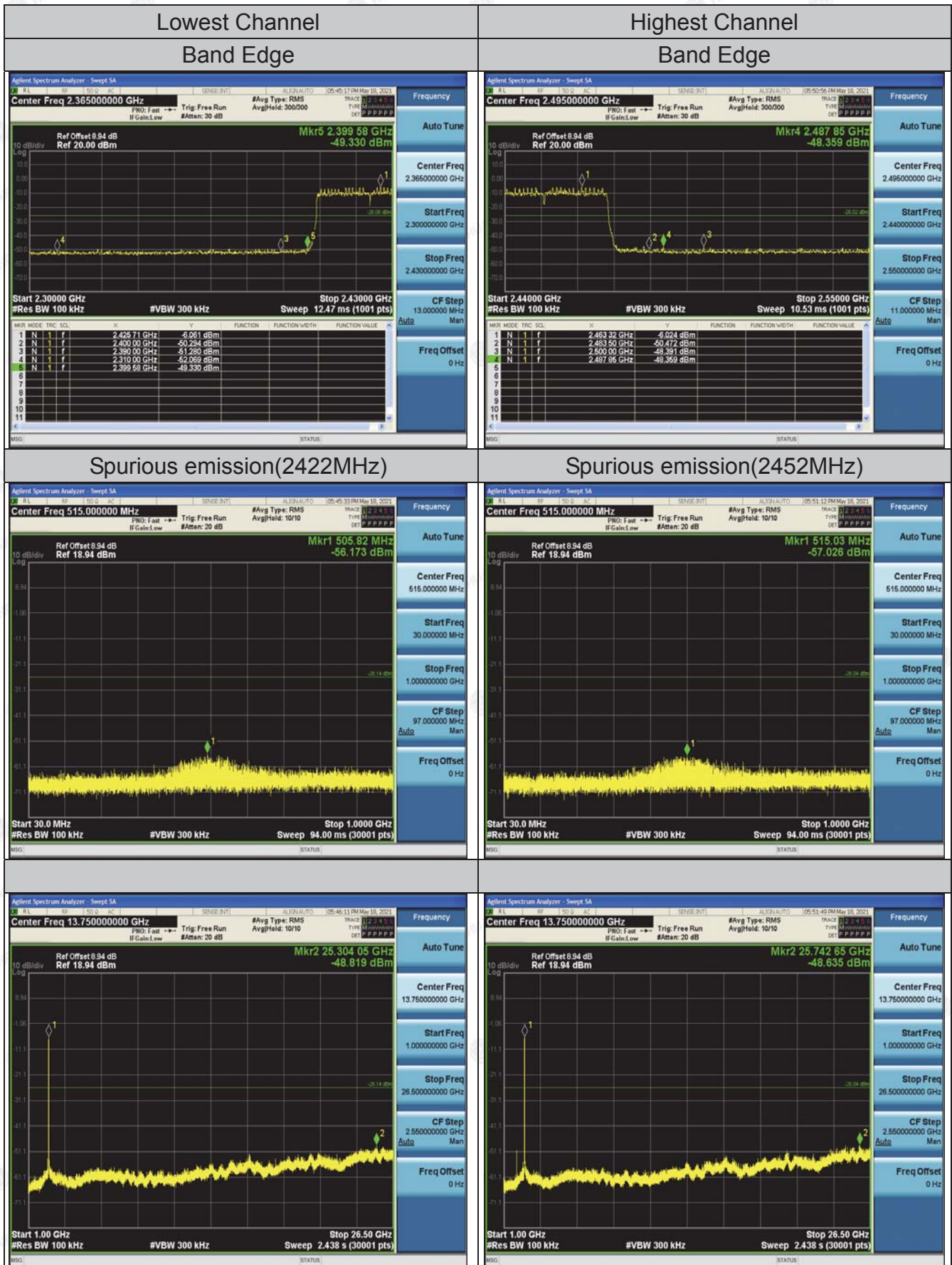


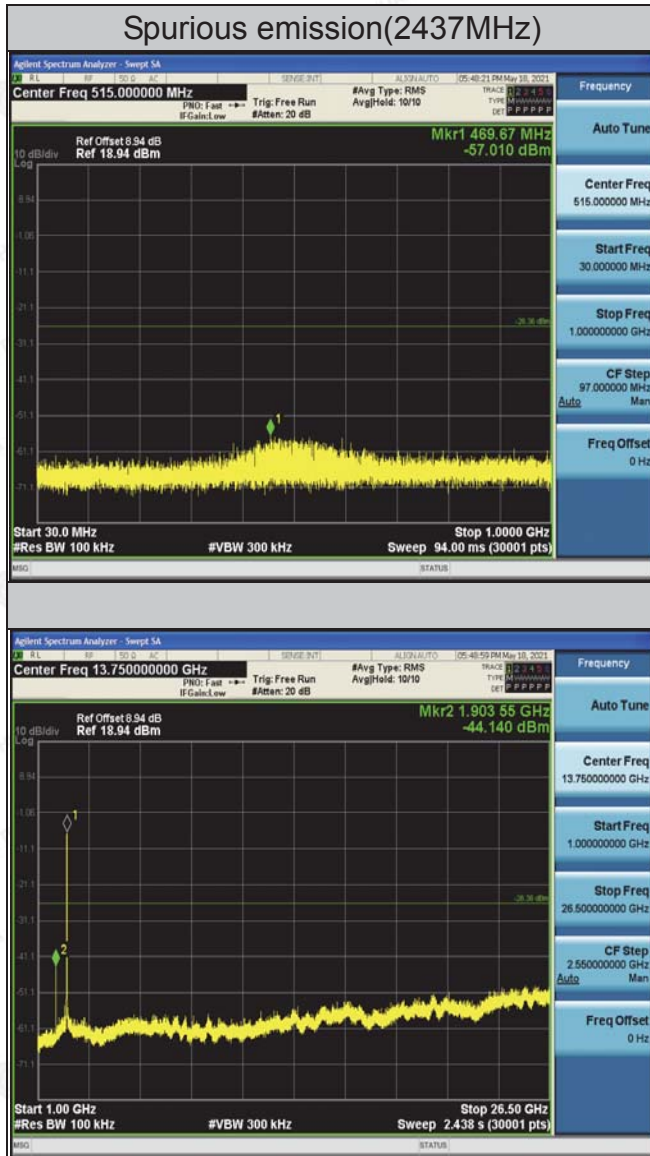
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802.11ax (HT40) Modulation



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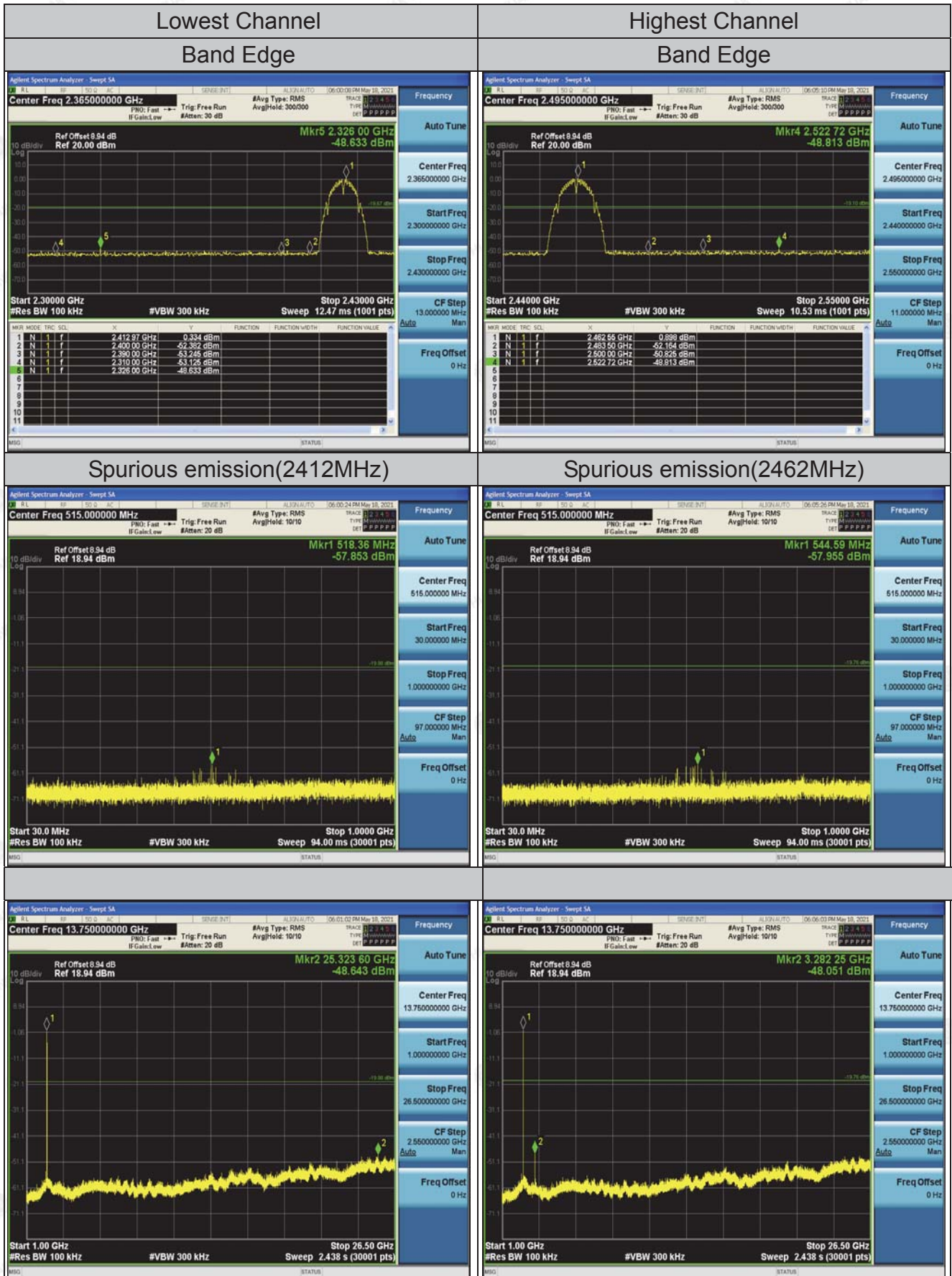
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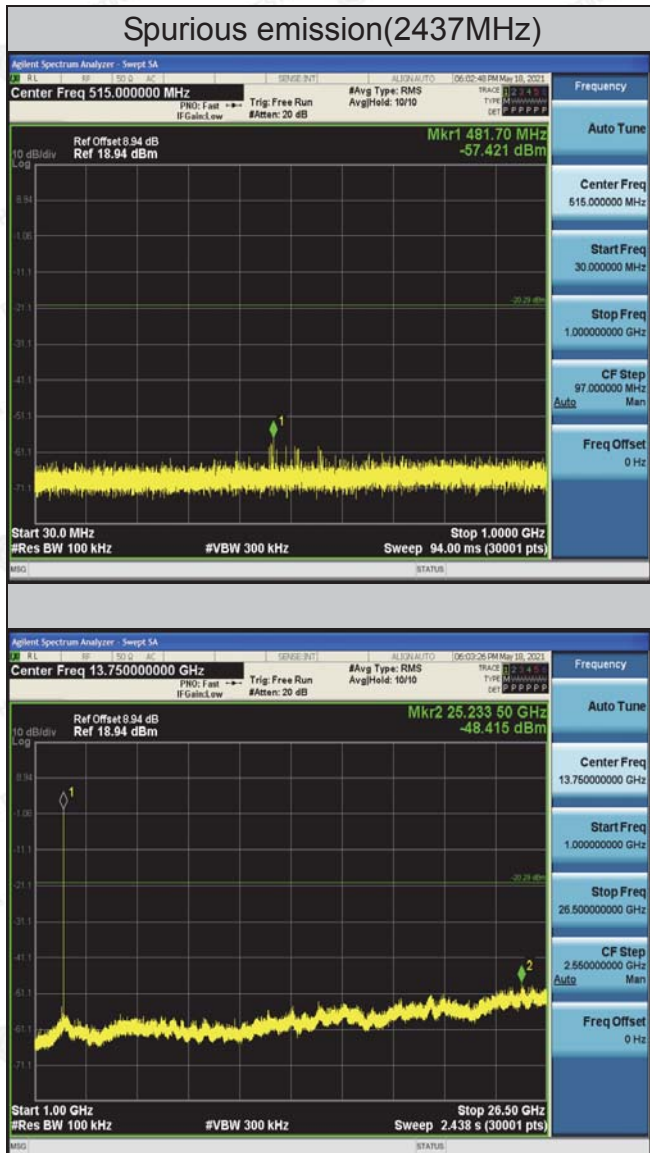
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Chain 2
802.11b Modulation



