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Prüfbericht - Nr.: *Test Report No.:*	**19660127 002**		**Seite 1 von 76** *Page 1 of 76*
Auftraggeber: *Client:*	**Redpine Signals Inc.** **2107 N. First Street, Suite 680,** **San Jose, CA 95131-2019** **United States**		
Gegenstand der Prüfung: *Test item:*	**802.11 bgn WiFi/BT/Zigbee MODULE**		
Bezeichnung: *Identification:*	**RS9113SB**	**Serien-Nr.:** *Serial No.*	**Engineering Sample**
Wareneingangs-Nr.: *Receipt No.:*	**1803095560**	**Eingangsdatum:** *Date of receipt:*	**31.08.2015**
Prüfort: *Testing location:*	**Refer Page 4 of 76 for test facilities**		
Prüfgrundlage: *Test specification:*	**FCC Part 15: Subpart C 15.247** **ANSI C63.10-2013**		
Prüfergebnis: *Test Result:*	**Der Prüfgegenstand entspricht oben genannter Prüfgrundlage(n).** *The test items passed the test specification(s).*		
Prüflaboratorium: *Testing Laboratory:*	**TÜV Rheinland (India) Pvt. Ltd.** 82/A, 3rd Main, West Wing, Electronic City Phase 1 Hosur Road, Bangalore – 560 100. India **FCC Registration No.: 176555**		

geprüft / *tested by:*			**kontrolliert** / *reviewed by:*		
09.10.2015	Saibaba Siddapur Sr Engineer		12.10.2015	Raghavendra Kulkarni Sr.Manager	
Datum *Date*	**Name/Stellung** *Name/Position*	**Unterschrift** *Signature*	**Datum** *Date*	**Name/Stellung** *Name/Position*	**Unterschrift** *Signature*

Sonstiges / *Other Aspects:* **FCC ID : XF6-RS9113SB - Class II Permissive Change**

Abkürzungen:				***Abbreviations:***			
	P(ass)	=	***entspricht Prüfgrundlage***		***P(ass)***	=	***passed***
	F(ail)	=	***entspricht nicht Prüfgrundlage***		***F(ail)***	=	***failed***
	N/A	=	***nicht anwendbar***		***N/A***	=	***not applicable***
	N/T	=	***nicht getestet***		***N/T***	=	***not tested***

Test Result Summary

Clause	Test Item	Result
Section 15.247(b) (3)	Maximum Average Conducted Output Power	Pass
Section 15.247(e)	Maximum Power Spectral Density	Pass
Section 15.247(a) (2)	6 dB Bandwidth	Pass
Section 15.247(d)	Emissions in non-restricted frequency bands	Pass
Section 15.209 / 15.205	Spurious Radiated Emissions and Restricted Bands of Operation	Pass

Note: Conducted measurements are done according to the procedure given in KDB No. **558074 D01 DTS Meas Guidance v03r04**

The Module is originally certified for FCC with FCC ID: **XF6-RS9113SB,** with respect to the changes made to originally certified module Class 2 permissive change has been applied.
Changes made to the originally certified module are listed in the below table.

Application Purpose	Antenna	Wi-Fi	ZigBee	BT LE	BT (BR+EDR)
Class II Permissive Change	Redpine Antenna	40MHz Channel added	None	None	None
	Molex Antenna	Additional antenna with 20MHz & 40MHz channel	Additional Antenna	Additional Antenna	Refer FCC_DSS Test Report (19660136 002)
	Fractus Antenna	Additional antenna with 20MHz & 40MHz channel	Additional Antenna	Additional Antenna	
	Antenna Factor (Linx's) Antenna	Additional antenna with 20MHz & 40MHz channel	Additional Antenna	Additional Antenna	

Content

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List of Test and Measurement Instruments

Equipment	Manufacturer	Model Name	Serial Number	Calibration Due Date	Periodicity	Used for Test Items
EMI Test Receiver	Rohde & Schwarz	ESU 40	100288	02.07.2016	Yearly	Spurious Radiated Emissions
Broadband Antenna	Frankonia	ALX-4000	ALX-4000-806	08.04.2016	Yearly	
Active Loop Antenna	Frankonia	LAX-10	LAX-10-800	22.10.2015	Yearly	
Broadband Horn Antenna	Frankonia	HAX-18	HAX18-802	02.12.2015	Yearly	
Emission Horn Antenna	ETS Lindgren	116706	00107323	02.11.2015	Yearly	
Anechoic Chamber	Frankonia	-	-	-	-	
Spectrum Analyser	Agilent Technologies	E4407B	US41192772	15.04.2016	Yearly	Antenna - Port Conducted Tests

Testing Facilities:

1) TUV Rheinland (India) Private Limited
82/A, 3rd Main, West Wing
Electronic City Phase 1, Hosur Road
Bangalore 560100, India.

2) TUV Rheinland (India) Private Limited
No. 108, West Wing
Electronic city Phase I
Bangalore – 560100

General Product Information

Product Function and Intended Use

The RS9113 module integrates a multi-threaded MAC processor with integrated analog peripherals and support for digital peripherals, baseband digital signal processor, analog front-end, crystal oscillator, calibration OTP memory, single band RF transceiver, single-band high-power amplifiers, baluns, diplexers, diversity switch and Quad-SPI Flash thus providing a fully-integrated solution for embedded wireless applications. The RS9113 based chips and modules leverage and improve upon Redpine's proven low power innovations from Lite-FTM products (RS9110) and provide WLAN 802.11n, BT4.0 and ZigBee convergence solution for integration into mobile and M2M communication devices. It can connect to a host processor through SDIO, USB, SPI or UART interfaces.

Ratings and System Details

Operating Frequency Range	2400MHz – 2483.50MHz	
No. of channel	Refer page 6 & 7 of 76	
Channel Spacing	5MHz – Wi-Fi, Zigbee 2MHz – BT LE	
Transmit Power (Conducted)	802.11n : 40MHz Channel	**7.27dBm**
Data Rate	802.11b: 1,2, 5.5,11 Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11n: 6.5, 14.4, 21.7, 28.9, 39, 52,57.8, 65Mbps (MCS0,MCS1,MCS2,MCS3,MCS4,MCS5,MCS6 & MCS7) ZigBee – 250Kbps BLE – 1Mbps	
Number of antenna	Refer page 7 of 76	
Antenna Gain and Antenna type	Refer page 7 of 76	
Supply Voltage to Module	3.0V – 3.6V DC from Host device	
Environmental	Operational Temperature: -40ºC to 85º C	

Test Conditions:

Supply Voltage: 5V DC from USB

Environmental conditions:

Temperature: +24 º C RH: 62%

Table of frequencies

Frequency Band	Channel No.	Frequency (MHz)
2400-2483.5 MHz_20MHz BW Channel	1	2412
	2	2417
	3	2422
	4	2427
	5	2432
	6	2437
	7	2442
	8	2447
	9	2452
	10	2457
	11	2462

Frequency Band	Channel No.	Frequency (MHz)
2400-2483.5 MHz_40MHz Bandwidth Channel	3	2422
	4	2427
	5	2432
	6	2437
	7	2442
	8	2447
	9	2452
	10	2457

Frequency Band	Channel No.	Frequency (MHz)
2400-2483.5_BLE	0	2402
	1	2404
	:	:
	:	:
	19	2440
	20	2442
	21	2444
	:	:
	:	:
	38	2478
	39	2480

Frequency Band	Channel No.	Frequency (MHz)
2400-2483.5_ZigBee	11	2405
	12	2410
	:	:
	:	:
	18	2440
	19	2445
	:	:
	:	:
	25	2475
	26	2480

Table 1: List of Antenna Used

Make	**Model/Part #**	**Antenna Gain at 2.4GHz (dBi)**	**Type of Antenna**
Redpine	-	0.99	Trace
Molex	PS-47950-001	3	External
Fractus	FR05-S1-NO-1-004	1.8	Chip
Antenna Factor (Linx's)	ANT-2.4-CW-RCT-RP	2.2	Whip

Test Set-up and Operation Mode

Principle of Configuration Selection

Transmission was enabled with 100% duty cycle on low, mid and high channel.

Test Operation and Test Software

Test software was used to enable the transmission with 100% duty cycle, changing channels (low/mid/high) and data rates on the EUT for the tests in this report.

Special Accessories and Auxiliary Equipment

- None

Countermeasures to achieve EMC Compliance

- None

Test Modes – Data Rates and Modulations

For Radiated spurious emissions, the tests were performed for all data rates and only worst case results (results which are close to standard limit) are reported in this report.

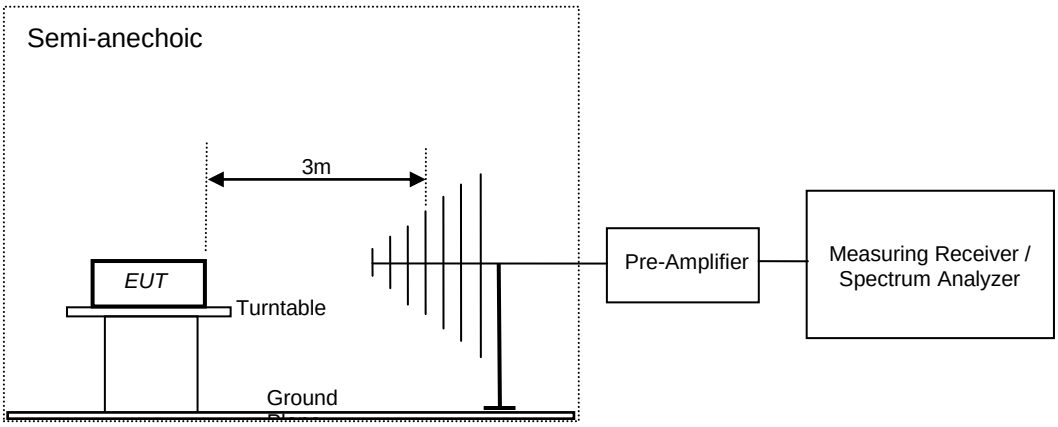
Note: Among the 4 antennas listed in table 1, Fractus antenna was tested with highest power level for 40 MHz radiated test. Hence same power level was used to perform antenna port test for 40MHz channel.

Test Methodology

Radiated Emission Test

The radiated emission measurement was performed according to the procedures in ANSI C63.10-2013. The equipment under test (EUT) was placed at the middle of the 80 cm high turntable, and the EUT is 3 meters far from the measuring antenna for below 1GHz & The equipment under test (EUT) was placed at the middle of the 1.5m high turntable, and the EUT is 3 meters far from the measuring antenna for above 1GHz. The turntable was rotated 360° for obtaining the maximum emission. The height of the measuring antennas was scanned between 1m and 4m, and the antenna rotated to repeat the measurements for both the horizontal and vertical antenna polarizations. Repeat the measurement steps until the maximum emissions were obtained. The measurement above 1000MHz was performed by horn antenna. The measurement below 30MHz was performed by loop antenna.

The EUT was rotated around the X-, Y-, and Z-Axis and the results from worst case axis are recorded.

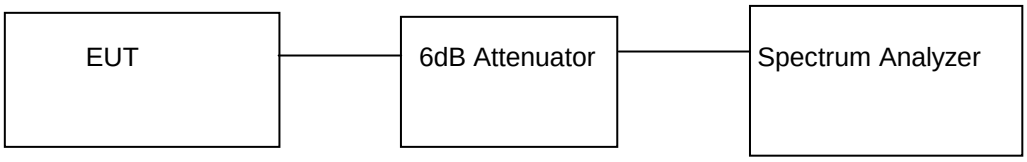


Test Results

Maximum Average Conducted Output Power **Section 15.247(b) (3)**
Result **Pass**

Test Specification	FCC Part 15 Subpart C
Measurement Bandwidth (RBW)	1MHz
Requirement	<1 watt (30dBm).

Test Method:

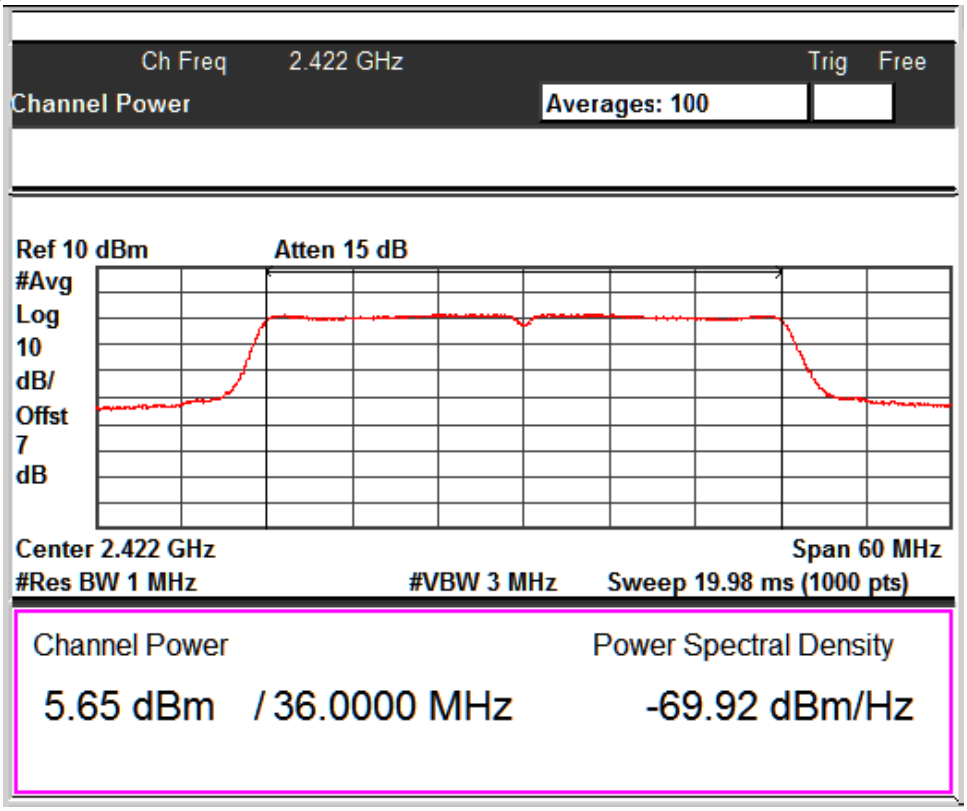


Note: For measurement of Maximum Average conducted output power method AVGSA-1 was used

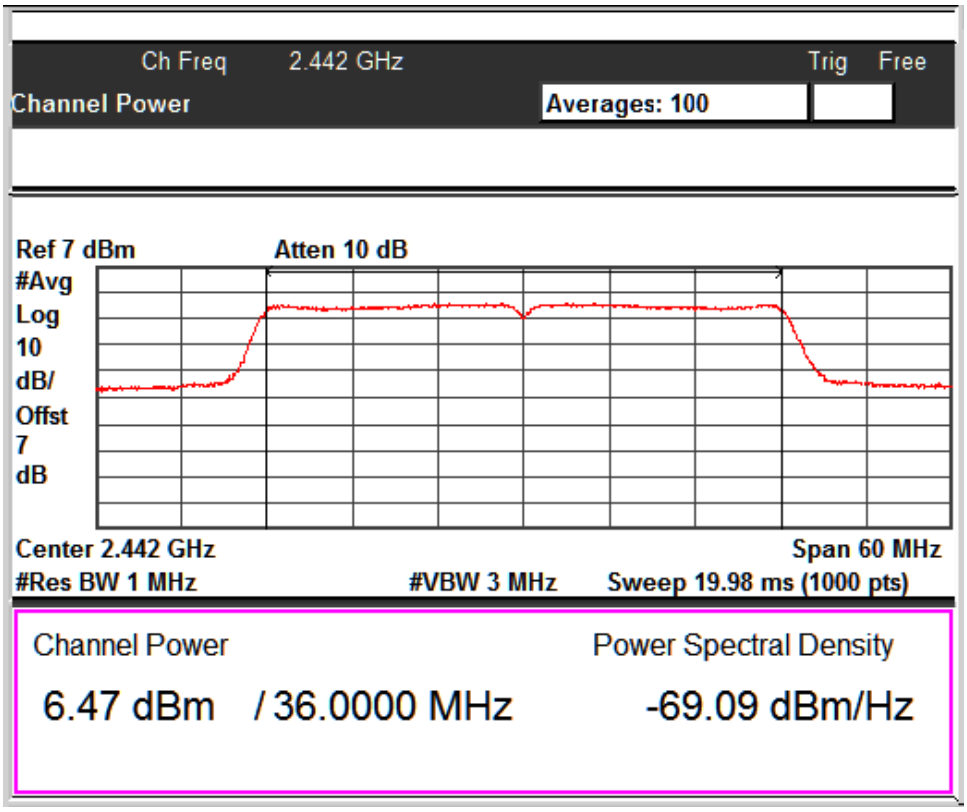
Test Result: Wi-Fi_40MHz BW

Cable Loss (1dB) + Attenuator (6dB): 7dB (Included in the test results)

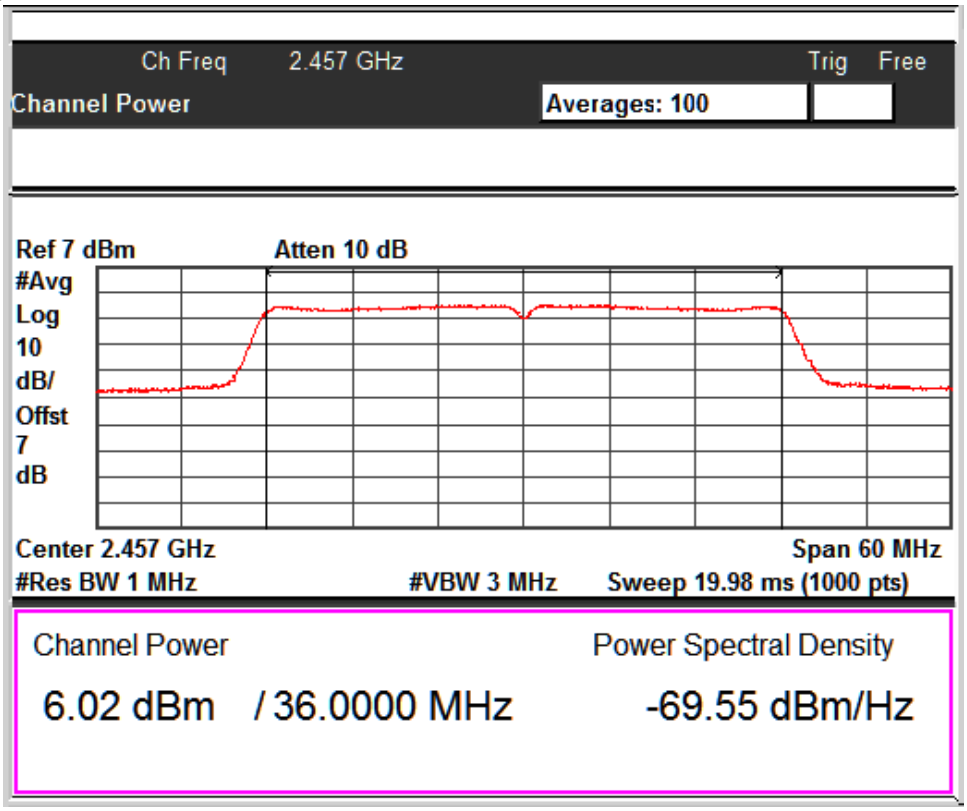
802.11 Protocol	Data Rate	Channel Frequency (MHz)	Total Power (dBm)	Limit (dBm)
n	MCS0	2422	5.65	30.00
		2442	6.47	30.00
		2457	6.02	30.00
	MCS4	2422	5.60	30.00
		2442	**7.27**	30.00
		2457	6.02	30.00
	MCS7	2422	5.63	30.00
		2442	7.21	30.00
		2457	5.95	30.00



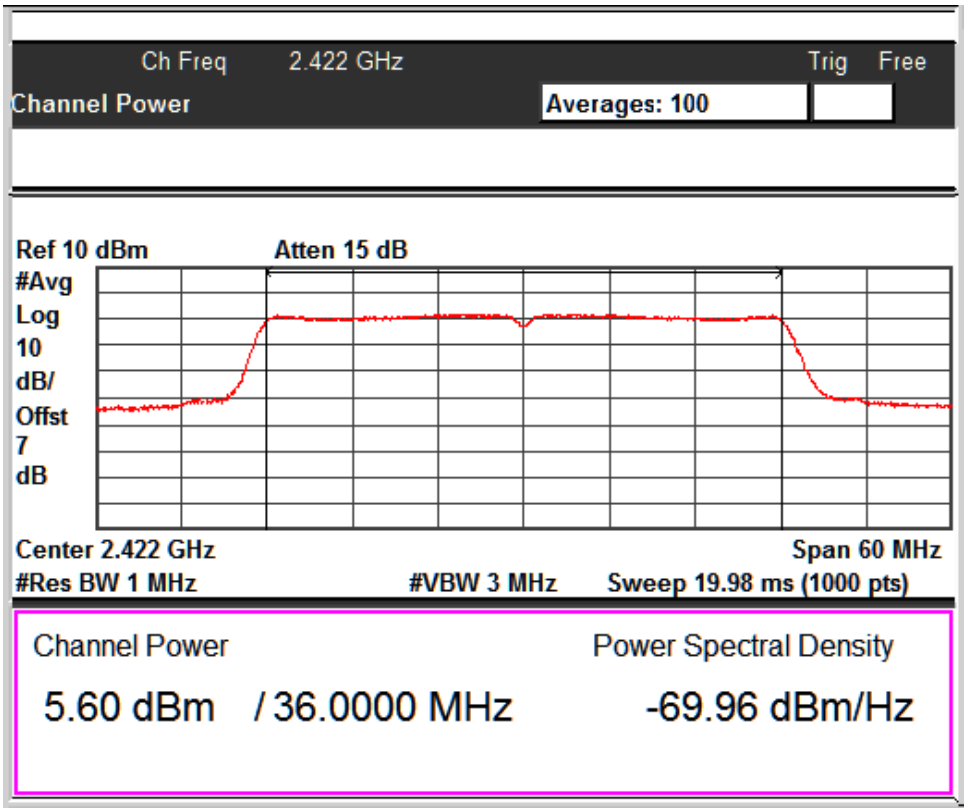
Data Rate: MCS0 **Channel Frequency: 2422 MHz**



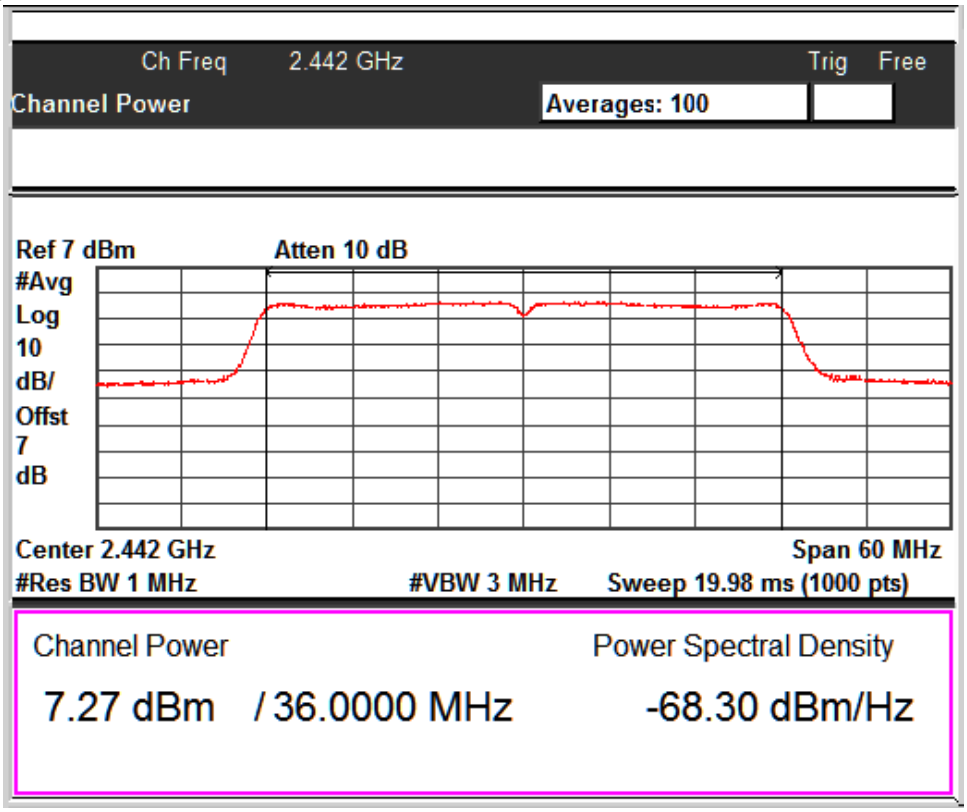
Data Rate: MCS0 **Channel Frequency: 2442 MHz**



