



## **REGULATORY COMPLIANCE TEST REPORT**

**FCC CFR 47 15.407, RSS-247 Issue 2**

**Report No.: RDWN69-U2 Rev A**  
**Part 2 Spurious Emissions**

**Company:** Radwin Ltd.

**Model Name:** RADWIN JET DUO 5.x/5.x GHz

## REGULATORY COMPLIANCE TEST REPORT

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**Model Name:** RADWIN JET DUO 5.x/5.x GHz

**To:** FCC CFR 47 Part 15 Subpart E 15.407, RSS-247

Test Report Serial No.: RDWN69-U2 Rev A **Part 2:** Spurious Emissions

This report supersedes: NONE

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## 1. TEST RESULTS

### 1.1. Radiated Spurious Emissions

Radiated Test Conditions for Radiated Spurious and Band-Edge Emissions			
<b>Standard:</b>	FCC CFR 47:15.407	<b>Ambient Temp. (°C):</b>	20.0 - 24.5
<b>Test Heading:</b>	Radiated Spurious and Band-Edge Emissions	<b>Rel. Humidity (%):</b>	32 - 45
<b>Standard Section(s):</b>	15.407 (b), 15.205, 15.209	<b>Pressure (mBars):</b>	999 - 1001
<b>Reference Document(s):</b>	See Normative References		

#### Test Procedure for Radiated Spurious and Band-Edge Emissions

Radiated emissions for restricted bands above 1 GHz are measured in the anechoic chamber at a 3-meter distance on every azimuth in both horizontal and vertical polarities. The emissions are recorded and maximized as a function of azimuth by rotation through 360° with a spectrum analyzer in peak hold mode. Depending on the frequency band spanned a notch filter was used to remove the fundamental frequency. The highest emissions relative to the limit are listed for each frequency spanned.

Measurements on any restricted band frequency or frequencies above 1 GHz are based on the use of measurement instrumentation employing peak and average detectors. All measurements were performed using a resolution bandwidth of 1 MHz.

Test configuration and setup for Undesirable Measurement were per the Radiated Test Set-up specified in this document.

15.407 (b) Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

(2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

(3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

(5) The emission measurements shall be performed using a minimum resolution bandwidth of 1 MHz. A lower resolution bandwidth may be employed near the band edge, when necessary, provided the measured energy is integrated to show the total power over 1 MHz.

(6) Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209. Further, any U-NII devices using an AC power line are required to comply also with the conducted limits set forth in §15.207.

(7) The provisions of §15.205 apply to intentional radiators operating under this section.

(8) When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the upper and lower frequency band edges as the design of the equipment permits.

#### Limits for Restricted Bands (15.205, 15.209)

**Peak emission: 74 dBuV/m**

**Average emission: 54 dBuV/m**

#### Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Loss, and subtracting Amplifier Gain from the measured reading. All factors are included in the reported data.

$$FS = R + AF + CORR - FO$$

where:

**FS = Field Strength**

**R = Measured Spectrum analyzer Input Amplitude**

**AF = Antenna Factor**

**CORR = Correction Factor = CL - AG + NFL**

**CL = Cable Loss**

**AG = Amplifier Gain**

**FO = Distance Falloff Factor**  
**NFL = Notch Filter Loss**

**Example:**

The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength (dBμV/m);

$$E = \frac{1000000 \times \sqrt{30P}}{3} \mu\text{V/m}$$

where P is the EIRP in Watts

Therefore: -27 dBm/MHz equates to 68.23 dBμV/m

Conversion between dBmV/m (or dBmV) and mV/m (or mV) are as follows:

Level (dBmV/m) = 20 \* Log (level (mV/m))

40 dBmV/m = 100 mV/m

48 dBmV/m = 250 mV/m

**Restricted Bands of Operation (15.205)**

(a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

Frequency Band			
MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	Above 38.6
13.36-13.41			

(b) Except as provided in paragraphs (d) and (e) of this section, the field strength of emissions appearing within these frequency bands shall not exceed the limits shown in §15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in §15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in §15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in §15.35 apply to these measurements.

(c) Except as provided in paragraphs (d) and (e) of this section, regardless of the field strength limits specified elsewhere in this subpart, the provisions of this section apply to emissions from any intentional radiator.

(d) The following devices are exempt from the requirements of this section:

(1) Swept frequency field disturbance sensors operating between 1.705 and 37 MHz provided their emissions only sweep through the bands listed in paragraph (a) of this section, the sweep is never stopped with the fundamental emission within the bands listed in paragraph (a) of this section, and the fundamental emission is outside of the bands listed in paragraph (a) of this section more than 99% of the time the device is actively transmitting, without compensation for duty cycle.

(2) Transmitters used to detect buried electronic markers at 101.4 kHz which are employed by telephone companies.

(3) Cable locating equipment operated pursuant to §15.213.

(4) Any equipment operated under the provisions of §15.253, 15.255, and 15.256 in the frequency band 75-85 GHz, or §15.257 of this part.

(5) Biomedical telemetry devices operating under the provisions of §15.242 of this part are not subject to the restricted band 608-614 MHz but are subject to compliance within the other restricted bands.

(6) Transmitters operating under the provisions of subparts D or F of this part.

(7) Devices operated pursuant to §15.225 are exempt from complying with this section for the 13.36-13.41 MHz band only.

(8) Devices operated in the 24.075-24.175 GHz band under §15.245 are exempt from complying with the requirements of this section for the 48.15-48.35 GHz and 72.225-72.525 GHz bands only, and shall not exceed the limits specified in §15.245(b).

(9) Devices operated in the 24.0-24.25 GHz band under §15.249 are exempt from complying with the requirements of this section for the 48.0-48.5 GHz and 72.0-72.75 GHz bands only, and shall not exceed the limits specified in §15.249(a).

(e) Harmonic emissions appearing in the restricted bands above 17.7 GHz from field disturbance sensors operating under the provisions of §15.245 shall not exceed the limits specified in §15.245(b).

### 1.1.1. TX Spurious & Restricted Band Emissions

#### 1.1.1.1. RADWIN Ltd. AP0200600

##### Equipment Configuration for TX Spurious & Restricted Band Emissions

<b>Antenna:</b>	RADWIN Ltd. AP0200600	<b>Variant:</b>	20 MHz
<b>Antenna Gain (dBi):</b>	9.00	<b>Modulation:</b>	OFDM
<b>Beam Forming Gain (Y):</b>	Not Applicable	<b>Duty Cycle (%):</b>	91
<b>Channel Frequency (MHz):</b>	5265.00	<b>Data Rate:</b>	6.00 MBit/s
<b>Power Setting:</b>	15.0	<b>Tested By:</b>	JMH

##### Test Measurement Results

##### 1000.00 - 18000.00 MHz

Num	Frequency MHz	Raw dBμV	Cable Loss dB	AF dB/m	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
#1	5266.95	75.71	2.91	-12.21	66.41	Fundamental	Vertical	150	0	--	--	
#2	6250.09	54.20	3.25	-9.49	47.96	Peak (NRB)	Vertical	150	360	--	--	Pass
#3	10531.75	46.90	4.70	-5.26	46.34	Peak (NRB)	Horizontal	150	343	--	--	Pass

Test Notes: EUT powered by POE, connected to laptop outside chamber.



#### Equipment Configuration for TX Spurious & Restricted Band Emissions

<b>Antenna:</b>	RADWIN Ltd. AP0200600	<b>Variant:</b>	20 MHz
<b>Antenna Gain (dBi):</b>	9.00	<b>Modulation:</b>	OFDM
<b>Beam Forming Gain (Y):</b>	Not Applicable	<b>Duty Cycle (%):</b>	91
<b>Channel Frequency (MHz):</b>	5300.00	<b>Data Rate:</b>	6.00 MBit/s
<b>Power Setting:</b>	14.0	<b>Tested By:</b>	JMH

#### Test Measurement Results

1000.00 - 18000.00 MHz												
Num	Frequency MHz	Raw dBμV	Cable Loss dB	AF dB/m	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
#1	5305.54	73.54	3.07	-11.95	64.66	Fundamental	Horizontal	100	0	--	--	
#2	10601.12	61.25	4.53	-4.92	60.86	Max Peak	Horizontal	178	330	68.2	-7.4	Pass
#3	10601.12	46.83	4.53	-4.92	46.44	Max Avg	Horizontal	178	330	54.0	-7.6	Pass

Test Notes: EUT powered by POE, connected to laptop outside chamber.



#### Equipment Configuration for TX Spurious & Restricted Band Emissions

<b>Antenna:</b>	RADWIN Ltd. AP0200600	<b>Variant:</b>	20 MHz
<b>Antenna Gain (dBi):</b>	9.00	<b>Modulation:</b>	OFDM
<b>Beam Forming Gain (Y):</b>	Not Applicable	<b>Duty Cycle (%):</b>	91
<b>Channel Frequency (MHz):</b>	5330.00	<b>Data Rate:</b>	6.00 MBit/s
<b>Power Setting:</b>	14.0	<b>Tested By:</b>	JMH

#### Test Measurement Results

1000.00 - 18000.00 MHz												
Num	Frequency MHz	Raw dBμV	Cable Loss dB	AF dB/m	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
#1	5330.65	73.69	3.01	-11.98	63.72	Fundamental	Horizontal	100	0	--	--	
#2	6250.16	53.79	3.25	-9.49	47.55	Peak (NRB)	Vertical	157	0	--	--	Pass
#3	10662.03	58.82	4.56	-4.89	58.49	Max Peak	Horizontal	168	332	68.2	-9.7	Pass
#4	10662.03	44.00	4.56	-4.89	43.67	Max Avg	Horizontal	168	332	54.0	-10.3	Pass

Test Notes: EUT powered by POE, connected to laptop outside chamber.

#### Equipment Configuration for TX Spurious & Restricted Band Emissions

<b>Antenna:</b>	RADWIN Ltd. AP0200600	<b>Variant:</b>	20 MHz
<b>Antenna Gain (dBi):</b>	9.00	<b>Modulation:</b>	OFDM
<b>Beam Forming Gain (Y):</b>	Not Applicable	<b>Duty Cycle (%):</b>	91
<b>Channel Frequency (MHz):</b>	5490.00	<b>Data Rate:</b>	6.00 MBit/s
<b>Power Setting:</b>	14.5	<b>Tested By:</b>	JMH

#### Test Measurement Results

1000.00 - 18000.00 MHz												
Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB/m	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
#1	5487.89	58.28	3.17	-11.70	49.75	Fundamental	Vertical	150	0	--	--	

Test Notes: EUT powered by POE, connected to laptop outside chamber.

#### Equipment Configuration for TX Spurious & Restricted Band Emissions

<b>Antenna:</b>	RADWIN Ltd. AP0200600	<b>Variant:</b>	20 MHz
<b>Antenna Gain (dBi):</b>	9.00	<b>Modulation:</b>	OFDM
<b>Beam Forming Gain (Y):</b>	Not Applicable	<b>Duty Cycle (%):</b>	91
<b>Channel Frequency (MHz):</b>	5590.00	<b>Data Rate:</b>	6.00 MBit/s
<b>Power Setting:</b>	13.0	<b>Tested By:</b>	JMH

#### Test Measurement Results

1000.00 - 18000.00 MHz												
Num	Frequency MHz	Raw dBμV	Cable Loss dB	AF dB/m	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
#1	5586.83	65.89	3.14	-11.57	57.46	Fundamental	Horizontal	100	0	--	--	

Test Notes: EUT powered by POE, connected to laptop outside chamber.

#### Equipment Configuration for TX Spurious & Restricted Band Emissions

<b>Antenna:</b>	RADWIN Ltd. AP0200600	<b>Variant:</b>	20 MHz
<b>Antenna Gain (dBi):</b>	9.00	<b>Modulation:</b>	OFDM
<b>Beam Forming Gain (Y):</b>	Not Applicable	<b>Duty Cycle (%):</b>	91
<b>Channel Frequency (MHz):</b>	5705.00	<b>Data Rate:</b>	6.00 MBit/s
<b>Power Setting:</b>	15.0	<b>Tested By:</b>	JMH

#### Test Measurement Results

1000.00 - 18000.00 MHz												
Num	Frequency MHz	Raw dBμV	Cable Loss dB	AF dB/m	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
#1	5701.02	62.15	3.19	-11.35	53.99	Fundamental	Horizontal	151	0	--	--	
#2	6249.85	50.72	3.25	-9.50	44.47	Peak (NRB)	Vertical	151	0	--	--	Pass

Test Notes: EUT powered by POE, connected to laptop outside chamber.

### 1.1.1.2. RADWIN Ltd. AP0200600-BF

#### Equipment Configuration for TX Spurious & Restricted Band Emissions

<b>Antenna:</b>	RADWIN Ltd. AP0200600-BF	<b>Variant:</b>	20 MHz
<b>Antenna Gain (dBi):</b>	9.00	<b>Modulation:</b>	OFDM
<b>Beam Forming Gain (Y):</b>	10	<b>Duty Cycle (%):</b>	91
<b>Channel Frequency (MHz):</b>	5265.00	<b>Data Rate:</b>	6.00 MBit/s
<b>Power Setting:</b>	7.0	<b>Tested By:</b>	JMH

#### Test Measurement Results

##### 1000.00 - 18000.00 MHz

Num	Frequency MHz	Raw dBμV	Cable Loss dB	AF dB/m	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
#1	5267.61	76.57	2.91	-12.21	67.27	Fundamental	Horizontal	151	0	--	--	
#2	6250.04	56.57	3.25	-9.49	50.33	Peak (NRB)	Horizontal	151	0	--	--	Pass

Test Notes: EUT powered by POE, connected to laptop outside chamber.

#### Equipment Configuration for TX Spurious & Restricted Band Emissions

<b>Antenna:</b>	RADWIN Ltd. AP0200600-BF	<b>Variant:</b>	20 MHz
<b>Antenna Gain (dBi):</b>	9.00	<b>Modulation:</b>	OFDM
<b>Beam Forming Gain (Y):</b>	10	<b>Duty Cycle (%):</b>	91
<b>Channel Frequency (MHz):</b>	5300.00	<b>Data Rate:</b>	6.00 MBit/s
<b>Power Setting:</b>	6.5	<b>Tested By:</b>	JMH

#### Test Measurement Results

1000.00 - 18000.00 MHz												
Num	Frequency MHz	Raw dBμV	Cable Loss dB	AF dB/m	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
#1	5302.67	75.86	3.06	-11.97	66.95	Fundamental	Horizontal	151	0	--	--	
#2	6250.03	56.39	3.25	-9.49	50.15	Peak (NRB)	Horizontal	151	0	--	--	Pass

Test Notes: EUT powered by POE, connected to laptop outside chamber.

