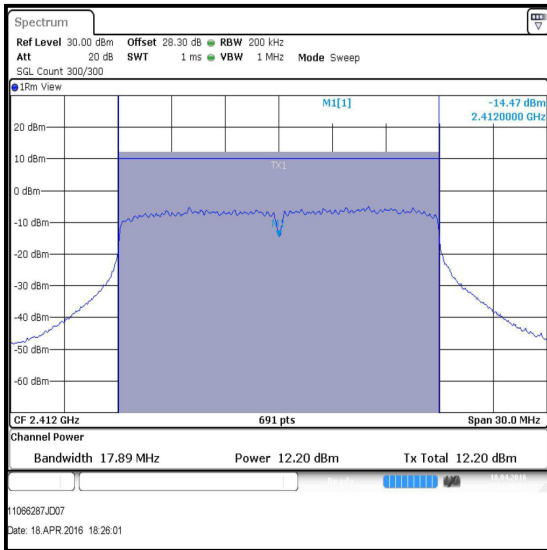
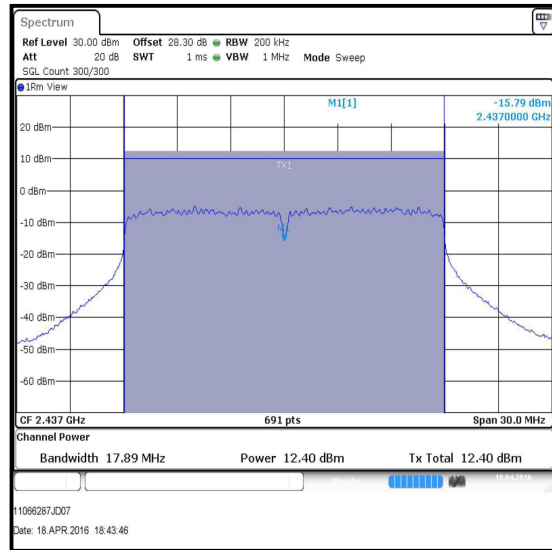


### Transmitter Maximum (Average) Output Power (continued)

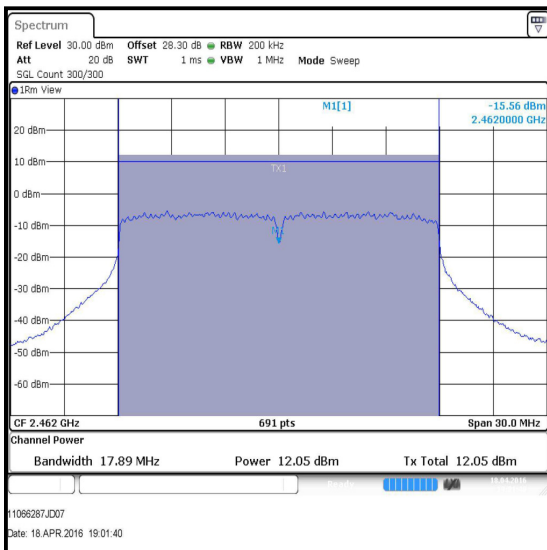
**Results: 802.11n / 20 MHz / 64QAM / MCS6 / Port 1**



**Bottom Channel**



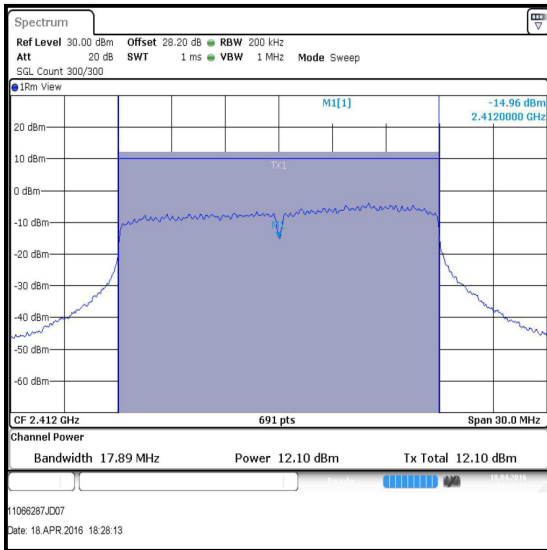
**Middle Channel**



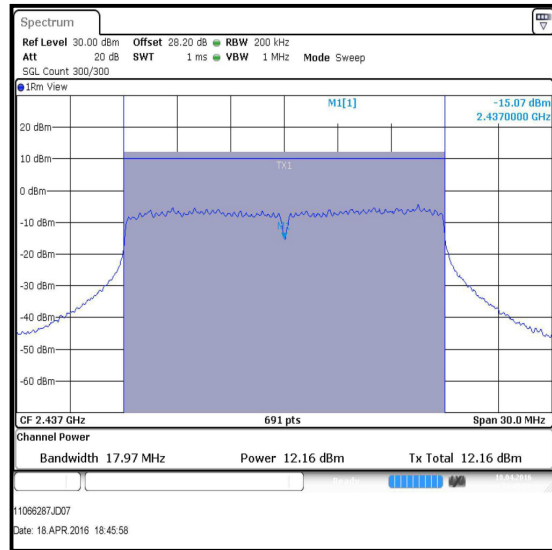
**Top Channel**

### Transmitter Maximum (Average) Output Power (continued)

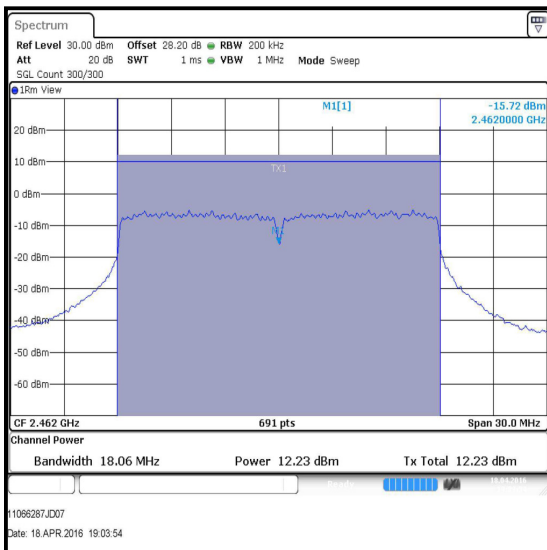
**Results: 802.11n / 20 MHz / 64QAM / MCS6 / Port 2**



**Bottom Channel**



**Middle Channel**



**Top Channel**

**Transmitter Maximum (Average) Output Power (continued)****Results: 802.11n / 40 MHz / QPSK / MCS2****Conducted Peak Limit Comparison**

Channel	Port 1			Port 2		
	Conducted Peak Power (dBm)	Duty Cycle Correction (dB)	Corrected Conducted Peak Power (dBm)	Conducted Peak Power (dBm)	Duty Cycle Correction (dB)	Corrected Conducted Peak Power (dBm)
Bottom	12.9	0.6	13.5	12.8	0.6	13.4
Middle	13.1	0.6	13.7	12.5	0.6	13.1
Top	12.6	0.6	13.2	12.6	0.6	13.2

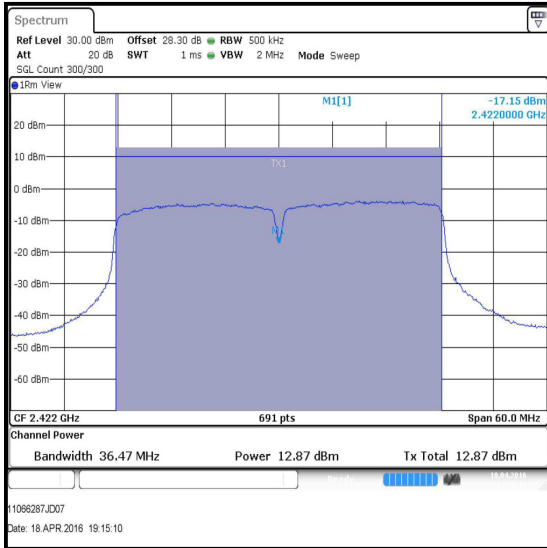
Channel	Corrected Conducted Peak Power Port 1 (dBm)	Corrected Conducted Peak Power Port 2 (dBm)	Combined Conducted Peak Power (dBm)	Conducted Peak Power Limit (dBm)	Margin (dB)	Result
Bottom	13.5	13.4	16.5	30.0	13.5	Complied
Middle	13.7	13.1	16.4	30.0	13.6	Complied
Top	13.2	13.2	16.2	30.0	13.8	Complied

**De Facto EIRP Limit Comparison**

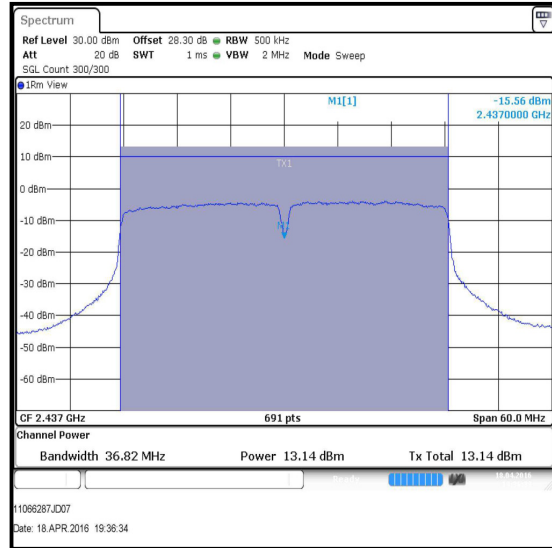
Channel	Combined Conducted Peak Power (dBm)	Directional Antenna Gain (dBi)	EIRP (dBm)	De Facto EIRP Limit (dBm)	Margin (dB)	Result
Bottom	16.5	0.1	16.6	36.0	19.4	Complied
Middle	16.4	0.1	16.5	36.0	19.5	Complied
Top	16.2	0.1	16.3	36.0	19.7	Complied

