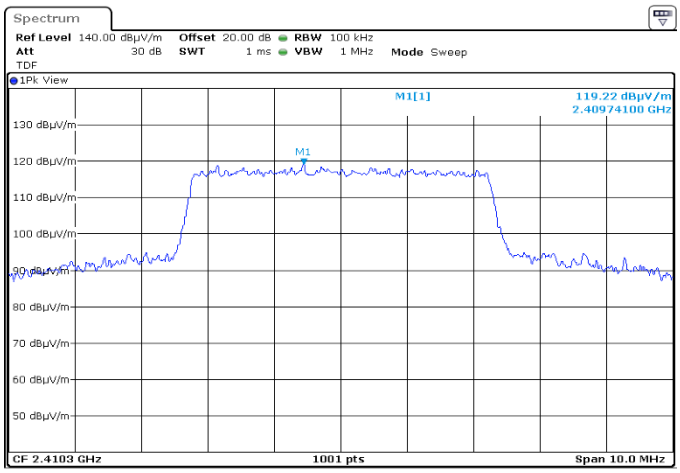
TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and horizontal
TRANSMITTER 1



Test specification:	**Section 15.247(d) / RSS-247 section 5.5, Radiated spurious emissions**		
Test procedure:	ANSI C63.10 section 11.12.1		
Test mode:	Compliance	**Verdict:**	PASS
Date(s):	29-Jul-20		
Temperature: 26 ºC	**Relative Humidity:** 38 %	**Air Pressure:** 1003 hPa	**Power:** 28 VDC
Remarks:			

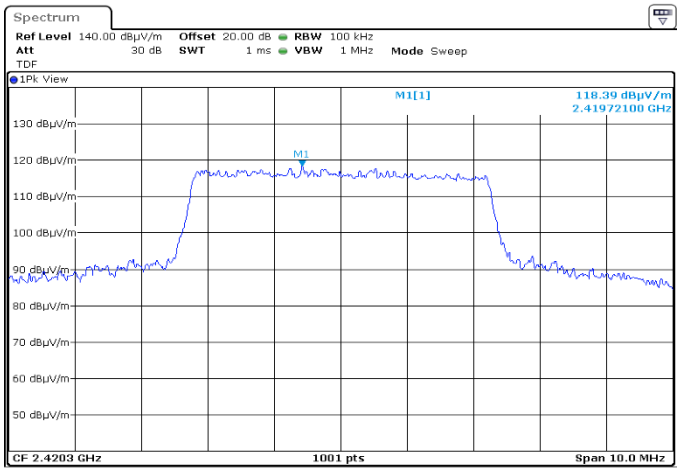
Plot 7.3.4 Radiated emission measurements at the low carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and horizontal
TRANSMITTER 2



Plot 7.3.5 Radiated emission measurements at the mid carrier frequency

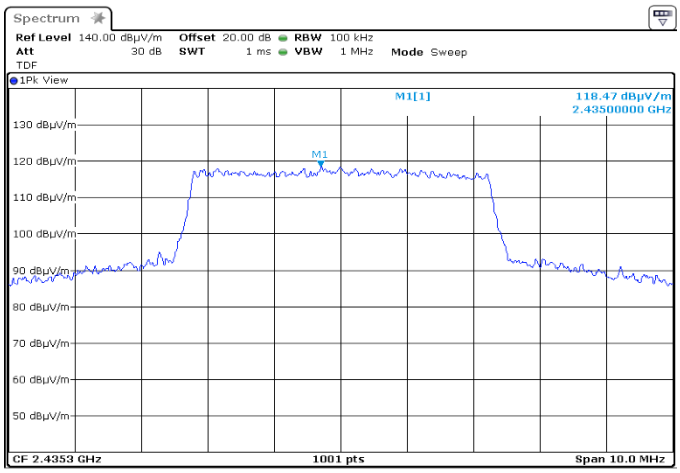
TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and horizontal
TRANSMITTER 2



Test specification:	**Section 15.247(d) / RSS-247 section 5.5, Radiated spurious emissions**		
Test procedure:	ANSI C63.10 section 11.12.1		
Test mode:	Compliance	**Verdict:**	PASS
Date(s):	29-Jul-20		
Temperature: 26 ºC	**Relative Humidity:** 38 %	**Air Pressure:** 1003 hPa	**Power:** 28 VDC
Remarks:			