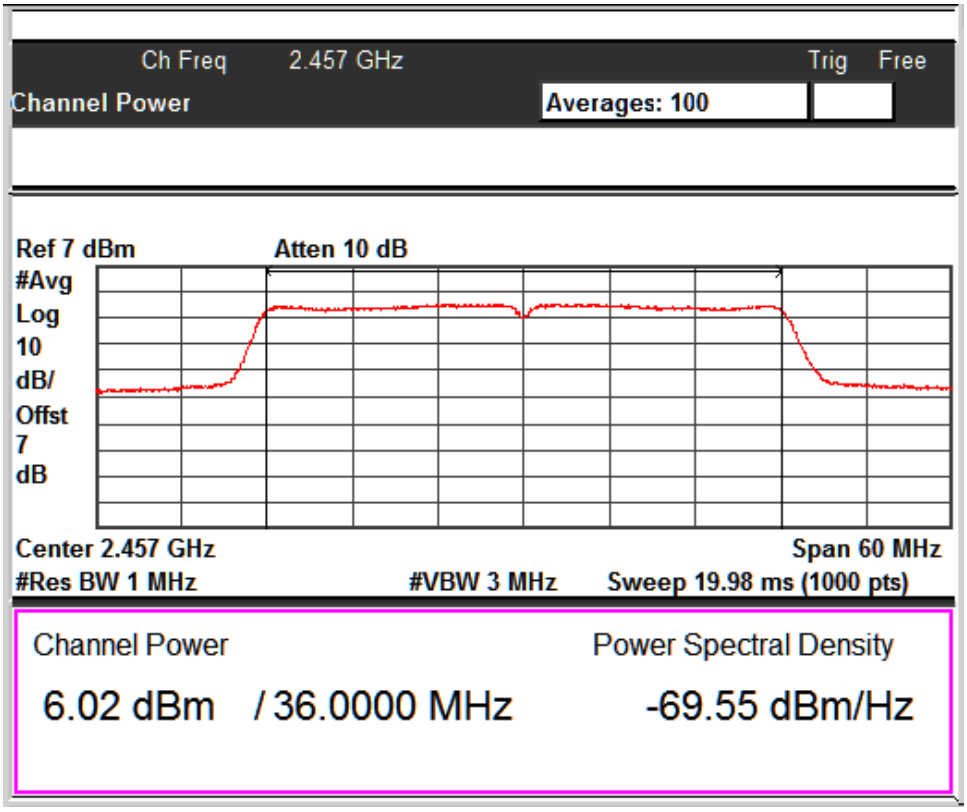
Data Rate: MCS0 **Channel Frequency: 2457 MHz**



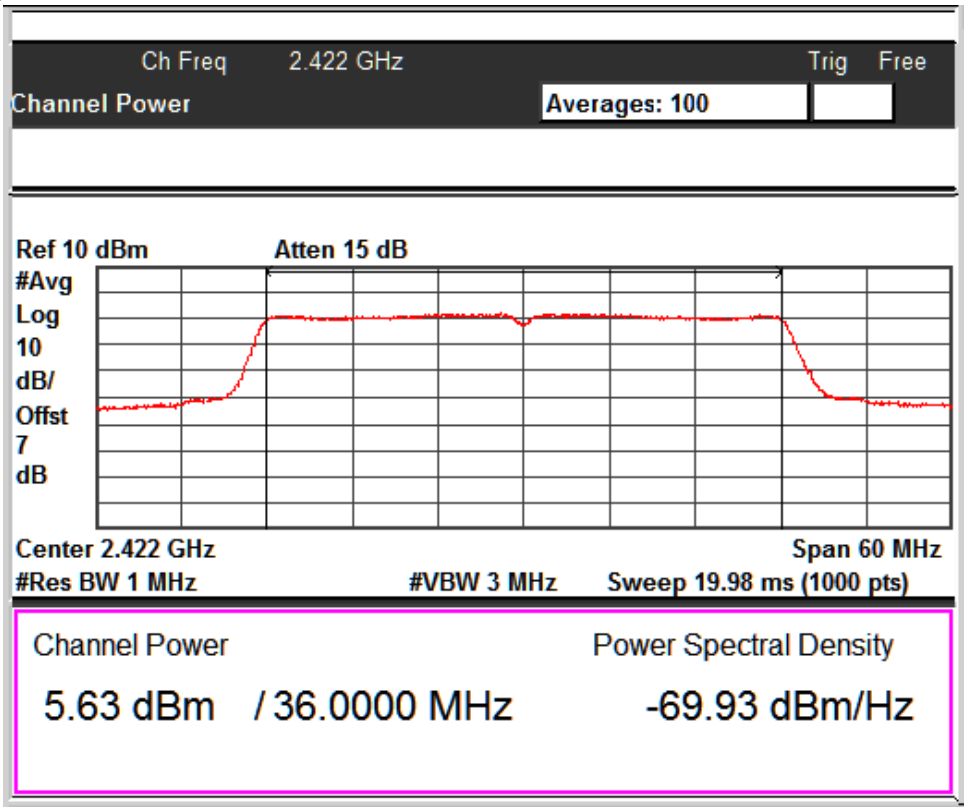
Data Rate: MCS4 **Channel Frequency: 2422 MHz**



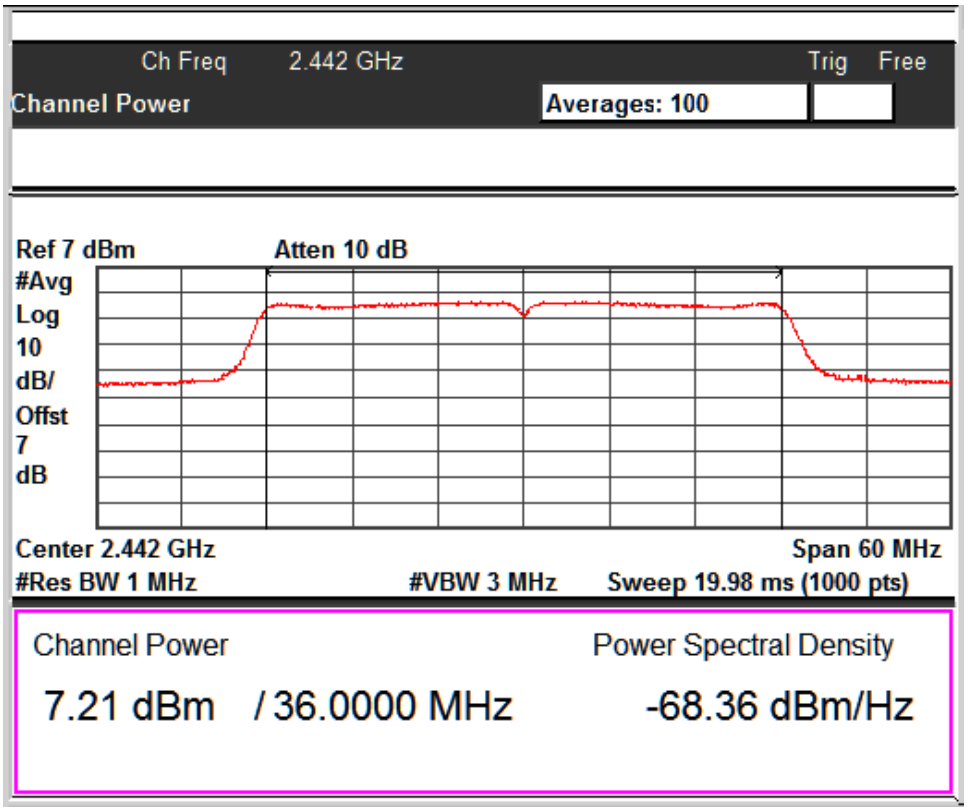
Data Rate: MCS4 **Channel Frequency: 2442 MHz**



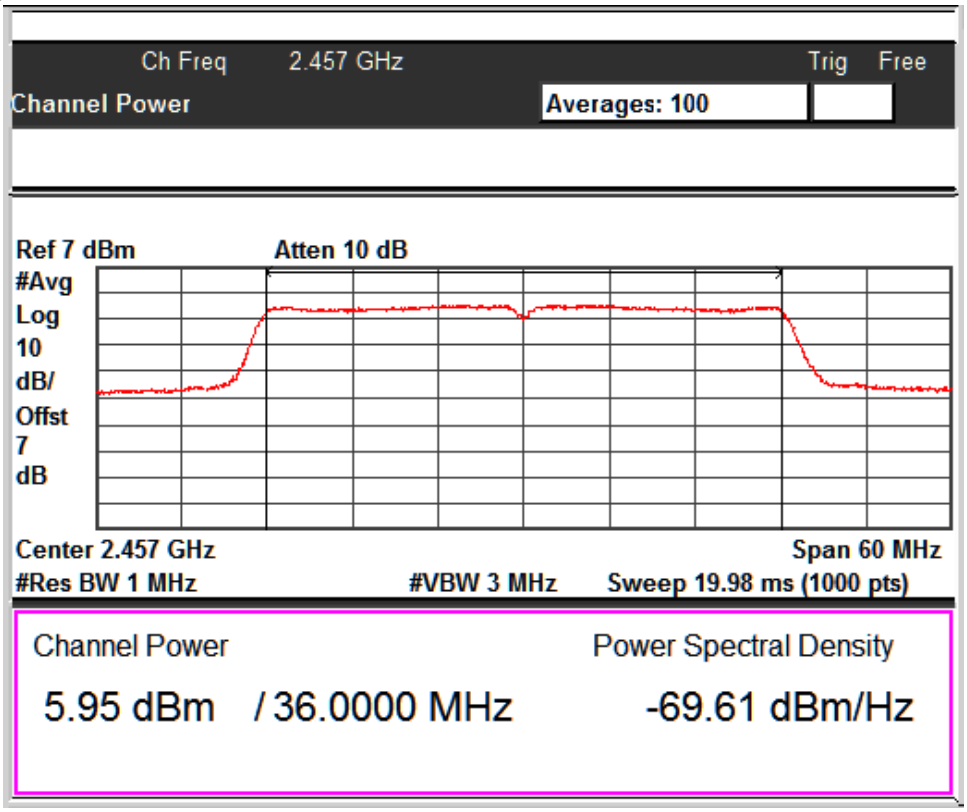
Data Rate: MCS4 **Channel Frequency: 2457 MHz**



Data Rate: MCS7 **Channel Frequency: 2422 MHz**



Data Rate: MCS7 **Channel Frequency: 2442 MHz**



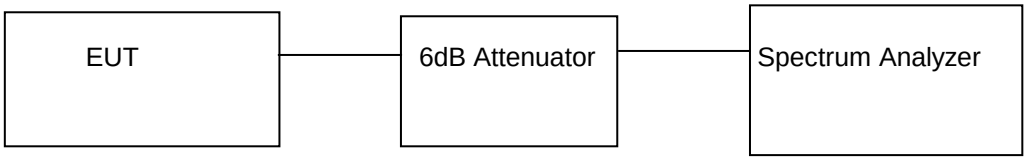
Data Rate: MCS7 **Channel Frequency: 2457 MHz**

Maximum Power Spectral Density **Section 15.247(e)**
Result **Pass**

Test Specification	FCC Part 15 Section 15.247 (e)
Detector Function	Average
Requirement	For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm.

Note: For measurement of Maximum power spectral density option 1 was used

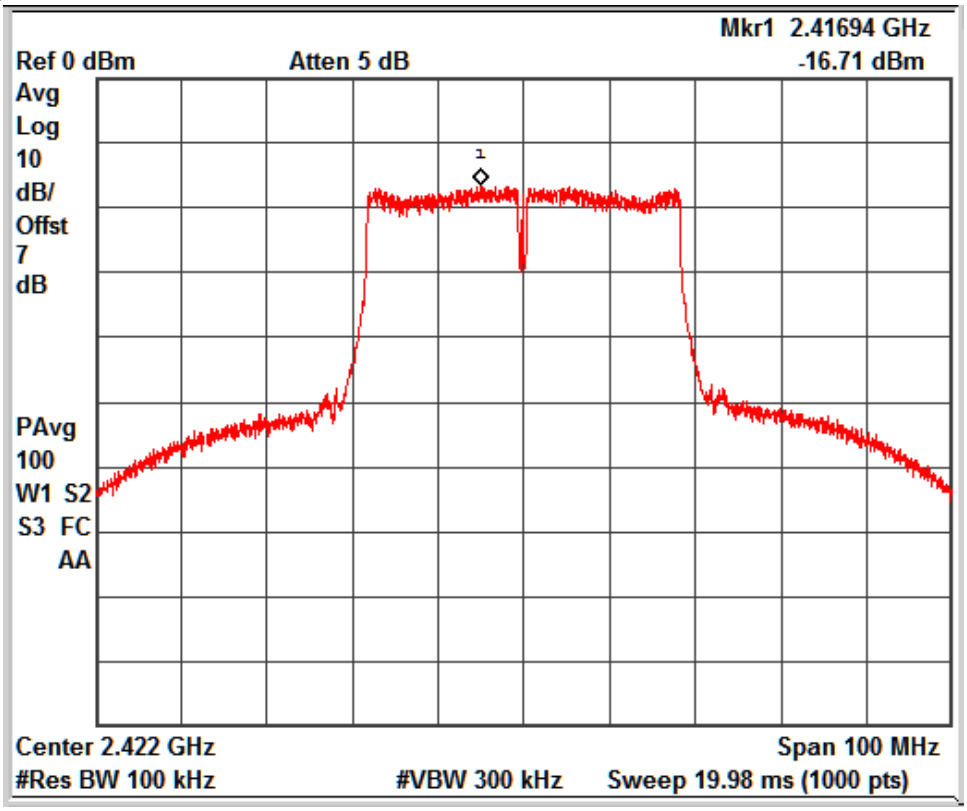
Test Method:



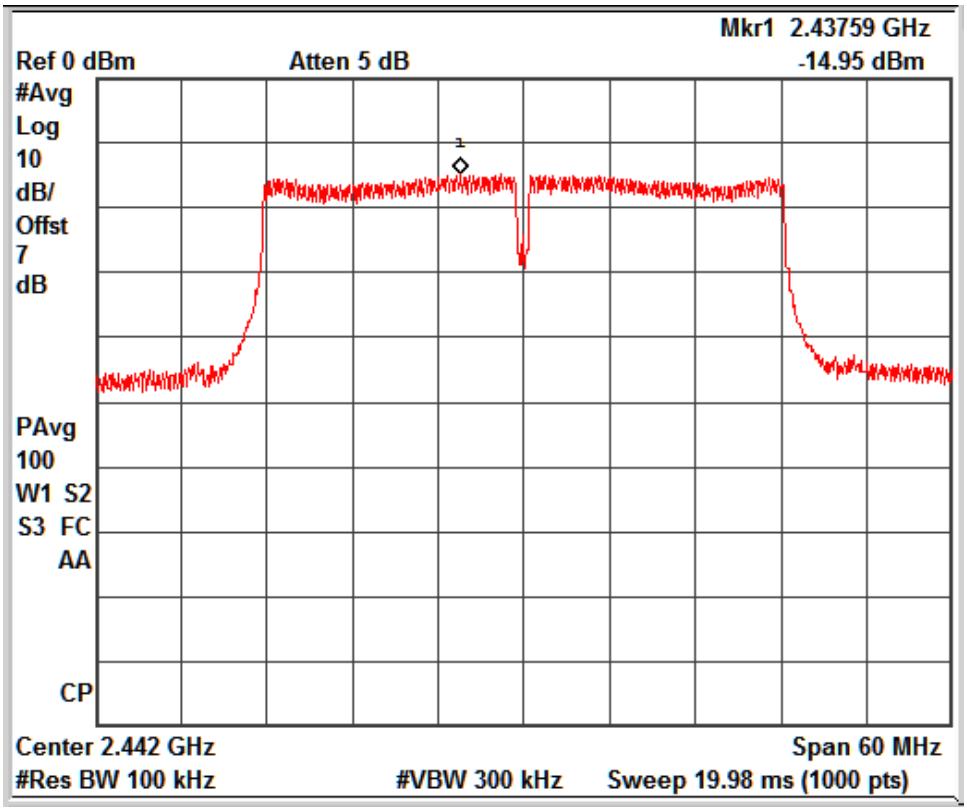
Test Result: Wi-Fi_40MHz BW

Cable Loss (1dB) + Attenuator (6dB): 7dB (Included in the test results)

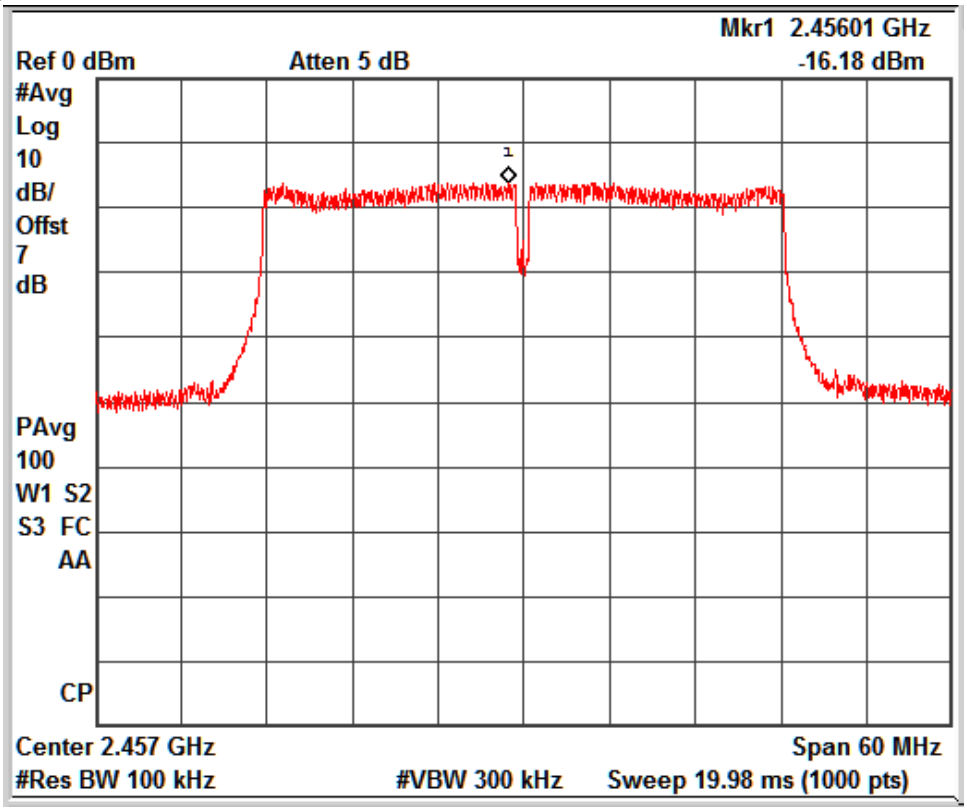
802.11 Protocol	Data Rate	Channel Frequency (MHz)	Total PSD (dBm)	Limit (dBm)
n	MCS0	2422.00	-16.71	8.00
		2442.00	-14.95	8.00
		2457.00	-16.18	8.00
	MCS4	2422.00	-16.82	8.00
		2442.00	-15.06	8.00
		2457.00	-15.96	8.00
	MCS7	2422.00	-16.69	8.00
		2442.00	-14.42	8.00
		2457.00	-15.80	8.00



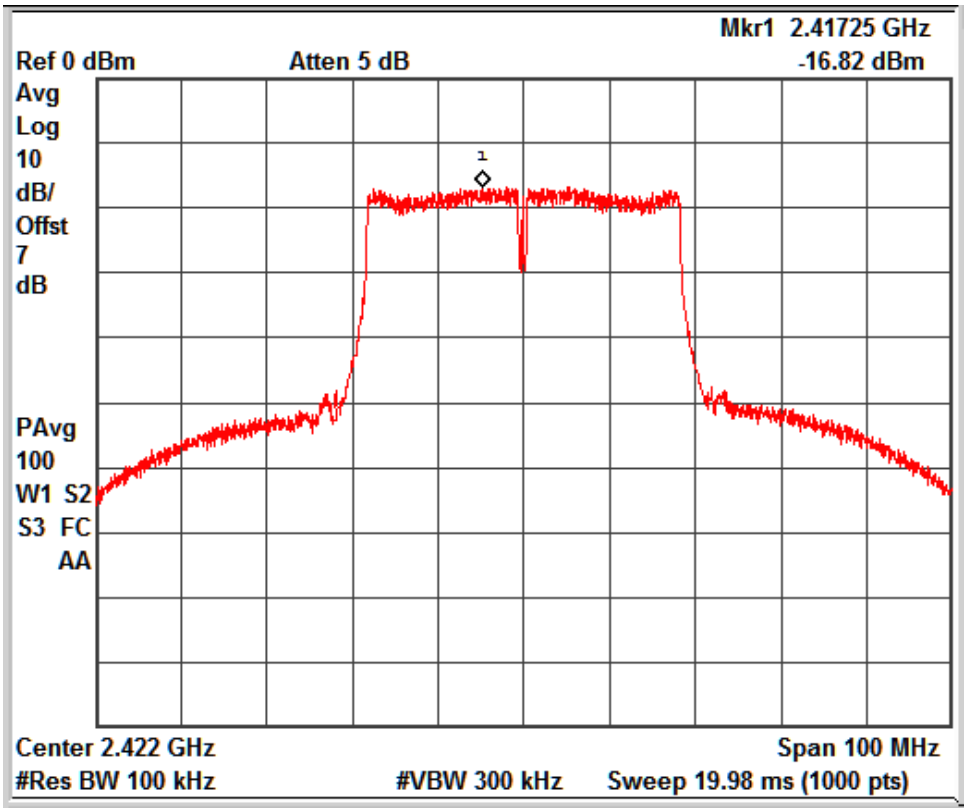
Data rate: MCS0 **Channel Frequency: 2422 MHz**



