

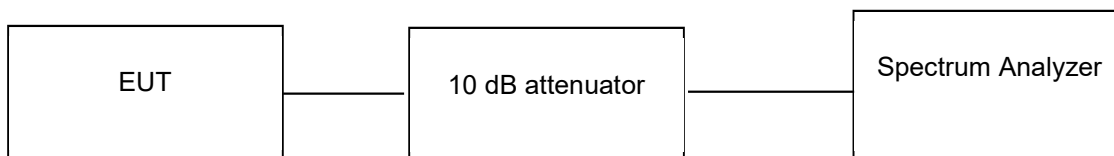
6.3 DTS Bandwidth

Result

Pass

Test Specification FCC part 15 Subpart C Section 15.247 (a)(2)
 Detector Peak
 Port of testing Antenna Port
 Requirement The minimum 6 dB bandwidth shall be at least 500 kHz.

Test Method:

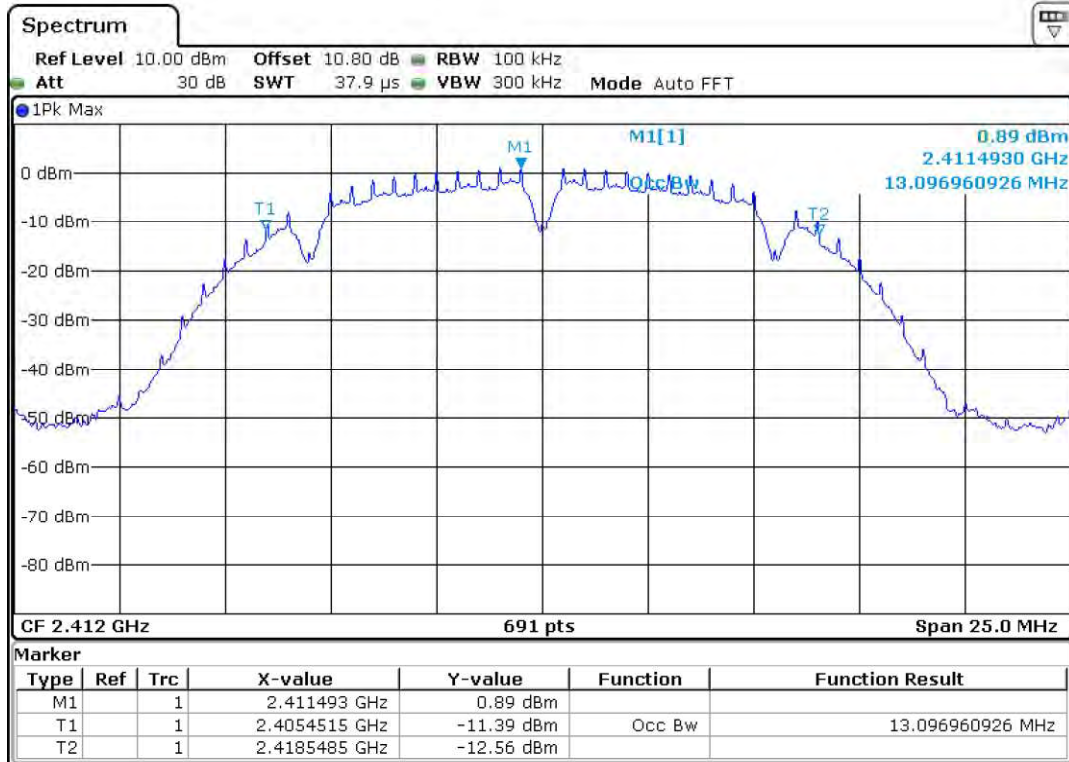


Test results for 802.11b

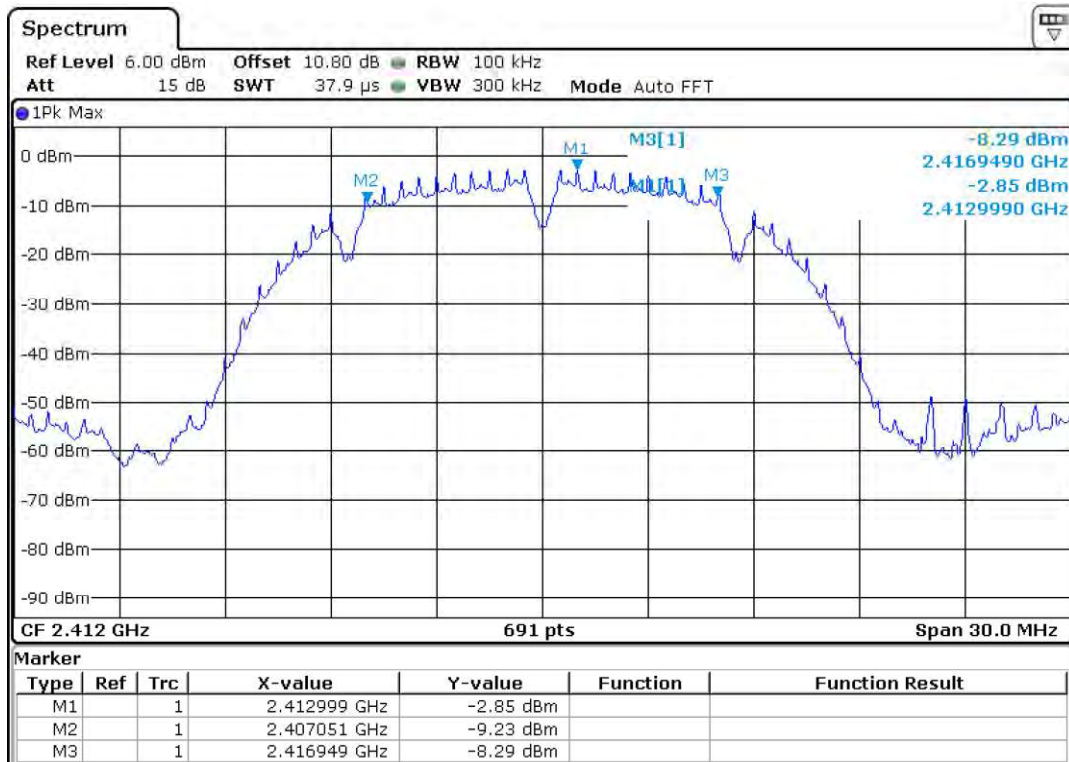
10 dB attenuator + 0.8 Cable loss = 10.8 dB offset is considered in below result

Note: Measurements were made as per section 8.1, 8.2 in KDB 558074 D01 DTS Meas Guidance v04.

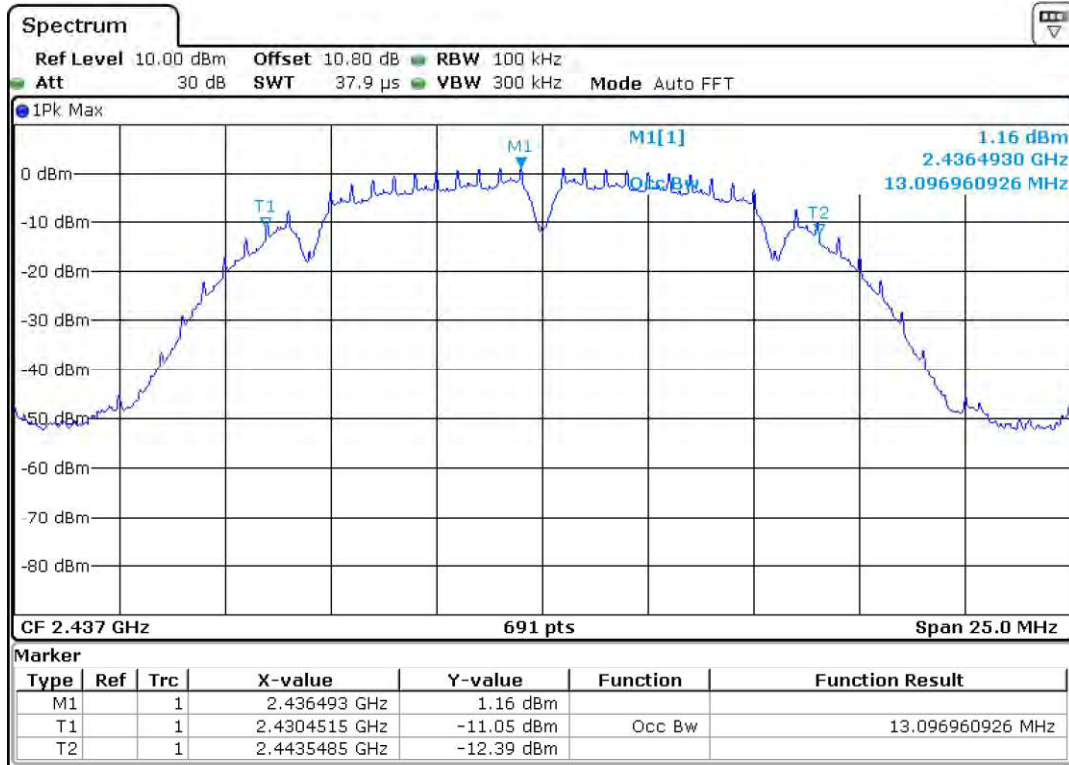
802.11 Protocol	Data rate (Mbps)	Channel Frequency (MHz)	6 dB Bandwidth (kHz)	99% OBW (MHz)
b	1	2412.00	9.855	13.096
		2437.00	9.725	13.096
		2462.00	9.898	13.096
	11	2412.00	9.899	13.096
		2437.00	10.16	13.096
		2462.00	9.855	13.096