**Transmitter Maximum (Average) Output Power (continued)**

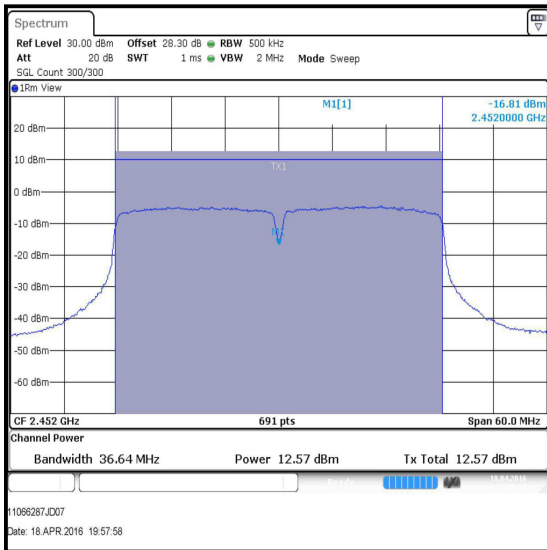
**Results: 802.11n / 40 MHz / QPSK / MCS2 / Port 1**



**Bottom Channel**



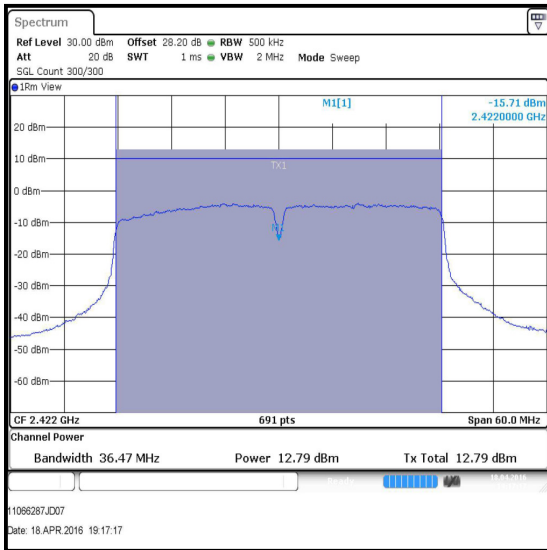
**Middle Channel**



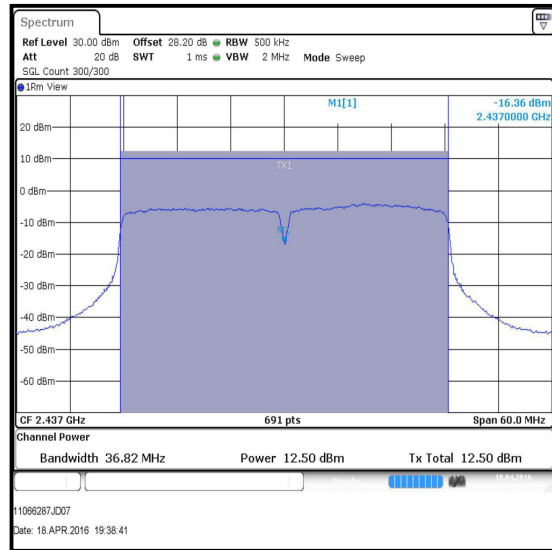
**Top Channel**

### Transmitter Maximum (Average) Output Power (continued)

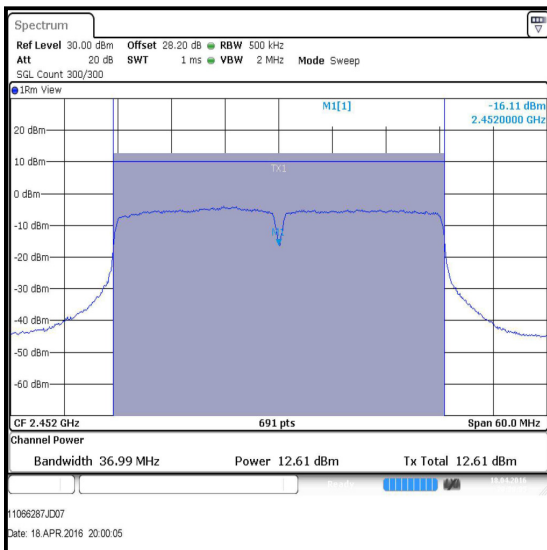
**Results: 802.11n / 40 MHz / QPSK / MCS2 / Port 2**



**Bottom Channel**



**Middle Channel**



**Top Channel**

**Transmitter Maximum (Average) Output Power (continued)****Test Equipment Used:**

Asset No.	Instrument	Manufacturer	Type No.	Serial No.	Date Calibration Due	Cal. Interval (Months)
M2002	Thermohygrometer	Testo	608-H1	45041825	02 Apr 2017	12
M1873	Signal Analyser	Rohde & Schwarz	FSV30	103074	03 Jul 2016	12
M1867	Attenuator	Huber + Suhner AG	6820.17.B	07101	Calibrated before use	-
A2847	Attenuator	Radiall	R411.820.121	24671450	Calibrated before use	-
A2345	Attenuator	Macom	2082-6043-20	None stated	Calibrated before use	-
135878	RF Switch	Pickering Interfaces	64-102-002 & 40-881-001	XZ340281 & X311198	Calibrated before use	-
S0538	DC Power Supply	TTi	PL154	250135	Calibrated before use	-
M1251	Multimeter	Fluke	175	89170179	26 May 2016	12
M1252	Signal Generator	Hewlett Packard	83640A	3119A00489	26 Oct 2017	24

**5.2.6. Transmitter Radiated Emissions****Test Summary:**

<b>Test Engineer:</b>	Georgios Vrezas	<b>Test Date:</b>	27 April 2016
<b>Test Sample IMEI:</b>	357232070004146		

<b>FCC Reference:</b>	Parts 15.247(d) & 15.209(a)
<b>Test Method Used:</b>	ANSI C63.10 Sections 6.3 and 6.5
<b>Frequency Range</b>	30 MHz to 1000 MHz

**Environmental Conditions:**

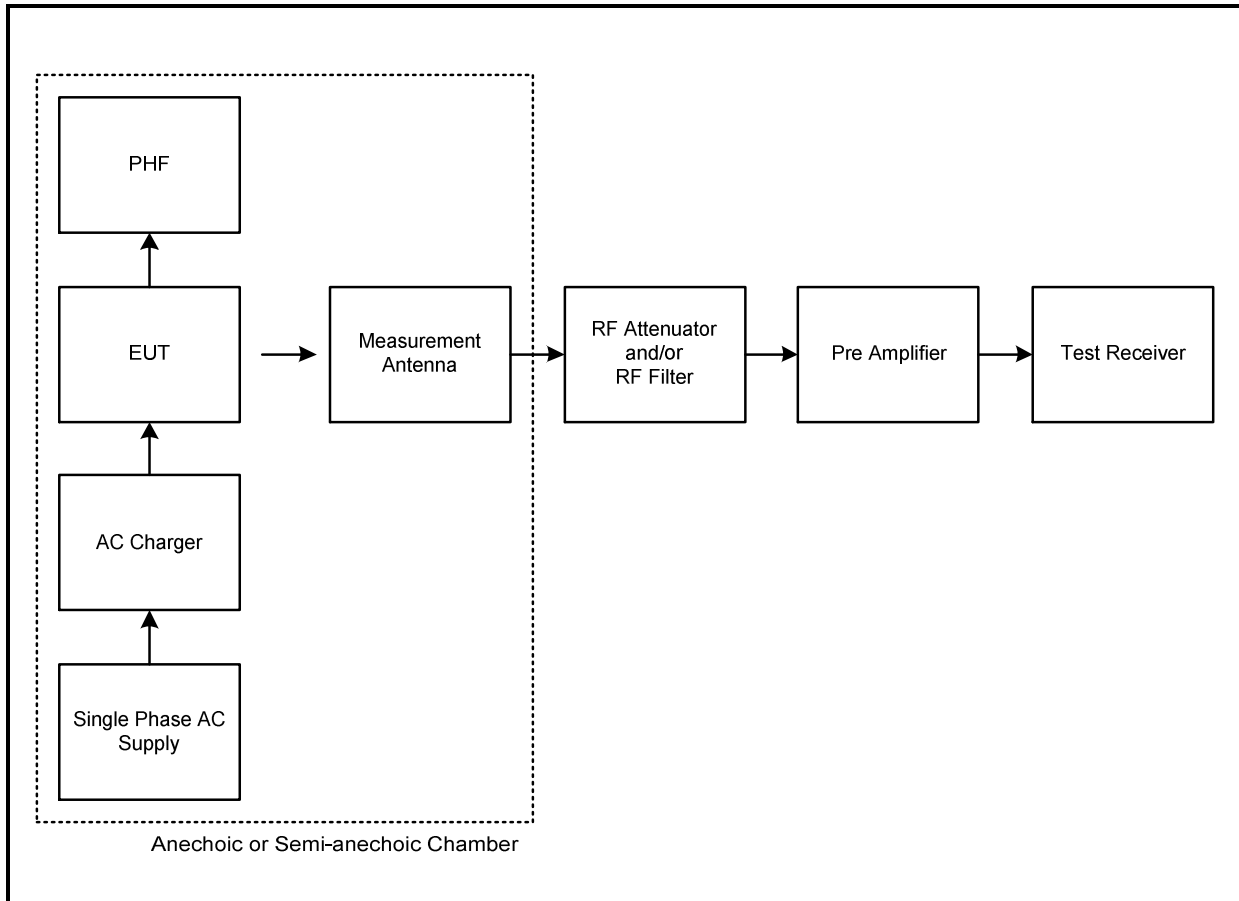
<b>Temperature (°C):</b>	22
<b>Relative Humidity (%):</b>	32

**Note(s):**

1. The final measured value, for the given emission, in the table below incorporates the calibrated antenna factor and cable loss.
2. The preliminary scans showed similar emission levels below 1 GHz, for each channel of operation. Therefore final radiated emissions measurements were performed with the EUT set to the middle channel only.
3. All other emissions shown on the pre-scans were investigated and found to be ambient, or > 20 dB below the appropriate limit or below the noise floor of the measurement system.
4. Measurements below 1 GHz were performed in a semi-anechoic chamber (Asset Number K0001) at a distance of 3 metres. The EUT was placed at a height of 80 cm above the reference ground plane in the centre of the chamber turntable. Maximum emission levels were determined by height searching the measurement antenna over the range 1 metre to 4 metres.
5. Pre-scans were performed and markers placed on the highest measured levels. The test receiver resolution bandwidth was set to 100 kHz and video bandwidth 300 kHz. A peak detector was used, sweep time was set to auto and trace mode was Max Hold.
6. Final measurements were performed on the marker frequencies and the results entered into the table below. The test receiver resolution bandwidth was set to 120 kHz and a CISPR quasi-peak detector was used.

