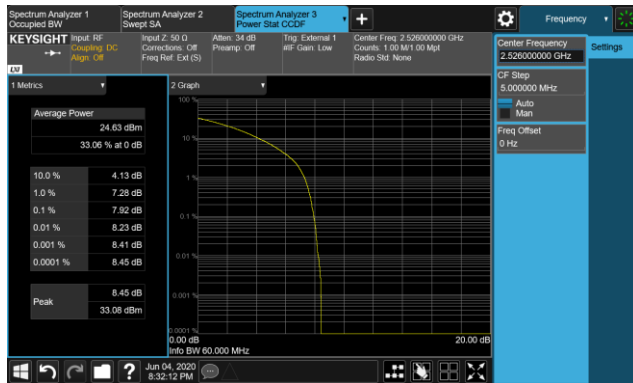
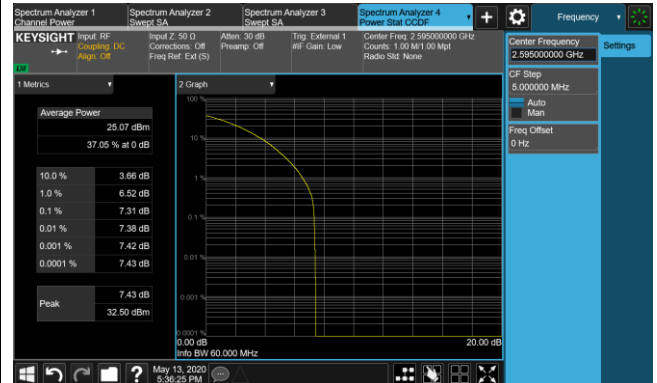


Peak to Average Ratio - Ant 0 (QPSK)

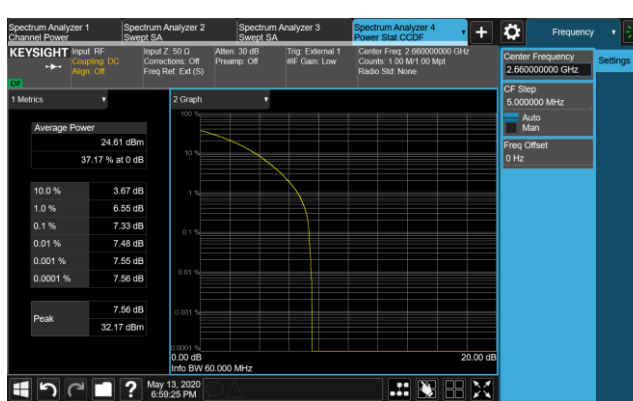
Bottom Channel



Middle Channel

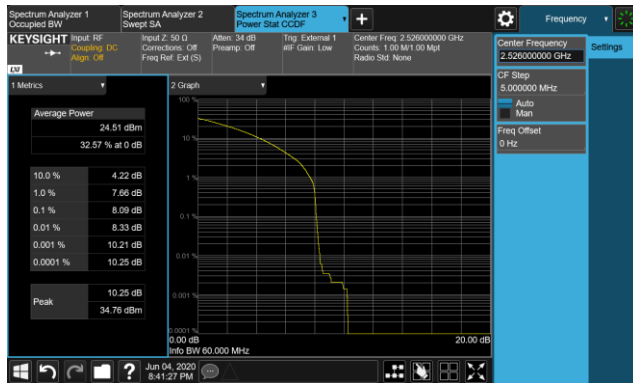


Top Channel

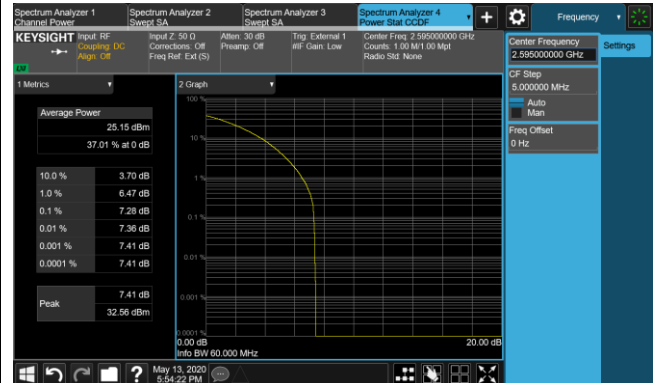


Peak to Average Ratio - Ant 0 (16QAM)

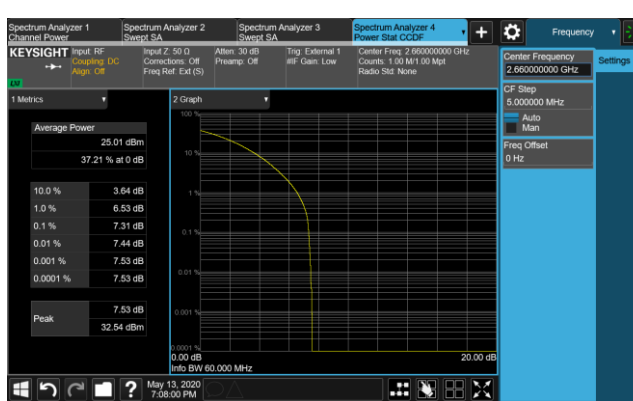
Bottom Channel



Middle Channel

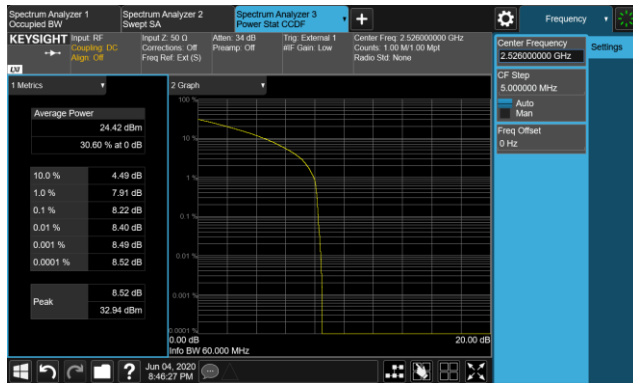


Top Channel

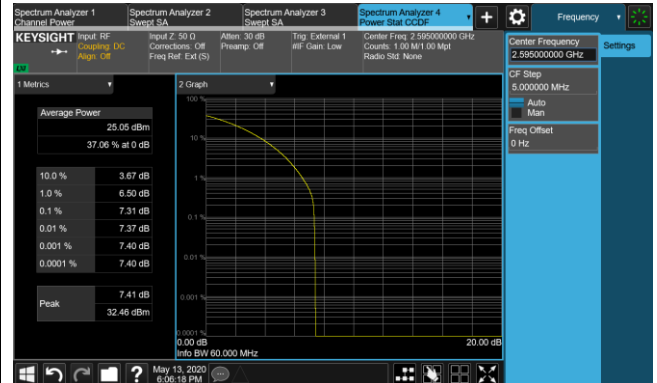


Peak to Average Ratio - Ant 0 (64QAM)

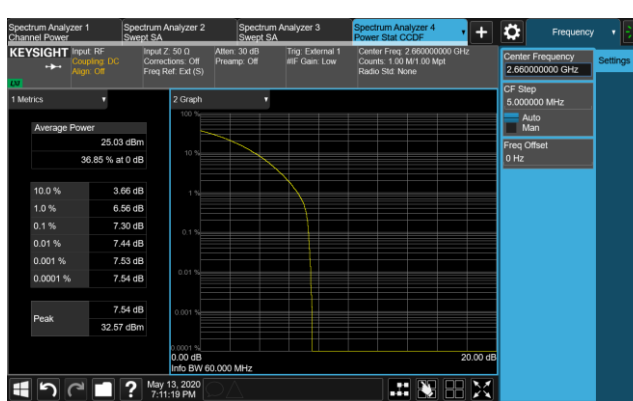
Bottom Channel



Middle Channel

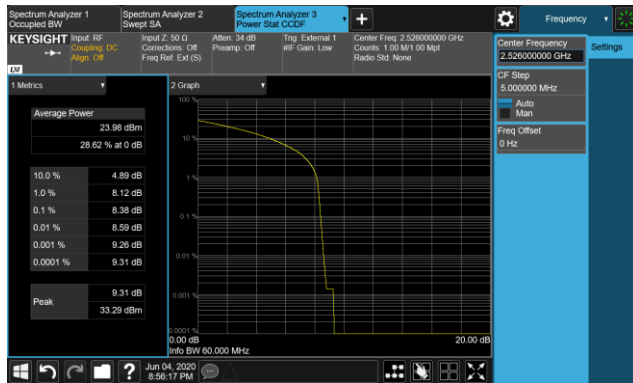


Top Channel

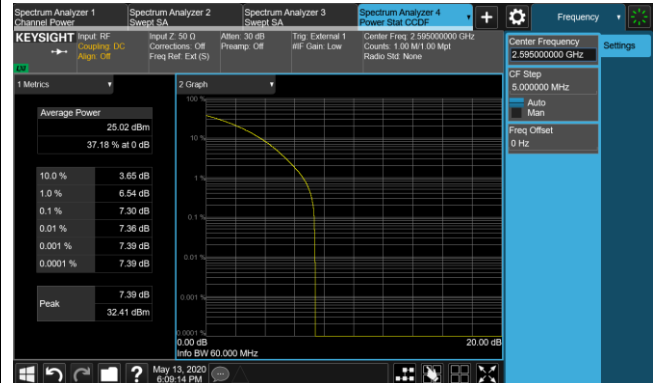


Peak to Average Ratio - Ant 0 (256QAM)