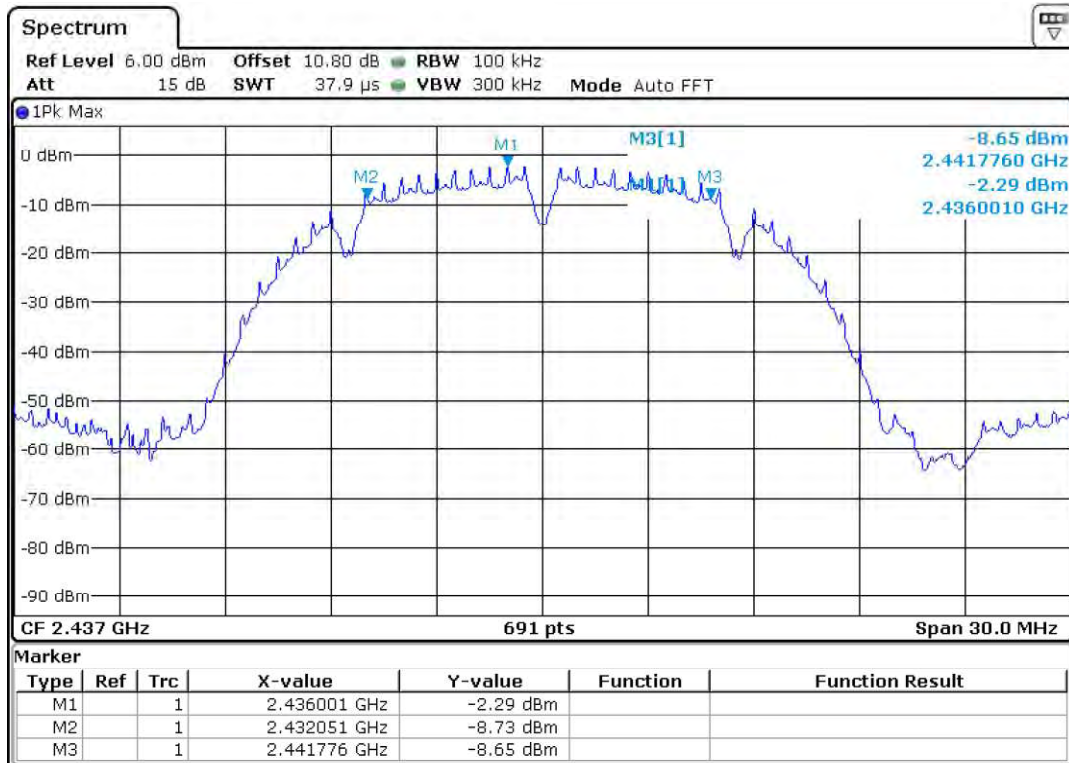
1 Mbps Channel low – OBW



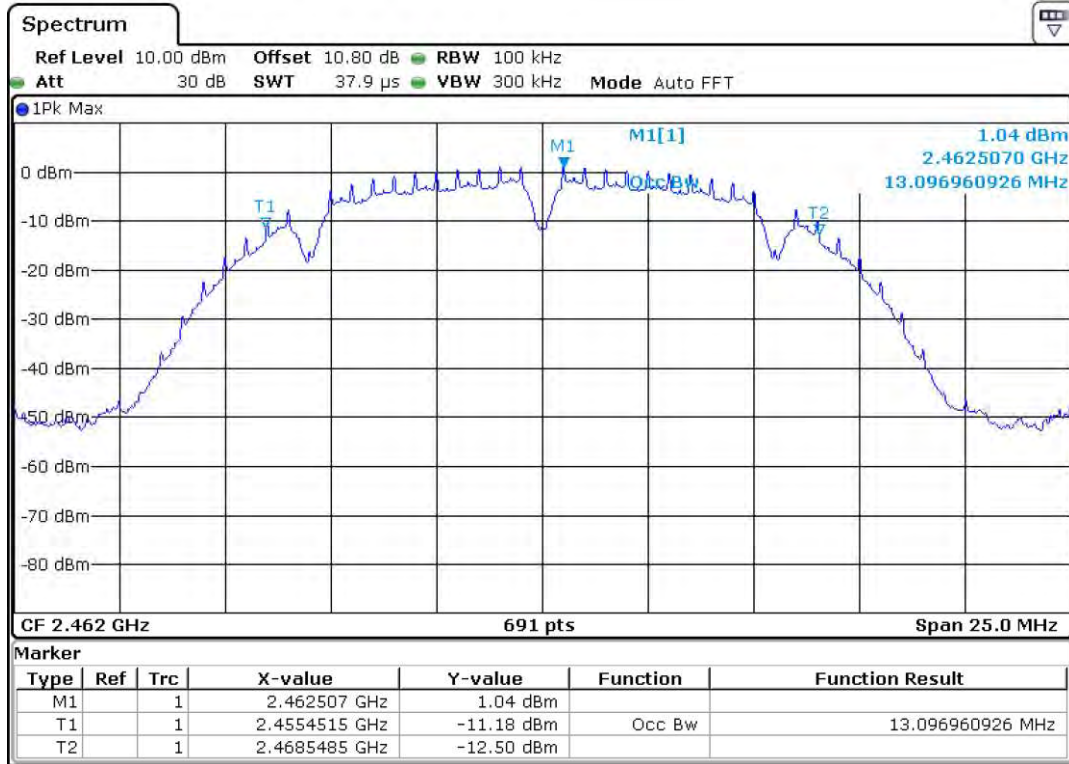
1 Mbps Channel low – 6 dB Bandwidth



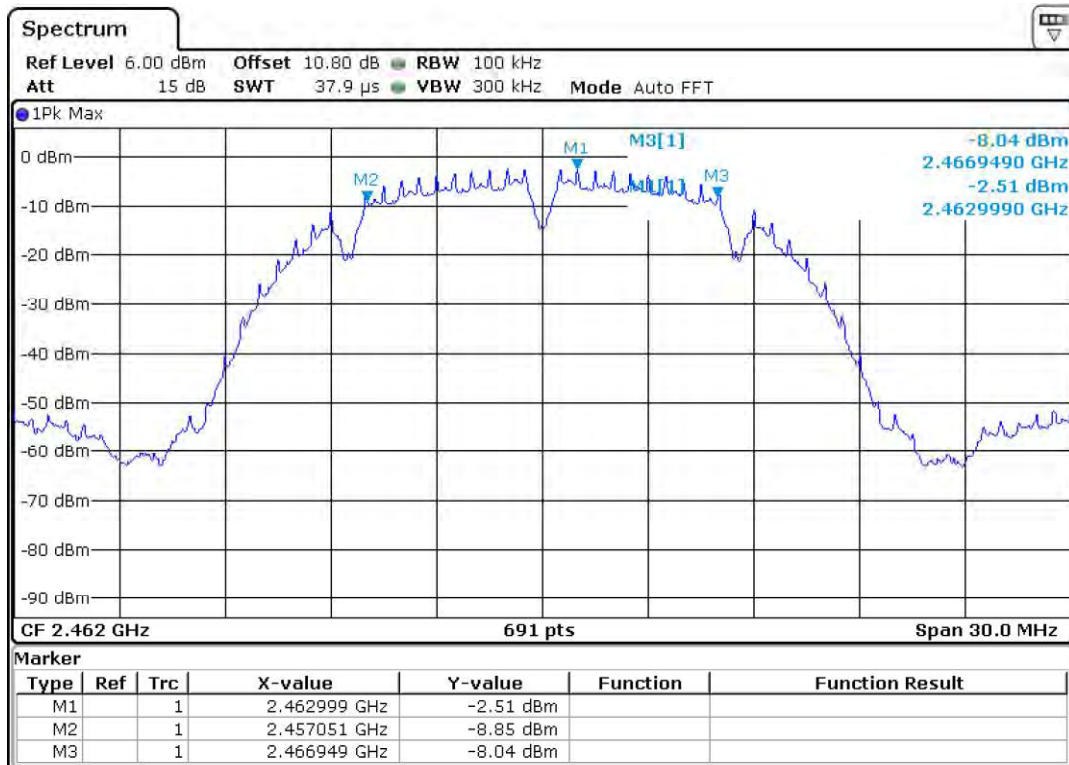
1 Mbps Channel mid - OBW



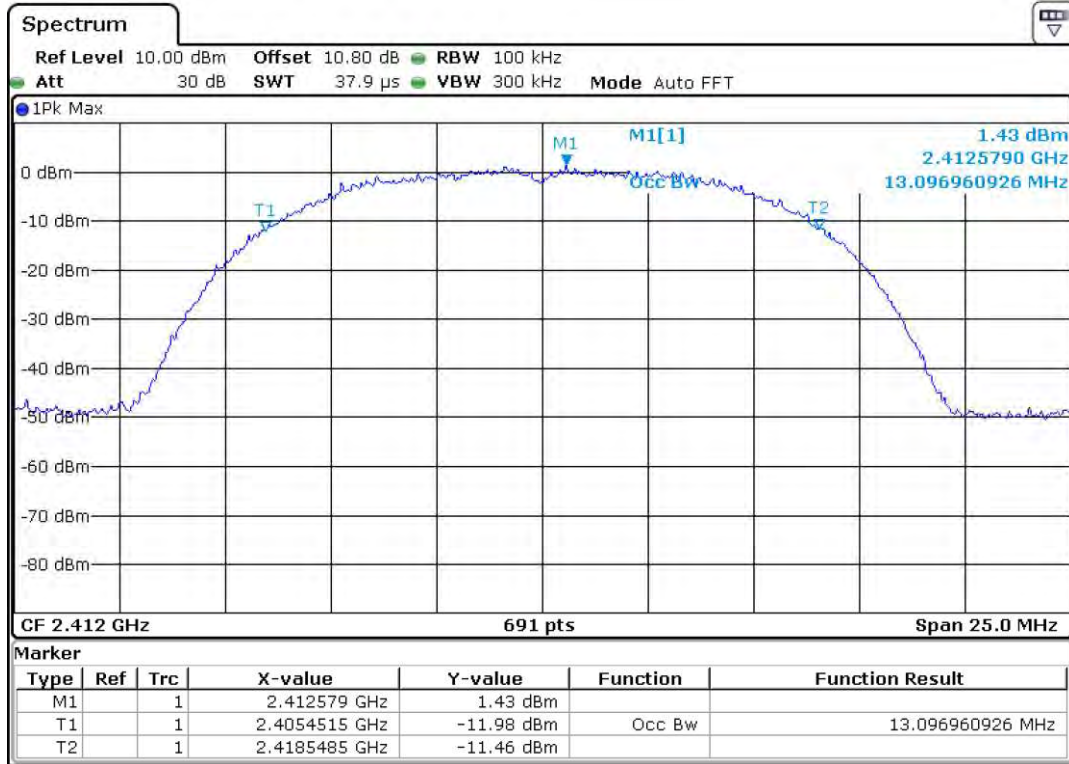
1 Mbps Channel mid – 6 dB Bandwidth



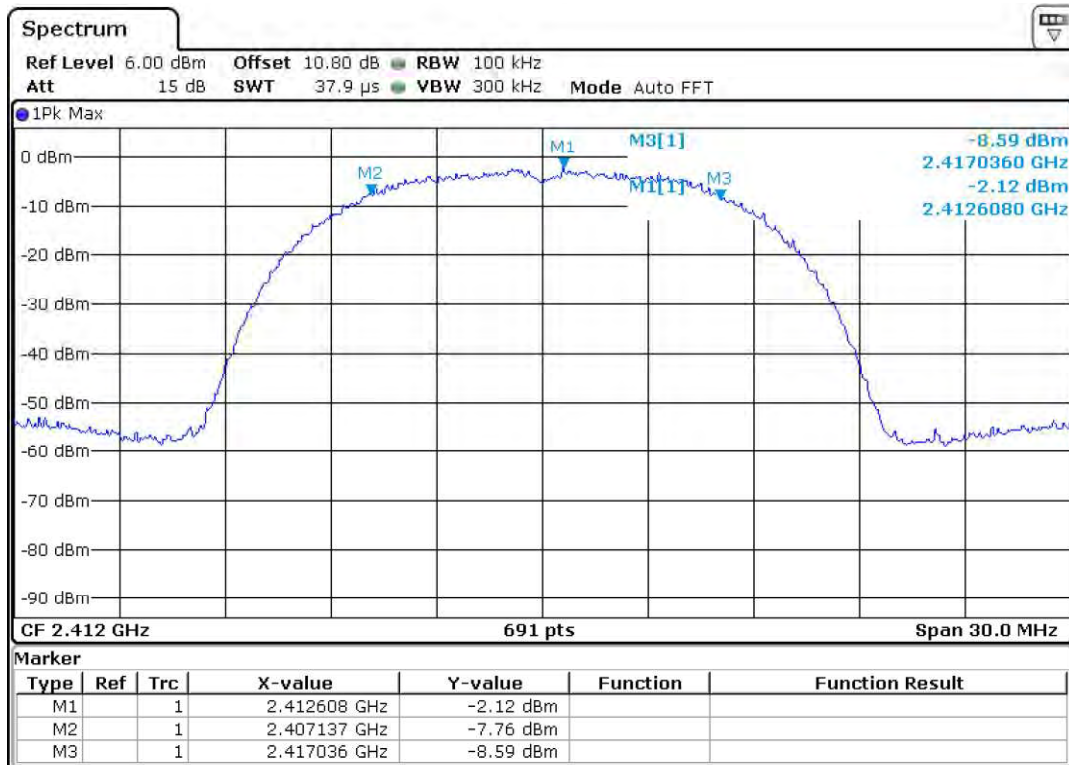
1 Mbps Channel high - OBW



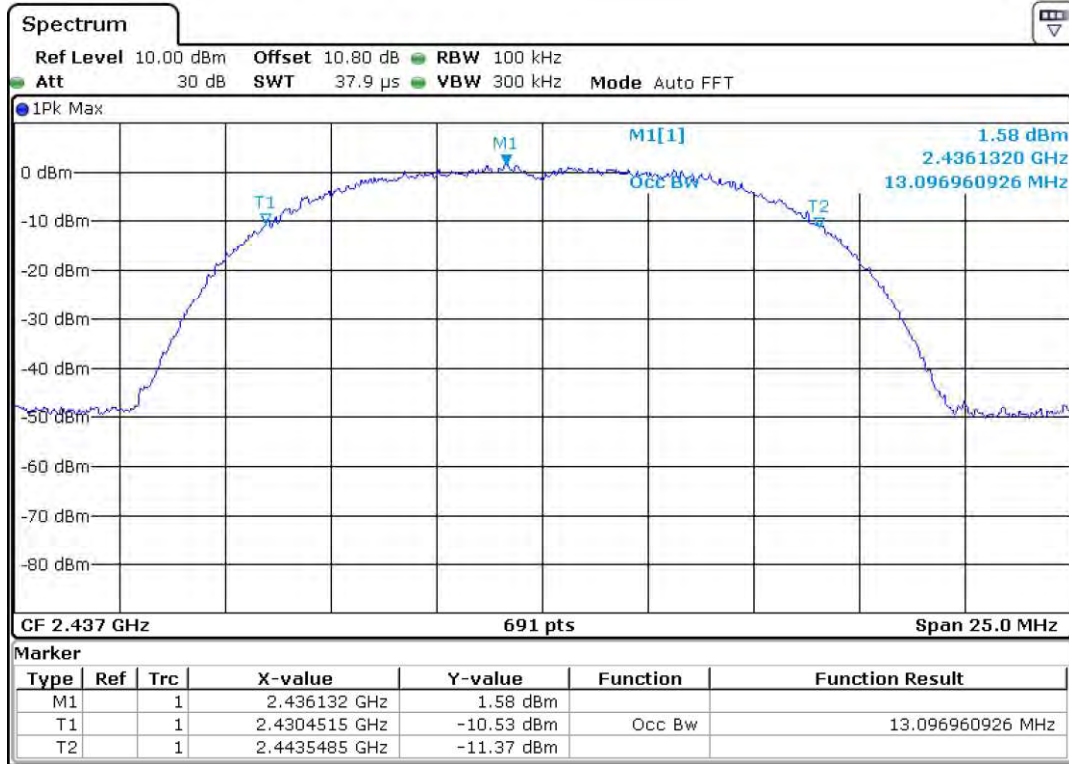
1 Mbps Channel high – 6 dB Bandwidth



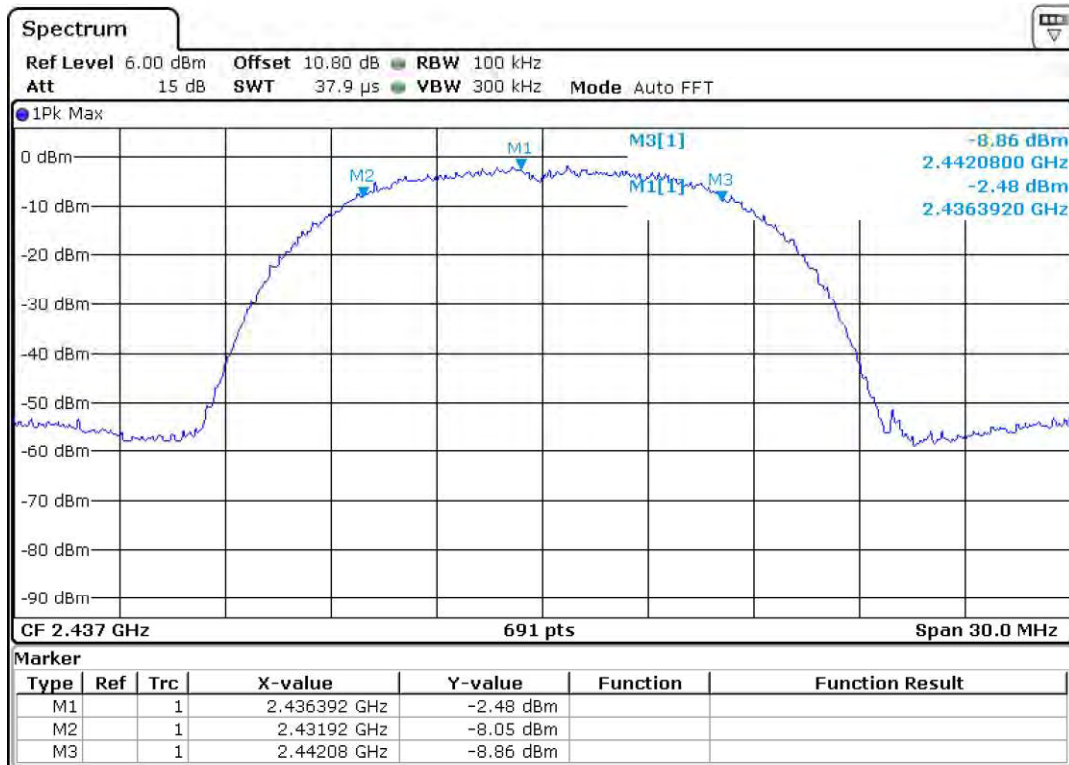
11 Mbps Channel low - OBW



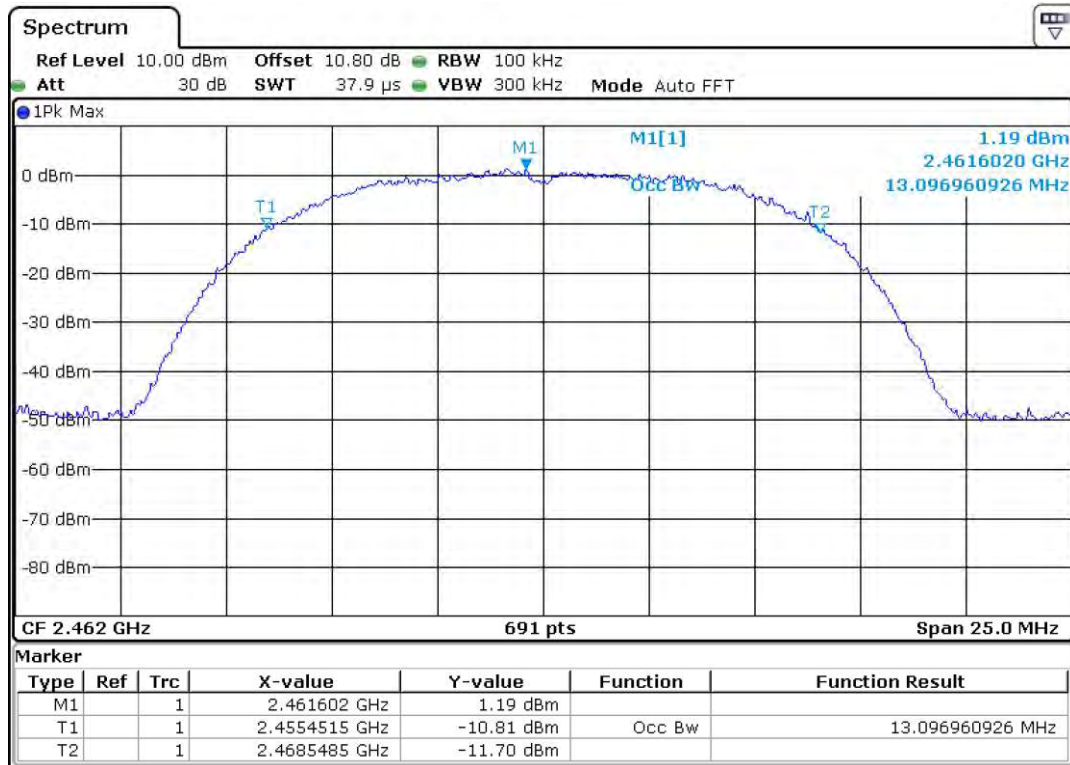
11 Mbps Channel low - 6 dB Bandwidth



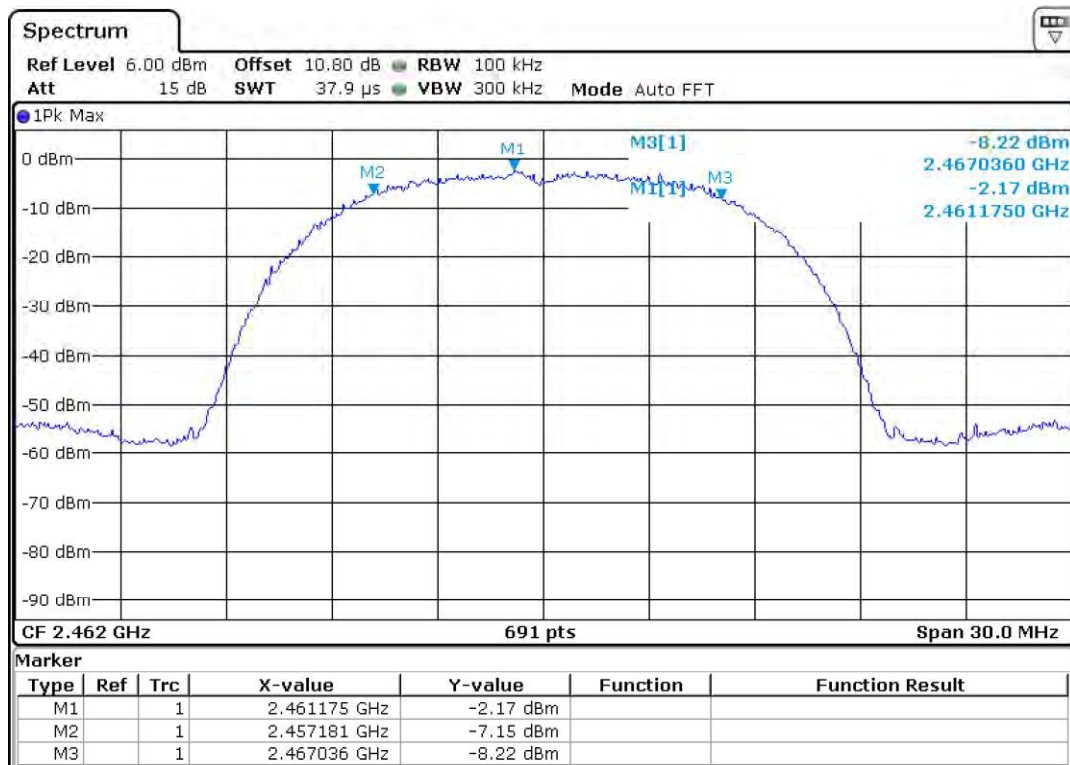
11 Mbps Channel mid - OBW



11 Mbps Channel mid - 6 dB Bandwidth

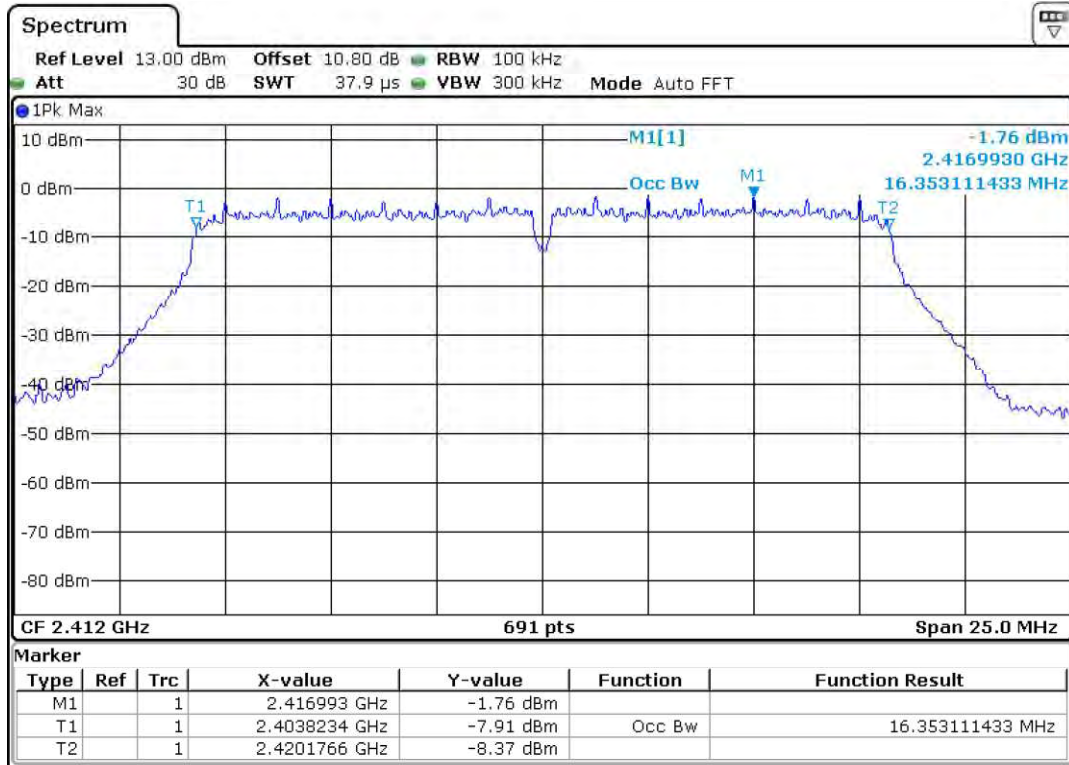


11 Mbps Channel high – OBW

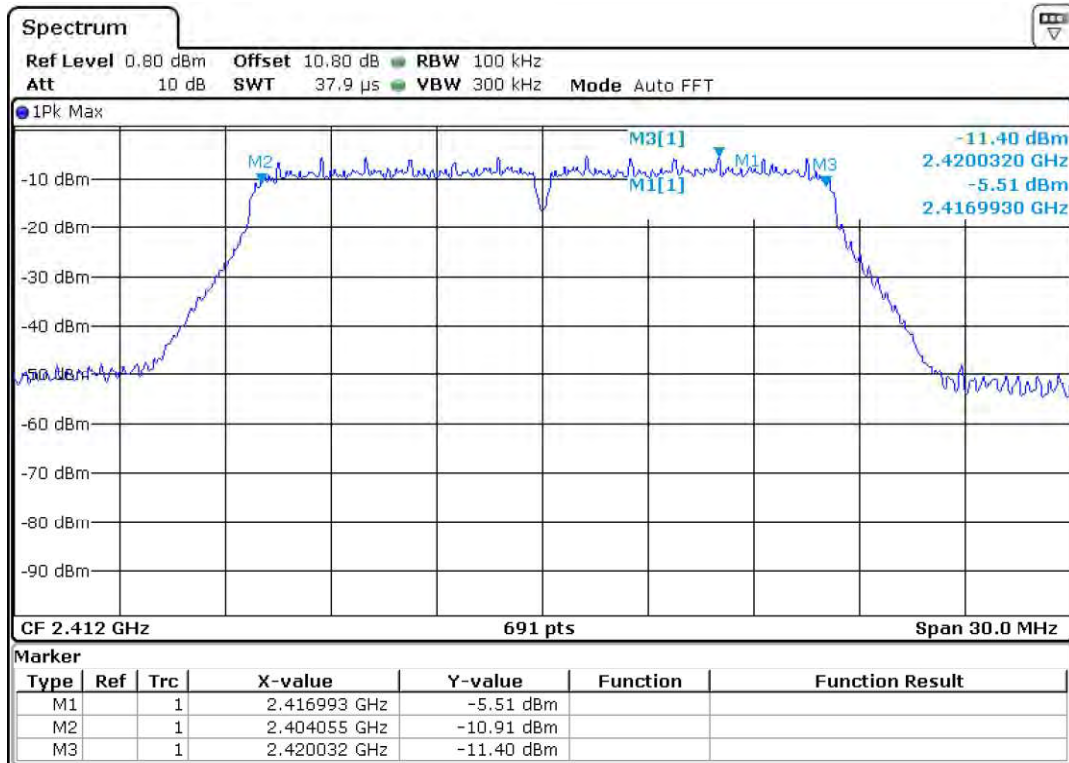


11 Mbps Channel high – 6 dB Bandwidth

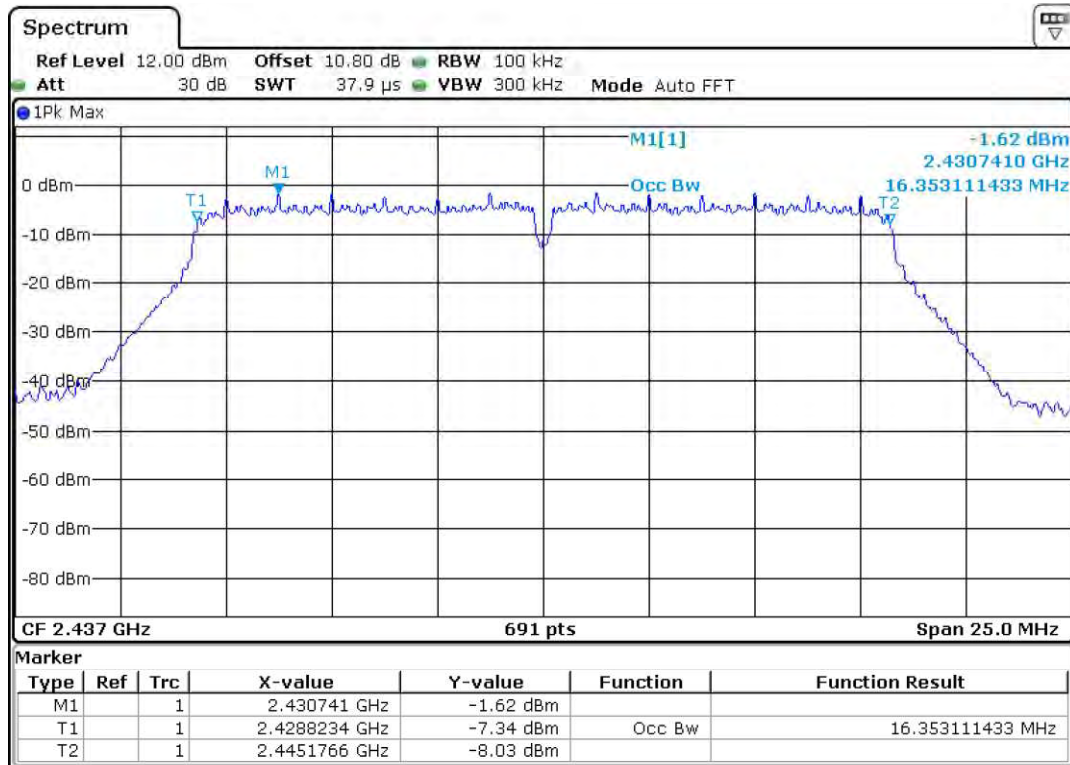
Test results for 802.11 g



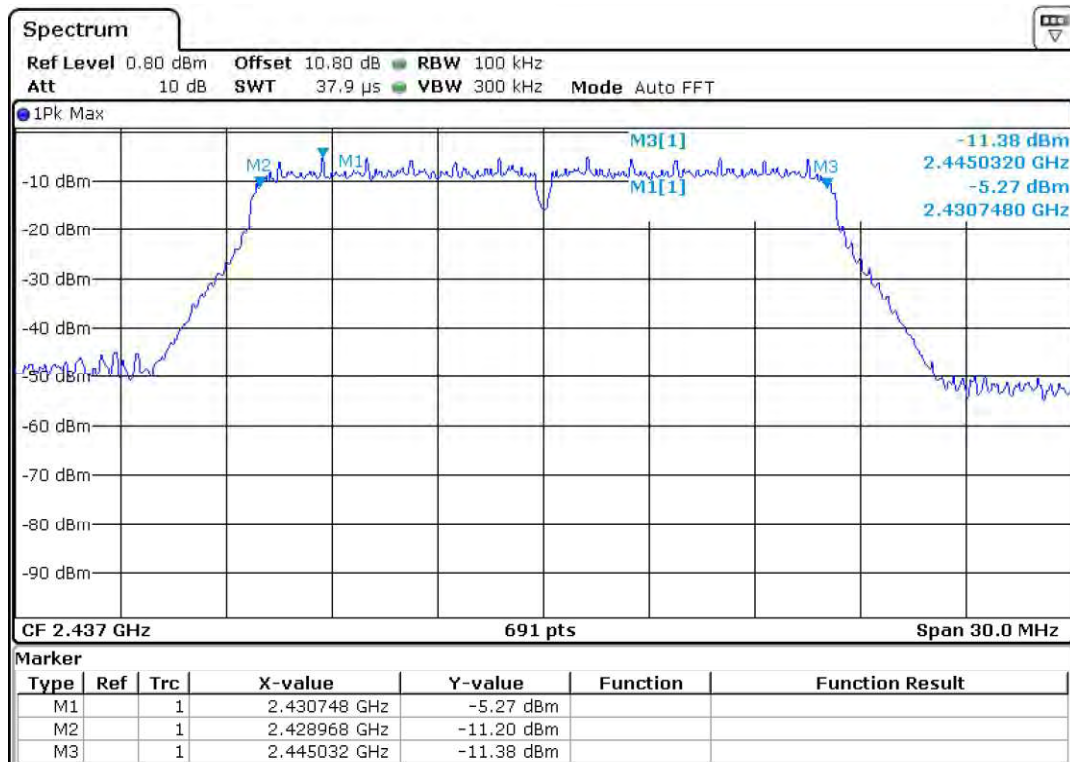
6 Mbps Channel low - OBW