Plot 7.3.6 Radiated emission measurements at the high carrier frequency

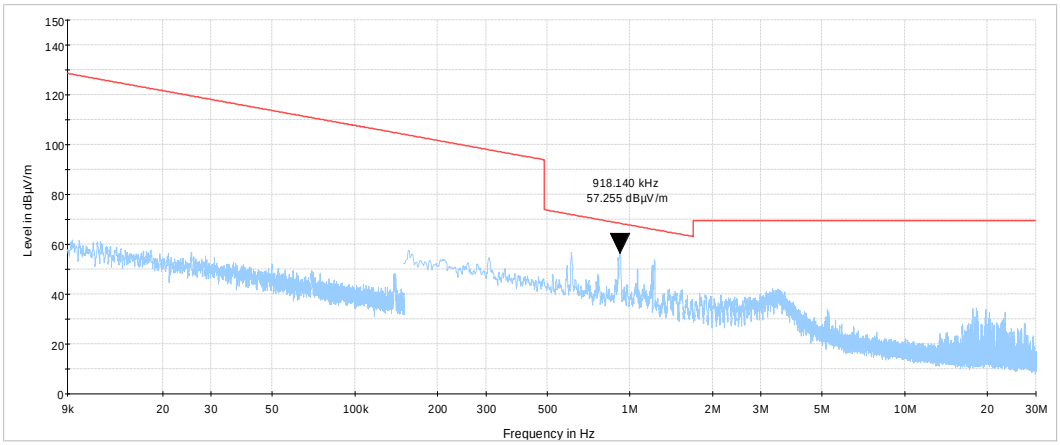
TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and horizontal
TRANSMITTER 2



Test specification:	**Section 15.247(d) / RSS-247 section 5.5, Radiated spurious emissions**		
Test procedure:	ANSI C63.10 section 11.12.1		
Test mode:	Compliance	**Verdict:**	PASS
Date(s):	29-Jul-20		
Temperature: 26 ºC	**Relative Humidity:** 38 %	**Air Pressure:** 1003 hPa	**Power:** 28 VDC
Remarks:			

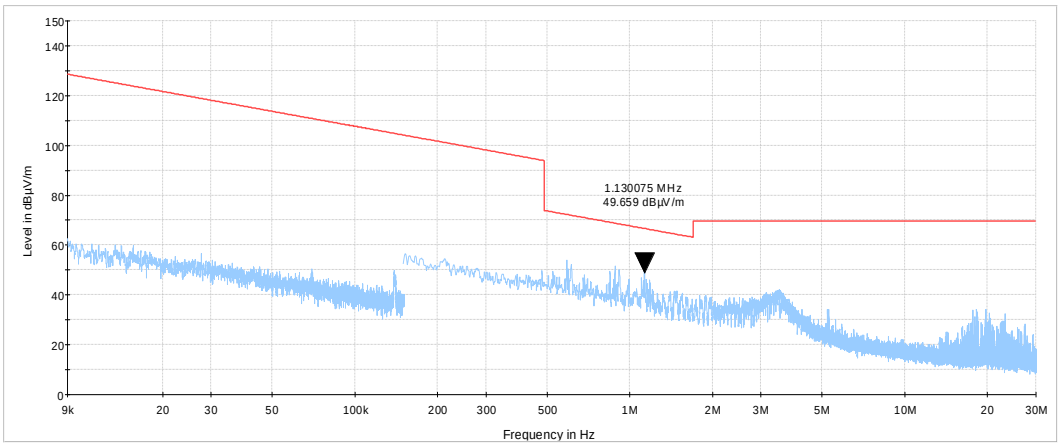
Plot 7.3.7 Radiated emission measurements from 9 kHz to 30 MHz at the low carrier frequency

TEST SITE:	Semi anechoic chamber
TEST DISTANCE:	3 m
ANTENNA POLARIZATION:	Vertical
EUT POSITION:	X
TRANSMITTER	1



Plot 7.3.8 Radiated emission measurements from 9 kHz to 30 MHz at the low carrier frequency

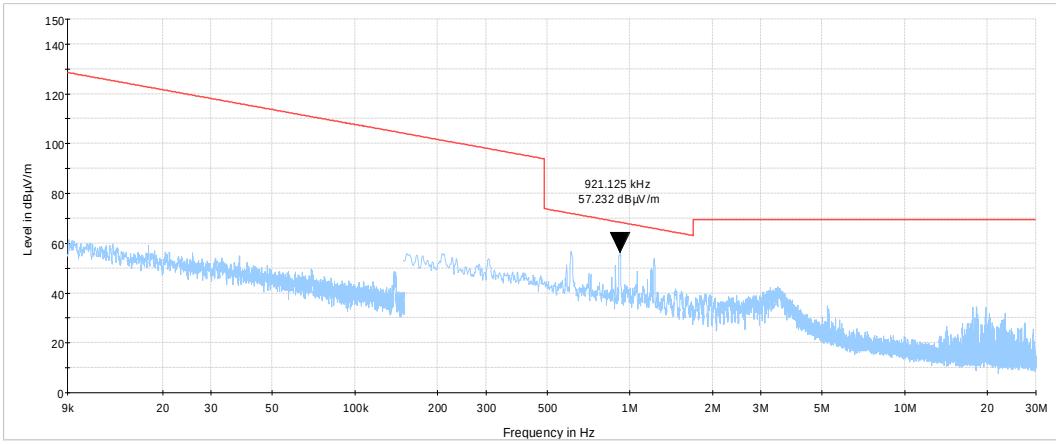
TEST SITE:	Semi anechoic chamber
TEST DISTANCE:	3 m
ANTENNA POLARIZATION:	Vertical
EUT POSITION:	Y
TRANSMITTER	1



Test specification:	**Section 15.247(d) / RSS-247 section 5.5, Radiated spurious emissions**		
Test procedure:	ANSI C63.10 section 11.12.1		
Test mode:	Compliance	**Verdict:**	PASS
Date(s):	29-Jul-20		
Temperature: 26 ºC	**Relative Humidity:** 38 %	**Air Pressure:** 1003 hPa	**Power:** 28 VDC
Remarks:			

