

# HCT Co., Ltd.

Appendix B: 802.11ax Test Plot

FCC ID A3LSMM526B

# **REVISION HISTORY**

The revision history for this document is shown in table.

Revision No.	Date of Issue	Description
0	August 19, 2021	Initial Release

#### Note:

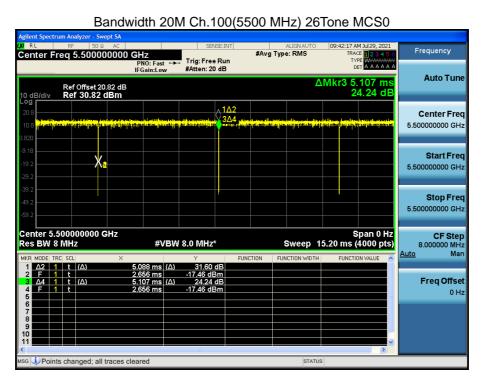
In order to simplify the report, attached plots were only the most lowest datarate.

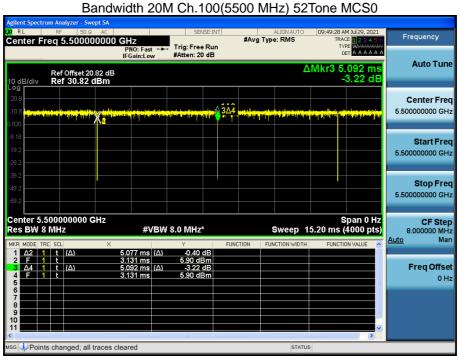


# 1. Duty Cycle

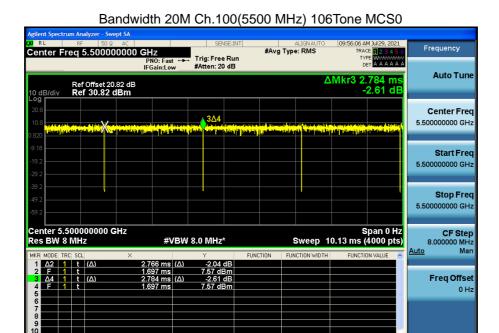
#### Note:

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



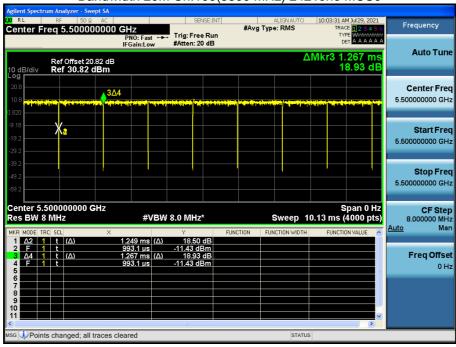






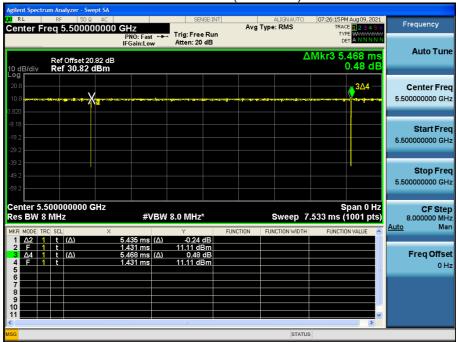
### Bandwidth 20M Ch.100(5500 MHz) 242Tone MCS0