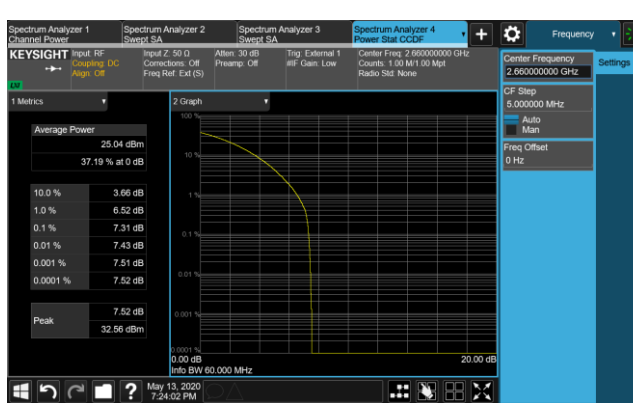
Bottom Channel



Middle Channel

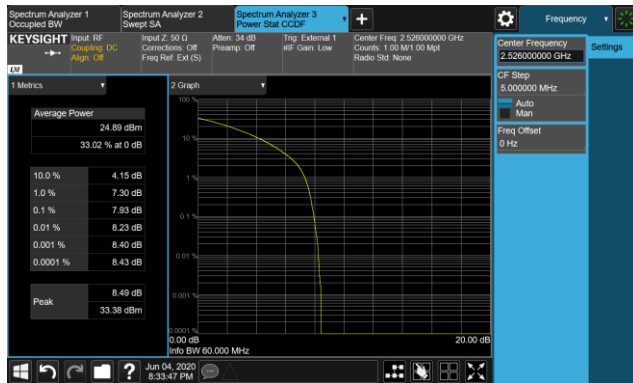


Top Channel

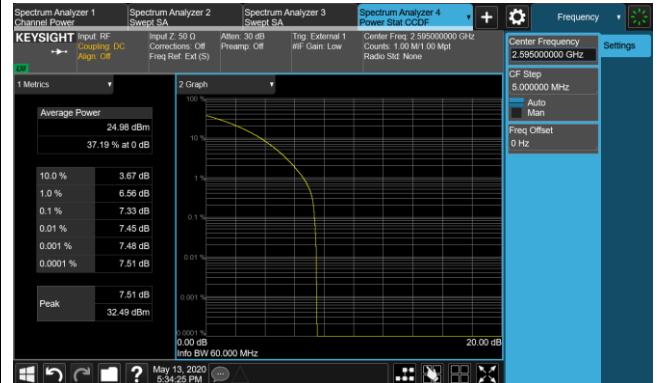


Peak to Average Ratio - Ant 1 (QPSK)

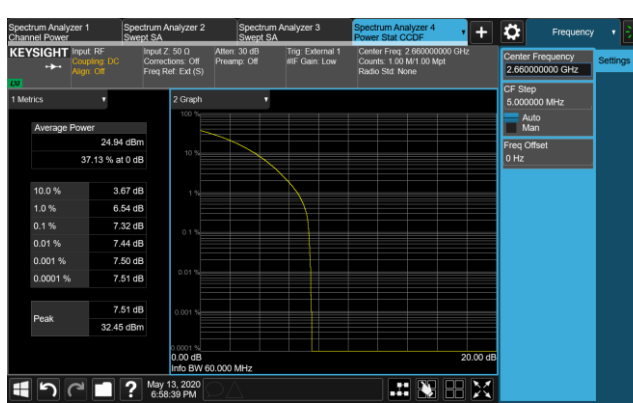
Bottom Channel



Middle Channel

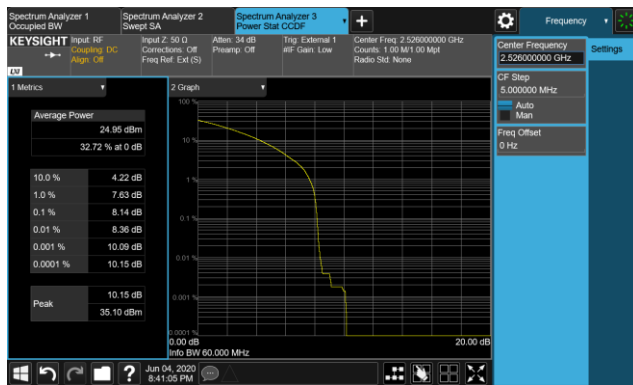


Top Channel

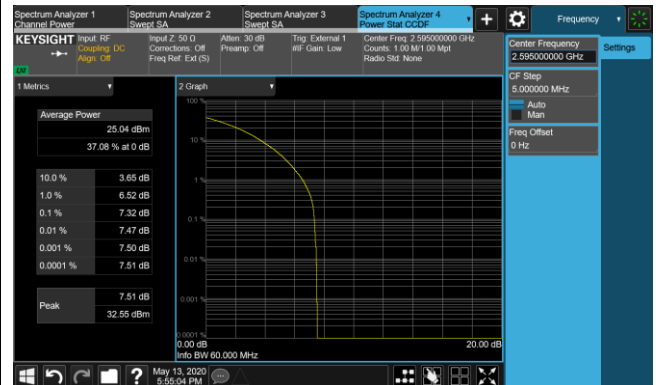


Peak to Average Ratio - Ant 1 (16QAM)

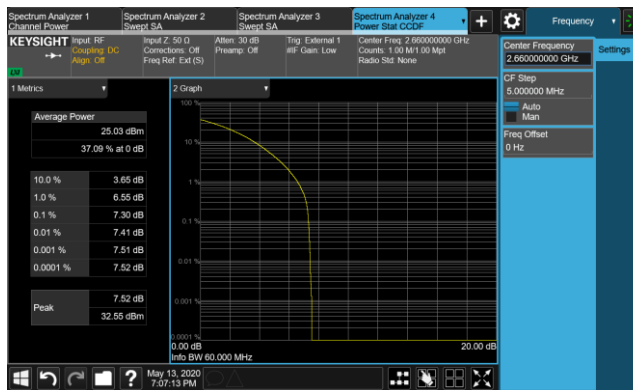
Bottom Channel



Middle Channel

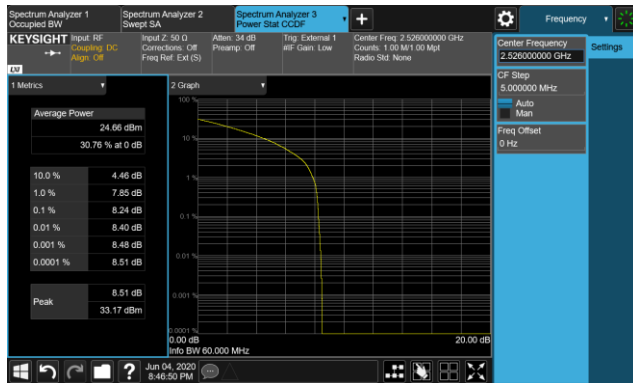


Top Channel

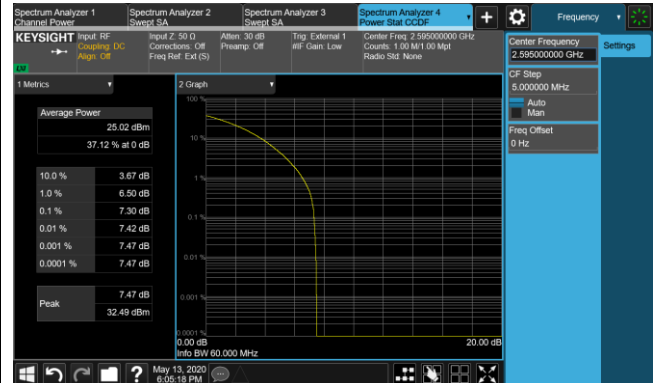


Peak to Average Ratio - Ant 1 (64QAM)

