



**HCT Co., Ltd.**

74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, 17383 KOREA  
Tel. +82 31 634 6300 Fax. +82 31 645 6401

Appendix B:  
802.11ax  
Test Plot

FCC ID  
A3LSMN980F

**REVISION HISTORY**

The revision history for this document is shown in table.

Revision No.	Date of Issue	Description
0	June 30, 2020	Initial Release

**Note:**

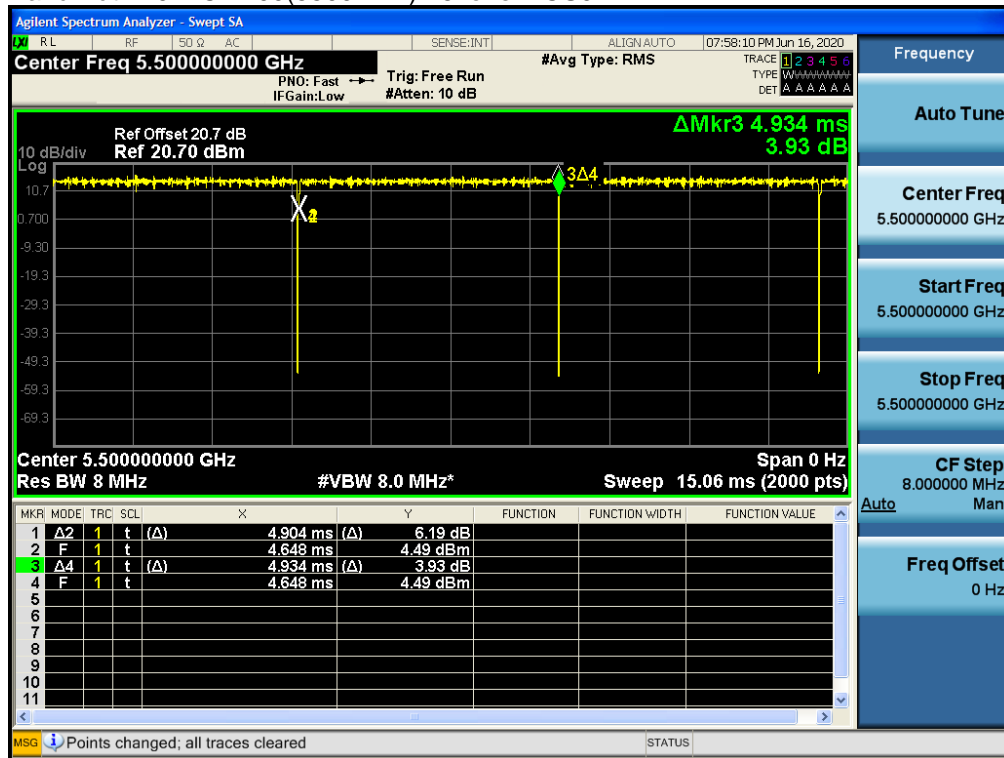
In order to simplify the report, attached plots were only the most lowest datarate.

# 1. Duty Cycle

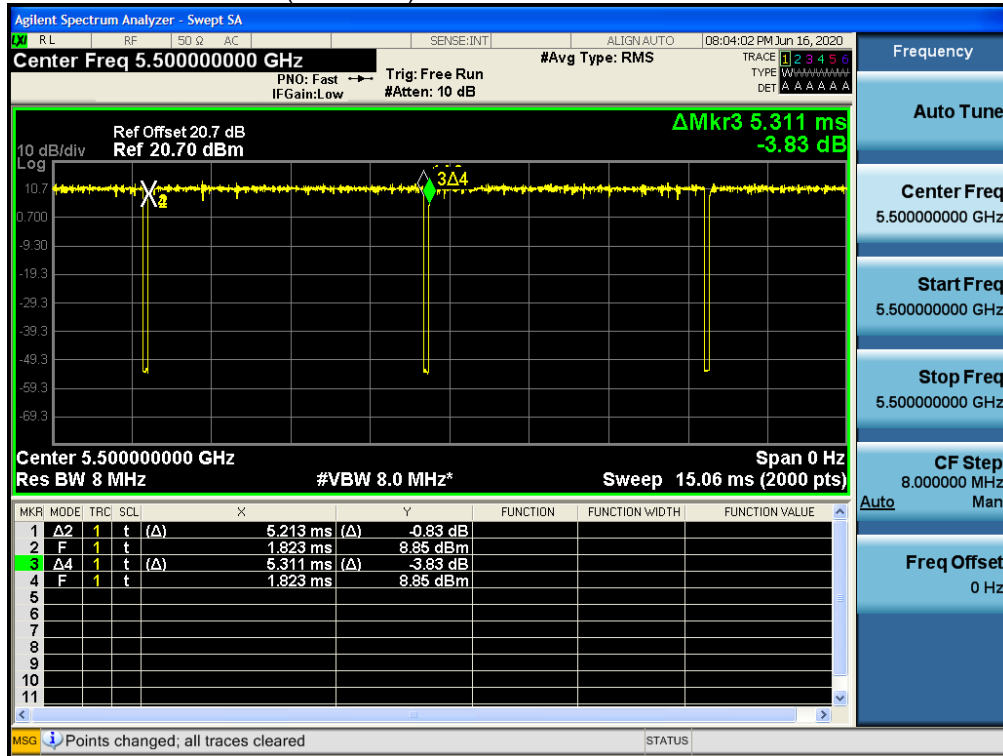
**Note:**

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

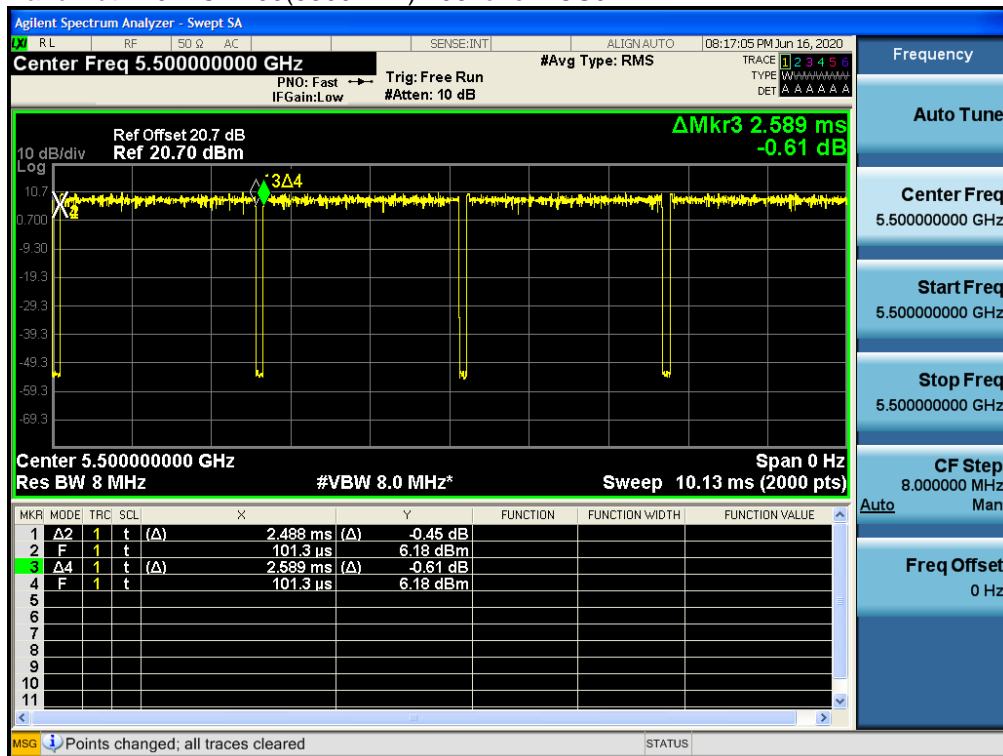
Bandwidth 20M Ch.100(5500MHz) 26Tone MCS0



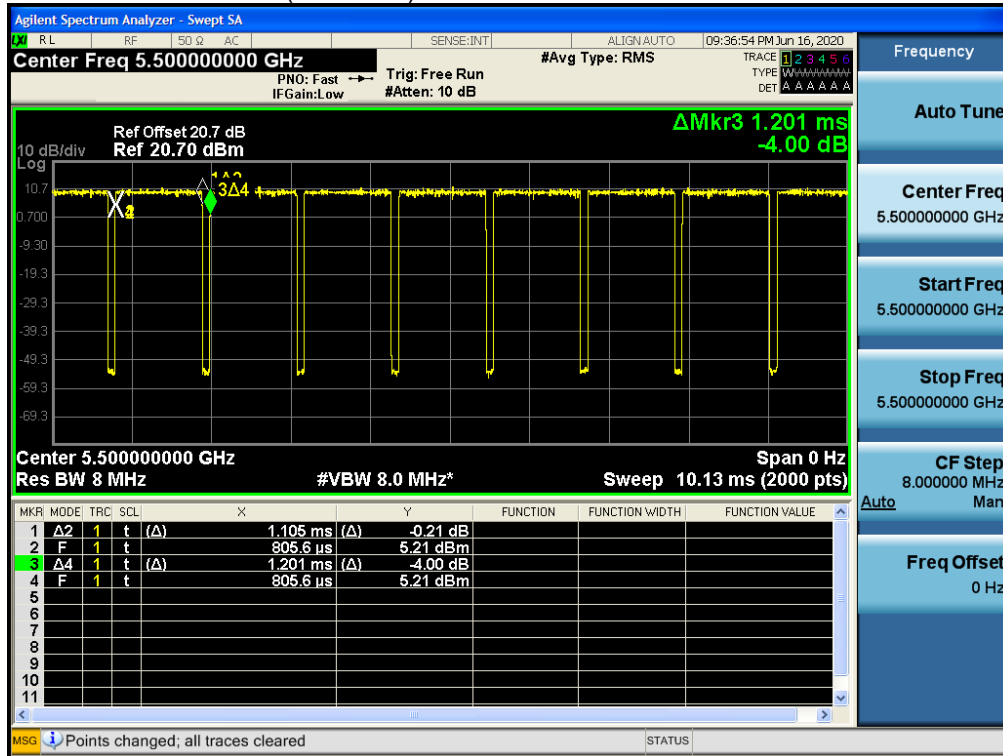
Bandwidth 20M Ch.100(5500MHz) 52Tone MCS0



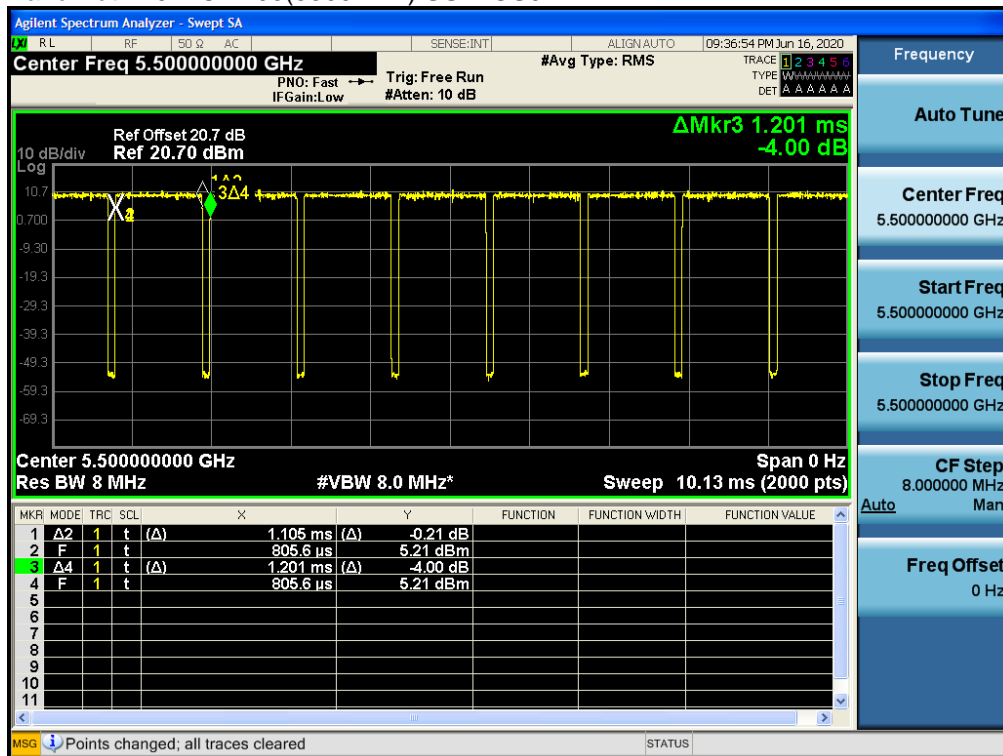
Bandwidth 20M Ch.100(5500MHz) 106Tone MCS0



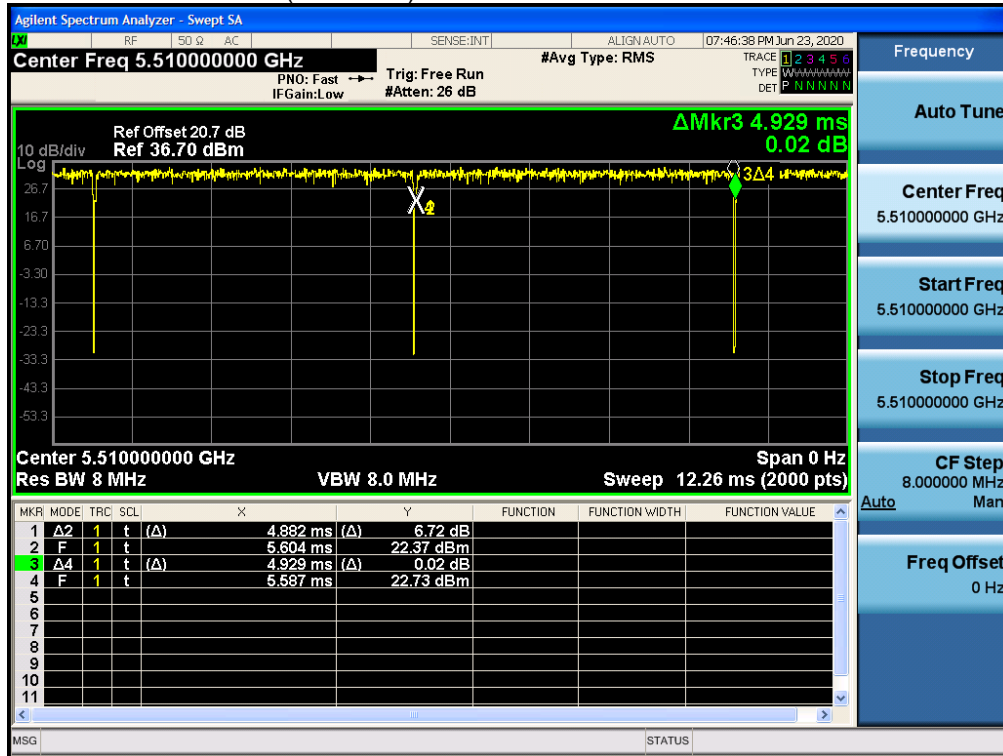
Bandwidth 20M Ch.100(5500MHz) 242Tone MCS0



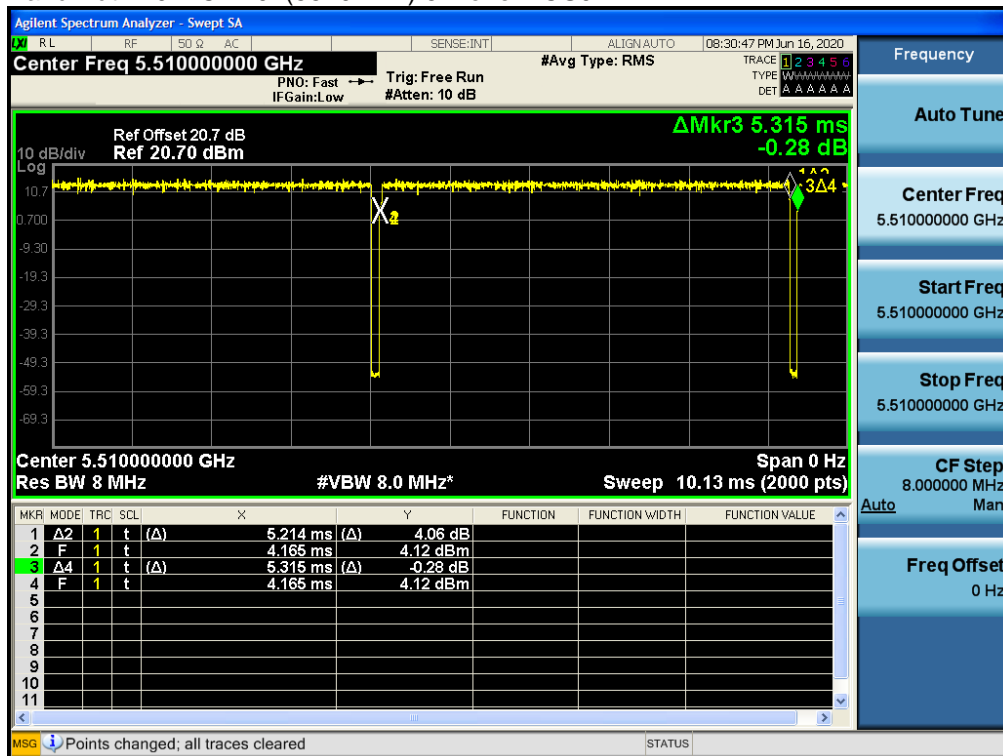
Bandwidth 20M Ch.100(5500MHz) SU MCS0



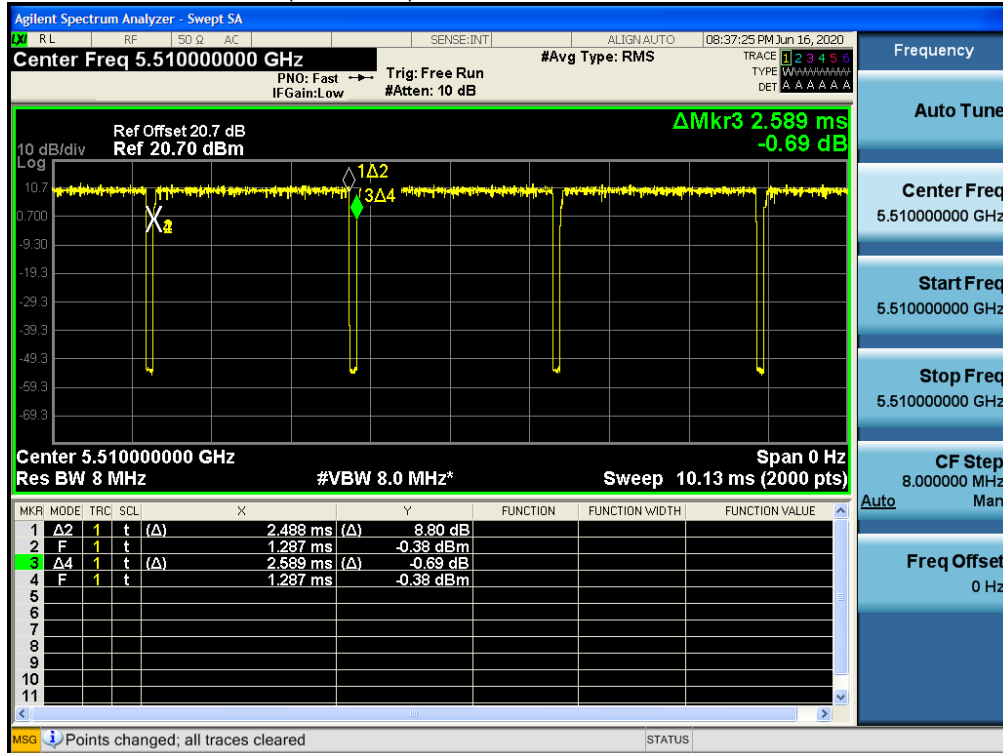
Bandwidth 40M Ch.102(5510MHz) 26Tone MCS0



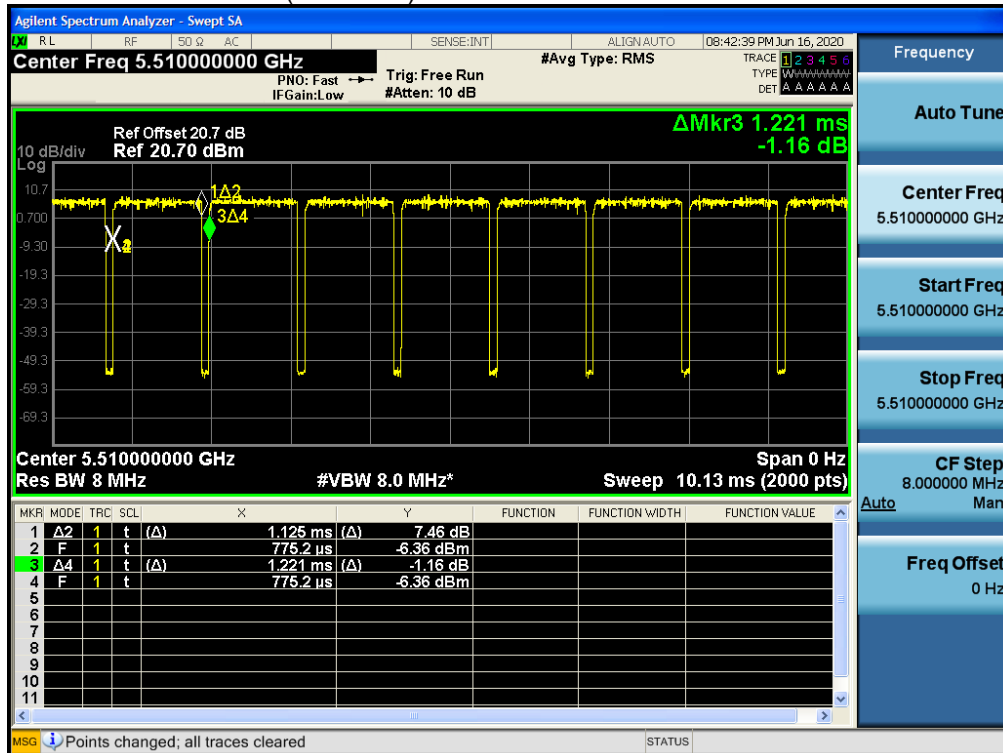
Bandwidth 40M Ch.102(5510MHz) 52Tone MCS0



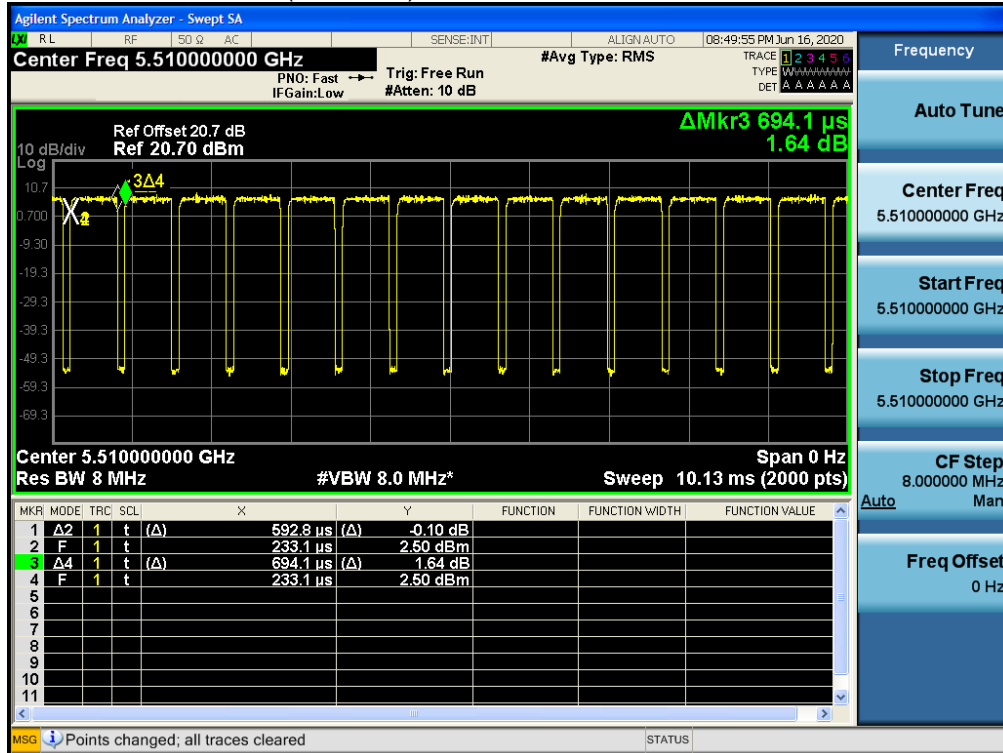
Bandwidth 40M Ch.102(5510MHz) 106Tone MCS0



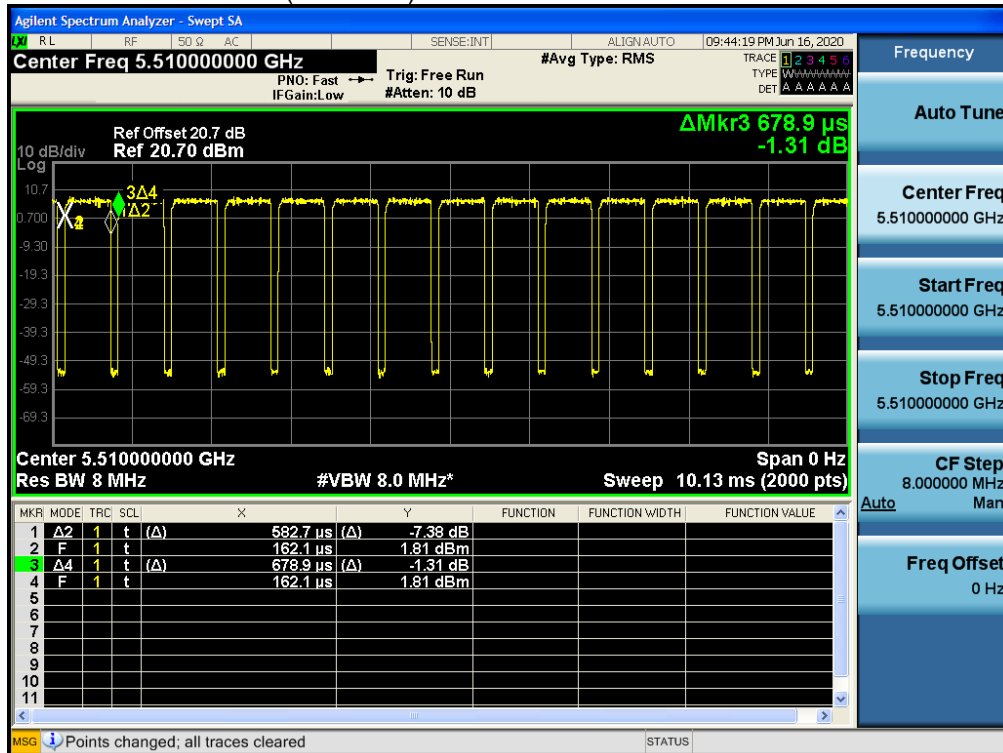
Bandwidth 40M Ch.102(5510MHz) 242Tone MCS0