**Transmitter Radiated Emissions (continued)**

**Test setup:**

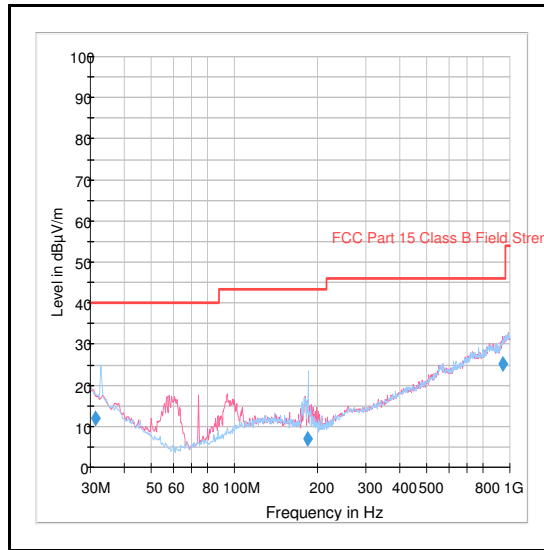


**Results: Middle Channel / 802.11b / 11 Mbit/s**

Frequency (MHz)	Antenna Polarity	Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Result
31.344	Horizontal	12.0	40.0	28.0	Complied
184.678	Horizontal	7.0	43.5	36.5	Complied
941.554	Vertical	25.1	46.0	20.9	Complied



**Transmitter Radiated Emissions (continued)**



*Note: This plot is a pre-scan and for indication purposes only. For final measurements, see accompanying table.*

**Test Equipment Used:**

Asset No.	Instrument	Manufacturer	Type No.	Serial No.	Date Calibration Due	Cal. Interval (Months)
M1625	Thermohygrometer	JM Handelspunkt	30.5015.06	None stated	11 Jan 2017	12
K0001	5m RSE Chamber	Rainford EMC	N/A	N/A	12 Jan 2017	12
A1834	Attenuator	Hewlett Packard	8491B	10444	Calibrated Before Use	-
G0543	Amplifier	Sonoma	310N	230801	29 May 2016	3
M1273	Test Receiver	Rohde & Schwarz	ESIB26	100275	11 Apr 2017	12
A259	Antenna	Chase	CBL6111A	1513	30 Mar 2017	12

**Transmitter Radiated Emissions (continued)****Test Summary:**

<b>Test Engineer:</b>	Georgios Vrezas	<b>Test Date:</b>	08 May 2016
<b>Test Sample IMEI:</b>	357232070004146		

<b>FCC Reference:</b>	Parts 15.247(d) & 15.209(a)
<b>Test Method Used:</b>	ANSI C63.10 Sections 6.3 and 6.6
<b>Frequency Range</b>	1 GHz to 25 GHz

**Environmental Conditions:**

<b>Temperature (°C):</b>	23
<b>Relative Humidity (%):</b>	35

**Note(s):**

1. The final measured value, for the given emission, in the table below incorporates the calibrated antenna factor and cable loss.
2. No spurious emissions were detected above the noise floor of the measuring receiver therefore the highest peak and average noise floor readings of the measuring receiver were recorded as shown in the tables below.
3. The emission shown approximately at 2437 MHz on the 1 GHz to 4 GHz plot is the EUT fundamental.
4. Pre-scans above 1 GHz were performed in a fully anechoic chamber (Asset Number K0002) at a distance of 3 metres. The EUT was placed at a height of 1.5 metres above the test chamber floor in the centre of the chamber turntable. All measurement antennas were placed at a fixed height of 1.5 metres above the test chamber floor, in line with the EUT. Final measurements above 1 GHz were performed in a semi-anechoic chamber (Asset Number K0001) at a distance of 3 metres. The EUT was placed at a height of 80 cm above the reference ground plane in the centre of the chamber turntable. Maximum emission levels were determined by height searching the measurement antenna over the range 1 metre to 4 metres.
5. Pre-scans were performed and a marker placed on the highest measured level of the appropriate plot. The test receiver resolution bandwidth was set to 1 MHz and video bandwidth 3 MHz. The sweep time was set to auto.

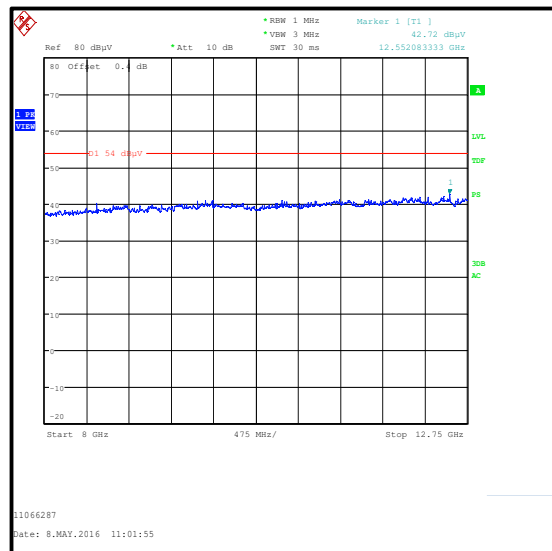
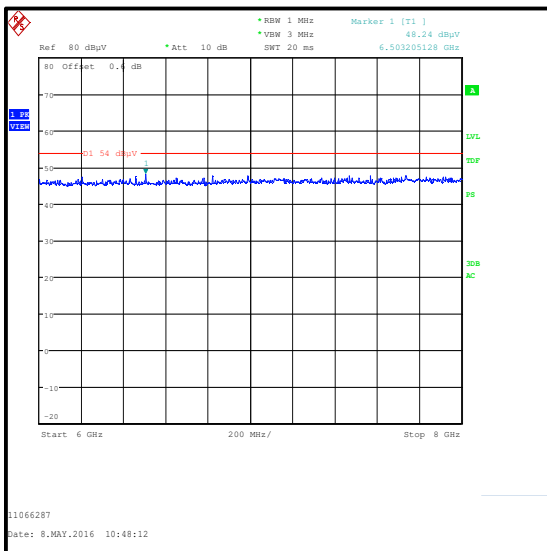
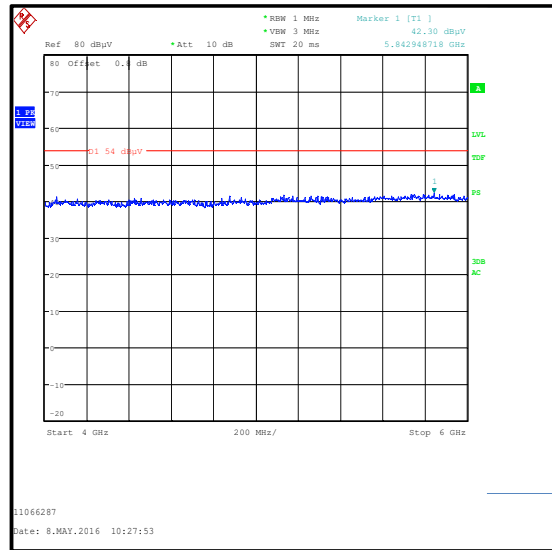
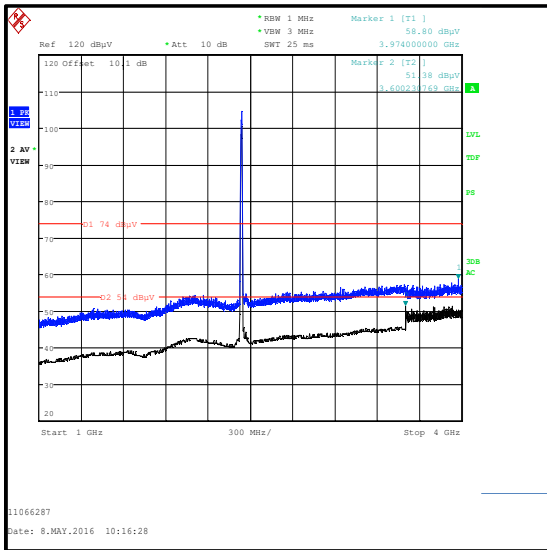
**Results: Peak**

Frequency (MHz)	Antenna Polarity	Peak Level (dB $\mu$ V/m)	Peak Limit (dB $\mu$ V/m)	Margin (dB)	Result
3794.000	Vertical	58.8	74.0	15.2	Complied

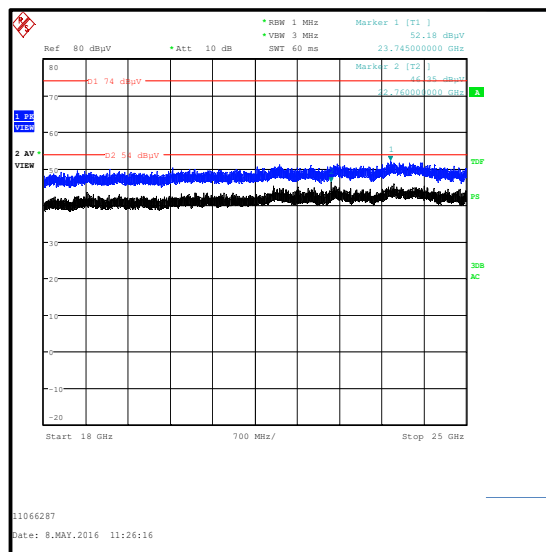
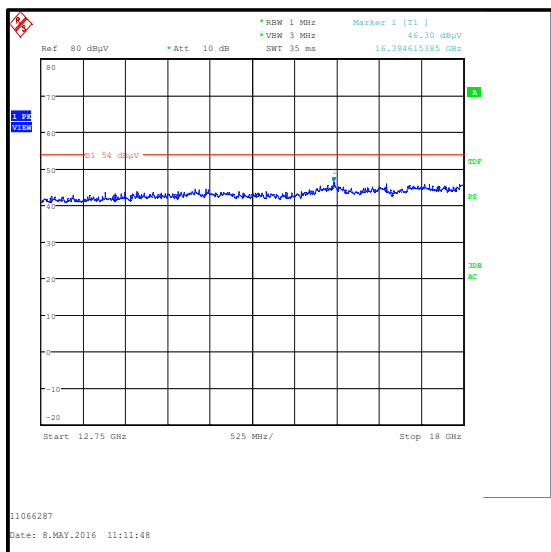
**Results: Average**

