APPENDIX A – TEST DATA OF CONDUCTED EMISSION

Duty Cycle

Test Mode	Frequency (MHz)	Duty Cycle (%)	Correction Factor(dB)	Plot
802.11a	5720	99.95%	0	Fig.1
802.11n HT20	5720	99.94%	0	Fig.2
802.11ac VHT20	5720	99.95%	0	Fig.3
802.11n HT40	5710	99.88%	0	Fig.4
802.11ac VHT40	5710	99.92%	0	Fig.5
802.11ac VHT80	5690	99.80%	0	Fig.6

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

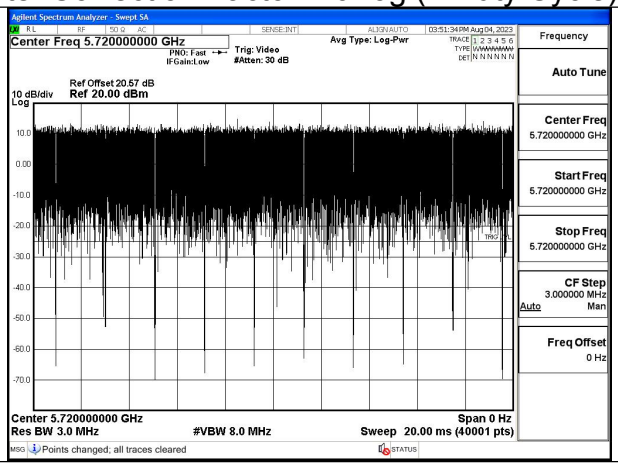


Fig.1

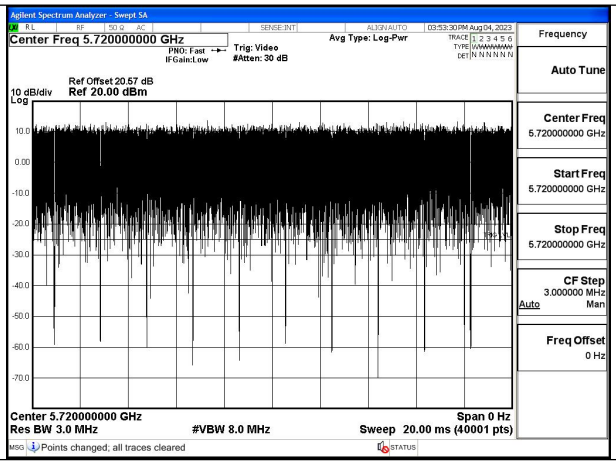


Fig.2

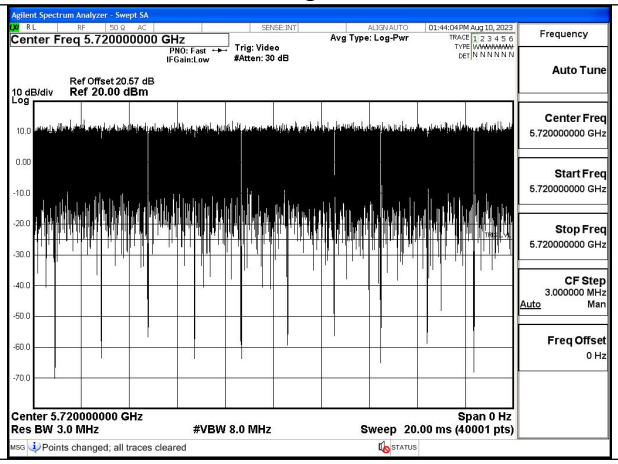


Fig.3

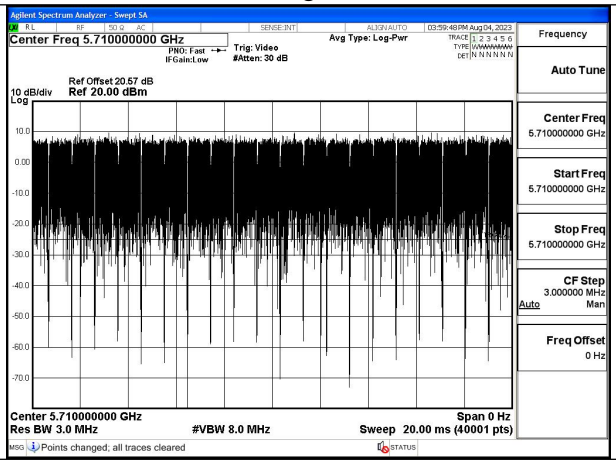


Fig.4

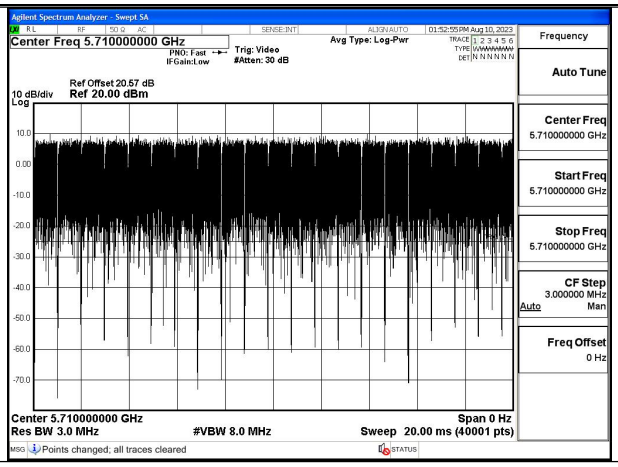

Agilent Spectrum Analyzer - Swept SA
Center Freq 5.710000000 GHz
PNO: Fast
IFGain:Low
Trig: Video
#Atten: 30 dB
Avg Type: Log-Pwr
Ref Offset 20.57 dB
10 dB/div
Log
Ref 20.00 dBm
Center 5.710000000 GHz
Res BW 3.0 MHz
#VBW 8.0 MHz
Span 0 Hz
Sweep 20.00 ms (40001 pts)
Points changed; all traces cleared
Frequency
Auto Tune
Center Freq
5.710000000 GHz
Start Freq
5.710000000 GHz
Stop Freq
5.710000000 GHz
CF Step
3.000000 MHz
Auto
Man
Freq Offset
0 Hz