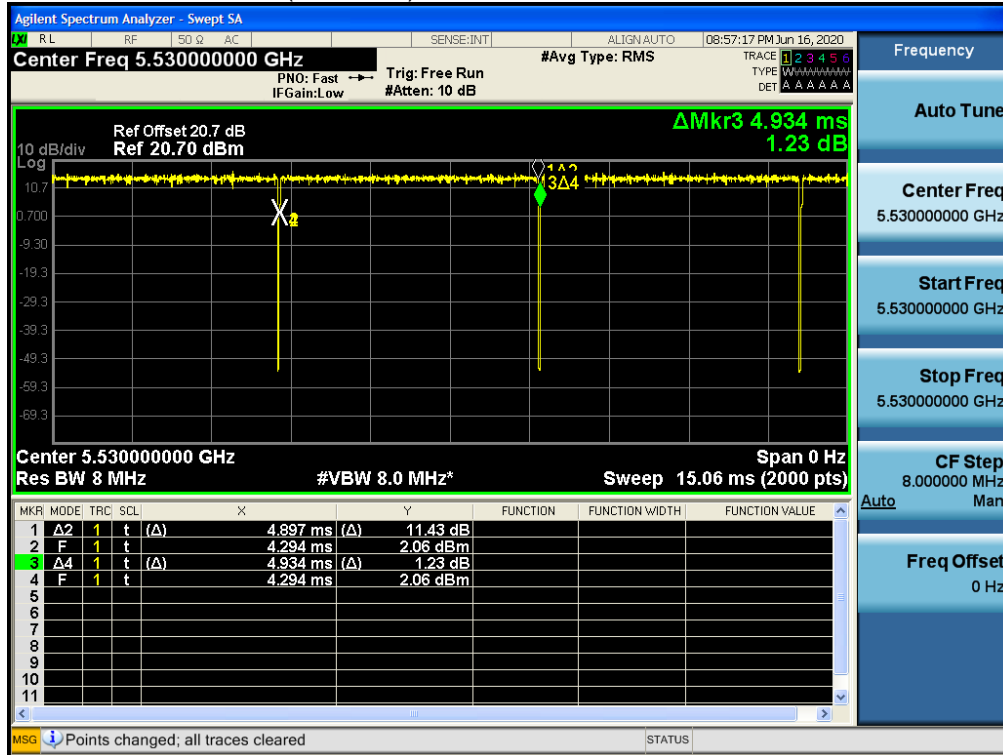
Bandwidth 40M Ch.102(5510MHz) 484Tone MCS0



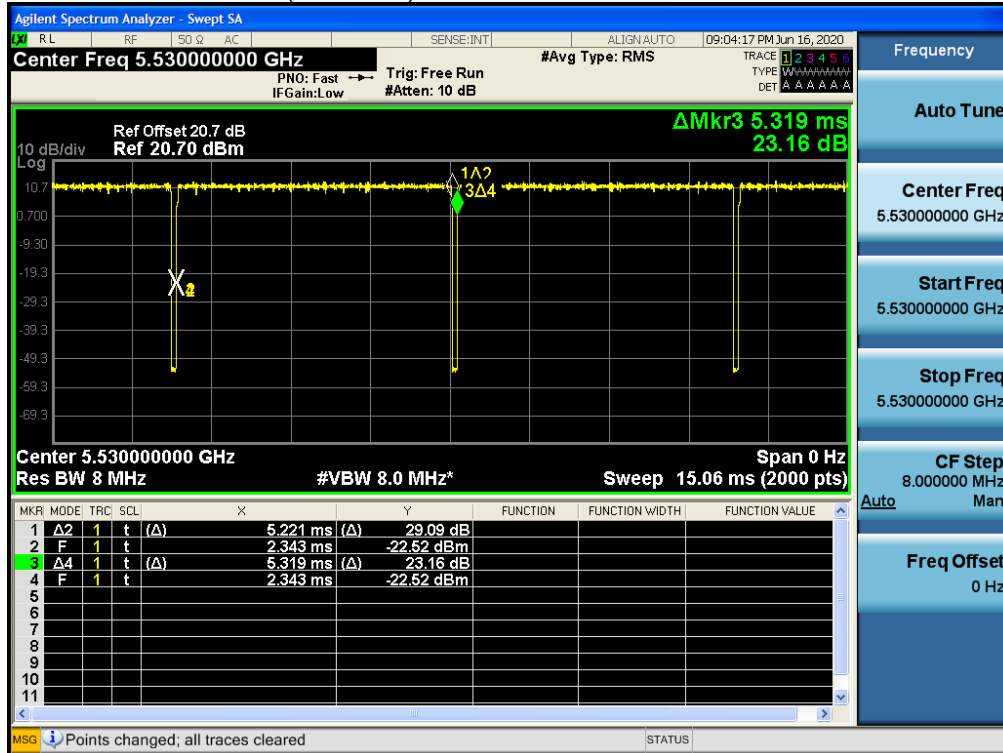
Bandwidth 40M Ch.102(5510MHz) SU MCS0



Bandwidth 80M Ch.106(5530MHz) 26Tone MCS0

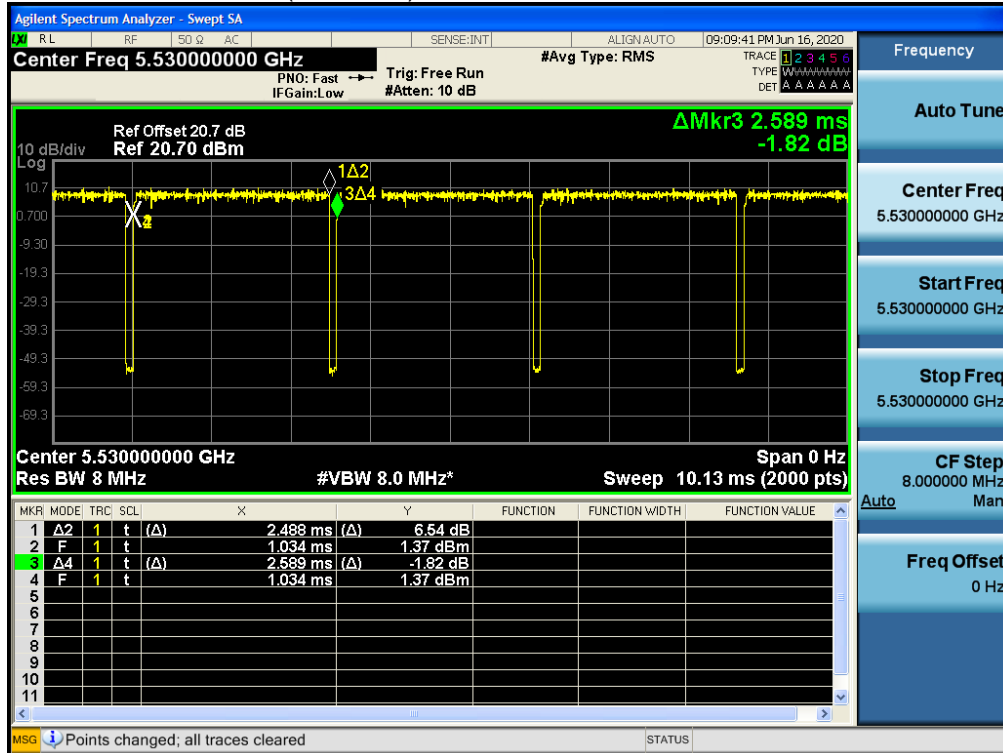


Bandwidth 80M Ch.106(5530MHz) 52Tone MCS0

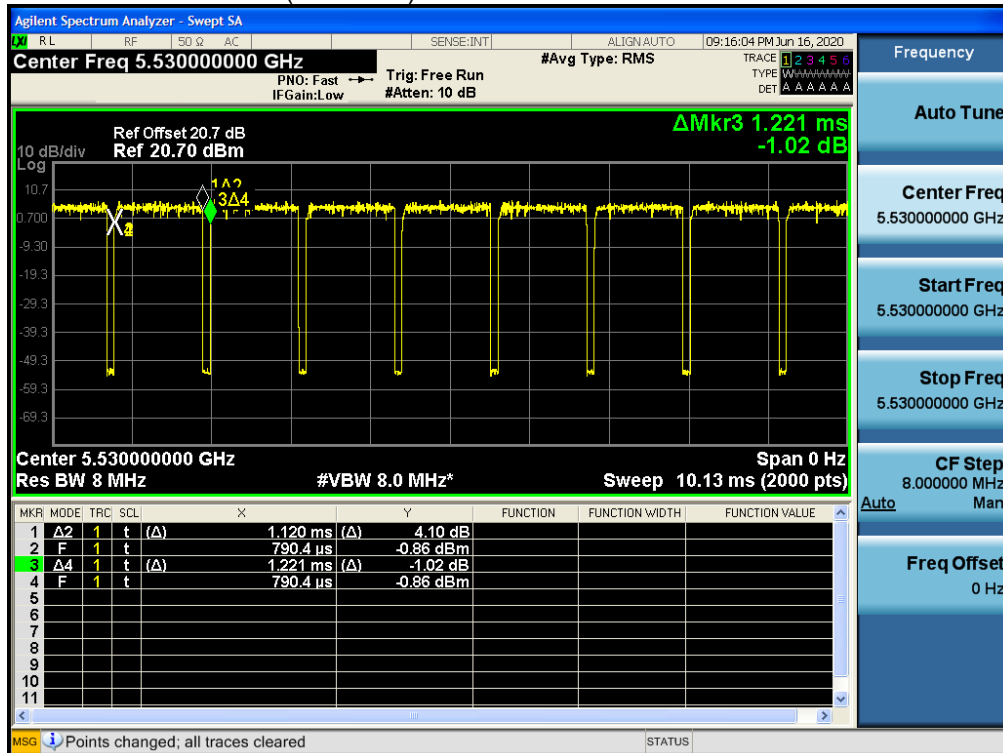




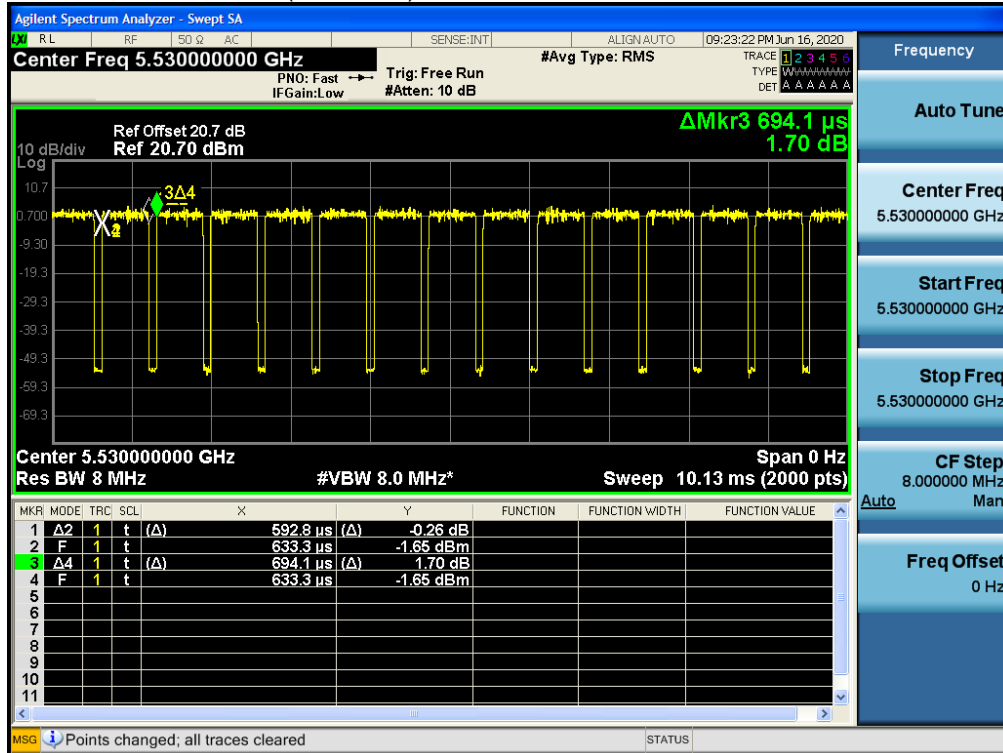
Bandwidth 80M Ch.106(5530MHz) 106Tone MCS0



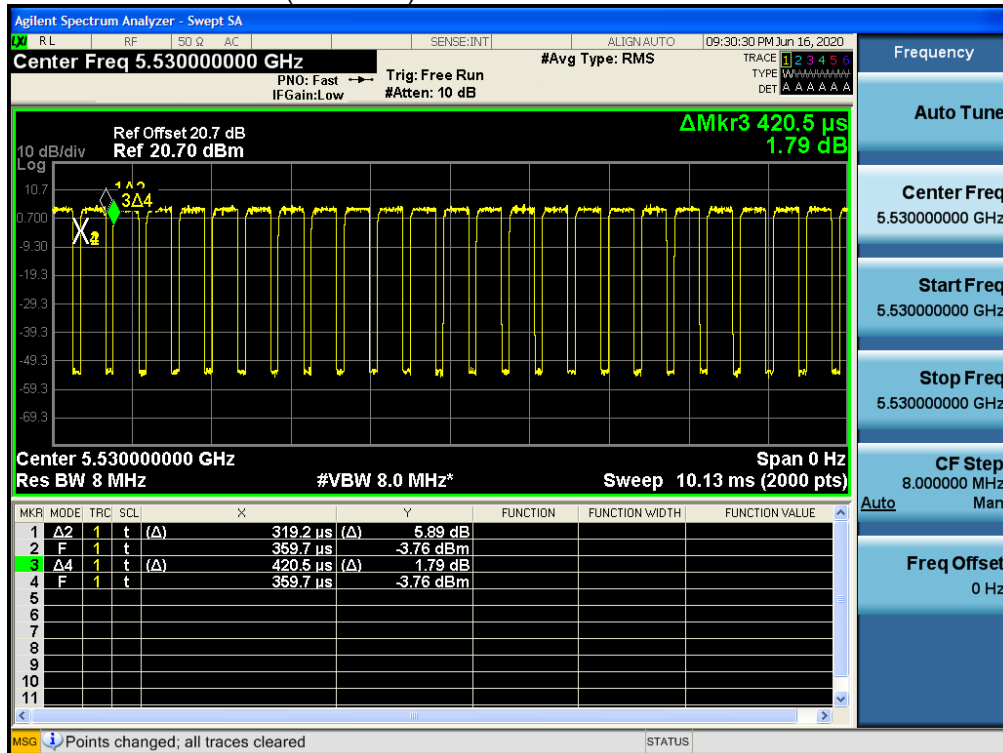
Bandwidth 80M Ch.106(5530MHz) 242Tone MCS0



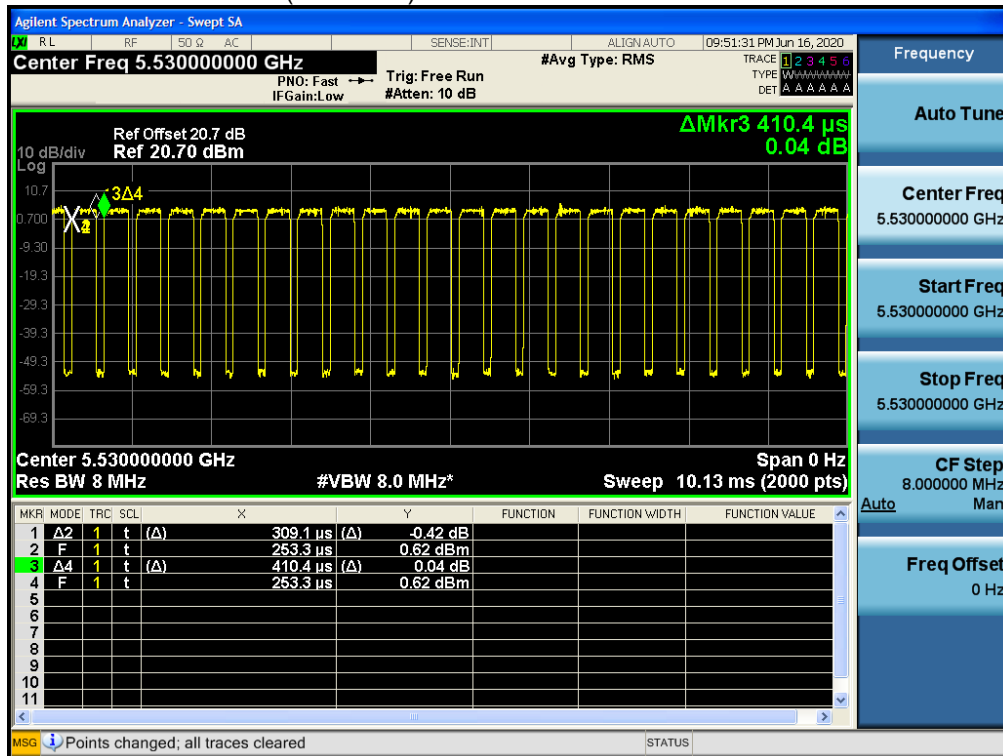
Bandwidth 80M Ch.106(5530MHz) 484Tone MCS0