#### Equipment Configuration for TX Spurious & Restricted Band Emissions

<b>Antenna:</b>	RADWIN Ltd. AP0200600-BF	<b>Variant:</b>	20 MHz
<b>Antenna Gain (dBi):</b>	9.00	<b>Modulation:</b>	OFDM
<b>Beam Forming Gain (Y):</b>	10	<b>Duty Cycle (%):</b>	91
<b>Channel Frequency (MHz):</b>	5330.00	<b>Data Rate:</b>	6.00 MBit/s
<b>Power Setting:</b>	7.0	<b>Tested By:</b>	JMH

#### Test Measurement Results

1000.00 - 18000.00 MHz												
Num	Frequency MHz	Raw dBμV	Cable Loss dB	AF dB/m	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
#1	5327.76	73.86	2.96	-11.96	64.86	Fundamental	Horizontal	150	0	--	--	
#2	6249.89	56.81	3.25	-9.50	50.56	Peak (NRB)	Horizontal	150	0	--	--	Pass

Test Notes: EUT powered by POE, connected to laptop outside chamber.



#### Equipment Configuration for TX Spurious & Restricted Band Emissions

<b>Antenna:</b>	RADWIN Ltd. AP0200600-BF	<b>Variant:</b>	20 MHz
<b>Antenna Gain (dBi):</b>	9.00	<b>Modulation:</b>	OFDM
<b>Beam Forming Gain (Y):</b>	10	<b>Duty Cycle (%):</b>	91
<b>Channel Frequency (MHz):</b>	5490.00	<b>Data Rate:</b>	6.00 MBit/s
<b>Power Setting:</b>	5.5	<b>Tested By:</b>	JMH

#### Test Measurement Results

1000.00 - 18000.00 MHz												
Num	Frequency MHz	Raw dBμV	Cable Loss dB	AF dB/m	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
#1	4867.76	60.58	2.93	-12.52	50.99	Max Peak	Horizontal	194	2	68.2	-17.2	Pass
#2	4867.76	46.29	2.93	-12.52	36.70	Max Avg	Horizontal	194	2	54.0	-17.3	Pass
#3	5493.65	62.36	3.09	-11.65	53.80	Fundamental	Horizontal	151	0	--	--	
#4	6249.85	56.29	3.25	-9.50	50.04	Peak (NRB)	Horizontal	151	0	--	--	Pass

Test Notes: EUT powered by POE, connected to laptop outside chamber.

#### Equipment Configuration for TX Spurious & Restricted Band Emissions

<b>Antenna:</b>	RADWIN Ltd. AP0200600-BF	<b>Variant:</b>	20 MHz
<b>Antenna Gain (dBi):</b>	9.00	<b>Modulation:</b>	OFDM
<b>Beam Forming Gain (Y):</b>	10	<b>Duty Cycle (%):</b>	91
<b>Channel Frequency (MHz):</b>	5590.00	<b>Data Rate:</b>	6.00 MBit/s
<b>Power Setting:</b>	5.5	<b>Tested By:</b>	JMH

#### Test Measurement Results

1000.00 - 18000.00 MHz												
Num	Frequency MHz	Raw dBμV	Cable Loss dB	AF dB/m	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
#1	4835.87	60.15	2.82	-12.53	50.44	Max Peak	Horizontal	141	3	68.2	-17.8	Pass
#2	4835.87	46.28	2.82	-12.53	36.57	Max Avg	Horizontal	141	3	54.0	-17.4	Pass
#3	5586.02	73.05	3.13	-11.56	64.62	Fundamental	Horizontal	156	0	--	--	
#4	6249.74	54.00	3.25	-9.50	47.75	Peak (NRB)	Horizontal	156	0	--	--	Pass

Test Notes: EUT powered by POE, connected to laptop outside chamber.

#### Equipment Configuration for TX Spurious & Restricted Band Emissions

<b>Antenna:</b>	RADWIN Ltd. AP0200600-BF	<b>Variant:</b>	20 MHz
<b>Antenna Gain (dBi):</b>	9.00	<b>Modulation:</b>	OFDM
<b>Beam Forming Gain (Y):</b>	10	<b>Duty Cycle (%):</b>	91
<b>Channel Frequency (MHz):</b>	5705.00	<b>Data Rate:</b>	6.00 MBit/s
<b>Power Setting:</b>	5.5	<b>Tested By:</b>	JMH

#### Test Measurement Results

1000.00 - 18000.00 MHz												
Num	Frequency MHz	Raw dBμV	Cable Loss dB	AF dB/m	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
#1	4839.67	61.36	2.82	-12.55	51.63	Max Peak	Horizontal	156	0	68.2	-16.6	Pass
#2	4839.67	47.42	2.82	-12.55	37.69	Max Avg	Horizontal	156	0	54.0	-16.3	Pass
#3	5701.40	62.80	3.19	-11.35	54.64	Fundamental	Horizontal	151	0	--	--	
#4	6250.07	54.85	3.25	-9.49	48.61	Peak (NRB)	Horizontal	151	0	--	--	Pass

Test Notes: EUT powered by POE, connected to laptop outside chamber.

### 1.1.2. Restricted Edge & Band-Edge Emissions

#### 1.1.2.3. RADWIN Ltd. AP0200600

#### RESULTS SUMMARY FOR RADIATED BAND-EDGE EMISSIONS

##### 5250 - 5350 MHz

RADWIN Ltd. AP0200600		Band-Edge Freq	Limit 74.0dBµV/m	Limit 54.0dBµV/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
20 MHz	5330.00	5350.00	68.85	53.07	13.0
40 MHz	5320.00	5350.00	71.32	53.82	8.5
80 MHz	5300.00	5350.00	70.91	53.50	8.0

##### 5470 - 5725 MHz

RADWIN Ltd. AP0200600		Restricted-Edge Freq	Limit 68.23dBµV/m	Limit 54.0dBµV/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dBµV/m	dBµV/m	
20 MHz	5490.00	5460.00	67.12	45.29	14.5
40 MHz	5500.00	5460.00	67.99	44.89	8.5
80 MHz	5525.00	5460.00	67.99	46.54	9.0

Click on the links to view the data.

#### Equipment Configuration for Restricted Upper Band-Edge Emissions

<b>Antenna:</b>	RADWIN Ltd. AP0200600	<b>Variant:</b>	20 MHz
<b>Antenna Gain (dBi):</b>	9.00	<b>Modulation:</b>	OFDM
<b>Beam Forming Gain (Y):</b>	Not Applicable	<b>Duty Cycle (%):</b>	91
<b>Channel Frequency (MHz):</b>	5330.00	<b>Data Rate:</b>	6.00 MBit/s
<b>Power Setting:</b>	13.0	<b>Tested By:</b>	JMH

#### Test Measurement Results

5300.00 - 5460.00 MHz												
Num	Frequency MHz	Raw dBμV	Cable Loss dB	AF dB/m	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
#1	5350.00	15.55	3.06	34.46	53.07	Max Avg	Horizontal	174	358	54.0	-0.9	Pass
#3	5350.96	31.33	3.06	34.46	68.85	Max Peak	Horizontal	174	358	74.0	-5.2	Pass
#2	5350.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--

Test Notes: EUT powered by POE, connected to laptop outside chamber. Added 0.41 to average marker to compensate for Duty cycle correction.

#### Equipment Configuration for Restricted Upper Band-Edge Emissions

<b>Antenna:</b>	RADWIN Ltd. AP0200600	<b>Variant:</b>	40 MHz
<b>Antenna Gain (dBi):</b>	9.00	<b>Modulation:</b>	OFDM
<b>Beam Forming Gain (Y):</b>	Not Applicable	<b>Duty Cycle (%):</b>	82.4
<b>Channel Frequency (MHz):</b>	5320.00	<b>Data Rate:</b>	13.90 MBit/s
<b>Power Setting:</b>	8.5	<b>Tested By:</b>	JMH

#### Test Measurement Results

5300.00 - 5460.00 MHz												
Num	Frequency MHz	Raw dBμV	Cable Loss dB	AF dB/m	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
#1	5350.00	16.30	3.06	34.46	53.82	Max Avg	Horizontal	174	358	54.0	-0.2	Pass
#3	5350.64	33.80	3.06	34.46	71.32	Max Peak	Horizontal	174	358	74.0	-2.8	Pass
#2	5350.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--

Test Notes: EUT powered by POE, connected to laptop outside chamber. 0.84 dB added to average measurement. Power Reduced to meet Band Edge Limit

#### Equipment Configuration for Restricted Upper Band-Edge Emissions

<b>Antenna:</b>	RADWIN Ltd. AP0200600	<b>Variant:</b>	80 MHz
<b>Antenna Gain (dBi):</b>	9.00	<b>Modulation:</b>	OFDM
<b>Beam Forming Gain (Y):</b>	Not Applicable	<b>Duty Cycle (%):</b>	72.5
<b>Channel Frequency (MHz):</b>	5300.00	<b>Data Rate:</b>	26.50 MBit/s
<b>Power Setting:</b>	8.0	<b>Tested By:</b>	JMH

#### Test Measurement Results

5300.00 - 5460.00 MHz												
Num	Frequency MHz	Raw dBμV	Cable Loss dB	AF dB/m	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
#1	5350.00	15.98	3.06	34.46	53.50	Max Avg	Horizontal	174	358	54.0	-0.5	Pass
#3	5350.64	33.39	3.06	34.46	70.91	Max Peak	Horizontal	174	358	74.0	-3.1	Pass
#2	5350.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--

Test Notes: EUT powered by POE, connected to laptop outside chamber. 1.4 dB added to average measurement. Power Reduced to meet Band Edge Limit



#### Equipment Configuration for Restricted Lower Band-Edge Emissions

<b>Antenna:</b>	RADWIN Ltd. AP0200600	<b>Variant:</b>	20 MHz
<b>Antenna Gain (dBi):</b>	9.00	<b>Modulation:</b>	OFDM
<b>Beam Forming Gain (Y):</b>	Not Applicable	<b>Duty Cycle (%):</b>	91
<b>Channel Frequency (MHz):</b>	5490.00	<b>Data Rate:</b>	6.00 MBit/s
<b>Power Setting:</b>	14.5	<b>Tested By:</b>	JMH

#### Test Measurement Results

5350.00 - 5500.00 MHz												
Num	Frequency MHz	Raw dBμV	Cable Loss dB	AF dB/m	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
#1	5460.00	7.70	3.06	34.53	45.29	Max Avg	Horizontal	193	353	54.0	-8.7	Pass
#3	5470.00	29.51	3.06	34.55	67.12	Max Peak	Horizontal	193	353	68.2	-1.1	Pass
#2	5460.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--
#4	5470.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT powered by POE, connected to laptop outside chamber. 0.41 dB added to average measurement.

#### Equipment Configuration for Restricted Lower Band-Edge Emissions

<b>Antenna:</b>	RADWIN Ltd. AP0200600	<b>Variant:</b>	40 MHz
<b>Antenna Gain (dBi):</b>	9.00	<b>Modulation:</b>	OFDM
<b>Beam Forming Gain (Y):</b>	Not Applicable	<b>Duty Cycle (%):</b>	82.4
<b>Channel Frequency (MHz):</b>	5500.00	<b>Data Rate:</b>	13.90 MBit/s
<b>Power Setting:</b>	8.5	<b>Tested By:</b>	JMH

#### Test Measurement Results

5350.00 - 5500.00 MHz												
Num	Frequency MHz	Raw dBμV	Cable Loss dB	AF dB/m	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
#1	5460.00	7.30	3.06	34.53	44.89	Max Avg	Horizontal	193	353	54.0	-9.1	Pass
#3	5470.00	30.38	3.06	34.55	67.99	Max Peak	Horizontal	193	353	68.2	-0.2	Pass
#2	5460.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--
#4	5470.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT powered by POE, connected to laptop outside chamber. 0.84 dB added to average measurement. Power reduced to meet Band Edge Limit

#### Equipment Configuration for Restricted Lower Band-Edge Emissions

<b>Antenna:</b>	RADWIN Ltd. AP0200600	<b>Variant:</b>	80 MHz
<b>Antenna Gain (dBi):</b>	9.00	<b>Modulation:</b>	OFDM
<b>Beam Forming Gain (Y):</b>	Not Applicable	<b>Duty Cycle (%):</b>	72.5
<b>Channel Frequency (MHz):</b>	5525.00	<b>Data Rate:</b>	29.50 MBit/s
<b>Power Setting:</b>	9.0	<b>Tested By:</b>	JMH

#### Test Measurement Results

5350.00 - 5500.00 MHz												
Num	Frequency MHz	Raw dBμV	Cable Loss dB	AF dB/m	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
#1	5460.00	8.95	3.06	34.53	46.54	Max Avg	Horizontal	193	353	54.0	-7.5	Pass
#3	5470.00	30.38	3.06	34.55	67.99	Max Peak	Horizontal	193	353	68.2	-0.2	Pass
#2	5460.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--
#4	5470.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT powered by POE, connected to laptop outside chamber. 1.4 dB added to average measurement. Power reduced to meet Band Edge Limit

#### 1.1.2.4. RADWIN Ltd. AP0200600-BF

##### RESULTS SUMMARY FOR RADIATED BAND-EDGE EMISSIONS

###### 5250 - 5350 MHz

RADWIN Ltd. AP0200600-BF		Band-Edge Freq	Limit 74.0dB $\mu$ V/m	Limit 54.0dB $\mu$ V/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dB $\mu$ V/m	dB $\mu$ V/m	
20 MHz	5330.00	5350.00	69.24	52.96	7.0
40 MHz	5320.00	5350.00	72.54	53.71	4.0
80 MHz	5300.00	5350.00	73.74	53.50	3.5

###### 5470 - 5725 MHz

RADWIN Ltd. AP0200600-BF		Restricted-Edge Freq	Limit 68.23 dB $\mu$ V/m	Limit 54.0dB $\mu$ V/m	Power Setting
Operational Mode	Operating Frequency (MHz)	MHz	dB $\mu$ V/m	dB $\mu$ V/m	
20 MHz	5490.00	5460.00	67.46	46.28	5.0
40 MHz	5500.00	5460.00	68.12	45.45	-1.5
80 MHz	5525.00	5460.00	67.58	46.54	-1.0

Click on the links to view the data.

### Equipment Configuration for Restricted Upper Band-Edge Emissions

<b>Antenna:</b>	RADWIN Ltd. AP0200600-BF	<b>Variant:</b>	20 MHz
<b>Antenna Gain (dBi):</b>	9.00	<b>Modulation:</b>	OFDM
<b>Beam Forming Gain (Y):</b>	10	<b>Duty Cycle (%):</b>	91
<b>Channel Frequency (MHz):</b>	5330.00	<b>Data Rate:</b>	6.00 MBit/s
<b>Power Setting:</b>	7.0	<b>Tested By:</b>	JMH

### Test Measurement Results

5300.00 - 5460.00 MHz												
Num	Frequency MHz	Raw dBμV	Cable Loss dB	AF dB/m	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
#1	5350.00	15.44	3.06	34.46	52.96	Max Avg	Horizontal	174	358	54.0	-1.0	Pass
#3	5352.57	31.72	3.05	34.47	69.24	Max Peak	Horizontal	174	358	74.0	-4.8	Pass
#2	5350.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--

Test Notes: EUT powered by POE, connected to laptop outside chamber. 0.41 dB added to average measurement.