G Points changed; all traces cleared

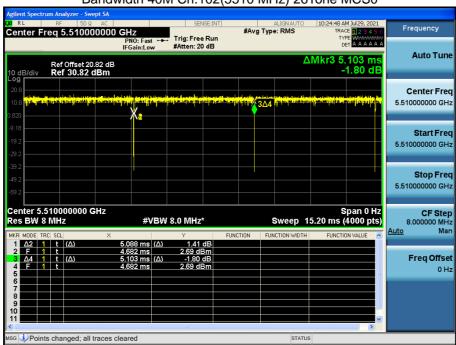




# Bandwidth 20M Ch.100(5500 MHz) SU MCS0



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

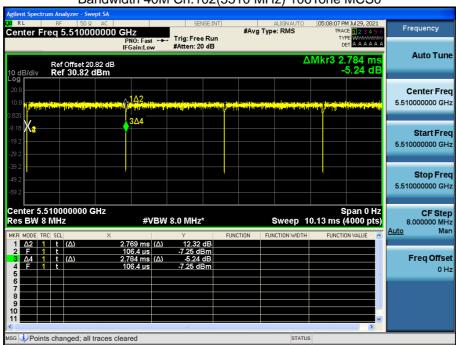




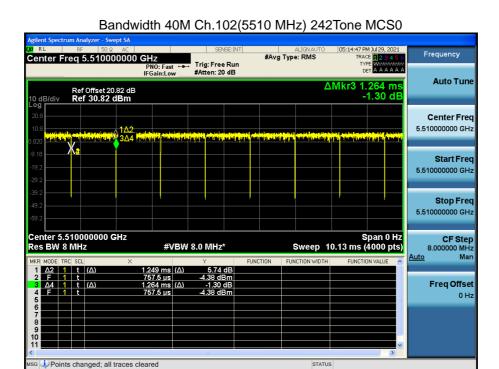
# Bandwidth 40M Ch.102(5510 MHz) 52Tone MCS0 Frequency **Auto Tune** ΔMkr3 5.092 ms -0.54 dE Ref Offset 20.82 dB Ref 30.82 dBm Δ1Δ2 5.510000000 GHz 5.510000000 GHz Stop Freq 5.510000000 GHz Center 5.510000000 GHz Res BW 8 MHz Span 0 Hz Sweep 15.20 ms (4000 pts) CF Step 8.000000 MHz Man #VBW 8.0 MHz\* Freq Offset 0 Hz

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

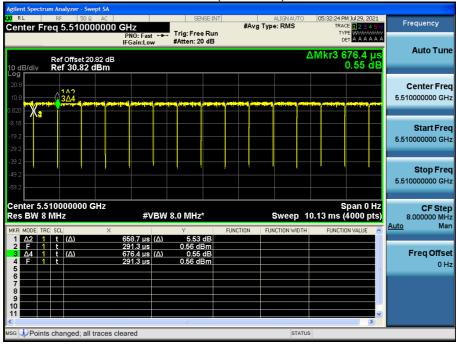
G Points changed; all traces cleared







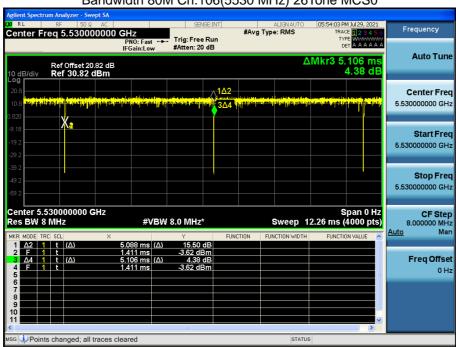
### Bandwidth 40M Ch.102(5510 MHz) 484Tone MCS0



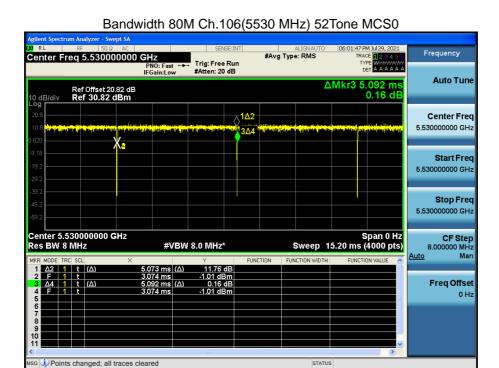


# Bandwidth 40M Ch.102(5510 MHz) SU MCS0 Frequency **Auto Tune** ΔMkr3 5.468 ms 0.34 dB Ref Offset 20.82 dB Ref 30.82 dBm 3∆/ 5.510000000 GHz Χ 5.510000000 GHz Stop Freq 5.510000000 GHz Center 5.510000000 GHz Res BW 8 MHz Span 0 Hz Sweep 7.533 ms (1001 pts) CF Step 8.000000 MHz Man #VBW 8.0 MHz\* 2.35 dB 6.74 dBm 0.34 dB 6.74 dBm Freq Offset 0 Hz

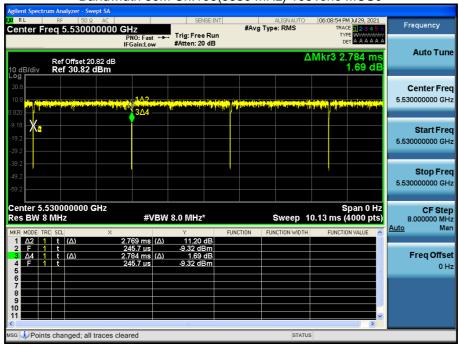
### Bandwidth 80M Ch.106(5530 MHz) 26Tone MCS0