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



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

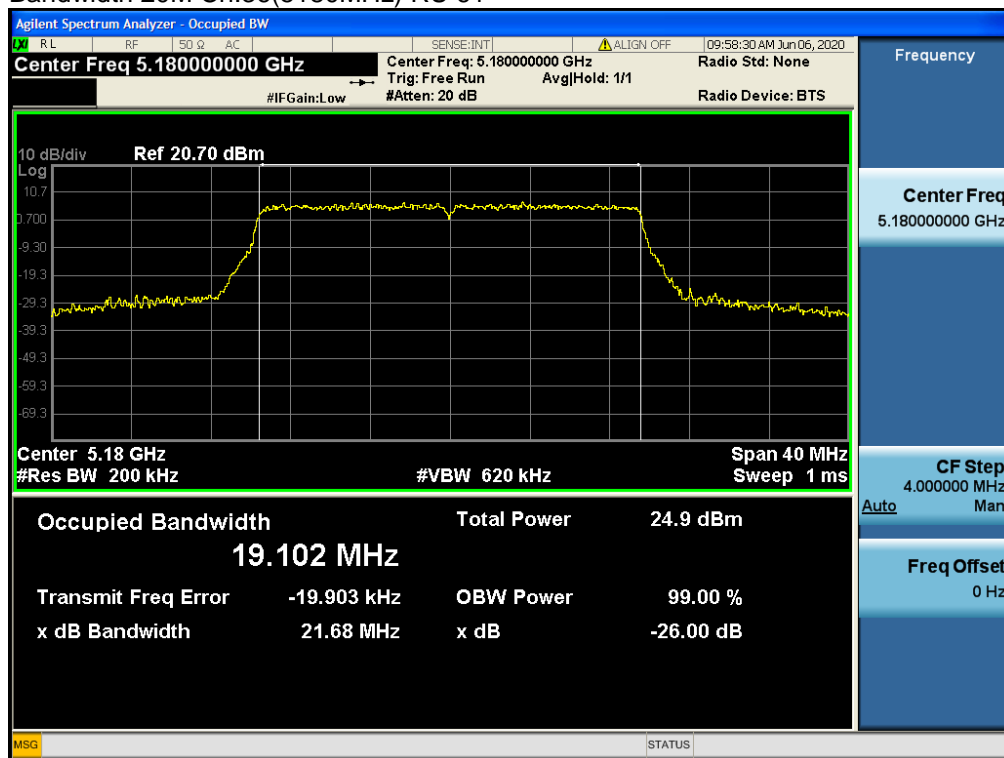


## 2. 26dB Bandwidth

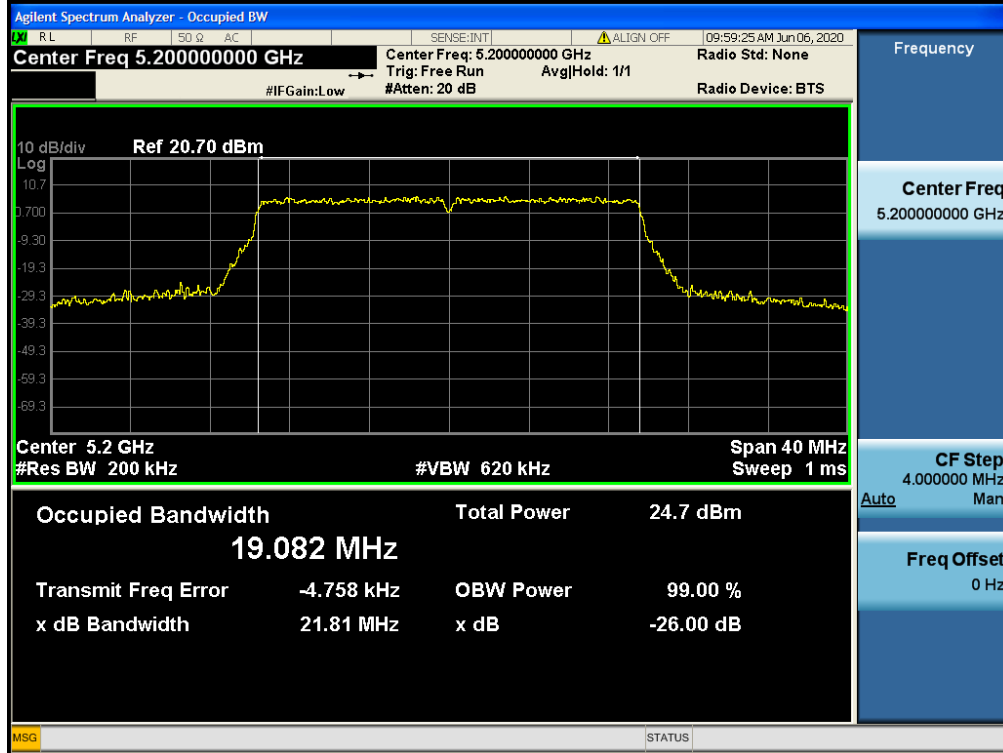
**Note:**

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

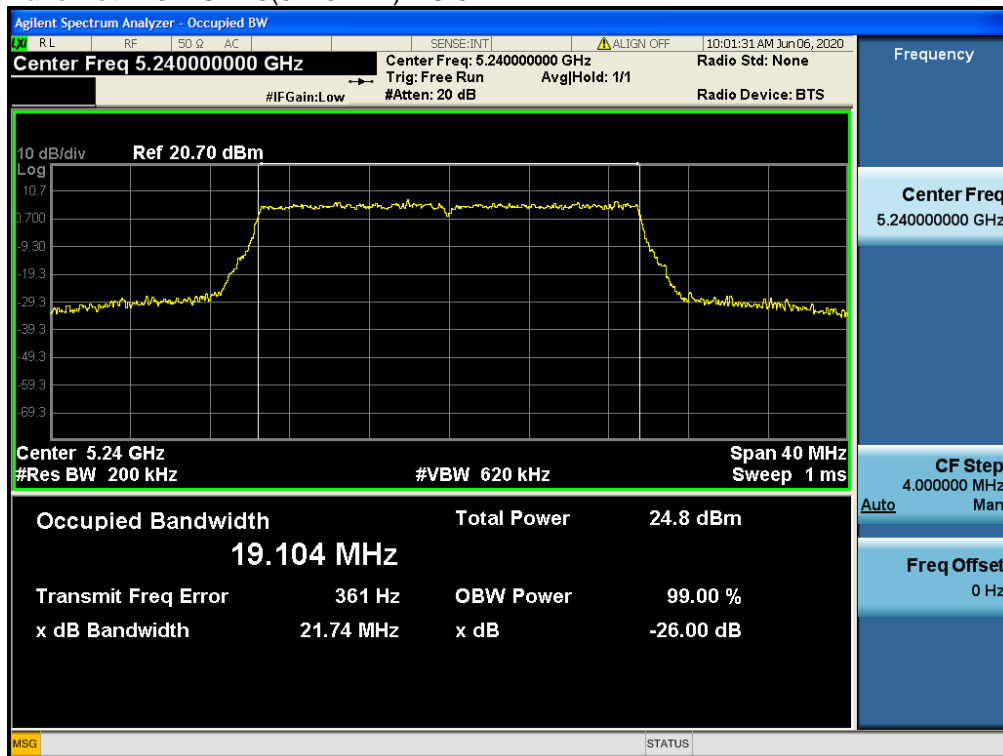
Bandwidth 20M Ch.36(5180MHz) RU 61



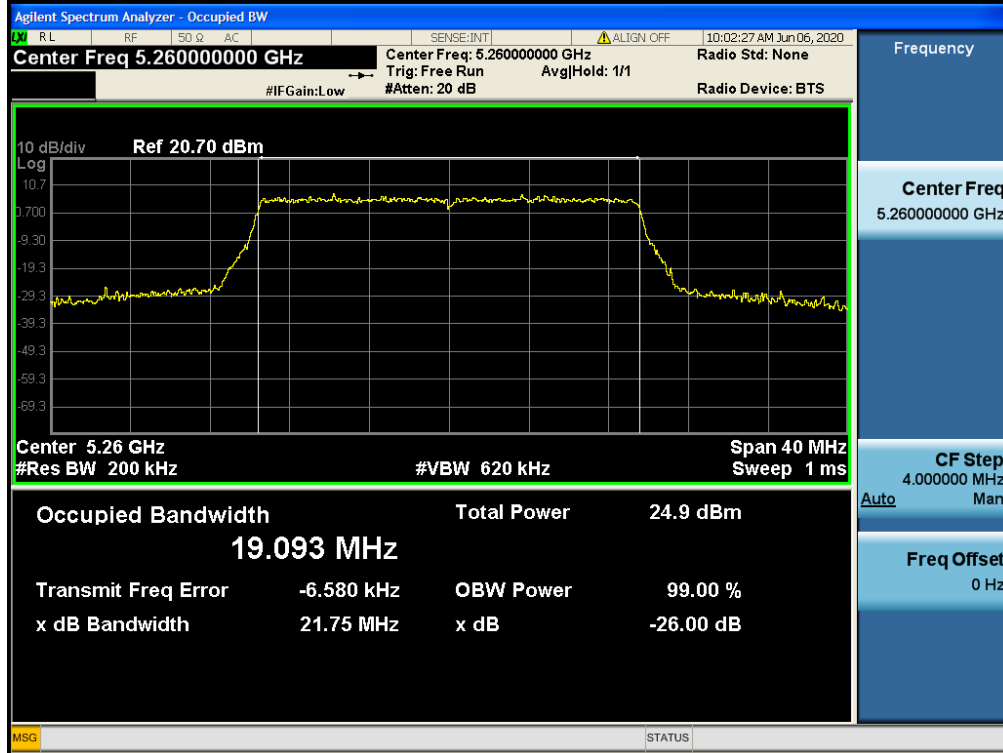
Bandwidth 20M Ch.40(5200MHz) RU 61



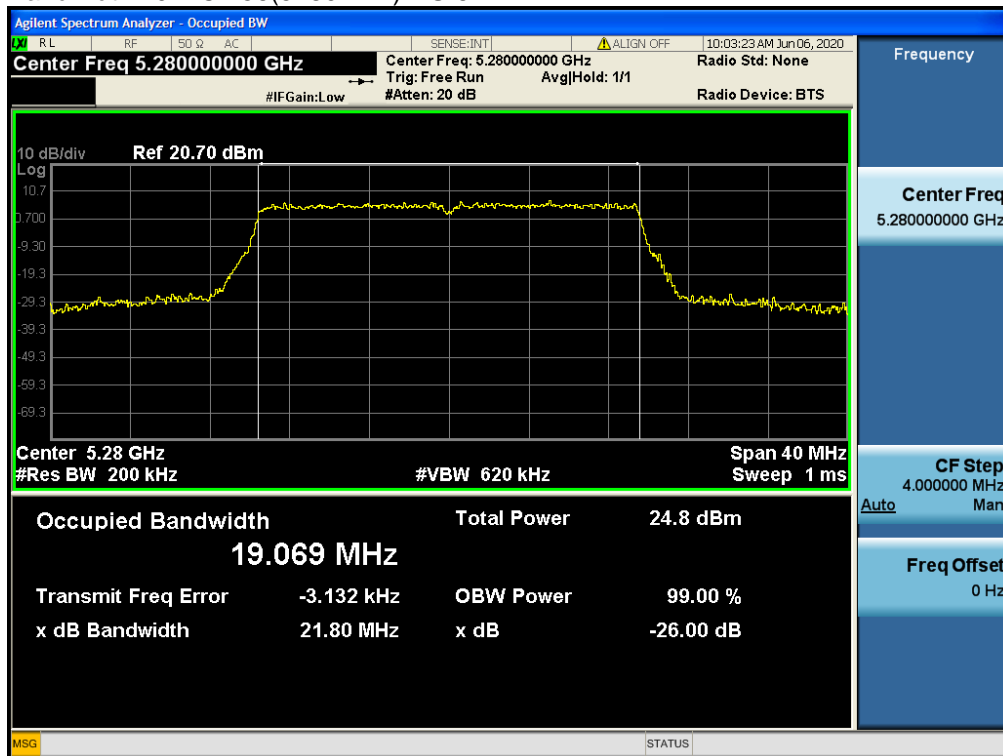
Bandwidth 20M Ch.48(5240MHz) RU 61



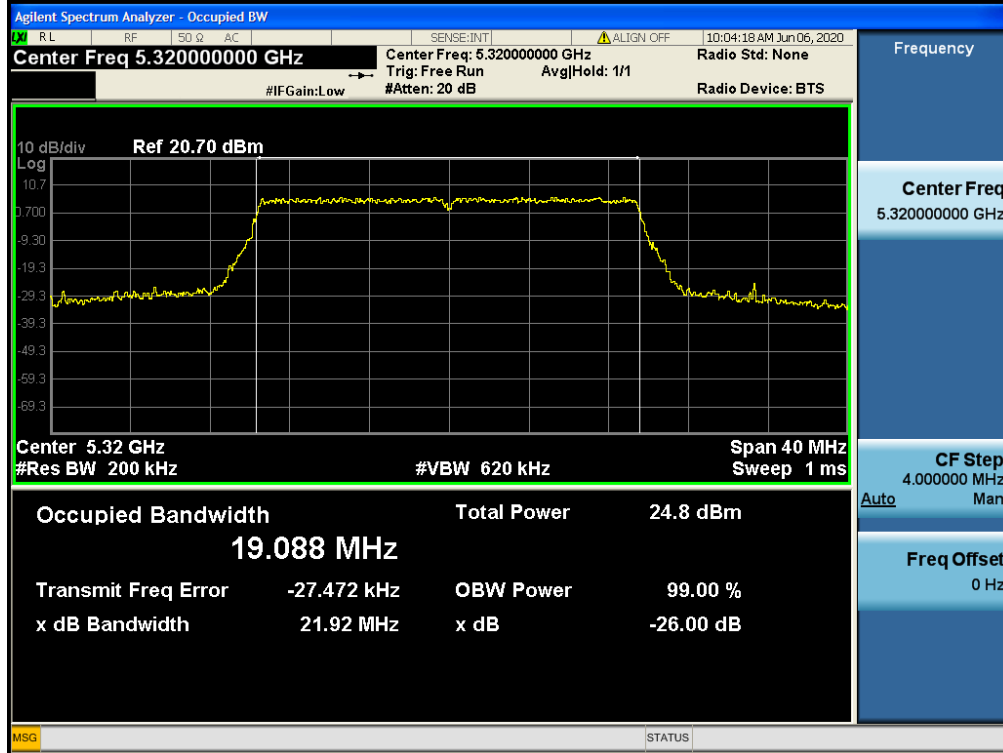
Bandwidth 20M Ch.52(5260MHz) RU 61



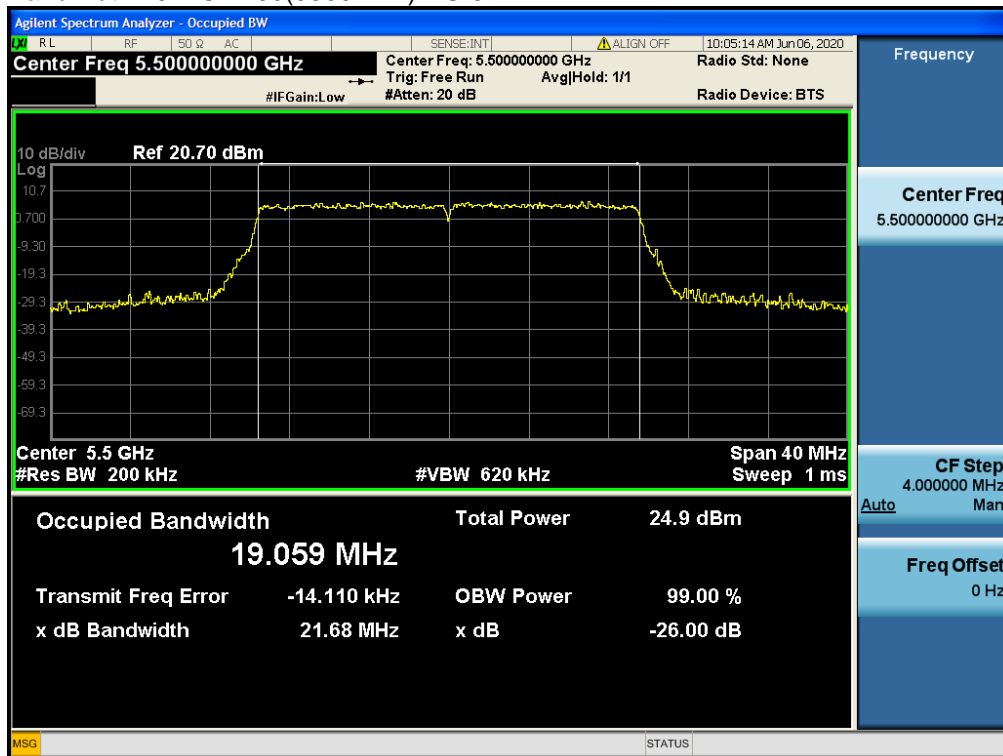
Bandwidth 20M Ch.56(5280MHz) RU 61



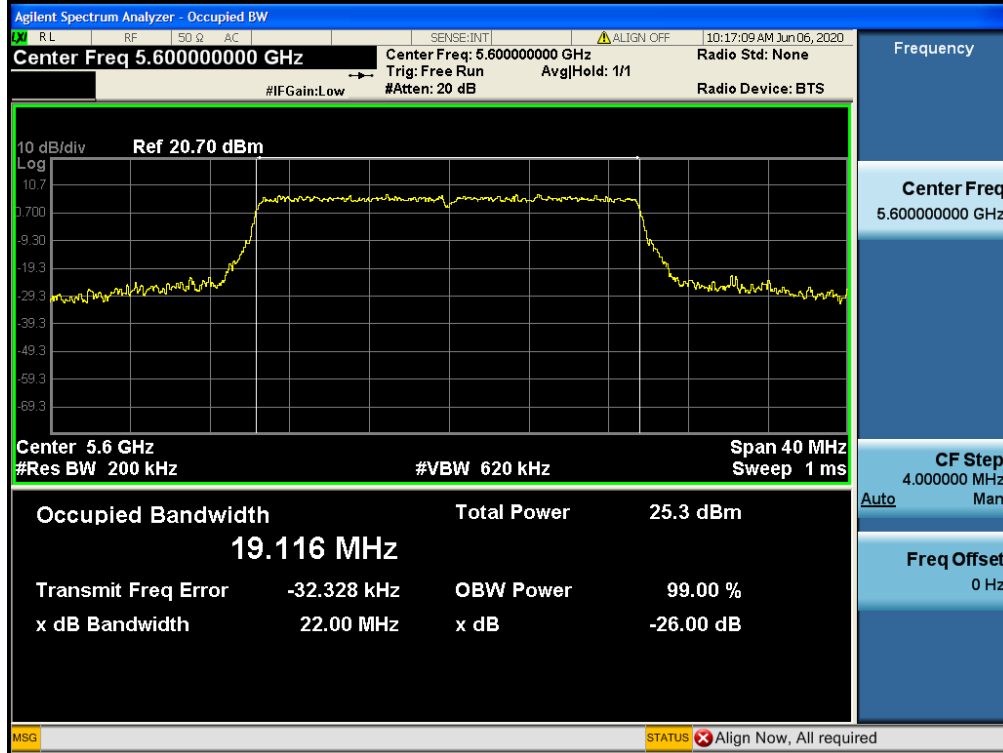
Bandwidth 20M Ch.64(5320MHz) RU 61



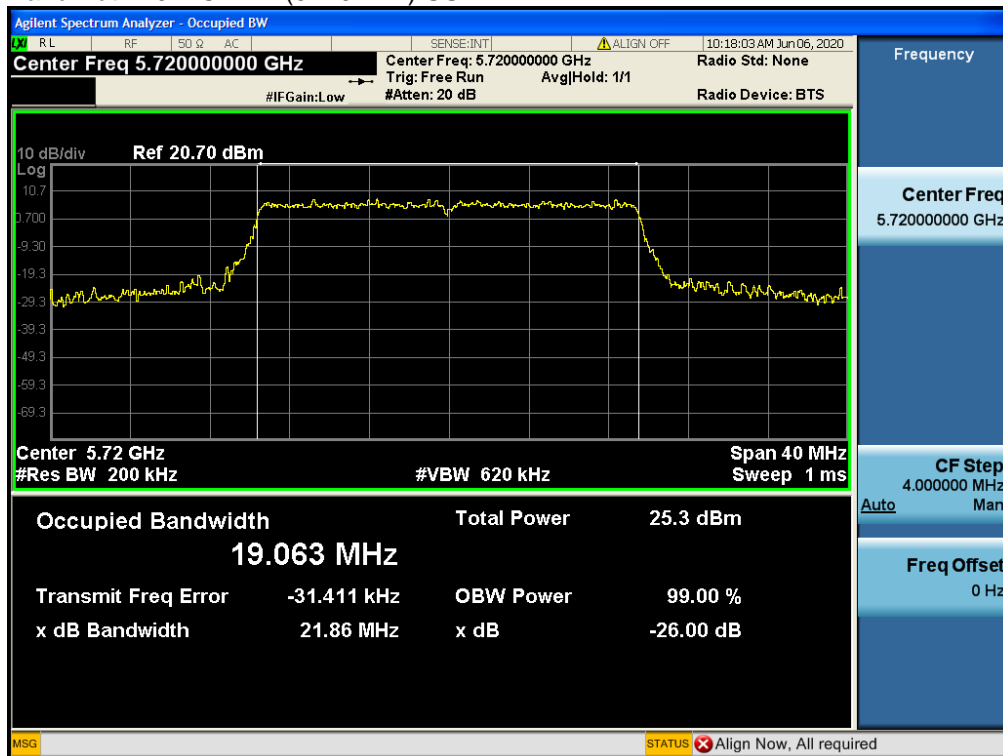
Bandwidth 20M Ch.100(5500MHz) RU 61



Bandwidth 20M Ch.120(5600MHz) SU

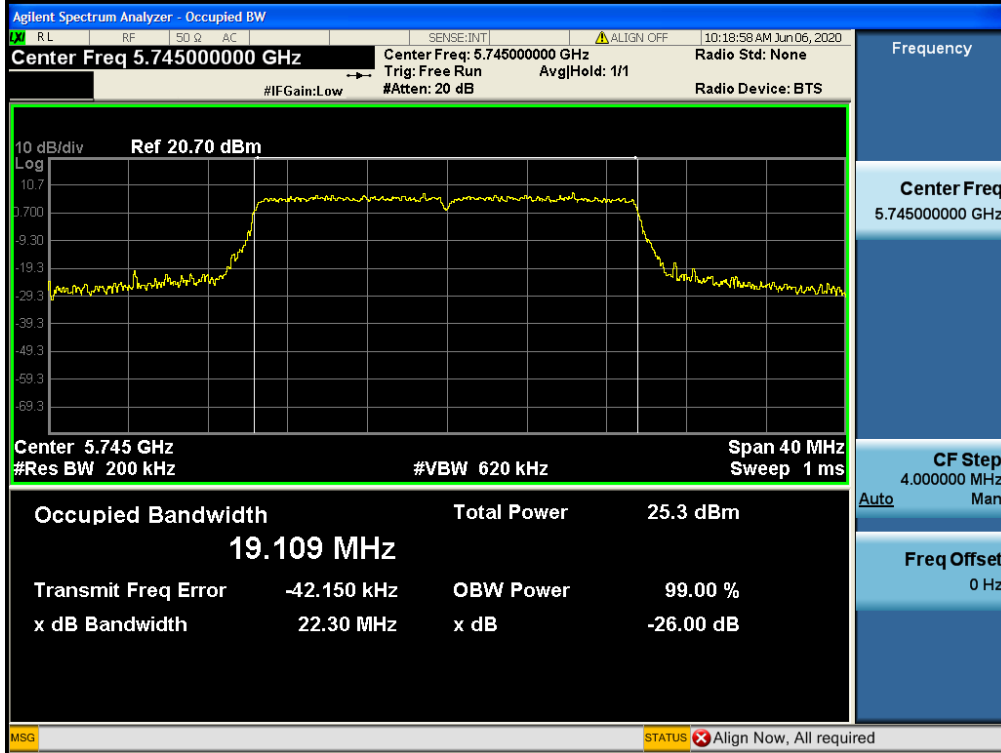


Bandwidth 20M Ch.144(5720MHz) SU

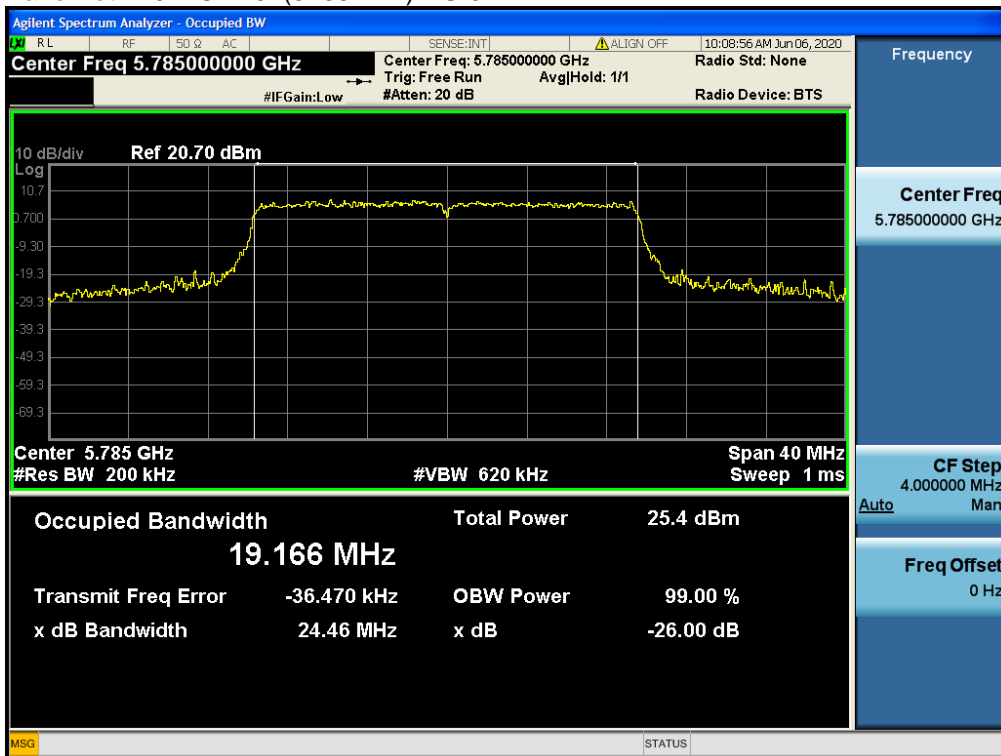




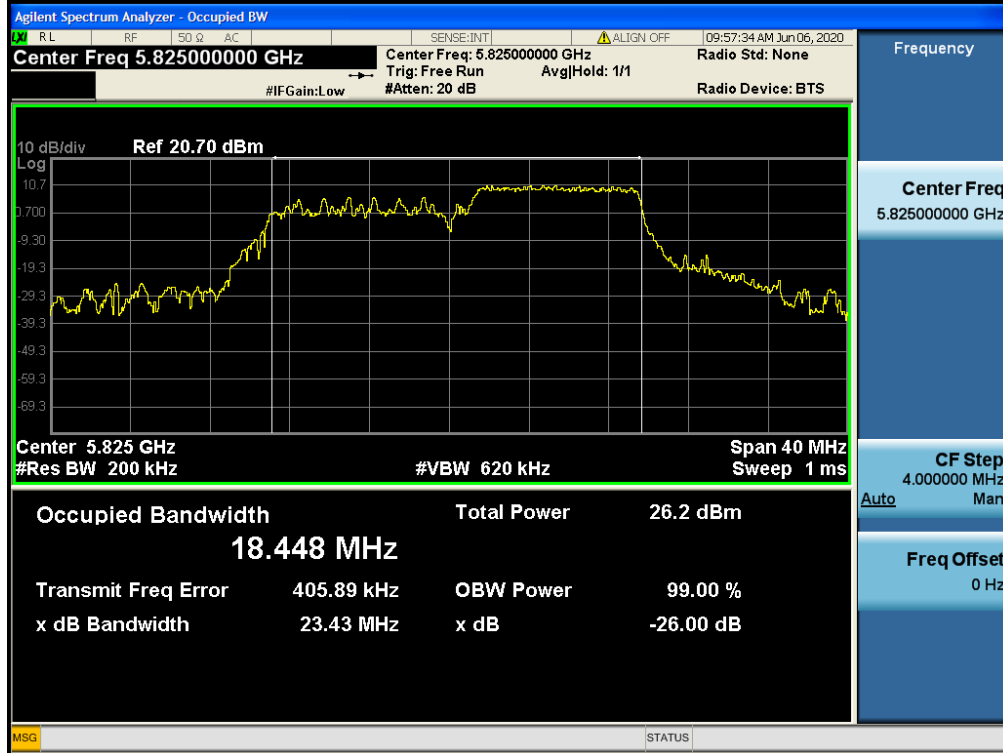
Bandwidth 20M Ch.149(5745MHz) SU



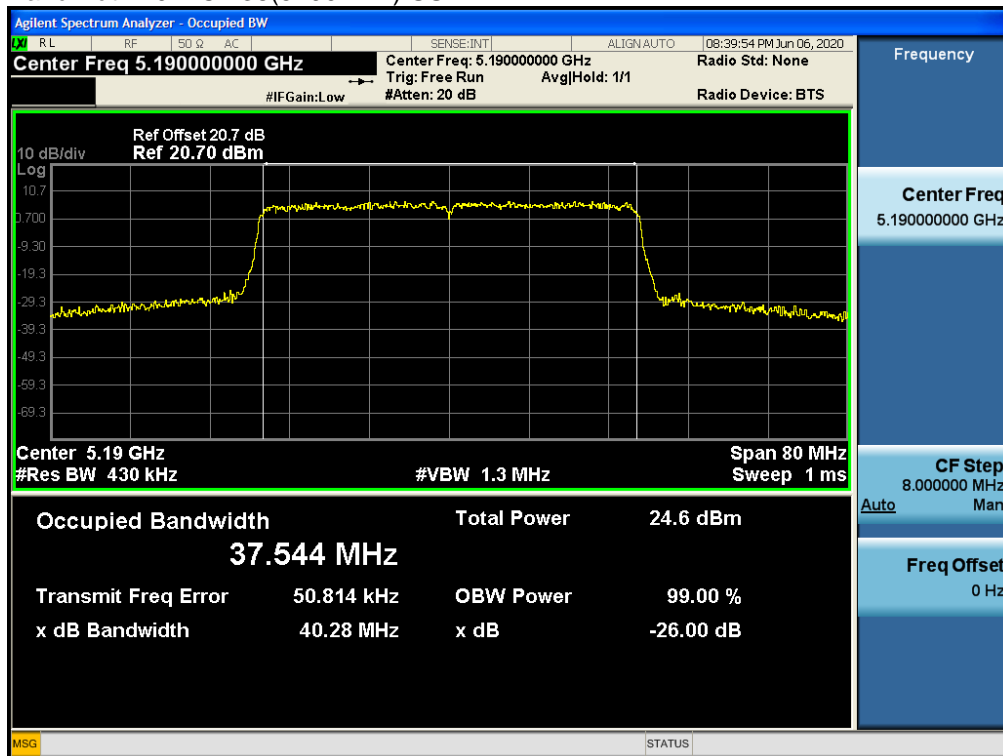
Bandwidth 20M Ch.157(5785MHz) RU 61



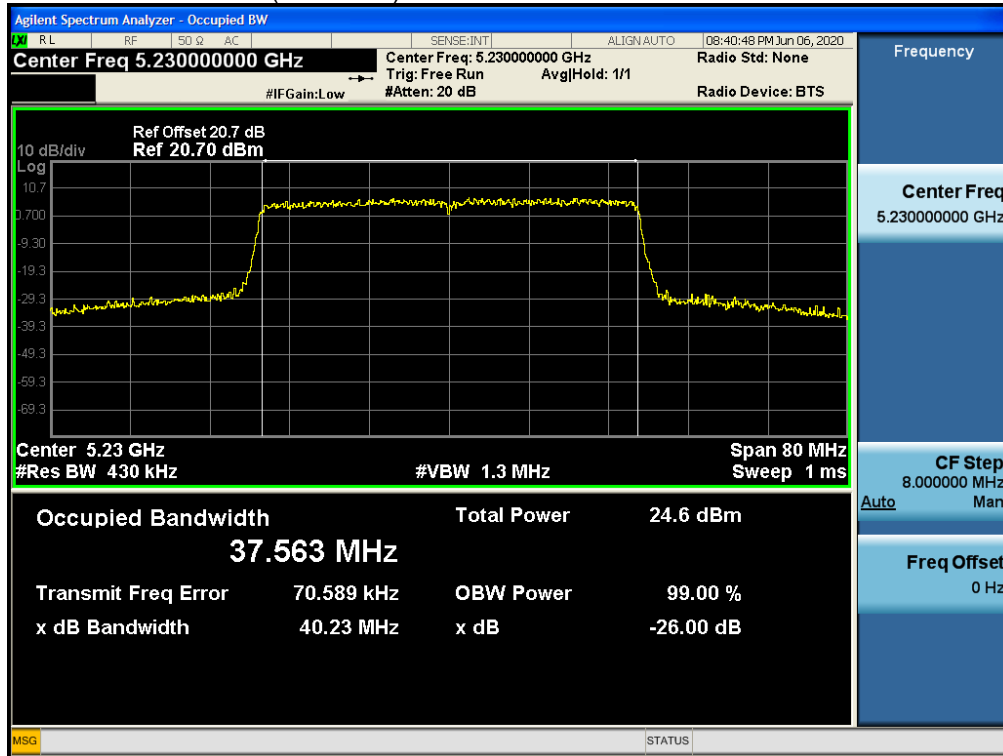
Bandwidth 20M Ch.165(5825MHz) RU 54



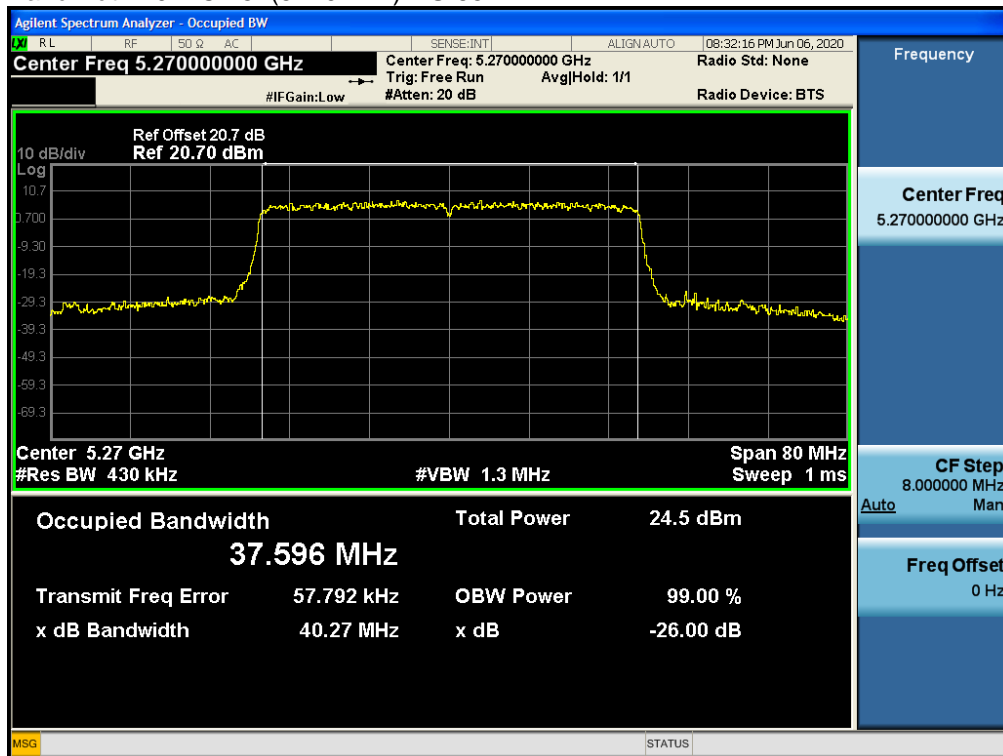