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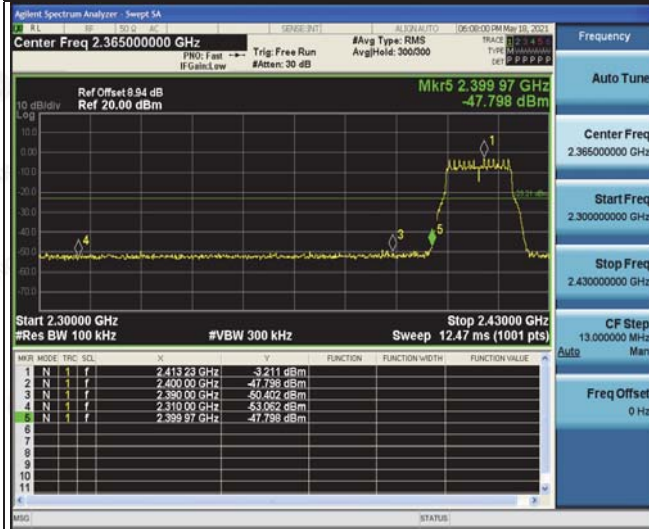
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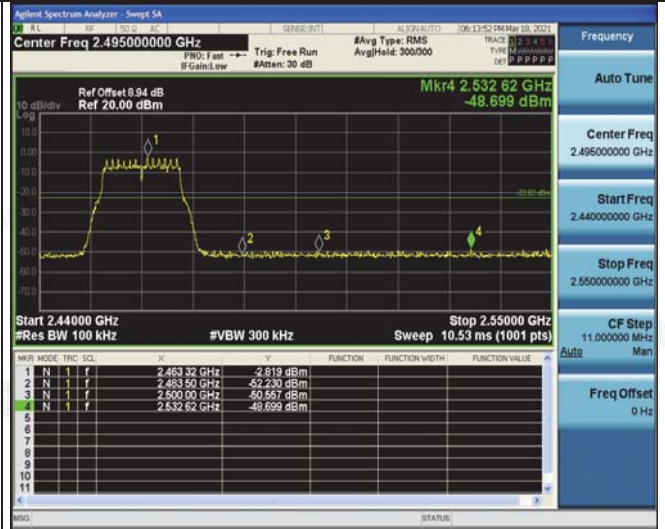


802.11g Modulation

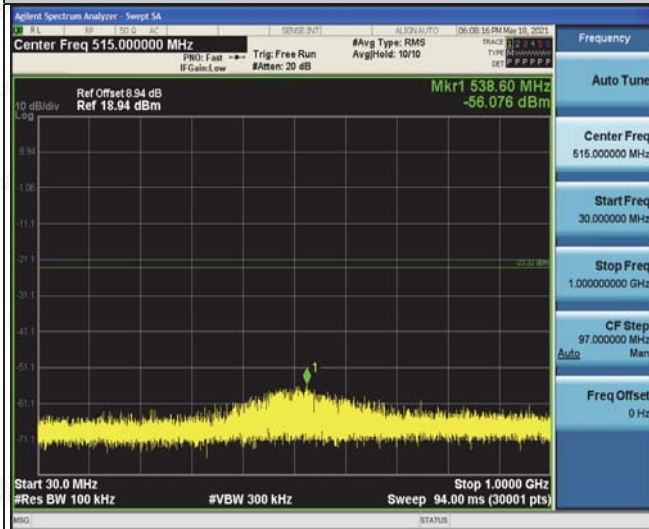
Lowest Channel
Band Edge



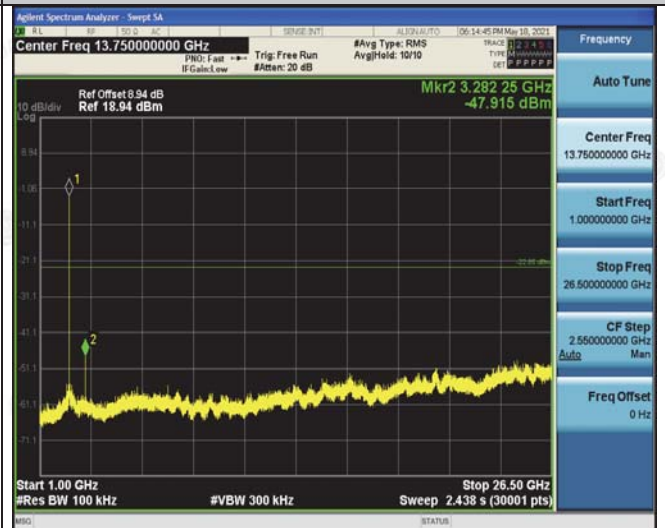
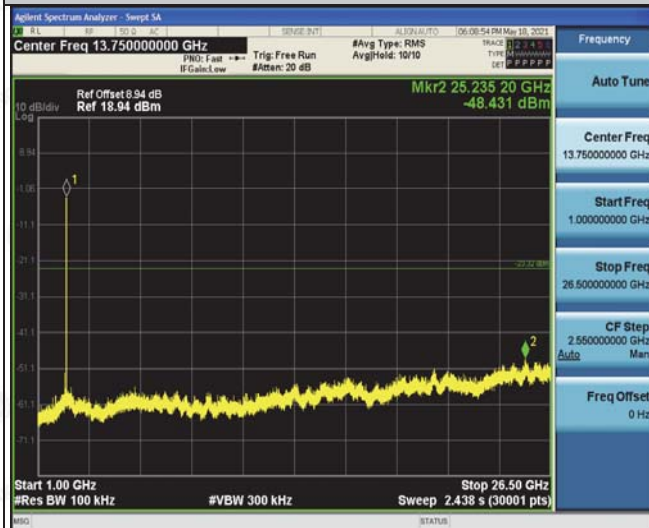
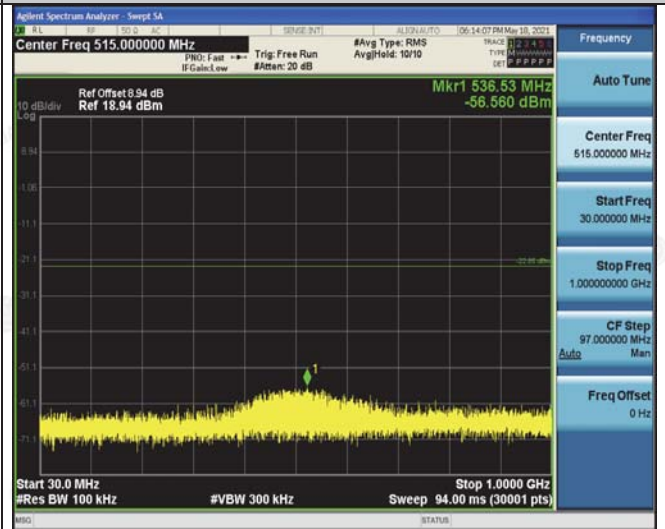
Highest Channel
Band Edge



