

APPENDIX A – TEST DATA OF CONDUCTED EMISSION

Duty Cycle

| Test Mode | Frequency (MHz) | Duty Cycle (%) | Correction Factor(dB) | Plot |
|----------------|-----------------|----------------|-----------------------|-------|
| 802.11a | 5180 | 99.94% | 0 | Fig.1 |
| 802.11n HT20 | 5180 | 99.96% | 0 | Fig.2 |
| 802.11ac VHT20 | 5180 | 99.95% | 0 | Fig.3 |
| 802.11n HT40 | 5190 | 99.89% | 0 | Fig.4 |
| 802.11ac VHT40 | 5190 | 99.91% | 0 | Fig.5 |
| 802.11ac VHT80 | 5210 | 99.75% | 0 | Fig.6 |

Note: Correction Factor=10*log (1/Duty Cycle)

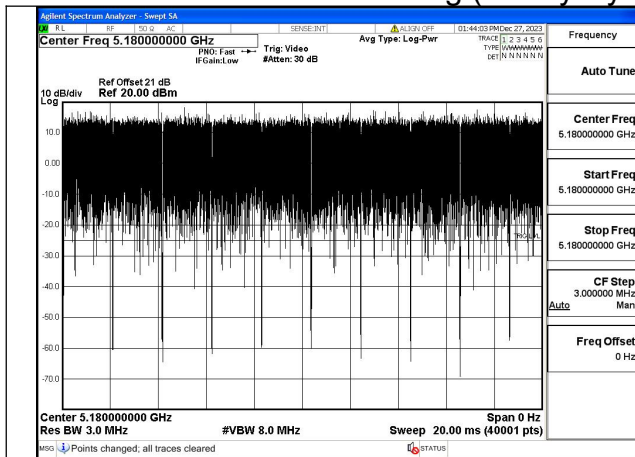


Fig.1

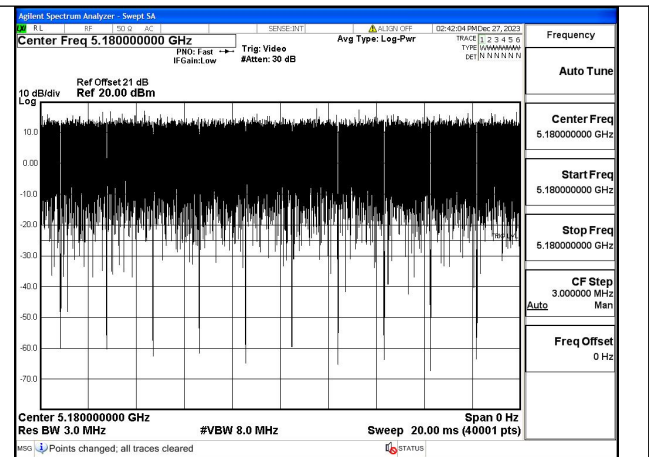


Fig.2

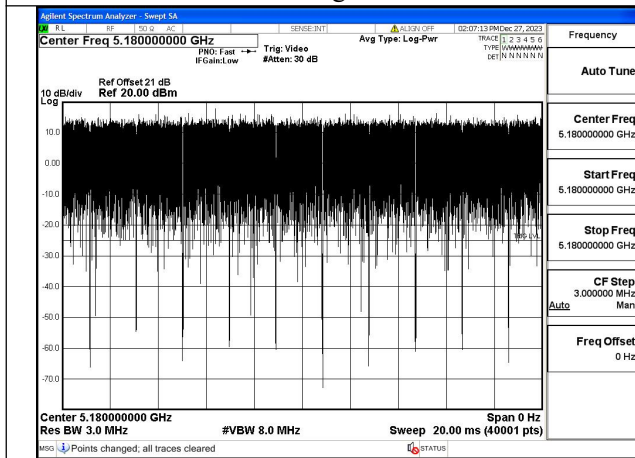


Fig.3

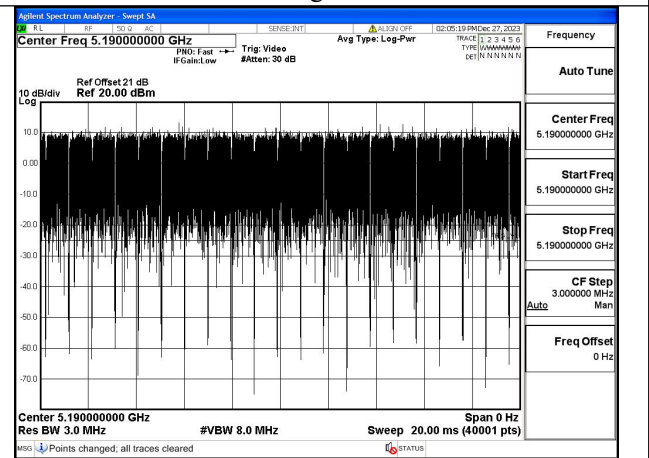


Fig.4

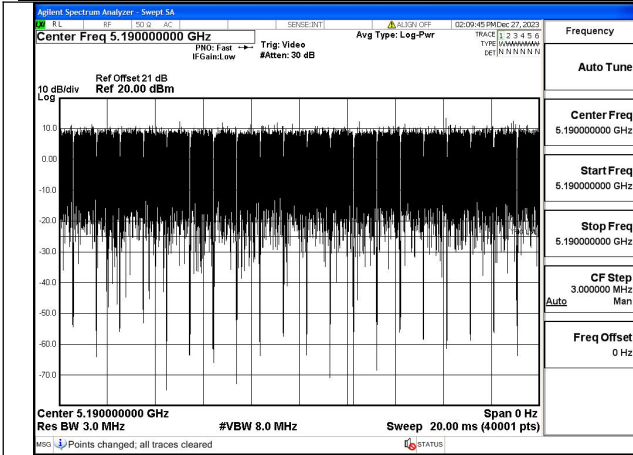


Fig.5

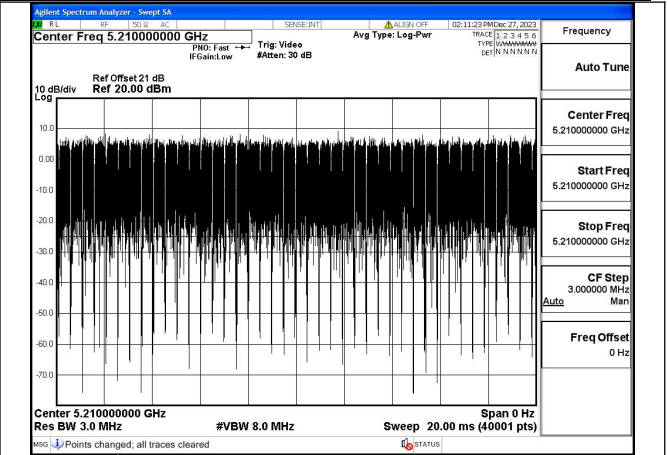


Fig.6

Output Power

| Mode | Tones/ RU Index | Frequency (MHz) | Antenna | Conducted average power output(dBm) | EIRP (dBm) |
|----------------|--------------------|--------------------|---------|--|---------------|
| 802.11a | NA | 5180 | Chain0 | 11.97 | 9.17 |
| 802.11a | NA | 5220 | Chain0 | 11.86 | 9.06 |
| 802.11a | NA | 5240 | Chain0 | 11.89 | 9.09 |
| 802.11n HT20 | NA | 5180 | Chain0 | 11.88 | 9.08 |
| 802.11n HT20 | NA | 5220 | Chain0 | 12.00 | 9.20 |
| 802.11n HT20 | NA | 5240 | Chain0 | 11.78 | 8.98 |
