Report ID: VAYRAD\_FCC\_15.247.51758\_WiFi.docx Date of Issue: 1-Feb-24



Test specification:	Section 15.247(b)3 / RSS-2	247 section 5.4(4), Maximun	n output power
Test procedure:	ANSI C63.10 sections 11.9.2.2	2.4	
Test mode:	Compliance	Verdict:	PASS
Date(s):	12-Sep-23 - 13-Sep-23	verdict:	PASS
Temperature: 24 °C	Relative Humidity: 45 %	Air Pressure: 1005 hPa	Power: 5 VDC
Remarks:			

# Table 7.4.2 Peak output power test results

ASSIGNED FREQUENCY: 2400.0 – 2483.5 MHz

TEST DISTANCE: 3 m

TEST SITE: Semi anechoic chamber

EUT HEIGHT: 1.5 m DETECTOR USED: Peak

TEST ANTENNA TYPE: Double ridged guide (above 1000 MHz)

TRANSMITTER OUTPUT POWER SETTINGS: Maximum DETECTOR USED: Peak RESOLUTION BANDWIDTH: 40 MHz VIDEO BANDWIDTH: 40 MHz CHANNEL BANDWIDTH: 20 MHz MODULATION: CCK BITRATE: 1 Mbps

Frequency, MHz	Field strength, dB(μV/m)	Antenna polarization	Antenna height, m	Azimuth, degrees*	EUT antenna gain, dBi	Peak output power, dBm**	Limit, dBm	Margin, dB***	Verdict
2412.0	104.82	Horizontal	1.8	155	2.3	7.32	30.0	-22.68	Pass
2442.0	104.29	Horizontal	1.5	-150	2.3	6.79	30.0	-23.21	Pass
2462.0	105.61	Horizontal	1.5	-138	2.3	8.11	30.0	-21.89	Pass

CHANNEL BANDWIDTH: 20 MHz
MODULATION: CCK
BITRATE: 11 Mbps

Frequency, MHz	Field strength, dB(μV/m)	Antenna polarization	Antenna height, m	Azimuth, degrees*	EUT antenna gain, dBi	Peak output power, dBm**	Limit, dBm	Margin, dB***	Verdict
2412.0	105.67	Horizontal	1.8	151	2.3	8.14	30.0	-21.86	Pass
2442.0	105.39	Horizontal	1.8	140	2.3	7.86	30.0	-22.14	Pass
2462.0	106.04	Horizontal	1.8	141	2.3	8.54	30.0	-21.49	Pass

CHANNEL BANDWIDTH: 20 MHz MODULATION: BPSK BITRATE: 6 Mbps

Frequency, MHz	Field strength, dB(μV/m)	Antenna polarization	Antenna height, m	Azimuth, degrees*	EUT antenna gain, dBi	Peak output power, dBm**	Limit, dBm	Margin, dB***	Verdict
2412.0	104.92	Horizontal	1.8	140	2.3	7.42	30.0	-22.58	Pass
2442.0	105.51	Horizontal	1.8	144	2.3	8.01	30.0	-21.99	Pass
2462.0	105.70	Horizontal	1.8	140	2.3	8.20	30.0	-21.80	Pass

CHANNEL BANDWIDTH: 20 MHz
MODULATION: 64-QAM
BITRATE: 54 Mbps

Frequency, MHz	Field strength, dB(μV/m)	Antenna polarization	Antenna height, m	Azimuth, degrees*	EUT antenna gain, dBi	Peak output power, dBm**	Limit, dBm	Margin, dB***	Verdict
2412.0	104.59	Horizontal	1.8	-145	2.3	7.06	30.0	-22.94	Pass
2442.0	104.25	Horizontal	1.8	-150	2.3	6.72	30.0	-23.28	Pass
2462.0	104.67	Horizontal	1.8	-138	2.3	7.14	30.0	-22.86	Pass



Test specification:	Section 15.247(b)3 / RSS-2	247 section 5.4(4), Maximun	n output power
Test procedure:	ANSI C63.10 sections 11.9.2.2	2.4	
Test mode:	Compliance	Verdict:	PASS
Date(s):	12-Sep-23 - 13-Sep-23	verdict:	PASS
Temperature: 24 °C	Relative Humidity: 45 %	Air Pressure: 1005 hPa	Power: 5 VDC
Remarks:			

CHANNEL BANDWIDTH: 20 MHz
MODULATION: BPSK
BITRATE: 6.5 Mbps

Frequency, MHz	Field strength, dB(μV/m)	Antenna polarization	Antenna height, m	Azimuth, degrees*	EUT antenna gain, dBi	Peak output power, dBm**	Limit, dBm	Margin, dB***	Verdict
2412.0	105.78	Horizontal	1.5	-163	2.3	8.28	30.0	-21.75	Pass
2442.0	105.20	Horizontal	1.6	-160	2.3	7.70	30.0	-22.33	Pass
2462.0	105.33	Horizontal	1.6	-160	2.3	7.83	30.0	-22.20	Pass

CHANNEL BANDWIDTH: 20 MHz
MODULATION: 64-QAM
BITRATE: 65 Mbps

Frequency, MHz	Field strength, dB(μV/m)	Antenna polarization	Antenna height, m	Azimuth, degrees*	EUT antenna gain, dBi	Peak output power, dBm**	Limit, dBm	Margin, dB***	Verdict
2412.0	104.18	Horizontal	1.8	-145	2.3	6.65	30.0	-23.35	Pass
2442.0	104.06	Horizontal	1.8	-150	2.3	6.53	30.0	-23.47	Pass
2462.0	104.61	Horizontal	1.8	-138	2.3	7.08	30.0	-22.92	Pass

CHANNEL BANDWIDTH: 40 MHz
MODULATION/BITRATE: BPSK / 6.5 Mbps

Frequency, MHz	Field strength, dB(μV/m)	Antenna polarization	Antenna height, m	Azimuth, degrees*	EUT antenna gain, dBi	Peak output power, dBm**	Limit, dBm	Margin, dB***	Verdict
2422.0	105.60	Horizontal	1.8	-145	0	8.07	30.0	-21.93	Pass
2437.0	105.17	Horizontal	1.8	-150	0	7.64	30.0	-22.36	Pass
2452.0	105.58	Horizontal	1.8	-148	0	8.05	30.0	-21.95	Pass

CHANNEL BANDWIDTH: 40 MHz
MODULATION/BITRATE: 64-QAM / 65 Mbps

Frequency, MHz	Field strength, dB(μV/m)	Antenna polarization	Antenna height, m	Azimuth, degrees*	EUT antenna gain, dBi	Peak output power, dBm**	Limit, dBm	Margin, dB***	Verdict
2422.0	104.84	Vertical	1.55	-145	2.3	7.34	30.0	7.34	Pass
2437.0	104.82	Vertical	1.55	-148	2.3	7.32	30.0	7.32	Pass
2452.0	105.14	Vertical	1.55	-140	2.3	7.64	30.0	7.64	Pass

<sup>\*-</sup> EUT front panel refer to 0 degrees position of turntable.

numeric antenna gain over an isotropic radiator. The above equation was converted in logarithmic units for 3 m test distance: Peak output power in dBm = Field strength in  $dB(\mu V/m)$  - Transmitter antenna gain in dBi = 95.2 dB

Note: Maximum peak output power was obtained at Unom (115%Unom, 85%Unom) input power voltage.