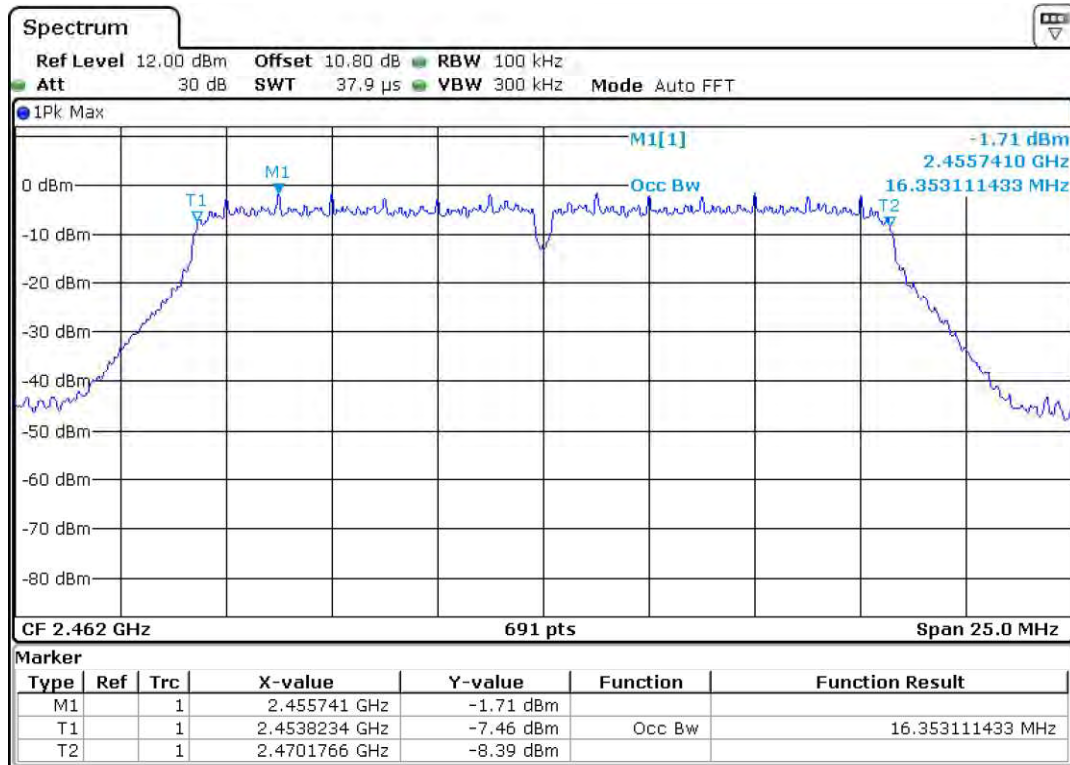
6 Mbps Channel low - 6 dB Bandwidth



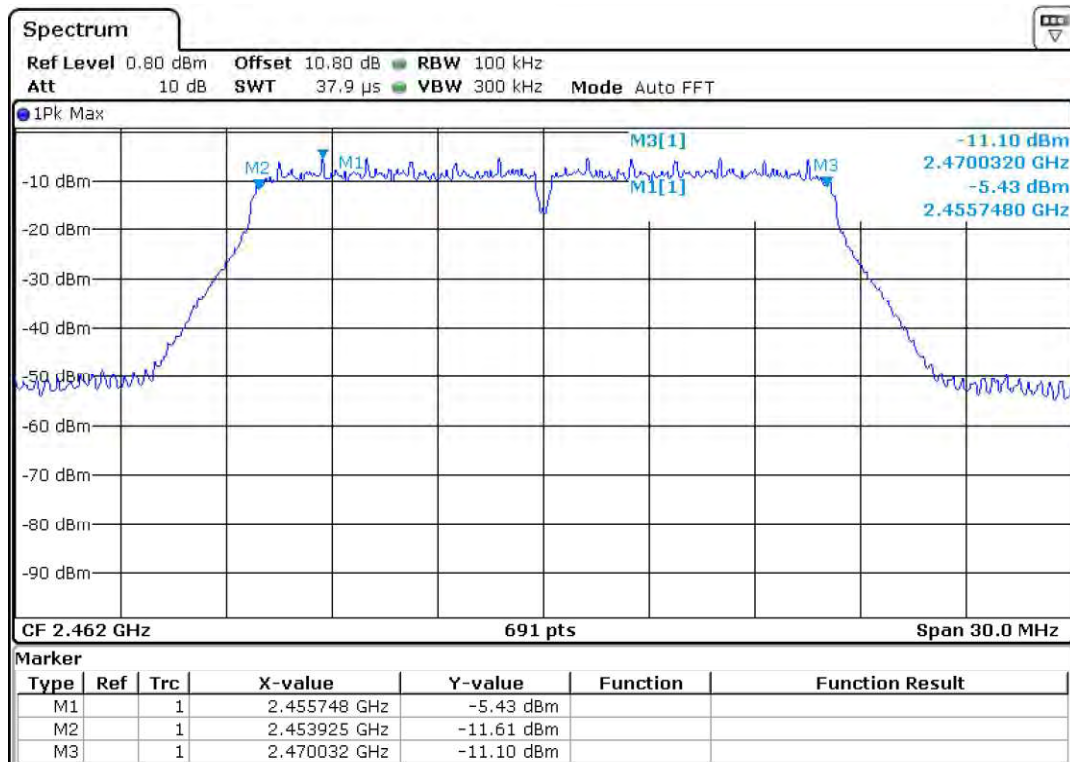
6 Mbps Channel mid – OBW



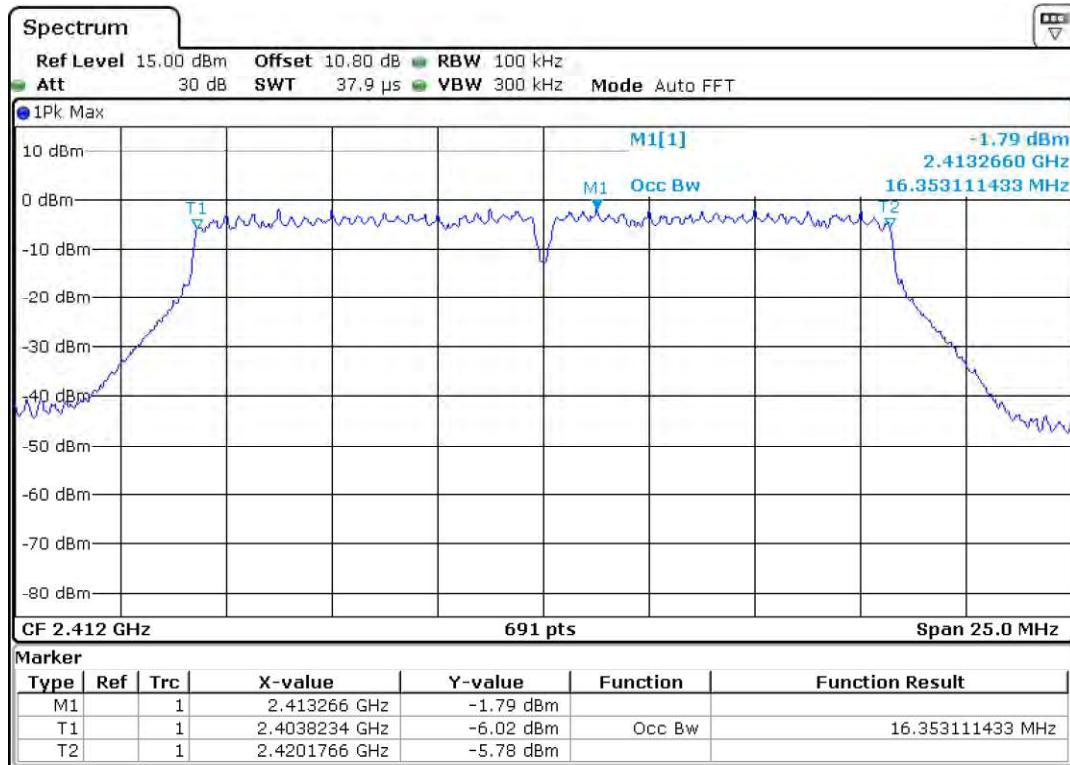
6 Mbps Channel mid – 6 dB Bandwidth



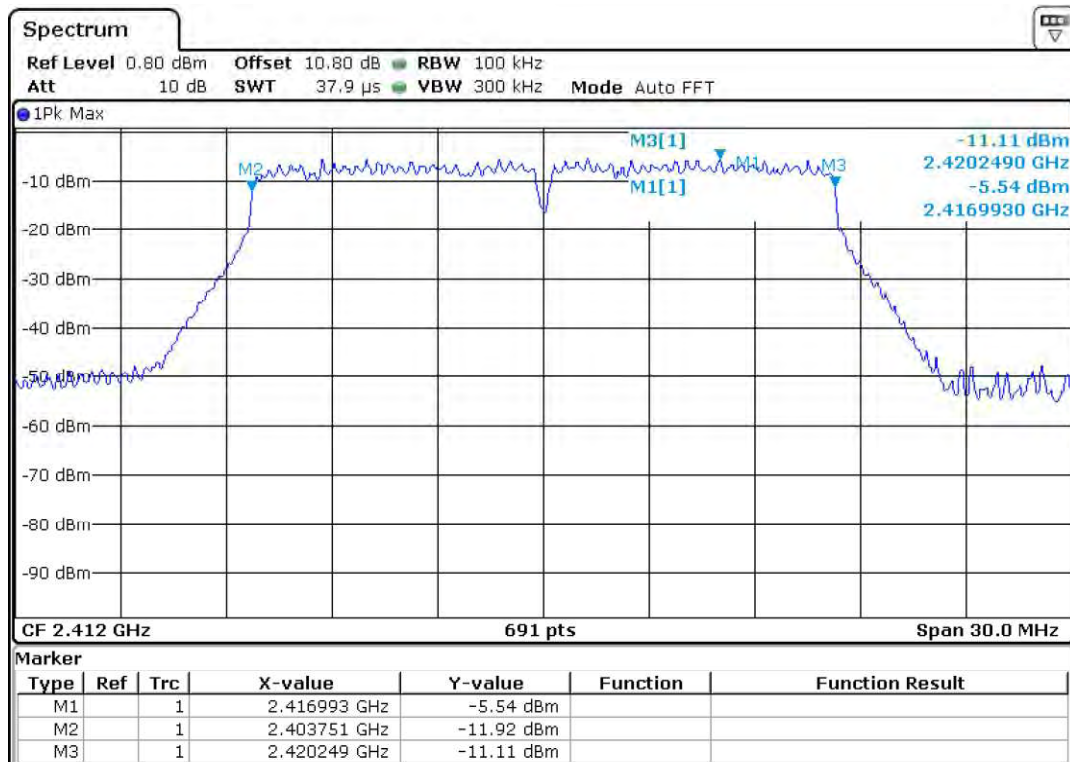
6 Mbps Channel high - OBW



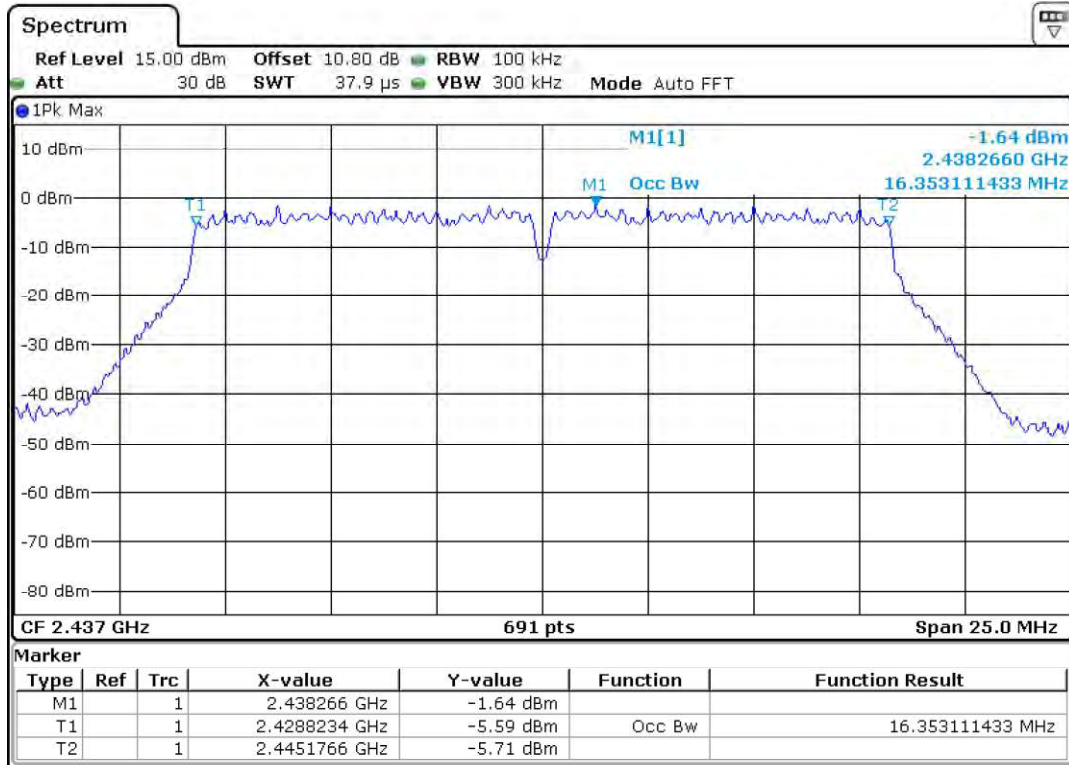
6 Mbps Channel high – 6 dB Bandwidth



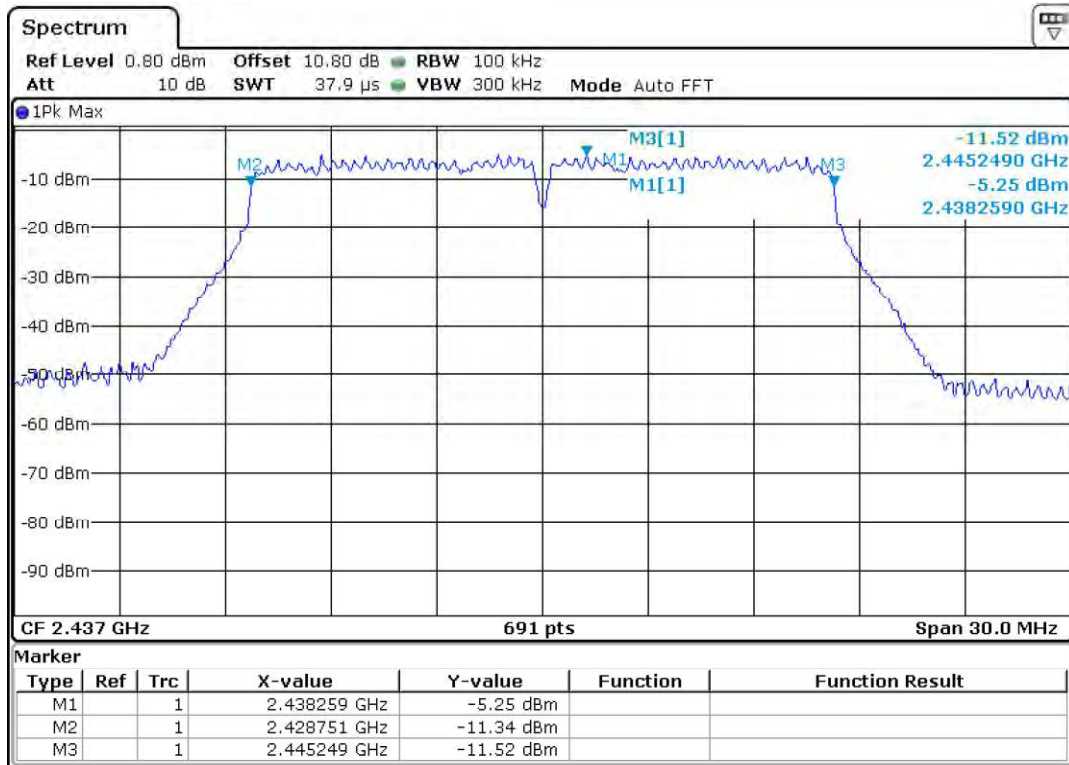
24 Mbps Channel low – OBW



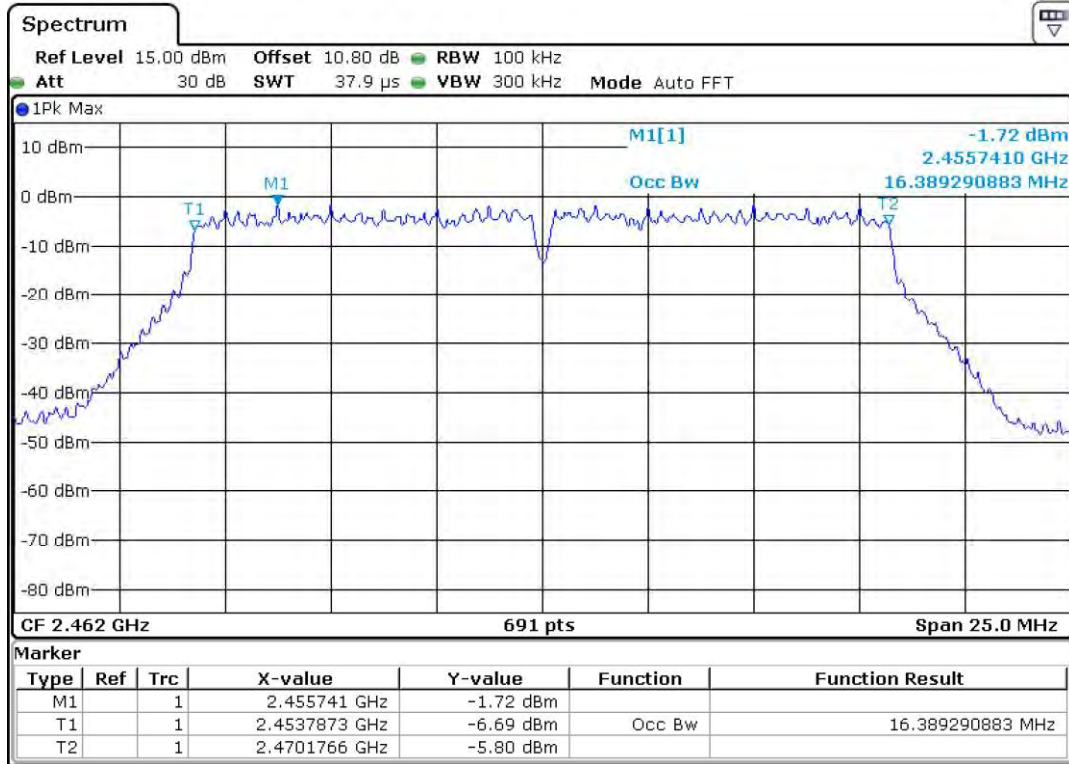
24 Mbps Channel low – 6 dB Bandwidth



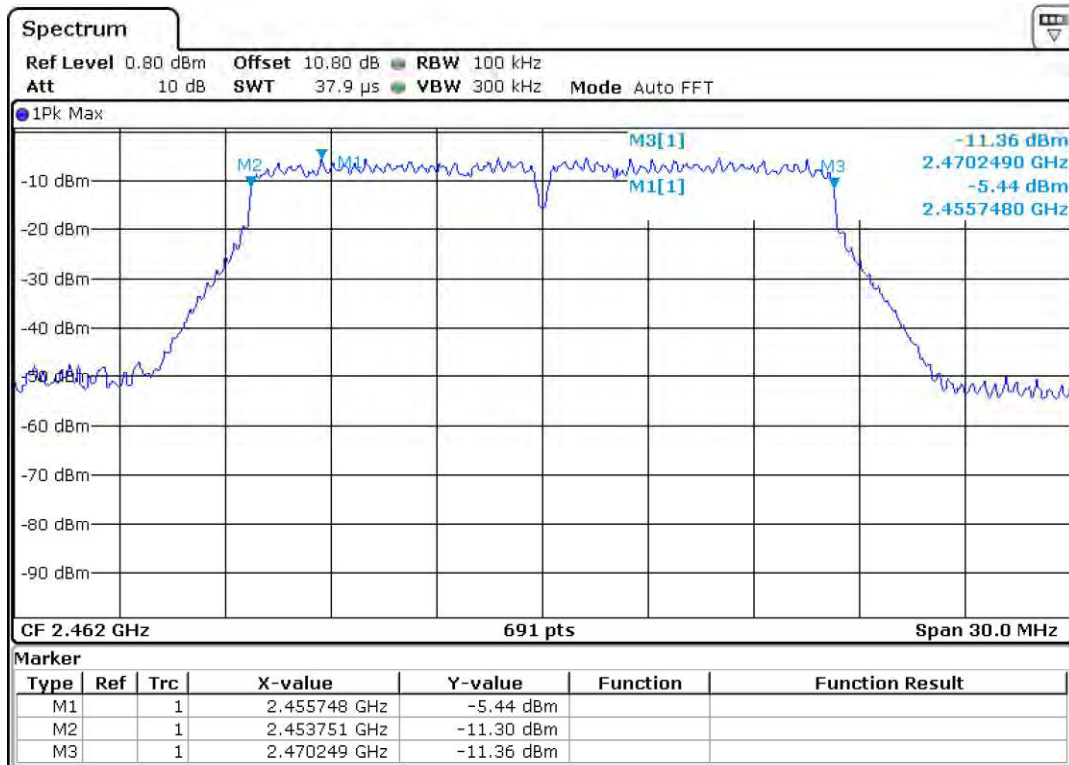
24 Mbps Channel mid – OBW



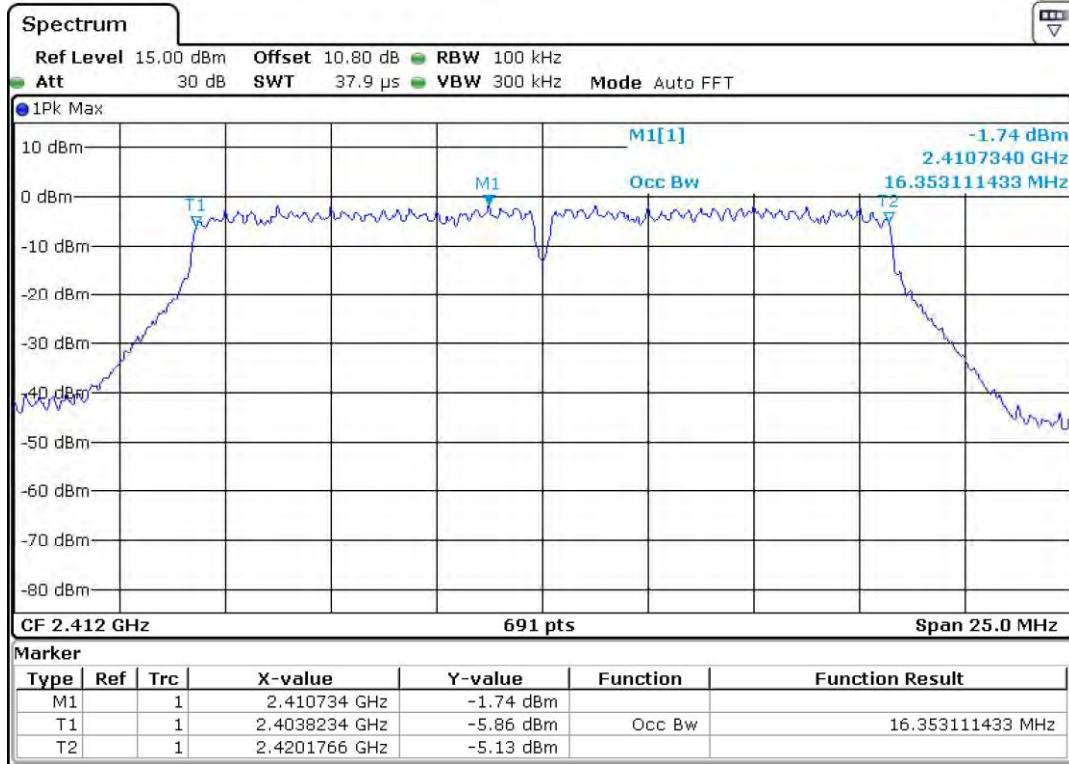
24 Mbps Channel mid – 6 dB Bandwidth



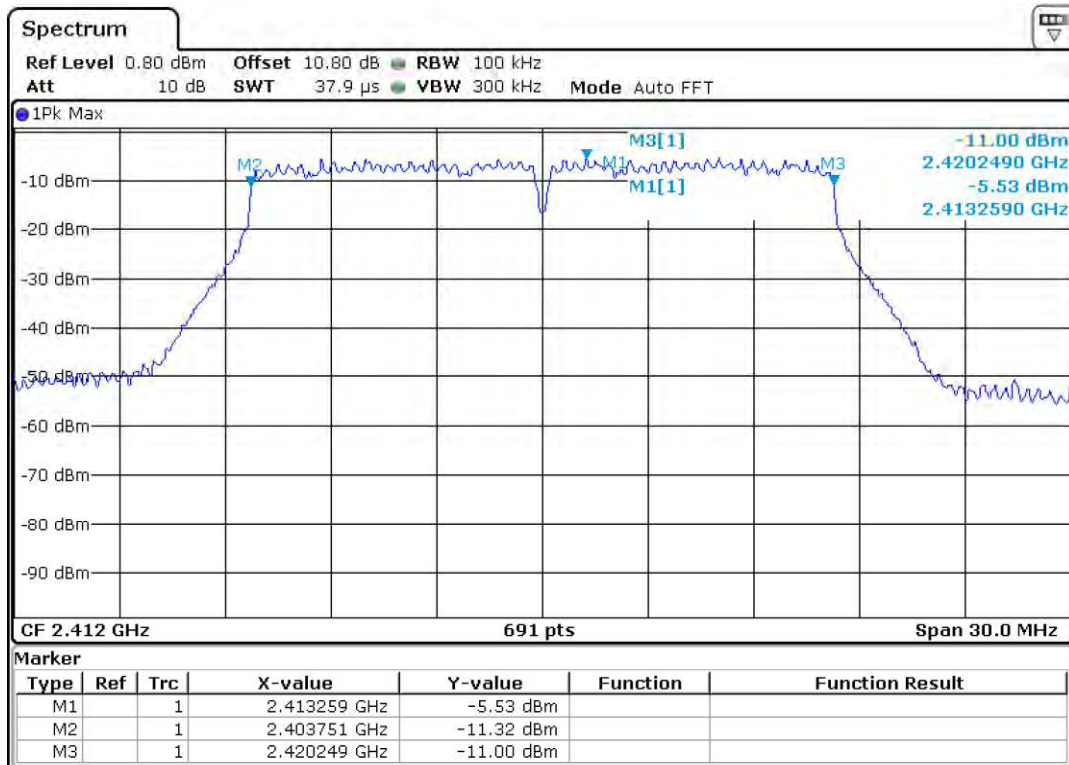
24 Mbps Channel high – OBW



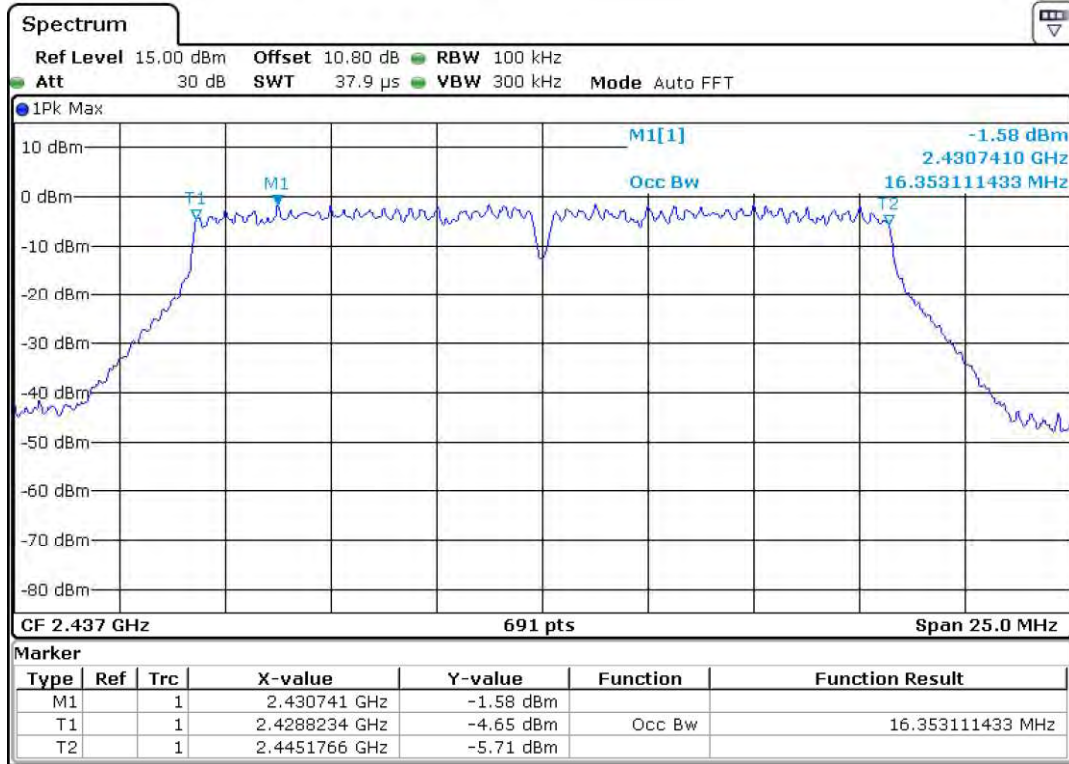
24 Mbps Channel high – 6 dB Bandwidth



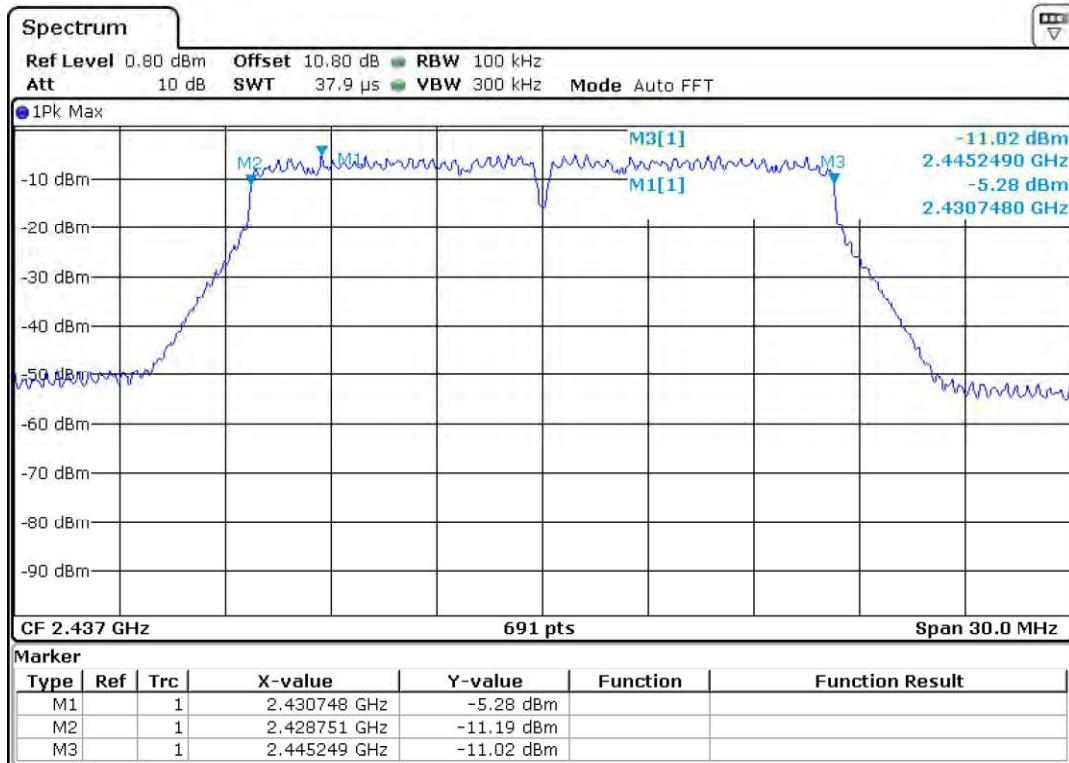
54 Mbps Channel low – OBW



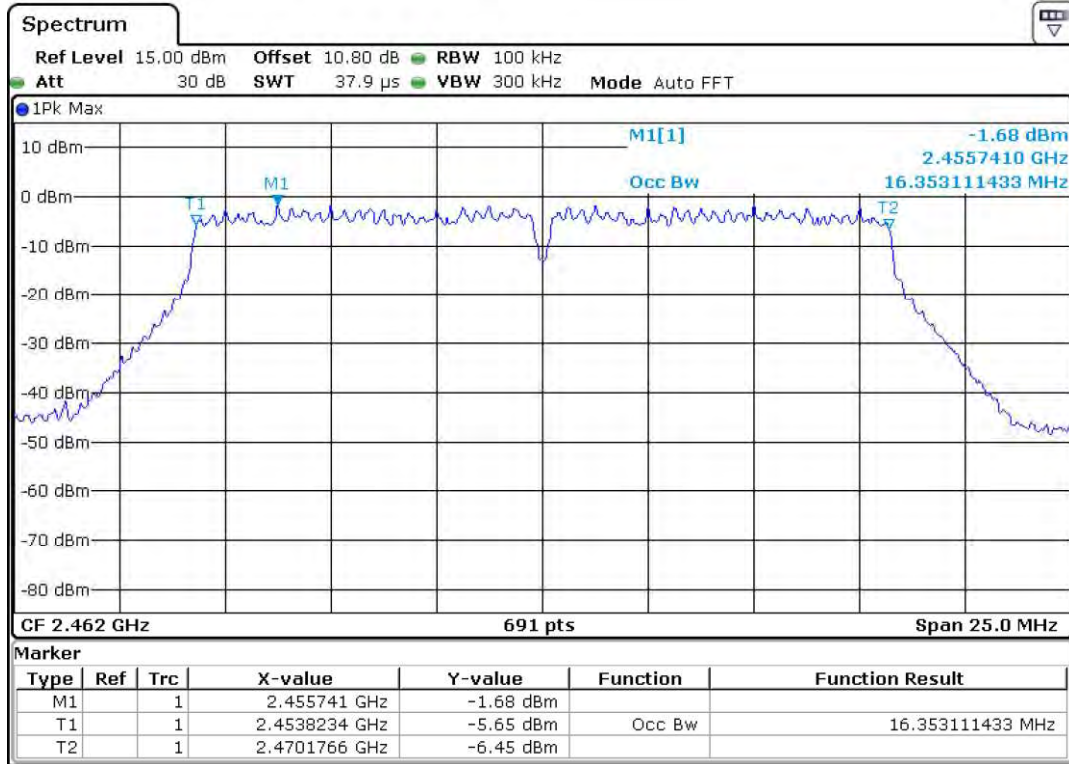
54 Mbps Channel low – 6 dB Bandwidth



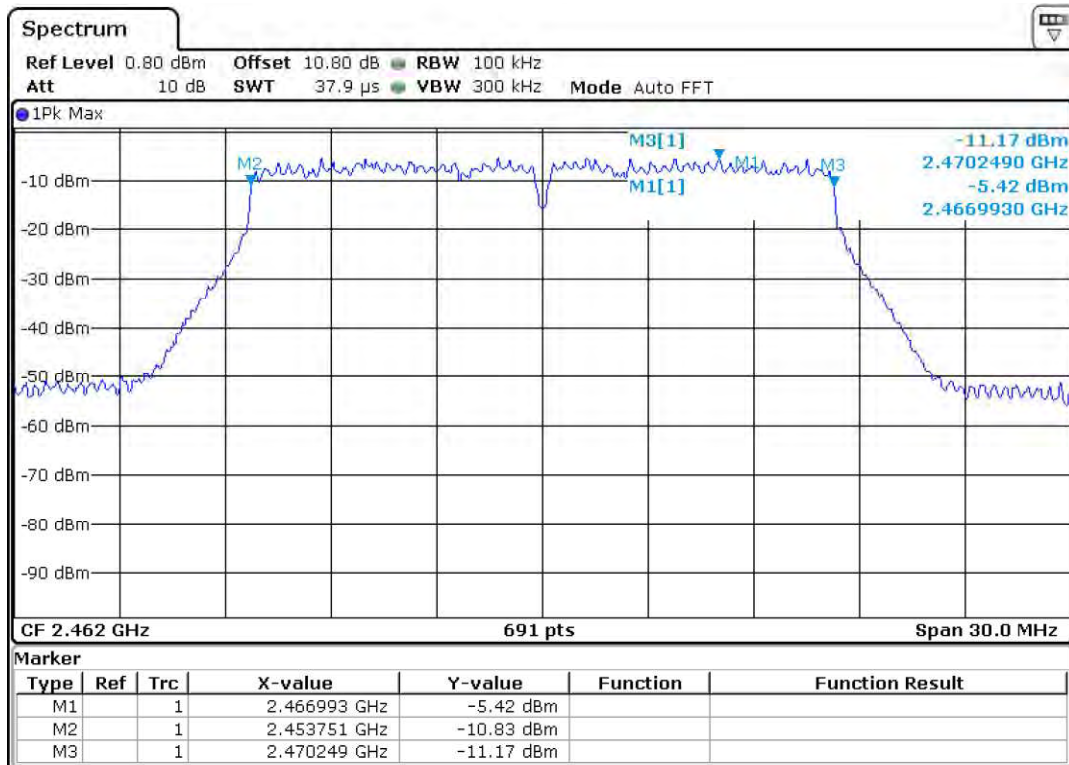