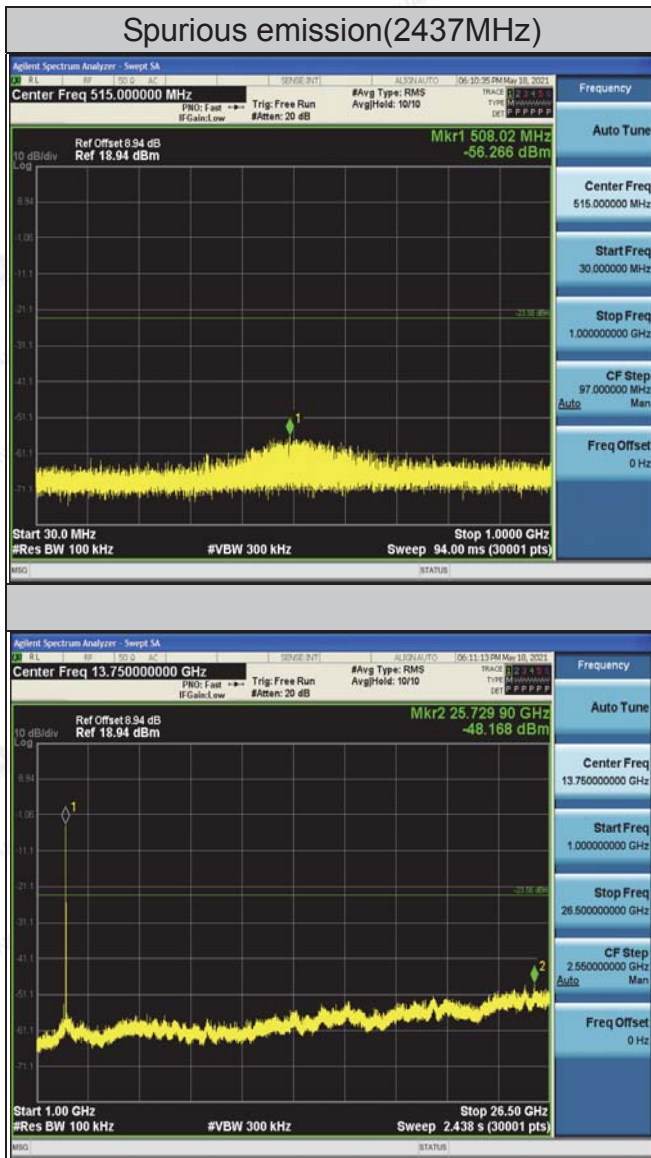
Spurious emission(2412MHz)



Spurious emission(2462MHz)



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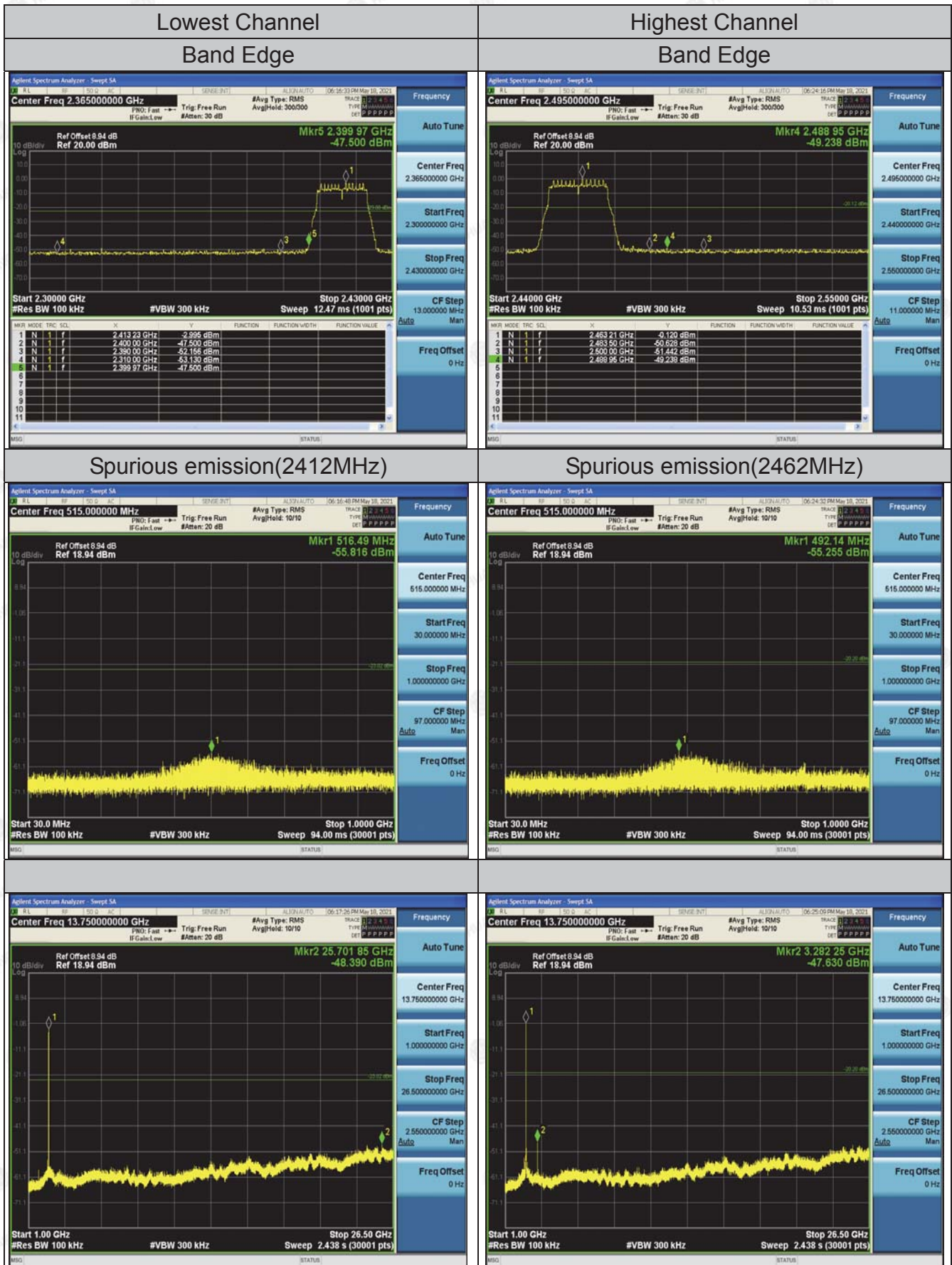
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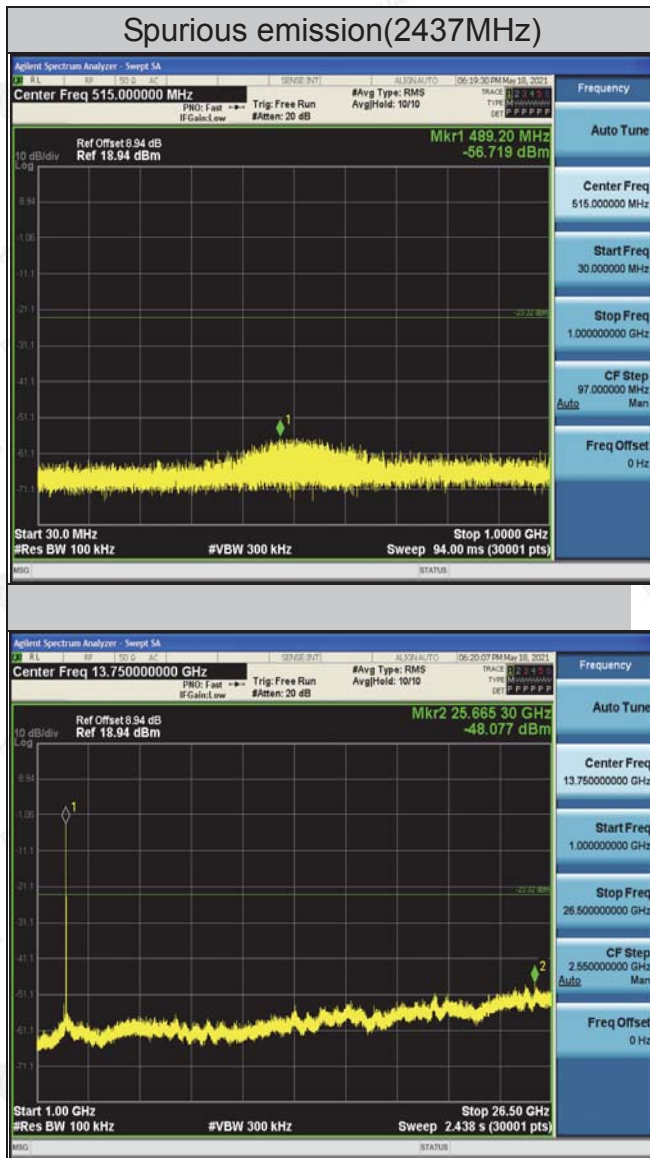
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802.11n (HT20) Modulation