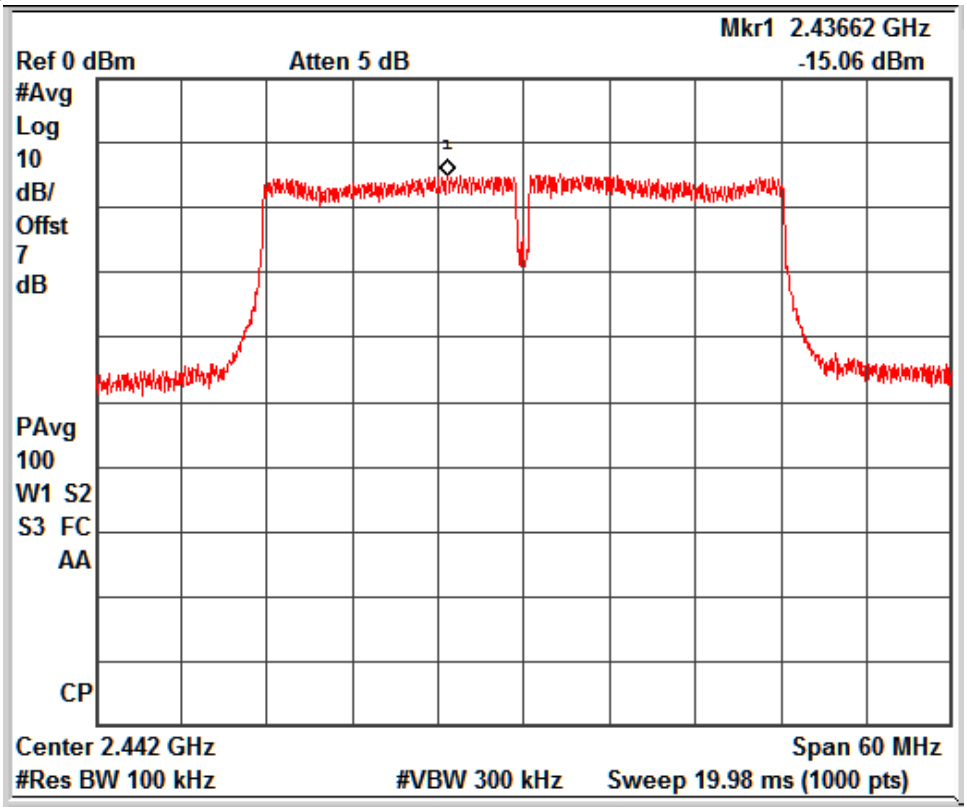
Data rate: MCS0 **Channel Frequency: 2442 MHz**



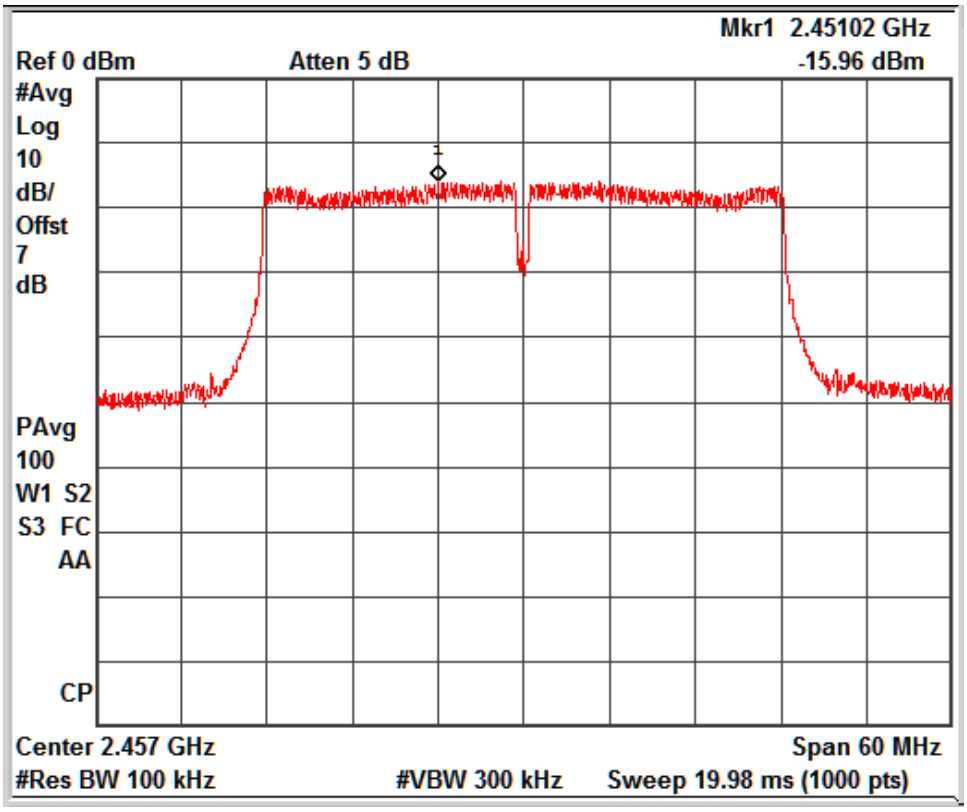
Data rate: MCS0 **Channel Frequency: 2457 MHz**



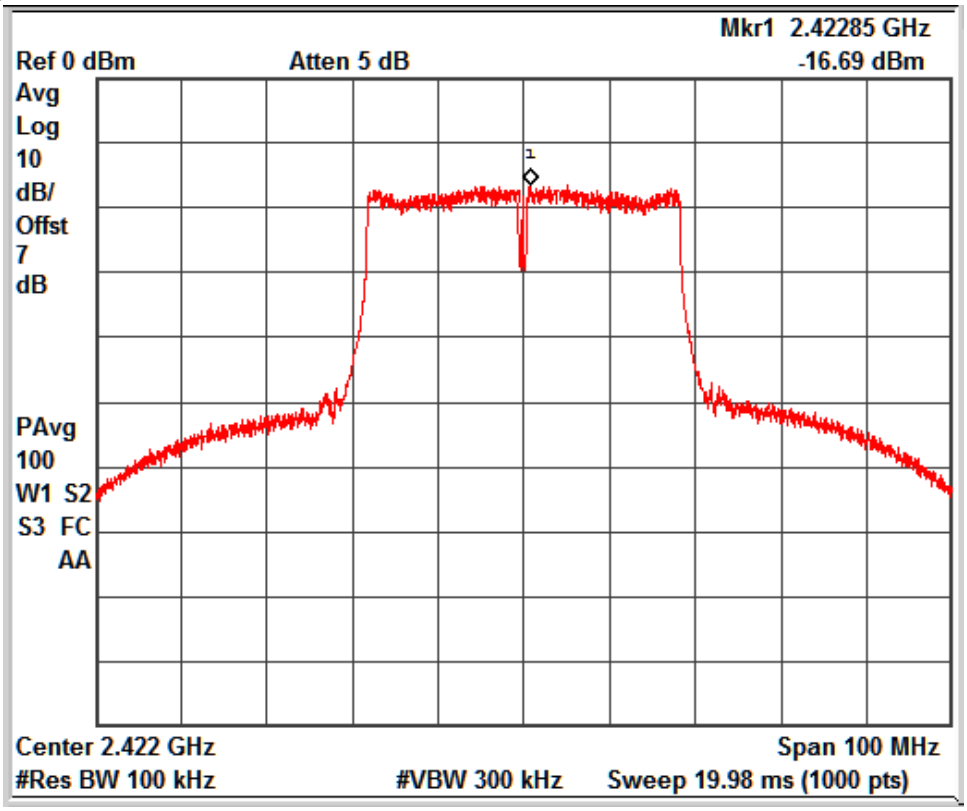
Data rate: MCS4 **Channel Frequency: 2422 MHz**



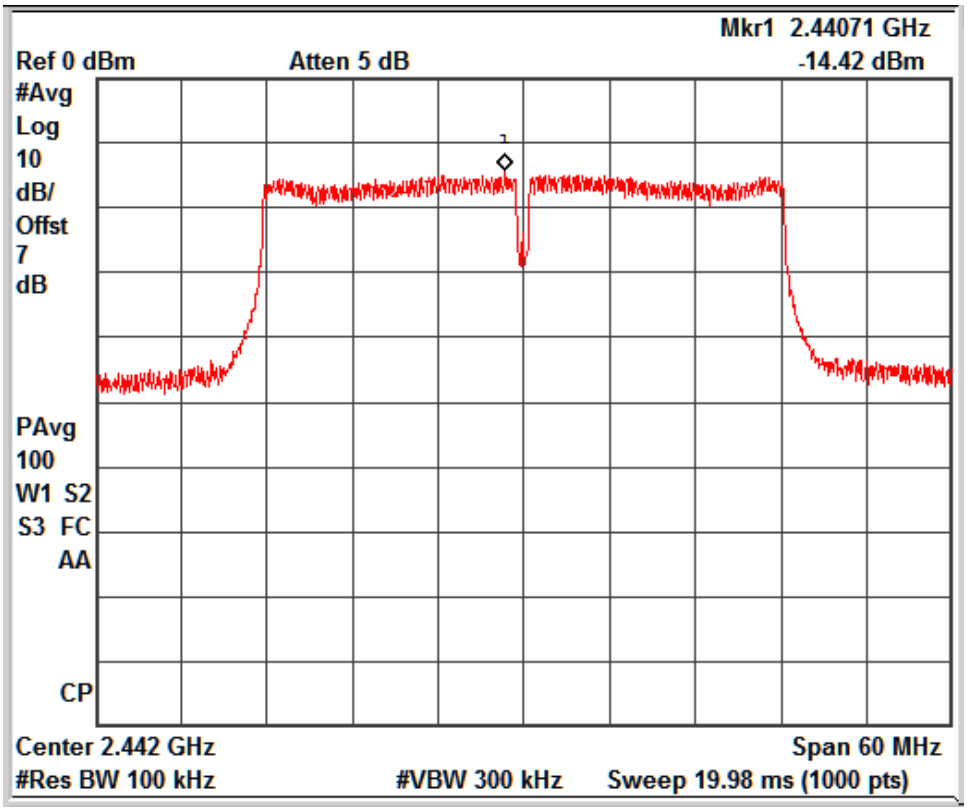
Data rate: MCS4 **Channel Frequency: 2442 MHz**



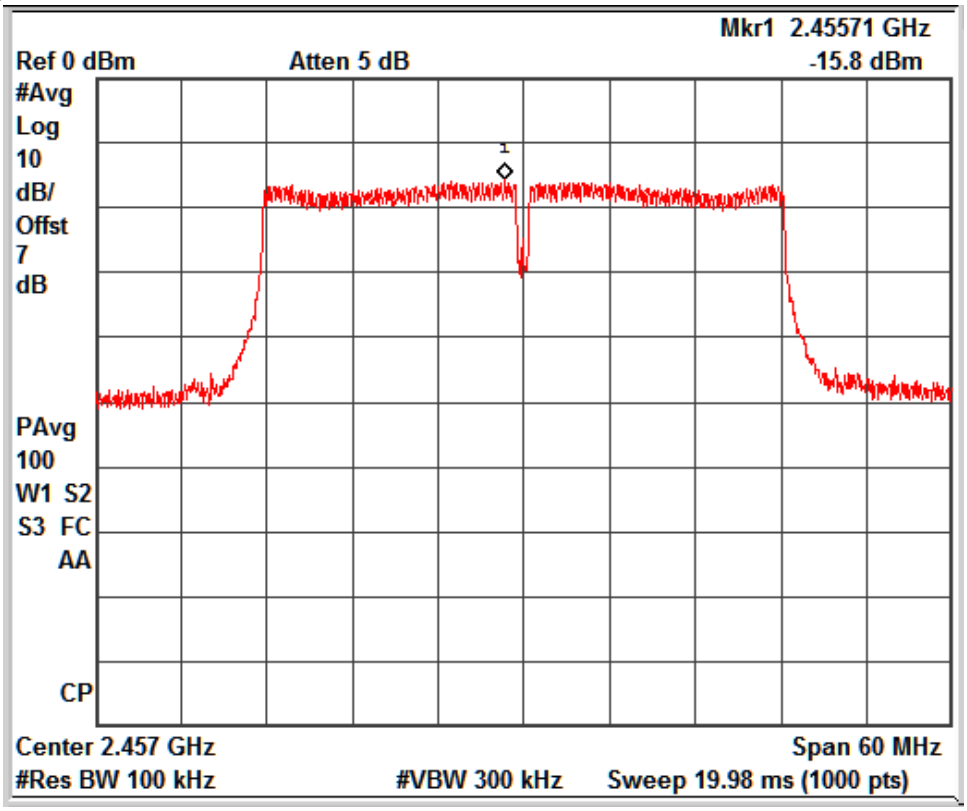
Data rate: MCS4 **Channel Frequency: 2457 MHz**



Data rate: MCS7 **Channel Frequency: 2422 MHz**



Data rate: MCS7 **Channel Frequency: 2442 MHz**

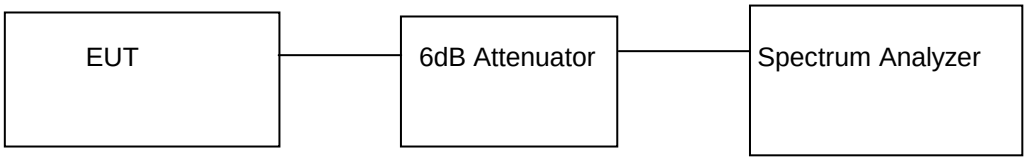


Data rate: MCS7 **Channel Frequency: 2457 MHz**

6 dB Bandwidth **Section 15.247(a) (2)**
Result **Pass**

Test Specification FCC Part 15 Section 15.247 (a) (2)
Requirement The minimum 6 dB bandwidth shall be at least 500 kHz.

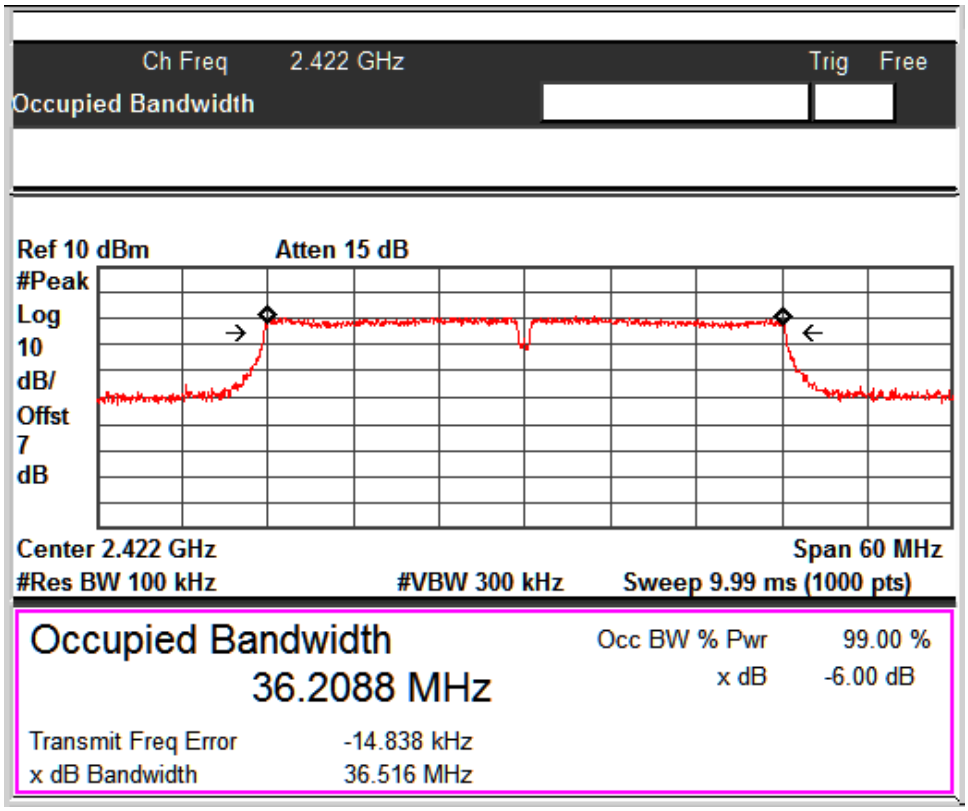
Test Method:



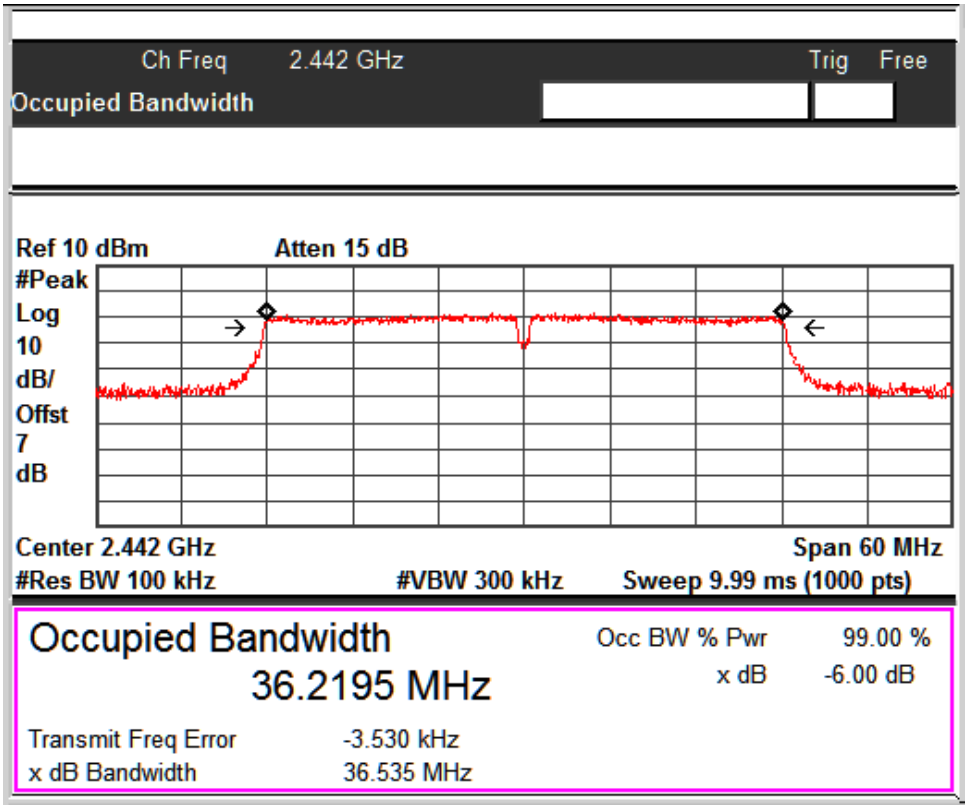
Test Result: Wi-Fi_40MHz BW

Cable Loss (1dB) + Attenuator (6dB): 7dB (Included in the test results)

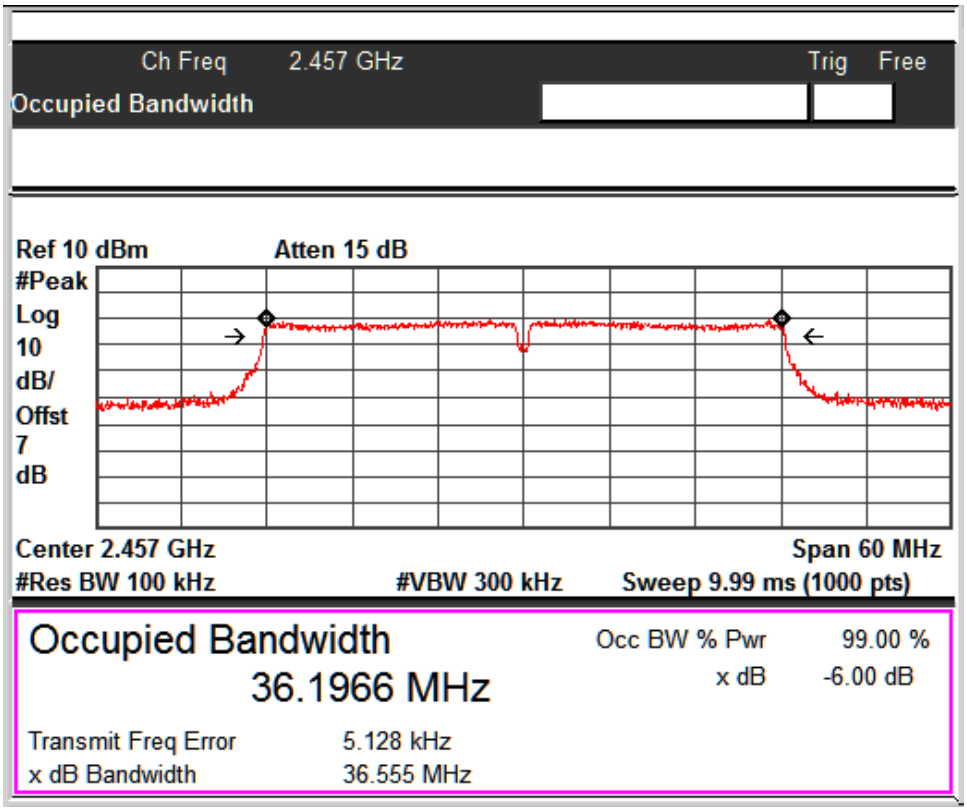
802.11 Protocol	Data Rate	Channel Frequency (MHz)	6 dB Bandwidth (MHz)	99% OBW (MHz)
n	MCS0	2422.00	36.56	36.21
		2442.00	36.53	36.22
		2457.00	36.55	36.19
	MCS4	2422.00	36.55	**36.24**
		2442.00	36.54	36.20
		2457.00	36.54	36.20
	MCS7	2422.00	36.48	36.23
		2442.00	36.53	36.22
		2457.00	36.55	36.21