54 Mbps Channel mid – OBW



54 Mbps Channel mid – 6 dB Bandwidth



54 Mbps Channel high – OBW



54 Mbps Channel high – 6 dB Bandwidth

802.11 Protocol	Data rate (Mbps)	Channel Frequency (MHz)	6 dB Bandwidth (MHz)	99% OBW (MHz)
g	6	2412.00	15.97	16.353
		2437.00	16.06	16.353
		2462.00	16.10	16.353
	24	2412.00	16.49	16.353
		2437.00	16.49	16.353
		2462.00	16.49	16.389
	54	2412.00	16.49	16.353
		2437.00	16.49	16.353
		2462.00	16.49	16.353

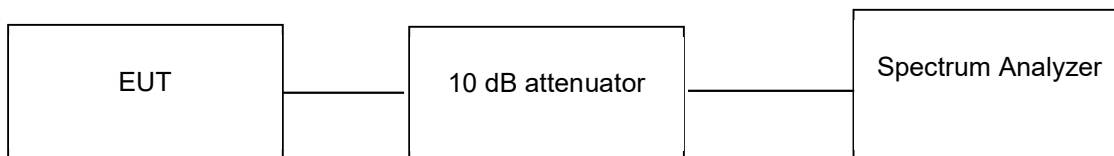
6.4 Emissions in non-restricted frequency bands

Result

Pass

Test Specification FCC Part 15 Subpart C Section 15.247 (d)
 Detector Function Peak
 Port of testing Antenna port
 Requirement In any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits.

Test Method:

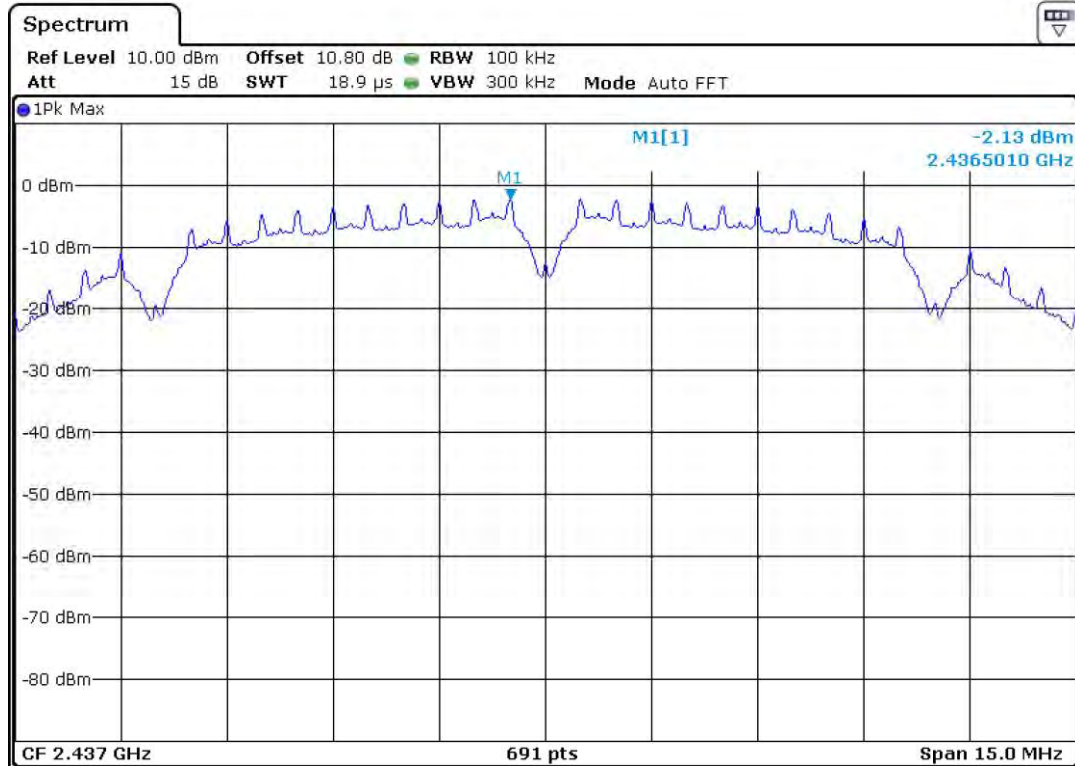


Test results:

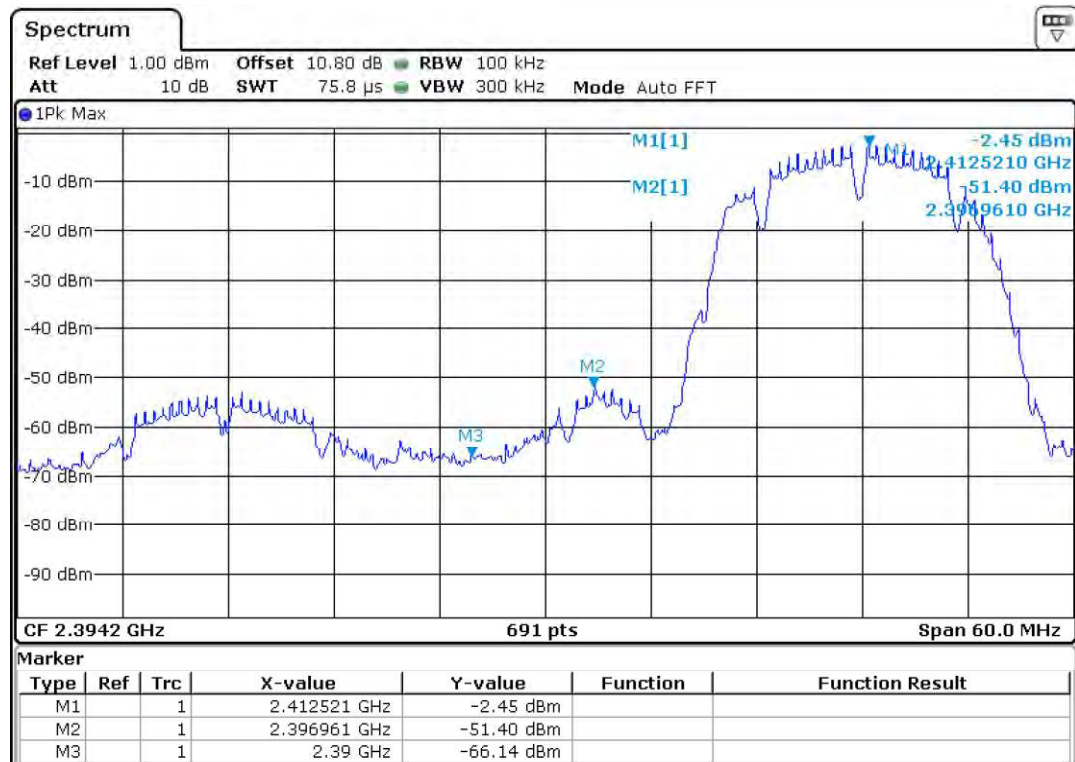
10 dB attenuator + 0.8 Cable loss = 10.8 dB offset is considered in below result

Note: Measurements were made as per section 11.2, 11.3 in KDB 558074 D01 DTS Meas Guidance v04.

