

09:21:34 AM Sep 11, 2020 #Avg Type: RMS Avg|Hold: 100/100 Frequency TYPE A WWWWW Auto Tune Mkr1 5.198 68 GHz Ref Offset 21.48 dB Ref 41.48 dBm 10 dB/div Log 0.222 dBm Center Freq 5.200000000 GHz Start Freq 5.180000000 GHz Stop Freq 5.220000000 GHz **CF Step** 4.000000 MHz Man Freq Offset 0 Hz Scale Type Span 40.00 MHz Sweep 1.000 ms (1001 pts) Center 5.20000 GHz #Res BW 1.0 MHz Lin #VBW 3.0 MHz* 11N20MIMO_Ant1_5200 09:22:49 AM Sep 11, 2020

TRACE 1 2 3 4 5 6

TYPE A WWWW

DET A A A A A A Frequency #Avg Type: RMS Avg|Hold: 100/100 Trig: Free Run #Atten: 30 dB Auto Tune Mkr1 5.198 92 GHz Ref Offset 21.5 dB Ref 41.50 dBm -0.169 dBm 10 dB/div Center Freq 5.200000000 GHz Start Freq 5.180000000 GHz Stop Freq 5.220000000 GHz CF Step 4.000000 MHz Freq Offset 0 Hz Scale Type Center 5.20000 GHz Span 40.00 MHz Log #Res BW 1.0 MHz #VBW 3.0 MHz* Sweep 1.000 ms (1001 pts) STATUS 11N20MIMO Ant2 5200



09:24:57 AM Sep 11, 2020 #Avg Type: RMS Avg|Hold: 100/100 Frequency TYPE A WWWWW Mkr1 5.238 36 GHz **Auto Tune** Ref Offset 21.49 dB Ref 41.49 dBm 10 dB/div Log -0.718 dBm Center Freq 5.240000000 GHz Start Freq 5.220000000 GHz Stop Freq 5.260000000 GHz **CF Step** 4.000000 MHz Man Freq Offset 0 Hz Scale Type Span 40.00 MHz Sweep 1.000 ms (1001 pts) Center 5.24000 GHz #Res BW 1.0 MHz Lin #VBW 3.0 MHz* 11N20MIMO_Ant1_5240 09:26:14 AM Sep 11, 2020 TRACE 1 2 3 4 5 6 TYPE A WWWW DET A A A A A A Frequency #Avg Type: RMS Avg|Hold: 100/100 Trig: Free Run #Atten: 30 dB Auto Tune Mkr1 5.239 04 GHz Ref Offset 21.47 dB Ref 41.47 dBm 0.051 dBm 10 dB/div Center Freq 5.240000000 GHz Start Freq 5.220000000 GHz Stop Freq 5.260000000 GHz CF Step 4.000000 MHz Freq Offset 0 Hz Scale Type Center 5.24000 GHz Span 40.00 MHz Log #Res BW 1.0 MHz #VBW 3.0 MHz* Sweep 1.000 ms (1001 pts) STATUS 11N20MIMO Ant2 5240



09:27:47 AM Sep 11, 2020 #Avg Type: RMS Avg|Hold: 100/100 Frequency TYPE A WWWWW Mkr1 5.260 60 GHz **Auto Tune** Ref Offset 21.49 dB Ref 41.49 dBm 10 dB/div Log 6.760 dBm Center Freq 5.260000000 GHz Start Freq 5.240000000 GHz Stop Freq 5.280000000 GHz **CF Step** 4.000000 MHz Man Freq Offset 0 Hz Scale Type Center 5.26000 GHz #Res BW 1.0 MHz Span 40.00 MHz Sweep 1.000 ms (1001 pts) Lin #VBW 3.0 MHz* 11N20MIMO_Ant1_5260 Frequency #Avg Type: RMS Avg|Hold: 100/100 Trig: Free Run #Atten: 30 dB Auto Tune Mkr1 5.260 88 GHz Ref Offset 21.47 dB Ref 41.47 dBm 6.475 dBm 10 dB/div Center Freq 5.260000000 GHz Start Freq 5.240000000 GHz Stop Freq 5.280000000 GHz CF Step 4.000000 MHz Freq Offset 0 Hz Scale Type Center 5.26000 GHz Span 40.00 MHz Log #Res BW 1.0 MHz #VBW 3.0 MHz* Sweep 1.000 ms (1001 pts) STATUS 11N20MIMO Ant2 5260



RL RF 50 Ω DC | Center Freq 5.280000000 GHz | PNO: Wide | PRO: Wi 09:29:46 AM Sep 11, 2020 #Avg Type: RMS Avg|Hold: 100/100 Frequency TYPE A WWWWW Mkr1 5.278 76 GHz **Auto Tune** Ref Offset 21.48 dB Ref 41.48 dBm 10 dB/div Log 6.088 dBm Center Freq 5.280000000 GHz Start Freq 5.260000000 GHz Stop Freq 5.300000000 GHz **CF Step** 4.000000 MHz Man Freq Offset 0 Hz Scale Type Center 5.28000 GHz #Res BW 1.0 MHz Span 40.00 MHz Sweep 1.000 ms (1001 pts) Lin #VBW 3.0 MHz* 11N20MIMO_Ant1_5280 09:30:26 AM Sep 11, 2020 TRACE 1 2 3 4 5 6 TYPE A WWWWW DET A A A A A A Frequency #Avg Type: RMS Avg|Hold: 100/100 Trig: Free Run #Atten: 30 dB Auto Tune Mkr1 5.278 76 GHz 6.201 dBm Ref Offset 21.48 dB Ref 41.48 dBm 10 dB/div Center Freq 5.280000000 GHz Start Freq 5.260000000 GHz Stop Freq 5.300000000 GHz CF Step 4.000000 MHz Freq Offset 0 Hz Scale Type Center 5.28000 GHz Span 40.00 MHz Log #Res BW 1.0 MHz #VBW 3.0 MHz* Sweep 1.000 ms (1001 pts) STATUS 11N20MIMO Ant2 5280



