

# 4.5 Conducted Band Edge and Spurious Emission Measurement

## 4.5.1 Test Specification

Test Requirement:	FCC Part15 C Section 15.247 (d)				
Test Method:	KDB558074 D01 15.247 Meas Guidance v05r02				
Limit:	In any 100 kHz bandwidth outside of the authorized frequency band, the emissions which fall in the non-restricted bands shall be attenuated at least 20 dB / 30dB relative to the maximum PSD level in 100 kHz by RF conducted measurement and radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).				
Test Setup:	Spectrum Analyzer EUT				
Test Mode:	Transmitting mode with modulation				
Test Procedure:	<ol> <li>The testing follows FCC KDB Publication No. 558074 D01 15.247 Meas Guidance v05r02.</li> <li>The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.</li> <li>Set to the maximum power setting and enable the EUT transmit continuously.</li> <li>Set RBW = 100 kHz, VBW=300 kHz, Peak Detector. Unwanted Emissions measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz when maximum peak conducted output power procedure is used. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB per 15.247(d).</li> <li>Measure and record the results in the test report.</li> <li>The RF fundamental frequency should be excluded against the limit line in the operating frequency band.</li> </ol>				
Test Result:	PASS MANUAL MANU				



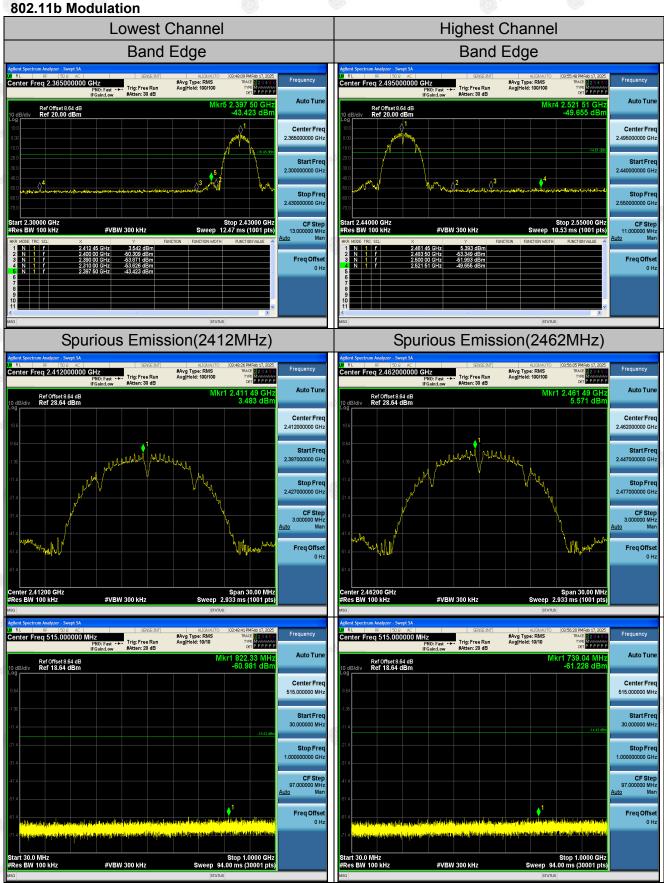
## 4.5.2 Test Instruments

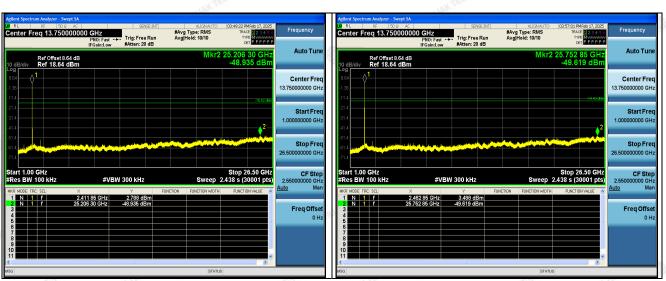
ATTIS. YY		ACC 10	10.795	A126. VV	08.7%	
RF Test Room						
Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due	
Spectrum analyzer	Agilent	N9020A	HKE-025	Feb. 20, 2024	Feb. 19, 2025	
RF cable	Times	1-40G	HKE-034	Feb. 20, 2024	Feb. 19, 2025	
RF automatic control unit	Tonscend	JS0806-2	HKE-060	Feb. 20, 2024	Feb. 19, 2025	
RF Test Software	Tonscend	JS1120-3 Version 3.5.39	HKE-083	N/A	N/A	