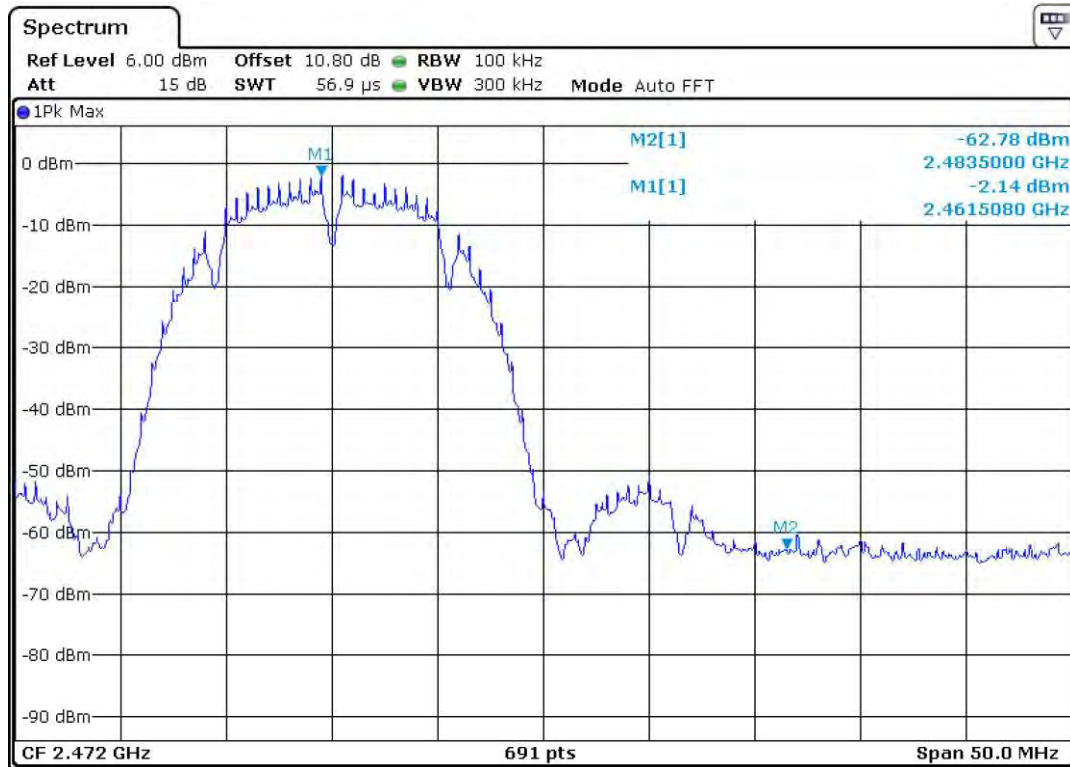
Data rate (Mbps)	Channel Frequency (MHz)	Value at Band Edge		Reference PSD Value B (dBm)	Band Edge Value A~B (dB)	Limit (dB)
		Frequency (MHz)	Value A (dBm)			
1	2412	2396	-51.40	-2.13	-49.27	-20.00
	2462	2483.50	-62.78	-2.13	-60.65	-20.00
11	2412	2397.4	-53.55	-1.56	-51.99	-20.00
	2462	2483.50	-64.01	-1.56	-62.45	-20.00



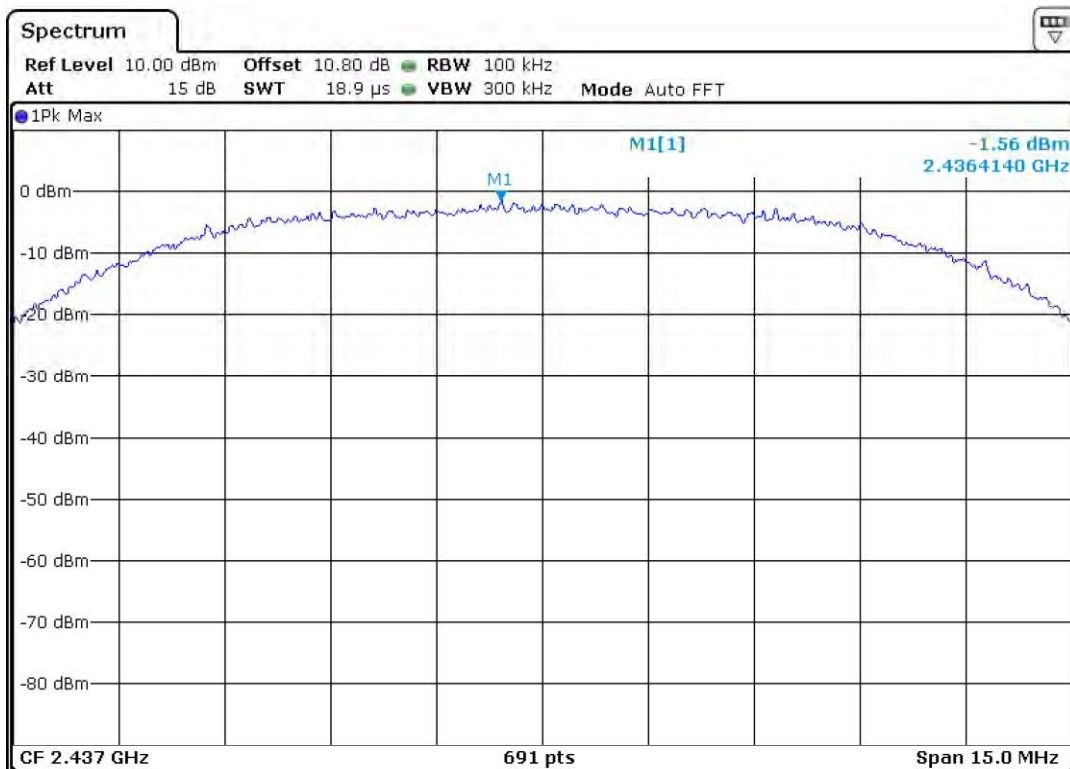
Reference Level Plot – 1 Mbps



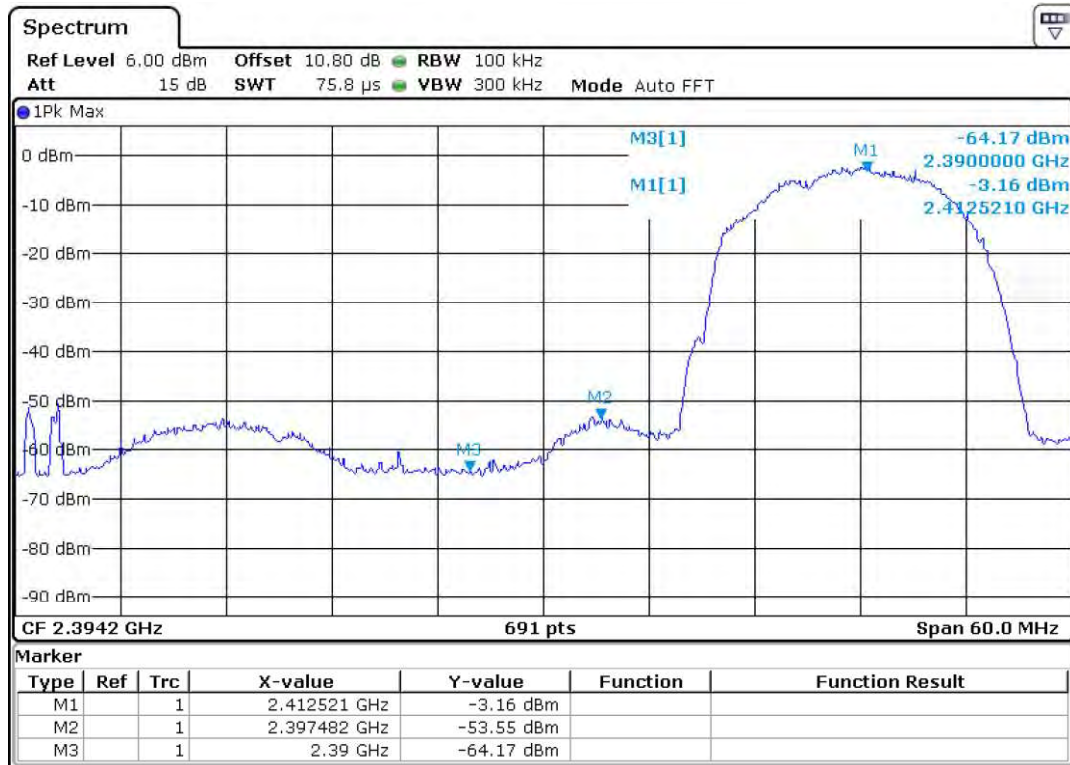
1 Mbps Channel low – 2412 MHz



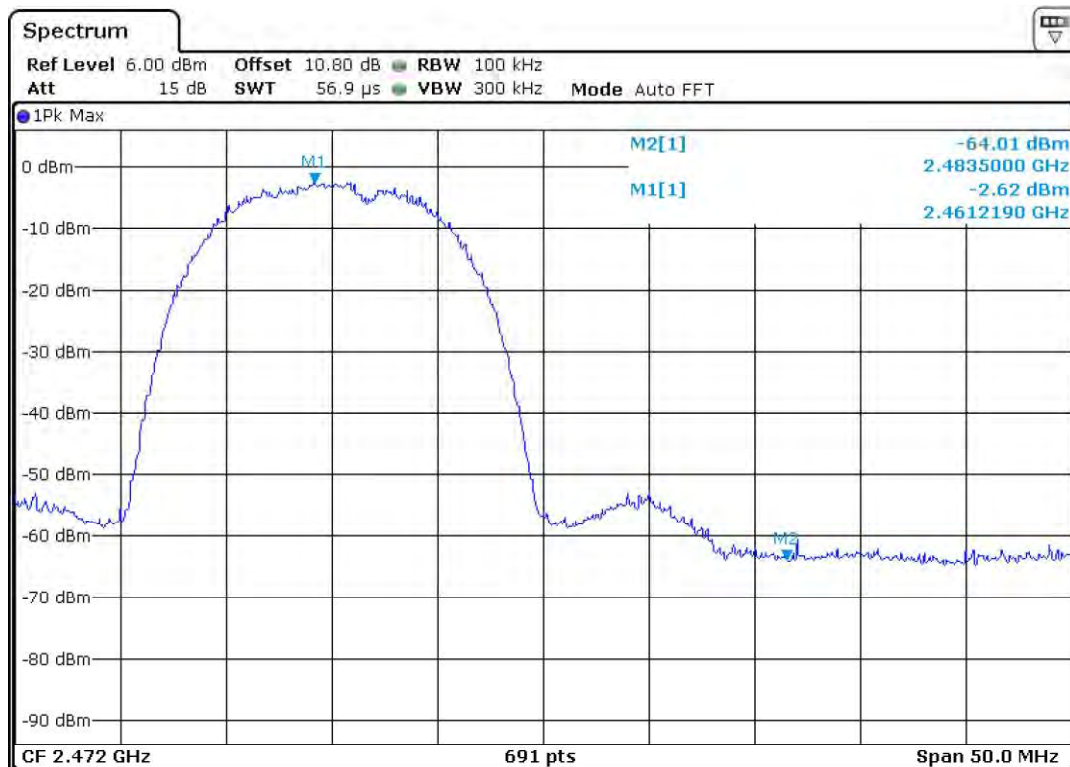
1 Mbps Channel high – 2462 MHz



Reference Level Plot – 11 Mbps

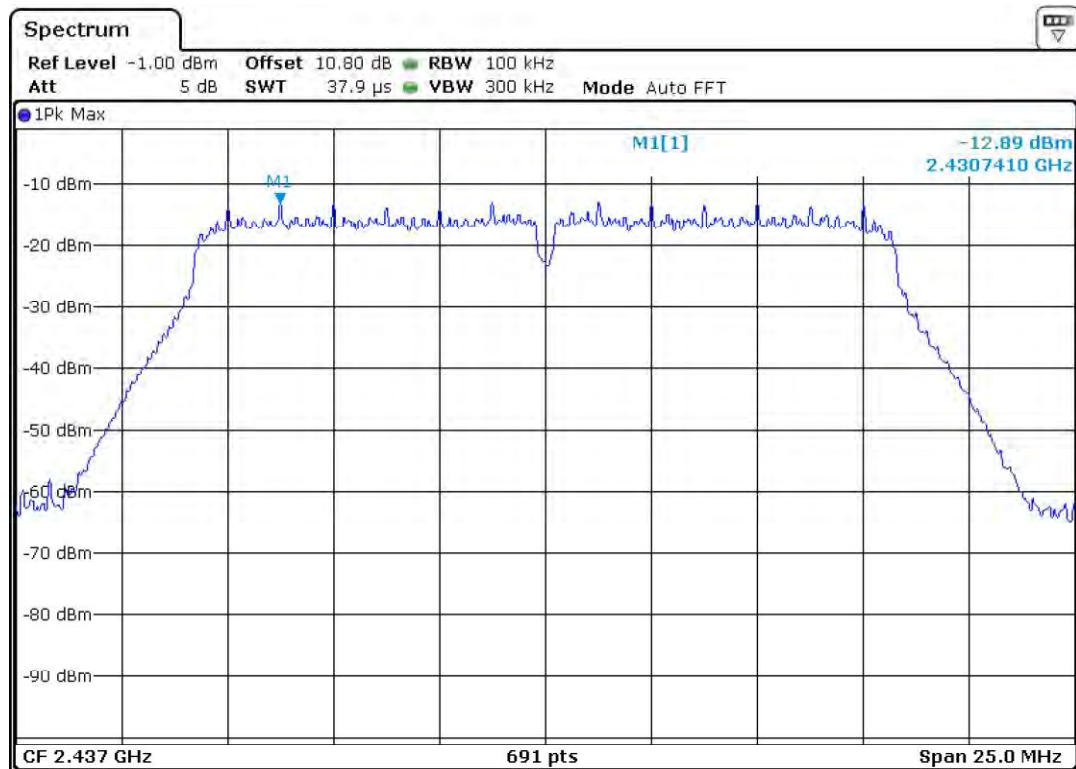


11 Mbps Channel low – 2412 MHz

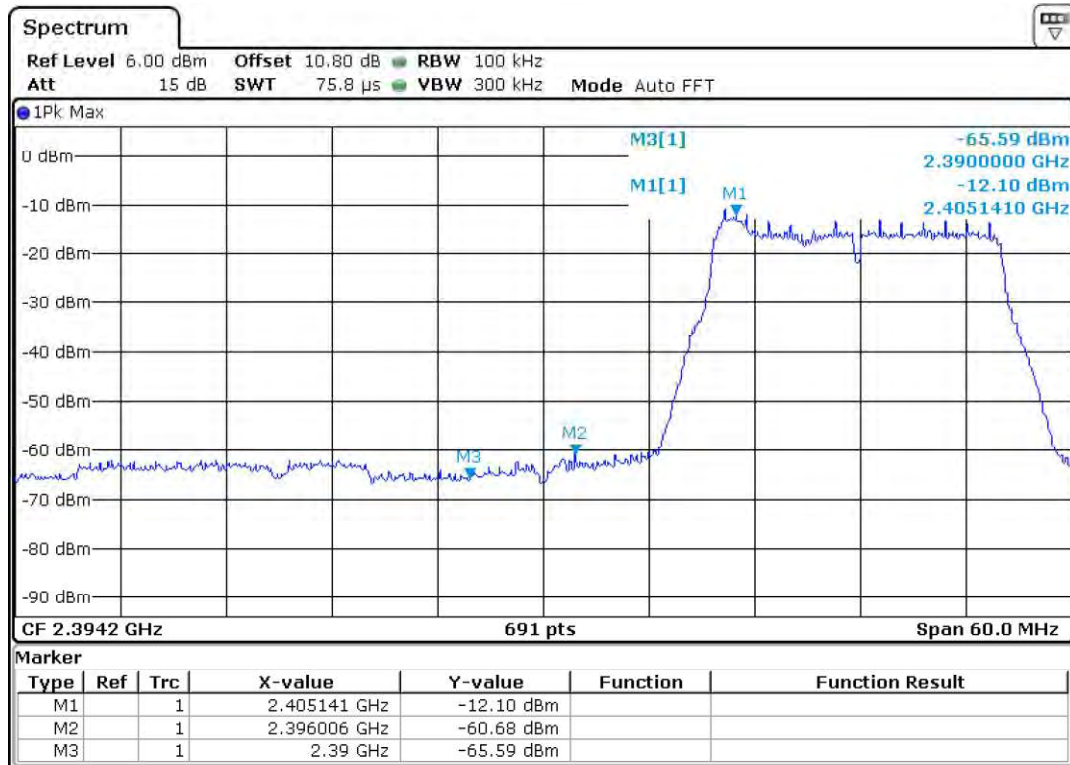


11 Mbps Channel high – 2462 MHz

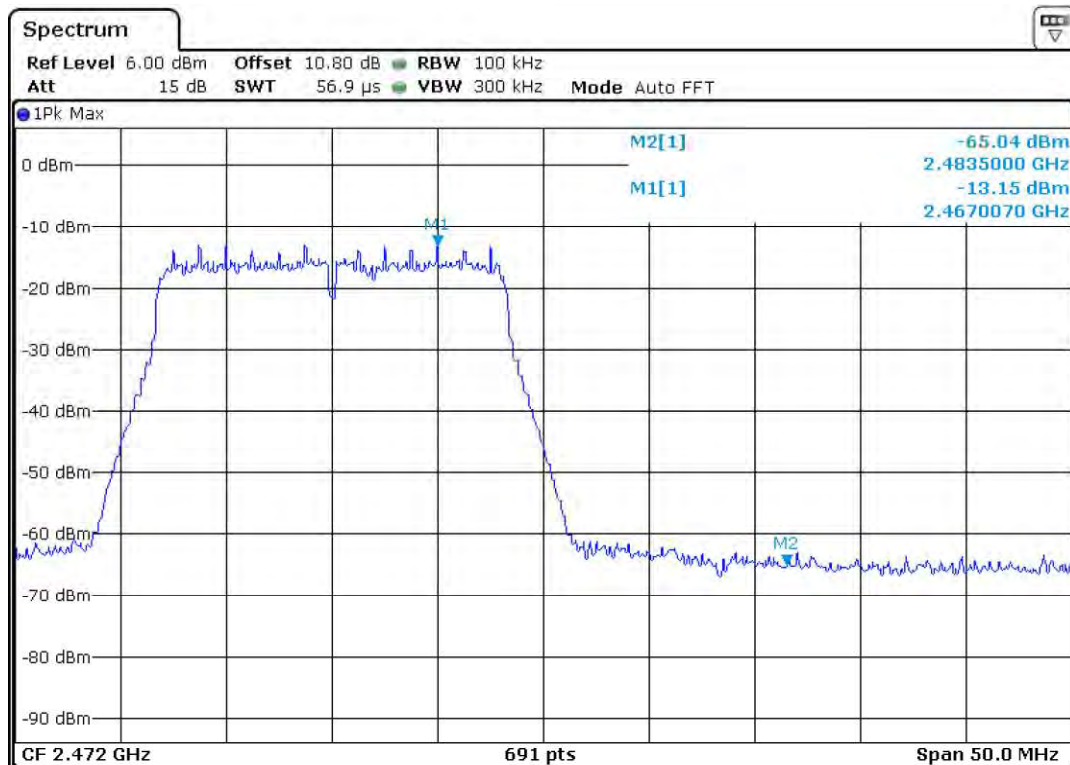
Data rate (Mbps)	Channel Frequency (MHz)	Value at Band Edge		Reference PSD Value B (dBm)	Band Edge Value A~B (dB)	Limit (dB)
		Frequency (MHz)	Value A (dBm)			
6	2412	2396	-60.68	-12.89	-47.79	-20.00
	2462	2483.50	-65.04	-12.89	-52.15	-20.00
24	2412	2397.9	-61.65	-12.85	-48.80	-20.00
	2462	2483.50	-65.26	-12.85	-52.41	-20.00
54	2412	2395.7	-61.84	-12.86	-48.98	-20.00
	2462	2483.5	-64.24	-12.86	-51.38	-20.00