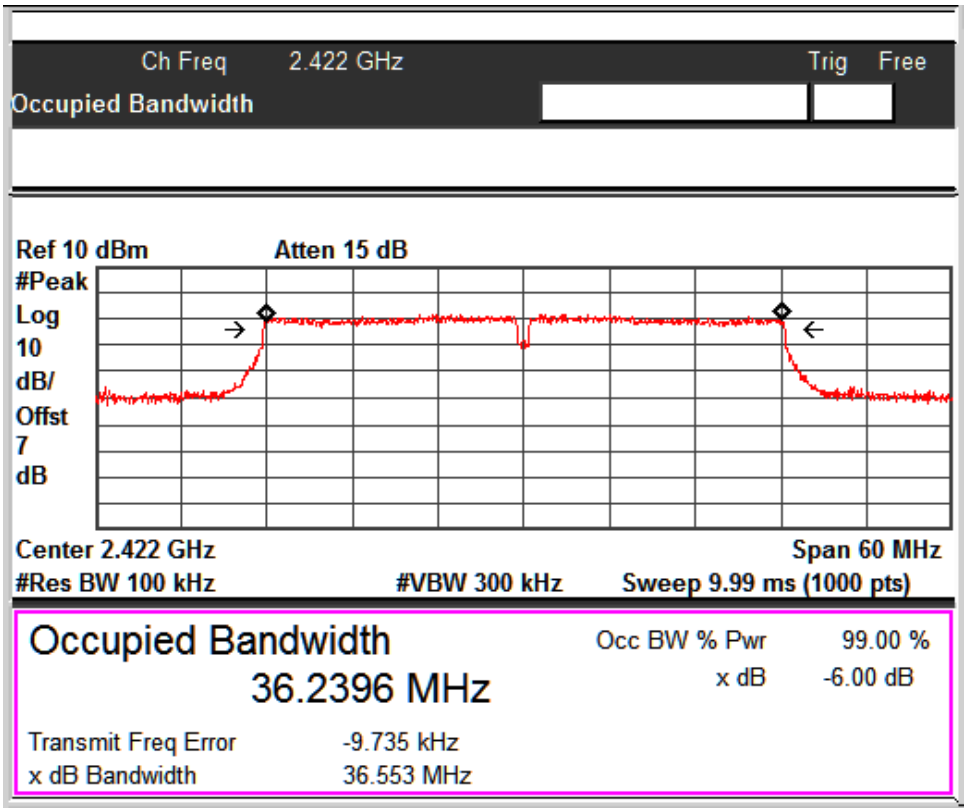
Data Rate: MCS0 **Channel: 2422 MHz**



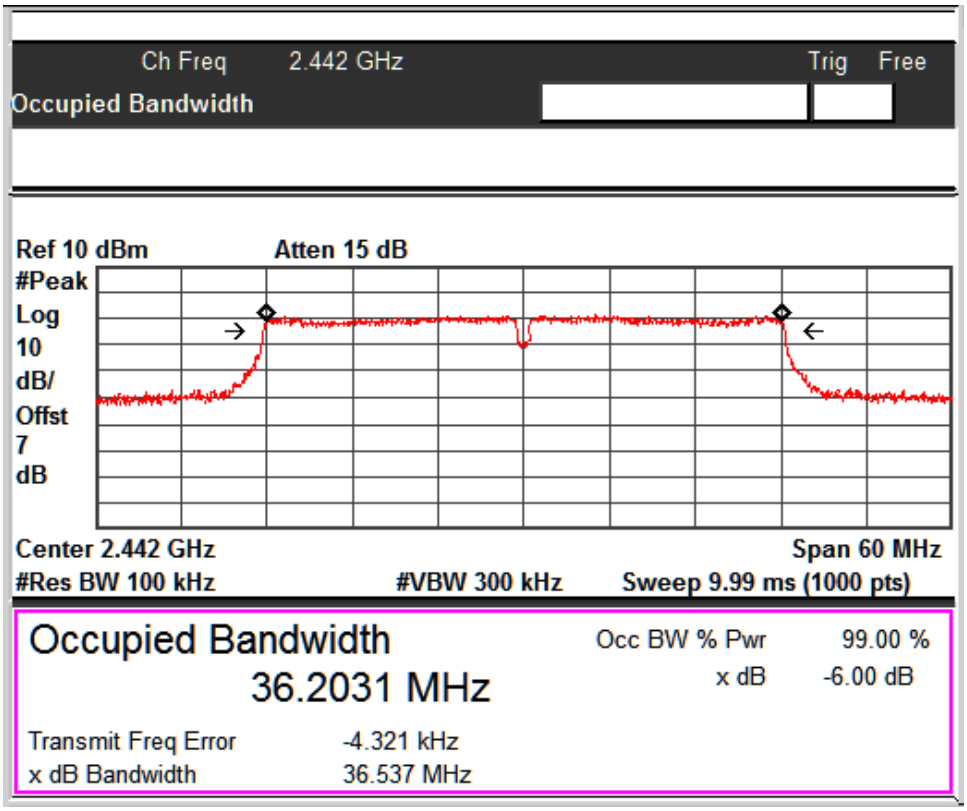
Data Rate: MCS0 **Channel: 2442 MHz**



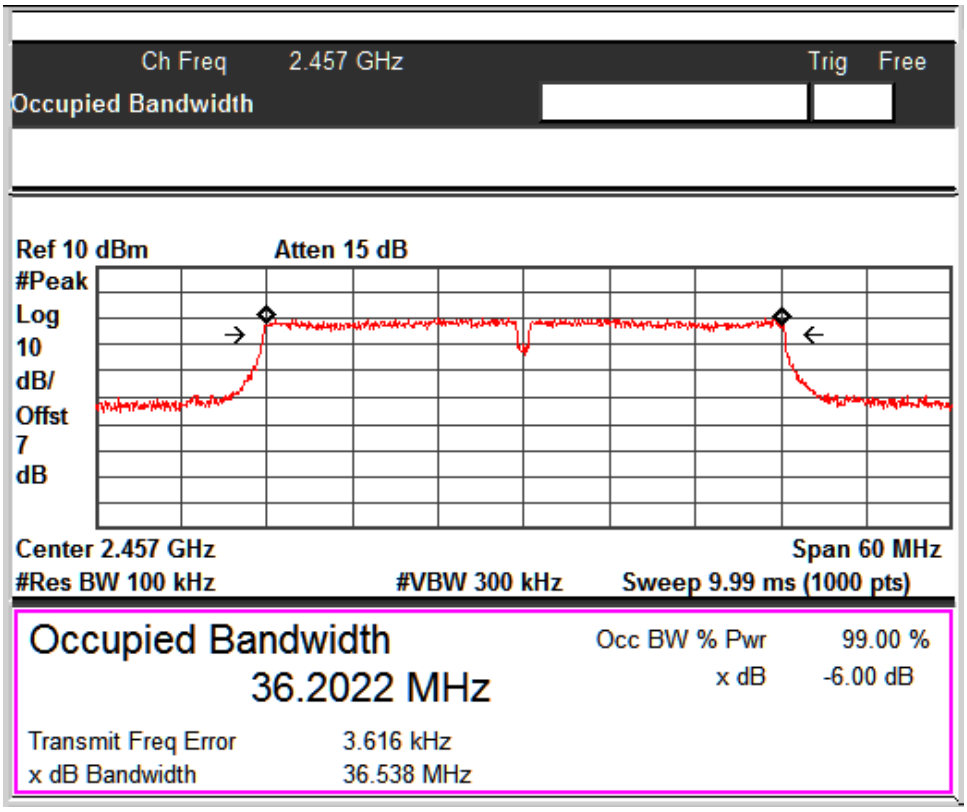
Data Rate: MCS0 **Channel: 2457 MHz**



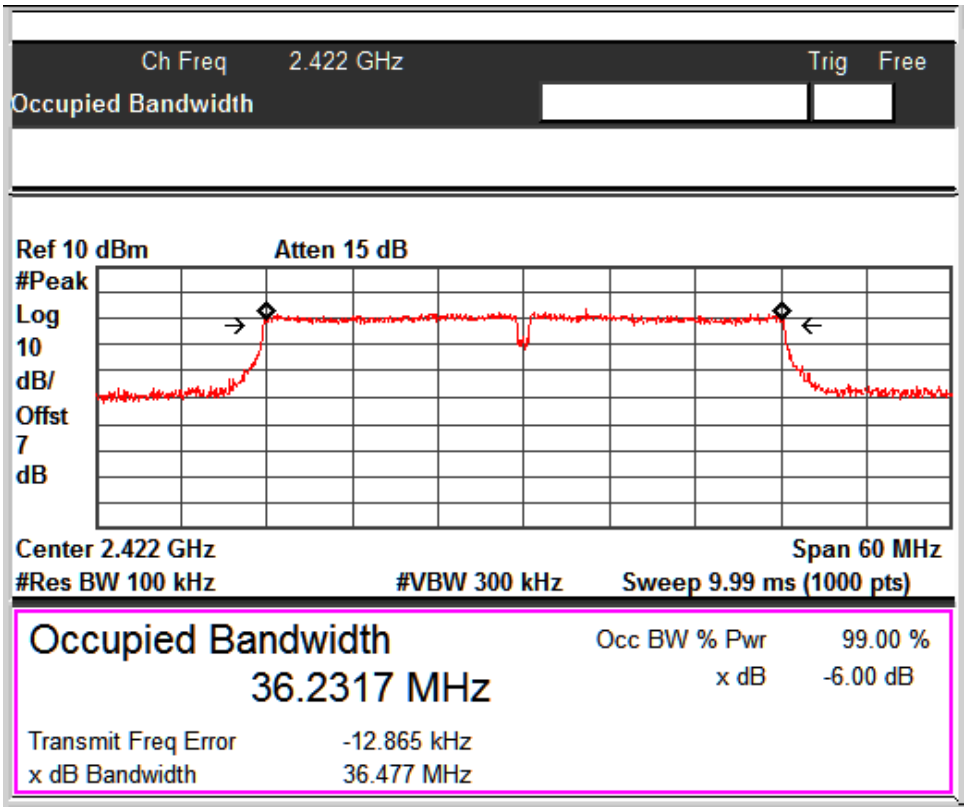
Data Rate: MCS4 **Channel: 2422 MHz**



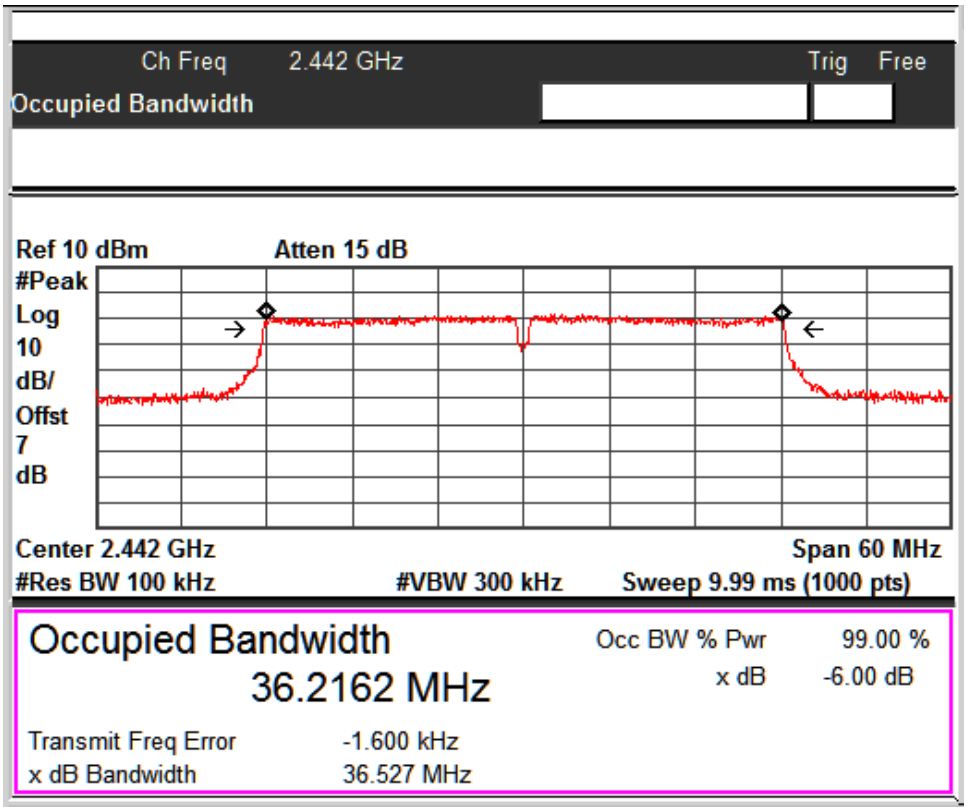
Data Rate: MCS4 **Channel: 2442 MHz**



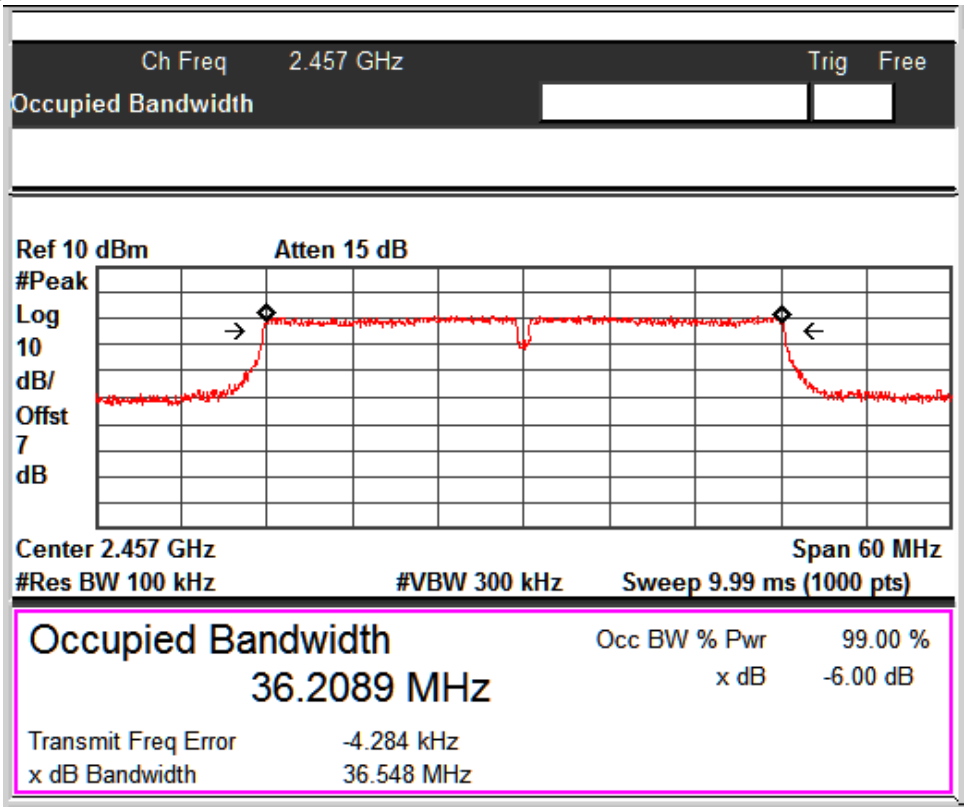
Data Rate: MCS4 **Channel: 2457 MHz**



Data Rate: MCS7 **Channel: 2422 MHz**



Data Rate: MCS7 **Channel: 2442MHz**

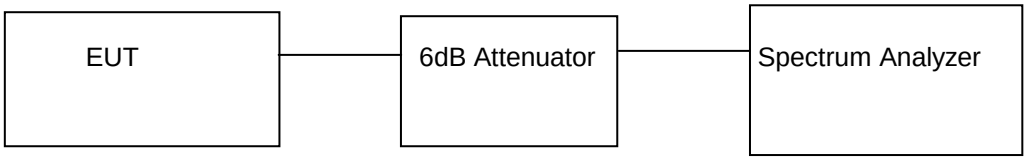


Data Rate: MCS7 **Channel: 2457 MHz**

Emissions in restricted frequency bands **Section 15.247(d)**
Result **Pass**

Test Specification	FCC Part 15 Section 15.247(d)
Detector Function	Peak
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:

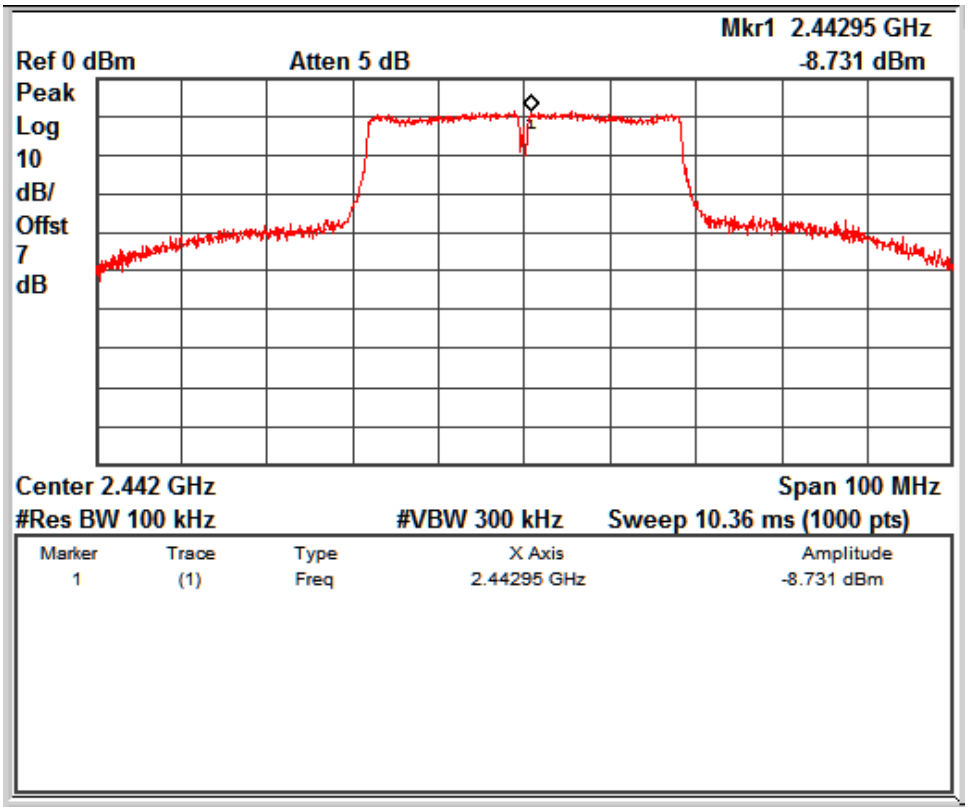


Test Result: Wi-Fi_40MHz BW

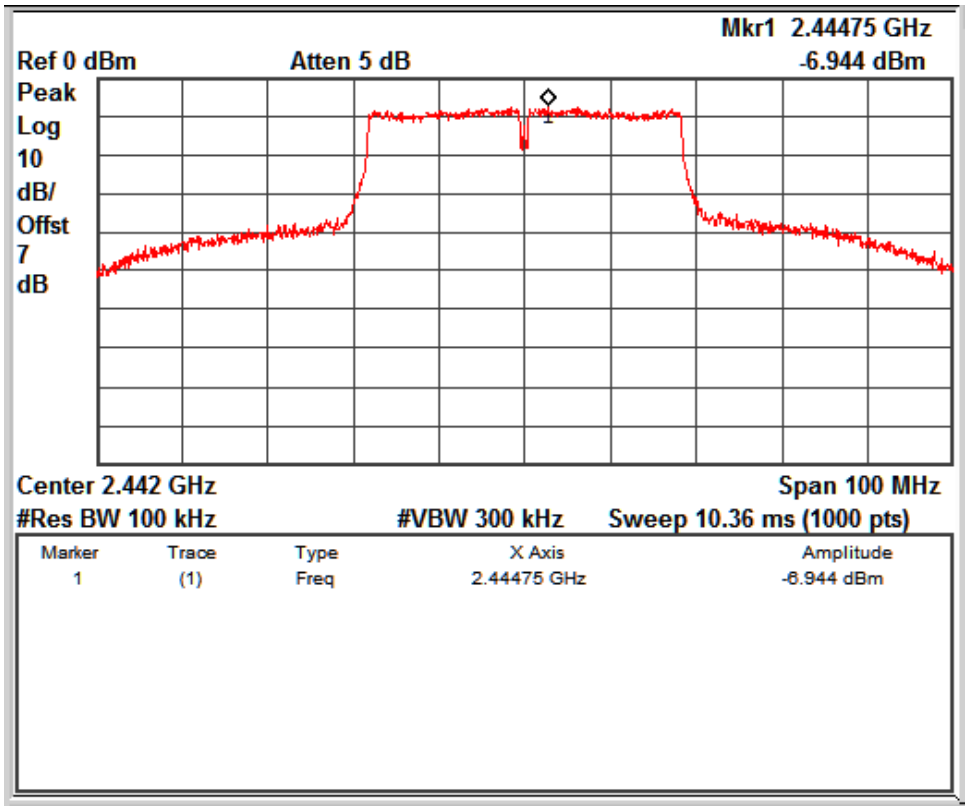
Cable Loss (1dB) + Attenuator (6dB): 7dB (Included in the test results)

802.11 Protocol	Data Rate (Mbps)	Channel Frequency (MHz)	Value at Band Edge		Reference Value B (dBm)	Band Edge Value A-B (dBc)	Limit (dBc)
			Frequency (MHz)	Value A (dBm)			
n	MCS0	2422	2398.90	-39.03	-8.73	-30.30	-30.00
		2457	2483.50	-41.40	-8.73	-32.67	-30.00
	MCS4	2422	2399.10	-38.51	-6.94	-31.57	-30.00
		2457	2483.50	-41.74	-6.94	-34.80	-30.00
	MCS7	2422	2400.00	-37.87	-6.90	-30.97	-30.00
		2457	2483.50	-40.90	-6.90	-34.00	-30.00

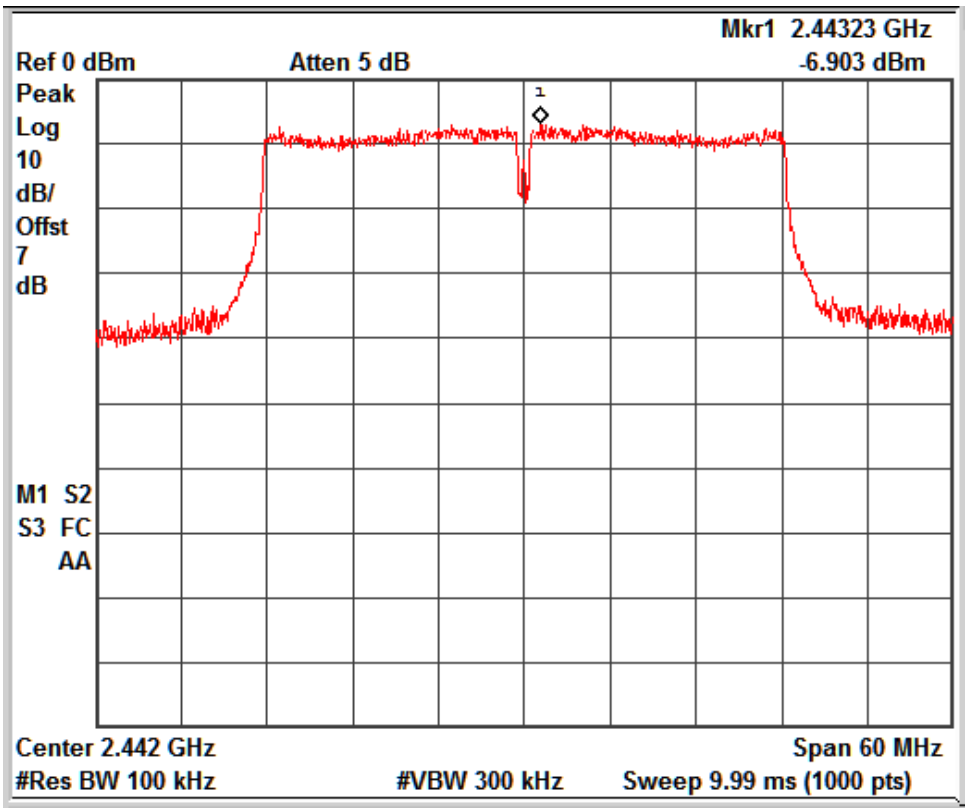
Note: The channel no. 7 (2442 MHz) found to contain the maximum PSD level and is used to establish the reference level.