| 802.11ac VHT20 | NA | 5180 | Chain0 | 11.86 | 9.06 |
| 802.11ac VHT20 | NA | 5220 | Chain0 | 11.91 | 9.11 |
| 802.11ac VHT20 | NA | 5240 | Chain0 | 11.92 | 9.12 |
| 802.11n HT40 | NA | 5190 | Chain0 | 11.44 | 8.64 |
| 802.11n HT40 | NA | 5230 | Chain0 | 11.57 | 8.77 |
| 802.11ac VHT40 | NA | 5190 | Chain0 | 11.44 | 8.64 |
| 802.11ac VHT40 | NA | 5230 | Chain0 | 11.61 | 8.81 |
| 802.11ac VHT80 | NA | 5210 | Chain0 | 11.28 | 8.48 |

Emission Bandwidth

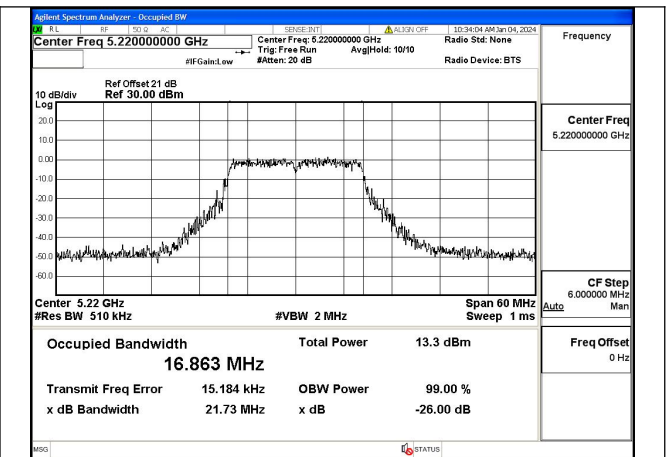
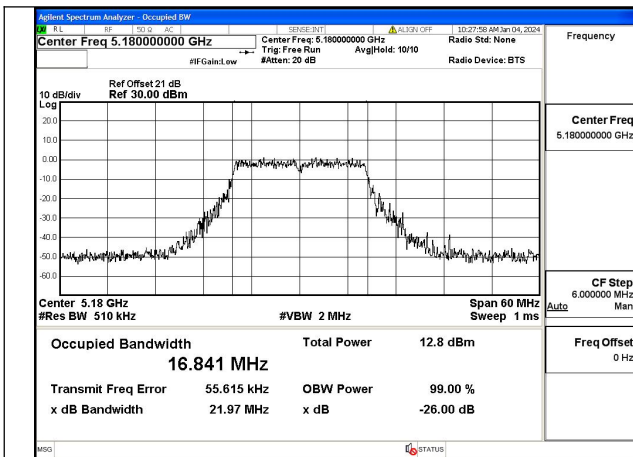
Offset 21dB = Attenuator + Temporary antenna connector loss + Cable loss

| Test Mode | Antenna | 26dB Bandwidth (MHz) | | |
|----------------|---------|----------------------|---------|---------|
| | | 5180MHz | 5220MHz | 5240MHz |
| 802.11a | Chain0 | 21.97 | 21.73 | 22.23 |
| 802.11n HT20 | Chain0 | 23.37 | 22.67 | 22.45 |
| 802.11ac VHT20 | Chain0 | 22.90 | 24.10 | 22.65 |

| Test Mode | Antenna | 26dB Bandwidth (MHz) | | |
|----------------|---------|----------------------|-----|---------|
| | | 5190MHz | --- | 5230MHz |
| 802.11n HT40 | Chain0 | 41.42 | --- | 41.89 |
| 802.11ac VHT40 | Chain0 | 42.45 | --- | 41.69 |

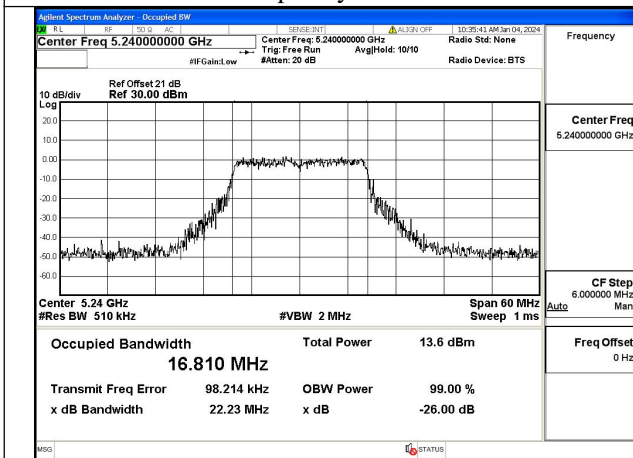
| Test Mode | Antenna | 26dB Bandwidth (MHz) | | |
|----------------|---------|----------------------|-----|-----|
| | | 5210MHz | --- | --- |
| 802.11ac VHT80 | Chain0 | 84.00 | --- | --- |