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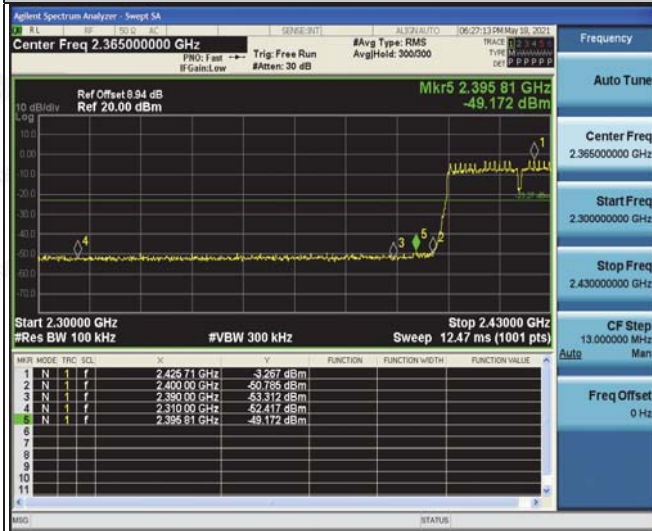
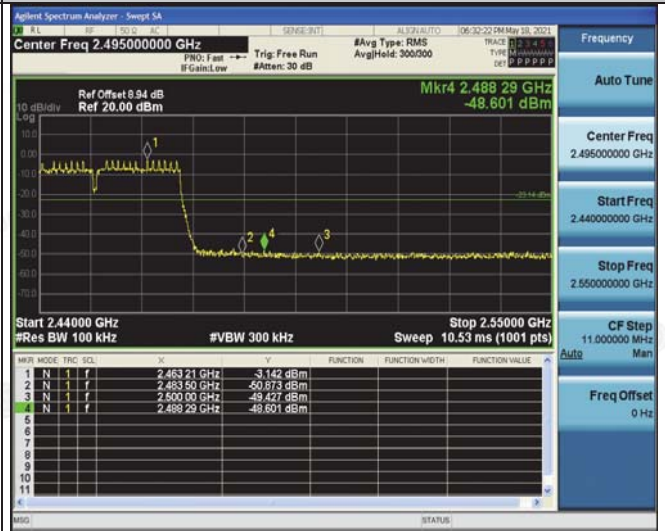
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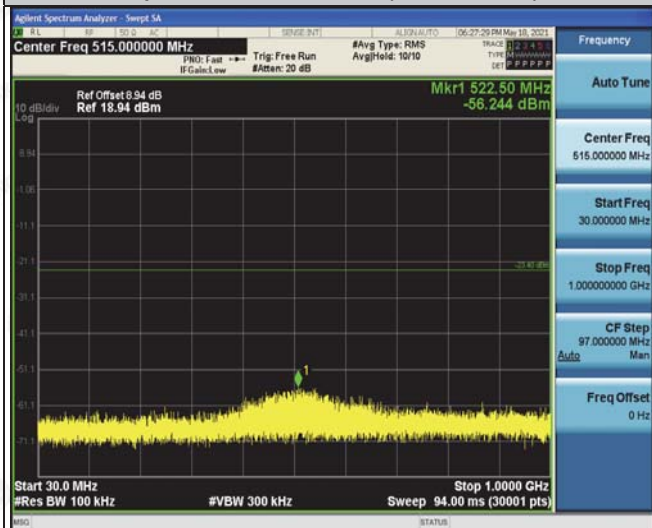
1-2/F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China



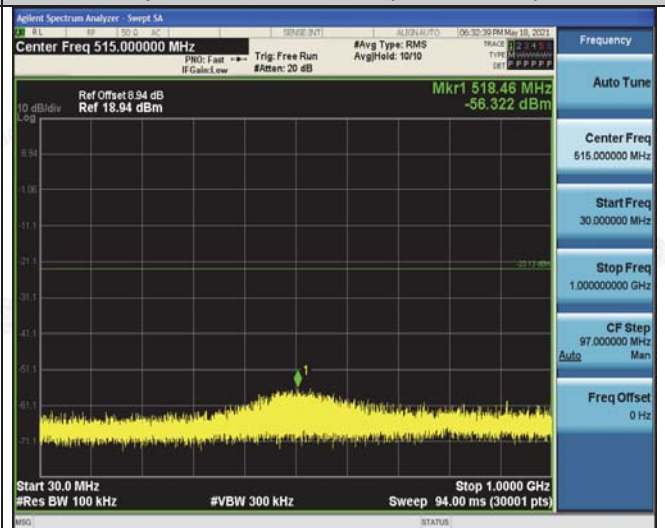
802.11n (HT40) Modulation

Lowest Channel
Band EdgeHighest Channel
Band Edge

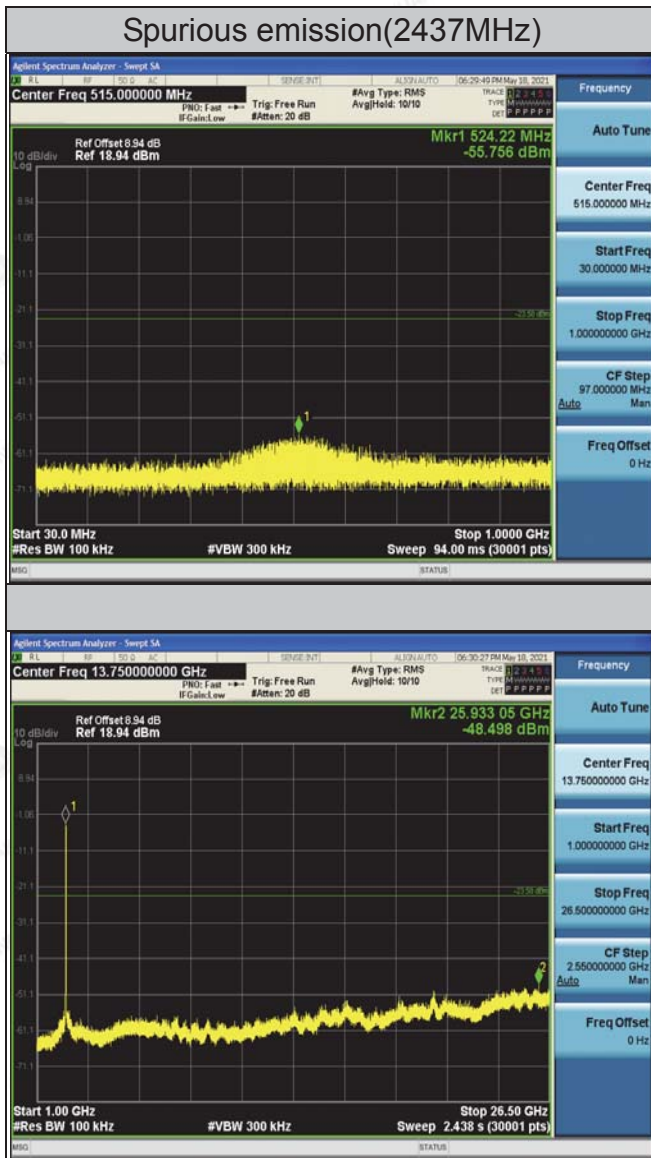
Spurious emission(2422MHz)



Spurious emission(2452MHz)



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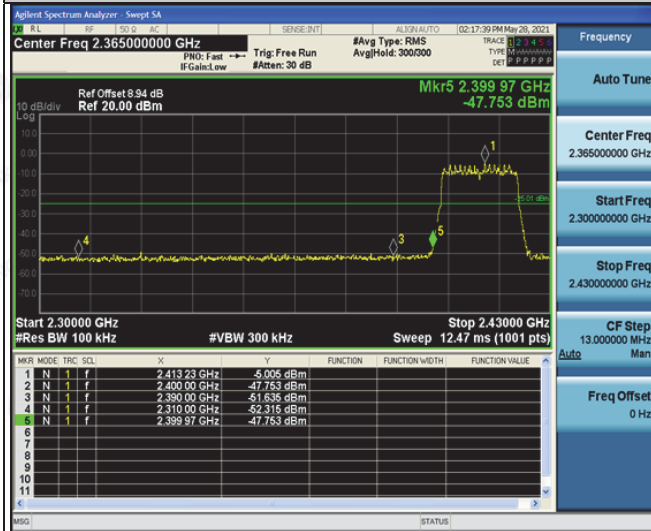
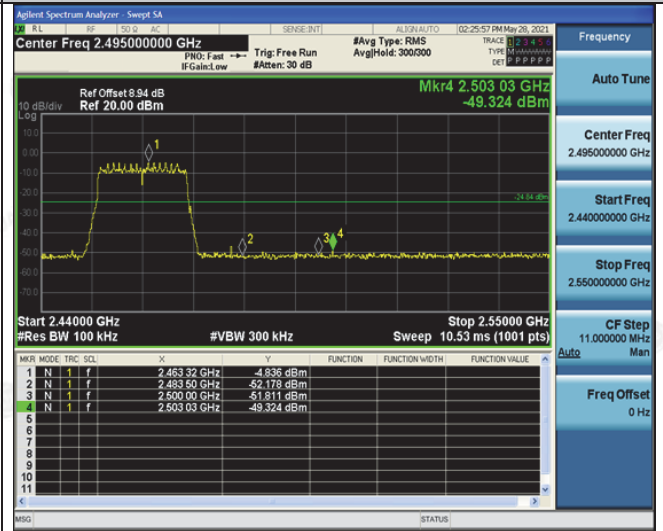
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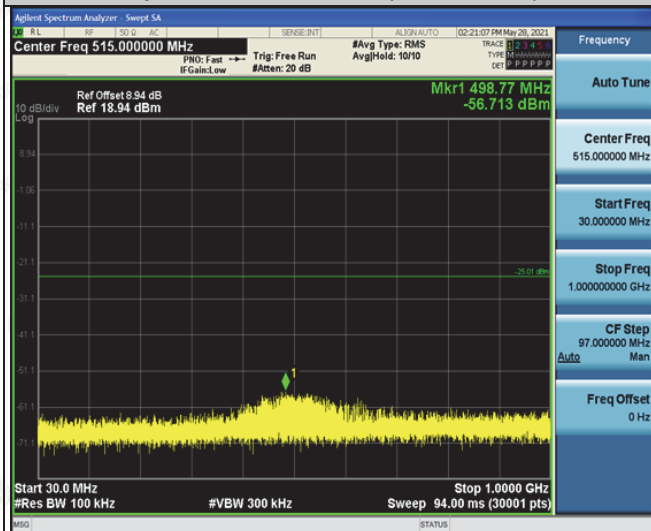
1-2/F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China