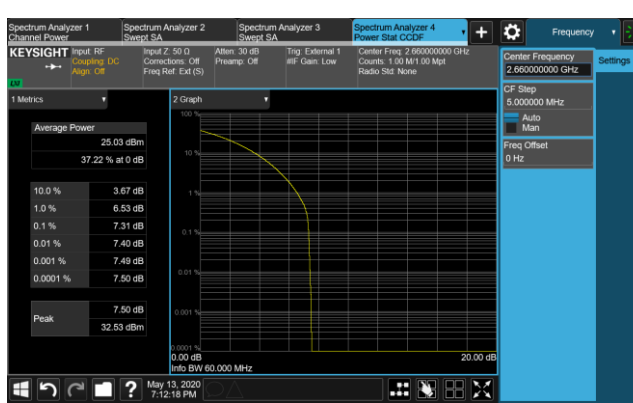
Bottom Channel



Middle Channel

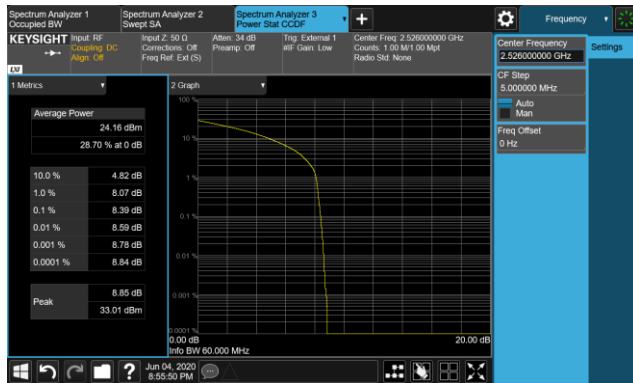


Top Channel

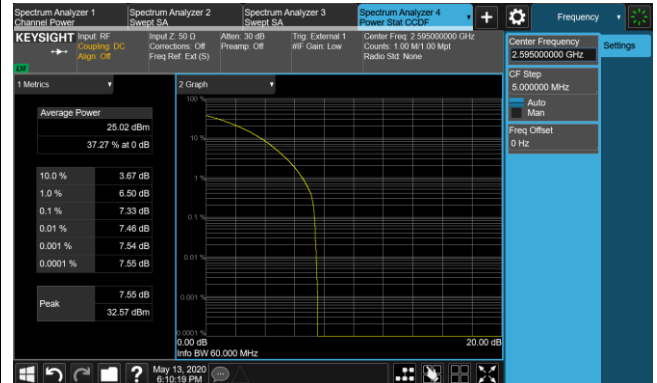


Peak to Average Ratio - Ant 1 (256QAM)

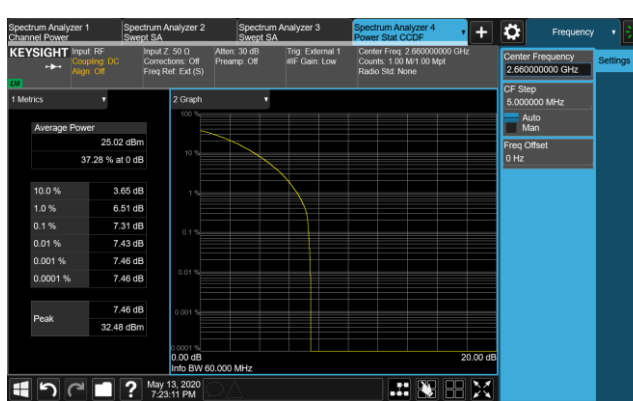
Bottom Channel



Middle Channel

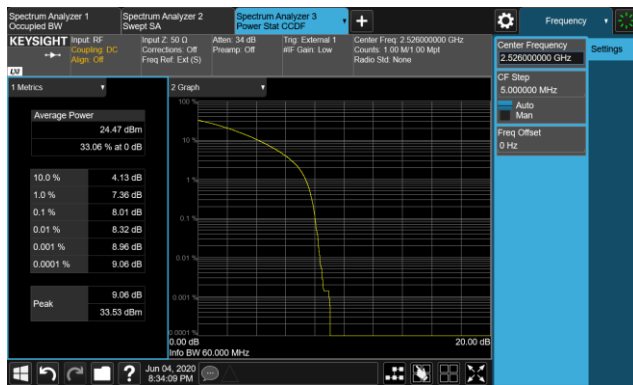


Top Channel

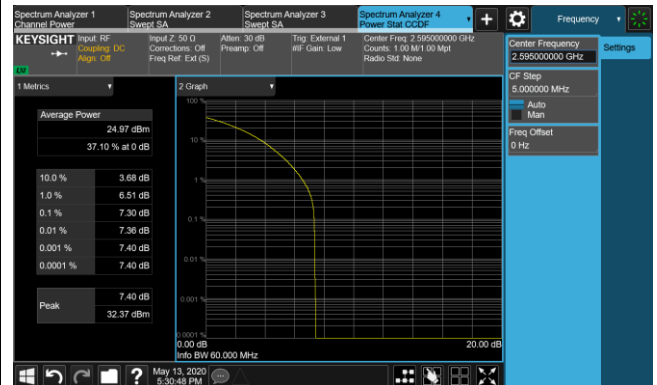


Peak to Average Ratio - Ant 2 (QPSK)

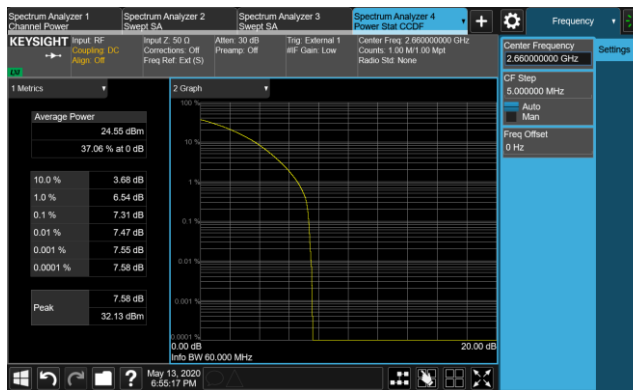
Bottom Channel



Middle Channel

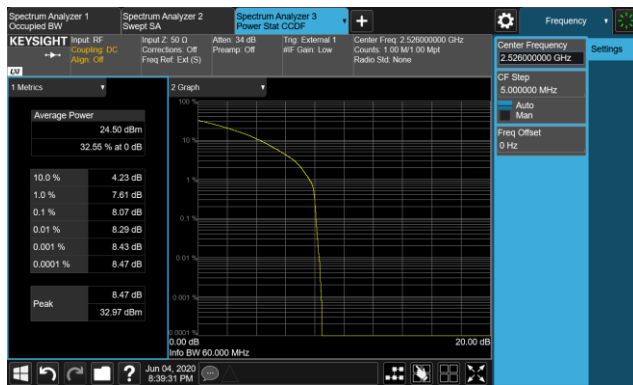


Top Channel

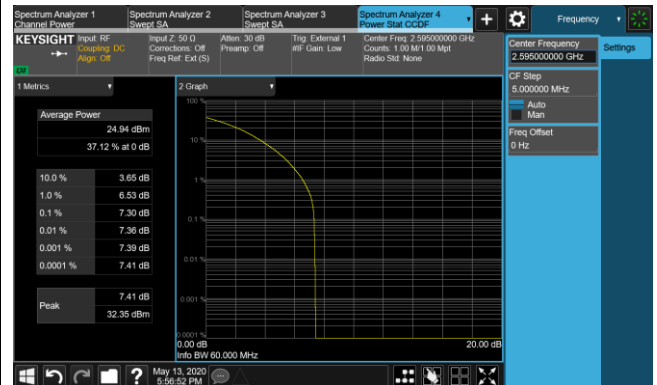


Peak to Average Ratio - Ant 2 (16QAM)