Test Mode: 802.11a



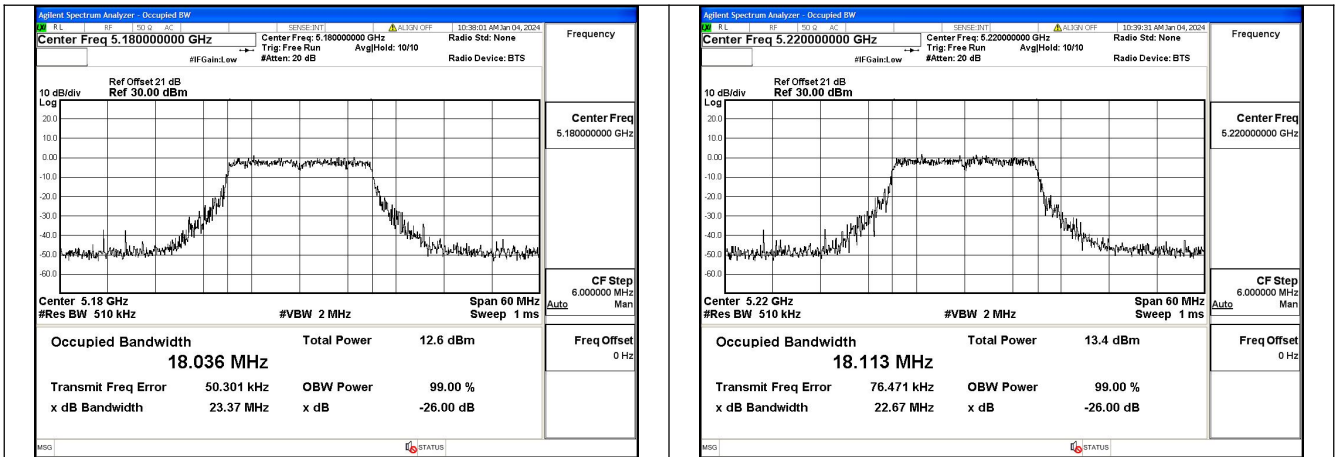
Mode:802.11a Frequency:5180MHz Ant:Chain0

Mode:802.11a Frequency:5220MHz Ant:Chain0



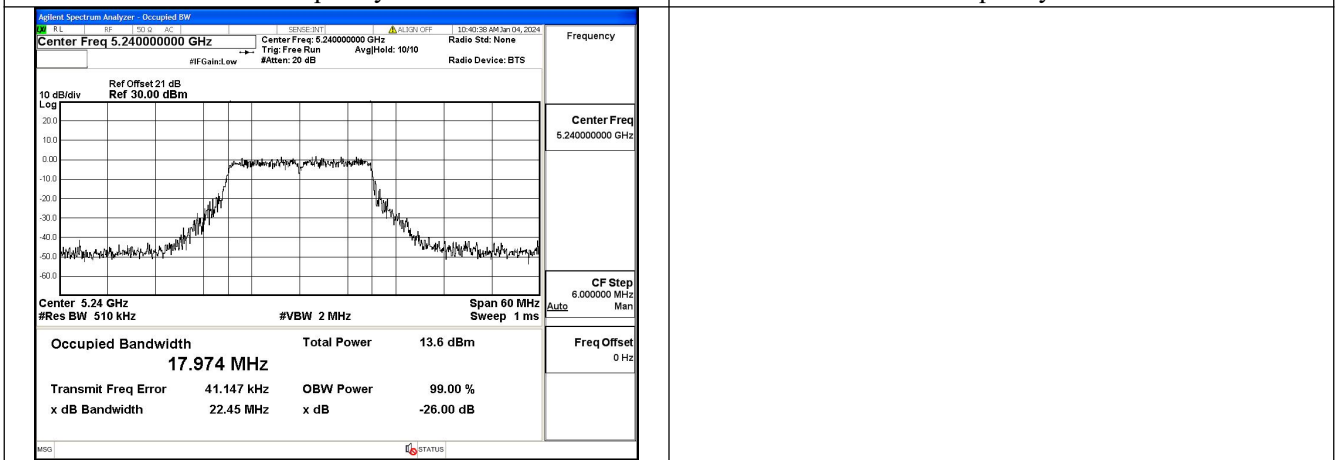
Mode:802.11a Frequency:5240MHz Ant:Chain0

Test Mode: 802.11n HT20



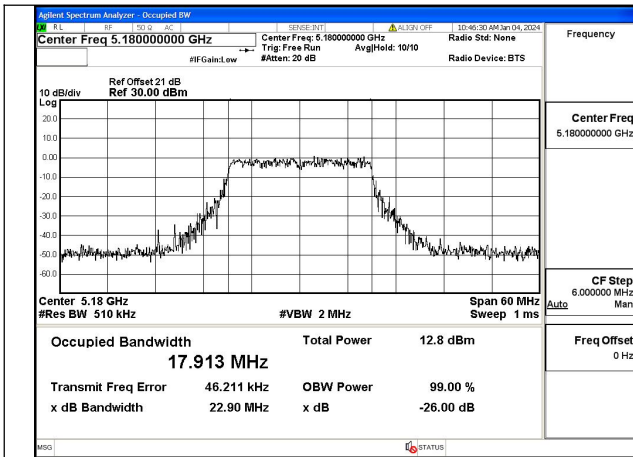
Mode:802.11n HT20 Frequency:5180MHz Ant:Chain0

Mode:802.11n HT20 Frequency:5220MHz Ant:Chain0

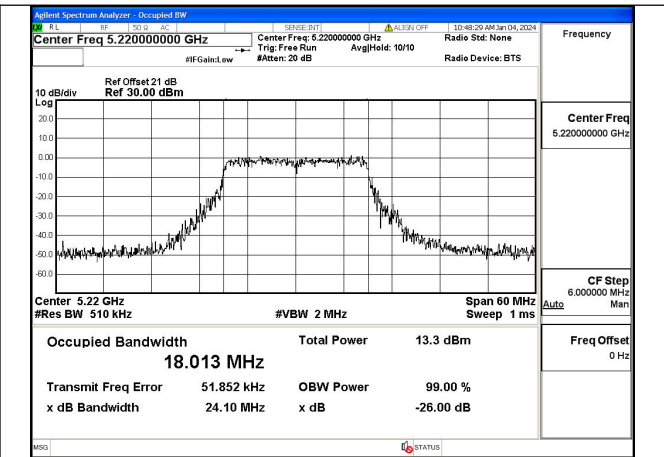


Mode:802.11n HT20 Frequency:5240MHz Ant:Chain0

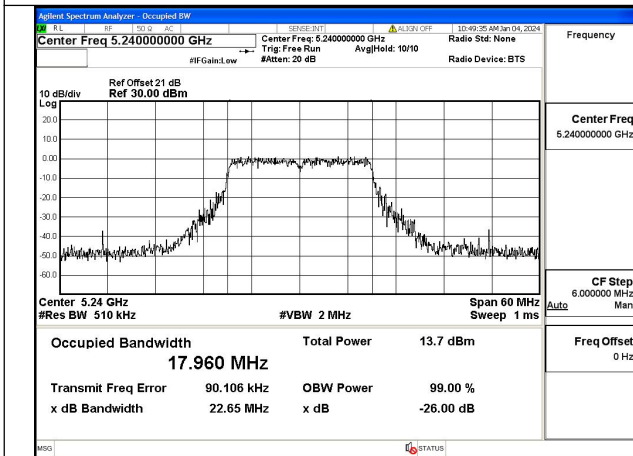
Test Mode: 802.11ac VHT20



Mode:802.11ac VHT20 Frequency:5180MHz
Ant:Chain0

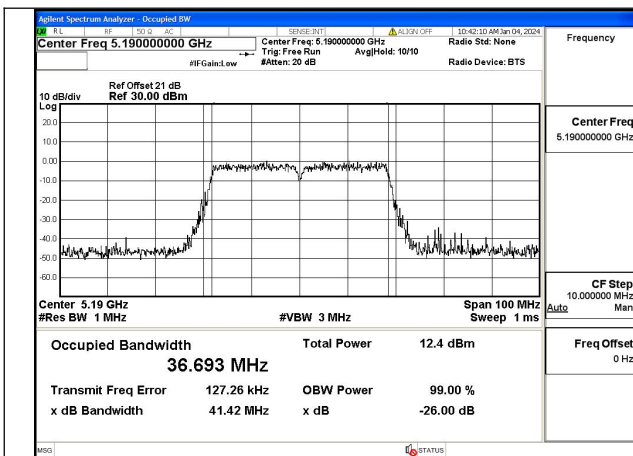


Mode:802.11ac VHT20 Frequency:5220MHz
Ant:Chain0

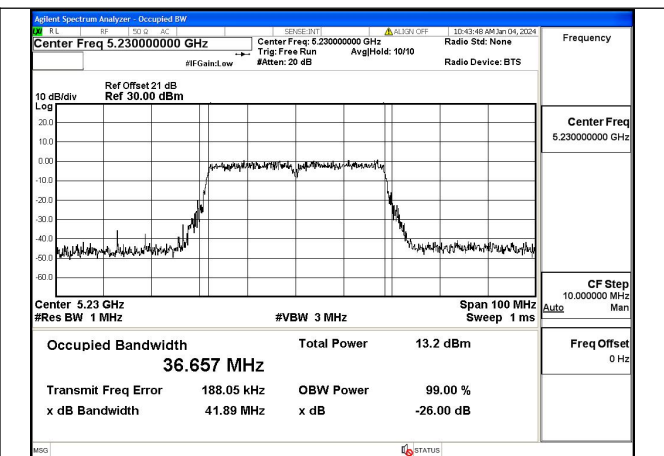


Mode:802.11ac VHT20 Frequency:5240MHz
Ant:Chain0

Test Mode: 802.11n HT40

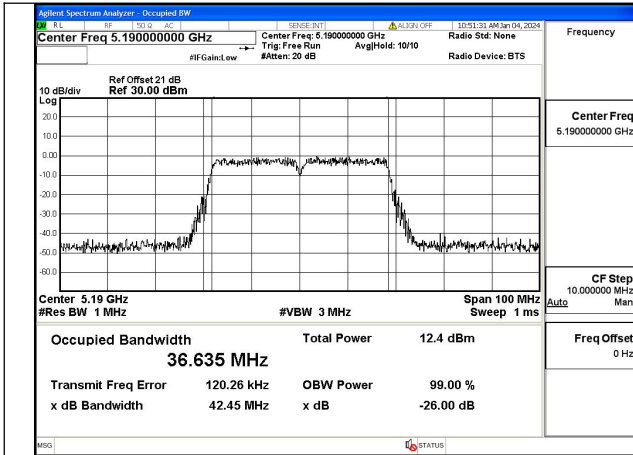


Mode:802.11n HT40 Frequency:5190MHz Ant:Chain0

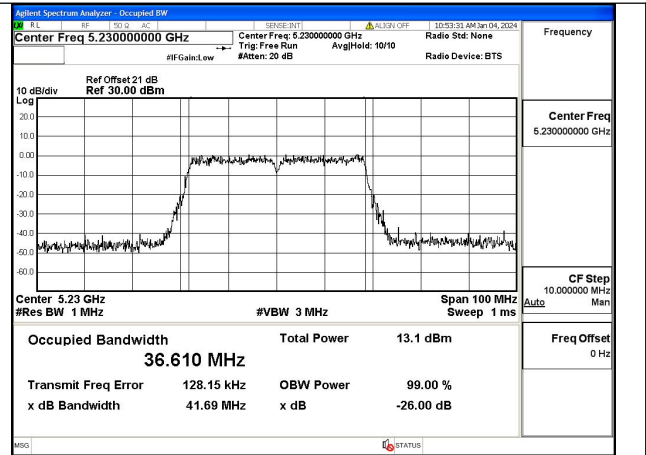


Mode:802.11n HT40 Frequency:5230MHz Ant:Chain0

Test Mode: 802.11ac VHT40

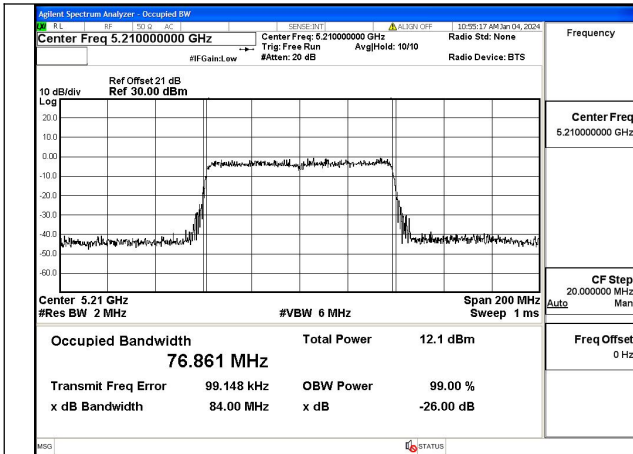


Mode:802.11ac VHT40 Frequency:5190MHz
Ant:Chain0



Mode:802.11ac VHT40 Frequency:5230MHz
Ant:Chain0

Test Mode: 802.11ac VHT80



Mode:802.11ac VHT80 Frequency:5210MHz
Ant:Chain0

Occupied Bandwidth

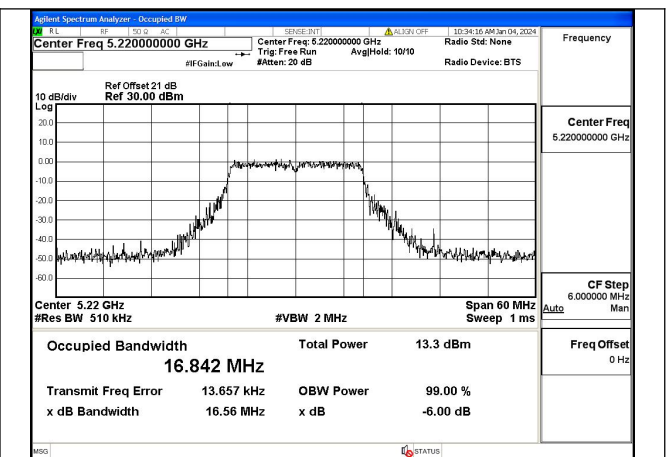
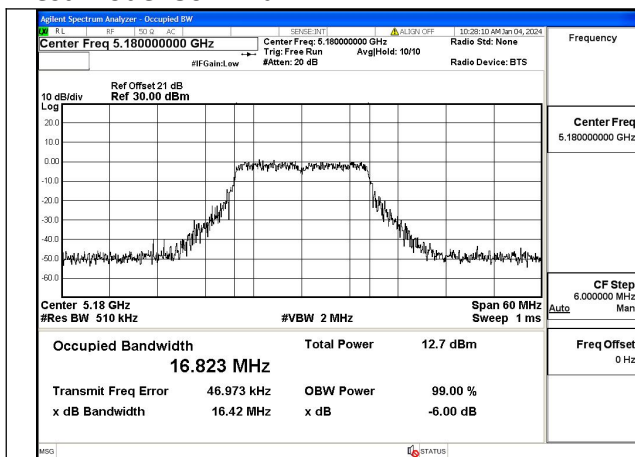
Offset 21dB = Attenuator + Temporary antenna connector loss + Cable loss

| Test Mode | Antenna | Occupied Bandwidth (MHz) | | |
|----------------|---------|--------------------------|---------|---------|
| | | 5180MHz | 5220MHz | 5240MHz |
| 802.11a | Chain0 | 16.823 | 16.842 | 16.919 |
| 802.11n HT20 | Chain0 | 18.033 | 17.963 | 17.933 |
| 802.11ac VHT20 | Chain0 | 17.930 | 18.025 | 17.904 |

| Test Mode | Antenna | Occupied Bandwidth (MHz) | | |
|----------------|---------|--------------------------|-----|---------|
| | | 5190MHz | --- | 5230MHz |
| 802.11n HT40 | Chain0 | 36.670 | --- | 36.672 |
| 802.11ac VHT40 | Chain0 | 36.664 | --- | 36.674 |

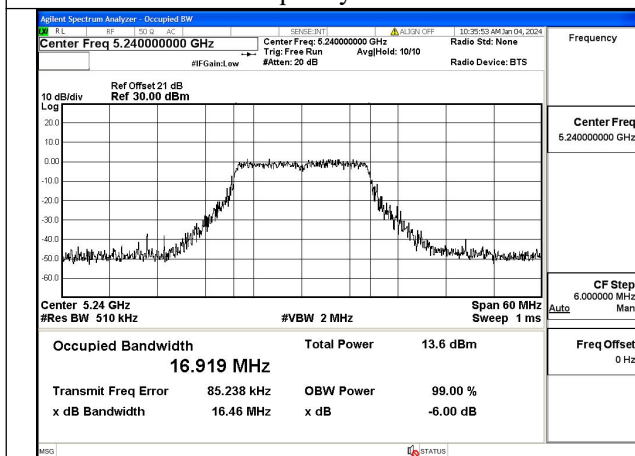
| Test Mode | Antenna | Occupied Bandwidth (MHz) | | |
|----------------|---------|--------------------------|-----|-----|
| | | 5210MHz | --- | --- |
| 802.11ac VHT80 | Chain0 | 76.736 | --- | --- |

Test Mode: 802.11a



Mode:802.11a Frequency:5180MHz Ant:Chain0

Mode:802.11a Frequency:5220MHz Ant:Chain0

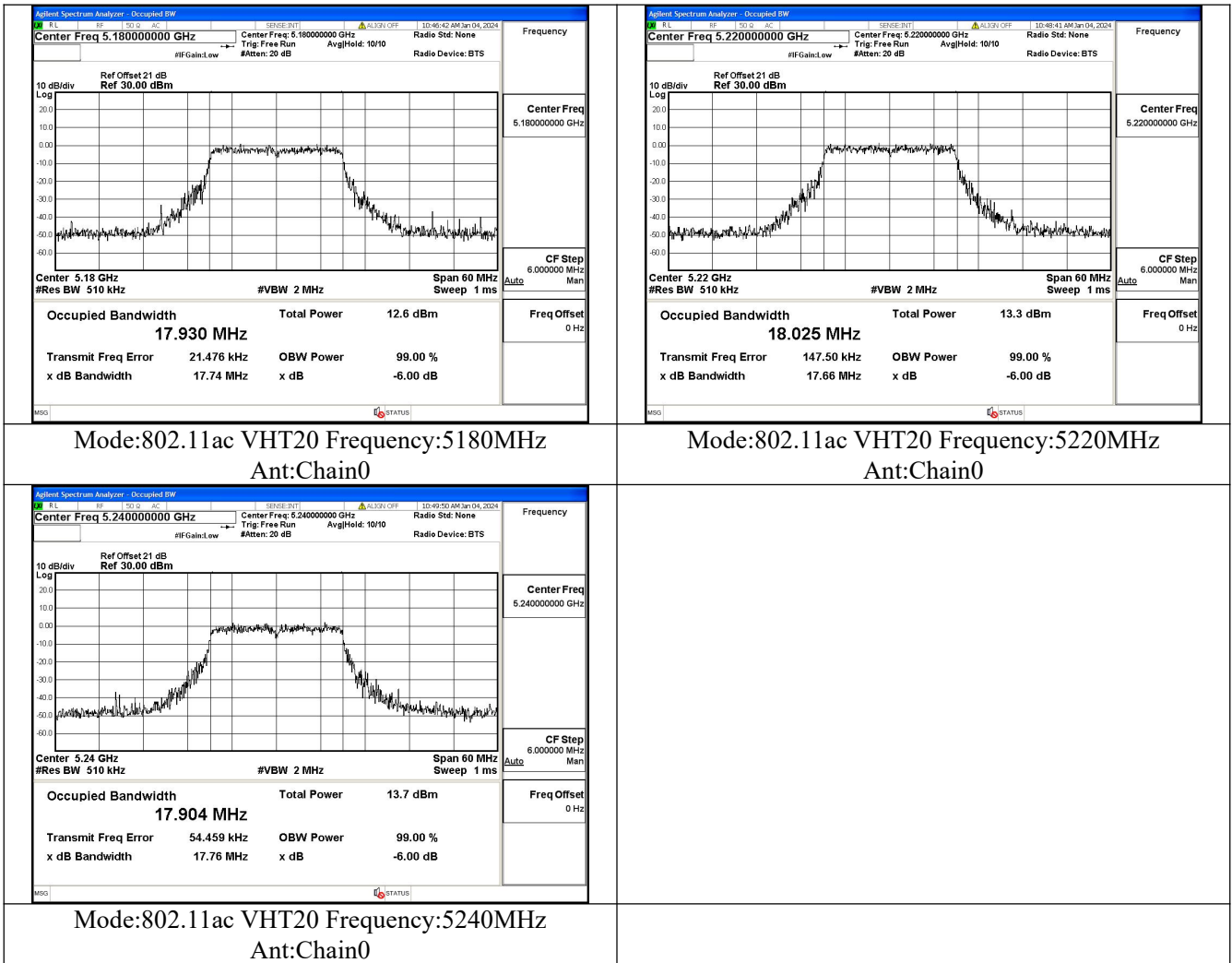


Mode:802.11a Frequency:5240MHz Ant:Chain0

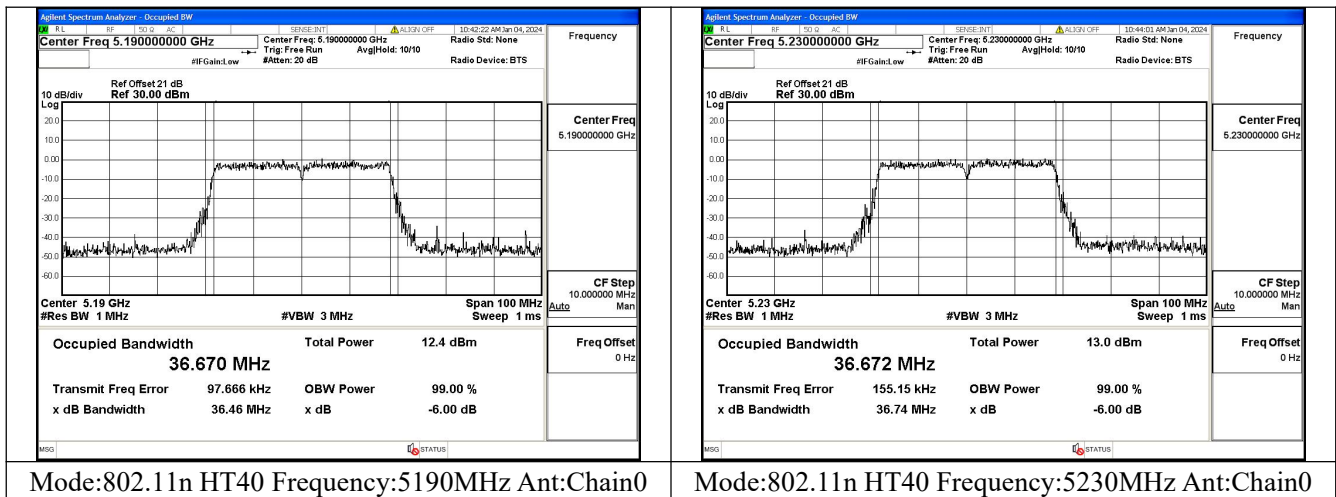
Test Mode: 802.11n HT20

| | |
|---|---|
| <p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 5.18000000 GHz</p> <p>Ref Offset 21 dB Ref 30.00 dBm</p> <p>Center 5.18 GHz #Res BW 510 kHz</p> <p>Occupied Bandwidth 18.033 MHz</p> <p>Total Power 12.6 dBm</p> <p>Transmit Freq Error -5.982 kHz</p> <p>x dB Bandwidth 17.65 MHz</p> | <p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 5.22000000 GHz</p> <p>Ref Offset 21 dB Ref 30.00 dBm</p> <p>Center 5.22 GHz #Res BW 510 kHz</p> <p>Occupied Bandwidth 17.963 MHz</p> <p>Total Power 13.2 dBm</p> <p>Transmit Freq Error 53.809 kHz</p> <p>x dB Bandwidth 17.79 MHz</p> |
| <p>Mode:802.11n HT20 Frequency:5180MHz Ant:Chain0</p> <p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 5.24000000 GHz</p> <p>Ref Offset 21 dB Ref 30.00 dBm</p> <p>Center 5.24 GHz #Res BW 510 kHz</p> <p>Occupied Bandwidth 17.933 MHz</p> <p>Total Power 13.7 dBm</p> <p>Transmit Freq Error 91.426 kHz</p> <p>x dB Bandwidth 17.51 MHz</p> | <p>Mode:802.11n HT20 Frequency:5220MHz Ant:Chain0</p> |
| <p>Mode:802.11n HT20 Frequency:5240MHz Ant:Chain0</p> | |

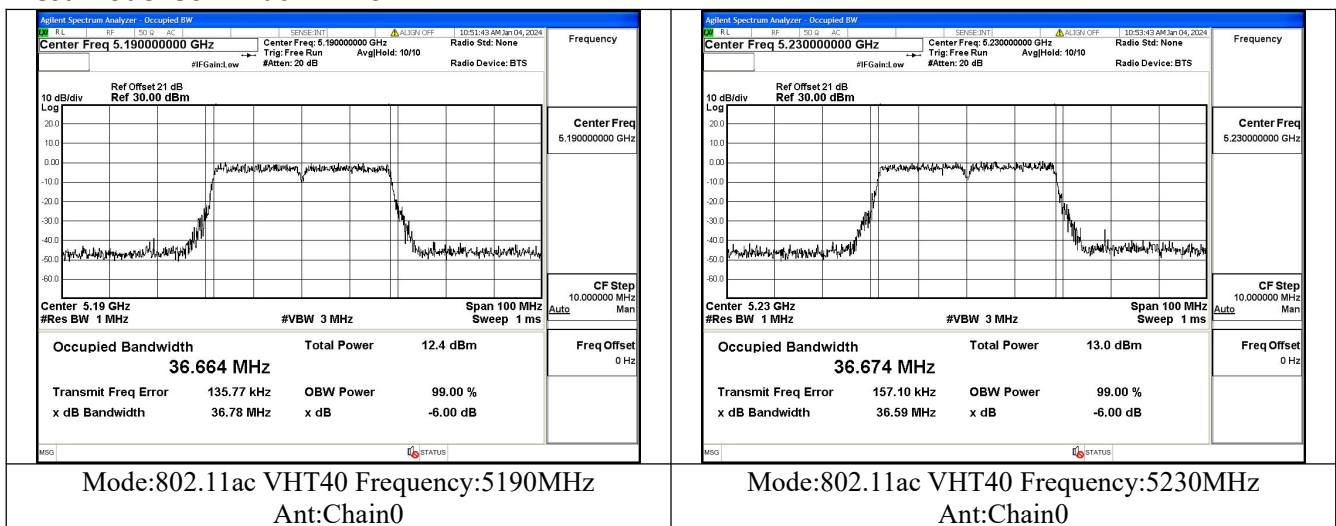
Test Mode: 802.11ac VHT20



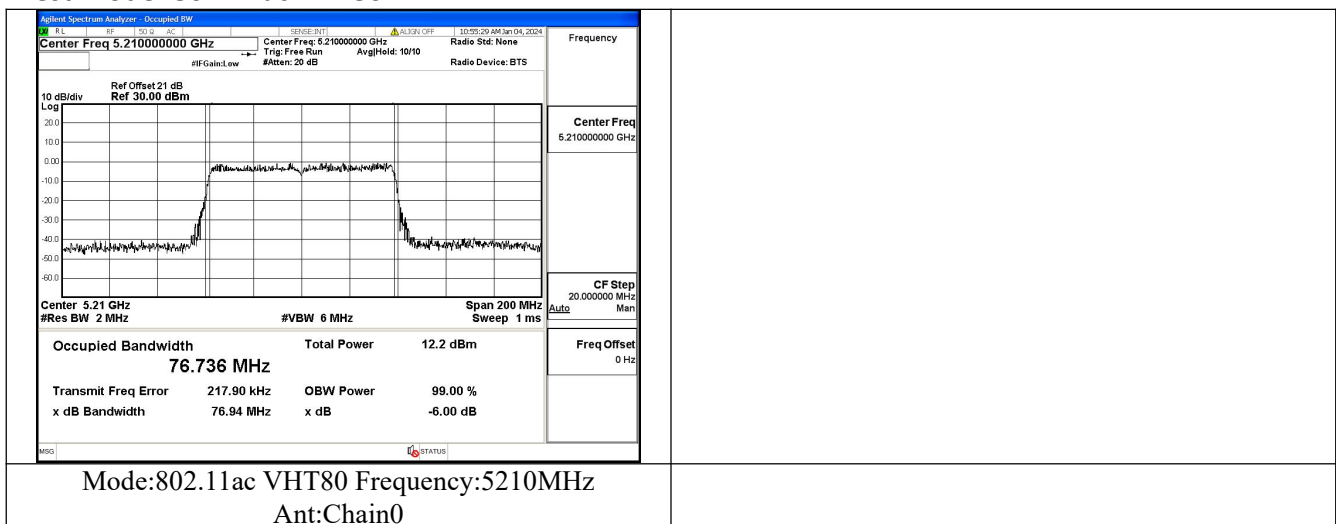
Test Mode: 802.11n HT40



Test Mode: 802.11ac VHT40



Test Mode: 802.11ac VHT80



Transmitter Power Spectral Density

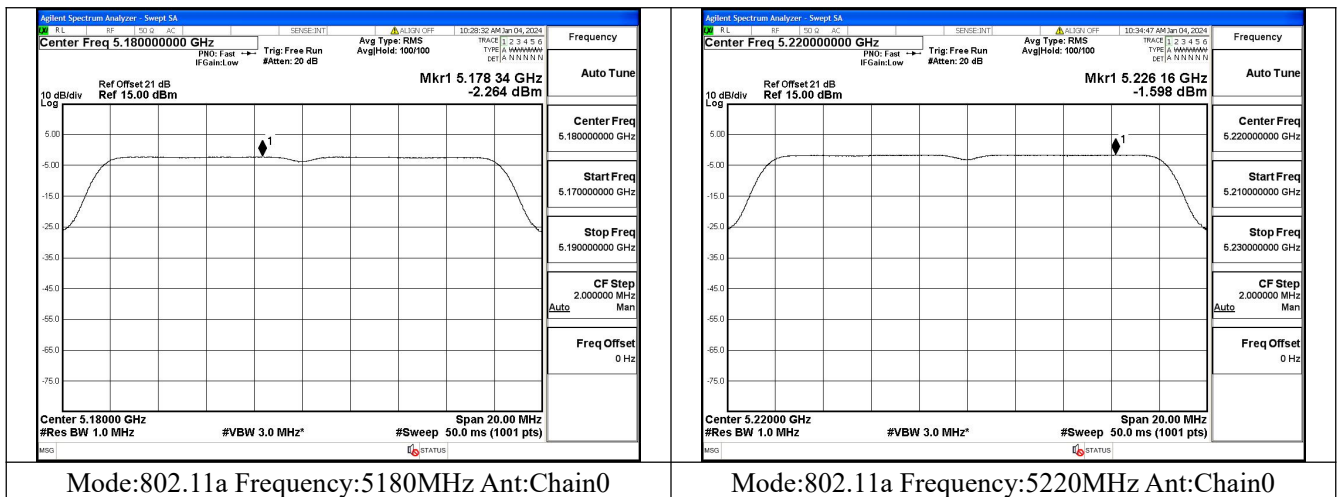
Offset 21dB = Attenuator + Temporary antenna connector loss + Cable loss