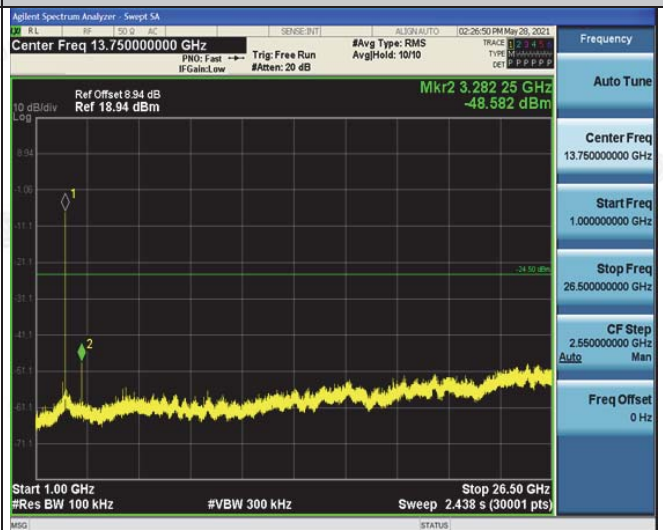
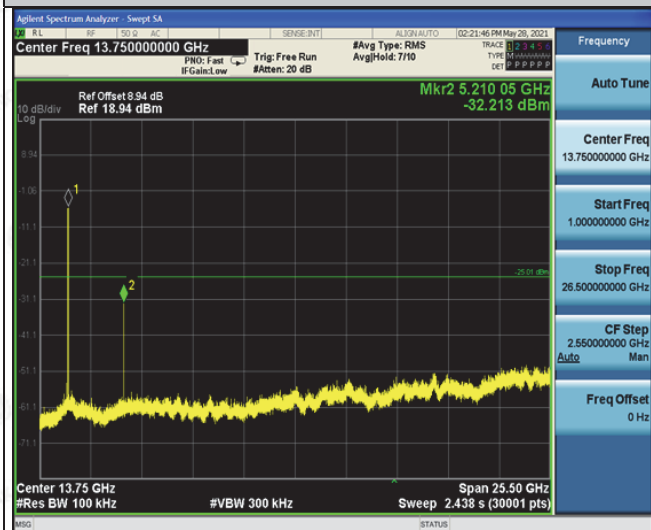
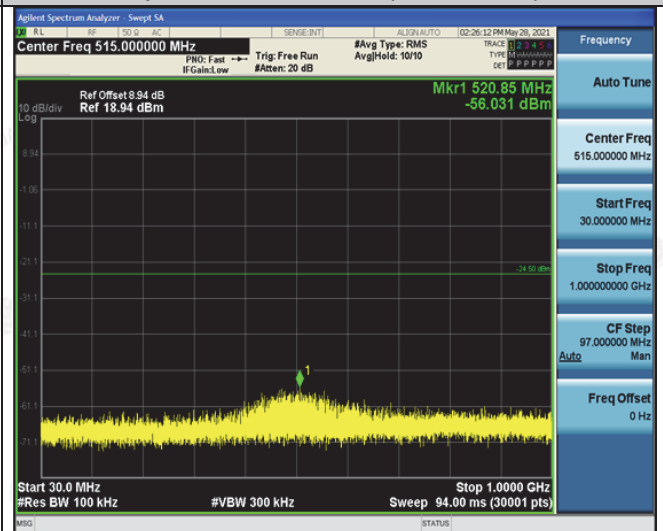
802.11ac (HT20) Modulation

Lowest Channel
Band EdgeHighest Channel
Band Edge

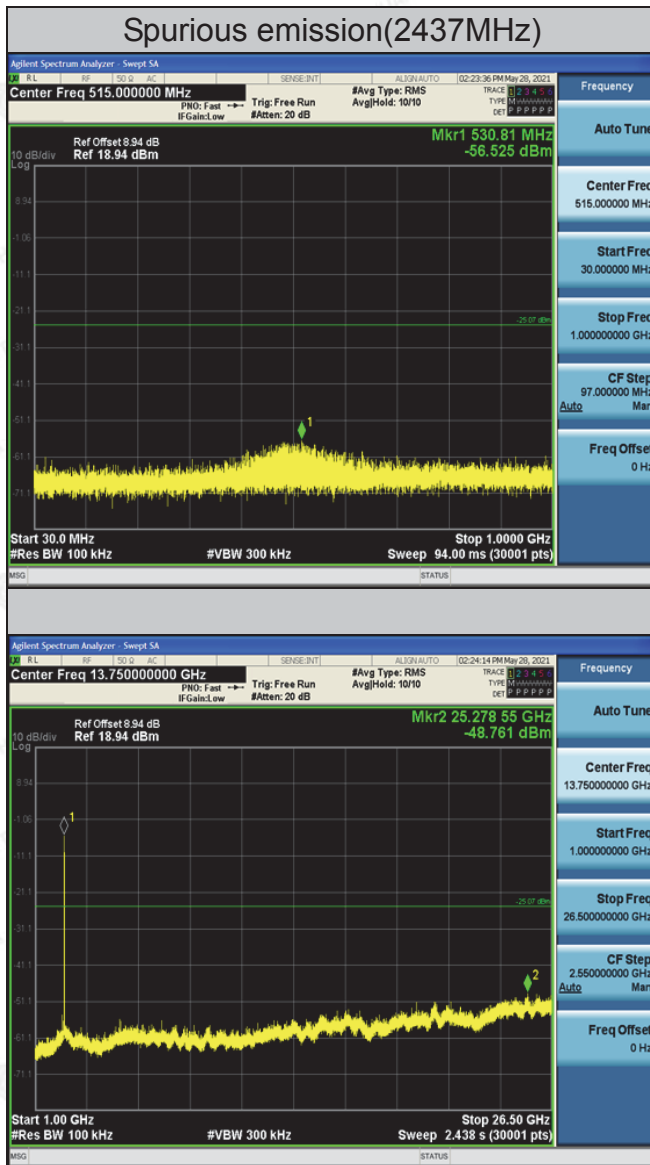
Spurious emission(2412MHz)



Spurious emission(2462MHz)



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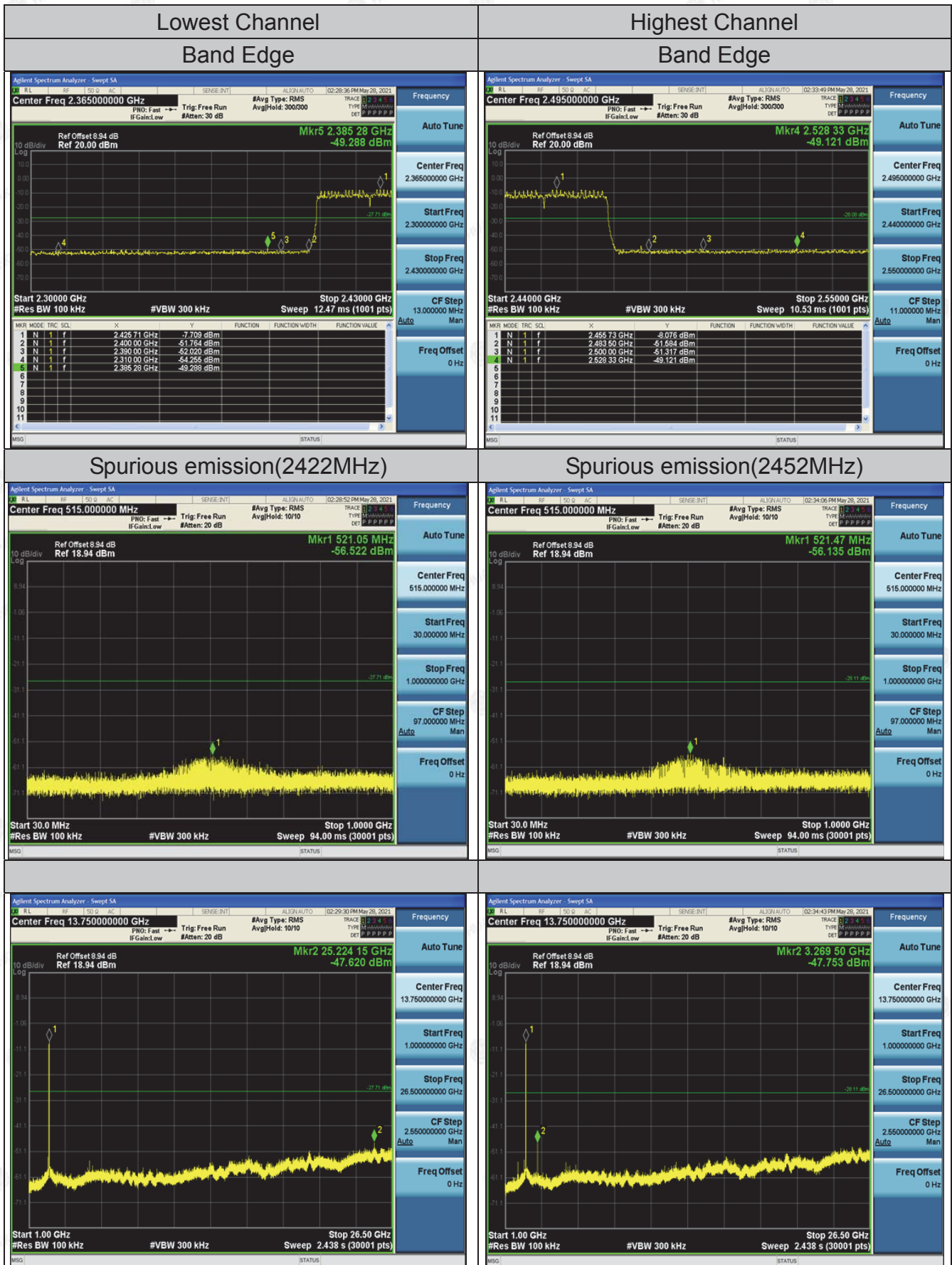
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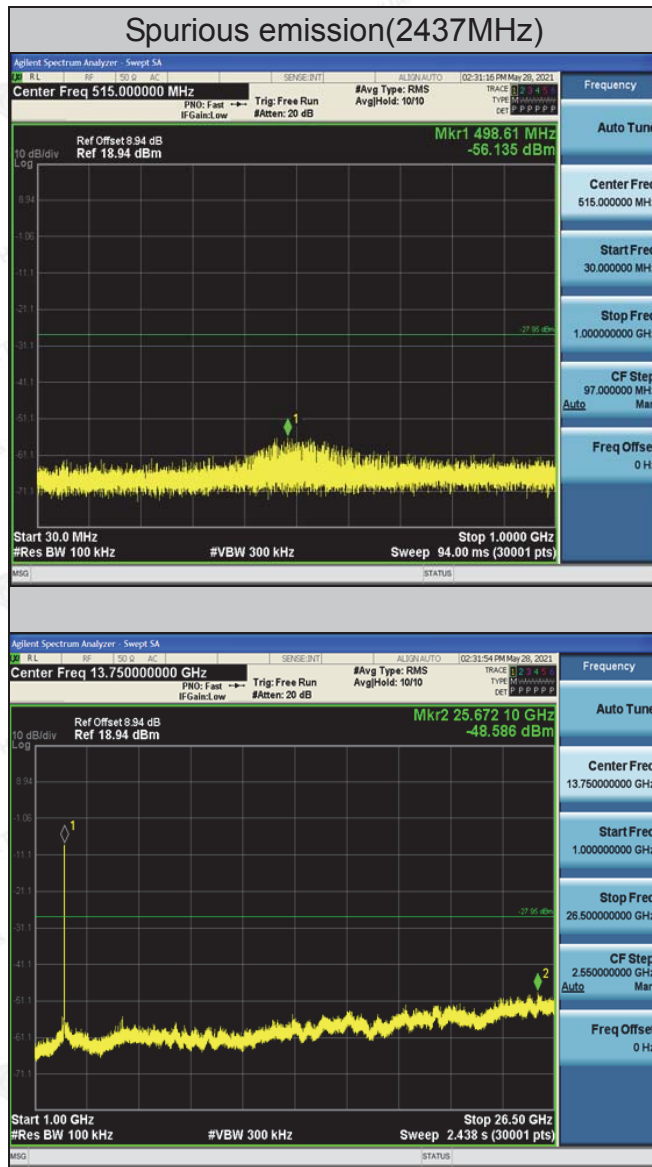
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802.11ac (HT40) Modulation