Frequency (MHz)	Antenna Polarity	Average Level (dB $\mu$ V/m)	Average Limit (dB $\mu$ V/m)	Margin (dB)	Result
3600.231	Vertical	51.4	54.0	2.6	Complied

**Transmitter Radiated Emissions (continued)**



**Transmitter Radiated Emissions (continued)**



**Test Equipment Used:**

Asset No	Instrument	Manufacturer	Type No.	Serial No.	Date Calibration Due	Cal. Interval (Months)
M1656	Thermohygrometer	JM Handelspunkt	30.5015.13	Not stated	02 Apr 2017	12
K0002	3m RSE Chamber	Rainford EMC	N/A	N/A	21 Dec 2016	12
M1886	Test Receiver	Rohde & Schwarz	ESU26	100554	21 May 2017	12
A1534	Pre Amplifier	Hewlett Packard	8449B	3008A00405	19 Dec 2016	12
A1818	Antenna	EMCO	3115	00075692	17 Dec 2016	12
A253	Antenna	Flann Microwave	12240-20	128	17 Dec 2016	12
A254	Antenna	Flann Microwave	14240-20	139	17 Dec 2016	12
A255	Antenna	Flann Microwave	16240-20	519	17 Dec 2016	12
A256	Antenna	Flann Microwave	18240-20	400	17 Dec 2016	12
A1396	Attenuator	Huber & Suhner	6810.17.B	757987	30 Apr 2017	12
A1975	High Pass Filter	AtlanTecRF	AFH-03000	090424010	26 Apr 2017	12

**5.2.7. Transmitter Band Edge Radiated Emissions****Test Summary:**

<b>Test Engineer:</b>	Georgios Vrezas	<b>Test Date:</b>	07 May 2016
<b>Test Sample IMEI:</b>	357232070004146		

<b>FCC Reference:</b>	Parts 15.247(d) & 15.209(a)
<b>Test Method Used:</b>	ANSI C63.10 Section 6.10 & FCC KDB 558074 Sections 11 & 13

**Environmental Conditions:**

<b>Temperature (°C):</b>	23
<b>Relative Humidity (%):</b>	32

**Note(s):**

- Tests were performed in the following modes as they produced the highest power, highest power spectral density and widest occupied bandwidth:
  - 802.11b – DBPSK / 1 Mbit/s
  - 802.11b – DQPSK / 11 Mbit/s
  - 802.11g – 16QAM / 24 Mbit/s
  - 802.11g – 64QAM / 48 Mbit/s
  - 802.11n / HT20 – 64QAM / 58.5 Mbit/s / MCS6 (GI = 800 ns)
  - 802.11n / HT40 – QPSK / 40.5 Mbit/s / MCS2 (GI = 800 ns)
  - 802.11n / HT40 – 64QAM / 121.5 Mbit/s / MCS6 (GI = 800 ns)
- The final measured value, for the given emission, in the table below incorporates the calibrated antenna factor and cable loss.
- The maximum conducted (average) output power was previously measured. In accordance with FCC KDB 558074 Section 11.1(b), the lower band edge measurement should be performed with a peak detector and the -30 dBc limit applied.
- As the lower band edge falls within a non-restricted band, only peak measurements are required. In accordance with FCC KDB 558074 Section 11.1, the test method in Section 11.3 was followed: the test receiver resolution bandwidth was set to 100 kHz and video bandwidth 300 kHz. A peak detector was used, sweep time was set to auto and trace mode was Max Hold. The test receiver was left to sweep for a sufficient length of time in order to maximise the carrier level and out-of-band emissions. A marker and corresponding reference level line were placed on the peak of the carrier. As the maximum conducted (average) output power was measured using an RMS detector in accordance with FCC KDB 558074 Section 9.2.2.4 an out-of-band limit line was placed 30 dB (FCC KDB 558074 Section 11.1(b)) below the peak level. A marker was placed on the band edge spot frequencies and a second marker placed on the highest emission level in the adjacent non-restricted band of operation (where a higher level emission was present). Marker frequencies and levels were recorded.

**Transmitter Band Edge Radiated Emissions (continued)****Note(s):**

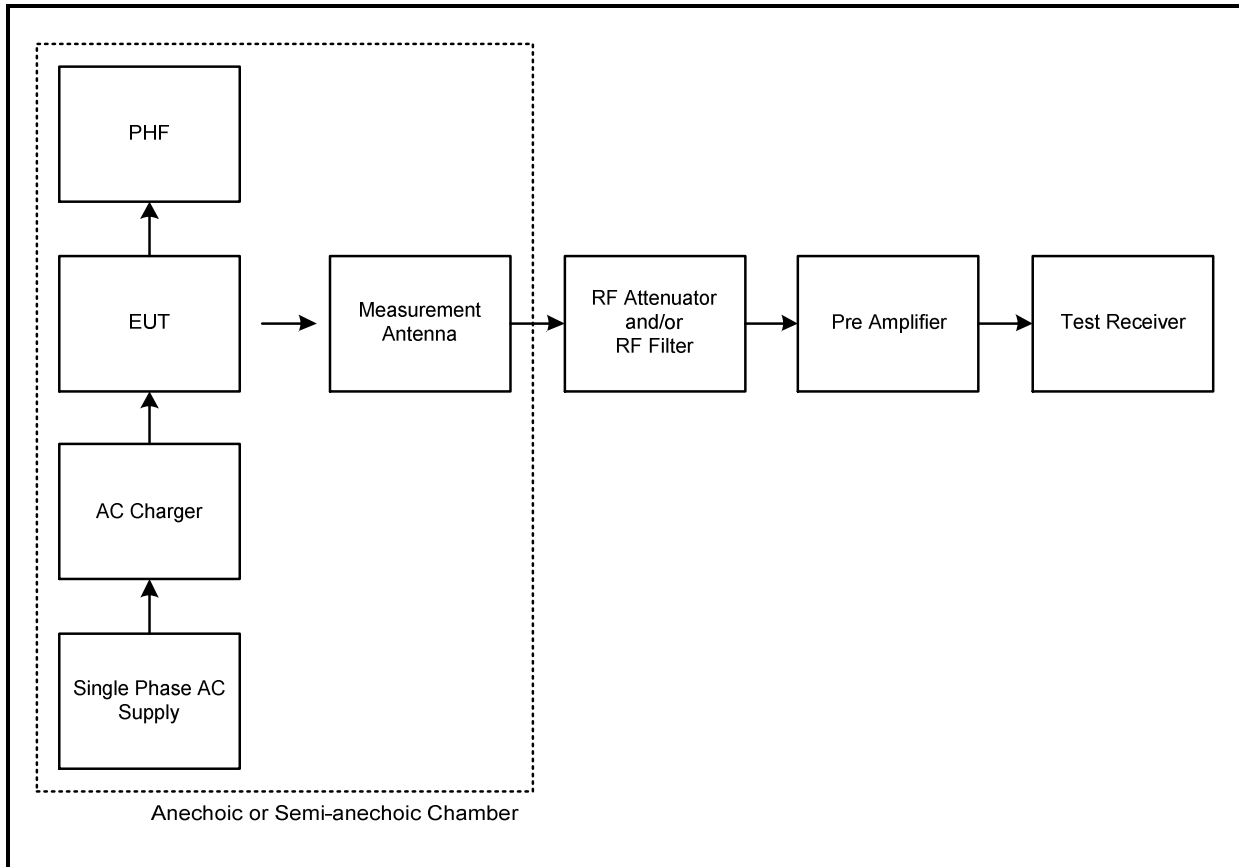
5. As the upper band edge falls within a restricted band both peak and average measurements were recorded by placing a marker at the edge of the band. For peak measurements the test receiver resolution bandwidth was set to 1 MHz and the video bandwidth 3 MHz. A peak detector was used, sweep time was set to auto and trace mode was Max Hold. For average measurements the test receiver resolution bandwidth was set to 1 MHz and the video bandwidth 3 MHz. An average detector was used, sweep time was set to auto and trace mode was Max Hold. The test receiver was left to sweep for a sufficient length of time in order to maximise the carrier level and out-of-band emissions. A marker was placed on the band edge spot frequencies and a second marker placed on the highest emission level in the adjacent restricted band of operation (where a higher level emission was present). Marker frequencies and levels were recorded.
6. \* The integration method was used in accordance with FCC KDB 558074 Section 13.3.2, in order to meet the average limit when transmitting in 802.11g and 802.11n modes. As the EUT had a duty cycle < 98% the duty cycle correction factor has been applied to the band edge results. The corrected levels are shown below:

*Integration method result + duty cycle = Corrected band edge level*

*802.11g / 24 Mbit/s at 2483.5 MHz : 49.3 + 0.4 = 49.7*

*802.11g / 48 Mbit/s at 2483.5 MHz : 47.3 + 0.8 = 48.1*

*802.11n / MCS6 at 2483.5 MHz : 47.3 + 0.9 = 49.2*

**Test setup:**

**Transmitter Band Edge Radiated Emissions (continued)****Results: 802.11b / 20 MHz / DBPSK / 1 Mbit/s****Results: Lower Band Edge**

Frequency (MHz)	Level (dB $\mu$ V/m)	-30 dBc Limit (dB $\mu$ V/m)	Margin (dB)	Result
2398.958	45.8	69.5	23.7	Complied
2400	42.3	69.5	27.2	Complied

**Results: Lower Band Edge / Restricted Band / Peak**

Frequency (MHz)	Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Result
2323.205	52.9	74.0	21.1	Complied

**Results: Lower Band Edge / Restricted Band / Average**

Frequency (MHz)	Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Result
2333.718	43.0	54.0	11.0	Complied

