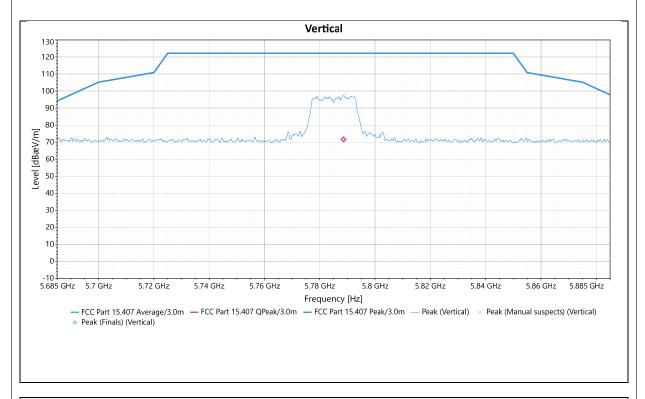


RESTRICTED BAND Test Plots 802.11a – 5785MHz

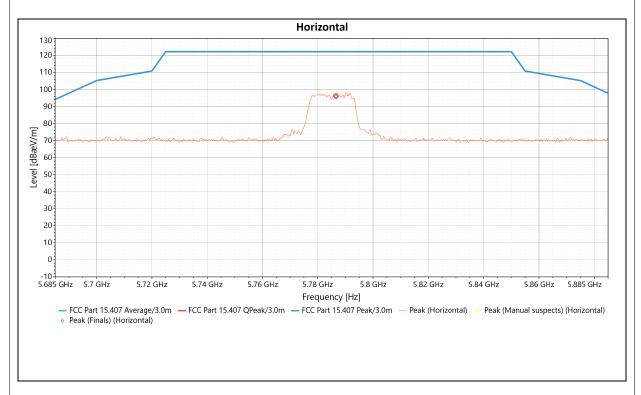


	Antenna Polarity & Test Distance: Vertical at 3m										
No.	Frequency (MHz)	Polarization	Level [dB(uV/m)]	Limit Peak dB(uV/m)	Limit Avg dB(uV/m)	Margin [dB]	Height (m)	Angle (Deg)	Factor [dB(1/m)]	Measure Type/ Result	
1	5788.56	Vertical	97.331	122.23	NaN	NaN	2	180	40.79	Peak (PASS)	

- 1. Level (dBuV) = Reading (dBuV) + Factor (dB(1/m)).
- 2. Factor (dB(1/m)) = Antenna Factor(AF) (dB(1/m)) + Cable Loss (dB) +Preamplifier
- 3. Margin value = Emission level Limit value.
- 4. The emission levels of other frequencies were less than 20dB margin agains



RESTRICTED BAND Test Plots 802.11a – 5785MHz



	Antenna Polarity & Test Distance: Vertical at 3m									
No.	Frequency (MHz)	Polarization	Level [dB(uV/m)]	Limit Peak dB(uV/m)	Limit Avg dB(uV/m)	Margin [dB]	Height (m)	Angle (Deg)	Factor [dB(1/m)]	Measure Type/ Result
1	5786.64	Horizontal	97.964	122.23	NaN	NaN	2.99	54	40.17	Peak (PASS)

REMARKS:

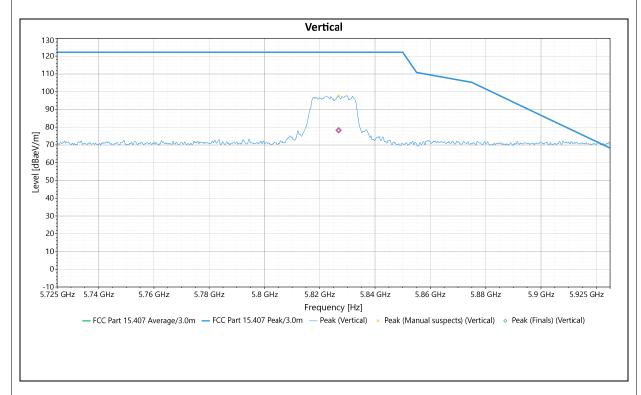
- 1. Level (dBuV) = Reading (dBuV) + Factor (dB(1/m)).
- 2. Factor (dB(1/m)) = Antenna Factor(AF) (dB(1/m)) + Cable Loss (dB) +Preamplifier
- 3. Margin value = Emission level Limit value.
- 4. The emission levels of other frequencies were less than 20dB margin agains

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RESTRICTED BAND Test Plots 802.11a – 5825MHz



	Antenna Polarity & Test Distance: Vertical at 3m										
No.	Frequency (MHz)	Polarization	Level [dB(uV/m)]	Limit Peak dB(uV/m)	Limit Avg dB(uV/m)	Margin [dB]	Height (m)	Angle (Deg)	Factor [dB(1/m)]	Measure Type/ Result	
1	5826.8	Vertical	97.679	122.23	NaN	NaN	1.99	185	40.81	Peak (PASS)	