RL RF 50 Ω DC | Center Freq 5.320000000 GHz | PNO: Wide | PRO: Wi 09:34:18 AM Sep 11, 2020 #Avg Type: RMS Avg|Hold: 100/100 Frequency TYPE A WWWWW Mkr1 5.318 60 GHz **Auto Tune** Ref Offset 21.48 dB Ref 41.48 dBm 10 dB/div Log 4.511 dBm Center Freq 5.320000000 GHz Start Freq 5.300000000 GHz • Stop Freq 5.340000000 GHz **CF Step** 4.000000 MHz Man Freq Offset 0 Hz Scale Type Span 40.00 MHz Sweep 1.000 ms (1001 pts) Center 5.32000 GHz #Res BW 1.0 MHz Lin #VBW 3.0 MHz* 11N20MIMO_Ant1_5320 09:35:01 AM Sep 11, 2020 TRACE 1 2 3 4 5 6 TYPE A WWWWW DET A A A A A A Frequency #Avg Type: RMS Avg|Hold: 100/100 Trig: Free Run #Atten: 30 dB Auto Tune Mkr1 5.321 04 GHz 5.057 dBm Ref Offset 21.47 dB Ref 41.47 dBm 10 dB/div Center Freq 5.320000000 GHz Start Freq 5.30000000 GHz Stop Freq 5.340000000 GHz CF Step 4.000000 MHz Freq Offset 0 Hz Scale Type Center 5.32000 GHz Span 40.00 MHz Log #Res BW 1.0 MHz #VBW 3.0 MHz* Sweep 1.000 ms (1001 pts) STATUS 11N20MIMO Ant2 5320

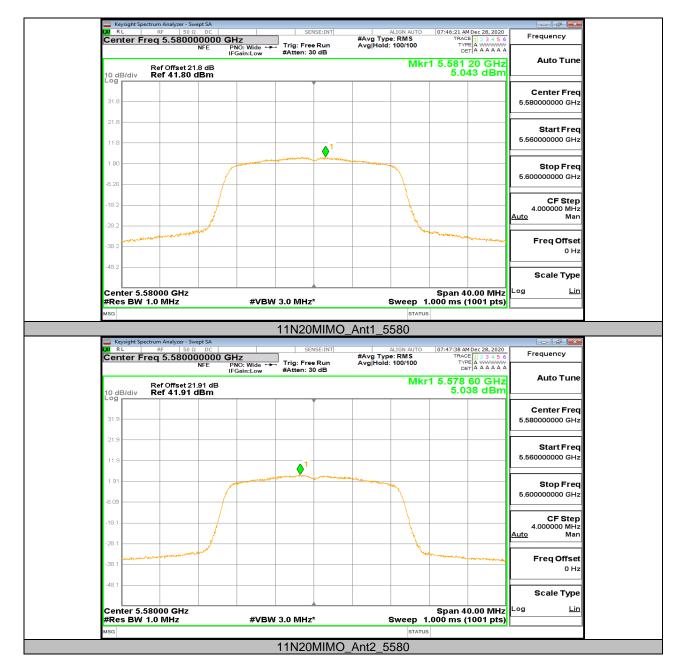


09:36:14 AM Sep 11, 2020 #Avg Type: RMS Avg|Hold: 100/100 Frequency TYPE A WWWWW Mkr1 5.498 64 GHz 3.612 dBm **Auto Tune** Ref Offset 21.49 dB Ref 41.49 dBm 10 dB/div Log Center Freq 5.500000000 GHz Start Freq 5.480000000 GHz **♦**¹ Stop Freq 5.520000000 GHz **CF Step** 4.000000 MHz Man Freq Offset 0 Hz Scale Type Span 40.00 MHz Sweep 1.000 ms (1001 pts) Center 5.50000 GHz #Res BW 1.0 MHz Lin #VBW 3.0 MHz* 11N20MIMO_Ant1_5500 Keysight Spectrum Analyzer - Swept - | GR | RL | RF | SO Q DC | | Center Freq 5.50000000 GHz | PNO: Wide → IFGain:Low 09:37:26 AM Sep 11, 2020 TRACE 1 2 3 4 5 6 TYPE A WWWWW DET A A A A A A Frequency #Avg Type: RMS Avg|Hold: 100/100 Trig: Free Run #Atten: 30 dB Auto Tune Mkr1 5.498 92 GHz 3.925 dBm Ref Offset 21.5 dB Ref 41.50 dBm 10 dB/div Center Freq 5.500000000 GHz Start Freq 5.480000000 GHz **♦**¹ Stop Freq 5.520000000 GHz CF Step 4.000000 MHz Freq Offset 0 Hz Scale Type Center 5.50000 GHz Span 40.00 MHz Log #Res BW 1.0 MHz #VBW 3.0 MHz* Sweep 1.000 ms (1001 pts)