# Reference numbers of test equipment used

HL 7802	HL 5902	HL 3903	HL 4933		

Full description is given in Appendix A.

<sup>\*\*-</sup> Peak output power was calculated from the field strength of carrier as follows:  $P = (E \times d)^2 / (30 \times G)$ , where P is the peak output power in W, E is the field strength in V/m, d is the test distance in meters and G is the transmitter

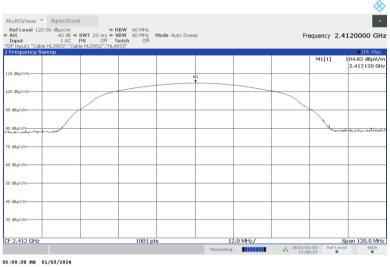
<sup>\*\*\*-</sup> Margin = Peak output power - specification limit.



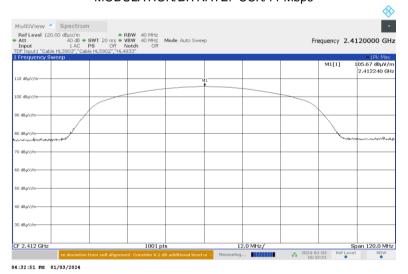
Test specification:	Section 15.247(b)3 / RSS-24	47 section 5.4(4), Maximum	output power
Test procedure:	ANSI C63.10 sections 11.9.2.2.4	4	
Test mode:	Compliance	Verdict:	PASS
Date(s):	12-Sep-23 - 13-Sep-23	verdict.	PASS
Temperature: 24 °C	Relative Humidity: 45 %	Air Pressure: 1005 hPa	Power: 5 VDC
Remarks:			

Plot 7.4.1 Field strength of carrier at low frequency

CHANNEL BANDWIDTH: 20 MHz MODULATION/BITRATE: CCK/1 Mbps



CHANNEL BANDWIDTH: 20 MHz MODULATION/BITRATE: CCK/11 Mbps

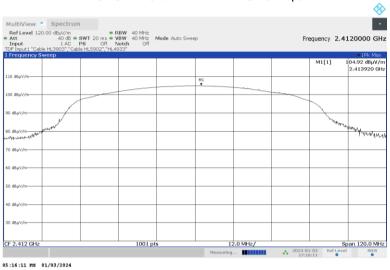




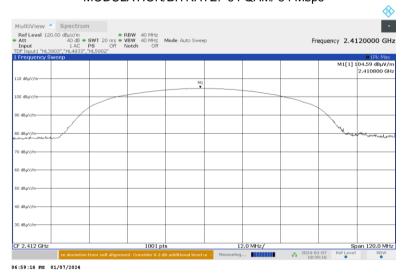
Test specification: Section 15.247(b)3 / RSS-247 section 5.4(4), Maximum output power					
Test procedure:	ANSI C63.10 sections 11.9.2.2.4				
Test mode:	Compliance	Verdict: PASS			
Date(s):	12-Sep-23 - 13-Sep-23				
Temperature: 24 °C	Relative Humidity: 45 % Air Pressure: 1005 hPa Power: 5 VDC				
Remarks:					

Plot 7.4.2 Field strength of carrier at low frequency (continuation)

CHANNEL BANDWIDTH: 20 MHz MODULATION/BITRATE: BPSK/6 Mbps



CHANNEL BANDWIDTH: 20 MHz MODULATION/BITRATE: 64 QAM/ 54 Mbps

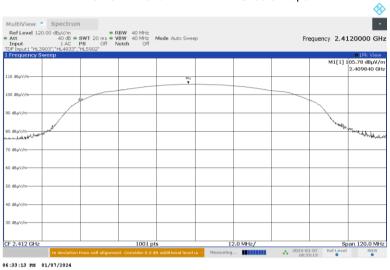




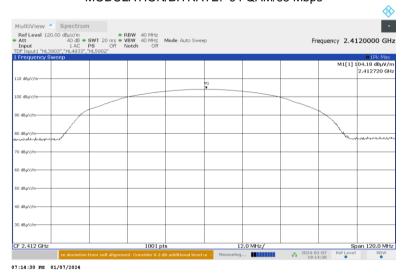
Test specification:	cification: Section 15.247(b)3 / RSS-247 section 5.4(4), Maximum output power					
Test procedure:	ANSI C63.10 sections 11.9.2.2.4					
Test mode:	Compliance	Verdict: PASS				
Date(s):	12-Sep-23 - 13-Sep-23					
Temperature: 24 °C	Relative Humidity: 45 % Air Pressure: 1005 hPa Power: 5 VDC					
Remarks:						

Plot 7.4.3 Field strength of carrier at low frequency (continuation)

CHANNEL BANDWIDTH: 20 MHz MODULATION/BITRATE: BPSK/6.5 Mbps



CHANNEL BANDWIDTH: 20 MHz MODULATION/BITRATE: 64 QAM/65 Mbps

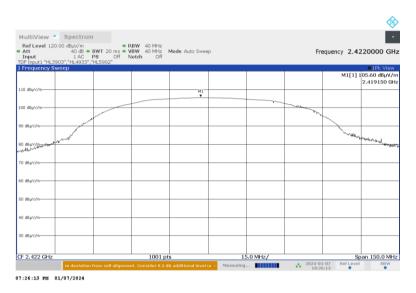




Test specification: Section 15.247(b)3 / RSS-247 section 5.4(4), Maximum output power					
Test procedure:	ANSI C63.10 sections 11.9.2.2.4				
Test mode:	Compliance	Verdict: PASS			
Date(s):	12-Sep-23 - 13-Sep-23				
Temperature: 24 °C	Relative Humidity: 45 % Air Pressure: 1005 hPa Power: 5 VDC				
Remarks:					

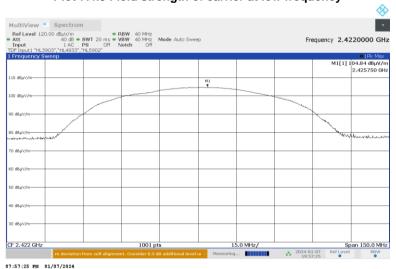
Plot 7.4.4 Field strength of carrier at low frequency (continuation)