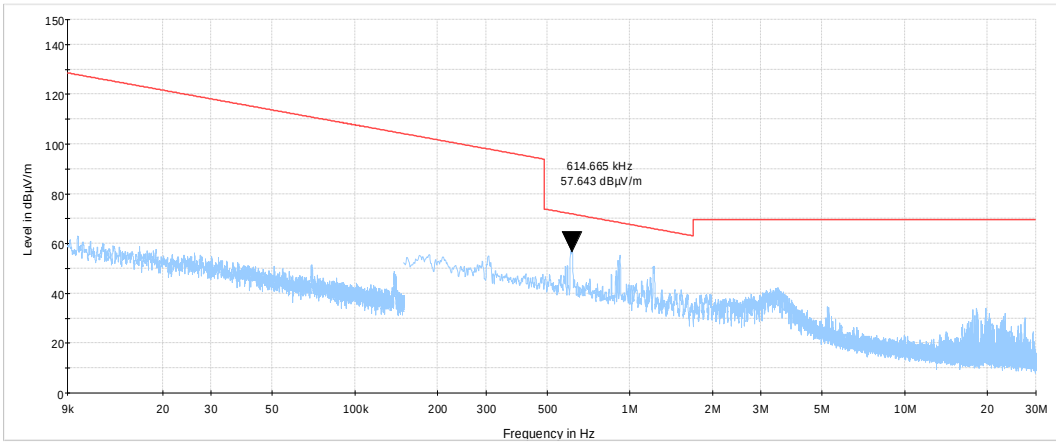
Plot 7.3.9 Radiated emission measurements from 9 kHz to 30 MHz at the mid carrier frequency

TEST SITE:	Semi anechoic chamber
TEST DISTANCE:	3 m
ANTENNA POLARIZATION:	Vertical
EUT POSITION:	X
TRANSMITTER	1



Plot 7.3.10 Radiated emission measurements from 9 kHz to 30 MHz at the mid carrier frequency

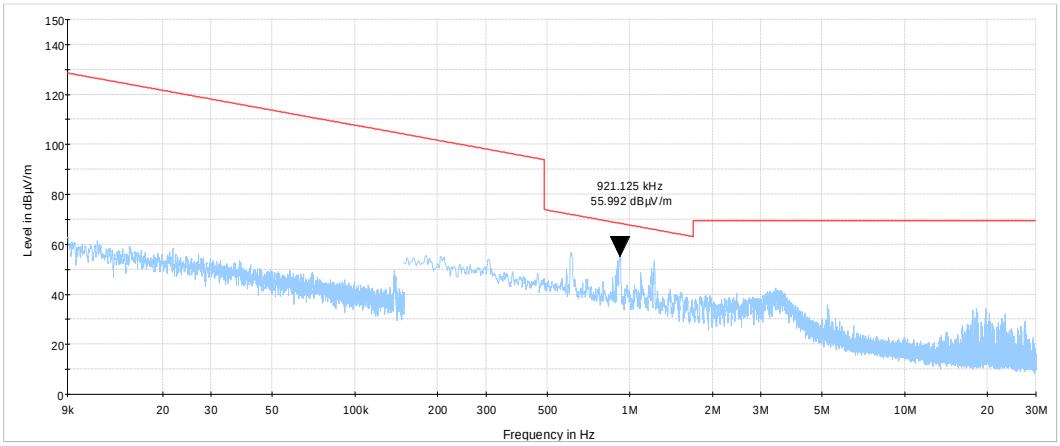
TEST SITE:	Semi anechoic chamber
TEST DISTANCE:	3 m
ANTENNA POLARIZATION:	Vertical
EUT POSITION:	Y
TRANSMITTER	1



Test specification:	**Section 15.247(d) / RSS-247 section 5.5, Radiated spurious emissions**		
Test procedure:	ANSI C63.10 section 11.12.1		
Test mode:	Compliance	**Verdict:**	PASS
Date(s):	29-Jul-20		
Temperature: 26 ºC	**Relative Humidity:** 38 %	**Air Pressure:** 1003 hPa	**Power:** 28 VDC
Remarks:			

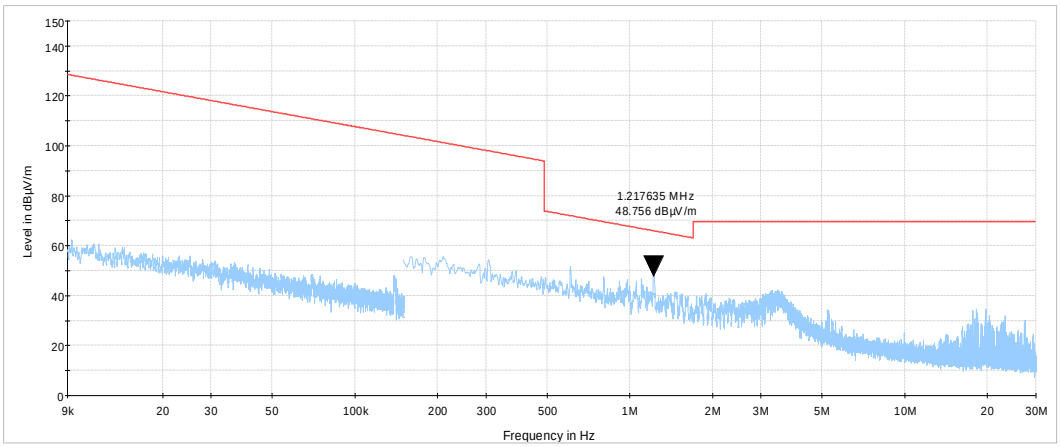
Plot 7.3.11 Radiated emission measurements from 9 kHz to 30 MHz at the high carrier frequency