**Results: Upper Band Edge / Restricted Band / Peak**

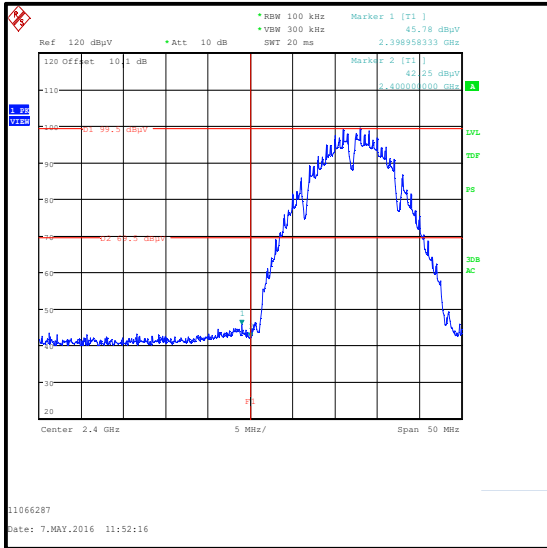
Frequency (MHz)	Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Result
2483.5	53.4	74.0	20.6	Complied
2483.821	54.8	74.0	19.2	Complied

**Results: Upper Band Edge / Restricted Band / Average**

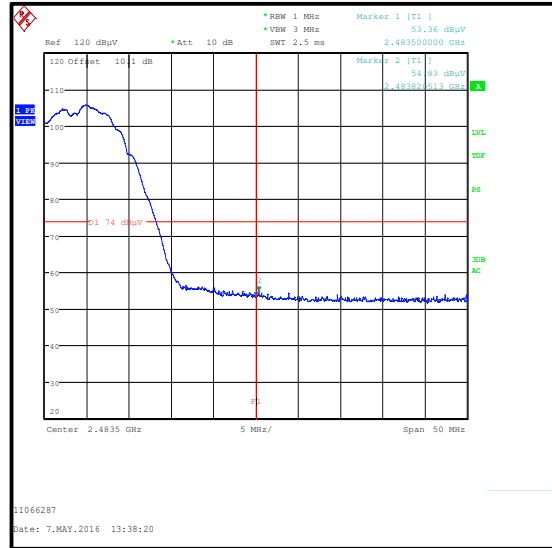
Frequency (MHz)	Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Result
2483.5	44.4	54.0	9.6	Complied
2485.904	45.1	54.0	8.9	Complied

### Transmitter Band Edge Radiated Emissions (continued)

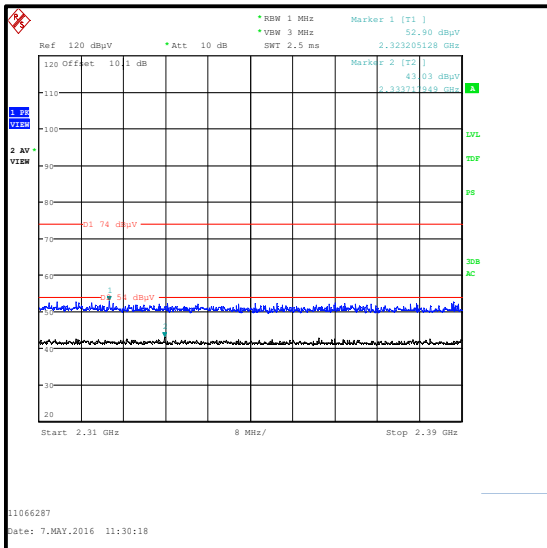
Results: 802.11b / 20 MHz / DBPSK / 1 Mbit/s



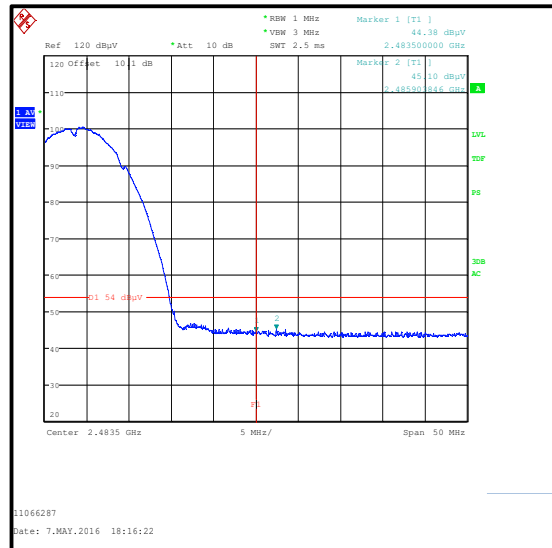
Lower Band Edge Peak Measurement



Upper Band Edge Peak Measurement



2310 MHz to 2390 MHz Restricted Band Plot



Upper Band Edge Average Measurement



**Transmitter Band Edge Radiated Emissions (continued)****Results: 802.11b / 20 MHz / DQPSK / 11 Mbit/s****Results: Lower Band Edge**

Frequency (MHz)	Level (dB $\mu$ V/m)	-30 dBc Limit (dB $\mu$ V/m)	Margin (dB)	Result
2397.917	46.8	70.9	24.1	Complied
2400	46.0	70.9	24.9	Complied

**Results: Lower Band Edge / Restricted Band / Peak**

Frequency (MHz)	Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Result
2383.205	53.0	74.0	21.0	Complied

**Results: Lower Band Edge / Restricted Band / Average**

Frequency (MHz)	Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Result
2310.641	42.9	54.0	11.1	Complied

**Results: Upper Band Edge / Restricted Band / Peak**

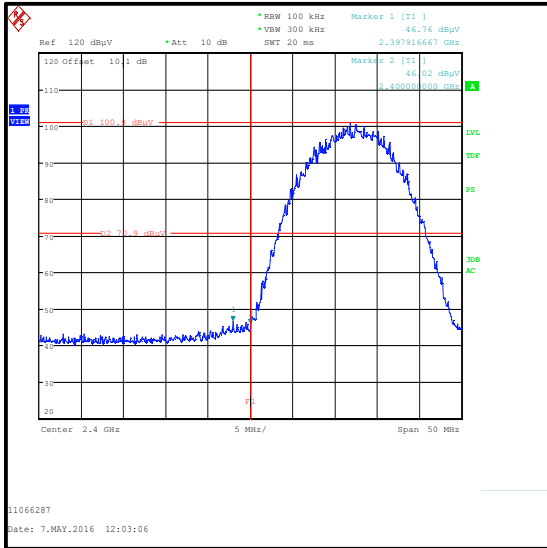
Frequency (MHz)	Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Result
2483.5	52.2	74.0	21.8	Complied
2485.904	54.6	74.0	19.4	Complied

**Results: Upper Band Edge / Restricted Band / Average**

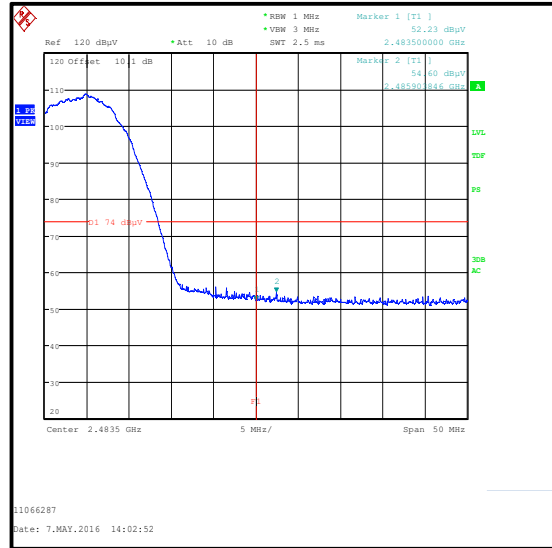
Frequency (MHz)	Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Result
2483.5	45.7	54.0	8.3	Complied

**Transmitter Band Edge Radiated Emissions (continued)**

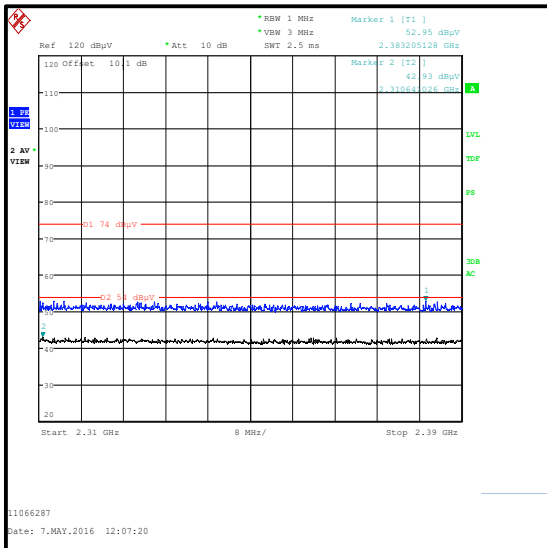
**Results: 802.11b / 20 MHz / DQPSK / 11 Mbit/s**



**Lower Band Edge Peak Measurement**



**Upper Band Edge Peak Measurement**



**2310 MHz to 2390 MHz Restricted Band Plot**



**Upper Band Edge Average Measurement**

**Transmitter Band Edge Radiated Emissions (continued)****Results: 802.11g / 20 MHz / 16QAM / 24 Mbit/s****Results: Lower Band Edge**

Frequency (MHz)	Level (dB $\mu$ V/m)	-30 dBc Limit (dB $\mu$ V/m)	Margin (dB)	Result
2399.439	59.3	67.4	8.1	Complied
2400	58.3	67.4	9.1	Complied

**Results: Lower Band Edge / Restricted Band / Peak**

Frequency (MHz)	Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Result
2389.744	57.4	74.0	16.6	Complied

**Results: Lower Band Edge / Restricted Band / Average**

Frequency (MHz)	Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Result
2390	44.5	54.0	9.5	Complied

**Results: Upper Band Edge / Restricted Band / Peak**

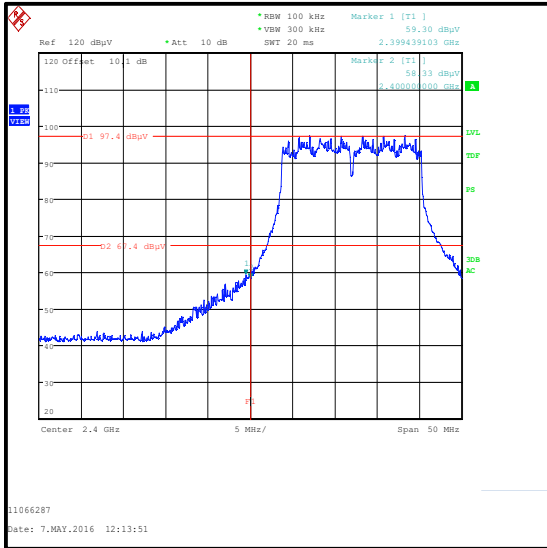
Frequency (MHz)	Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Result
2483.5	71.6	74.0	2.4	Complied
2483.821	72.6	74.0	1.4	Complied