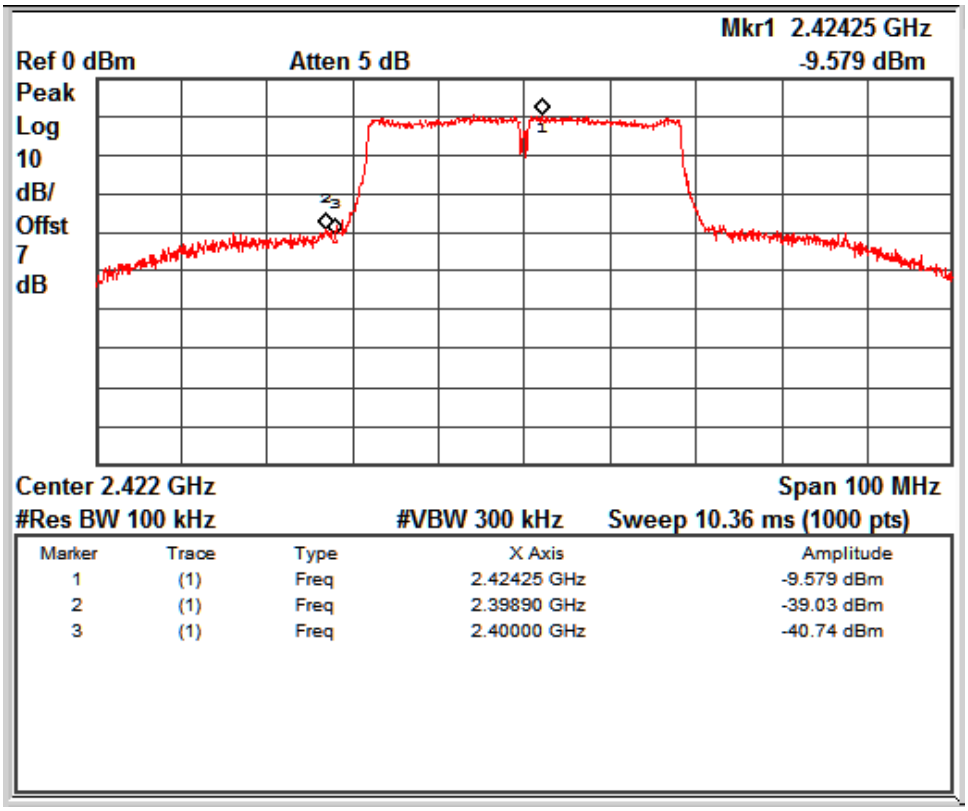
Reference Level Plot: MCS0



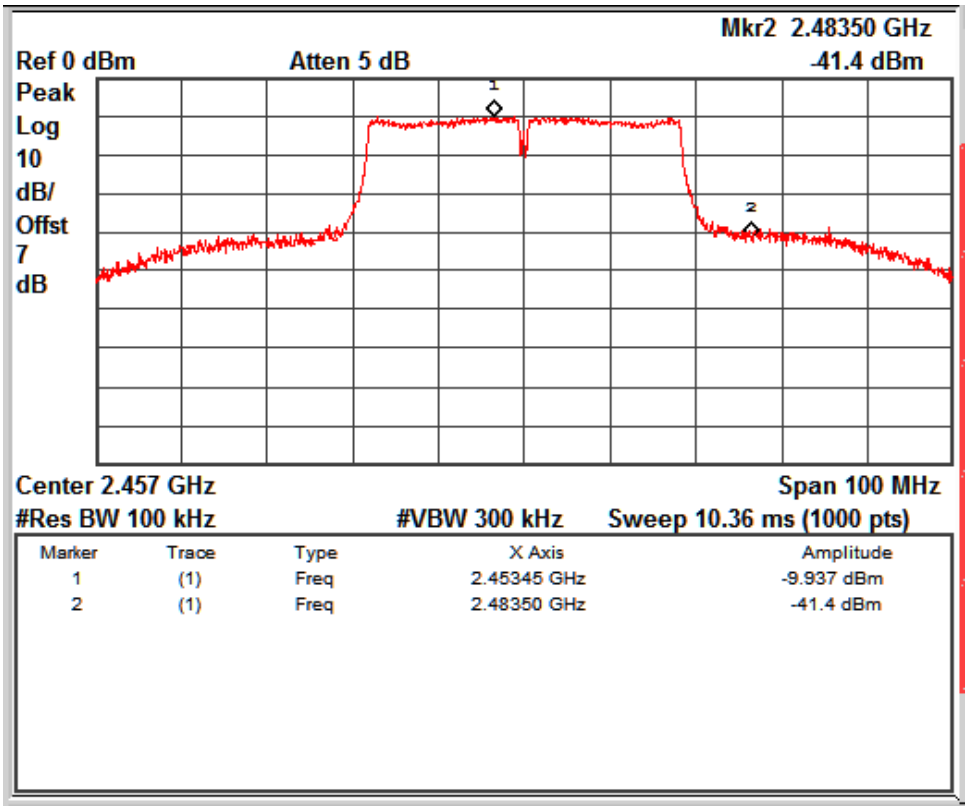
Reference Level Plot: MCS4



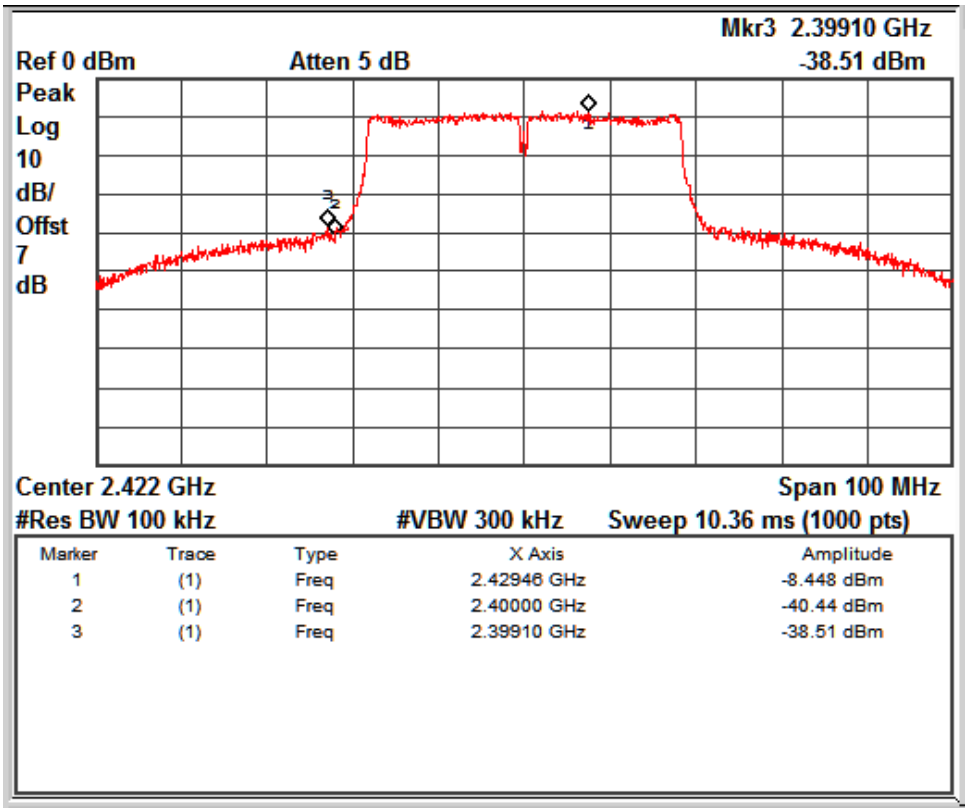
Reference Level Plot: MCS7



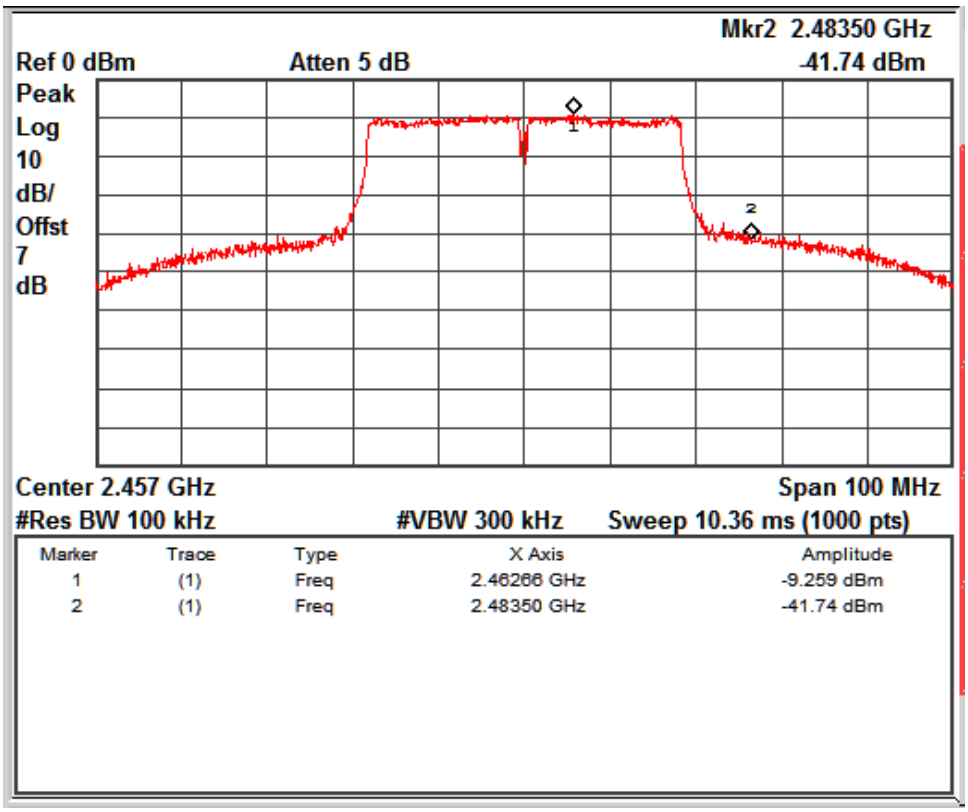
Data Rate: MCS0 **Channel frequency: 2422 MHz**



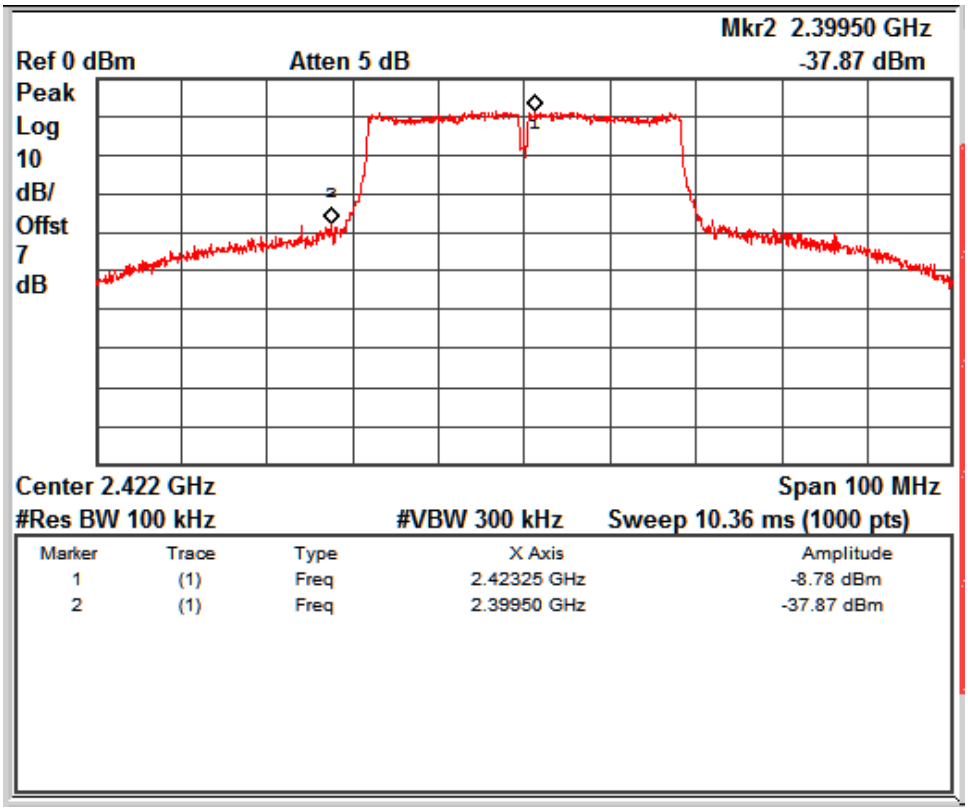
Data Rate: MCS0 **Channel frequency: 2457 MHz**



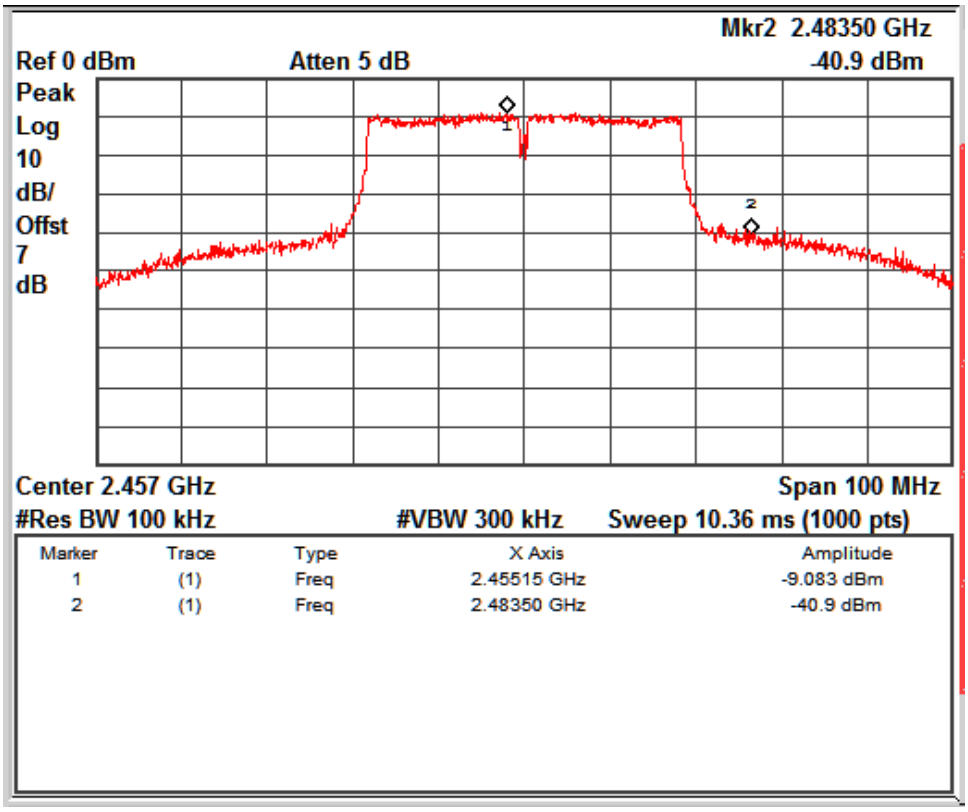
Data Rate: MCS4 **Channel frequency: 2422 MHz**



Data Rate: MCS4 **Channel frequency: 2457 MHz**



Data Rate: MCS7 **Channel frequency: 2422 MHz**



Data Rate: MCS7 **Channel frequency: 2457 MHz**

Spurious Radiated Emissions and Restricted Bands of Operation **Section 15.209 and 15.205**
Result **Pass**

Test Specification	FCC Part 15 Section 15.209 &15.205
Test Method	ANSI C63.10-2013
Measurement Location	Semi Anechoic Chamber
Measuring Distance	3m
Detection	QP for frequency below 1GHz, Average for frequency above 1GHz
Requirement	As per the limits mentioned in the bellow table

Limit for Radiated Emission of Section 15.209:

Frequency (MHz)	Field strength (µV/m)	Field strength (dBµV/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 88.50 – 53.80, 53.80 – 43.00 and 49.5dBµV/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.

Wi-Fi 20MHz bandwidth Channel

Low - 2412MHz, Mid - 2437MHz & High – 2462MHz

Wi-Fi 40MHz bandwidth Channel

Low - 2422MHz, Mid - 2442MHz & High – 2457MHz

ZigBee Channel

Low - 2405MHz, Mid - 2440MHz & High – 2480MHz

Bluetooth Low Energy

Low - 2402MHz, Mid - 2440MHz & High – 2480MHz

Test results:

For frequency Range 9kHz - 1 GHz

No emissions found in this frequency range.

For frequency above 1GHz

a.) Antenna: Molex

Wi-Fi

B Mode: 1Mbps ; Channel size: 20MHz Bandwidth					
Channel	**Polarization**	**Frequency (MHz)**	**Field Strength (dBµV/m)**	**Limit (dBµV/m)**	**Margin (dB)**
Low	V	2390 (Pk)	53.53	74	-20.47
		2390 (Av)	40.5	54	-13.5
		2412 (Pk)	89.49	*	-
		2412 (Av)	86.69	*	-
		4824 (Pk)	53.36	74	-20.64
		4824 (Av)	48.17	54	-5.83
		7236 (Pk)	58.47	74	-15.53
		7236 (Av)	45.07	54	-8.93
	H	2390 (Pk)	48.91	74	-25.09
		2390 (Av)	41.99	54	-12.01
		2412 (Pk)	100.93	*	-
		2412 (Av)	98.47	*	-
		4824 (Pk)	56.02	74	-17.98
		4824 (Av)	52.02	54	-1.98
		7236 (Pk)	59.51	74	-14.49
		7236 (Av)	46.25	54	-7.75
Mid	V	2437 (Pk)	91.12	*	-
		2437 (Av)	89.81	*	-
		4874 (Pk)	54.35	74	-19.65
		4874 (Av)	49.62	54	-4.38
		7311 (Pk)	59.53	74	-14.47
		7311 (Av)	45.94	54	-8.06
	H	2437 (Pk)	99.98	*	-
		2437 (Av)	98.32	*	-
		4874 (Pk)	57.92	74	-16.08
		4874 (Av)	52.84	54	-1.16
		7311 (Pk)	60.63	74	-13.37
		7311 (Av)	47.82	54	-6.18
High	V	2462 (Pk)	90.91	*	-
		2462 (Av)	88.18	*	-

		2483.5 (Pk)	49.55	74	-24.45
		2483.5 (Av)	32.56	54	-21.44
		4924 (Pk)	54.56	74	-19.44
		4924 (Av)	48.45	54	-5.55
		7386 (Pk)	59.34	74	-14.66
		7386 (Av)	45.86	54	-8.14
	H	2462 (Pk)	102.64	*	-
		2462 (Av)	99.87	*	-
		2483.5 (Pk)	53.86	74	-20.14
		2483.5 (Av)	47.61	54	-6.39
		4924 (Pk)	58.64	74	-15.36
		4924 (Av)	52.83	54	-1.17
		7386 (Pk)	58.74	74	-15.26
		7386 (Av)	47.82	54	-6.18

B Mode: 11Mbps ; Channel size 20MHz Bandwidth					
Channel	**Polarization**	**Frequency (MHz)**	**Field Strength (dBµV/m)**	**Limit (dBµV/m)**	**Margin (dB)**
Low	V	2390 (Pk)	54.03	74	-19.97
		2390 (Av)	43.21	54	-10.79
		2412 (Pk)	91.67	*	-
		2412 (Av)	88.98	*	-
		4824 (Pk)	50.11	74	-23.89
		4824 (Av)	37.18	54	-16.82
		7236 (Pk)	-	-	-
		7236 (Av)	-	-	-
	H	2390 (Pk)	50.32	74	-23.68
		2390 (Av)	42.24	54	-11.76
		2412 (Pk)	99.32	*	-
		2412 (Av)	98.76	*	-
		4824 (Pk)	59.15	74	-14.85
		4824 (Av)	46.21	54	-7.79
		7236 (Pk)	-	-	-
		7236 (Av)	-	-	-
Mid	V	2437 (Pk)	96.21	*	-
		2437 (Av)	87.89	*	-
		4874 (Pk)	50.58	74	-23.42
		4874 (Av)	38.18	54	-15.82
		7311 (Pk)	-	-	-
		7311 (Av)	-	-	-
	H	2437 (Pk)	104.45	*	-
		2437 (Av)	97.37	*	-

		4874 (Pk)	59.53	74	-14.47
		4874 (Av)	47.13	54	-6.87
High	V	2462 (Pk)	92.34	*	-
		2462 (Av)	89.58	*	-
		2483.5 (Pk)	55.78	74	-18.22
		2483.5 (Av)	44.21	54	-9.79
		4924 (Pk)	51.21	74	-22.79
		4924 (Av)	38.48	54	-15.52
	H	2462 (Pk)	100.32	*	-
		2462 (Av)	99.01	*	-
		2483.5 (Pk)	56.32	74	-17.68
		2483.5 (Av)	46.32	54	-7.68
		4924 (Pk)	58.98	74	-15.02
		4924 (Av)	47.56	54	-6.44

G Mode: 6Mbps ; Channel Size: 20MHz Bandwidth					
Channel	**Polarization**	**Frequency (MHz)**	**Field Strength (dBµV/m)**	**Limit (dBµV/m)**	**Margin (dB)**
Low	V	2390 (Pk)	53.89	74	-20.11
		2390 (Av)	37.4	54	-16.6
		2412 (Pk)	87.53	*	-
		2412 (Av)	78.99	*	-
		4824 (Pk)	50.86	74	-23.14
		4824 (Av)	38.67	54	-15.33
	H	2390 (Pk)	59.8	74	-14.2
		2390 (Av)	40.64	54	-13.36
		2412 (Pk)	98.52	*	-
		2412 (Av)	89.67	*	-
		4824 (Pk)	53.32	74	-20.68
		4824 (Av)	39.87	54	-14.13
Mid	V	2437 (Pk)	98.07	*	-
		2437 (Av)	89.33	*	-
		2483.5 (Pk)	60.86	74	-13.14
		2483.5 (Av)	36.71	54	-17.29
		4874 (Pk)	53.81	74	-20.19
		4874 (Av)	40.43	54	-13.57
		7311 (Pk)	57.41	74	-16.59
		7311 (Av)	43.31	54	-10.69
	H	2437 (Pk)	107.47	*	-
		2437 (Av)	98.59	*	-
		2483.5 (Pk)	72.57	74	-01.43
		2483.5 (Av)	47.37	54	-06.63

		4874 (Pk)	59.87	74	-14.13
		4874 (Av)	47.45	54	-6.55
		7311 (Pk)	64.91	74	-9.09
		7311 (Av)	50.37	54	-3.63
High	V	2462 (Pk)	88.89	*	-
		2462 (Av)	82.67	*	-
		2483.5 (Pk)	61.56	74	-12.44
		2483.5 (Av)	43.55	54	-10.45
		4924 (Pk)	50.02	74	-23.98
		4924 (Av)	37.68	54	-16.32
	H	2462 (Pk)	97.89	*	-
		2462 (Av)	88.34	*	-
		2483.5 (Pk)	65.32	74	-8.68
		2483.5 (Av)	46.12	54	-7.88
		4924 (Pk)	52.56	74	-21.44
		4924 (Av)	38.78	54	-15.22

G Mode: 54Mbps ; Channel Size: 20MHz Bandwidth					
Channel	**Polarization**	**Frequency (MHz)**	**Field Strength (dBµV/m)**	**Limit (dBµV/m)**	**Margin (dB)**
Low	V	2390 (Pk)	58.34	74	-15.66
		2390 (Av)	42.67	54	-11.33
		2412 (Pk)	92.07	*	-
		2412 (Av)	83.13	*	-
		4824 (Pk)	48.2	74	-25.8
		4824 (Av)	34.21	54	-19.79
	H	2390 (Pk)	61.02	74	-12.98
		2390 (Av)	44.21	54	-9.79
		2412 (Pk)	100.01	*	-
		2412 (Av)	89.69	*	-
		4824 (Pk)	49.78	74	-24.22
		4824 (Av)	35.78	54	-18.22
Mid	V	2390 (Pk)	61.21	74	-12.79
		2390 (Av)	42.19	54	-11.81
		2437 (Pk)	99.34	*	-
		2437 (Av)	92.67	*	-
		2483.5 (Pk)	64.32	74	-9.68
		2483.5 (Av)	44.45	54	-9.55
		4874 (Pk)	54.21	74	-19.79
		4874 (Av)	40.67	54	-13.33
		7311 (Pk)	58.32	74	-15.68
		7311 (Av)	42.89	54	-11.11

	H	2390 (Pk)	66.89	74	-7.11
		2390 (Av)	48.21	54	-5.79
		2437 (Pk)	108.87	*	-
		2437 (Av)	98.54	*	-
		2483.5 (Pk)	68.78	74	-5.22
		2483.5 (Av)	48.53	54	-5.47
		4874 (Pk)	60.01	74	-13.99
		4874 (Av)	48.02	54	-5.98
		7311 (Pk)	64.21	74	-9.79
		7311 (Av)	50.36	54	-3.64
High	V	2462 (Pk)	88.66	*	-
		2462 (Av)	78.62	*	-
		2483.5 (Pk)	51.51	74	-22.49
		2483.5 (Av)	34.25	54	-19.75
		4924 (Pk)	49.98	74	-24.02
		4924 (Av)	36.32	54	-17.68
	H	2462 (Pk)	102.39	*	-
		2462 (Av)	91.58	*	-
		2483.5 (Pk)	64.43	74	-9.57
		2483.5 (Av)	47.03	54	-6.97
		4924 (Pk)	54.66	74	-19.34
		4924 (Av)	39.29	54	-14.71