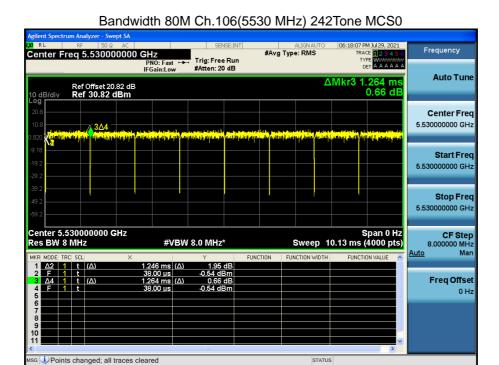




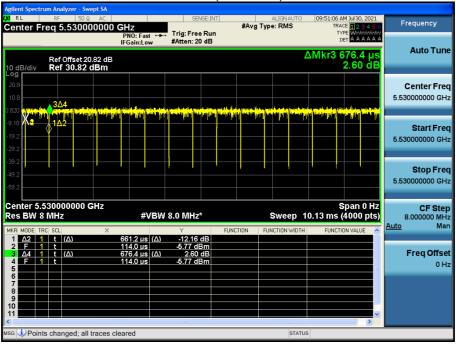
### Bandwidth 80M Ch.106(5530 MHz) 106Tone MCS0



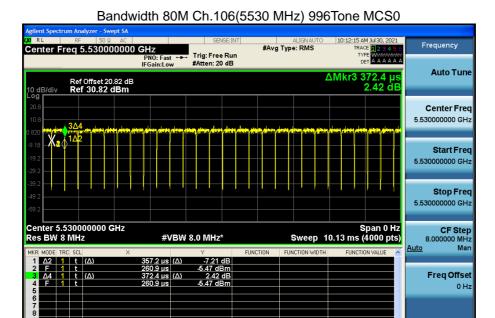




### Bandwidth 80M Ch.106(5530 MHz) 484Tone MCS0

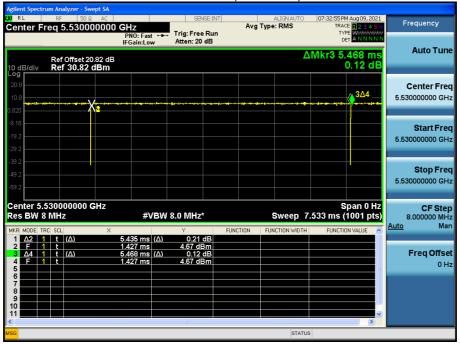






### Bandwidth 80M Ch.106(5530 MHz) SU MCS0

G Points changed; all traces cleared





#### 2. 26 dB Bandwidth

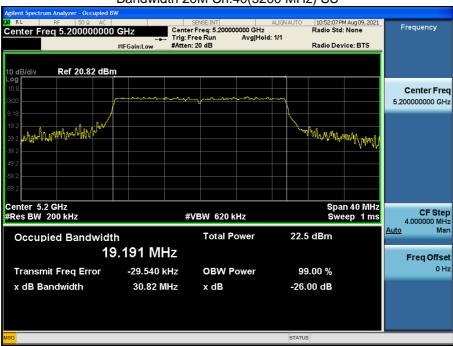
# Note:

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

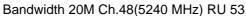




#### Bandwidth 20M Ch.40(5200 MHz) SU

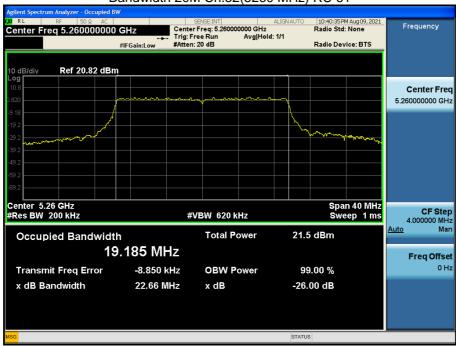








#### Bandwidth 20M Ch.52(5260 MHz) RU 61





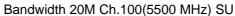




#### Bandwidth 20M Ch.64(5320 MHz) RU 61





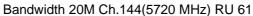




#### Bandwidth 20M Ch.120(5600 MHz) RU 61







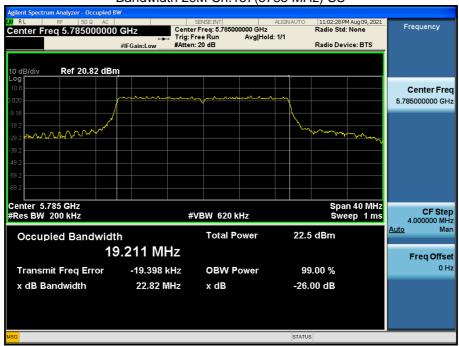


#### Bandwidth 20M Ch.149(5745 MHz) SU







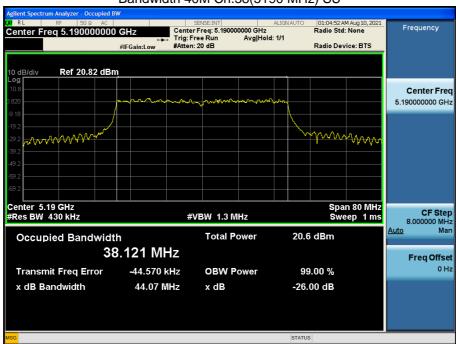


#### Bandwidth 20M Ch.165(5825 MHz) SU









#### Bandwidth 40M Ch.46(5230 MHz) SU

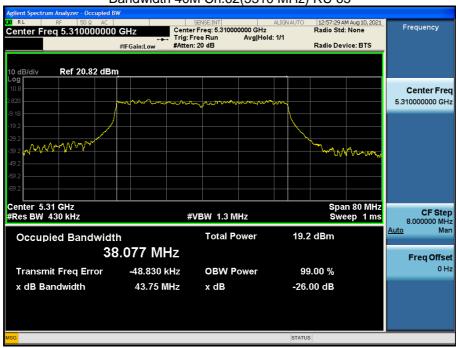




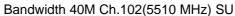




#### Bandwidth 40M Ch.62(5310 MHz) RU 65





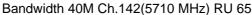


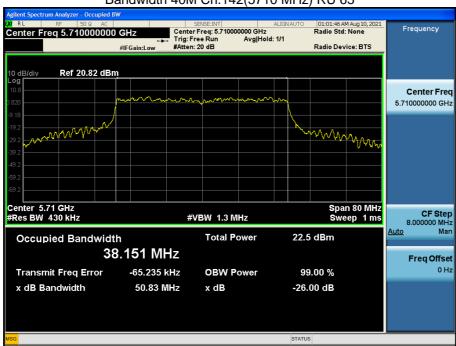