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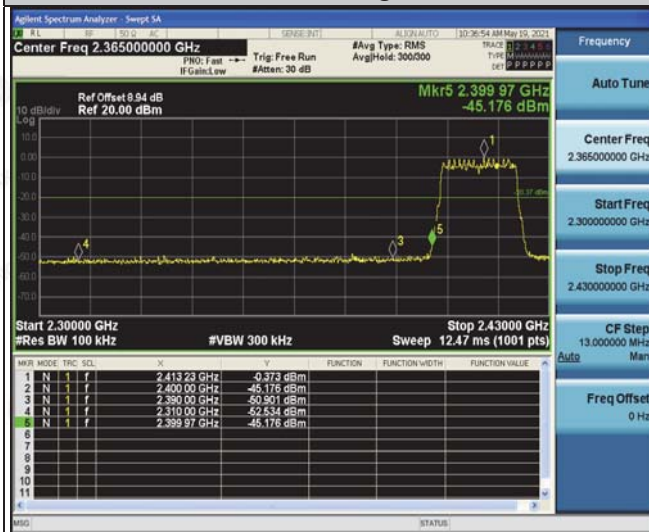
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1-2/F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

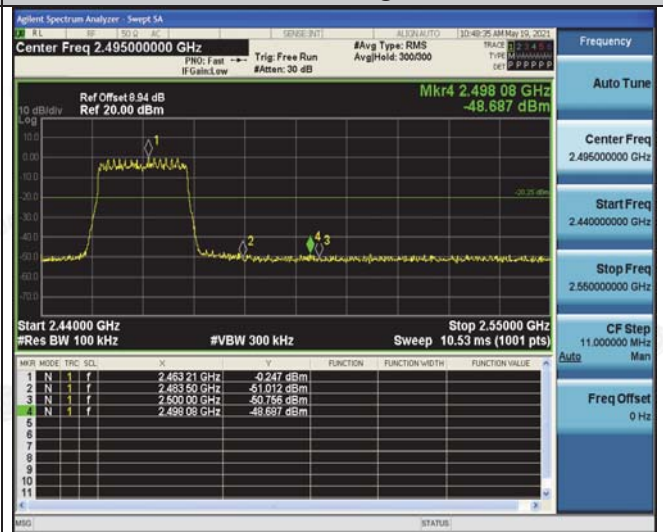


802.11ax (HT20) Modulation

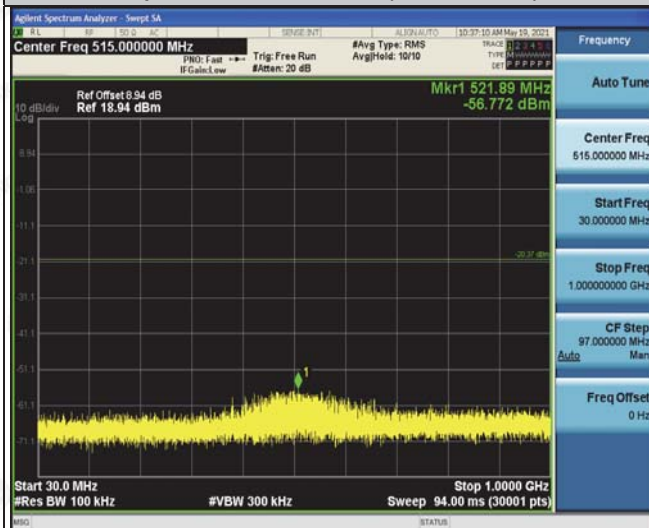
Lowest Channel
Band Edge



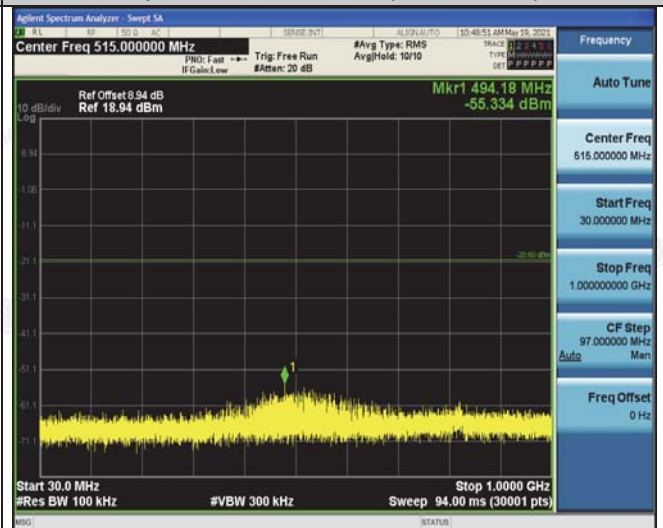
Highest Channel
Band Edge



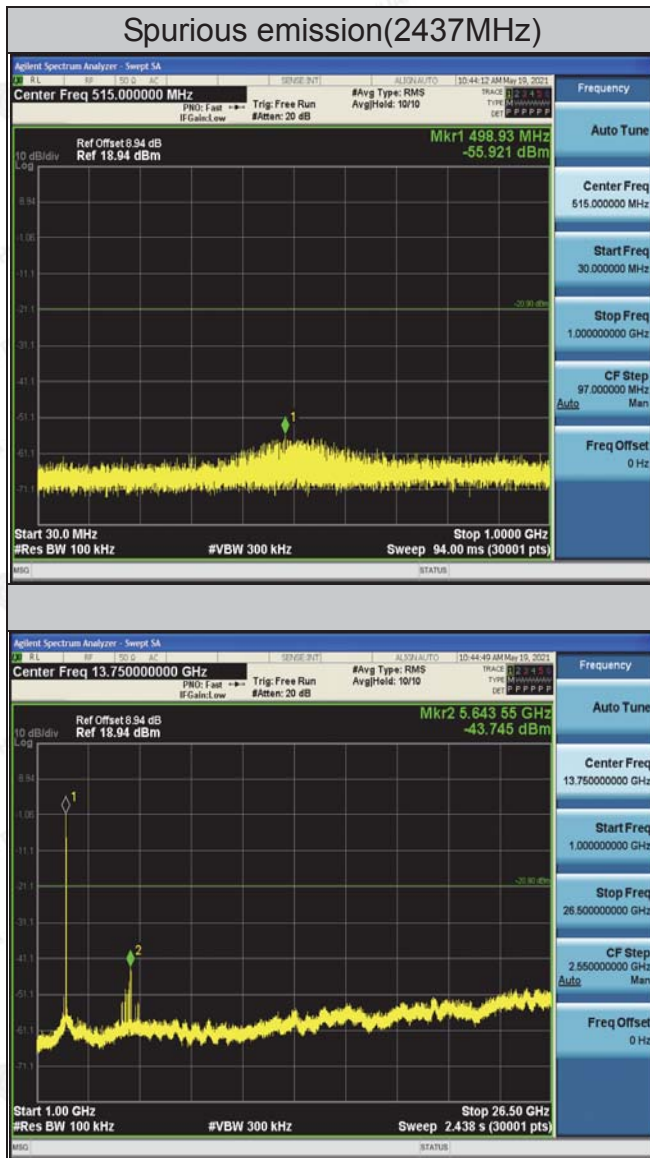
Spurious emission(2412MHz)