### Equipment Configuration for Restricted Upper Band-Edge Emissions

<b>Antenna:</b>	RADWIN Ltd. AP0200600-BF	<b>Variant:</b>	40 MHz
<b>Antenna Gain (dBi):</b>	9.00	<b>Modulation:</b>	OFDM
<b>Beam Forming Gain (Y):</b>	10	<b>Duty Cycle (%):</b>	82.4
<b>Channel Frequency (MHz):</b>	5320.00	<b>Data Rate:</b>	13.90 MBit/s
<b>Power Setting:</b>	4.0	<b>Tested By:</b>	JMH

### Test Measurement Results

5300.00 - 5460.00 MHz												
Num	Frequency MHz	Raw dBμV	Cable Loss dB	AF dB/m	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
#1	5350.00	15.35	3.06	34.46	53.71	Max Avg	Horizontal	174	358	54.0	-0.3	Pass
#3	5350.64	35.02	3.06	34.46	72.54	Max Peak	Horizontal	174	358	74.0	-1.5	Pass
#2	5350.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--

Test Notes: EUT powered by POE, connected to laptop outside chamber. 0.84 dB added to average measurement. Power Reduced to meet Band Edge Limit

#### Equipment Configuration for Restricted Upper Band-Edge Emissions

<b>Antenna:</b>	RADWIN Ltd. AP0200600-BF	<b>Variant:</b>	80 MHz
<b>Antenna Gain (dBi):</b>	9.00	<b>Modulation:</b>	OFDM
<b>Beam Forming Gain (Y):</b>	10	<b>Duty Cycle (%):</b>	72.5
<b>Channel Frequency (MHz):</b>	5300.00	<b>Data Rate:</b>	26.50 MBit/s
<b>Power Setting:</b>	3.5	<b>Tested By:</b>	JMH

#### Test Measurement Results

5300.00 - 5460.00 MHz												
Num	Frequency MHz	Raw dBμV	Cable Loss dB	AF dB/m	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
#1	5350.00	15.98	3.06	34.46	53.50	Max Avg	Horizontal	174	358	54.0	-0.5	Pass
#2	5350.00	36.22	3.06	34.46	73.74	Max Peak	Horizontal	174	358	74.0	-0.3	Pass
#3	5350.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--

Test Notes: EUT powered by POE, connected to laptop outside chamber. 1.4 dB added to average measurement. Power Reduced to meet Band Edge Limit



#### Equipment Configuration for Restricted Lower Band-Edge Emissions

<b>Antenna:</b>	RADWIN Ltd. AP0200600-BF	<b>Variant:</b>	20 MHz
<b>Antenna Gain (dBi):</b>	9.00	<b>Modulation:</b>	OFDM
<b>Beam Forming Gain (Y):</b>	10	<b>Duty Cycle (%):</b>	91
<b>Channel Frequency (MHz):</b>	5490.00	<b>Data Rate:</b>	6.00 MBit/s
<b>Power Setting:</b>	5.0	<b>Tested By:</b>	JMH

#### Test Measurement Results

5350.00 - 5500.00 MHz												
Num	Frequency MHz	Raw dBμV	Cable Loss dB	AF dB/m	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
#1	5460.00	8.69	3.06	34.53	46.28	Max Avg	Horizontal	174	358	54.0	-7.7	Pass
#3	5470.00	29.85	3.06	34.55	67.46	Max Peak	Horizontal	174	358	68.2	-0.8	Pass
#2	5460.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--
#4	5470.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT powered by POE, connected to laptop outside chamber. 0.41 dB added to average measurement. Power reduced to meet Band Edge Limit

#### Equipment Configuration for Restricted Lower Band-Edge Emissions

<b>Antenna:</b>	RADWIN Ltd. AP0200600-BF	<b>Variant:</b>	40 MHz
<b>Antenna Gain (dBi):</b>	9.00	<b>Modulation:</b>	OFDM
<b>Beam Forming Gain (Y):</b>	10	<b>Duty Cycle (%):</b>	82.4
<b>Channel Frequency (MHz):</b>	5500.00	<b>Data Rate:</b>	13.90 MBit/s
<b>Power Setting:</b>	-1.5	<b>Tested By:</b>	JMH

#### Test Measurement Results

5350.00 - 5500.00 MHz												
Num	Frequency MHz	Raw dBμV	Cable Loss dB	AF dB/m	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
#1	5460.00	7.86	3.06	34.53	45.45	Max Avg	Horizontal	174	358	54.0	-8.6	Pass
#3	5469.10	30.51	3.06	34.55	68.12	Max Peak	Horizontal	174	358	68.2	-0.1	Pass
#2	5460.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--
#4	5470.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT powered by POE, connected to laptop outside chamber. 0.84 dB added to average measurement. Power reduced to meet Band Edge Limit

#### Equipment Configuration for Restricted Lower Band-Edge Emissions

<b>Antenna:</b>	RADWIN Ltd. AP0200600-BF	<b>Variant:</b>	80 MHz
<b>Antenna Gain (dBi):</b>	9.00	<b>Modulation:</b>	OFDM
<b>Beam Forming Gain (Y):</b>	10	<b>Duty Cycle (%):</b>	72.5
<b>Channel Frequency (MHz):</b>	5525.00	<b>Data Rate:</b>	29.50 MBit/s
<b>Power Setting:</b>	-1.0	<b>Tested By:</b>	JMH

#### Test Measurement Results

5350.00 - 5500.00 MHz												
Num	Frequency MHz	Raw dBμV	Cable Loss dB	AF dB/m	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
#1	5460.00	8.95	3.06	34.53	46.54	Max Avg	Horizontal	174	358	54.0	-7.5	Pass
#3	5469.70	29.97	3.06	34.55	67.58	Max Peak	Horizontal	174	358	68.2	-0.7	Pass
#2	5460.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--
#4	5470.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

Test Notes: EUT powered by POE, connected to laptop outside chamber. 1.4 dB added to average measurement. Power reduced to meet Band Edge Limit

## **APPENDIX A - GRAPHICAL IMAGES**

## A.1. Radiated

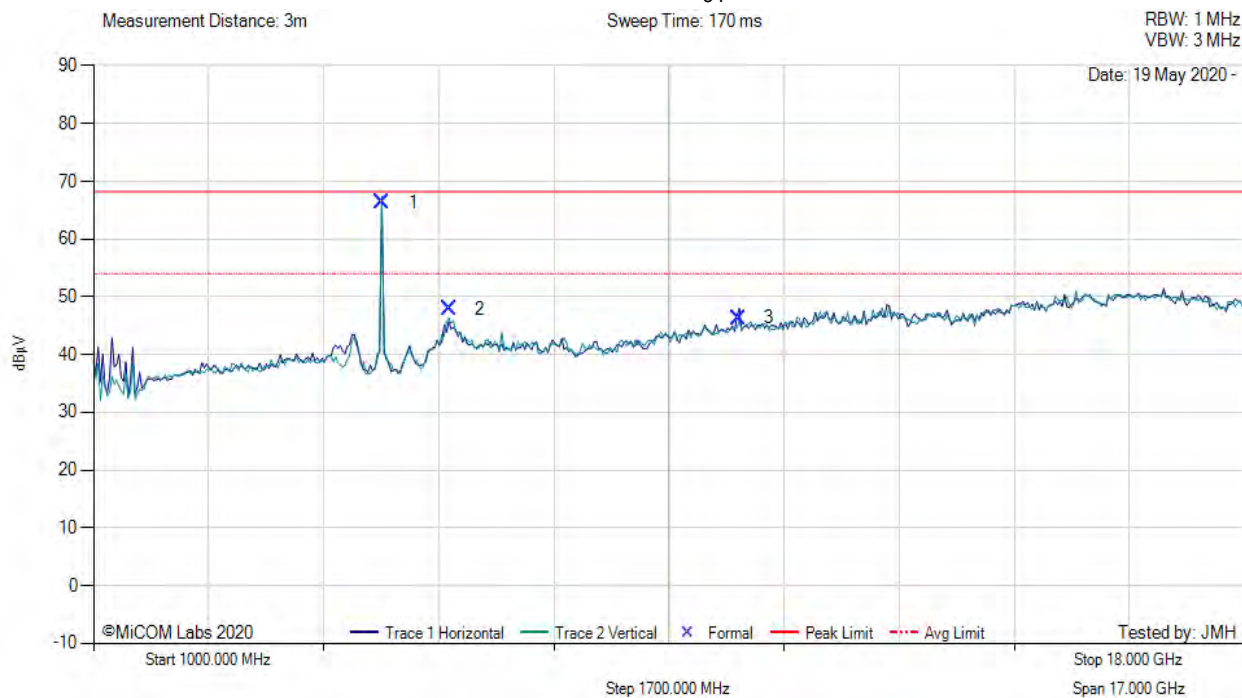
### A.1.1. TX Spurious & Restricted Band Emissions

#### A.1.1.1. RADWIN Ltd. AP0200600



#### TX SPURIOUS & RESTRICTED BAND EMISSIONS

Variant: 20 MHz, Test Freq: 5265.00 MHz, Antenna: RADWIN Ltd. AP0200600, Power Setting: 15.0, Duty Cycle (%): 91



1000.00 - 18000.00 MHz												
Num	Frequency MHz	Raw dBμV	Cable Loss dB	AF dB/m	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5266.95	75.71	2.91	-12.21	66.41	Fundamental	Vertical	150	0	--	--	
2	6250.09	54.20	3.25	-9.49	47.96	Peak (NRB)	Vertical	150	360	--	--	Pass
3	10531.75	46.90	4.70	-5.26	46.34	Peak (NRB)	Horizontal	150	343	--	--	Pass

**Test Notes:** EUT powered by POE, connected to laptop outside chamber.

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# TX SPURIOUS & RESTRICTED BAND EMISSIONS



Variant: 20 MHz, Test Freq: 5300.00 MHz, Antenna: RADWIN Ltd. AP0200600, Power Setting: 14.0, Duty Cycle (%):

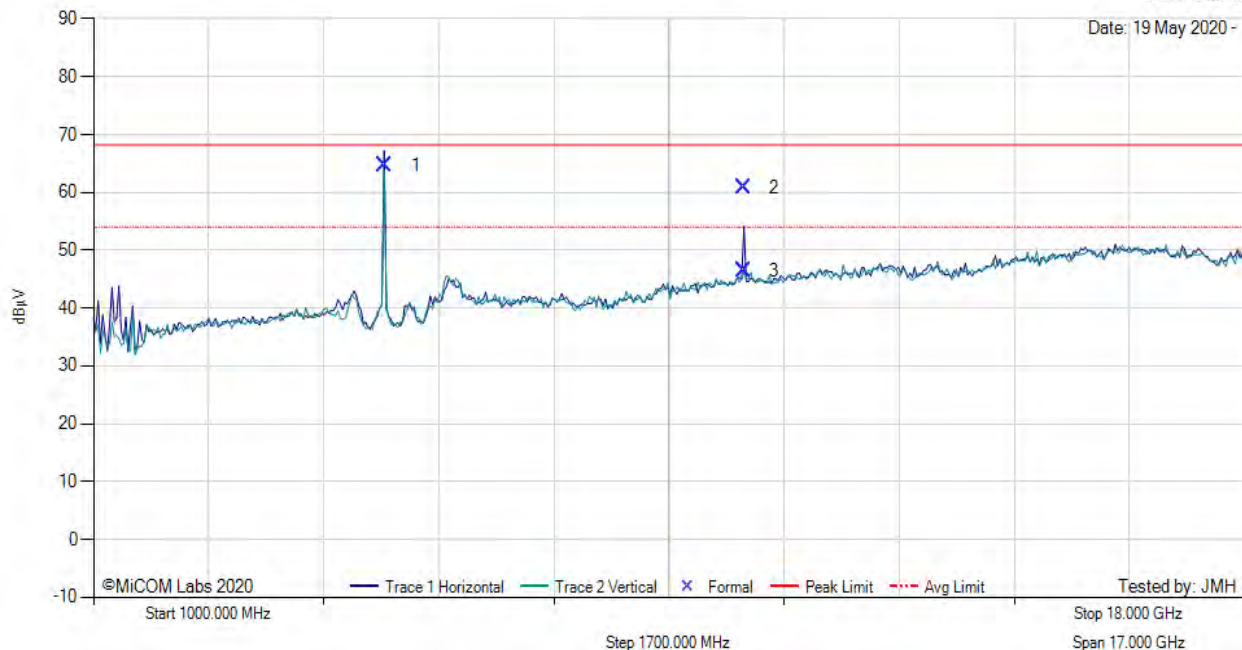
91

Measurement Distance: 3m

Sweep Time: 170 ms

RBW: 1 MHz

VBW: 3 MHz



1000.00 - 18000.00 MHz												
Num	Frequency MHz	Raw dBμV	Cable Loss dB	AF dB/m	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5305.54	73.54	3.07	-11.95	64.66	Fundamental	Horizontal	100	0	--	--	
2	10601.12	61.25	4.53	-4.92	60.86	Max Peak	Horizontal	178	330	68.2	-7.4	Pass
3	10601.12	46.83	4.53	-4.92	46.44	Max Avg	Horizontal	178	330	54.0	-7.6	Pass

**Test Notes:** EUT powered by POE, connected to laptop outside chamber.

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# TX SPURIOUS & RESTRICTED BAND EMISSIONS



Variant: 20 MHz, Test Freq: 5330.00 MHz, Antenna: RADWIN Ltd. AP0200600, Power Setting: 14.0, Duty Cycle (%):