TEST SITE:	Semi anechoic chamber
TEST DISTANCE:	3 m
ANTENNA POLARIZATION:	Vertical
EUT POSITION:	X
TRANSMITTER	1



Plot 7.3.12 Radiated emission measurements from 9 kHz to 30 MHz at the high carrier frequency

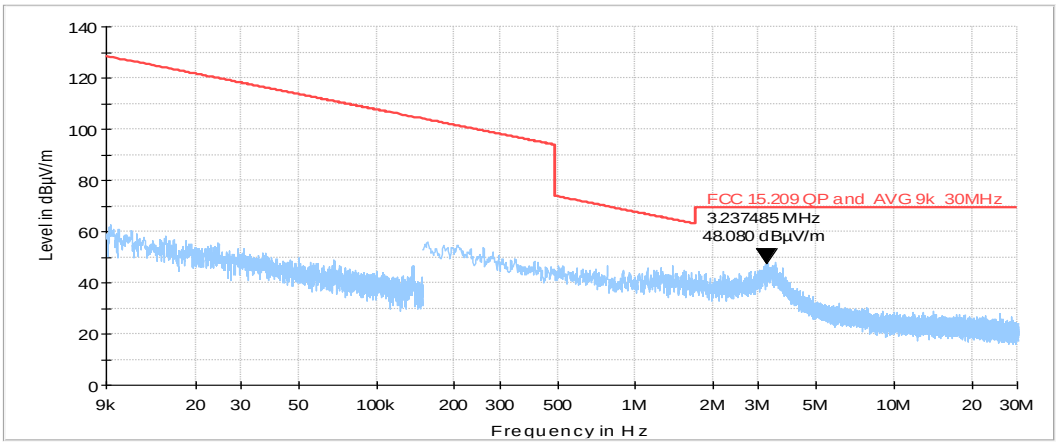
TEST SITE:	Semi anechoic chamber
TEST DISTANCE:	3 m
ANTENNA POLARIZATION:	Vertical
EUT POSITION:	Y
TRANSMITTER	1



Test specification:	**Section 15.247(d) / RSS-247 section 5.5, Radiated spurious emissions**		
Test procedure:	ANSI C63.10 section 11.12.1		
Test mode:	Compliance	**Verdict:**	PASS
Date(s):	29-Jul-20		
Temperature: 26 ºC	**Relative Humidity:** 38 %	**Air Pressure:** 1003 hPa	**Power:** 28 VDC
Remarks:			

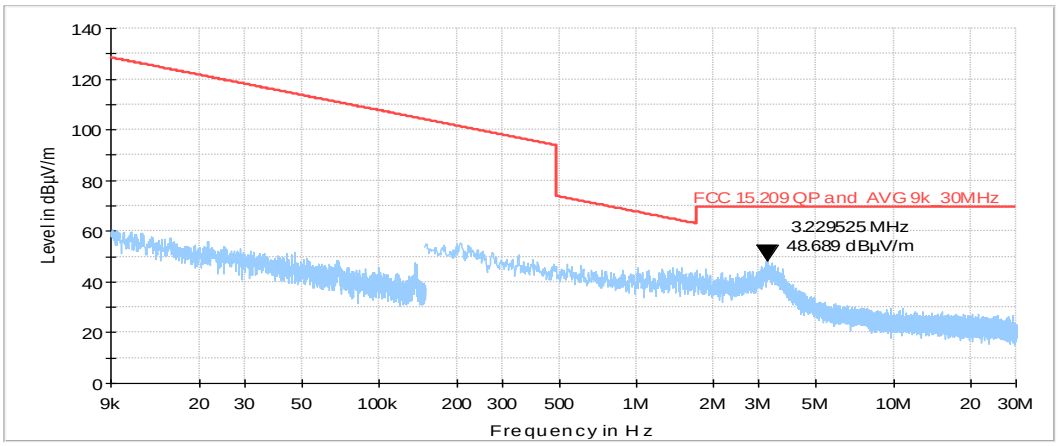
Plot 7.3.13 Radiated emission measurements from 9 kHz to 30 MHz at the low carrier frequency

TEST SITE:	Semi anechoic chamber
TEST DISTANCE:	3 m
ANTENNA POLARIZATION:	Vertical
EUT POSITION:	X
TRANSMITTER	2



Plot 7.3.14 Radiated emission measurements from 9 kHz to 30 MHz at the low carrier frequency