Spurious emission(2462MHz)



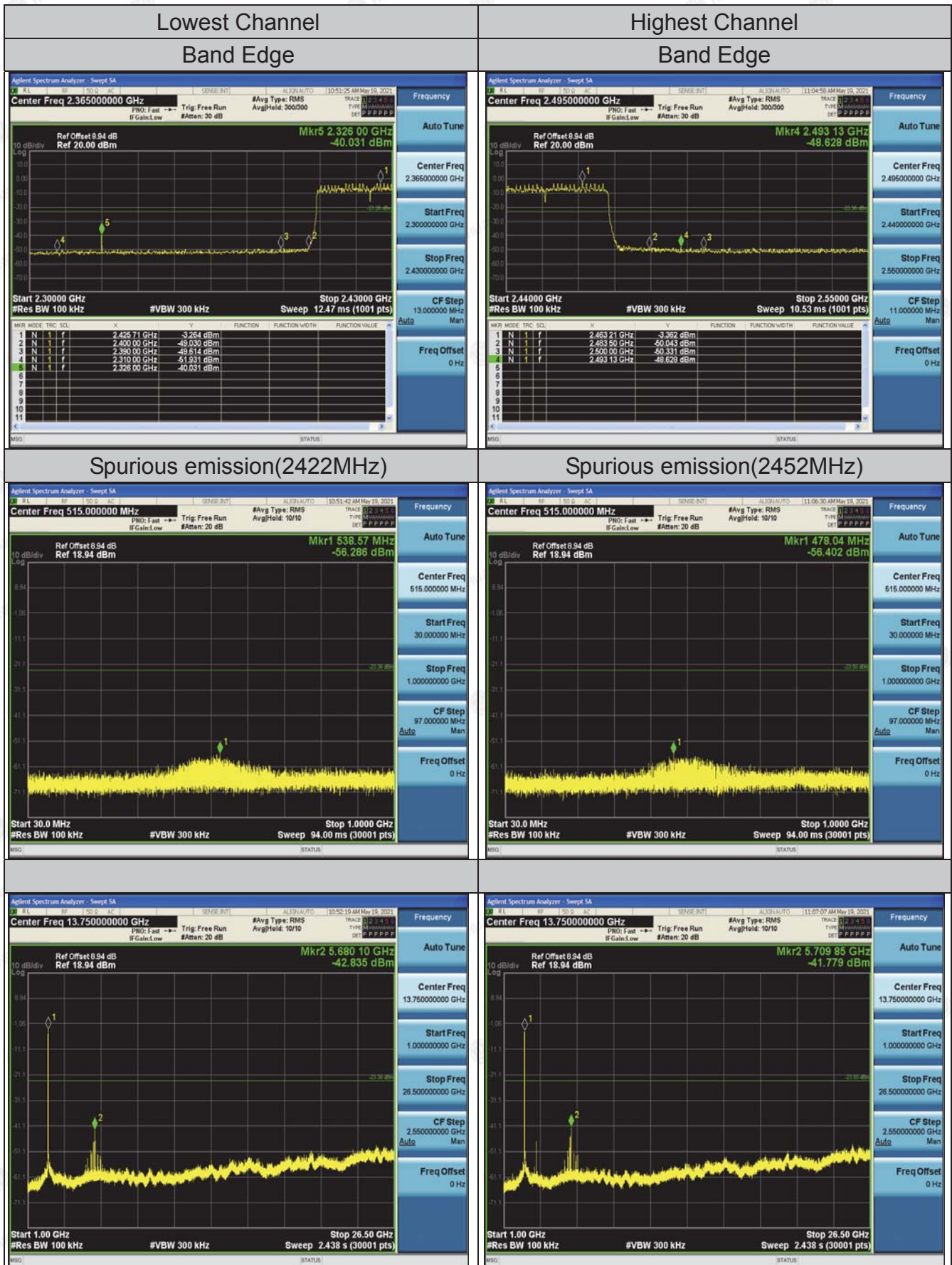
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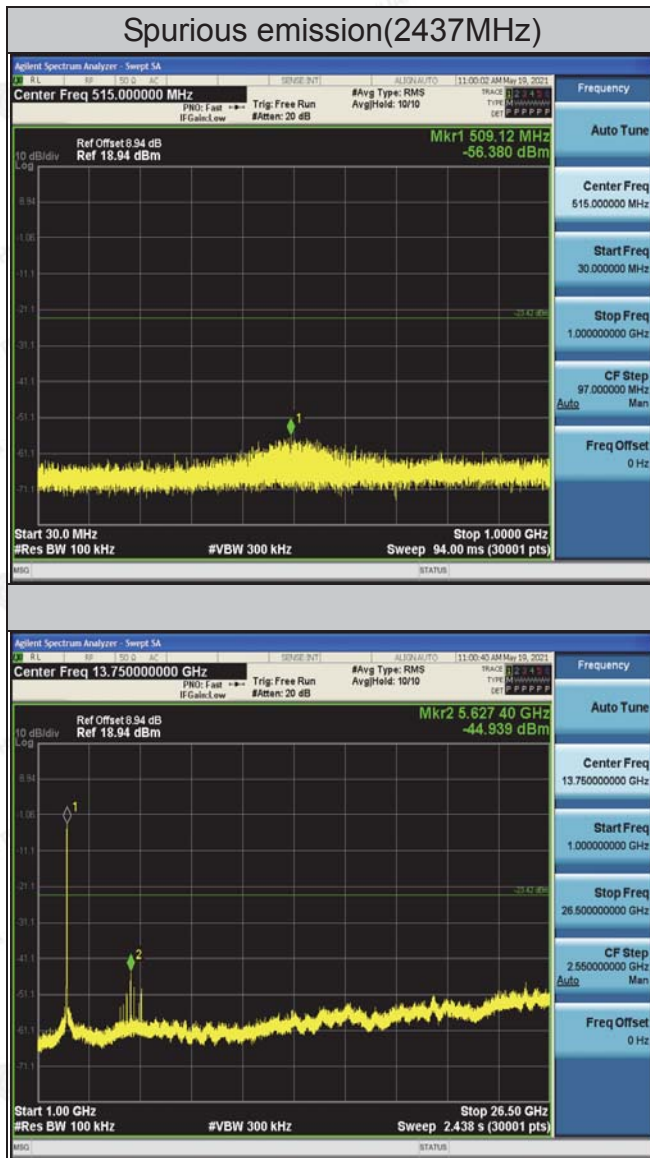
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802.11ax (HT40) Modulation



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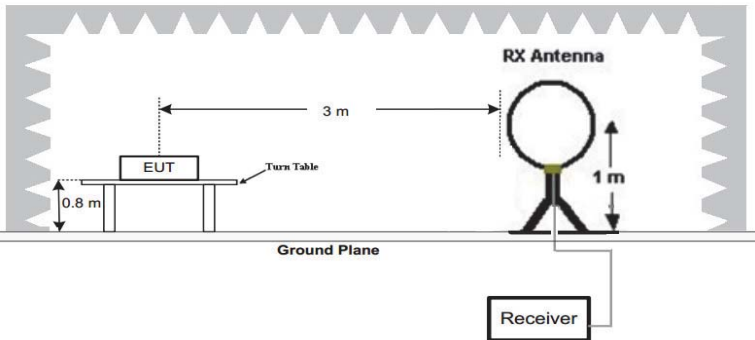


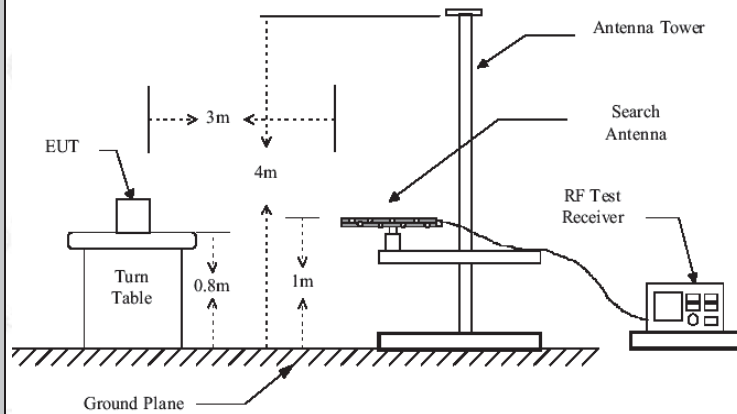
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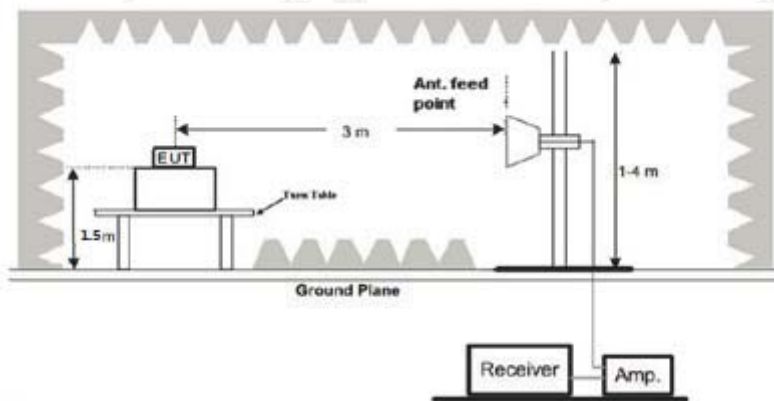
4.6. Radiated Spurious Emission Measurement