N Mode: MCS0 ; Channel Size: 20MHZ Bandwidth					
Channel	**Polarization**	**Frequency (MHz)**	**Field Strength (dBµV/m)**	**Limit (dBµV/m)**	**Margin (dB)**
Low	V	2390 (Pk)	65.56	74	-8.44
		2390 (Av)	45.58	54	-8.42
		2412 (Pk)	93.45	*	-
		2412 (Av)	83.56	*	-
		4824 (Pk)	50.67	74	-23.33
		4824 (Av)	39.32	54	-14.68
	H	2390 (Pk)	67.01	74	-6.99
		2390 (Av)	46.81	54	-7.19
		2412 (Pk)	97.88	*	-
		2412 (Av)	87.92	*	-
		4824 (Pk)	52.31	74	-21.69
		4824 (Av)	39.14	54	-14.86
Mid	V	2437 (Pk)	98.59	*	-
		2437 (Av)	88.43	*	-
		2483.5 (Pk)	61.78	74	-12.22
		2483.5 (Av)	40.34	54	-13.66

		4874 (Pk)	54.32	74	-19.68
		4874 (Av)	41.87	54	-12.13
		7311 (Pk)	-	-	-
		7311 (Av)	-	-	-
	H	2437 (Pk)	108.13	*	-
		2437 (Av)	98.27	*	-
		2483.5 (Pk)	69.21	74	-4.79
		2483.5 (Av)	49.46	54	-4.54
		4874 (Pk)	60.21	74	-13.79
		4874 (Av)	47.78	54	-6.22
		7311 (Pk)	64.42	74	-9.58
		7311 (Av)	50.03	54	-3.97
High	V	2462 (Pk)	90.36	*	-
		2462 (Av)	79.98	*	-
		2483.5 (Pk)	56.98	74	-17.02
		2483.5 (Av)	39.54	54	-14.46
		4924 (Pk)	48.34	74	-25.66
		4924 (Av)	35.43	54	-18.57
		7386 (Pk)	-	-	-
		7386 (Av)	-	-	-
	H	2462 (Pk)	97.12	*	-
		2462 (Av)	89.23	*	-
		2483.5 (Pk)	66.56	74	-7.44
		2483.5 (Av)	49.78	54	-4.22
		4924 (Pk)	49.43	74	-24.57
		4924 (Av)	37.89	54	-16.11
		7386 (Pk)	-	-	-
		7386 (Av)	-	-	-

N Mode: MCS7 ; Channel Size: 20MHz Bandwidth					
Channel	**Polarization**	**Frequency (MHz)**	**Field Strength (dBµV/m)**	**Limit (dBµV/m)**	**Margin (dB)**
Low	V	2390 (Pk)	59.13	74	-14.87
		2390 (Av)	42.78	54	-11.22
		2412 (Pk)	92.45	*	-
		2412 (Av)	83.11	*	-
		4824 (Pk)	50.23	74	-23.77
		4824 (Av)	37.16	54	-16.84
	H	2390 (Pk)	63.14	74	-10.86
		2390 (Av)	45.01	54	-8.99
		2412 (Pk)	99.89	*	-

		2412 (Av)	88.78	*	-
		4824 (Pk)	51.12	74	-22.88
		4824 (Av)	36.82	54	-17.18
Mid	V	2437 (Pk)	98.59	*	-
		2437 (Av)	89.43	*	-
		2483.5 (Pk)	61.05	74	-12.95
		2483.5 (Av)	39.67	54	-14.33
		4874 (Pk)	53.19	74	-20.81
		4874 (Av)	40.78	54	-13.22
	H	2437 (Pk)	108.78	*	-
		2437 (Av)	98.57	*	-
		2483.5 (Pk)	69.97	74	-4.03
		2483.5 (Av)	50.01	54	-3.99
		4874 (Pk)	59.83	74	-14.17
		4874 (Av)	48.07	54	-5.93
		7311 (Pk)	64.91	74	-9.09
		7311 (Av)	50.19	54	-3.81
High	V	2462 (Pk)	90.36	*	-
		2462 (Av)	79.98	*	-
		2483.5 (Pk)	56.98	74	-17.02
		2483.5 (Av)	39.54	54	-14.46
		4924 (Pk)	48.34	74	-25.66
		4924 (Av)	35.43	54	-18.57
	H	2462 (Pk)	100.97	*	-
		2462 (Av)	90.83	*	-
		2483.5 (Pk)	68.49	74	-5.51
		2483.5 (Av)	51.66	54	-2.34
		4924 (Pk)	50.23	74	-23.77
		4924 (Av)	38.87	54	-15.13

N Mode: MCS0 ; Channel Size: 40MHZ Bandwidth					
Channel	**Polarization**	**Frequency (MHz)**	**Field Strength (dBµV/m)**	**Limit (dBµV/m)**	**Margin (dB)**
Low	V	2390 (Pk)	59.8	74	-14.2
		2390 (Av)	43.43	54	-10.57
		2422 (Pk)	86.34	*	-
		2422 (Av)	77.21	*	-
		4844 (Pk)	50.01	74	-23.99
		4844 (Av)	36.12	54	-17.88
		7266 (Pk)	-	-	-
		7266 (Av)	-	-	-
	H	2390 (Pk)	67.25	74	-6.75

		2390 (Av)	51.8	54	-2.2
		2422 (Pk)	96.81	*	-
		2422 (Av)	87.27	*	-
		4844 (Pk)	50.43	74	-23.57
		4844 (Av)	37.21	54	-16.79
Mid	V	2442 (Pk)	85.84	*	-
		2442 (Av)	76.6	*	-
		2483.5 (Pk)	56.98	74	-17.02
		2483.5 (Av)	39.17	54	-14.83
		4884 (Pk)	49.47	74	-24.53
		4884 (Av)	38.21	54	-15.79
	H	2442 (Pk)	95.97	*	-
		2442 (Av)	87.14	*	-
		2483.5 (Pk)	66.53	74	-7.47
		2483.5 (Av)	50.19	54	-3.81
		4884 (Pk)	50.24	74	-23.76
		4884 (Av)	36.45	54	-17.55
High	V	2457 (Pk)	85.9	*	-
		2457 (Av)	75.38	*	-
		2483.5 (Pk)	58.81	74	-15.19
		2483.5 (Av)	40.27	54	-13.73
		4914 (Pk)	48.98	74	-25.02
		4914 (Av)	34.78	54	-19.22
	H	2457 (Pk)	94.53	*	-
		2457 (Av)	84.99	*	-
		2483.5 (Pk)	67.01	74	-6.99
		2483.5 (Av)	51.58	54	-2.42
		4914 (Pk)	49.45	74	-24.55
		4914 (Av)	34.78	54	-19.22

N Mode: MCS7 ; Channel Size: 40MHZ Bandwidth					
Channel	**Polarization**	**Frequency (MHz)**	**Field Strength (dBµV/m)**	**Limit (dBµV/m)**	**Margin (dB)**
Low	V	2390 (Pk)	51.44	74	-22.56
		2390 (Av)	31.84	54	-22.16
		2422 (Pk)	87.68	*	-
		2422 (Av)	76.87	*	-
		4844 (Pk)	49.89	74	-24.11
		4844 (Av)	34.78	54	-19.22
	H	2390 (Pk)	53.86	74	-20.14
		2390 (Av)	36.9	54	-17.1
		2422 (Pk)	97.54	*	-

		2422 (Av)	87.01	*	-
		4844 (Pk)	49.67	74	-24.33
		4844 (Av)	33.98	54	-20.02
		7266 (Pk)	-	-	-
		7266 (Av)	-	-	-
Mid	V	2442 (Pk)	90.56	*	-
		2442 (Av)	81.21	*	-
		2483.5 (Pk)	65.21	74	-8.79
		2483.5 (Av)	51.45	54	-2.55
		4884 (Pk)	50.23	74	-23.77
		4884 (Av)	37.42	54	-16.58
	H	2442 (Pk)	98.12	*	-
		2442 (Av)	86.32	*	-
		2483.5 (Pk)	68.71	74	-5.29
		2483.5 (Av)	51.89	54	-2.11
		4884 (Pk)	53.76	74	-20.24
		4884 (Av)	39.23	54	-14.77
		7326 (Pk)	-	-	-
		7326 (Av)	-	-	-
High	V	2457 (Pk)	85.9	*	-
		2457 (Av)	75.26	*	-
		2483.5 (Pk)	58.25	74	-15.75
		2483.5 (Av)	40.94	54	-13.06
		4914 (Pk)	49.48	74	-24.52
		4914 (Av)	36.78	54	-17.22
		7371 (Pk)	-	-	-
		7371 (Av)	-	-	-
	H	2457 (Pk)	96.41	*	-
		2457 (Av)	85.96	*	-
		2483.5 (Pk)	67.48	74	-6.52
		2483.5 (Av)	51.84	54	-2.16
		4914 (Pk)	50.23	74	-23.77
		4914 (Av)	35.32	54	-18.68
		7371 (Pk)	-	-	-
		7371 (Av)	-	-	-

Channel	Polarization	Frequency (MHz)	Field Strength(dBµV/m)	Limit (dBµV/m)	Margin (dB)
Low	V	2390 (Pk)	55.05	74	-18.95
		2390 (Av)	30.81	54	-23.19
		2405 (Pk)	97.99	*	-
		2405 (Av)	92.88	*	-
		4810 (Pk)	50.58	74	-23.42
		4810 (Av)	39.02	54	-14.98
		7215 (Pk)	58.15	74	-15.85
		7215 (Av)	44.9	54	-9.1
	H	2390 (Pk)	50.25	74	-23.75
		2390 (Av)	32.94	54	-21.06
		2405 (Pk)	108.08	*	-
		2405 (Av)	102.98	*	-
		4810 (Pk)	57.15	74	-16.85
		4810 (Av)	48.48	54	-5.52
		7215 (Pk)	58.32	74	-15.68
		7215 (Av)	46.34	54	-7.66
Mid	V	2440 (Pk)	98.52	*	-
		2440 (Av)	93.31	*	-
		4880 (Pk)	50.41	74	-23.59
		4880 (Av)	40.21	54	-13.79
		7320 (Pk)	60.12	74	-13.88
		7320 (Av)	46.48	54	-7.52
	H	2440 (Pk)	109.22	*	-
		2440 (Av)	104.12	*	-
		4880 (Pk)	51.24	74	-22.76
		4880 (Av)	41.68	54	-12.32
		7320 (Pk)	59.86	74	-14.14
		7320 (Av)	47.01	54	-6.99
High	V	2480 (Pk)	99.24	*	-
		2480 (Av)	94.13	*	-
		2483.5 (Pk)	55.15	74	-18.85
		2483.5 (Av)	35.24	54	-18.76
		4960 (Pk)	53.22	74	-20.78
		4960 (Av)	41.01	54	-12.99
		7440 (Pk)	59.16	74	-14.84
		7440 (Av)	46.29	54	-7.71
	H	2480 (Pk)	110.08	*	-
		2480 (Av)	105.01	*	-
		2483.5 (Pk)	57.45	74	-16.55

		2483.5 (Av)	46.42	54	-7.58
		4960 (Pk)	56.78	74	-17.22
		4960 (Av)	48.47	54	-5.53
		7440 (Pk)	59.48	74	-14.52
		7440 (Av)	46.23	54	-7.77

Bluetooth LE:

Channel	Polarization	Frequency (MHz)	Field Strength(dBµV/m)	Limit (dBµV/m)	Margin (dB)
Low	V	2390 (Pk)	49.41	74	-24.59
		2390 (Av)	29.03	54	-24.97
		2402 (Pk)	100.26	*	-
		2402 (Av)	99.01	*	-
		4804 (Pk)	51.72	74	-22.28
		4804 (Av)	41.01	54	-12.99
		7206 (Pk)	58.37	74	-15.63
		7206 (Av)	45.66	54	-8.34
	H	2390 (Pk)	49.77	74	-24.23
		2390 (Av)	34.02	54	-19.98
		2402 (Pk)	110.77	*	-
		2402 (Av)	109.51	*	-
		4804 (Pk)	59.13	74	-14.87
		4804 (Av)	52.46	54	-1.54
		7206 (Pk)	61.28	74	-12.72
		7206 (Av)	51.77	54	-2.23
Mid	V	2440 (Pk)	100.98	*	-
		2440 (Av)	99.96	*	-
		4880 (Pk)	51.52	74	-22.48
		4880 (Av)	39.71	54	-14.29
		7320 (Pk)	59.13	74	-14.87
		7320 (Av)	45.23	54	-8.77
	H	2440 (Pk)	111.12	*	-
		2440 (Av)	109.98	*	-
		4880 (Pk)	58.78	74	-15.22
		4880 (Av)	51.76	54	-2.24
		7320 (Pk)	60.45	74	-13.55
		7320 (Av)	49.01	54	-4.99
High	V	2480 (Pk)	101.65	*	-
		2480 (Av)	100.31	*	-
		2483.5 (Pk)	52.64	74	-21.36

		2483.5 (Av)	32.54	54	-21.46
		4960 (Pk)	53.55	74	-20.45
		4960 (Av)	42.19	54	-11.81
		7440 (Pk)	58.01	74	-15.99
		7440 (Av)	44.76	54	-9.24
	H	2480 (Pk)	111.96	*	-
		2480 (Av)	110.65	*	-
		2483.5 (Pk)	53.45	74	-20.55
		2483.5 (Av)	42.03	54	-11.97
		4960 (Pk)	58.04	74	-15.96
		4960 (Av)	50.6	54	-3.4
		7440 (Pk)	59.28	74	-14.72
		7440 (Av)	48.27	54	-5.73

b.) Antenna : Fractus
Wi-Fi

B Mode: 1Mbps ; Channel size: 20MHz Bandwidth					
Channel	**Polarization**	**Frequency (MHz)**	**Field Strength(dBµV/m)**	**Limit (dBµV/m)**	**Margin (dB)**
Low	V	2390 (Pk)	53.37	74	-20.63
		2390 (Av)	42.99	54	-11.01
		2412 (Pk)	101.84	*	-
		2412 (Av)	97.21	*	-
		4824 (Pk)	53.83	74	-20.17
		4824 (Av)	47.38	54	-6.62
		7236 (Pk)	58.5	74	-15.5
		7236 (Av)	45.56	54	-8.44
	H	2390 (Pk)	47.96	74	-26.04
		2390 (Av)	39.18	54	-14.82
		2412 (Pk)	95.89	*	-
		2412 (Av)	93.31	*	-
		4824 (Pk)	56.08	74	-17.92
		4824 (Av)	52.39	54	-1.61
		7236 (Pk)	58.35	74	-15.65
		7236 (Av)	46.09	54	-7.91
Mid	V	2437 (Pk)	99.06	*	-
		2437 (Av)	96.4	*	-
		4874 (Pk)	54.54	74	-19.46
		4874 (Av)	47.13	54	-6.87
		7311 (Pk)	58.93	74	-15.07
		7311 (Av)	45.42	54	-8.58
	H	2437 (Pk)	96.82	*	-

		2437 (Av)	94.23	*	-
		4874 (Pk)	56.12	74	-17.88
		4874 (Av)	52.84	54	-1.16
		7311 (Pk)	58.16	74	-15.84
		7311 (Av)	46.44	54	-7.56
High	V	2462 (Pk)	99.63	*	-
		2462 (Av)	97.85	*	-
		2483.5 (Pk)	51.5	74	-22.5
		2483.5 (Av)	43.96	54	-10.04
		4924 (Pk)	53.64	74	-20.36
		4924 (Av)	48.62	54	-5.38
		7386 (Pk)	59.82	74	-14.18
		7386 (Av)	45.65	54	-8.35
	H	2462 (Pk)	96.64	*	-
		2462 (Av)	93.94	*	-
		2483.5 (Pk)	48.01	74	-25.99
		2483.5 (Av)	40.43	54	-13.57
		4924 (Pk)	57.23	74	-16.77
		4924 (Av)	52.66	54	-1.34
		7386 (Pk)	57.73	74	-16.27
		7386 (Av)	47.37	54	-6.63

B Mode: 11Mbps ; Channel size: 20MHz Bandwidth					
Channel	**Polarization**	**Frequency (MHz)**	**Field Strength(dBµV/m)**	**Limit (dBµV/m)**	**Margin (dB)**
Low	V	2390 (Pk)	53.07	74	-20.93
		2390 (Av)	42.96	54	-11.04
		2412 (Pk)	102.87	*	-
		2412 (Av)	99.98	*	-
		4824 (Pk)	51.23	74	-22.77
		4824 (Av)	38.41	54	-15.59
		7236 (Pk)	-	-	-
		7236 (Av)	-	-	-
	H	2390 (Pk)	47.83	74	-26.17
		2390 (Av)	40.1	54	-13.9
		2412 (Pk)	99.93	*	-
		2412 (Av)	97.13	*	-
		4824 (Pk)	58.73	74	-15.27
		4824 (Av)	47.01	54	-6.99
		7236 (Pk)	-	-	-
		7236 (Av)	-	-	-
Mid	V	2437 (Pk)	106.79	*	-

		2437 (Av)	98.61	*	-
		4874 (Pk)	51.02	74	-22.98
		4874 (Av)	37.68	54	-16.32
		7311 (Pk)	-	-	-
		7311 (Av)	-	-	-
	H	2437 (Pk)	104.28	*	-
		2437 (Av)	96.39	*	-
		4874 (Pk)	59.01	74	-14.99
		4874 (Av)	46.34	54	-7.66
		7311 (Pk)	-	-	-
		7311 (Av)	-	-	-
High	V	2462 (Pk)	102.88	*	-
		2462 (Av)	100.03	*	-
		2483.5 (Pk)	52.43	74	-21.57
		2483.5 (Av)	44.32	54	-9.68
		4924 (Pk)	51.24	74	-22.76
		4924 (Av)	37.97	54	-16.03
		7386 (Pk)	-	-	-
		7386 (Av)	-	-	-
	H	2462 (Pk)	100.21	*	-
		2462 (Av)	97.98	*	-
		2483.5 (Pk)	54.12	74	-19.88
		2483.5 (Av)	45.67	54	-8.33
		4924 (Pk)	59.89	74	-14.11
		4924 (Av)	48.11	54	-5.89
		7386 (Pk)	-	-	-
		7386 (Av)	-	-	-

G Mode: 6Mbps ; Channel Size: 20MHz Bandwidth					
Channel	**Polarization**	**Frequency (MHz)**	**Field Strength(dBµV/m)**	**Limit (dBµV/m)**	**Margin (dB)**
Low	V	2390 (Pk)	61.33	74	-12.67
		2390 (Av)	43.57	54	-10.43
		2412 (Pk)	101.24	*	-
		2412 (Av)	90.56	*	-
		4824 (Pk)	51.06	74	-22.94
		4824 (Av)	39.45	54	-14.55
		7236 (Pk)	-	-	-
		7236 (Av)	-	-	-
	H	2390 (Pk)	57.5	74	-16.5
		2390 (Av)	40.78	54	-13.22
		2412 (Pk)	97.41	*	-

		2412 (Av)	87.27	*	-
		4824 (Pk)	54.76	74	-19.24
		4824 (Av)	40.13	54	-13.87
		7236 (Pk)	-	-	-
		7236 (Av)	-	-	-
Mid	V	2390 (Pk)	70.97	74	-3.03
		2490 (Av)	49.68	54	-4.32
		2437 (Pk)	106.56	*	-
		2437 (Av)	96.4	*	-
		2483.5 (Pk)	69.75	74	-4.25
		2483.5 (Av)	48.45	54	-5.55
		4874 (Pk)	54.77	74	-19.23
		4874 (Av)	41.4	54	-12.6
		7311 (Pk)	57.52	74	-16.48
		7311 (Av)	45.21	54	-8.79
	H	2390 (Pk)	66.82	74	-7.18
		2490 (Av)	46.89	54	-7.11
		2437 (Pk)	106.54	*	-
		2437 (Av)	98.09	*	-
		2483.5 (Pk)	68.37	74	-5.63
		2483.5 (Av)	47.28	54	-6.72
		4874 (Pk)	57.1	74	-16.9
		4874 (Av)	44.05	54	-9.95
		7311 (Pk)	66.34	74	-7.66
		7311 (Av)	51.52	54	-2.48
High	V	2462 (Pk)	98.73	*	-
		2462 (Av)	89.68	*	-
		2483.5 (Pk)	64.74	74	-9.26
		2483.5 (Av)	45.91	54	-8.09
		4924 (Pk)	49.67	74	-24.33
		4924 (Av)	34.21	54	-19.79
		7386 (Pk)	-	-	-
		7386 (Av)	-	-	-
	H	2462 (Pk)	96.09	*	-
		2462 (Av)	87.11	*	-
		2483.5 (Pk)	62.27	74	-11.73
		2483.5 (Av)	42.69	54	-11.31
		4924 (Pk)	53.34	74	-20.66
		4924 (Av)	39.65	54	-14.35
		7386 (Pk)	-	-	-
		7386 (Av)	-	-	-

G Mode: 54Mbps ; Channel Size: 20MHz Bandwidth					
Channel	**Polarization**	**Frequency (MHz)**	**Field Strength (dBµV/m)**	**Limit (dBµV/m)**	**Margin (dB)**
Low	V	2390 (Pk)	60.64	74	-13.36
		2390 (Av)	43.77	54	-10.23
		2412 (Pk)	100.88	*	-
		2412 (Av)	90.83	*	-
		4824 (Pk)	49.87	74	-24.13
		4824 (Av)	35.24	54	-18.76
		7236 (Pk)	-	-	-
		7236 (Av)	-	-	-
	H	2390 (Pk)	58.44	74	-15.56
		2390 (Av)	41.06	54	-12.94
		2412 (Pk)	98.06	*	-
		2412 (Av)	87.76	*	-
		4824 (Pk)	50.16	74	-23.84
		4824 (Av)	35.98	54	-18.02
		7236 (Pk)	-	-	-
		7236 (Av)	-	-	-
Mid	V	2390 (Pk)	67.77	74	-6.23
		2390 (Av)	49.23	54	-4.77
		2437 (Pk)	107.69	*	-
		2437 (Av)	97.43	*	-
		2483.5 (Pk)	68.34	74	-5.66
		2483.5 (Av)	48.65	54	-5.35
		4874 (Pk)	55.17	74	-18.83
		4874 (Av)	42.31	54	-11.69
		7311 (Pk)	58.34	74	-15.66
		7311 (Av)	46.21	54	-7.79
	H	2390 (Pk)	64.78	74	-9.22
		2390 (Av)	45.59	54	-8.41
		2437 (Pk)	104.43	*	-
		2437 (Av)	94.16	*	-
		2483.5 (Pk)	63.66	74	-10.34
		2483.5 (Av)	45.52	54	-8.48
		4874 (Pk)	57.89	74	-16.11
		4874 (Av)	43.32	54	-10.68
		7311 (Pk)	65.49	74	-8.51
		7311 (Av)	51.23	54	-2.77
High	V	2462 (Pk)	100.61	*	-

		2462 (Av)	89.98	*	-
		2483.5 (Pk)	64.62	74	-9.38
		2483.5 (Av)	46.38	54	-7.62
		4924 (Pk)	50.23	74	-23.77
		4924 (Av)	36.45	54	-17.55
		7386 (Pk)	-	-	-
		7386 (Av)	-	-	-
	H	2462 (Pk)	97.53	*	-
		2462 (Av)	87.02	*	-
		2483.5 (Pk)	60.74	74	-13.26
		2483.5 (Av)	42.96	54	-11.04
		4924 (Pk)	55.87	74	-18.13
		4924 (Av)	40.21	54	-13.79
		7386 (Pk)	-	-	-
		7386 (Av)	-	-	-

