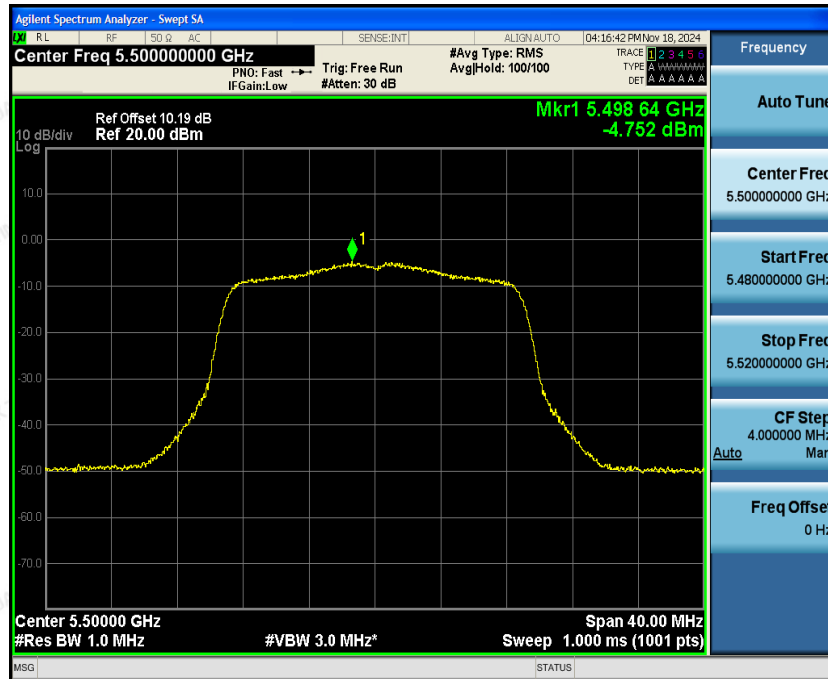


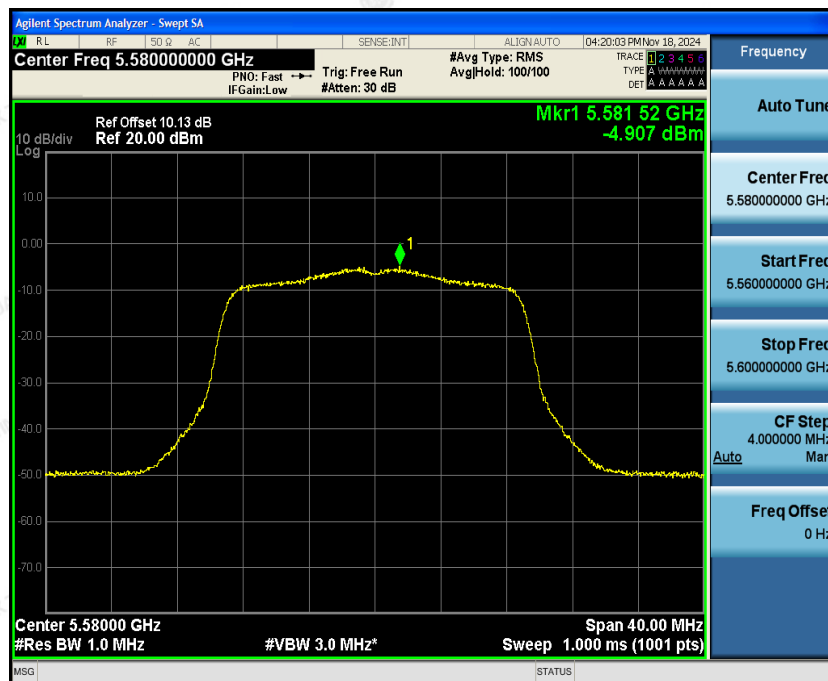


5470~5725MHz

Low Channel

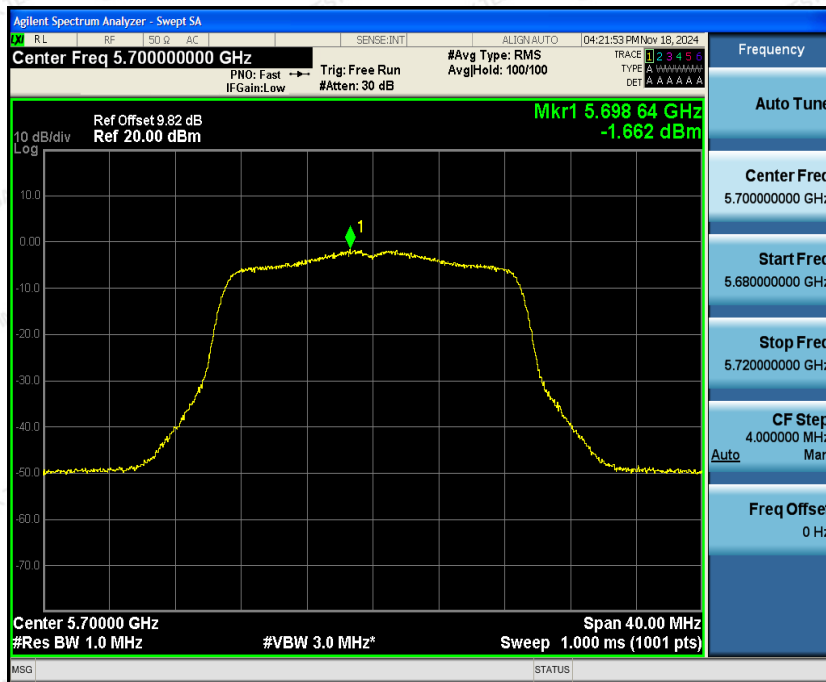


Mid Channel





High Channel



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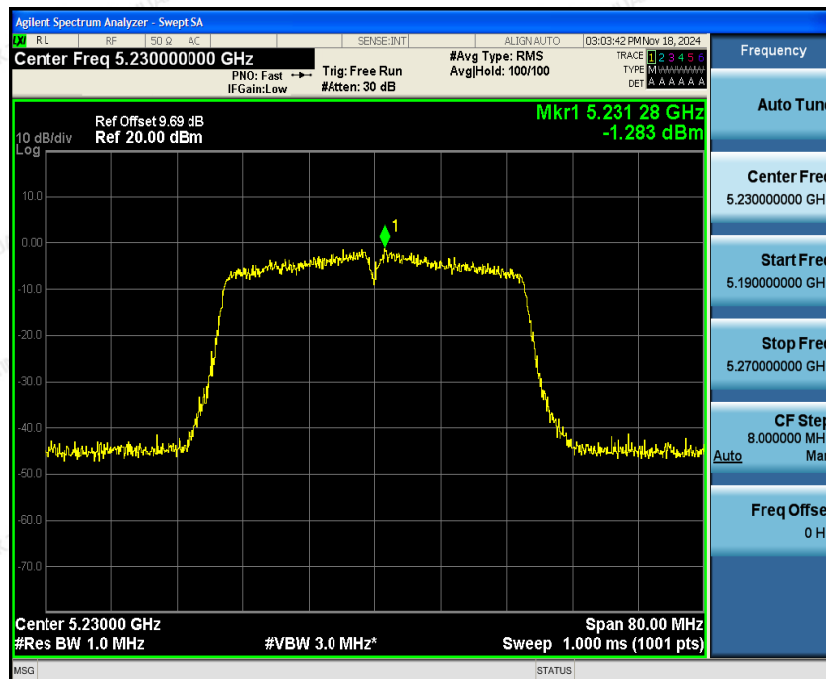
IEEE802.11n HT40 mode

5150~5250MHz

Low Channel

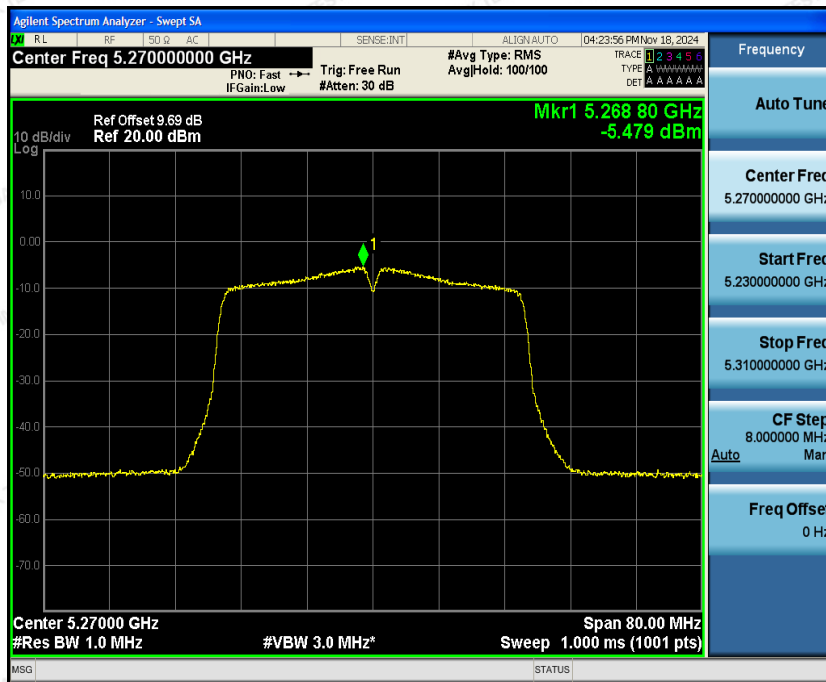


High Channel

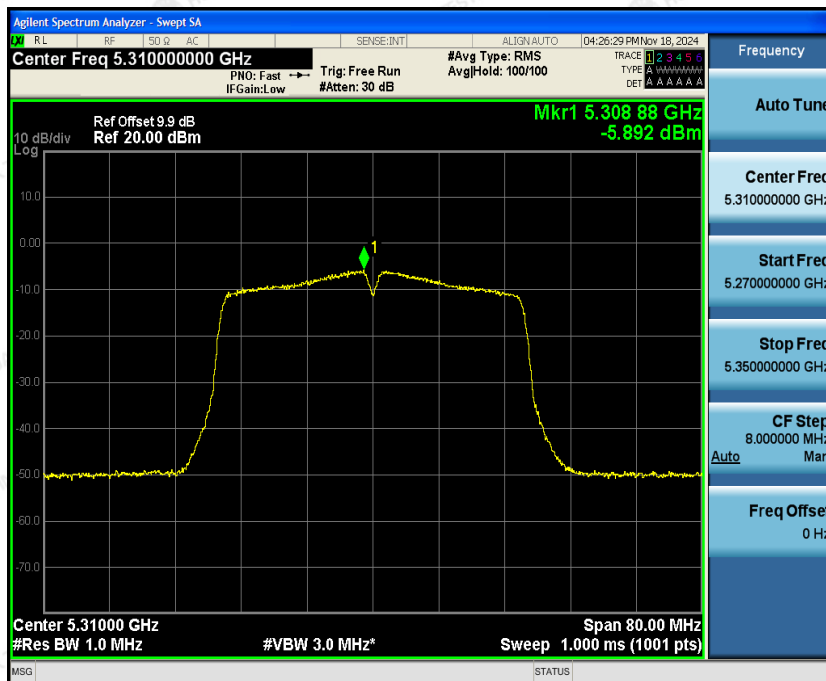




Low Channel



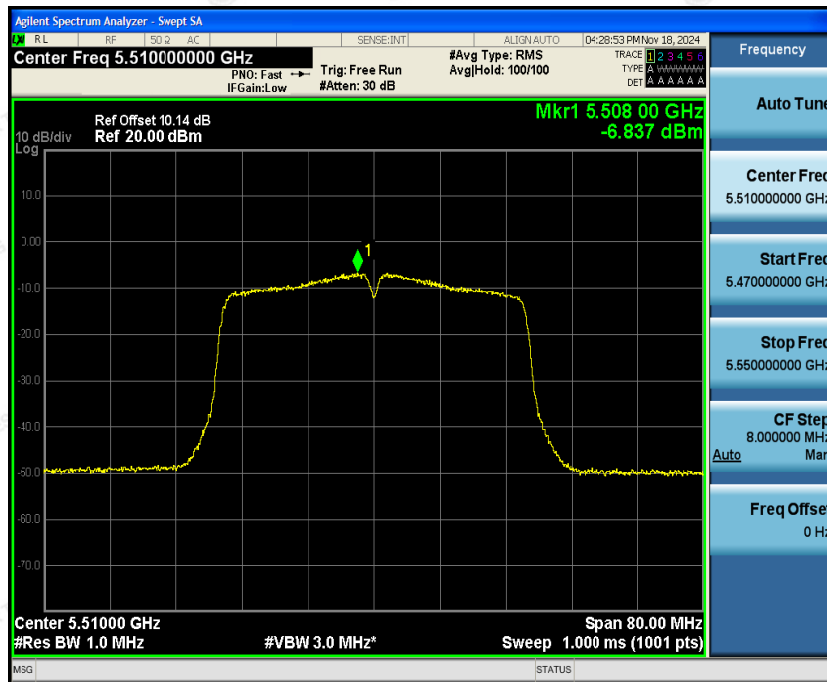
High Channel



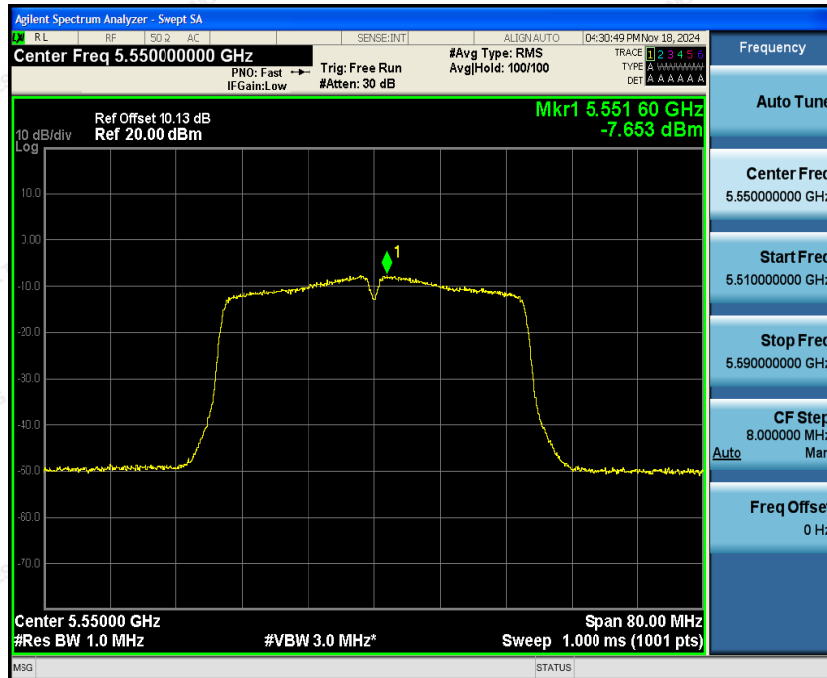


5470~5725MHz

Low Channel



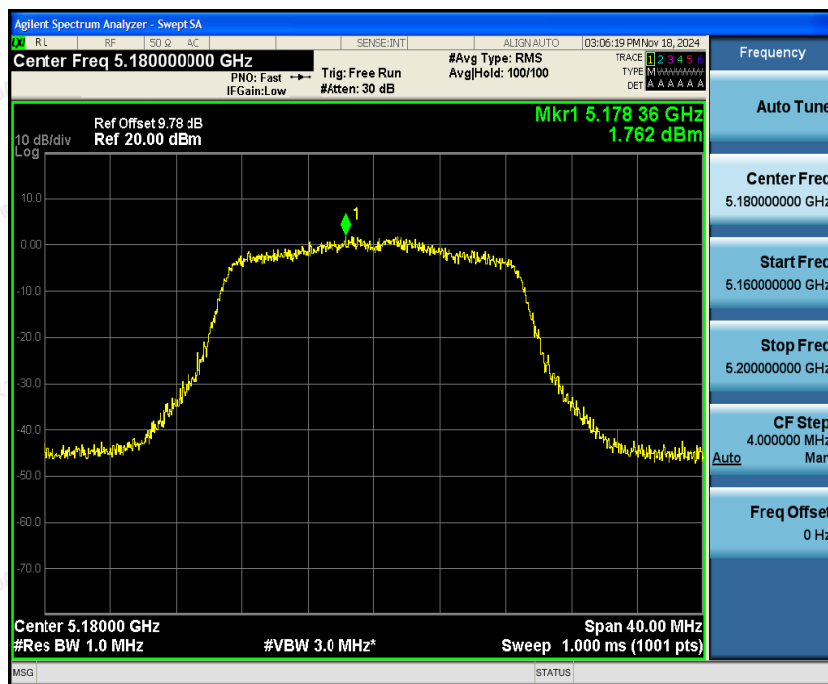
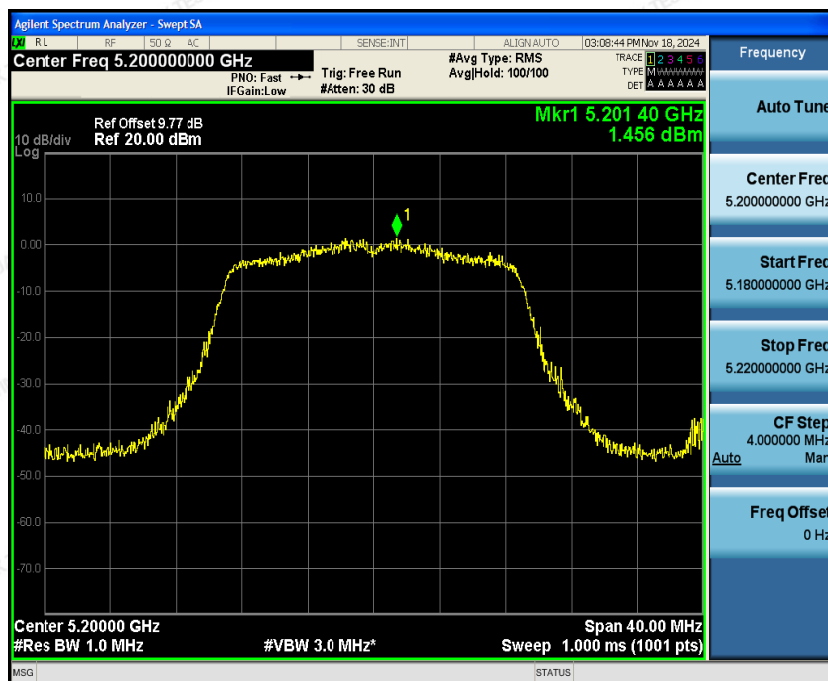
Mid Channel