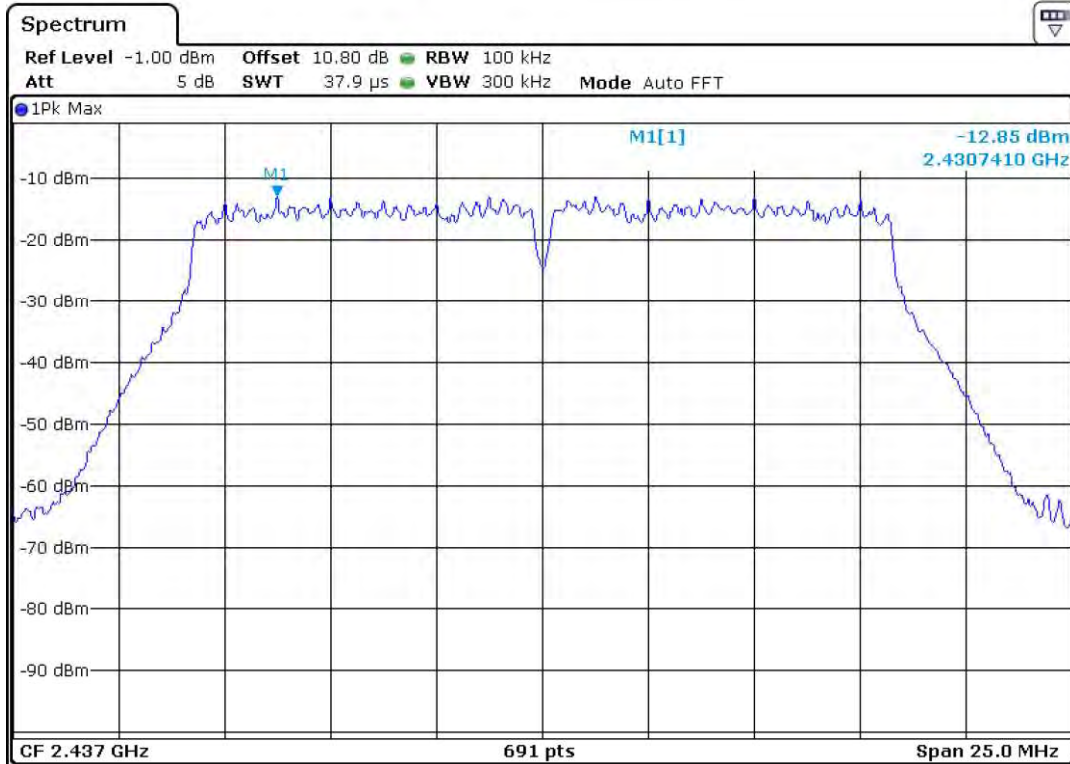
Reference Level Plot – 6 Mbps



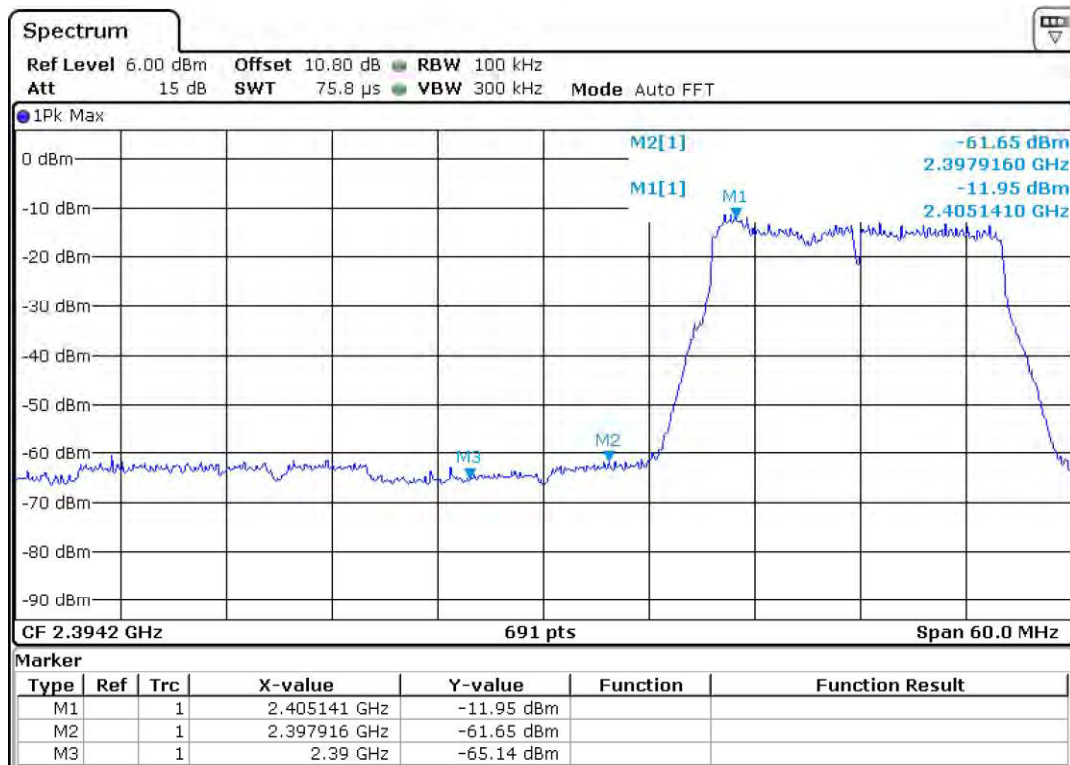
6 Mbps Channel low – 2412 MHz



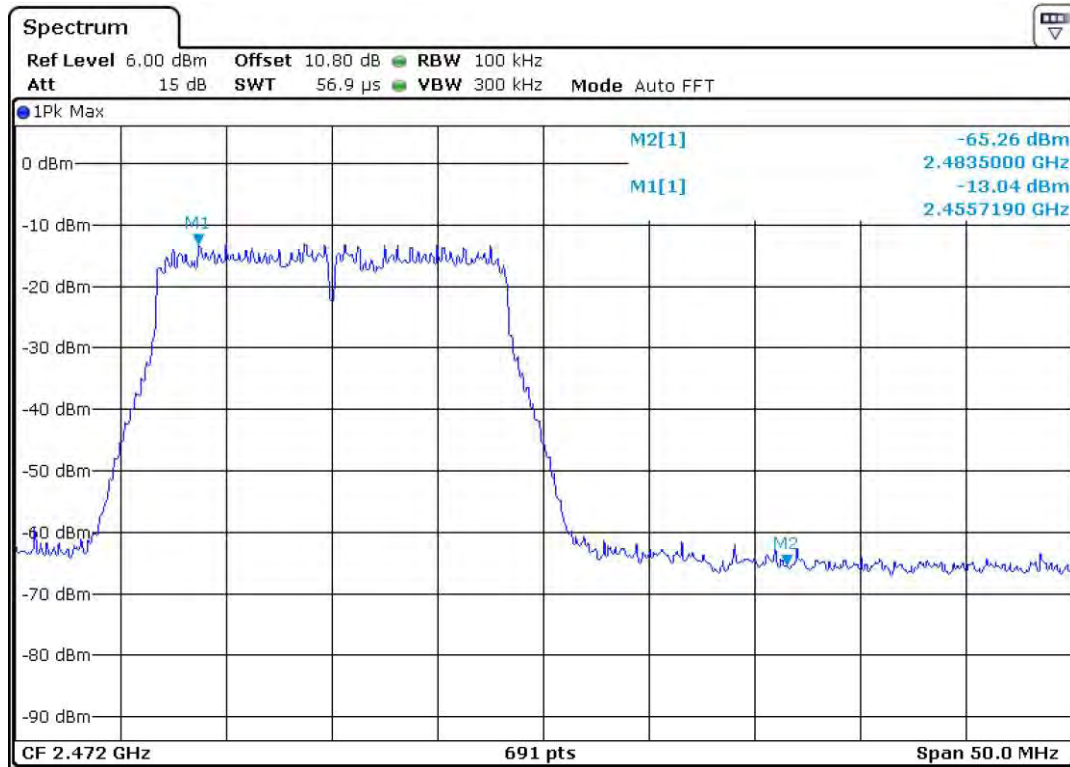
6 Mbps Channel high – 2462 MHz



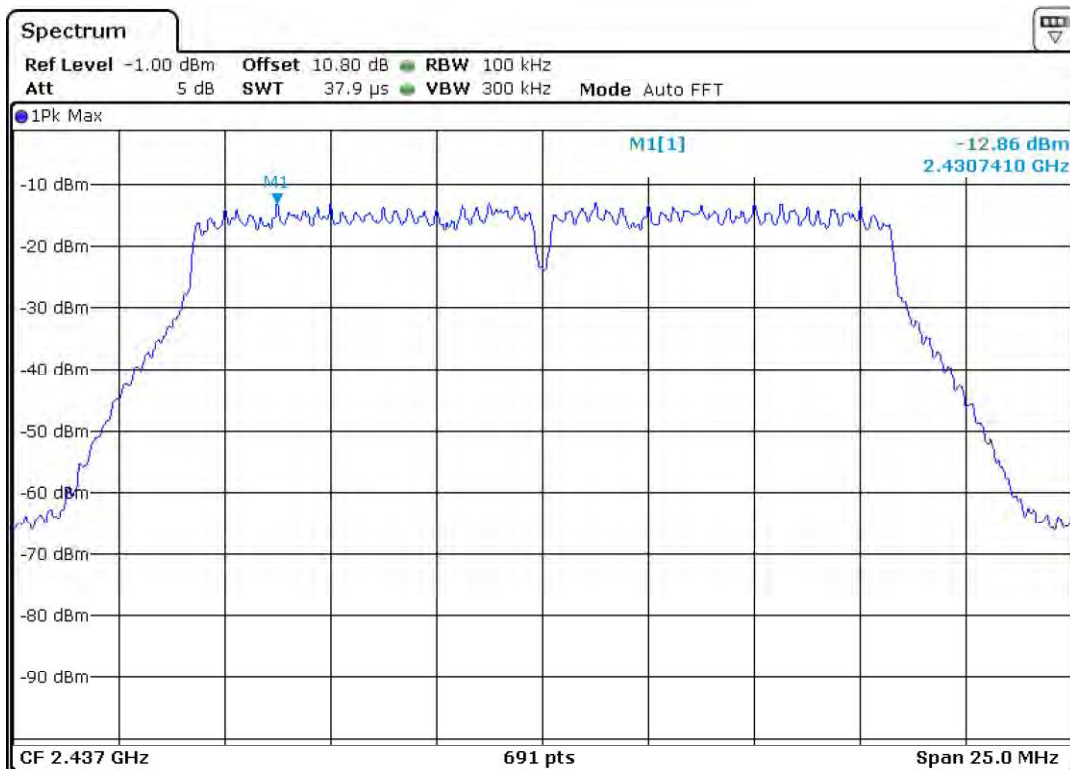
Reference Level Plot – 24 Mbps



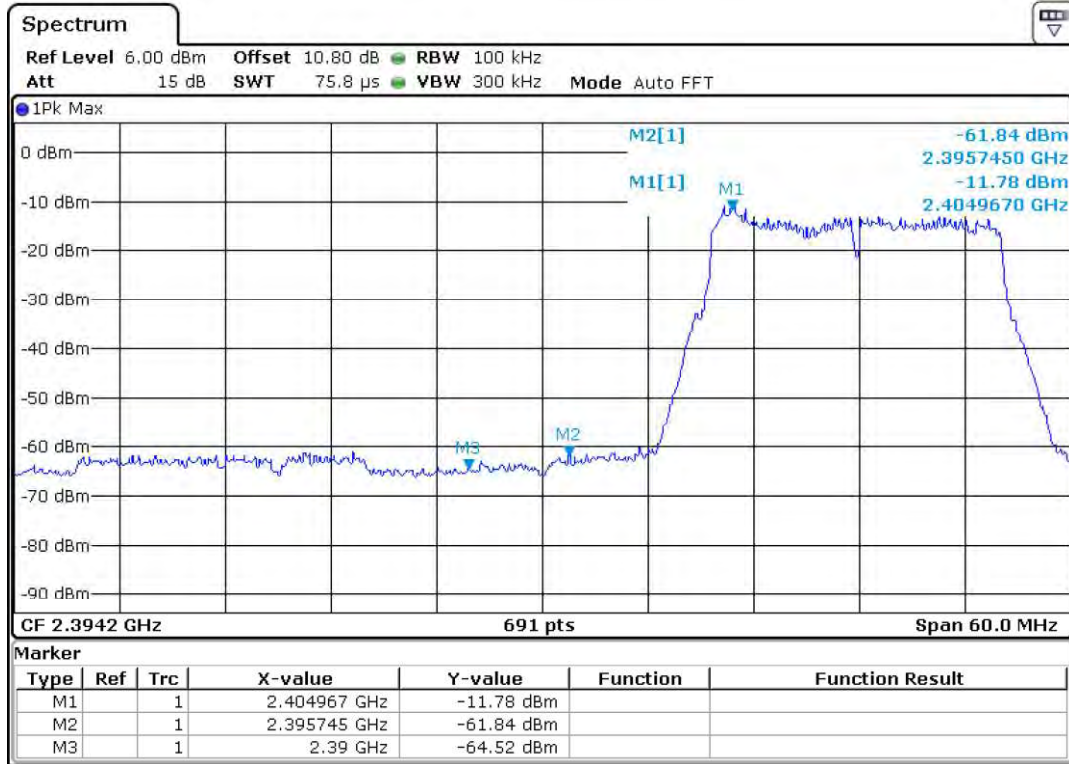
24 Mbps Channel low – 2412 MHz



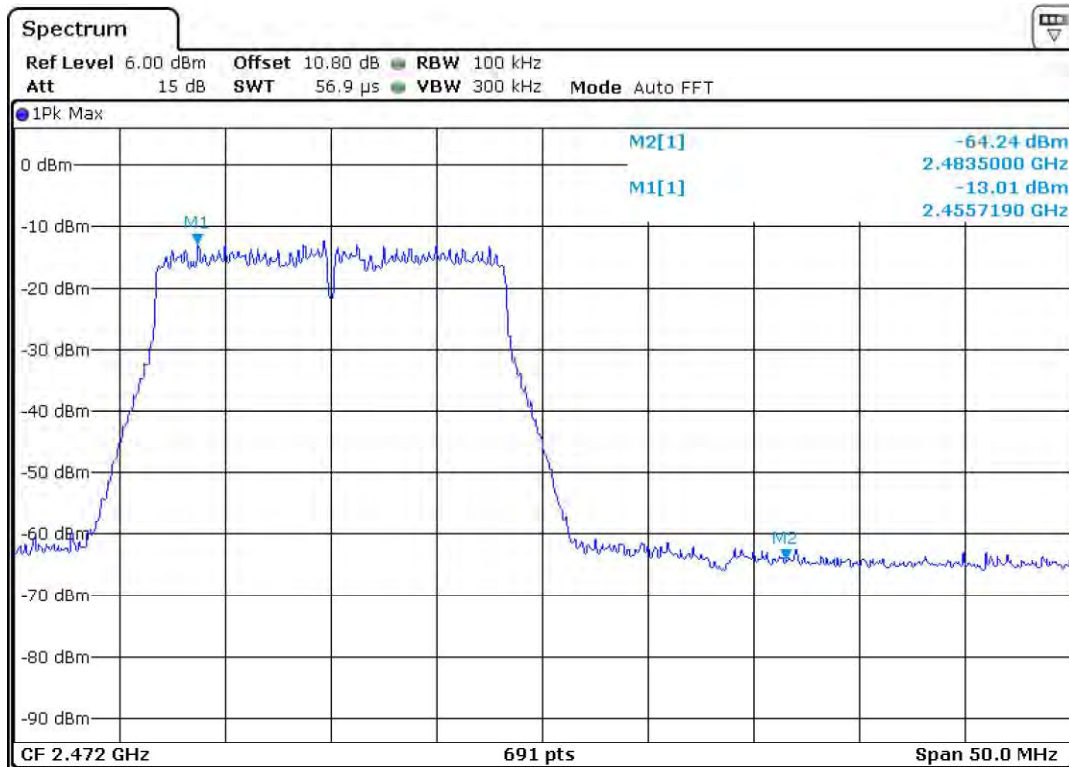
24 Mbps Channel high – 2462 MHz



Reference Level Plot – 54 Mbps



54 Mbps Channel low – 2412 MHz



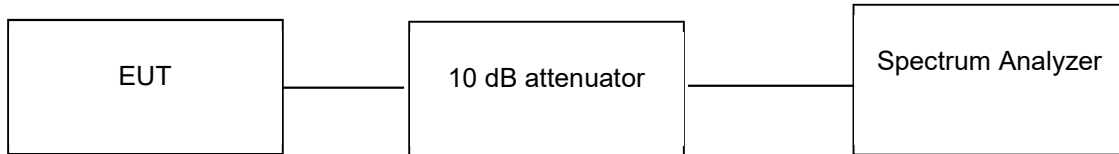
54 Mbps Channel high – 2462 MHz

6.5 Conducted Spurious Emission

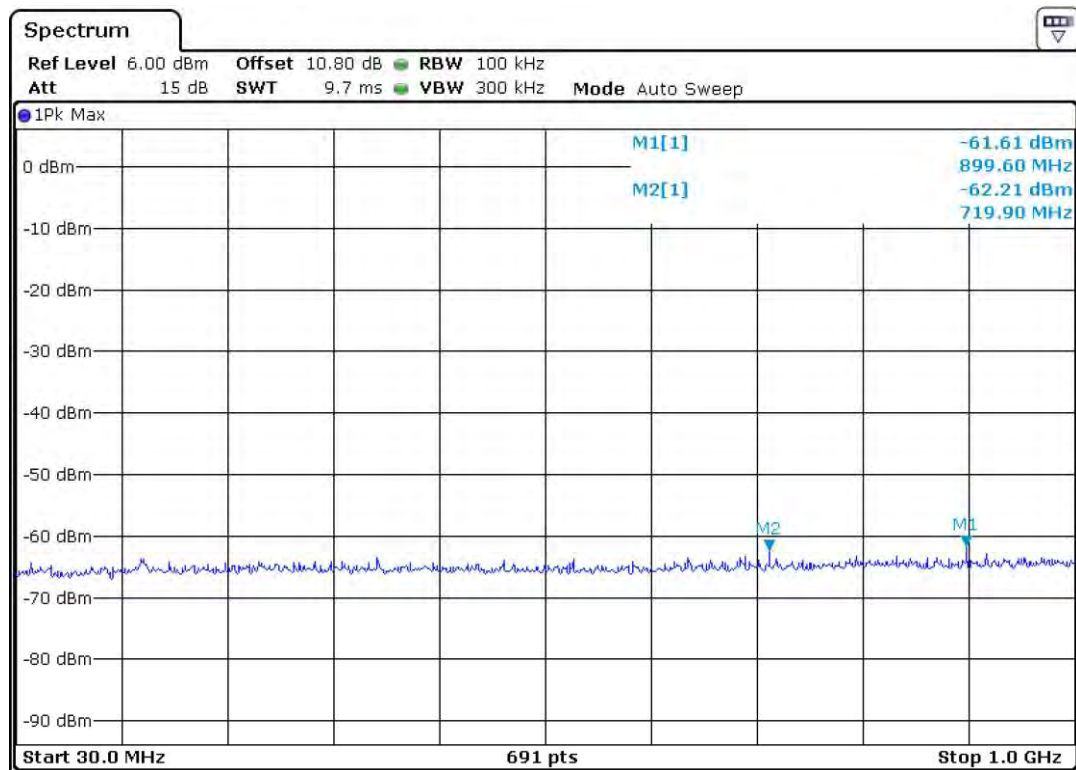
Result

Pass

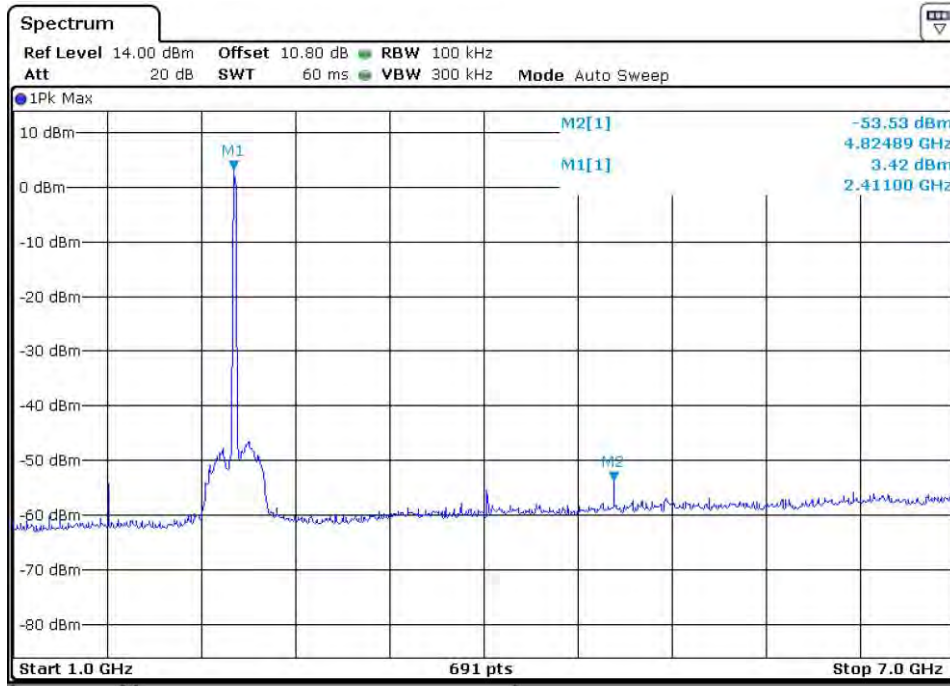
Test Method:



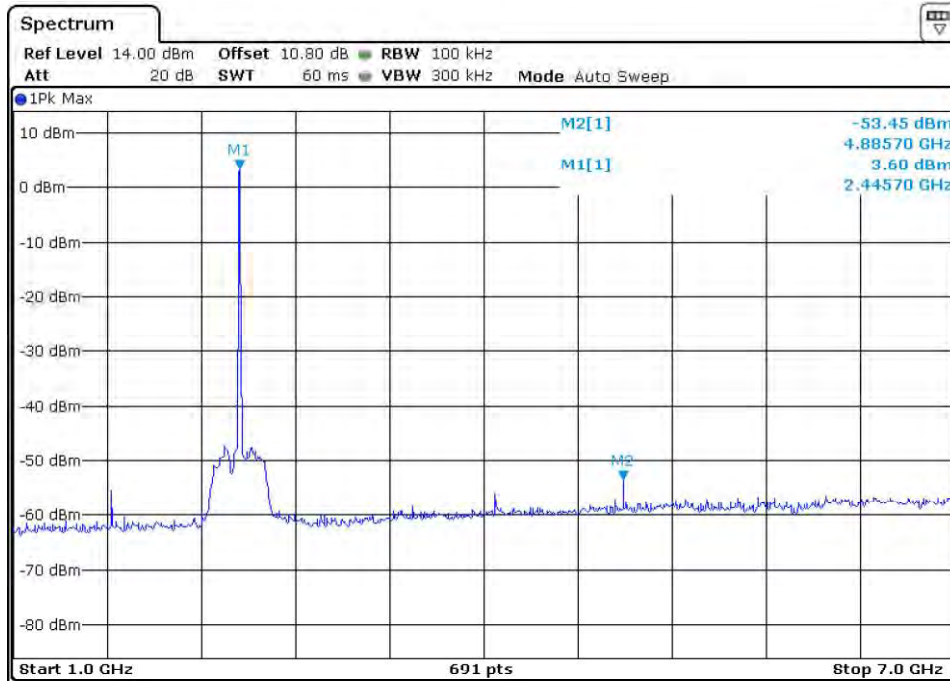
Test results:



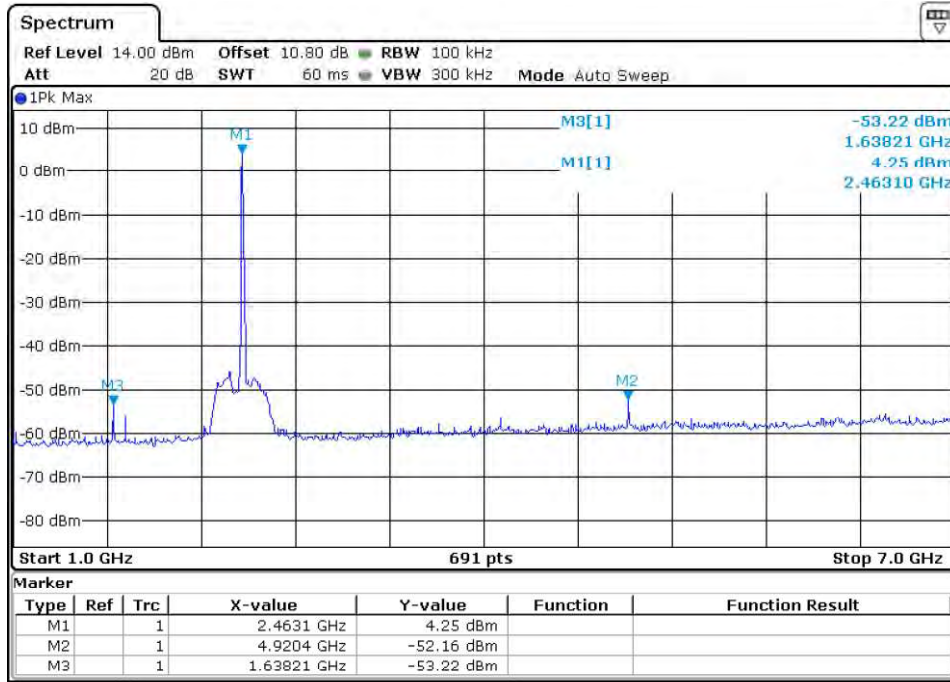
30MHz to 1GHz Spurious Emissions



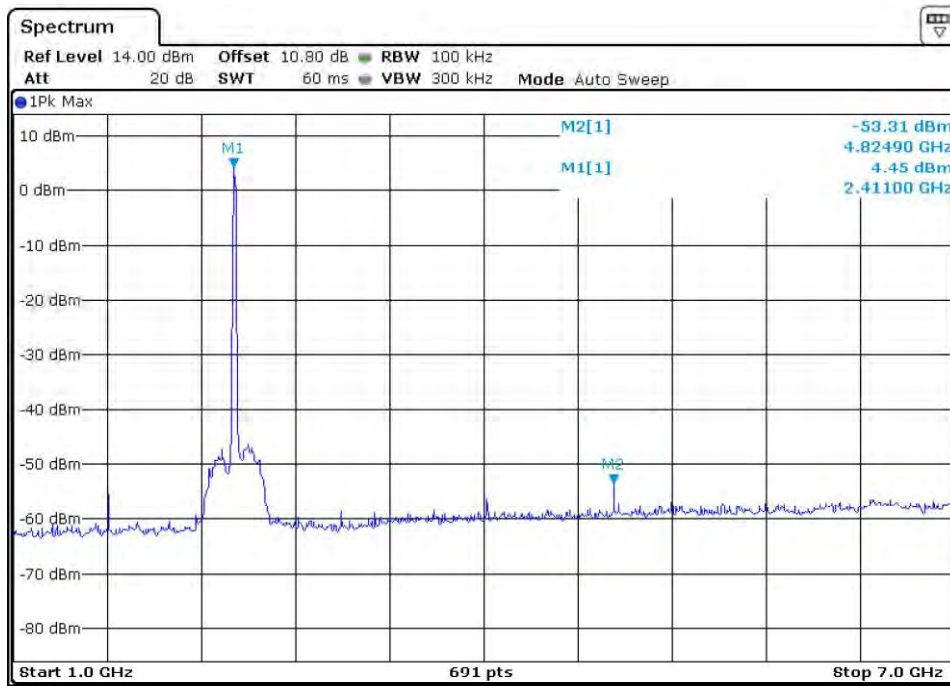
1 Mbps Channel low



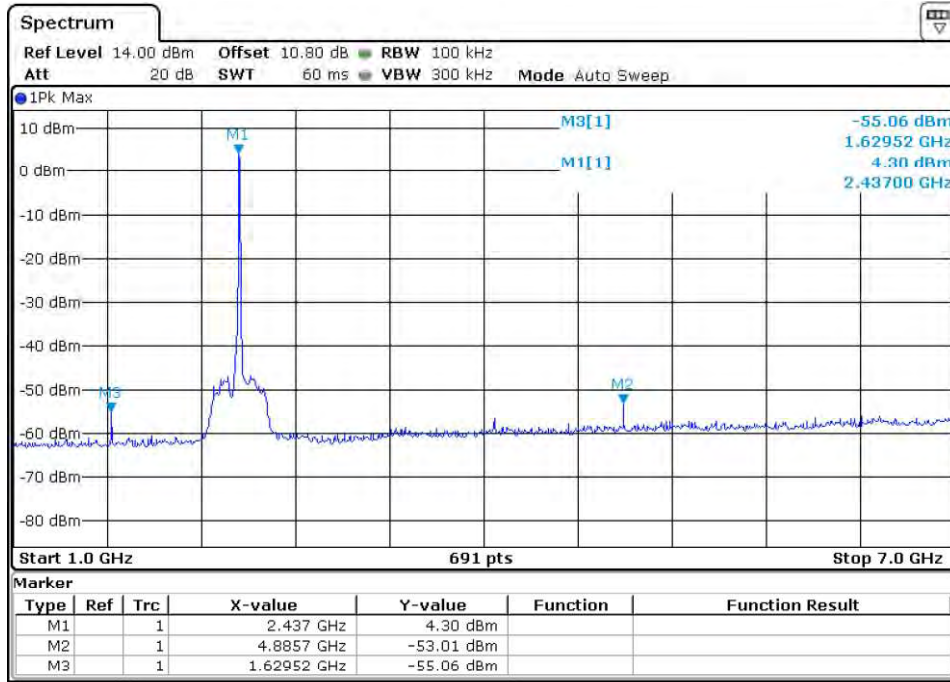
1 Mbps Channel mid



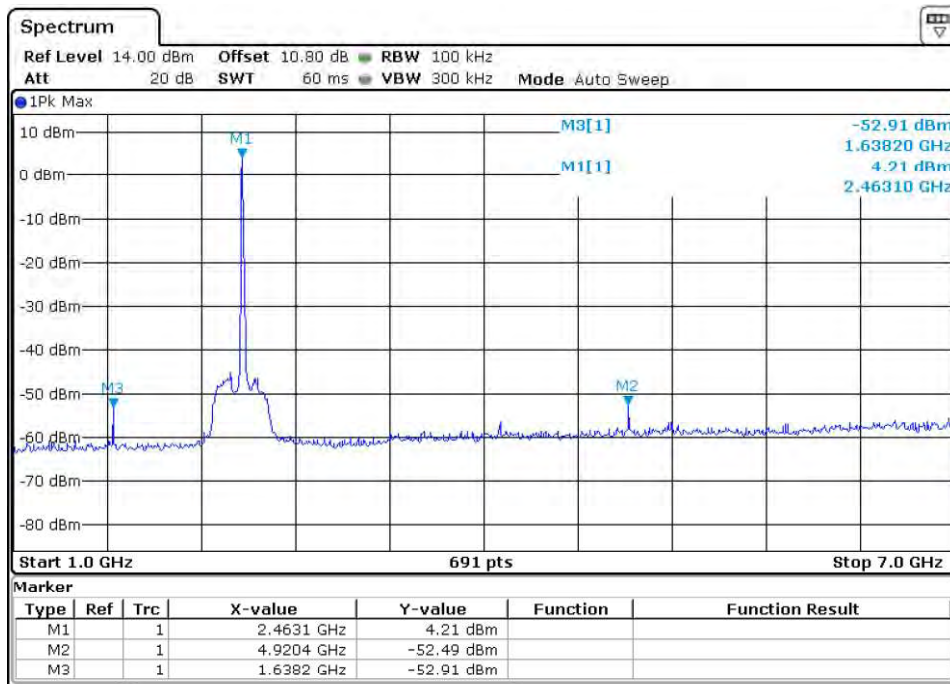
1 Mbps Channel high



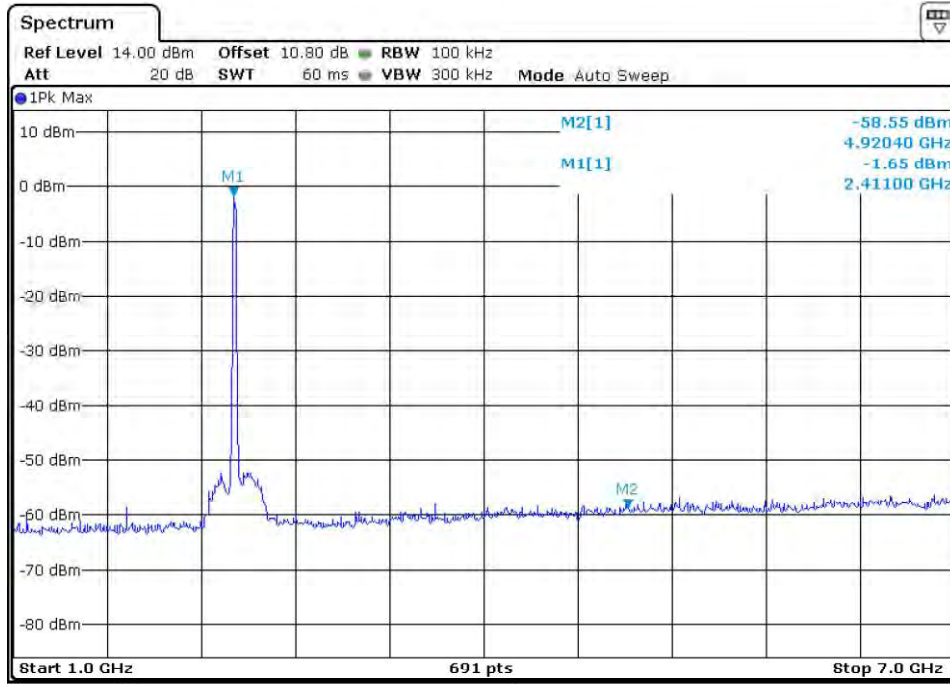
11 Mbps Channel low



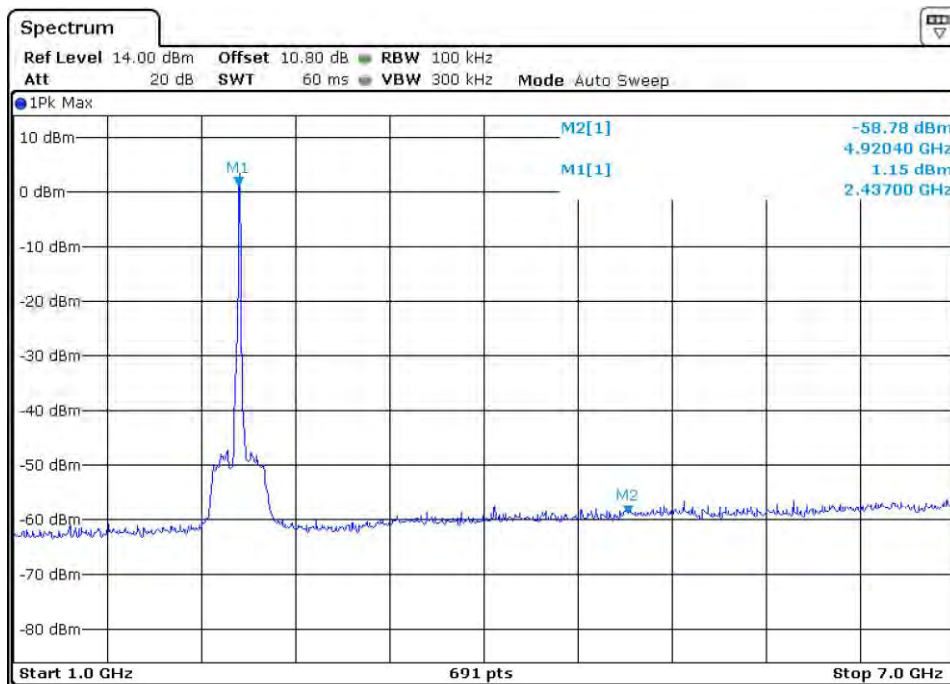
11 Mbps Channel mid



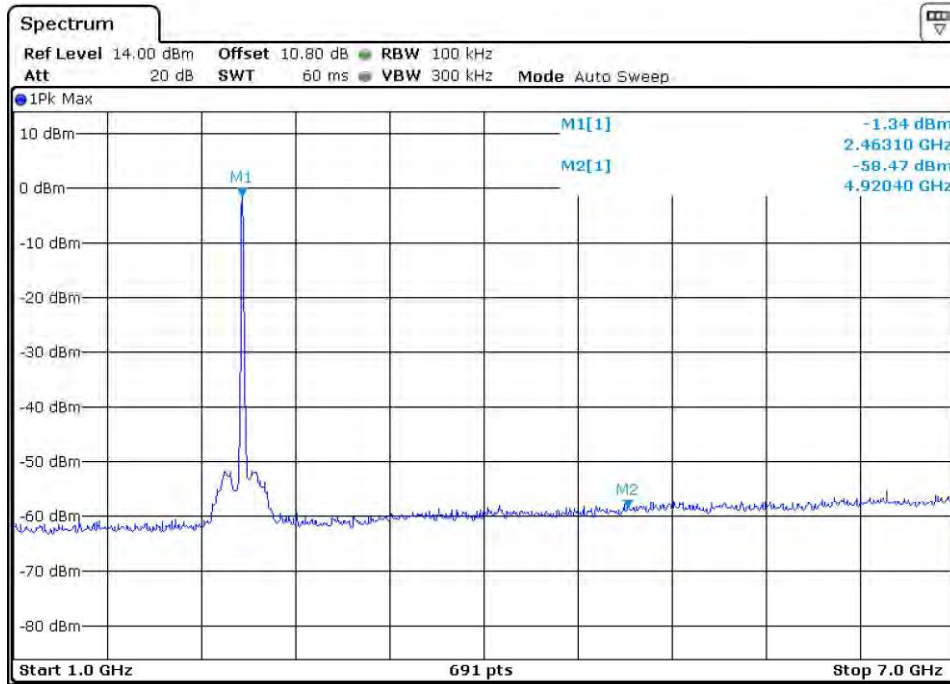
11 Mbps Channel high



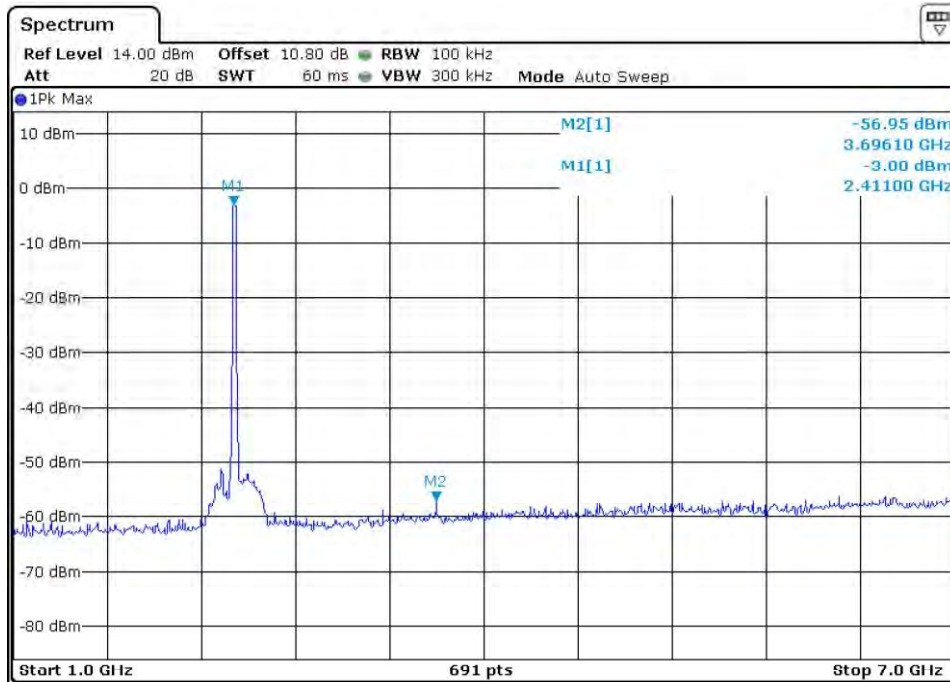
6 Mbps Channel low



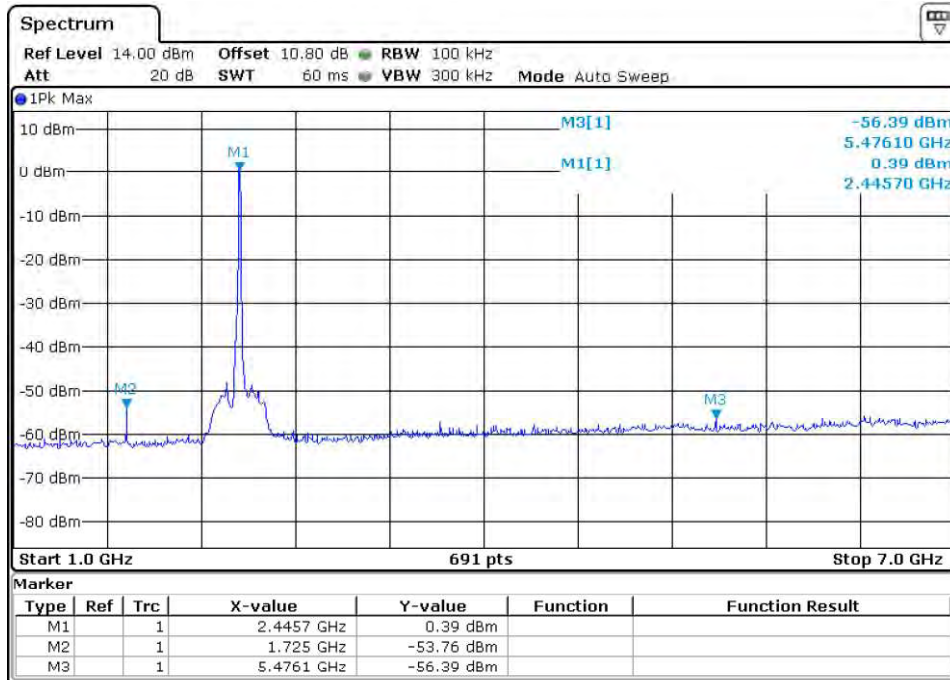
6 Mbps Channel mid



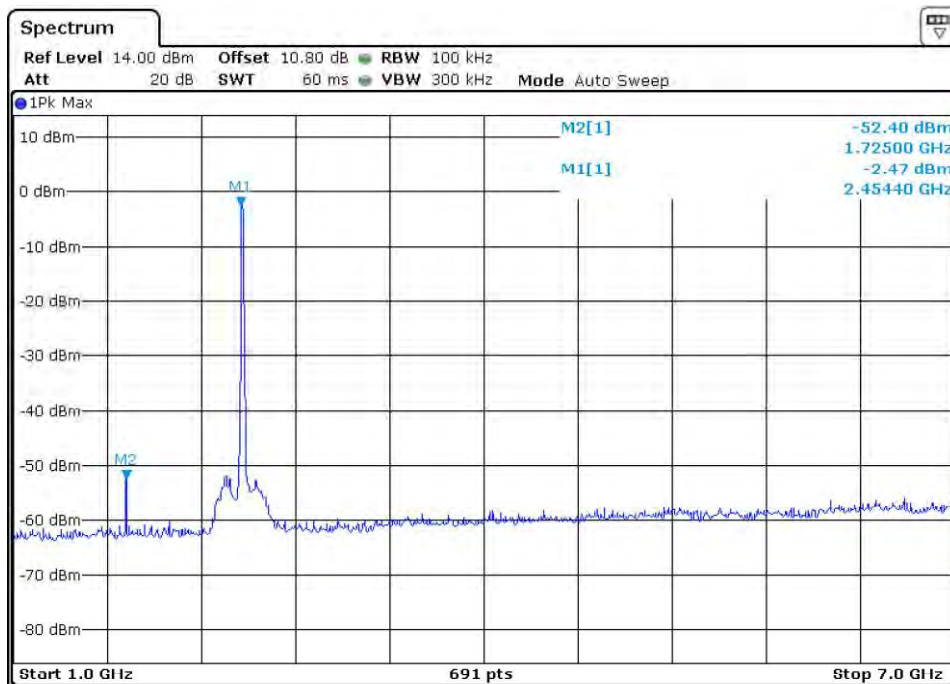
6 Mbps Channel high



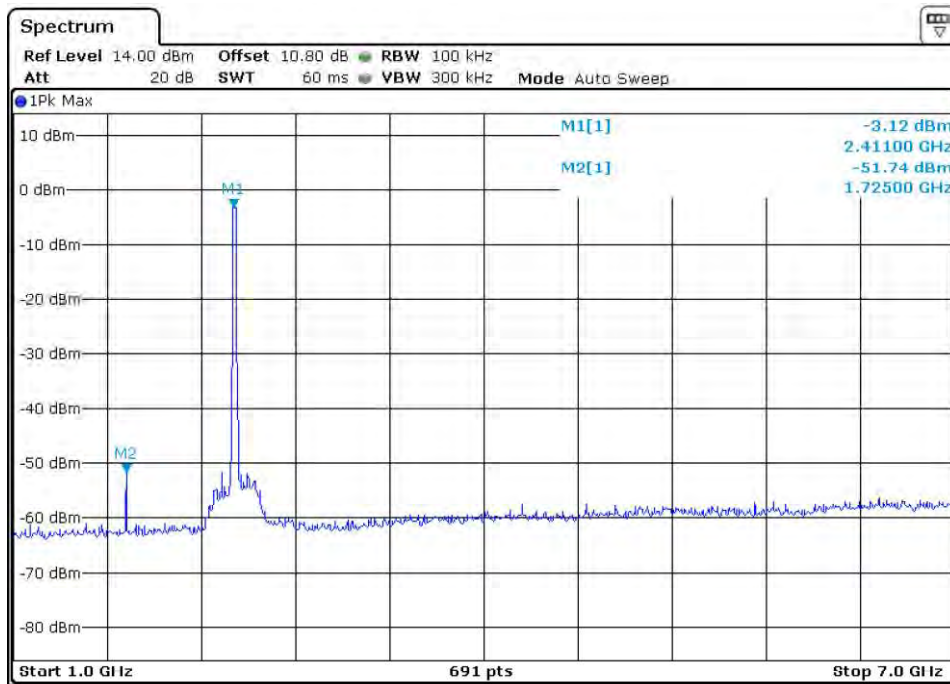
24 Mbps Channel low



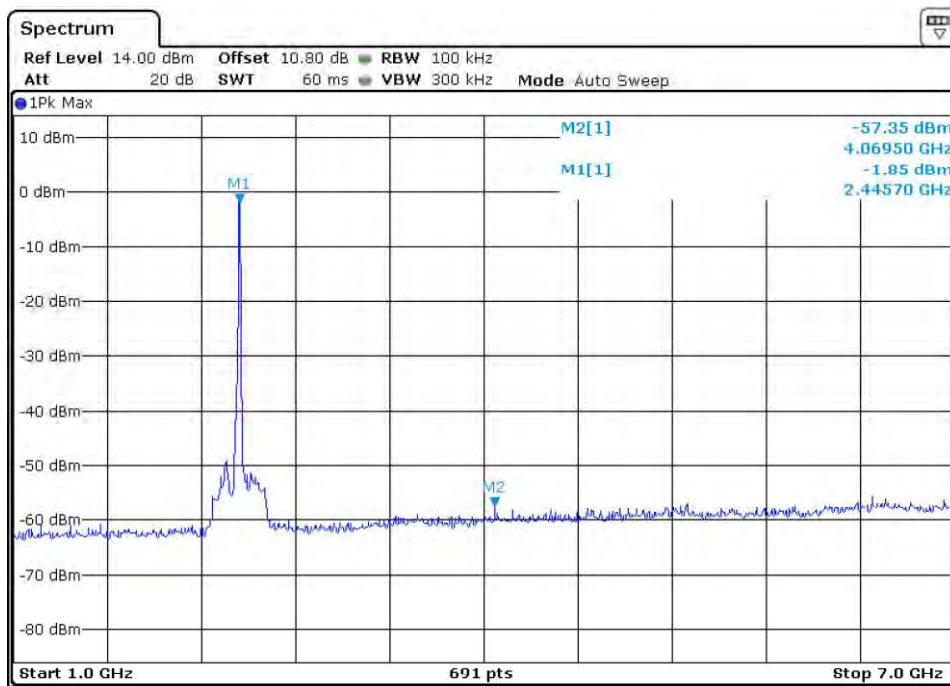
24 Mbps Channel mid



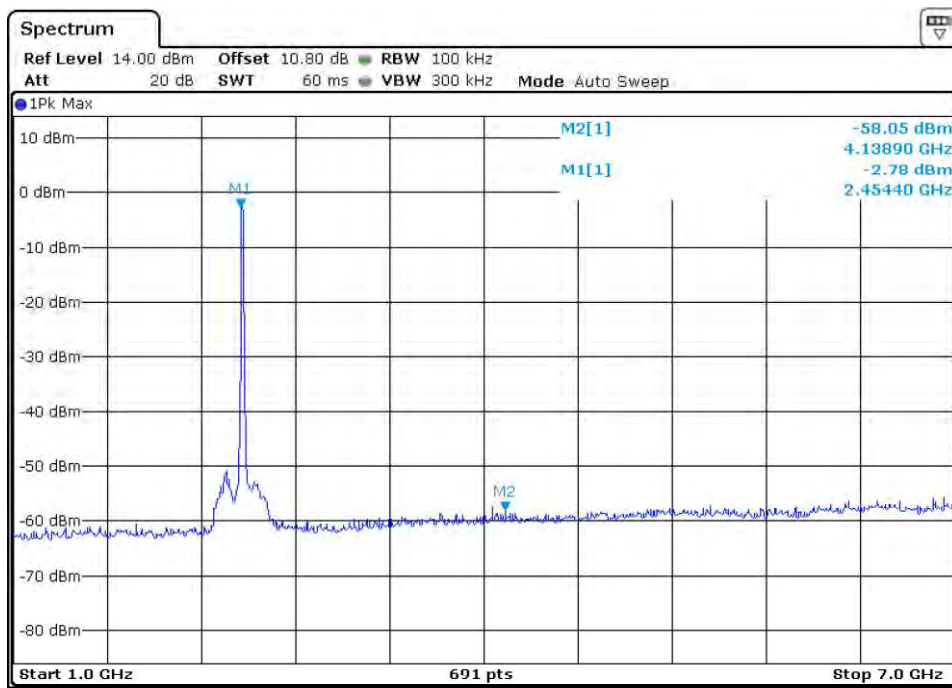
24 Mbps Channel high



54 Mbps Channel low



54 Mbps Channel mid



54 Mbps Channel high

6.6 Restricted bands of Emissions & Restricted Bands of Operation

Result

Pass

Test Specification	FCC part 15 Subpart C Section 15.247 (d) / (15.209 & 15.205)
Test Method	ANSI C 63.10 – 2013
Measurement Location	Semi Anechoic Chamber
Measuring Distance	3 m
Detector	QP for frequency below 1 GHz, Average for frequency above 1 GHz
Requirement	As per the limits mentioned in the below table

Limits for Radiated Emission of Section 15.209:

Frequency (MHz)	Field strength ($\mu\text{V/m}$)	Field strength ($\text{dB}\mu\text{V/m}$)	Distance of Measurement (m)
0.009 – 0.490	2400/F(kHz)	48.50 – 13.80	300*
0.490 – 1.705	24000/F(kHz)	33.80 – 23.00	30*
1.705 -30	30	29.54	30*
30-88	100	40.0	3
88-216	150	43.5	3
216-960	200	46.0	3
Above 960	500	54.0	3

Remark: * the limit shows in the table above of frequency range 0.009 – 0.490, 0.490 – 1.705 MHz and 1.705-30MHz is at 300 meter, 30 meter and 30 meter range respectively, which corresponds to 128-93.8, 73.80-62.95, 69.54 $\text{dB}\mu\text{V/m}$ at 3m range by extrapolation calculation and the measurement of loop antenna.