4.6.1. Test Specification

Test Requirement:	FCC Part15 C Section 15.209				
Test Method:	ANSI C63.10: 2013				
Frequency Range:	9 kHz to 25 GHz				
Measurement Distance:	3 m				
Antenna Polarization:	Horizontal & Vertical				
Operation mode:	Transmitting mode with modulation				
Receiver Setup:	Frequency	Detector	RBW	VBW	Remark
	9kHz- 150kHz	Quasi-peak	200Hz	1kHz	Quasi-peak Value
	150kHz- 30MHz	Quasi-peak	9kHz	30kHz	Quasi-peak Value
	30MHz-1GHz	Quasi-peak	120KHz	300KHz	Quasi-peak Value
	Above 1GHz	Peak	1MHz	3MHz	Peak Value
Peak		1MHz	10Hz	Average Value	
Limit:	Frequency		Field Strength (microvolts/meter)		Measurement Distance (meters)
	0.009-0.490		2400/F(KHz)		300
	0.490-1.705		24000/F(KHz)		30
	1.705-30		30		30
	30-88		100		3
	88-216		150		3
	216-960		200		3
	Above 960		500		3
	Frequency		Field Strength (microvolts/meter)	Measurement Distance (meters)	Detector
	Above 1GHz		500	3	Average
		5000	3	Peak	
Test setup:	For radiated emissions below 30MHz				
					
	30MHz to 1GHz				



Above 1GHz



Test Procedure:

1. For the radiated emission test below 1GHz:
The EUT was placed on a turntable with 0.8 meter above ground. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high PASS filter are used for the test in order to get better signal level.
For the radiated emission test above 1GHz:
Place the measurement antenna on a turntable with 1.5 meter above ground, which is away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal.



	<p>The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.</p> <p>3. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level</p> <p>4. For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.</p> <p>5. Use the following spectrum analyzer settings:</p> <p>(1) Span shall wide enough to fully capture the emission being measured;</p> <p>(2) Set RBW=100 kHz for $f < 1$ GHz; VBW \geq RBW; Sweep = auto; Detector function = peak; Trace = max hold;</p> <p>(3) Set RBW = 1 MHz, VBW= 3MHz for $f \geq 1$ GHz for peak measurement.</p> <p>For average measurement: VBW = 10 Hz, when duty cycle is no less than 98 percent. VBW $\geq 1/T$, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.</p>
Test results:	PASS



4.6.2. Test Instruments

Radiated Emission Test Site (966)					
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
Receiver	R&S	ESR-7	HKE-010	Jun. 18, 2020	Jun. 17, 2021
Spectrum analyzer	Agilent	N9020A	HKE-048	Jun. 18, 2020	Jun. 17, 2021
Preamplifier	EMCI	EMC051845 SE	HKE-015	Jun. 18, 2020	Jun. 17, 2021
Preamplifier	Agilent	83051A	HKE-016	Jun. 18, 2020	Jun. 17, 2021
Loop antenna	Schwarzbeck	FMZB 1519 B	HKE-014	Jun. 18, 2020	Jun. 17, 2021
Broadband antenna	Schwarzbeck	VULB 9163	HKE-012	Jun. 18, 2020	Jun. 17, 2021
Horn antenna	Schwarzbeck	9120D	HKE-013	Jun. 18, 2020	Jun. 17, 2021
Antenna Mast	Keleto	CC-A-4M	N/A	N/A	N/A
Position controller	Taiwan MF	MF7802	HKE-011	Jun. 18, 2020	Jun. 17, 2021
Radiated test software	Tonscend	TS+ Rev 2.5.0.0	HKE-082	N/A	N/A
RF cable (9KHz-1GHz)	Times	381806-001	N/A	N/A	N/A
RF cable	Times	1-40G	HKE-034	Jun. 18, 2020	Jun. 17, 2021
Horn Antenna	Schwarzbeck	BBHA 9170	HKE-017	Jun. 18, 2020	Jun. 17, 2021

Note: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).



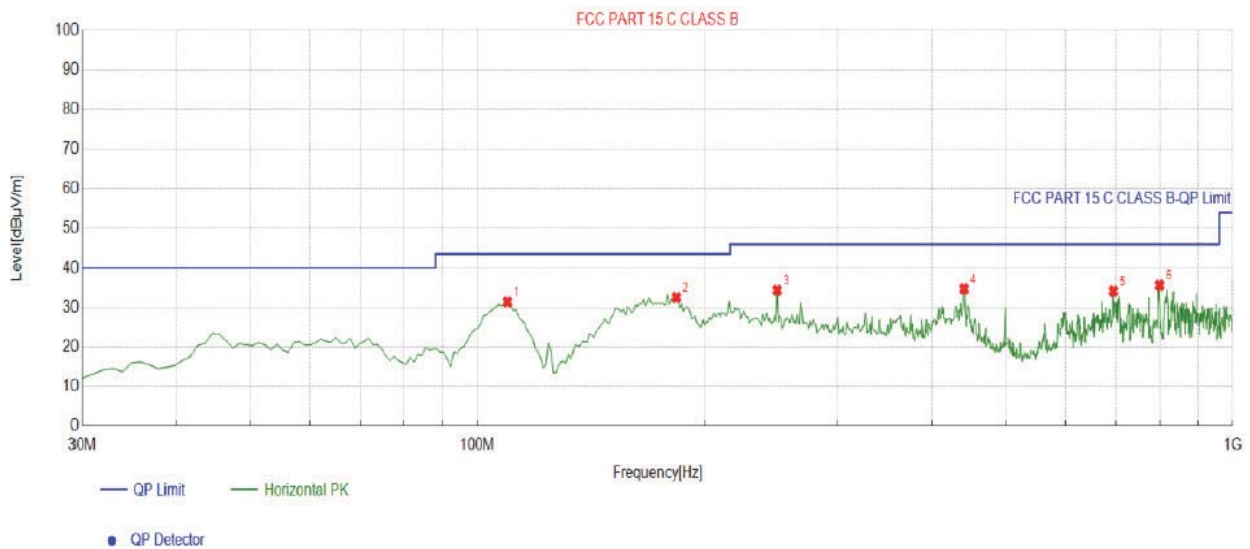
4.6.3. Test Data

Adapter 1:

Please refer to following diagram for individual
Below 1GHz

All the test modes completed for test. only the worst result of AC240V/60Hz(802.11b at 2412MHz)
was reported as below:

Horizontal

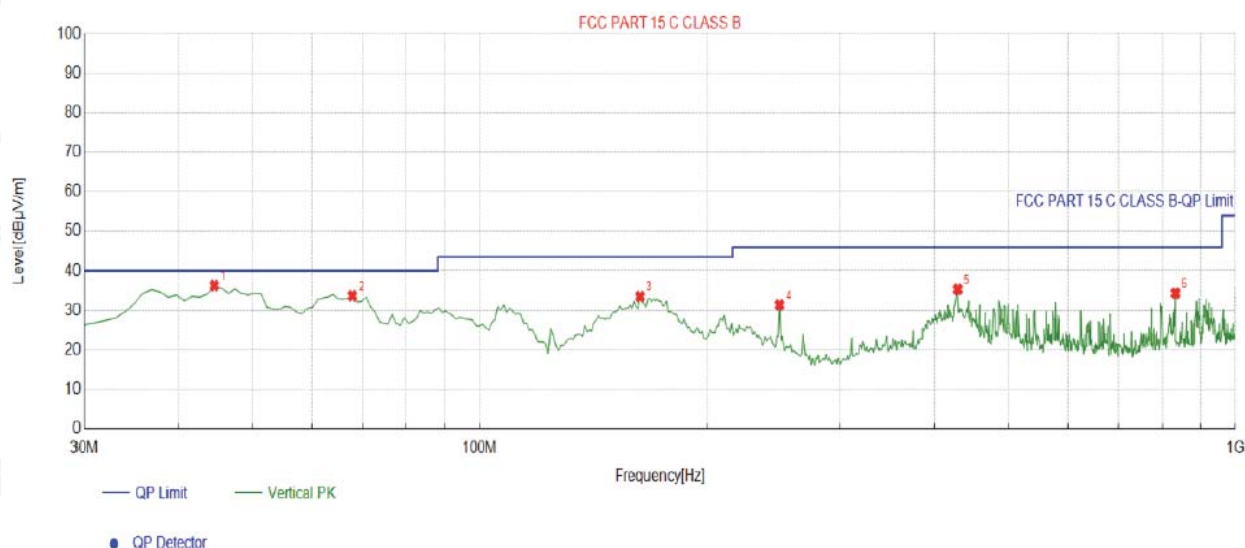


Suspected List									
NO.	Freq. [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	109.6196	-15.43	46.84	31.41	43.50	12.09	100	153	Horizontal
2	183.4134	-16.57	49.12	32.55	43.50	10.95	100	296	Horizontal
3	249.4394	-13.42	47.78	34.36	46.00	11.64	100	343	Horizontal
4	440.7207	-9.39	44.10	34.71	46.00	11.29	100	78	Horizontal
5	695.1151	-5.13	39.29	34.16	46.00	11.84	100	280	Horizontal
6	799.9800	-3.12	38.74	35.62	46.00	10.38	100	4	Horizontal

Remark: Factor = Cable loss + Antenna factor – Preamplifier; Level = Reading + Factor; Margin = Limit – Level



Vertical



Suspected List									
NO.	Freq. [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	44.5646	-13.73	49.98	36.25	40.00	3.75	100	56	Vertical
2	67.8679	-17.13	50.80	33.67	40.00	6.33	100	218	Vertical
3	163.0230	-17.94	51.45	33.51	43.50	9.99	100	262	Vertical
4	249.4394	-13.42	44.78	31.36	46.00	14.64	100	179	Vertical
5	429.0691	-9.87	45.16	35.29	46.00	10.71	100	1	Vertical
6	832.9930	-2.47	36.81	34.34	46.00	11.66	100	290	Vertical

Remark: Factor = Cable loss + Antenna factor – Preamplifier; Level = Reading + Factor; Margin = Limit – Level