High Channel



**IEEE802.11ac HT20 mode****5150~5250MHz****Low Channel****Mid Channel**



High Channel



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Low Channel



Mid Channel



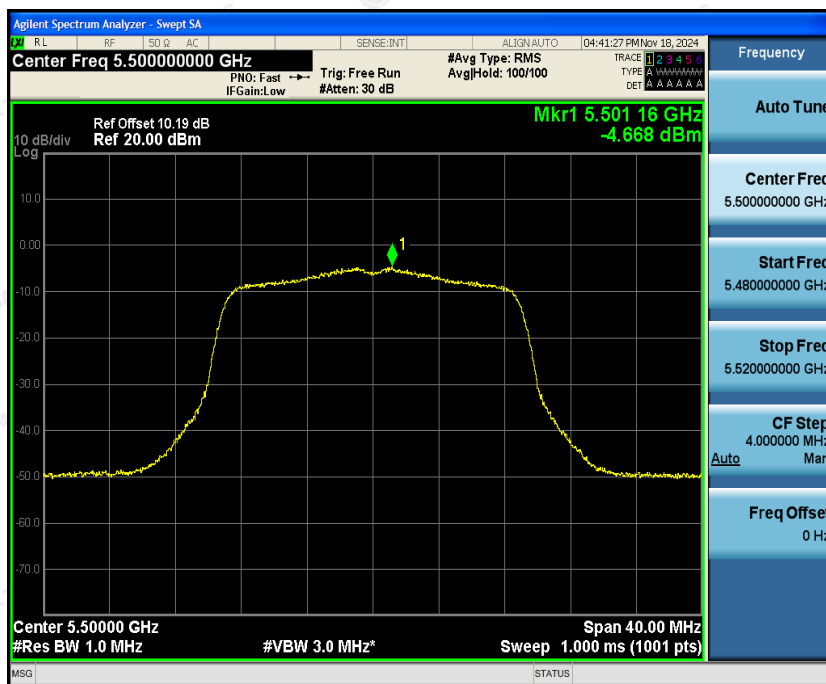


High Channel



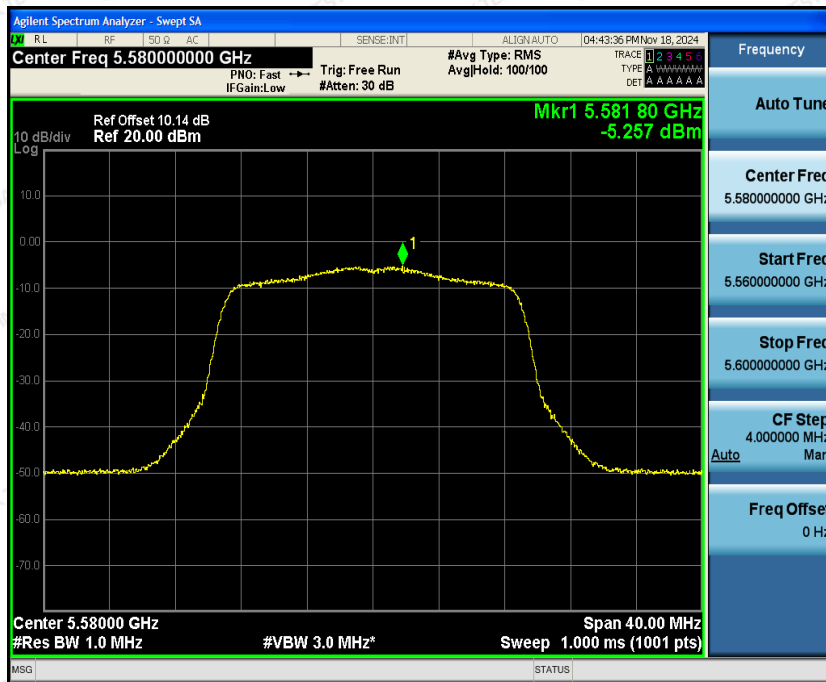
5470~5725MHz

Low Channel

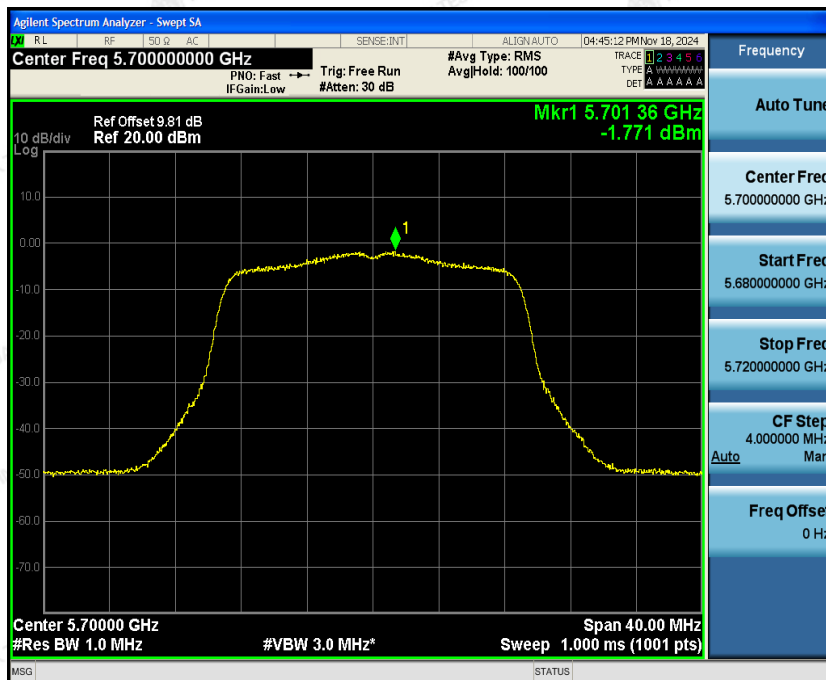




Mid Channel



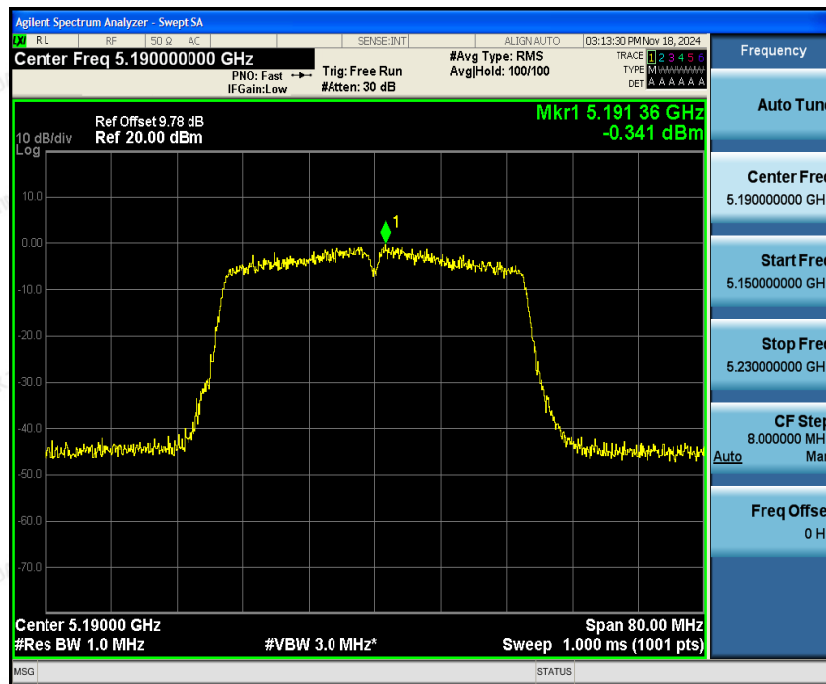
High Channel



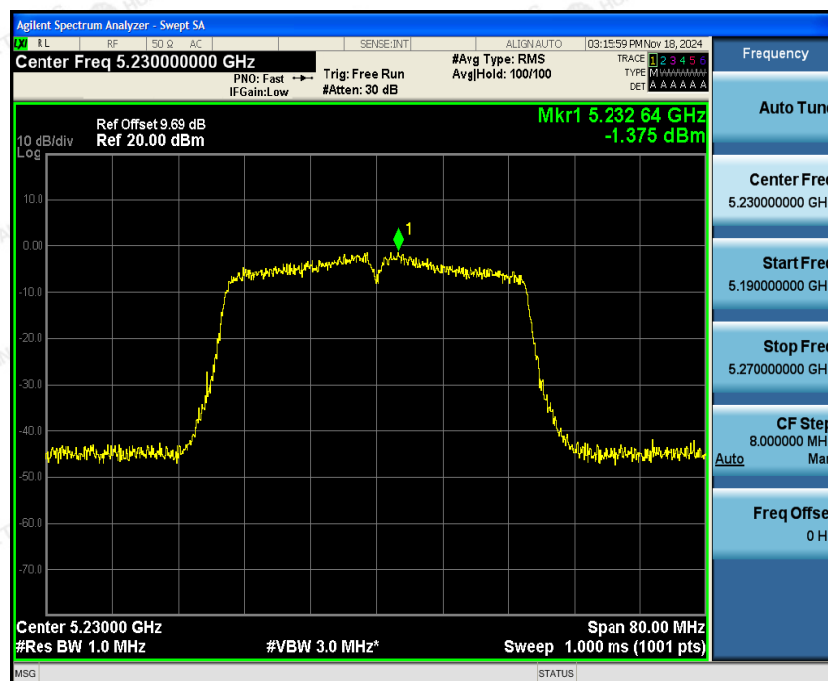
IEEE802.11ac HT40 mode

5150~5250MHz

Low Channel



High Channel



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5250~5350MHz

Low Channel

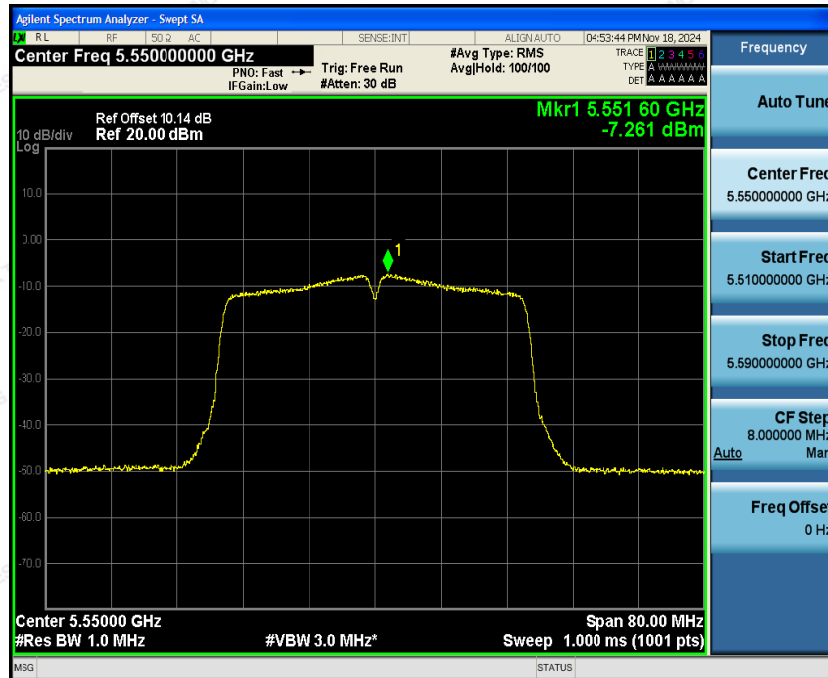


High Channel





Low Channel

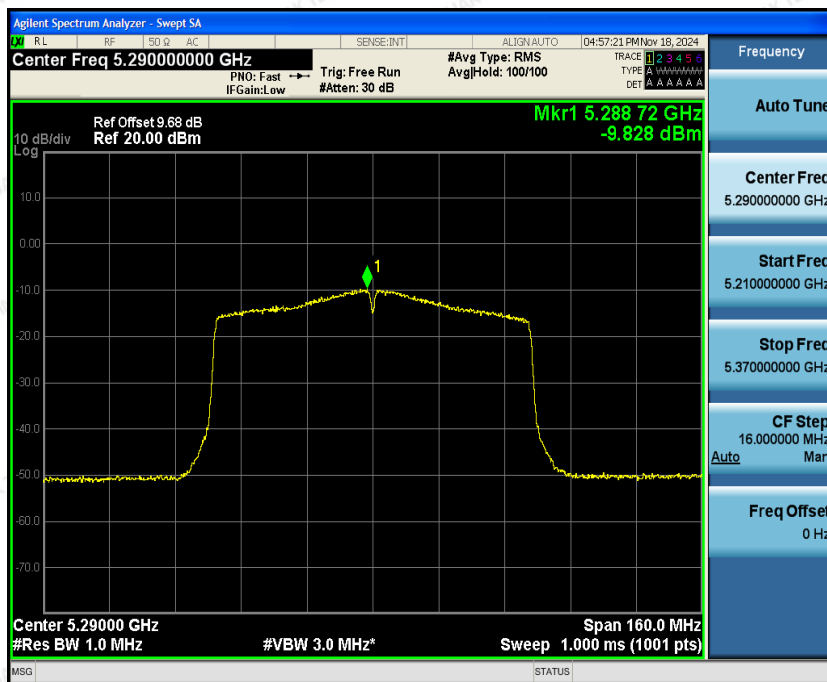


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High Channel

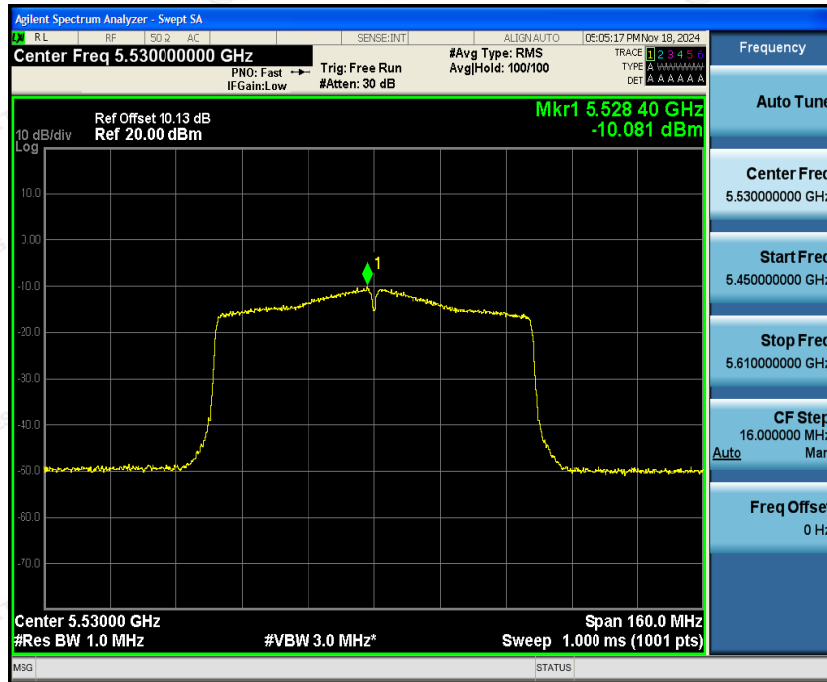


**IEEE802.11ac HT80 mode****5150~5250MHz****5250~5350MHz**

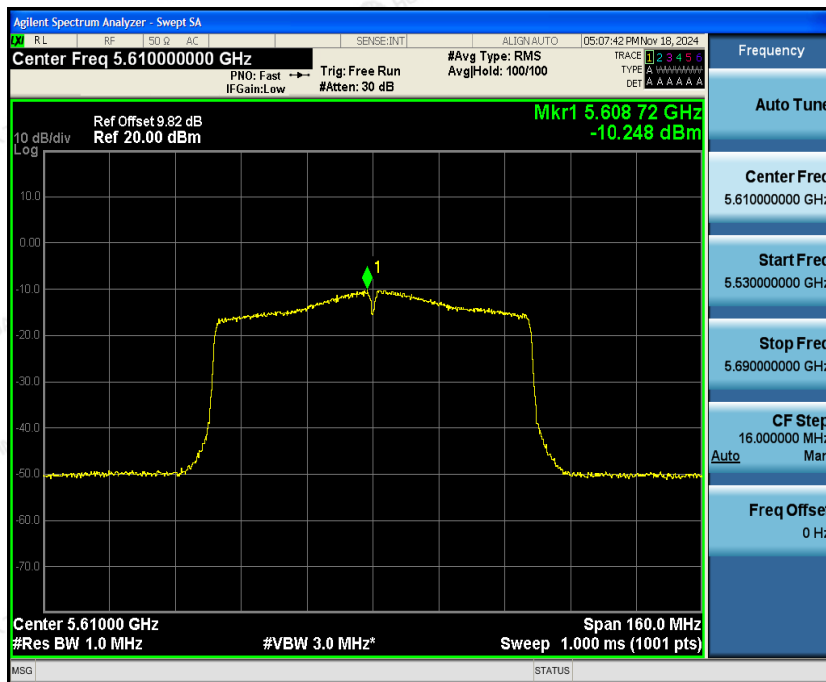


5470~5725MHz

Low Channel



High Channel



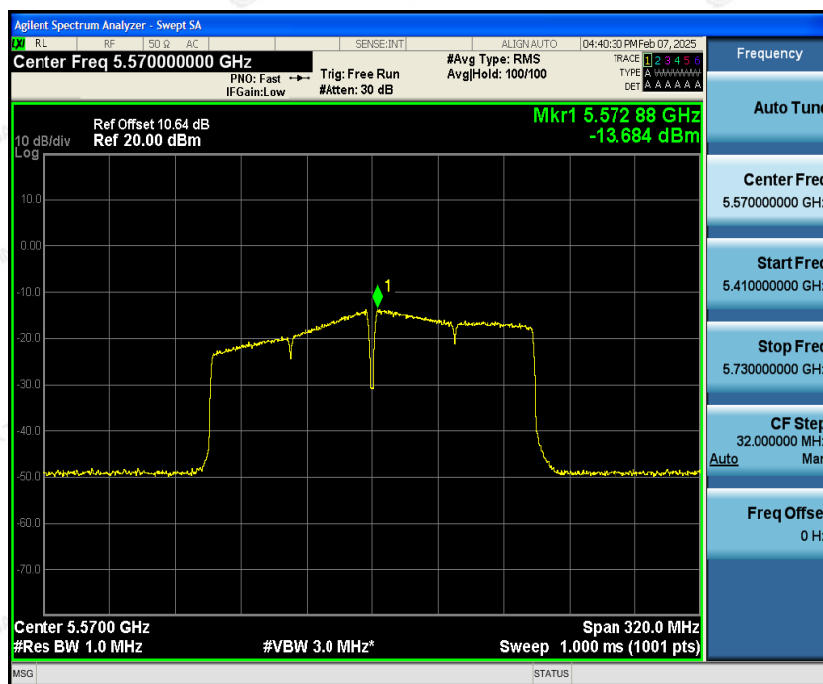


IEEE802.11ac HT160 mode

5150~5350MHz



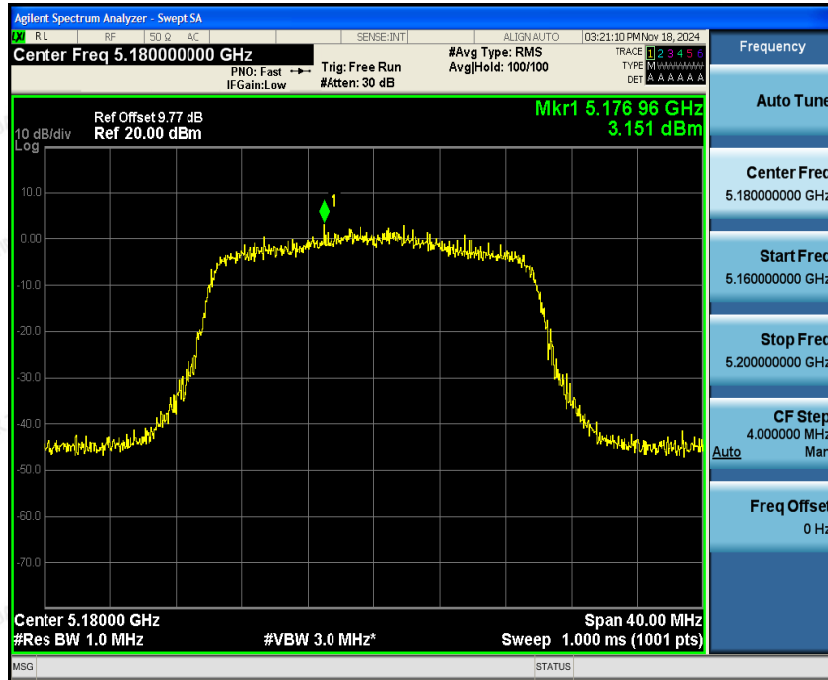
5470~5725MHz





5150~5250MHz

Low Channel

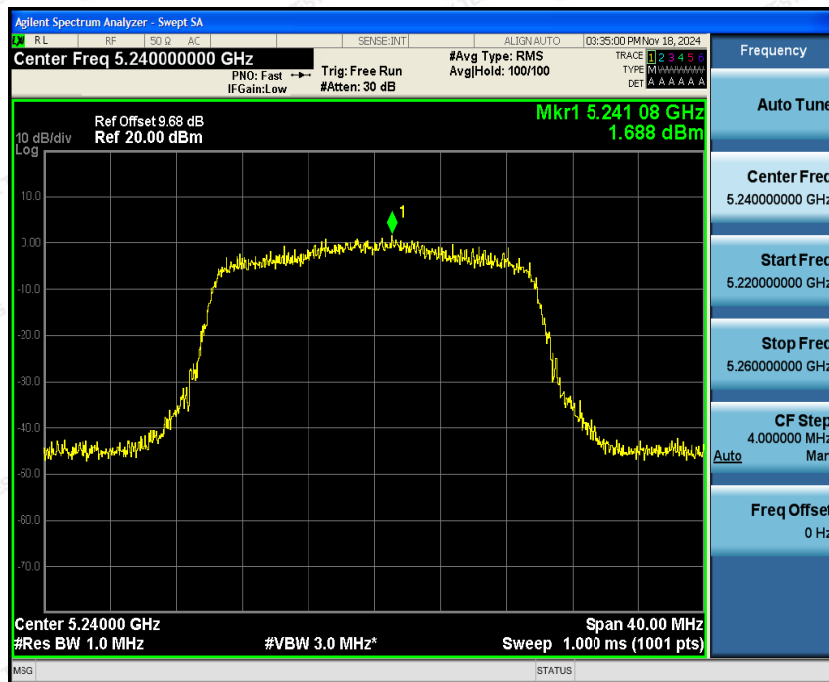


Mid Channel





High Channel



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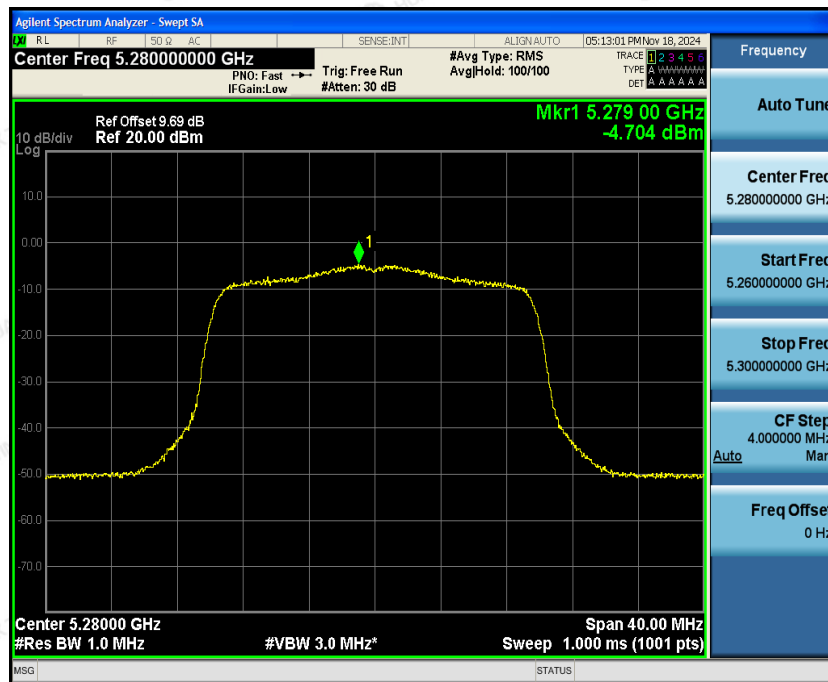