**Results: Upper Band Edge / Restricted Band / Average**

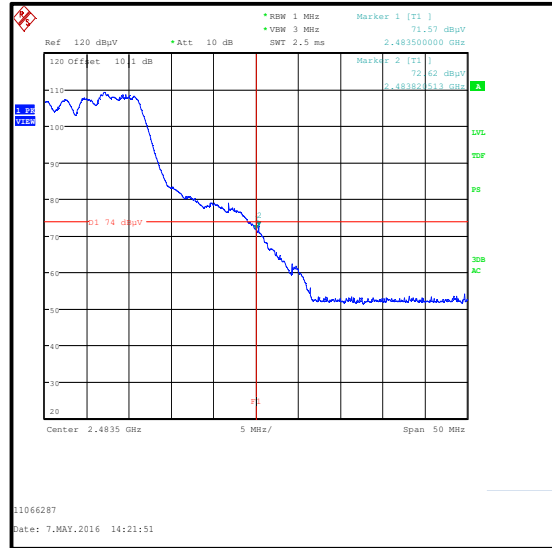
Frequency (MHz)	Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Result
2483.5	49.7*	54.0	4.3	Complied

**Transmitter Band Edge Radiated Emissions (continued)**

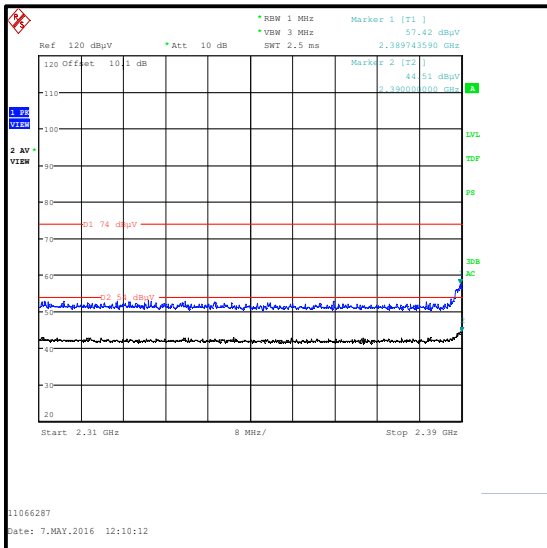
**Results: 802.11g / 20 MHz / 16QAM / 24 Mbit/s**



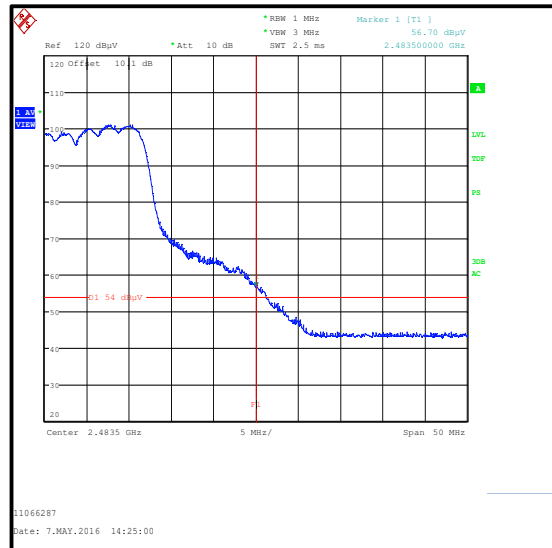
**Lower Band Edge Peak Measurement**



**Upper Band Edge Peak Measurement**



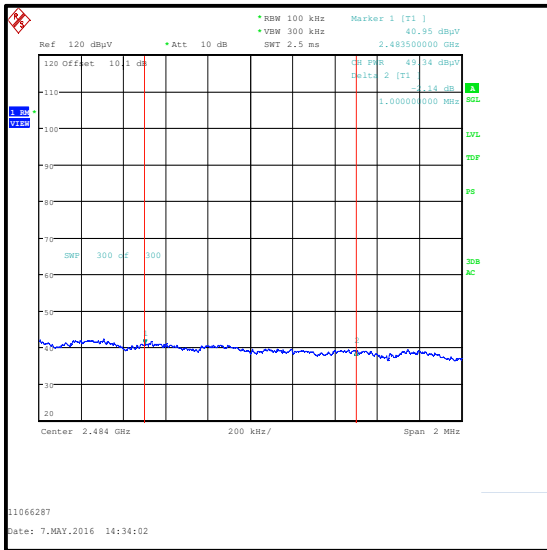
**2310 MHz to 2390 MHz Restricted Band Plot**



**Upper Band Edge Average Measurement**

**Transmitter Band Edge Radiated Emissions (continued)**

**Results: 802.11g / 20 MHz / 16QAM / 24 Mbit/s**



**Upper Band Edge  
Average Measurement / Integration Method**

**Transmitter Band Edge Radiated Emissions (continued)****Results: 802.11g / 20 MHz / 64QAM / 48 Mbit/s****Results: Lower Band Edge**

Frequency (MHz)	Level (dB $\mu$ V/m)	-30 dBc Limit (dB $\mu$ V/m)	Margin (dB)	Result
2400	58.4	67.0	8.6	Complied

**Results: Lower Band Edge / Restricted Band / Peak**

Frequency (MHz)	Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Result
2389.744	53.8	74.0	20.2	Complied

**Results: Lower Band Edge / Restricted Band / Average**

Frequency (MHz)	Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Result
2389.872	43.2	54.0	10.8	Complied

**Results: Upper Band Edge / Restricted Band / Peak**

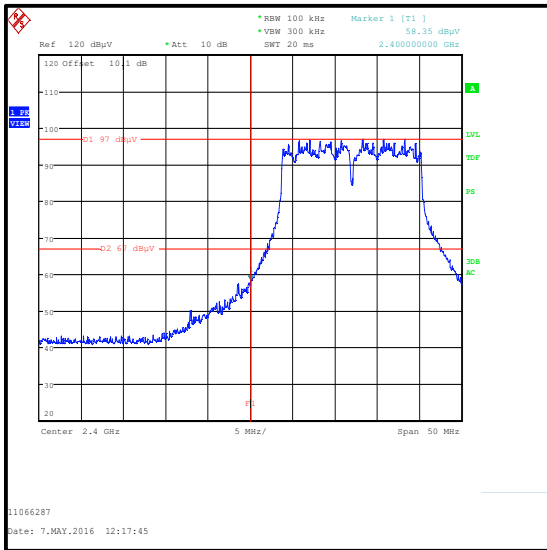
Frequency (MHz)	Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Result
2483.5	69.8	74.0	4.2	Complied
2483.580	70.6	74.0	3.4	Complied

**Results: Upper Band Edge / Restricted Band / Average**

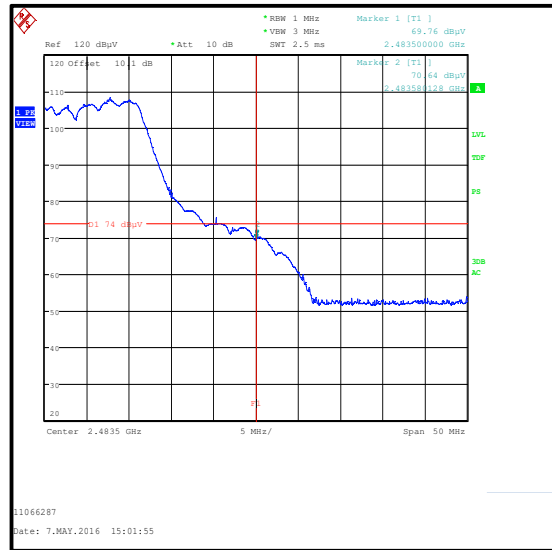
Frequency (MHz)	Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Result
2483.5	48.1*	54.0	5.9	Complied

### Transmitter Band Edge Radiated Emissions (continued)

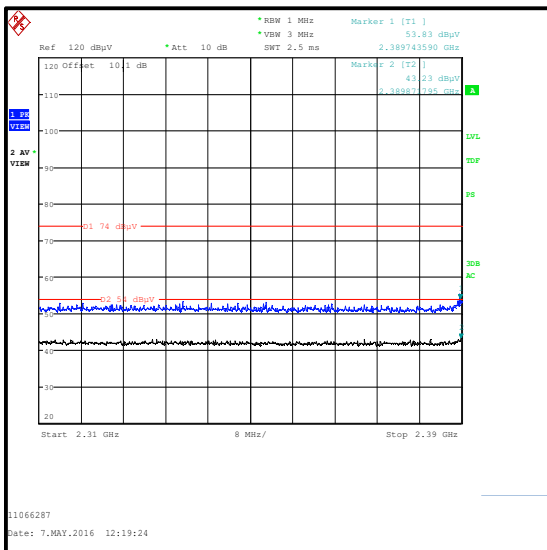
Results: 802.11g / 20 MHz / 64QAM / 48 Mbit/s



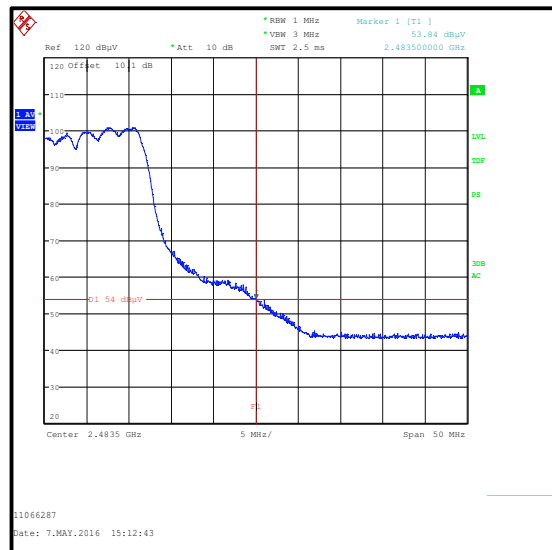
Lower Band Edge Peak Measurement



Upper Band Edge Peak Measurement



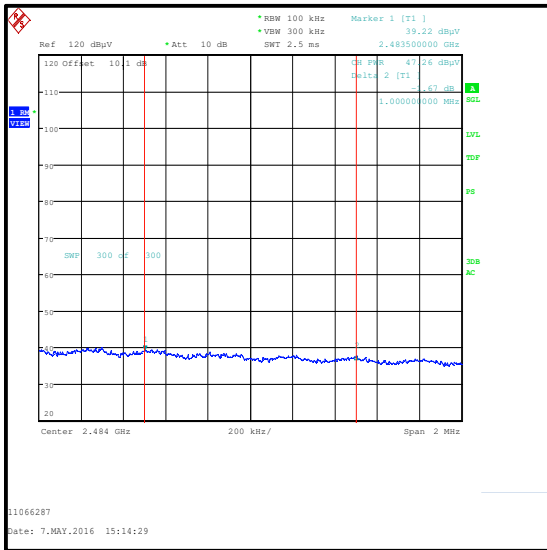
2310 MHz to 2390 MHz Restricted Band Plot