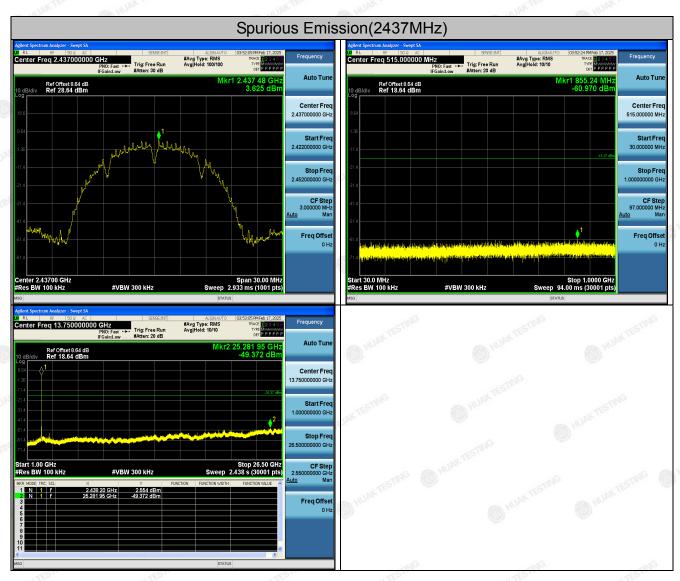
**Note:** The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).

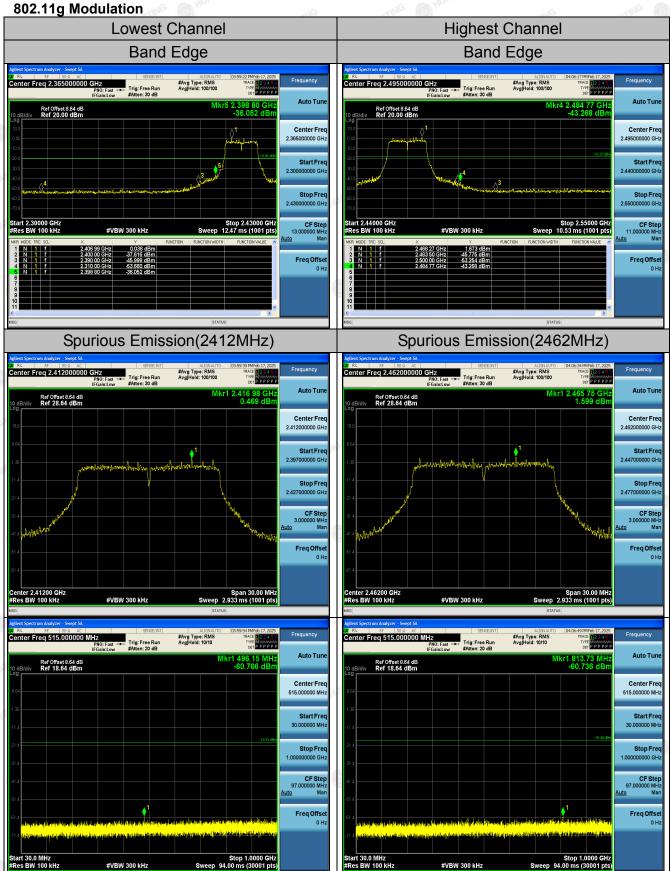
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#### 4.5.3 Test Data Chain 1 802.11b Modulation