91

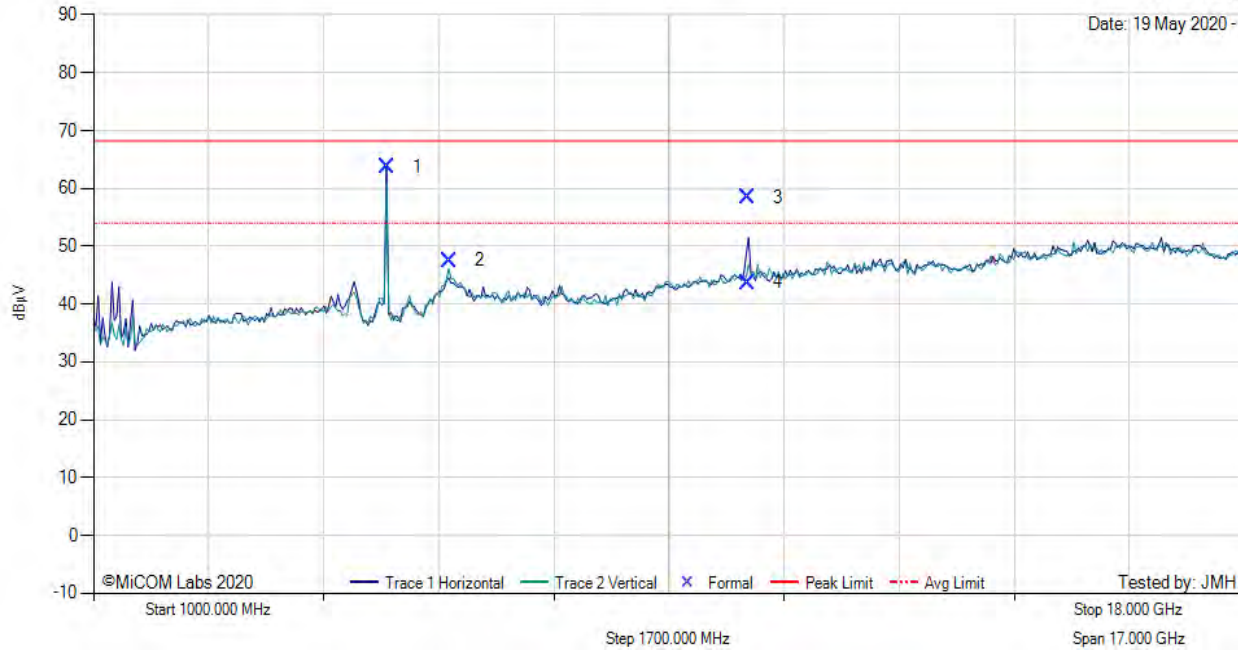
Measurement Distance: 3m

Sweep Time: 170 ms

RBW: 1 MHz

VBW: 3 MHz

Date: 19 May 2020 -



1000.00 - 18000.00 MHz												
Num	Frequency MHz	Raw dBμV	Cable Loss dB	AF dB/m	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5330.65	73.69	3.01	-11.98	63.72	Fundamental	Horizontal	100	0	--	--	
2	6250.16	53.79	3.25	-9.49	47.55	Peak (NRB)	Vertical	157	0	--	--	Pass
3	10662.03	58.82	4.56	-4.89	58.49	Max Peak	Horizontal	168	332	68.2	-9.7	Pass
4	10662.03	44.00	4.56	-4.89	43.67	Max Avg	Horizontal	168	332	54.0	-10.3	Pass

**Test Notes:** EUT powered by POE, connected to laptop outside chamber.

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# TX SPURIOUS & RESTRICTED BAND EMISSIONS



Variant: 20 MHz, Test Freq: 5490.00 MHz, Antenna: RADWIN Ltd. AP0200600, Power Setting: 14.5, Duty Cycle (%):

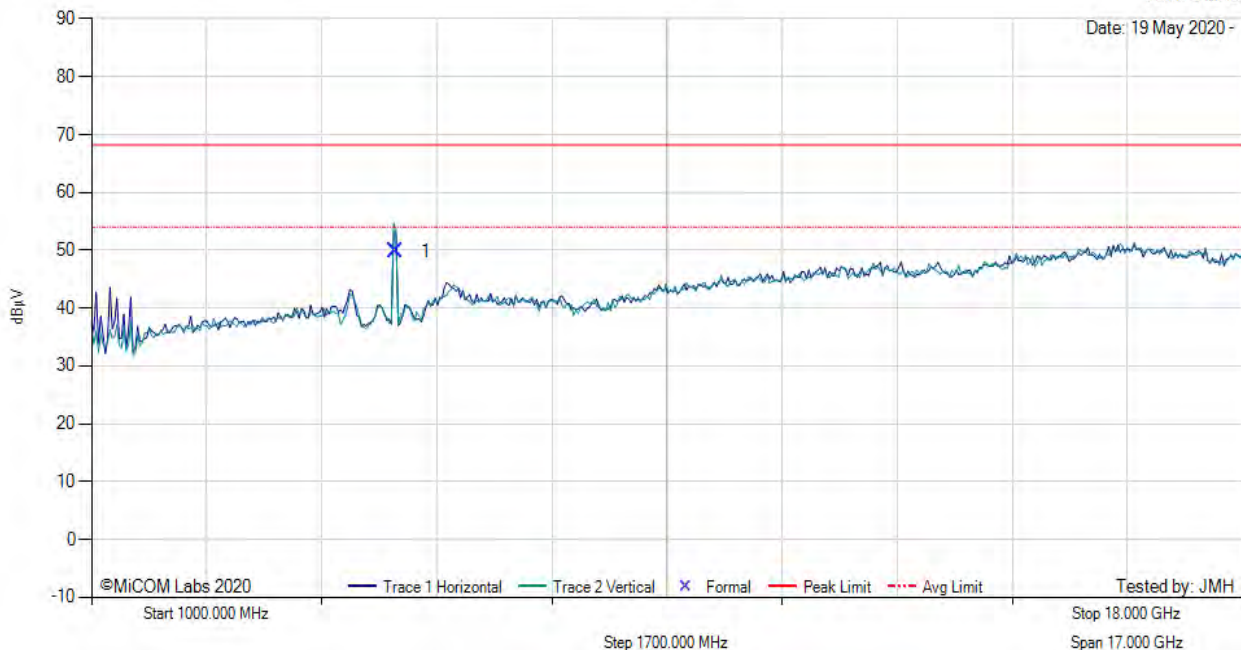
91

Measurement Distance: 3m

Sweep Time: 170 ms

RBW: 1 MHz

VBW: 3 MHz



1000.00 - 18000.00 MHz												
Num	Frequency MHz	Raw dBμV	Cable Loss dB	AF dB/m	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5487.89	58.28	3.17	-11.70	49.75	Fundamental	Vertical	150	0	--	--	

**Test Notes:** EUT powered by POE, connected to laptop outside chamber.

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# TX SPURIOUS & RESTRICTED BAND EMISSIONS



Variant: 20 MHz, Test Freq: 5590.00 MHz, Antenna: RADWIN Ltd. AP0200600, Power Setting: 13.0, Duty Cycle (%):

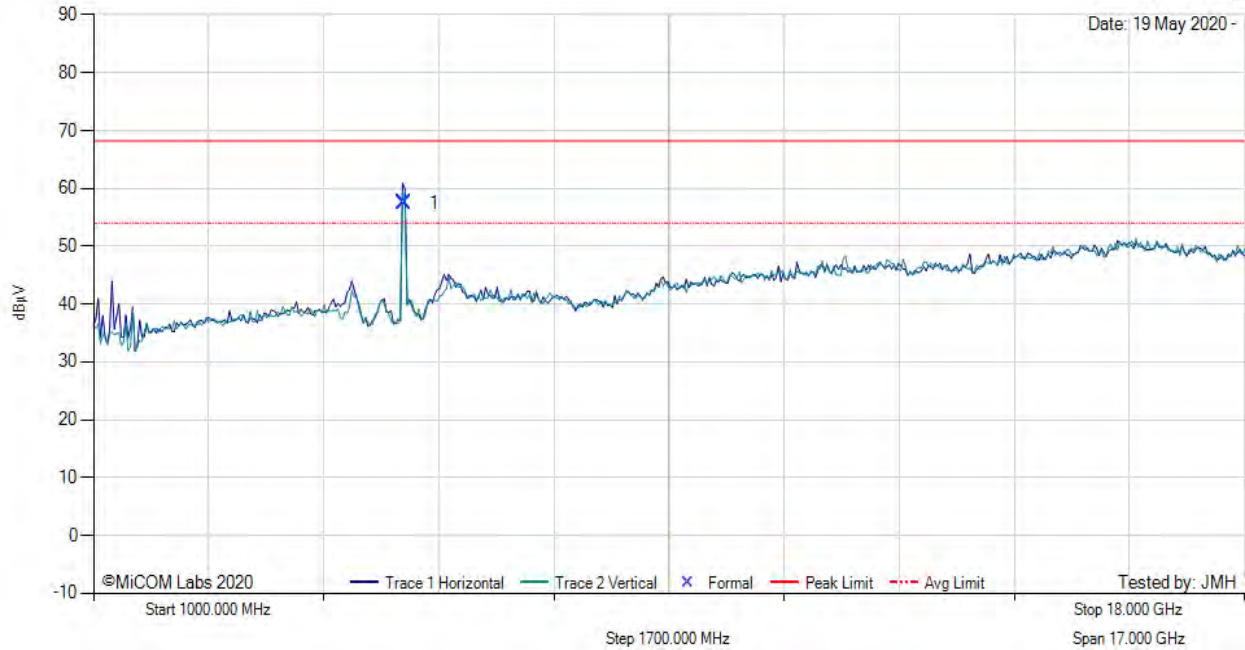
91

Measurement Distance: 3m

Sweep Time: 170 ms

RBW: 1 MHz

VBW: 3 MHz



1000.00 - 18000.00 MHz												
Num	Frequency MHz	Raw dBμV	Cable Loss dB	AF dB/m	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5586.83	65.89	3.14	-11.57	57.46	Fundamental	Horizontal	100	0	--	--	
<b>Test Notes:</b> EUT powered by POE, connected to laptop outside chamber.												

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# TX SPURIOUS & RESTRICTED BAND EMISSIONS



Variant: 20 MHz, Test Freq: 5705.00 MHz, Antenna: RADWIN Ltd. AP0200600, Power Setting: 15.0, Duty Cycle (%):

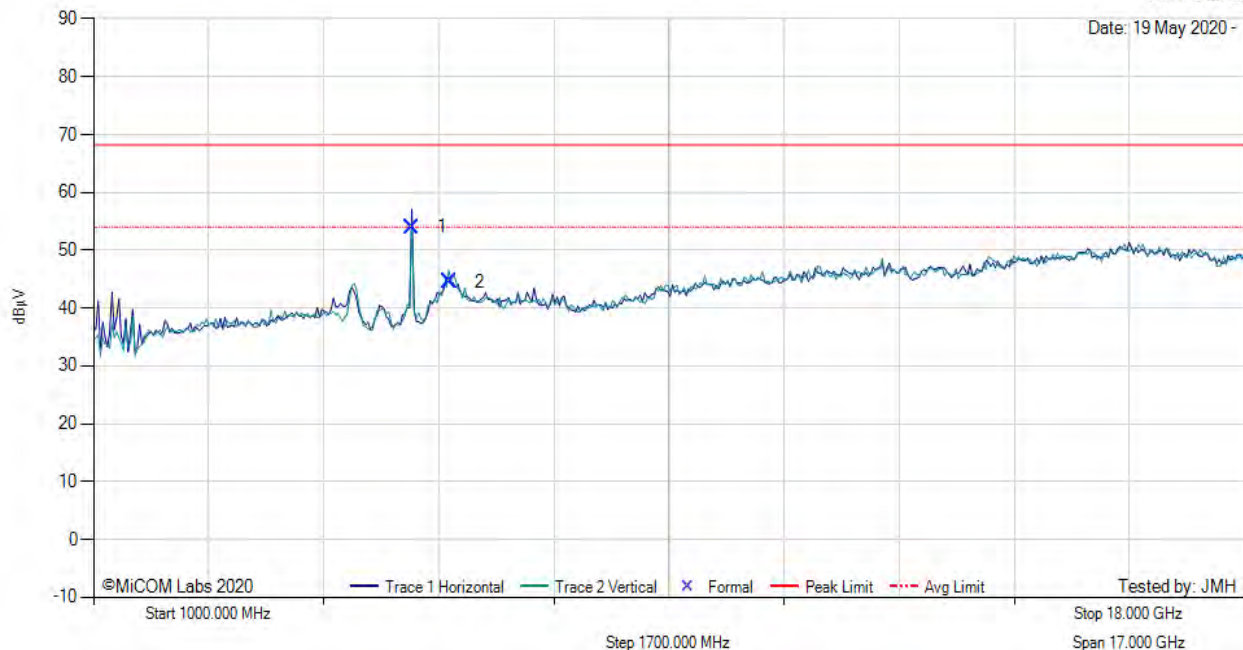
91

Measurement Distance: 3m

Sweep Time: 170 ms

RBW: 1 MHz

VBW: 3 MHz



1000.00 - 18000.00 MHz												
Num	Frequency MHz	Raw dBμV	Cable Loss dB	AF dB/m	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5701.02	62.15	3.19	-11.35	53.99	Fundamental	Horizontal	151	0	--	--	
2	6249.85	50.72	3.25	-9.50	44.47	Peak (NRB)	Vertical	151	0	--	--	Pass

**Test Notes:** EUT powered by POE, connected to laptop outside chamber.

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### A.1.1.2. RADWIN Ltd. AP0200600-BF

#### TX SPURIOUS & RESTRICTED BAND EMISSIONS



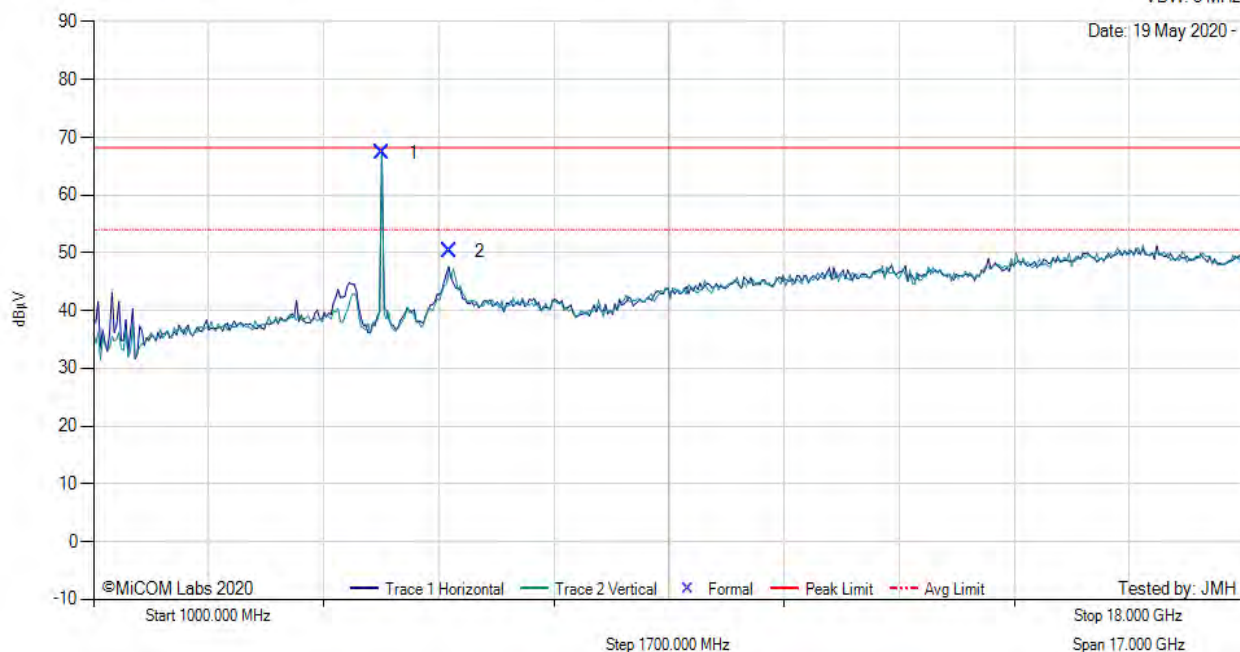
Variant: 20 MHz, Test Freq: 5265.00 MHz, Antenna: RADWIN Ltd. AP0200600-BF, Power Setting: 7.0, Duty Cycle (%): 91