Upper Band Edge Average Measurement

**Transmitter Band Edge Radiated Emissions (continued)**

**Results: 802.11g / 20 MHz / 64QAM / 48 Mbit/s**



**Upper Band Edge  
Average Measurement / Integration Method**



**Transmitter Band Edge Radiated Emissions (continued)****Results: 802.11n / 20 MHz / 64QAM / 58.5 Mbit/s / MCS6****Results: Lower Band Edge**

Frequency (MHz)	Level (dB $\mu$ V/m)	-30 dBc Limit (dB $\mu$ V/m)	Margin (dB)	Result
2400	58.9	66.4	7.5	Complied

**Results: Lower Band Edge / Restricted Band / Peak**

Frequency (MHz)	Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Result
2390	58.5	74.0	15.5	Complied

**Results: Lower Band Edge / Restricted Band / Average**

Frequency (MHz)	Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Result
2389.744	44.7	54.0	9.3	Complied

**Results: Upper Band Edge / Restricted Band / Peak**

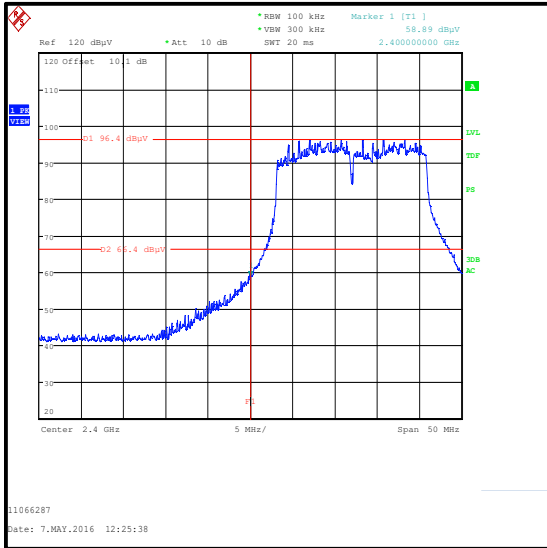
Frequency (MHz)	Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Result
2483.5	66.3	74.0	7.7	Complied
2483.580	65.5	74.0	8.5	Complied

**Results: Upper Band Edge / Restricted Band / Average**

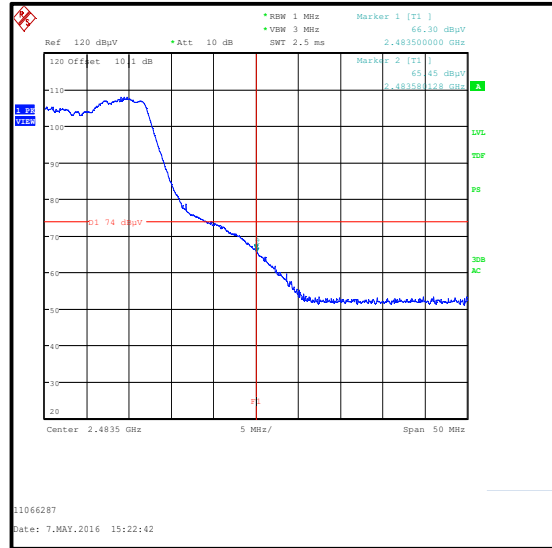
Frequency (MHz)	Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Result
2483.5	49.2*	54.0	4.8	Complied

**Transmitter Band Edge Radiated Emissions (continued)**

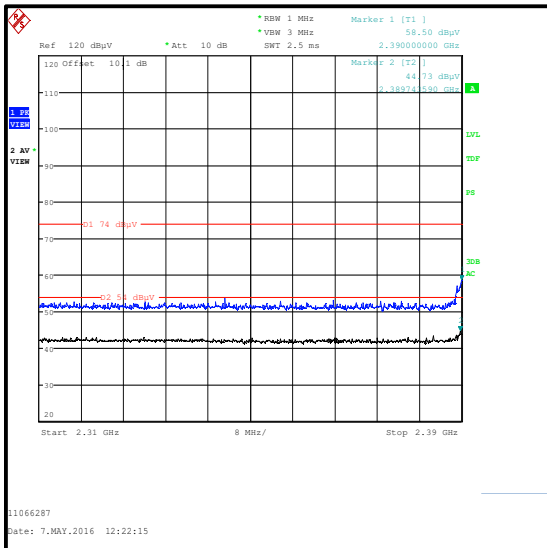
**Results: 802.11n / 20 MHz / 64QAM / 58.5 Mbit/s / MCS6**



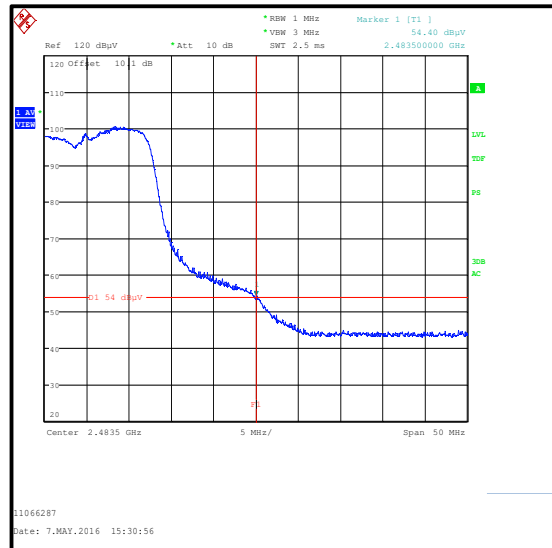
**Lower Band Edge Peak Measurement**



**Upper Band Edge Peak Measurement**



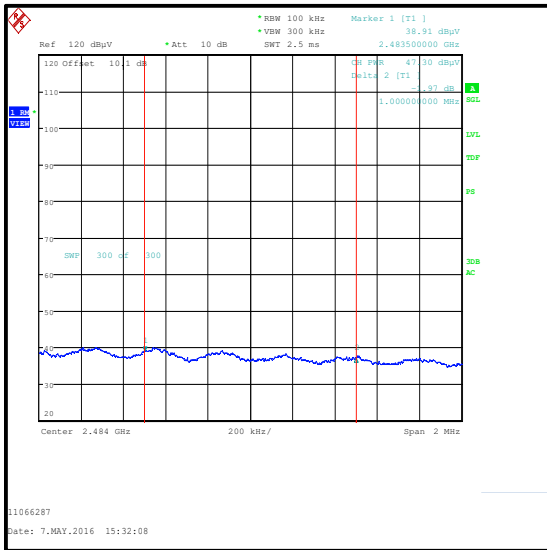
**2310 MHz to 2390 MHz Restricted Band Plot**



**Upper Band Edge Average Measurement**

**Transmitter Band Edge Radiated Emissions (continued)**

**Results: 802.11n / 20 MHz / 64QAM / 58.5 Mbit/s / MCS6**



**Upper Band Edge  
Average Measurement / Integration Method**

**Transmitter Band Edge Radiated Emissions (continued)****Results: 802.11n / 40 MHz / QPSK / 40.5 Mbit/s / MCS2****Results: Lower Band Edge**

Frequency (MHz)	Level (dB $\mu$ V/m)	-30 dBc Limit (dB $\mu$ V/m)	Margin (dB)	Result
2399.840	57.6	67.4	9.8	Complied
2400	56.8	67.4	10.6	Complied

**Results: Lower Band Edge / Restricted Band / Peak**

Frequency (MHz)	Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Result
2390	56.3	74.0	17.7	Complied

**Results: Lower Band Edge / Restricted Band / Average**

Frequency (MHz)	Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Result
2389.744	44.5	54.0	9.5	Complied

**Results: Upper Band Edge / Restricted Band / Peak**

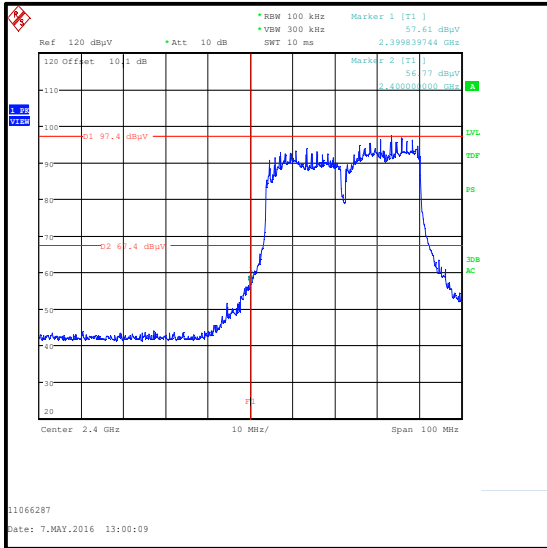
Frequency (MHz)	Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Result
2483.5	61.7	74.0	12.3	Complied
2485.103	64.0	74.0	10.0	Complied

**Results: Upper Band Edge / Restricted Band / Average**

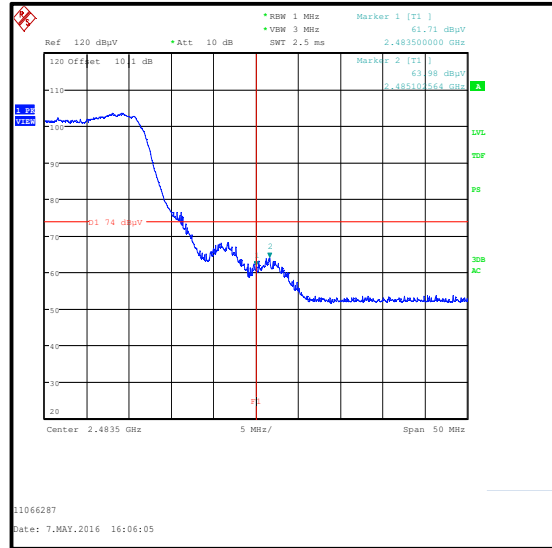
Frequency (MHz)	Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Result
2483.5	50.0	54.0	4.0	Complied
2485.103	50.5	54.0	3.5	Complied