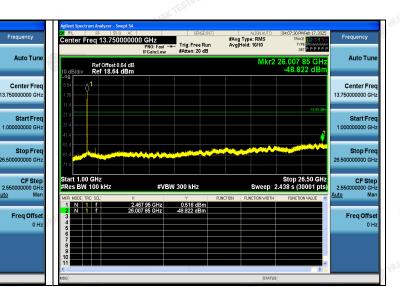




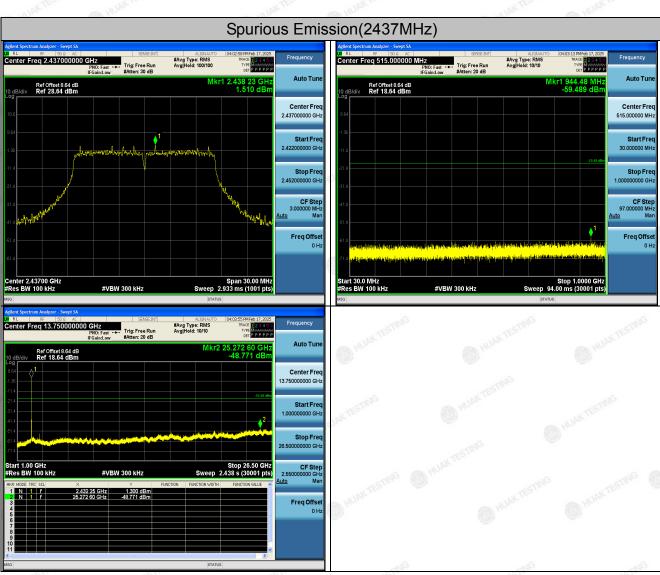


ter Freq 13.750000000 GHz

Ref Offset 8.64 dB Ref 18.64 dBm #Avg Type: RMS Avg|Hold: 10/10



Report No.: HK2501090212-E