Bandwidth 40M Ch.38(5190MHz) SU



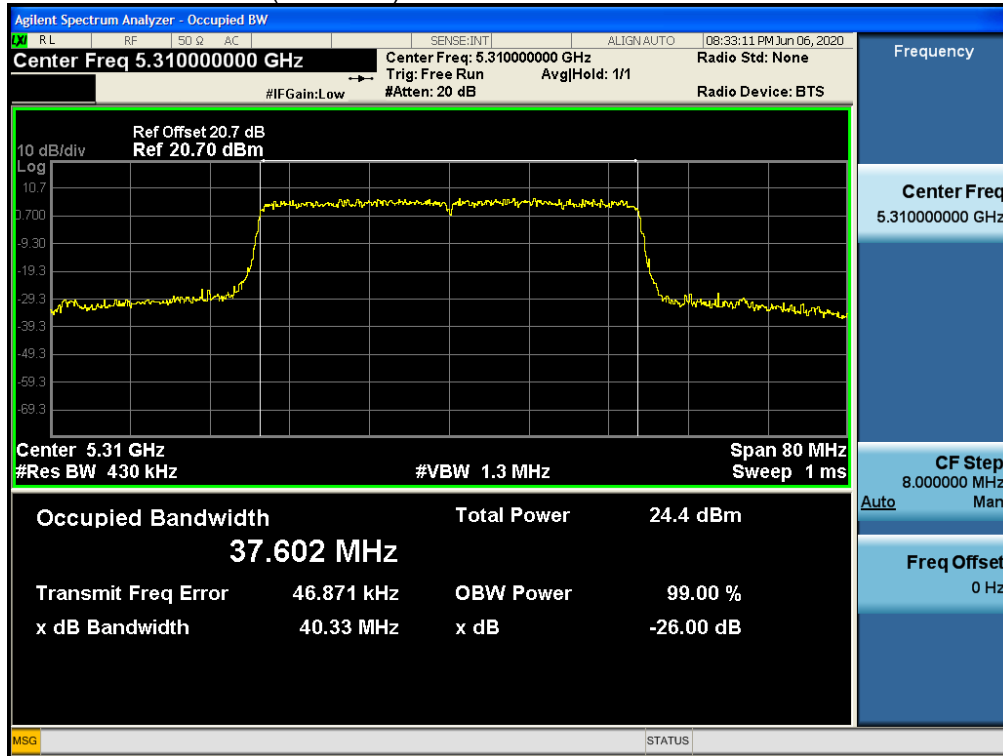
Bandwidth 40M Ch.46(5230MHz) SU



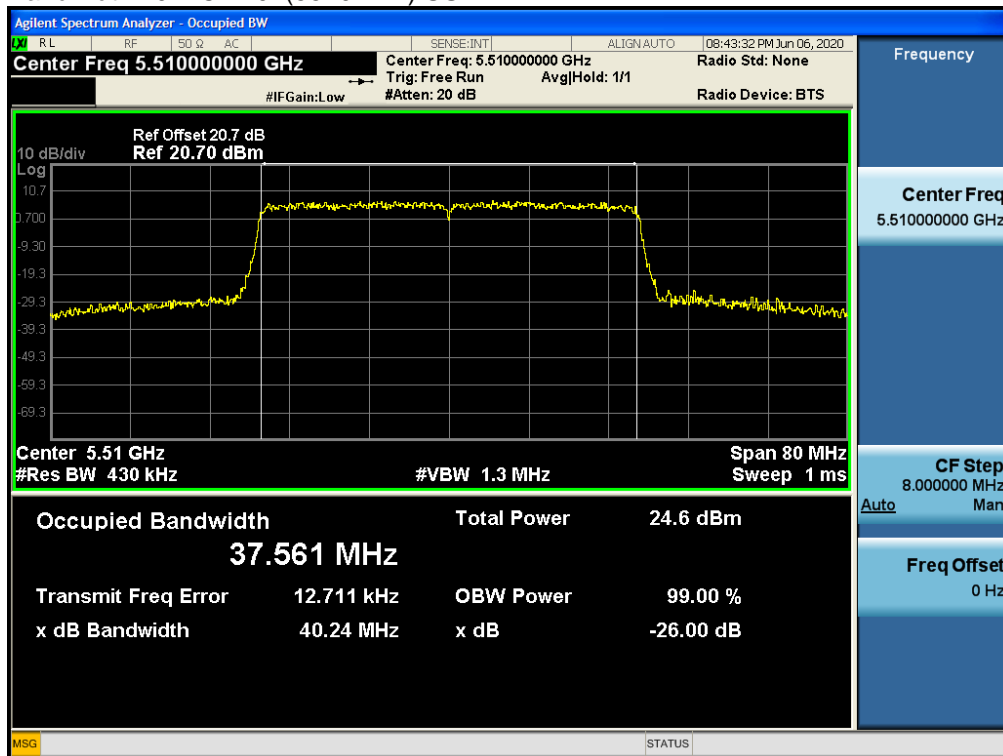
Bandwidth 40M Ch.54(5270MHz) RU 65



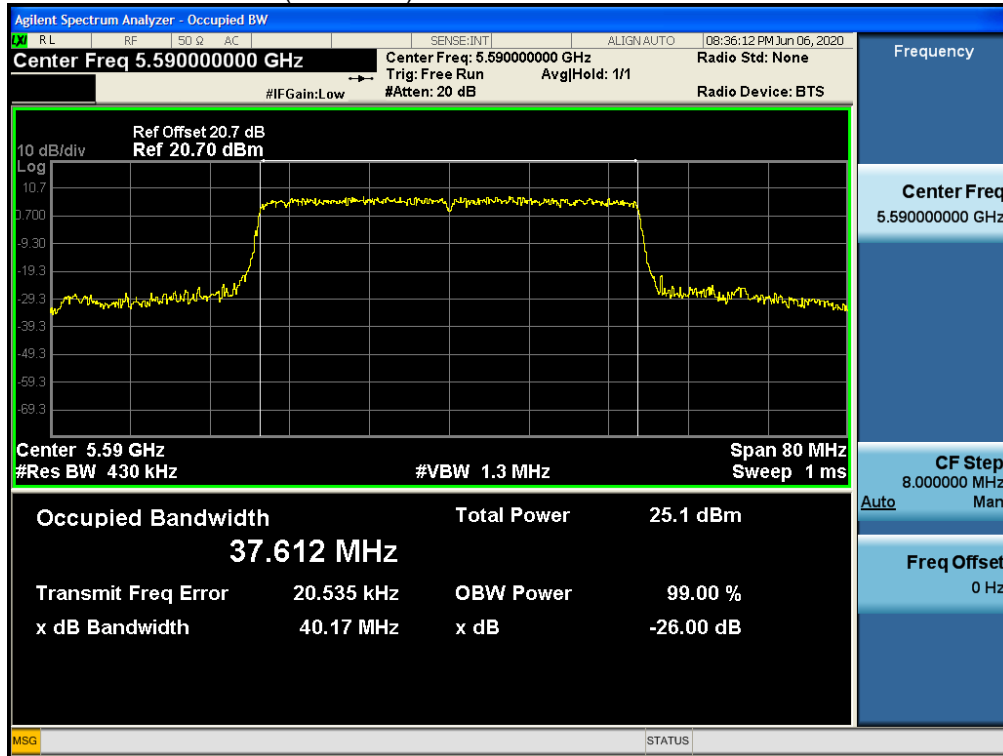
Bandwidth 40M Ch.62(5310MHz) RU 65



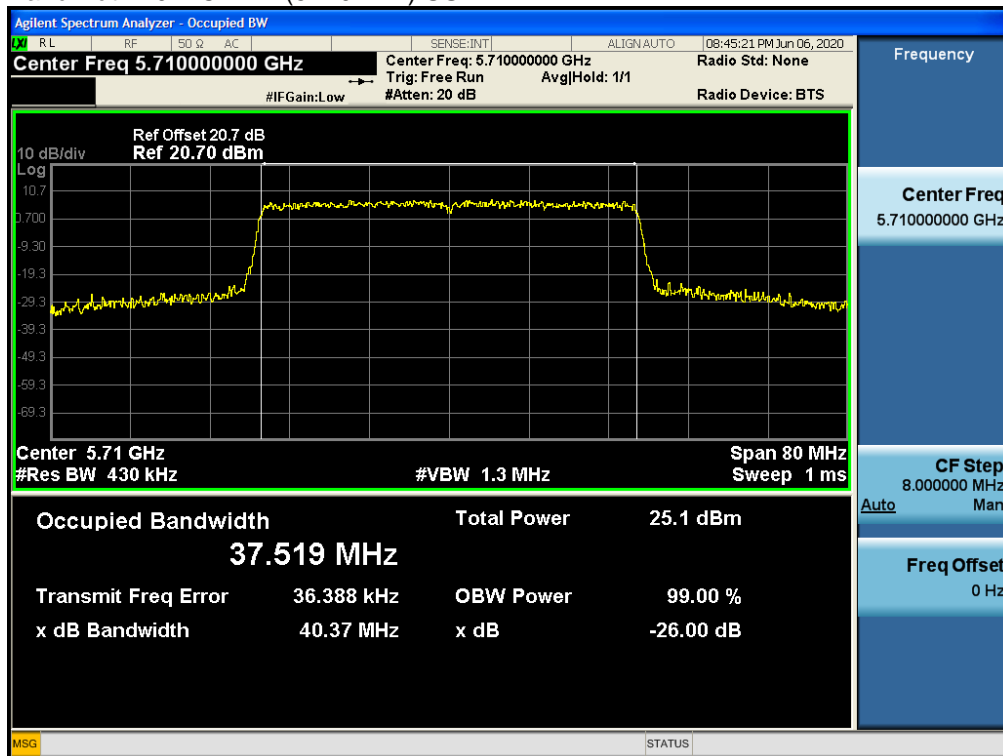
Bandwidth 40M Ch.102(5510MHz) SU



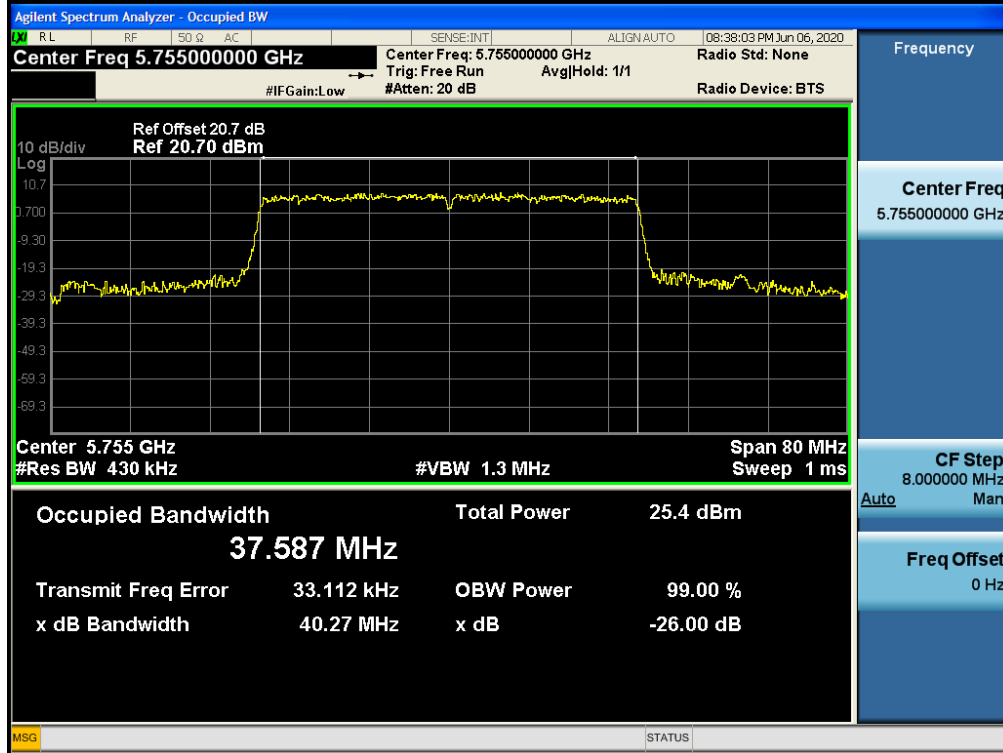
Bandwidth 40M Ch.118(5590MHz) RU 65



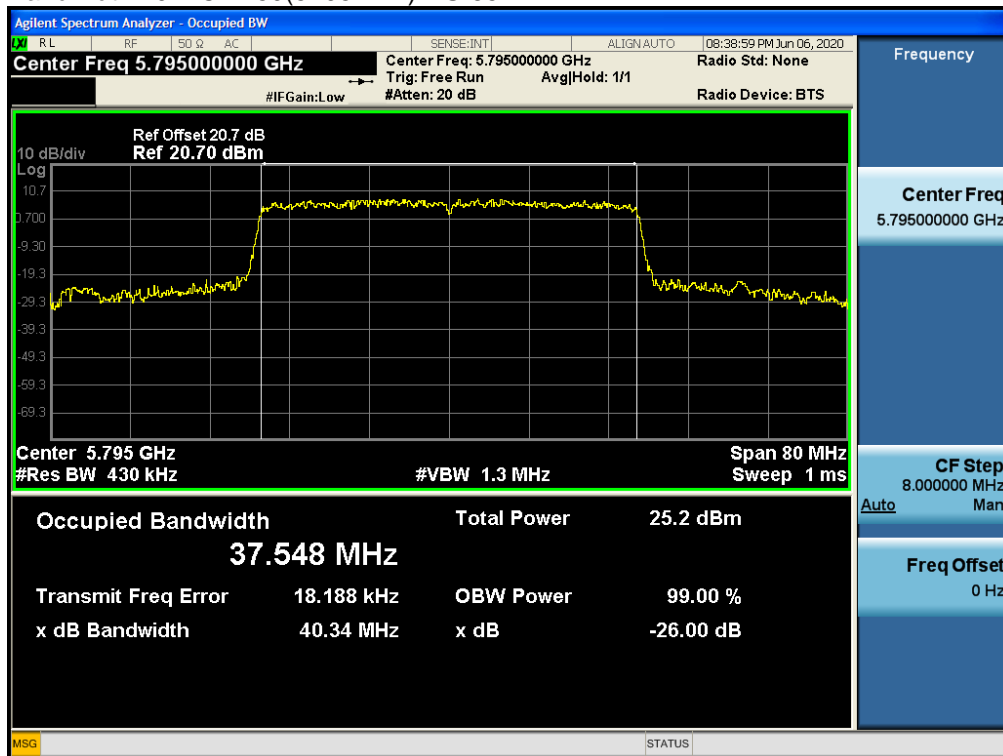
Bandwidth 40M Ch.142(5710MHz) SU



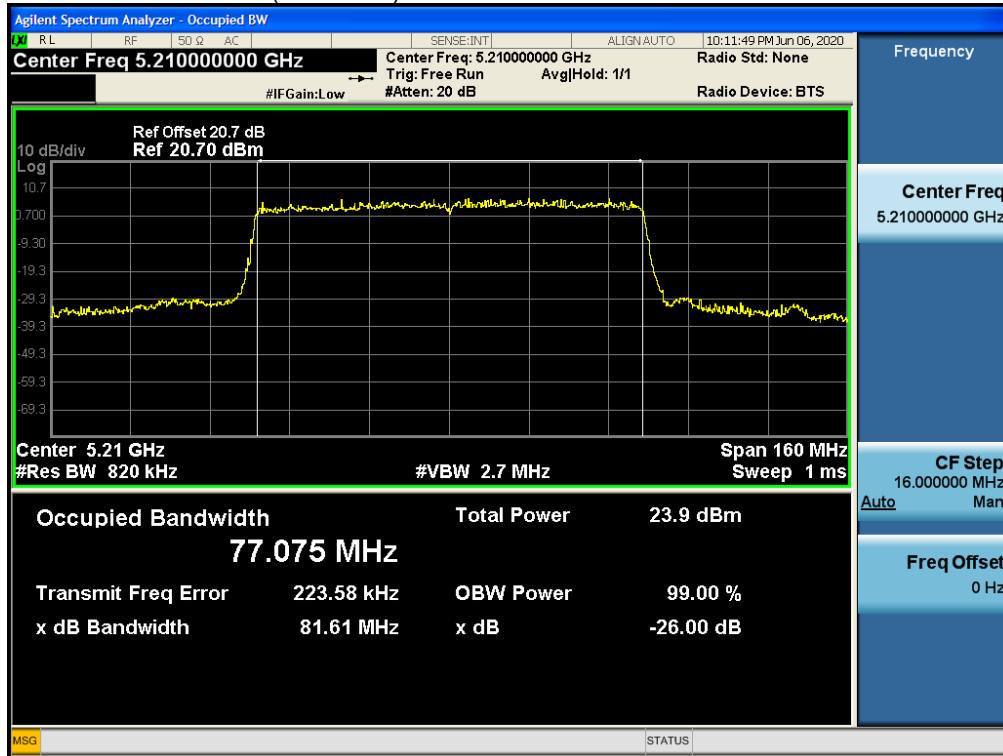
Bandwidth 40M Ch.151(5755MHz) RU 65



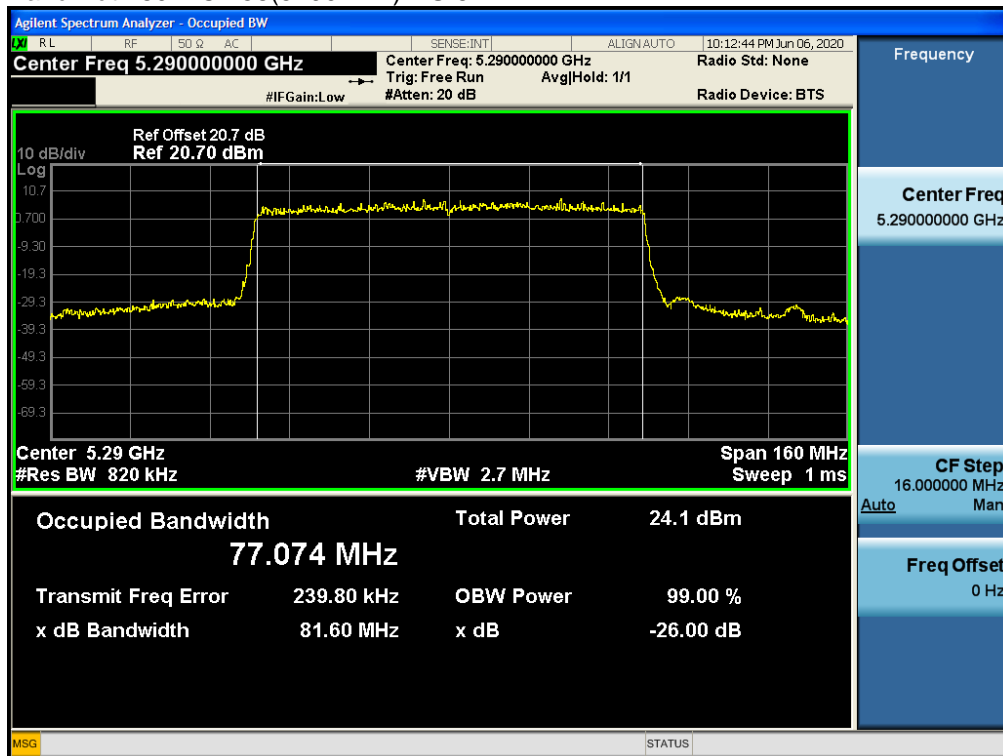
Bandwidth 40M Ch.159(5795MHz) RU 65



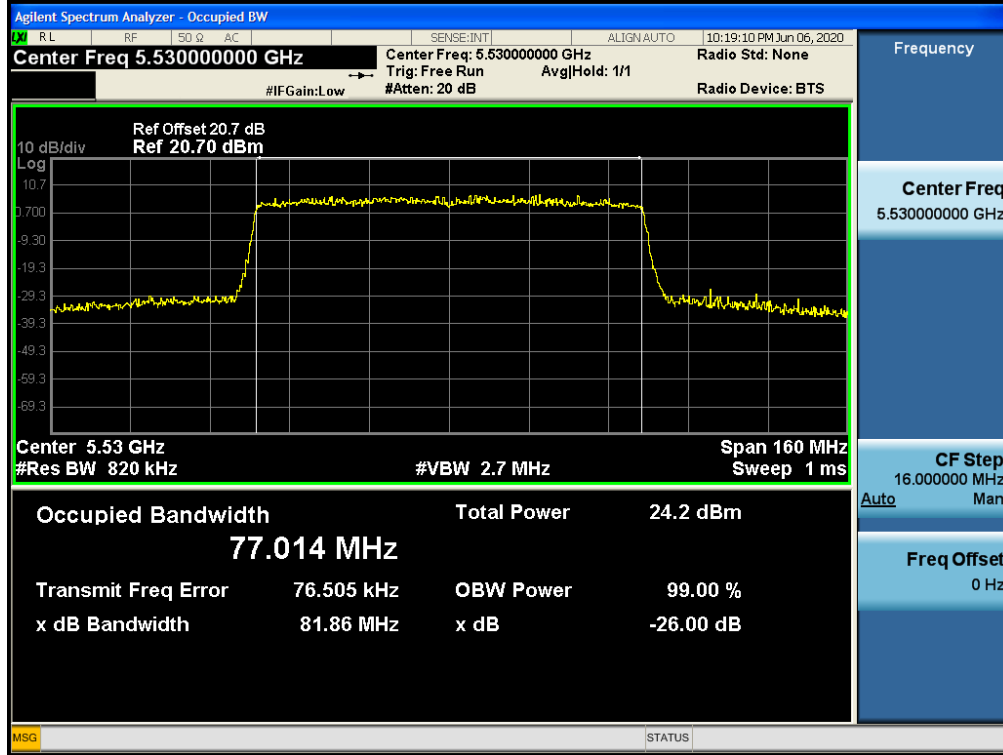
Bandwidth 80M Ch.42(5210MHz) RU 67



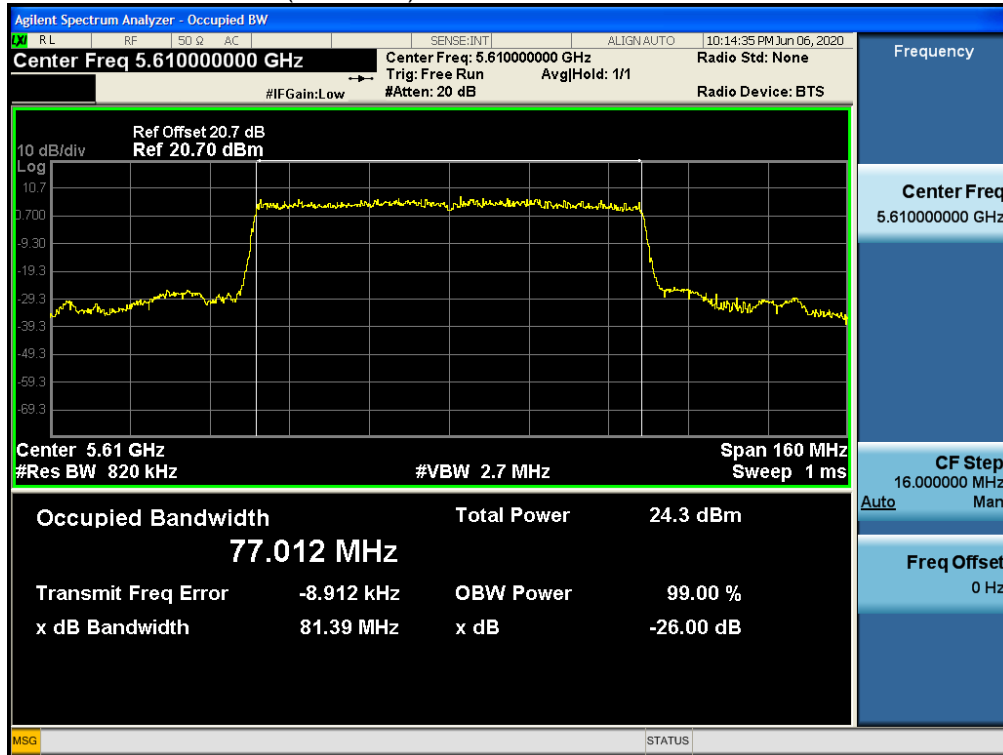
Bandwidth 80M Ch.58(5290MHz) RU 67



Bandwidth 80M Ch.106(5530MHz) SU

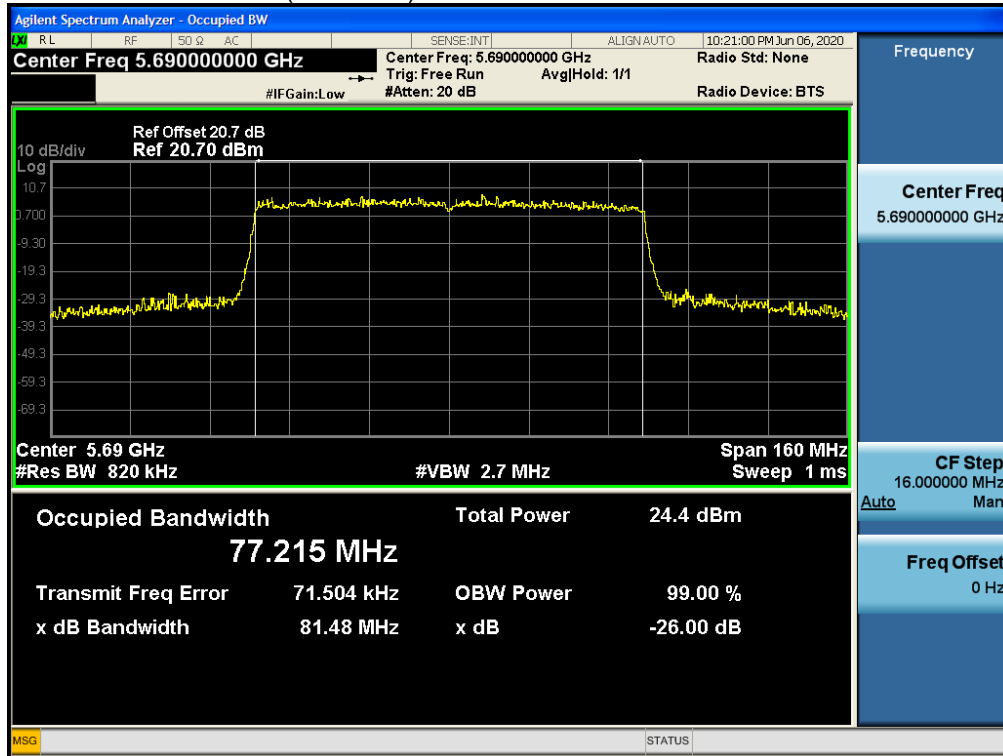


Bandwidth 80M Ch.122(5610MHz) RU 67

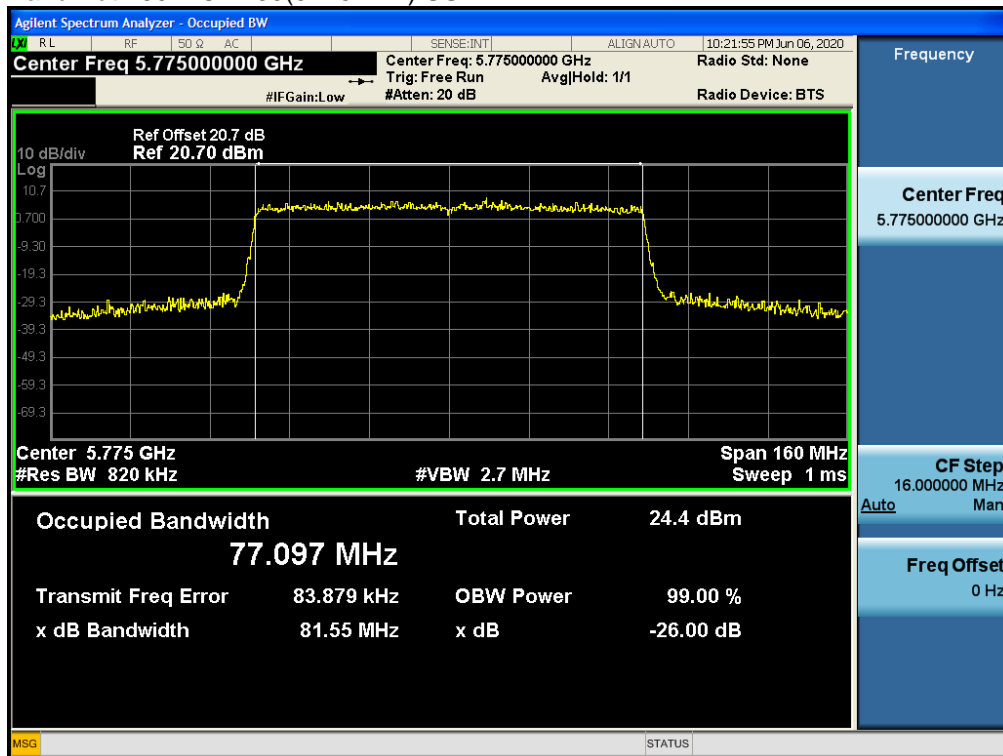




Bandwidth 80M Ch.138(5690MHz) SU



Bandwidth 80M Ch.155(5775MHz) SU



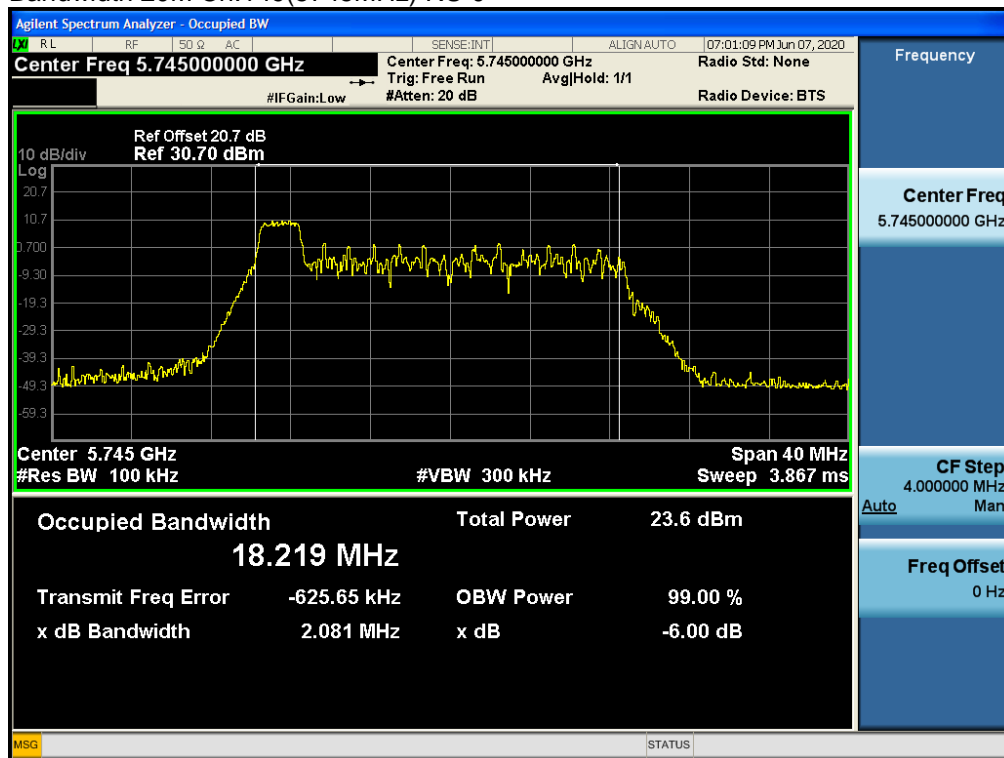
### 3. 6dB Bandwidth

**Note:**

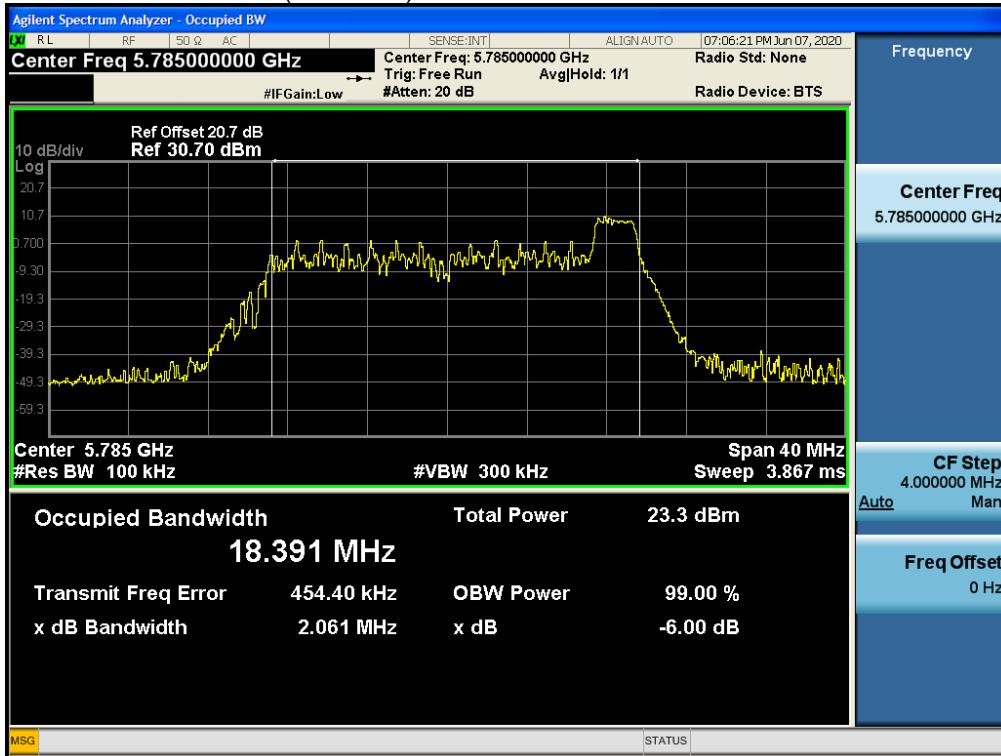
1. In order to simplify the report, attached plots were only the most narrow channel.