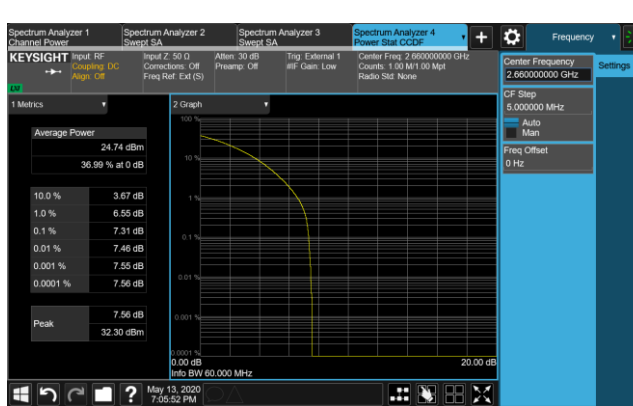
Bottom Channel



Middle Channel

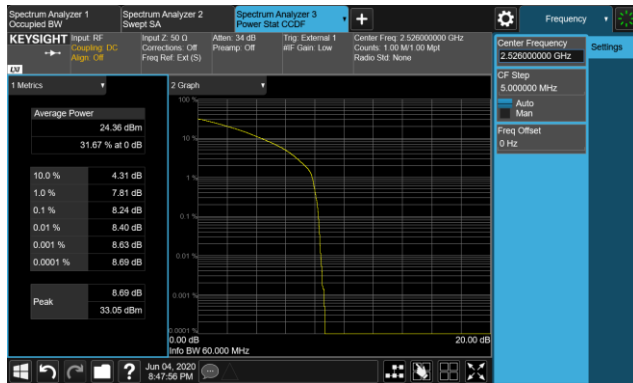


Top Channel

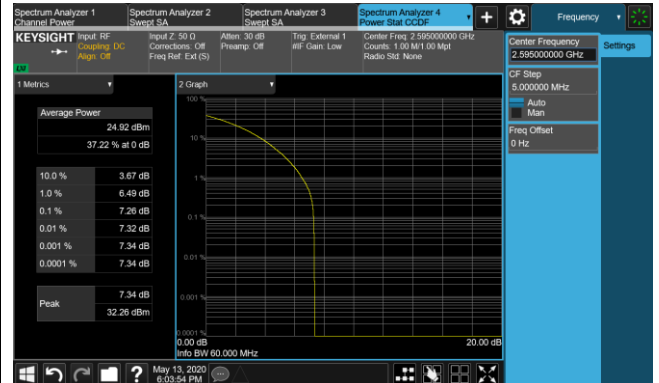


Peak to Average Ratio - Ant 2 (64QAM)

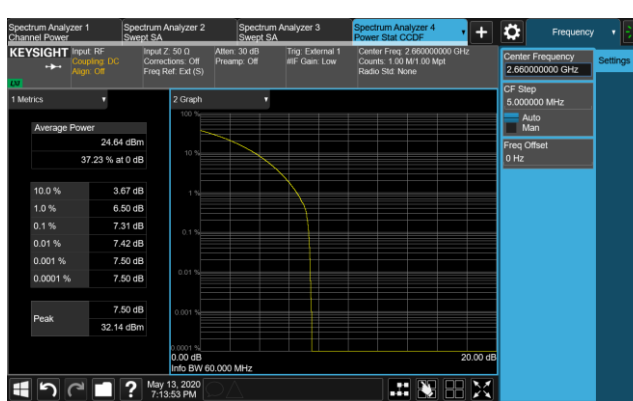
Bottom Channel



Middle Channel

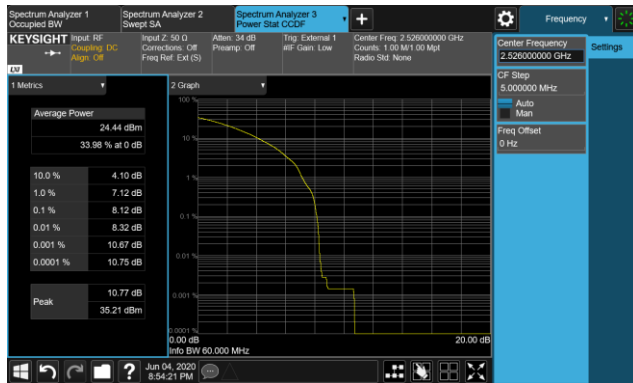


Top Channel

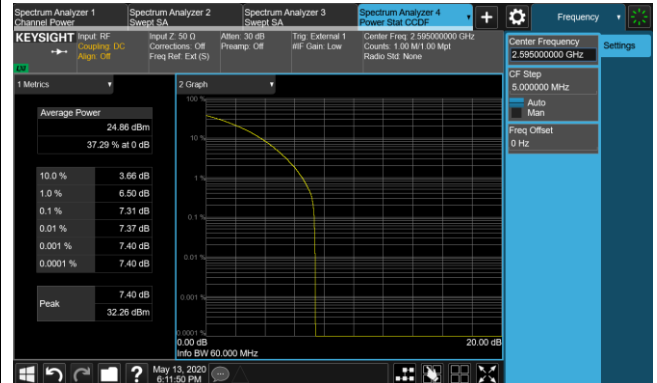


Peak to Average Ratio - Ant 2 (256QAM)

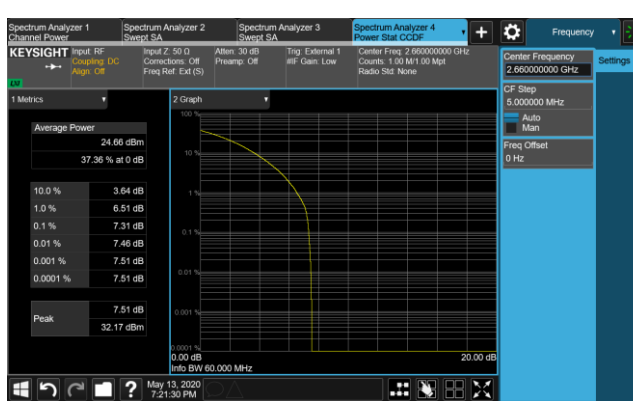
Bottom Channel



Middle Channel

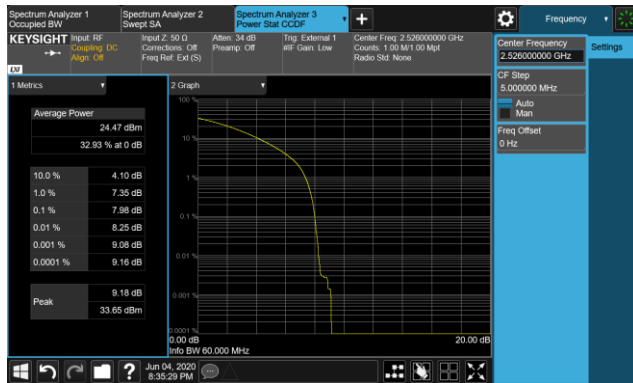


Top Channel

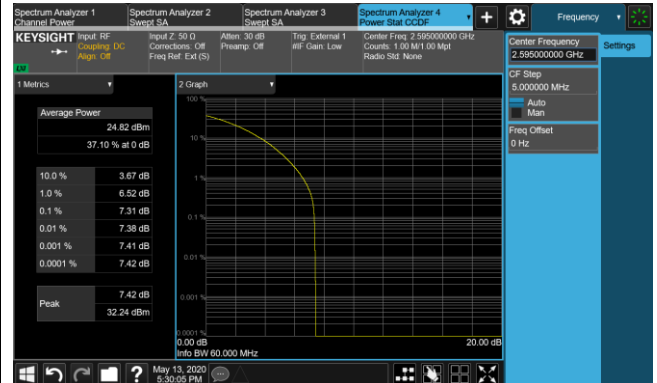


Peak to Average Ratio - Ant 3 (QPSK)

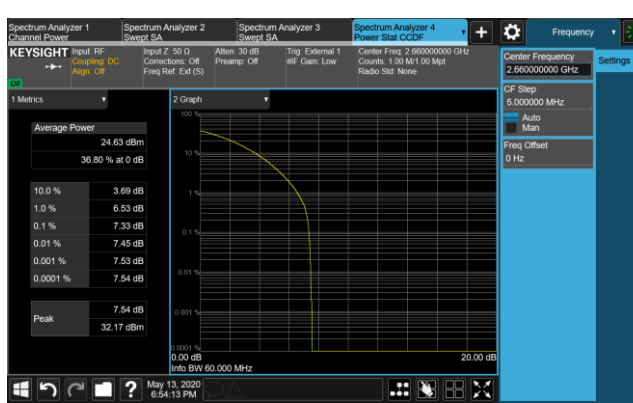
Bottom Channel



Middle Channel

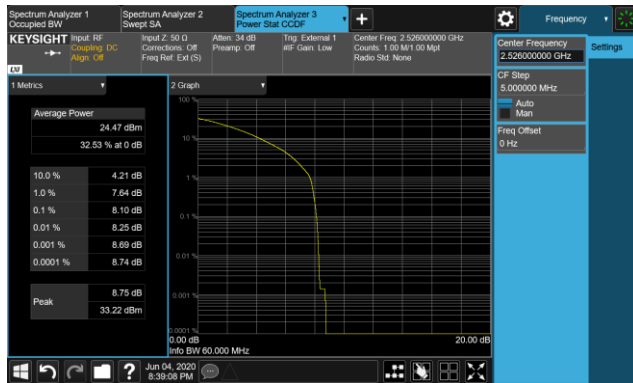


Top Channel

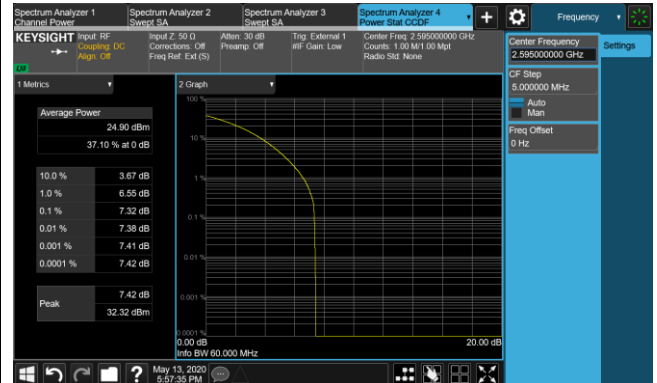


Peak to Average Ratio - Ant 3 (16QAM)