Measurement Distance: 3m

Sweep Time: 170 ms

RBW: 1 MHz  
VBW: 3 MHz

Date: 19 May 2020 -



1000.00 - 18000.00 MHz												
Num	Frequency MHz	Raw dBμV	Cable Loss dB	AF dB/m	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5267.61	76.57	2.91	-12.21	67.27	Fundamental	Horizontal	151	0	--	--	
2	6250.04	56.57	3.25	-9.49	50.33	Peak (NRB)	Horizontal	151	0	--	--	Pass

**Test Notes:** EUT powered by POE, connected to laptop outside chamber.

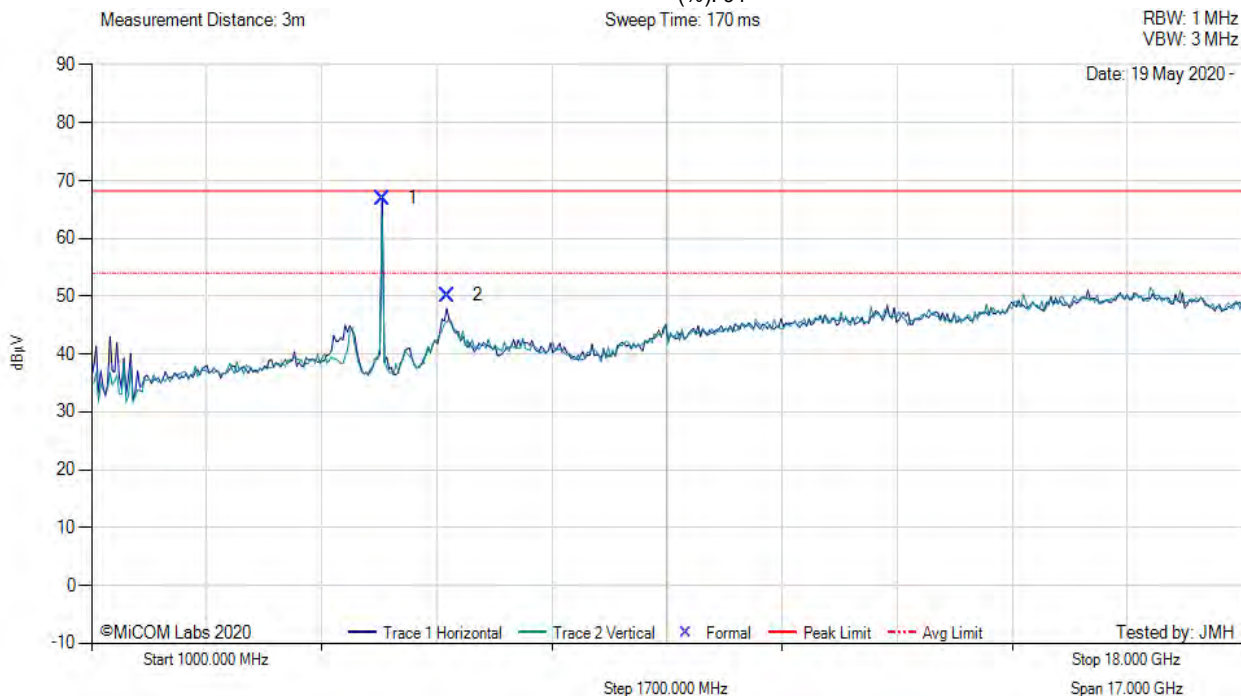
[back to matrix](#)



# TX SPURIOUS & RESTRICTED BAND EMISSIONS



Variant: 20 MHz, Test Freq: 5300.00 MHz, Antenna: RADWIN Ltd. AP0200600-BF, Power Setting: 6.5, Duty Cycle (%): 91



1000.00 - 18000.00 MHz												
Num	Frequency MHz	Raw dBμV	Cable Loss dB	AF dB/m	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5302.67	75.86	3.06	-11.97	66.95	Fundamental	Horizontal	151	0	--	--	
2	6250.03	56.39	3.25	-9.49	50.15	Peak (NRB)	Horizontal	151	0	--	--	Pass

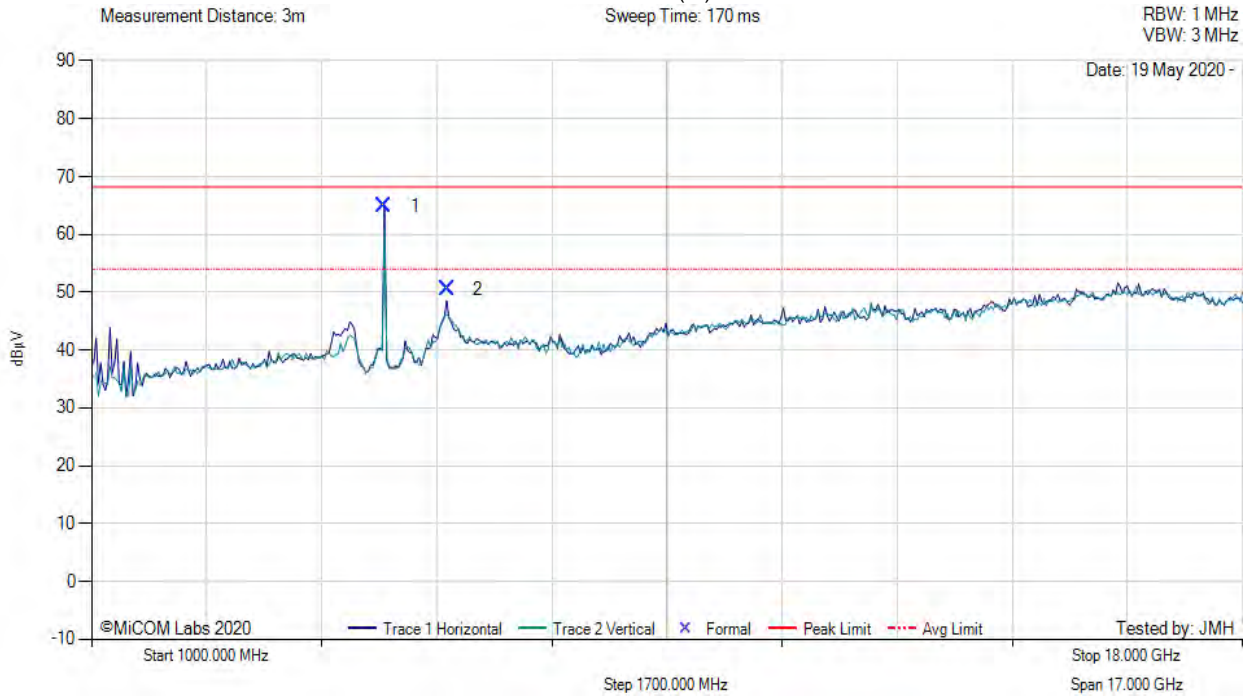
**Test Notes:** EUT powered by POE, connected to laptop outside chamber.

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# TX SPURIOUS & RESTRICTED BAND EMISSIONS



Variant: 20 MHz, Test Freq: 5330.00 MHz, Antenna: RADWIN Ltd. AP0200600-BF, Power Setting: 7.0, Duty Cycle (%): 91



1000.00 - 18000.00 MHz												
Num	Frequency MHz	Raw dBμV	Cable Loss dB	AF dB/m	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5327.76	73.86	2.96	-11.96	64.86	Fundamental	Horizontal	150	0	--	--	
2	6249.89	56.81	3.25	-9.50	50.56	Peak (NRB)	Horizontal	150	0	--	--	Pass

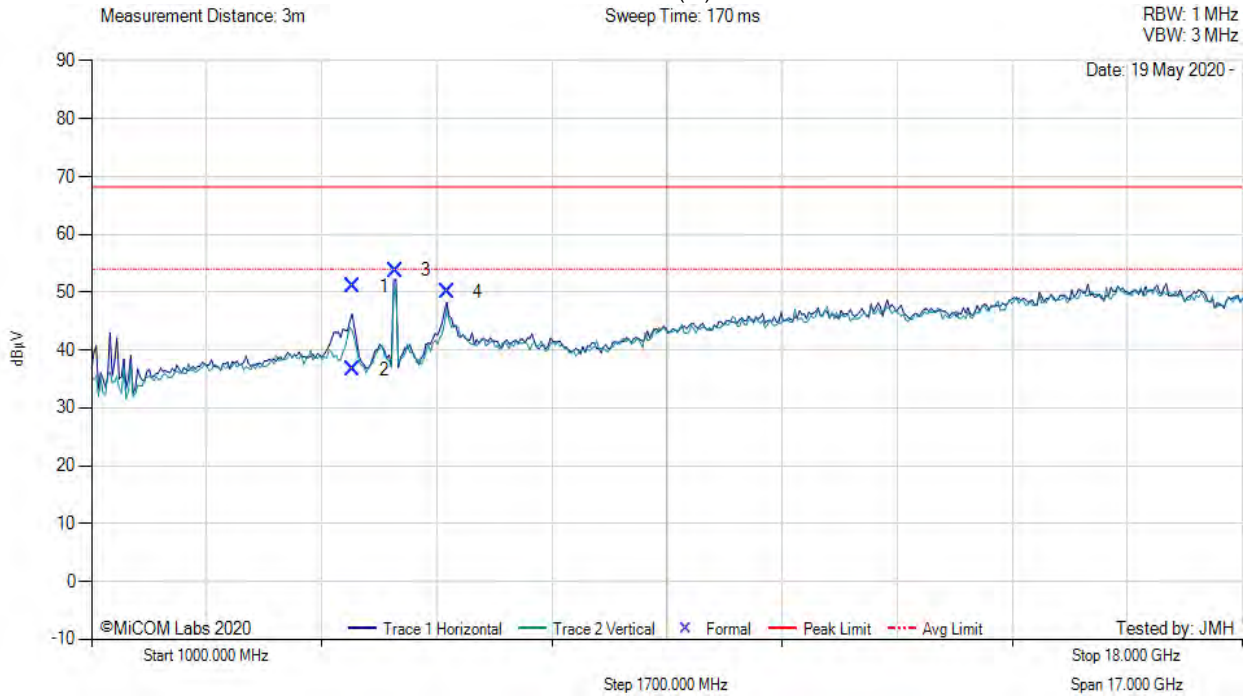
**Test Notes:** EUT powered by POE, connected to laptop outside chamber.

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# TX SPURIOUS & RESTRICTED BAND EMISSIONS



Variant: 20 MHz, Test Freq: 5490.00 MHz, Antenna: RADWIN Ltd. AP0200600-BF, Power Setting: 5.5, Duty Cycle (%): 91



1000.00 - 18000.00 MHz												
Num	Frequency MHz	Raw dBμV	Cable Loss dB	AF dB/m	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	4867.76	60.58	2.93	-12.52	50.99	Max Peak	Horizontal	194	2	68.2	-17.2	Pass
2	4867.76	46.29	2.93	-12.52	36.70	Max Avg	Horizontal	194	2	54.0	-17.3	Pass
3	5493.65	62.36	3.09	-11.65	53.80	Fundamental	Horizontal	151	0	--	--	
4	6249.85	56.29	3.25	-9.50	50.04	Peak (NRB)	Horizontal	151	0	--	--	Pass

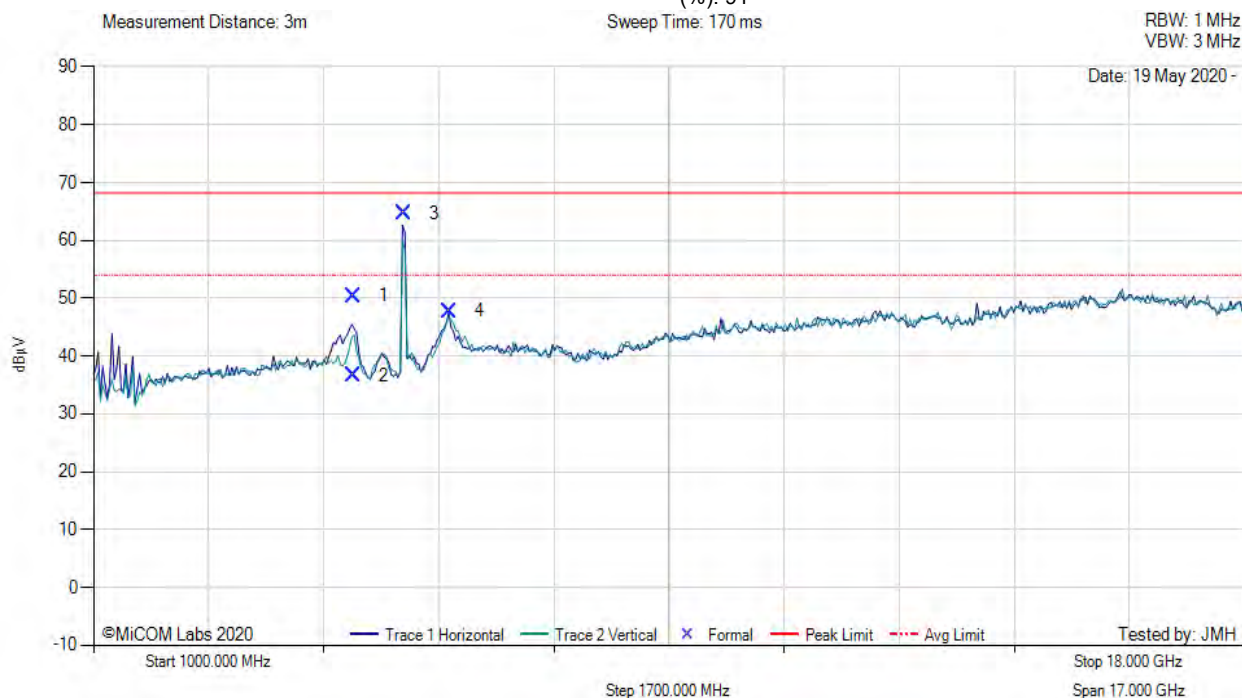
**Test Notes:** EUT powered by POE, connected to laptop outside chamber.