#### 3.1 Ant1

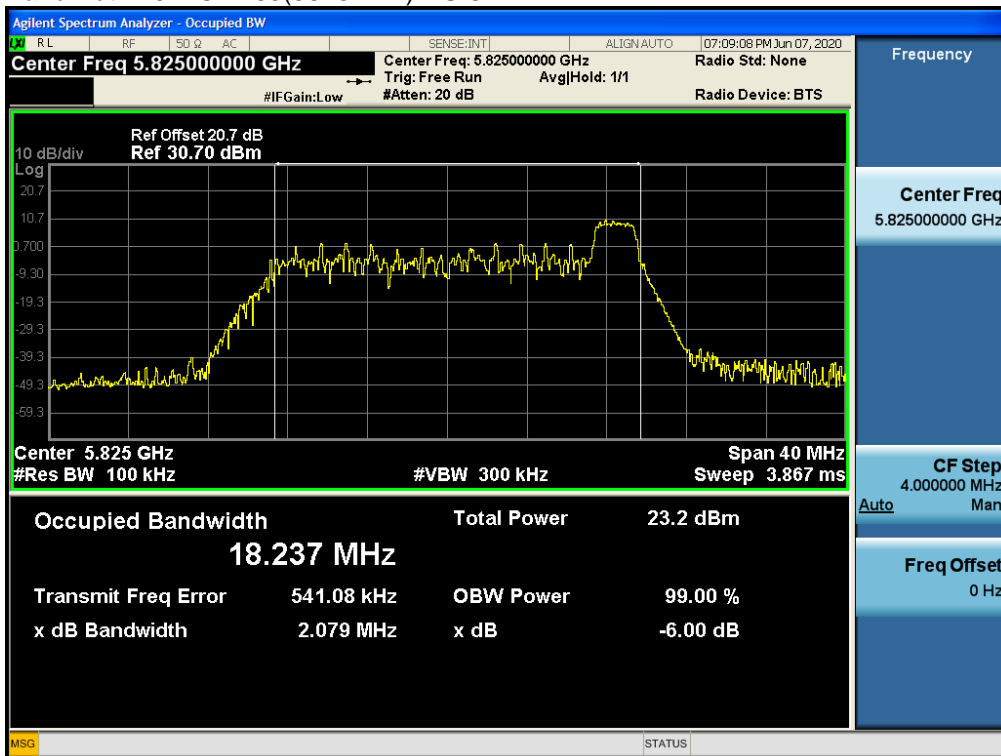
Bandwidth 20M Ch.149(5745MHz) RU 0



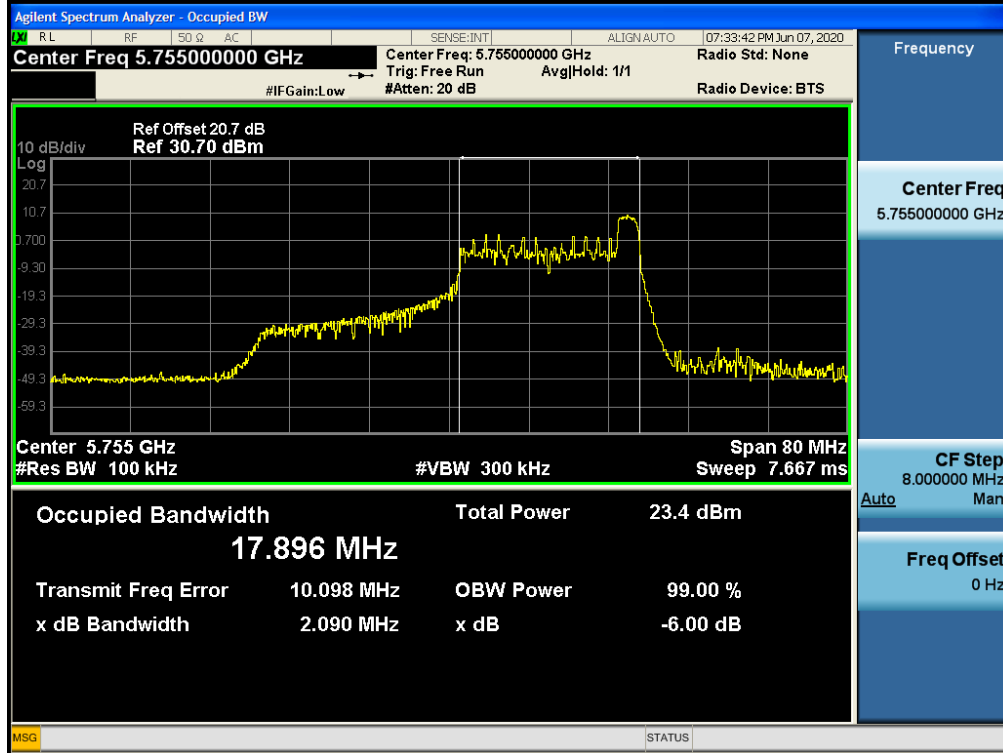
Bandwidth 20M Ch.157(5785MHz) RU 8



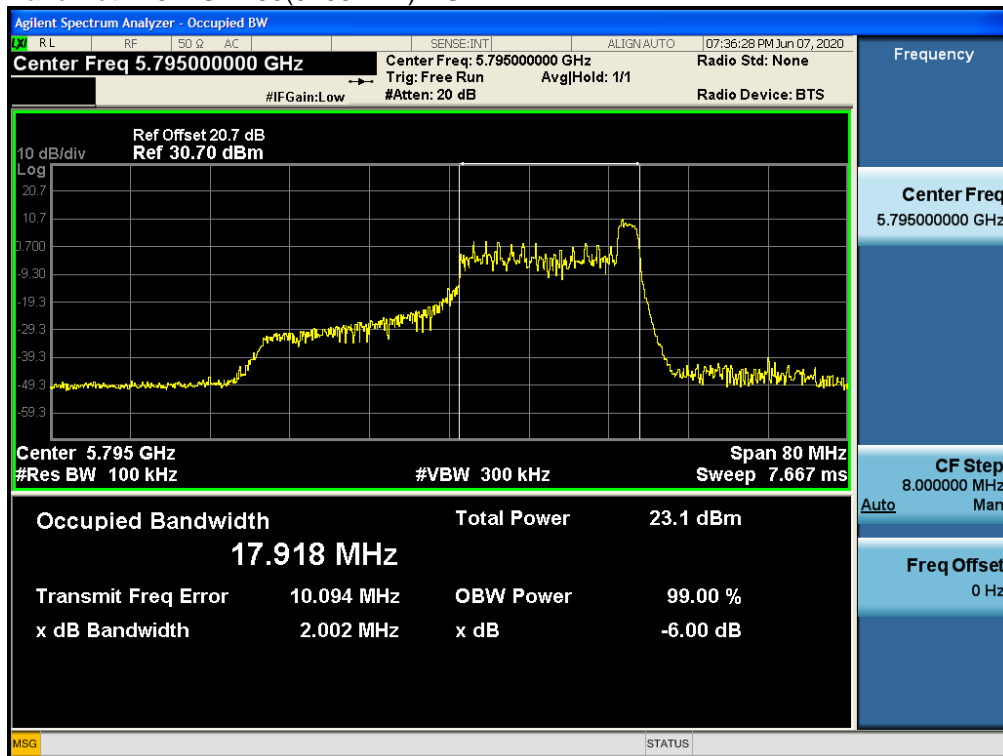
Bandwidth 20M Ch.165(5825MHz) RU 8



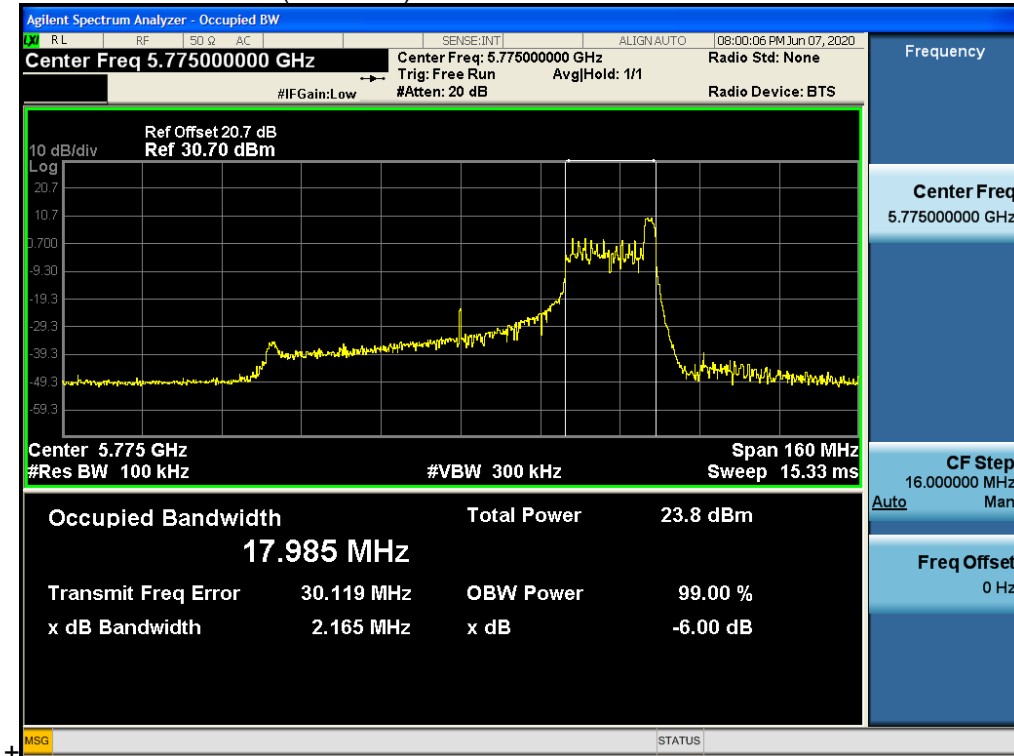
Bandwidth 40M Ch.151(5755MHz) RU 17



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

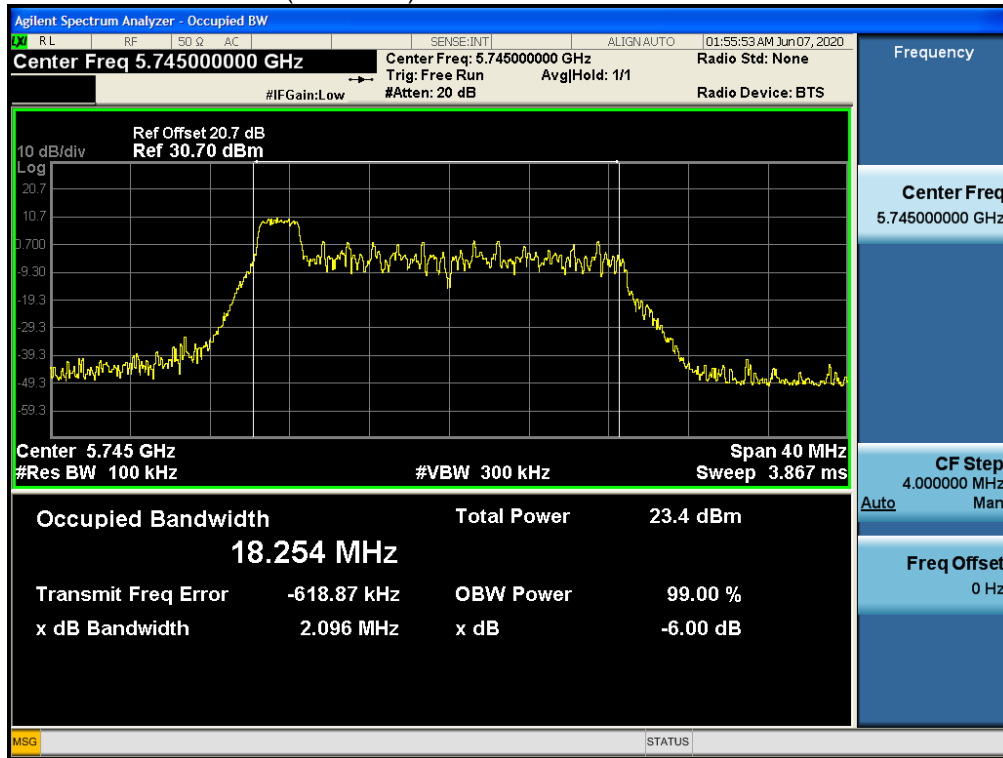


Bandwidth 80M Ch.155(5775MHz) RU 36

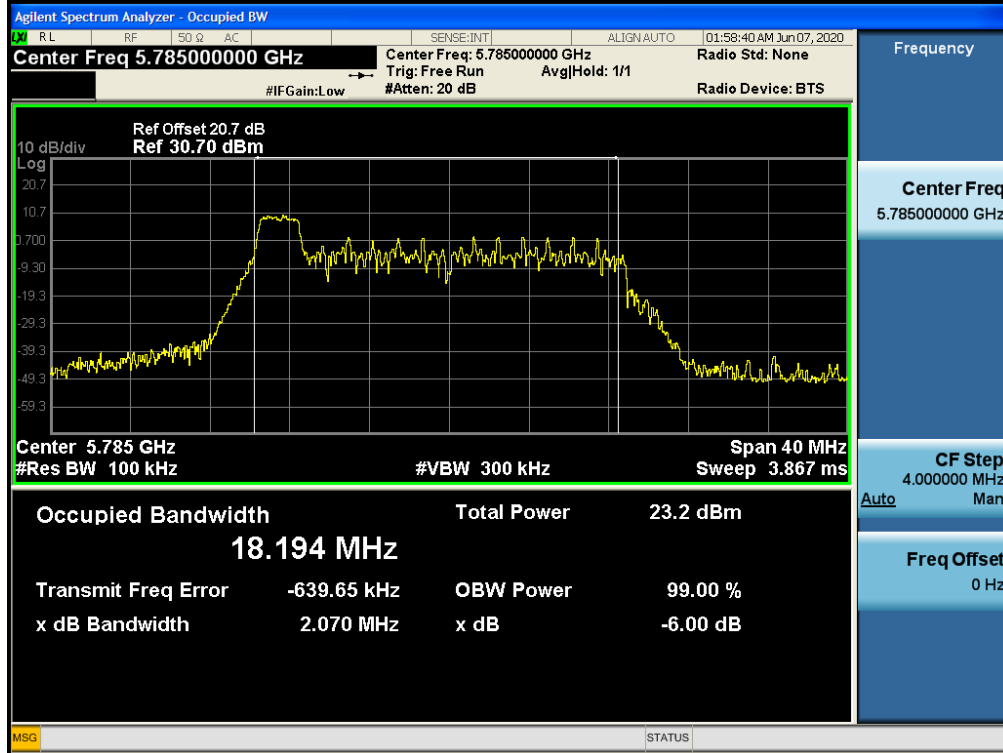


### 3.2 Ant2

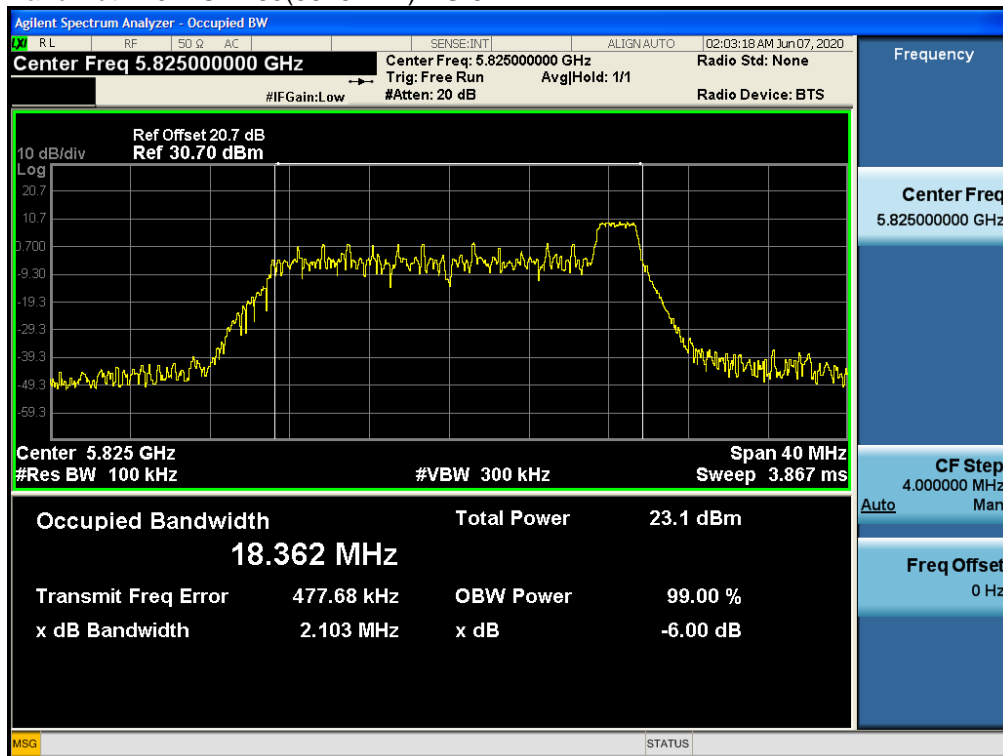
Bandwidth 20M Ch.149(5745MHz) RU 0



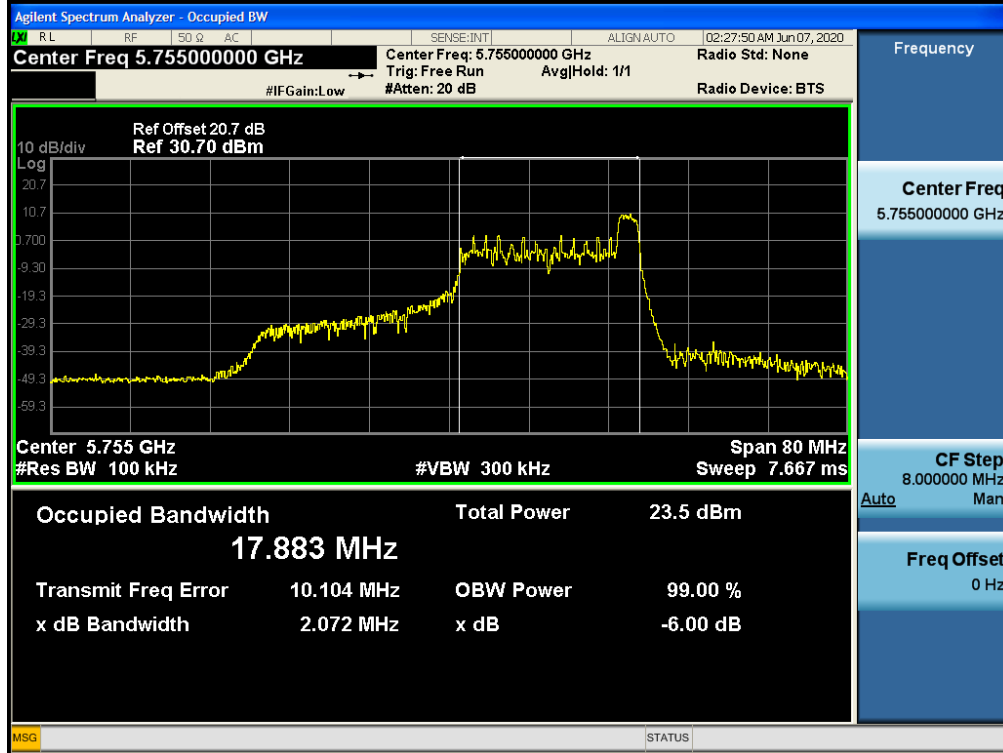
Bandwidth 20M Ch.157(5785MHz) RU 0



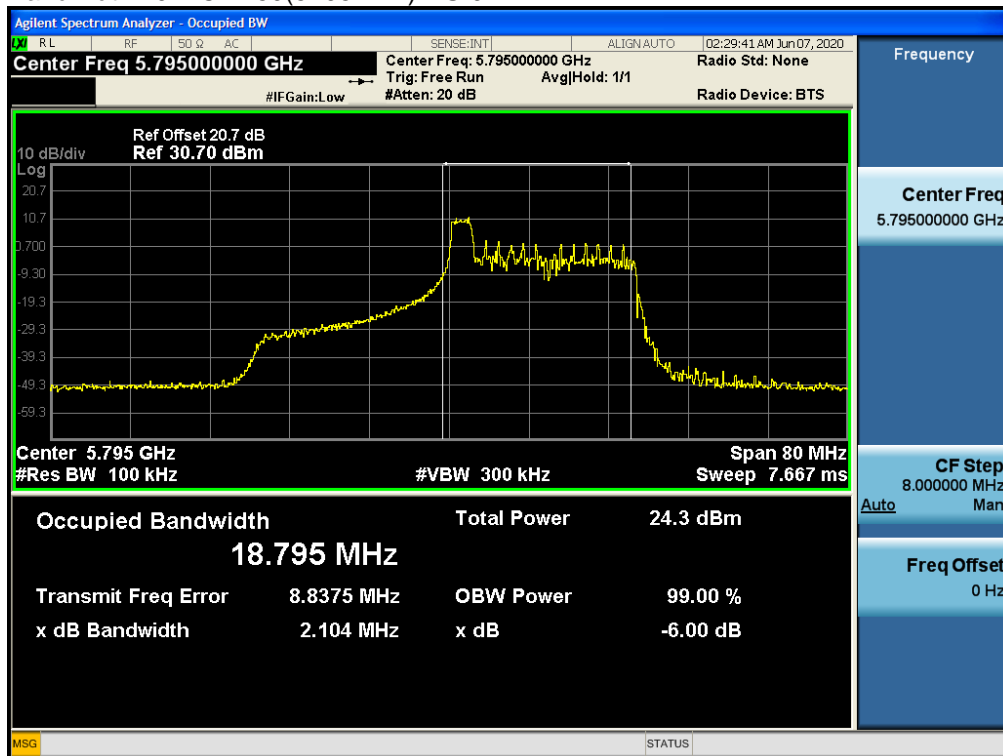
Bandwidth 20M Ch.165(5825MHz) RU 8



Bandwidth 40M Ch.151(5755MHz) RU 17

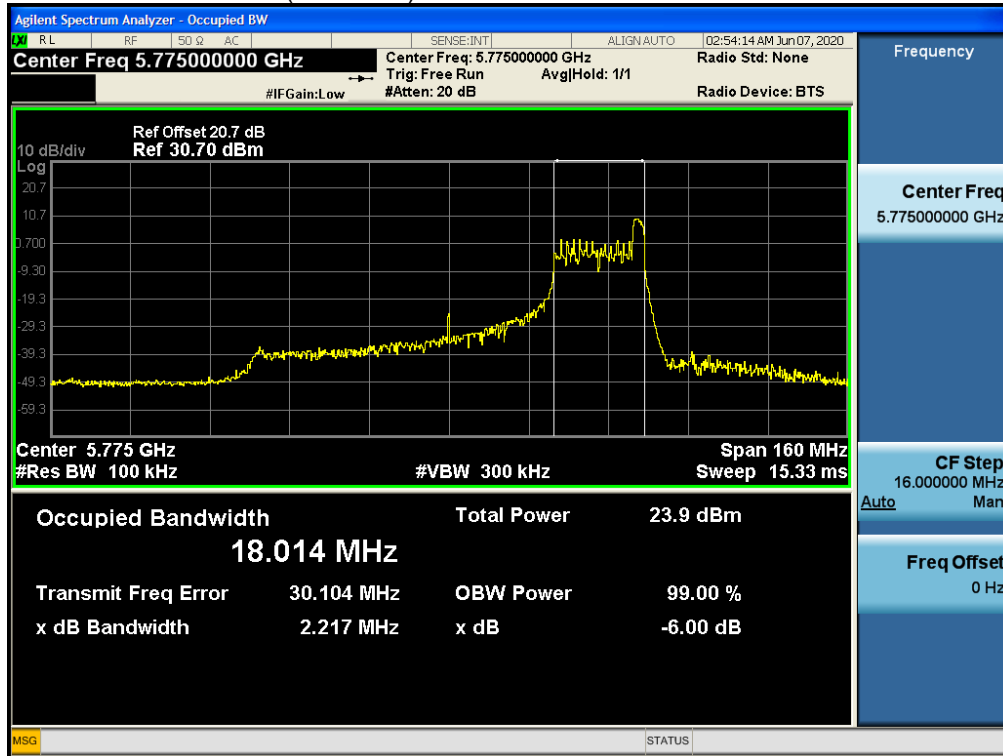


Bandwidth 40M Ch.159(5795MHz) RU 9





Bandwidth 80M Ch.155(5775MHz) RU 36



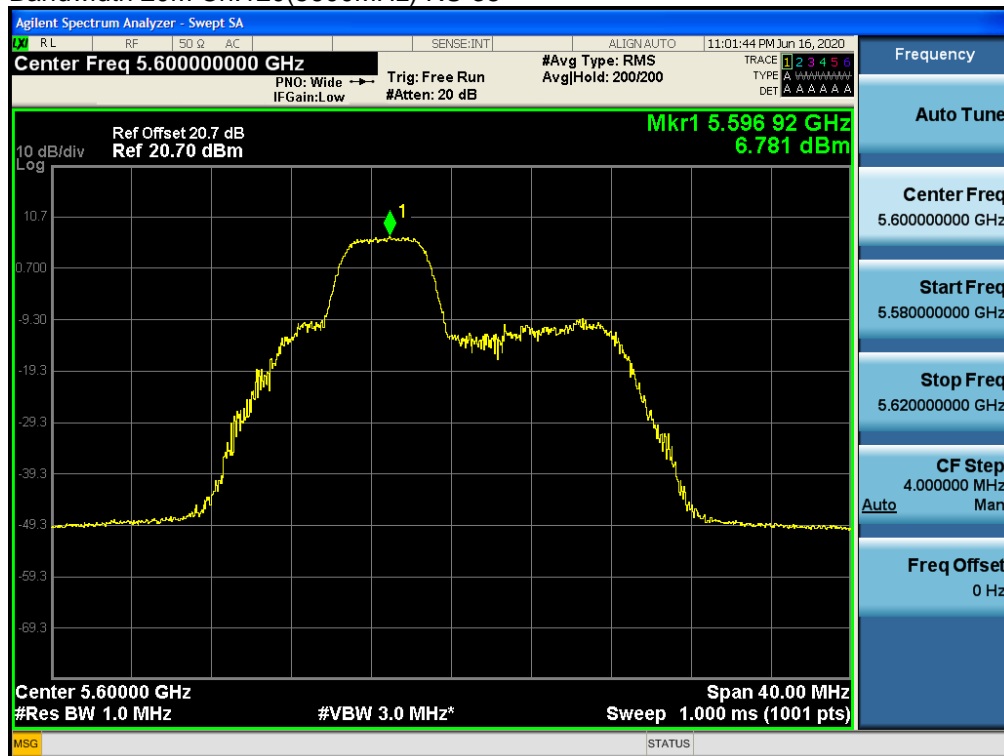
### 4. Power Spectral Density

**Note:**

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

#### 4.1 Ant1

Bandwidth 20M Ch.120(5600MHz) RU 38

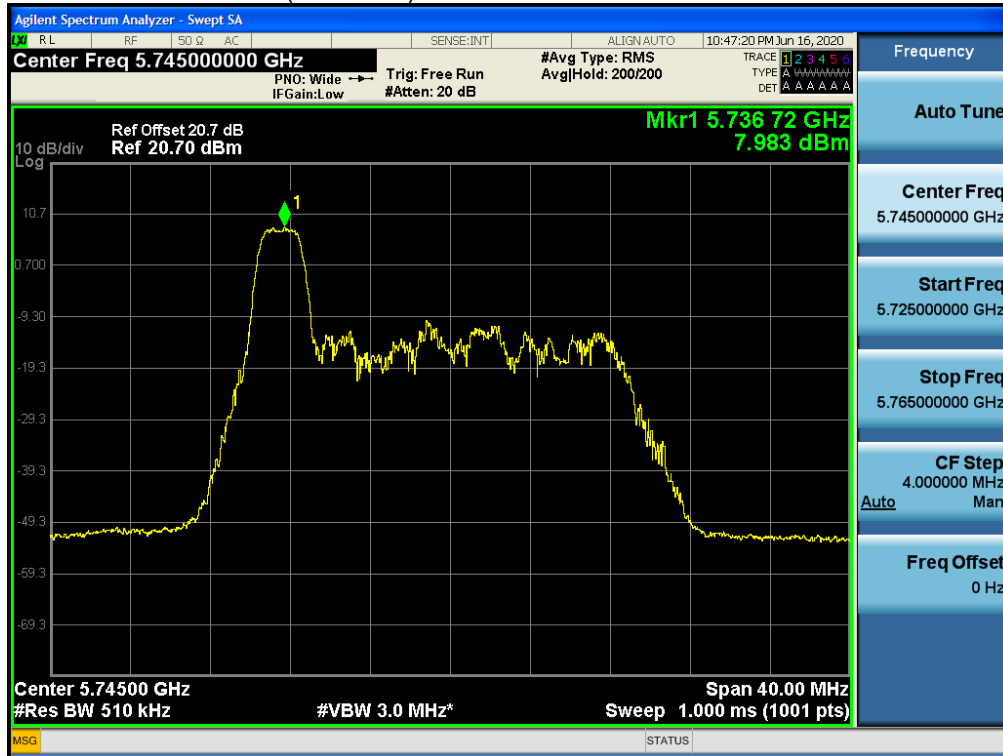


Reading Value (dBm)	Duty Cycle Factor (dB)	Total PSD (dBm)
6.781	0.81	7.60

**Note:**

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

Bandwidth 20M Ch.149(5745MHz) RU 0



Reading Value (dBm)	Duty Cycle Factor (dB)	Total PSD (dBm)
7.983	0.49	8.48

**Note:**

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

Bandwidth 40M Ch.118(5590MHz) RU 54

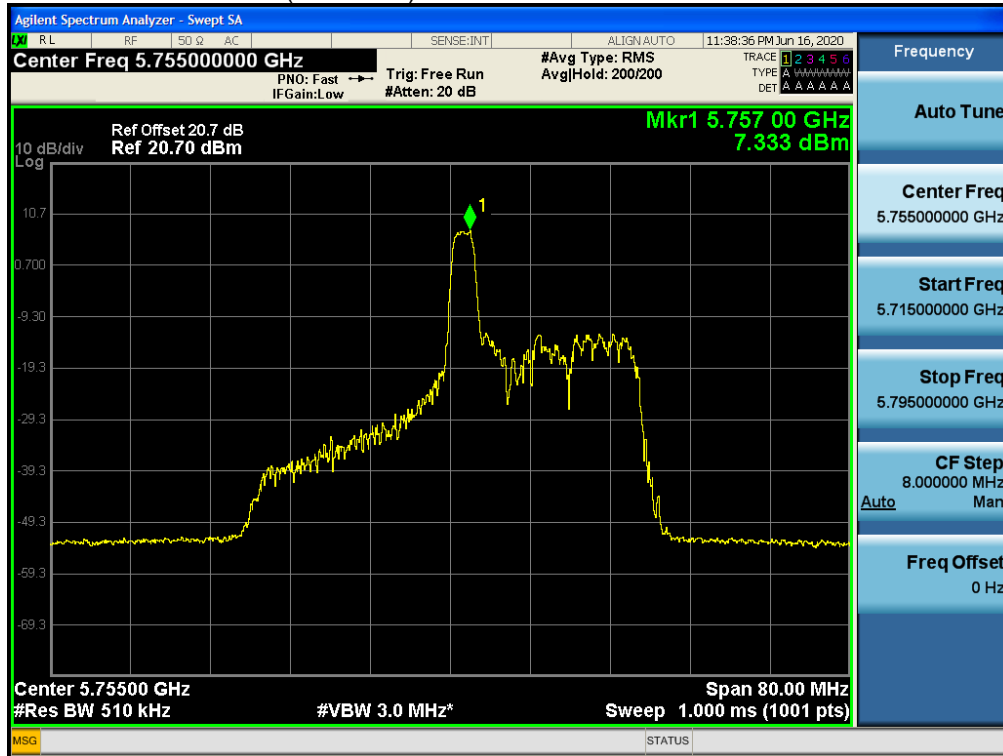


Reading Value (dBm)	Duty Cycle Factor (dB)	Total PSD (dBm)
6.407	1.41	7.82

**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)
7.333	0.49	7.83

**Note:**

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

Bandwidth 80M Ch.122(5610MHz) RU 45

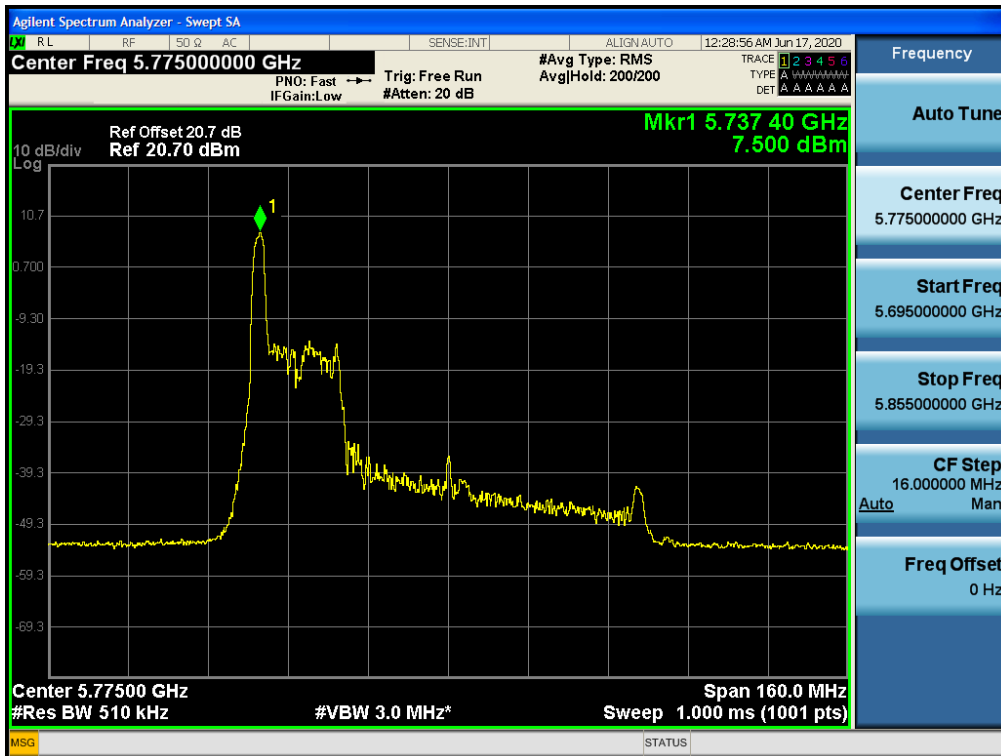


Reading Value (dBm)	Duty Cycle Factor (dB)	Total PSD (dBm)
7.121	0.70	7.82

**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)
7.500	0.49	7.99

**Note:**

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

### 4.2 Ant2

Bandwidth 20M Ch.120(5600MHz) RU 38



Reading Value (dBm)	Duty Cycle Factor (dB)	Total PSD (dBm)
6.614	0.81	7.43

**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)
8.256	0.49	8.75

**Note:**

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

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

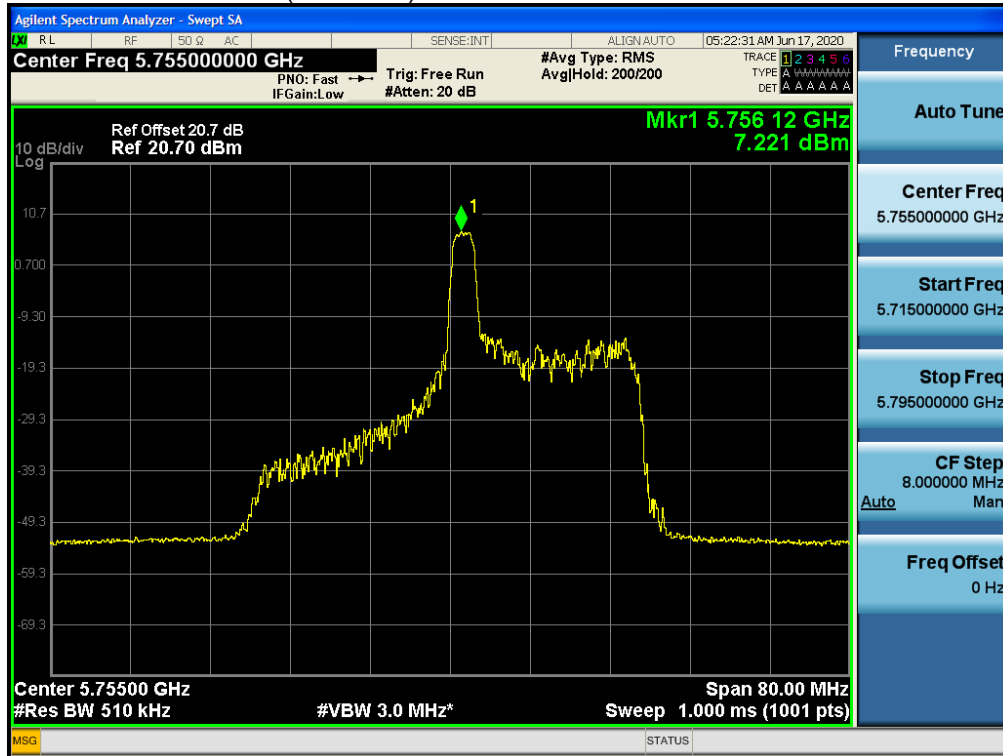


Reading Value (dBm)	Duty Cycle Factor (dB)	Total PSD (dBm)
6.285	1.41	7.70

**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)
7.221	0.49	7.72