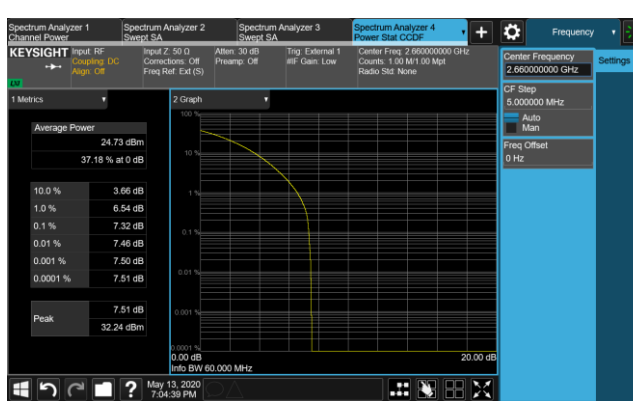
Bottom Channel



Middle Channel

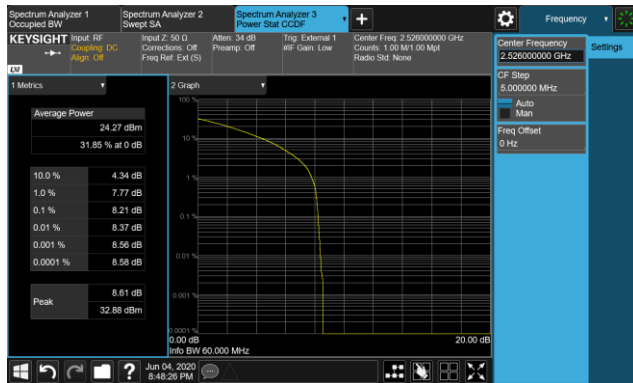


Top Channel

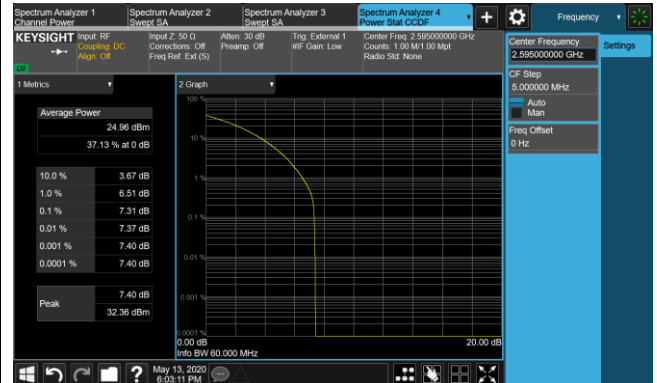


Peak to Average Ratio - Ant 3 (64QAM)

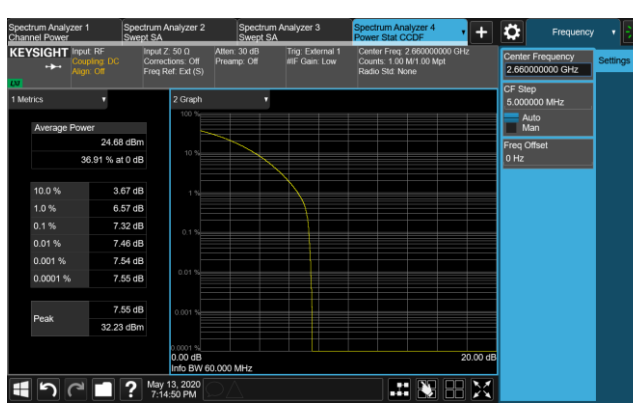
Bottom Channel



Middle Channel

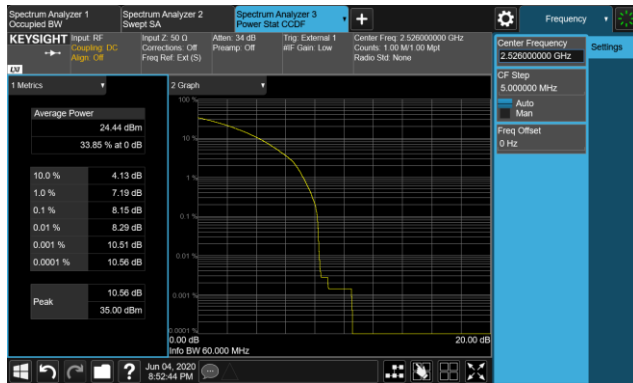


Top Channel

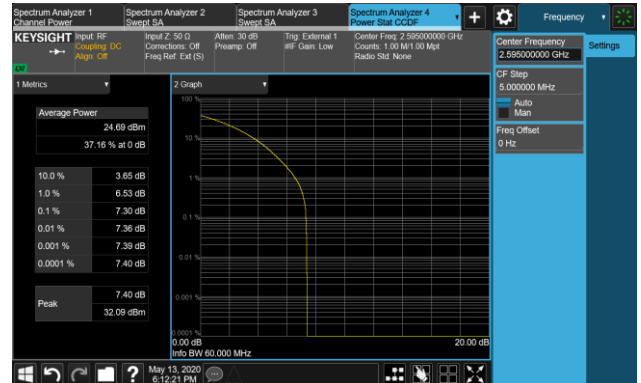


Peak to Average Ratio - Ant 3 (256QAM)

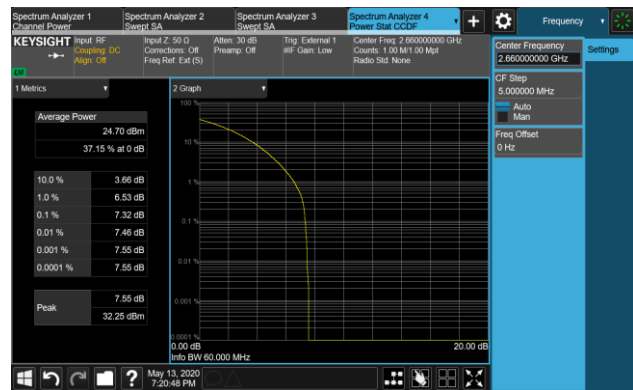
Bottom Channel



Middle Channel



Top Channel



6.7. Conducted Spurious Emissions

6.7.1. Test Limit

For all fixed digital user stations, the attenuation factor shall be not less than $43 + 10 \log (P)$ dB at the channel edge.

Note: This device can be implement MIMO function, so the limit os spurious emissions needs to be reduced $10 \cdot \log(\text{Numbers}_{\text{Ant}})$ according to FCC KDB 662911 D01 guidance.

The UUT can operate in either 2*2 or 4*4 MIMO mode. The 4X4 MIMO limit is applied in this test report and is adjusted to $-13 \text{ dBm} - 10 \cdot \log (4) = -19.02 \text{ dBm}$, since it is more stringent than the 2*2 MIMO limit.

6.7.2. Test Procedure Used

KDB 971168 D01v03r01 - Section 6

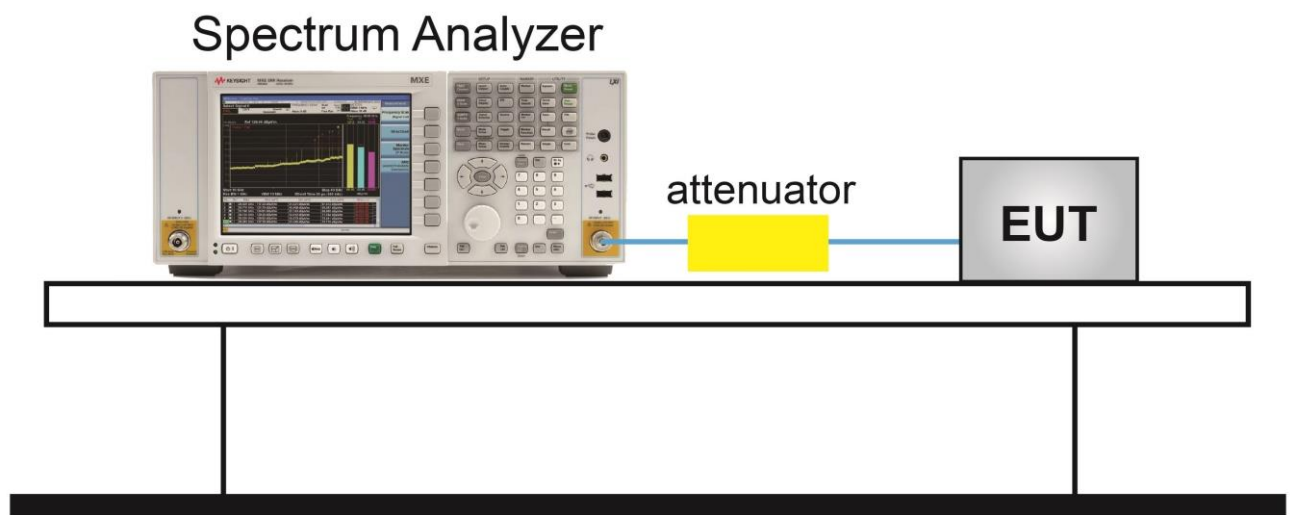
ANSI C63.26-2015 - Section 6.4.4.2

6.7.3. Test Setting

1. Set the analyzer frequency to low or high channel.
2. RBW = 100kHz or 1MHz
3. VBW $\geq 3 \cdot \text{RBW}$
4. Sweep time = auto
5. Detector = power averaging (rms)
6. Set sweep trigger to "free run."
7. Trace average at least 100 traces in power averaging (rms) mode if sweep is set to auto-couple.