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# TX SPURIOUS & RESTRICTED BAND EMISSIONS



Variant: 20 MHz, Test Freq: 5590.00 MHz, Antenna: RADWIN Ltd. AP0200600-BF, Power Setting: 5.5, Duty Cycle (%): 91



1000.00 - 18000.00 MHz												
Num	Frequency MHz	Raw dBμV	Cable Loss dB	AF dB/m	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	4835.87	60.15	2.82	-12.53	50.44	Max Peak	Horizontal	141	3	68.2	-17.8	Pass
2	4835.87	46.28	2.82	-12.53	36.57	Max Avg	Horizontal	141	3	54.0	-17.4	Pass
3	5586.02	73.05	3.13	-11.56	64.62	Fundamental	Horizontal	156	0	--	--	
4	6249.74	54.00	3.25	-9.50	47.75	Peak (NRB)	Horizontal	156	0	--	--	Pass

**Test Notes:** EUT powered by POE, connected to laptop outside chamber.

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# TX SPURIOUS & RESTRICTED BAND EMISSIONS



Variant: 20 MHz, Test Freq: 5705.00 MHz, Antenna: RADWIN Ltd. AP0200600-BF, Power Setting: 5.5, Duty Cycle (%): 91



1000.00 - 18000.00 MHz												
Num	Frequency MHz	Raw dBμV	Cable Loss dB	AF dB/m	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	4839.67	61.36	2.82	-12.55	51.63	Max Peak	Horizontal	156	0	68.2	-16.6	Pass
2	4839.67	47.42	2.82	-12.55	37.69	Max Avg	Horizontal	156	0	54.0	-16.3	Pass
3	5701.40	62.80	3.19	-11.35	54.64	Fundamental	Horizontal	151	0	--	--	
4	6250.07	54.85	3.25	-9.49	48.61	Peak (NRB)	Horizontal	151	0	--	--	Pass

**Test Notes:** EUT powered by POE, connected to laptop outside chamber.

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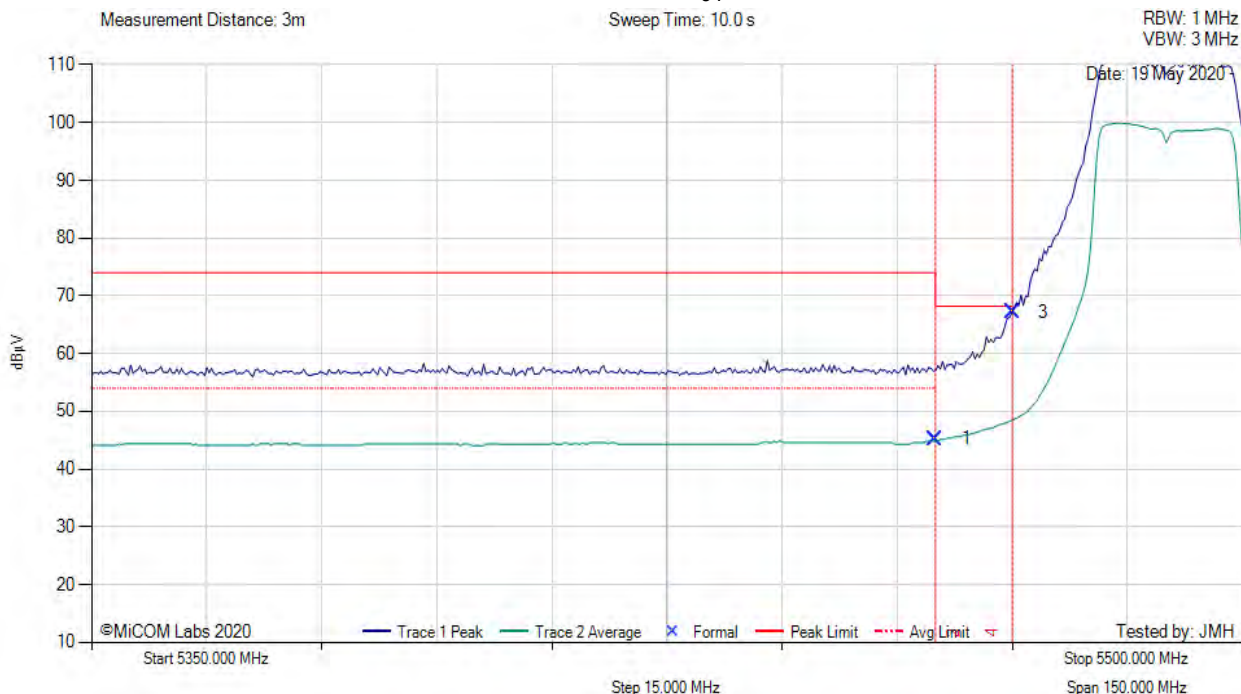
## A.1.2. Restricted Edge & Band-Edge Emissions

### A.1.2.3. RADWIN Ltd. AP0200600



#### RESTRICTED LOWER BAND-EDGE EMISSIONS

Variant: 20 MHz, Test Freq: 5490.00 MHz, Antenna: RADWIN Ltd. AP0200600, Power Setting: 14.5, Duty Cycle (%): 91



5350.00 - 5500.00 MHz												
Num	Frequency MHz	Raw dBμV	Cable Loss dB	AF dB/m	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5460.00	7.70	3.06	34.53	45.29	Max Avg	Horizontal	193	353	54.0	-8.7	Pass
3	5470.00	29.51	3.06	34.55	67.12	Max Peak	Horizontal	193	353	68.2	-1.1	Pass
2	5460.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--
4	5470.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

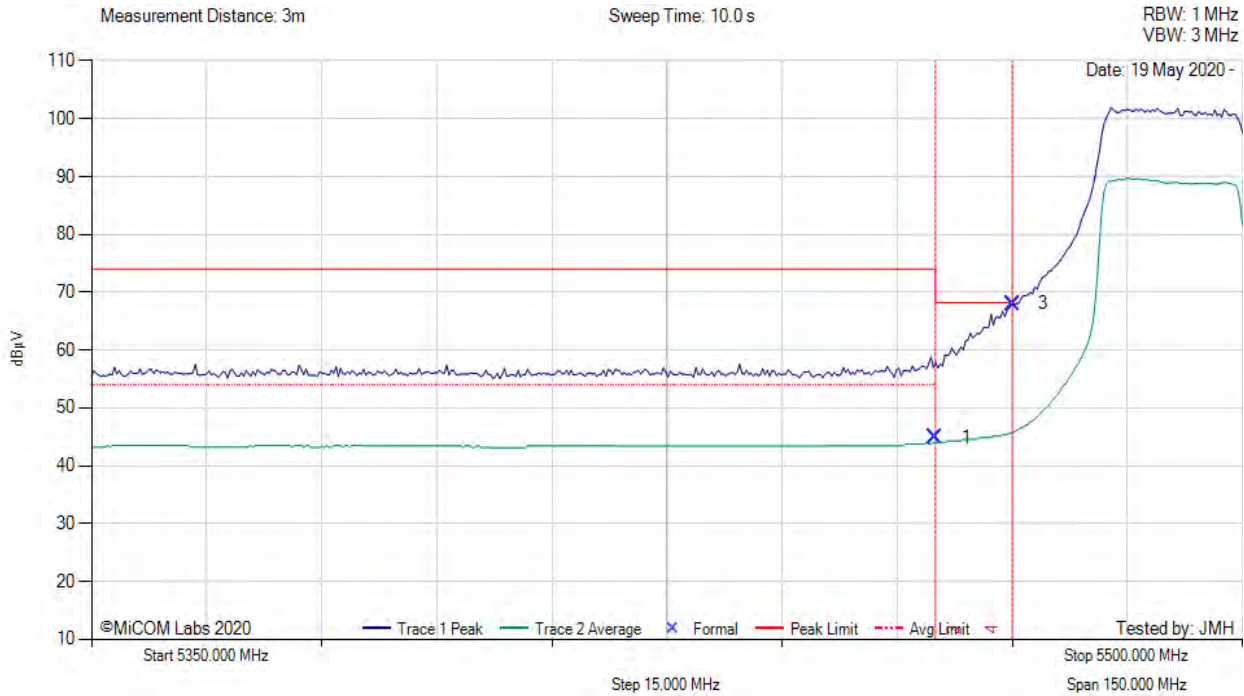
**Test Notes:** EUT powered by POE, connected to laptop outside chamber. 0.41 dB added to average measurement.

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# RESTRICTED LOWER BAND-EDGE EMISSIONS



Variant: 40 MHz, Test Freq: 5500.00 MHz, Antenna: RADWIN Ltd. AP0200600, Power Setting: 8.5, Duty Cycle (%): 82.4



5350.00 - 5500.00 MHz												
Num	Frequency MHz	Raw dBμV	Cable Loss dB	AF dB/m	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5460.00	7.30	3.06	34.53	44.89	Max Avg	Horizontal	193	353	54.0	-9.1	Pass
3	5470.00	30.38	3.06	34.55	67.99	Max Peak	Horizontal	193	353	68.2	-0.2	Pass
2	5460.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--
4	5470.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

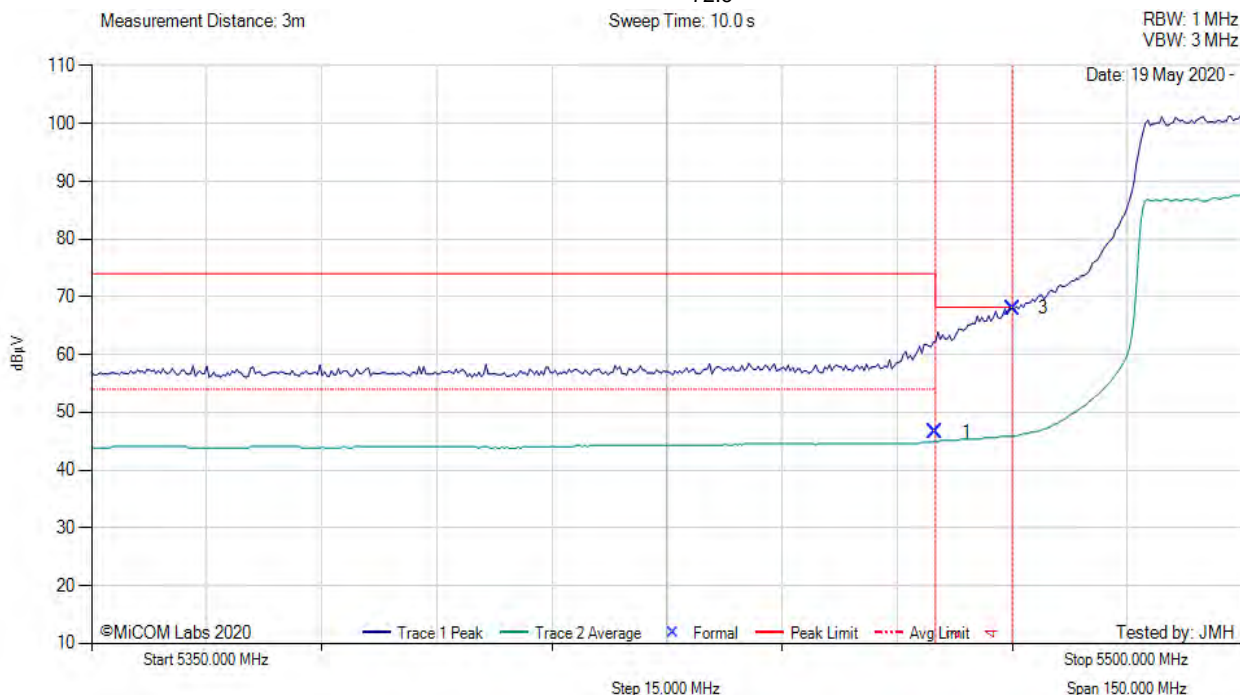
**Test Notes:** EUT powered by POE, connected to laptop outside chamber. 0.84 dB added to average measurement. Power reduced to meet Band Edge Limit

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# RESTRICTED LOWER BAND-EDGE EMISSIONS



Variant: 80 MHz, Test Freq: 5525.00 MHz, Antenna: RADWIN Ltd. AP0200600, Power Setting: 9.0, Duty Cycle (%): 72.5



## 5350.00 - 5500.00 MHz

Num	Frequency MHz	Raw dBμV	Cable Loss dB	AF dB/m	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5460.00	8.95	3.06	34.53	46.54	Max Avg	Horizontal	193	353	54.0	-7.5	Pass
3	5470.00	30.38	3.06	34.55	67.99	Max Peak	Horizontal	193	353	68.2	-0.2	Pass
2	5460.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--
4	5470.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

**Test Notes:** EUT powered by POE, connected to laptop outside chamber. 1.4 dB added to average measurement. Power reduced to meet Band Edge Limit

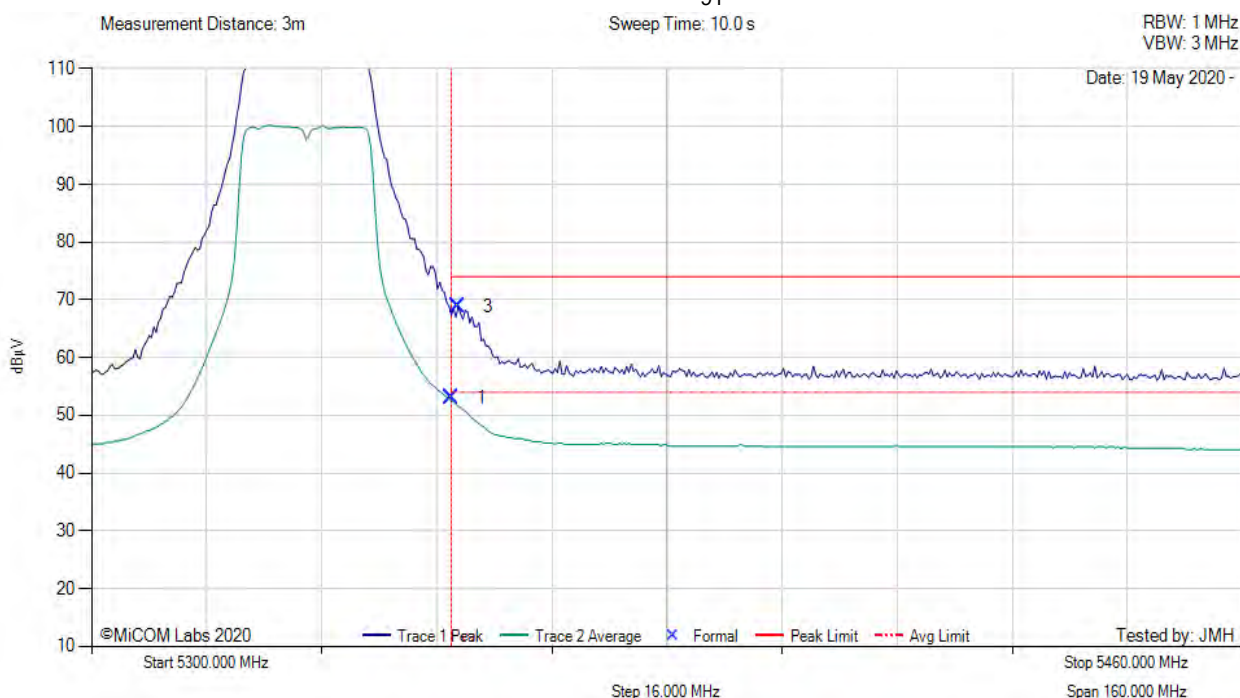
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# RESTRICTED UPPER BAND-EDGE EMISSIONS



Variant: 20 MHz, Test Freq: 5330.00 MHz, Antenna: RADWIN Ltd. AP0200600, Power Setting: 13.0, Duty Cycle (%): 91



5300.00 - 5460.00 MHz												
Num	Frequency MHz	Raw dBμV	Cable Loss dB	AF dB/m	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5350.00	15.55	3.06	34.46	53.07	Max Avg	Horizontal	174	358	54.0	-0.9	Pass
3	5350.96	31.33	3.06	34.46	68.85	Max Peak	Horizontal	174	358	74.0	-5.2	Pass
2	5350.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--

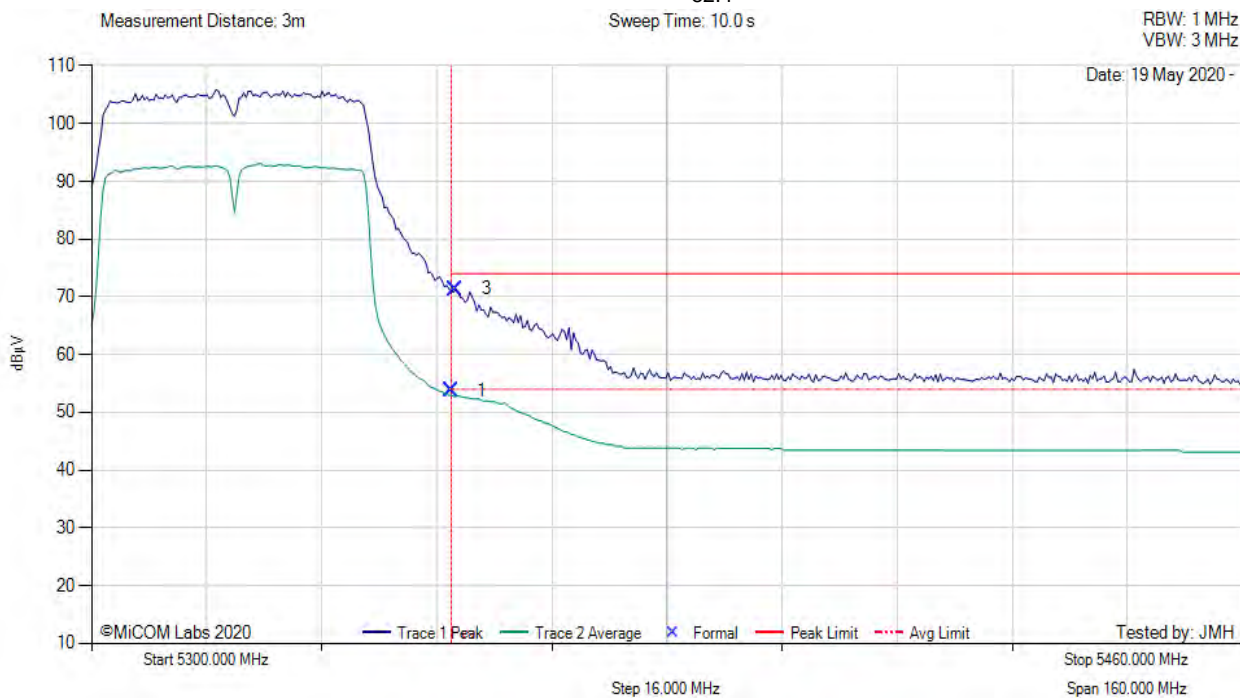
**Test Notes:** EUT powered by POE, connected to laptop outside chamber. Added 0.41 to average marker to compensate for Duty cycle correction.

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# RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 40 MHz, Test Freq: 5320.00 MHz, Antenna: RADWIN Ltd. AP0200600, Power Setting: 8.5, Duty Cycle (%): 82.4



5300.00 - 5460.00 MHz												
Num	Frequency MHz	Raw dBμV	Cable Loss dB	AF dB/m	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5350.00	16.30	3.06	34.46	53.82	Max Avg	Horizontal	174	358	54.0	-0.2	Pass
3	5350.64	33.80	3.06	34.46	71.32	Max Peak	Horizontal	174	358	74.0	-2.8	Pass
2	5350.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--

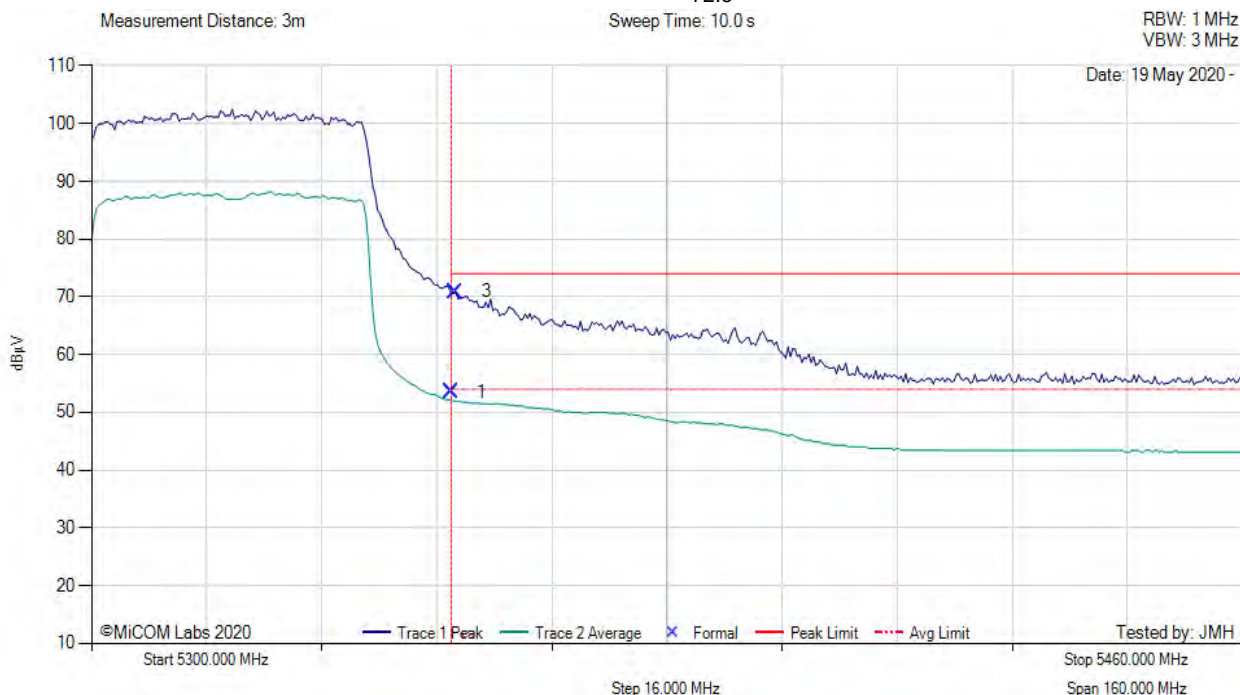
**Test Notes:** EUT powered by POE, connected to laptop outside chamber. 0.84 dB added to average measurement. Power Reduced to meet Band Edge Limit

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# RESTRICTED UPPER BAND-EDGE EMISSIONS



Variant: 80 MHz, Test Freq: 5300.00 MHz, Antenna: RADWIN Ltd. AP0200600, Power Setting: 8.0, Duty Cycle (%): 72.5



5300.00 - 5460.00 MHz												
Num	Frequency MHz	Raw dBμV	Cable Loss dB	AF dB/m	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5350.00	15.98	3.06	34.46	53.50	Max Avg	Horizontal	174	358	54.0	-0.5	Pass
3	5350.64	33.39	3.06	34.46	70.91	Max Peak	Horizontal	174	358	74.0	-3.1	Pass
2	5350.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--

**Test Notes:** EUT powered by POE, connected to laptop outside chamber. 1.4 dB added to average measurement. Power Reduced to meet Band Edge Limit

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#### A.1.2.4. RADWIN Ltd. AP0200600-BF

##### RESTRICTED LOWER BAND-EDGE EMISSIONS

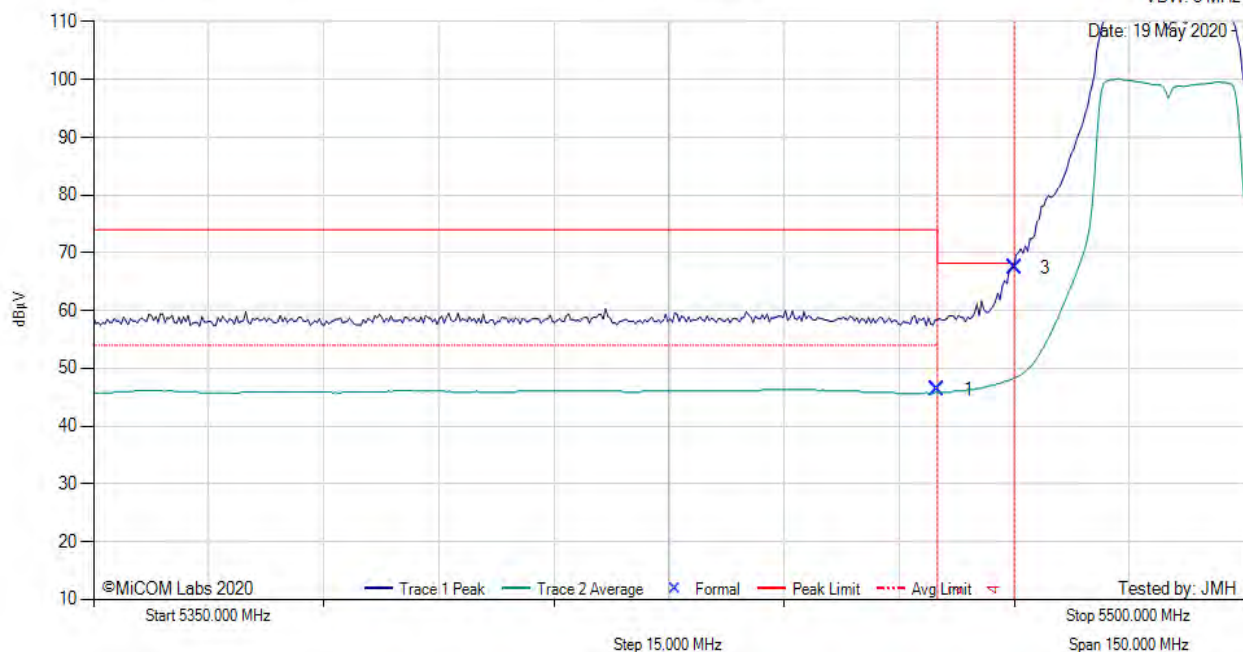


Variant: 20 MHz, Test Freq: 5490.00 MHz, Antenna: RADWIN Ltd. AP0200600-BF, Power Setting: 5.0, Duty Cycle (%): 91

Measurement Distance: 3m

Sweep Time: 10.0 s

RBW: 1 MHz  
VBW: 3 MHz



5350.00 - 5500.00 MHz												
Num	Frequency MHz	Raw dBμV	Cable Loss dB	AF dB/m	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5460.00	8.69	3.06	34.53	46.28	Max Avg	Horizontal	174	358	54.0	-7.7	Pass
3	5470.00	29.85	3.06	34.55	67.46	Max Peak	Horizontal	174	358	68.2	-0.8	Pass
2	5460.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--
4	5470.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

**Test Notes:** EUT powered by POE, connected to laptop outside chamber. 0.41 dB added to average measurement. Power reduced to meet Band Edge Limit

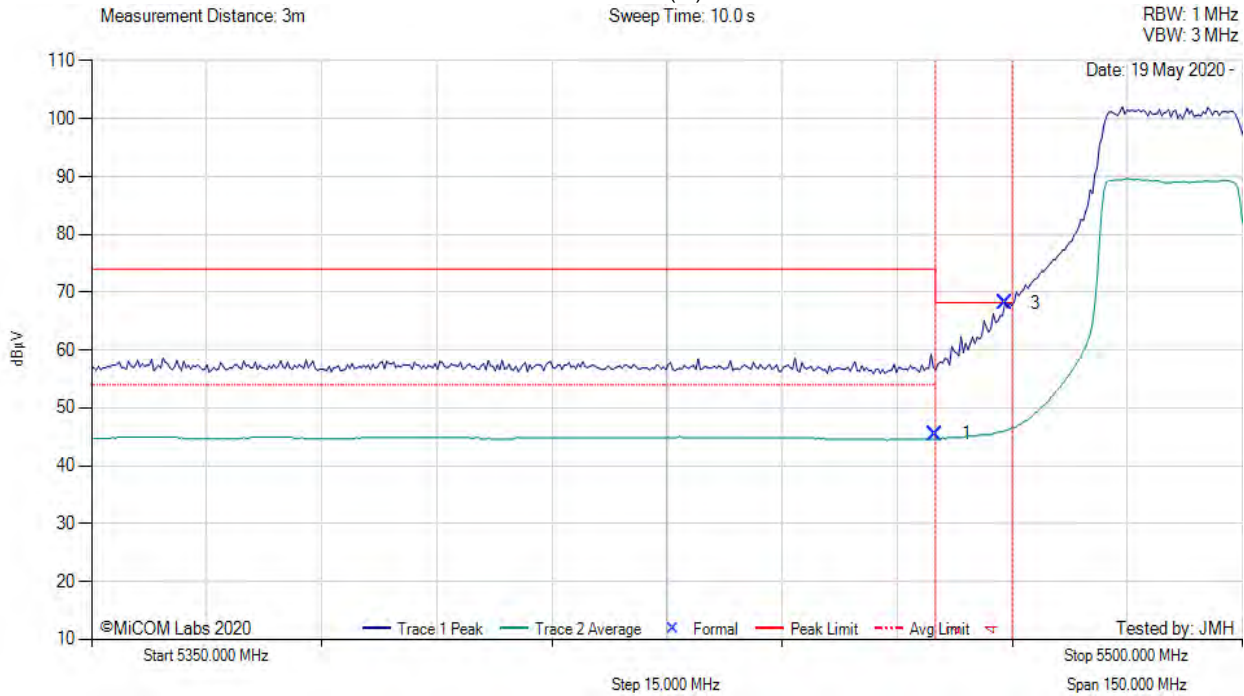
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# RESTRICTED LOWER BAND-EDGE EMISSIONS



Variant: 40 MHz, Test Freq: 5500.00 MHz, Antenna: RADWIN Ltd. AP0200600-BF, Power Setting: -1.5, Duty Cycle (%): 82.4



5350.00 - 5500.00 MHz												
Num	Frequency MHz	Raw dBμV	Cable Loss dB	AF dB/m	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5460.00	7.86	3.06	34.53	45.45	Max Avg	Horizontal	174	358	54.0	-8.6	Pass
3	5469.10	30.51	3.06	34.55	68.12	Max Peak	Horizontal	174	358	68.2	-0.1	Pass
2	5460.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--
4	5470.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

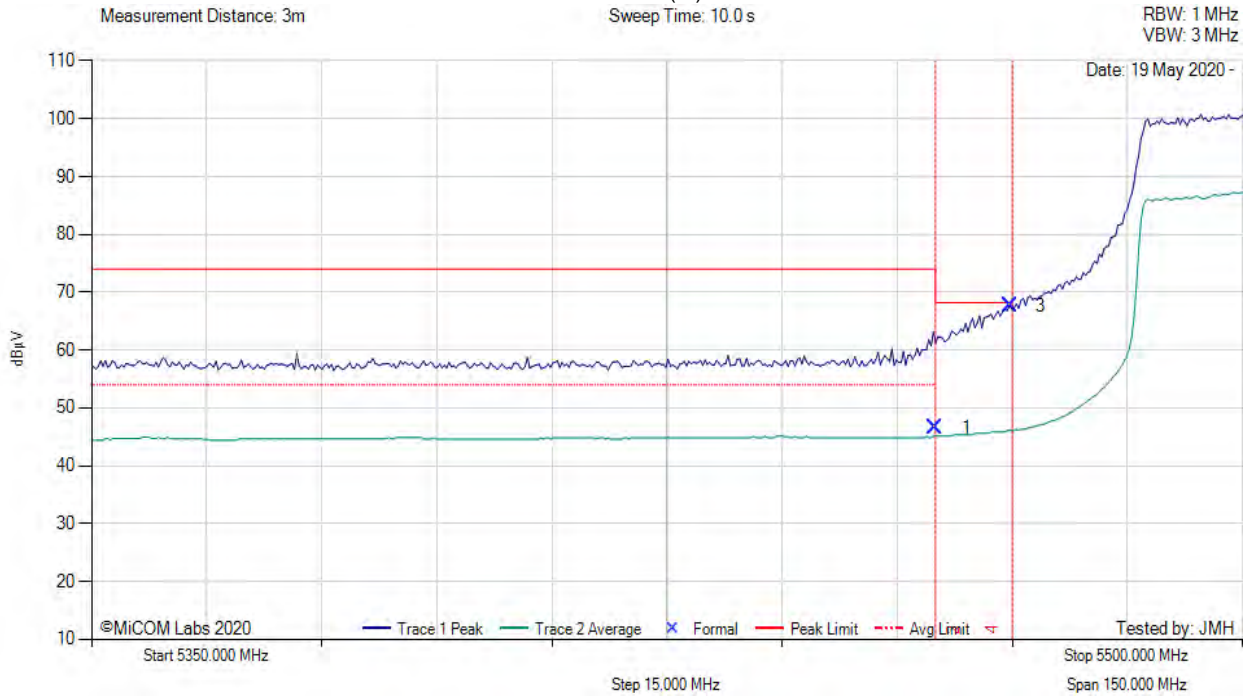
**Test Notes:** EUT powered by POE, connected to laptop outside chamber. 0.84 dB added to average measurement. Power reduced to meet Band Edge Limit

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# RESTRICTED LOWER BAND-EDGE EMISSIONS



Variant: 80 MHz, Test Freq: 5525.00 MHz, Antenna: RADWIN Ltd. AP0200600-BF, Power Setting: -1.0, Duty Cycle (%): 72.5



5350.00 - 5500.00 MHz												
Num	Frequency MHz	Raw dBμV	Cable Loss dB	AF dB/m	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5460.00	8.95	3.06	34.53	46.54	Max Avg	Horizontal	174	358	54.0	-7.5	Pass
3	5469.70	29.97	3.06	34.55	67.58	Max Peak	Horizontal	174	358	68.2	-0.7	Pass
2	5460.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--
4	5470.00	--	--	--	--	Band-Edge	--	--	--	--	--	--

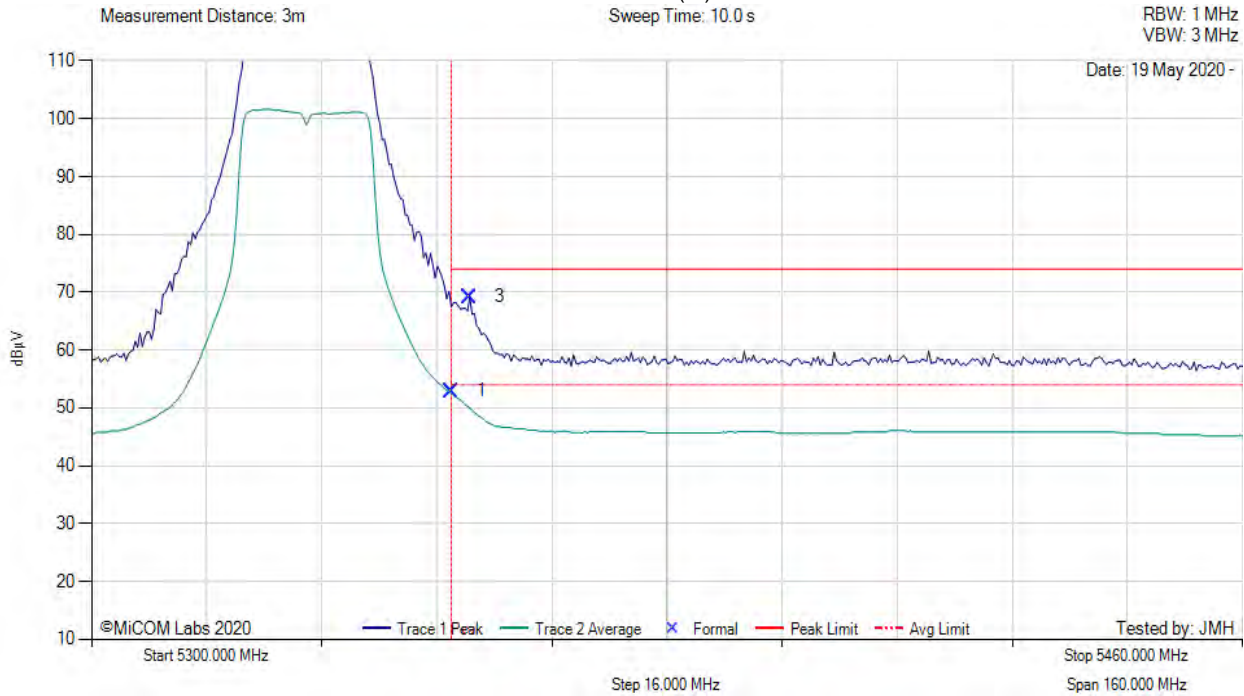
**Test Notes:** EUT powered by POE, connected to laptop outside chamber. 1.4 dB added to average measurement. Power reduced to meet Band Edge Limit

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# RESTRICTED UPPER BAND-EDGE EMISSIONS



Variant: 20 MHz, Test Freq: 5330.00 MHz, Antenna: RADWIN Ltd. AP0200600-BF, Power Setting: 7.0, Duty Cycle (%): 91



5300.00 - 5460.00 MHz												
Num	Frequency MHz	Raw dBμV	Cable Loss dB	AF dB/m	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5350.00	15.44	3.06	34.46	52.96	Max Avg	Horizontal	174	358	54.0	-1.0	Pass
3	5352.57	31.72	3.05	34.47	69.24	Max Peak	Horizontal	174	358	74.0	-4.8	Pass
2	5350.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--

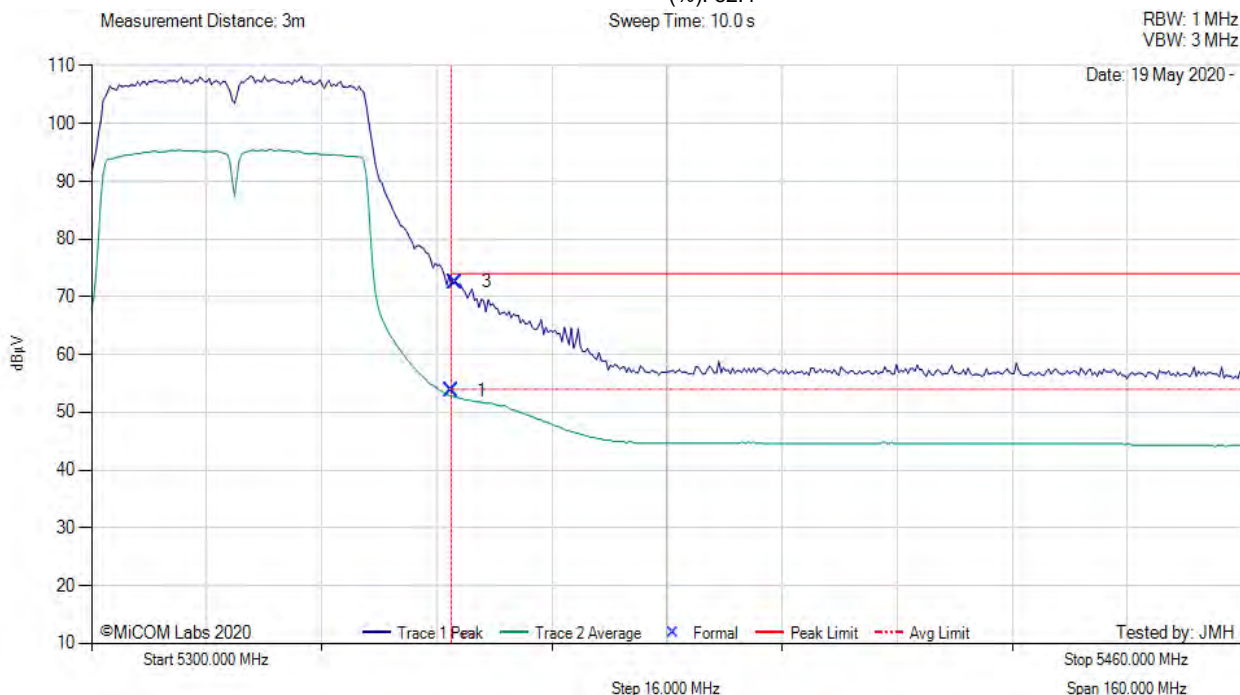
**Test Notes:** EUT powered by POE, connected to laptop outside chamber. 0.41 dB added to average measurement.

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# RESTRICTED UPPER BAND-EDGE EMISSIONS

Variant: 40 MHz, Test Freq: 5320.00 MHz, Antenna: RADWIN Ltd. AP0200600-BF, Power Setting: 4.0, Duty Cycle (%): 82.4



5300.00 - 5460.00 MHz												
Num	Frequency MHz	Raw dBμV	Cable Loss dB	AF dB/m	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5350.00	15.35	3.06	34.46	53.71	Max Avg	Horizontal	174	358	54.0	-0.3	Pass
3	5350.64	35.02	3.06	34.46	72.54	Max Peak	Horizontal	174	358	74.0	-1.5	Pass
2	5350.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--

**Test Notes:** EUT powered by POE, connected to laptop outside chamber. 0.84 dB added to average measurement. Power Reduced to meet Band Edge Limit

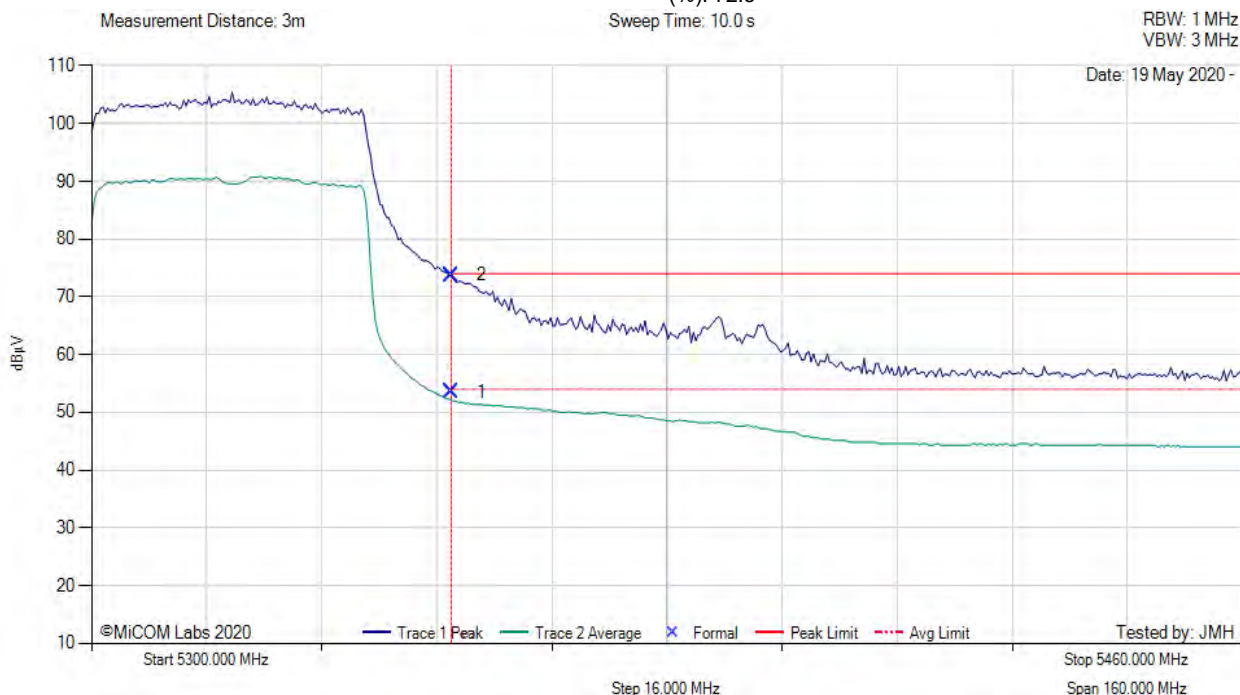
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# RESTRICTED UPPER BAND-EDGE EMISSIONS



Variant: 80 MHz, Test Freq: 5300.00 MHz, Antenna: RADWIN Ltd. AP0200600-BF, Power Setting: 3.5, Duty Cycle (%): 72.5



## 5300.00 - 5460.00 MHz

Num	Frequency MHz	Raw dBμV	Cable Loss dB	AF dB/m	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	5350.00	15.98	3.06	34.46	53.50	Max Avg	Horizontal	174	358	54.0	-0.5	Pass
2	5350.00	36.22	3.06	34.46	73.74	Max Peak	Horizontal	174	358	74.0	-0.3	Pass
3	5350.00	--	--	--	--	Restricted-Band	--	--	--	--	--	--

**Test Notes:** EUT powered by POE, connected to laptop outside chamber. 1.4 dB added to average measurement. Power Reduced to meet Band Edge Limit



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