**Transmitter Band Edge Radiated Emissions (continued)**

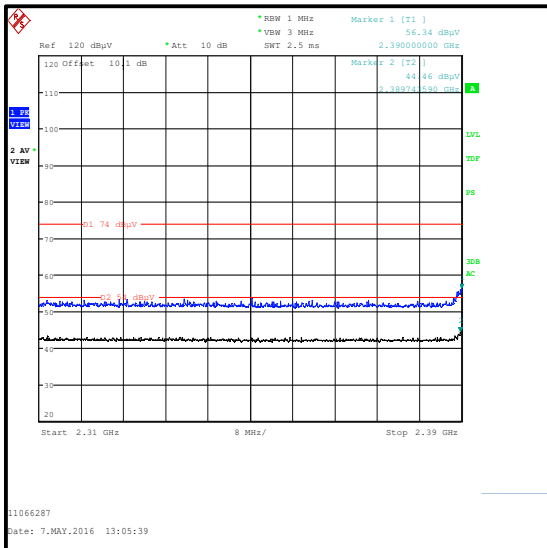
**Results: 802.11n / 40 MHz / QPSK / 40.5 Mbit/s / MCS2**



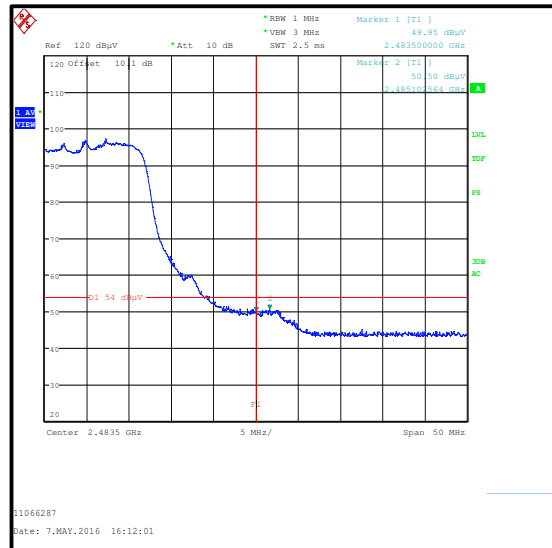
**Lower Band Edge Peak Measurement**



**Upper Band Edge Peak Measurement**



**2310 MHz to 2390 MHz Restricted Band Plot**



**Upper Band Edge Average Measurement**

**Transmitter Band Edge Radiated Emissions (continued)****Results: 802.11n / 40 MHz / 64QAM / 121.5 Mbit/s / MCS6****Results: Lower Band Edge**

Frequency (MHz)	Level (dB $\mu$ V/m)	-30 dBc Limit (dB $\mu$ V/m)	Margin (dB)	Result
2400	56.8	66.1	9.3	Complied

**Results: Lower Band Edge / Restricted Band / Peak**

Frequency (MHz)	Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Result
2389.872	57.8	74.0	16.2	Complied

**Results: Lower Band Edge / Restricted Band / Average**

Frequency (MHz)	Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Result
2389.744	45.9	54.0	8.1	Complied

**Results: Upper Band Edge / Restricted Band / Peak**

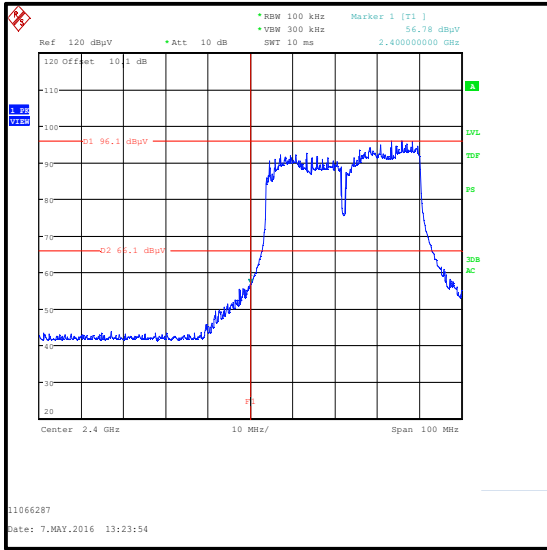
Frequency (MHz)	Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Result
2483.5	64.2	74.0	9.8	Complied
2483.660	64.8	74.0	9.2	Complied

**Results: Upper Band Edge / Restricted Band / Average**

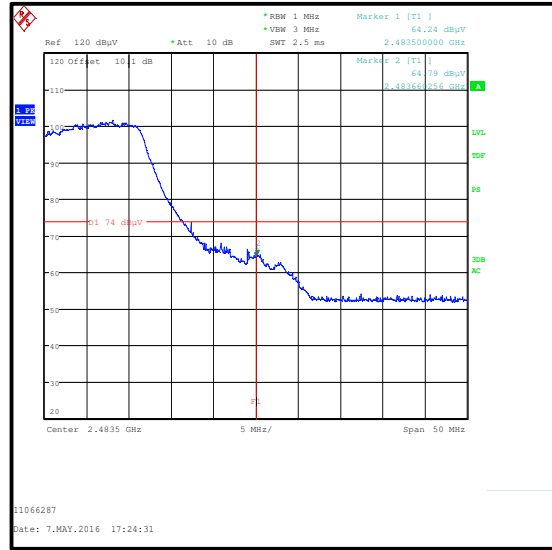
Frequency (MHz)	Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Result
2483.5	52.2	54.0	1.8	Complied
2486.224	52.5	54.0	1.5	Complied

**Transmitter Band Edge Radiated Emissions (continued)**

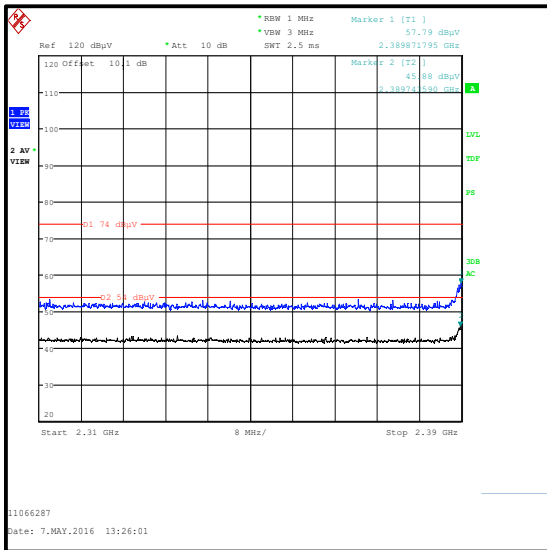
**Results: 802.11n / 40 MHz / 64QAM / 121.5 Mbit/s / MCS6**



**Lower Band Edge Peak Measurement**



**Upper Band Edge Peak Measurement**



**2310 MHz to 2390 MHz Restricted Band Plot**



**Upper Band Edge Average Measurement**

**Transmitter Band Edge Radiated Emissions (continued)****Test Equipment Used:**

<b>Asset No</b>	<b>Instrument</b>	<b>Manufacturer</b>	<b>Type No.</b>	<b>Serial No.</b>	<b>Date Calibration Due</b>	<b>Cal. Interval (Months)</b>
M1656	Thermohygrometer	JM Handelspunkt	30.5015.13	Not stated	02 Apr 2017	12
K0002	3m RSE Chamber	Rainford EMC	N/A	N/A	21 Dec 2016	12
M1886	Test Receiver	Rohde & Schwarz	ESU26	100554	21 May 2017	12
A1534	Pre Amplifier	Hewlett Packard	8449B	3008A00405	19 Dec 2016	12
A1818	Antenna	EMCO	3115	00075692	17 Dec 2016	12
A1396	Attenuator	Huber & Suhner	6810.17.B	757987	30 Apr 2017	12



## **6. Measurement Uncertainty**

No measurement or test can ever be perfect and the imperfections give rise to error of measurement in the results. Consequently the result of a measurement is only an approximation to the value of the measurand (the specific quantity subject to measurement) and is only complete when accompanied by a statement of the uncertainty of the approximation.

The expression of uncertainty of a measurement result allows realistic comparison of results with reference values and limits given in specifications and standards.

The uncertainty of the result may need to be taken into account when interpreting the measurement results.

The reported expanded uncertainties below are based on a standard uncertainty multiplied by an appropriate coverage factor such that a confidence level of approximately 95% is maintained. For the purposes of this document "approximately" is interpreted as meaning "effectively" or "for most practical purposes".

<b>Measurement Type</b>	<b>Range</b>	<b>Confidence Level (%)</b>	<b>Calculated Uncertainty</b>
AC Conducted Spurious Emissions	0.15 MHz to 30 MHz	95%	±4.69 dB
99% Occupied Bandwidth	2.4 GHz to 2.4835 GHz	95%	±3.92 %
Minimum 6 dB Bandwidth	2.4 GHz to 2.4835 GHz	95%	±4.59 %
Duty Cycle	2.4 GHz to 2.4835 GHz	95%	±1.14 %
Spectral Power Density	2.4 GHz to 2.4835 GHz	95%	±1.13 dB
Conducted Maximum Output Power	2.4 GHz to 2.4835 GHz	95%	±1.13 dB
Radiated Spurious Emissions	30 MHz to 1 GHz	95%	±5.65 dB
Radiated Spurious Emissions	1 GHz to 25 GHz	95%	±2.94 dB

The methods used to calculate the above uncertainties are in line with those recommended within the various measurement specifications. Where measurement specifications do not include guidelines for the evaluation of measurement uncertainty the published guidance of the appropriate accreditation body is followed.

## **7. Report Revision History**

Version Number	Revision Details		
	Page No(s)	Clause	Details
1.0	-	-	Initial Version
2.0	1 & 7 16 & 17 6	- - -	Changed FCC ID to 2AIP8I Inserted 240 VAC conducted emission results Inserted reference to KDB 174176

**--- END OF REPORT ---**