**Note:**

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

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



Reading Value (dBm)	Duty Cycle Factor (dB)	Total PSD (dBm)
6.829	0.70	7.53

**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)
7.231	0.49	7.73

**Note:**

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

## 5. Straddle Channel

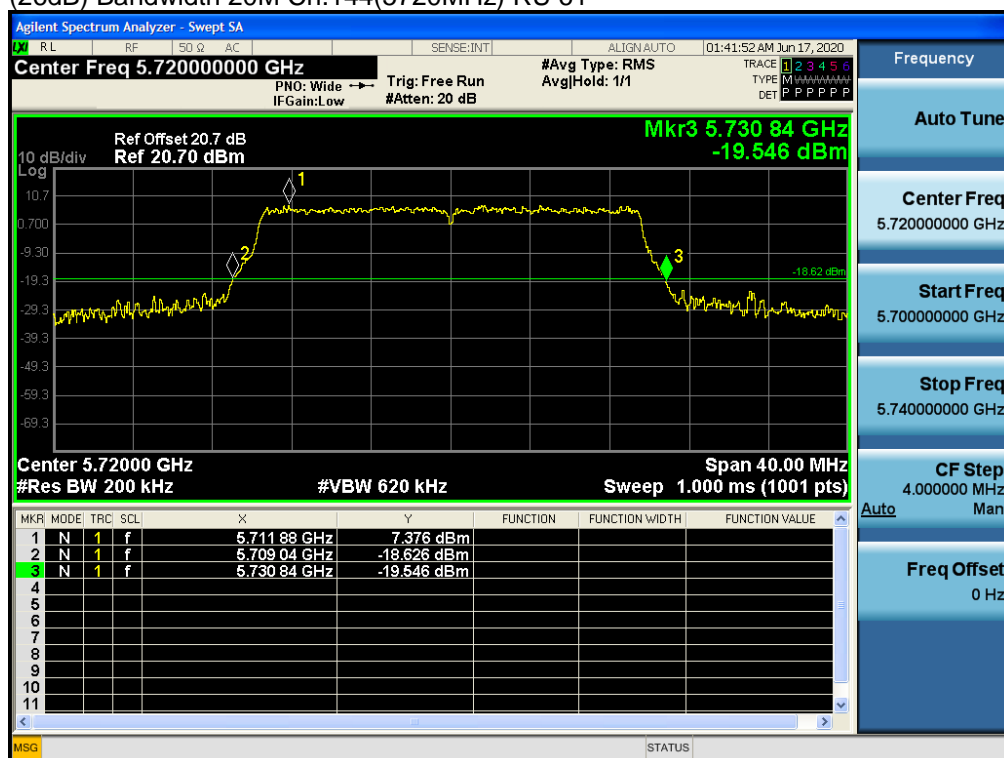
### 5.1 26dB Bandwidth

**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) RU 61



UNII 2C	5725 [MHz]	Measured Frequency [MHz]	26dB Bandwidth [MHz]
	5725	5709.04	15.96
UNII 3	Measured Frequency [MHz]	5725 [MHz]	26dB Bandwidth [MHz]
	5730.84	5725	5.84

**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) RU 65

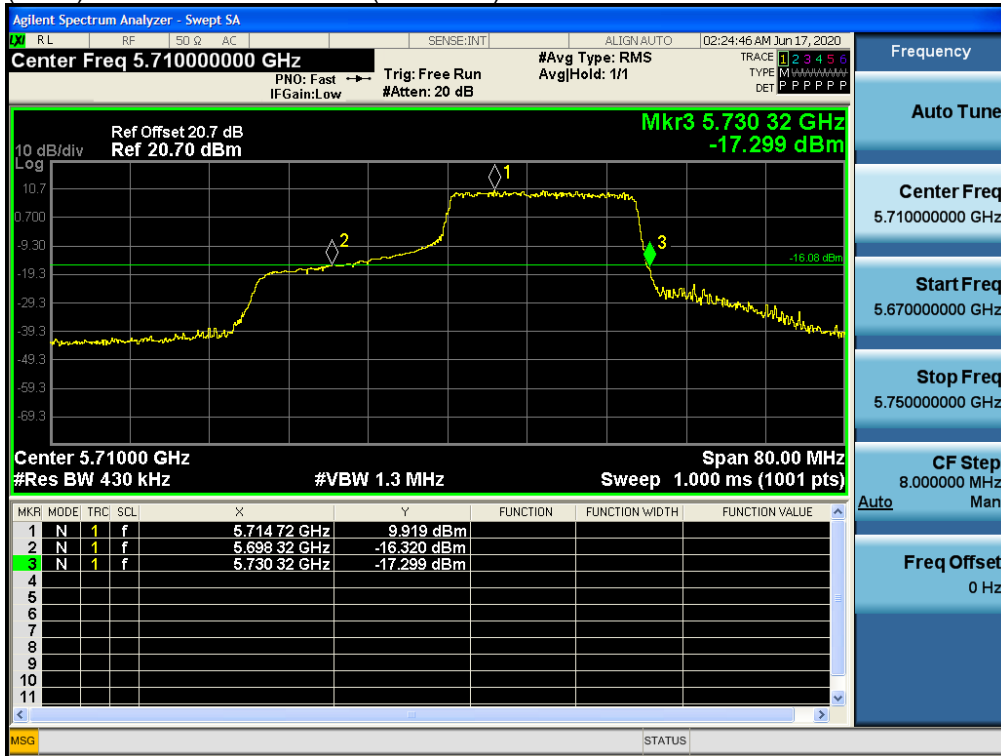


UNII 2C	5725 [MHz]	Measured Frequency [MHz]	26dB Bandwidth [MHz]
	5725	5689.84	35.16

**Note:**

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

(26dB) Bandwidth 40M Ch.142(5710MHz) RU 62



UNII 3	Measured Frequency [MHz]	5725 [MHz]	26dB Bandwidth [MHz]
		5730.32	5725

**Note:**

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



(26dB) Bandwidth 80M Ch.138(5690MHz) RU 67

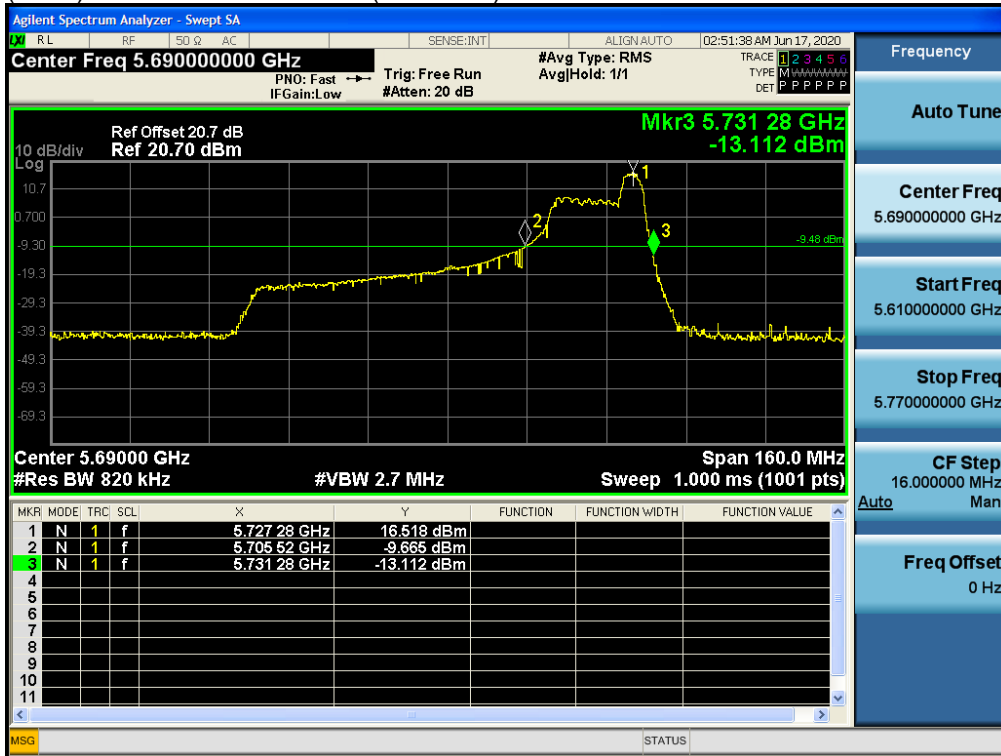


UNII 2C	5725 [MHz]	Measured Frequency [MHz]	26dB Bandwidth [MHz]
	5725	5649.2	75.80

**Note:**

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

(26dB) Bandwidth 80M Ch.138(5690MHz) RU 52



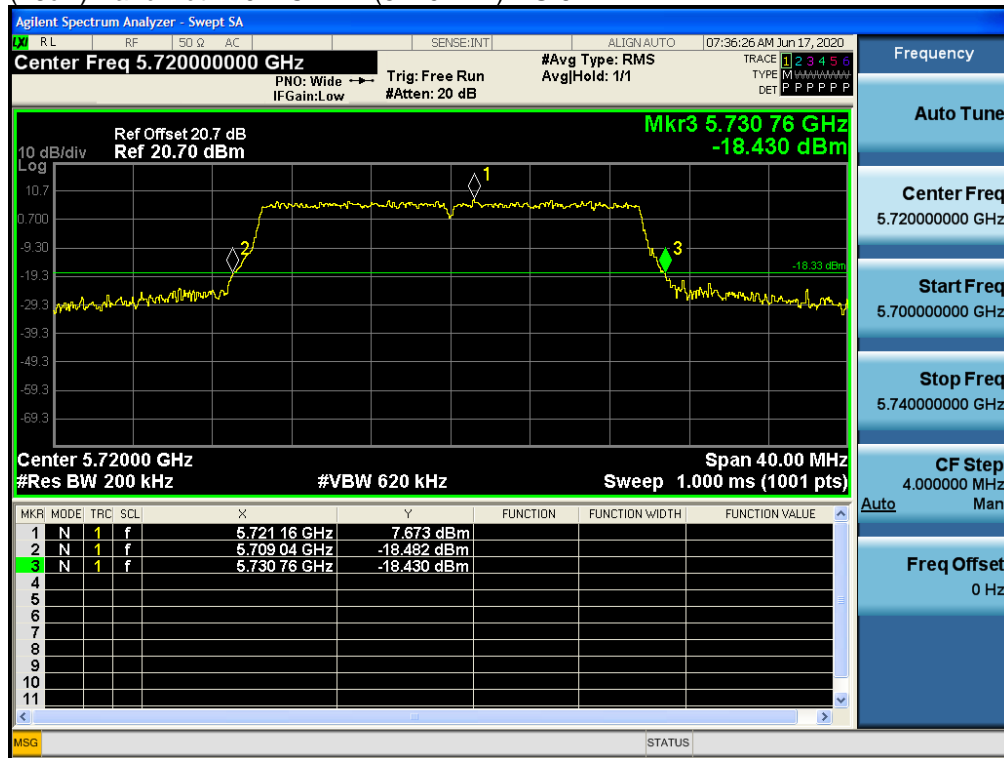
UNII 3	Measured Frequency [MHz]	5725 [MHz]	26dB Bandwidth [MHz]
		5731.28	5725

**Note:**

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

### 5.1.2 Ant2

(26dB) Bandwidth 20M Ch.144(5720MHz) RU 61



UNII 2C	5725 [MHz]	Measured Frequency [MHz]	26dB Bandwidth [MHz]
	5725	5709.04	15.96
UNII 3	Measured Frequency [MHz]	5725 [MHz]	26dB Bandwidth [MHz]
	5730.76	5725	5.76

**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) RU 65

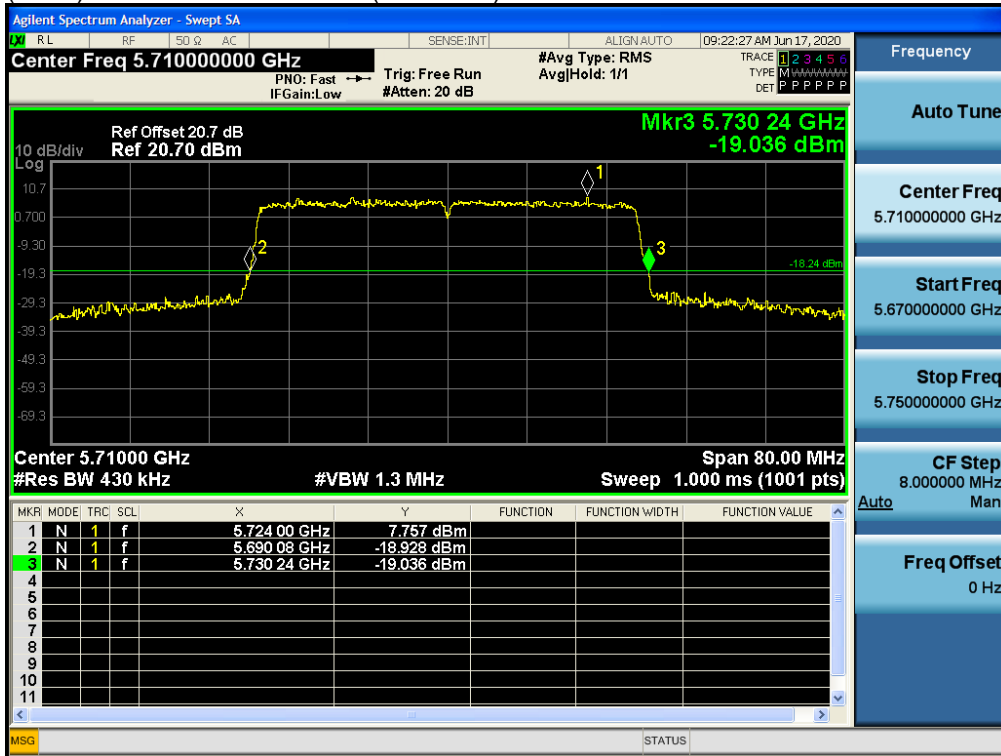


UNII 2C	5725 [MHz]	Measured Frequency [MHz]	26dB Bandwidth [MHz]
	5725	5689.84	35.16

**Note:**

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

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

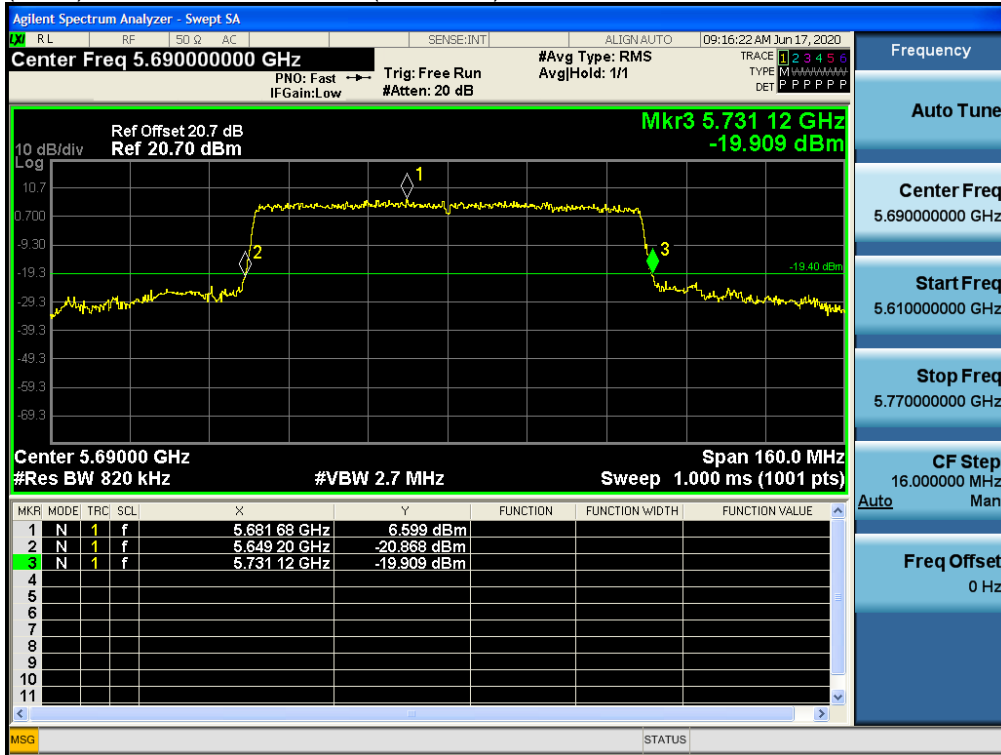


UNII 3	Measured Frequency [MHz]	5725 [MHz]	26dB Bandwidth [MHz]
		5730.24	5725

**Note:**

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

(26dB) Bandwidth 80M Ch.138(5690MHz) RU 67



UNII 2C	5725 [MHz]	Measured Frequency [MHz]	26dB Bandwidth [MHz]
		5725	5649.2
UNII 3	Measured Frequency [MHz]	5725 [MHz]	26dB Bandwidth [MHz]
		5731.12	5725