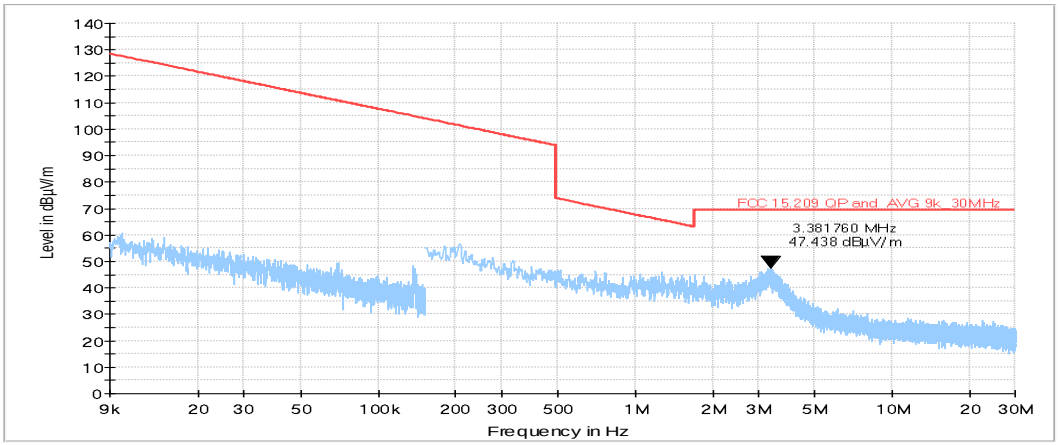
TEST SITE:	Semi anechoic chamber
TEST DISTANCE:	3 m
ANTENNA POLARIZATION:	Vertical
EUT POSITION:	Y
TRANSMITTER	2



Test specification:	**Section 15.247(d) / RSS-247 section 5.5, Radiated spurious emissions**		
Test procedure:	ANSI C63.10 section 11.12.1		
Test mode:	Compliance	**Verdict:**	PASS
Date(s):	29-Jul-20		
Temperature: 26 ºC	**Relative Humidity:** 38 %	**Air Pressure:** 1003 hPa	**Power:** 28 VDC
Remarks:			

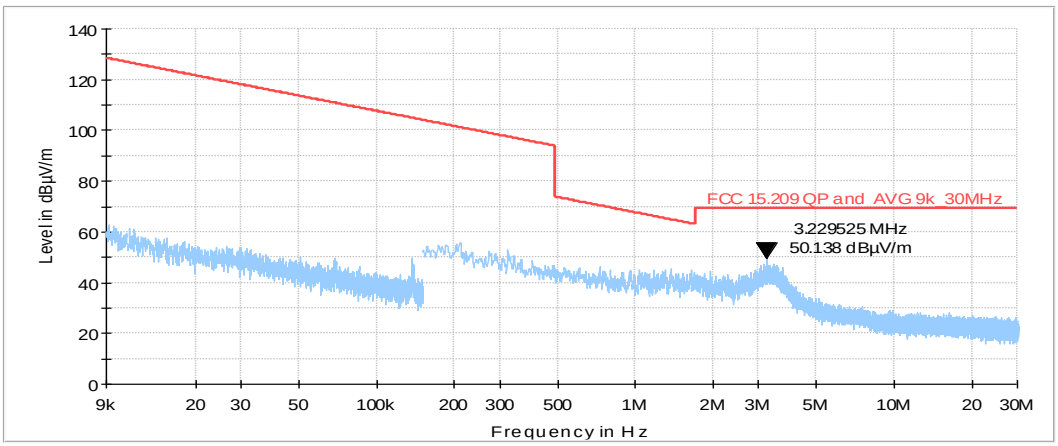
Plot 7.3.15 Radiated emission measurements from 9 kHz to 30 MHz at the mid carrier frequency

TEST SITE:	Semi anechoic chamber
TEST DISTANCE:	3 m
ANTENNA POLARIZATION:	Vertical
EUT POSITION:	X
TRANSMITTER	2



Plot 7.3.16 Radiated emission measurements from 9 kHz to 30 MHz at the mid carrier frequency

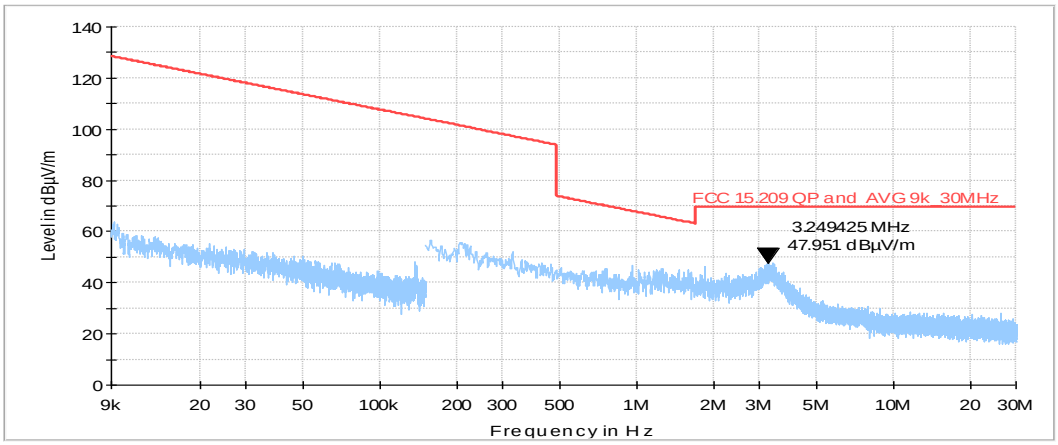
TEST SITE:	Semi anechoic chamber
TEST DISTANCE:	3 m
ANTENNA POLARIZATION:	Vertical
EUT POSITION:	Y
TRANSMITTER	2