Fig.5

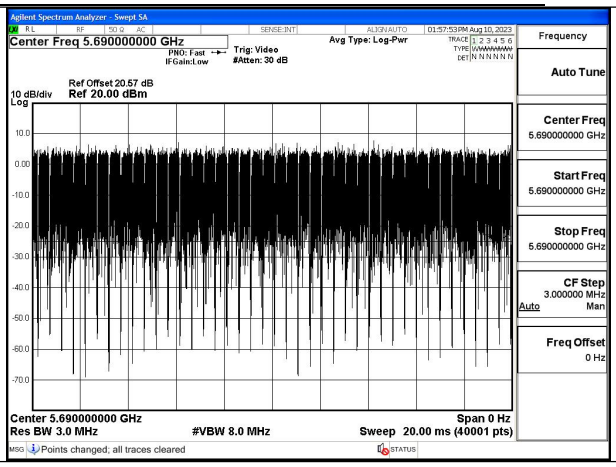

Agilent Spectrum Analyzer - Swept SA
Center Freq 5.690000000 GHz
PNO: Fast
IFGain:Low
Trig: Video
#Atten: 30 dB
Avg Type: Log-Pwr
Ref Offset 20.57 dB
10 dB/div
Log
Ref 20.00 dBm
Center 5.690000000 GHz
Res BW 3.0 MHz
#VBW 8.0 MHz
Span 0 Hz
Sweep 20.00 ms (40001 pts)
Points changed; all traces cleared
Frequency
Auto Tune
Center Freq
5.690000000 GHz
Start Freq
5.690000000 GHz
Stop Freq
5.690000000 GHz
CF Step
3.000000 MHz
Auto
Man
Freq Offset
0 Hz

Fig.6

Output Power

NII2C

Title	Test Mode	Tones/ RU Index	Freq (MHz)	Antenna	Conducted average power output(dBm)	EIRP (dBm)
NII2C	802.11a	NA	5720	Chain0	9.93	9.83
NII2C	802.11n HT20	NA	5720	Chain0	9.69	9.59
NII2C	802.11ac VHT20	NA	5720	Chain0	9.89	9.79
NII2C	802.11n HT40	NA	5710	Chain0	10.15	10.05
NII2C	802.11ac VHT40	NA	5710	Chain0	10.24	10.14
NII2C	802.11ac VHT80	NA	5690	Chain0	10.23	10.13

NII3

Title	Test Mode	Tones/ RU Index	Freq (MHz)	Antenna	Conducted average power output(dBm)	EIRP (dBm)
NII3	802.11a	NA	5720	Chain0	2.90	2.80
NII3	802.11n HT20	NA	5720	Chain0	3.33	3.23
NII3	802.11ac VHT20	NA	5720	Chain0	3.58	3.48
NII3	802.11n HT40	NA	5710	Chain0	-0.48	-0.58
NII3	802.11ac VHT40	NA	5710	Chain0	-0.44	-0.54
NII3	802.11ac VHT80	NA	5690	Chain0	-3.84	-3.94

Emission Bandwidth

NII2C

Offset 20.57dB = Attenuator + Temporary antenna connector loss + Cable loss

26dB Bandwidth (MHz)			
Title	Test Mode	Antenna	5720MHz
NII2C	802.11a	Chain0	16.58
NII2C	802.11n HT20	Chain0	16.58
NII2C	802.11ac VHT20	Chain0	16.40

26dB Bandwidth (MHz)			
Title	Test Mode	Antenna	5710MHz
NII2C	802.11n HT40	Chain0	35.52
NII2C	802.11ac VHT40	Chain0	35.16

26dB Bandwidth (MHz)			
Title	Test Mode	Antenna	5690MHz
NII2C	802.11ac VHT80	Chain0	76.28

NII3

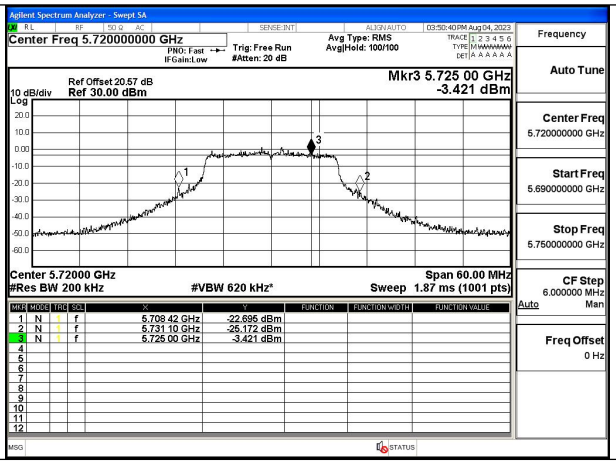
Offset 20.57dB = Attenuator + Temporary antenna connector loss + Cable loss

26dB Bandwidth (MHz)			
Title	Test Mode	Antenna	5720MHz
NII3	802.11a	Chain0	6.10
NII3	802.11n HT20	Chain0	6.28
NII3	802.11ac VHT20	Chain0	6.04

26dB Bandwidth (MHz)			
Title	Test Mode	Antenna	5710MHz
NII3	802.11n HT40	Chain0	5.40
NII3	802.11ac VHT40	Chain0	5.52

26dB Bandwidth (MHz)			
Title	Test Mode	Antenna	5690MHz
NII3	802.11ac VHT80	Chain0	7.00