**Note:**

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

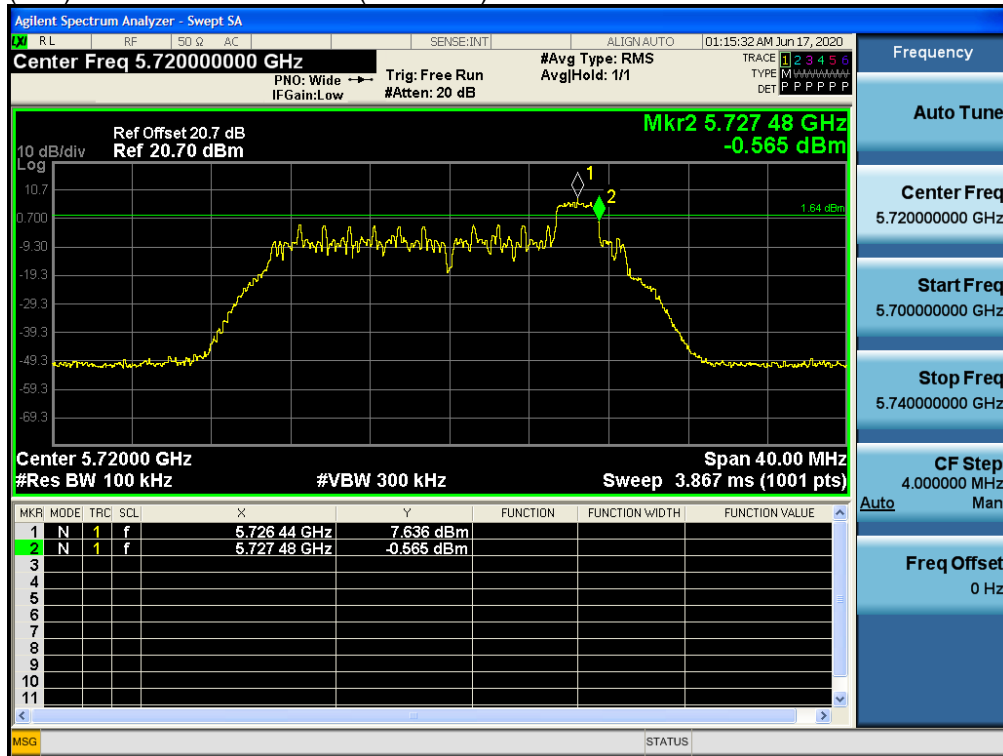
## 5.2 6dB Bandwidth

**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 7

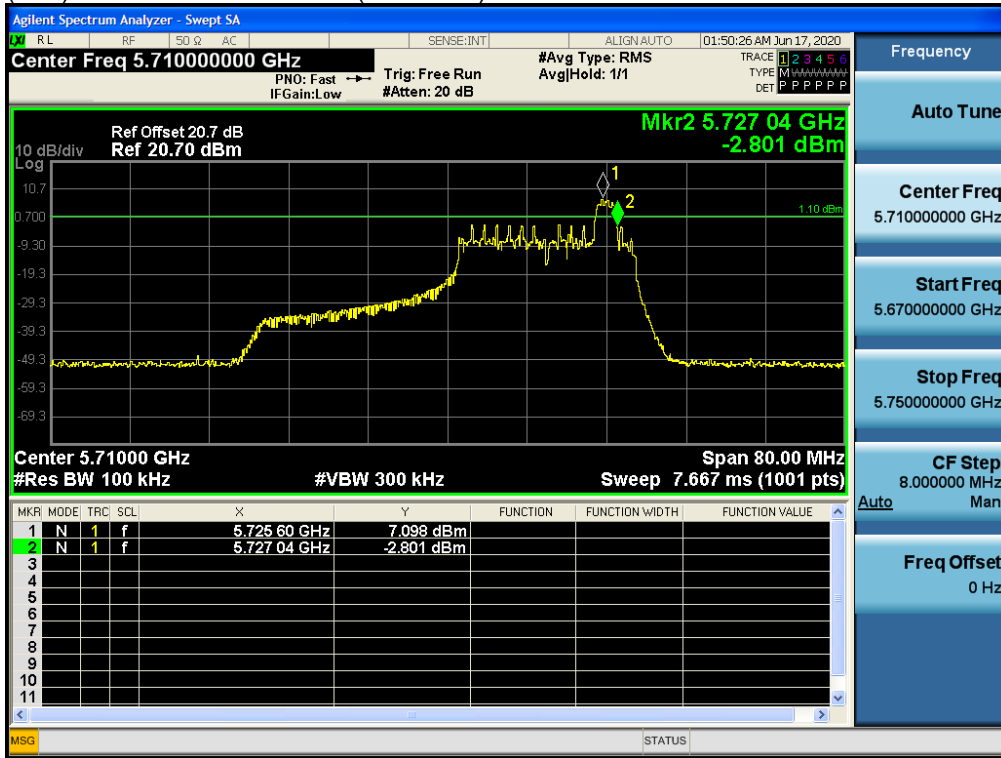


Measured Frequency [MHz]	5725 [MHz]	6dB Bandwidth [MHz]
5727.48	5725	2.48

**Note:**

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

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



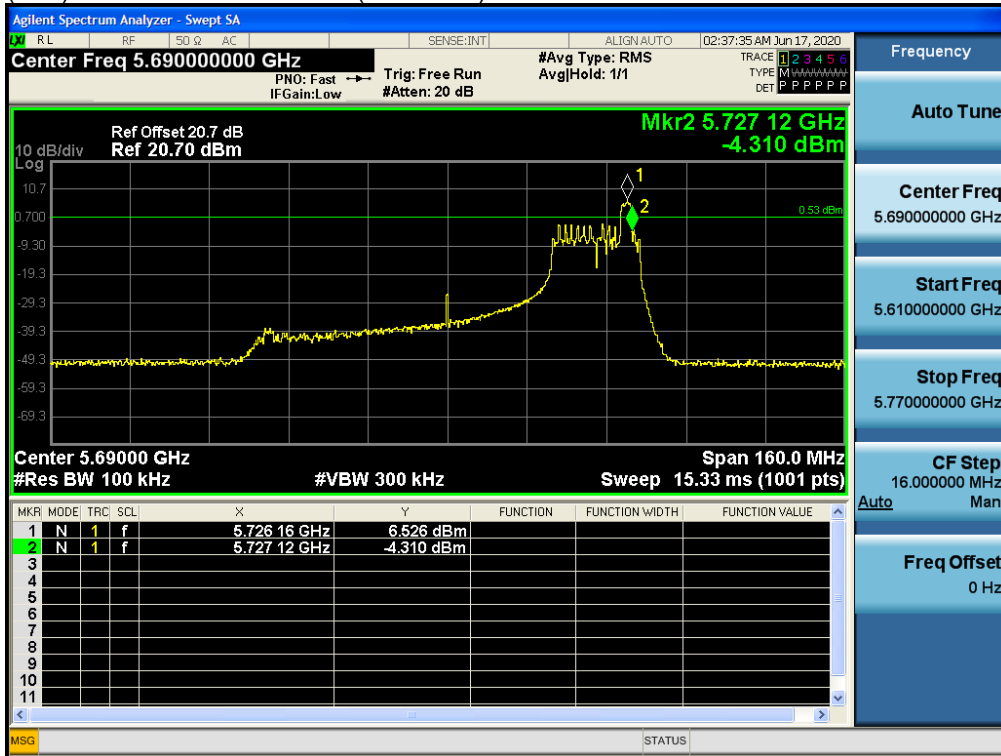
Measured Frequency [MHz]	5725 [MHz]	6dB Bandwidth [MHz]
5727.04	5725	2.04

**Note:**

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



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



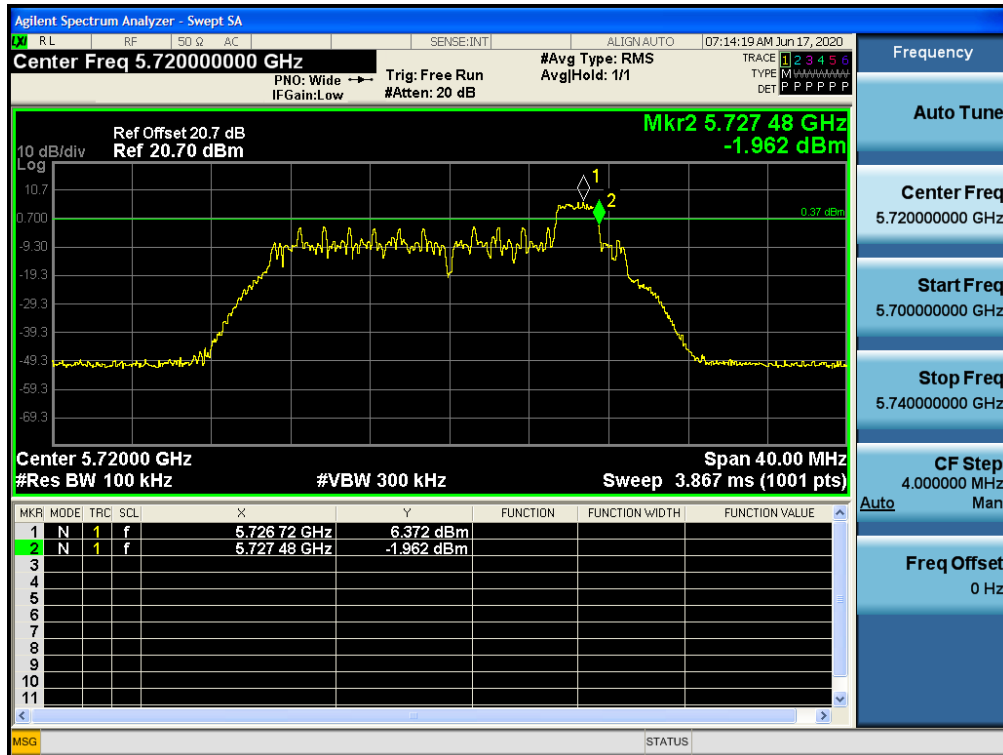
Measured Frequency [MHz]	5725 [MHz]	6dB Bandwidth [MHz]
5727.12	5725	2.12

**Note:**

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

### 5.2.2 Ant2

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

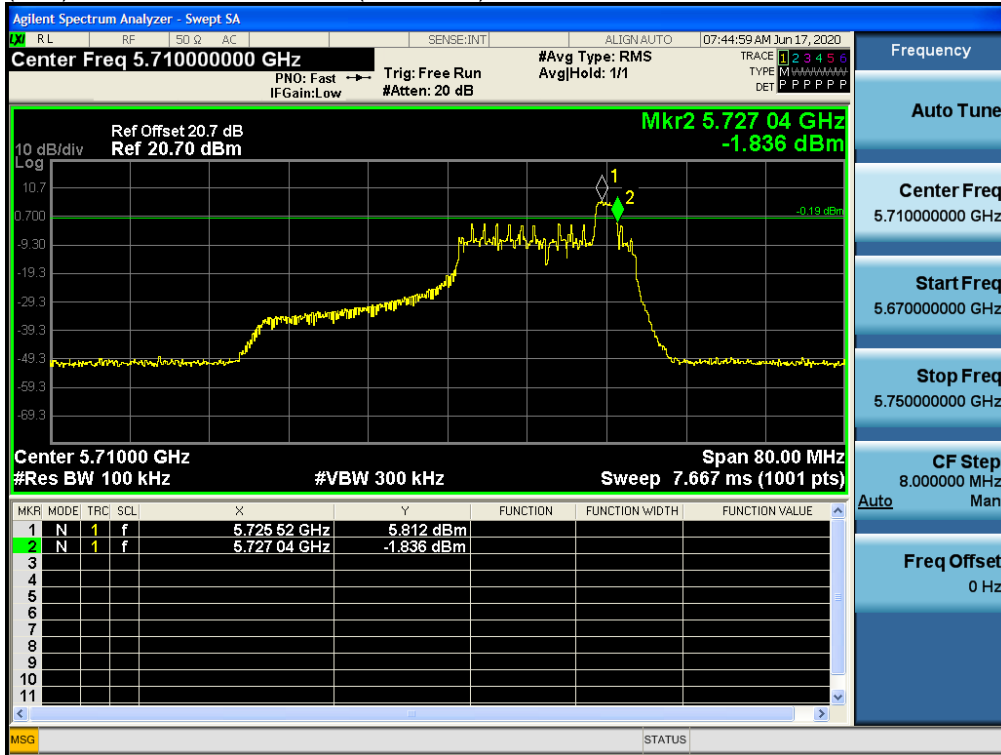


Measured Frequency [MHz]	5725 [MHz]	6dB Bandwidth [MHz]
5727.48	5725	2.48

**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

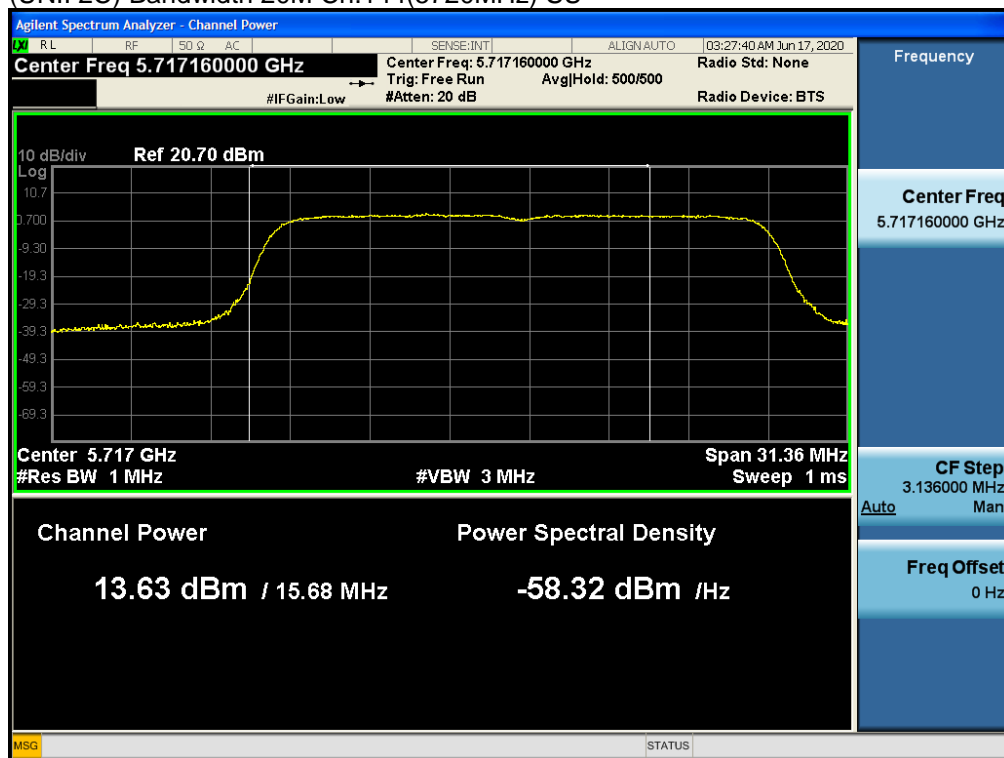
### 5.3 Output Power

**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

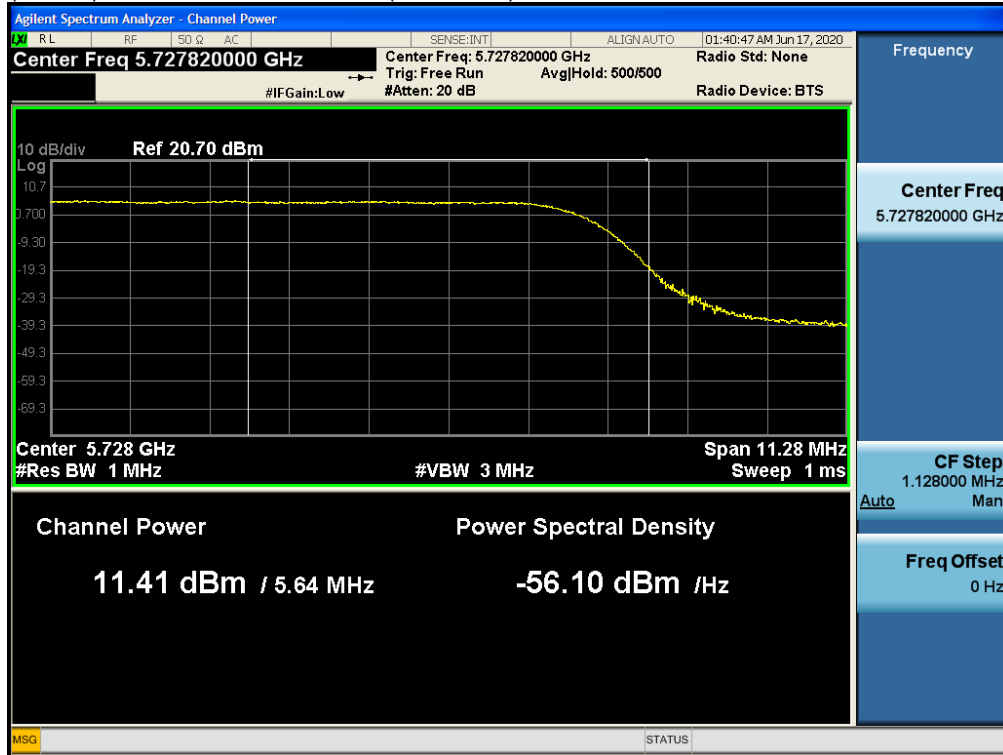


Reading Value (dBm)	Duty Cycle Factor (dB)	Total Power (dBm)
13.63	2.48	16.11

**Note:**

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

(UNII 3) Bandwidth 20M Ch.144(5720MHz) RU 54

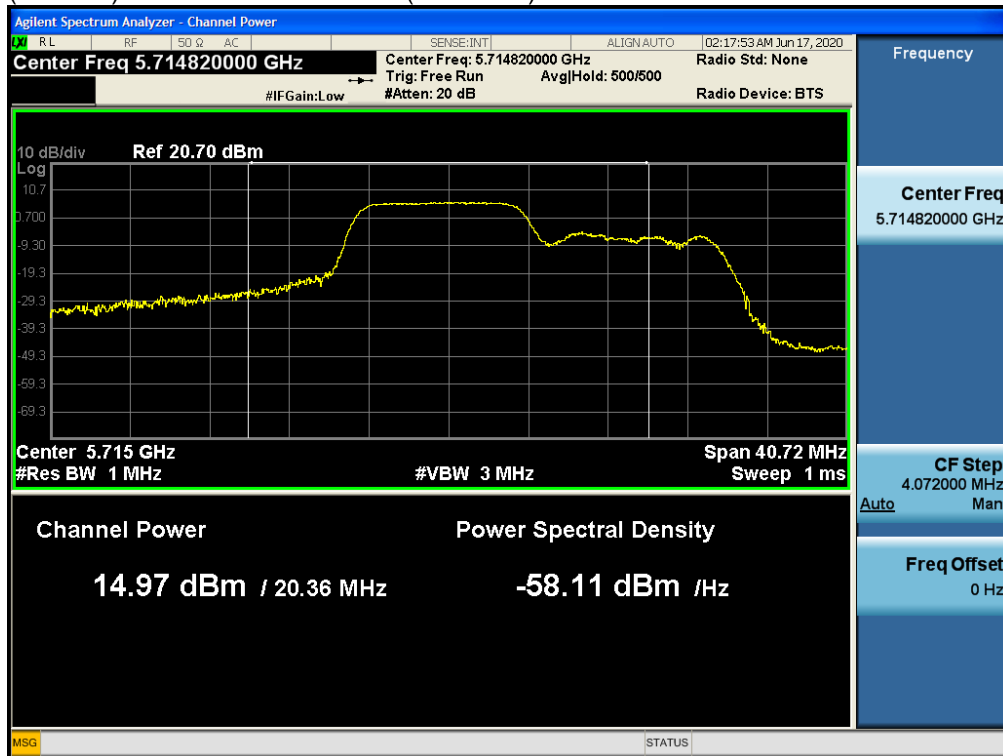


Reading Value (dBm)	Duty Cycle Factor (dB)	Total Power (dBm)
11.41	1.49	12.90

**Note:**

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

(UNII 2C) Bandwidth 40M Ch.142(5710MHz) RU 55

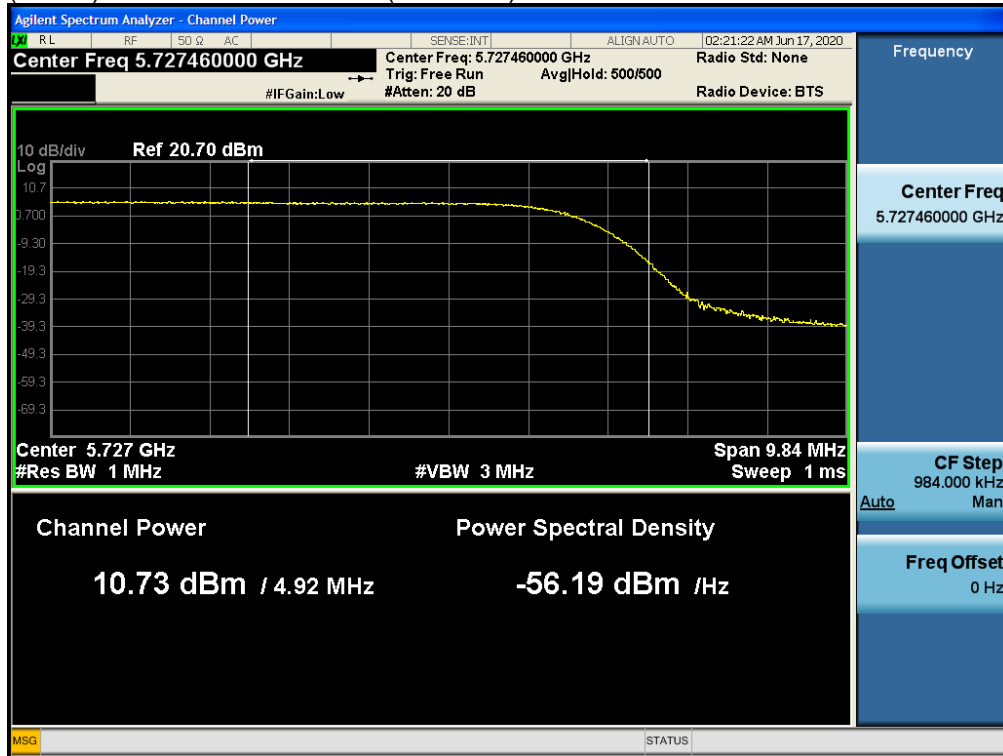


Reading Value (dBm)	Duty Cycle Factor (dB)	Total Power (dBm)
14.97	1.41	16.39

**Note:**

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

(UNII 3) Bandwidth 40M Ch.142(5710MHz) RU 56



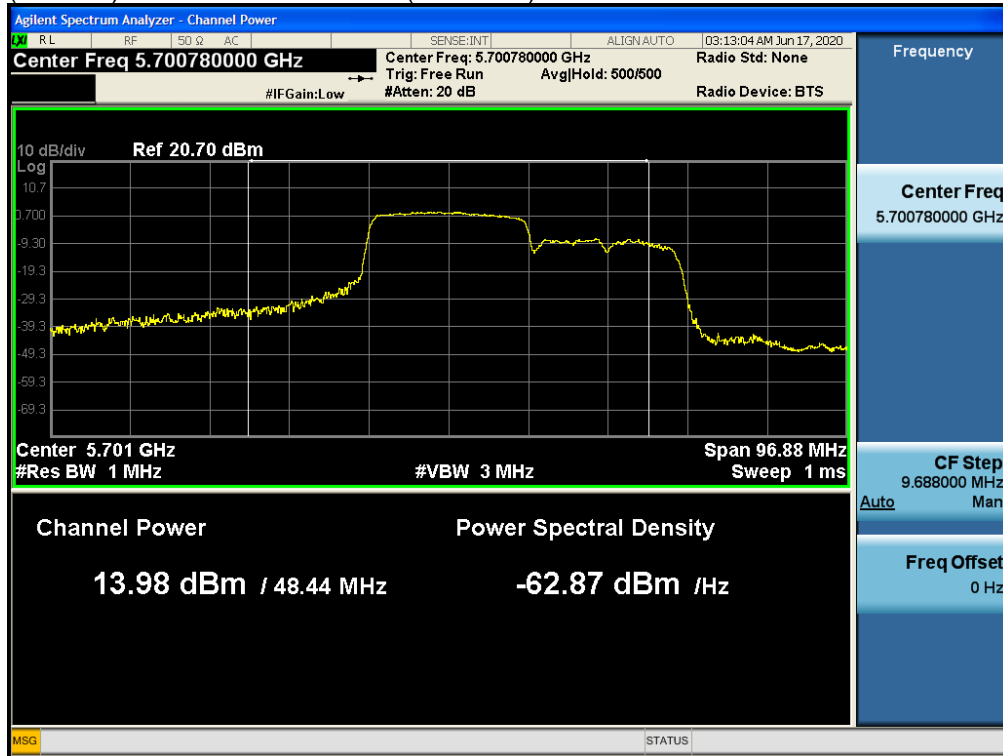
Reading Value (dBm)	Duty Cycle Factor (dB)	Total Power (dBm)
10.73	1.41	12.14

**Note:**

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



(UNII 2C) Bandwidth 80M Ch.138(5690MHz) RU 63

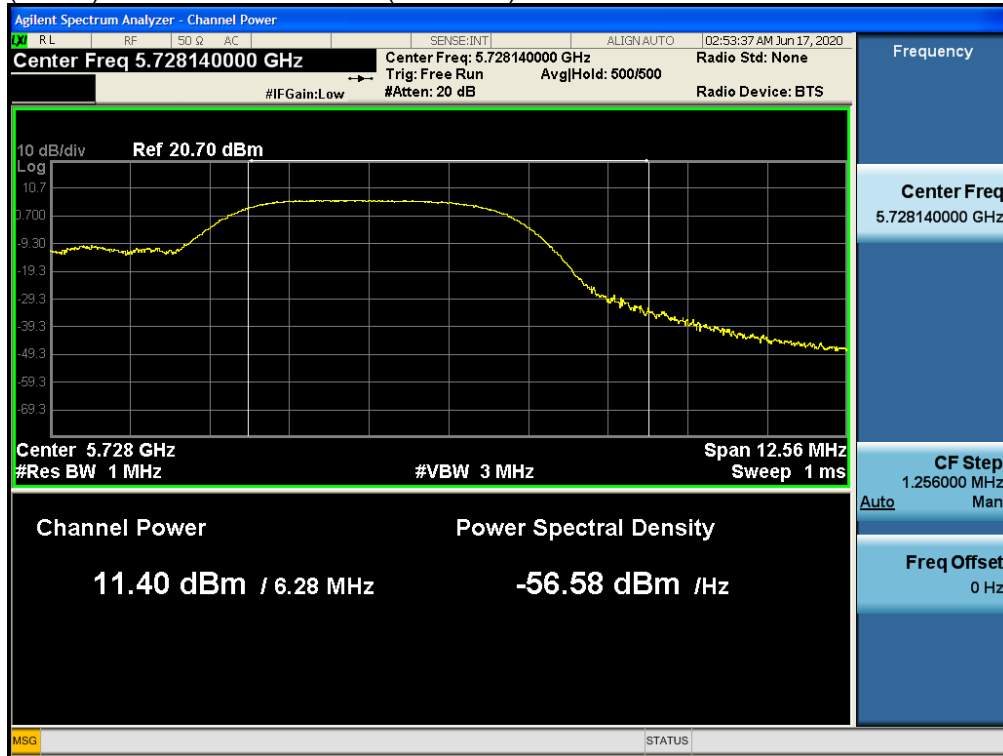


Reading Value (dBm)	Duty Cycle Factor (dB)	Total Power (dBm)
13.98	2.01	15.99

**Note:**

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

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



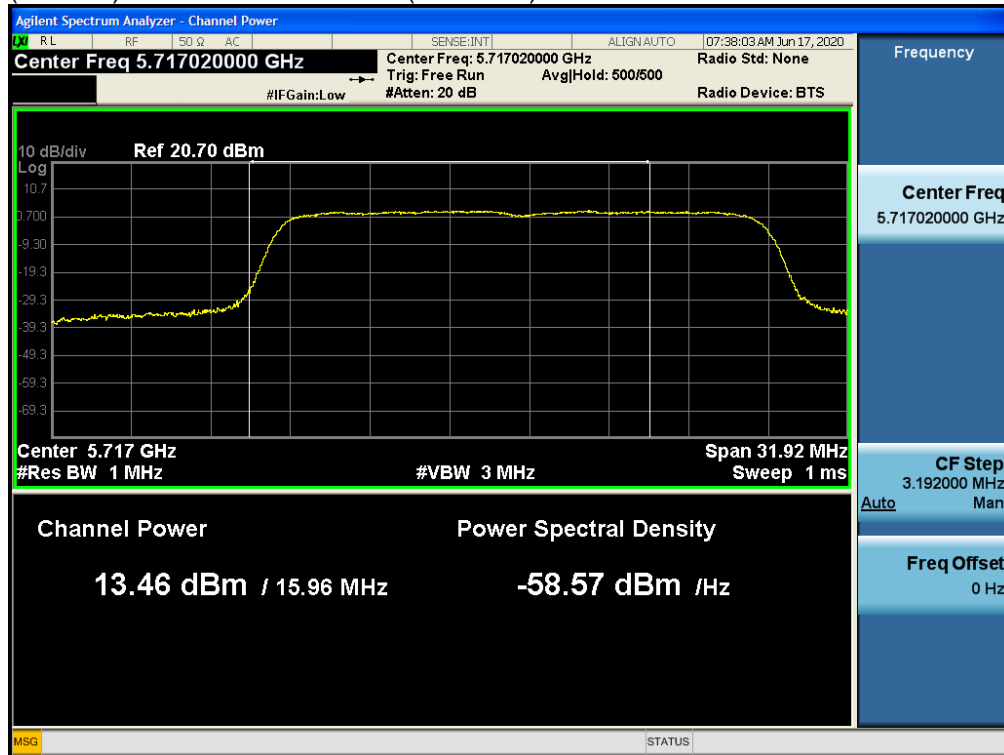
Reading Value (dBm)	Duty Cycle Factor (dB)	Total Power (dBm)
11.40	0.70	12.10

**Note:**

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

### 5.3.1 Ant2

(UNII 2C) Bandwidth 20M Ch.144(5720MHz) RU 61

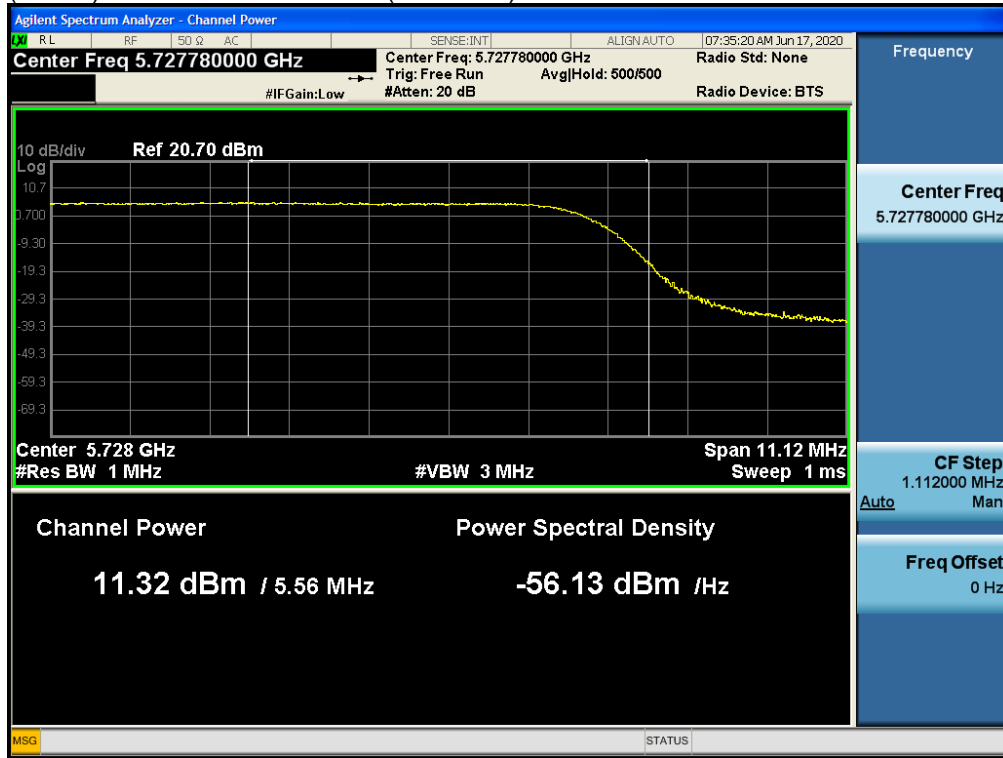


Reading Value (dBm)	Duty Cycle Factor (dB)	Total Power (dBm)
13.46	2.41	15.87

**Note:**

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

(UNII 3) Bandwidth 20M Ch.144(5720MHz) RU 54

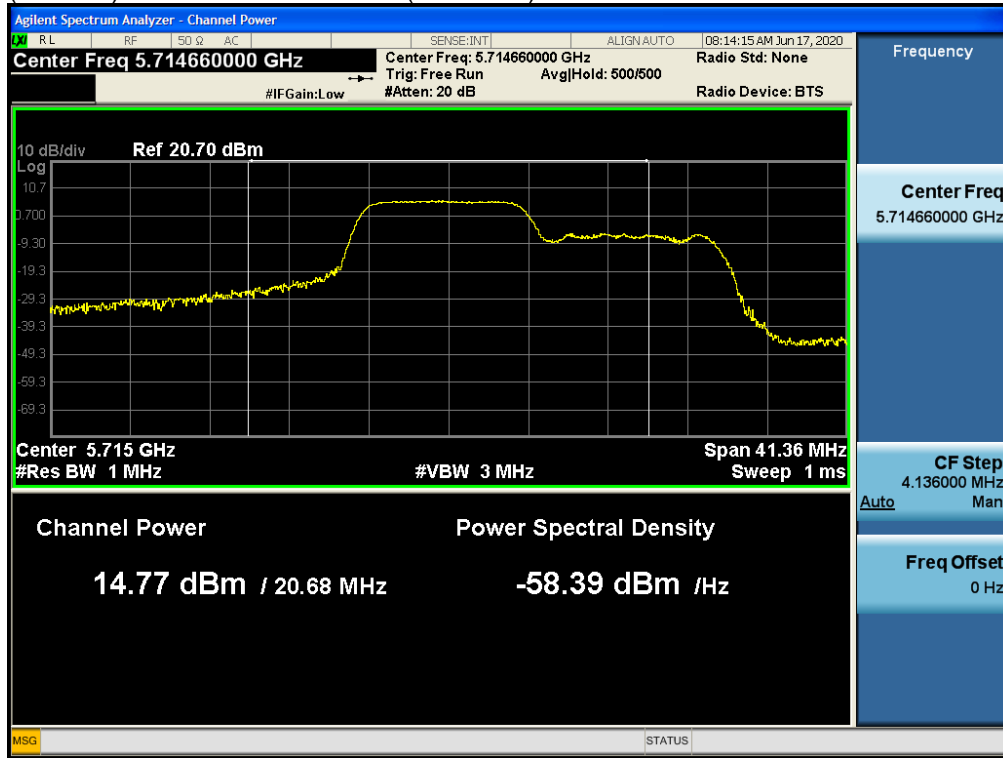


Reading Value (dBm)	Duty Cycle Factor (dB)	Total Power (dBm)
11.32	1.49	12.81

**Note:**

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

(UNII 2C) Bandwidth 40M Ch.142(5710MHz) RU 55

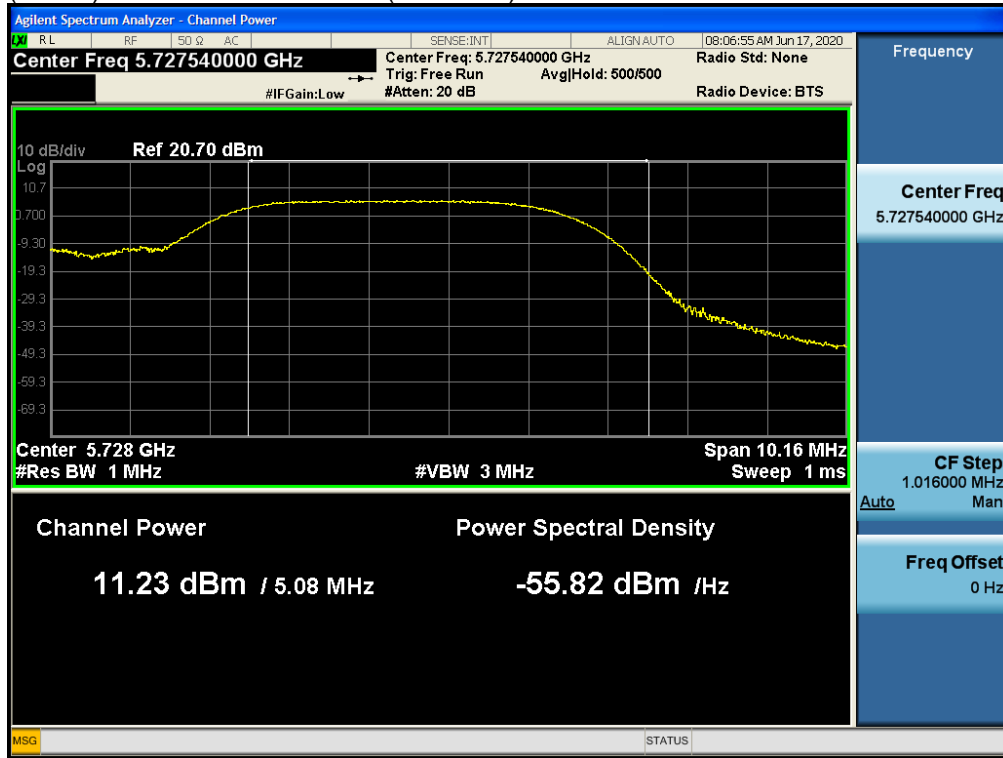


Reading Value (dBm)	Duty Cycle Factor (dB)	Total Power (dBm)
14.77	1.41	16.18

**Note:**

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

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

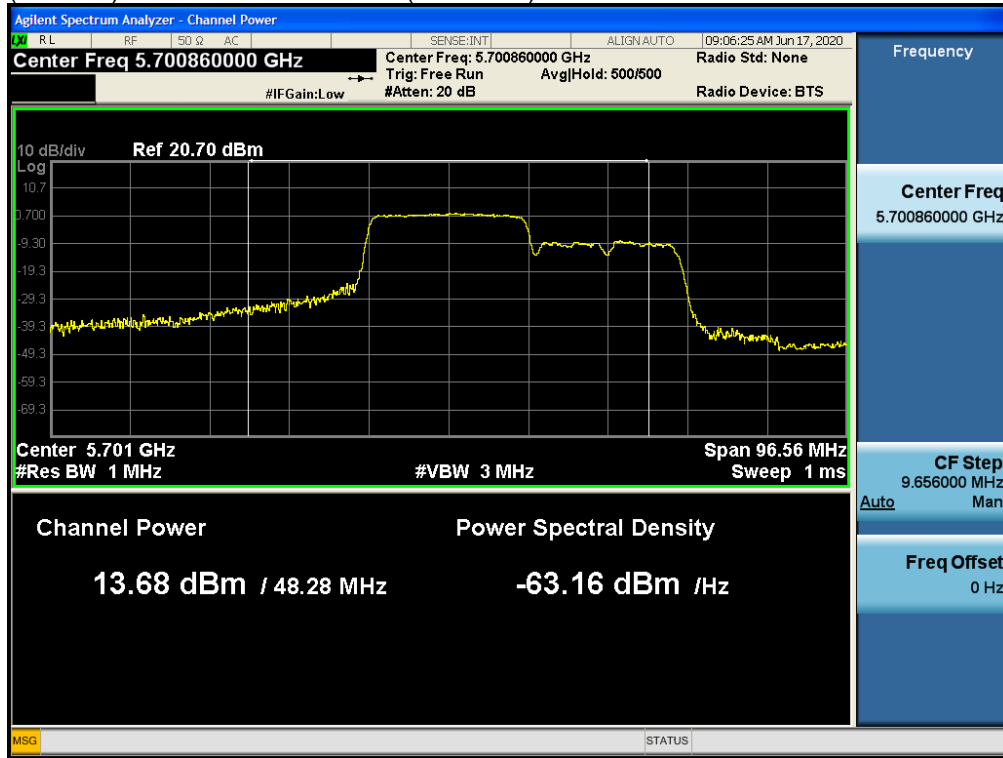


Reading Value (dBm)	Duty Cycle Factor (dB)	Total Power (dBm)
11.23	0.64	11.87

**Note:**

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

(UNII 2C) Bandwidth 80M Ch.138(5690MHz) RU 63

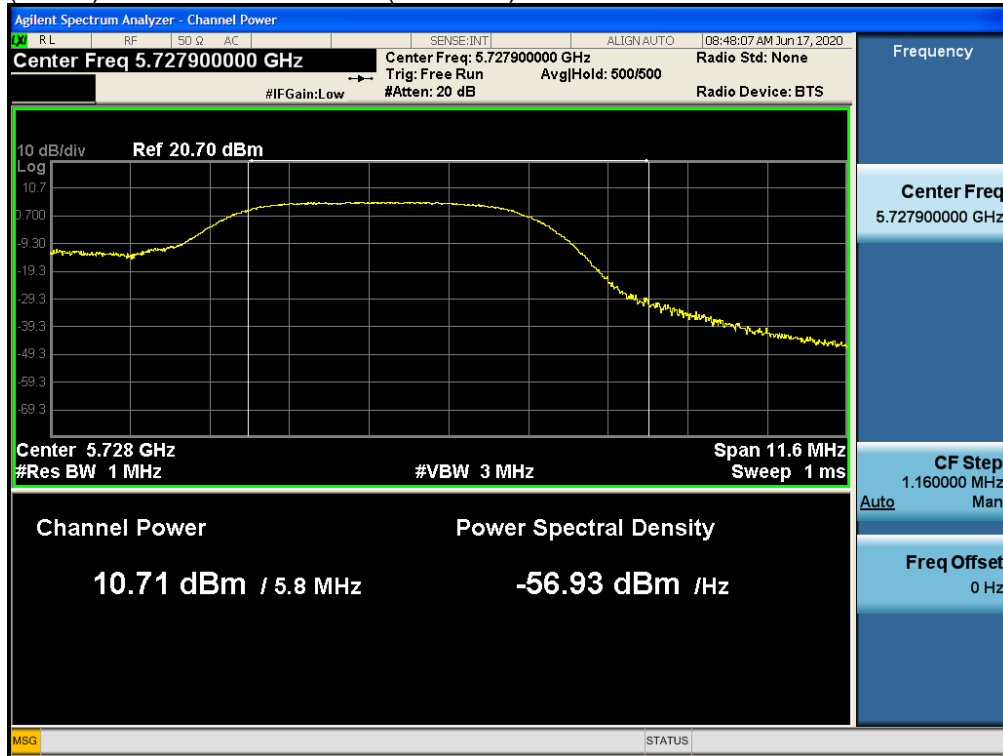


Reading Value (dBm)	Duty Cycle Factor (dB)	Total Power (dBm)
13.68	2.01	15.69

**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)
10.71	0.70	11.41

**Note:**

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



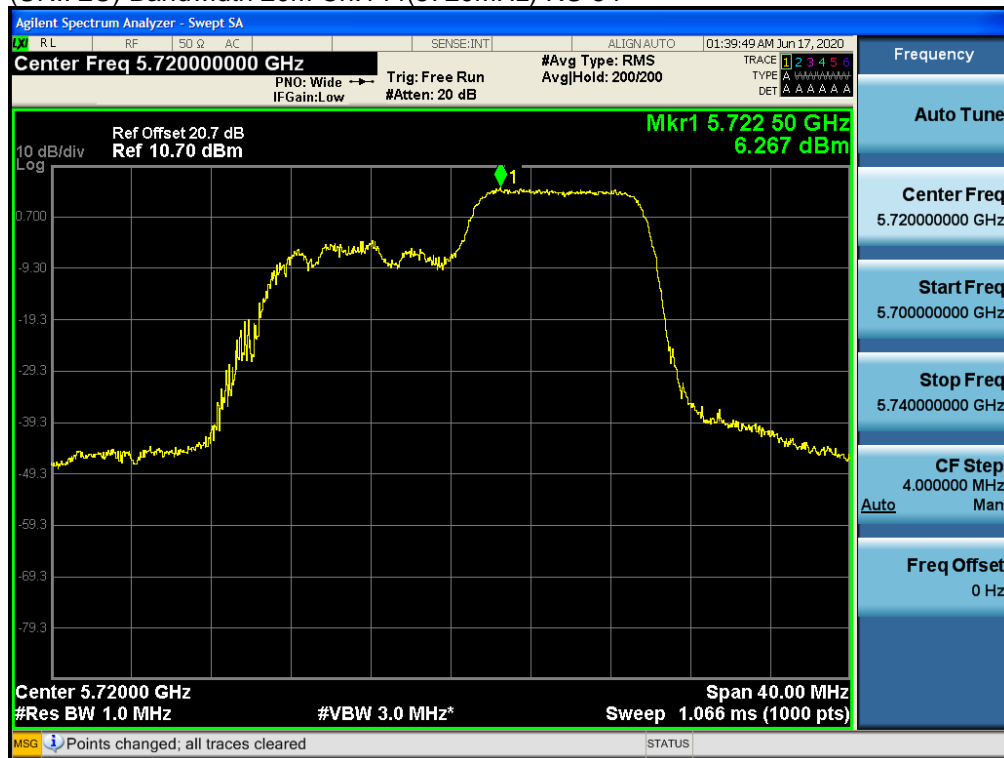
### 5.4 Power Spectral Density

**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 54



Reading Value (dBm)	Duty Cycle Factor (dB)	Total PSD (dBm)
6.267	1.49	7.75

**Note:**

Total PSD (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 PSD (dBm)
4.019	0.81	4.83

**Note:**

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

(UNII 2C) Bandwidth 40M Ch.142(5710MHz) RU 41



Reading Value (dBm)	Duty Cycle Factor (dB)	Total PSD (dBm)
7.331	0.64	7.98

**Note:**

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

(UNII 3) Bandwidth 40M Ch.142(5710MHz) RU 56



Reading Value (dBm)	Duty Cycle Factor (dB)	Total PSD (dBm)
3.222	1.41	4.63

**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)
7.307	0.70	8.00

**Note:**

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

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



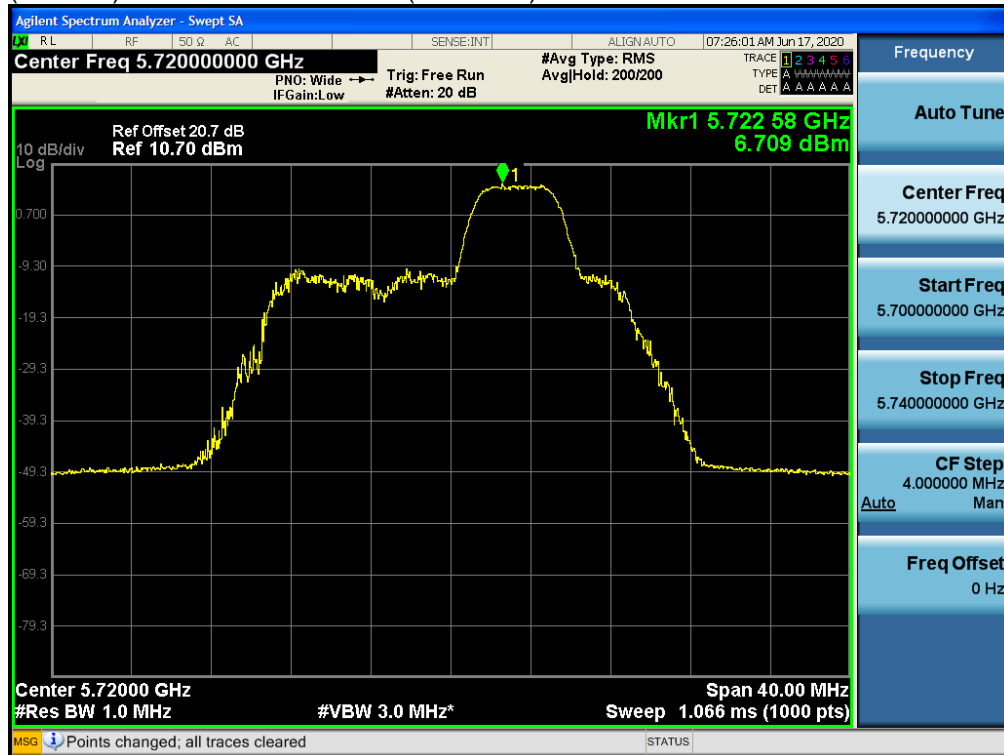
Reading Value (dBm)	Duty Cycle Factor (dB)	Total PSD (dBm)
3.624	0.70	4.32

**Note:**

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

### 5.4.2 Ant2

(UNII 2C) Bandwidth 20M Ch.144(5720MHz) RU 39



Reading Value (dBm)	Duty Cycle Factor (dB)	Total PSD (dBm)
6.709	0.81	7.52

**Note:**

Total PSD (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 PSD (dBm)
3.847	0.81	4.66

**Note:**

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



(UNII 2C) Bandwidth 40M Ch.142(5710MHz) RU 41

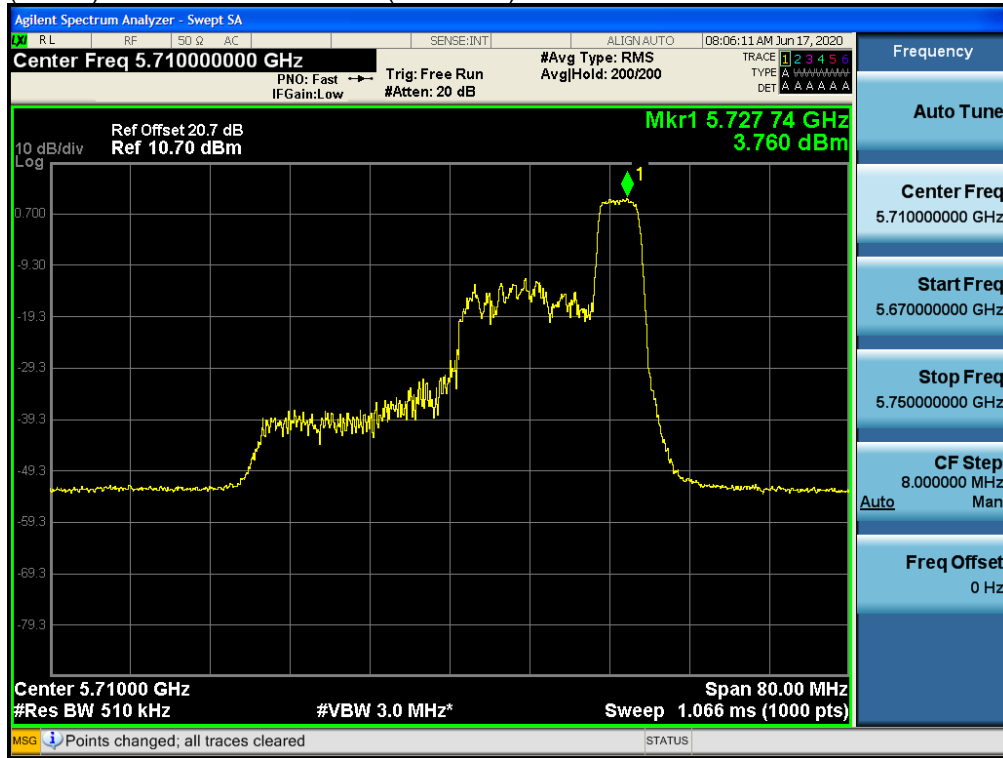


Reading Value (dBm)	Duty Cycle Factor (dB)	Total PSD (dBm)
7.340	0.64	7.98

**Note:**

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

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

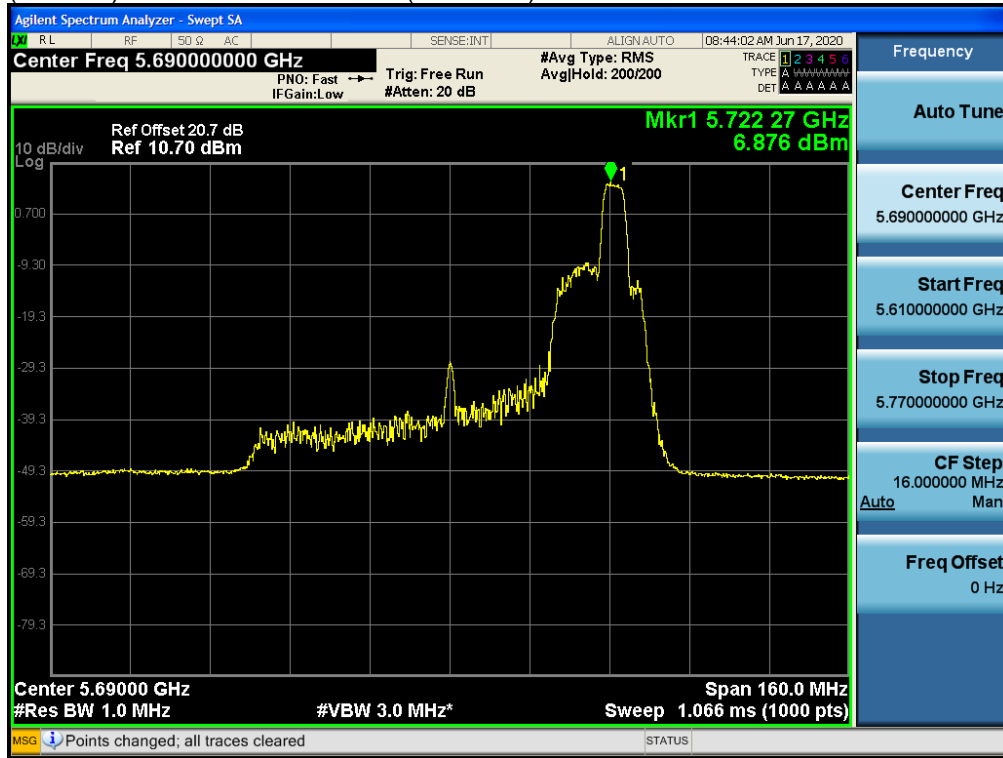


Reading Value (dBm)	Duty Cycle Factor (dB)	Total PSD (dBm)
3.760	0.64	4.40

**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)
6.876	0.70	7.57

**Note:**

Total PSD (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 PSD (dBm)
3.617	0.70	4.31

**Note:**

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