#### Bandwidth 40M Ch.118(5590 MHz) SU







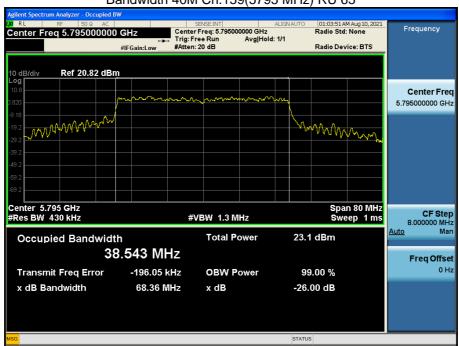


#### Bandwidth 40M Ch.151(5755 MHz) SU







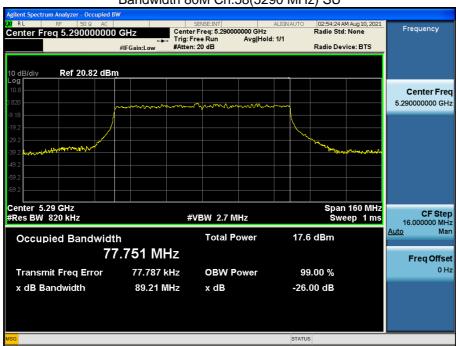


#### Bandwidth 80M Ch.42(5210 MHz) RU 67





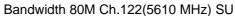




#### Bandwidth 80M Ch.106(5530 MHz) SU





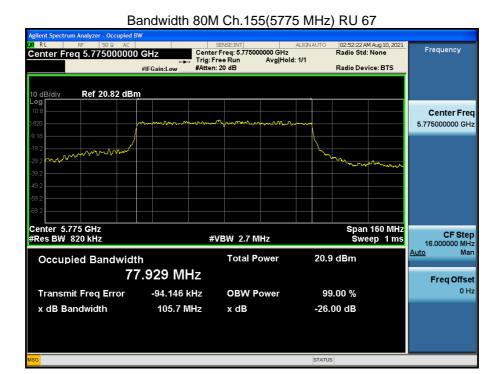




#### Bandwidth 80M Ch.138(5690 MHz) SU





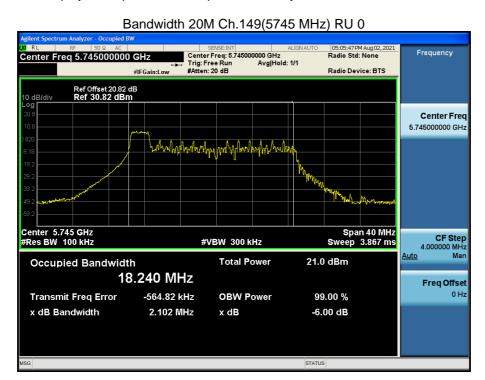


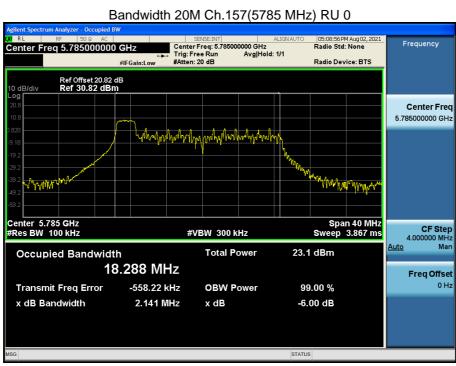


#### 3. 6 dB Bandwidth

#### Note:

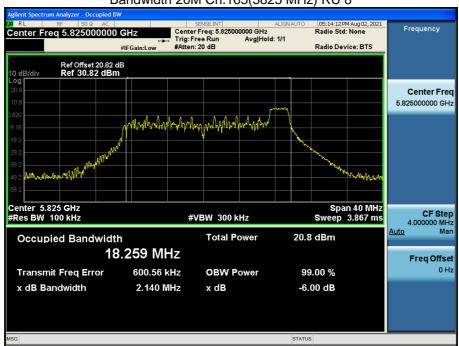
1. In order to simplify the report, attached plots were only the most narrow channel.



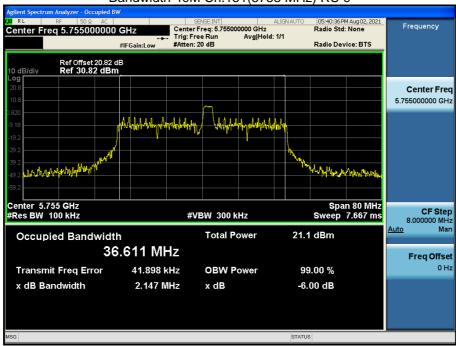








#### Bandwidth 40M Ch.151(5755 MHz) RU 9

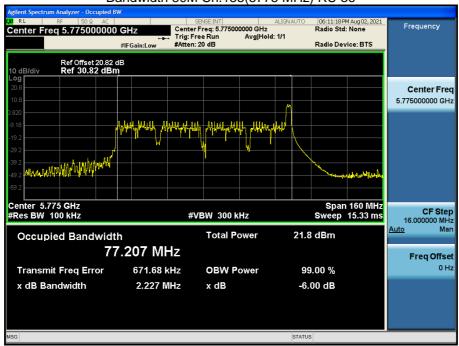








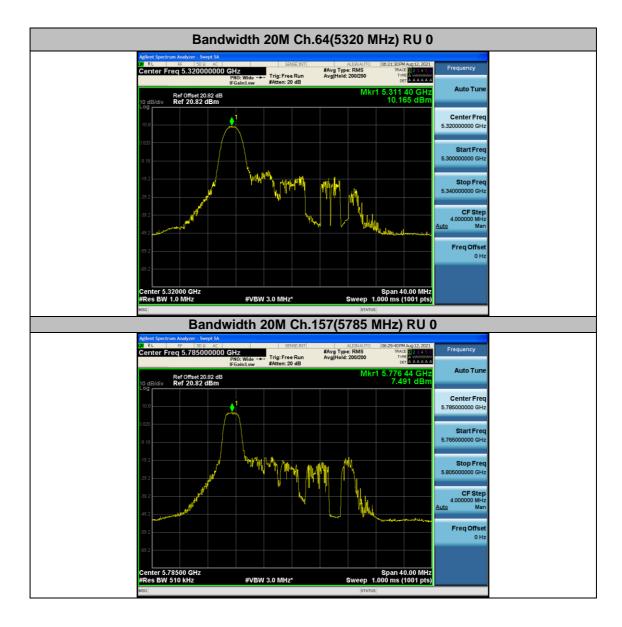
#### Bandwidth 80M Ch.155(5775 MHz) RU 36