N Mode: MCS0 ; Channel Size: 20MHz Bandwidth					
Channel	**Polarization**	**Frequency (MHz)**	**Field Strength (dBµV/m)**	**Limit (dBµV/m)**	**Margin (dB)**
Low	V	2390 (Pk)	66.41	74	-7.59
		2390 (Av)	46.67	54	-7.33
		2412 (Pk)	98.51	*	-
		2412 (Av)	88.82	*	-
		4824 (Pk)	50.12	74	-23.88
		4824 (Av)	38.33	54	-15.67
		7236 (Pk)	-	-	-
		7236 (Av)	-	-	-
	H	2390 (Pk)	66.62	74	-7.38
		2390 (Av)	46.07	54	-7.93
		2412 (Pk)	98.85	*	-
		2412 (Av)	88.86	*	-
		4824 (Pk)	51.65	74	-22.35
		4824 (Av)	38.78	54	-15.22
		7236 (Pk)	-	-	-
		7236 (Av)	-	-	-
Mid	V	2437 (Pk)	106.78	*	-
		2437 (Av)	96.96	*	-
		2483.5 (Pk)	68.14	74	-5.86
		2483.5 (Av)	47.44	54	-6.56
		4874 (Pk)	55.31	74	-18.69
		4874 (Av)	42.13	54	-11.87
		7311 (Pk)	-	-	-

		7311 (Av)	-	-	-
	H	2437 (Pk)	101.88	*	-
		2437 (Av)	91.56	*	-
		2483.5 (Pk)	66.02	74	-7.98
		2483.5 (Av)	45.32	54	-8.68
		4874 (Pk)	60.34	74	-13.66
		4874 (Av)	48.92	54	-5.08
		7311 (Pk)	65.98	74	-8.02
		7311 (Av)	50.34	54	-3.66
High	V	2462 (Pk)	97.9	*	-
		2462 (Av)	89.92	*	-
		2483.5 (Pk)	68.27	74	-5.73
		2483.5 (Av)	50.97	54	-3.03
		4924 (Pk)	49.42	74	-24.58
		4924 (Av)	36.65	54	-17.35
		7386 (Pk)	-	-	-
		7386 (Av)	-	-	-
	H	2462 (Pk)	99.46	*	-
		2462 (Av)	89.76	*	-
		2483.5 (Pk)	67.77	74	-6.23
		2483.5 (Av)	50.58	54	-3.42
		4924 (Pk)	50.43	74	-23.57
		4924 (Av)	38.76	54	-15.24
		7386 (Pk)	-	-	-
		7386 (Av)	-	-	-

N Mode: MCS7 ; Channel Size: 20MHz Bandwidth					
Channel	**Polarization**	**Frequency (MHz)**	**Field Strength (dBµV/m)**	**Limit (dBµV/m)**	**Margin (dB)**
Low	V	2390 (Pk)	63.94	74	-10.06
		2390 (Av)	44.5	54	-9.5
		2412 (Pk)	100.32	*	-
		2412 (Av)	89.69	*	-
		4824 (Pk)	50.32	74	-23.68
		4824 (Av)	36.76	54	-17.24
		7236 (Pk)	-	-	-
		7236 (Av)	-	-	-
	H	2390 (Pk)	59.77	74	-14.23
		2390 (Av)	42.63	54	-11.37
		2412 (Pk)	97.52	*	-
		2412 (Av)	87.03	*	-

		4824 (Pk)	51.76	74	-22.24
		4824 (Av)	37.32	54	-16.68
		7236 (Pk)	-	-	-
		7236 (Av)	-	-	-
Mid	V	2437 (Pk)	106.86	*	-
		2437 (Av)	97.24	*	-
		2483.5 (Pk)	67.68	74	-6.32
		2483.5 (Av)	45.84	54	-8.16
		4874 (Pk)	53.98	74	-20.02
		4874 (Av)	41.23	54	-12.77
		7311 (Pk)	-	-	-
		7311 (Av)	-	-	-
	H	2437 (Pk)	102.68	*	-
		2437 (Av)	93.12	*	-
		2483.5 (Pk)	65.34	74	-8.66
		2483.5 (Av)	43.57	54	-10.43
		4874 (Pk)	60.34	74	-13.66
		4874 (Av)	49.02	54	-4.98
		7311 (Pk)	65.23	74	-8.77
		7311 (Av)	50.76	54	-3.24
High	V	2462 (Pk)	99.78	*	-
		2462 (Av)	89.17	*	-
		2483.5 (Pk)	64.51	74	-9.49
		2483.5 (Av)	47.71	54	-6.29
		4924 (Pk)	48.87	74	-25.13
		4924 (Av)	36.78	54	-17.22
		7386 (Pk)	-	-	-
		7386 (Av)	-	-	-
	H	2462 (Pk)	96.65	*	-
		2462 (Av)	86.1	*	-
		2483.5 (Pk)	63.11	74	-10.89
		2483.5 (Av)	44.5	54	-9.5
		4924 (Pk)	49.89	74	-24.11
		4924 (Av)	39.32	54	-14.68
		7386 (Pk)	-	-	-
		7386 (Av)	-	-	-

N Mode: MCS0 ; Channel Size: 40MHz Bandwidth					
Channel	**Polarization**	**Frequency (MHz)**	**Field Strength (dBµV/m)**	**Limit (dBµV/m)**	**Margin (dB)**
Low	V	2390 (Pk)	69.18	74	-4.82
		2390 (Av)	52.25	54	-1.75
		2422 (Pk)	95.44	*	-
		2422 (Av)	86.37	*	-
		4844 (Pk)	49.45	74	-24.55
		4844 (Av)	35.46	54	-18.54
		7266 (Pk)	-	-	-
		7266 (Av)	-	-	-
	H	2390 (Pk)	65.43	74	-8.57
		2390 (Av)	48.94	54	-5.06
		2422 (Pk)	92.14	*	-
		2422 (Av)	83.1	*	-
		4844 (Pk)	50.32	74	-23.68
		4844 (Av)	36.72	54	-17.28
		7266 (Pk)	-	-	-
		7266 (Av)	-	-	-
Mid	V	2442 (Pk)	96.14	*	-
		2442 (Av)	86.9	*	-
		2483.5 (Pk)	67.81	74	-6.19
		2483.5 (Av)	52	54	-2
		4884 (Pk)	50.73	74	-23.27
		4884 (Av)	37.03	54	-16.97
		7326 (Pk)	-	-	-
		7326 (Av)	-	-	-
	H	2442 (Pk)	96.92	*	-
		2442 (Av)	87.54	*	-
		2483.5 (Pk)	69.38	74	-4.62
		2483.5 (Av)	53.17	54	-0.83
		4884 (Pk)	51.54	74	-22.46
		4884 (Av)	37.75	54	-16.25
		7326 (Pk)	-	-	-
		7326 (Av)	-	-	-
High	V	2457 (Pk)	94.02	*	-
		2457 (Av)	84.83	*	-
		2483.5 (Pk)	66.7	74	-7.3
		2483.5 (Av)	50.47	54	-3.53
		4914 (Pk)	48.45	74	-25.55
		4914 (Av)	35.2	54	-18.8
		7371 (Pk)	-	-	-

		7371 (Av)	-	-	-
	H	2457 (Pk)	90.87	*	-
		2457 (Av)	81.11	*	-
		2483.5 (Pk)	63.37	74	-10.63
		2483.5 (Av)	46.78	54	-7.22
		4914 (Pk)	49.02	74	-24.98
		4914 (Av)	34.98	54	-19.02
		7371 (Pk)	-	-	-
		7371 (Av)	-	-	-

N Mode: MCS7 ; Channel Size: 40MHz Bandwidth					
Channel	**Polarization**	**Frequency (MHz)**	**Field Strength (dBµV/m)**	**Limit (dBµV/m)**	**Margin (dB)**
Low	V	2390 (Pk)	52.24	*	-
		2390 (Av)	68.4	*	-
		2422 (Pk)	97.8	74	23.8
		2422 (Av)	86.27	54	32.27
		4844 (Pk)	49.67	74	-24.33
		4844 (Av)	35.01	54	-18.99
		7266 (Pk)	-	-	-
		7266 (Av)	-	-	-
	H	2390 (Pk)	63.63	74	-10.37
		2390 (Av)	48.35	54	-5.65
		2422 (Pk)	94.72	*	-
		2422 (Av)	82.64	*	-
		4844 (Pk)	49.34	74	-24.66
		4844 (Av)	34.89	54	-19.11
		7266 (Pk)	-	-	-
		7266 (Av)	-	-	-
Mid	V	2442 (Pk)	98.52	*	-
		2442 (Av)	86.89	*	-
		2483.5 (Pk)	69.12	74	-4.88
		2483.5 (Av)	52.34	54	-1.66
		4884 (Pk)	50.67	74	-23.33
		4884 (Av)	36.78	54	-17.22
		7326 (Pk)	-	-	-
		7326 (Av)	-	-	-
	H	2442 (Pk)	96.72	*	-
		2442 (Av)	87.98	*	-
		2483.5 (Pk)	68.38	74	-5.62
		2483.5 (Av)	53.12	54	-0.88
		4884 (Pk)	53.23	74	-20.77

		4884 (Av)	38.98	54	-15.02
		7326 (Pk)	-	-	-
		7326 (Av)	-	-	-
High	V	2457 (Pk)	96.7	*	-
		2457 (Av)	84.77	*	-
		2483.5 (Pk)	65.18	74	-8.82
		2483.5 (Av)	50.54	54	-3.46
		4914 (Pk)	50.03	74	-23.97
		4914 (Av)	35.45	54	-18.55
		7371 (Pk)	-	-	-
		7371 (Av)	-	-	-
	H	2457 (Pk)	92.03	*	-
		2457 (Av)	81.38	*	-
		2483.5 (Pk)	61.09	74	-12.91
		2483.5 (Av)	47.15	54	-6.85
		4914 (Pk)	50.65	74	-23.35
		4914 (Av)	36.12	54	-17.88
		7371 (Pk)	-	-	-
		7371 (Av)	-	-	-

ZigBee:

Channel	Polarization	Frequency (MHz)	Field Strength (dBµV/m)	Limit (dBµV/m)	Margin (dB)
Low	V	2390 (Pk)	55.55	74	-18.45
		2390 (Av)	32.74	54	-21.26
		2405 (Pk)	107.84	*	-
		2405 (Av)	103.08	*	-
		4810 (Pk)	54.4	74	-19.6
		4810 (Av)	44.07	54	-9.93
		7215 (Pk)	57.87	74	-16.13
		7215 (Av)	44.98	54	-9.02
	H	2390 (Pk)	51.4	74	-22.6
		2390 (Av)	31.81	54	-22.19
		2405 (Pk)	107.35	*	-
		2405 (Av)	102.2	*	-
		4810 (Pk)	55.74	74	-18.26
		4810 (Av)	46.5	54	-7.5
		7215 (Pk)	58.55	74	-15.45
		7215 (Av)	45.81	54	-8.19
Mid	V	2440 (Pk)	107.62	*	-
		2440 (Av)	102.78	*	-

		4880 (Pk)	54.12	74	-19.88
		4880 (Av)	45.56	54	-8.44
		7320 (Pk)	58.17	74	-15.83
		7320 (Av)	45.38	54	-8.62
	H	2440 (Pk)	106.58	*	-
		2440 (Av)	102.01	*	-
		4880 (Pk)	56.24	74	-17.76
		4880 (Av)	47.62	54	-6.38
		7320 (Pk)	59.16	74	-14.84
		7320 (Av)	46.01	54	-7.99
High	V	2480 (Pk)	107.41	*	-
		2480 (Av)	102.24	*	-
		2483.5 (Pk)	54.4	74	-19.6
		2483.5 (Av)	43.39	54	-10.61
		4960 (Pk)	54.48	74	-19.52
		4960 (Av)	44.24	54	-9.76
		7440 (Pk)	59.83	74	-14.17
		7440 (Av)	46.63	54	-7.37
	H	2480 (Pk)	106.38	*	-
		2480 (Av)	101.28	*	-
		2483.5 (Pk)	53.1	74	-20.9
		2483.5 (Av)	42.24	54	-11.76
		4960 (Pk)	58.31	74	-15.69
		4960 (Av)	49.93	54	-4.07
		7440 (Pk)	59.75	74	-14.25
		7440 (Av)	47.36	54	-6.64

Bluetooth LE:

Channel	Polarization	Frequency (MHz)	Field Strength (dBµV/m)	Limit (dBµV/m)	Margin (dB)
Low	V	2390 (Pk)	54.67	74	-19.33
		2390 (Av)	35.88	54	-18.12
		2402 (Pk)	113.24	*	-
		2402 (Av)	111.94	*	-
		4804 (Pk)	54.16	74	-19.84
		4804 (Av)	45.33	54	-8.67
		7206 (Pk)	59.6	74	-14.4
		7206 (Av)	48.63	54	-5.37
	H	2390 (Pk)	48.72	74	-25.28
		2390 (Av)	28.19	54	-25.81

		2402 (Pk)	101.26	*	-
		2402 (Av)	99.98	*	-
		4804 (Pk)	55.79	74	-18.21
		4804 (Av)	47.65	54	-6.35
		7206 (Pk)	61.52	74	-12.48
		7206 (Av)	52.13	54	-1.87
Mid	V	2440 (Pk)	112.43	*	-
		2440 (Av)	110.45	*	-
		4880 (Pk)	55.16	74	-18.84
		4880 (Av)	46.01	54	-7.99
		7320 (Pk)	59.56	74	-14.44
		7320 (Av)	48.43	54	-5.57
	H	2440 (Pk)	101.34	*	-
		2440 (Av)	99.88	*	-
		4880 (Pk)	56.79	74	-17.21
		4880 (Av)	48.15	54	-5.85
		7320 (Pk)	60.52	74	-13.48
		7320 (Av)	51.73	54	-2.27
High	V	2480 (Pk)	111.8	*	-
		2480 (Av)	110.52	*	-
		2483.5 (Pk)	56.93	74	-17.07
		2483.5 (Av)	41.91	54	-12.09
		4960 (Pk)	55.35	74	-18.65
		4960 (Av)	47.02	54	-6.98
		7440 (Pk)	59.5	74	-14.5
		7440 (Av)	48.01	54	-5.99
	H	2480 (Pk)	100.64	*	-
		2480 (Av)	99.32	*	-
		2483.5 (Pk)	51.11	74	-22.89
		2483.5 (Av)	31.66	54	-22.34
		4960 (Pk)	59.02	74	-14.98
		4960 (Av)	52.2	54	-1.8
		7440 (Pk)	62.07	74	-11.93
		7440 (Av)	51.36	54	-2.64

c.) Antenna: Redpine

N Mode: MCS0 ; Channel Size: 40MHz Bandwidth					
Channel	**Polarization**	**Frequency (MHz)**	**Field Strength (dBµV/m)**	**Limit (dBµV/m)**	**Margin (dB)**
Low	V	2390 (Pk)	61.44	74	-12.56
		2390 (Av)	46.35	54	-7.65
		2422 (Pk)	88.67	*	-
		2422 (Av)	79.45	*	-
		4844 (Pk)	51.21	74	-22.79
		4844 (Av)	38.43	54	-15.57
		7266 (Pk)	-	-	-
		7266 (Av)	-	-	-
	H	2390 (Pk)	69.06	74	-4.94
		2390 (Av)	53.2	54	-0.8
		2422 (Pk)	95.93	*	-
		2422 (Av)	87.03	*	-
		4844 (Pk)	51.43	74	-22.57
		4844 (Av)	37.91	54	-16.09
		7266 (Pk)	-	-	-
		7266 (Av)	-	-	-
Mid	V	2442 (Pk)	86.64	*	-
		2442 (Av)	77.01	*	-
		2483.5 (Pk)	58.34	74	-15.66
		2483.5 (Av)	40.21	54	-13.79
		4884 (Pk)	50.48	74	-23.52
		4884 (Av)	39.64	54	-14.36
		7326 (Pk)	-	-	-
		7326 (Av)	-	-	-
	H	2442 (Pk)	96.12	*	-
		2442 (Av)	87.78	*	-
		2483.5 (Pk)	67.34	74	-6.66
		2483.5 (Av)	51.34	54	-2.66
		4884 (Pk)	53.21	74	-20.79
		4884 (Av)	38.34	54	-15.66
		7326 (Pk)	-	-	-
		7326 (Av)	-	-	-
High	V	2457 (Pk)	86.32	*	-
		2457 (Av)	76.34	*	-
		2483.5 (Pk)	59.87	74	-14.13
		2483.5 (Av)	42.01	54	-11.99
		4914 (Pk)	50.21	74	-23.79

		4914 (Av)	35.07	54	-18.93
		7371 (Pk)	-	-	-
		7371 (Av)	-	-	-
	H	2457 (Pk)	95.32	*	-
		2457 (Av)	85.43	*	-
		2483.5 (Pk)	68.81	74	-5.19
		2483.5 (Av)	52.33	54	-1.67
		4914 (Pk)	50.34	74	-23.66
		4914 (Av)	35.45	54	-18.55
		7371 (Pk)	-	-	-
		7371 (Av)	-	-	-

N Mode: MCS7 ; Channel Size: 40MHz Bandwidth					
Channel	**Polarization**	**Frequency (MHz)**	**Field Strength (dBµV/m)**	**Limit (dBµV/m)**	**Margin (dB)**
Low	V	2390 (Pk)	52.34	74	-21.66
		2390 (Av)	32.34	54	-21.66
		2422 (Pk)	88.68	*	-
		2422 (Av)	77.04	*	-
		4844 (Pk)	50.56	74	-23.44
		4844 (Av)	36.12	54	-17.88
		7266 (Pk)	-	-	-
		7266 (Av)	-	-	-
	H	2390 (Pk)	54.98	74	-19.02
		2390 (Av)	37.89	54	-16.11
		2422 (Pk)	98.02	*	-
		2422 (Av)	87.89	*	-
		4844 (Pk)	51.02	74	-22.98
		4844 (Av)	35.34	54	-18.66
		7266 (Pk)	-	-	-
		7266 (Av)	-	-	-
Mid	V	2442 (Pk)	91.76	*	-
		2442 (Av)	82.34	*	-
		2483.5 (Pk)	66.68	74	-7.32
		2483.5 (Av)	52.13	54	-1.87
		4884 (Pk)	52.01	74	-21.99
		4884 (Av)	38.78	54	-15.22
		7326 (Pk)	-	-	-
		7326 (Av)	-	-	-
	H	2442 (Pk)	99.23	*	-
		2442 (Av)	87.14	*	-
		2483.5 (Pk)	69.31	74	-4.69

		2483.5 (Av)	52.12	54	-1.88
		4884 (Pk)	54.78	74	-19.22
		4884 (Av)	40.21	54	-13.79
		7326 (Pk)	-	-	-
		7326 (Av)	-	-	-
High	V	2457 (Pk)	88.25	*	-
		2457 (Av)	77.83	*	-
		2483.5 (Pk)	57.95	74	-16.05
		2483.5 (Av)	43.48	54	-10.52
		4914 (Pk)	50.32	74	-23.68
		4914 (Av)	38.43	54	-15.57
		7371 (Pk)	-	-	-
		7371 (Av)	-	-	-
	H	2457 (Pk)	97.25	*	-
		2457 (Av)	86.85	*	-
		2483.5 (Pk)	67.76	74	-6.24
		2483.5 (Av)	53.76	54	-0.24
		4914 (Pk)	51.43	74	-22.57
		4914 (Av)	37.21	54	-16.79
		7371 (Pk)	-	-	-
		7371 (Av)	-	-	-

D.) Antenna Factor (Linx's) Antenna

B Mode: 1Mbps ; Channel size: 20MHz Bandwidth					
Channel	**Polarization**	**Frequency (MHz)**	**Field Strength (dBµV/m)**	**Limit (dBµV/m)**	**Margin (dB)**
Low	V	2390 (Pk)	54.39	74	-19.61
		2390 (Av)	31.59	54	-22.41
		2412 (Pk)	100.33	*	-
		2412 (Av)	97.52	*	-
		4824 (Pk)	50.47	74	-23.53
		4824 (Av)	40.1	54	-13.9
		7236 (Pk)	-	74	-
		7236 (Av)	-	54	-
	H	2390 (Pk)	49.31	74	-24.69
		2390 (Av)	28.54	54	-25.46
		2412 (Pk)	92.76	*	-
		2412 (Av)	90.06	*	-
		4824 (Pk)	50.54	74	-23.46
		4824 (Av)	41.53	54	-12.47
		7236 (Pk)	-	74	-

		7236 (Av)	-	54	-
Mid	V	2437 (Pk)	98.63	*	-
		2437 (Av)	97.21	*	-
		4874 (Pk)	54.96	74	-19.04
		4874 (Av)	48.83	54	-5.17
		7311 (Pk)	-	74	-
		7311 (Av)	-	54	-
	H	2437 (Pk)	95.12	*	-
		2437 (Av)	91.53	*	-
		4874 (Pk)	52.35	74	-21.65
		4874 (Av)	47.72	54	-6.28
		7311 (Pk)	-	74	-
		7311 (Av)	-	54	-
High	V	2462 (Pk)	100.28	*	-
		2462 (Av)	97.59	*	-
		2483.5 (Pk)	52.15	74	-21.85
		2483.5 (Av)	31.56	54	-22.44
		4924 (Pk)	51.68	74	-22.32
		4924 (Av)	42.24	54	-11.76
		7386 (Pk)	-	74	-
		7386 (Av)	-	54	-
	H	2462 (Pk)	90.87	*	-
		2462 (Av)	88.47	*	-
		2483.5 (Pk)	48.54	74	-25.46
		2483.5 (Av)	29.61	54	-24.39
		4924 (Pk)	53.72	74	-20.28
		4924 (Av)	47.53	54	-6.47
		7386 (Pk)	-	74	-
		7386 (Av)	-	54	-

B Mode: 11Mbps ; Channel size: 20MHz Bandwidth					
Channel	**Polarization**	**Frequency (MHz)**	**Field Strength (dBµV/m)**	**Limit (dBµV/m)**	**Margin (dB)**
Low	V	2390 (Pk)	49.33	74	-24.67
		2390 (Av)	41.72	54	-12.28
		2412 (Pk)	95.87	*	-
		2412 (Av)	93.19	*	-
		4824 (Pk)	50.11	74	-23.89
		4824 (Av)	37.18	54	-16.82
		7236 (Pk)	-	74	-
		7236 (Av)	-	54	-
	H	2390 (Pk)	56.93	74	-17.07

		2390 (Av)	45.23	54	-8.77
		2412 (Pk)	99.32	*	-
		2412 (Av)	98.76	*	-
		4824 (Pk)	59.15	74	-14.85
		4824 (Av)	46.21	54	-7.79
		7236 (Pk)	-	74	-
		7236 (Av)	-	54	-
Mid	V	2437 (Pk)	100.33	*	-
		2437 (Av)	91.04	*	-
		4874 (Pk)	51.78	74	-22.22
		4874 (Av)	38.61	54	-15.39
		7311 (Pk)	-	74	-
		7311 (Av)	-	54	-
	H	2437 (Pk)	92.36	*	-
		2437 (Av)	83.33	*	-
		4874 (Pk)	55.16	74	-18.84
		4874 (Av)	42.31	54	-11.69
		7311 (Pk)	61.22	74	-12.78
		7311 (Av)	48.24	54	-5.76
High	V	2462 (Pk)	108.19	*	-
		2462 (Av)	100.23	*	-
		2483.5 (Pk)	52.04	74	-21.96
		2483.5 (Av)	37.71	54	-16.29
		4924 (Pk)	52.05	74	-21.95
		4924 (Av)	39.09	54	-14.91
		7386 (Pk)	-	74	-
		7386 (Av)	-	54	-
	H	2462 (Pk)	98.31	*	-
		2462 (Av)	90.38	*	-
		2483.5 (Pk)	46.44	74	-27.56
		2483.5 (Av)	30.65	54	-23.35
		4924 (Pk)	55.52	74	-18.48
		4924 (Av)	42.37	54	-11.63
		7386 (Pk)	60.21	74	-13.79
		7386 (Av)	47.53	54	-6.47