Test specification:	**Section 15.247(d) / RSS-247 section 5.5, Radiated spurious emissions**		
Test procedure:	ANSI C63.10 section 11.12.1		
Test mode:	Compliance	**Verdict:**	PASS
Date(s):	29-Jul-20		
Temperature: 26 ºC	**Relative Humidity:** 38 %	**Air Pressure:** 1003 hPa	**Power:** 28 VDC
Remarks:			

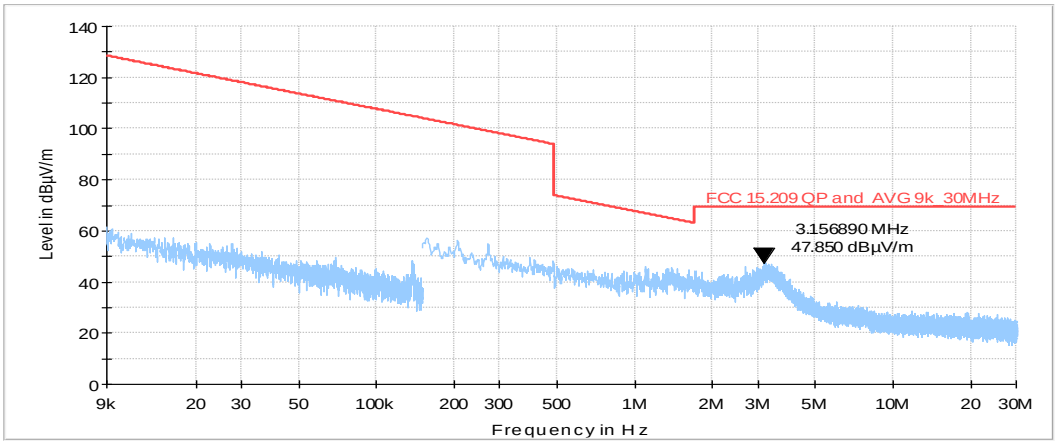
Plot 7.3.17 Radiated emission measurements from 9 kHz to 30 MHz at the high carrier frequency

TEST SITE:	Semi anechoic chamber
TEST DISTANCE:	3 m
ANTENNA POLARIZATION:	Vertical
EUT POSITION:	X
TRANSMITTER	2



Plot 7.3.18 Radiated emission measurements from 9 kHz to 30 MHz at the high carrier frequency

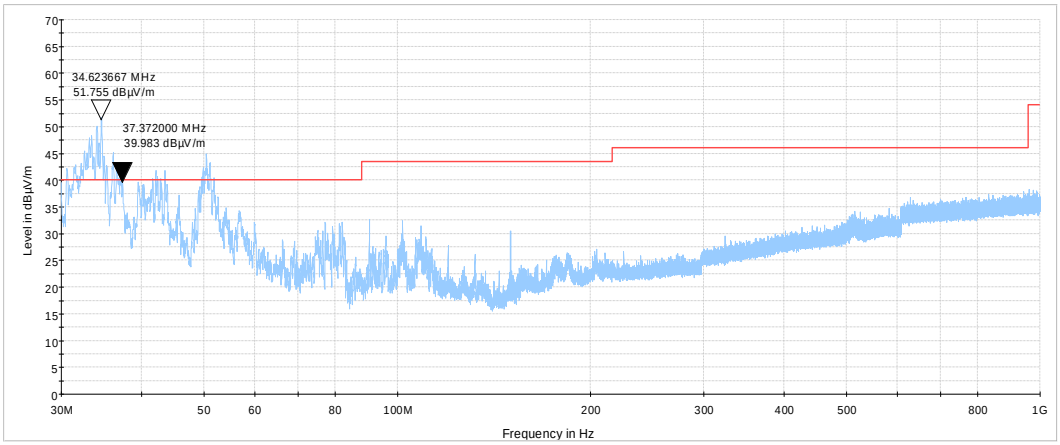
TEST SITE:	Semi anechoic chamber
TEST DISTANCE:	3 m
ANTENNA POLARIZATION:	Vertical
EUT POSITION:	Y
TRANSMITTER	2



Test specification:	**Section 15.247(d) / RSS-247 section 5.5, Radiated spurious emissions**		
Test procedure:	ANSI C63.10 section 11.12.1		
Test mode:	Compliance	**Verdict:**	PASS
Date(s):	29-Jul-20		
Temperature: 26 ºC	**Relative Humidity:** 38 %	**Air Pressure:** 1003 hPa	**Power:** 28 VDC
Remarks:			