CHANNEL BANDWIDTH: 40 MHz MODULATION/BITRATE: BPSK / 6.5 Mbps



CHANNEL BANDWIDTH: 40 MHz MODULATION/BITRATE: 64QAM / 65 Mbps

Plot 7.4.5 Field strength of carrier at low frequency





Test specification: Section 15.247(b)3 / RSS-247 section 5.4(4), Maximum output power

Test procedure: ANSI C63.10 sections 11.9.2.2.4

Test mode: Compliance Verdict: PASS

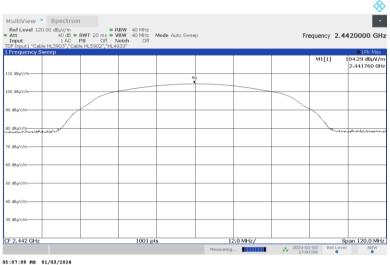
Date(s): 12-Sep-23 - 13-Sep-23

Temperature: 24 °C Relative Humidity: 45 % Air Pressure: 1005 hPa Power: 5 VDC

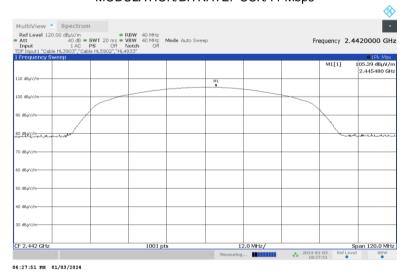
Remarks:

Plot 7.4.6 Field strength of carrier at mid frequency

CHANNEL BANDWIDTH: 20 MHz MODULATION/BITRATE: CCK/1 Mbps



CHANNEL BANDWIDTH: 20 MHz MODULATION/BITRATE: CCK/11 Mbps

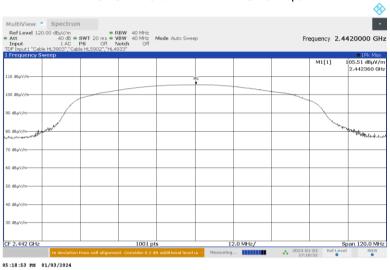




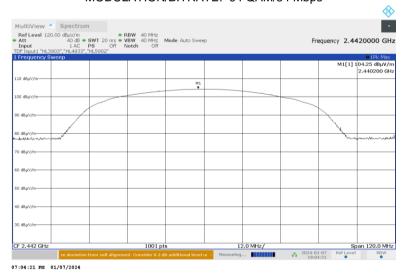
Test specification: Section 15.247(b)3 / RSS-247 section 5.4(4), Maximum output power					
Test procedure:	ANSI C63.10 sections 11.9.2.2.4				
Test mode:	Compliance	Verdict: PASS			
Date(s):	12-Sep-23 - 13-Sep-23				
Temperature: 24 °C	Relative Humidity: 45 % Air Pressure: 1005 hPa Power: 5 VDC				
Remarks:					

Plot 7.4.7 Field strength of carrier at mid frequency (continuation)

CHANNEL BANDWIDTH: 20 MHz MODULATION/BITRATE: BPSK/6 Mbps



CHANNEL BANDWIDTH: 20 MHz MODULATION/BITRATE: 64 QAM/54 Mbps

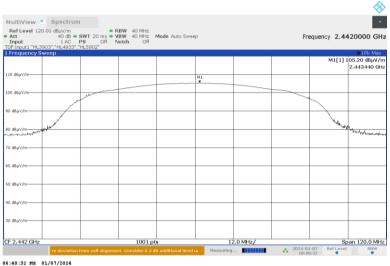




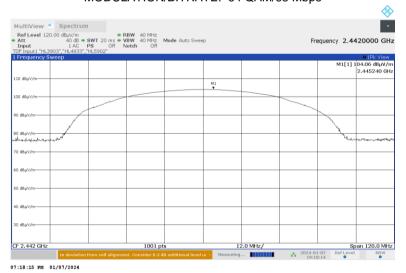
Test specification: Section 15.247(b)3 / RSS-247 section 5.4(4), Maximum output power					
Test procedure:	ANSI C63.10 sections 11.9.2.2.4				
Test mode:	Compliance	Verdict: PASS			
Date(s):	12-Sep-23 - 13-Sep-23				
Temperature: 24 °C	Relative Humidity: 45 % Air Pressure: 1005 hPa Power: 5 VDC				
Remarks:					

Plot 7.4.8 Field strength of carrier at mid frequency (continuation)

CHANNEL BANDWIDTH: 20 MHz MODULATION/BITRATE: BPSK/6.5 Mbps



CHANNEL BANDWIDTH: 20 MHz MODULATION/BITRATE: 64 QAM/65 Mbps





Test specification: Section 15.247(b)3 / RSS-247 section 5.4(4), Maximum output power

Test procedure: ANSI C63.10 sections 11.9.2.2.4

Test mode: Compliance Verdict: PASS

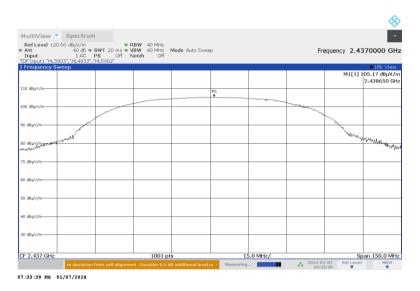
Date(s): 12-Sep-23 - 13-Sep-23

Temperature: 24 °C Relative Humidity: 45 % Air Pressure: 1005 hPa Power: 5 VDC

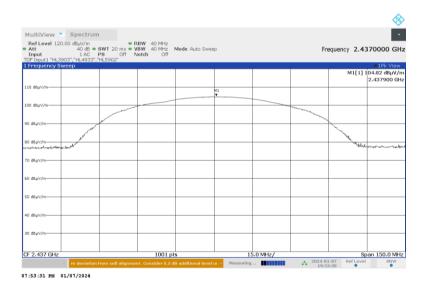
Remarks:

Plot 7.4.9 Field strength of carrier at mid frequency (continuation)

CHANNEL BANDWIDTH: 40 MHz MODULATION/BITRATE: BPSK / 6.5 Mbps



CHANNEL BANDWIDTH: 40 MHz MODULATION/BITRATE: 64QAM / 65 Mbps





Test specification: Section 15.247(b)3 / RSS-247 section 5.4(4), Maximum output power