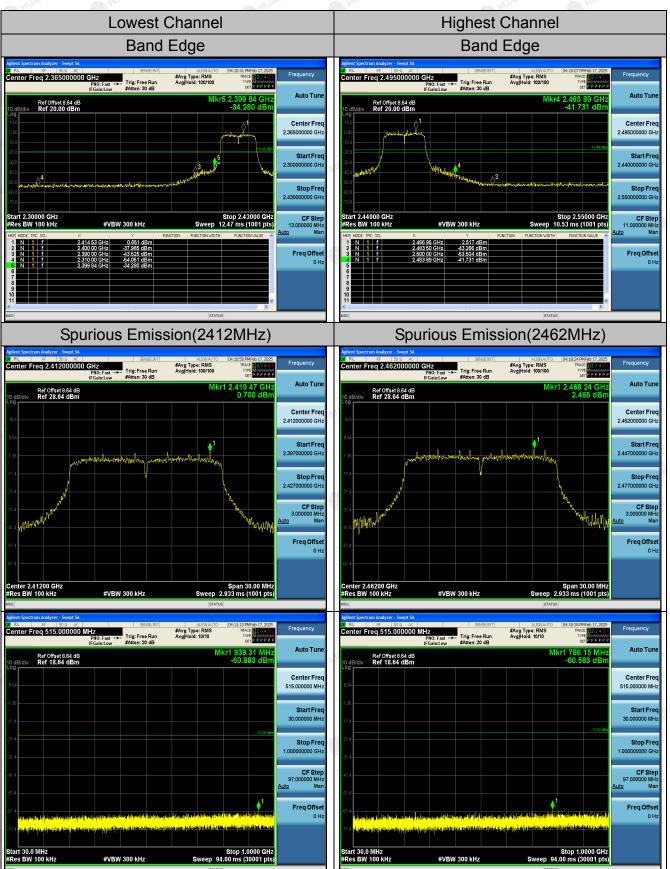


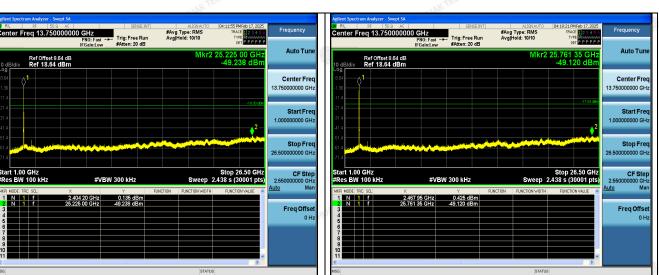
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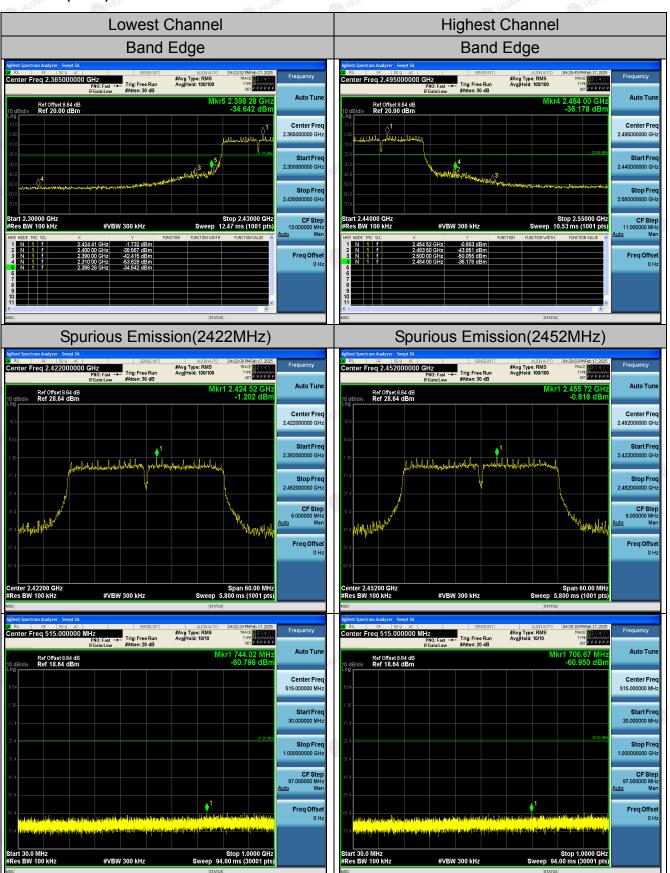
#### 802.11n (HT20) Modulation

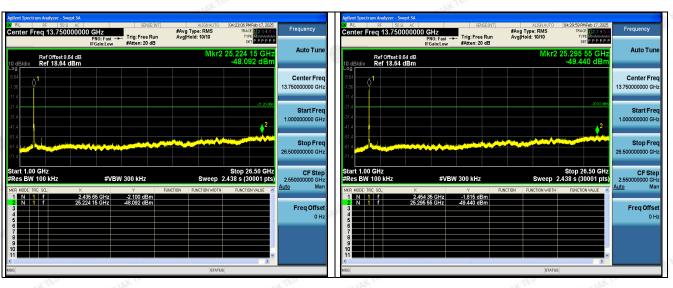


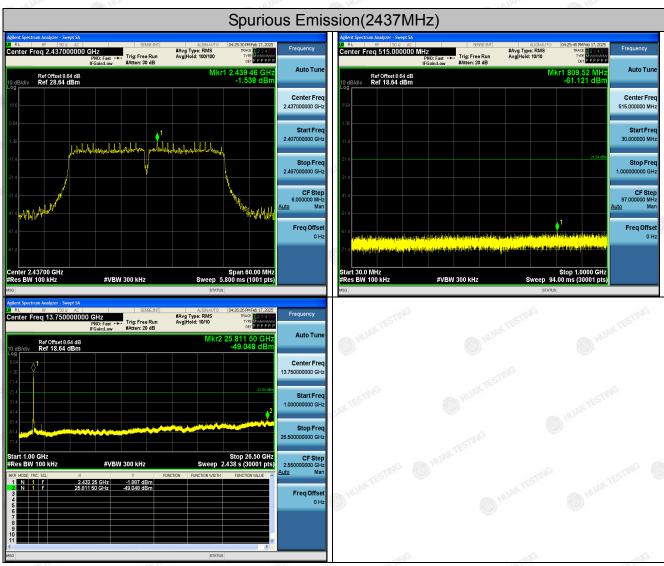




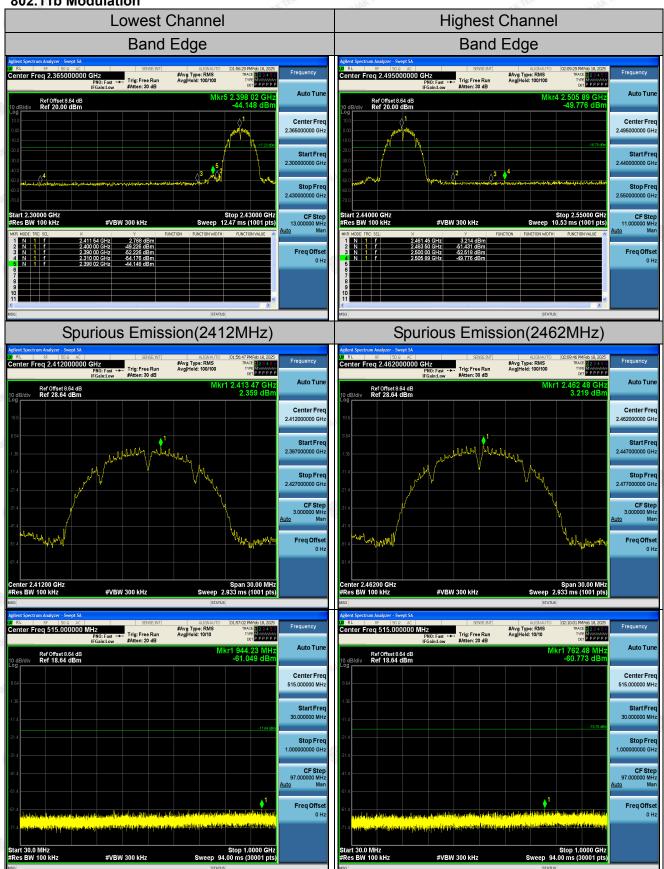
### 802.11n (HT40) Modulation







Chain 2 802.11b Modulation



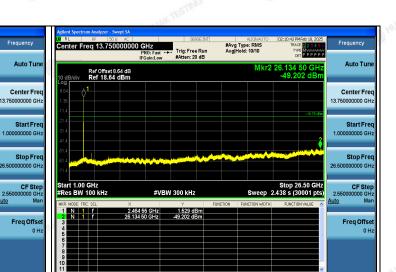
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ter Freq 13.750000000 GHz PNO: Fast