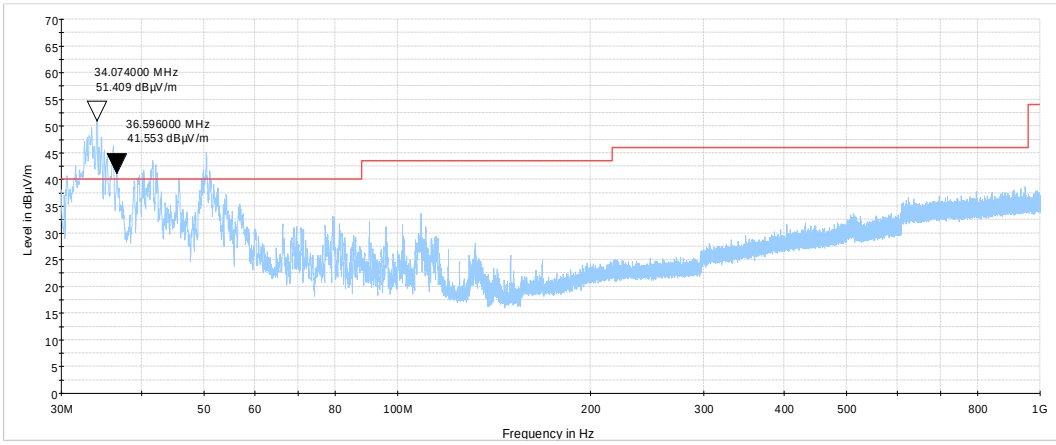
Plot 7.3.19 Radiated emission measurements from 30 to 1000 MHz at the low carrier frequency

TEST SITE:	Semi anechoic chamber
TEST DISTANCE:	3 m
ANTENNA POLARIZATION:	Vertical and Horizontal
EUT POSITION:	X
TRANSMITTER	1



Plot 7.3.20 Radiated emission measurements from 30 to 1000 MHz at the low carrier frequency

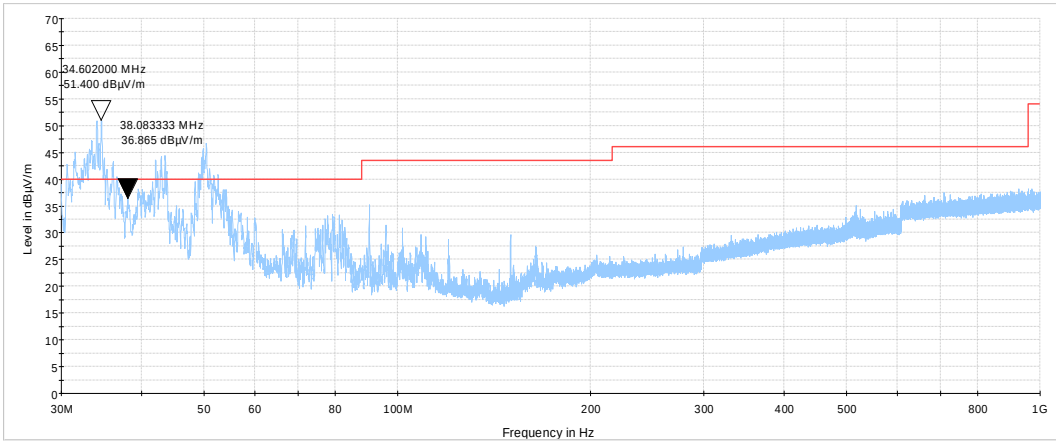
TEST SITE:	Semi anechoic chamber
TEST DISTANCE:	3 m
ANTENNA POLARIZATION:	Vertical and Horizontal
EUT POSITION:	Y
TRANSMITTER	1



Test specification:	**Section 15.247(d) / RSS-247 section 5.5, Radiated spurious emissions**		
Test procedure:	ANSI C63.10 section 11.12.1		
Test mode:	Compliance	**Verdict:**	PASS
Date(s):	29-Jul-20		
Temperature: 26 ºC	**Relative Humidity:** 38 %	**Air Pressure:** 1003 hPa	**Power:** 28 VDC
Remarks:			

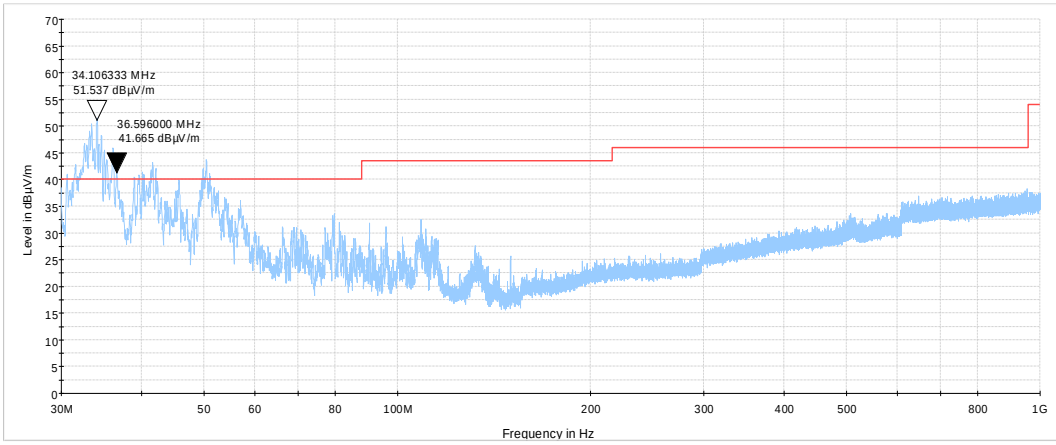
Plot 7.3.21 Radiated emission measurements from 30 to 1000 MHz at the mid carrier frequency