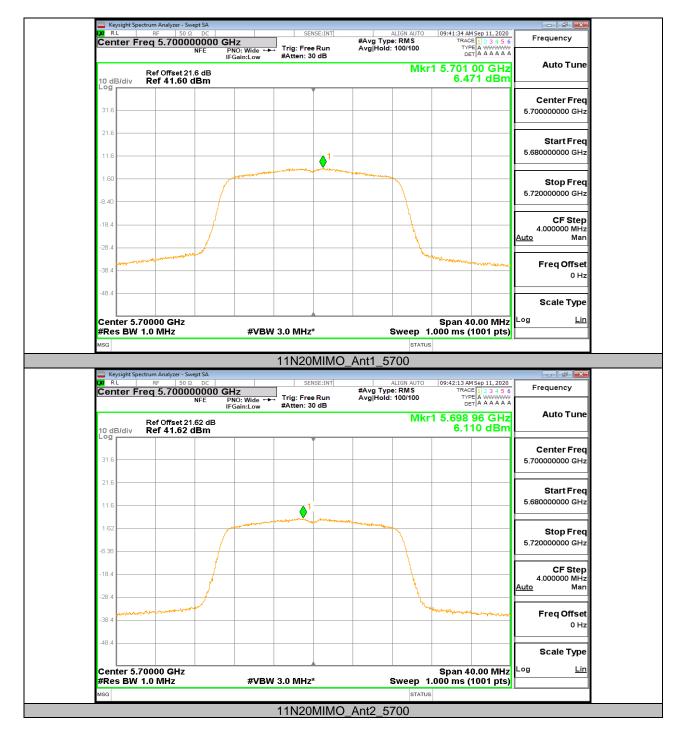
11N20MIMO Ant2 5500

STATUS























RL RF 50 Ω DC | Center Freq 5.785000000 GHz | PNO: Wide | PRO: Wi 09:46:14 AM Sep 11, 2020 #Avg Type: RMS Avg|Hold: 100/100 Frequency TYPE A WWWWW Mkr1 5.783 84 GHz 1.235 dBm **Auto Tune** Ref Offset 21.39 dB Ref 41.39 dBm 10 dB/div Log Center Freq 5.785000000 GHz Start Freq 5.765000000 GHz Stop Freq 5.805000000 GHz **CF Step** 4.000000 MHz Man Freq Offset 0 Hz Scale Type Span 40.00 MHz Sweep 1.000 ms (1001 pts) Center 5.78500 GHz #Res BW 510 kHz Lin #VBW 1.5 MHz* 11N20MIMO_Ant1_5785 09:47:30 AM Sep 11, 2020 TRACE 1 2 3 4 5 6 TYPE A WWWW DET A A A A A A Frequency #Avg Type: RMS Avg|Hold: 100/100 Trig: Free Run #Atten: 30 dB Auto Tune Mkr1 5.783 72 GHz 1.744 dBm Ref Offset 21.38 dB Ref 41.38 dBm 10 dB/div Center Freq 5.785000000 GHz Start Freq 5.765000000 GHz Stop Freq 5.805000000 GHz CF Step 4.000000 MHz -18. Freq Offset 0 Hz Scale Type Center 5.78500 GHz Span 40.00 MHz Log #Res BW 510 kHz #VBW 1.5 MHz* Sweep 1.000 ms (1001 pts) STATUS 11N20MIMO Ant2 5785



M RL RF 50 Ω DC |
Center Freq 5.825000000 GHz

NFE PNO: Wide +++
IFGain:Low 09:49:21 AM Sep 11, 2020 #Avg Type: RMS Avg|Hold: 100/100 Frequency TYPE A WWWWW Mkr1 5.824 20 GHz **Auto Tune** Ref Offset 21.39 dB Ref 41.39 dBm 10 dB/div Log 2.168 dBm Center Freq 5.825000000 GHz Start Freq 5.805000000 GHz Stop Freq 5.845000000 GHz **CF Step** 4.000000 MHz Man Freq Offset 0 Hz Scale Type Center 5.82500 GHz #Res BW 510 kHz Span 40.00 MHz Sweep 1.000 ms (1001 pts) Lin #VBW 1.5 MHz* 11N20MIMO_Ant1_5825 09:51:22 AM Sep 11, 2020

TRACE 1 2 3 4 5 6

TYPE A WWWW

DET A A A A A A Frequency #Avg Type: RMS Avg|Hold: 100/100 Trig: Free Run #Atten: 30 dB Auto Tune Mkr1 5.824 00 GHz Ref Offset 21.38 dB Ref 41.38 dBm 1.892 dBm 10 dB/div Center Freq 5.825000000 GHz Start Freq 5.805000000 GHz Stop Freq 5.845000000 GHz CF Step 4.000000 MHz -18. Freq Offset 0 Hz Scale Type Center 5.82500 GHz Span 40.00 MHz Log #Res BW 510 kHz #VBW 1.5 MHz* Sweep 1.000 ms (1001 pts) STATUS 11N20MIMO Ant2 5825

Scale Type

Log

Span 80.00 MHz

Sweep 1.000 ms (1001 pts)

STATUS



Center 5.19000 GHz

#Res BW 1.0 MHz

10:05:05 AM Sep 11, 2020 Center Freq 5.19000000 GHz

NFE PNO: Fast →
IFGain:Low #Avg Type: RMS Avg|Hold: 100/100 Frequency TYPE A WWWWW Mkr1 5.187 44 GHz 0.422 dBm **Auto Tune** Ref Offset 21.69 dB Ref 41.69 dBm 10 dB/div Log Center Freq 5.190000000 GHz Start Freq 5.150000000 GHz Stop Freq 5.230000000 GHz **CF Step** 8.000000 MHz Man Freq Offset 0 Hz Scale Type Span 80.00 MHz Sweep 1.000 ms (1001 pts) Center 5.19000 GHz #Res BW 1.0 MHz Lin #VBW 3.0 MHz* 11N40MIMO_Ant1_5190 10:08:28 AM Sep 11, 2020 TRACE 1 2 3 4 5 6 TYPE A WWWW DET A A A A A A RL | RF | 50 Ω DC | |

