APPENDIX A – TEST DATA OF CONDUCTED EMISSION

Duty Cycle

Test Mode	Chain0	Frequency (MHz)	Duty Cycle (%)	Correction Factor(dB)	Plot
802.11a	Chain1	5720	99.99%	0	Fig.1
802.11a	Chain0	5720	99.98%	0	Fig.2
802.11n HT20	Chain1	5720	99.98%	0	Fig.3
802.11n HT20	Chain0	5720	99.98%	0	Fig.4
802.11ac VHT20	Chain1	5720	99.97%	0	Fig.5
802.11ac VHT20	Chain0	5720	99.19%	0	Fig.6
802.11n HT40	Chain1	5710	99.96%	0	Fig.7
802.11n HT40	Chain0	5710	99.95%	0	Fig.8
802.11ac VHT40	Chain1	5710	99.96%	0	Fig.9
802.11ac VHT40	Chain0	5710	99.96%	0	Fig.10
802.11ac VHT80	Chain1	5690	99.91%	0	Fig.11
802.11ac VHT80	Chain0	5690	99.91%	0	Fig.12

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

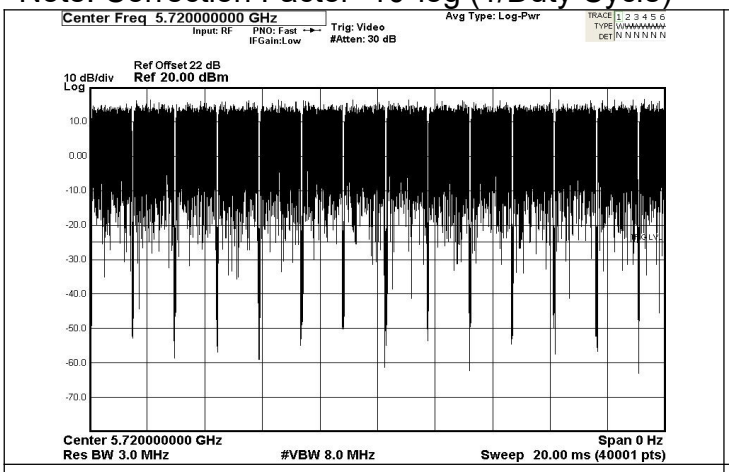


Fig.1

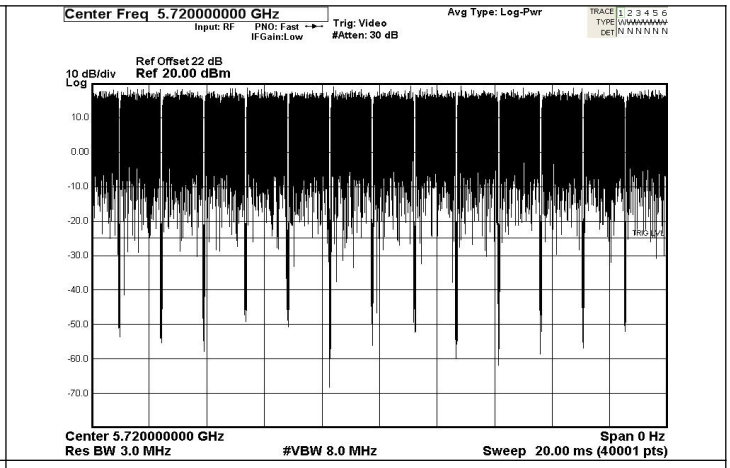


Fig.2

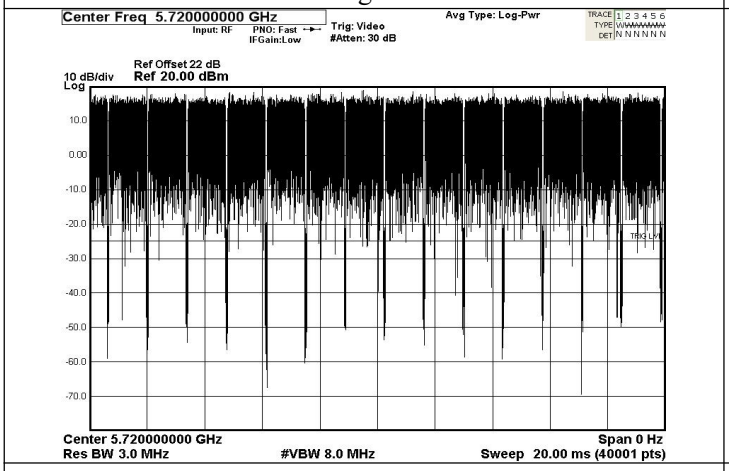


Fig.3

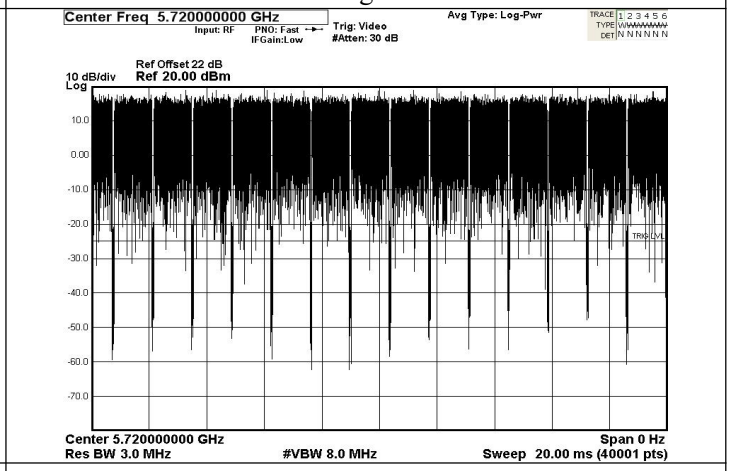


Fig.4

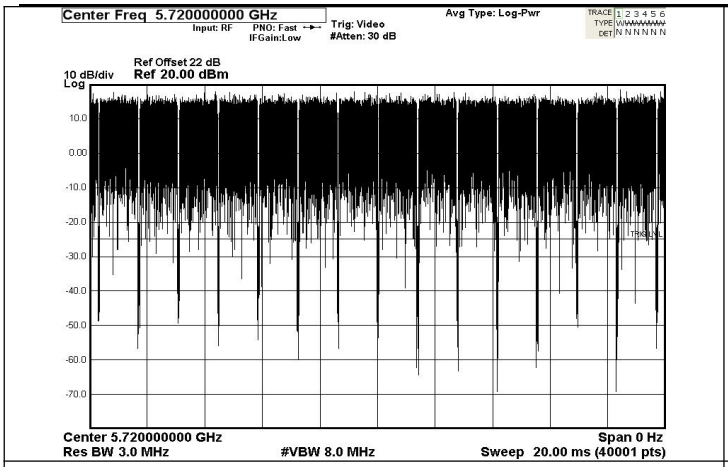


Fig.5

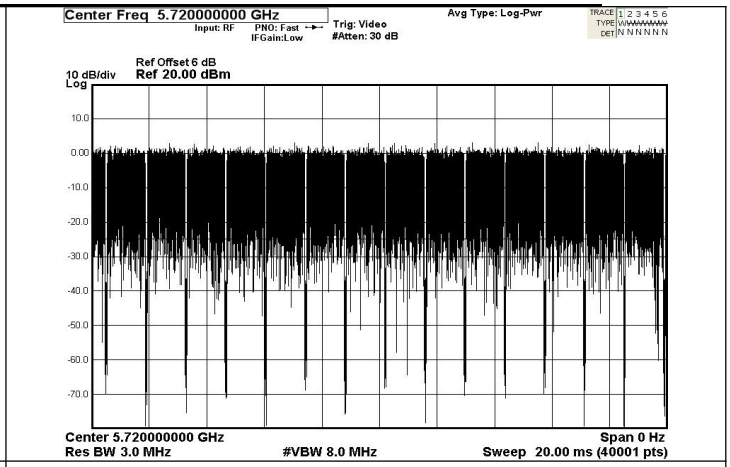


Fig.6

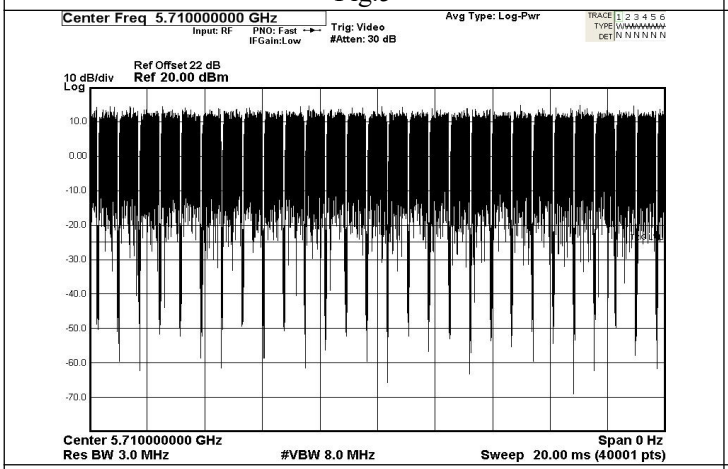


Fig.7

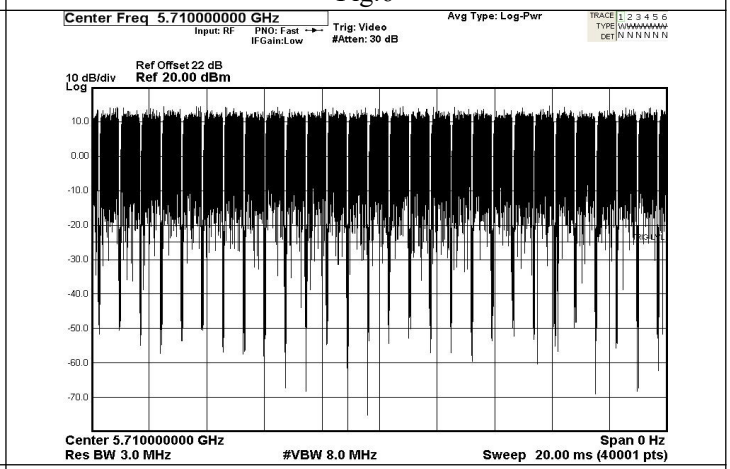


Fig.8

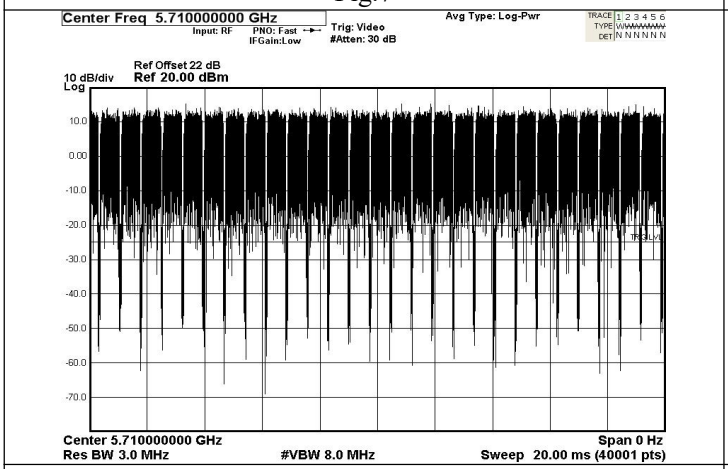


Fig.9

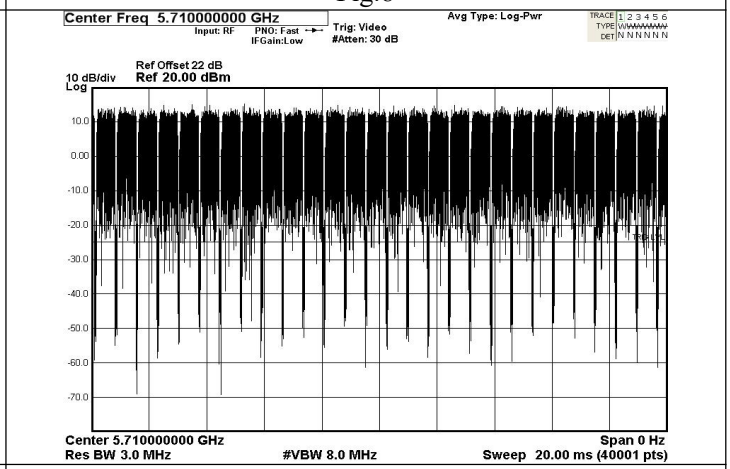


Fig.10

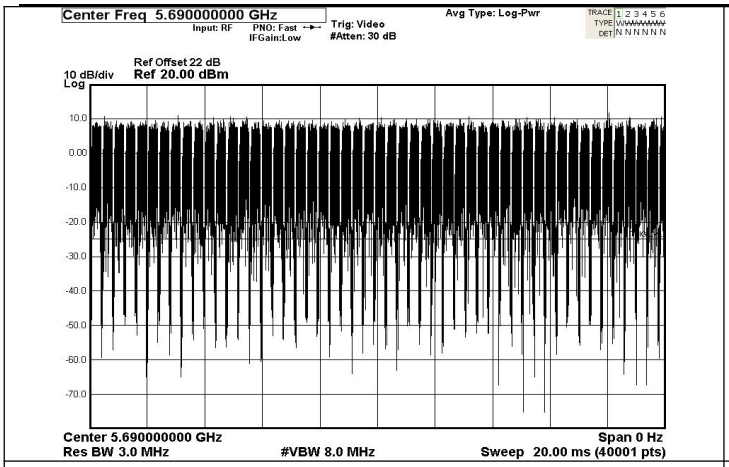

Center Freq 5.690000000 GHz
Input: RF
PNO: Fast
IFGain:Low