Test procedure: ANSI C63.10 sections 11.9.2.2.4

Test mode: Compliance Verdict: PASS

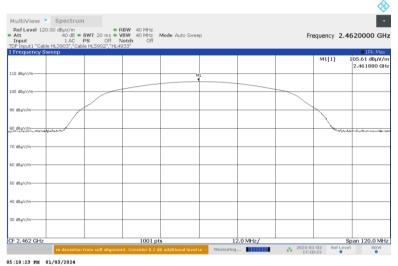
Date(s): 12-Sep-23 - 13-Sep-23

Temperature: 24 °C Relative Humidity: 45 % Air Pressure: 1005 hPa Power: 5 VDC

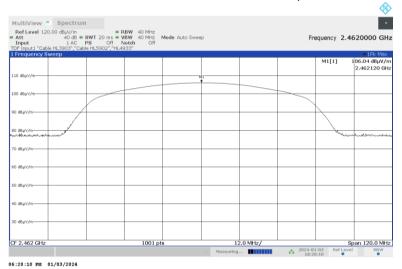
Remarks:

Plot 7.4.10 Field strength of carrier at high frequency

CHANNEL BANDWIDTH: 20 MHz MODULATION/BITRATE: CCK/1 Mbps



CHANNEL BANDWIDTH: 20 MHz MODULATION/BITRATE: CCK/11 Mbps

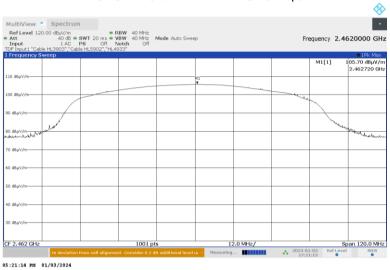




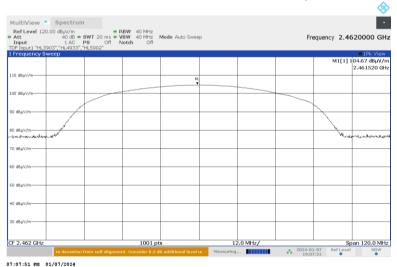
Test specification: Section 15.247(b)3 / RSS-247 section 5.4(4), Maximum output power					
Test procedure:	ANSI C63.10 sections 11.9.2.2.4				
Test mode:	Compliance	Verdict: PASS			
Date(s):	12-Sep-23 - 13-Sep-23				
Temperature: 24 °C	Relative Humidity: 45 % Air Pressure: 1005 hPa Power: 5 VDC				
Remarks:					

Plot 7.4.11 Field strength of carrier at high frequency (continuation)

CHANNEL BANDWIDTH: 20 MHz MODULATION/BITRATE: BPSK/6 Mbps



CHANNEL BANDWIDTH: 20 MHz MODULATION/BITRATE: 64 QAM/54 Mbps

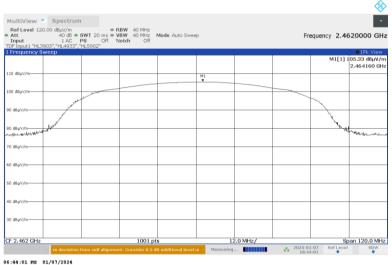




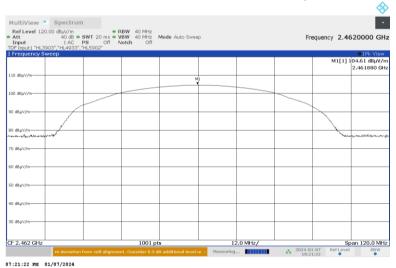
Test specification: Section 15.247(b)3 / RSS-247 section 5.4(4), Maximum output power					
Test procedure:	ANSI C63.10 sections 11.9.2.2.4				
Test mode:	Compliance	Verdict: PASS			
Date(s):	12-Sep-23 - 13-Sep-23				
Temperature: 24 °C	Relative Humidity: 45 % Air Pressure: 1005 hPa Power: 5 VDC				
Remarks:					

Plot 7.4.12 Field strength of carrier at high frequency (continuation)





CHANNEL BANDWIDTH: 20 MHz MODULATION/BITRATE: 64 QAM/65 Mbps

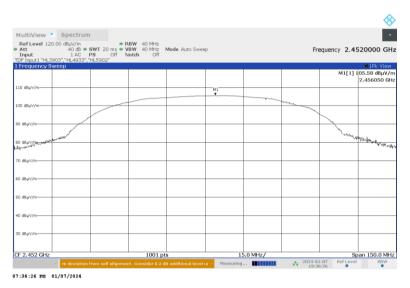




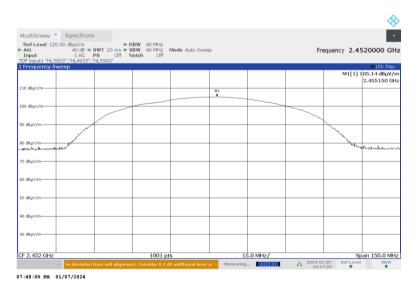
Test specification: Section 15.247(b)3 / RSS-247 section 5.4(4), Maximum output power					
Test procedure:	ANSI C63.10 sections 11.9.2.2.4				
Test mode:	Compliance	Verdict: PASS			
Date(s):	12-Sep-23 - 13-Sep-23				
Temperature: 24 °C	Relative Humidity: 45 % Air Pressure: 1005 hPa Power: 5 VDC				
Remarks:					

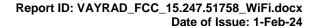
Plot 7.4.13 Field strength of carrier at high frequency (continuation)

CHANNEL BANDWIDTH: 40 MHz MODULATION/BITRATE: BPSK / 6.5 Mbps



CHANNEL BANDWIDTH: 40 MHz MODULATION/BITRATE: 64QAM / 65 Mbps







Test specification:	Section 15.247(d) / RSS-247 section 5.5, Band edge emissions				
Test procedure:	ANSI C63.10 section 11.12.1				
Test mode:	Compliance	Vardiet: DACC			
Date(s):	14-Sep-23 Verdict: PASS				
Temperature: 24 °C	Relative Humidity: 44 % Air Pressure: 1010 hPa Power: 5 VDC				
Remarks:					

# 7.5 Band edge radiated emissions

#### 7.5.1 General

This test was performed to measure emissions, radiated from the EUT at the assigned frequency band edges. Specification test limits are given in Table 7.5.1.

Table 7.5.1 Band edge emission limits

Output power	Assigned frequency, MHz	Attenuation below carrier*, dBc	Field strength at 3 m within restricted bands, dB(μV/m)	
	rrequericy, winz	carrier, ubc	Peak	Average
Peak	2400.0 – 2483.5	20.0	74.0	54.0

<sup>\* -</sup> Band edge emission limit is provided in terms of attenuation below the peak of modulated carrier measured with the same resolution bandwidth.

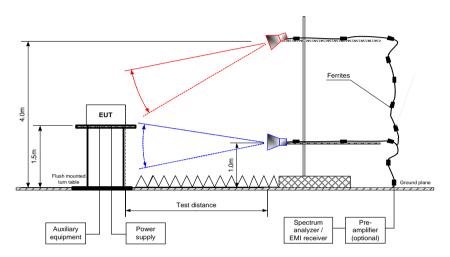
# 7.5.2 Test procedure

- **7.5.2.1** The EUT was set up as shown in Figure 7.5.1, energized normally modulated at the maximum data rate and its proper operation was checked.
- 7.5.2.2 The EUT was adjusted to produce maximum available to end user RF output power at the lowest carrier frequency.
- **7.5.2.3** The spectrum analyzer span was set to capture the carrier frequency and associated modulation products. The resolution bandwidth was set wider than 1 % of the frequency span.
- **7.5.2.4** The spectrum analyzer was set in max hold mode and allowed trace to stabilize. The highest emission level within the authorized band was measured.
- **7.5.2.5** The maximum band edge emission and modulation product outside of the band were measured as provided in Table 7.5.2 and associated plots and referenced to the highest emission level measured within the authorized band.
- **7.5.2.6** The above procedure was repeated with the EUT adjusted to produce maximum RF output power at the highest carrier frequency.
- **7.5.2.7** The above procedure was repeated with the frequency hopping function enabled.



Test specification:	Section 15.247(d) / RSS-247 section 5.5, Band edge emissions					
Test procedure:	ANSI C63.10 section 11.12.1					
Test mode:	Compliance Vardiet DACC					
Date(s):	14-Sep-23	14-Sep-23 Verdict: PASS				
Temperature: 24 °C	Relative Humidity: 44 % Air Pressure: 1010 hPa Power: 5 VDC					
Remarks:						

Figure 7.5.1 Band edge emission test setup



Report ID: VAYRAD\_FCC\_15.247.51758\_WiFi.docx Date of Issue: 1-Feb-24



Test specification: Section 15.247(d) / RSS-247 section 5.5, Band edge emissions

Test procedure: ANSI C63.10 section 11.12.1

Test mode: Compliance Verdict: PASS

Temperature: 24 °C Relative Humidity: 44 % Air Pressure: 1010 hPa Power: 5 VDC

Remarks:

# Table 7.5.2 Band edge emission outside restricted bands test results

ASSIGNED FREQUENCY RANGE: 2400.0 – 2483.5 MHz

DETECTOR USED:PeakTRANSMITTER OUTPUT POWER SETTINGS:MaximumRESOLUTION BANDWIDTH:100 kHzVIDEO BANDWIDTH:≥ RBW

CHANNEL BANDWIDTH: 20 MHz
MODULATION/BITRATE: CCK / 11 Mbps

Frequency, MHz	Band edge emission, dBm	Emission at carrier, dBm	Attenuation below carrier, dBc	Limit, dBc	Margin, dB*	Verdict
2395.989	45.45	91.70	46.25	20	-26.25	Pass

CHANNEL BANDWIDTH: 20 MHz
MODULATION/BITRATE: CCK / 11Mbps

Frequency, MHz	Band edge emission, dBµV/m	Emission at carrier, dBµV/m	Attenuation below carrier, dBc	Limit, dBc	Margin, dB*	Verdict
2396.165	43.81	91.79	47.98	20	-27.98	Pass

CHANNEL BANDWIDTH: 20 MHz
MODULATION/BITRATE: BPSK / 6 Mbps

Frequency, Band edge emission, MHz dBµV/m		Emission at carrier, dBµV/m	Attenuation below carrier, dBc	Limit, dBc	Margin, dB*	Verdict
2395.132	56.46	87.64	31.18	20.0	-11.18	Pass

CHANNEL BANDWIDTH: 20 MHz

MODULATION/BITRATE: BPSK / 6.5 Mbps

Frequency, MHz	Band edge emission, dBµV/m	Emission at carrier, dBµV/m	Attenuation below carrier, dBc	Limit, dBc	Margin, dB*	Verdict
2398.846	58.10	87.66	29.56	20.0	-9.56	Pass

CHANNEL BANDWIDTH: 20 MHz

MODULATION/BITRATE: 64QAM / 54 Mbps

Frequency, MHz	Band edge emission, dBµV/m	Emission at carrier, dBµV/m	Attenuation below carrier, dBc	Limit, dBc	Margin, dB*	Verdict
2397.000	43.34	84.26	40.92	20.0	-20.92	Pass

CHANNEL BANDWIDTH: 20 MHz

MODULATION/BITRATE: 64QAM / 65 Mbps

Frequency, Band edge emission, dBµV/m		Emission at carrier, Attenuation below carrier, dBc		Limit, dBc	Margin, dB*	Verdict
2397.000	42.10	83.31	41.21	20.0	-21.21	Pass



Date of Issue: 1-Feb-24

Test specification:	Section 15.247(d) / RSS-24	7 section 5.5, Band edge e	missions		
Test procedure:	ANSI C63.10 section 11.12.1				
Test mode:	Compliance	Vordict	DACC		
Date(s):	14-Sep-23	Verdict: PASS			
Temperature: 24 °C	Relative Humidity: 44 %	Air Pressure: 1010 hPa	Power: 5 VDC		
Remarks:					

Table 7.5.3 Band edge emission outside restricted bands test results (continuation)

ASSIGNED FREQUENCY RANGE: 2400.0 – 2483.5 MHz

DETECTOR USED:PeakTRANSMITTER OUTPUT POWER SETTINGS:MaximumRESOLUTION BANDWIDTH:100 kHzVIDEO BANDWIDTH:≥ RBW

CHANNEL BANDWIDTH: 40 MHz

MODULATION/BITRATE: BPSK / 6.5 Mbps

Frequency, MHz	Band edge emission, dBµV/m	Emission at carrier, dBµV/m	Attenuation below carrier, dBc	Limit, dBc	Margin, dB*	Verdict
2399.494	62.31	84.95	22.04	20.0	-2.04	Pass

CHANNEL BANDWIDTH: 40 MHz

MODULATION/BITRATE: 64-QAM / 65 Mbps

Frequency, MHz	Band edge emission, dBµV/m	Emission at carrier, dBµV/m	Attenuation below carrier, dBc	Limit, dBc	Margin, dB*	Verdict
2399.494	54.38	80.43	26.05	20.0	-6.05	Pass

<sup>\*-</sup> Margin = Attenuation below carrier – specification limit.