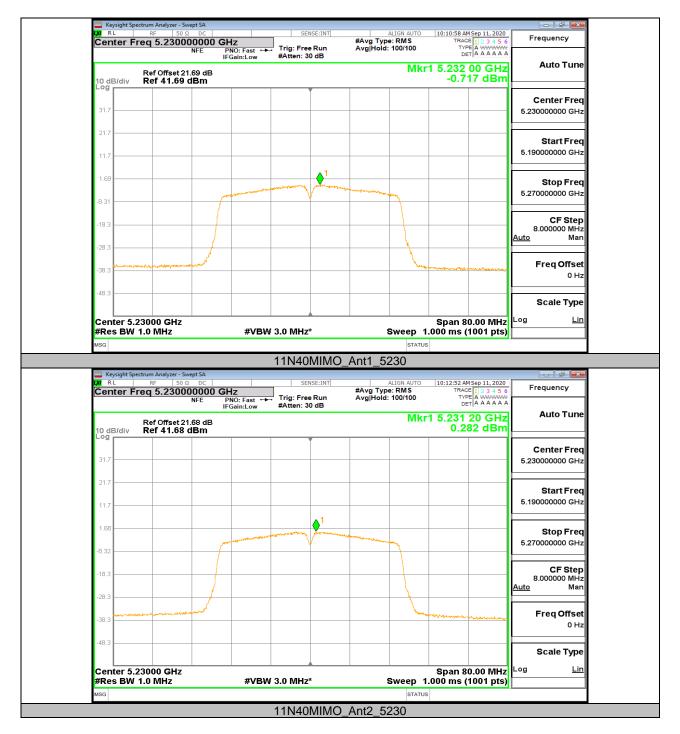
Center Freq 5.19000000 GHz

NFE | PNO: Fast → IFGain:Low Frequency #Avg Type: RMS Avg|Hold: 100/100 Trig: Free Run #Atten: 30 dB Auto Tune Mkr1 5.192 08 GHz Ref Offset 21.68 dB Ref 41.68 dBm -0.161 dBm 10 dB/div Center Freq 5.190000000 GHz Start Freq 5.150000000 GHz Stop Freq 5.230000000 GHz CF Step 8.000000 MHz Freq Offset 0 Hz

11N40MIMO Ant2 5190

#VBW 3.0 MHz*







10:15:07 AM Sep 11, 2020 Center Freq 5.27000000 GHz

NFE PNO: Fast →
IFGain:Low #Avg Type: RMS Avg|Hold: 100/100 Frequency TYPE A WWWWW Auto Tune Mkr1 5.267 44 GHz Ref Offset 21.69 dB Ref 41.69 dBm 10 dB/div Log 4.006 dBm Center Freq 5.270000000 GHz Start Freq 5.230000000 GHz \diamondsuit^1 Stop Freq 5.310000000 GHz **CF Step** 8.000000 MHz Man Freq Offset 0 Hz Scale Type Span 80.00 MHz Sweep 1.000 ms (1001 pts) Center 5.27000 GHz #Res BW 1.0 MHz Lin #VBW 3.0 MHz* 11N40MIMO_Ant1_5270 10:17:41 AM Sep 11, 2020 TRACE 1 2 3 4 5 6 TYPE A WWWW DET A A A A A A RL | RF | 50 Ω DC | |

Center Freq 5.27000000 GHz

NFE | PNO: Fast → IFGain:Low Frequency #Avg Type: RMS Avg|Hold: 100/100 Trig: Free Run #Atten: 30 dB Auto Tune Mkr1 5.267 68 GHz Ref Offset 21.68 dB Ref 41.68 dBm 3.738 dBm 10 dB/div Center Freq 5.270000000 GHz Start Freq 5.230000000 GHz Stop Freq 5.310000000 GHz CF Step 8.000000 MHz Freq Offset 0 Hz Scale Type Center 5.27000 GHz Span 80.00 MHz Log #Res BW 1.0 MHz #VBW 3.0 MHz* Sweep 1.000 ms (1001 pts) STATUS 11N40MIMO Ant2 5270



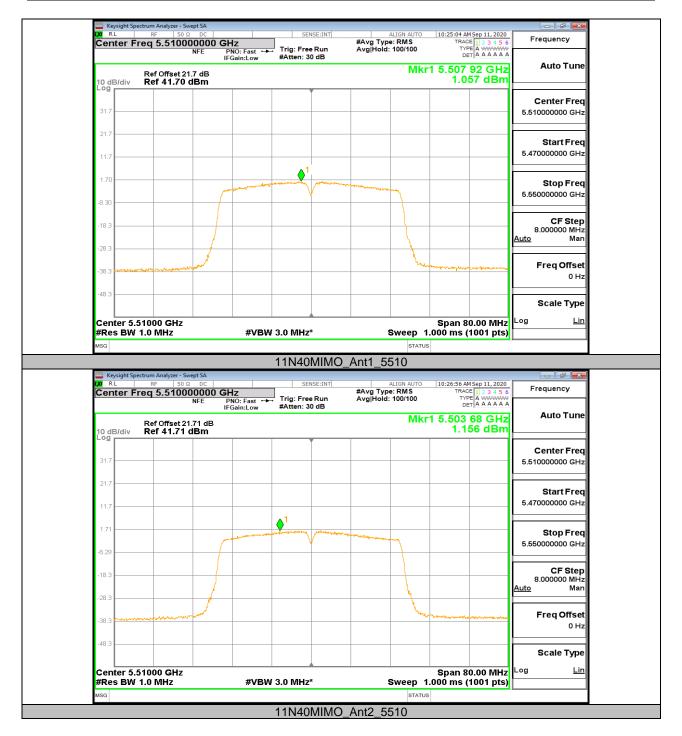
10:21:32 AM Sep 11, 2020 Center Freq 5.31000000 GHz

NFE PNO: Fast →
IFGain:Low #Avg Type: RMS Avg|Hold: 100/100 Frequency TYPE A WWWWW Mkr1 5.307 76 GHz Auto Tune Ref Offset 21.69 dB Ref 41.69 dBm 10 dB/div Log 2.600 dBm Center Freq 5.310000000 GHz Start Freq 5.270000000 GHz **** Stop Freq 5.350000000 GHz **CF Step** 8.000000 MHz Man Freq Offset 0 Hz Scale Type Span 80.00 MHz Sweep 1.000 ms (1001 pts) Center 5.31000 GHz #Res BW 1.0 MHz Lin #VBW 3.0 MHz* 11N40MIMO_Ant1_5310 10:22:46 AM Sep 11, 2020 TRACE 1 2 3 4 5 6 TYPE A WWWW DET A A A A A A RL | RF | 50 Ω DC | |

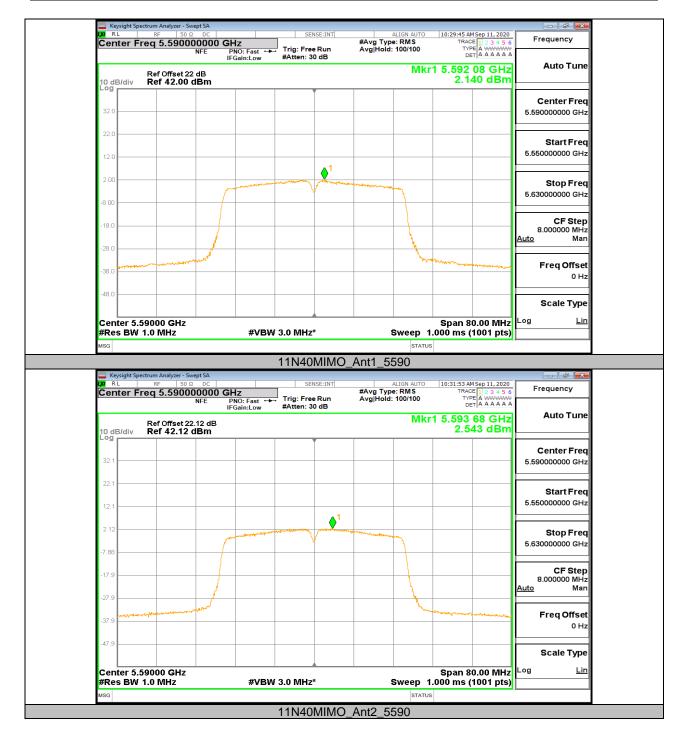
Center Freq 5.31000000 GHz

NFE | PNO: Fast → IFGain:Low Frequency #Avg Type: RMS Avg|Hold: 100/100 Trig: Free Run #Atten: 30 dB Auto Tune Mkr1 5.307 76 GHz 2.853 dBm Ref Offset 21.68 dB Ref 41.68 dBm 10 dB/div Center Freq 5.310000000 GHz Start Freq 5.270000000 GHz **\rightarrow** Stop Freq 5.350000000 GHz CF Step 8.000000 MHz Freq Offset 0 Hz Scale Type Center 5.31000 GHz Span 80.00 MHz Log #Res BW 1.0 MHz #VBW 3.0 MHz* Sweep 1.000 ms (1001 pts) STATUS 11N40MIMO Ant2 5310











RL RF 50 Ω DU Center Freq 5.670000000 GHz

NFE PNO: Fast PFGain:Low 10:33:45 AM Sep 11, 2020 #Avg Type: RMS Avg|Hold: 100/100 Frequency TYPE A WWWWW Mkr1 5.667 28 GHz **Auto Tune** Ref Offset 21.8 dB Ref 41.80 dBm 10 dB/div Log 2.560 dBm Center Freq 5.670000000 GHz Start Freq 5.630000000 GHz **♦**¹ Stop Freq 5.710000000 GHz **CF Step** 8.000000 MHz Man Freq Offset 0 Hz Scale Type Span 80.00 MHz Sweep 1.000 ms (1001 pts) Center 5.67000 GHz #Res BW 1.0 MHz Lin #VBW 3.0 MHz* 11N40MIMO_Ant1_5670 10:37:28 AM Sep 11, 2020 TRACE 1 2 3 4 5 6 TYPE A WWWW DET A A A A A A Frequency #Avg Type: RMS Avg|Hold: 100/100 Trig: Free Run #Atten: 30 dB Auto Tune Mkr1 5.671 52 GHz Ref Offset 21.83 dB Ref 41.83 dBm 2.560 dBm 10 dB/div Center Freq 5.670000000 GHz Start Freq 5.630000000 GHz Stop Freq 5.710000000 GHz CF Step 8.000000 MHz Freq Offset 0 Hz Scale Type Center 5.67000 GHz Span 80.00 MHz Log #Res BW 1.0 MHz #VBW 3.0 MHz* Sweep 1.000 ms (1001 pts) STATUS 11N40MIMO Ant2 5670



RL RF 50 Ω DC Center Freq 5.710000000 GHz

NFE PNO: Fast PFGain:Low 02:13:21 PM Sep 11, 2020 #Avg Type: RMS Avg|Hold: 100/100 Frequency TYPE A WWWWW Mkr2 5.712 48 GHz **Auto Tune** Ref Offset 21.8 dB Ref 41.80 dBm 10 dB/div Log 3.501 dBm Center Freq 5.710000000 GHz Start Freq 5.670000000 GHz Stop Freq 5.750000000 GHz **CF Step** 8.000000 MHz Man Freq Offset 0 Hz Scale Type Span 80.00 MHz Sweep 1.000 ms (1001 pts) Center 5.71000 GHz #Res BW 1.0 MHz Lin #VBW 3.0 MHz* 11N40MIMO_Ant1_5710_UNII-2C 02:16:29 PM Sep 11, 2020

TRACE 1 2 3 4 5 6

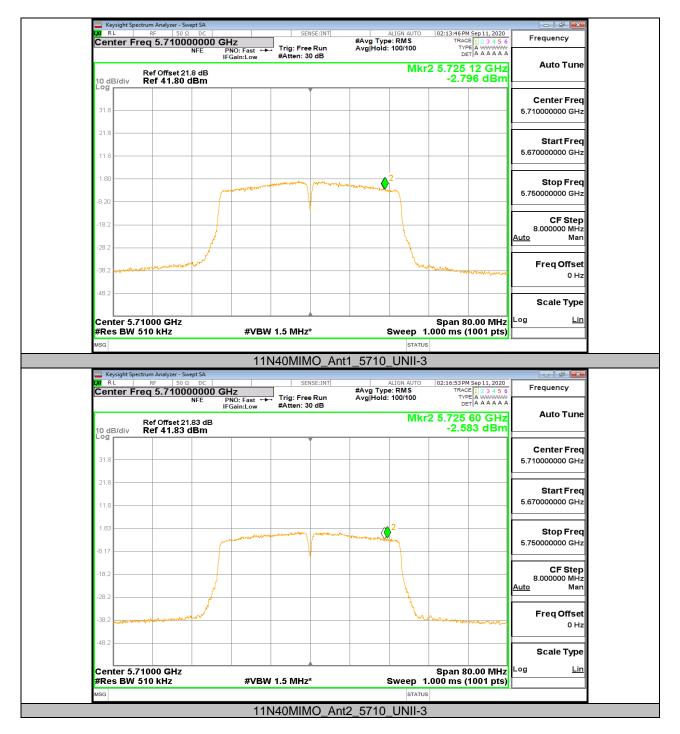
TYPE A WWWWW
DET A A A A A A RL | RF | 50 Ω DC | |

Center Freq 5.71000000 GHz

NFE | PNO: Fast → IFGain:Low Frequency #Avg Type: RMS Avg|Hold: 100/100 Auto Tune Mkr2 5.708 40 GHz Ref Offset 21.83 dB Ref 41.83 dBm 3.012 dBm 10 dB/div Center Freq 5.710000000 GHz Start Freq 5.670000000 GHz Stop Freq 5.750000000 GHz CF Step 8.000000 MHz Freq Offset 0 Hz Scale Type Center 5.71000 GHz Span 80.00 MHz Log #Res BW 1.0 MHz #VBW 3.0 MHz* Sweep 1.000 ms (1001 pts) STATUS

11N40MIMO Ant2 5710 UNII-2C







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10:51:02 AM Sep 11, 2020 Center Freq 5.79500000 GHz

NFE PNO: Fast →
IFGain:Low #Avg Type: RMS Avg|Hold: 100/100 Frequency TYPE A WWWWW Mkr1 5.797 08 GHz **Auto Tune** Ref Offset 21.59 dB Ref 41.59 dBm 10 dB/div Log -0.670 dBm Center Freq 5.795000000 GHz Start Freq 5.755000000 GHz Stop Freq 5.835000000 GHz **CF Step** 8.000000 MHz Man Freq Offset 0 Hz Scale Type Center 5.79500 GHz #Res BW 510 kHz Span 80.00 MHz Sweep 1.000 ms (1001 pts) Lin #VBW 1.5 MHz* 11N40MIMO_Ant1_5795 RL | RF | 50 Ω DC | |

Center Freq 5.795000000 GHz

NFE | PNO: Fast → IFGain:Low Frequency #Avg Type: RMS Avg|Hold: 100/100 Trig: Free Run #Atten: 30 dB Auto Tune Mkr1 5.797 16 GHz 0.104 dBm Ref Offset 21.59 dB Ref 41.59 dBm 10 dB/div Center Freq 5.795000000 GHz Start Freq 5.755000000 GHz Stop Freq 5.835000000 GHz CF Step 8.000000 MHz Freq Offset 0 Hz Scale Type Center 5.79500 GHz #Res BW 510 kHz Span 80.00 MHz Log #VBW 1.5 MHz* Sweep 1.000 ms (1001 pts) STATUS 11N40MIMO Ant2 5795

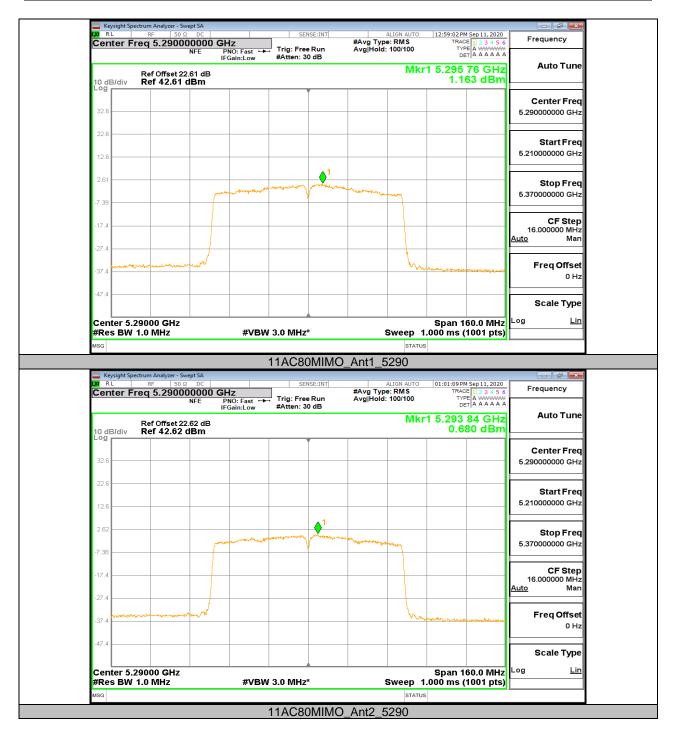


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01:07:24 PM Sep 11, 2020 Center Freq 5.61000000 GHz

NFE PNO: Fast →
IFGain:Low #Avg Type: RMS Avg|Hold: 100/100 Frequency TYPE A WWWWW **Auto Tune** Mkr1 5.612 72 GHz Ref Offset 22.94 dB Ref 42.94 dBm 10 dB/div Log -0.150 dBm Center Freq 5.610000000 GHz Start Freq 5.530000000 GHz Stop Freq 5.690000000 GHz CF Step 16.000000 MHz Man Freq Offset 0 Hz Scale Type Span 160.0 MHz Sweep 1.000 ms (1001 pts) Center 5.61000 GHz #Res BW 1.0 MHz Lin #VBW 3.0 MHz* 11AC80MIMO_Ant1_5610 RL | RF | 50 Ω DC | |

Center Freq 5.61000000 GHz

NFE | PNO: Fast → IFGain:Low Frequency #Avg Type: RMS Avg|Hold: 100/100 Trig: Free Run #Atten: 30 dB Auto Tune Mkr1 5.604 72 GHz 0.266 dBm Ref Offset 23.06 dB Ref 43.06 dBm 10 dB/div Center Freq 5.610000000 GHz Start Freq 5.530000000 GHz Stop Freq 5.690000000 GHz CF Step 16.000000 MHz Freq Offset 0 Hz Scale Type Center 5.61000 GHz Span 160.0 MHz Log #Res BW 1.0 MHz #VBW 3.0 MHz* Sweep 1.000 ms (1001 pts) STATUS

11AC80MIMO Ant2 5610



RL RF 50 Ω DU Center Freq 5.690000000 GHz

NFE PNO: Fast PFGain:Low 01:30:36 PM Sep 11, 2020 #Avg Type: RMS Avg|Hold: 100/100 Frequency TYPE A WWWWW Mkr2 5.693 84 GHz **Auto Tune** Ref Offset 22.72 dB Ref 42.72 dBm 10 dB/div Log 0.495 dBm Center Freq 5.690000000 GHz Start Freq 5.610000000 GHz Stop Freq 5.770000000 GHz CF Step 16.000000 MHz Man Freq Offset 0 Hz Scale Type Center 5.69000 GHz #Res BW 1.0 MHz Span 160.0 MHz Sweep 1.000 ms (1001 pts) Lin #VBW 3.0 MHz* 11AC80MIMO_Ant1_5690_UNII-2C 01:34:32 PM Sep 11, 2020 TRACE 1 2 3 4 5 6 TYPE A WWWWWW DET A A A A A A RL | RF | 50 Ω DC | |

Center Freq 5.69000000 GHz

NFE | PNO: Fast → IFGain:Low Frequency #Avg Type: RMS Avg|Hold: 100/100 Auto Tune Mkr2 5.687 60 GHz 0.847 dBm Ref Offset 22.77 dB Ref 42.77 dBm 10 dB/div Center Freq 5.690000000 GHz Start Freq 5.610000000 GHz Stop Freq 5.770000000 GHz CF Step 16.000000 MHz Freq Offset 0 Hz Scale Type Center 5.69000 GHz Span 160.0 MHz Log #Res BW 1.0 MHz #VBW 3.0 MHz* Sweep 1.000 ms (1001 pts) STATUS 11AC80MIMO Ant2 5690 UNII-2C



01:31:01 PM Sep 11, 2020 #Avg Type: RMS Avg|Hold: 100/100 Frequency TYPE A WWWWW Mkr2 5.727 60 GHz **Auto Tune** Ref Offset 22.72 dB Ref 42.72 dBm 10 dB/div Log -5.981 dBm Center Freq 5.690000000 GHz Start Freq 5.610000000 GHz Stop Freq 5.770000000 GHz CF Step 16.000000 MHz Man Freq Offset 0 Hz Scale Type Span 160.0 MHz Sweep 1.000 ms (1001 pts) Center 5.69000 GHz #Res BW 510 kHz Lin #VBW 1.5 MHz* 11AC80MIMO_Ant1_5690_UNII-3 01:34:57 PM Sep 11, 2020 TRACE 1 2 3 4 5 6 TYPE A WWWW DET A A A A A A RL | RF | 50 Ω DC | |

Center Freq 5.69000000 GHz

NFE | PNO: Fast → IFGain:Low Frequency #Avg Type: RMS Avg|Hold: 100/100 Auto Tune Mkr2 5.725 04 GHz -5.717 dBm Ref Offset 22.77 dB Ref 42.77 dBm 10 dB/div Center Freq 5.690000000 GHz Start Freq 5.610000000 GHz Stop Freq 5.770000000 GHz CF Step 16.000000 MHz Freq Offset 0 Hz Scale Type Center 5.69000 GHz Span 160.0 MHz Log #Res BW 510 kHz #VBW 1.5 MHz* Sweep 1.000 ms (1001 pts) STATUS 11AC80MIMO Ant2 5690 UNII-3



01:11:48 PM Sep 11, 2020 Center Freq 5.775000000 GHz

NFE PNO: Fast →
IFGain:Low #Avg Type: RMS Avg|Hold: 100/100 Frequency TYPE A WWWWW Mkr1 5.770 04 GHz -3.090 dBm Auto Tune Ref Offset 22.51 dB Ref 42.51 dBm 10 dB/div Log Center Freq 5.775000000 GHz Start Freq 5.695000000 GHz Stop Freq 5.855000000 GHz CF Step 16.000000 MHz Man Freq Offset 0 Hz Scale Type Span 160.0 MHz Sweep 1.000 ms (1001 pts) Center 5.77500 GHz #Res BW 510 kHz Lin #VBW 1.5 MHz* 11AC80MIMO_Ant1_5775 01:14:02 PM Sep 11, 2020 TRACE 1 2 3 4 5 6 TYPE A WWWWW DET A A A A A A RL | RF | 50 Ω DC | |

Center Freq 5.775000000 GHz

NFE | PNO: Fast → IFGain:Low Frequency #Avg Type: RMS Avg|Hold: 100/100 Trig: Free Run #Atten: 30 dB Auto Tune Mkr1 5.778 84 GHz Ref Offset 22.53 dB Ref 42.53 dBm -1.915 dBm 10 dB/div Center Freq 5.775000000 GHz Start Freq 5.695000000 GHz Stop Freq 5.855000000 GHz CF Step 16.000000 MHz Freq Offset 0 Hz Scale Type Center 5.77500 GHz #Res BW 510 kHz Span 160.0 MHz Log #VBW 1.5 MHz* Sweep 1.000 ms (1001 pts)

11AC80MIMO_Ant2_5775

STATUS



Appendix D: Duty Cycle Test Result

Mode	On Time (msec)	Period (msec)	Duty Cycle x (Linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/T Minimum VBW (kHz)	Final setting For VBW (kHz)
11A	1.39	1.46	0.9521	95.21	0.21	0.72	1
11AC20MIMO	1.31	1.37	0.9562	95.62	0.19	0.76	1
11AC40MIMO	0.65	0.71	0.9155	91.55	0.38	1.54	2
11AC80MIMO	0.19	0.25	0.7600	76.00	1.19	5.26	10

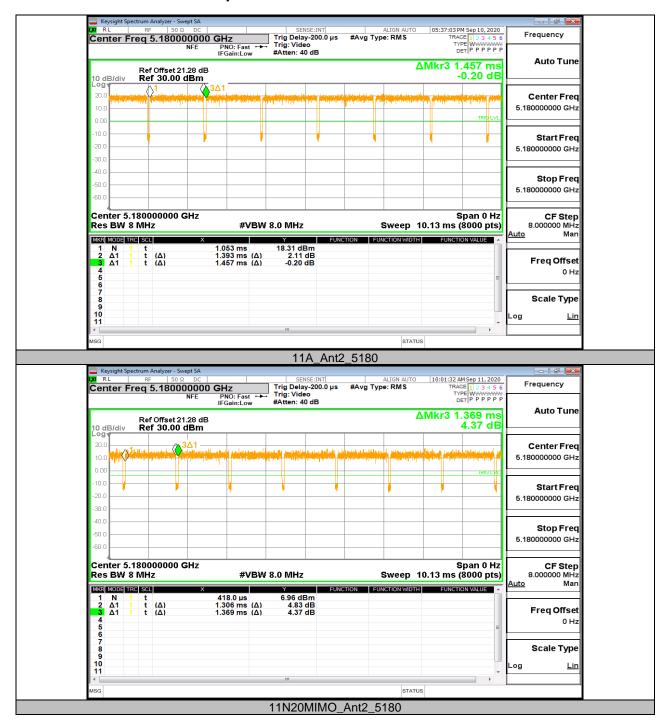
Duty Cycle Correction Factor=10log (1/x). Where: x is Duty Cycle (Linear)

Where: T is On Time

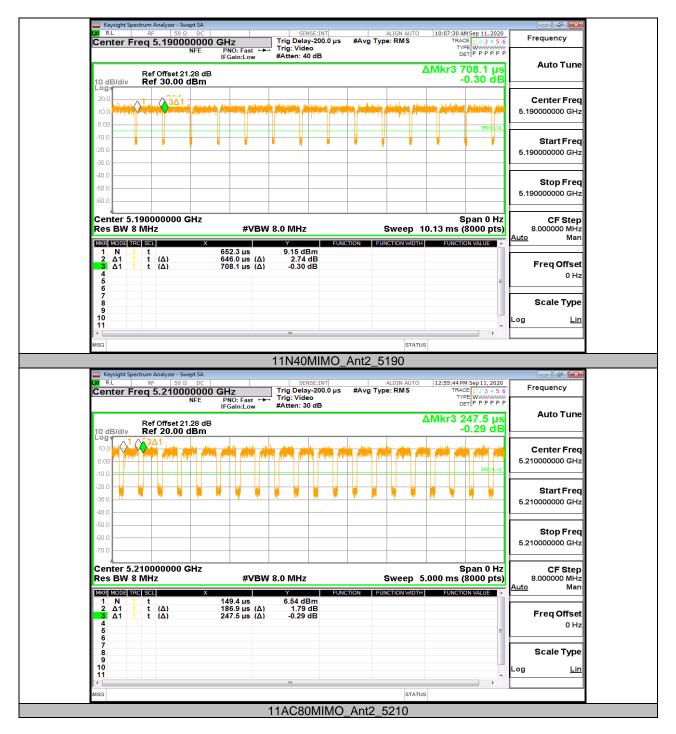
If that calculated VBW is not available on the analyzer then the next higher value should be used.



Test Graphs









REPORT NO.: 4789609364.2-6

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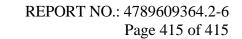
Appendix E: Frequency Stability

Test Result

	Frequency Error vs. Voltage									
802.11a:5200MHz										
Temp. Vo		0 Minute		2 Minute		5 Minute		10 Minute		
	Volt.	Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)	
T _N	VL	5199.9827	-3.33	5200.0104	2.01	5200.0051	0.99	5199.9810	-3.65	
T _N	V _N	5200.0074	1.42	5199.9947	-1.03	5199.9773	-4.36	5199.9933	-1.30	
T _N	Vн	5200.0128	2.46	5200.0119	2.29	5199.9877	-2.36	5199.9982	-0.35	
	Frequency Error vs. Temperature									
	802.11a: 5200 MHz									
_		0 Minute		2 Minute		5 Minute		10 Minute		
Temp.	Volt.	Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)	
40	V_N	5200.0185	3.56	5199.9998	-0.05	5199.9915	-1.63	5199.9946	-1.03	
30	V _N	5199.9943	-1.09	5200.0139	2.67	5200.0125	2.41	5199.9765	-4.52	
20	V _N	5200.0020	0.38	5200.0008	0.16	5200.0106	2.03	5200.0022	0.42	
10	V _N	5200.0001	0.03	5199.9845	-2.98	5199.9796	-3.93	5200.0010	0.20	
0	V _N	5199.9957	-0.83	5200.0099	1.90	5199.9902	-1.88	5199.9935	-1.25	

Frequency Error vs. Voltage										
	802.11a: 5825 MHz									
		0 Minute		2 Minute		5 Minute		10 Minute		
Temp.	Volt.	Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)	
T _N	VL	5825.0238	4.08	5825.0045	0.77	5824.9774	-3.88	5825.0051	0.87	
T _N	V _N	5824.9814	-3.19	5825.0206	3.54	5824.9916	-1.44	5825.0028	0.48	
T _N	Vн	5824.9855	-2.50	5824.9881	-2.04	5824.9864	-2.34	5824.9979	-0.37	
	Frequency Error vs. Temperature									
				802.	11a:5825MH	z				
		0 Minute		2 Minute		5 Minute		10 Minute		
Temp.	Volt.	Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)	
40	V _N	5824.9810	-3.26	5824.9938	-1.07	5824.9955	-0.77	5824.9872	-2.19	
30	VN	5824.9954	-0.79	5824.9901	-1.70	5824.9919	-1.39	5824.9849	-2.59	
20	V _N	5824.9918	-1.40	5825.0080	1.37	5824.9823	-3.03	5824.9893	-1.84	
10	V _N	5825.0134	2.30	5824.9820	-3.09	5825.0032	0.55	5824.9788	-3.64	
0	V _N	5824.9925	-1.29	5825.0107	1.84	5825.0053	0.90	5824.9758	-4.15	

Note: All the modes have been tested, only the worst data was recorded in the report.





END OF REPORT