Trig: Video
#Atten: 30 dB
Avg Type: Log-Pwr
Ref Offset 22 dB
10 dB/div
Log
Ref 20.00 dBm
Center 5.690000000 GHz
Span 0 Hz
Res BW 3.0 MHz
#VBW 8.0 MHz
Sweep 20.00 ms (40001 pts)

Fig.11

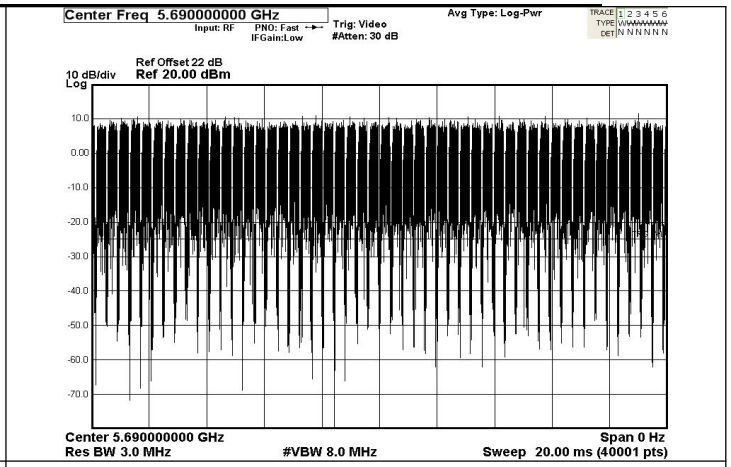

Center Freq 5.690000000 GHz
Input: RF
PNO: Fast
IFGain:Low
Trig: Video
#Atten: 30 dB
Avg Type: Log-Pwr
Ref Offset 22 dB
10 dB/div
Log
Ref 20.00 dBm
Center 5.690000000 GHz
Span 0 Hz
Res BW 3.0 MHz
#VBW 8.0 MHz
Sweep 20.00 ms (40001 pts)

Fig.12

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	14.98	15.48
NII2C	802.11a	NA	5720	Chain1	14.87	15.32
NII2C	802.11n HT20	NA	5720	Chain0	14.60	15.10
NII2C	802.11n HT20	NA	5720	Chain1	14.79	15.24
NII2C	802.11n HT20	NA	5720	MIMO	17.71	18.19
NII2C	802.11ac VHT20	NA	5720	Chain0	15.01	15.51
NII2C	802.11ac VHT20	NA	5720	Chain1	14.66	15.11
NII2C	802.11ac VHT20	NA	5720	MIMO	17.85	18.33
NII2C	802.11n HT40	NA	5710	Chain0	14.24	14.74
NII2C	802.11n HT40	NA	5710	Chain1	14.07	14.52
NII2C	802.11n HT40	NA	5710	MIMO	17.17	17.65
NII2C	802.11ac VHT40	NA	5710	Chain0	14.20	14.70
NII2C	802.11ac VHT40	NA	5710	Chain1	13.81	14.26
NII2C	802.11ac VHT40	NA	5710	MIMO	17.02	17.50
NII2C	802.11ac VHT80	NA	5690	Chain0	13.64	14.14
NII2C	802.11ac VHT80	NA	5690	Chain1	13.11	13.56
NII2C	802.11ac VHT80	NA	5690	MIMO	16.39	16.87