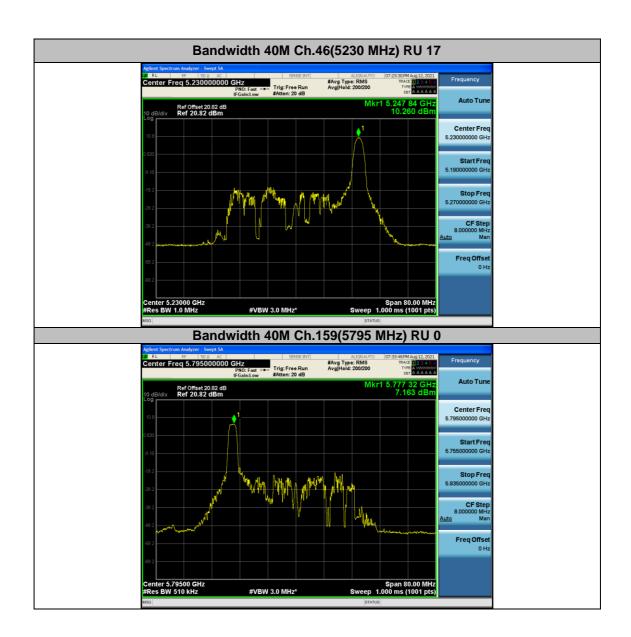
# 4. Power Spetral Density

- 1. In order to simplify the report, attached plots were only channel of highest PSD.
- 2. Total PSD (dBm) = Measured Level (dBm) + Duty Cycle Factor (dB)



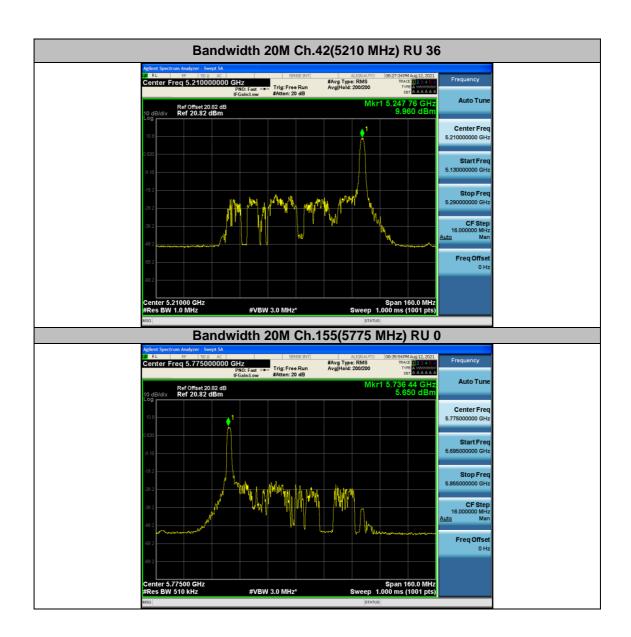
Frequency [MHz]	Measured PSD (dBm)	Duty Cycle Factor (dB)	Total PSD (dBm)
5320	10.165	0.016	10.181
5785	7.491	0.016	7.507





Frequency [MHz]	Measured PSD (dBm)	Duty Cycle Factor (dB)	Total PSD (dBm)
5230	10.260	0.013	10.273
5795	7.163	0.013	7.176





Frequency [MHz]	Measured PSD (dBm)	Duty Cycle Factor (dB)	Total PSD (dBm)
5210	9.960	0.016	9.976
5775	5.650	0.016	5.666



# 5. Straddle Channel 5.1 26 dB Bandwidth

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

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



UNII 2C	5725 [MHz]	Measured Frequency [MHz]	26dB Bandwidth [MHz]
	5725	5706.2	18.80
UNII 3	Measured Frequency [MHz]	5725 [MHz]	26dB Bandwidth [MHz]
	5731.84	5725	6.84

- 1. [UNII 2C] 26 dB Bandwidth = 5725 MHz Measured Frequency[MHz]
- 2. [UNII 3] 26 dB Bandwidth = Measured Frequency[MHz] 5 725 MHz





UNII 2C	5725 [MHz]	Measured Frequency [MHz]	26dB Bandwidth [MHz]
51tm 26	5725	5681.2	43.80
UNII 3	Measured Frequency [MHz]	5725 [MHz]	26dB Bandwidth [MHz]
• · · · · · ·	5732	5725	7.00

- 1. [UNII 2C] 26 dB Bandwidth = 5725 MHz Measured Frequency[MHz]
- 2. [UNII 3] 26 dB Bandwidth = Measured Frequency[MHz] 5 725 MHz





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

UNII 2C	5725 [MHz]	Measured Frequency [MHz]	26dB Bandwidth [MHz]
	5725	5627.76	97.24
UNII 3	Measured Frequency [MHz]	5725 [MHz]	26dB Bandwidth [MHz]
5 <b>v</b>	5734.32	5725	9.32