5250~5350MHz

Low Channel

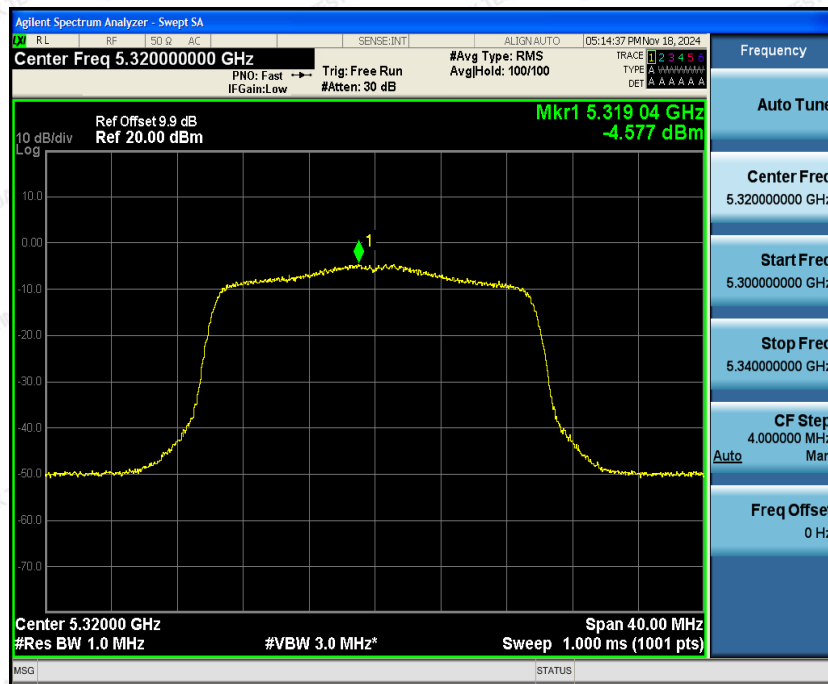


Mid Channel





High Channel



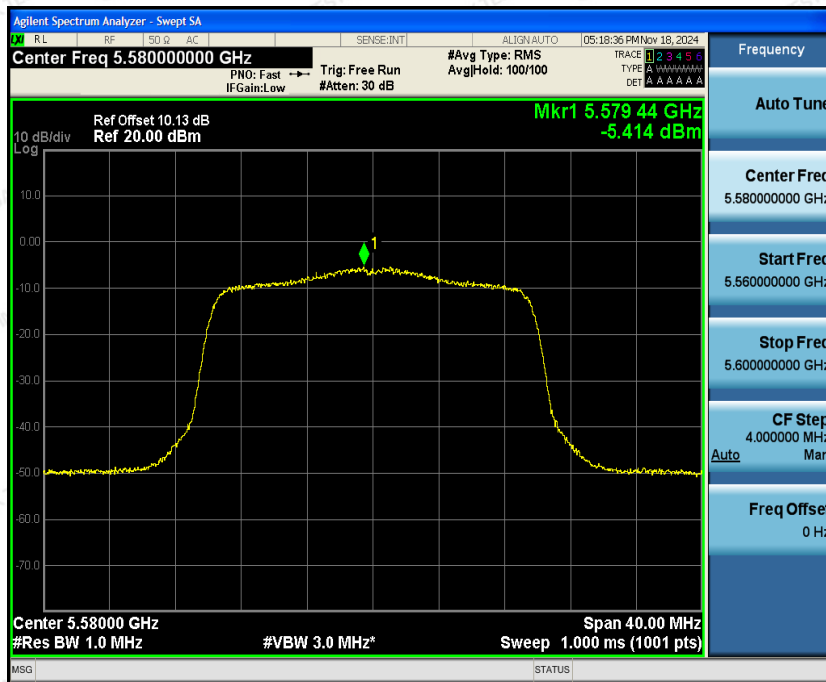
5470~5725MHz

Low Channel

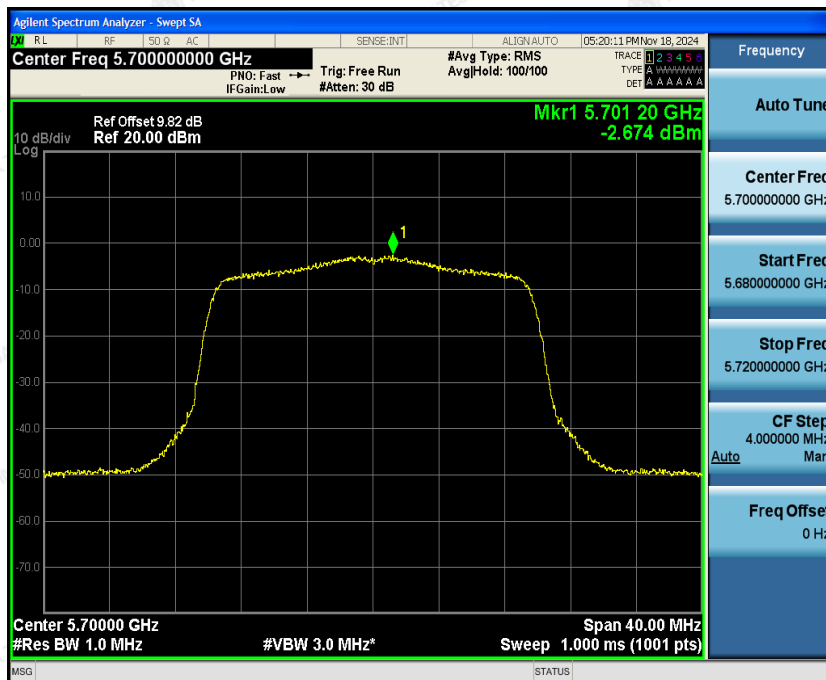


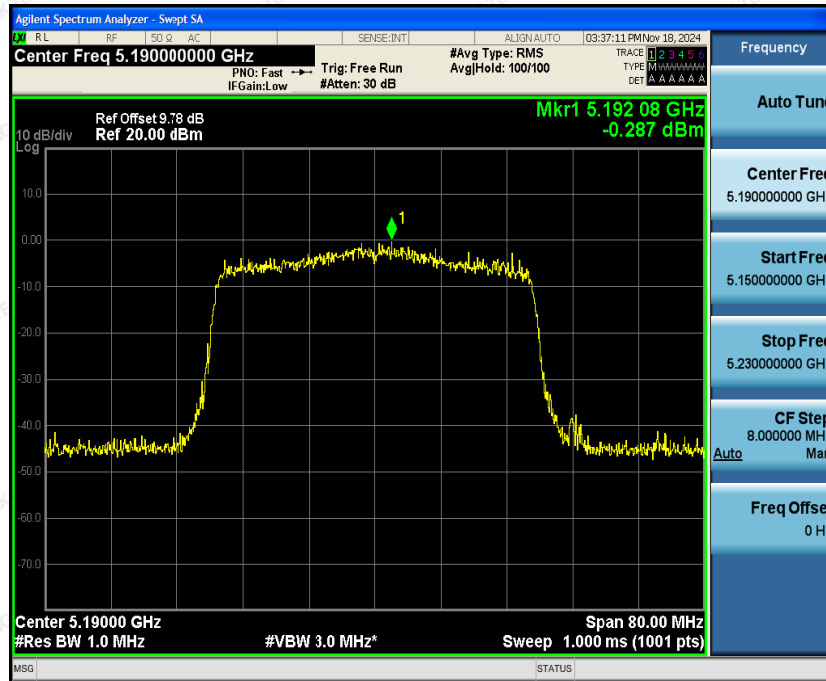
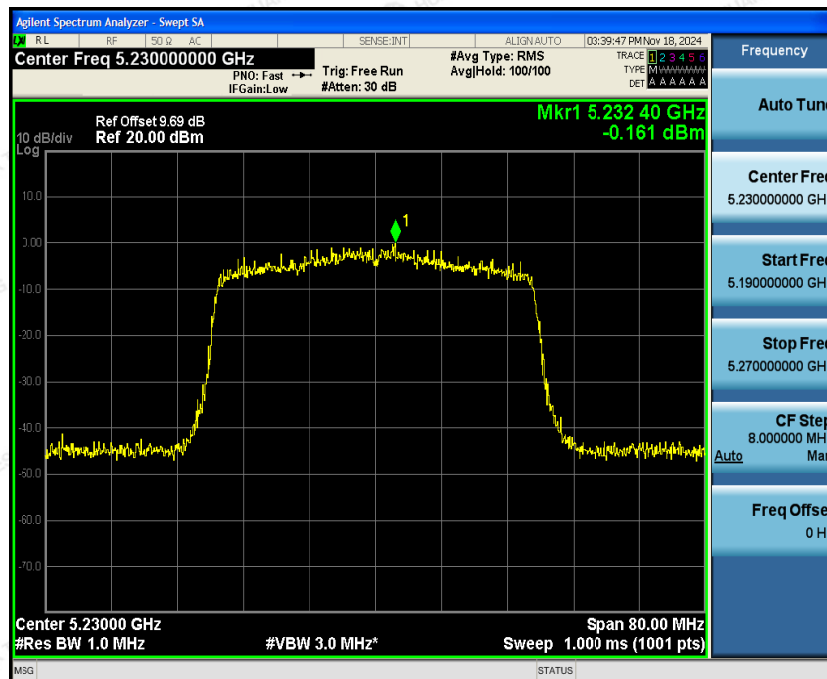


Mid Channel



High Channel

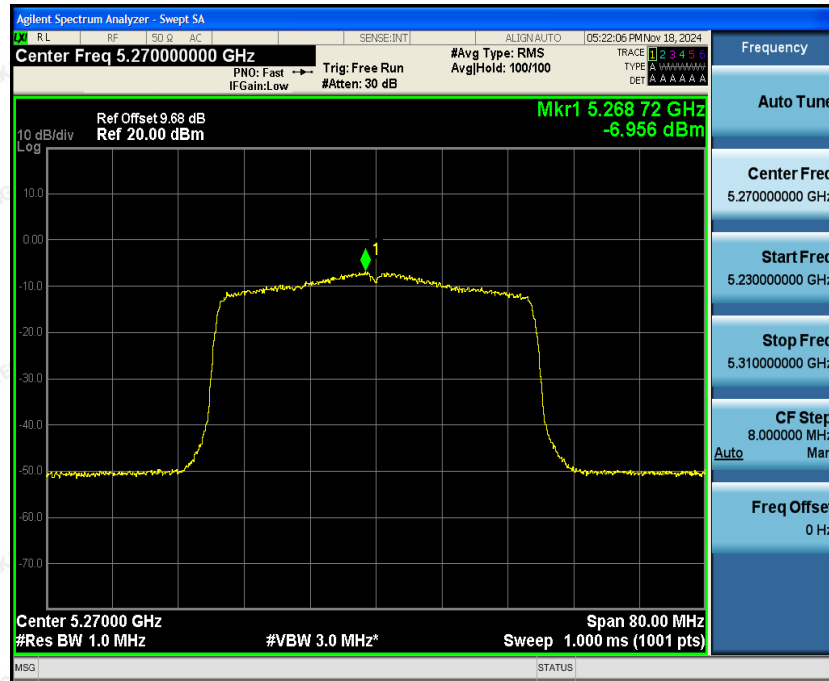


**IEEE802.11ax HE40 mode****5150~5250MHz****Low Channel****High Channel**

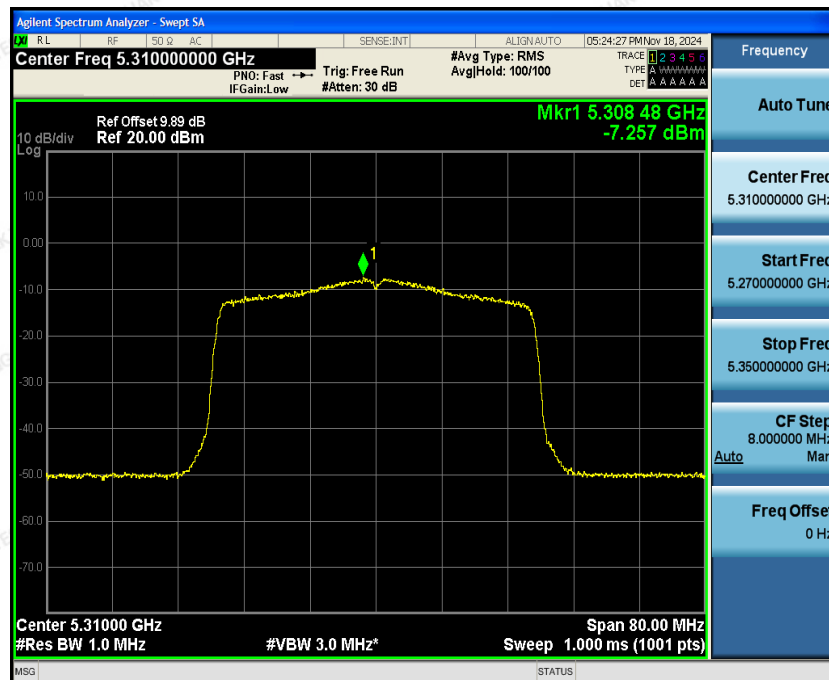


5250~5350MHz

Low Channel



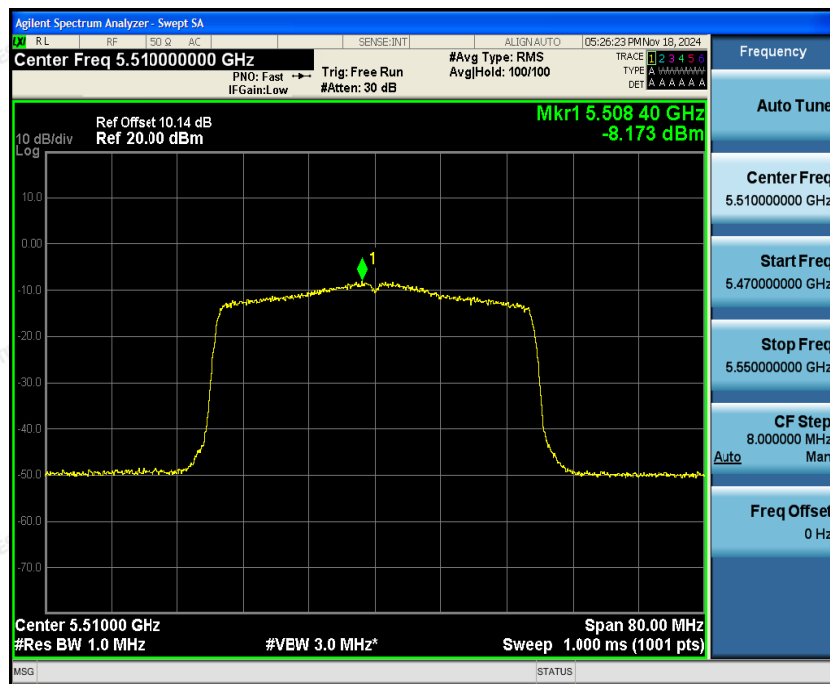
High Channel



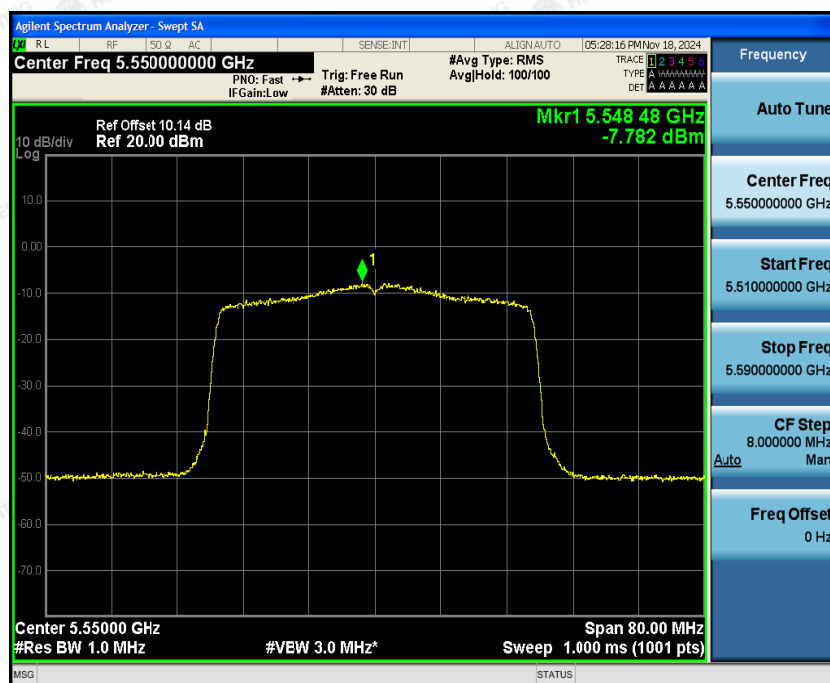


5470~5725MHz

Low Channel

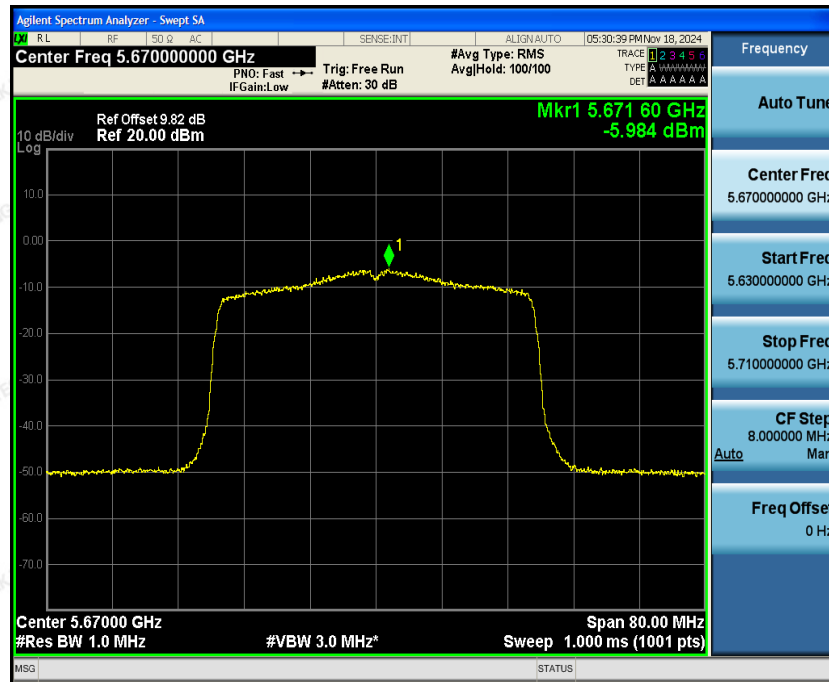


Mid Channel





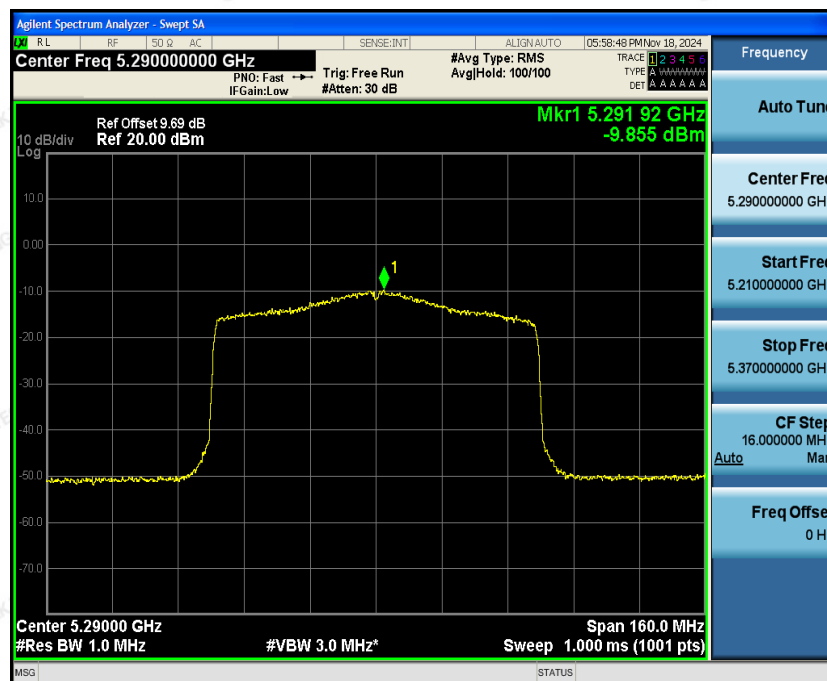
High Channel



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**IEEE802.11ax HE80 mode****5150~5250MHz****5250~5350MHz**

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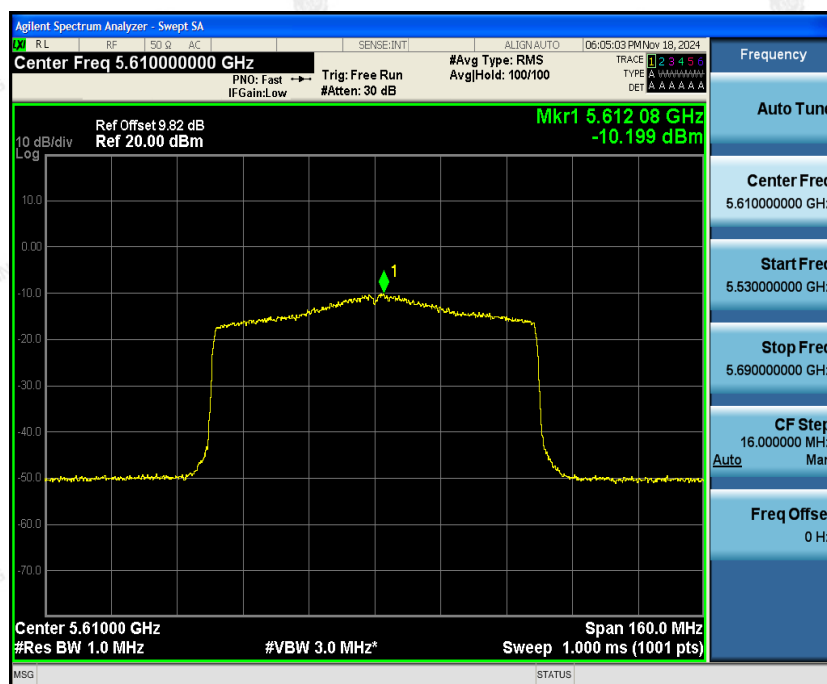
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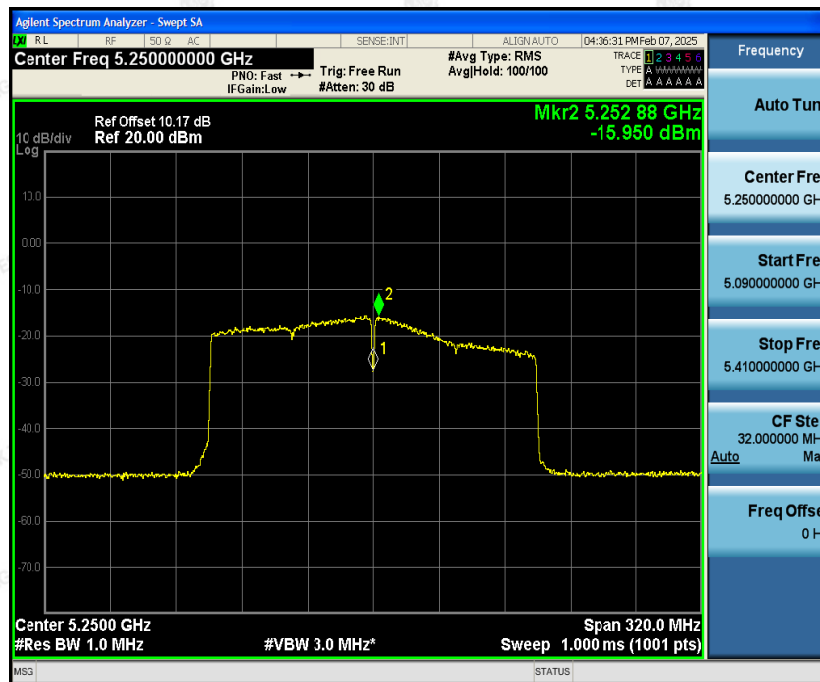
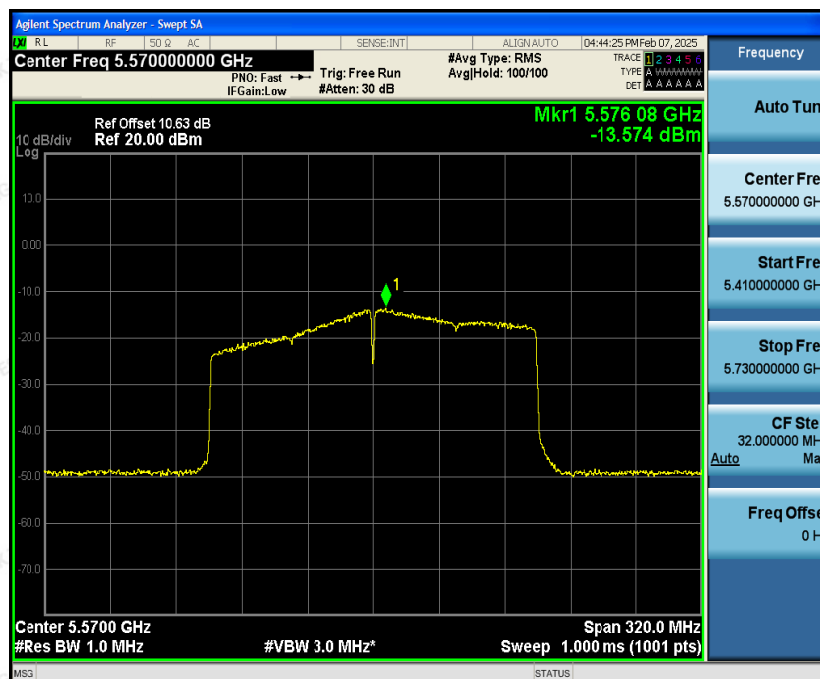
5470~5725MHz

Low Channel



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**IEEE802.11ax HE160 mode****5150~5350MHz****5470~5725MHz**

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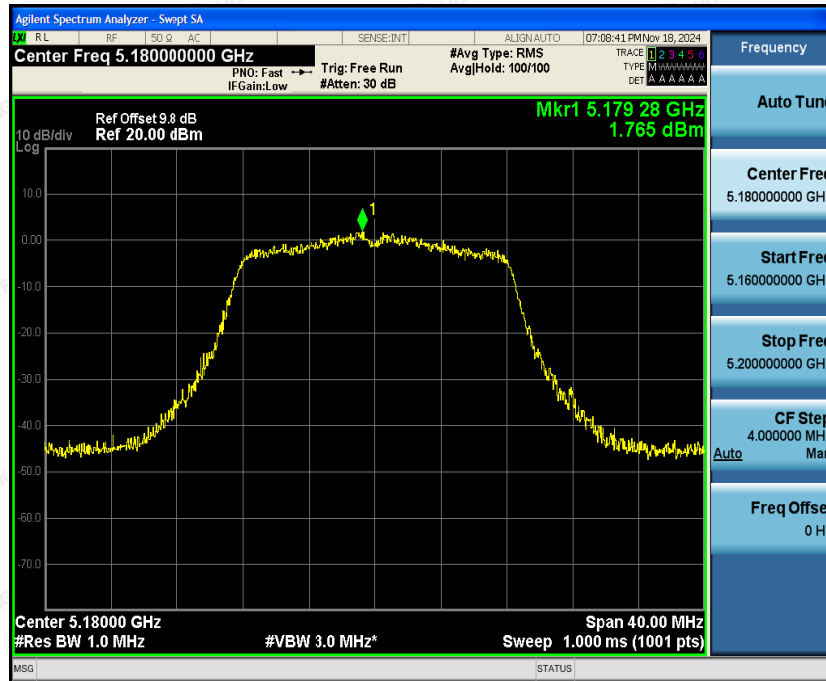
Add: 1-2F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China



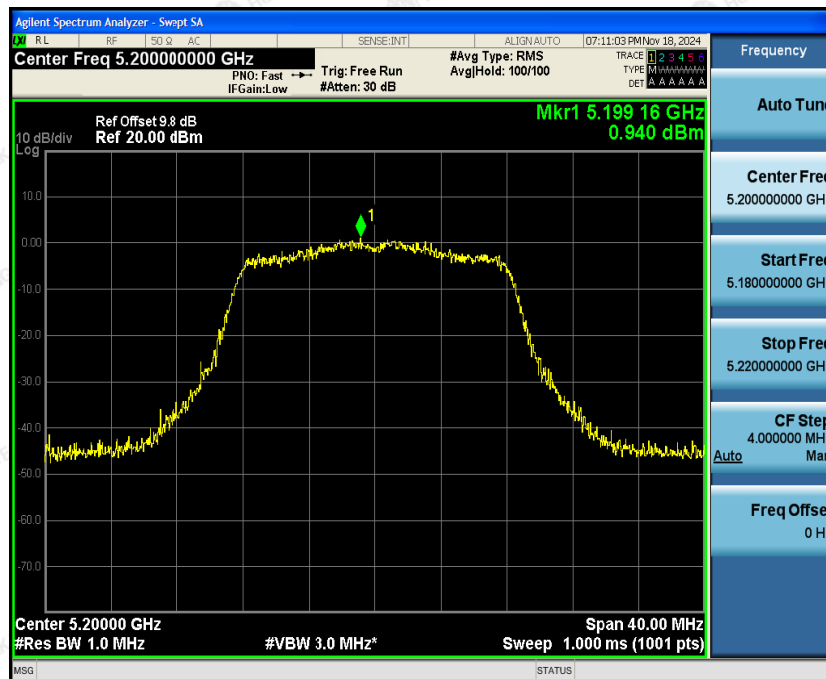
Antenna 2
IEEE802.11a mode:

5150~5250MHz

Low Channel



Mid Channel





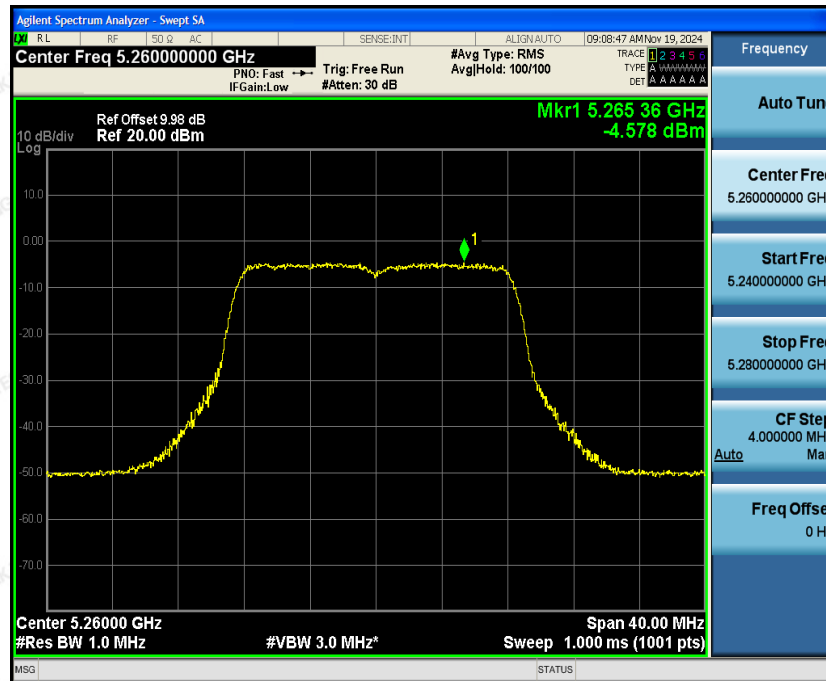
High Channel



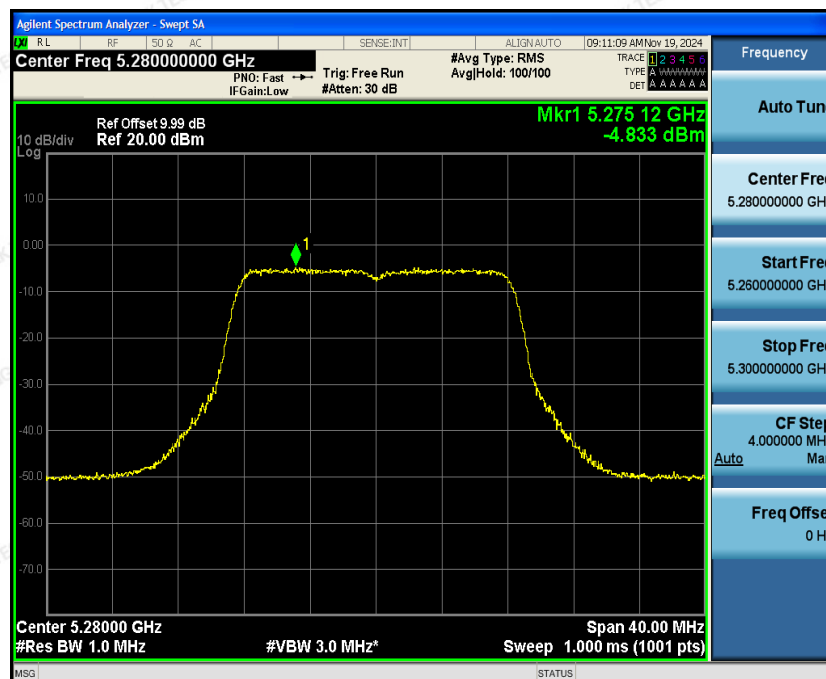


5250~5350MHz

Low Channel

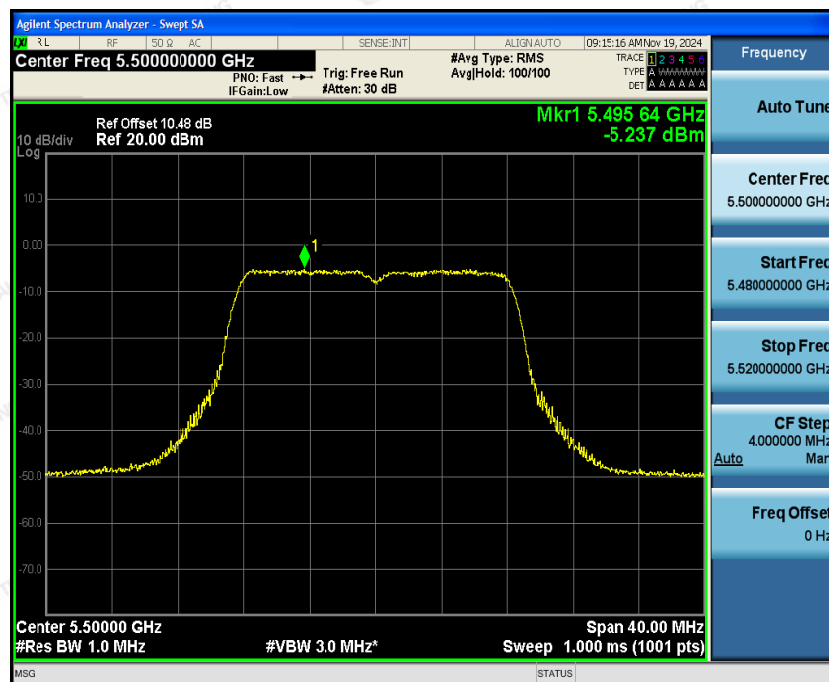


Mid Channel





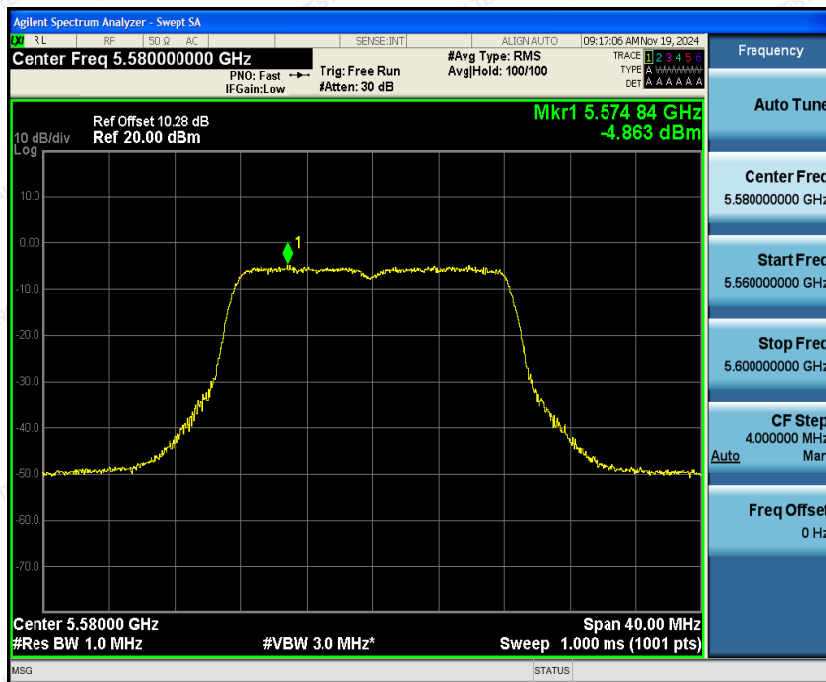
Low Channel



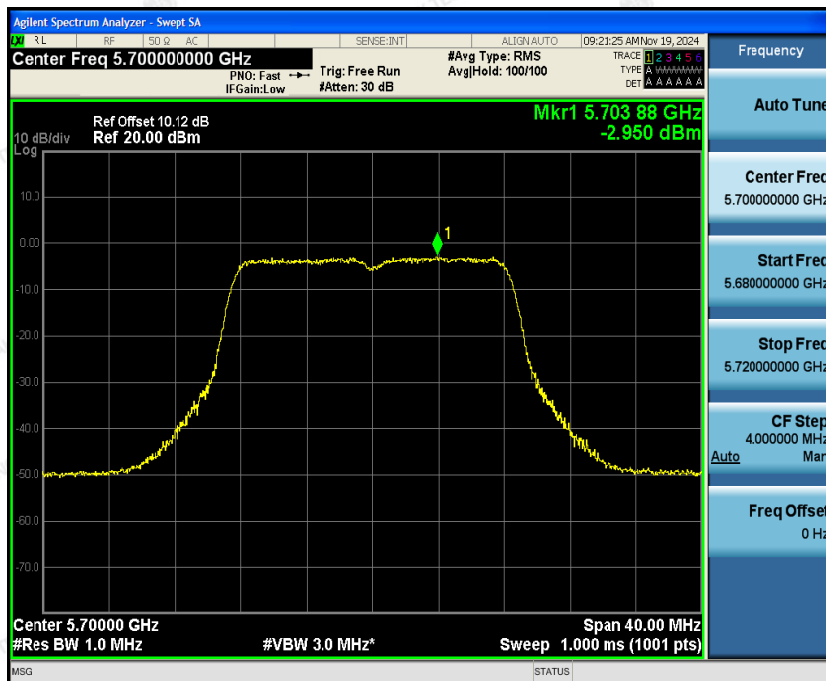
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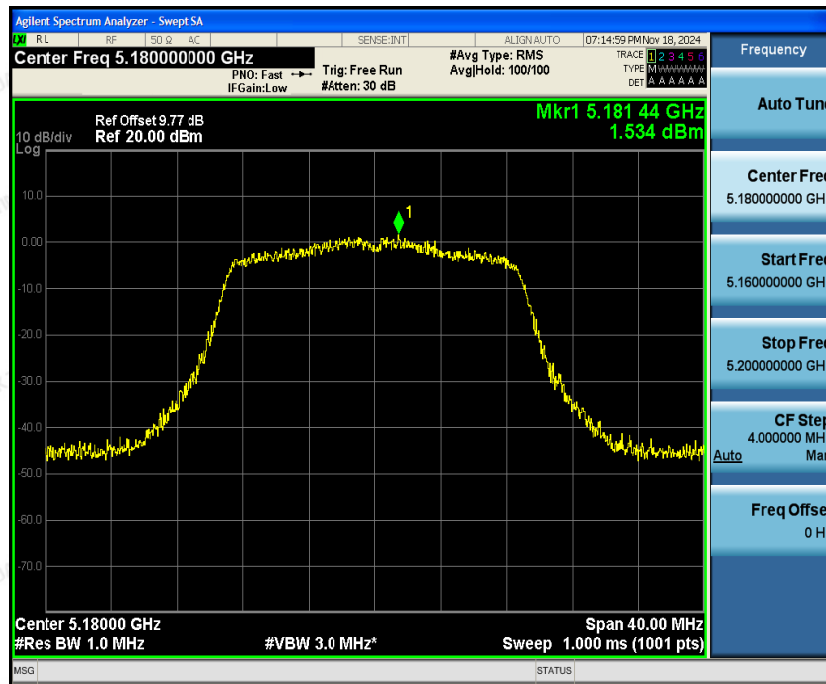
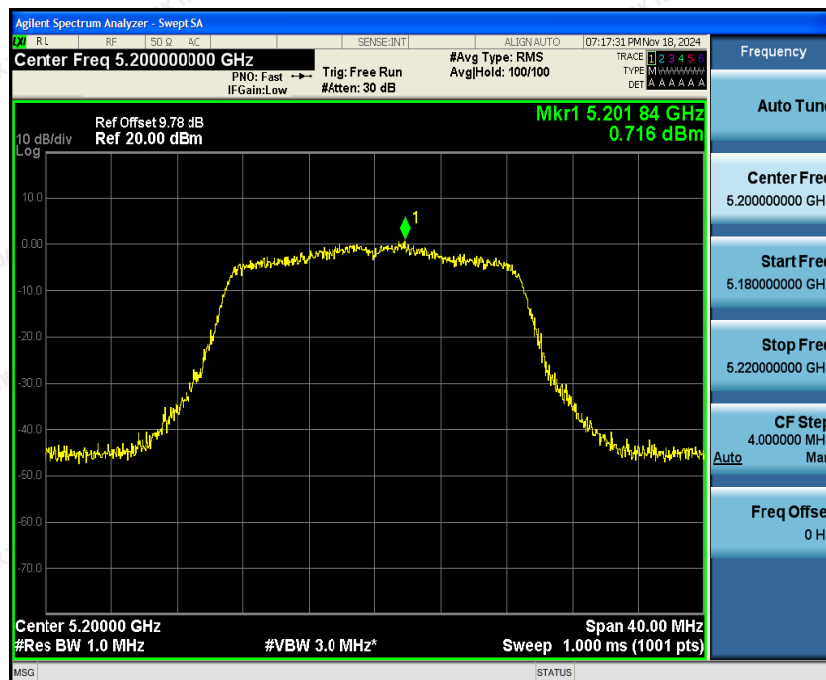


Mid Channel



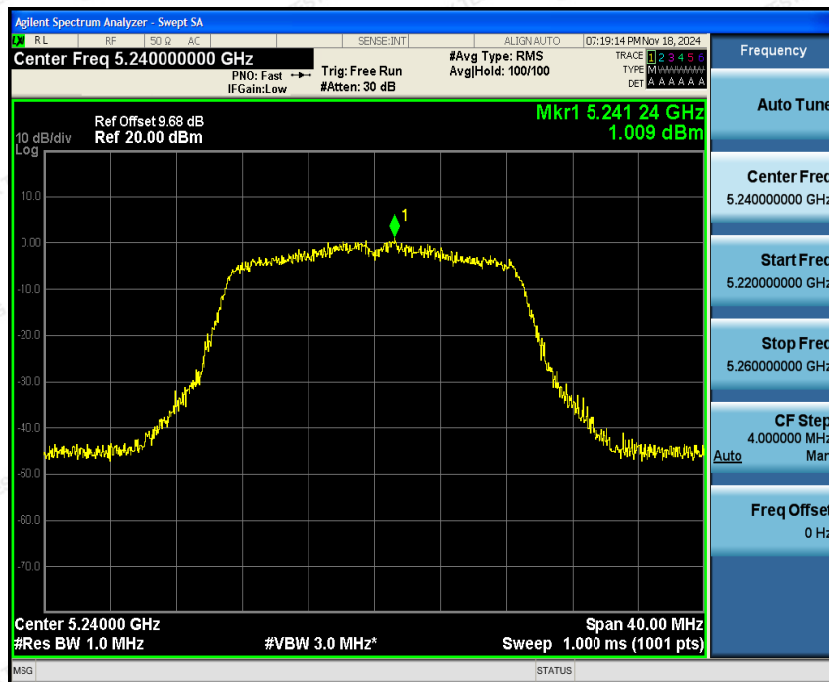
High Channel



**IEEE802.11n HT20 mode****5150~5250MHz****Low Channel****Mid Channel**



High Channel



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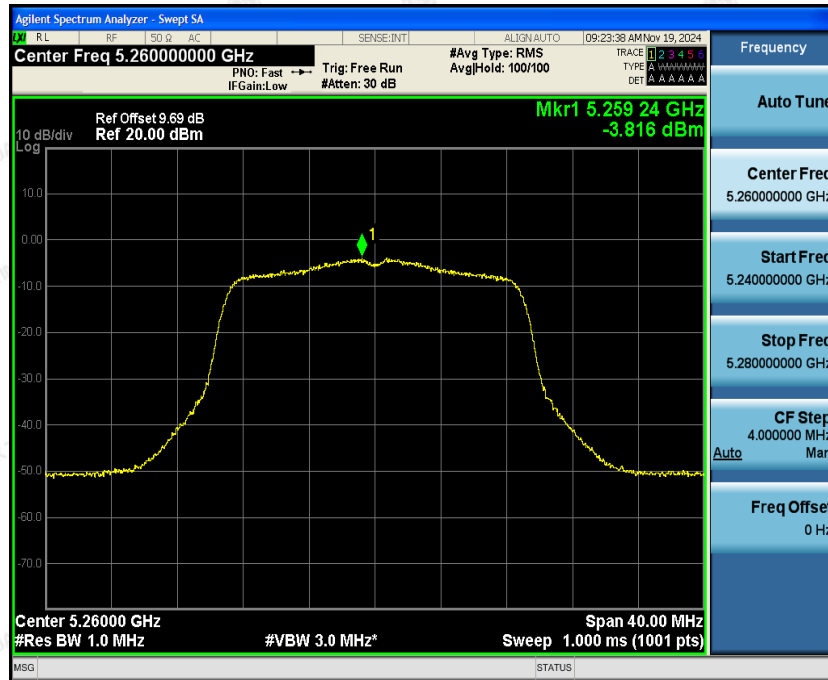
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5250~5350MHz

Low Channel

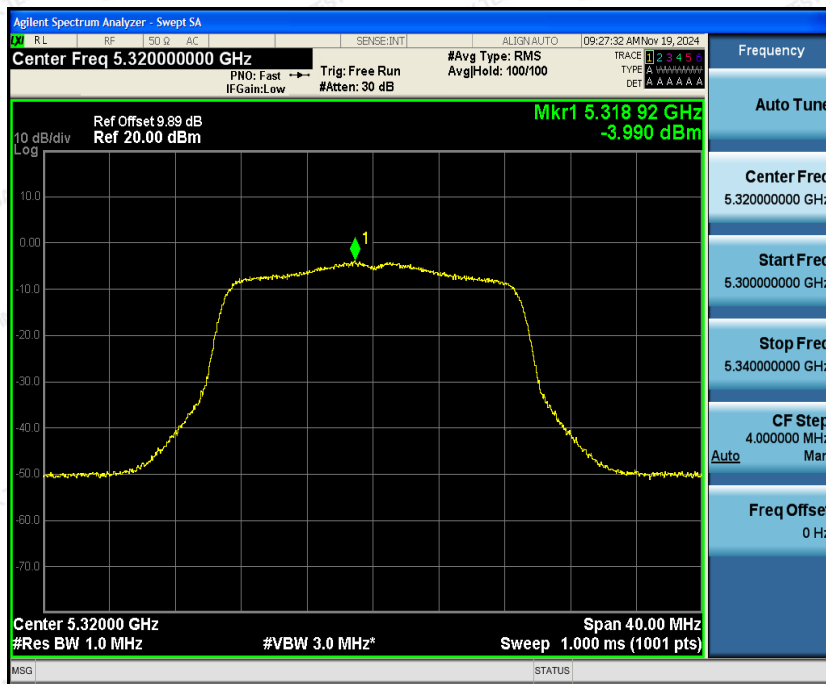


Mid Channel



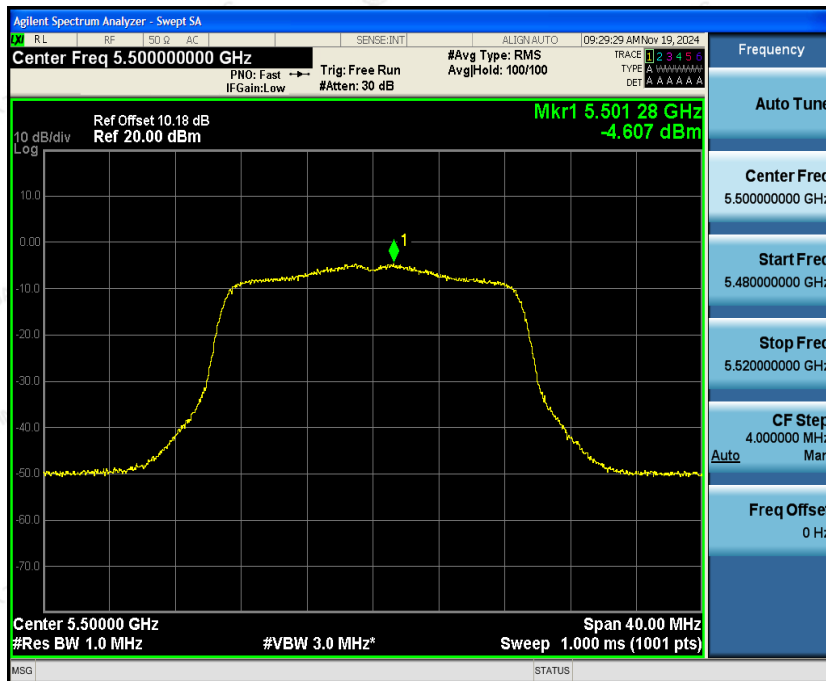


High Channel



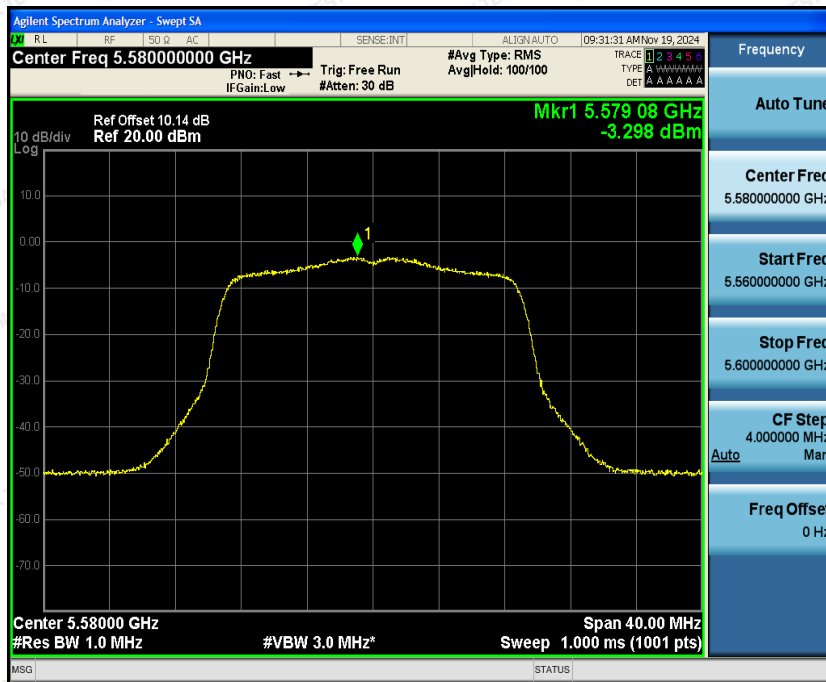
5470~5725MHz

Low Channel

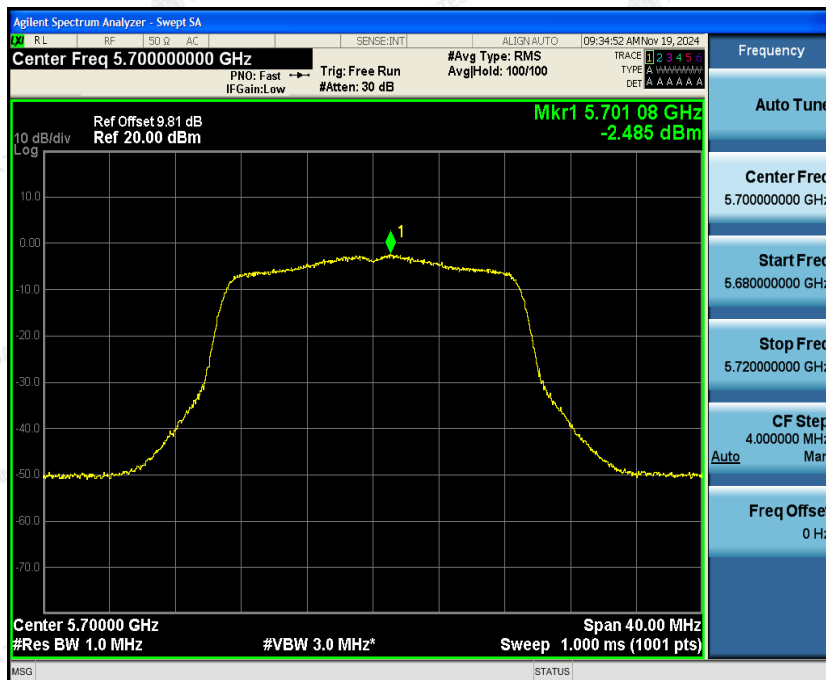




Mid Channel



High Channel





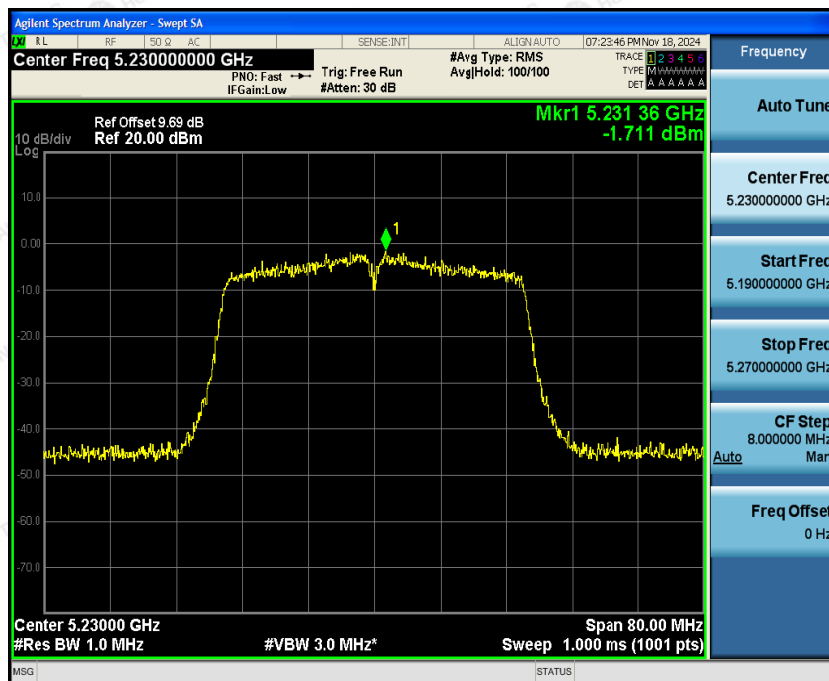
IEEE802.11n HT40 mode

5150~52500MHz

Low Channel



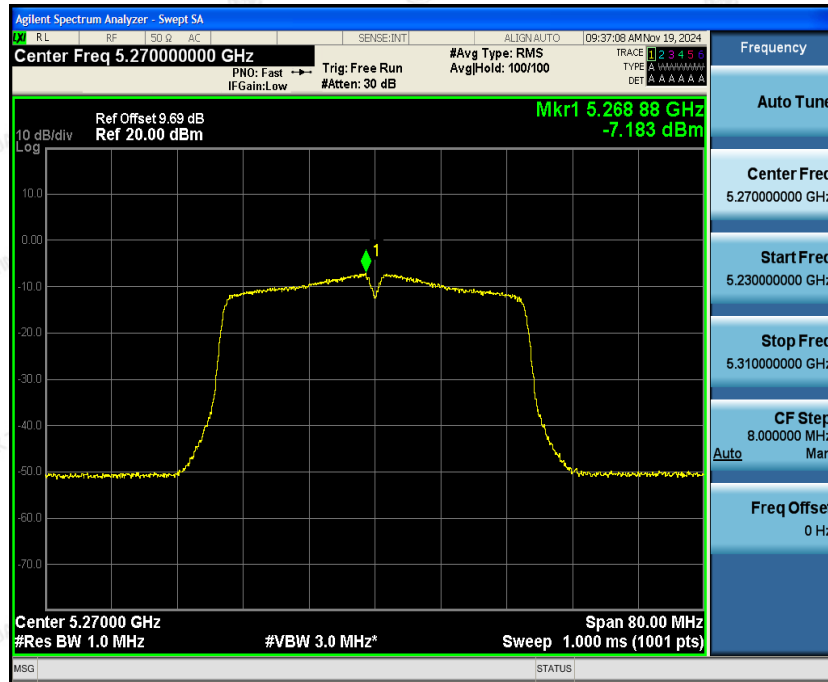
High Channel



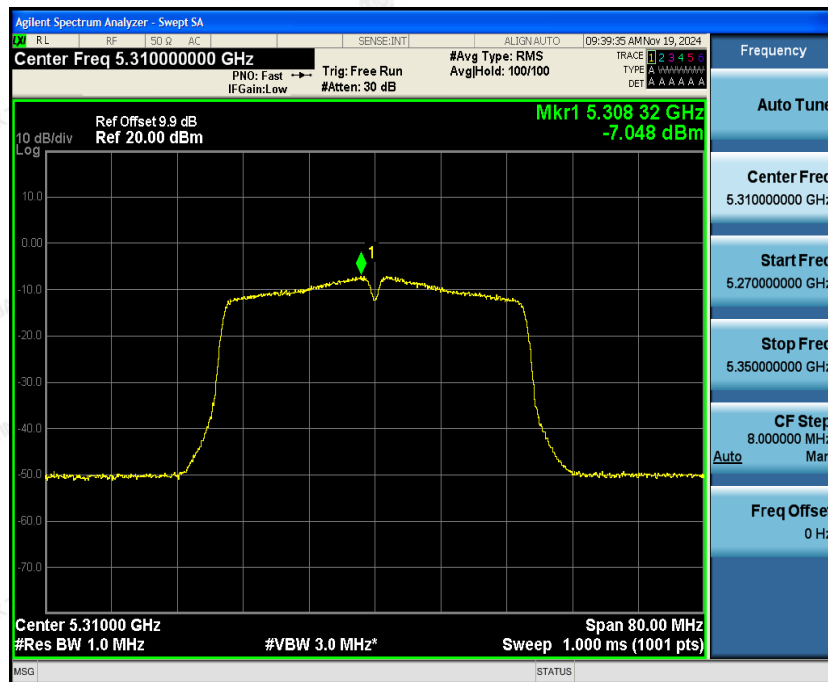


5250~5350MHz

Low Channel



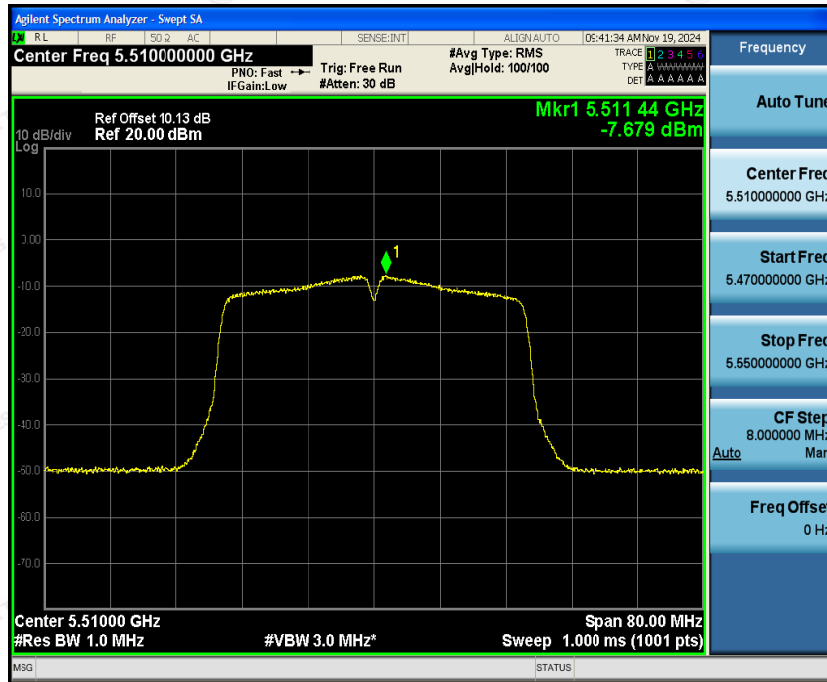
High Channel





5470~5725MHz

Low Channel



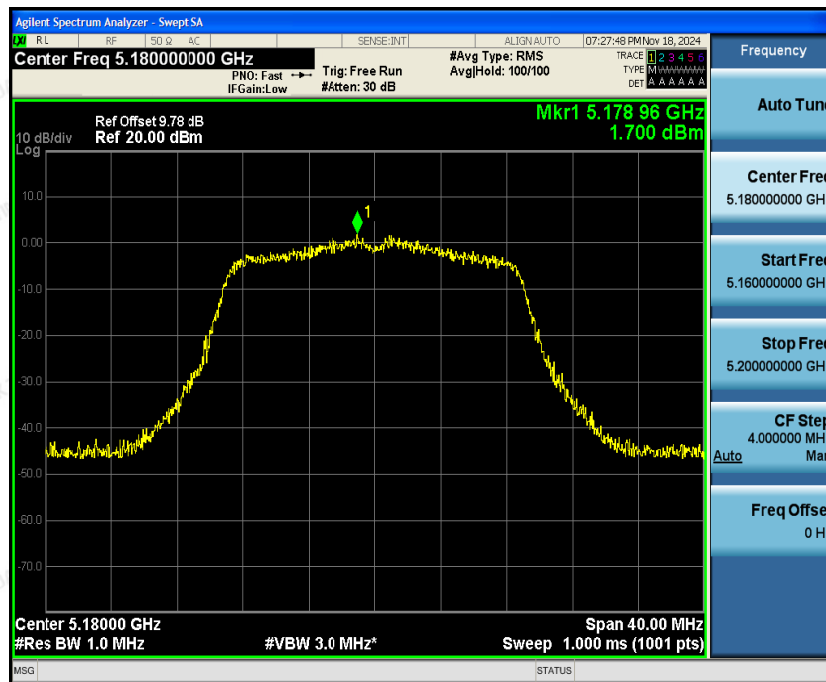
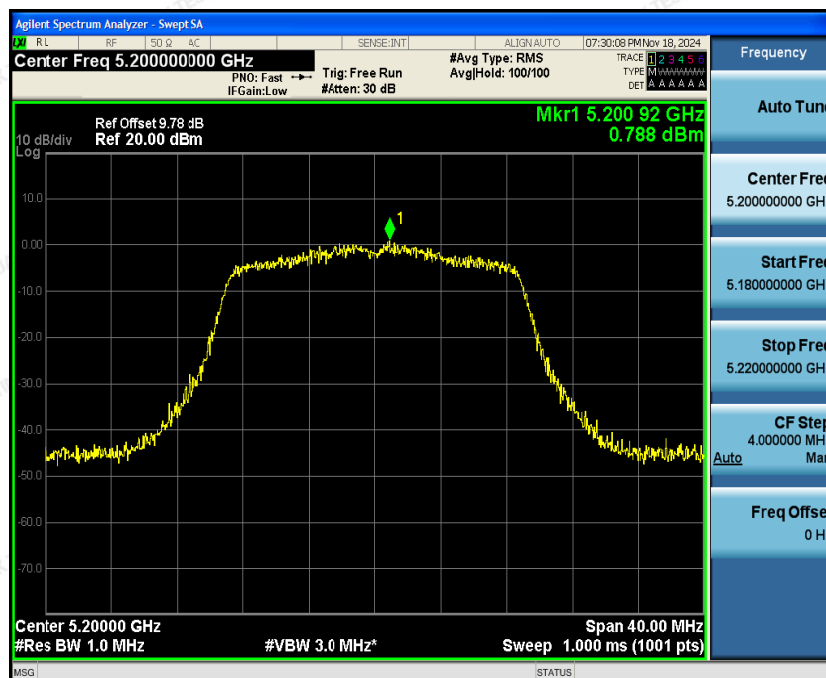
Mid Channel





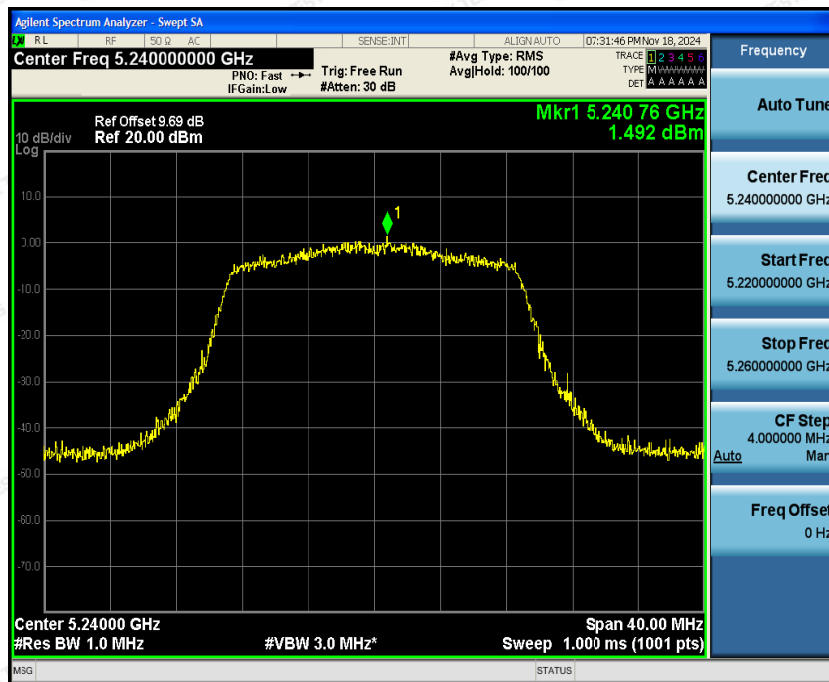
High Channel



**IEEE802.11ac HT20 mode****5150~5250MHz****Low Channel****Mid Channel**

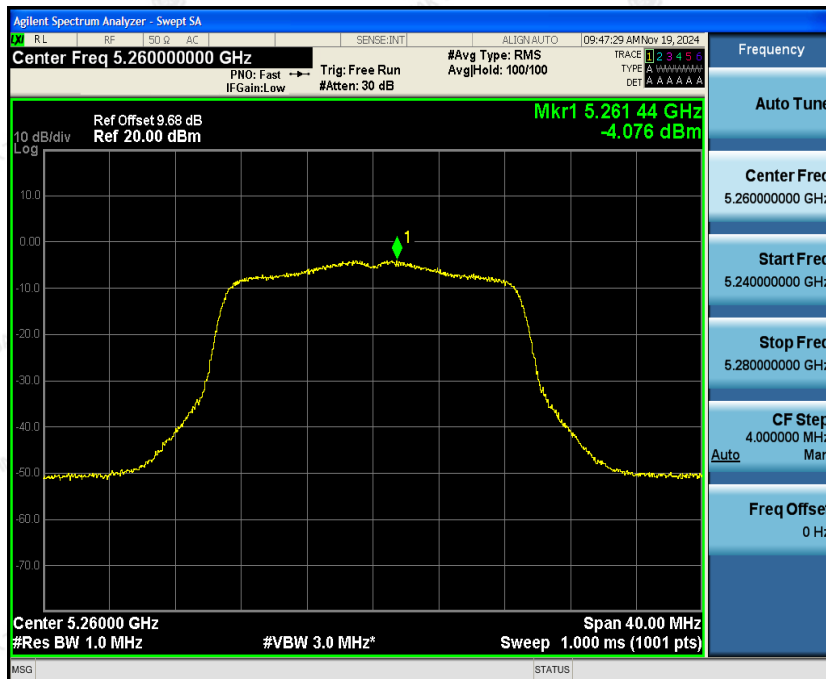


High Channel



5250~5350MHz

Low Channel

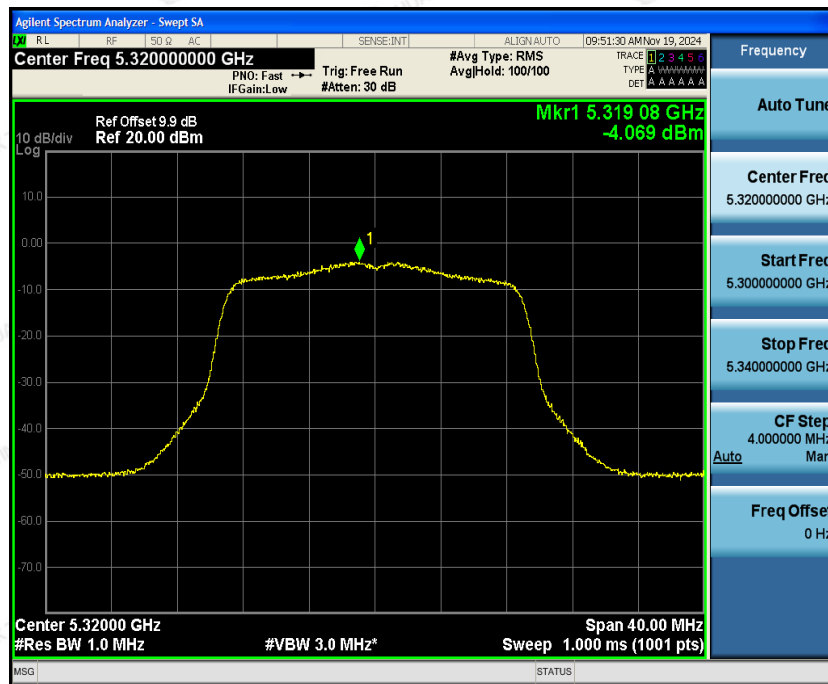




Mid Channel

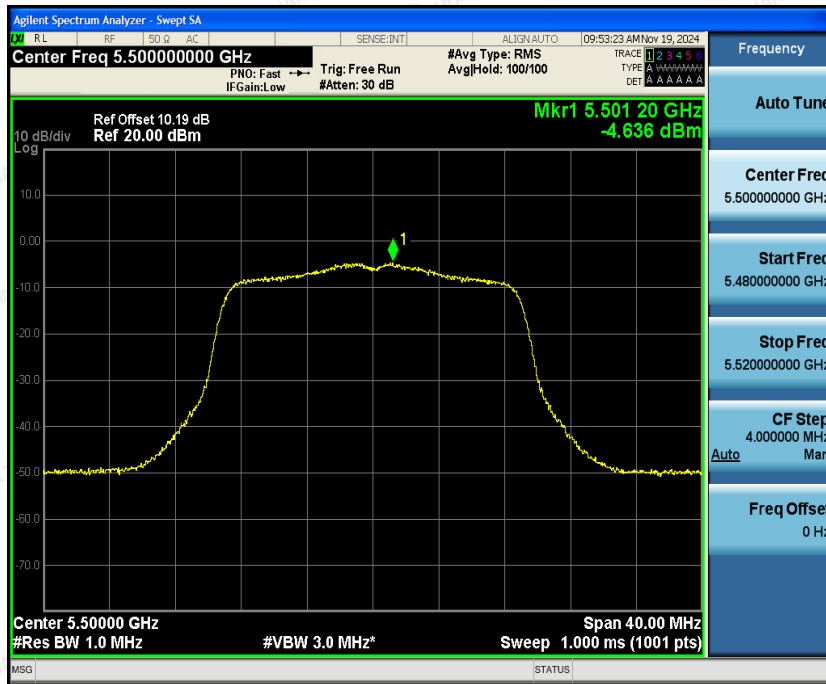


High Channel





Low Channel

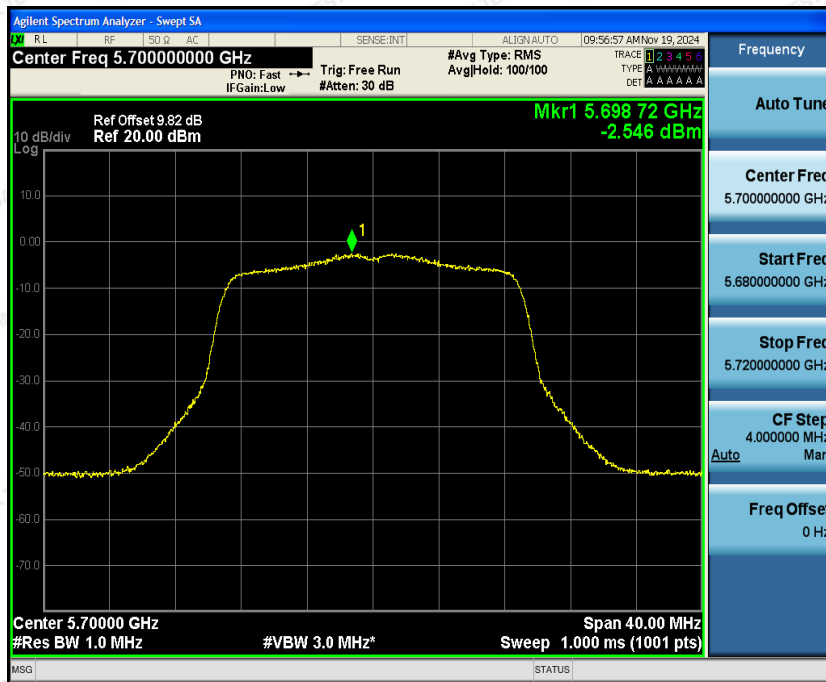


Mid Channel





High Channel



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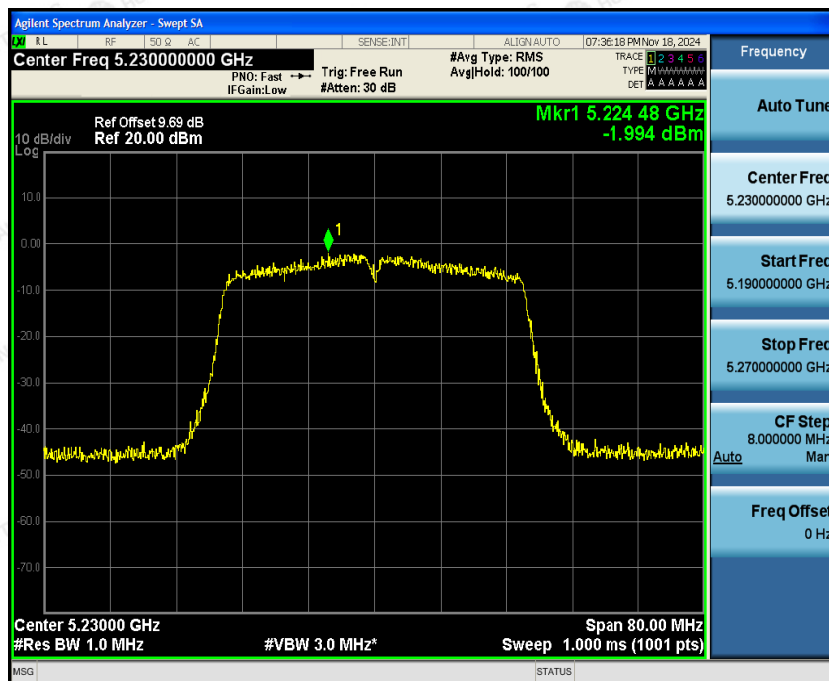
IEEE802.11ac HT40 mode

5150~5250MHz

Low Channel



High Channel



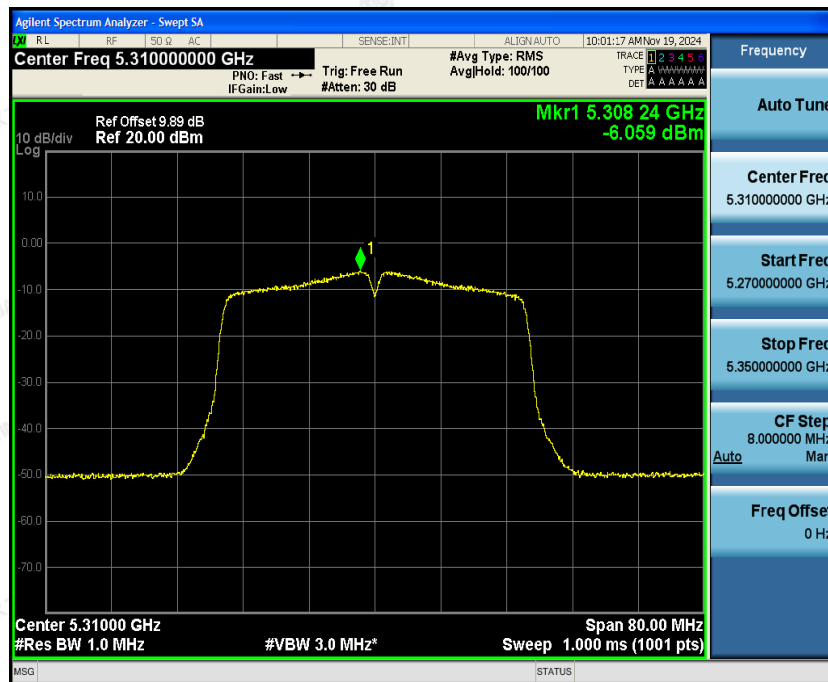


5250~5350MHz

Low Channel

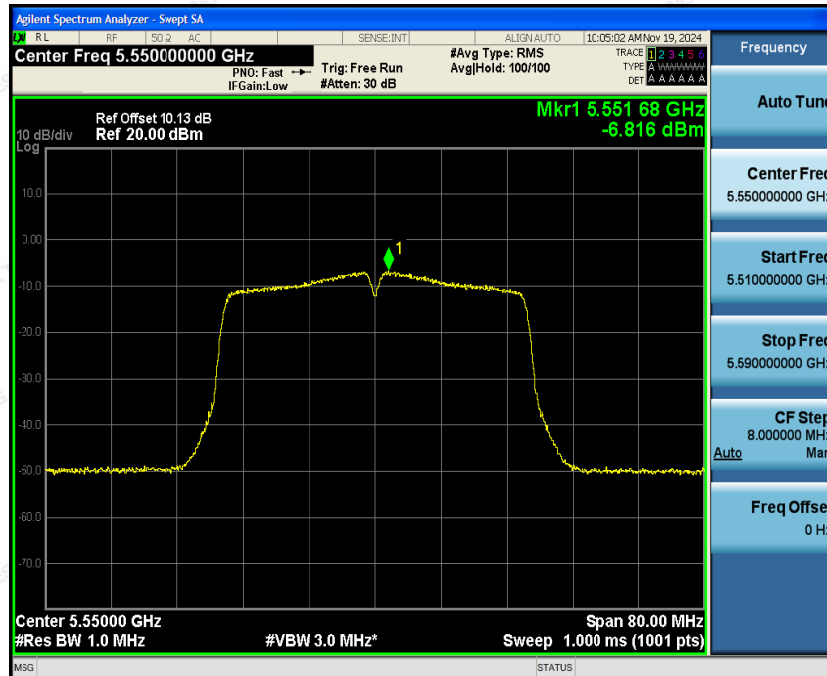


High Channel





Low Channel



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High Channel



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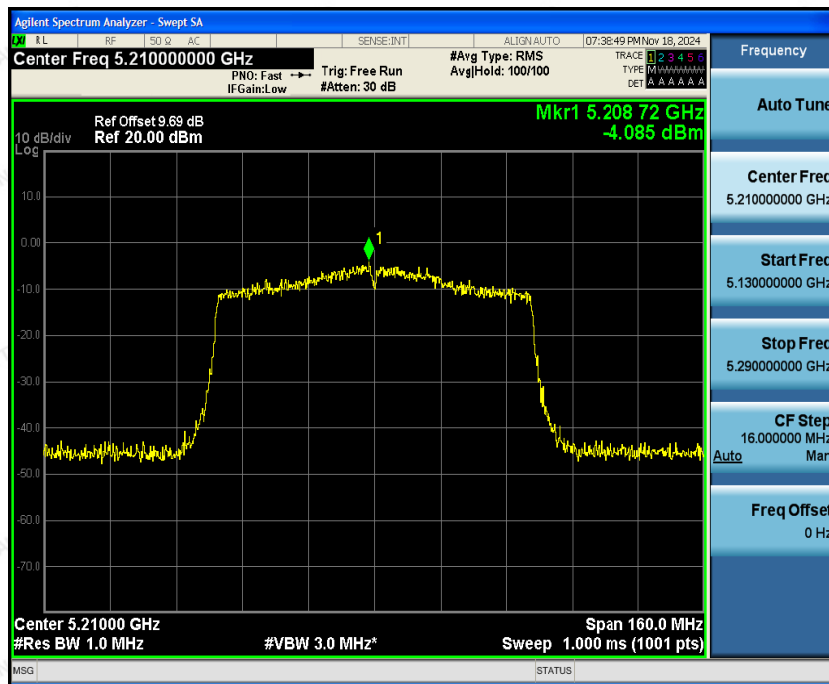
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IEEE802.11ac HT80 mode

5150~5250MHz



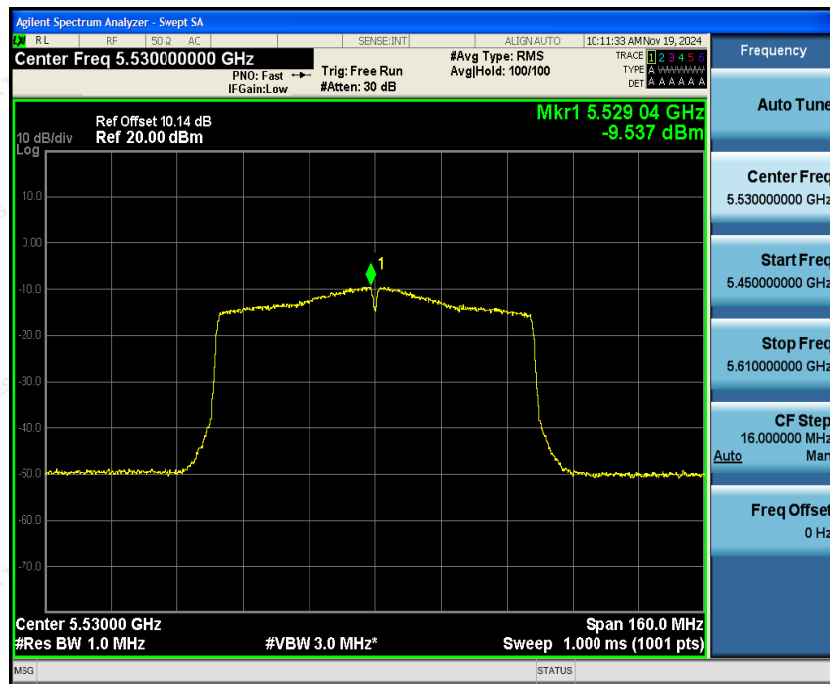
5250~5350MHz





5470~5725MHz

Low Channel



High Channel



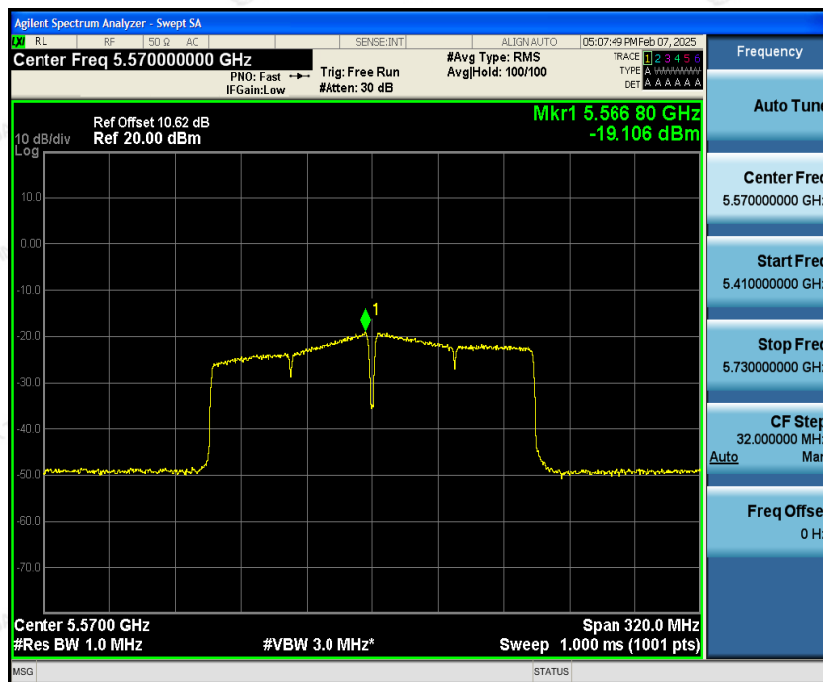


IEEE802.11ac HT160 mode

5150~5350MHz



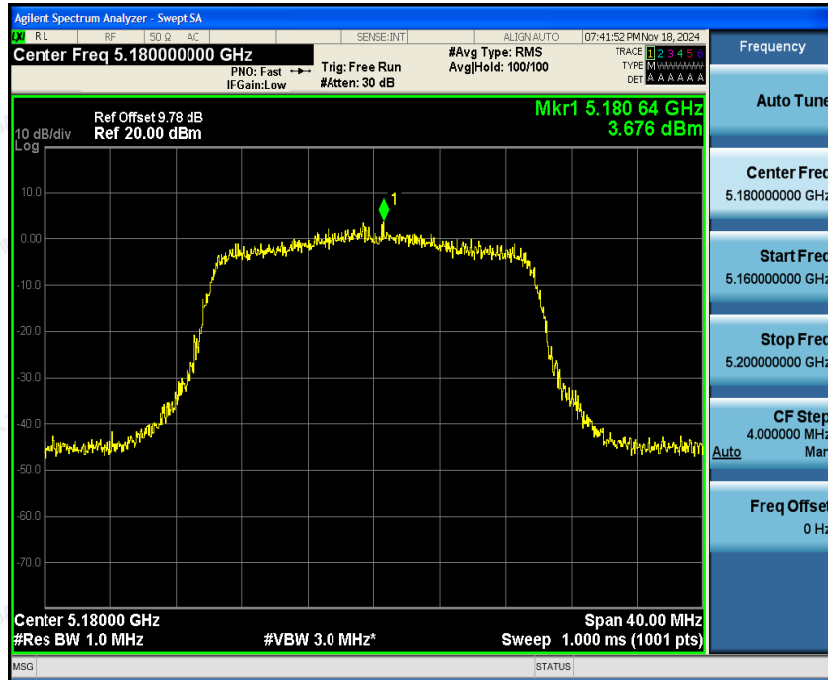
5470~5725MHz



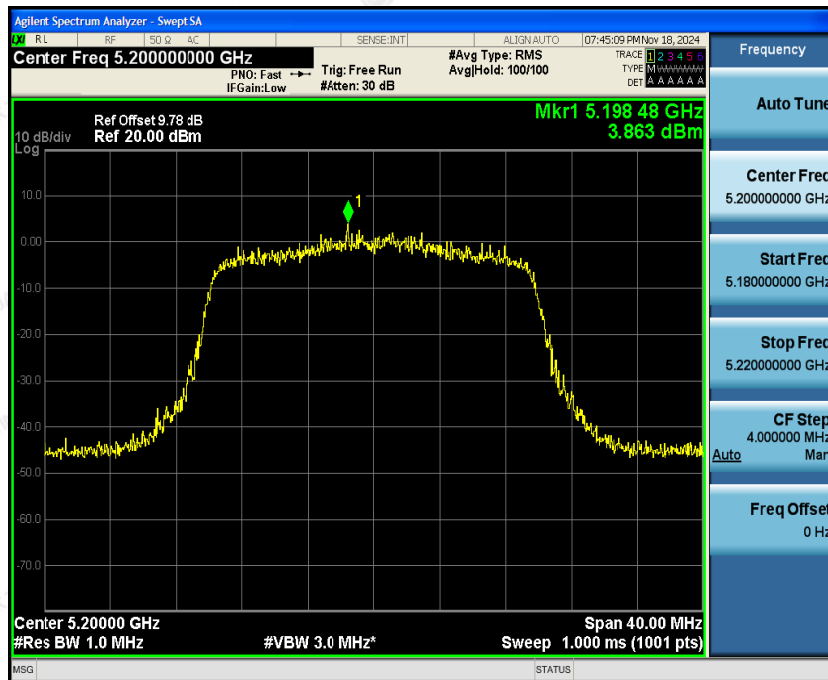


5150~5250MHz

Low Channel



Mid Channel



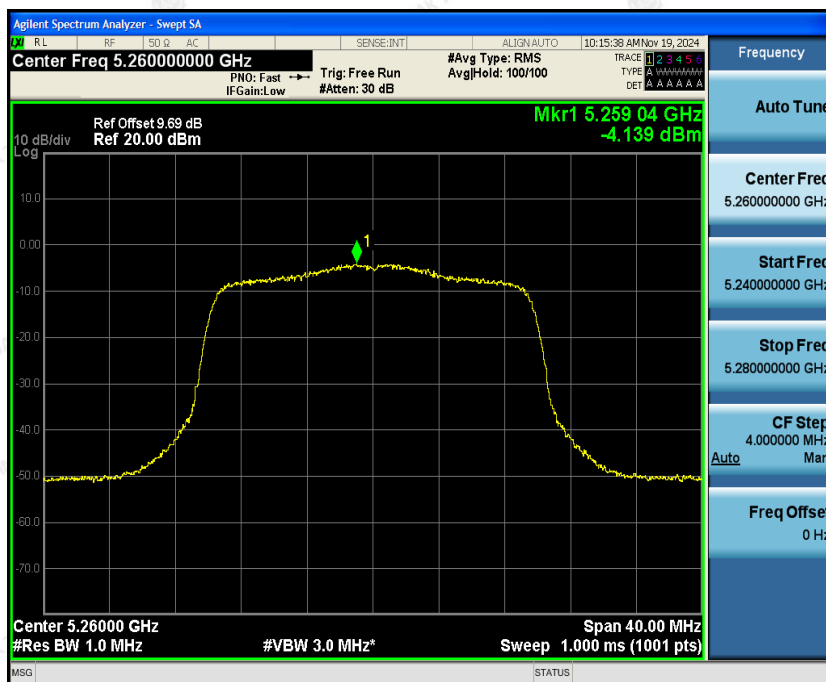


High Channel



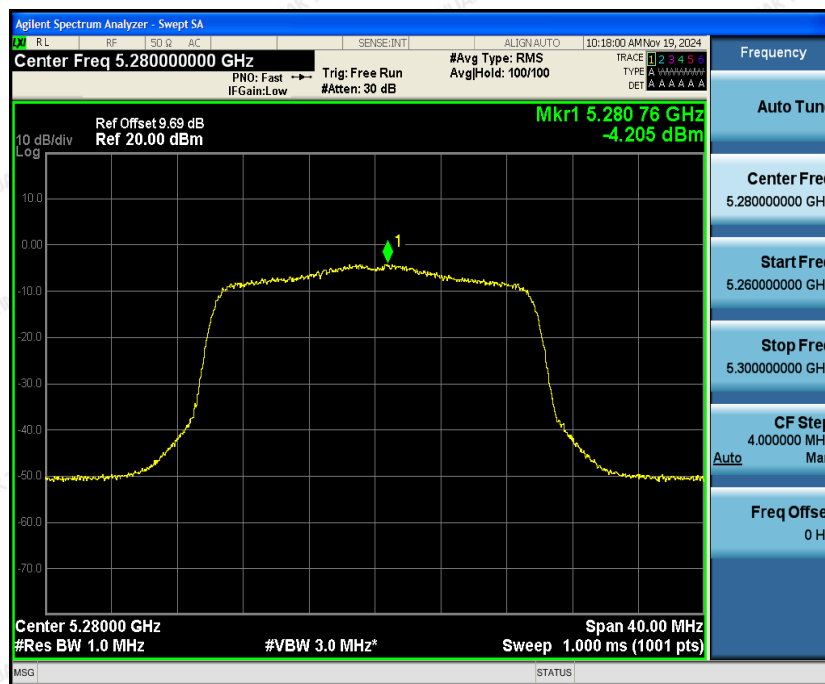
5250~5350MHz

Low Channel

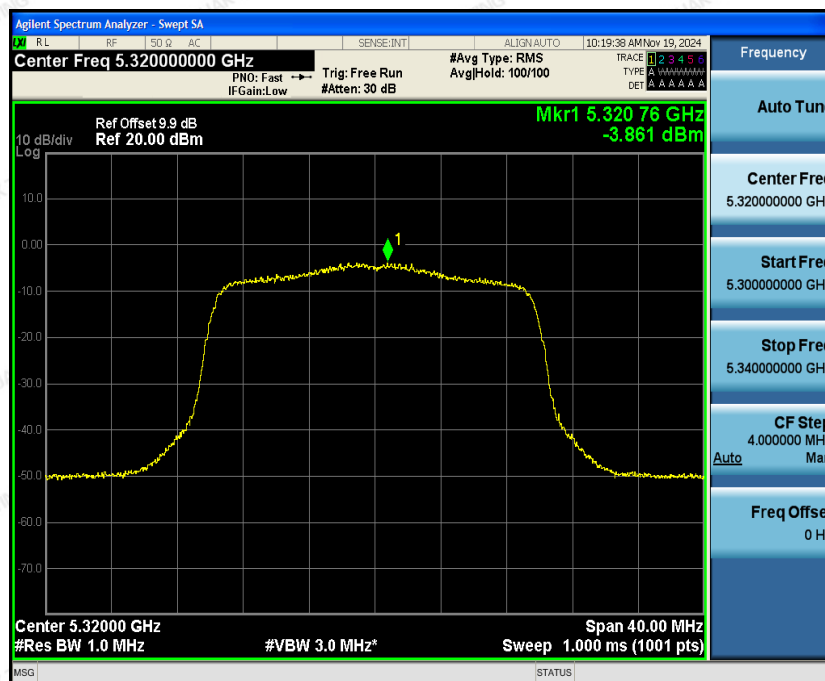


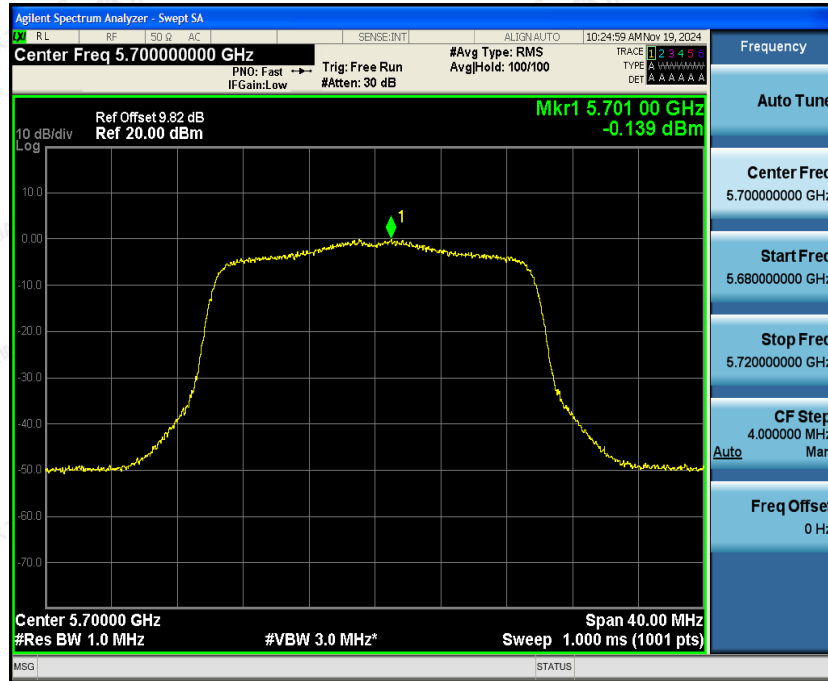


Mid Channel



High Channel

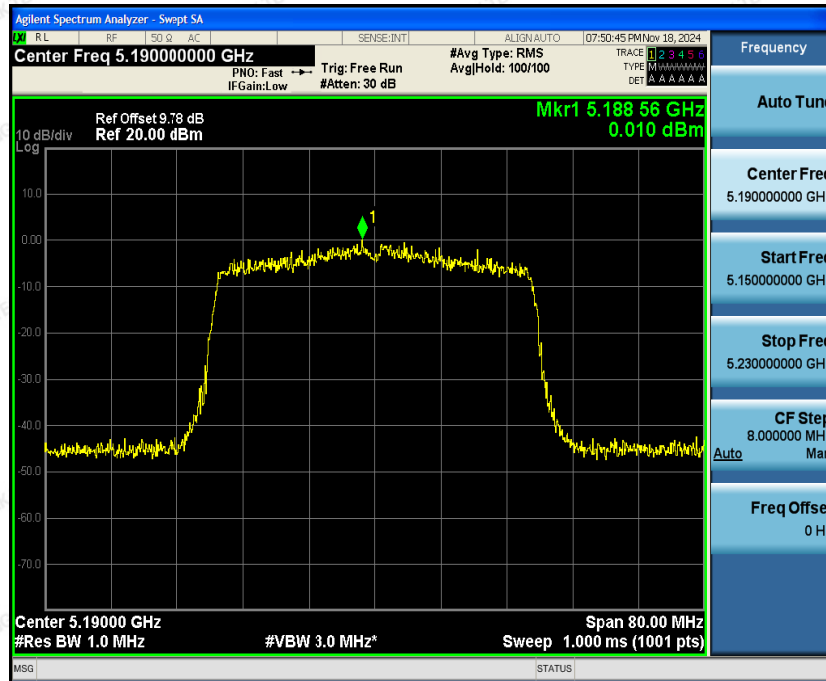
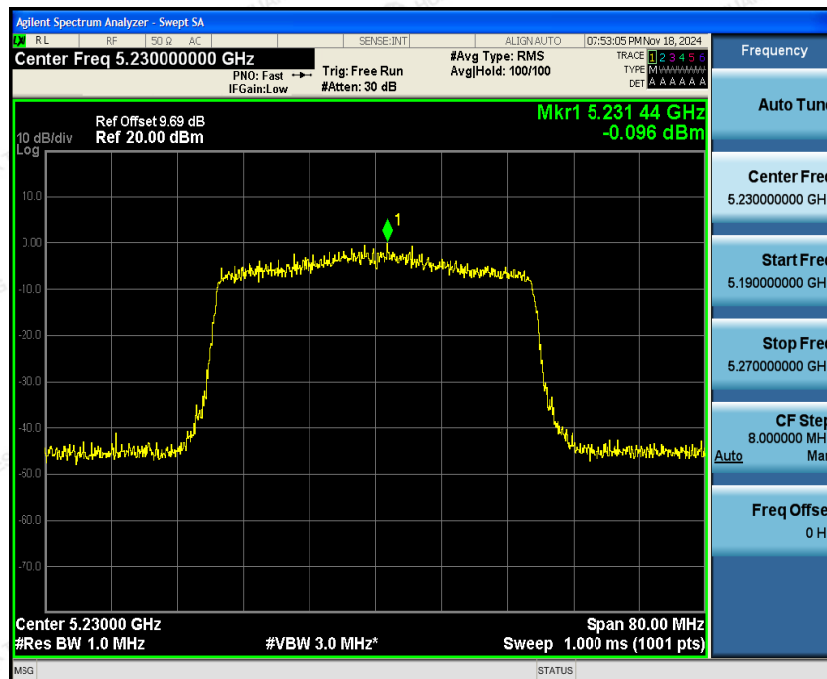




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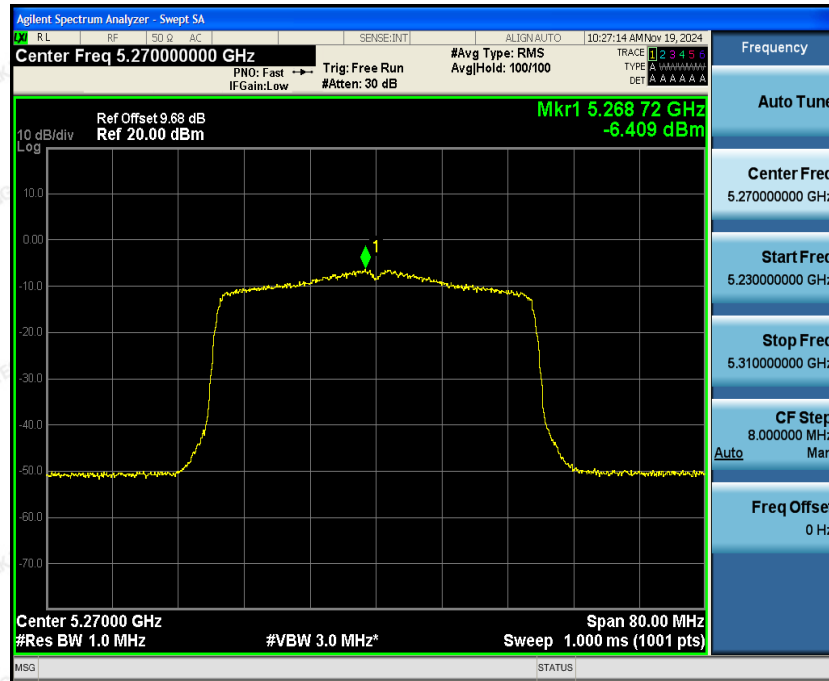
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**IEEE802.11ax HE40 mode****5150~5250MHz****Low Channel****High Channel**

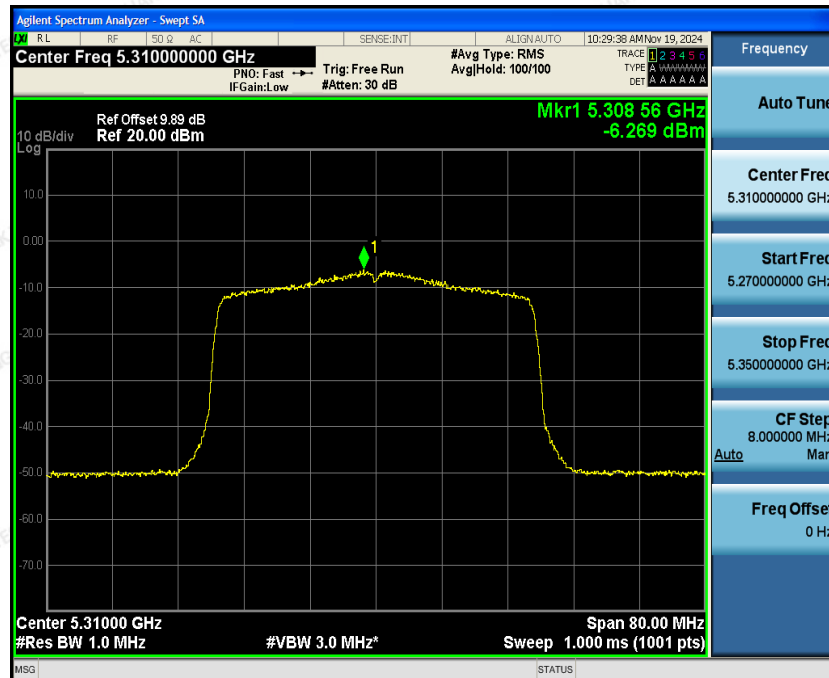


5250~5350MHz

Low Channel



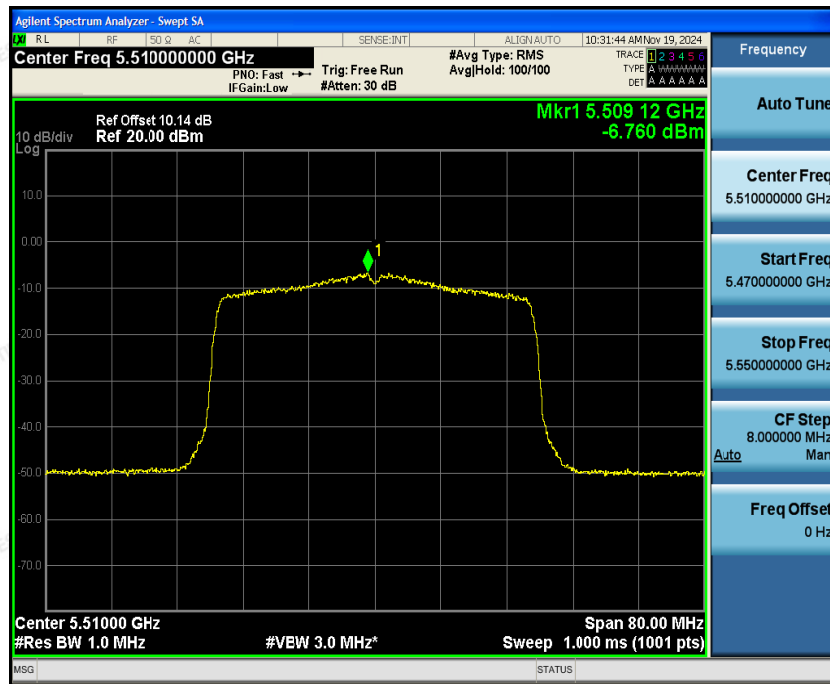
High Channel





5470~5725MHz

Low Channel



Mid Channel





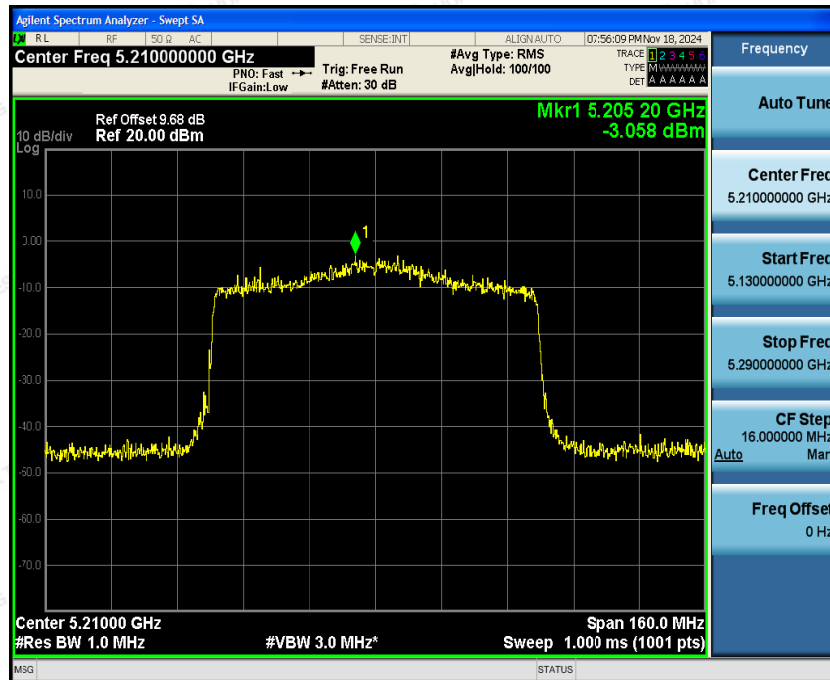
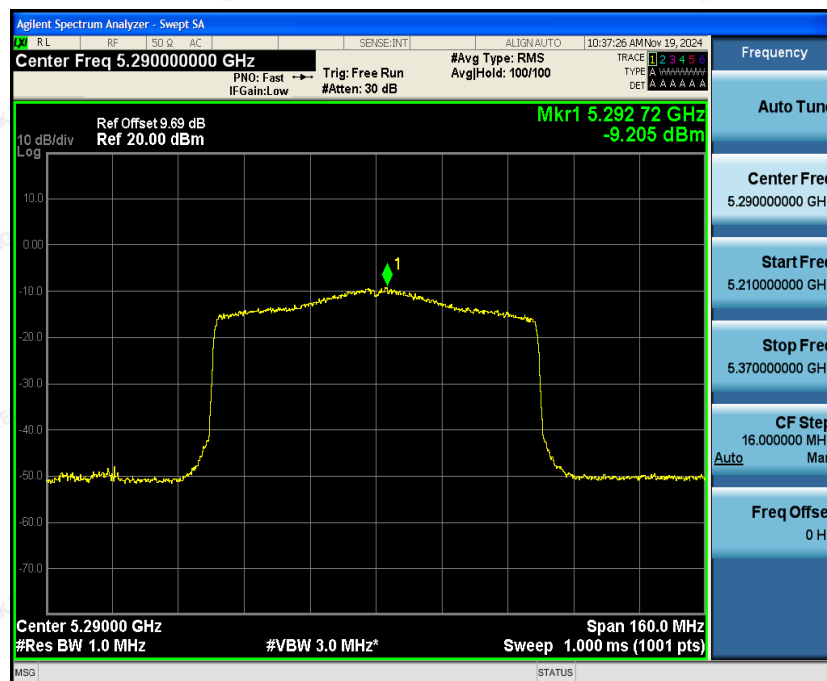
High Channel



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**IEEE802.11ax HE80 mode****5150~5250MHz****5250~5350MHz**



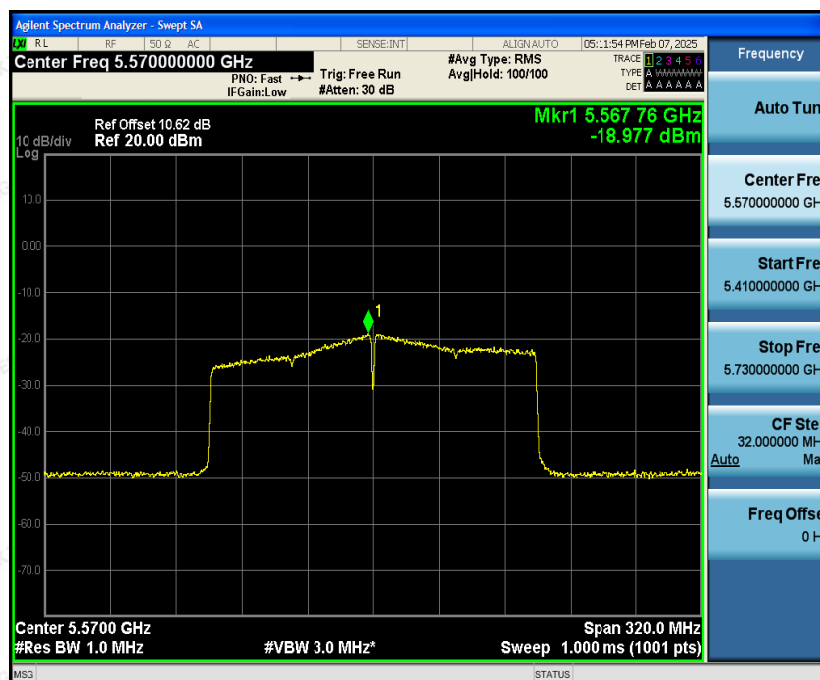
5470~5725MHz

Low Channel



High Channel



**IEEE802.11ax HE160 mode****5150~5350MHz****5470~5725MHz**

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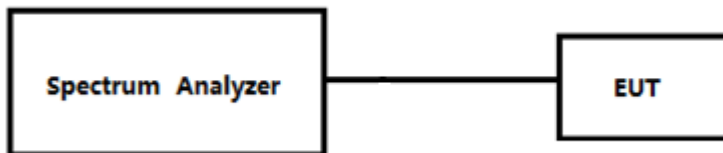
6.5 Duty Cycle

LIMIT

All measurements are to be performed with the EUT transmitting at 100% duty cycle at its maximum power control level; however, if 100% duty cycle cannot be achieved, measurements of duty cycle, x , and maximum-power transmission duration, T , are required for each tested mode of operation.

- T refers to 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.
- Duty cycle (x), as used in this document, refers to the fraction of time over which the transmitter is on and is transmitting at its maximum power control level.
- The term “maximum power control level” is intended to distinguish between operating power levels of the EUT and differences in power levels of individual symbols that occur with some modulation types such as quadrature amplitude modulation (QAM). During testing, the EUT is not required to transmit continuously its highest possible *symbol* power level. Rather, it shall transmit all of the symbols and shall do so at the highest power control level (i.e., highest operating power level) of the EUT.

TEST CONFIGURATION



TEST METHOD

Measurements of duty cycle and transmission duration shall be performed using one of the following techniques:

- A diode detector and an oscilloscope that together have sufficiently short response time to permit accurate measurements of the on and off times of the transmitted signal.
789033 D02 General UNII Test Procedures New Rules v02r01 Page 3 .
- The zero-span mode on a spectrum analyzer or EMI receiver, if the response time and spacing between bins on the sweep are sufficient to permit accurate measurements of the on and off times of the transmitted signal. Set the center frequency of the instrument to the center frequency of the transmission. Set $RBW \geq EBW$ if possible; otherwise, set RBW to the largest available value. Set $VBW \geq RBW$. Set detector = peak or average. The zero-span measurement method shall not be used unless both RBW and VBW are $> 50/T$, where T is defined in II.B.1.a), and the number of sweep points across duration T exceeds 100. (For example, if VBW and/or RBW are limited to 3 MHz, then the zero-span method of measuring duty cycle shall not be used if $T \leq 16.7$ microseconds.)