Report ID: VAYRAD\_FCC\_15.247.51758\_WiFi.docx Date of Issue: 1-Feb-24



Test specification: Section 15.247(d) / RSS-247 section 5.5, Band edge emissions

Test procedure: ANSI C63.10 section 11.12.1

Test mode: Compliance Verdict: PASS

Temperature: 24 °C Relative Humidity: 44 % Air Pressure: 1010 hPa Power: 5 VDC

Remarks:

# Table 7.5.4 Band edge emission inside restricted bands test results

ASSIGNED FREQUENCY RANGE: 2400.0 – 2483.5 MHz

DETECTOR USED: Peak
TRANSMITTER OUTPUT POWER SETTINGS: Maximum
VIDEO BANDWIDTH: ≥ RBW

CHANNEL BANDWIDTH: 20 MHz
MODULATION/BITRATE: CCK / 1 Mbps

	Peak field strength			Avera			
Frequency, MHz	Measured, dB(μV/m)	Limit, dB(μV/m)	Margin, dB**	Measured, dB(μV/m)	Limit, dB(μV/m)	Margin, dB**	Verdict
2386.380	47.68	74.0	-26.32	37.48	54.0	-16.52	Pass
2487.890	48.91	74.0	-25.05	39.57	54.0	-14.43	Pass

CHANNEL BANDWIDTH: 20 MHz
MODULATION/BITRATE: CCK / 11 Mbps

	Peak field strength			Average field			
Frequency, MHz	Measured, dB(μV/m)	Limit, dB(μV/m)	Margin, dB**	Measured, dB(μV/m)	Limit, dB(μV/m)	Margin, dB**	Verdict
2296.860	48.44	74.0	-25.66	36.73	54.0	-17.27	Pass
2487.890	48.63	74.0	-25.37	38.07	54.0	-15.93	Pass

CHANNEL BANDWIDTH: 20 MHz
MODULATION/BITRATE: BPSK / 6 Mbps

	Peak field strength			Avera			
Frequency, MHz	Measured, dB(μV/m)	Limit, dB(μV/m)	Margin, dB**	Measured, dB(μV/m)	Limit, dB(μV/m)	Margin, dB**	Verdict
2389.860	60.19	74.0	-13.81	42.40	54.0	-11.60	Pass
2483.760	64.29	74.0	-9.71	46.49	54.0	-7.51	Pass

CHANNEL BANDWIDTH: 20 MHz
MODULATION/BITRATE: BPSK / 6.5 Mbps

	Peak field strength			Avera			
Frequency, MHz	Measured, dB(μV/m)	Limit, dB(μV/m)	Margin, dB**	Measured, dB(μV/m)	Limit, dB(μV/m)	Margin, dB**	Verdict
2389.860	63.06	74.0	-10.94	44.11	54.0	-9.89	Pass
2483.760	70.23	74.0	-3.77	48.58	54.0	-5.42	Pass

CHANNEL BANDWIDTH: 20 MHz

MODULATION/BITRATE: 64 QAM / 54 Mbps

		Peak field strengt			Average field strength			
Fre	quency, MHz	Measured, dB(μV/m)	Limit, dB(μV/m)	Margin, dB**	Measured, dB(μV/m)	Limit, dB(μV/m)	Margin, dB**	Verdict
	2389.860	49.39	74.0	-24.61	35.44	54.0	-18.57	Pass
	2483.760	56.53	74.0	-17.47	37.41	54.0	-16.59	Pass

CHANNEL BANDWIDTH: 20 MHz

MODULATION/BITRATE: 64 QAM / 65 Mbps

	Peak field strength(VBW=8 MHz)			Average field strength(VBW=1 kHz)			
Frequency, MHz	Measured, dB(μV/m)	Limit, dB(μV/m)	Margin, dB**	Measured, dB(μV/m)	Limit, dB(μV/m)	Margin, dB**	Verdict
2389.860	49.69	74.0	-24.31	35.30	54.0	-18.70	Pass
2484.270	53.88	74.0	-20.12	37.47	54.0	16.53	Pass



Test specification: Section 15.247(d) / RSS-247 section 5.5, Band edge emissions

Test procedure: ANSI C63.10 section 11.12.1

Test mode: Compliance Verdict: PASS

Temperature: 24 °C Relative Humidity: 44 % Air Pressure: 1010 hPa Power: 5 VDC

Remarks:

# Table 7.5.5 Band edge emission inside restricted bands test results

ASSIGNED FREQUENCY RANGE: 2400.0 – 2483.5 MHz

DETECTOR USED: Peak
TRANSMITTER OUTPUT POWER SETTINGS: Maximum
VIDEO BANDWIDTH: ≥ RBW

CHANNEL BANDWIDTH: 40 MHz

MODULATION/BITRATE: BPSK / 6.5 Mbps

	Peak field strength			Average field strength			
Frequency, MHz	Measured, dB(μV/m)	Limit, dB(μV/m)	Margin, dB**	Measured, dB(μV/m)	Limit, dB(μV/m)	Margin, dB**	Verdict
2387.830	64.86	74	-9.14	48.20	54	-5.80	Pass
2483.760	69.28	74	-4.72	53.37	54	-0.63	Pass

CHANNEL BANDWIDTH: 40 MHz

MODULATION/BITRATE: 64-QAM / 65 Mbps

	Peak field strength(VBW=8 MHz)			Average field strength(VBW=1 kHz)			
Frequency, MHz	Measured, dB(μV/m)	Limit, dB(μV/m)	Margin, dB**	Measured, dB(μV/m)	Limit, dB(μV/m)	Margin, dB**	Verdict
2389.860	50.95	74	-23.05	35.51	54	-18.49	Pass
2483.760	55.93	74	-18.07	38.46	54	-15.54	Pass

# Reference numbers of test equipment used

	-	-			
HL 7802	HL 5902	HL 3903	HL 4933		

Full description is given in Appendix A.