G Mode: 6Mbps ; Channel Size: 20MHz Bandwidth					
Channel	**Polarization**	**Frequency (MHz)**	**Field Strength (dBµV/m)**	**Limit (dBµV/m)**	**Margin (dB)**
Low	V	2390 (Pk)	55.04	74	-18.96
		2390 (Av)	32.05	54	-21.95
		2412 (Pk)	99.95	*	-

		2412 (Av)	91.39	*	-
		4824 (Pk)	56.37	74	-17.63
		4824 (Av)	41.72	54	-12.28
		7236 (Pk)	-	74	-
		7236 (Av)	-	54	-
	H	2390 (Pk)	48.64	74	-25.36
		2390 (Av)	28.63	54	-25.37
		2412 (Pk)	92.27	*	-
		2412 (Av)	83.33	*	-
		4824 (Pk)	51.29	74	-22.71
		4824 (Av)	40.83	54	-13.17
		7236 (Pk)	-	74	-
		7236 (Av)	-	54	-
Mid	V	2390 (Pk)	-	74	-
		2490 (Av)	-	54	-
		2437 (Pk)	107.32	*	-
		2437 (Av)	98.54	*	-
		2483.5 (Pk)	65.86	74	-8.14
		2483.5 (Av)	47.71	54	-6.29
		4874 (Pk)	59.81	74	-14.19
		4874 (Av)	45.43	54	-8.57
		7311 (Pk)	65.41	74	-8.59
		7311 (Av)	46.31	54	-7.69
	H	2390 (Pk)	-	74	-
		2490 (Av)	-	54	-
		2437 (Pk)	100.34	*	-
		2437 (Av)	99.59	*	-
		2483.5 (Pk)	62.34	74	-11.66
		2483.5 (Av)	36.38	54	-17.62
		4874 (Pk)	54.65	74	-19.35
		4874 (Av)	43.45	54	-10.55
		7311 (Pk)	61.91	74	-12.09
		7311 (Av)	49.37	54	-4.63
High	V	2462 (Pk)	98.89	*	-
		2462 (Av)	92.67	*	-
		2483.5 (Pk)	66.56	74	-7.44
		2483.5 (Av)	45.55	54	-8.45
		4924 (Pk)	52.02	74	-21.98
		4924 (Av)	36.68	54	-17.32
		7386 (Pk)	-	74	-
		7386 (Av)	-	54	-
	H	2462 (Pk)	97.89	*	-
		2462 (Av)	88.34	*	-

		2483.5 (Pk)	65.32	74	-8.68
		2483.5 (Av)	46.12	54	-7.88
		4924 (Pk)	50.56	74	-23.44
		4924 (Av)	37.78	54	-16.22
		7386 (Pk)	-	74	-
		7386 (Av)	-	54	-

G Mode: 54Mbps ; Channel Size: 20MHz Bandwidth					
Channel	**Polarization**	**Frequency (MHz)**	**Field Strength(dBµV/m)**	**Limit (dBµV/m)**	**Margin (dB)**
Low	V	2390 (Pk)	62.34	74	-11.66
		2390 (Av)	45.67	54	-8.33
		2412 (Pk)	101.07	*	-
		2412 (Av)	91.13	*	-
		4824 (Pk)	49.2	74	-24.8
		4824 (Av)	37.21	54	-16.79
		7236 (Pk)	-	74	-
		7236 (Av)	-	54	-
	H	2390 (Pk)	58.02	74	-15.98
		2390 (Av)	45.21	54	-8.79
		2412 (Pk)	93.01	*	-
		2412 (Av)	83.69	*	-
		4824 (Pk)	47.78	74	-26.22
		4824 (Av)	34.78	54	-19.22
		7236 (Pk)	-	74	-
		7236 (Av)	-	54	-
Mid	V	2390 (Pk)	63.89	74	-10.11
		2390 (Av)	46.21	54	-7.79
		2437 (Pk)	107.87	*	-
		2437 (Av)	99.54	*	-
		2483.5 (Pk)	66.78	74	-7.22
		2483.5 (Av)	47.53	54	-6.47
		4874 (Pk)	59.54	74	-14.46
		4874 (Av)	47.56	54	-6.44
		7311 (Pk)	63.21	74	-10.79
		7311 (Av)	49.36	54	-4.64
	H	2390 (Pk)	59.21	74	-14.79
		2390 (Av)	41.19	54	-12.81
		2437 (Pk)	98.34	*	-
		2437 (Av)	91.67	*	-
		2483.5 (Pk)	63.32	74	-10.68
		2483.5 (Av)	42.45	54	-11.55

		4874 (Pk)	53.21	74	-20.79
		4874 (Av)	39.67	54	-14.33
		7311 (Pk)	57.32	74	-16.68
		7311 (Av)	39.89	54	-14.11
High	V	2462 (Pk)	102.36	*	-
		2462 (Av)	91.07	*	-
		2483.5 (Pk)	62.96	74	-11.04
		2483.5 (Av)	45.25	54	-8.75
		4924 (Pk)	58.39	74	-15.61
		4924 (Av)	48.28	54	-5.72
		7386 (Pk)	-	74	-
		7386 (Av)	-	54	-
	H	2462 (Pk)	91.43	*	-
		2462 (Av)	81.58	*	-
		2483.5 (Pk)	54.26	74	-19.74
		2483.5 (Av)	35.89	54	-18.11
		4924 (Pk)	58.28	74	-15.72
		4924 (Av)	48.82	54	-5.18
		7386 (Pk)	-	74	-
		7386 (Av)	-	54	-

N Mode: MCS0 ; Channel Size: 20MHz Bandwidth					
Channel	**Polarization**	**Frequency (MHz)**	**Field Strength (dBµV/m)**	**Limit (dBµV/m)**	**Margin (dB)**
Low	V	2390 (Pk)	63.01	74	-10.99
		2390 (Av)	44.81	54	-9.19
		2412 (Pk)	98.88	*	-
		2412 (Av)	88.92	*	-
		4824 (Pk)	51.31	74	-22.69
		4824 (Av)	40.14	54	-13.86
		7236 (Pk)	-	74	-
		7236 (Av)	-	54	-
	H	2390 (Pk)	66.56	74	-7.44
		2390 (Av)	46.58	54	-7.42
		2412 (Pk)	95.45	*	-
		2412 (Av)	85.56	*	-
		4824 (Pk)	49.67	74	-24.33
		4824 (Av)	38.32	54	-15.68
		7236 (Pk)	-	74	-
		7236 (Av)	-	54	-
Mid	V	2437 (Pk)	110.13	*	-
		2437 (Av)	98.27	*	-

		2483.5 (Pk)	69.21	74	-4.79
		2483.5 (Av)	49.46	54	-4.54
		4874 (Pk)	60.21	74	-13.79
		4874 (Av)	47.78	54	-6.22
		7311 (Pk)	64.42	-	-
		7311 (Av)	50.03	-	-
	H	2437 (Pk)	100.59	*	-
		2437 (Av)	90.43	*	-
		2483.5 (Pk)	62.78	74	-11.22
		2483.5 (Av)	41.34	54	-12.66
		4874 (Pk)	55.32	74	-18.68
		4874 (Av)	42.87	54	-11.13
		7311 (Pk)	-	74	-
		7311 (Av)	-	54	-
High	V	2462 (Pk)	100.12	*	-
		2462 (Av)	90.23	*	-
		2483.5 (Pk)	67.56	74	-6.44
		2483.5 (Av)	50.78	54	-3.22
		4924 (Pk)	48.43	74	-25.57
		4924 (Av)	39.89	54	-14.11
		7386 (Pk)	-	74	-
		7386 (Av)	-	54	-
	H	2462 (Pk)	90.36	*	-
		2462 (Av)	80.98	*	-
		2483.5 (Pk)	53.98	74	-20.02
		2483.5 (Av)	39.54	54	-14.46
		4924 (Pk)	49.34	74	-24.66
		4924 (Av)	36.38	54	-17.62
		7386 (Pk)	-	74	-
		7386 (Av)	-	54	-

N Mode: MCS7 ; Channel Size: 20MHz Bandwidth					
Channel	**Polarization**	**Frequency (MHz)**	**Field Strength (dBµV/m)**	**Limit (dBµV/m)**	**Margin (dB)**
Low	V	2390 (Pk)	62.14	74	-11.86
		2390 (Av)	44.39	54	-9.61
		2412 (Pk)	101.32	*	-
		2412 (Av)	91.84	*	-
		4824 (Pk)	52.12	74	-21.88
		4824 (Av)	40.82	54	-13.18
		7236 (Pk)	-	74	-

		7236 (Av)	-	54	-
	H	2390 (Pk)	58.13	74	-15.87
		2390 (Av)	41.78	54	-12.22
		2412 (Pk)	91.45	*	-
		2412 (Av)	82.11	*	-
		4824 (Pk)	49.23	74	-24.77
		4824 (Av)	38.16	54	-15.84
		7236 (Pk)	-	74	-
		7236 (Av)	-	54	-
Mid	V	2437 (Pk)	110.26	*	-
		2437 (Av)	99.54	*	-
		2483.5 (Pk)	63.82	74	-10.18
		2483.5 (Av)	44.16	54	-9.84
		4874 (Pk)	70.97	74	-3.03
		4874 (Av)	51.01	54	-2.99
		7311 (Pk)	60.83	74	-13.17
		7311 (Av)	49.07	54	-4.93
	H	2437 (Pk)	100.02	*	-
		2437 (Av)	90.74	*	-
		2483.5 (Pk)	57.98	74	-16.02
		2483.5 (Av)	36.61	54	-17.39
		4874 (Pk)	55.19	74	-18.81
		4874 (Av)	42.78	54	-11.22
		7311 (Pk)	-	74	-
		7311 (Av)	-	54	-
High	V	2462 (Pk)	100.97	*	-
		2462 (Av)	90.83	*	-
		2483.5 (Pk)	68.49	74	-5.51
		2483.5 (Av)	51.66	54	-2.34
		4924 (Pk)	50.23	74	-23.77
		4924 (Av)	38.87	54	-15.13
		7386 (Pk)	-	74	-
		7386 (Av)	-	54	-
	H	2462 (Pk)	91.36	*	-
		2462 (Av)	80.98	*	-
		2483.5 (Pk)	57.98	74	-16.02
		2483.5 (Av)	40.54	54	-13.46
		4924 (Pk)	49.34	74	-24.66
		4924 (Av)	36.82	54	-17.18
		7386 (Pk)	-	74	-
		7386 (Av)	-	54	-

N Mode: MCS0 ; Channel Size: 40MHz Bandwidth					
Channel	Polarization	Frequency (MHz)	Field Strength(dBµV/m)	Limit (dBµV/m)	Margin (dB)
Low	V	2390 (Pk)	66.25	74	-7.75
		2390 (Av)	50.35	54	-3.65
		2422 (Pk)	96.81	*	-
		2422 (Av)	86.27	*	-
		4844 (Pk)	51.43	74	-22.57
		4844 (Av)	39.21	54	-14.79
		7266 (Pk)	-	74	-
		7266 (Av)	-	54	-
	H	2390 (Pk)	60.8	74	-13.2
		2390 (Av)	42.43	54	-11.57
		2422 (Pk)	86.34	*	-
		2422 (Av)	77.21	*	-
		4844 (Pk)	51.01	74	-22.99
		4844 (Av)	38.34	54	-15.66
		7266 (Pk)	-	74	-
		7266 (Av)	-	54	-
Mid	V	2442 (Pk)	96.97	*	-
		2442 (Av)	86.14	*	-
		2483.5 (Pk)	67.53	74	-6.47
		2483.5 (Av)	51.78	54	-2.22
		4884 (Pk)	51.67	74	-22.33
		4884 (Av)	37.45	54	-16.55
		7326 (Pk)	-	74	-
		7326 (Av)	-	54	-
	H	2442 (Pk)	86.84	*	-
		2442 (Av)	76.6	*	-
		2483.5 (Pk)	55.98	74	-18.02
		2483.5 (Av)	40.67	54	-13.33
		4884 (Pk)	48.47	74	-25.53
		4884 (Av)	39.876	54	-14.124
		7326 (Pk)	-	74	-
		7326 (Av)	-	54	-
High	V	2457 (Pk)	94.53	*	-
		2457 (Av)	84.99	*	-
		2483.5 (Pk)	66.01	74	-7.99
		2483.5 (Av)	53.58	54	-0.42
		4914 (Pk)	50.45	74	-23.55
		4914 (Av)	35.97	54	-18.03
		7371 (Pk)	-	74	-

		7371 (Av)	-	54	-
	H	2457 (Pk)	86.83	*	-
		2457 (Av)	77.83	*	-
		2483.5 (Pk)	59.28	74	-14.72
		2483.5 (Av)	41.26	54	-12.74
		4914 (Pk)	49.93	74	-24.07
		4914 (Av)	35.82	54	-18.18
		7371 (Pk)	-	74	-
		7371 (Av)	-	54	-

N Mode: MCS7 ; Channel Size: 40MHz Bandwidth					
Channel	**Polarization**	**Frequency (MHz)**	**Field Strength (dBµV/m)**	**Limit (dBµV/m)**	**Margin (dB)**
Low	V	2390 (Pk)	55.86	74	-18.14
		2390 (Av)	37.82	54	-16.18
		2422 (Pk)	98.43	*	-
		2422 (Av)	88.54	*	-
		4844 (Pk)	50.43	74	-23.57
		4844 (Av)	34.73	54	-19.27
		7266 (Pk)	-	74	-
		7266 (Av)	-	54	-
	H	2390 (Pk)		74	-74
		2390 (Av)	52.83	54	-1.17
		2422 (Pk)	33.26	*	-
		2422 (Av)	88.91	*	-
		4844 (Pk)	76.45	74	2.45
		4844 (Av)	50.37	54	-3.63
		7266 (Pk)	-	74	-
		7266 (Av)	-	54	-
Mid	V	2442 (Pk)	99.12	*	-
		2442 (Av)	87.48	*	-
		2483.5 (Pk)	69.87	74	-4.13
		2483.5 (Av)	52.64	54	-1.36
		4884 (Pk)	54.37	74	-19.63
		4884 (Av)	40.82	54	-13.18
		7326 (Pk)	-	74	-
		7326 (Av)	-	54	-
	H	2442 (Pk)	91.64	*	-
		2442 (Av)	82.74	*	-
		2483.5 (Pk)	66.28	74	-7.72
		2483.5 (Av)	52.54	54	-1.46
		4884 (Pk)	51.39	74	-22.61

		4884 (Av)	38.52	54	-15.48
		7326 (Pk)	-	74	-
		7326 (Av)	-	54	-
High	V	2457 (Pk)	96.41	*	-
		2457 (Av)	85.96	*	-
		2483.5 (Pk)	68.93	74	-5.07
		2483.5 (Av)	52.74	54	-1.26
		4914 (Pk)	49.89	74	-24.11
		4914 (Av)	36.28	54	-17.72
		7371 (Pk)	-	74	-
		7371 (Av)	-	54	-
	H	2457 (Pk)	86.38	*	-
		2457 (Av)	76.23	*	-
		2483.5 (Pk)	58.29	74	-15.71
		2483.5 (Av)	41.84	54	-12.16
		4914 (Pk)	48.26	74	-25.74
		4914 (Av)	37.98	54	-16.02
		7371 (Pk)	-	74	-
		7371 (Av)	-	54	-

ZigBee:

Channel	Polarization	Frequency (MHz)	Field Strength(dBµV/m)	Limit (dBµV/m)	Margin (dB)
Low	V	2390 (Pk)	53.25	74	-20.75
		2390 (Av)	37.94	54	-16.06
		2405 (Pk)	110.75	*	-
		2405 (Av)	105.74	*	-
		4810 (Pk)	57.15	74	-16.85
		4810 (Av)	48.48	54	-05.52
		7215 (Pk)	58.32	74	-15.68
		7215 (Av)	46.34	54	-07.66
	H	2390 (Pk)	46.05	74	-27.95
		2390 (Av)	31.81	54	-22.19
		2405 (Pk)	104.99	*	-
		2405 (Av)	94.83	*	-
		4810 (Pk)	53.58	74	-20.42
		4810 (Av)	41.02	54	-12.98
		7215 (Pk)	60.93	74	-13.07
		7215 (Av)	46.38	54	-07.62
Mid	V	2440 (Pk)	109.98	*	-
		2440 (Av)	104.34	*	-

		4880 (Pk)	53.84	74	-20.16
		4880 (Av)	43.27	54	-10.73
		7320 (Pk)	61.83	74	-12.17
		7320 (Av)	49.27	54	-04.73
	H	2440 (Pk)	103.43	*	-
		2440 (Av)	98.38	*	-
		4880 (Pk)	52.41	74	-21.59
		4880 (Av)	42.75	54	-11.25
		7320 (Pk)	61.84	74	-12.16
		7320 (Av)	47.28	54	-06.72
High	V	2480 (Pk)	110.08	*	-
		2480 (Av)	105.01	*	-
		2483.5 (Pk)	58.45	74	-15.55
		2483.5 (Av)	47.23	54	-6.77
		4960 (Pk)	57.86	74	-16.14
		4960 (Av)	49.35	54	-04.65
		7440 (Pk)	60.43	74	-13.57
		7440 (Av)	47.35	54	-06.65
	H	2480 (Pk)	103.24	*	-
		2480 (Av)	96.34	*	-
		2483.5 (Pk)	56.34	74	-17.66
		2483.5 (Av)	37.75	54	-16.25
		4960 (Pk)	55.46	74	-18.54
		4960 (Av)	42.47	54	-11.53
		7440 (Pk)	60.76	74	-13.24
		7440 (Av)	47.93	54	-06.07

Bluetooth LE:

Channel	Polarization	Frequency (MHz)	Field Strength (dBµV/m)	Limit (dBµV/m)	Margin (dB)
Low	V	2390 (Pk)	55.26	74	-18.74
		2390 (Av)	43.17	54	-10.83
		2402 (Pk)	112.22	*	-
		2402 (Av)	110.91	*	-
		4804 (Pk)	50.52	74	-23.48
		4804 (Av)	39.95	54	-14.05
		7206 (Pk)	59.94	74	-14.06
		7206 (Av)	49.92	54	-04.08
	H	2390 (Pk)	49.68	74	-24.32
		2390 (Av)	36.08	54	-17.92

		2402 (Pk)	104.22	*	-
		2402 (Av)	102.83	*	-
		4804 (Pk)	51.39	74	-22.61
		4804 (Av)	39.97	54	-14.03
		7206 (Pk)	60.89	74	-13.11
		7206 (Av)	50.74	54	-03.26
Mid	V	2440 (Pk)	112.5	*	-
		2440 (Av)	111.44	*	-
		4880 (Pk)	55.38	74	-18.62
		4880 (Av)	45.29	54	-8.71
		7320 (Pk)	62.17	74	-11.83
		7320 (Av)	51.93	54	-02.07
	H	2440 (Pk)	106.38	*	-
		2440 (Av)	104.27	*	-
		4880 (Pk)	59.27	74	-14.73
		4880 (Av)	52.48	54	-1.52
		7320 (Pk)	62.48	74	-11.52
		7320 (Av)	51.49	54	-02.51
High	V	2480 (Pk)	113.5	*	-
		2480 (Av)	112.14	*	-
		2483.5 (Pk)	53.78	74	-20.22
		2483.5 (Av)	43.82	54	-10.18
		4960 (Pk)	54.98	74	-19.02
		4960 (Av)	44.4	54	-09.6
		7440 (Pk)	61.13	74	-12.87
		7440 (Av)	50.35	54	-03.65
	H	2480 (Pk)	105.11	*	-
		2480 (Av)	103.8	*	-
		2483.5 (Pk)	48.32	74	-25.68
		2483.5 (Av)	47.39	54	-06.61
		4960 (Pk)	58.74	74	-15.26
		4960 (Av)	51.78	54	-02.22
		7440 (Pk)	61.86	74	-12.14
		7440 (Av)	51.68	54	-02.32

Power level Settings used during Fractus Antenna testing:

		Channels					
		Low		Mid		High	
Mode	Data Rate (Mbps)	Tx Power	Attenuation for Antenna Gain	Tx power	Attenuation for Antenna Gain	Tx power	Attenuation for Antenna Gain
802.11 b	1	14	4	14	4	14	4
	11	14	0	14	0	14	0
802.11 g	6	8	0	18	4	8	0
	24	8	0	18	4	8	0
	54	8	0	18	4	8	0
802.11 n_20MHz	MCS0	7	0	18	4	7	0
	MCS4	7	0	18	4	7	0
	MCS7	7	0	18	4	7	0
802.11 n_40MHz	MCS0	8	2	10	3	7	1
	MCS4	8	2	10	3	7	1
	MCS7	8	2	10	3	7	1
Bluetooth	LE	15	0	15	0	15	0
ZigBee	250kbps	12	0	12	0	12	0

Power level Settings used during Molex Antenna testing:

		Channels					
		Low		Mid		High	
Mode	Data Rate (Mbps)	Tx Power	Attenuation for Antenna Gain	Tx power	Attenuation for Antenna Gain	Tx power	Attenuation for Antenna Gain
802.11 b	1	14	4	14	4	14	4
	11	14	1	14	0	14	1
802.11 g	6	8	1	18	2	8	1
	24	8	1	18	2	8	1
	54	8	1	18	2	8	1
802.11 n_20MHz	MCS0	7	1	18	2	7	1
	MCS4	7	1	18	2	7	1
	MCS7	7	1	18	2	7	1
802.11 n_40MHz	MCS0	8	2	10	4	7	3
	MCS4	8	2	10	4	7	3
	MCS7	8	2	10	4	7	3
Bluetooth	LE	15	0	15	0	15	0
ZigBee	250kbps	12	0	12	0	12	0

Power level Settings used during Antenna Factor (Linx's) Antenna testing:

		Channels					
		Low		Mid		High	
Mode	Data Rate (Mbps)	Tx Power	Attenuation for Antenna Gain	Tx power	Attenuation for Antenna Gain	Tx power	Attenuation for Antenna Gain
802.11 b	1	14	4	14	4	14	4
	11	14	1	14	0	14	1
802.11 g	6	8	1	18	2	8	1
	24	8	1	18	2	8	1
	54	8	1	18	2	8	1
802.11 n_20MHz	MCS0	7	1	18	2	7	1
	MCS4	7	1	18	2	7	1
	MCS7	7	1	18	2	7	1
802.11 n_40MHz	MCS0	8	2	10	4	7	3
	MCS4	8	2	10	4	7	3
	MCS7	8	2	10	4	7	3
Bluetooth	LE	15	0	15	0	15	0
ZigBee	250kbps	12	0	12	0	12	0

Power level Settings used during Redpine Antenna testing:

		Channels					
		Low		Mid		High	
Mode	Data Rate (Mbps)	Tx Power	Attenuation for Antenna Gain	Tx power	Attenuation for Antenna Gain	Tx power	Attenuation for Antenna Gain
802.11 n_40MHz	MCS0	6	0	6	0	5	0
	MCS4	6	0	6	0	5	0
	MCS7	6	0	6	0	5	0

***** END OF TEST REPORT*****