The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz Radiated emission limits in these three bands are based on measurements employing an average detector.

Test results:

No emissions found in frequency 9 kHz to 30 MHz

Test results for frequencies in the range 30 MHz – 1 GHz

Note: The product has digital device which cannot control the functions of intentional radiator (Wi-Fi, ZigBee, BLE)) in such condition Radiated spurious emission for the frequency range from 30MHz to 1GHz was performed as per FCC part 15 subpart B 15.109, Class A requirement. Only worst case test results are reported.

FCC Part 15 Subpart B 15.109 Class A limits

Frequency MHz	Field Strength dBuV/m	Measured Distance (meter)	Field Strength (dBµV/m)
30-88	90.00	10.00	39.08
88-216	150.00	10.00	43.52
216-960	210.00	10.00	46.43
above 960	300.00	10.00	49.54

Test results for frequencies in the range 30 MHz to 200 MHz

Polarization	Frequency (MHz)	Measured value (dBµV/m)	Limit (dBµV/m)	Margin (dB)
Vertical	33.33	36.32	39.08	-2.76
	43.8	29.72	39.08	-9.36
	100.02	36.61	43.52	-6.91
	122.53	38.64	43.52	-4.88
Horizontal	33.31	19.37	39.08	-19.71
	45.7	17.04	39.08	-22.04
	100	26.23	43.52	-17.29
	125.03	34.96	43.52	-8.56

Test results for frequencies in the range 200MHz – 1GHz

Polarization	Frequency (MHz)	Measured value (dBµV/m)	Limit (dBµV/m)	Margin (dB)
Vertical	250	36.58	46.43	-9.85
	720	43.15	46.43	-3.28
	836.4	39.7	46.43	-6.73
	900	40.33	46.43	-6.1
Horizontal	250	40.36	46.43	-6.07
	420	36.7	46.43	-9.73
	720	44.75	46.43	-1.68
	900	45.55	46.43	-0.88

For frequency range: Above 1 GHz

Test results:

802.11 b – 1 Mbps

Channel	Polarization	Frequency (MHz)	Measure Emission Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)
Low	Vertical	2390(Pk)	46.55	74	-27.45
		2390(Av)	33.19	54	-20.81
		2412(Pk)	90.38	-	*
		2412(Av)	88.02	-	*
		4824(Pk)	52.90	74	-21.1
		4824(Av)	41.90	54	-12.1
	Horizontal	2390(Pk)	41.98	74	-32.02
		2390(Av)	29.47	54	-24.53
		2412(Pk)	83.99	-	*
		2412(Av)	81.53	-	*
		4824(Pk)	54.25	74	-19.75
		4824(Av)	40.36	54	-13.64
Mid	Vertical	2437(Pk)	89.56	-	*
		2437(Av)	87.25	-	*
		4874(Pk)	53.51	74	-20.49
		4874(Av)	42.50	54	-11.5
	Horizontal	2437(Pk)	83.07	-	*
		2437(Av)	80.64	-	*
		4874(Pk)	53.19	74	-20.81
		4874(Av)	41.24	54	-12.76
High	Vertical	2462(Pk)	88.68	-	*
		2462(Av)	86.34	-	*
		2483.5(Pk)	40.71	74	-33.29
		2483.5(Av)	29.04	54	-24.96
		4924(Pk)	53.82	74	-20.18
		4924(Av)	42.09	54	-11.91
	Horizontal	2462(Pk)	82.73	-	*
		2462(Av)	80.26	-	*
		2483.5(Pk)	39.05	74	-34.95
		2483.5(Av)	28.35	54	-25.65
		4924(Pk)	53.53	74	-20.47
		4924(Av)	40.83	54	-13.17

*-> Fundamental frequency
Pk-> Peak
Av-> Average

802.11 b – 11 Mbps

Channel	Polarization	Frequency (MHz)	Measure Emission Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)
Low	Vertical	2390(Pk)	45.65	74	-28.35
		2390(Av)	31.75	54	-22.25
		2412(Pk)	95.14	-	*
		2412(Av)	87.53	-	*
		4824(Pk)	53.93	74	-20.07
		4824(Av)	41.60	54	-12.4
	Horizontal	2390(Pk)	41.96	74	-32.04
		2390(Av)	30.02	54	-23.98
		2412(Pk)	88.25	-	*
		2412(Av)	80.49	-	*
		4824(Pk)	52.36	74	-21.64
		4824(Av)	39.86	54	-14.14
Mid	Vertical	2437(Pk)	93.76	-	*
		2437(Av)	86.35	-	*
		4874(Pk)	54.42	74	-19.58
		4874(Av)	42.18	54	-11.82
	Horizontal	2437(Pk)	86.75	-	*
		2437(Av)	79.23	-	*
		4874(Pk)	53.00	74	-21
		4874(Av)	41.08	54	-12.92
High	Vertical	2462(Pk)	93.34	-	*
		2462(Av)	85.45	-	*
		2483.5(Pk)	40.99	74	-33.01
		2483.5(Av)	28.79	54	-25.21
		4924(Pk)	54.25	74	-19.75
		4924(Av)	42.39	54	-11.61
	Horizontal	2462(Pk)	88.36	-	*
		2462(Av)	80.54	-	*
		2483.5(Pk)	39.89	74	-34.11
		2483.5(Av)	28.12	54	-25.88
		4924(Pk)	53.75	74	-20.25
		4924(Av)	40.79	54	-13.21

*-> Fundamental frequency
Pk-> Peak
Av-> Average

802.11 g – 6 Mbps

Channel	Polarization	Frequency (MHz)	Measure Emission Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)
Low	Vertical	2390(Pk)	46.82	74	-27.18
		2390(Av)	32.53	54	-21.47
		2412(Pk)	87.42	-	*
		2412(Av)	78.06	-	*
		4824(Pk)	53.29	74	-20.71
		4824(Av)	41.89	54	-12.11
	Horizontal	2390(Pk)	41.46	74	-32.54
		2390(Av)	29.10	54	-24.9
		2412(Pk)	80.75	-	*
		2412(Av)	71.58	-	*
		4824(Pk)	53.51	74	-20.49
		4824(Av)	39.74	54	-14.26
Mid	Vertical	2437(Pk)	86.26	-	*
		2437(Av)	77.04	-	*
		4874(Pk)	53.33	74	-20.67
		4874(Av)	42.48	54	-11.52
	Horizontal	2437(Pk)	79.30	-	*
		2437(Av)	69.97	-	*
		4874(Pk)	52.50	74	-21.5
		4874(Av)	41.02	54	-12.98
High	Vertical	2462(Pk)	85.24	-	*
		2462(Av)	76.05	-	*
		2483.5(Pk)	40.46	74	-33.54
		2483.5(Av)	28.69	54	-25.31
		4924(Pk)	53.16	74	-20.84
		4924(Av)	42.55	54	-11.45
	Horizontal	2462(Pk)	79.33	-	*
		2462(Av)	70.07	-	*
		2483.5(Pk)	39.37	74	-34.63
		2483.5(Av)	28.00	54	-26
		4924(Pk)	53.44	74	-20.56
		4924(Av)	40.85	54	-13.15

*-> Fundamental frequency
Pk-> Peak
Av-> Average

802.11 g – 24 Mbps

Channel	Polarization	Frequency (MHz)	Measure Emission Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)
Low	Vertical	2390(Pk)	46.28	74	-27.72
		2390(Av)	32.33	54	-21.67
		2412(Pk)	88.40	-	*
		2412(Av)	78.12	-	*
		4824(Pk)	53.05	74	-20.95
		4824(Av)	41.90	54	-12.1
	Horizontal	2390(Pk)	42.16	74	-31.84
		2390(Av)	29.25	54	-24.75
		2412(Pk)	81.43	-	*
		2412(Av)	71.36	-	*
		4824(Pk)	52.61	74	-21.39
		4824(Av)	40.24	54	-13.76
Mid	Vertical	2437(Pk)	86.95	-	*
		2437(Av)	77.17	-	*
		4874(Pk)	53.52	74	-20.48
		4874(Av)	42.69	54	-11.31
	Horizontal	2437(Pk)	80.77	-	*
		2437(Av)	70.80	-	*
		4874(Pk)	53.30	74	-20.7
		4874(Av)	41.24	54	-12.76
High	Vertical	2462(Pk)	87.11	-	*
		2462(Av)	76.60	-	*
		2483.5(Pk)	40.15	74	-33.85
		2483.5(Av)	28.66	54	-25.34
		4924(Pk)	53.72	74	-20.28
		4924(Av)	42.63	54	-11.37
	Horizontal	2462(Pk)	80.18	-	*
		2462(Av)	70.38	-	*
		2483.5(Pk)	39.12	74	-34.88
		2483.5(Av)	28.09	54	-25.91
		4924(Pk)	52.96	74	-21.04
		4924(Av)	41.03	54	-12.97

*-> Fundamental frequency
Pk-> Peak
Av-> Average

802.11 g – 54 Mbps

Channel	Polarization	Frequency (MHz)	Measure Emission Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)
Low	Vertical	2390(Pk)	46.85	74	-27.15
		2390(Av)	31.67	54	-22.33
		2412(Pk)	90.08	-	*
		2412(Av)	77.91	-	*
		4824(Pk)	53.09	74	-20.91
		4824(Av)	41.99	54	-12.01
	Horizontal	2390(Pk)	42.30	74	-31.7
		2390(Av)	29.18	54	-24.82
		2412(Pk)	83.81	-	*
		2412(Av)	71.40	-	*
		4824(Pk)	52.38	74	-21.62
		4824(Av)	40.36	54	-13.64
Mid	Vertical	2437(Pk)	87.58	-	*
		2437(Av)	76.86	-	*
		4874(Pk)	54.01	74	-19.99
		4874(Av)	42.80	54	-11.2
	Horizontal	2437(Pk)	81.61	-	*
		2437(Av)	70.94	-	*
		4874(Pk)	53.44	74	-20.56
		4874(Av)	41.20	54	-12.8
High	V	2462(Pk)	85.78	-	*
		2462(Av)	76.55	-	*
		2483.5(Pk)	40.79	74	-33.21
		2483.5(Av)	28.87	54	-25.13
		4924(Pk)	54.01	74	-19.99
		4924(Av)	42.64	54	-11.36
	H	2462(Pk)	80.16	-	*
		2462(Av)	69.59	-	*
		2483.5(Pk)	40.07	74	-33.93
		2483.5(Av)	28.01	54	-25.99
		4924(Pk)	53.65	74	-20.35
		4924(Av)	41.04	54	-12.96

*-> Fundamental frequency
Pk-> Peak
Av-> Average

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ZigBee 1(with FCC ID: PBR-SZMDLNR1))

Channel	Polarization	Frequency (MHz)	Measure Emission Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
Low	Vertical	2390(Pk)	49.53	74	-24.47
		2390(Av)	32.50	54	-21.5
		2405(Pk)	97.61	-	*
		2405(Av)	86.51	-	*
		4810(Pk)	52.94	74	-21.06
		4810(Av)	41.05	54	-12.95
	Horizontal	2390(Pk)	42.12	74	-31.88
		2390(Av)	29.37	54	-24.63
		2405(Pk)	94.39	-	*
		2405(Av)	87.02	-	*
		4810(Pk)	53.34	74	-20.66
		4810(Av)	40.35	54	-13.65
Mid	Vertical	4880(Pk)	53.78	74	-20.22
		4880(Av)	40.84	54	-13.16
	Horizontal	4880(Pk)	53.59	74	-20.41
		4880(Av)	40.79	54	-13.21
High	Vertical	2480(Pk)	93.17	-	*
		2480(Av)	87.60	-	*
		2483.5(Pk)	52.07	74	-21.93
		2483.5(Av)	42.93	54	-11.07
		4960(Pk)	54.44	74	-19.56
		4960(Av)	41.11	54	-12.89
	Horizontal	2480(Pk)	95.28	-	*
		2480(Av)	90.64	-	*
		2483.5(Pk)	53.68	74	-20.32
		2483.5(Av)	42.65	54	-11.35
		4960(Pk)	53.13	74	-20.87
		4960(Av)	40.84	54	-13.16

*-> Fundamental frequency
Pk-> Peak
Av-> Average

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ZigBee 2(with FCC ID: PBR-SZMDLM3BR1)

Channel	Polarization	Frequency (MHz)	Measure Emission Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)
Low	Vertical	2390(Pk)	48.87	74	-25.13
		2390(Av)	36.16	54	-17.84
		2405(Pk)	107.18	-	
		2405(Av)	102.97	-	
		4810(Pk)	53.68	74	-20.32
		4810(Av)	42.61	54	-11.39
	Horizontal	2390(Pk)	43.74	74	-30.26
		2390(Av)	31.52	54	-22.48
		2405(Pk)	109.25	-	
		2405(Av)	105.13	-	
		4810(Pk)	54.41	74	-19.59
		4810(Av)	43.52	54	-10.48
Mid	Vertical	4880(Pk)	53.97	74	-20.03
		4880(Av)	42.35	54	-11.65
	Horizontal	4880(Pk)	54.95	74	-19.05
		4880(Av)	43.85	54	-10.15
25	Vertical	2475(Pk)	105.88	-	
		2475(Av)	103.04	-	
		2483.5(Pk)	49.15	74	-24.85
		2483.5(Av)	38.18	54	-15.82
		4950(Pk)	53.67	74	-20.33
		4950(Av)	41.93	54	-12.07
	Horizontal	2475(Pk)	107.58	-	
		2475(Av)	101.49	-	
		2483.5(Pk)	51.98	74	-22.02
		2483.5(Av)	36.91	54	-17.09
		4950(Pk)	53.77	74	-20.23
		4950(Av)	42.87	54	-11.13
High	Vertical	2480(Pk)	99.61	-	
		2480(Av)	96.20	-	
		2483.5(Pk)	54.28	74	-19.72
		2483.5(Av)	47.76	54	-6.24
		4960(Pk)	53.26	74	-20.74
		4960(Av)	40.49	54	-13.51
	Horizontal	2480(Pk)	100.62	-	
		2480(Av)	97.05	-	
		2483.5(Pk)	53.71	74	-20.29
		2483.5(Av)	46.72	54	-7.28
		4960(Pk)	53.24	74	-20.76
		4960(Av)	40.39	54	-13.61

*-> Fundamental frequency
Pk-> Peak
Av-> Average

ZigBee 3(with FCC ID: PBR-SZMDLM3BR1)

Channel	Polarization	Frequency (MHz)	Measure Emission Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)
Low	Vertical	2390(Pk)	49.85	74	-24.15
		2390(Av)	33.30	54	-20.7
		2405(Pk)	108.88	-	*
		2405(Av)	104.53	-	*
		4810(Pk)	52.27	74	-21.73
		4810(Av)	41.68	54	-12.32
	Horizontal	2390(Pk)	49.05	74	-24.95
		2390(Av)	34.15	54	-19.85
		2405(Pk)	109.29	-	*
		2405(Av)	105.86	-	*
		4810(Pk)	54.34	74	-19.66
		4810(Av)	43.21	54	-10.79
Mid	Vertical	4880(Pk)	53.68	74	-20.32
		4880(Av)	42.45	54	-11.55
	Horizontal	4880(Pk)	54.67	74	-19.33
		4880(Av)	43.77	54	-10.23
25	Vertical	2475(Pk)	108.42	-	*
		2475(Av)	104.77	-	*
		2483.5(Pk)	53.17	74	-20.83
		2483.5(Av)	42.61	54	-11.39
		4950(Pk)	52.13	74	-21.87
		4950(Av)	41.88	54	-12.12
	Horizontal	2475(Pk)	109.03	-	*
		2475(Av)	105.17	-	*
		2483.5(Pk)	51.58	74	-22.42
		2483.5(Av)	36.20	54	-17.8
		4950(Pk)	53.68	74	-20.32
		4950(Av)	42.39	54	-11.61
High	Vertical	2480(Pk)	102.10	-	*
		2480(Av)	98.49	-	*
		2483.5(Pk)	56.06	74	-17.94
		2483.5(Av)	47.00	54	-7
		4960(Pk)	52.27	74	-21.73
		4960(Av)	40.41	54	-13.59
	Horizontal	2480(Pk)	102.41	-	*
		2480(Av)	99.11	-	*
		2483.5(Pk)	52.60	74	-21.4
		2483.5(Av)	42.90	54	-11.1
		4960(Pk)	52.24	74	-21.76
		4960(Av)	40.49	54	-13.51

*-> Fundamental frequency
Pk-> Peak
Av-> Average

Bluetooth Low Energy

Channel	Polarization	Frequency (MHz)	Measure Emission Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)
Low	Vertical	2390(Pk)	48.20	74	-25.8
		2390(Av)	34.64	54	-19.36
		2402(Pk)	94.51	-	*
		2402(Av)	93.41	-	*
		4804(Pk)	56.81	74	-17.19
		4804(Av)	48.08	54	-5.92
	Horizontal	2390(Pk)	42.76	74	-31.24
		2390(Av)	29.73	54	-24.27
		2402(Pk)	94.14	-	*
		2402(Av)	93.05	-	*
		4804(Pk)	56.75	74	-17.25
		4804(Av)	48.66	54	-5.34
Mid	Vertical	4880(Pk)	55.70	74	-18.3
		4880(Av)	46.07	54	-7.93
	Horizontal	4880(Pk)	56.01	74	-17.99
		4880(Av)	46.51	54	-7.49
High	Vertical	2480(Pk)	94.72	-	*
		2480(Av)	93.74	-	*
		2483.5(Pk)	42.51	74	-31.49
		2483.5(Av)	31.82	54	-22.18
		4960(Pk)	54.96	74	-19.04
		4960(Av)	45.21	54	-8.79
	Horizontal	2480(Pk)	95.73	-	*
		2480(Av)	94.76	-	*
		2483.5(Pk)	42.63	74	-31.37
		2483.5(Av)	32.44	54	-21.56
		4960(Pk)	55.47	74	-18.53
		4960(Av)	44.67	54	-9.33

*-> Fundamental frequency
Pk-> Peak
Av-> Average

Test results: Simultaneous transmission of Wi-Fi, ZigBee, Bluetooth Low Energy modules

All the radio modules operating in the low channel

Channel	Polarization	Frequency (MHz)	Measure Emission Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)
Low	Vertical	2390(Pk)	49.26	74	-24.74
		2390(Av)	36.20	54	-17.8
		2402(Pk)	93.21	-	*
		2402(Av)	91.06	-	*
		2405(Pk)	108.33	-	*
		2405(Av)	104.36	-	*
		2412(Pk)	88.27	-	*
		2412(Av)	76.66	-	*
		4804(Pk)	58.93	74	-15.07
		4804(Av)	52.29	54	-1.71
		4810(Pk)	55.54	74	-18.46
		4810(Av)	44.27	54	-9.73
	4824(Pk)	53.52	74	-20.48	
	4824(Av)	41.41	54	-12.59	
	Horizontal	2390(Pk)	45.05	74	-28.95
		2390(Av)	32.95	54	-21.05
		2402(Av)	92.18	-	*
		2402(Pk)	91.12	-	*
		2405(Av)	105.63	-	*
		2405(Pk)	101.51	-	*
		2412(Av)	79.44	-	*
		2412(Pk)	69.09	-	*
		4804(Pk)	58.71	74	-15.29
		4804(Av)	51.42	54	-2.58
4810(Pk)		55.02	74	-18.98	
4810(Av)		44.58	54	-9.42	
4824(Pk)	52.85	74	-21.15		
4824(Av)	40.45	54	-13.55		

*-> Fundamental frequency
Pk-> Peak
Av-> Average

All the radio modules operating in high channel

Channel	Polarization	Frequency (MHz)	Measure Emission Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
High	Vertical	2462(Pk)	85.56	-	*
		2462(Av)	73.64	-	*
		2480(Pk)	102.17	-	*
		2480(Av)	96.23	-	*
		2483.5(Pk)	53.58	74	-20.42
		2483.5(Av)	45.68	54	-8.32
		4924(Pk)	53.77	74	-20.23
		4924(Av)	40.86	54	-13.14
		4960(Pk)	54.11	74	-19.89
	4960(Av)	42.84	54	-11.16	
	Horizontal	2462(Pk)	80.59	-	*
		2462(Av)	70.19	-	*
		2480(Pk)	54.10	-	*
		2480(Av)	47.17	-	*
		2483.5(Pk)	54.10	74	-19.9
		2483.5(Av)	47.17	54	-6.83
		4924(Pk)	53.26	74	-20.74
		4924(Av)	40.72	54	-13.28
4960(Pk)		54.77	74	-19.23	
4960(Av)	43.61	54	-10.39		

*-> Fundamental frequency

Pk-> Peak
Av-> Average

Note: Measured emission value = Received value + Antenna Factor + Cable loss – Pre-Amplifier Gain

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