NII3

Title	Test Mode	Tones/ RU Index	Freq (MHz)	Antenna	Conducted average power output(dBm)	EIRP (dBm)
NII3	802.11a	NA	5720	Chain0	7.43	7.93
NII3	802.11a	NA	5720	Chain1	7.36	7.81
NII3	802.11n HT20	NA	5720	Chain0	7.77	8.27
NII3	802.11n HT20	NA	5720	Chain1	7.60	8.05
NII3	802.11n HT20	NA	5720	MIMO	10.70	11.18
NII3	802.11ac VHT20	NA	5720	Chain0	7.98	8.48
NII3	802.11ac VHT20	NA	5720	Chain1	7.56	8.01
NII3	802.11ac VHT20	NA	5720	MIMO	10.79	11.27
NII3	802.11n HT40	NA	5710	Chain0	2.56	3.06
NII3	802.11n HT40	NA	5710	Chain1	5.20	5.65
NII3	802.11n HT40	NA	5710	MIMO	7.09	7.57
NII3	802.11ac VHT40	NA	5710	Chain0	1.97	2.47
NII3	802.11ac VHT40	NA	5710	Chain1	2.62	3.07
NII3	802.11ac VHT40	NA	5710	MIMO	5.32	5.80
NII3	802.11ac VHT80	NA	5690	Chain0	-1.49	-0.99
NII3	802.11ac VHT80	NA	5690	Chain1	-2.44	-1.99
NII3	802.11ac VHT80	NA	5690	MIMO	1.07	1.55

Emission Bandwidth

NII2C

Offset 22dB = Attenuator + Temporary antenna connector loss + Cable loss

26dB Bandwidth (MHz)			
Title	Test Mode	Antenna	5720MHz
NII2C	802.11a	Chain0	16.28
NII2C	802.11a	Chain1	15.38
NII2C	802.11n HT20	Chain0	15.08
NII2C	802.11n HT20	Chain1	15.26
NII2C	802.11ac VHT20	Chain0	15.02
NII2C	802.11ac VHT20	Chain1	14.96

26dB Bandwidth (MHz)			
Title	Test Mode	Antenna	5710MHz
NII2C	802.11n HT40	Chain0	35.64
NII2C	802.11n HT40	Chain1	35.52
NII2C	802.11ac VHT40	Chain0	35.16
NII2C	802.11ac VHT40	Chain1	34.92

26dB Bandwidth (MHz)			
Title	Test Mode	Antenna	5690MHz
NII2C	802.11ac VHT80	Chain0	75.32
NII2C	802.11ac VHT80	Chain1	82.04

NII3

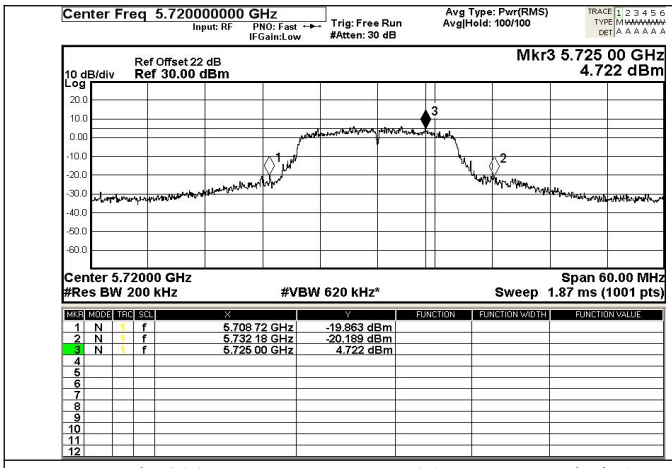
Offset 22dB = Attenuator + Temporary antenna connector loss + Cable loss

26dB Bandwidth (MHz)			
Title	Test Mode	Antenna	5720MHz
NII3	802.11a	Chain0	7.18
NII3	802.11a	Chain1	5.50
NII3	802.11n HT20	Chain0	5.32
NII3	802.11n HT20	Chain1	6.64
NII3	802.11ac VHT20	Chain0	5.20
NII3	802.11ac VHT20	Chain1	5.26

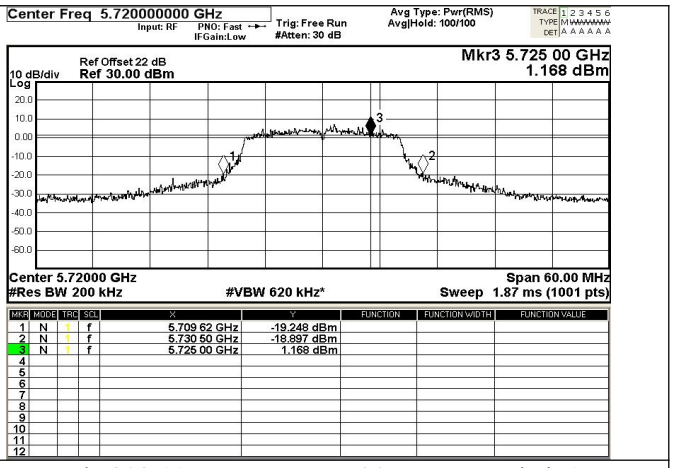
26dB Bandwidth (MHz)			
Title	Test Mode	Antenna	5710MHz
NII3	802.11n HT40	Chain0	5.52
NII3	802.11n HT40	Chain1	5.64
NII3	802.11ac VHT40	Chain0	5.40
NII3	802.11ac VHT40	Chain1	5.52

26dB Bandwidth (MHz)			
Title	Test Mode	Antenna	5690MHz
NII3	802.11ac VHT80	Chain0	5.56
NII3	802.11ac VHT80	Chain1	5.56

Test Mode: 802.11a

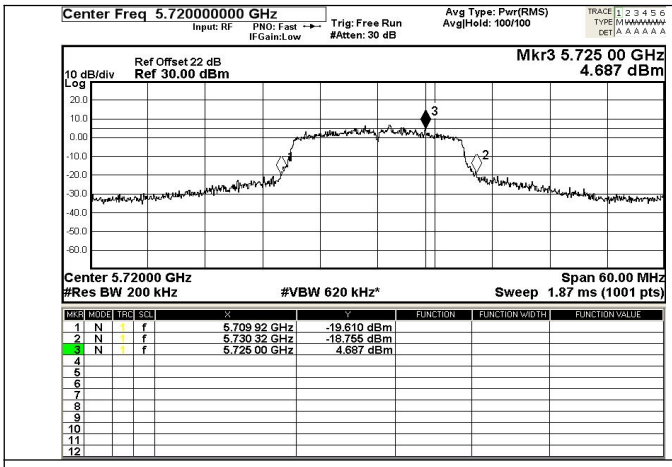


Mode:802.11a Frequency:5720MHz Ant:Chain0
scope:NII2C

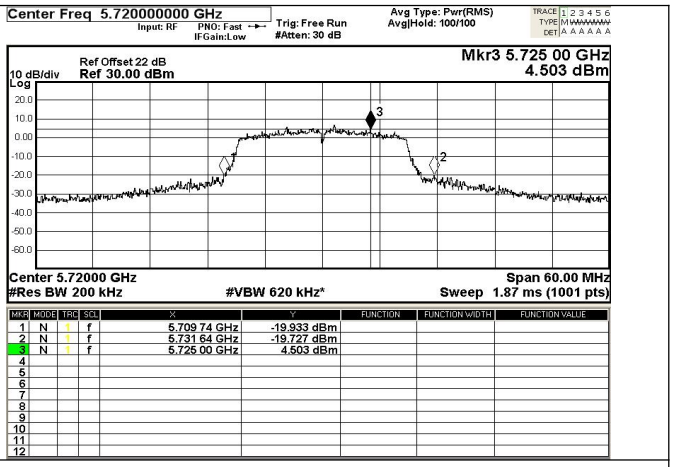


Mode:802.11a Frequency:5720MHz Ant:Chain1
scope:NII2C

Test Mode: 802.11n HT20

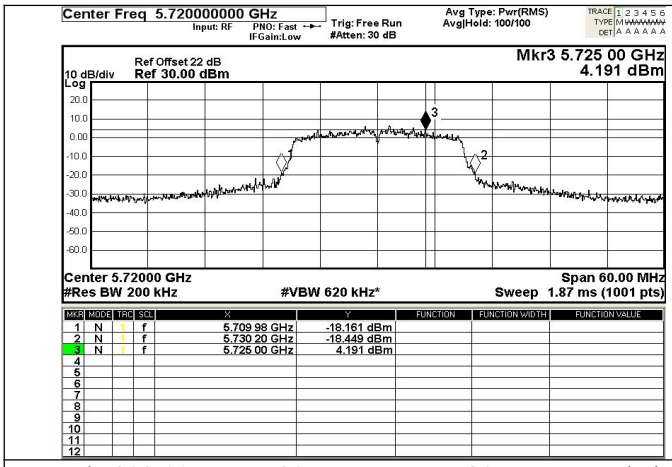


Mode:802.11n HT20 Frequency:5720MHz Ant:Chain0
scope:NII2C

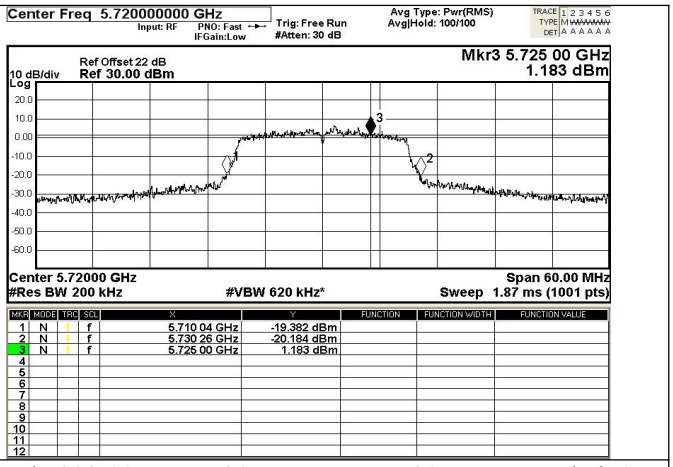


Mode:802.11n HT20 Frequency:5720MHz Ant:Chain1
scope:NII2C

Test Mode: 802.11ac VHT20

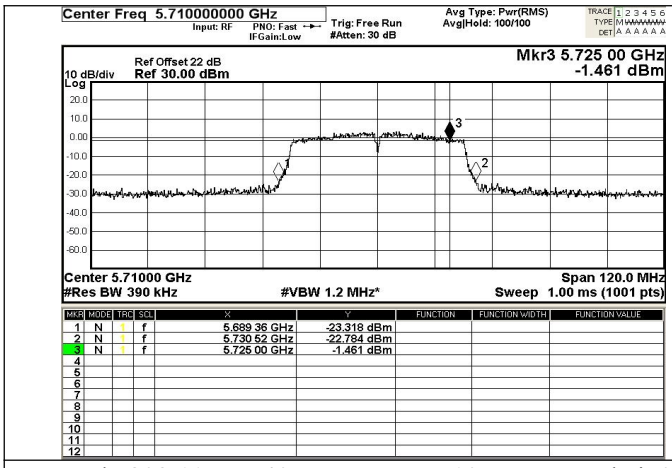


Mode:802.11ac VHT20 Frequency:5720MHz Ant:Chain0
scope:NII2C

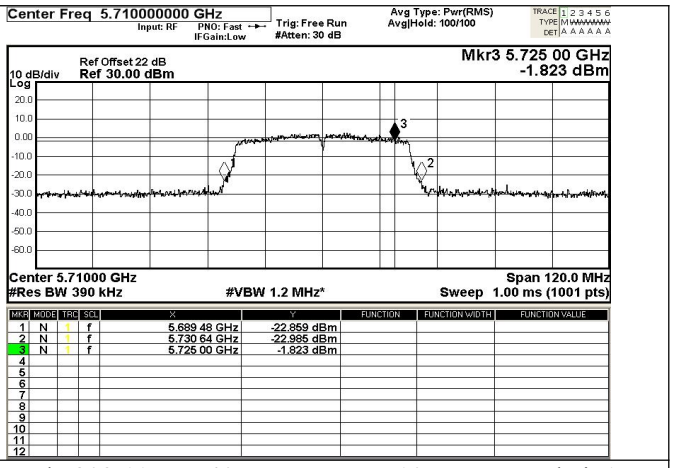


Mode:802.11ac VHT20 Frequency:5720MHz Ant:Chain1
scope:NII2C

Test Mode: 802.11n HT40

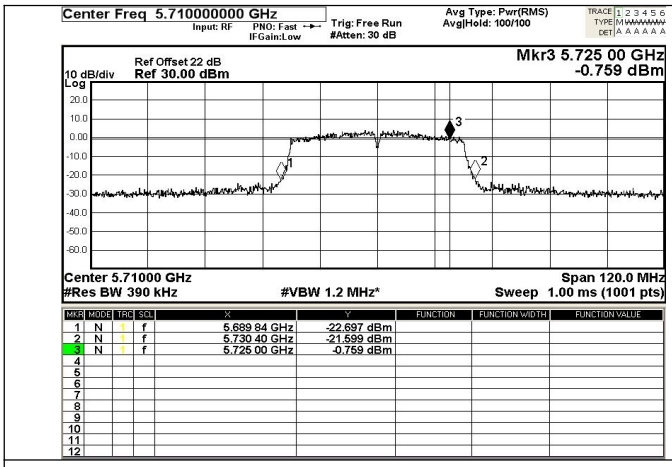


Mode:802.11n HT40 Frequency:5710MHz Ant:Chain0
scope:NII2C

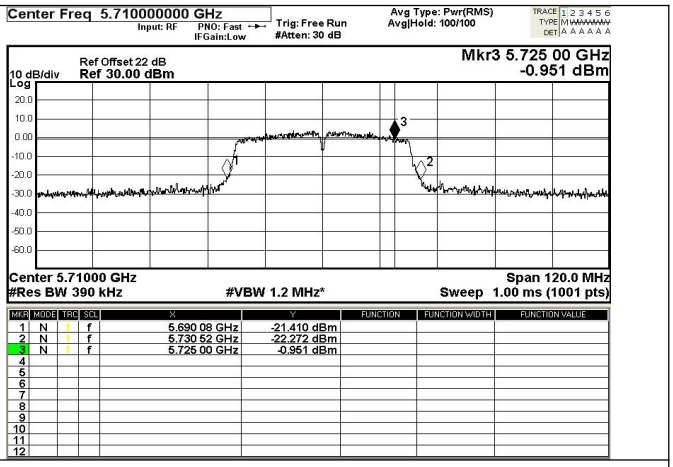


Mode:802.11n HT40 Frequency:5710MHz Ant:Chain1
scope:NII2C

Test Mode: 802.11ac VHT40

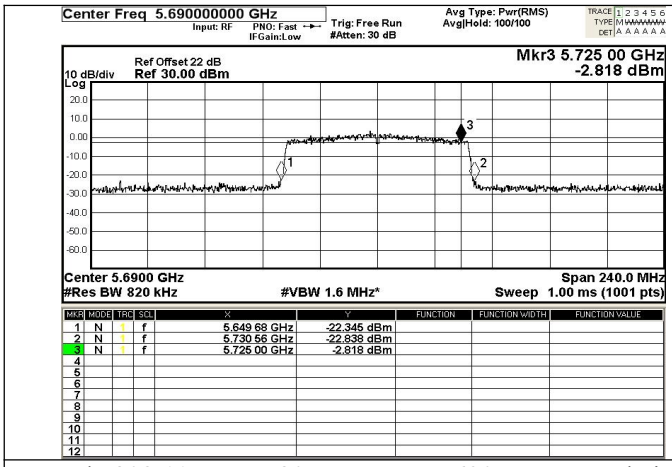


Mode:802.11ac VHT40 Frequency:5710MHz Ant:Chain0
scope:NII2C

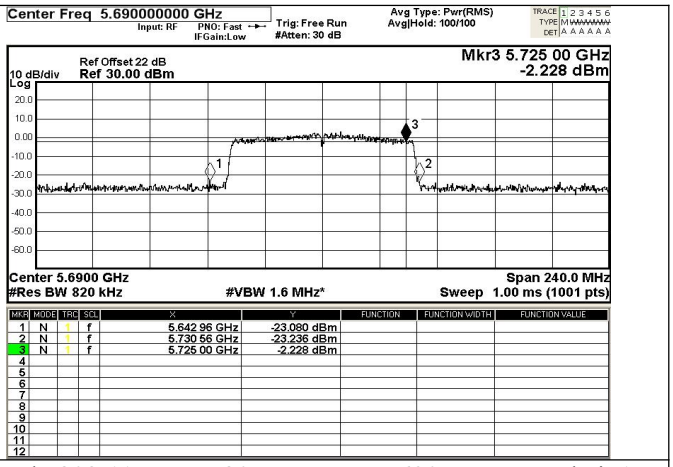


Mode:802.11ac VHT40 Frequency:5710MHz Ant:Chain1
scope:NII2C

Test Mode: 802.11ac VHT80



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



Mode:802.11ac VHT80 Frequency:5690MHz Ant:Chain1
scope:NII2C

Occupied Bandwidth

NII2C

Offset 22dB = Attenuator + Temporary antenna connector loss + Cable loss

Occupied Bandwidth (MHz)			
Title	Test Mode	Antenna	5720MHz
NII2C	802.11a	Chain0	13.26
NII2C	802.11a	Chain1	13.23
NII2C	802.11n HT20	Chain0	13.83
NII2C	802.11n HT20	Chain1	13.87
NII2C	802.11ac VHT20	Chain0	13.76
NII2C	802.11ac VHT20	Chain1	13.76

Occupied Bandwidth (MHz)			
Title	Test Mode	Antenna	5710MHz
NII2C	802.11n HT40	Chain0	33.07
NII2C	802.11n HT40	Chain1	33.09
NII2C	802.11ac VHT40	Chain0	33.02
NII2C	802.11ac VHT40	Chain1	33.14

Occupied Bandwidth (MHz)			
Title	Test Mode	Antenna	5690MHz
NII2C	802.11ac VHT80	Chain0	73.48
NII2C	802.11ac VHT80	Chain1	73.46

NII3

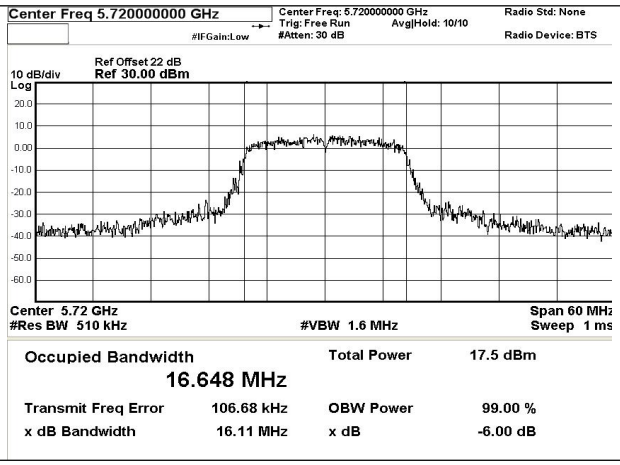
Offset 22dB = Attenuator + Temporary antenna connector loss + Cable loss

Occupied Bandwidth (MHz)			
Title	Test Mode	Antenna	5720MHz
NII3	802.11a	Chain0	3.42
NII3	802.11a	Chain1	3.33
NII3	802.11n HT20	Chain0	3.98
NII3	802.11n HT20	Chain1	3.90
NII3	802.11ac VHT20	Chain0	3.90
NII3	802.11ac VHT20	Chain1	3.99

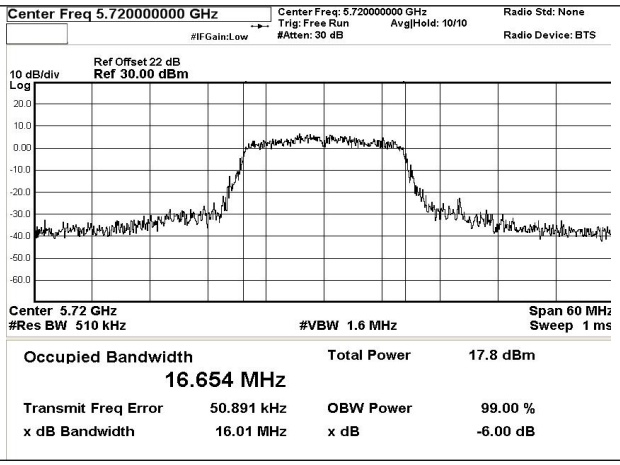
Occupied Bandwidth (MHz)			
Title	Test Mode	Antenna	5710MHz
NII3	802.11n HT40	Chain0	3.24
NII3	802.11n HT40	Chain1	3.22
NII3	802.11ac VHT40	Chain0	3.10
NII3	802.11ac VHT40	Chain1	3.20

Occupied Bandwidth (MHz)			
Title	Test Mode	Antenna	5690MHz
NII3	802.11ac VHT80	Chain0	3.31
NII3	802.11ac VHT80	Chain1	3.38

Test Mode: 802.11a

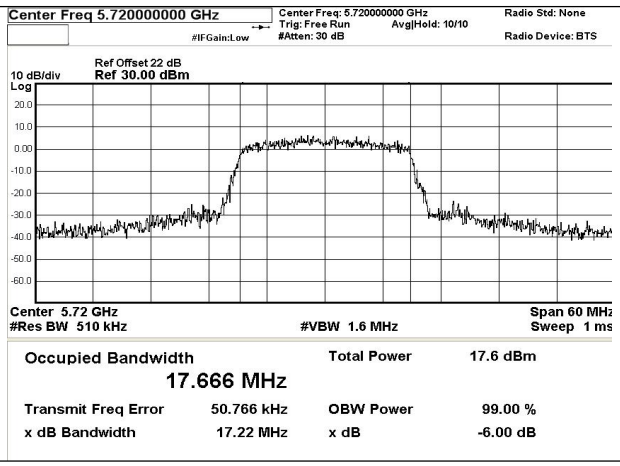


Mode:802.11a Frequency:5720MHz Ant:Chain0
scope:NII2C

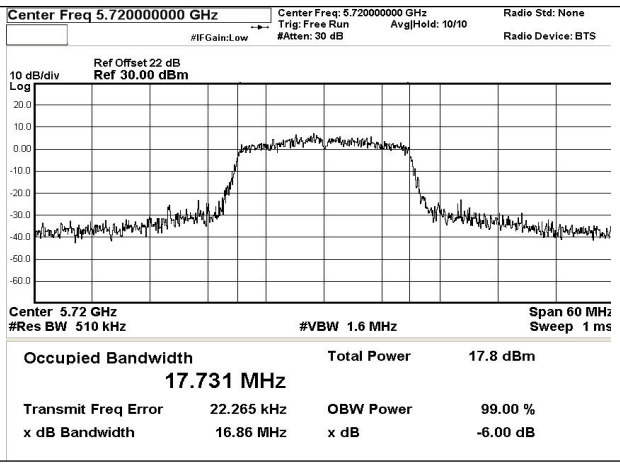


Mode:802.11a Frequency:5720MHz Ant:Chain1
scope:NII2C

Test Mode: 802.11n HT20

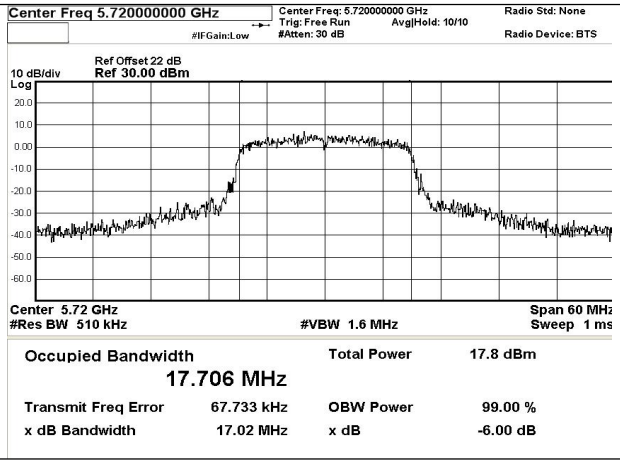


Mode:802.11n HT20 Frequency:5720MHz Ant:Chain0
scope:NII2C

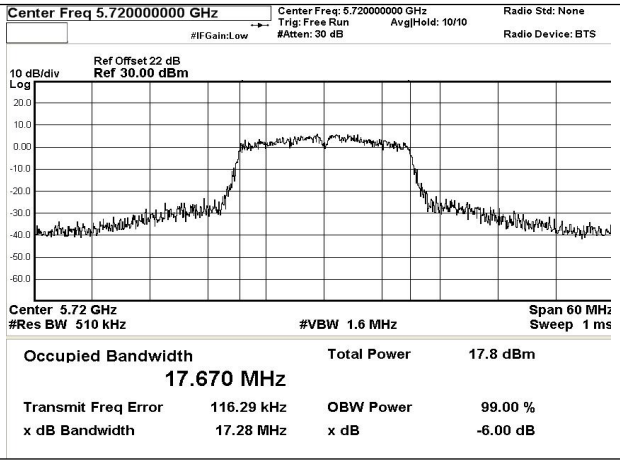


Mode:802.11n HT20 Frequency:5720MHz Ant:Chain1
scope:NII2C

Test Mode: 802.11ac VHT20

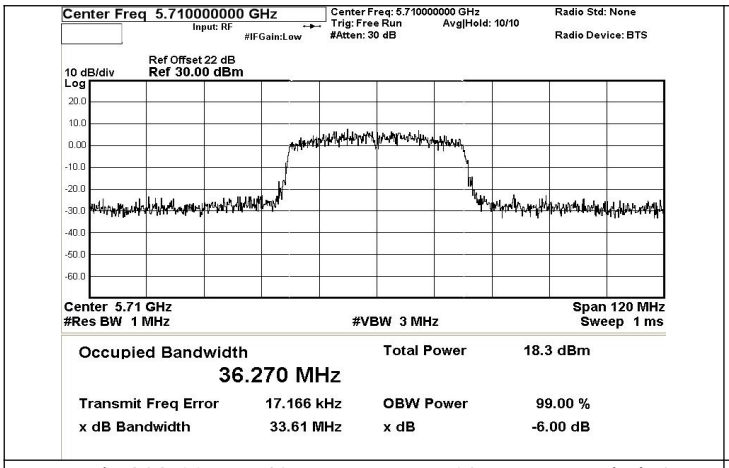


Mode:802.11ac VHT20 Frequency:5720MHz Ant:Chain0
scope:NII2C

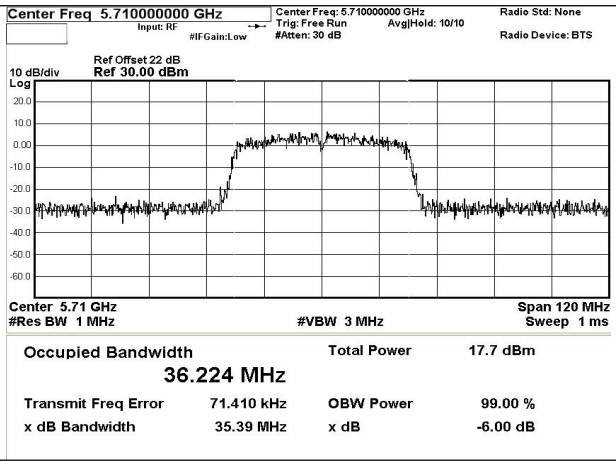


Mode:802.11ac VHT20 Frequency:5720MHz Ant:Chain1
scope:NII2C

Test Mode: 802.11n HT40

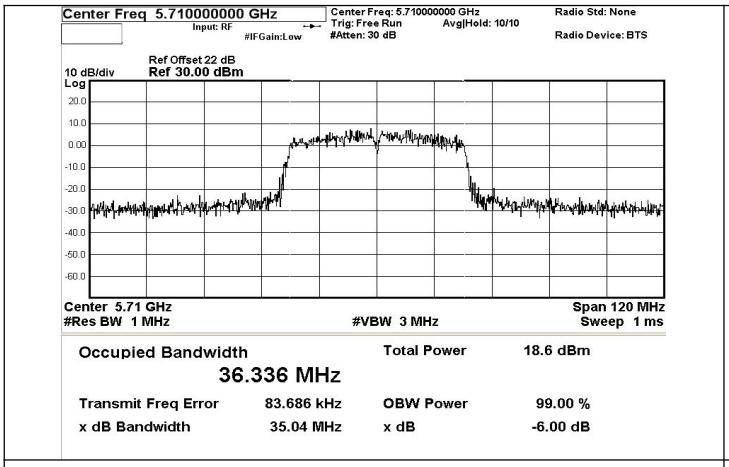


Mode:802.11n HT40 Frequency:5710MHz Ant:Chain0 scope:NII2C

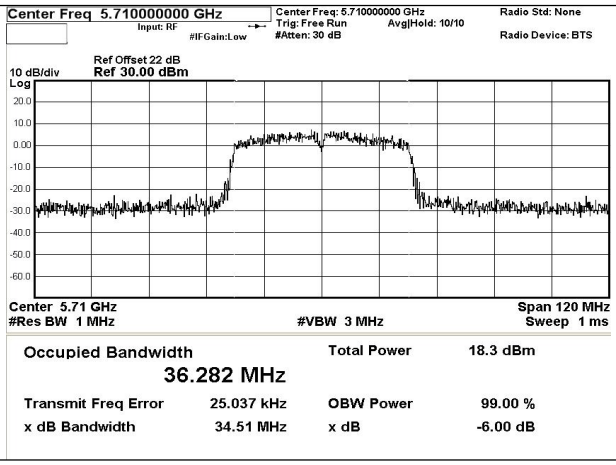


Mode:802.11n HT40 Frequency:5710MHz Ant:Chain1 scope:NII2C

Test Mode: 802.11ac VHT40

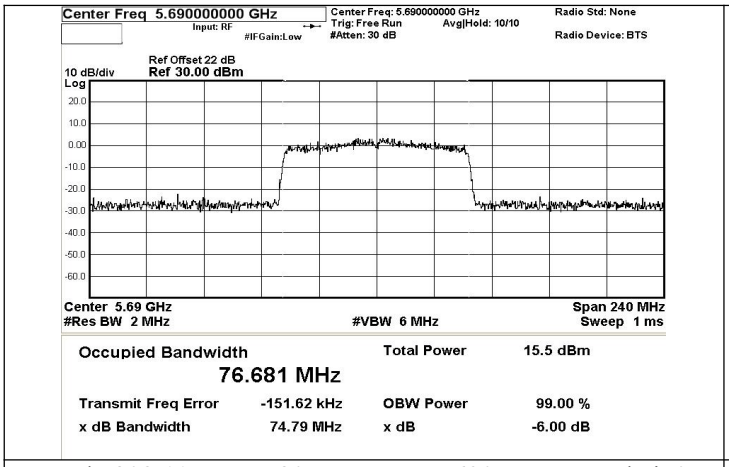


Mode:802.11ac VHT40 Frequency:5710MHz Ant:Chain0 scope:NII2C

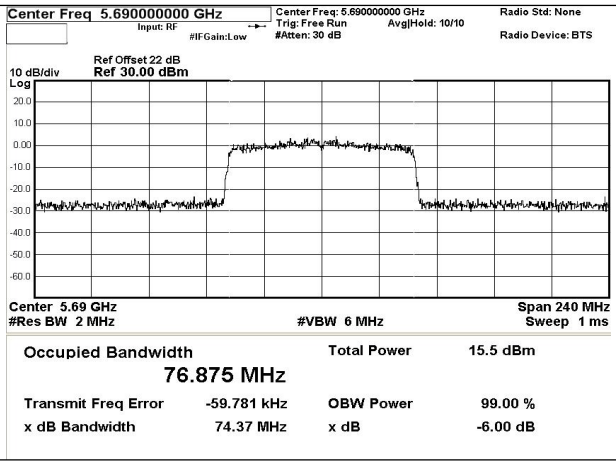


Mode:802.11ac VHT40 Frequency:5710MHz Ant:Chain1 scope:NII2C

Test Mode: 802.11ac VHT80



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



Mode:802.11ac VHT80 Frequency:5690MHz Ant:Chain1 scope:NII2C

6dB Bandwidth

NII2C

Offset 22dB = Attenuator + Temporary antenna connector loss + Cable loss

6dB Bandwidth (MHz)			
Title	Test Mode	Antenna	5720MHz
NII2C	802.11a	Chain0	12.86
NII2C	802.11a	Chain1	12.44
NII2C	802.11n HT20	Chain0	12.54
NII2C	802.11n HT20	Chain1	13.12
NII2C	802.11ac VHT20	Chain0	12.87
NII2C	802.11ac VHT20	Chain1	12.47

6dB Bandwidth (MHz)			
Title	Test Mode	Antenna	5710MHz
NII2C	802.11n HT40	Chain0	30.36
NII2C	802.11n HT40	Chain1	32.46
NII2C	802.11ac VHT40	Chain0	32.54
NII2C	802.11ac VHT40	Chain1	31.30

6dB Bandwidth (MHz)			
Title	Test Mode	Antenna	5690MHz
NII2C	802.11ac VHT80	Chain0	72.56
NII2C	802.11ac VHT80	Chain1	72.44

NII3

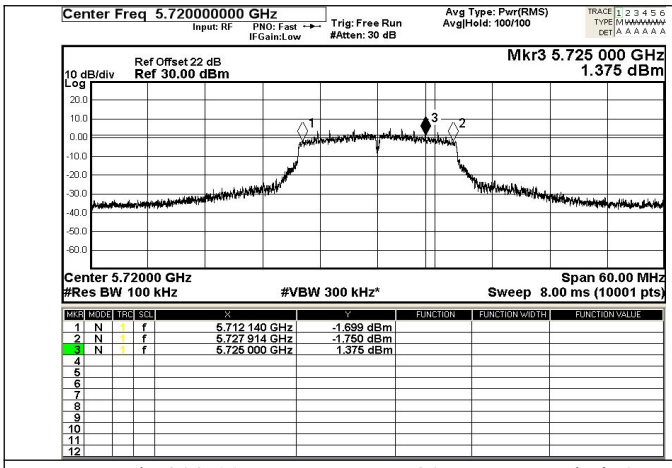
Offset 22dB = Attenuator + Temporary antenna connector loss + Cable loss

6dB Bandwidth (MHz)			
Title	Test Mode	Antenna	5720MHz
NII3	802.11a	Chain0	2.91
NII3	802.11a	Chain1	2.57
NII3	802.11n HT20	Chain0	2.57
NII3	802.11n HT20	Chain1	3.54
NII3	802.11ac VHT20	Chain0	2.45
NII3	802.11ac VHT20	Chain1	2.57

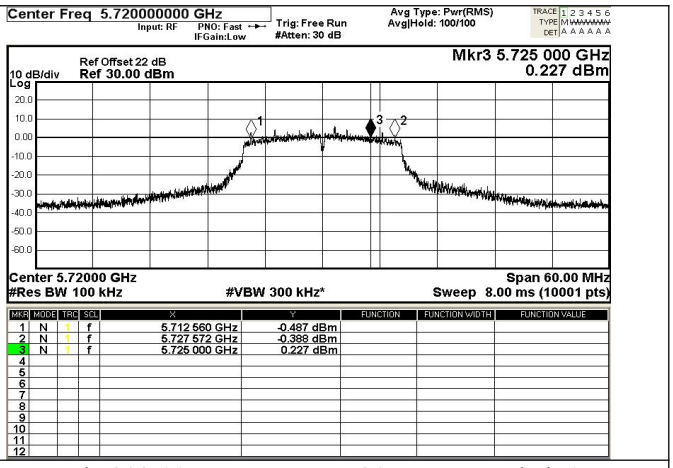
6dB Bandwidth (MHz)			
Title	Test Mode	Antenna	5710MHz
NII3	802.11n HT40	Chain0	2.57
NII3	802.11n HT40	Chain1	2.51
NII3	802.11ac VHT40	Chain0	2.57
NII3	802.11ac VHT40	Chain1	2.57

6dB Bandwidth (MHz)			
Title	Test Mode	Antenna	5690MHz
NII3	802.11ac VHT80	Chain0	2.44
NII3	802.11ac VHT80	Chain1	2.56

Test Mode: 802.11a

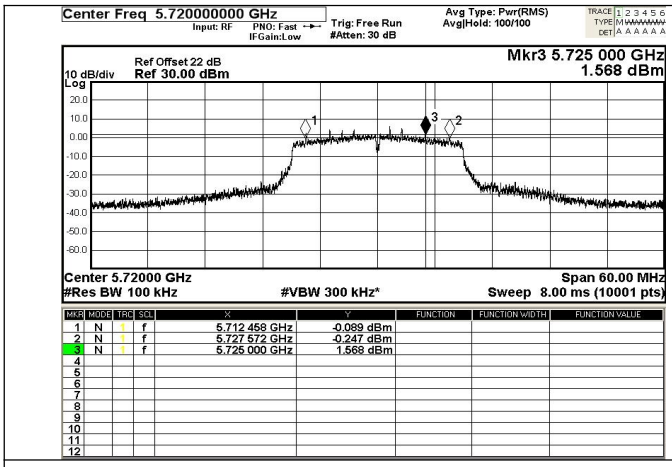


Mode:802.11a Frequency:5720MHz Ant:Chain0
scope:NII2C

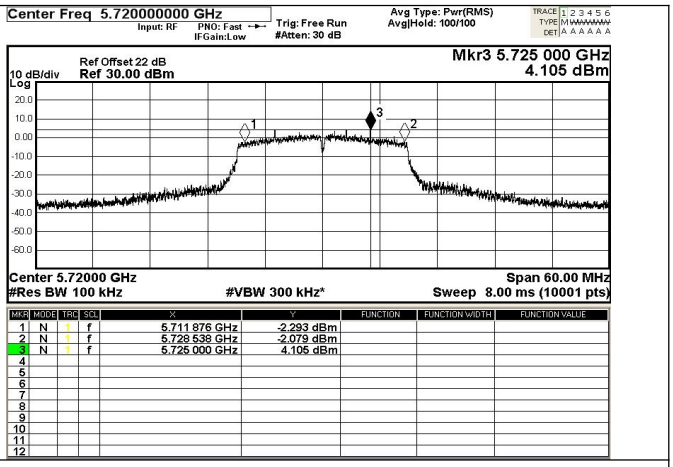


Mode:802.11a Frequency:5720MHz Ant:Chain1
scope:NII2C

Test Mode: 802.11n HT20

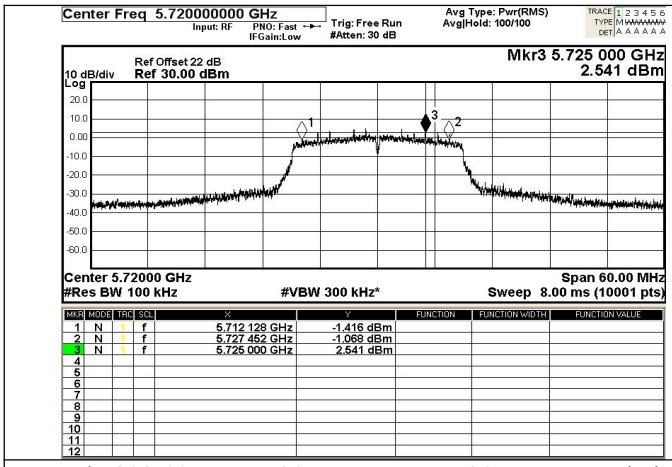


Mode:802.11n HT20 Frequency:5720MHz Ant:Chain0
scope:NII2C

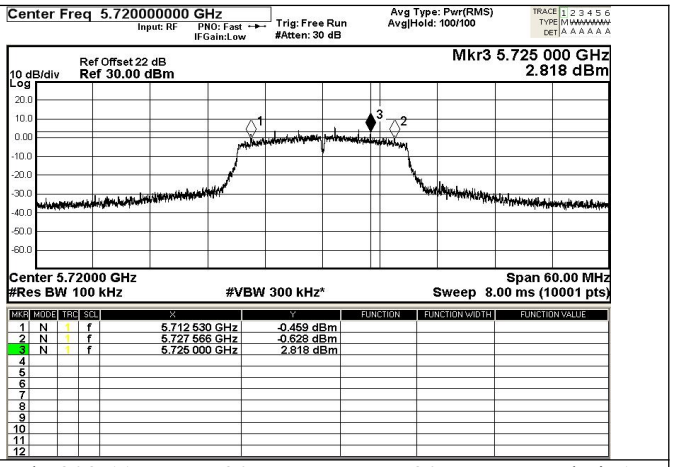


Mode:802.11n HT20 Frequency:5720MHz Ant:Chain1
scope:NII2C

Test Mode: 802.11ac VHT20

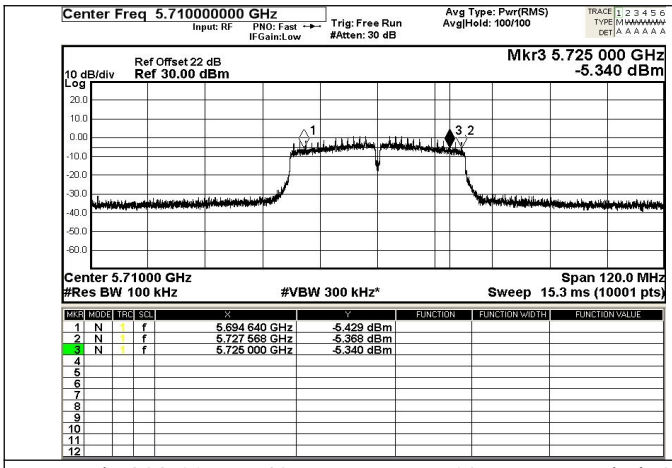


Mode:802.11ac VHT20 Frequency:5720MHz Ant:Chain0
scope:NII2C

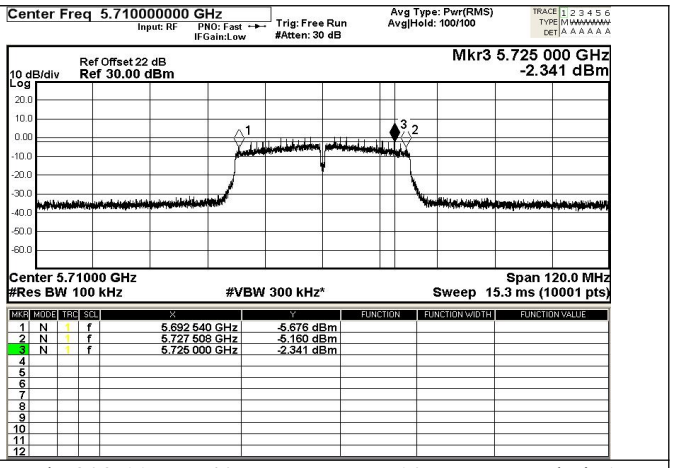


Mode:802.11ac VHT20 Frequency:5720MHz Ant:Chain1
scope:NII2C

Test Mode: 802.11n HT40

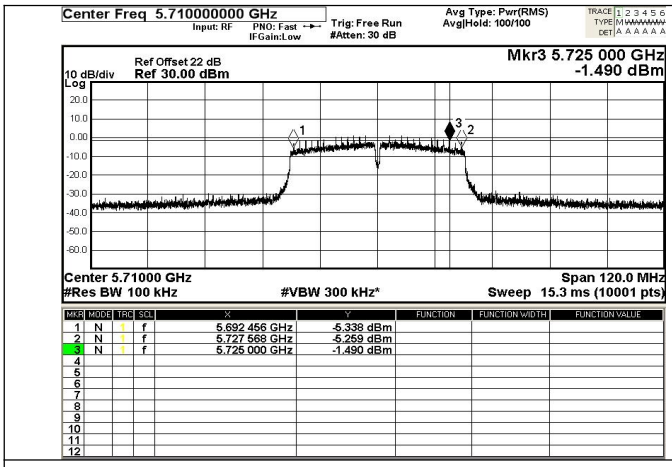


Mode:802.11n HT40 Frequency:5710MHz Ant:Chain0
scope:NII2C

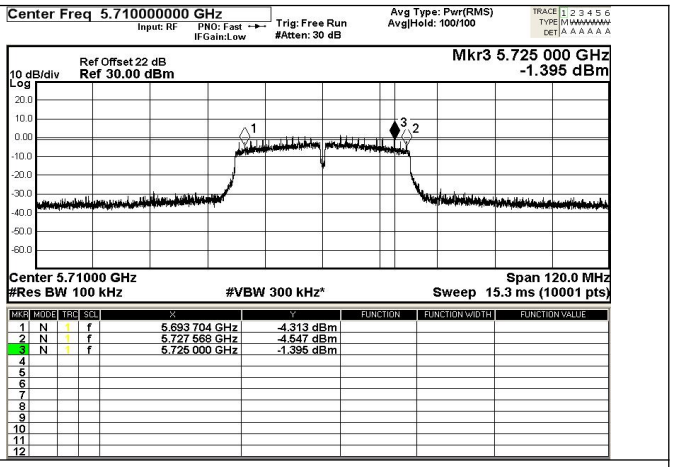


Mode:802.11n HT40 Frequency:5710MHz Ant:Chain1
scope:NII2C

Test Mode: 802.11ac VHT40

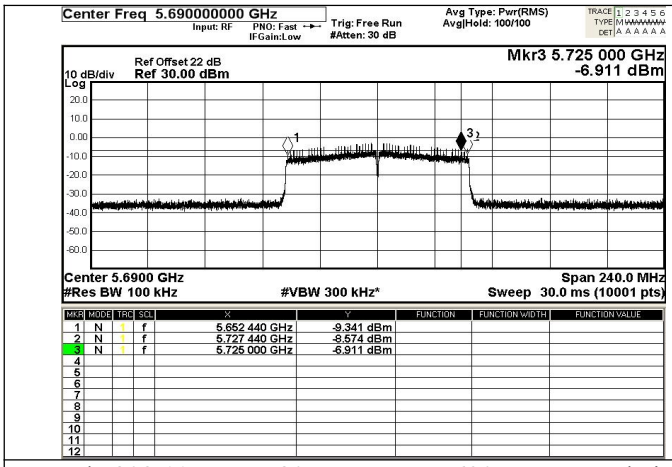


Mode:802.11ac VHT40 Frequency:5710MHz Ant:Chain0
scope:NII2C

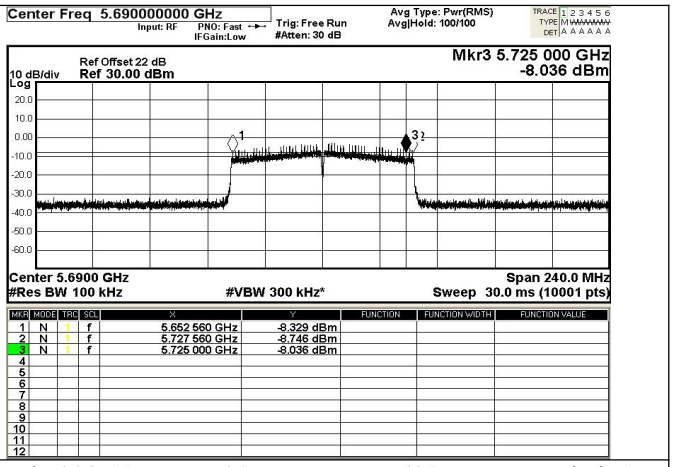


Mode:802.11ac VHT40 Frequency:5710MHz Ant:Chain1
scope:NII2C

Test Mode: 802.11ac VHT80



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



Mode:802.11ac VHT80 Frequency:5690MHz Ant:Chain1
scope:NII2C

Transmitter Power Spectral Density

NII2C

Offset 22dB = Attenuator + Temporary antenna connector loss + Cable loss

Title	Test Mode	Antenna	5720MHz	
			Correction Factor(dB)	Power Density (dBm/MHz)
NII2C	802.11a	Chain0	0	5.271
NII2C	802.11a	Chain1	0	5.234
NII2C	802.11n HT20	Chain0	0	4.874
NII2C	802.11n HT20	Chain1	0	4.891
NII2C	802.11n HT20	MIMO	0.000	7.893
NII2C	802.11ac VHT20	Chain0	0	4.431
NII2C	802.11ac VHT20	Chain1	0	4.425
NII2C	802.11ac VHT20	MIMO	0.000	7.438

Title	Test Mode	Antenna	5710MHz	
			Correction Factor(dB)	Power Density (dBm/MHz)
NII2C	802.11n HT40	Chain0	0	-0.274
NII2C	802.11n HT40	Chain1	0	-0.461
NII2C	802.11n HT40	MIMO	0.000	2.644
NII2C	802.11ac VHT40	Chain0	0	0.548
NII2C	802.11ac VHT40	Chain1	0	0.624
NII2C	802.11ac VHT40	MIMO	0.000	3.596

Title	Test Mode	Antenna	5690MHz	
			Correction Factor(dB)	Power Density (dBm/MHz)
NII2C	802.11ac VHT80	Chain0	0	-4.021
NII2C	802.11ac VHT80	Chain1	0	-4.532
NII2C	802.11ac VHT80	MIMO	0.000	-1.259