TEST SITE:	Semi anechoic chamber
TEST DISTANCE:	3 m
ANTENNA POLARIZATION:	Vertical and Horizontal
EUT POSITION:	X
TRANSMITTER	1



Plot 7.3.22 Radiated emission measurements from 30 to 1000 MHz at the mid carrier frequency

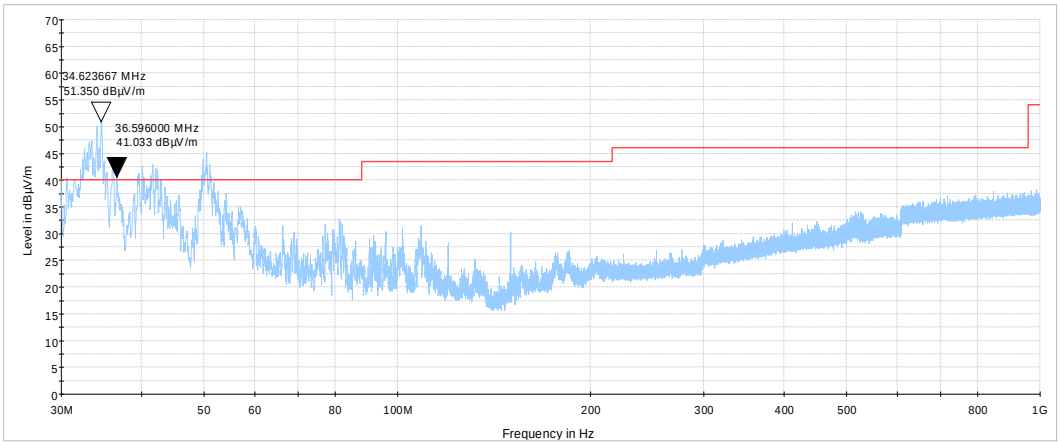
TEST SITE:	Semi anechoic chamber
TEST DISTANCE:	3 m
ANTENNA POLARIZATION:	Vertical and Horizontal
EUT POSITION:	Y
TRANSMITTER	1

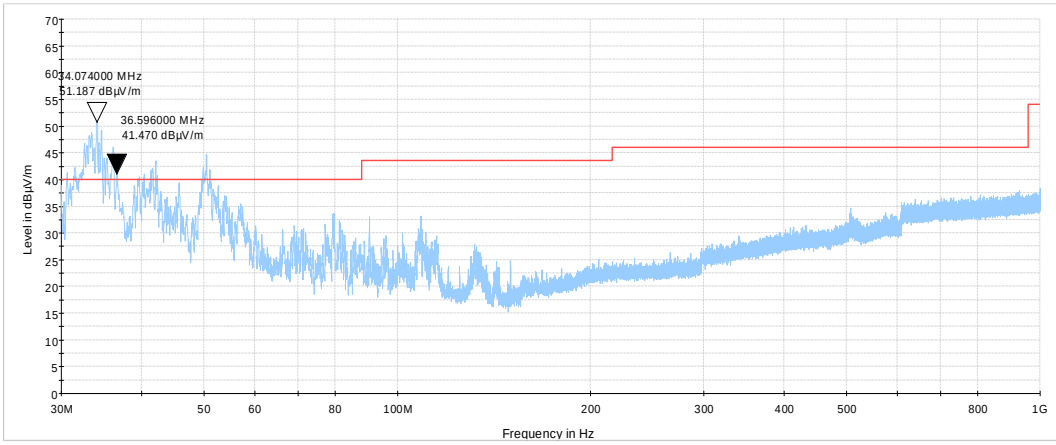


Test specification:	**Section 15.247(d) / RSS-247 section 5.5, Radiated spurious emissions**		
Test procedure:	ANSI C63.10 section 11.12.1		
Test mode:	Compliance	**Verdict:**	PASS
Date(s):	29-Jul-20		
Temperature: 26 ºC	**Relative Humidity:** 38 %	**Air Pressure:** 1003 hPa	**Power:** 28 VDC
Remarks:			

Plot 7.3.23 Radiated emission measurements from 30 to 1000 MHz at the high carrier frequency

TEST SITE:	Semi anechoic chamber
TEST DISTANCE:	3 m
ANTENNA POLARIZATION:	Vertical and Horizontal
EUT POSITION:	X
TRANSMITTER	1



Plot 7.3.24 Radiated emission measurements from 30 to 1000 MHz at the high carrier frequency

TEST SITE:	Semi anechoic chamber
TEST DISTANCE:	3 m
ANTENNA POLARIZATION:	Vertical and Horizontal
EUT POSITION:	Y
TRANSMITTER	1