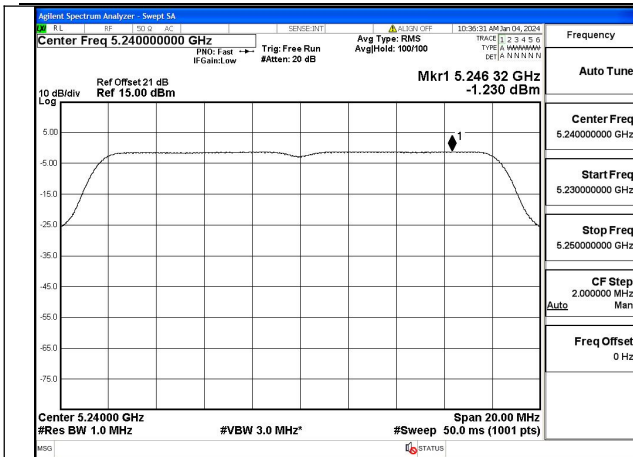
| Test Mode | Antenna | Tones | 5180MHz | | 5220MHz | | 5240MHz | |
|----------------|---------|-------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|
| | | | Correction Factor(dB) | Power Density (dBm/MHz) | Correction Factor(dB) | Power Density (dBm/MHz) | Correction Factor(dB) | Power Density (dBm/MHz) |
| 802.11a | Chain0 | NA | 0 | -2.264 | 0 | -1.598 | 0 | -1.230 |
| 802.11n HT20 | Chain0 | NA | 0 | -2.574 | 0 | -1.965 | 0 | -1.543 |
| 802.11ac VHT20 | Chain0 | NA | 0 | -2.580 | 0 | -1.973 | 0 | -1.530 |

| Test Mode | Antenna | Tones | 5190MHz | | --- | | 5230MHz | |
|----------------|---------|-------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|
| | | | Correction Factor(dB) | Power Density (dBm/MHz) | Correction Factor(dB) | Power Density (dBm/MHz) | Correction Factor(dB) | Power Density (dBm/MHz) |
| 802.11n HT40 | Chain0 | NA | 0 | -5.519 | --- | --- | 0 | -4.546 |
| 802.11ac VHT40 | Chain0 | NA | 0 | -5.495 | --- | --- | 0 | -4.575 |

| Test Mode | Antenna | Tones | 5210MHz | | --- | | --- | |
|----------------|---------|-------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|
| | | | Correction Factor(dB) | Power Density (dBm/MHz) | Correction Factor(dB) | Power Density (dBm/MHz) | Correction Factor(dB) | Power Density (dBm/MHz) |
| 802.11ac VHT80 | Chain0 | NA | 0 | -7.976 | --- | --- | --- | --- |

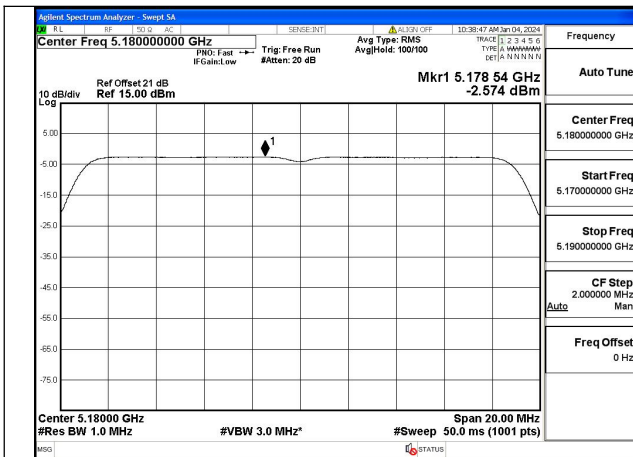
Test Mode: 802.11a



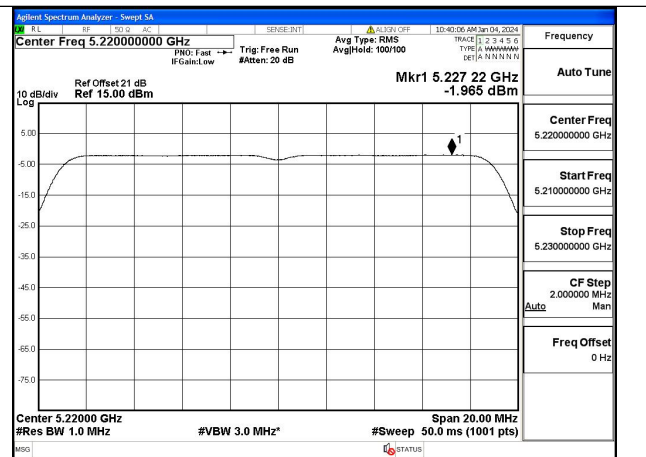


Mode:802.11a Frequency:5240MHz Ant:Chain0

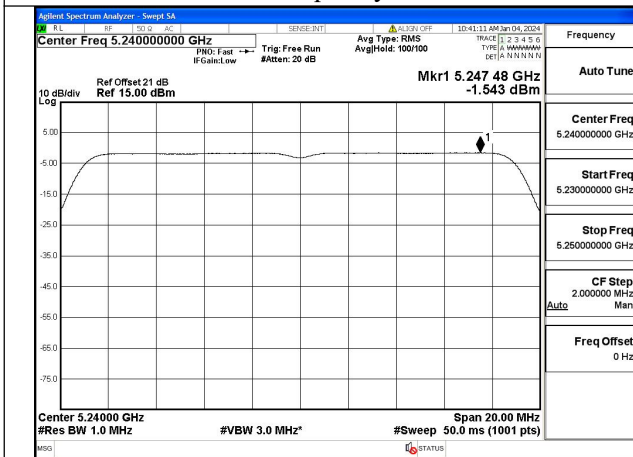
Test Mode: 802.11n HT20



Mode:802.11n HT20 Frequency:5180MHz Ant:Chain0



Mode:802.11n HT20 Frequency:5220MHz Ant:Chain0



Mode:802.11n HT20 Frequency:5240MHz Ant:Chain0