> Ref Offset 8.64 dB Ref 18.64 dBm

#Avg Type: RMS Avg|Hold: 10/10

Trig: Free Run

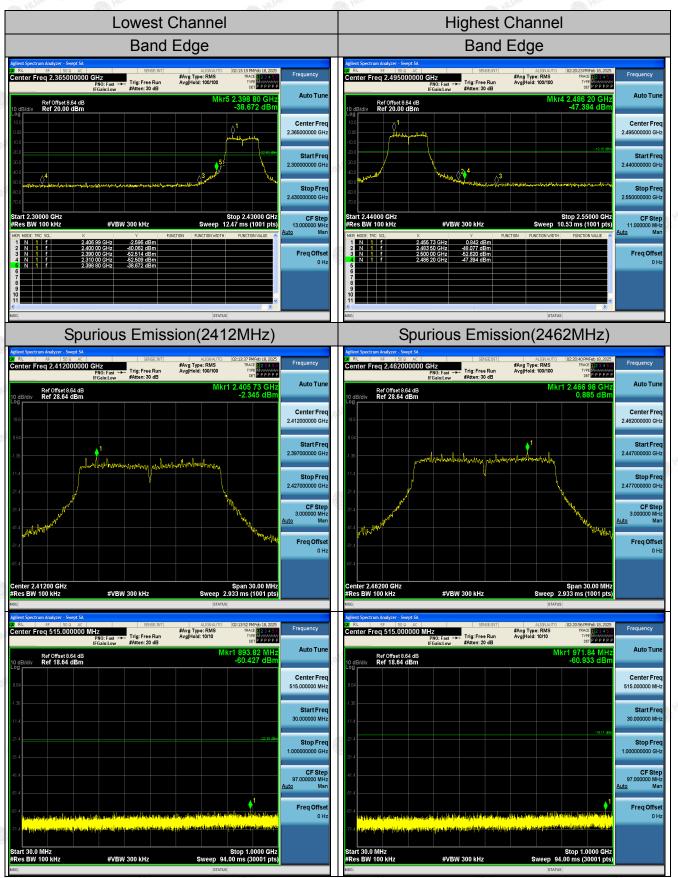


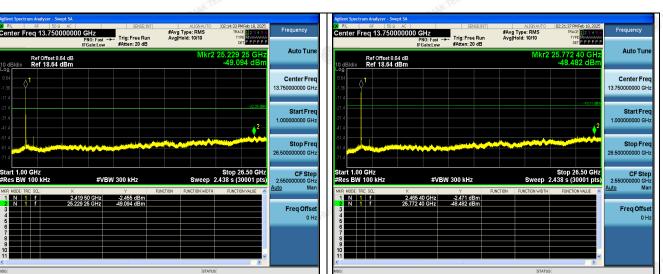
Report No.: HK2501090212-E

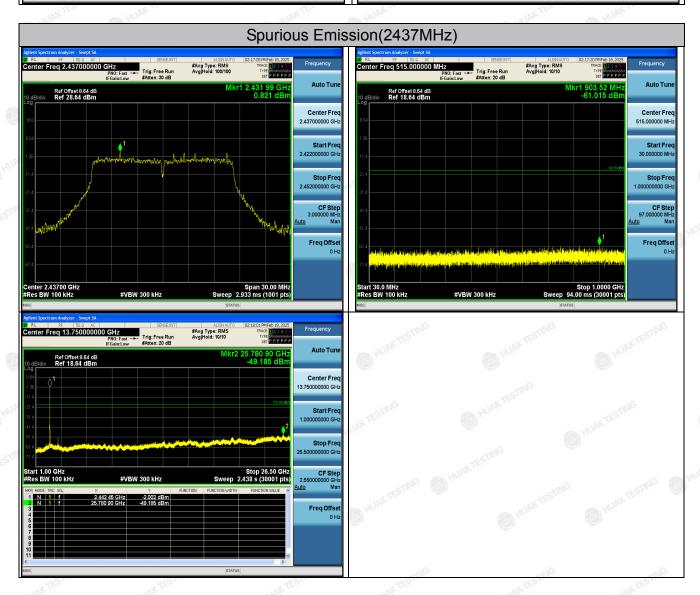


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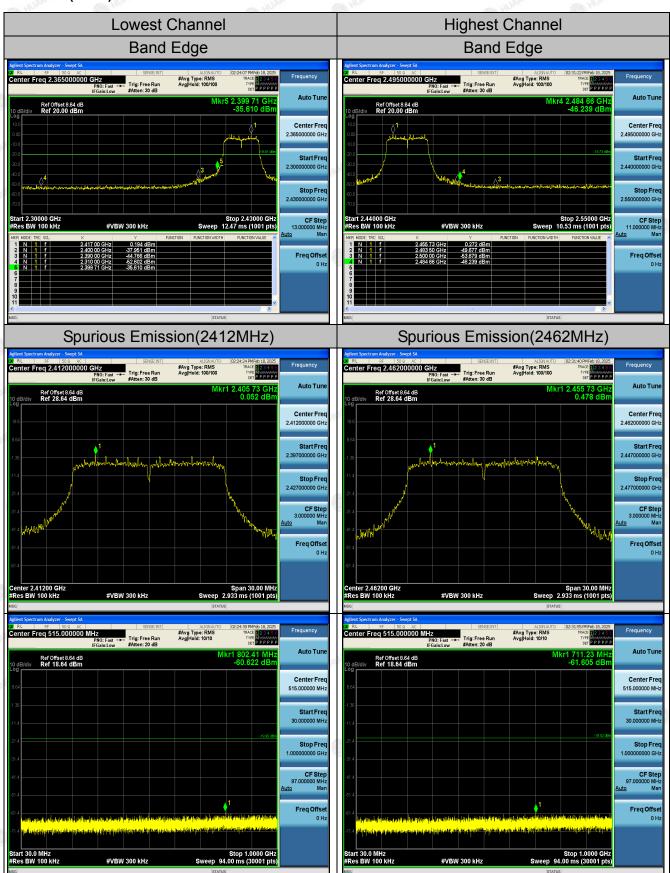
#### 802.11g Modulation