TEST RESULTS

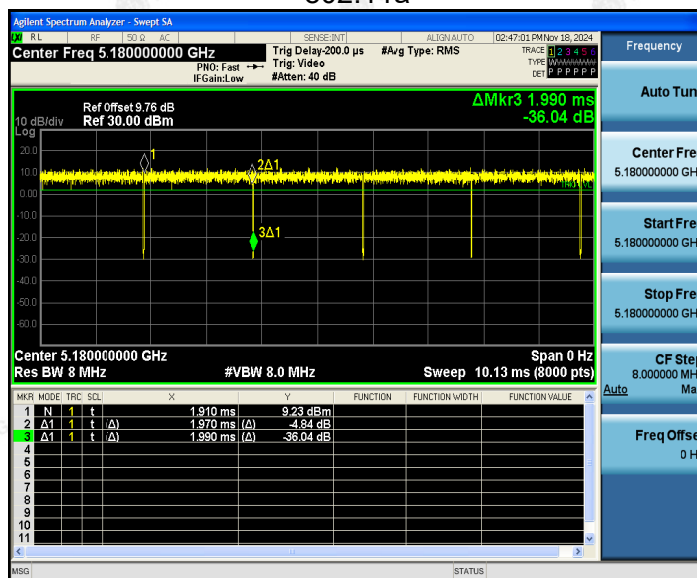
PASS

Antenna 1:

Mode Test Duty Cycle: 5150-5250MHz

Mode	Duty Cycle	Duty Cycle Factor (dB)
802.11a	0.99	-0.04
802.11n(HT20)	0.99	-0.04
802.11n(HT40)	0.99	-0.04
802.11ac(HT20)	0.99	-0.04
802.11ac(HT40)	0.99	-0.04
802.11ac(HT80)	0.99	-0.04
802.11ax(HE20)	0.99	-0.04
802.11ax(HE40)	0.99	-0.04
802.11ax(HE80)	0.99	-0.04

802.11a



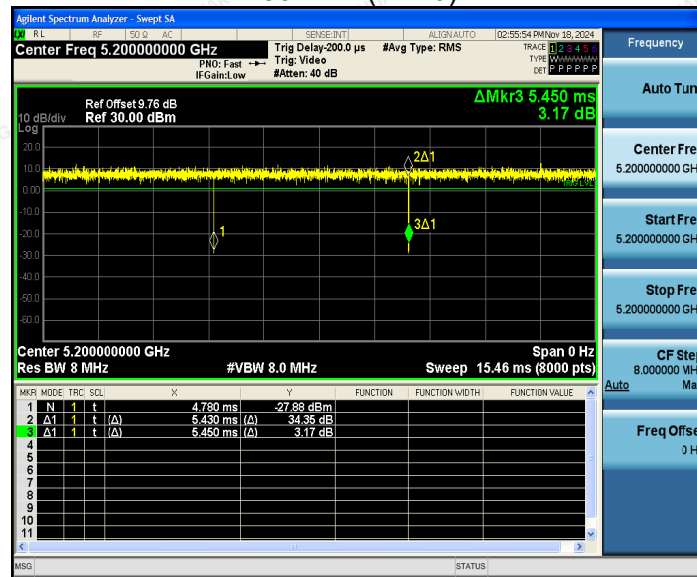
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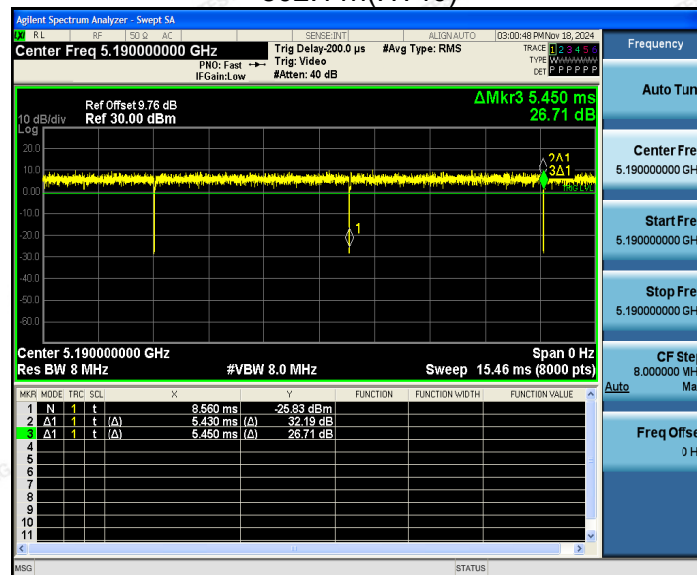
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802.11n(HT20)

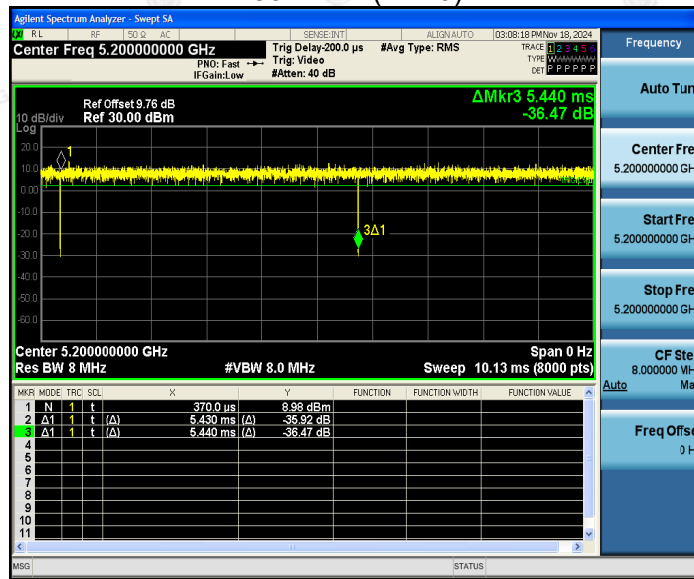


802.11n(HT40)

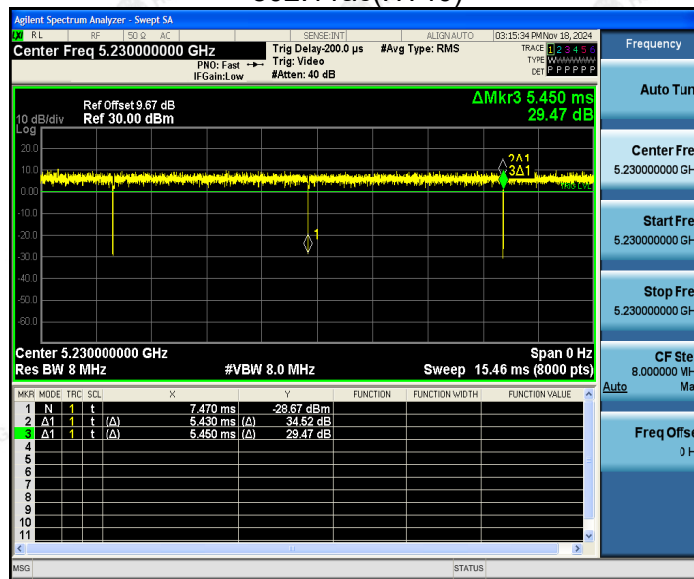




802.11ac(HT20)

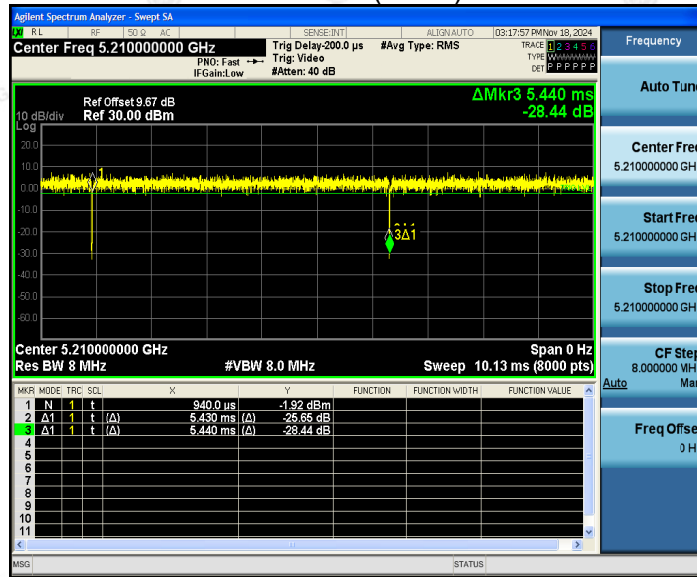


802.11ac(HT40)

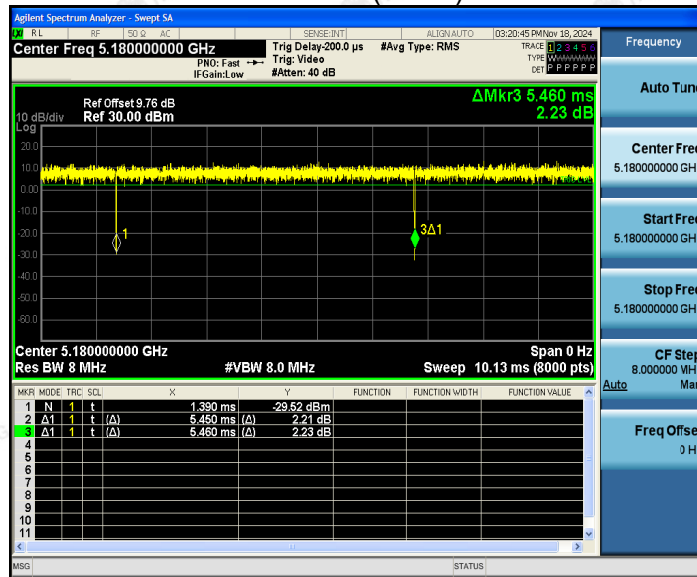




802.11ac(HT80)

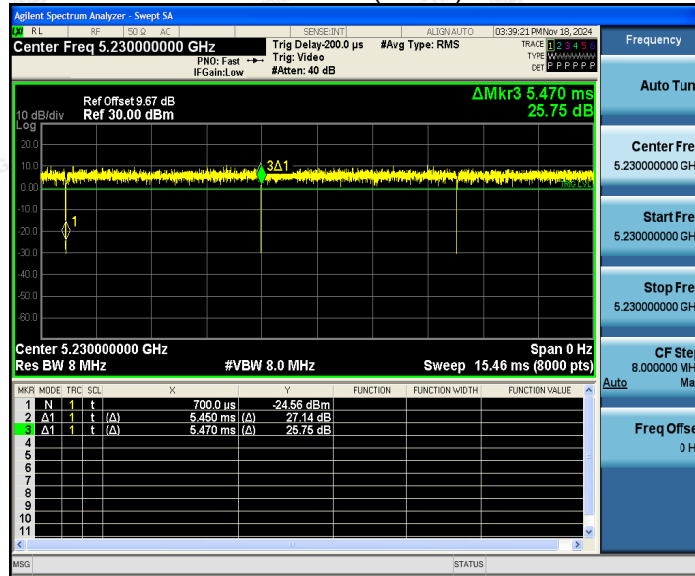


802.11ax(HE20)

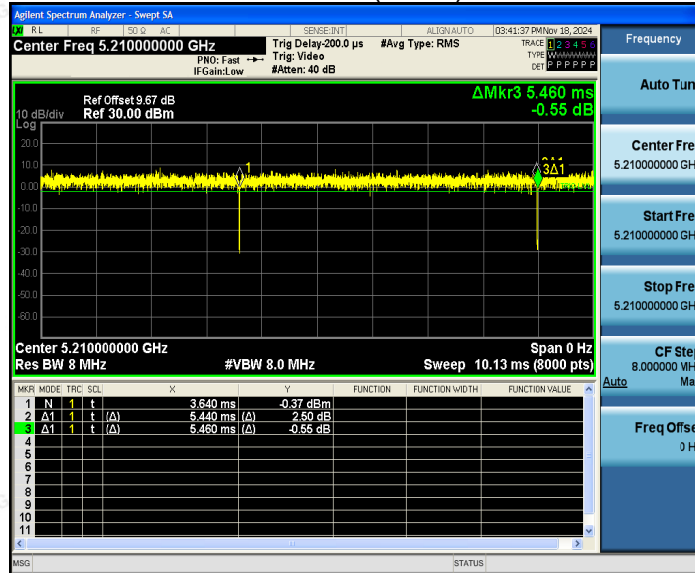




802.11ax(HE40)



802.11ax(HE80)



Mode	Duty Cycle	Duty Cycle Factor (dB)
802.11a	0.99	-0.04
802.11n(HT20)	0.99	-0.04
802.11n(HT40)	0.99	-0.04
802.11ac(HT20)	0.99	-0.04
802.11ac(HT40)	0.99	-0.04
802.11ac(HT80)	0.99	-0.04
802.11ac(HT160)	0.99	-0.04
802.11ax(HE20)	0.99	-0.04
802.11ax(HE40)	0.99	-0.04
802.11ax(HE80)	0.99	-0.04
802.11ax(HE160)	0.99	-0.04

Agilent Spectrum Analyzer - Swept SA

IF IL RF ISO AC SENSE [INT] ALIGN [AUTO] 03:56:59 PM Nov 18, 2024

Center Freq 5.260000000 GHz Trg Delay: 2.000 ms #Avg Type: RMS TRACE 1 2 3 4 5 6
 PNO: Fast IF Gain: Low Trg: Video #Atten: 40 dB TYPE [BANDWIDTH] det [PPPPPP]

Ref Offset 9.67 dB **ΔMkr 1.990 ms**
Ref 30.00 dBm **0.13 dB**

Center 5.260000000 GHz **Span 0 Hz**
Res BW 8 MHz **#VBW 8.0 MHz** **Sweep 10.13 ms (8000 pts)**

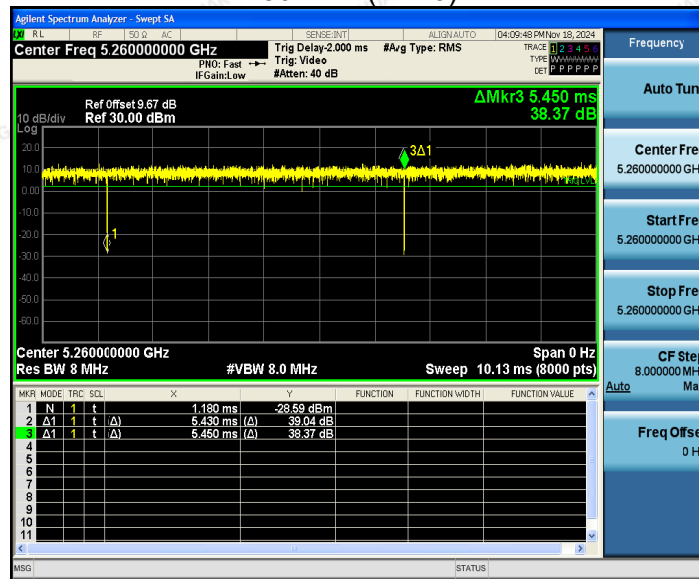
MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	t		3.910 ms	10.14 dBm		
2	Δ1	1	t	Δ1	1.970 ms (Δ1)	0.02 dB		
3	Δ1	1	t	Δ1	1.990 ms (Δ1)	0.13 dB		
4								
5								
6								
7								
8								
9								
10								
11								

Auto **CF Step** 8.00000000 MHz **Ma**
Freq Offset 0 Hz

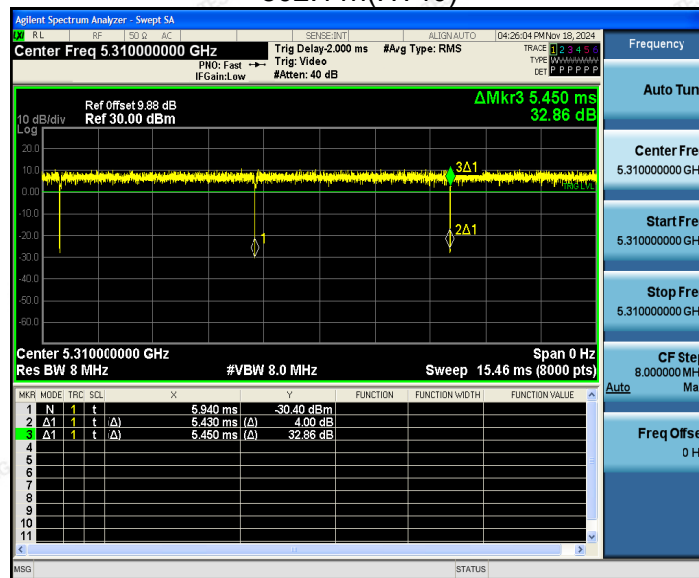
MSG [STATUS]



802.11n(HT20)

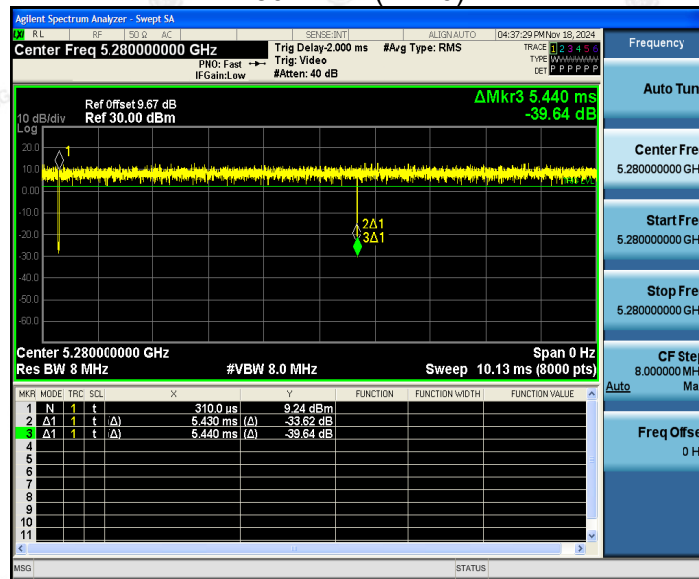


802.11n(HT40)

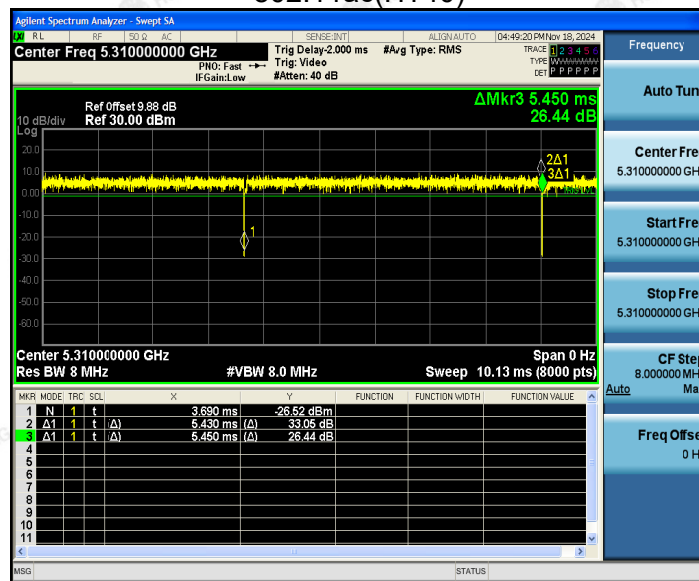




802.11ac(HT20)

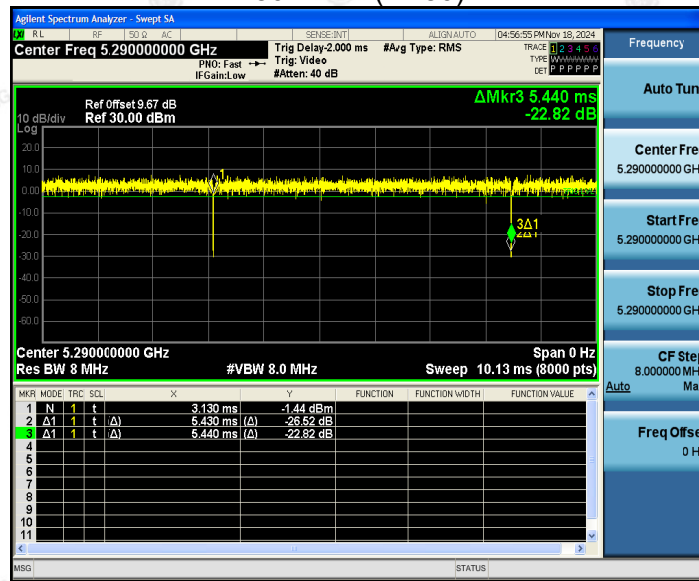


802.11ac(HT40)

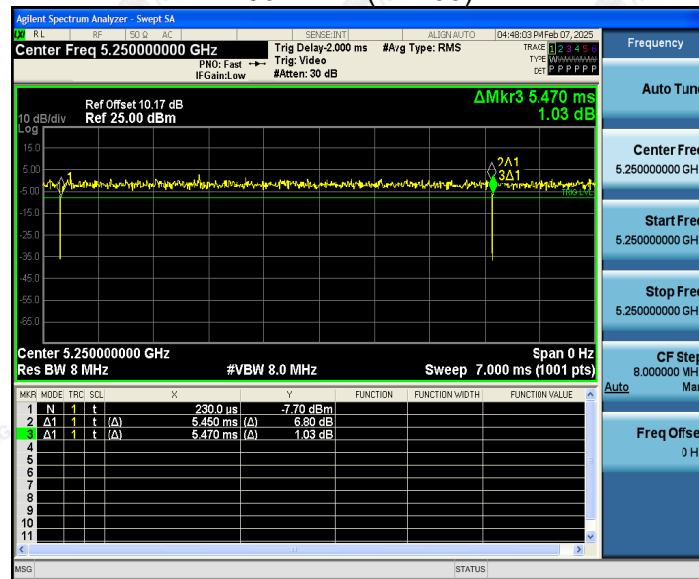




802.11ac(HT80)

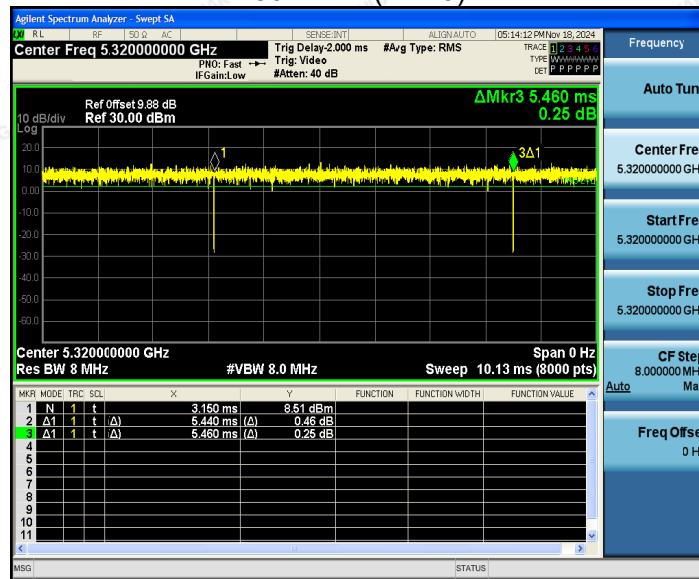


802.11ac(HT160)

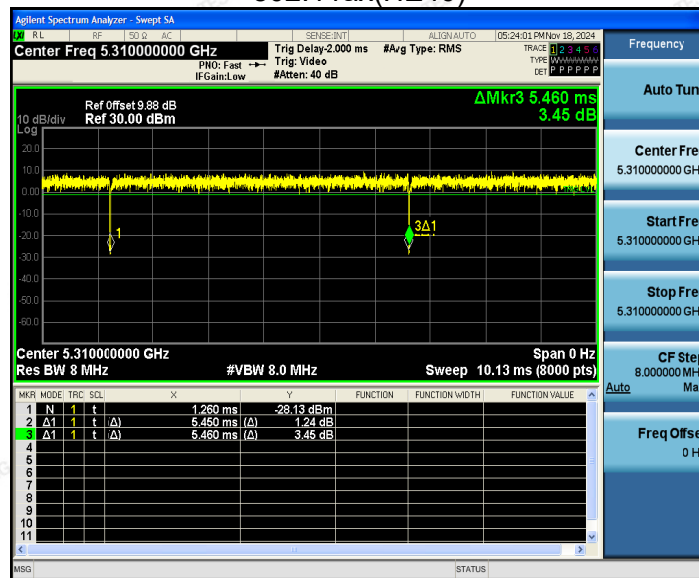




802.11ax(HE20)

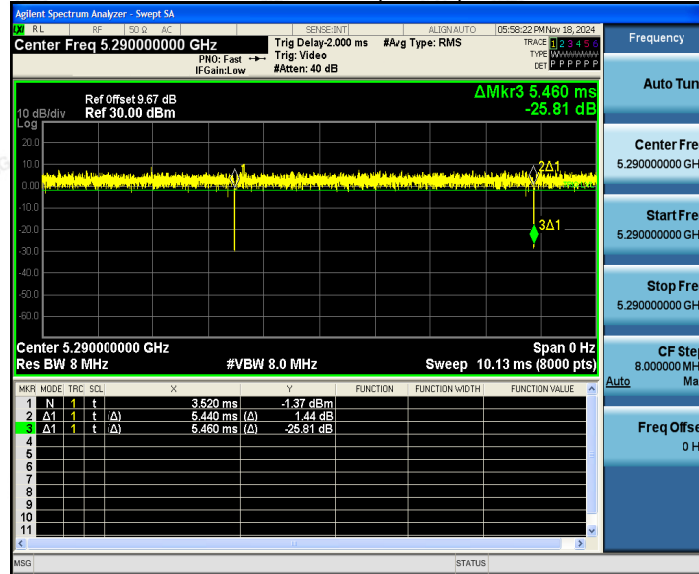


802.11ax(HE40)





802.11ax(HE80)



802.11ax(HE160)