06:10:15 PM 09/14/2023

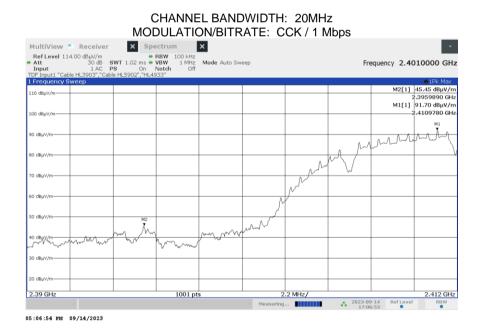
Test specification:	Section 15.247(d) / RSS-247 section 5.5, Band edge emissions				
Test procedure:	ANSI C63.10 section 11.12.1				
Test mode:	Compliance	Verdict:	PASS		
Date(s):	14-Sep-23	verdict.	PASS		
Temperature: 24 °C	Relative Humidity: 44 %	Air Pressure: 1010 hPa	Power: 5 VDC		
Remarks:					

Plot 7.5.1 The highest emission level within restricted band at low carrier frequency

CHANNEL BANDWIDTH: 20MHz

Plot 7.5.2 The highest emission level outside restricted band at low carrier frequency

06:08:28 PM 09/14/2023





06:14:40 PM 09/14/2023

Test specification:	Section 15.247(d) / RSS-247 section 5.5, Band edge emissions				
Test procedure:	ANSI C63.10 section 11.12.1				
Test mode:	Compliance	Verdict:	PASS		
Date(s):	14-Sep-23	verdict.	PASS		
Temperature: 24 °C	Relative Humidity: 44 %	Air Pressure: 1010 hPa	Power: 5 VDC		
Remarks:					

Plot 7.5.3 The highest emission level within restricted band at low carrier frequency

CHANNEL BANDWIDTH: 20MHz

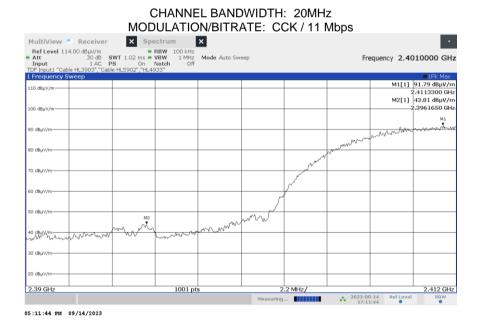
MODULATION/BITRATE: CCK / 11 Mbps

\*\*NullNiew \*\* Receiver\*\*

\*\*Ret Level 90.00 d/s//m \*\* Rev 1 10 fez \*\* Null 10 fe

Plot 7.5.4 The highest emission level outside restricted band at low carrier frequency

06:16:49 PM 09/14/2023





2.1 GHz 06:21:19 PM 09/14/2023

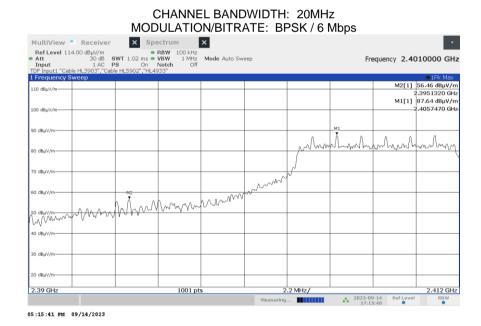
Test specification:	Section 15.247(d) / RSS-247 section 5.5, Band edge emissions				
Test procedure:	ANSI C63.10 section 11.12.1				
Test mode:	Compliance	Verdict:	PASS		
Date(s):	14-Sep-23	verdict.	PASS		
Temperature: 24 °C	Relative Humidity: 44 %	Air Pressure: 1010 hPa	Power: 5 VDC		
Remarks:					

Plot 7.5.5 The highest emission level within restricted band at low carrier frequency

CHANNEL BANDWIDTH: 20MHz

Plot 7.5.6 The highest emission level outside restricted band at low carrier frequency

06:19:14 PM 09/14/2023

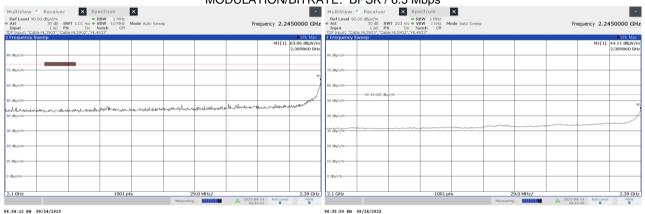




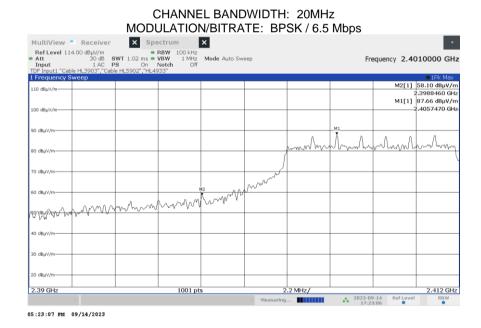
Test specification:	Section 15.247(d) / RSS-247 section 5.5, Band edge emissions				
Test procedure:	ANSI C63.10 section 11.12.1				
Test mode:	Compliance	Verdict:	PASS		
Date(s):	14-Sep-23	verdict:	PASS		
Temperature: 24 °C	Relative Humidity: 44 %	Air Pressure: 1010 hPa	Power: 5 VDC		
Remarks:	-				

Plot 7.5.7 The highest emission level within restricted band at low carrier frequency

CHANNEL BANDWIDTH: 20MHz MODULATION/BITRATE: BPSK / 6.5 Mbps



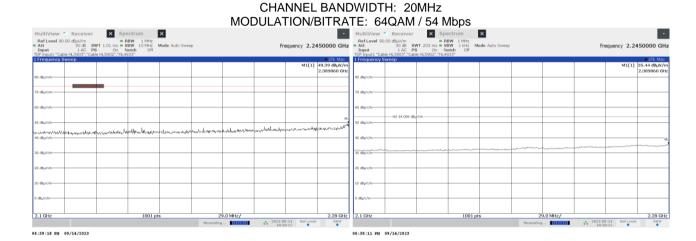
Plot 7.5.8 The highest emission level outside restricted band at low carrier frequency



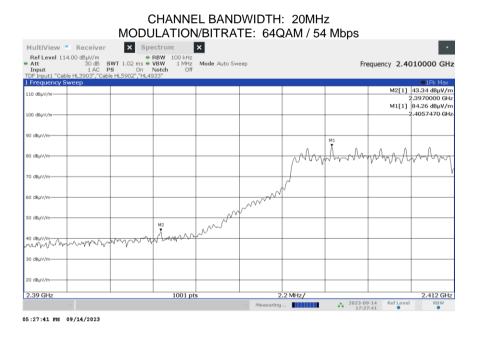


Test specification:	Section 15.247(d) / RSS-247 section 5.5, Band edge emissions				
Test procedure:	ANSI C63.10 section 11.12.1				
Test mode:	Compliance	Verdict:	PASS		
Date(s):	14-Sep-23	verdict.	PASS		
Temperature: 24 °C	Relative Humidity: 44 %	Air Pressure: 1010 hPa	Power: 5 VDC		
Remarks:					

Plot 7.5.9 The highest emission level within restricted band at low carrier frequency



Plot 7.5.10 The highest emission level outside restricted band at low carrier frequency





06:43:11 PM 09/14/2023

Test specification:	Section 15.247(d) / RSS-247 section 5.5, Band edge emissions				
Test procedure:	ANSI C63.10 section 11.12.1				
Test mode:	Compliance	Verdict:	PASS		
Date(s):	14-Sep-23	verdict.	PASS		
Temperature: 24 °C	Relative Humidity: 44 %	Air Pressure: 1010 hPa	Power: 5 VDC		
Remarks:					

Plot 7.5.11 The highest emission level within restricted band at low carrier frequency

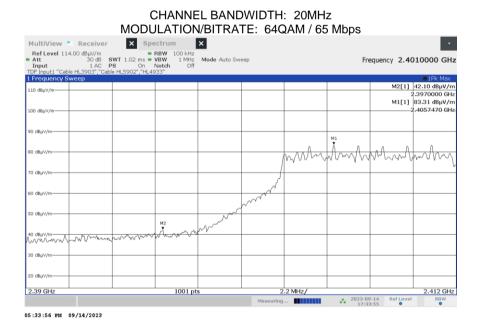
CHANNEL BANDWIDTH: 20MHz

MODULATION/BITRATE: 64QAM / 65 Mbps

Multiview \* Receiver \* Program \*

Plot 7.5.12 The highest emission level outside restricted band at low carrier frequency

06:44:41 PM 09/14/2023





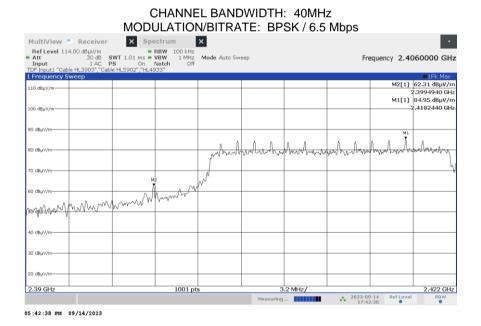
06:51:27 PM 09/14/2023

Test specification:	Section 15.247(d) / RSS-247 section 5.5, Band edge emissions				
Test procedure:	ANSI C63.10 section 11.12.1				
Test mode:	Compliance	Verdict:	PASS		
Date(s):	14-Sep-23	verdict:	PASS		
Temperature: 24 °C	Relative Humidity: 44 %	Air Pressure: 1010 hPa	Power: 5 VDC		
Remarks:	-				

Plot 7.5.13 The highest emission level within restricted band at low carrier frequency

Plot 7.5.14 The highest emission level outside restricted band at low carrier frequency

06:49:38 PM 09/14/2023





06:54:50 PM 09/14/2023

Test specification: Section 15.247(d) / RSS-247 section 5.5, Band edge emissions

Test procedure: ANSI C63.10 section 11.12.1

Test mode: Compliance Verdict: PASS

Temperature: 24 °C Relative Humidity: 44 % Air Pressure: 1010 hPa Power: 5 VDC

Remarks:

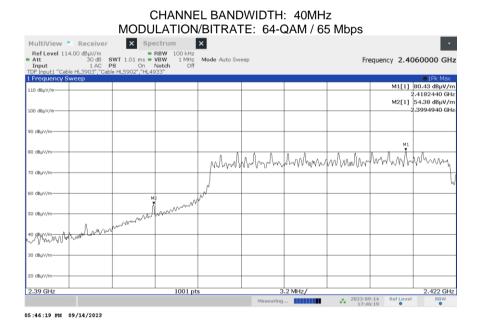
Plot 7.5.15 The highest emission level within restricted band at low carrier frequency

CHANNEL BANDWIDTH: 40MHz
MODULATION/BITRATE: 64-QAM / 65 Mbps

\*\*HullNiver\*\* Receiver\*\*\*
\*\*Ref Level 90.00 80/s/m\*\*\*
\*\*AR 1 Level 90.00 80/s/m\*\*
\*\*AR 1 Level 90.00 80/s/m

Plot 7.5.16 The highest emission level outside restricted band at low carrier frequency

06:55:50 PM 09/14/2023





Test specification: Section 15.247(d) / RSS-247 section 5.5, Band edge emissions

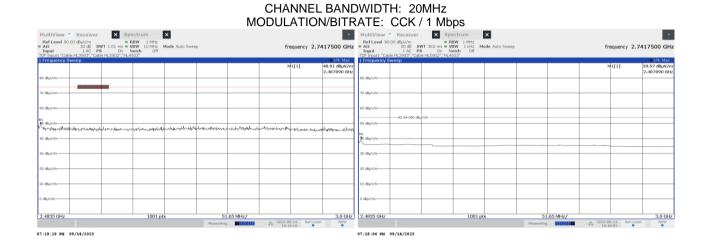
Test procedure: ANSI C63.10 section 11.12.1

Test mode: Compliance Verdict: PASS

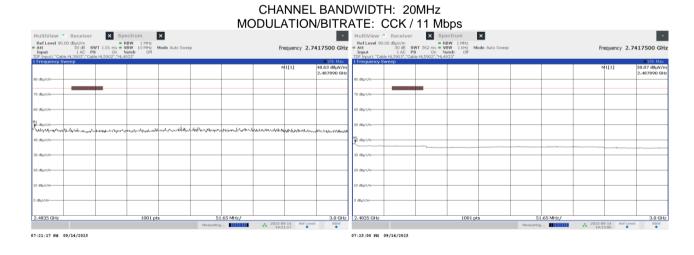
Temperature: 24 °C Relative Humidity: 44 % Air Pressure: 1010 hPa Power: 5 VDC

Remarks:

Plot 7.5.17 The highest emission level within restricted band at high carrier frequency



Plot 7.5.18 The highest emission level within restricted band at high carrier frequency





07:32:01 PM 09/14/2023

Test specification: Section 15.247(d) / RSS-247 section 5.5, Band edge emissions

Test procedure: ANSI C63.10 section 11.12.1

Test mode: Compliance Verdict: PASS

Temperature: 24 °C Relative Humidity: 44 % Air Pressure: 1010 hPa Power: 5 VDC

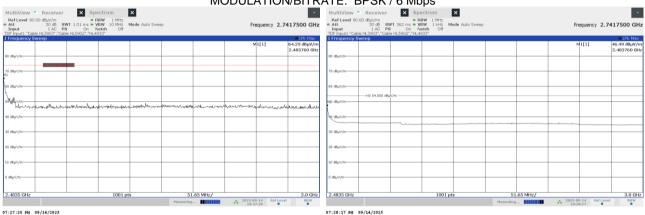
Remarks:

Plot 7.5.19 The highest emission level within restricted band at high carrier frequency

CHANNEL BANDWIDTH: 20MHz
MODULATION/BITRATE: BPSK / 6 Mbps

Multiview \* Receiver Spectrum

Spectrum



Plot 7.5.20 The highest emission level within restricted band at high carrier frequency

07:30:39 PM 09/14/2023