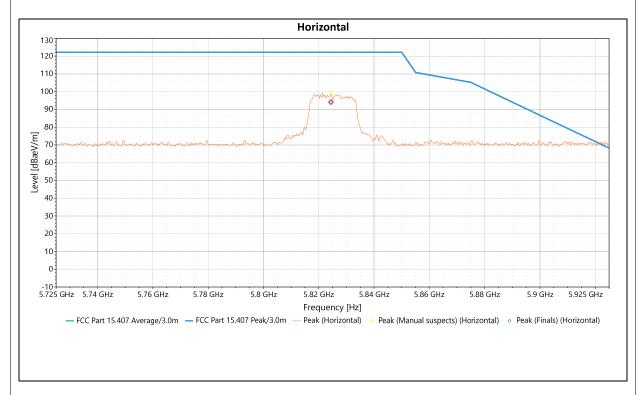
REMARKS:

- 1. Level (dBuV) = Reading (dBuV) + Factor (dB(1/m)).
- 2. Factor (dB(1/m)) = Antenna Factor(AF) (dB(1/m)) + Cable Loss (dB) +Preamplifier
- 3. Margin value = Emission level Limit value.
- 4. The emission levels of other frequencies were less than 20dB margin agains

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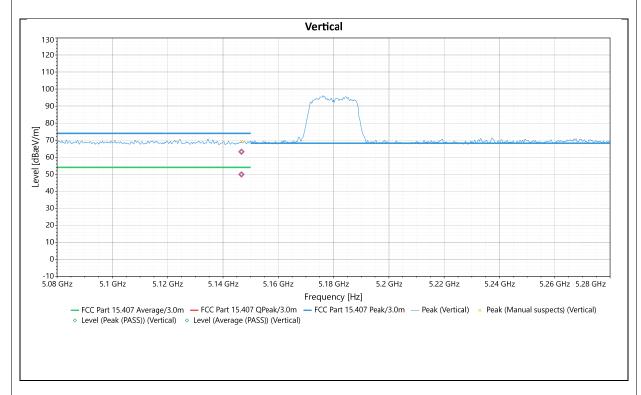
RESTRICTED BAND Test Plots 802.11a – 5825MHz



	Antenna Polarity & Test Distance: Vertical at 3m										
No.	Frequency (MHz)	Polarization	Level [dB(uV/m)]	Limit Peak dB(uV/m)	Limit Avg dB(uV/m)	Margin [dB]	Height (m)	Angle (Deg)	Factor [dB(1/m)]	Measure Type/ Result	
1	5824.44	Horizontal	98.711	122.23	NaN	NaN	2.99	43	40.22	Peak (PASS)	

- 1. Level (dBuV) = Reading (dBuV) + Factor (dB(1/m)).
- 2. Factor (dB(1/m)) = Antenna Factor(AF) (dB(1/m)) + Cable Loss (dB) +Preamplifier
- 3. Margin value = Emission level Limit value.
- 4. The emission levels of other frequencies were less than 20dB margin agains

RESTRICTED BAND Test Plots 802.11n HT20 – 5180MHz

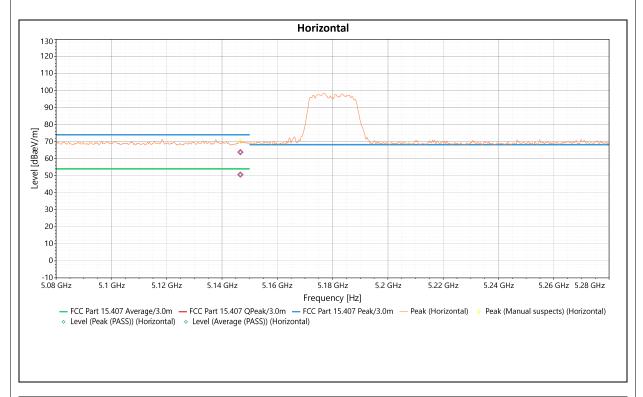


	Antenna Polarity & Test Distance: Vertical at 3m											
No.	No. Frequency (MHz) Polarization Level Limit Margin Height Angle Factor Measure Type/ (MHz) [dB(uV/m)] dB(uV/m) [dB] (m) (Deg) [dB(1/m)]											
1	1 5146.666 Vertical 63.222 74 -10.778 1.77 269 39.24 Peak (PASS)											
2	2 5146.666 Vertical 49.93 54 -4.07 1.77 269 39.24 Average (PASS)											

- 1. Level (dBuV) = Reading (dBuV) + Factor (dB(1/m)).
- 2. Factor (dB(1/m)) = Antenna Factor(AF) (dB(1/m)) + Cable Loss (dB) +Preamplifier
- 3. Margin value = Emission level Limit value.
- 4. The emission levels of other frequencies were less than 20dB margin agains



RESTRICTED BAND Test Plots 802.11n HT20 – 5180MHz

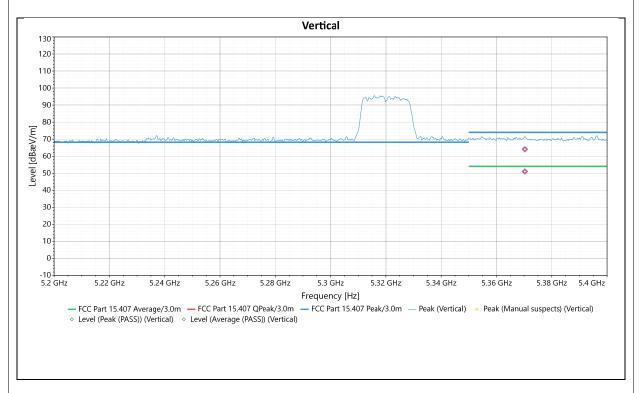


	Antenna Polarity & Test Distance: Vertical at 3m											
No.	Frequency (MHz) Polarization Level Limit dB(uV/m) [dB] Height Angle (Deg) Factor [dB(1/m)] Result											
1	1 5146.641 Horizontal 63.812 74 -10.188 2.34 3 39.75 Peak (PASS)											
2	2 5146.641 Horizontal 50.614 54 -3.386 2.34 3 39.75 Average (PASS)											

- 1. Level (dBuV) = Reading (dBuV) + Factor (dB(1/m)).
- 2. Factor (dB(1/m)) = Antenna Factor(AF) (dB(1/m)) + Cable Loss (dB) +Preamplifier
- 3. Margin value = Emission level Limit value.
- 4. The emission levels of other frequencies were less than 20dB margin agains



RESTRICTED BAND Test Plots 802.11n HT20 – 5320MHz

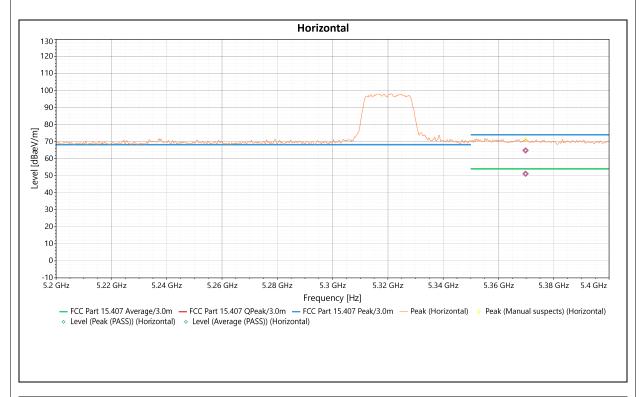


	Antenna Polarity & Test Distance: Vertical at 3m										
No.	No. Frequency (MHz) Polarization Level Limit Margin Height Angle Factor Measure Type/ Result										
1	5370.258	Vertical	64.074	74	-9.926	3.92	198	39.61	Peak (PASS)		
2	2 5370.258 Vertical 51.032 54 -2.968 3.92 198 39.61 Average (PASS)										

- 1. Level (dBuV) = Reading (dBuV) + Factor (dB(1/m)).
- 2. Factor (dB(1/m)) = Antenna Factor(AF) (dB(1/m)) + Cable Loss (dB) +Preamplifier
- 3. Margin value = Emission level Limit value.
- 4. The emission levels of other frequencies were less than 20dB margin agains



RESTRICTED BAND Test Plots 802.11n HT20 – 5320MHz



	Antenna Polarity & Test Distance: Vertical at 3m											
No.	No. Frequency (MHz) Polarization Level Limit Margin Height Angle Factor Measure Type/ (MHz) (MHz) Result											
1	1 5369.79 Horizontal 64.818 74 -9.182 3.73 360 39.68 Peak (PASS)											
2	2 5369.79 Horizontal 51.13 54 -2.87 3.73 360 39.68 Average (PASS)											

REMARKS:

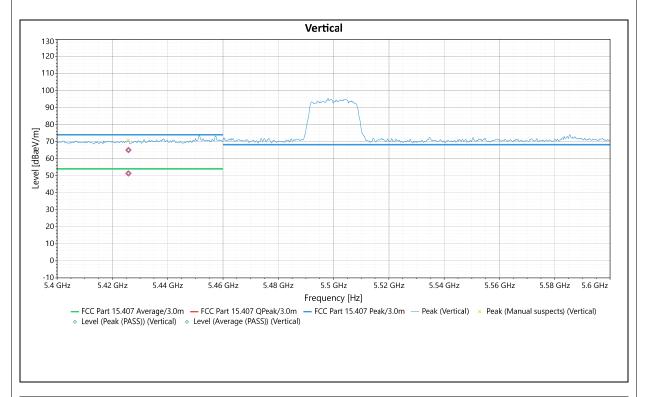
- 1. Level (dBuV) = Reading (dBuV) + Factor (dB(1/m)).
- 2. Factor (dB(1/m)) = Antenna Factor(AF) (dB(1/m)) + Cable Loss (dB) +Preamplifier
- 3. Margin value = Emission level Limit value.
- 4. The emission levels of other frequencies were less than 20dB margin agains

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RESTRICTED BAND Test Plots 802.11n HT20 – 5500MHz

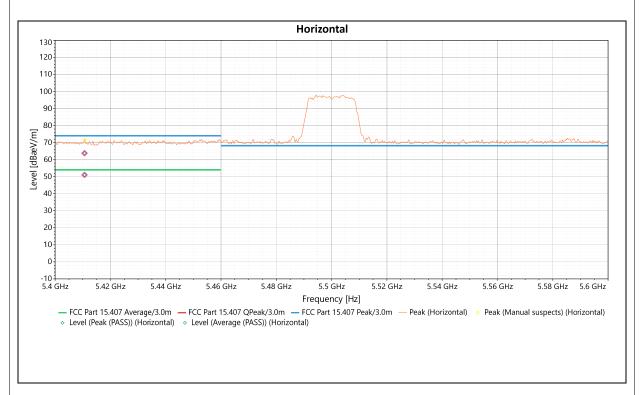


	Antenna Polarity & Test Distance: Vertical at 3m											
No.	Frequency (MHz) Polarization Level Limit dB(uV/m) Margin (m) Angle (Deg) Factor Result											
1	1 5425.796 Vertical 65.036 74 -8.964 1.87 16 39.79 Peak (PASS)											
2	2 5425.796 Vertical 51.318 54 -2.682 1.87 16 39.79 Average (PASS)											

- 1. Level (dBuV) = Reading (dBuV) + Factor (dB(1/m)).
- 2. Factor (dB(1/m)) = Antenna Factor(AF) (dB(1/m)) + Cable Loss (dB) +Preamplifier
- 3. Margin value = Emission level Limit value.
- 4. The emission levels of other frequencies were less than 20dB margin agains



RESTRICTED BAND Test Plots 802.11n HT20 – 5500MHz



	Antenna Polarity & Test Distance: Vertical at 3m											
No.	o. Frequency (MHz) Polarization Level Limit dB(uV/m) [dB] Height Angle (Deg) Factor Measure Type/ Result											
1	1 5410.65 Horizontal 63.789 74 -10.211 2.61 269 39.7 Peak (PASS)											
2	2 5410.65 Horizontal 51.04 54 -2.96 2.61 269 39.7 Average (PASS)											

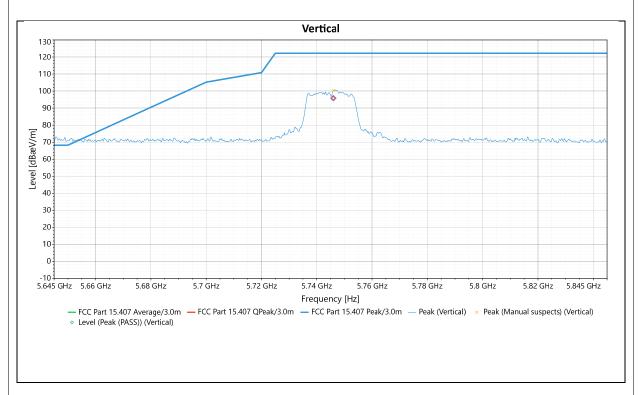
REMARKS:

- 1. Level (dBuV) = Reading (dBuV) + Factor (dB(1/m)).
- 2. Factor (dB(1/m)) = Antenna Factor(AF) (dB(1/m)) + Cable Loss (dB) +Preamplifier
- 3. Margin value = Emission level Limit value.
- 4. The emission levels of other frequencies were less than 20dB margin agains

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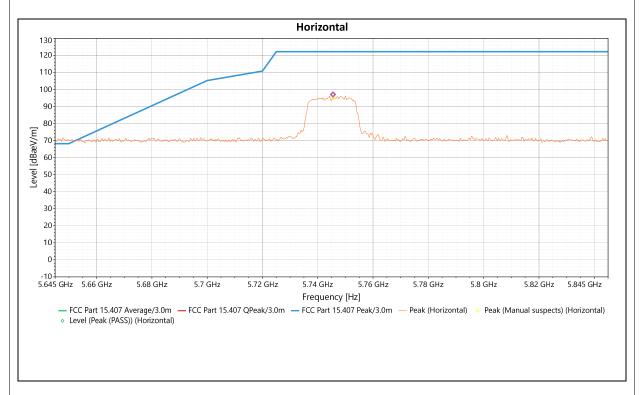
RESTRICTED BAND Test Plots 802.11n HT20 – 5745MHz



	Antenna Polarity & Test Distance: Vertical at 3m										
No.	Frequency (MHz)	Polarization	Level [dB(uV/m)]	Limit Peak dB(uV/m)	Limit Avg dB(uV/m)	Margin [dB]	Height (m)	Angle (Deg)	Factor [dB(1/m)]	Measure Type/ Result	
1	5746.08	Vertical	100.35	122.23	NaN	NaN	1.5	312	40.72	Peak (PASS)	

- 1. Level (dBuV) = Reading (dBuV) + Factor (dB(1/m)).
- 2. Factor (dB(1/m)) = Antenna Factor(AF) (dB(1/m)) + Cable Loss (dB) +Preamplifier
- 3. Margin value = Emission level Limit value.
- 4. The emission levels of other frequencies were less than 20dB margin agains

RESTRICTED BAND Test Plots 802.11n HT – 5745MHz



	Antenna Polarity & Test Distance: Vertical at 3m										
No.	Frequency (MHz)	Polarization	Level [dB(uV/m)]	Limit Peak dB(uV/m)	Limit Avg dB(uV/m)	Margin [dB]	Height (m)	Angle (Deg)	Factor [dB(1/m)]	Measure Type/ Result	
1	5745.56	Vertical	94.703	122.23	NaN	NaN	2.5	191	40.05	Peak (PASS)	

REMARKS:

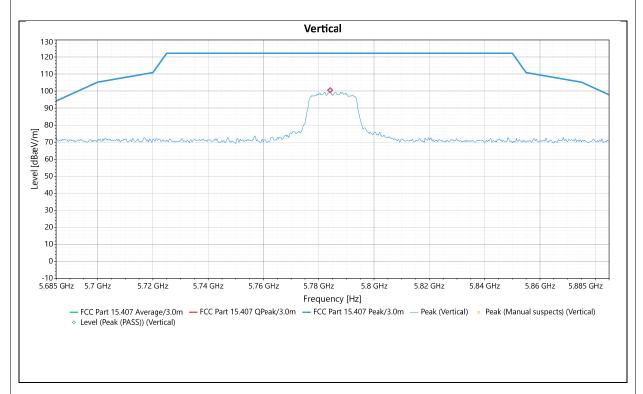
- 1. Level (dBuV) = Reading (dBuV) + Factor (dB(1/m)).
- 2. Factor (dB(1/m)) = Antenna Factor(AF) (dB(1/m)) + Cable Loss (dB) +Preamplifier
- 3. Margin value = Emission level Limit value.
- 4. The emission levels of other frequencies were less than 20dB margin agains

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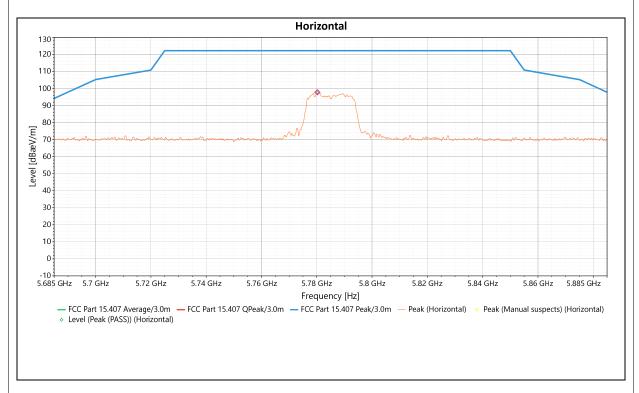
RESTRICTED BAND Test Plots 802.11n HT20 – 5785MHz



	Antenna Polarity & Test Distance: Vertical at 3m									
No.	Frequency (MHz)	Polarization	Level [dB(uV/m)]	Limit Peak dB(uV/m)	Limit Avg dB(uV/m)	Margin [dB]	Height (m)	Angle (Deg)	Factor [dB(1/m)]	Measure Type/ Result
1	5784.2	Vertical	99.516	122.23	NaN	NaN	1.49	312	40.79	Peak (PASS)

- 1. Level (dBuV) = Reading (dBuV) + Factor (dB(1/m)).
- 2. Factor (dB(1/m)) = Antenna Factor(AF) (dB(1/m)) + Cable Loss (dB) +Preamplifier
- 3. Margin value = Emission level Limit value.
- 4. The emission levels of other frequencies were less than 20dB margin agains

RESTRICTED BAND Test Plots 802.11n HT20 – 5785MHz



	Antenna Polarity & Test Distance: Vertical at 3m									
No.	Frequency (MHz)	Polarization	Level [dB(uV/m)]	Limit Peak dB(uV/m)	Limit Avg dB(uV/m)	Margin [dB]	Height (m)	Angle (Deg)	Factor [dB(1/m)]	Measure Type/ Result
1	5780.2	Horizontal	97.31	122.23	NaN	NaN	2.99	28	40.17	Peak (PASS)

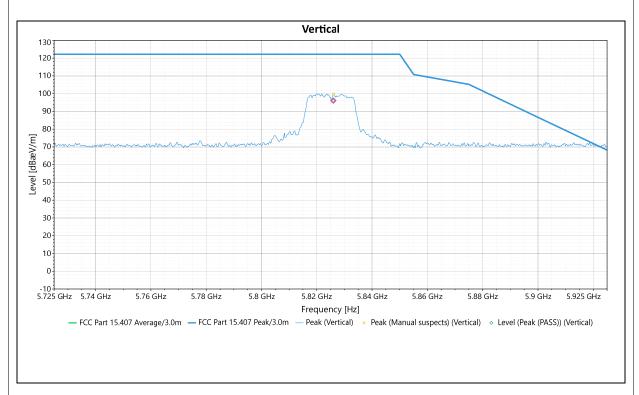
REMARKS:

- 1. Level (dBuV) = Reading (dBuV) + Factor (dB(1/m)).
- 2. Factor (dB(1/m)) = Antenna Factor(AF) (dB(1/m)) + Cable Loss (dB) +Preamplifier
- 3. Margin value = Emission level Limit value.
- 4. The emission levels of other frequencies were less than 20dB margin agains

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RESTRICTED BAND Test Plots 802.11n HT20 – 5825MHz



	Antenna Polarity & Test Distance: Vertical at 3m									
No.	Frequency (MHz)	Polarization	Level [dB(uV/m)]	Limit Peak dB(uV/m)	Limit Avg dB(uV/m)	Margin [dB]	Height (m)	Angle (Deg)	Factor [dB(1/m)]	Measure Type/ Result
1	5826.08	Vertical	99.8	122.23	NaN	NaN	3	315	40.81	Peak (PASS)

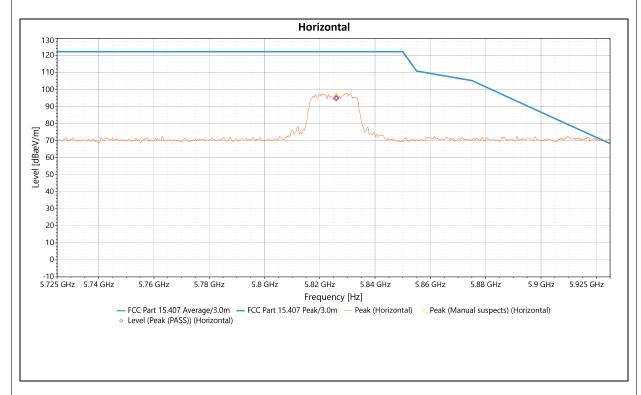
REMARKS:

- 1. Level (dBuV) = Reading (dBuV) + Factor (dB(1/m)).
- 2. Factor (dB(1/m)) = Antenna Factor(AF) (dB(1/m)) + Cable Loss (dB) +Preamplifier
- 3. Margin value = Emission level Limit value.
- 4. The emission levels of other frequencies were less than 20dB margin agains

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RESTRICTED BAND Test Plots 802.11n HT20 – 5825MHz



	Antenna Polarity & Test Distance: Vertical at 3m									
No.	Frequency (MHz)	Polarization	Level [dB(uV/m)]	Limit Peak dB(uV/m)	Limit Avg dB(uV/m)	Margin [dB]	Height (m)	Angle (Deg)	Factor [dB(1/m)]	Measure Type/ Result
1	5825.92	Horizontal	97.487	122.23	NaN	NaN	3	27	40.22	Peak (PASS)

REMARKS:

- 1. Level (dBuV) = Reading (dBuV) + Factor (dB(1/m)).
- 2. Factor (dB(1/m)) = Antenna Factor(AF) (dB(1/m)) + Cable Loss (dB) +Preamplifier
- 3. Margin value = Emission level Limit value.
- 4. The emission levels of other frequencies were less than 20dB margin agains

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3.3 Conducted Emission Measurement

3.3.1 Limits of Conducted Emission Measurement

Frequency (MHz)	Conducted Limit (dBuV)					
Frequency (MHZ)	Quasi-peak	Average				
0.15 - 0.5	66 - 56	56 - 46				
0.50 - 5.0	56	46				
5.0 - 30.0	60	50				

Note: 1. The lower limit shall apply at the transition frequencies.

2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

3.3.2 Test Instruments

Test Name:	CE Voltage – AC Power F	ort	Test Date(s): 07/21/2022					
MET Asset #	Equipment	Manufacturer	Model	Last Cal Date	Cal Due Date			
1U0337	LISN	Com-Power	LI-215A	10/07/2021	10/07/2022			
1U0304 EMI Receiver		Narda	PMM 9010	10/07/2021	10/07/2022			
Note: Eupetie	Note: Eunationally tested agripment is verified using calibrated instrumentation at the time of testing							

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

NOTE:



3.3.3 Test Procedure

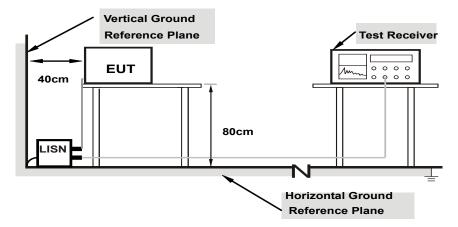
- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit 20dB) was not recorded.

NOTE: All modes of operation were investigated and the worst-case emissions are reported.

3.3.4 Deviation from Test Standard

No deviation.

3.3.5 Test Setup



3.3.6 EUT Operating Condition

Same as 4.1.6.

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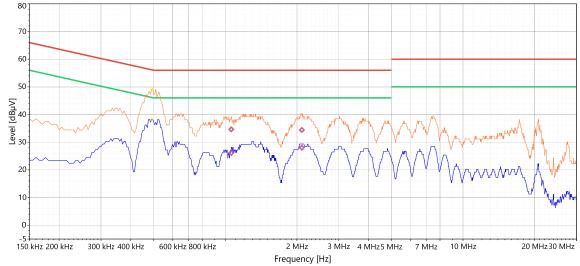
3.3.7 Test Results

Phase	Line (L)	Detector Function	Quasi-Peak / Average
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	Conducted Emission											
No.	Frequency (MHz)	Polarization	Level QP[dB(uV/m)]	Level Average[dB(uV/m)]	Limit dB(uV/m)	Margin [dB]	Source	Factor [dB(1/m)]	Result			
1	1.059081	Line	34.648	NaN	56	-21.352	QuasiPeak	0.21	Pass			
2	1.059081	Line	NaN	26.148	46	-19.852	Average	0.21	Pass			
3	2.098634	Line	34.433	NaN	56	-21.567	QuasiPeak	0.35	Pass			
4	2.098634	Line	NaN	27.993	46	-18.007	Average	0.35	Pass			

Test Plot:





^{- 47} CFR Part 15 section 15.107 - Class:B Average - 47 CFR Part 15 section 15.107 - Class:B QPeak - Peak (Phase 1) - Avg (Phase 1)

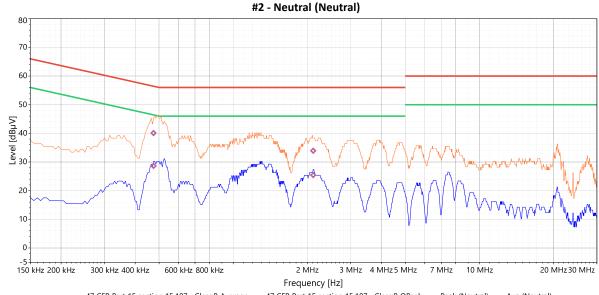
• Peak (Manual suspects) (Phase 1) • Avg (Manual suspects) (Phase 1) • Meas.Q-Peak (dBuV) (QuasiPeak) (Phase 1) • Meas.Avg (dBuV) (Average) (Phase 1)



Phase	Neutral (N)	Detector Function	Quasi-Peak / Average

	Conducted Emission											
No	Frequency (MHz)	Polarization	Level QP[dB(uV/m)]	Level Average[dB(uV/m)]	Limit dB(uV/m)	Margin [dB]	Source	Factor [dB(1/m)]	Result			
1	0.474545	Neutral	40.085	NaN	56.426	-16.341	QuasiPeak	0.25	Pass			
2	0.474545	Neutral	NaN	28.635	46.426	-17.791	Average	0.25	Pass			
3	2.113394	Neutral	33.915	NaN	56	-22.085	QuasiPeak	0.35	Pass			
4	2.113394	Neutral	NaN	25.425	46	-20.575	Average	0.35	Pass			

Test Plot:



— 47 CFR Part 15 section 15.107 - Class:B Average — 47 CFR Part 15 section 15.107 - Class:B QPeak — Peak (Neutral) — Avg (Neutral) • Meas.Q-Peak (dBuV) (QuasiPeak) (Neutral) • Meas.Avg (dBuV) (Average) (Neutral)



3.4 Transmit Power Measurement

3.4.1 Limits of Transmit Power Measurement

Operation Band		EUT Category	Limit			
U-NII-1		Outdoor Access Point	1 Watt (30 dBm) (Max. e.i.r.p ≤ 125mW(21 dBm) at any elevation angle above 30 degrees as measured from the horizon)			
0-1111-1	Fixed point-to-point Access Point		1 Watt (30 dBm)			
	Indoor Access Point		1 Watt (30 dBm)			
	√	Client device	250mW (24 dBm)			
U-NII-2A		$\sqrt{}$	250mW (24 dBm) or 11 dBm+10 log B*			
U-NII-2C		$\sqrt{}$	250mW (24 dBm) or 11 dBm+10 log B*			
U-NII-3		V	1 Watt (30 dBm)			

^{*}B is the 26 dB emission bandwidth in megahertz

Per KDB 662911 Method of conducted output power measurement on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for N_{ANT} ≤ 4;

Array Gain = 0 dB (i.e., no array gain) for channel widths \geq 40 MHz for any N_{ANT};

Array Gain = 5 log(N_{ANT}/N_{SS}) dB or 3 dB, whichever is less for 20-MHz channel widths with N_{ANT} ≥ 5.

For power measurements on all other devices: Array Gain = 10 log(N_{ANT}/N_{SS}) dB.

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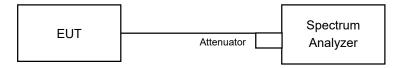
3.4.2 Test Setup

FOR POWER OUTPUT MEASUREMENT

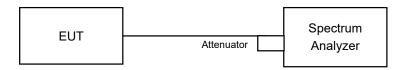
♦ Power Meter Measurement



♦ Spectrum Measurement



FOR 26dB OCCUPIED BANDWIDTH



3.4.3 Test Instruments

Asset #	Equipment	Manufacturer	Model	Last Cal Date	Cal Due Date
N/A	Power Meter	ROHDE & SCHWARZ	NRQ6	05/05/2021	05/05/2022

3.4.4 Test Procedure

For Average Power Measurement

For 802.11a, 802.11n (HT20), 802.11n (HT40), 802.11ac (VHT20, 802.11ac (VHT40)

Method PM is used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of TX on burst and set the detector to AVERAGE. Duty factor is not added to measured value.

For 802.11ac (VHT80)

- 1) Set span to encompass the entire 26 dB EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal.
- 2) Set sweep trigger to "free run".
- 3) Set RBW = 1 MHz.
- 4) Set VBW ≥ 3 MHz
- 5) Number of points in sweep ≥ 2 Span / RBW.
- 6) Sweep time ≤ (number of points in sweep) * T
- 7) Using emission bandwidth to determine the frequency span for integration the channel bandwidth.
- 8) Detector = RMS.
- 9) Trace mode = max hold.
- 10) Allow max hold to run for at least 60 seconds, or longer as needed to allow the trace to stabilize.



♦ Power Meter Measurement

Method PM is used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of TX on burst. Duty factor is not added to measured value.

♦ Spectrum Measurement

Follow FCC KDB 789033 UNII test procedure:

Method SA-1

- 1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
- 2. Set RBW =1MHz.
- 3. Set the VBW \geq 3 x RBW.
- 4. Number of points in sweep ≥ 2 Span / RBW.
- 5. Sweep time = auto.
- 6. Set trigger to free run (duty cycle ≥ 98 percent)
- 7. Detector = RMS.
- 8. Trace average at least 100 traces in power averaging mode
- 9. Compute power by integrating the spectrum across the 26 dB EBW of the signal.

Follow FCC KDB 789033 UNII test procedure:

Method SA-2

- 1. Set span to encompass the emission bandwidth (EBW) of the signal.
- 2. Set RBW =1MHz.
- 3. Set the VBW \geq 3 x RBW.
- 4. Number of points in sweep ≥ 2 Span / RBW.
- 5. Sweep time = auto.
- 6. Detector = RMS.
- 7. Trace average at least 100 traces in power averaging mode
- 8. Compute power by integrating the spectrum across the 26 dB EBW of the signal.
- 9. Duty factor need added to measured value (duty cycle < 98 percent).

FOR 26dB OCCUPIED BANDWIDTH

- 1. Set RBW = approximately 1% of the emission bandwidth.
- 2. Set the VBW > RBW.
- 3. Detector = Peak.
- 4. Trace mode = max hold.
- 5. Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

3.4.5 Deviation from Test Standard

No deviation.

3.4.6 EUT Operating Condition

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

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3.4.7 Test Results

Output Power measurement result for UNII-1 Band

Туре	Test mode	Freq (MHz)	СН	Conducted Power (dBm)	Limit (dBm)	Result
Output Power		5180	Low	6.53	24	Pass
	802.11a	5200	Mid	6.57	24	Pass
		5240	High	6.77	24	Pass
		5180	Low	6.73	24	Pass
	802.11n-HT20	5200	Mid	6.71	24	Pass
		5240	High	6.85	24	Pass

Output Power measurement result for UNII-2 Band

Туре	Test mode	Freq (MHz)	СН	Conducted Power (dBm)	Limit (dBm)	Result
		5260	Low	6.46	24	Pass
		5280	Mid	6.63	24	Pass
	802.11a	5320	High	6.77	24	Pass
	002.11a	5500	Low	6.64	24	Pass
		5600	Mid	6.77	24	Pass
Output Power		5700	High	6.89	24	Pass
Power		5260	Low	6.74	24	Pass
		5280	Mid	6.65	24	Pass
	802.11n-HT20	5320	High	6.36	24	Pass
	002.1111-11120	5500	Low	6.59	24	Pass
		5600	Mid	6.61	24	Pass
		5700	High	6.68	24	Pass

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Output Power measurement result for UNII-3 Band

Туре	Test mode	Freq (MHz)	СН	Conducted Power (dBm)	Limit (dBm)	Result
Output Power		5745	Low	5.68	30	Pass
	802.11a	5785	Mid	4.5	30	Pass
		5825	High	6.45	30	Pass
		5745	Low	5.44	30	Pass
	802.11n-HT20	5785	Mid	4.57	30	Pass
		5825	High	5.9	30	Pass

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3.5 26dB Bandwidth & 6dB Bandwidth Measurement

3.5.1 Limits of 6 dB Bandwidth Measurement

The minimum of 6 dB Bandwidth Measurement is 0.5 MHz.

3.5.2 Test Setup



3.5.3 Test Instruments

MET Asset #	Equipment	Manufacturer	Model	Last Cal Date	Cal Due Date
1S2003	EMI Test Receiver	Keysight	N9030B	10/08/2021	10/08/2022

3.5.4 Test Procedure

26dB Emission bandwidth measurement procedure (Other than 5.725-5.85 GHz)

- Allow the trace to stabilize.
- Use the spectrum analyzer built-in measurement function to determine the 26dB BW.

Set RBW = around 1% of emission bandwidth

Set VBW > RBW

Detector = Peak

Trace mode = max hold

- Capture the plot.
- Repeat above steps for different test channel and other modulation type.

6 dB Minimum emission bandwidth measurement procedure

- Allow the trace to stabilize.
- Use the spectrum analyzer built-in measurement function to determine the 6dB BW.

Set RBW = 100 KHz

Set VBW ≥ 3 x RBW

Detector = Peak

Trace mode = max hold

Sweep = auto couple

- Capture the plot.
- Repeat above steps for different test channel and other modulation type.

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26dB Bandwidth measurement result for UNII-1 Band

Туре	Test mode	Freq (MHz)	СН	99% OBW(MHz)	26 dB OBW(MHz)
	802.11a	5180	Low	16.376	19.204
		5200	Mid	16.389	19.446
26dB BW		5240	High	16.477	20.169
200B BVV	802.11n-HT20	5180	Low	17.621	20.631
		5200	Mid	17.577	20.274
		5240	High	17.589	20.584

26dB Bandwidth measurement result for UNII-2 Band

Туре	Test mode	Freq (MHz)	СН	99% OBW(MHz)	26 dB OBW(MHz)
		5260	Low	16.455	19.756
		5280	Mid	16.483	19.148
	802.11a	5320	High	16.366	19.380
		5500	Low	16.402	19.965
		5600	Mid	16.409	19.974
26dB BW		5700	High	16.389	19.472
ZOUD DVV	802.11n-HT20	5260	Low	17.598	20.670
		5280	Mid	17.588	20.684
		5320	High	17.536	20.545
		5500	Low	17.631	20.737
		5600	Mid	17.625	20.627
		5700	High	17.591	20.883

6dB Bandwidth measurement result for UNII-3 Band

Туре	Test mode	Freq (MHz)	СН	99% OBW(MHz	6 dB OBW(MHz)	Limit (MHz)	Result
	802.11a	5745	Low	16.362	16.359	0.5	Pass
		5785	Mid	16.367	16.403	0.5	Pass
6dB		5825	High	16.394	16.494	0.5	Pass
BW	802.11n-HT20	5745	Low	16.381	16.419	0.5	Pass
		5785	Mid	17.559	17.628	0.5	Pass
		5825	High	17.570	17.638	0.5	Pass

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Occupied Bandwidth Test Plots UNII-1 Band