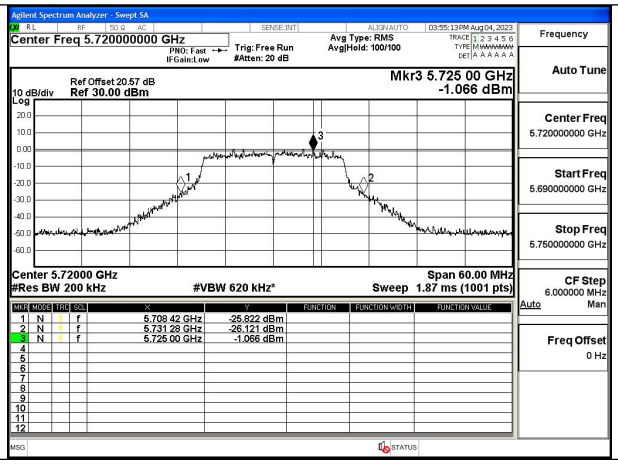
Test Mode: 802.11a



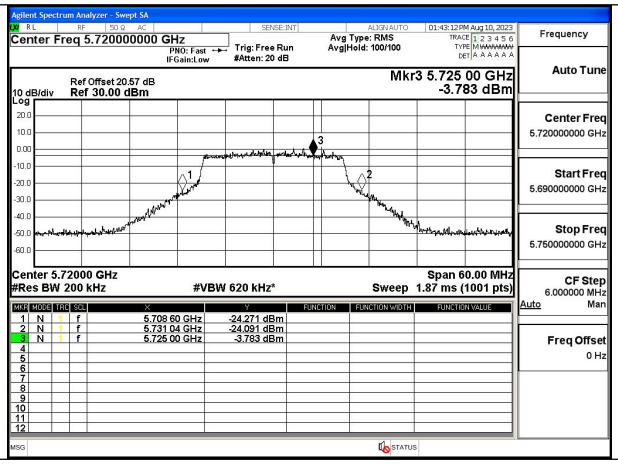
Mode:802.11a Frequency:5720MHz Ant:Chain0

scope:NII2C	

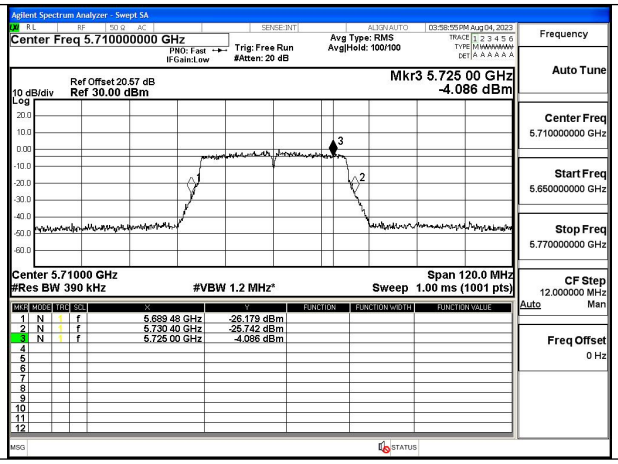
Test Mode: 802.11n HT20

	
Mode:802.11n HT20 Frequency:5720MHz Ant:Chain0 scope:NII2C	

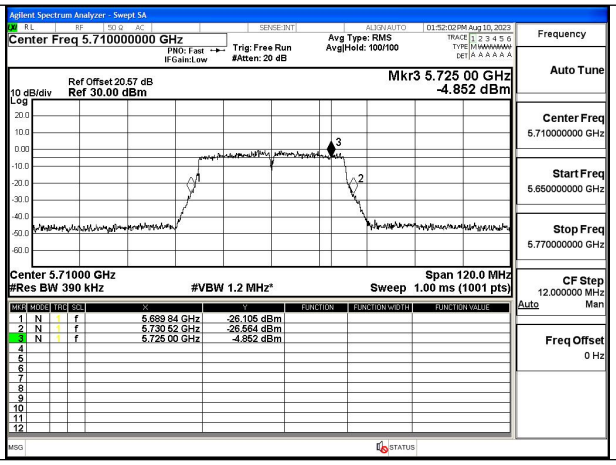
Test Mode: 802.11ac VHT20

	
Mode:802.11ac VHT20 Frequency:5720MHz Ant:Chain0 scope:NII2C	

Test Mode: 802.11n HT40

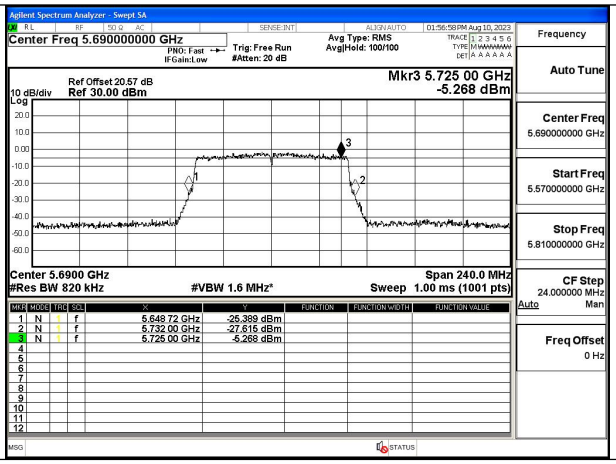
	
Mode:802.11n HT40 Frequency:5710MHz Ant:Chain0 scope:NII2C	

Test Mode: 802.11ac VHT40



Mode:802.11ac VHT40 Frequency:5710MHz Ant:Chain0
scope:NII2C

Test Mode: 802.11ac VHT80



Mode:802.11ac VHT80 Frequency:5690MHz Ant:Chain0
scope:NII2C

Occupied Bandwidth

NII2C

Offset 20.57dB = Attenuator + Temporary antenna connector loss + Cable loss

Occupied Bandwidth (MHz)			
Title	Test Mode	Antenna	5720MHz
NII2C	802.11a	Chain0	13.32
NII2C	802.11n HT20	Chain0	13.95
NII2C	802.11ac VHT20	Chain0	13.86

Occupied Bandwidth (MHz)			
Title	Test Mode	Antenna	5710MHz
NII2C	802.11n HT40	Chain0	33.03
NII2C	802.11ac VHT40	Chain0	33.09

Occupied Bandwidth (MHz)			
Title	Test Mode	Antenna	5690MHz
NII2C	802.11ac VHT80	Chain0	73.01

NII3

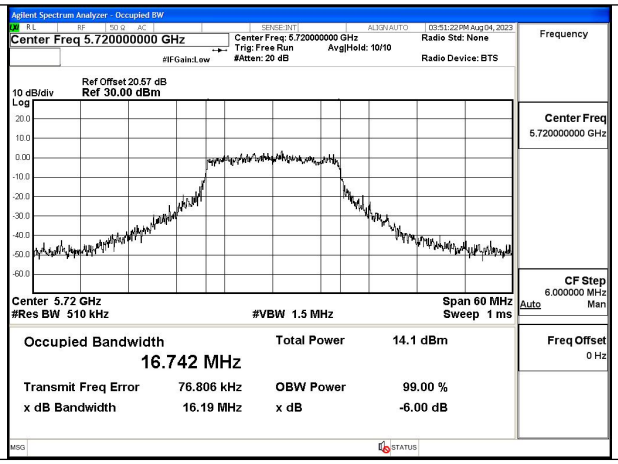
Offset 20.57dB = Attenuator + Temporary antenna connector loss + Cable loss

Occupied Bandwidth (MHz)			
Title	Test Mode	Antenna	5720MHz
NII3	802.11a	Chain0	3.42
NII3	802.11n HT20	Chain0	3.90
NII3	802.11ac VHT20	Chain0	4.05

Occupied Bandwidth (MHz)			
Title	Test Mode	Antenna	5710MHz
NII3	802.11n HT40	Chain0	3.44
NII3	802.11ac VHT40	Chain0	3.27

Occupied Bandwidth (MHz)			
Title	Test Mode	Antenna	5690MHz
NII3	802.11ac VHT80	Chain0	3.11

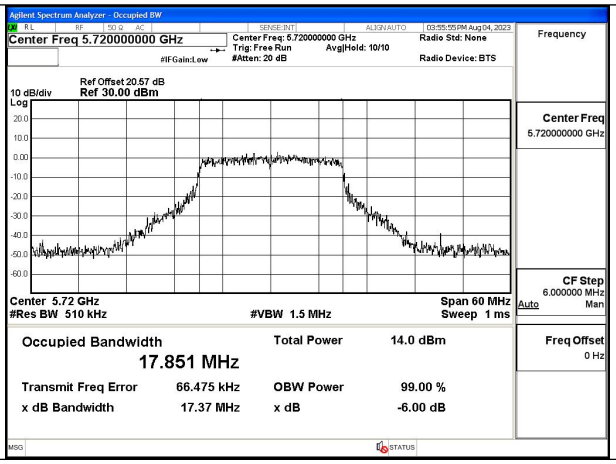
Test Mode: 802.11a



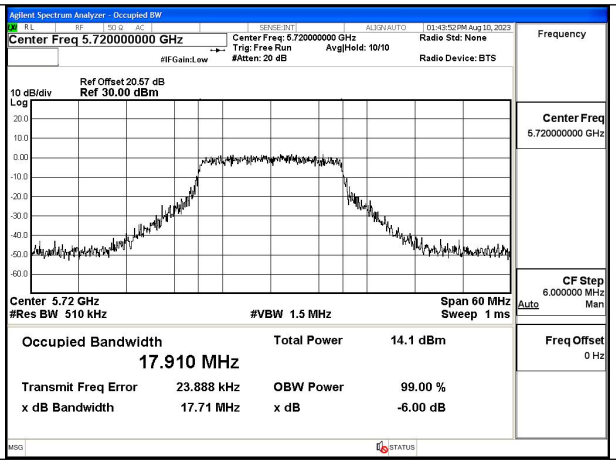
Mode:802.11a Frequency:5720MHz Ant:Chain0

scope:NII2C	

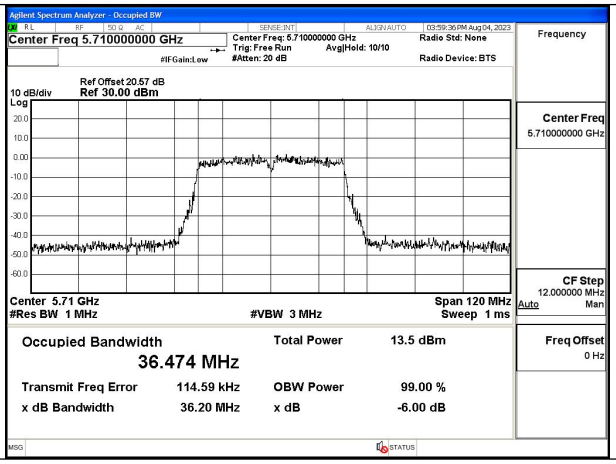
Test Mode: 802.11n HT20

	
Mode:802.11n HT20 Frequency:5720MHz Ant:Chain0 scope:NII2C	

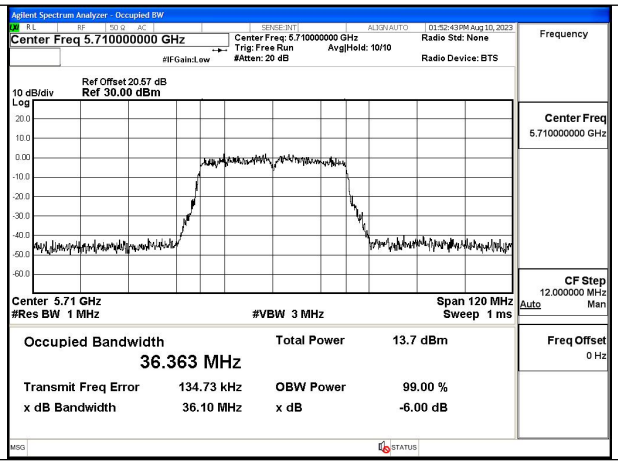
Test Mode: 802.11ac VHT20

	
Mode:802.11ac VHT20 Frequency:5720MHz Ant:Chain0 scope:NII2C	

Test Mode: 802.11n HT40

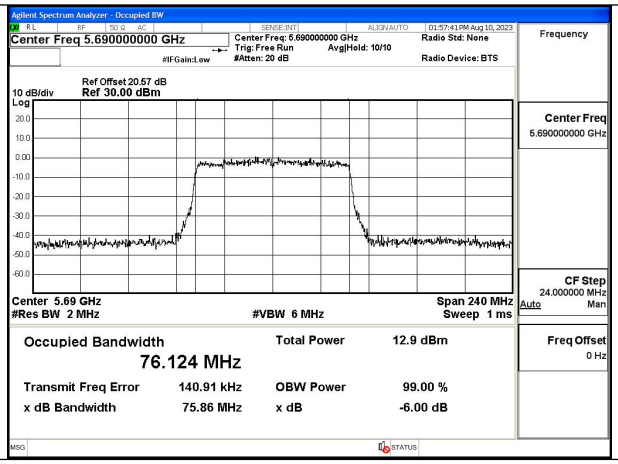
	
Mode:802.11n HT40 Frequency:5710MHz Ant:Chain0 scope:NII2C	

Test Mode: 802.11ac VHT40



Mode:802.11ac VHT40 Frequency:5710MHz Ant:Chain0 scope:NII2C	

Test Mode: 802.11ac VHT80



Mode:802.11ac VHT80 Frequency:5690MHz Ant:Chain0 scope:NII2C	

6dB Bandwidth

NII2C

Offset 20.57dB = Attenuator + Temporary antenna connector loss + Cable loss

6dB Bandwidth (MHz)			
Title	Test Mode	Antenna	5720MHz
NII2C	802.11a	Chain0	13.16
NII2C	802.11n HT20	Chain0	13.39
NII2C	802.11ac VHT20	Chain0	13.51

6dB Bandwidth (MHz)			
Title	Test Mode	Antenna	5710MHz
NII2C	802.11n HT40	Chain0	32.90
NII2C	802.11ac VHT40	Chain0	32.90

6dB Bandwidth (MHz)			
Title	Test Mode	Antenna	5690MHz
NII2C	802.11ac VHT80	Chain0	72.56

NII3

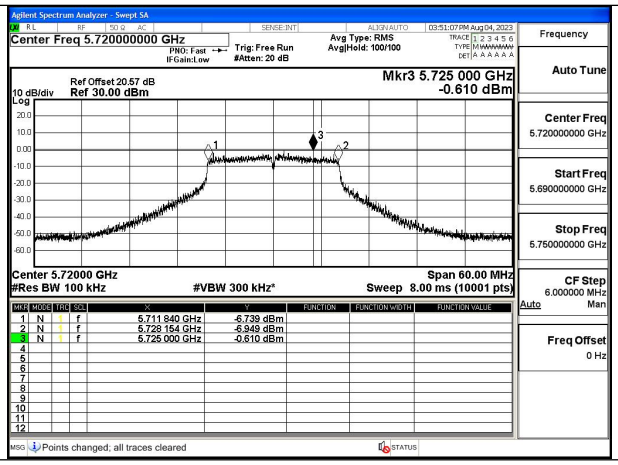
Offset 20.57dB = Attenuator + Temporary antenna connector loss + Cable loss

6dB Bandwidth (MHz)			
Title	Test Mode	Antenna	5720MHz
NII3	802.11a	Chain0	3.15
NII3	802.11n HT20	Chain0	3.13
NII3	802.11ac VHT20	Chain0	3.38

6dB Bandwidth (MHz)			
Title	Test Mode	Antenna	5710MHz
NII3	802.11n HT40	Chain0	3.13
NII3	802.11ac VHT40	Chain0	3.12

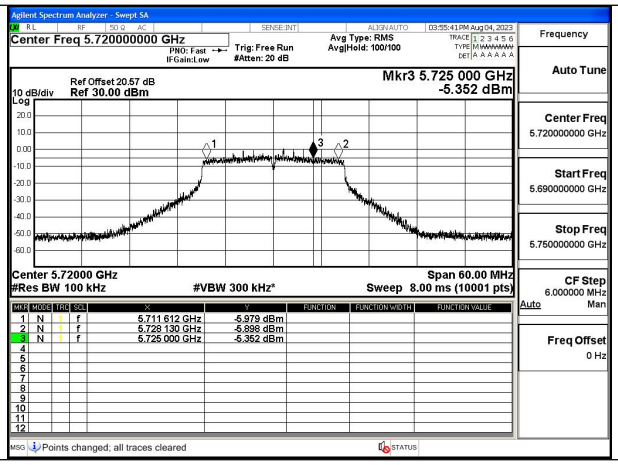
6dB Bandwidth (MHz)			
Title	Test Mode	Antenna	5690MHz
NII3	802.11ac VHT80	Chain0	2.51

Test Mode: 802.11a



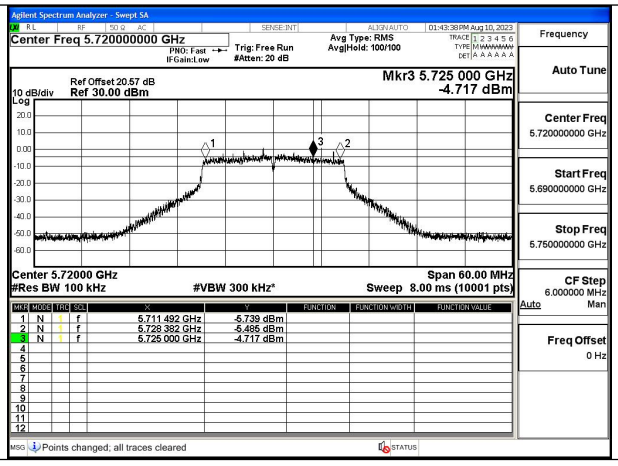
Mode:802.11a Frequency:5720MHz Ant:Chain0
scope:NII2C

Test Mode: 802.11n HT20



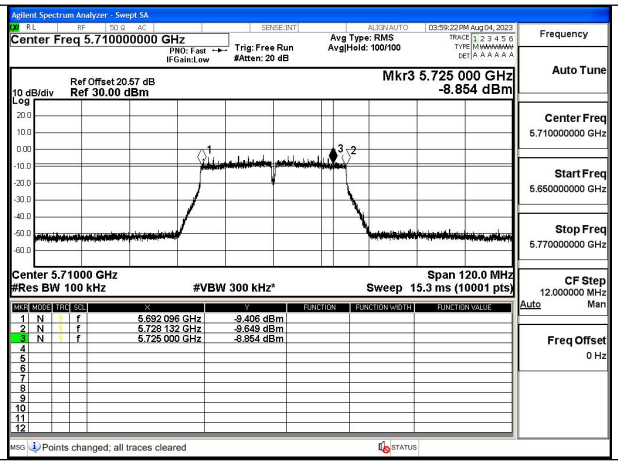
Mode:802.11n HT20 Frequency:5720MHz Ant:Chain0
scope:NII2C

Test Mode: 802.11ac VHT20



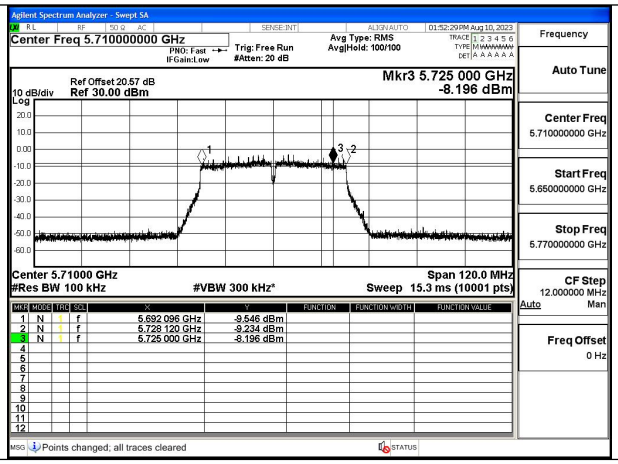
Mode:802.11ac VHT20 Frequency:5720MHz Ant:Chain0
scope:NII2C

Test Mode: 802.11n HT40



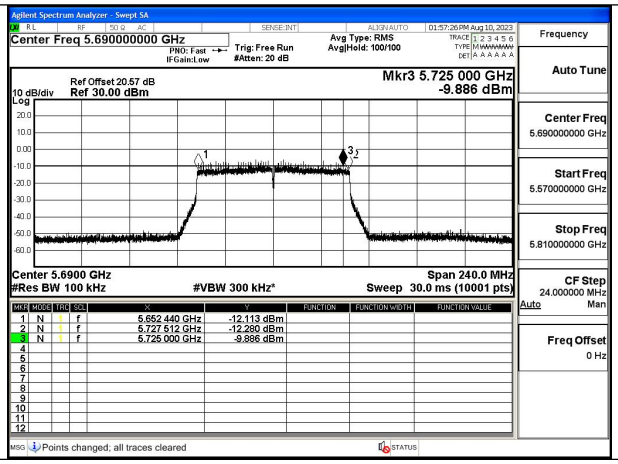
Mode:802.11n HT40 Frequency:5710MHz Ant:Chain0
scope:NII2C

Test Mode: 802.11ac VHT40



Mode:802.11ac VHT40 Frequency:5710MHz Ant:Chain0
scope:NII2C

Test Mode: 802.11ac VHT80



Mode:802.11ac VHT80 Frequency:5690MHz Ant:Chain0
scope:NII2C

Transmitter Power Spectral Density

NII2C

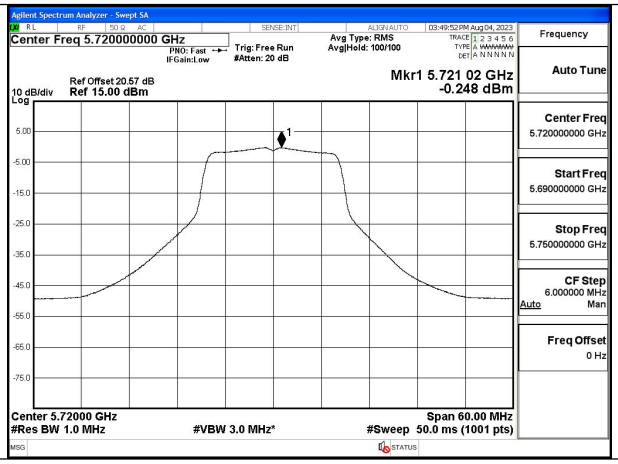
Offset 20.57dB = Attenuator + Temporary antenna connector loss + Cable loss

Title	Test Mode	Antenna	5720MHz	
			Correction Factor(dB)	Power Density (dBm/500KHz)
NII2C	802.11a	Chain0	0	-0.138
NII2C	802.11n HT20	Chain0	0	-0.528
NII2C	802.11ac VHT20	Chain0	0	-0.292

Title	Test Mode	Antenna	5710MHz	
			Correction Factor(dB)	Power Density (dBm/500KHz)
NII2C	802.11n HT40	Chain0	0	-3.532
NII2C	802.11ac VHT40	Chain0	0	-3.348

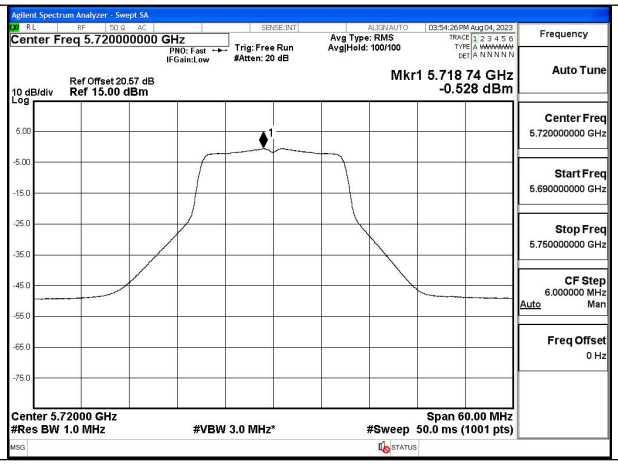
Title	Test Mode	Antenna	5690MHz	
			Correction Factor(dB)	Power Density (dBm/500KHz)
NII2C	802.11ac VHT80	Chain0	0	-6.718

Test Mode: 802.11a



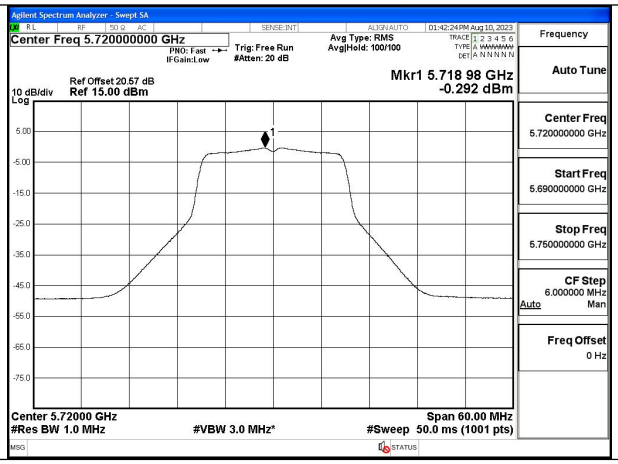
Mode:802.11a Frequency:5720MHz Ant:Chain0
scope:NII2C

Test Mode: 802.11n HT20



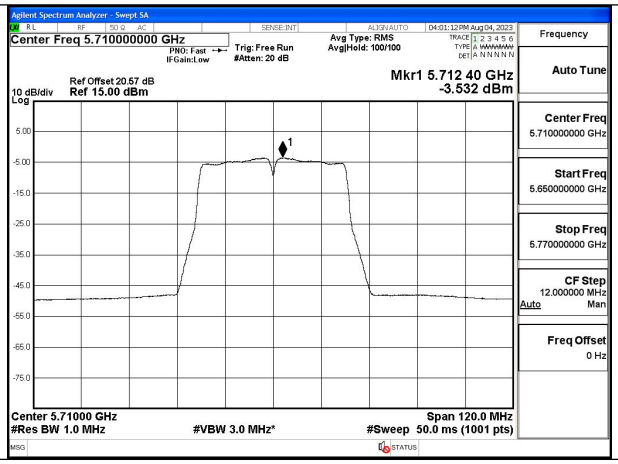
Mode:802.11n HT20 Frequency:5720MHz Ant:Chain0 scope:NII2C

Test Mode: 802.11ac VHT20



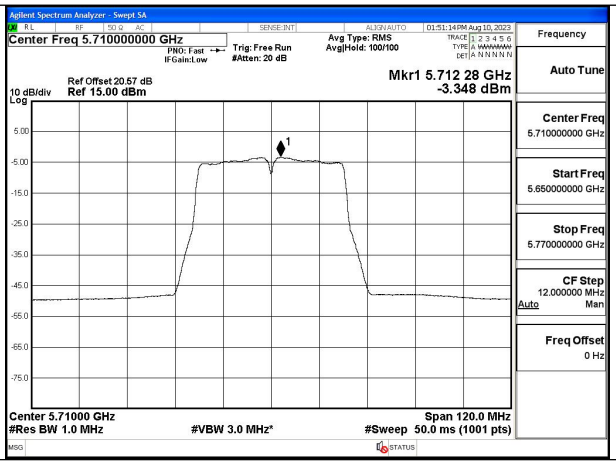
Mode:802.11ac VHT20 Frequency:5720MHz Ant:Chain0 scope:NII2C

Test Mode: 802.11n HT40

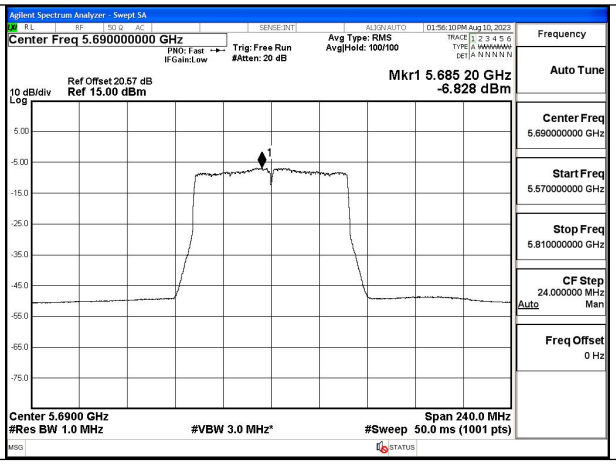


Mode:802.11n HT40 Frequency:5710MHz Ant:Chain0 scope:NII2C

Test Mode: 802.11ac VHT40

	
Mode:802.11ac VHT40 Frequency:5710MHz Ant:Chain0 scope:NII2C	

Test Mode: 802.11ac VHT80

	
Mode:802.11ac VHT80 Frequency:5690MHz Ant:Chain0 scope:NII2C	

NII3

Offset 20.57dB = Attenuator + Temporary antenna connector loss + Cable loss

Title	Test Mode	Antenna	5720MHz	
			Correction Factor(dB)	Power Density (dBm/500KHz)
NII3	802.11a	Chain0	0	-3.519
NII3	802.11n HT20	Chain0	0	-3.889
NII3	802.11ac VHT20	Chain0	0	-3.564

Note: As measurement bandwidth of Maximum PSD is specified in 500 kHz, add 10log(500kHz/RBW) to the measured result.

Title	Test Mode	Antenna	5710MHz	
			Correction Factor(dB)	Power Density (dBm/500KHz)
NII3	802.11n HT40	Chain0	0	-7.162
NII3	802.11ac VHT40	Chain0	0	-7.243

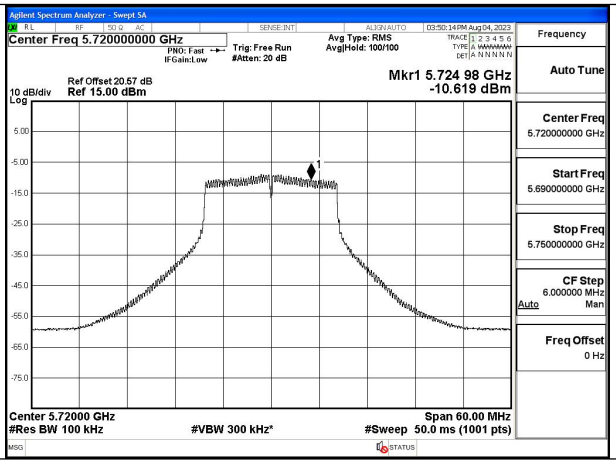
Note: As measurement bandwidth of Maximum PSD is specified in 500 kHz, add 10log(500kHz/RBW) to the

measured result.

Title	Test Mode	Antenna	5690MHz	
			Correction Factor(dB)	Power Density (dBm/500KHz)
NII3	802.11ac VHT80	Chain0	0	-11.122

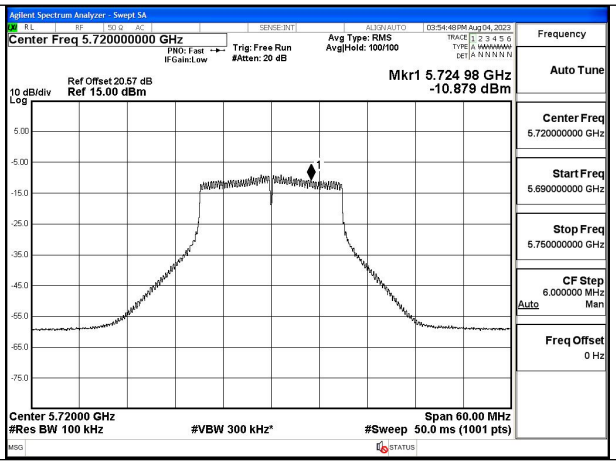
Note: As measurement bandwidth of Maximum PSD is specified in 500 kHz, add 10log(500kHz/RBW) to the measured result.

Test Mode: 802.11a

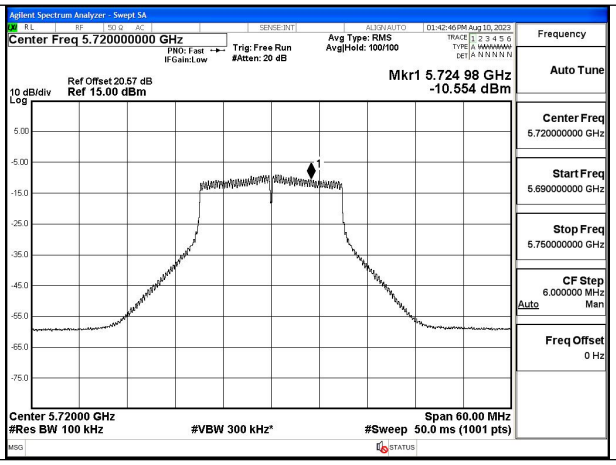


Mode:802.11a Frequency:5720MHz Ant:Chain0 scope:NII3

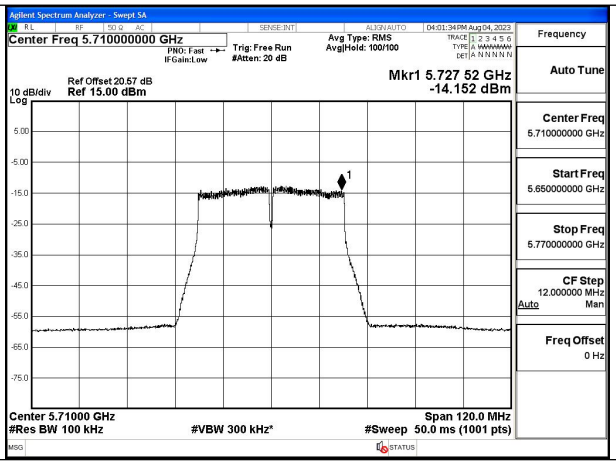
Test Mode: 802.11n HT20

	
Mode:802.11n HT20 Frequency:5720MHz Ant:Chain0 scope:NII3	

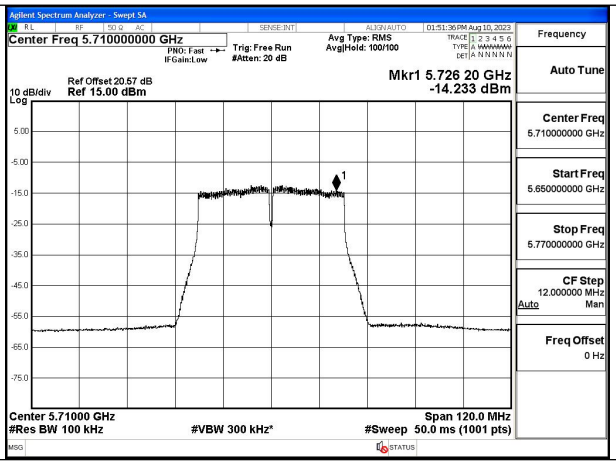
Test Mode: 802.11ac VHT20

	
Mode:802.11ac VHT20 Frequency:5720MHz Ant:Chain0 scope:NII3	

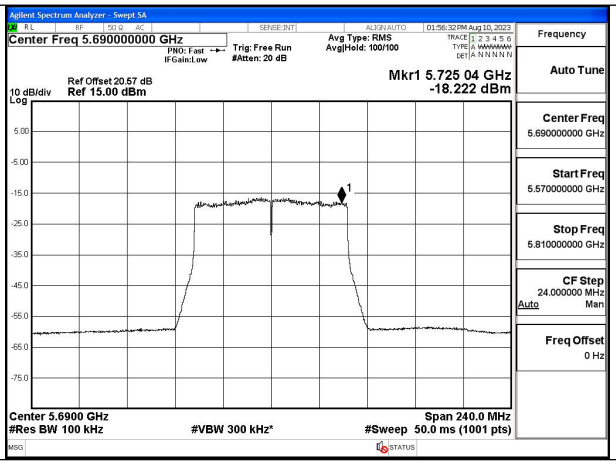
Test Mode: 802.11n HT40

	
Mode:802.11n HT40 Frequency:5710MHz Ant:Chain0 scope:NII3	

Test Mode: 802.11ac VHT40

	
Mode:802.11ac VHT40 Frequency:5710MHz Ant:Chain0 scope:NII3	

Test Mode: 802.11ac VHT80

	
Mode:802.11ac VHT80 Frequency:5690MHz Ant:Chain0 scope:NII3	