To accurately determine the average power over the on and off time of the transmitter, it can be necessary to increase the number of traces to be averaged above 100, or if using a manually configured sweep time, increase the sweep time.

6.7.4. Test Setup



6.7.5. Test Result

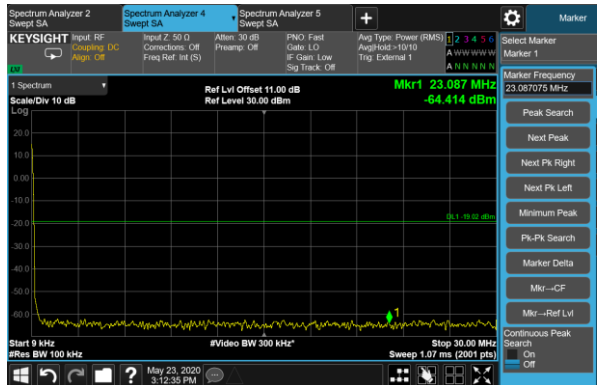
Product	AirScale Indoor Radio ASiR 5G-pRRH	Test Engineer	Larry Yan
Test Site	SR2	Test Date	2019/05/21 ~ 2019/05/22
Test Item	Conducted Spurious Emissions, 20MHz Bandwidth		

Frequency (MHz)	Channel Bandwidth (MHz)	Frequency Range (MHz)	Max Spurious Emissions (dBm)				Limit (dBm)	Result
			Ant 0	Ant 1	Ant 2	Ant 3		
QPSK								
Bottom	20	0.009 ~ 30	-64.41	-63.76	-63.76	-63.42	≤ -19.02	Pass
		30 ~ 27000	-41.23	-40.71	-40.71	-39.42	≤ -19.02	Pass
Middle	20	0.009 ~ 30	-63.11	-63.67	-63.68	-63.63	≤ -19.02	Pass
		30 ~ 27000	-39.78	-40.09	-41.60	-40.93	≤ -19.02	Pass
Top	20	0.009 ~ 30	-63.99	-63.90	-64.04	-64.25	≤ -19.02	Pass
		30 ~ 27000	-41.46	-40.70	-40.78	-39.90	≤ -19.02	Pass

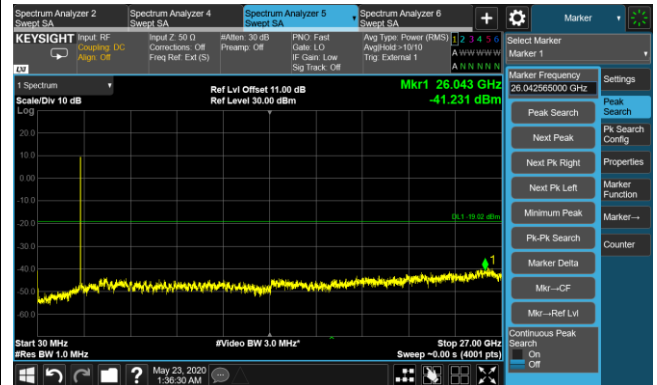
Conducted Spurious Emissions - Ant 0 (QPSK)

Bottom Channel

9kHz ~ 30MHz

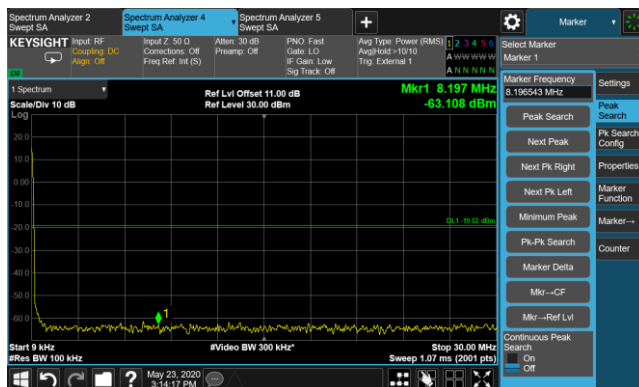


30MHz ~ 27.0GHz

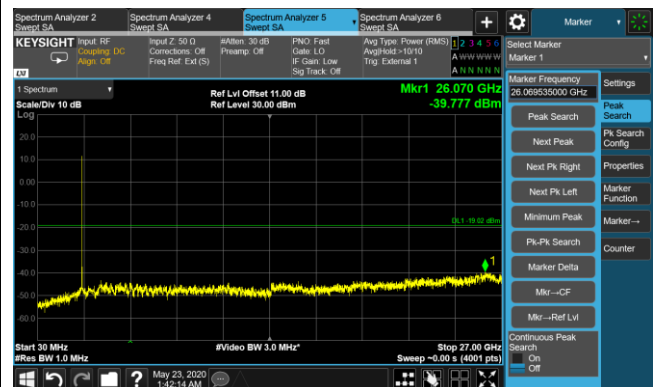


Middle Channel

9kHz ~ 30MHz



30MHz ~ 27.0GHz

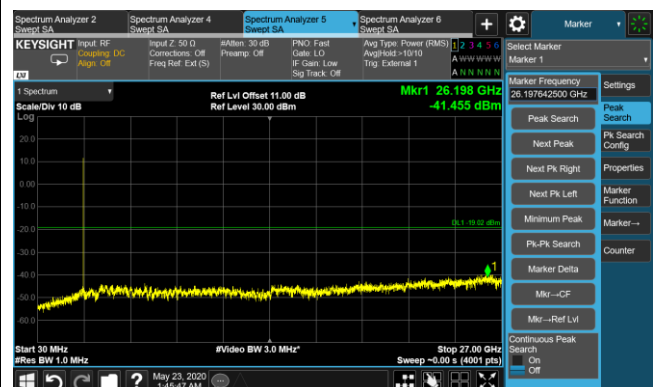


Top Channel

9kHz ~ 30MHz



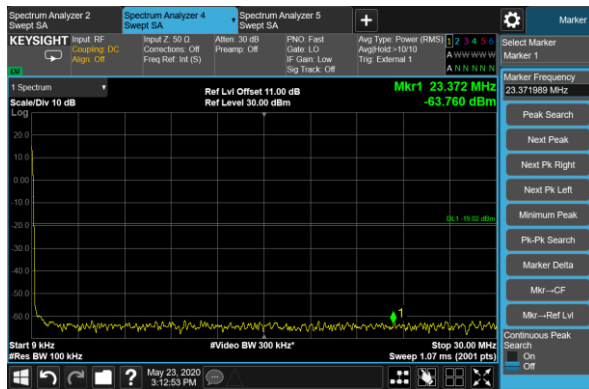
30MHz ~ 27.0GHz



Conducted Spurious Emissions - Ant 1 (QPSK)

Bottom Channel

9kHz ~ 30MHz

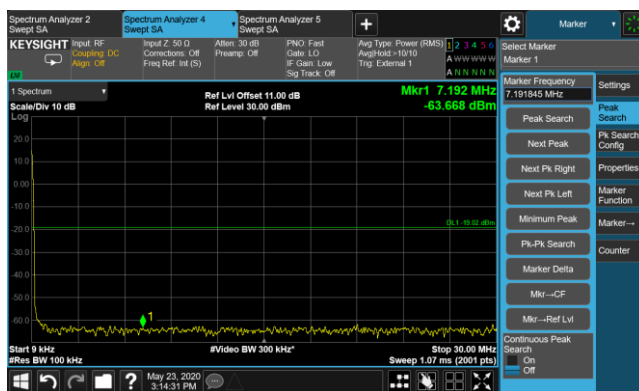


30MHz ~ 27.0GHz

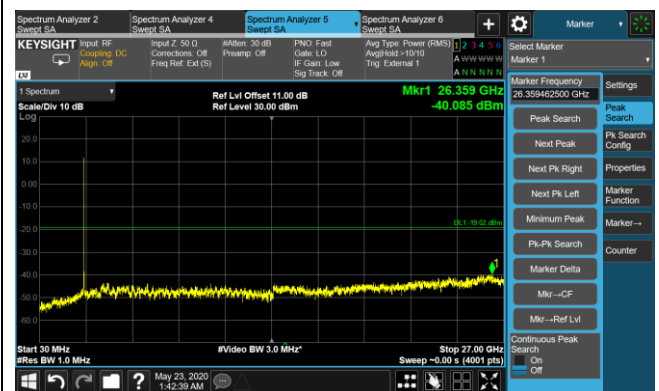


Middle Channel

9kHz ~ 30MHz

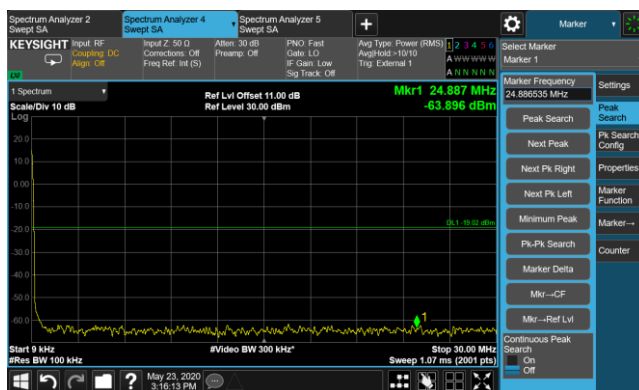


30MHz ~ 27.0GHz

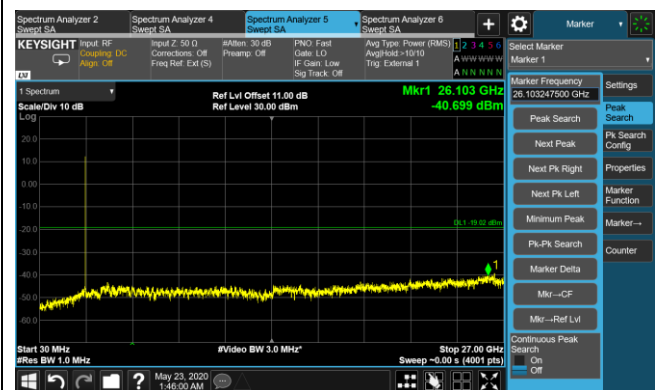


Top Channel

9kHz ~ 30MHz



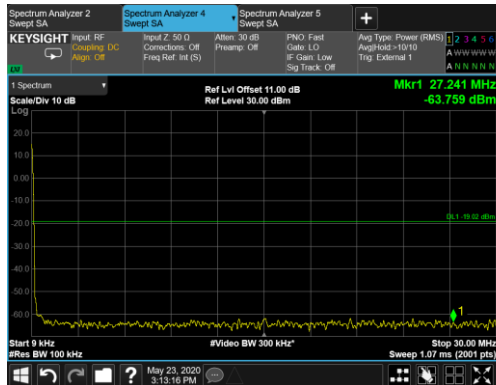
30MHz ~ 27.0GHz



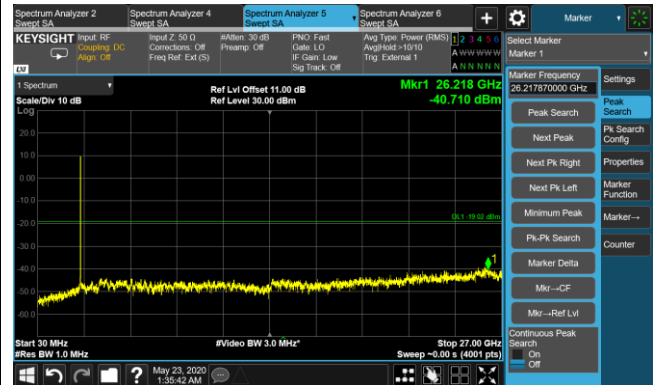
Conducted Spurious Emissions - Ant 2 (QPSK)

Bottom Channel

9kHz ~ 30MHz

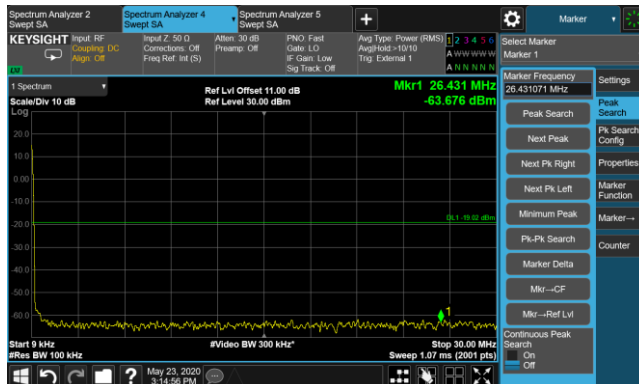


30MHz ~ 27.0GHz

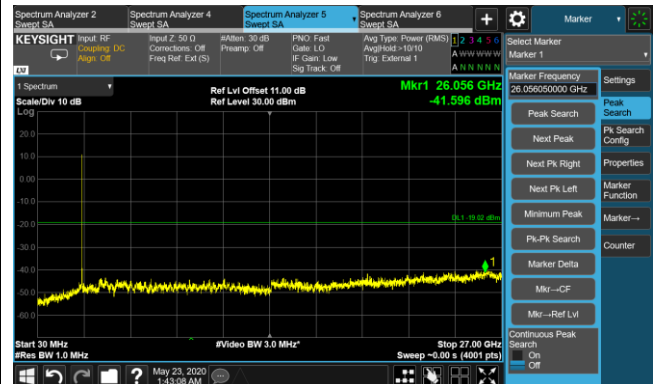


Middle Channel

9kHz ~ 30MHz

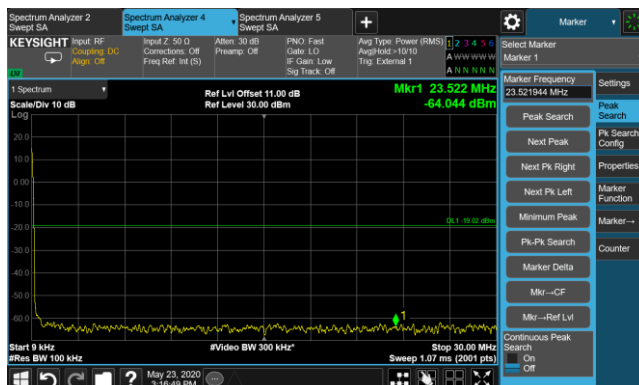


30MHz ~ 27.0GHz

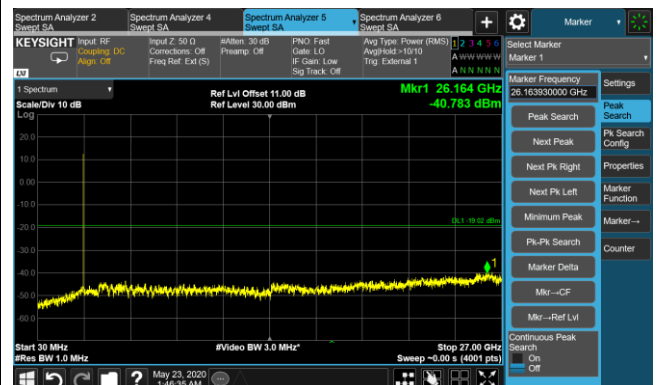


Top Channel

9kHz ~ 30MHz



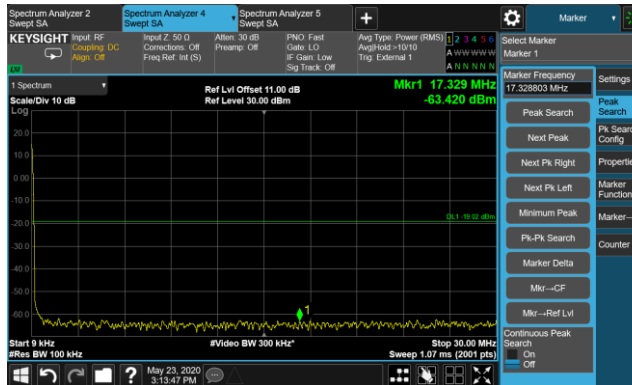
30MHz ~ 27.0GHz



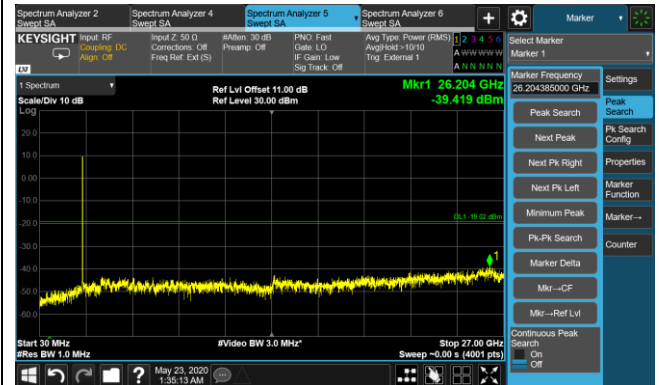
Conducted Spurious Emissions - Ant 3 (QPSK)

Bottom Channel

9kHz ~ 30MHz

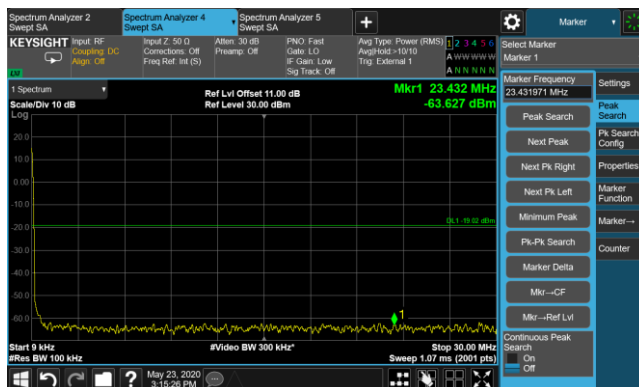


30MHz ~ 27.0GHz

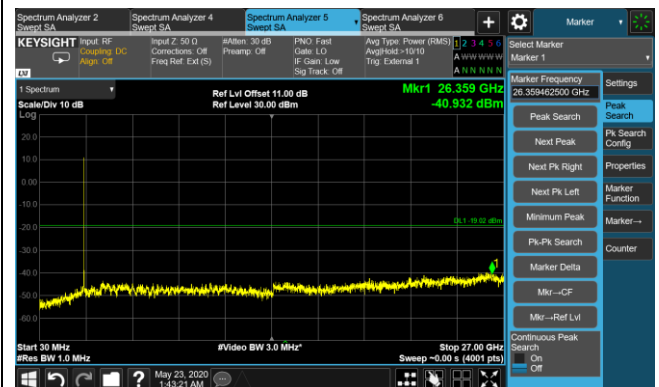


Middle Channel

9kHz ~ 30MHz



30MHz ~ 27.0GHz

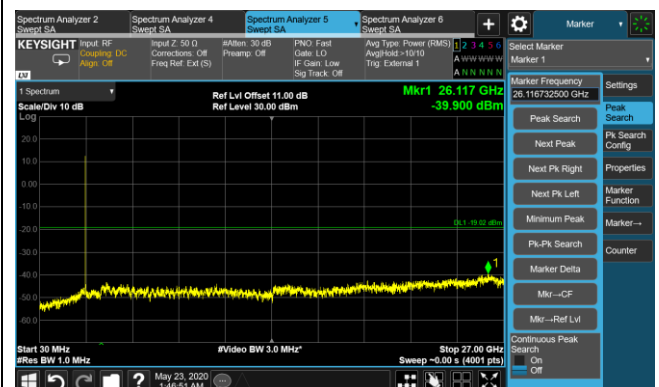


Top Channel

9kHz ~ 30MHz



30MHz ~ 27.0GHz



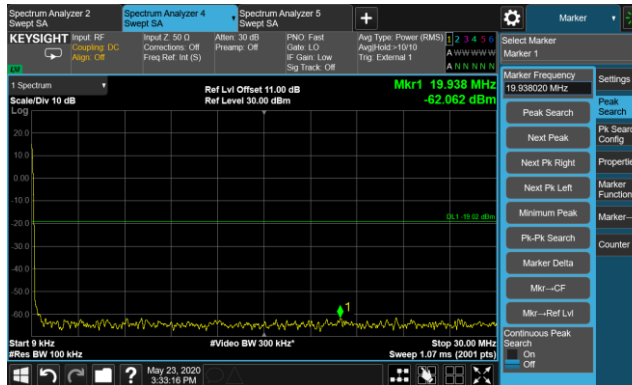
Product	AirScale Indoor Radio ASiR 5G-pRRH	Test Engineer	Larry Yan
Test Site	SR2	Test Date	2019/05/21 ~ 2019/05/22
Test Item	Conducted Spurious Emissions, 20+20MHz Bandwidth		

Frequency (MHz)	Channel Bandwidth (MHz)	Frequency Range (MHz)	Max Spurious Emissions (dBm)				Limit (dBm)	Result
			Ant 0	Ant 1	Ant 2	Ant 3		
QPSK								
Bottom	20+20	0.009 ~ 30	-62.06	-63.18	-63.48	-64.30	≤ -19.02	Pass
		30 ~ 27000	-40.94	-40.59	-39.47	-39.34	≤ -19.02	Pass
Middle	20+20	0.009 ~ 30	-63.68	-63.48	-64.26	-64.24	≤ -19.02	Pass
		30 ~ 27000	-41.50	-41.00	-39.95	-39.42	≤ -19.02	Pass
Top	20+20	0.009 ~ 30	-63.65	-63.51	-63.95	-64.00	≤ -19.02	Pass
		30 ~ 27000	-40.65	-41.81	-40.07	-40.90	≤ -19.02	Pass

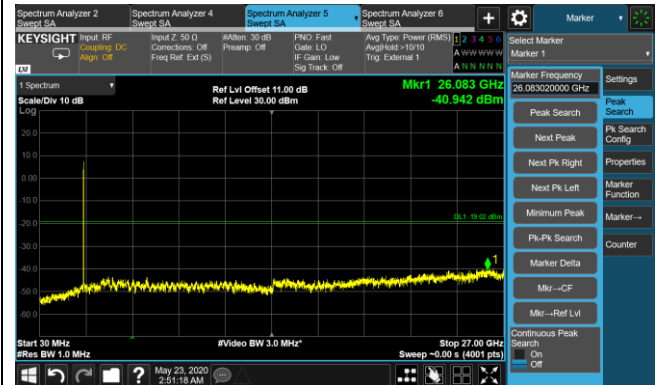
Conducted Spurious Emissions - Ant 0 (QPSK)

Bottom Channel

9kHz ~ 30MHz

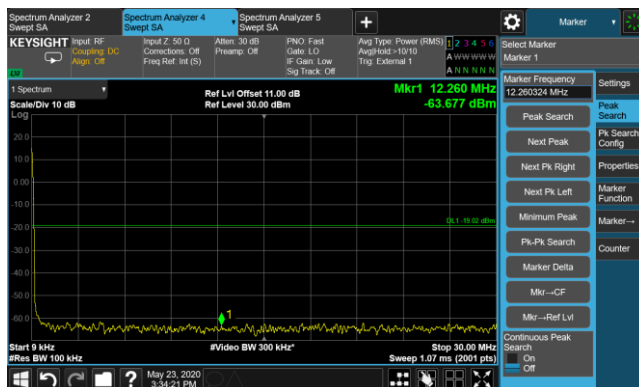


30MHz ~ 27.0GHz

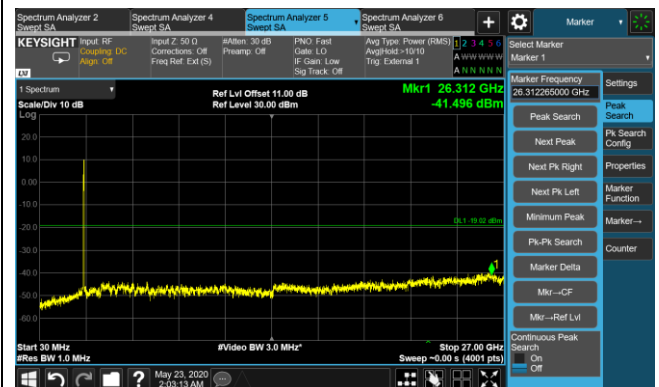


Middle Channel

9kHz ~ 30MHz

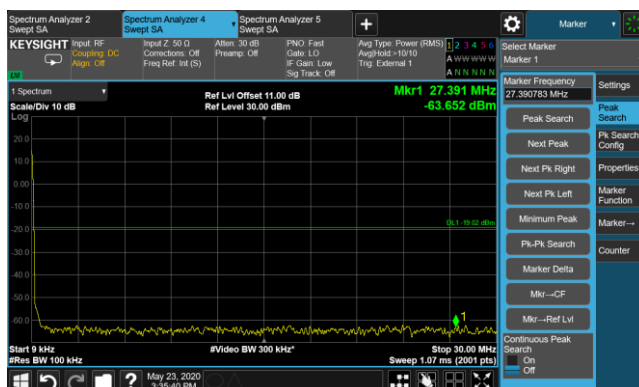


30MHz ~ 27.0GHz



Top Channel

9kHz ~ 30MHz



30MHz ~ 27.0GHz