- 1. [UNII 2C] 26 dB Bandwidth = 5725 MHz Measured Frequency[MHz]
- 2. [UNII 3] 26 dB Bandwidth = Measured Frequency[MHz] 5 725 MHz



#### 5.2 6 dB Bandwidth

#### Note:

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

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

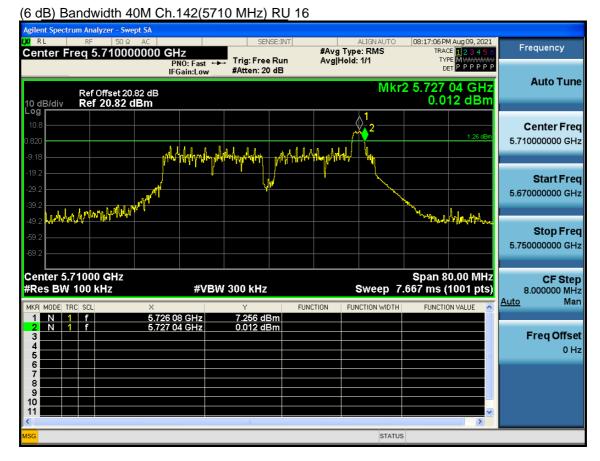


Measured Frequency	Measured Frequency	6dB Bandwidth
[MHz]	[MHz]	[MHz]
5727.52	5725	2.52

