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Appendix B:
802.11ax
Test Plot

FCC ID
A3LSMG781U

REVISION HISTORY

The revision history for this document is shown in table.

Revision No.	Date of Issue	Description
0	August 27, 2020	Initial Release

Note:

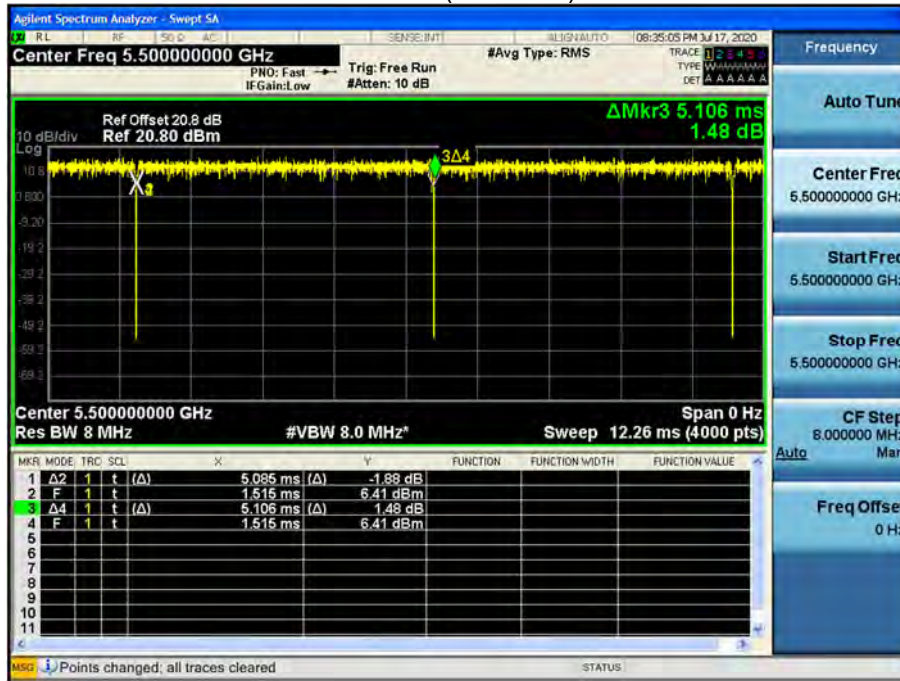
In order to simplify the report, attached plots were only the most lowest datarate.

1. Duty Cycle

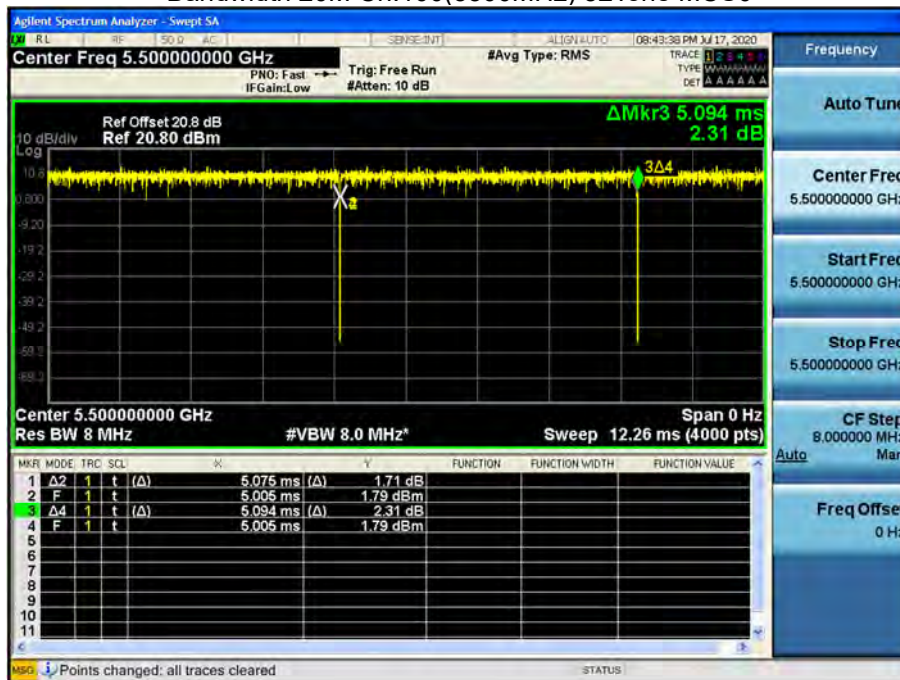
Note:

In order to simplify the report, attached plots were only the most lowest datarate.

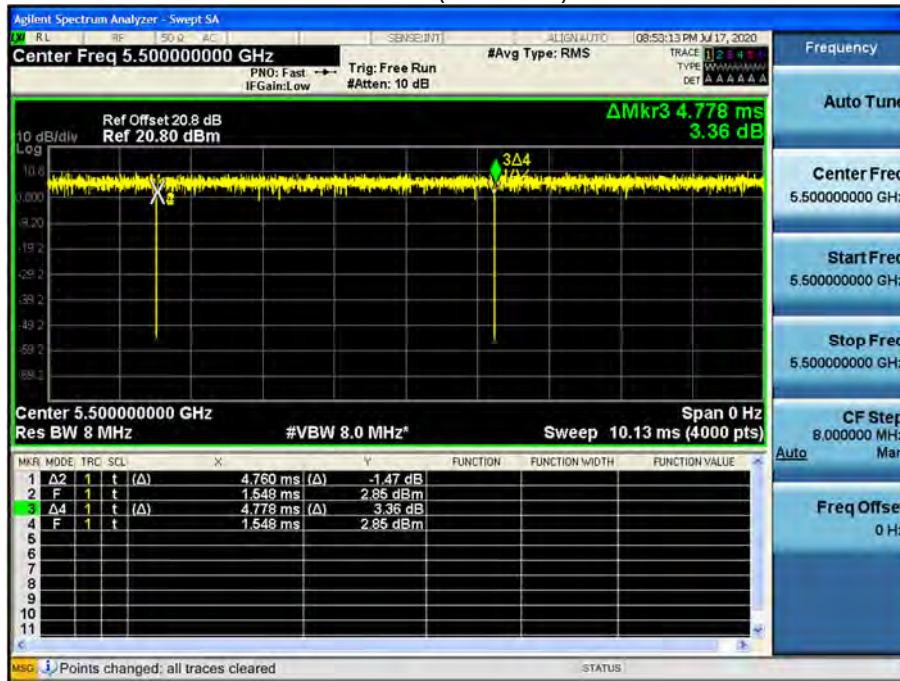
Bandwidth 20M Ch.100(5500MHz) 26Tone MCS0



Bandwidth 20M Ch.100(5500MHz) 52Tone MCS0



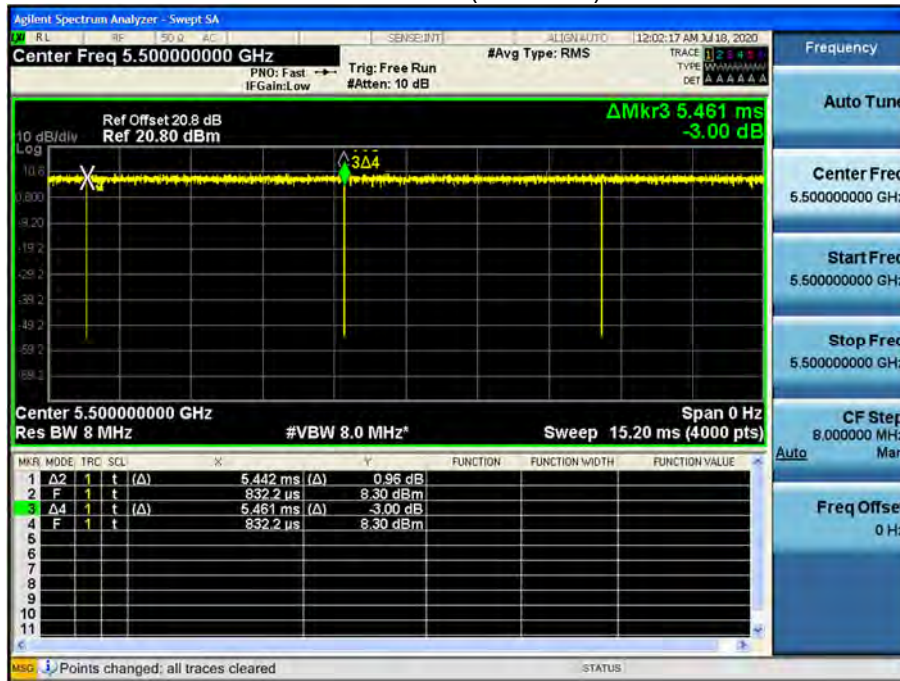
Bandwidth 20M Ch.100(5500MHz) 106Tone MCS0



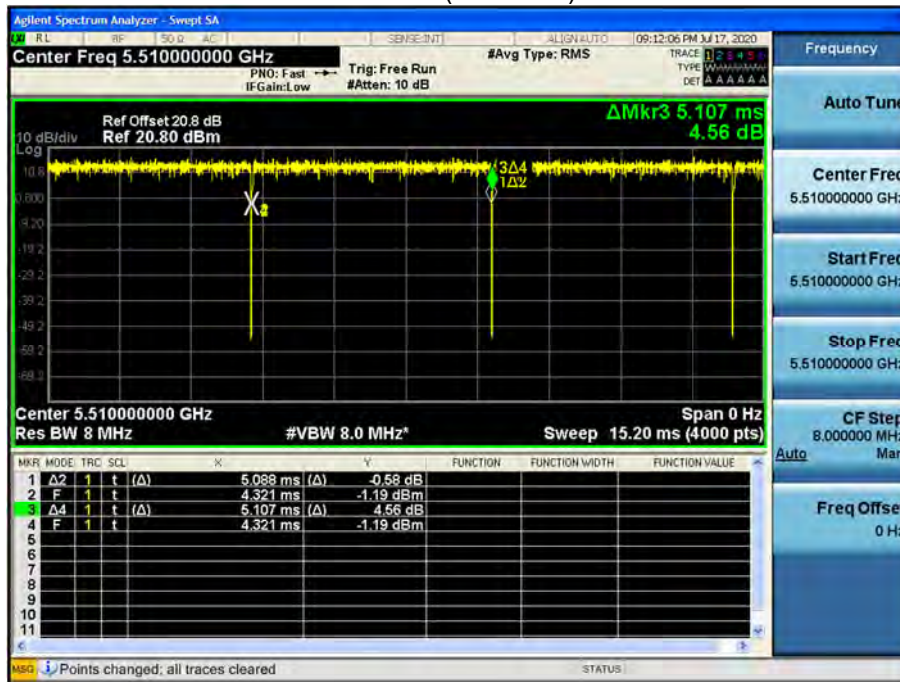
Bandwidth 20M Ch.100(5500MHz) 242Tone MCS0



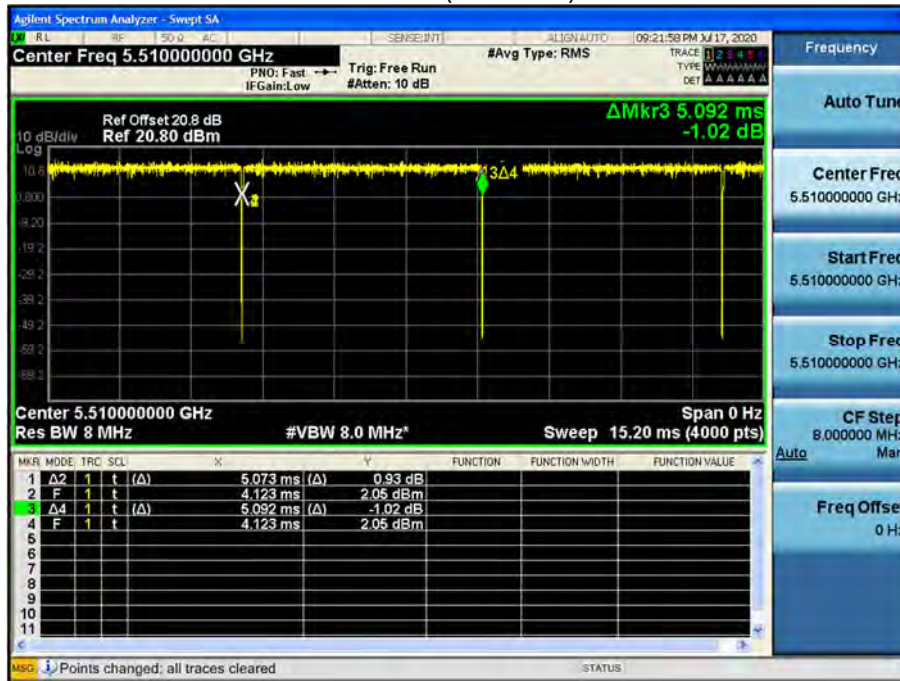
Bandwidth 20M Ch.100(5500MHz) SU MCS0



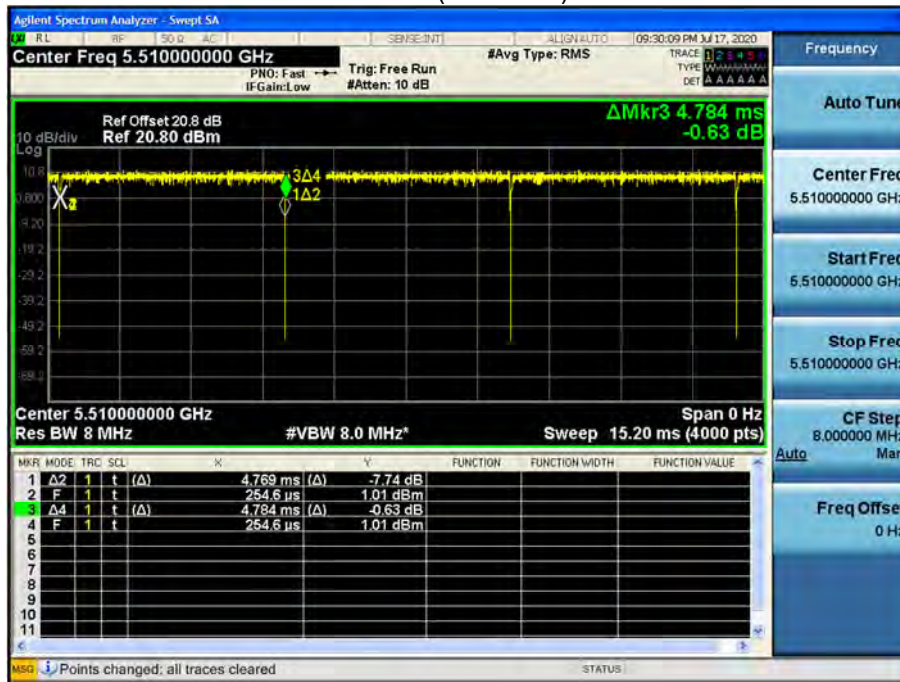
Bandwidth 40M Ch.102(5510MHz) 26Tone MCS0



Bandwidth 40M Ch.102(5510MHz) 52Tone MCS0



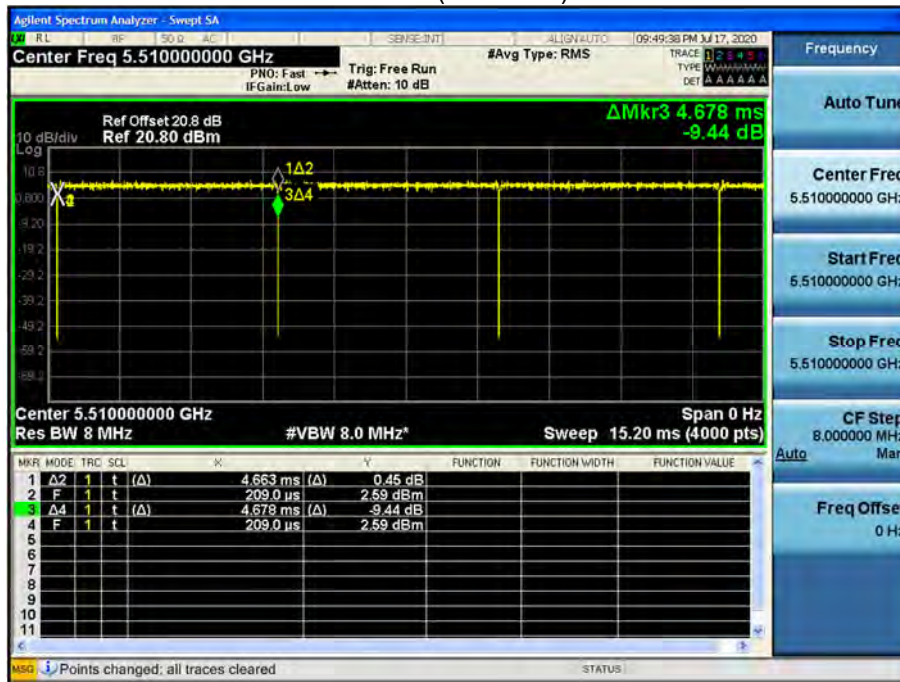
Bandwidth 40M Ch.102(5510MHz) 106Tone MCS0



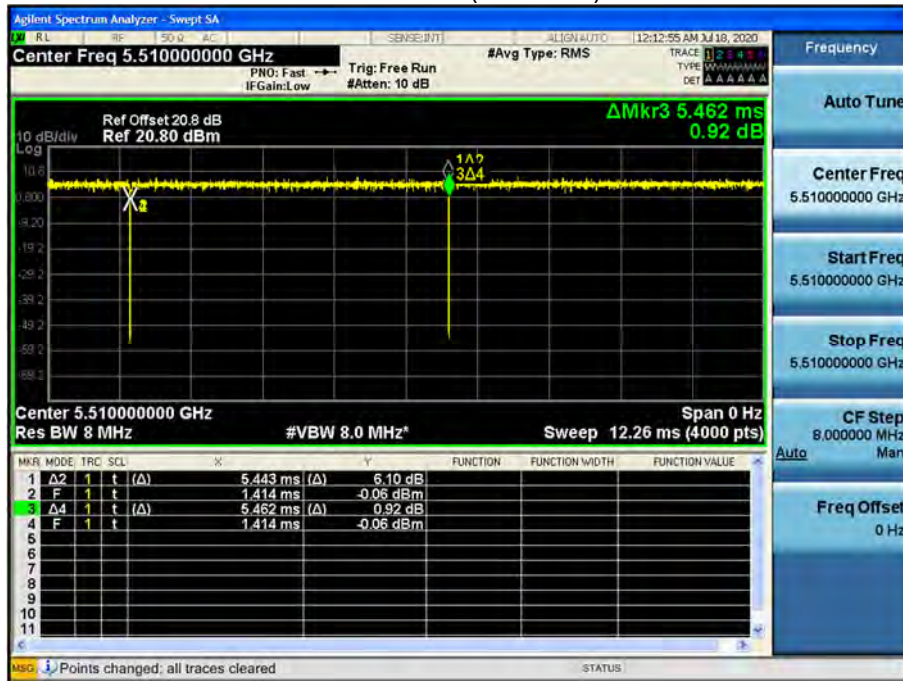
Bandwidth 40M Ch.102(5510MHz) 242Tone MCS0



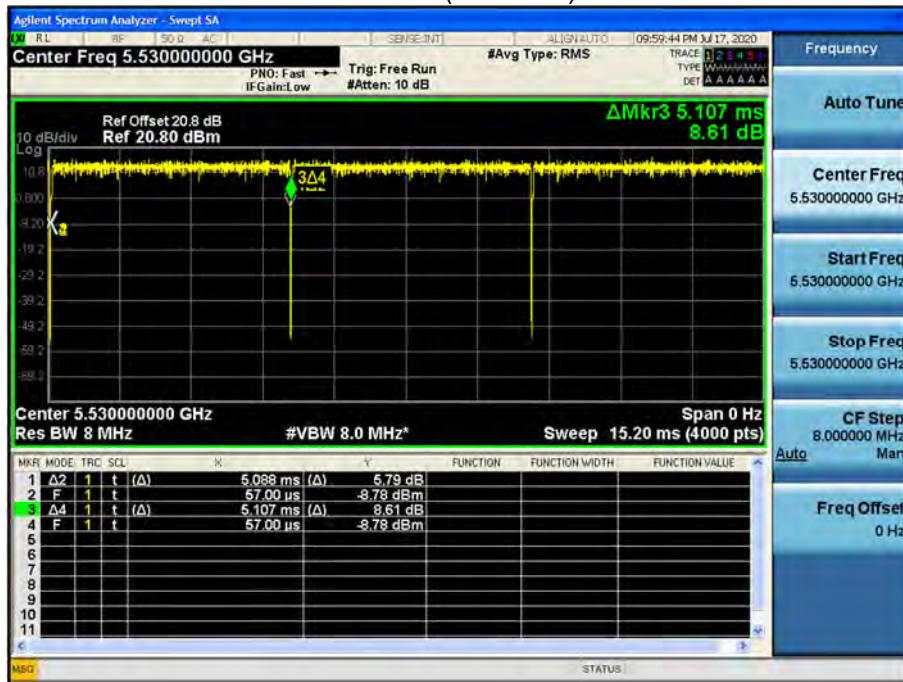
Bandwidth 40M Ch.102(5510MHz) 484Tone MCS0



Bandwidth 40M Ch.102(5510MHz) SU MCSO



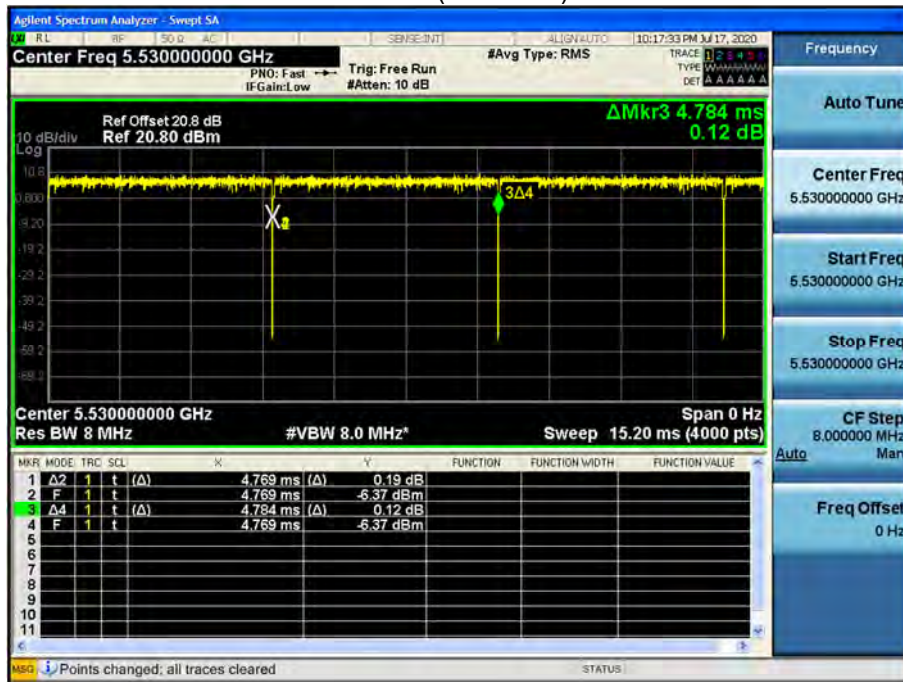
Bandwidth 80M Ch.106(5530MHz) 26Tone MCSO



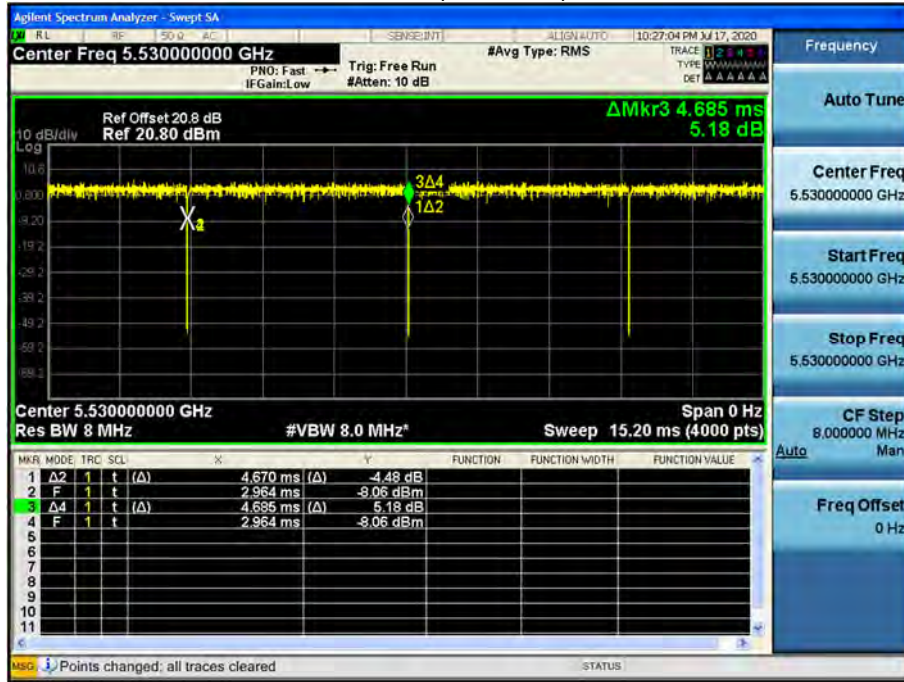
Bandwidth 80M Ch.106(5530MHz) 52Tone MCS0



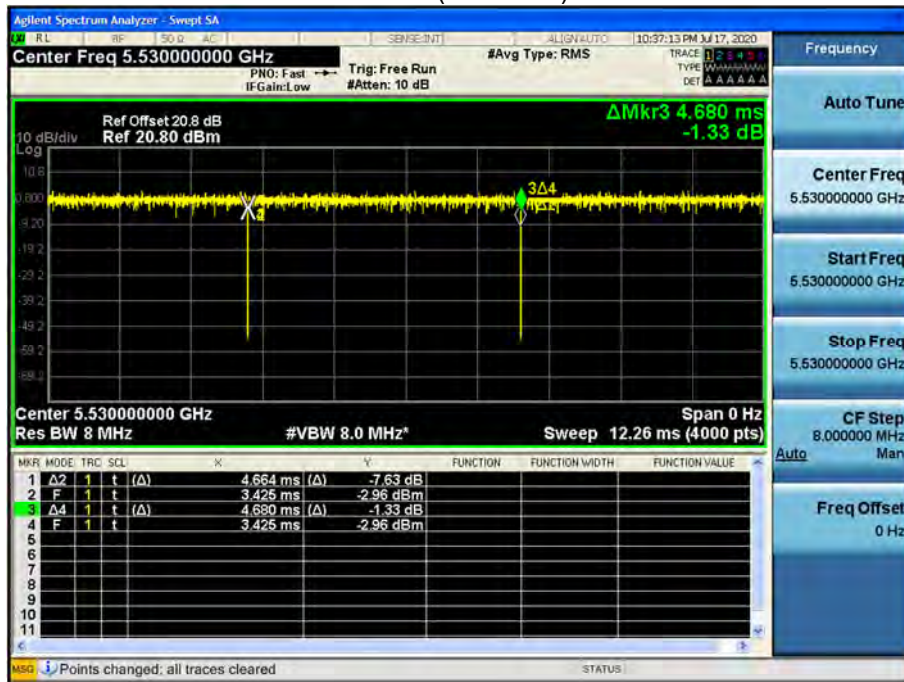
Bandwidth 80M Ch.106(5530MHz) 106Tone MCS0



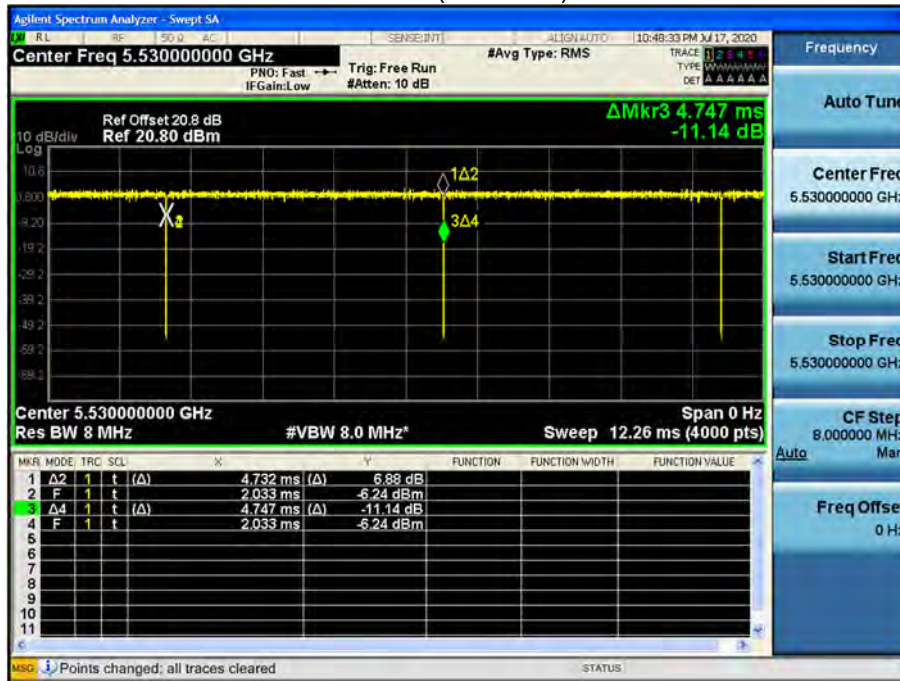
Bandwidth 80M Ch.106(5530MHz) 242Tone MCS0



Bandwidth 80M Ch.106(5530MHz) 484Tone MCS0



Bandwidth 80M Ch.106(5530MHz) 996Tone MCS0



Bandwidth 80M Ch.106(5530MHz) SU MCS0



2. 26dB Bandwidth

Note:

1. In order to simplify the report, attached plots were only Ant.1 (Worst Case: Ant.1).
2. In order to simplify the report, attached plots were only the most wide channel.

Bandwidth 20M Ch.36(5180MHz) SU



Bandwidth 20M Ch.40(5200MHz) SU



Bandwidth 20M Ch.48(5240MHz) SU



Bandwidth 20M Ch.52(5260MHz) SU



Bandwidth 20M Ch.56(5280MHz) SU



Bandwidth 20M Ch.64(5320MHz) SU



Bandwidth 20M Ch.100(5500MHz) SU



Bandwidth 20M Ch.120(5600MHz) RU 61



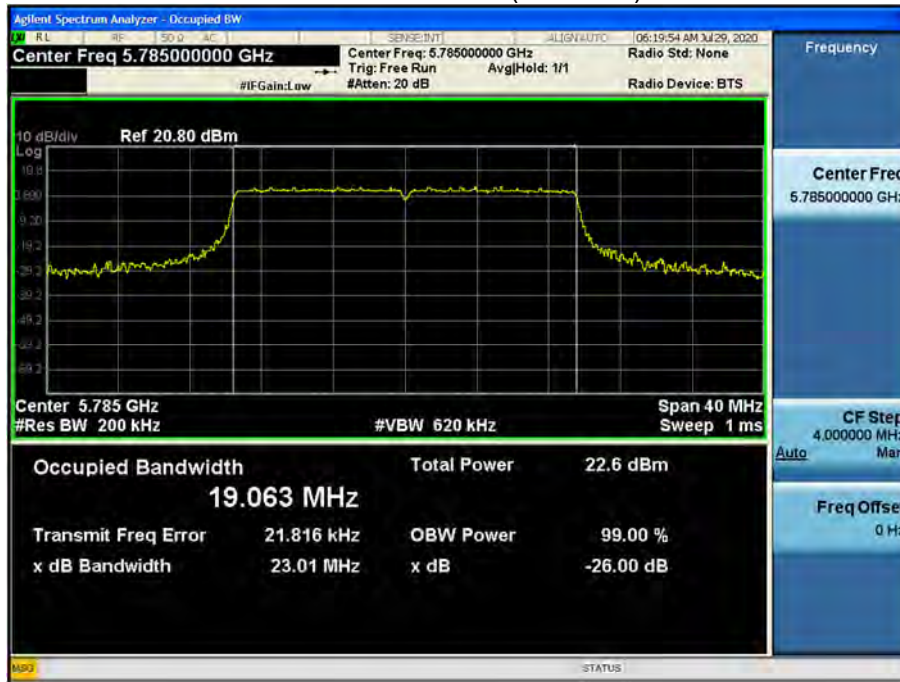
Bandwidth 20M Ch.144(5720MHz) RU 61



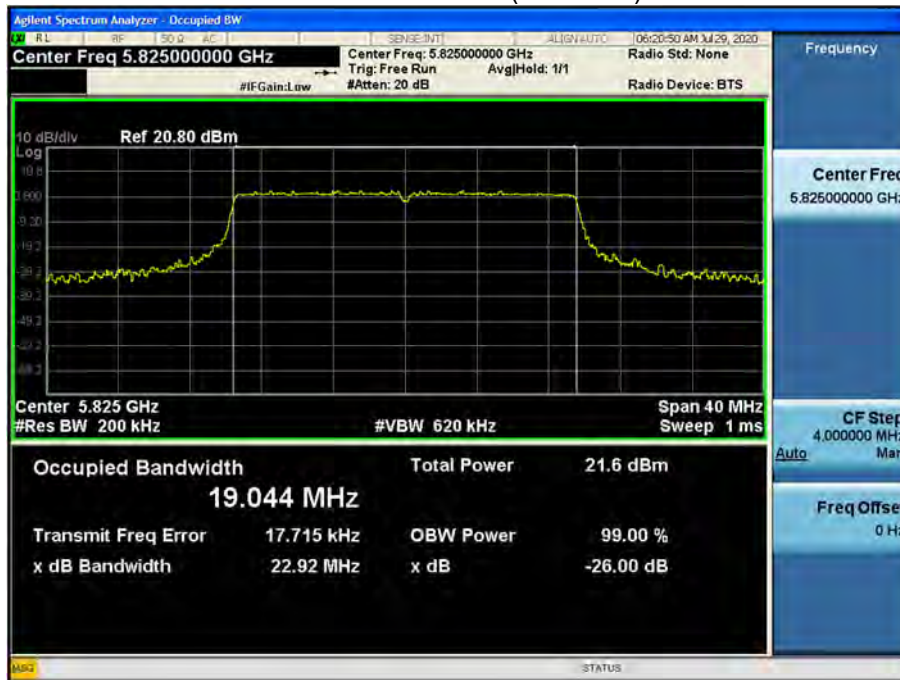
Bandwidth 20M Ch.149(5745MHz) SU



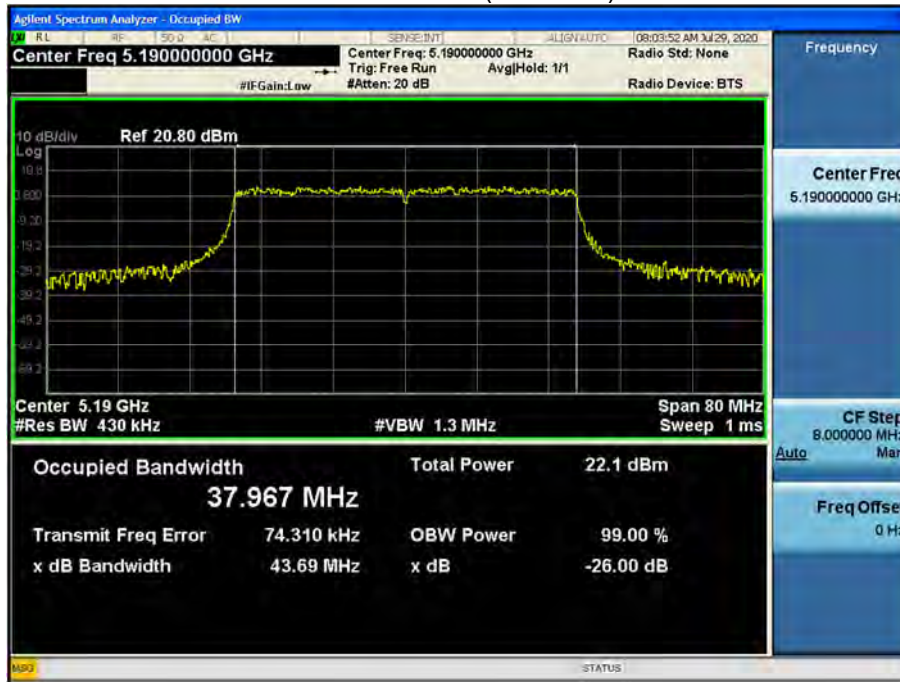
Bandwidth 20M Ch.157(5785MHz) SU



Bandwidth 20M Ch.165(5825MHz) SU



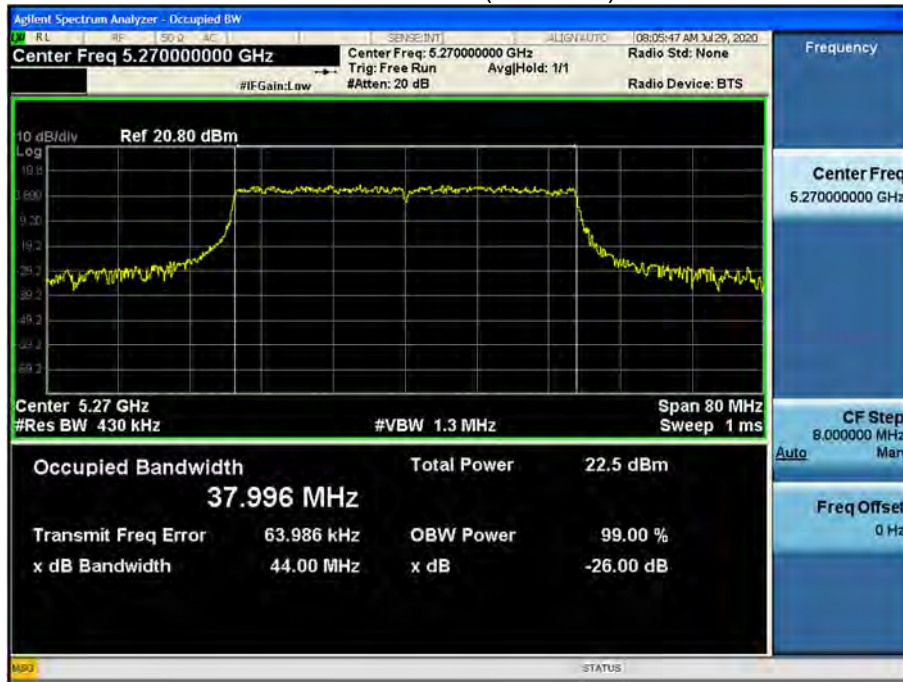
Bandwidth 40M Ch.38(5190MHz) RU 65



Bandwidth 40M Ch.46(5230MHz) SU



Bandwidth 40M Ch.54(5270MHz) RU 65



Bandwidth 40M Ch.62(5310MHz) SU



Bandwidth 40M Ch.102(5510MHz) RU 65



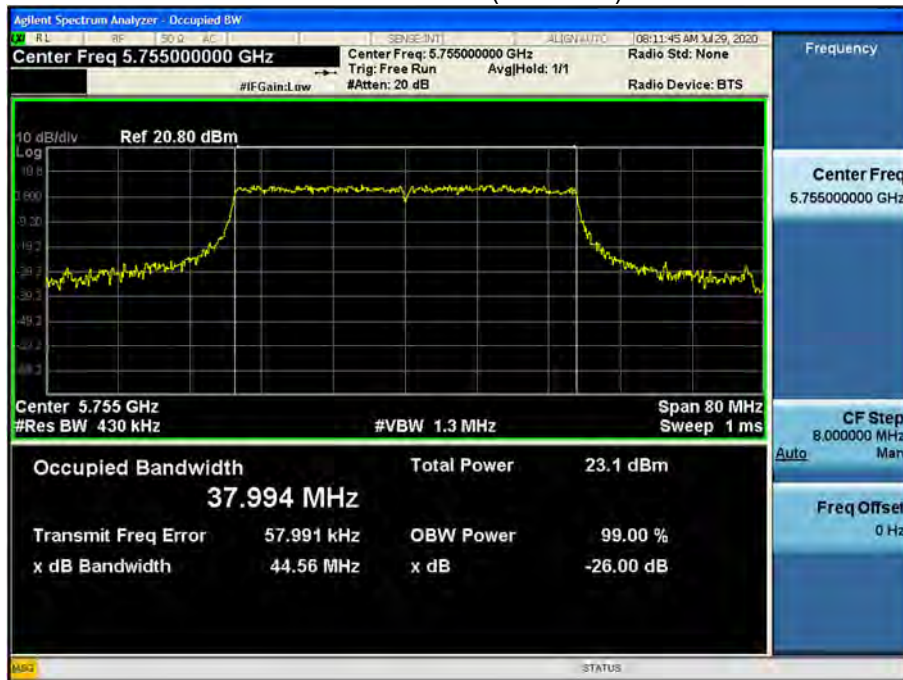
Bandwidth 40M Ch.118(5590MHz) SU



Bandwidth 40M Ch.142(5710MHz) SU



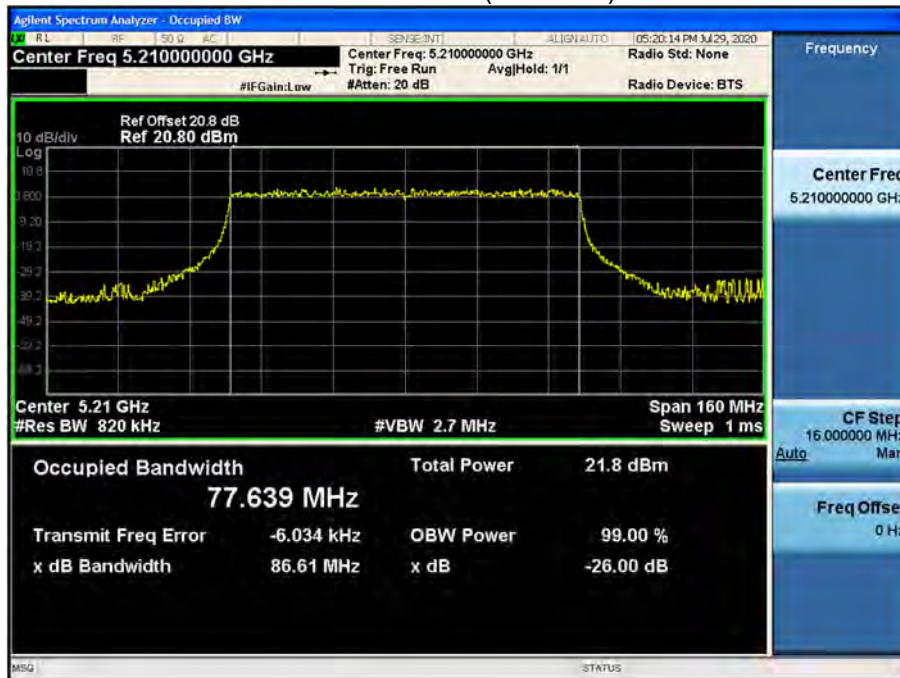
Bandwidth 40M Ch.151(5755MHz) RU 65



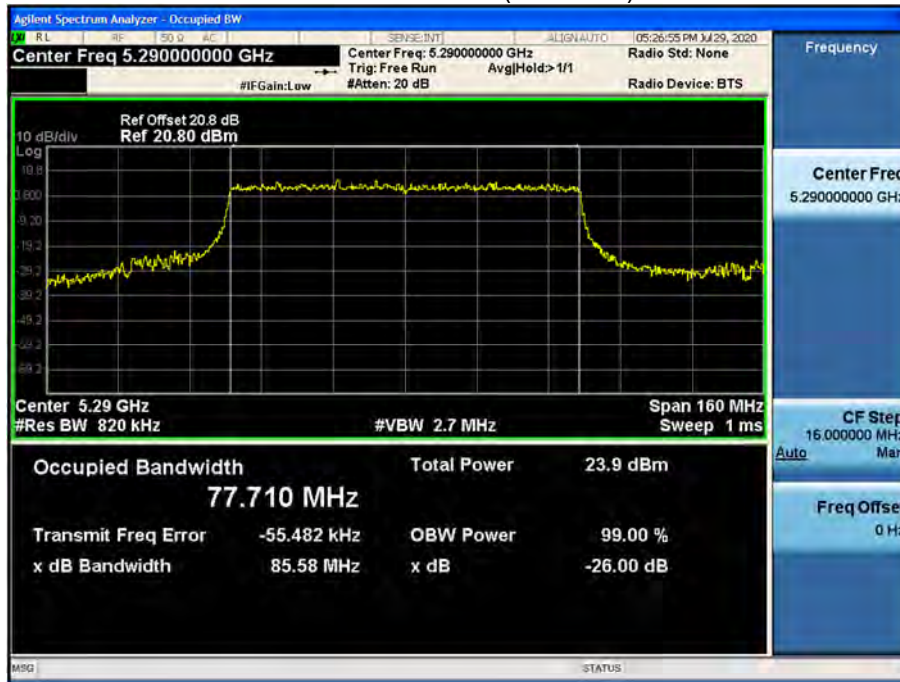
Bandwidth 40M Ch.159(5795MHz) RU 65



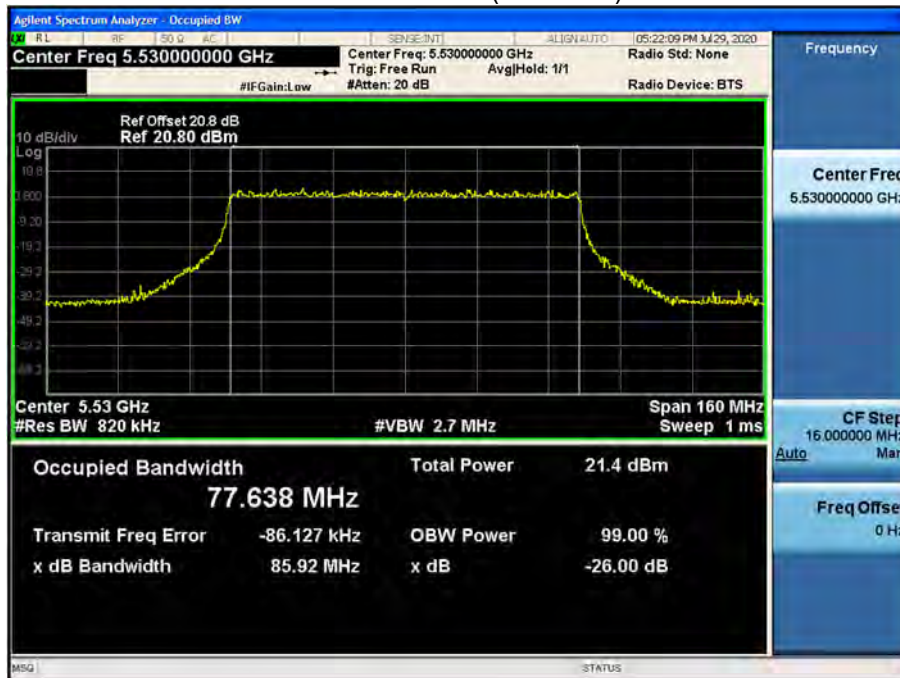
Bandwidth 80M Ch.42(5210MHz) RU 67



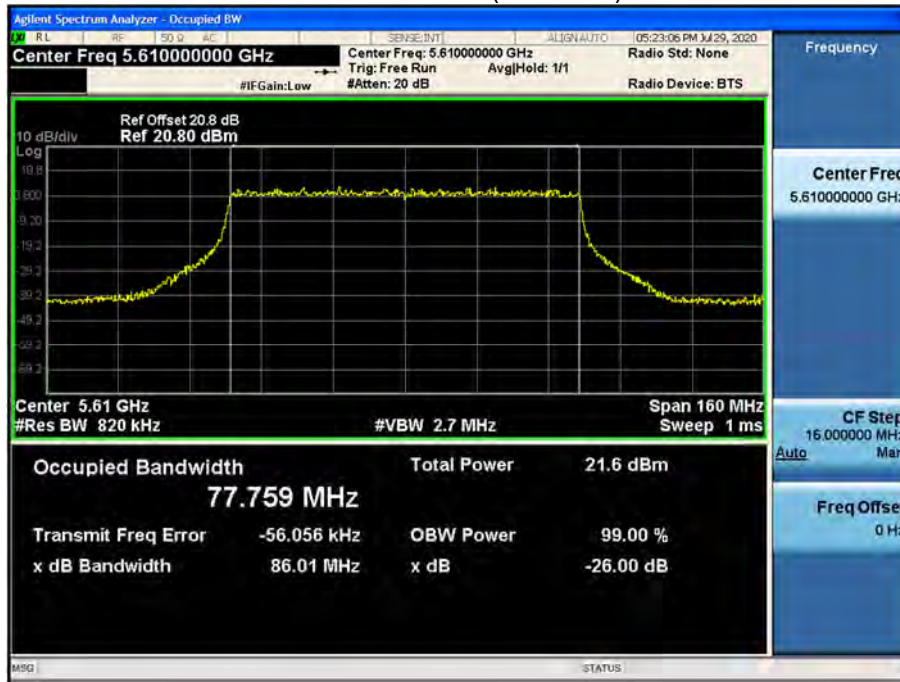
Bandwidth 80M Ch.58(5290MHz) SU



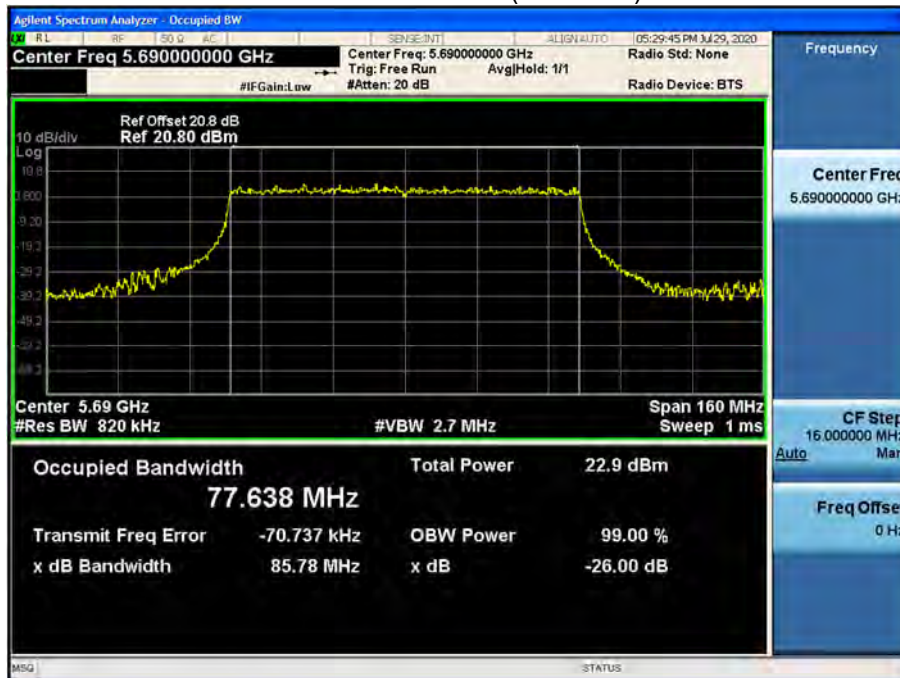
Bandwidth 80M Ch.106(5530MHz) RU 67



Bandwidth 80M Ch.122(5610MHz) RU 67



Bandwidth 80M Ch.138(5690MHz) SU



Bandwidth 80M Ch.155(5775MHz) RU 67



3. 6dB Bandwidth

Note:

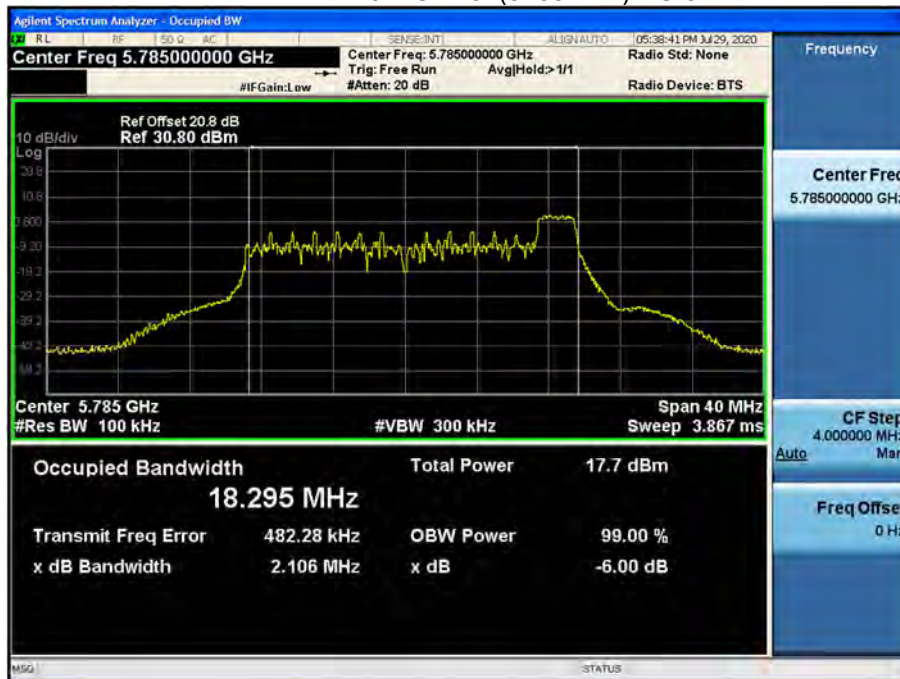
1. In order to simplify the report, attached plots were only the most narrow channel.

3.1 Ant1

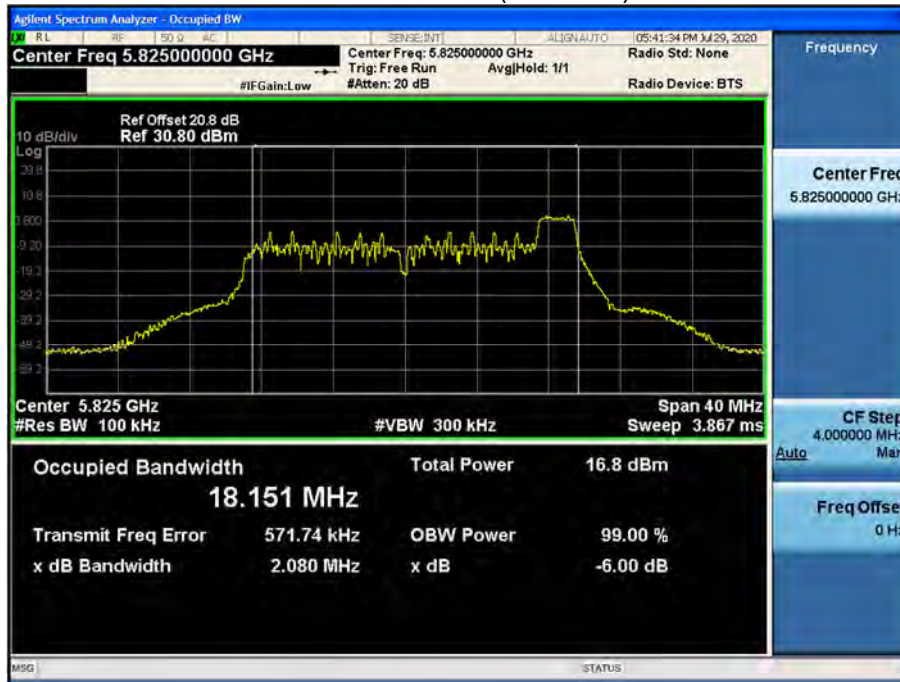
Bandwidth 20M Ch.149(5745MHz) RU 8



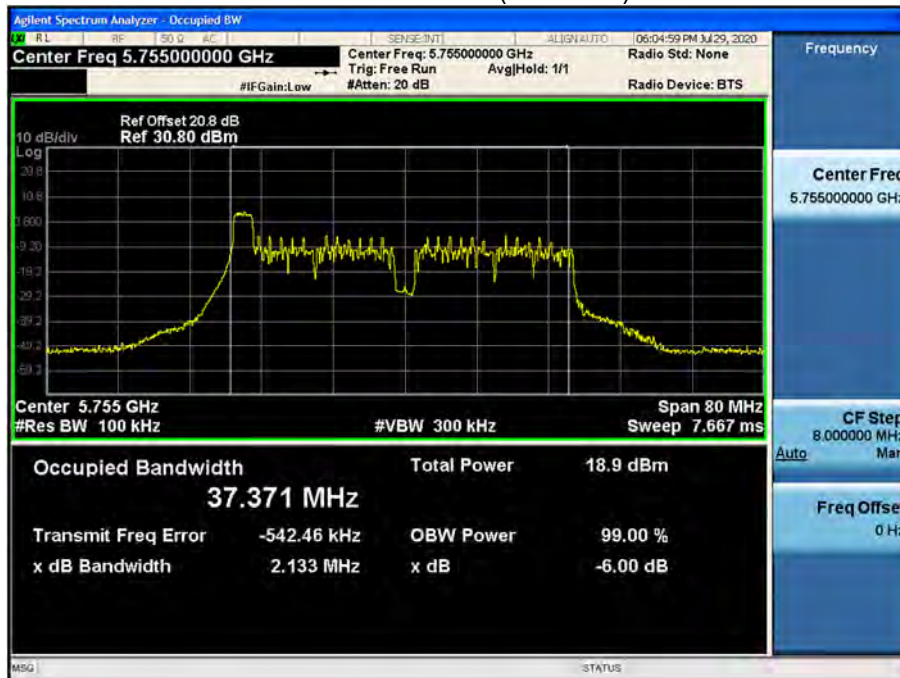
Bandwidth 20M Ch.157(5785MHz) RU 8



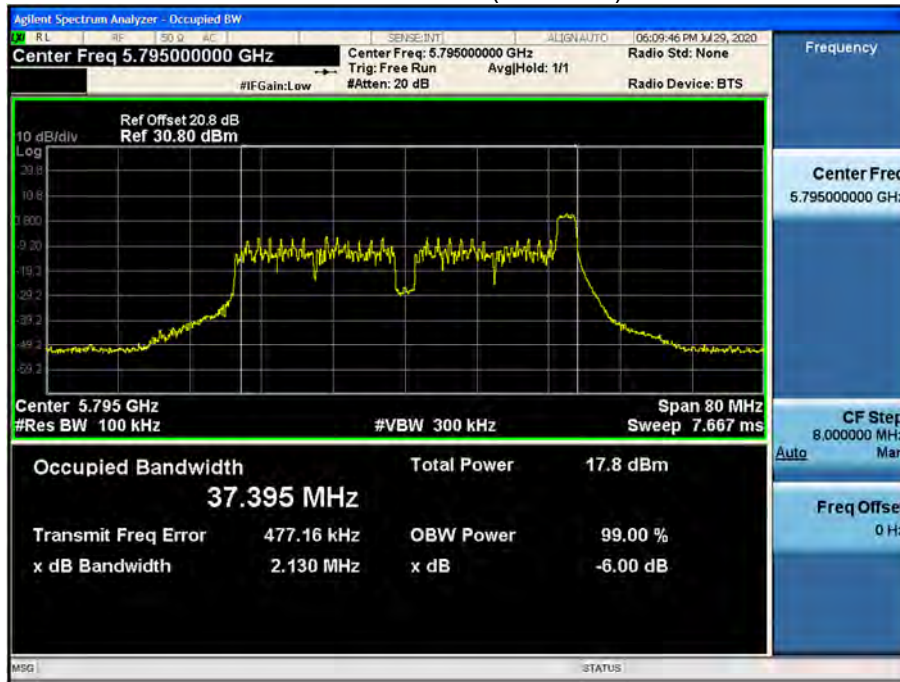
Bandwidth 20M Ch.165(5825MHz) RU 8



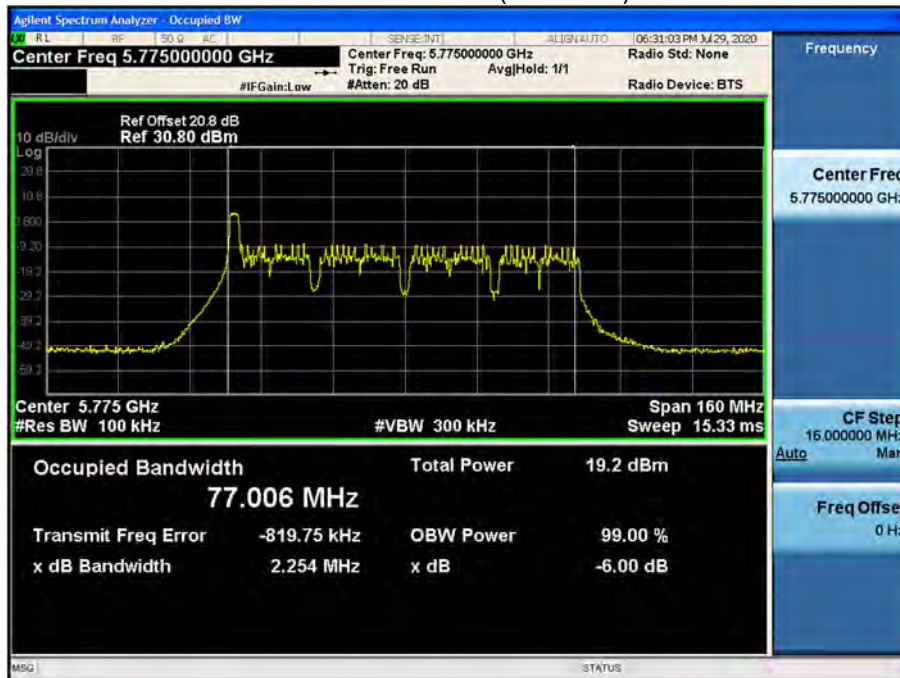
Bandwidth 40M Ch.151(5755MHz) RU 0



Bandwidth 40M Ch.159(5795MHz) RU 17



Bandwidth 80M Ch.155(5775MHz) RU 0

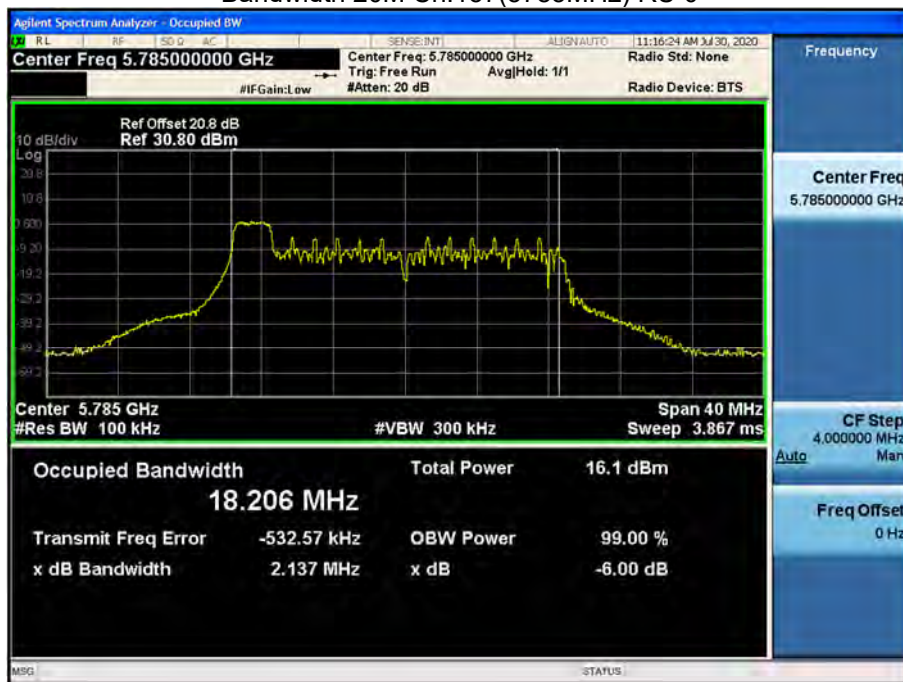


3.2 Ant2

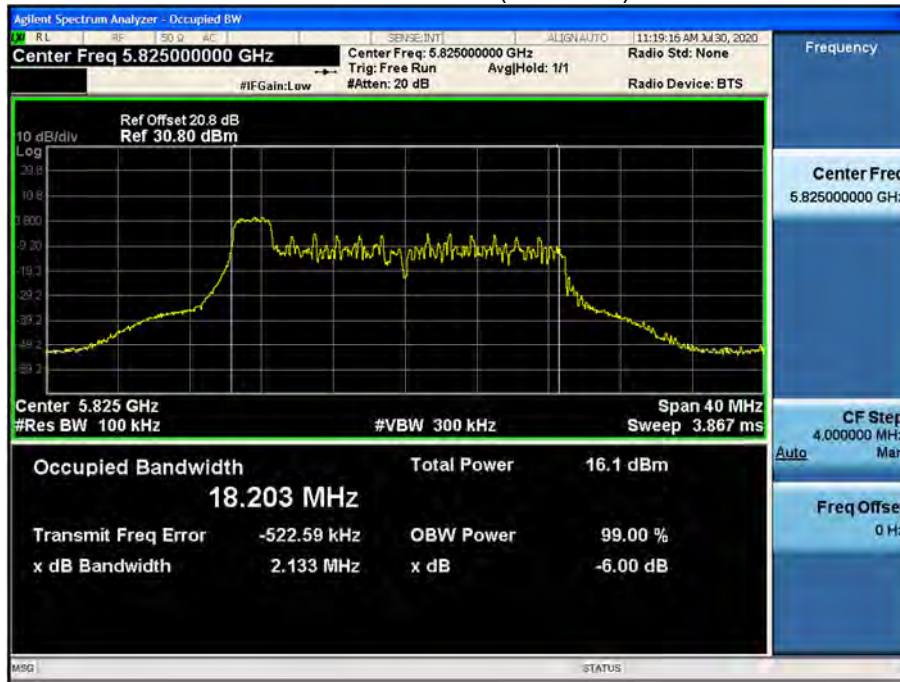
Bandwidth 20M Ch.149(5745MHz) RU 8



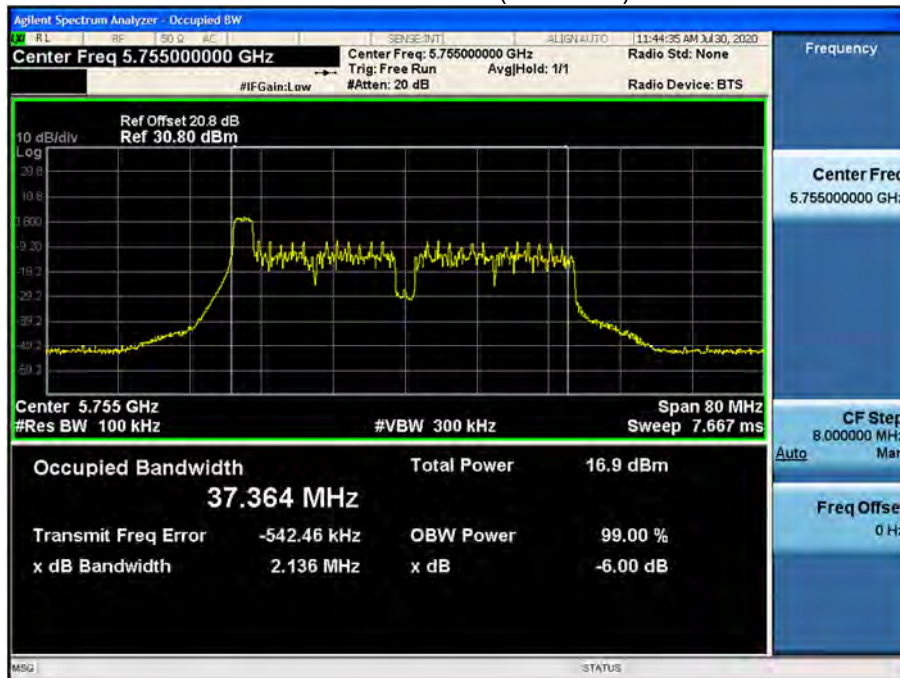
Bandwidth 20M Ch.157(5785MHz) RU 0



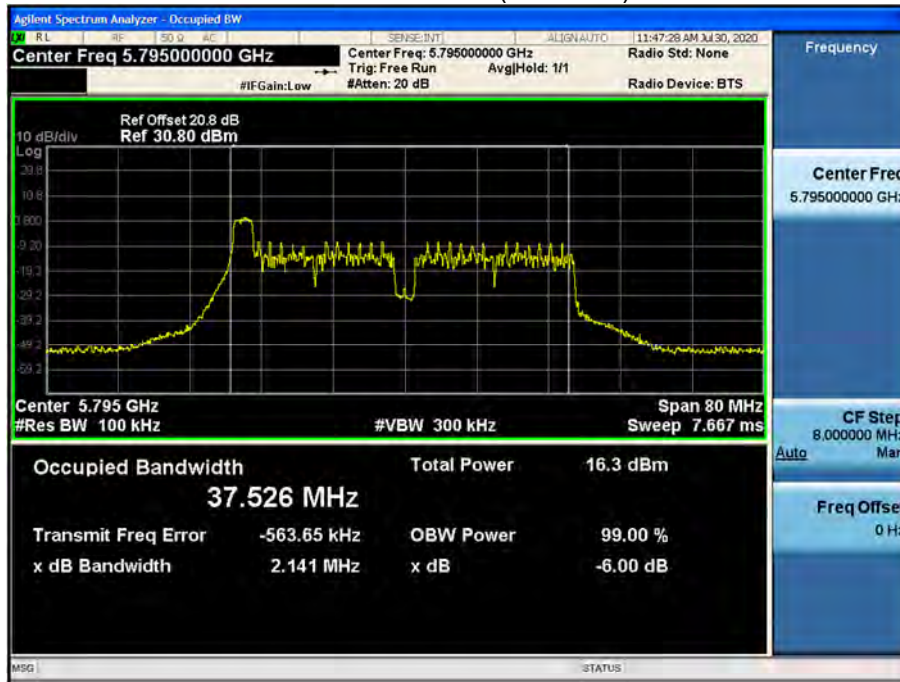
Bandwidth 20M Ch.165(5825MHz) RU 0



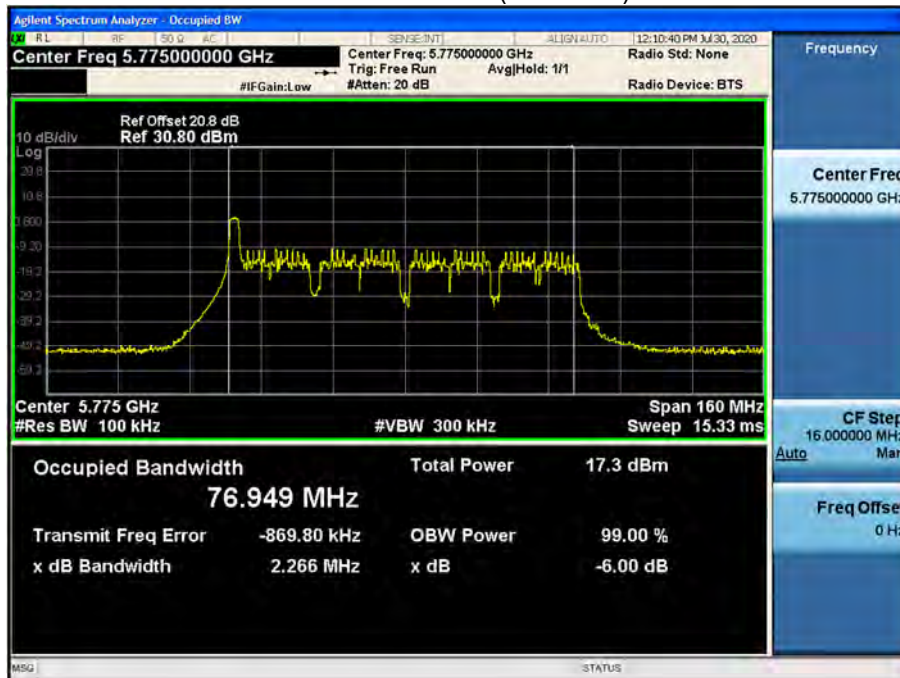
Bandwidth 40M Ch.151(5755MHz) RU 0



Bandwidth 40M Ch.159(5795MHz) RU 0



Bandwidth 80M Ch.155(5775MHz) RU 0



4. Power Spetral Density

Note:

1. In order to simplify the report, attached plots were only channel of highest PSD.

4.1 Ant1

Bandwidth 20M Ch.64(5320MHz) RU 0



Reading Value (dBm)	Duty Cycle Factor (dB)	Total PSD (dBm)
6.313	0.015	6.328

Note:

Total PSD (dBm) = Reading Value(dBm) + Duty Cycle Factor(dB)

Bandwidth 20M Ch.149(5745MHz) RU 8

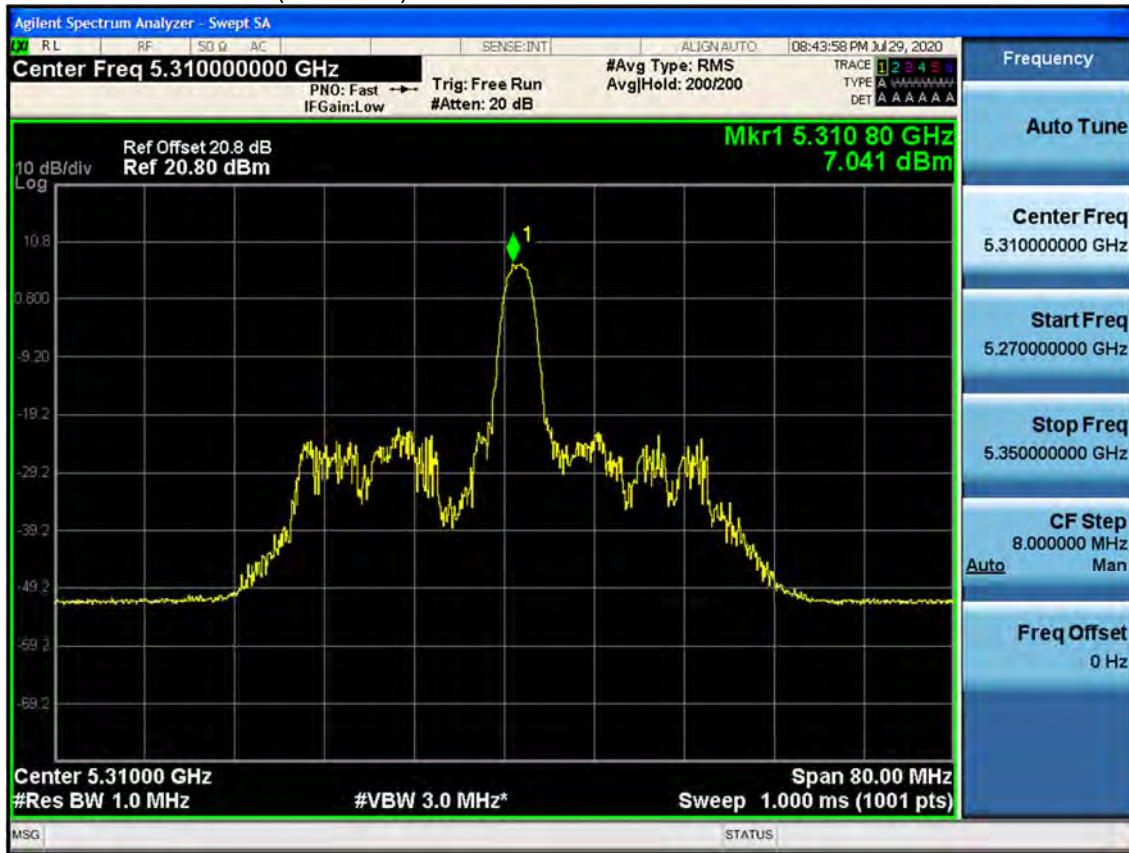


Reading Value (dBm)	Duty Cycle Factor (dB)	Total PSD (dBm)
3.370	0.015	3.385

Note:

Total PSD (dBm) = Reading Value(dBm) + Duty Cycle Factor(dB)

Bandwidth 40M Ch.62 (5310MHz) RU 9



Reading Value (dBm)	Duty Cycle Factor (dB)	Total PSD (dBm)
7.041	0.016	7.057

Note:

Total PSD (dBm) = Reading Value(dBm) + Duty Cycle Factor(dB)

Bandwidth 40M Ch.151(5755MHz) RU 9



Reading Value (dBm)	Duty Cycle Factor (dB)	Total PSD (dBm)
4.225	0.016	4.241

Note:

Total PSD (dBm) = Reading Value(dBm) + Duty Cycle Factor(dB)

Bandwidth 80M Ch.58(5290MHz) RU 0



Reading Value (dBm)	Duty Cycle Factor (dB)	Total PSD (dBm)
6.746	0.013	6.759

Note:

Total PSD (dBm) = Reading Value(dBm) + Duty Cycle Factor(dB)

Bandwidth 80M Ch.155(5775MHz) RU 0



Reading Value (dBm)	Duty Cycle Factor (dB)	Total PSD (dBm)
3.550	0.013	3.563

Note:

Total PSD (dBm) = Reading Value(dBm) + Duty Cycle Factor(dB)

4.2 Ant2

Bandwidth 20M Ch.52(5260MHz) RU 0



Reading Value (dBm)	Duty Cycle Factor (dB)	Total PSD (dBm)
5.907	0.015	5.922

Note:

Total PSD (dBm) = Reading Value(dBm) + Duty Cycle Factor(dB)

Bandwidth 20M Ch.149(5745MHz) RU 4



Reading Value (dBm)	Duty Cycle Factor (dB)	Total PSD (dBm)
2.137	0.015	2.152

Note:

Total PSD (dBm) = Reading Value(dBm) + Duty Cycle Factor(dB)

Bandwidth 40M Ch.62(5310MHz) RU 9



Reading Value (dBm)	Duty Cycle Factor (dB)	Total PSD (dBm)
6.640	0.016	6.656

Note:

Total PSD (dBm) = Reading Value(dBm) + Duty Cycle Factor(dB)

Bandwidth 40M Ch.151(5755MHz) RU 0



Reading Value (dBm)	Duty Cycle Factor (dB)	Total PSD (dBm)
2.227	0.016	2.243

Note:

Total PSD (dBm) = Reading Value(dBm) + Duty Cycle Factor(dB)

Bandwidth 80M Ch.58(5290MHz) RU 0



Reading Value (dBm)	Duty Cycle Factor (dB)	Total PSD (dBm)
6.485	0.013	6.498

Note:

Total PSD (dBm) = Reading Value(dBm) + Duty Cycle Factor(dB)

Bandwidth 80M Ch.155(5775MHz) RU 0



Reading Value (dBm)	Duty Cycle Factor (dB)	Total PSD (dBm)
1.895	0.013	1.908

Note:

Total PSD (dBm) = Reading Value(dBm) + Duty Cycle Factor(dB)

5. Straddle Channel

5.1 26dB Bandwidth

Note:

1. In order to simplify the report, attached plots were only the most wide channel.

5.1.1 Ant1

(26dB) Bandwidth 20M Ch.144(5720MHz) SU



UNII 2C	5725 [MHz]	Measured Frequency [MHz]	26dB Bandwidth [MHz]
		5725	5709.04
UNII 3	Measured Frequency [MHz]	5725 [MHz]	26dB Bandwidth [MHz]
		5730.96	5725

Note:

1. [UNII 2C] 26dB Bandwidth = 5725MHz - Measured Frequency[MHz]
2. [UNII 3] 26dB Bandwidth = Measured Frequency[MHz] -5725MHz

(26dB) Bandwidth 40M Ch.142(5710MHz) SU



UNII 2C	5725 [MHz]	Measured Frequency [MHz]	26dB Bandwidth [MHz]
		5725	5688.32
UNII 3	Measured Frequency [MHz]	5725 [MHz]	26dB Bandwidth [MHz]
		5732.32	5725

Note:

1. [UNII 2C] 26dB Bandwidth = 5725MHz - Measured Frequency[MHz]
2. [UNII 3] 26dB Bandwidth = Measured Frequency[MHz] -5725MHz

(26dB) Bandwidth 80M Ch.138(5690MHz) SU



UNII 2C	5725 [MHz]	Measured Frequency [MHz]	26dB Bandwidth [MHz]
		5725	5646.96
UNII 3	Measured Frequency [MHz]	5725 [MHz]	26dB Bandwidth [MHz]
		5733.04	5725

Note:

1. [UNII 2C] 26dB Bandwidth = 5725MHz - Measured Frequency[MHz]
2. [UNII 3] 26dB Bandwidth = Measured Frequency[MHz] -5725MHz

5.1.2 Ant2

(26dB) Bandwidth 20M Ch.144(5720MHz) SU



UNII 2C	5725 [MHz]	Measured Frequency [MHz]	26dB Bandwidth [MHz]
	5725	5709.08	15.92

Note:

1. [UNII 2C] 26dB Bandwidth = 5725MHz - Measured Frequency[MHz]

(26dB) Bandwidth 20M Ch.144(5720MHz) RU 54



UNII 3	Measured Frequency [MHz]	5725 [MHz]	26dB Bandwidth [MHz]
		5730.6	5725

Note:

1. [UNII 3] 26dB Bandwidth = Measured Frequency[MHz] -5725MHz

(26dB) Bandwidth 40M Ch.142(5710MHz) RU 65



UNII 2C	5725 [MHz]	Measured Frequency [MHz]	26dB Bandwidth [MHz]
	5725	5688.32	36.68
UNII 3	Measured Frequency [MHz]	5725 [MHz]	26dB Bandwidth [MHz]
	5731.04	5725	6.04

Note:

1. [UNII 2C] 26dB Bandwidth = 5725MHz - Measured Frequency[MHz]
2. [UNII 3] 26dB Bandwidth = Measured Frequency[MHz] -5725MHz

(26dB) Bandwidth 80M Ch.138(5690MHz) RU 35



UNII 2C	5725 [MHz]	Measured Frequency [MHz]	26dB Bandwidth [MHz]
	5725	5650.48	74.52

Note:

1. [UNII 2C] 26dB Bandwidth = 5725MHz - Measured Frequency[MHz]

(26dB) Bandwidth 80M Ch.138(5690MHz) RU 36



UNII 3	Measured Frequency [MHz]	5725 [MHz]	26dB Bandwidth [MHz]
	5732.88	5725	7.88

Note:

1. [UNII 3] 26dB Bandwidth = Measured Frequency[MHz] -5725MHz

5.2 6dB Bandwidth

Note:

1. In order to simplify the report, attached plots were only the most narrow channel.

5.2.1 Ant1

(6dB) Bandwidth 20M Ch.144(5720MHz) RU 39

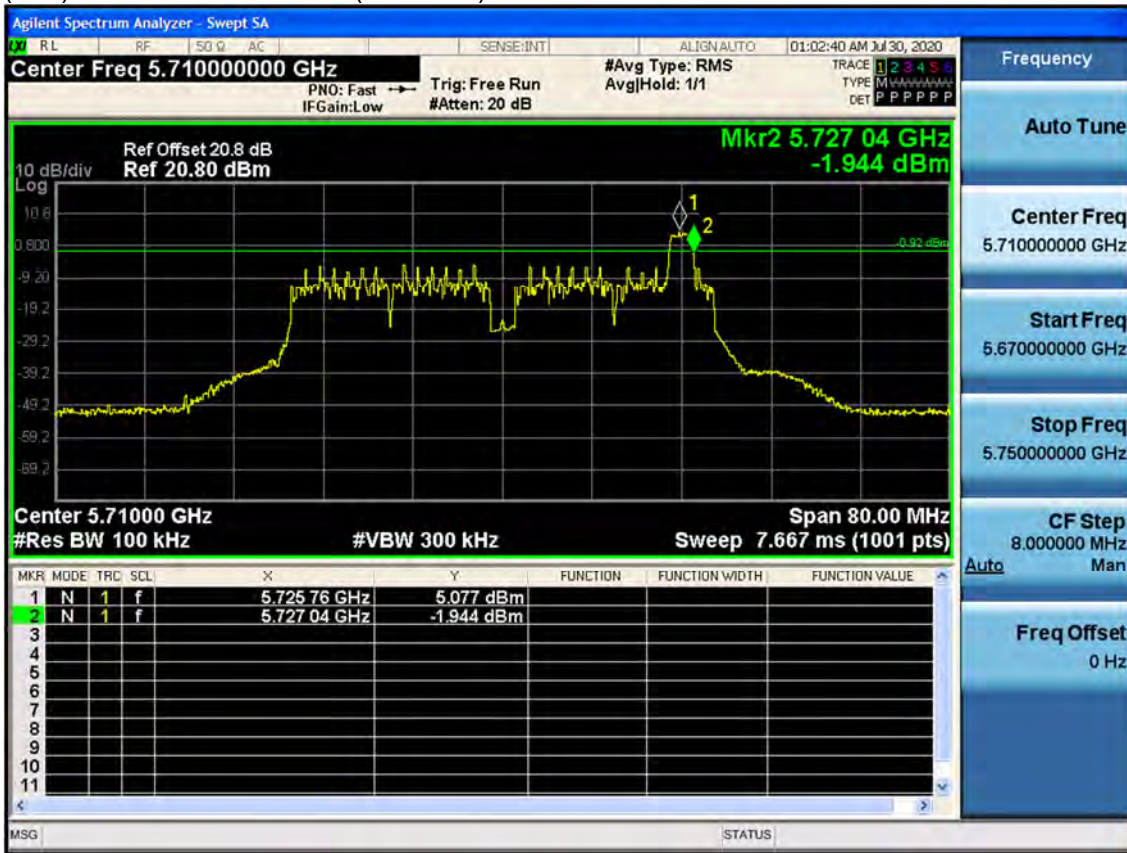


Measured Frequency [MHz]	5725 [MHz]	6dB Bandwidth [MHz]
5727.52	5725	2.52

Note:

6dB Bandwidth = Measured Frequency[MHz] – 5725MHz

(6dB) Bandwidth 40M Ch.142(5710MHz) RU 16

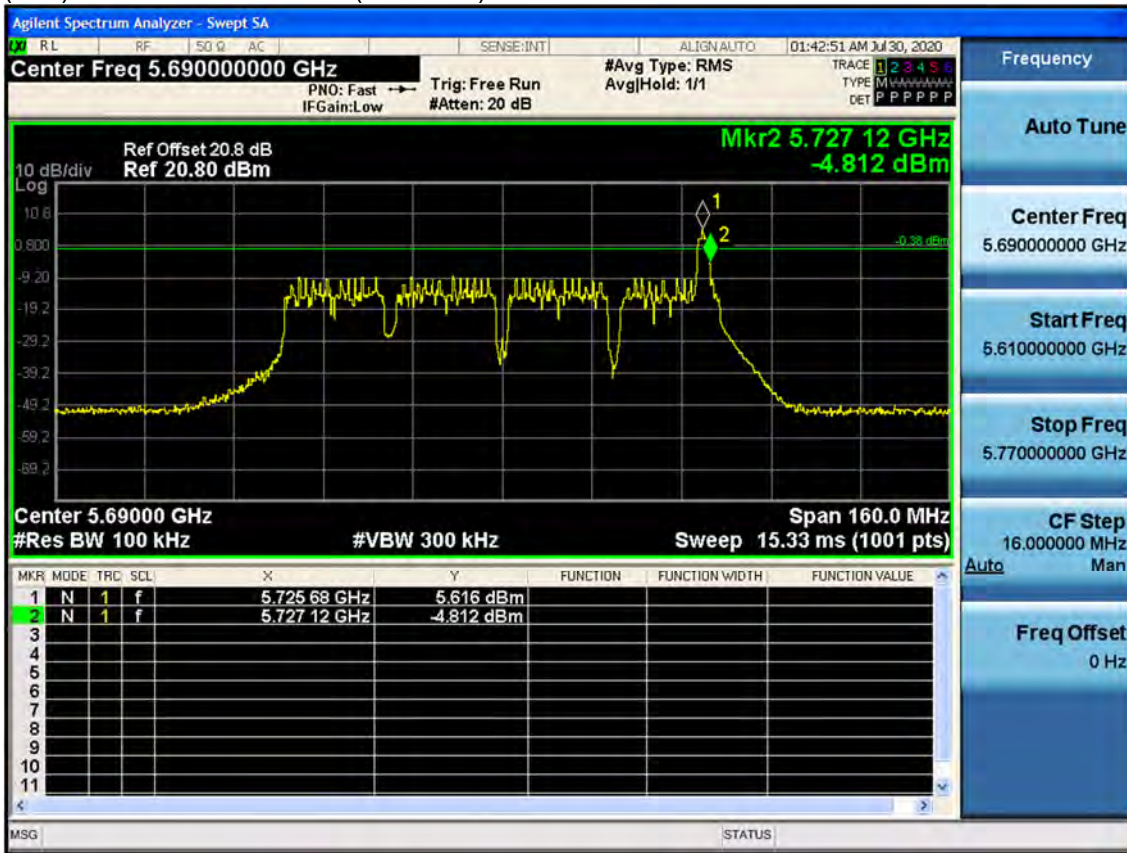


Measured Frequency [MHz]	5725 [MHz]	6dB Bandwidth [MHz]
5727.04	5725	2.04

Note:

6dB Bandwidth = Measured Frequency[MHz] – 5725MHz

(6dB) Bandwidth 80M Ch.138(5690MHz) RU 35



Measured Frequency [MHz]	5725 [MHz]	6dB Bandwidth [MHz]
5727.12	5725	2.12

Note:

6dB Bandwidth = Measured Frequency[MHz] – 5725MHz

5.2.2 Ant2

(6dB) Bandwidth 20M Ch.144(5720MHz) RU 7



Measured Frequency [MHz]	5725 [MHz]	6dB Bandwidth [MHz]
5727.52	5725	2.52

Note:

6dB Bandwidth = Measured Frequency[MHz] – 5725MHz

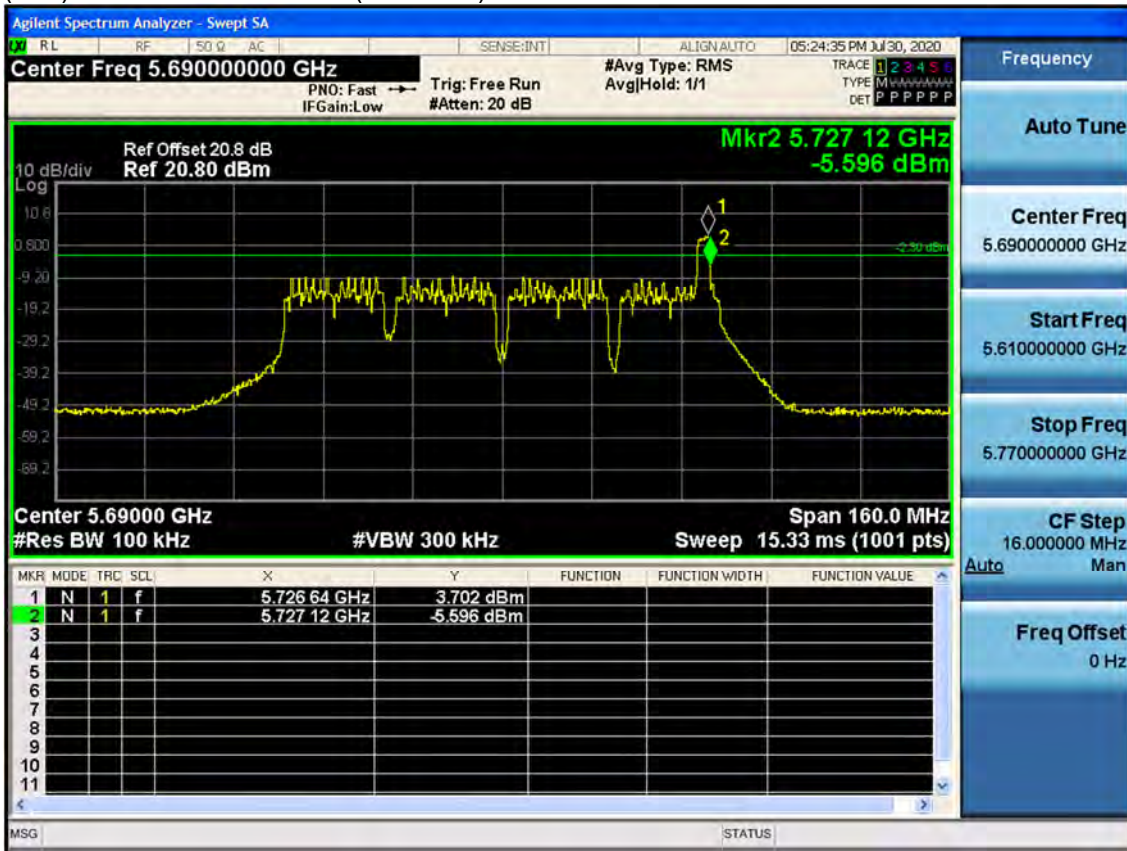
(6dB) Bandwidth 40M Ch.142(5710MHz) RU 16



Measured Frequency [MHz]	5725 [MHz]	6dB Bandwidth [MHz]
5727.04	5725	2.04

Note:
 6dB Bandwidth = Measured Frequency[MHz] – 5725MHz

(6dB) Bandwidth 80M Ch.138(5690MHz) RU 35



Measured Frequency [MHz]	5725 [MHz]	6dB Bandwidth [MHz]
5727.12	5725	2.12

Note:

6dB Bandwidth = Measured Frequency[MHz] – 5725MHz

5.3 Output Power

Note:

1. In order to simplify the report, attached plots were only channel of highest Power.

5.3.1 Ant1

(UNII 2C) Bandwidth 20M Ch.144(5720MHz) SU

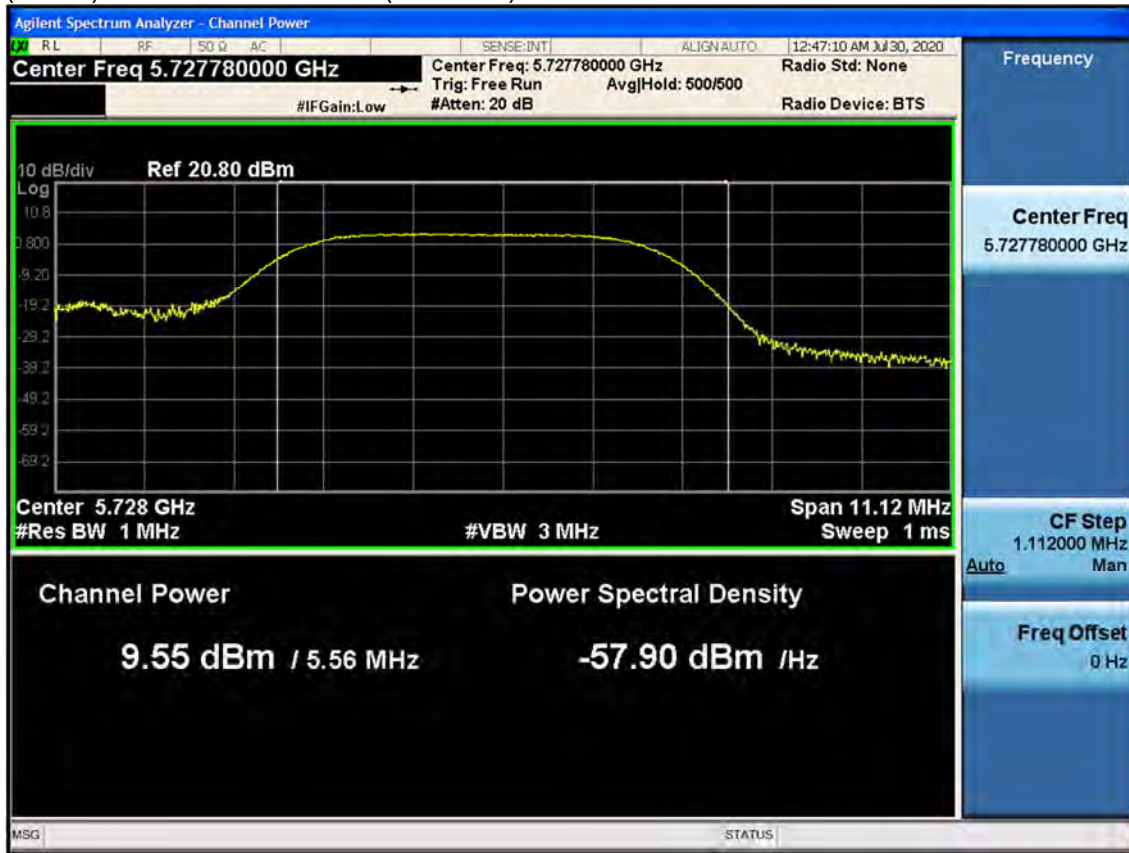


Reading Value (dBm)	Duty Cycle Factor (dB)	Total Power (dBm)
13.96	0.015	13.97

Note:

$$\text{Total Power(dBm)} = \text{Reading Value(dBm)} + \text{Duty Cycle Factor(dB)}$$

(UNII 3) Bandwidth 20M Ch.144(5720MHz) RU 40

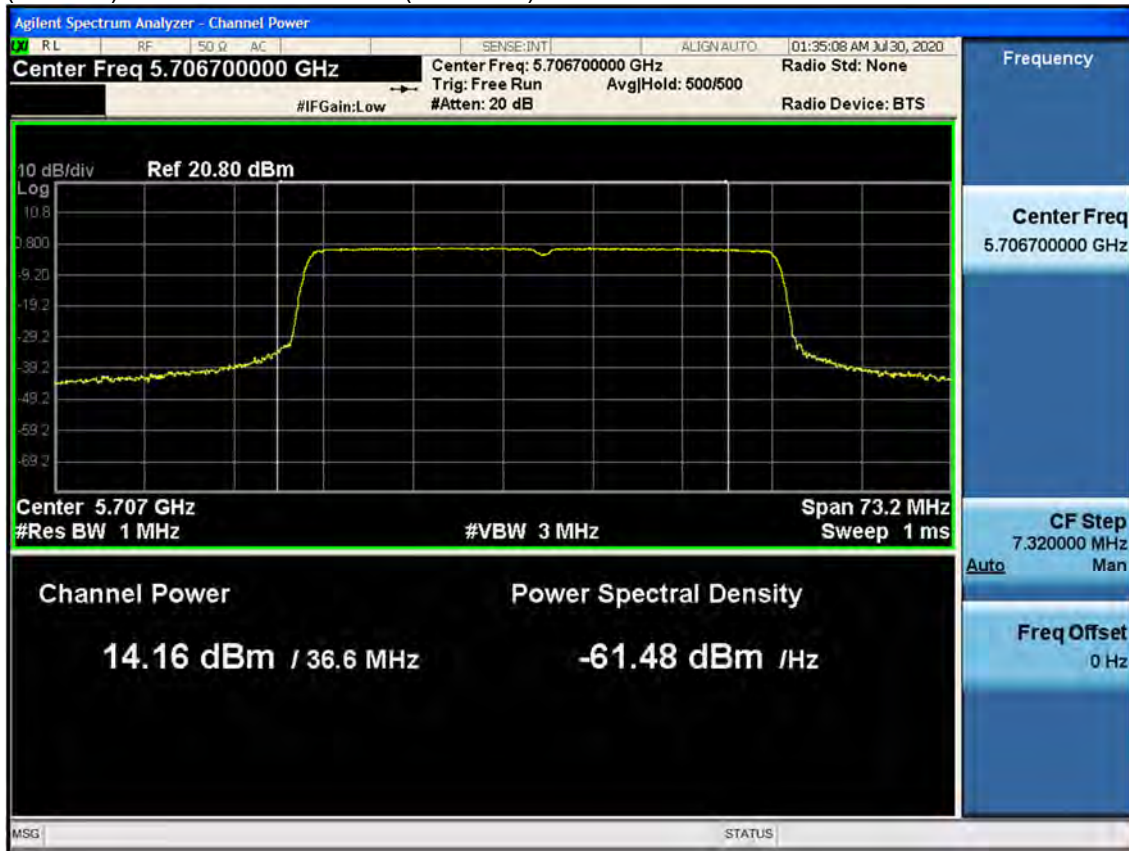


Reading Value (dBm)	Duty Cycle Factor (dB)	Total Power (dBm)
9.55	0.016	9.56

Note:

Total Power(dBm) = Reading Value(dBm) + Duty Cycle Factor(dB)

(UNII 2C) Bandwidth 40M Ch.142(5710MHz) RU 65



Reading Value (dBm)	Duty Cycle Factor (dB)	Total Power (dBm)
14.16	0.016	14.17

Note:

Total Power(dBm) = Reading Value(dBm) + Duty Cycle Factor(dB)

(UNII 3) Bandwidth 40M Ch.142(5710MHz) RU 44

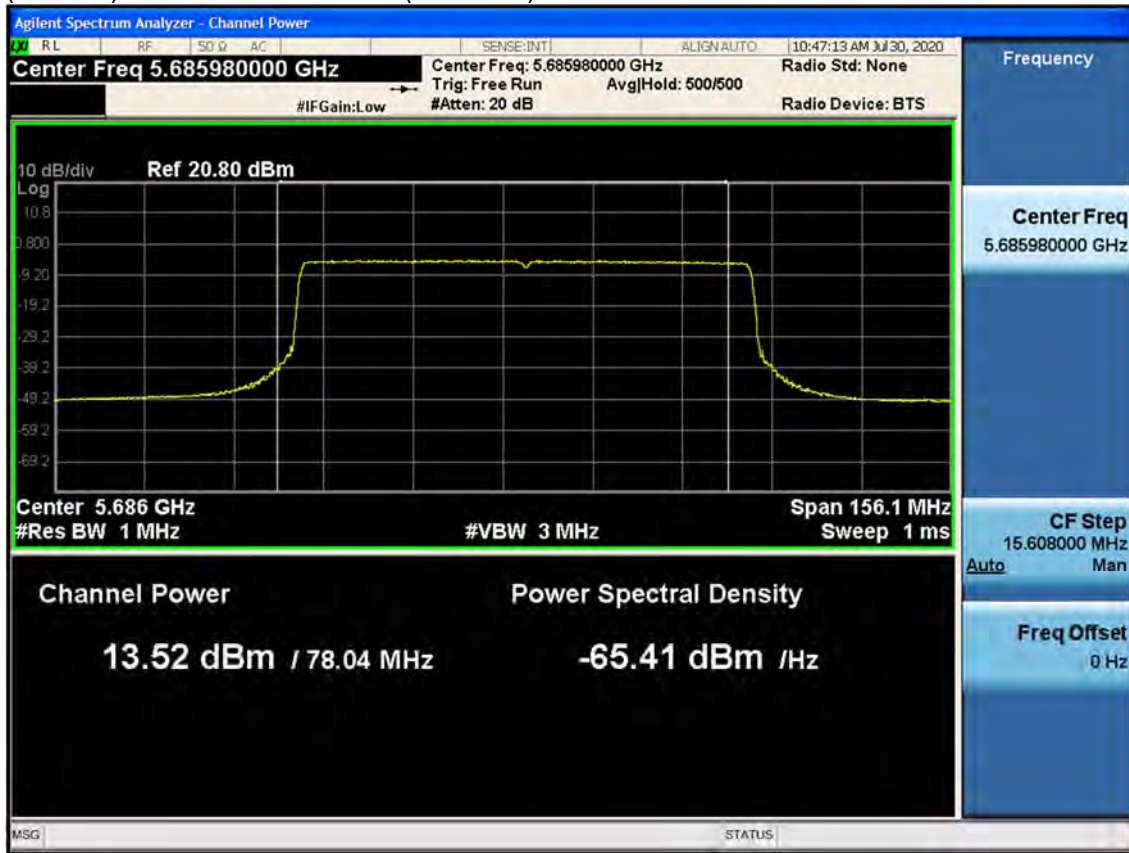


Reading Value (dBm)	Duty Cycle Factor (dB)	Total Power (dBm)
9.33	0.016	9.34

Note:

Total Power(dBm) = Reading Value(dBm) + Duty Cycle Factor(dB)

(UNII 2C) Bandwidth 80M Ch.138(5690MHz) SU

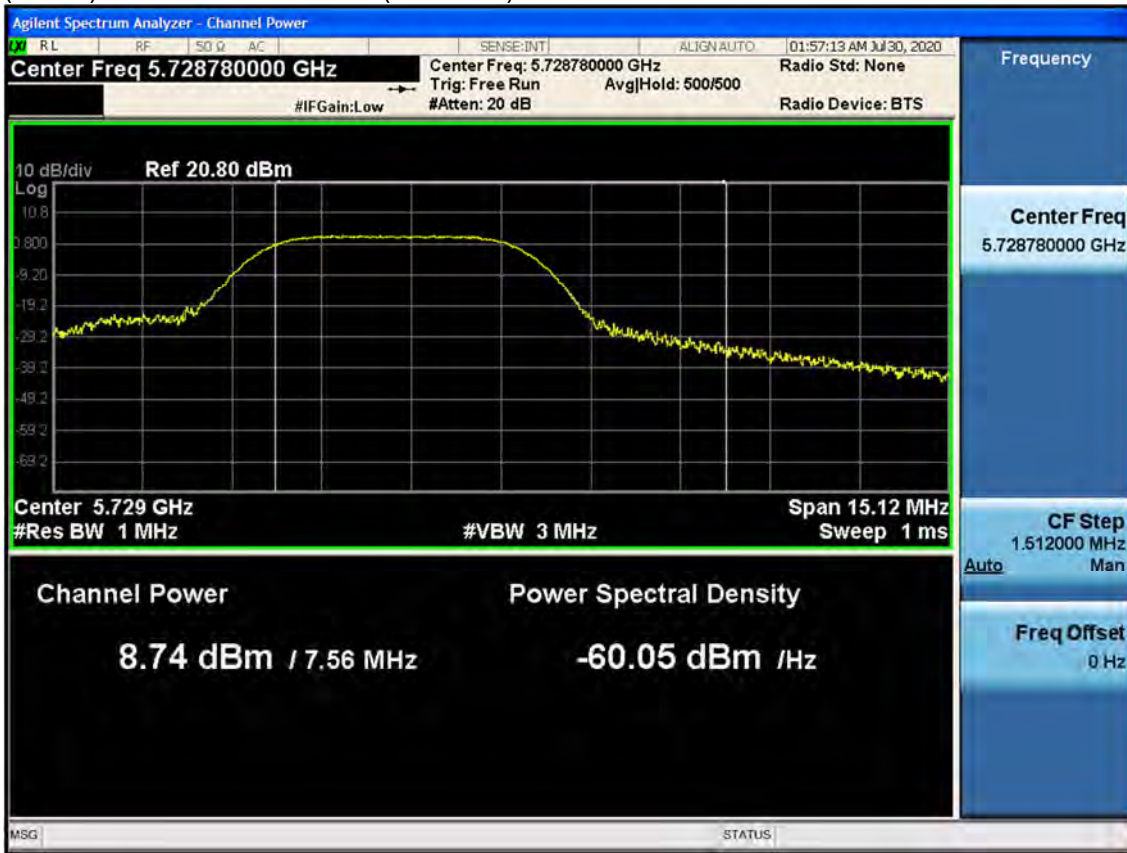


Reading Value (dBm)	Duty Cycle Factor (dB)	Total Power (dBm)
13.52	0.012	13.53

Note:

Total Power(dBm) = Reading Value(dBm) + Duty Cycle Factor(dB)

(UNII 3) Bandwidth 80M Ch.138(5690MHz) RU 52



Reading Value (dBm)	Duty Cycle Factor (dB)	Total Power (dBm)
8.74	0.013	8.75

Note:

Total Power(dBm) = Reading Value(dBm) + Duty Cycle Factor(dB)

5.3.1 Ant2

(UNII 2C) Bandwidth 20M Ch.144(5720MHz) SU



Reading Value (dBm)	Duty Cycle Factor (dB)	Total Power (dBm)
13.37	0.015	13.38

Note:

Total Power(dBm) = Reading Value(dBm) + Duty Cycle Factor(dB)

(UNII 3) Bandwidth 20M Ch.144(5720MHz) RU 40

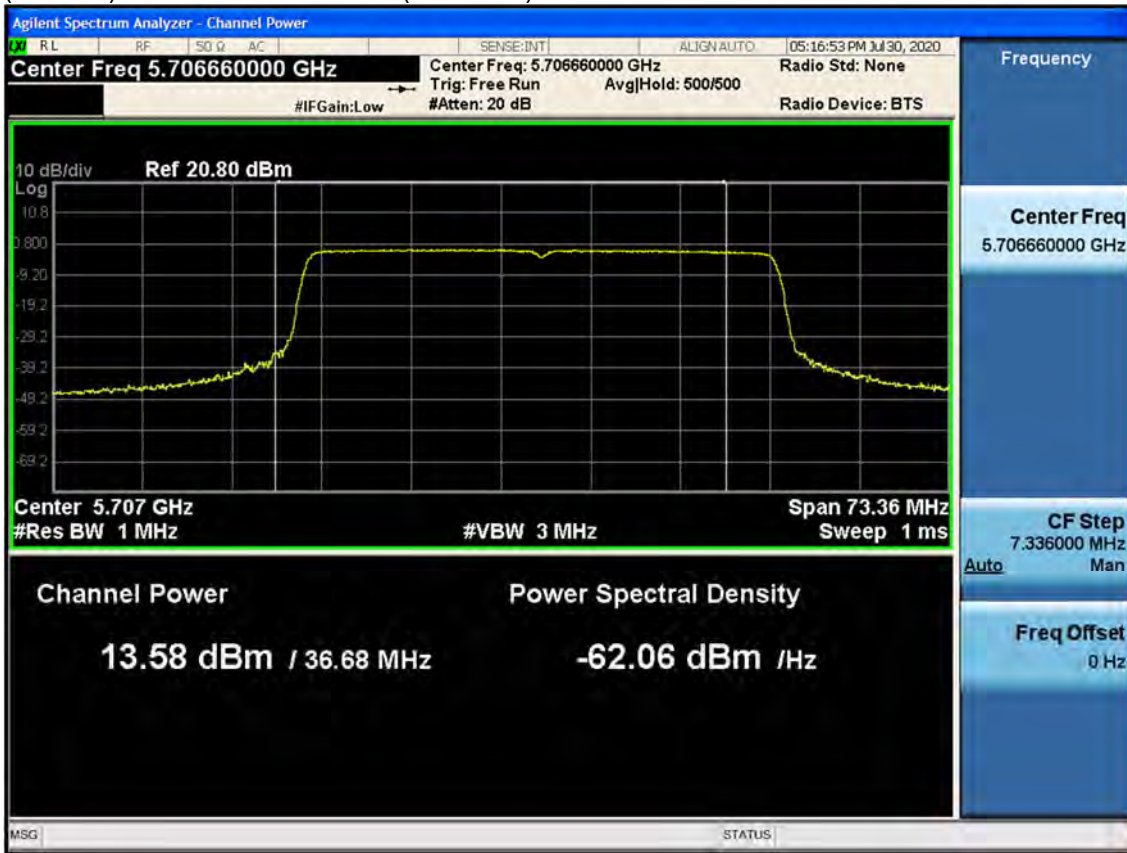


Reading Value (dBm)	Duty Cycle Factor (dB)	Total Power (dBm)
8.85	0.016	8.86

Note:

Total Power(dBm) = Reading Value(dBm) + Duty Cycle Factor(dB)

(UNII 2C) Bandwidth 40M Ch.142(5710MHz) RU 65

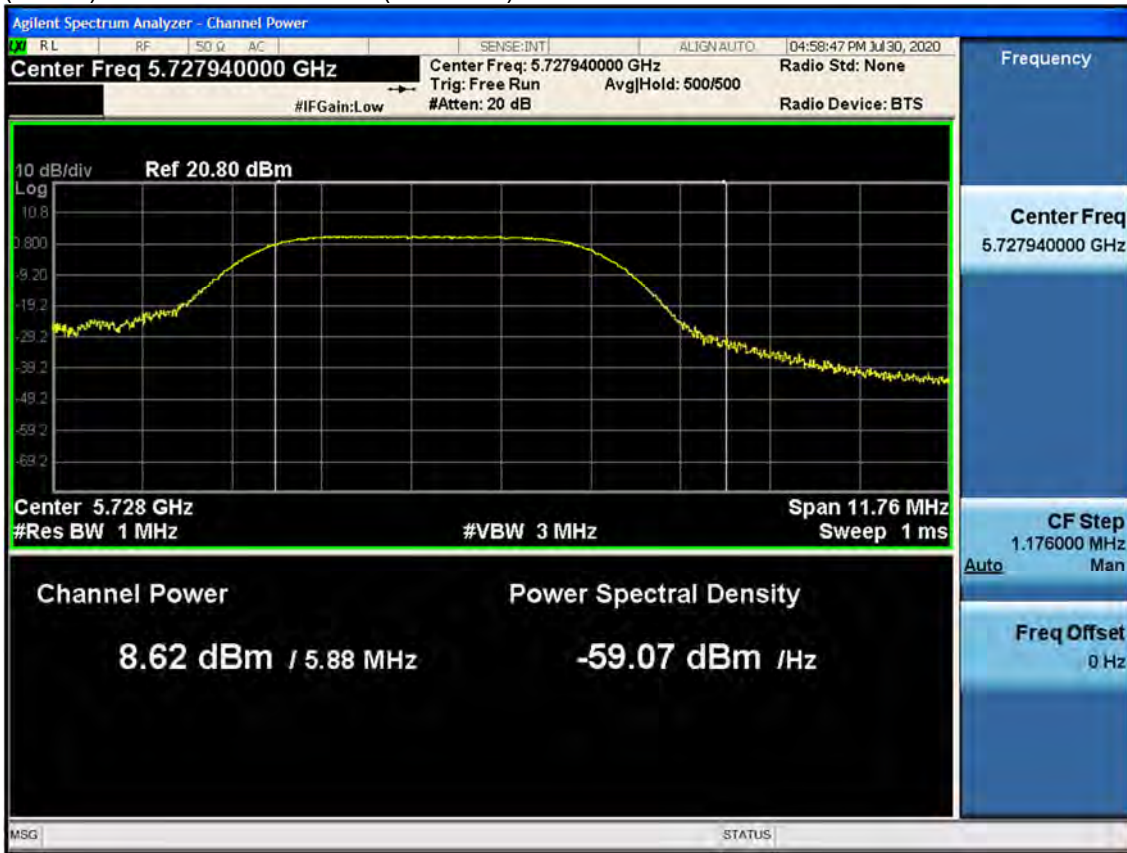


Reading Value (dBm)	Duty Cycle Factor (dB)	Total Power (dBm)
13.58	0.016	13.60

Note:

Total Power(dBm) = Reading Value(dBm) + Duty Cycle Factor(dB)

(UNII 3) Bandwidth 40M Ch.142(5710MHz) RU 44



Reading Value (dBm)	Duty Cycle Factor (dB)	Total Power (dBm)
8.62	0.016	8.64

Note:

Total Power(dBm) = Reading Value(dBm) + Duty Cycle Factor(dB)

(UNII 2C) Bandwidth 80M Ch.138(5690MHz) SU

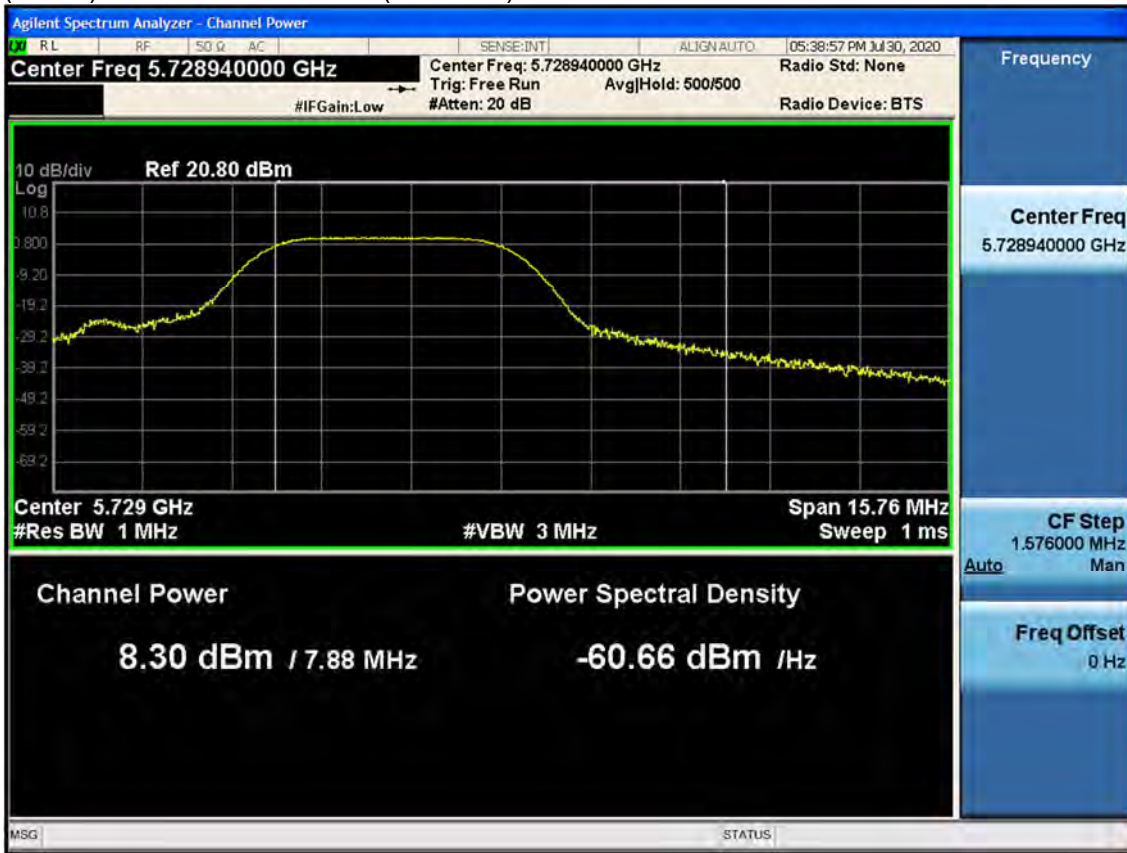


Reading Value (dBm)	Duty Cycle Factor (dB)	Total Power (dBm)
13.12	0.012	13.14

Note:

Total Power(dBm) = Reading Value(dBm) + Duty Cycle Factor(dB)

(UNII 3) Bandwidth 80M Ch.138(5690MHz) RU 52



Reading Value (dBm)	Duty Cycle Factor (dB)	Total Power (dBm)
8.30	0.013	8.31

Note:

Total Power(dBm) = Reading Value(dBm) + Duty Cycle Factor(dB)

5.4 Power Spectral Density

Note:

1. In order to simplify the report, attached plots were only channel of highest PSD.

5.4.1 Ant1

(UNII 2C) Bandwidth 20M Ch.144(5720MHz) RU 0



Reading Value (dBm)	Duty Cycle Factor (dB)	Total PSD (dBm)
6.004	0.015	6.019

Note:

Total PSD (dBm) = Reading Value(dBm) + Duty Cycle Factor(dB)

(UNII 3) Bandwidth 20M Ch.144(5720MHz) RU 7



Reading Value (dBm)	Duty Cycle Factor (dB)	Total PSD (dBm)
3.364	0.015	3.379

Note:

Total PSD (dBm) = Reading Value(dBm) + Duty Cycle Factor(dB)

(UNII 2C) Bandwidth 40M Ch.142(5710MHz) RU 9

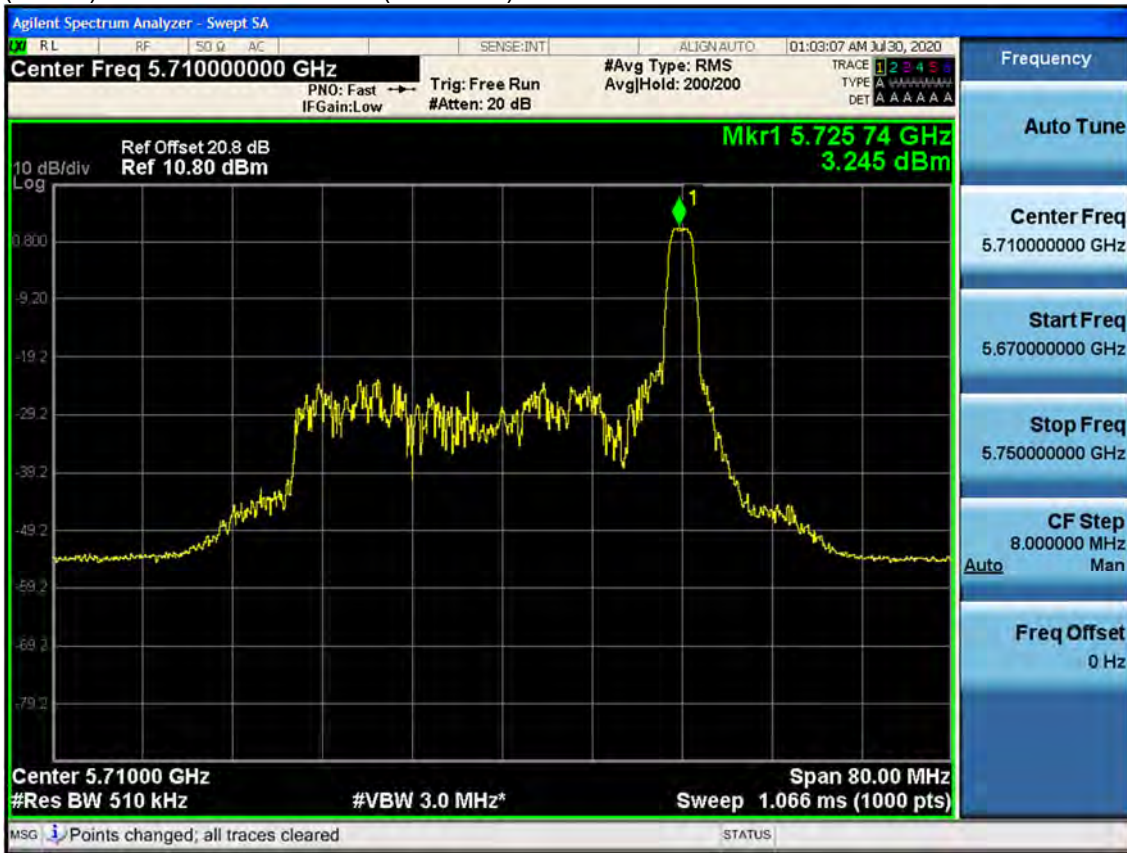


Reading Value (dBm)	Duty Cycle Factor (dB)	Total PSD (dBm)
6.404	0.016	6.420

Note:

Total PSD (dBm) = Reading Value(dBm) + Duty Cycle Factor(dB)

(UNII 3) Bandwidth 40M Ch.142(5710MHz) RU 16

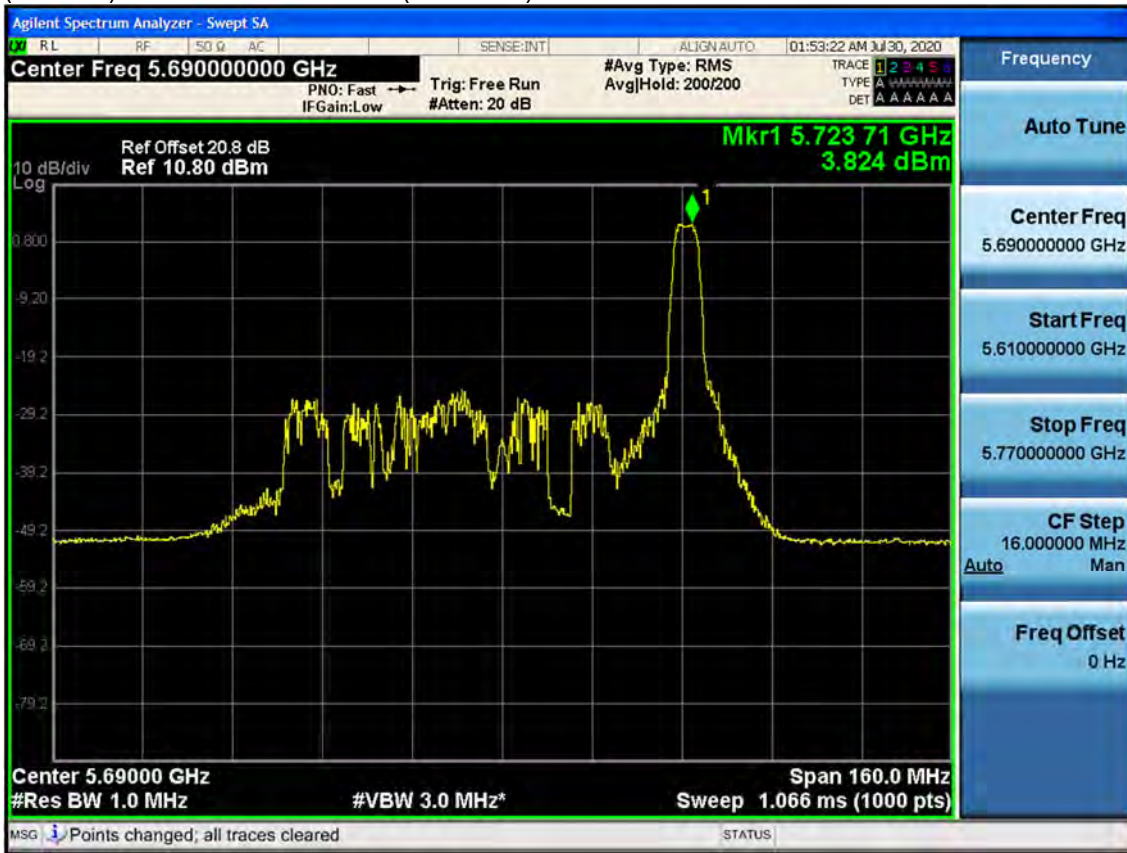


Reading Value (dBm)	Duty Cycle Factor (dB)	Total PSD (dBm)
3.245	0.016	3.261

Note:

Total PSD (dBm) = Reading Value(dBm) + Duty Cycle Factor(dB)

(UNII 2C) Bandwidth 80M Ch.138(5690MHz) RU 51



Reading Value (dBm)	Duty Cycle Factor (dB)	Total PSD (dBm)
3.824	0.013	3.837

Note:

Total PSD (dBm) = Reading Value(dBm) + Duty Cycle Factor(dB)

(UNII 3) Bandwidth 80M Ch.138(5690MHz) RU 35



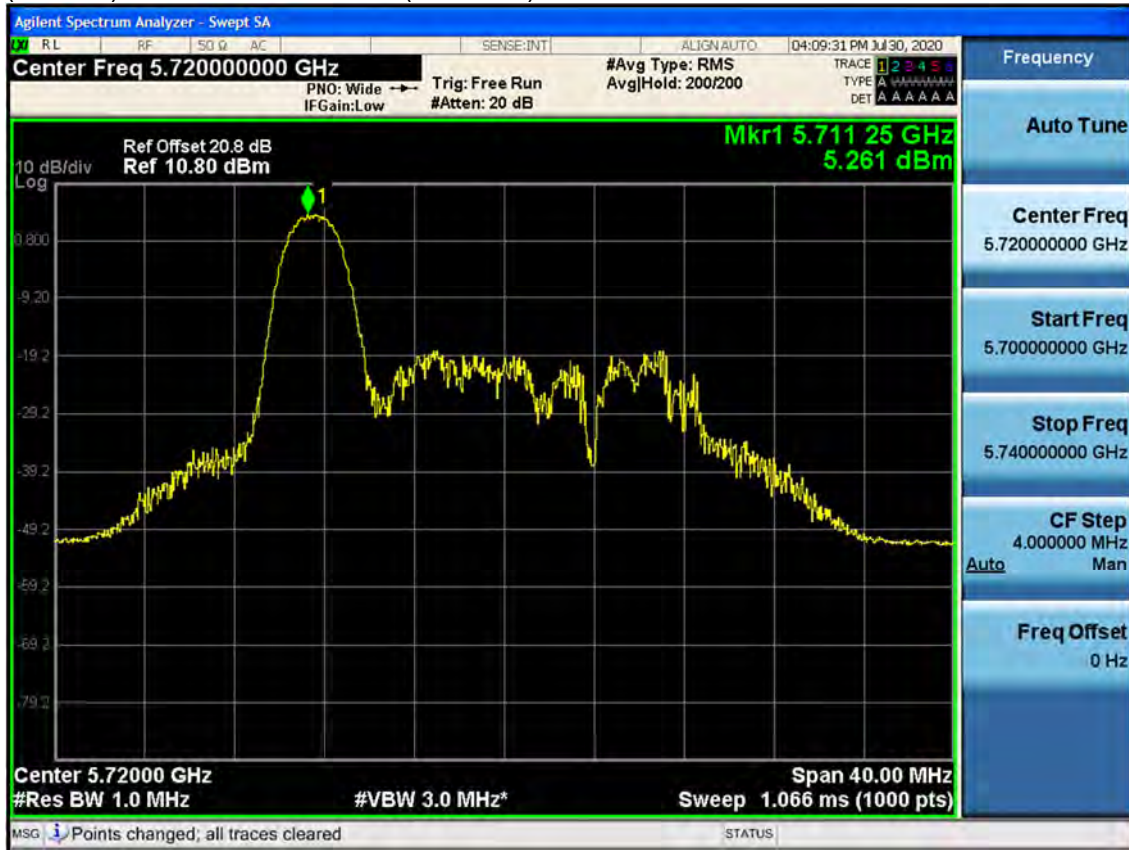
Reading Value (dBm)	Duty Cycle Factor (dB)	Total PSD (dBm)
2.294	0.013	2.307

Note:

Total PSD (dBm) = Reading Value(dBm) + Duty Cycle Factor(dB)

5.4.2 Ant2

(UNII 2C) Bandwidth 20M Ch.144(5720MHz) RU 0



Reading Value (dBm)	Duty Cycle Factor (dB)	Total PSD (dBm)
5.261	0.015	5.276

Note:

Total PSD (dBm) = Reading Value(dBm) + Duty Cycle Factor(dB)

(UNII 3) Bandwidth 20M Ch.144(5720MHz) RU 7



Reading Value (dBm)	Duty Cycle Factor (dB)	Total PSD (dBm)
2.484	0.015	2.499

Note:

Total PSD (dBm) = Reading Value(dBm) + Duty Cycle Factor(dB)

(UNII 2C) Bandwidth 40M Ch.142(5710MHz) RU 9



Reading Value (dBm)	Duty Cycle Factor (dB)	Total PSD (dBm)
5.835	0.016	5.851

Note:

Total PSD (dBm) = Reading Value(dBm) + Duty Cycle Factor(dB)

(UNII 3) Bandwidth 40M Ch.142(5710MHz) RU 17



Reading Value (dBm)	Duty Cycle Factor (dB)	Total PSD (dBm)
2.606	0.016	2.622

Note:

Total PSD (dBm) = Reading Value(dBm) + Duty Cycle Factor(dB)

(UNII 2C) Bandwidth 80M Ch.138(5690MHz) RU 51



Reading Value (dBm)	Duty Cycle Factor (dB)	Total PSD (dBm)
3.654	0.013	3.667

Note:

Total PSD (dBm) = Reading Value(dBm) + Duty Cycle Factor(dB)

(UNII 3) Bandwidth 80M Ch.138(5690MHz) RU 35



Reading Value (dBm)	Duty Cycle Factor (dB)	Total PSD (dBm)
1.994	0.013	2.007

Note:

Total PSD (dBm) = Reading Value(dBm) + Duty Cycle Factor(dB)