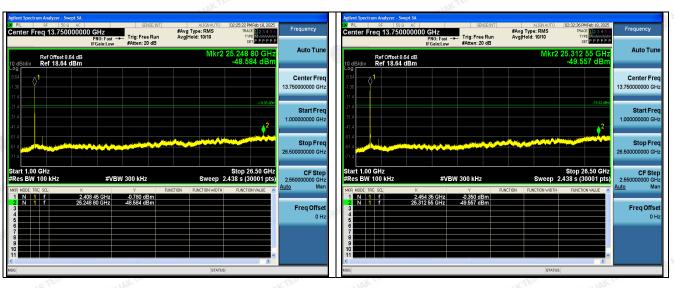


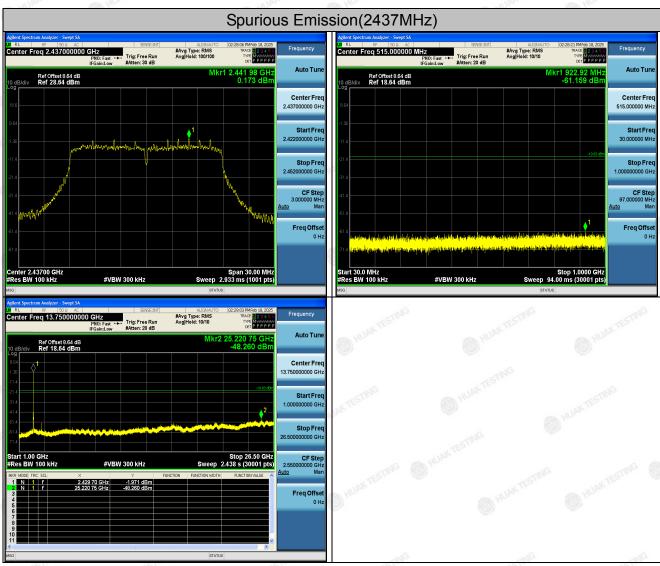




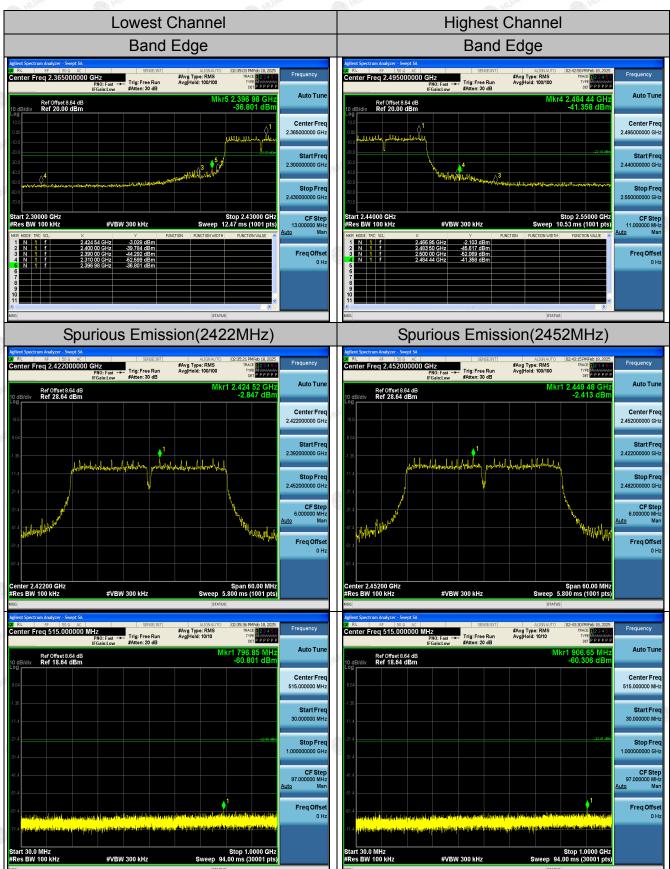
#### 802.11n (HT20) Modulation



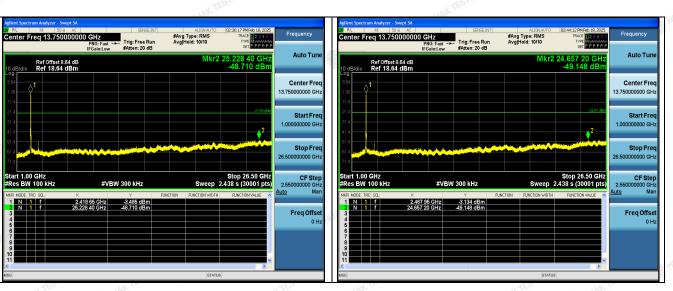


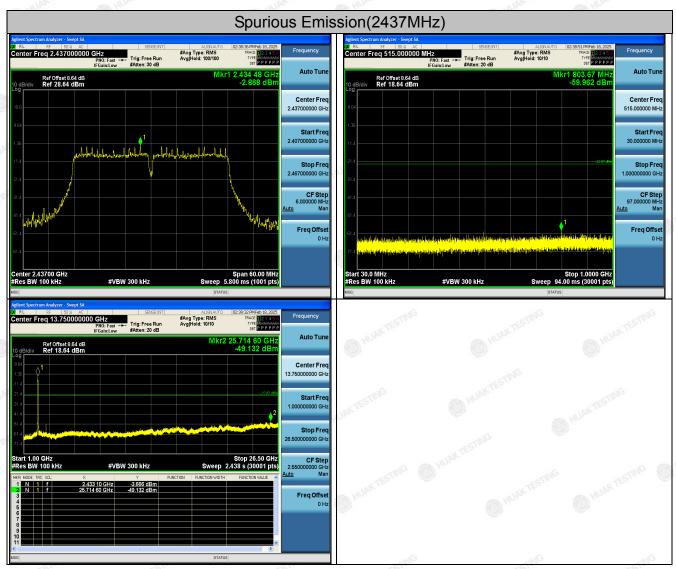


#### 802.11n (HT40) Modulation



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