#### Note:

6 dB Bandwidth = Measured Frequency[MHz] - 5 725 MHz





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

#### Note:

6 dB Bandwidth = Measured Frequency[MHz] - 5 725 MHz





# Measured Frequency<br/>[MHz]Measured Frequency<br/>[MHz]6dB Bandwidth<br/>[MHz]5727.1257252.12

#### Note:

6 dB Bandwidth = Measured Frequency[MHz] - 5 725 MHz

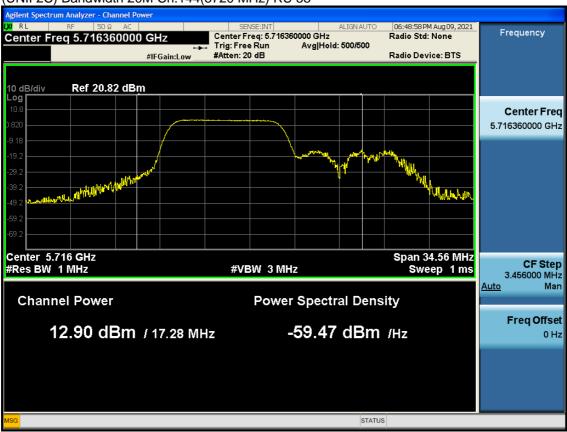


# 5.3 Output Power

#### Note:

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

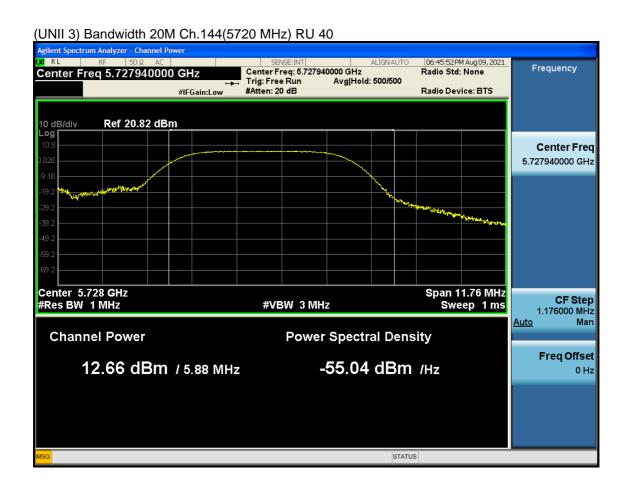




Measured Level (dBm)	Duty Cycle Factor (dB)	Total Power (dBm)
12.90	0.028	12.93

#### Note

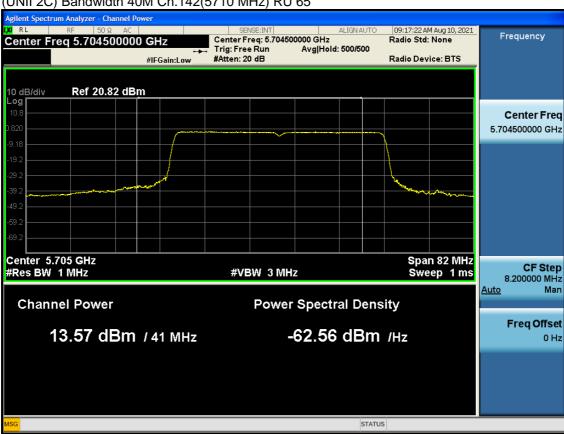




Measured Level	Duty Cycle Factor	Total Power
(dBm)	(dB)	(dBm)
12.66	0.013	

#### Note:





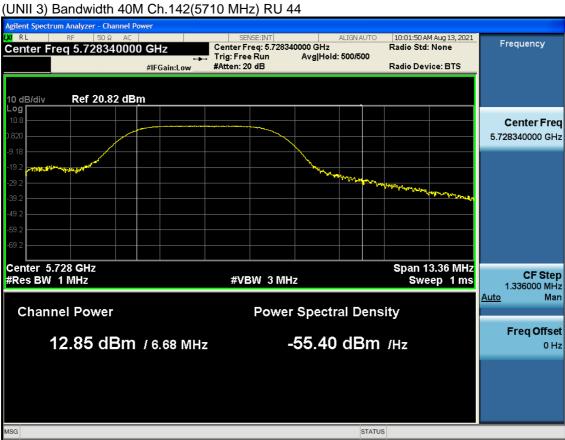
# (UNII 2C) Bandwidth 40M Ch.142(5710 MHz) RU 65

Measured Level (dBm)	Duty Cycle Factor (dB)	Total Power (dBm)
13.57	0.115	13.69

(dBm)

12.87





# Measured Level Duty Cycle Factor Total Power

(dB)

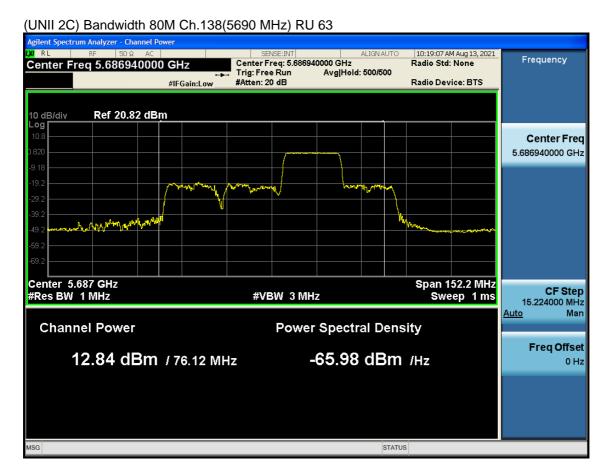
0.016

#### Note:

(dBm)

12.85





#### Measured Level (dBm) Duty Cycle Factor (dB) Total Power (dBm) 12.84 0.061 12.90

#### Note:





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

Measured Level (dBm)	Duty Cycle Factor (dB)	Total Power (dBm)
11.66	0.016	11.68

#### Note:



# 5.4 Power Spectral Density

#### Note:

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





Measured Level (dBm)	Duty Cycle Factor (dB)	Total PSD (dBm)
9.520	0.016	9.536

#### Note:





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

Measured Level (dBm)	Duty Cycle Factor (dB)	Total PSD (dBm)
6.478	0.016	6.494

#### Note:





#### Measured Level (dBm) Duty Cycle Factor (dB) Total PSD (dBm) 8.838 0.013 8.851

#### Note:

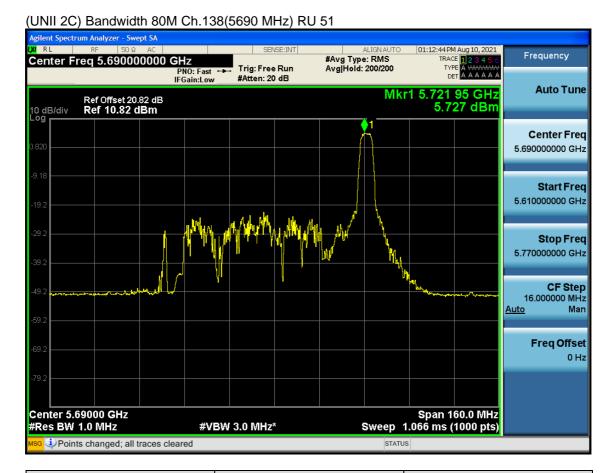




#### Measured Level (dBm) Duty Cycle Factor (dB) Total PSD (dBm) 6.122 0.013 6.135

#### Note:





Measured Level (dBm)	Duty Cycle Factor (dB)	Total PSD (dBm)
5.727	0.016	5.743

#### Note:





#### Measured Level (dBm) Duty Cycle Factor (dB) Total PSD (dBm) 4.957 0.016 4.973

#### Note: