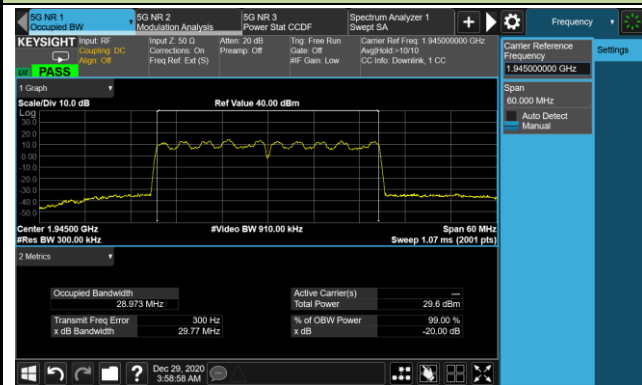
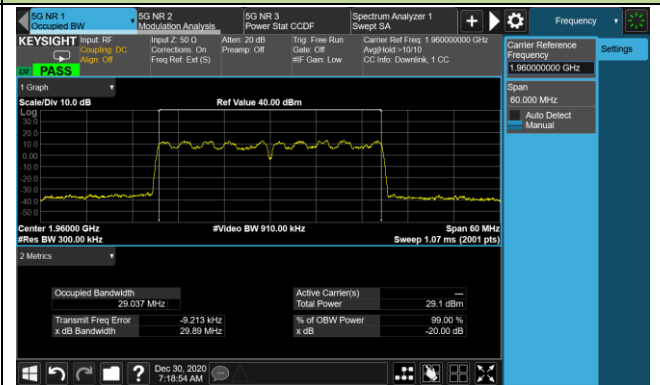


15+15MHz Channel Bandwidth - 16QAM

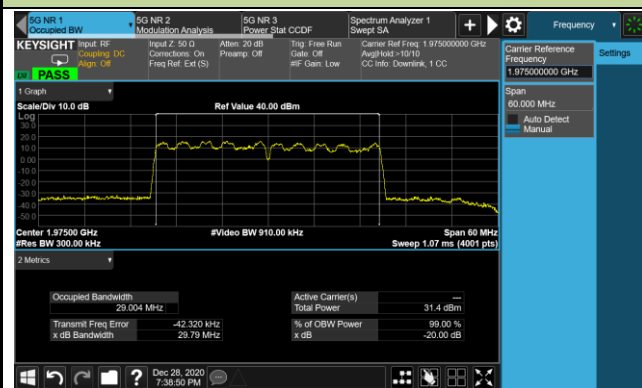
1937.5+1952.5MHz



1952.5+1967.5 MHz

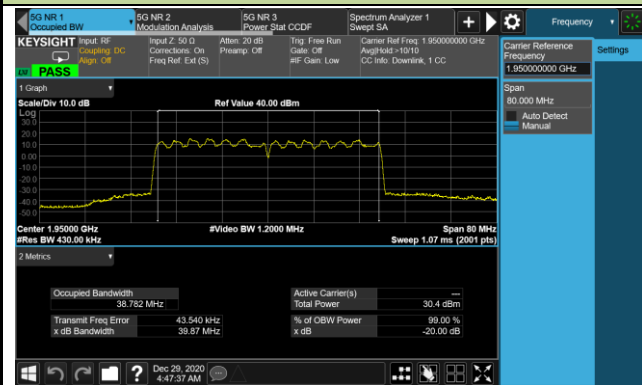


1967.5+1982.5 MHz

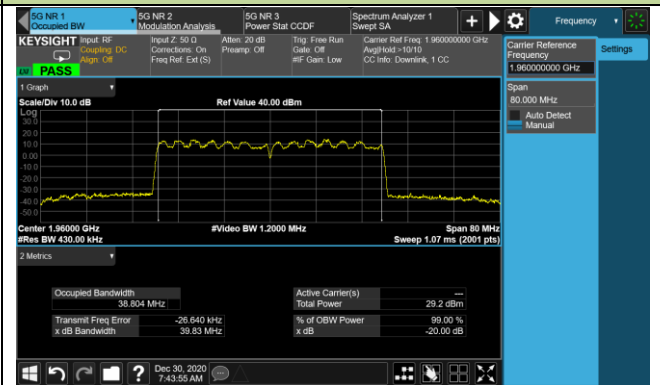


20+20MHz Channel Bandwidth - 16QAM

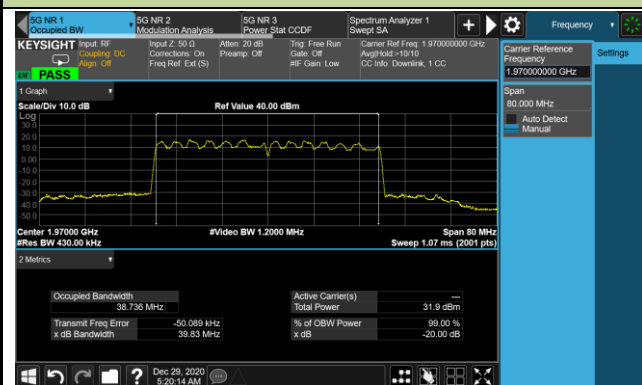
1940.0+1960.0 MHz



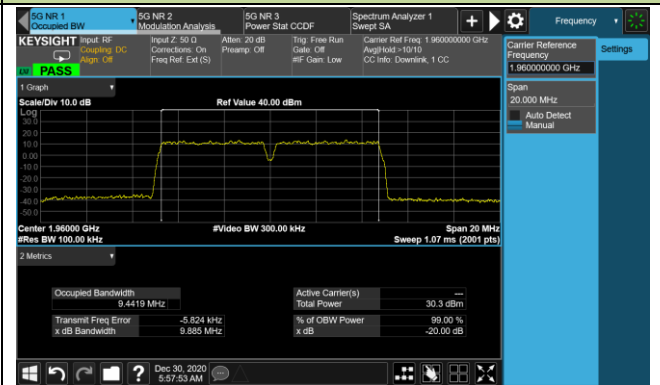
1950.0+1970.0 MHz



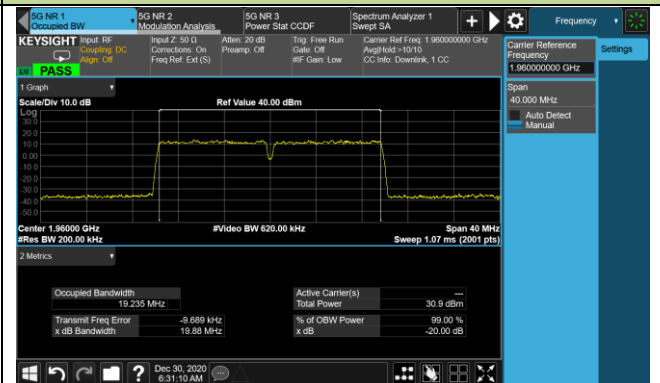
1960.0+1980.0 MHz



1957.5+1962.5 MHz

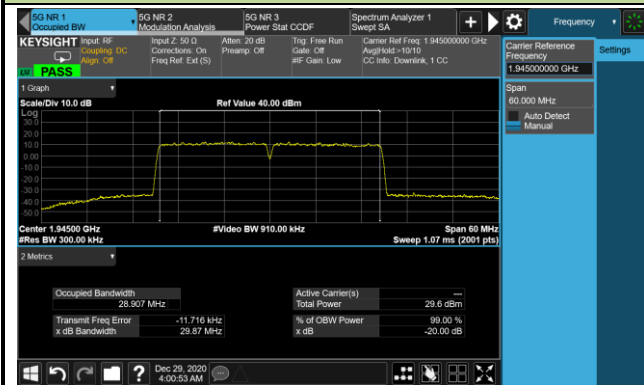
[illegible]

1955.0+1965.0 MHz

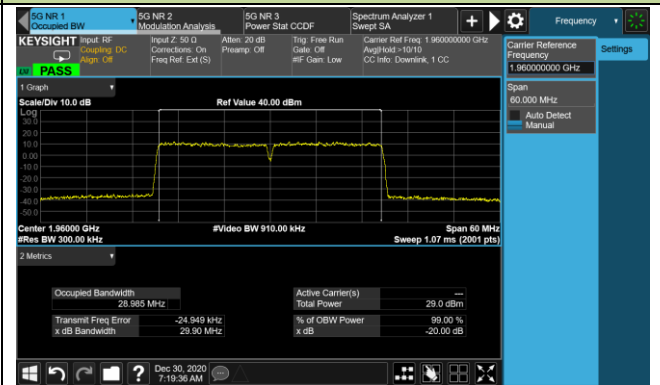
[illegible]

15+15MHz Channel Bandwidth - 64QAM

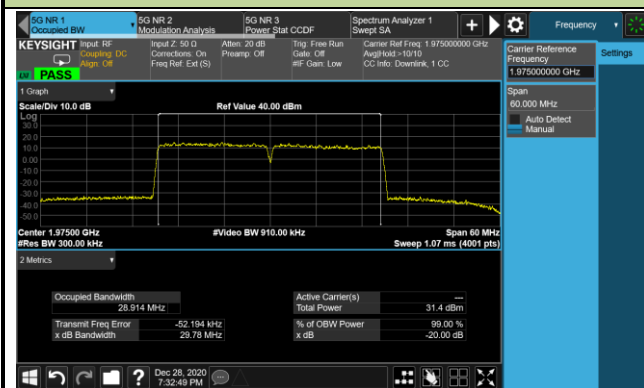
1937.5+1952.5MHz



1952.5+1967.5 MHz

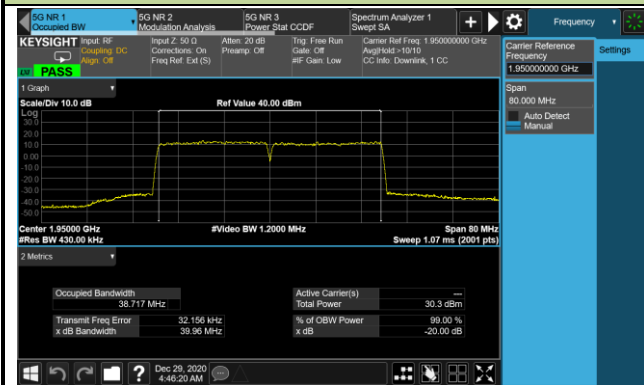


1967.5+1982.5 MHz

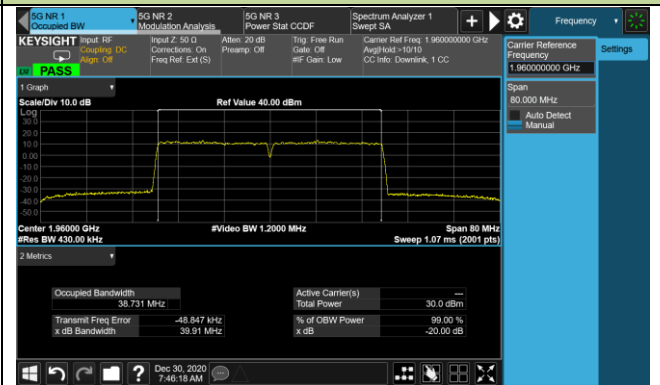


20+20MHz Channel Bandwidth - 64QAM

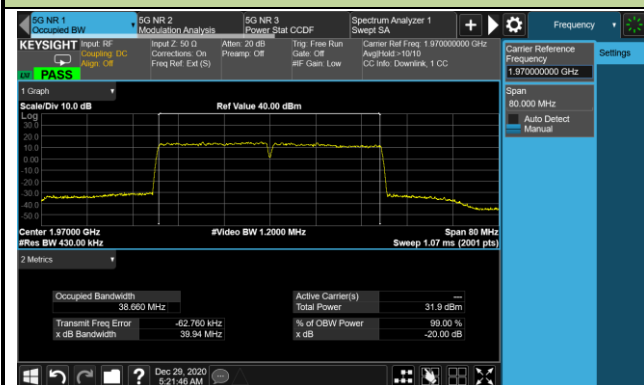
1940.0+1960.0 MHz



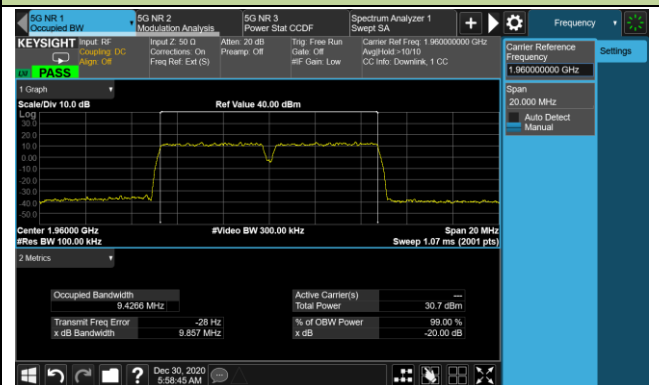
1950.0+1970.0 MHz



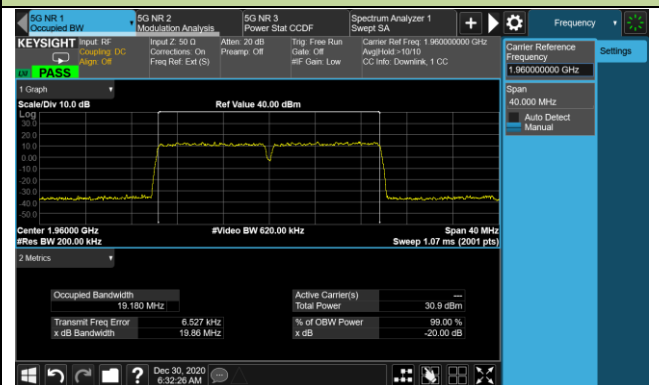
1960.0+1980.0 MHz



1957.5+1962.5 MHz

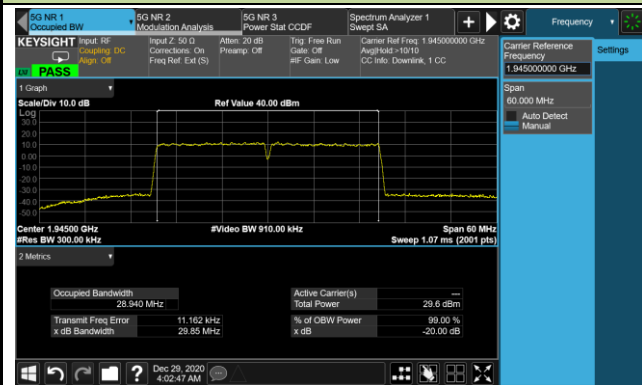
[illegible]

1955.0+1965.0 MHz

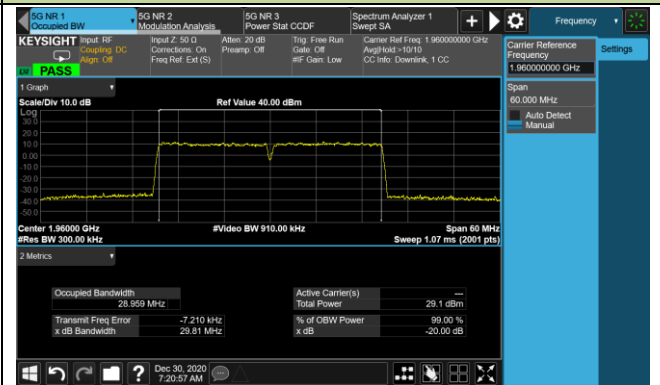
[illegible]

15+15MHz Channel Bandwidth - 256QAM

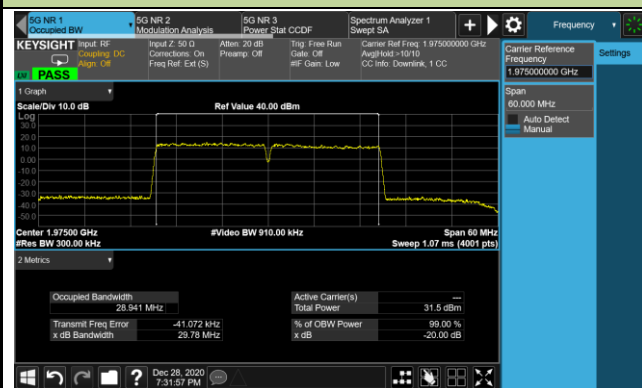
1937.5+1952.5MHz



1952.5+1967.5 MHz

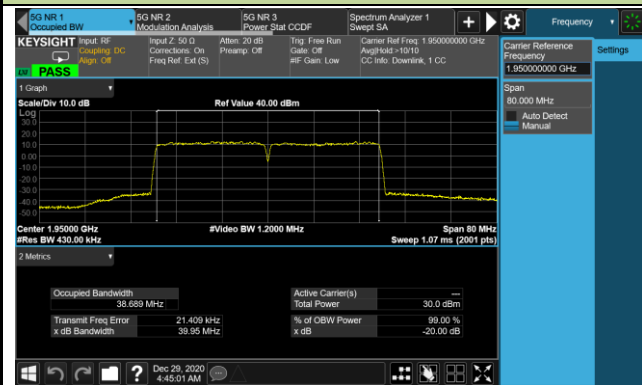


1967.5+1982.5 MHz

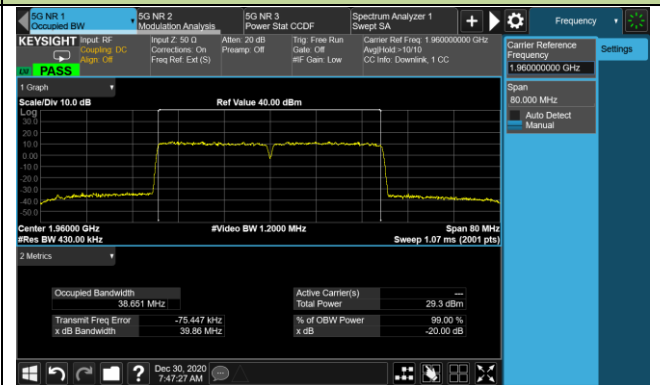


20+20MHz Channel Bandwidth - 256QAM

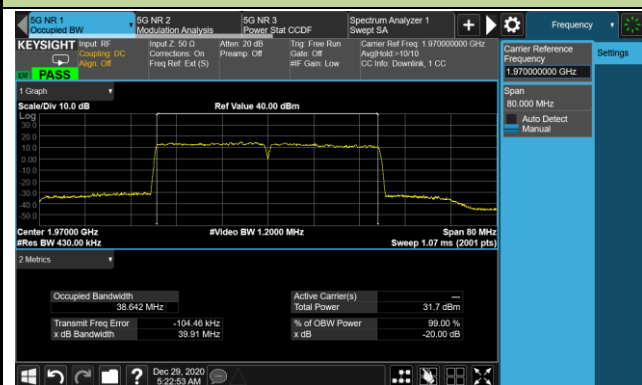
1940.0+1960.0 MHz



1950.0+1970.0 MHz



1960.0+1980.0 MHz



5.4. Band Edge Measurement

5.4.1. Test Limit

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB. The emission limit equal to -13dBm.

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

The limit is adjusted to $-13 \text{ dBm} - 10 \cdot \log(2) = -16.01 \text{ dBm}$

5.4.2. Test Procedure Used

KDB 971168 D01v03r01 - Section 6.1

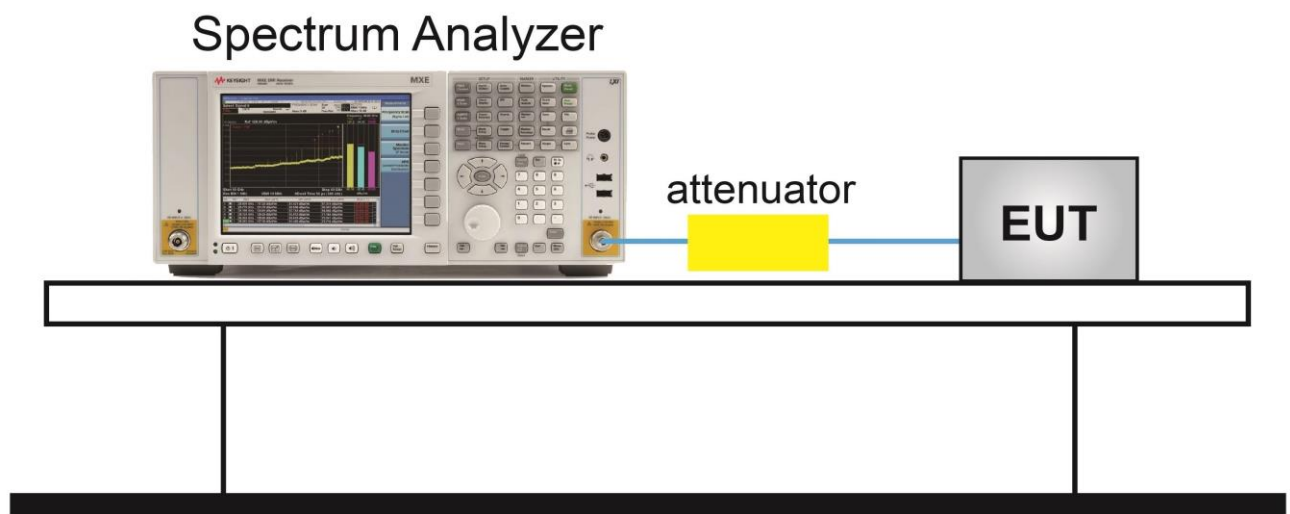
ANSI C63.26-2015 - Section 5.7.1

5.4.3. Test Setting

1. Set the analyzer frequency to low or high channel.
1. RBW = The nominal RBW shall be in the range of 1% to 5% of the anticipated OBW
2. VBW $\geq 3 \cdot \text{RBW}$
3. Sweep time = auto
4. Detector = power averaging (rms)
5. Set sweep trigger to "free run"
6. 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.

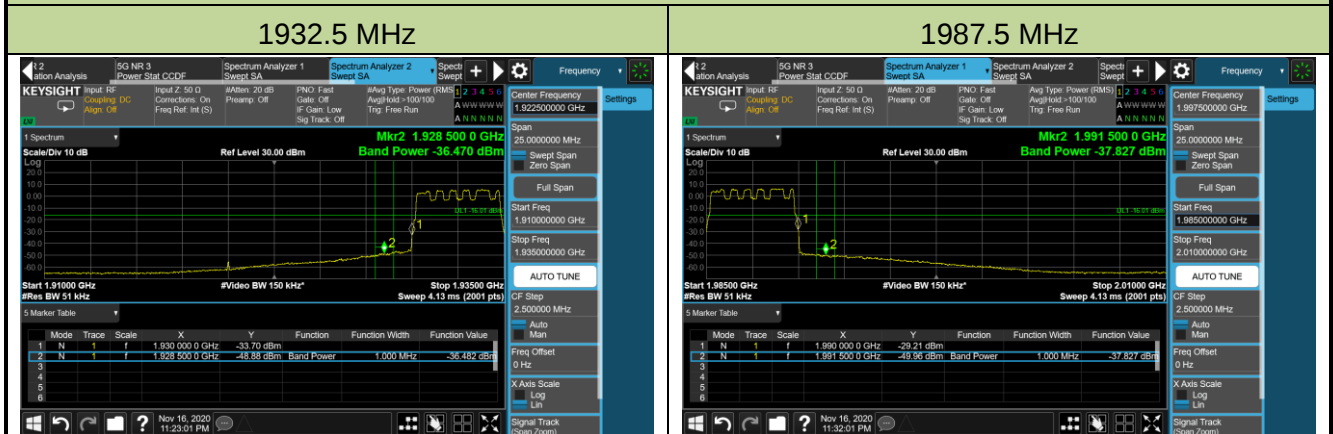
5.4.4. Test Setup



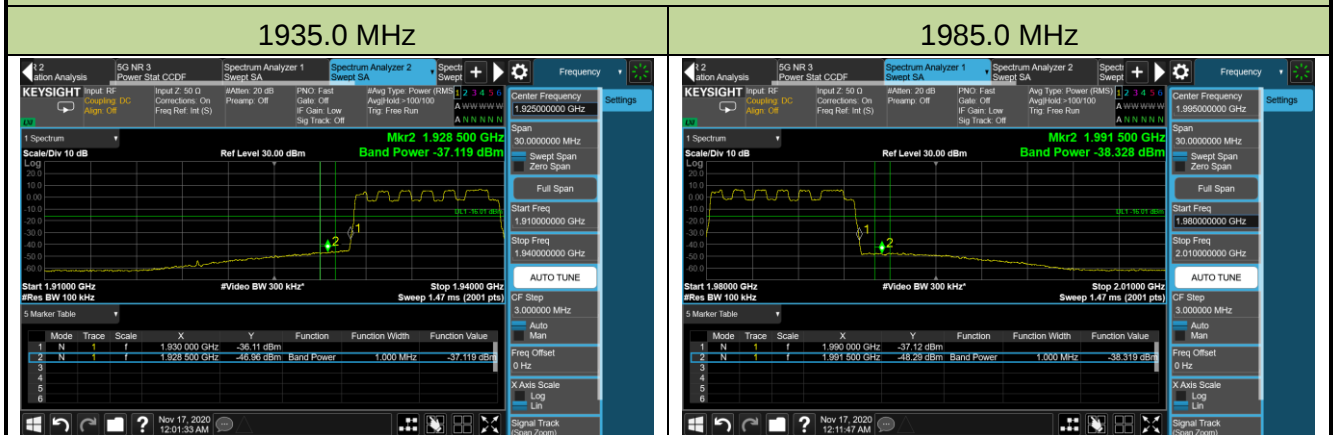
5.4.5. Test Result

Product	AirScale Indoor Radio ASiR-pRRH	Test Engineer	Peter Xu
Test Site	SR2	Test Date	2020/11/16 ~ 2020/12/29
Test Configuration	n2, QPSK		

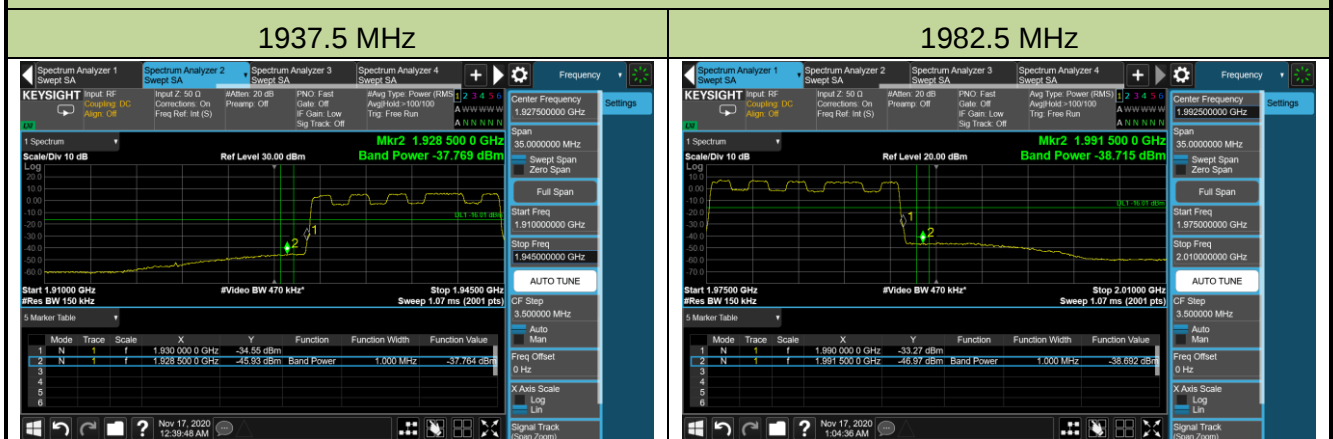
5MHz Channel Bandwidth - Ant 0



10MHz Channel Bandwidth - Ant 0

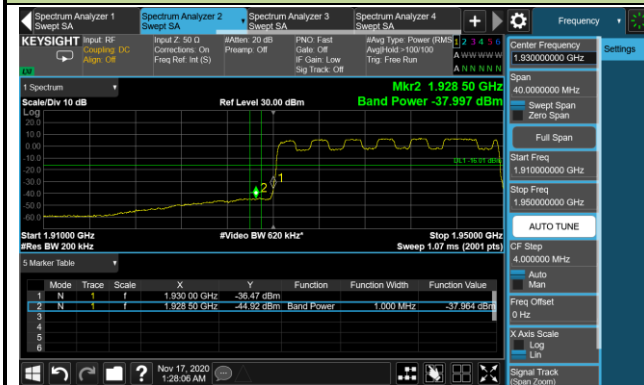


15MHz Channel Bandwidth - Ant 0

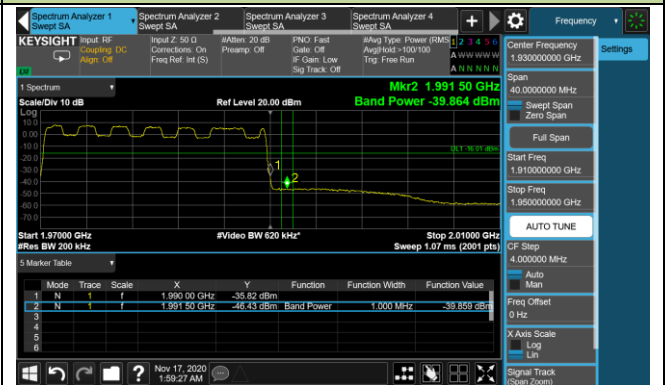


20MHz Channel Bandwidth - Ant 0

1940.0 MHz

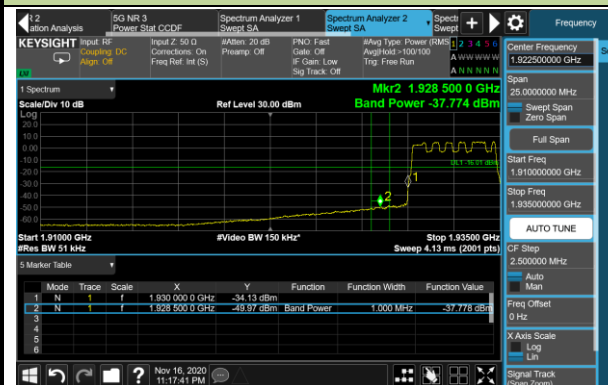


1980.0 MHz



5MHz Channel Bandwidth - Ant 1

1932.5 MHz

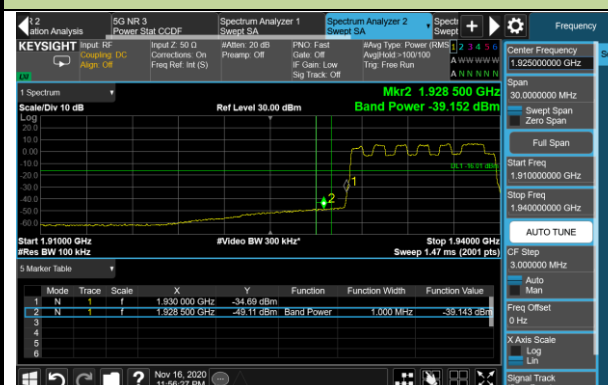


1987.5 MHz

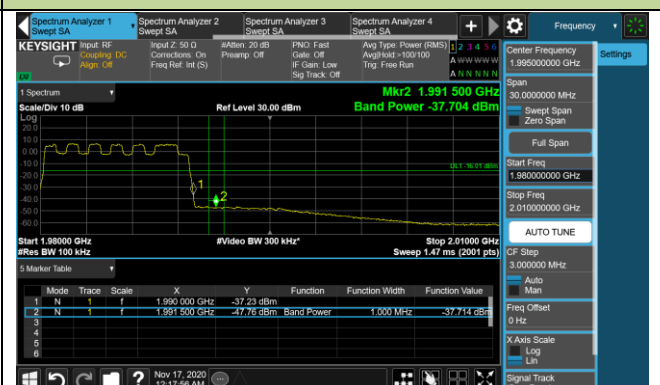


10MHz Channel Bandwidth - Ant 1

1935.0 MHz

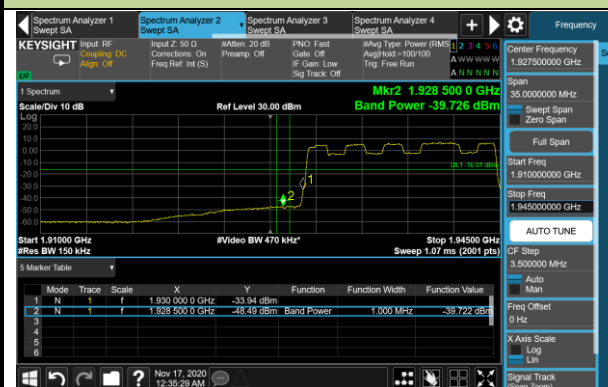


1985.0 MHz

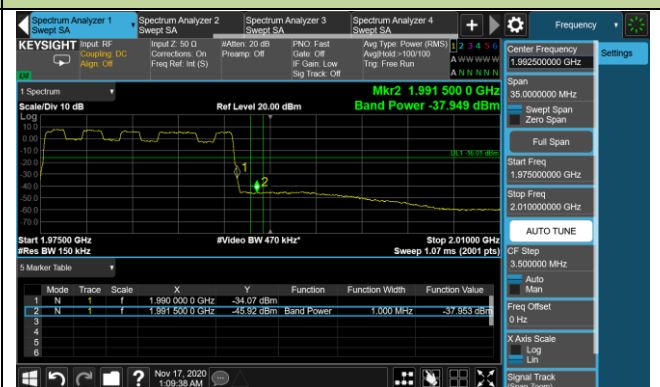


15MHz Channel Bandwidth - Ant 1

1937.5 MHz



1982.5 MHz



20MHz Channel Bandwidth - Ant 1

1940.0 MHz

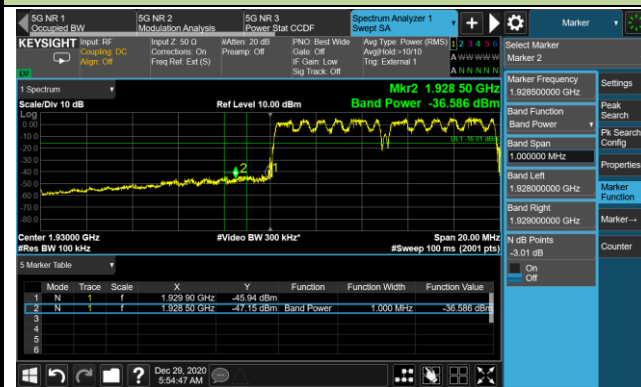


1980.0 MHz

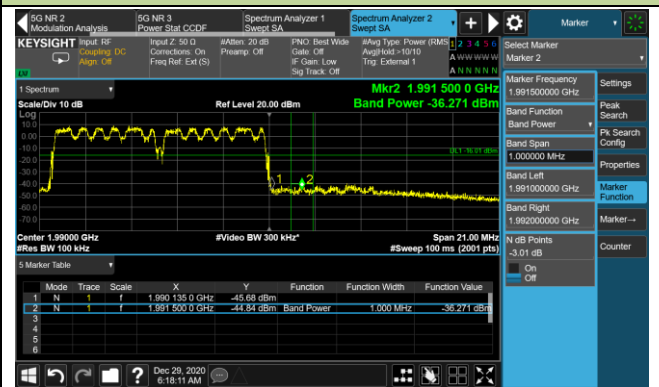


5+5MHz Channel Bandwidth - Ant 0

1932.5+1937.5 MHz

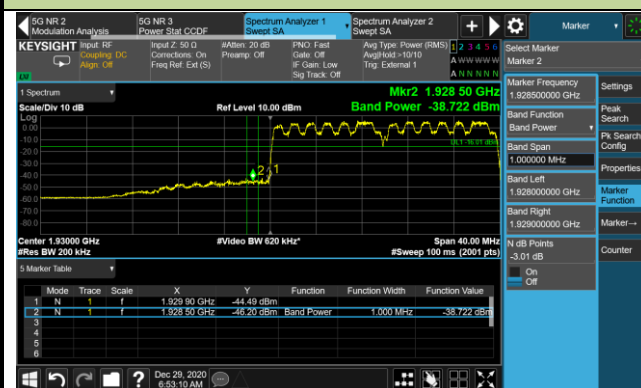


1982.5+1987.5 MHz

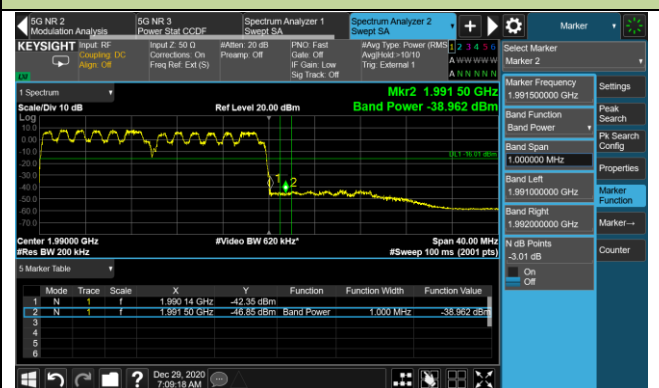


10+10MHz Channel Bandwidth - Ant 0

1935.0+1945.0 MHz

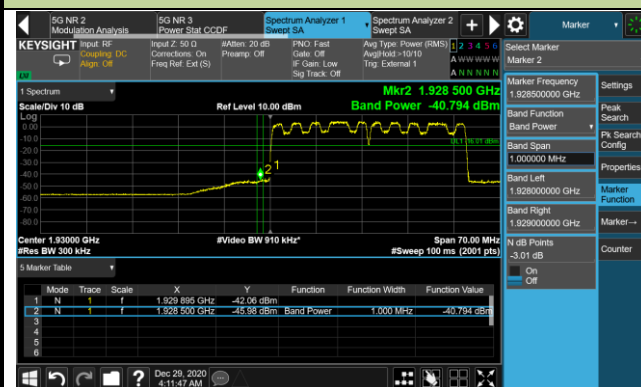


1975.0+1985.0 MHz

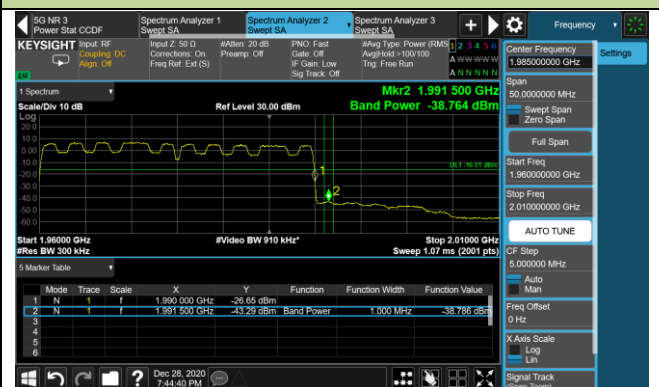


15+15MHz Channel Bandwidth - Ant 0

1937.5+1952.5 MHz

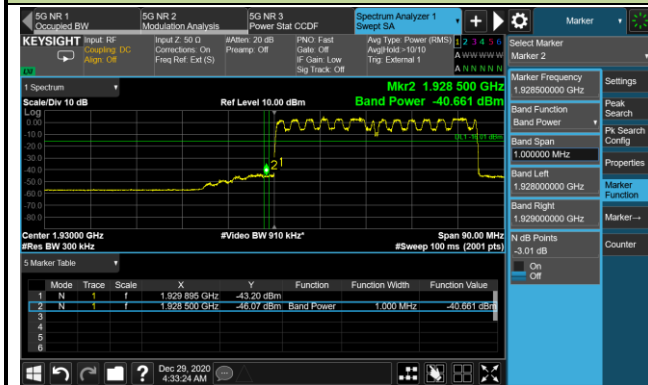


1967.5+1982.5 MHz



20+20MHz Channel Bandwidth - Ant 0

1940.0+1960.0 MHz

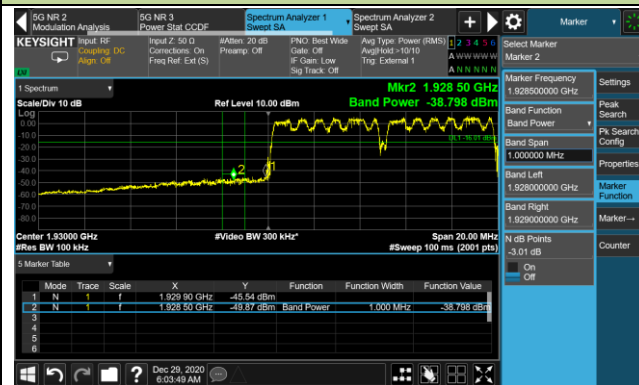


1960.0+1980.0 MHz

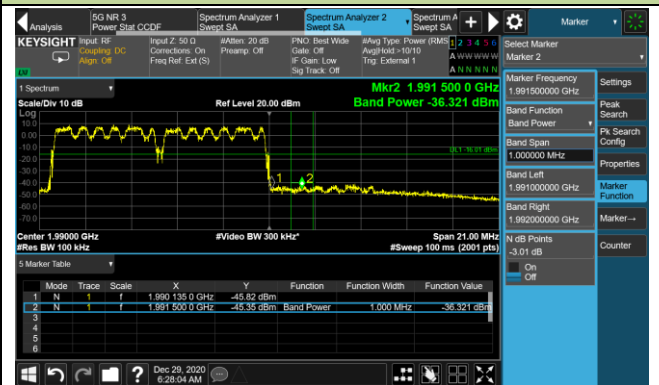


5+5MHz Channel Bandwidth - Ant 1

1932.5+1937.5 MHz

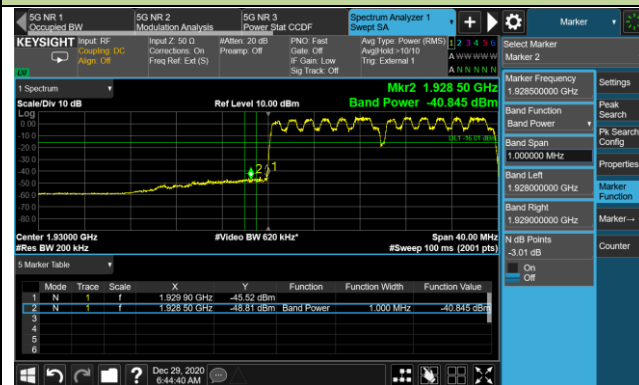


1982.5+1987.5 MHz

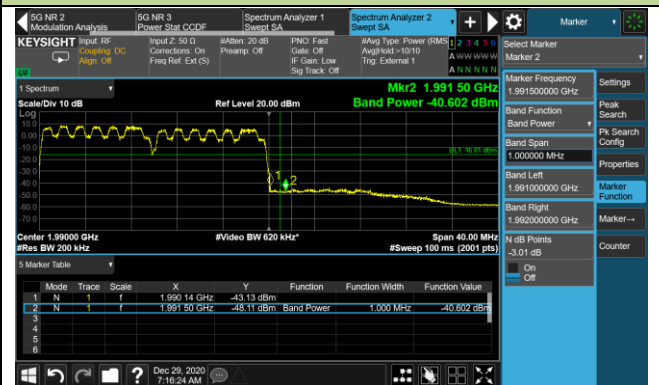


10+10MHz Channel Bandwidth - Ant 1

1935.0+1945.0 MHz

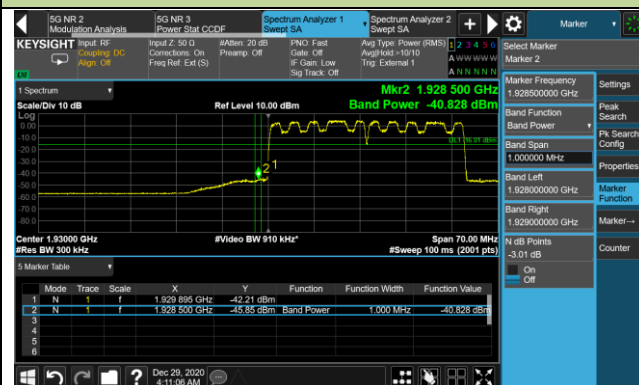


1975.0+1985.0 MHz

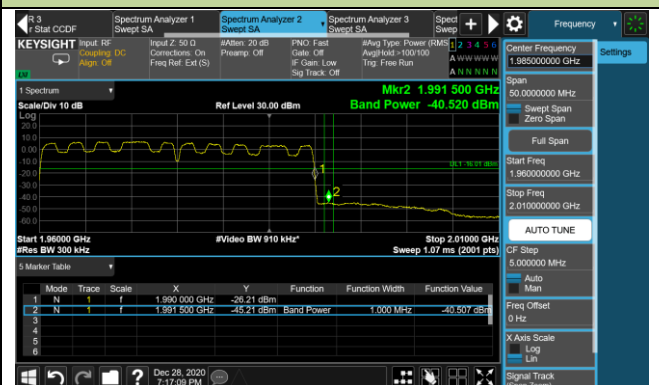


15+15MHz Channel Bandwidth - Ant 1

1937.5+1952.5 MHz

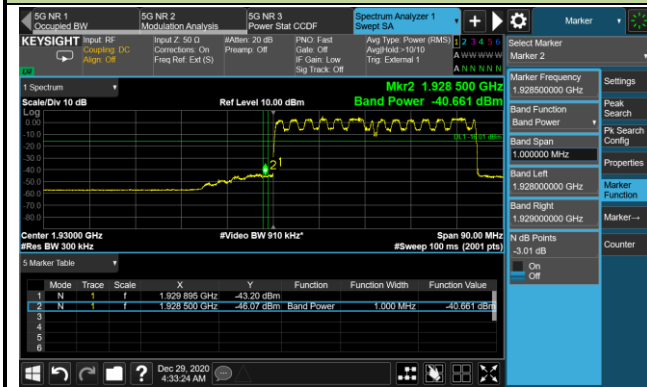


1967.5+1982.5 MHz

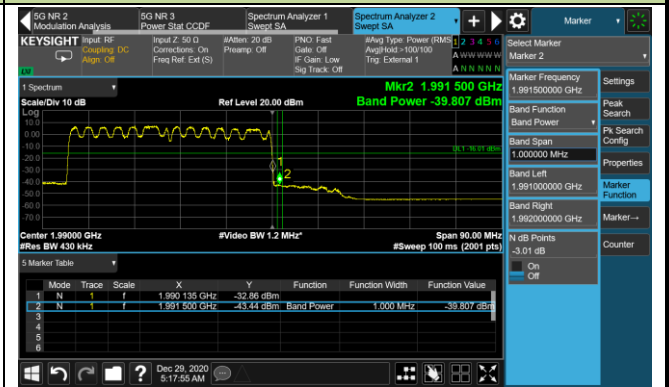


20+20MHz Channel Bandwidth - Ant 1

1940.0+1960.0 MHz



1960.0+1980.0 MHz



5.5. Conducted Spurious Emissions

5.5.1. Test Limit

In the FCC 24.238, on any frequency outside a licensee's frequency block, the power of any emission shall be attenuated below the transmitter power (P) at least $43 + 10 \cdot \log(P)$ dB, the emission limit equal to -13dBm.

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 limit is adjusted to $-13\text{dBm} - 10 \cdot \log(2) = -16.01\text{dBm}$

5.5.2. Test Procedure Used

KDB 971168 D01v03r01 - Section 6

ANSI C63.26-2015 - Section 6.4.4.2

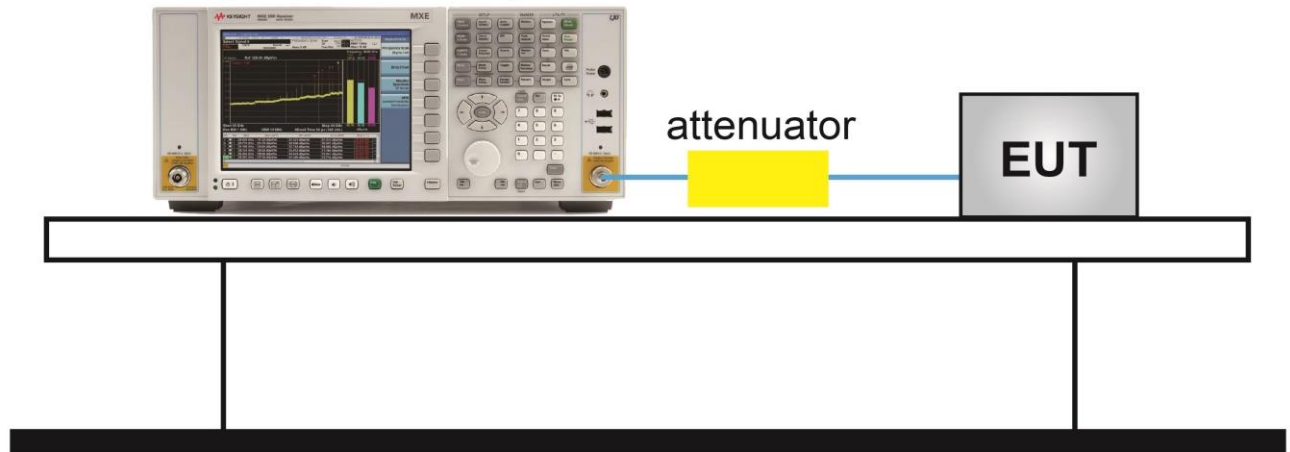
5.5.3. Test Setting

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.

5.5.4. Test Setup

Spectrum Analyzer



5.5.5. Test Result

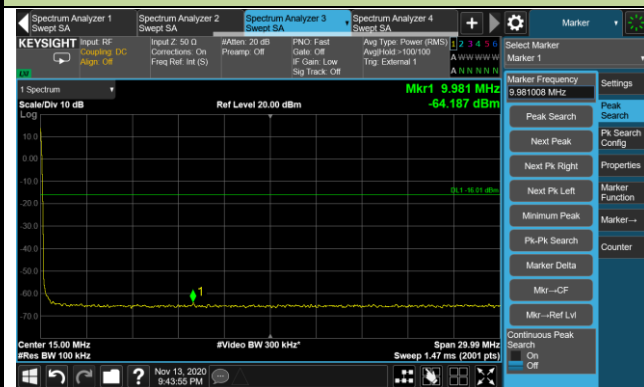
Product	AirScale Indoor Radio ASiR-pRRH	Test Engineer	Peter Xu
Test Site	SR2	Test Date	2020/11/13 ~ 2020/12/29
Test Configuration	n2 (Single Carrier), QPSK		

Frequency (MHz)	Channel Bandwidth (MHz)	Frequency Range (MHz)	Max Spurious Emissions (dBm/MHz)	Limit (dBm/MHz)	Result
1932.5	5	0.009 ~ 30	-64.187	≤ -16.01	Pass
		30 ~ 26500	-30.864	≤ -16.01	Pass
1960.0	5	0.009 ~ 30	-64.759	≤ -16.01	Pass
		30 ~ 26500	-31.487	≤ -16.01	Pass
1987.5	5	0.009 ~ 30	-65.846	≤ -16.01	Pass
		30 ~ 26500	-30.158	≤ -16.01	Pass
1935.0	10	0.009 ~ 30	-65.172	≤ -16.01	Pass
		30 ~ 26500	-29.836	≤ -16.01	Pass
1960.0	10	0.009 ~ 30	-65.347	≤ -16.01	Pass
		30 ~ 26500	-30.220	≤ -16.01	Pass
1985.0	10	0.009 ~ 30	-65.569	≤ -16.01	Pass
		30 ~ 26500	-29.642	≤ -16.01	Pass
1937.5	15	0.009 ~ 30	-64.611	≤ -16.01	Pass
		30 ~ 26500	-29.975	≤ -16.01	Pass
1960.0	15	0.009 ~ 30	-65.280	≤ -16.01	Pass
		30 ~ 26500	-30.108	≤ -16.01	Pass
1982.5	15	0.009 ~ 30	-64.817	≤ -16.01	Pass
		30 ~ 26500	-31.112	≤ -16.01	Pass
1940.0	20	0.009 ~ 30	-65.164	≤ -16.01	Pass
		30 ~ 26500	-30.349	≤ -16.01	Pass
1960.0	20	0.009 ~ 30	-65.431	≤ -16.01	Pass
		30 ~ 26500	-29.193	≤ -16.01	Pass
1980.0	20	0.009 ~ 30	-64.937	≤ -16.01	Pass
		30 ~ 26500	-31.110	≤ -16.01	Pass

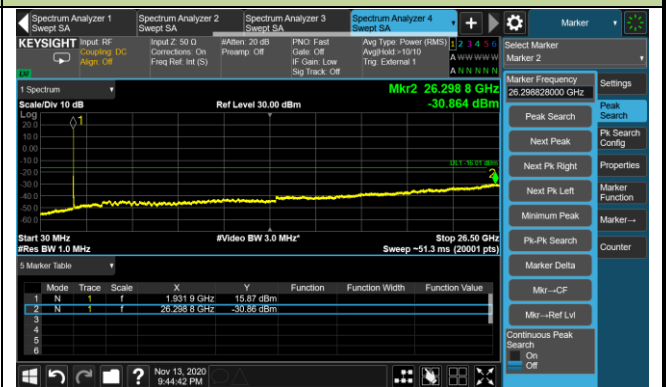
5MHz Channel Bandwidth

1932.5 MHz

9kHz ~ 30MHz

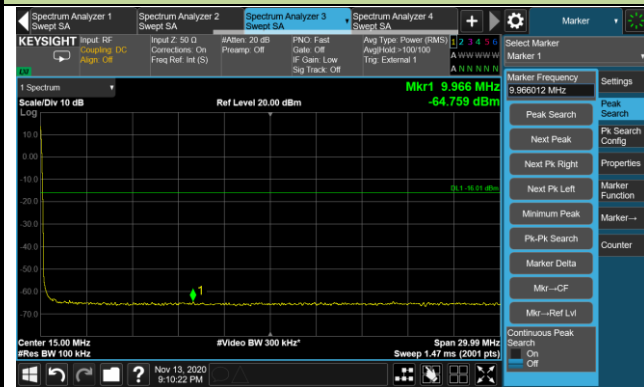


30MHz ~ 26500MHz



1960.0 MHz

9kHz ~ 30MHz

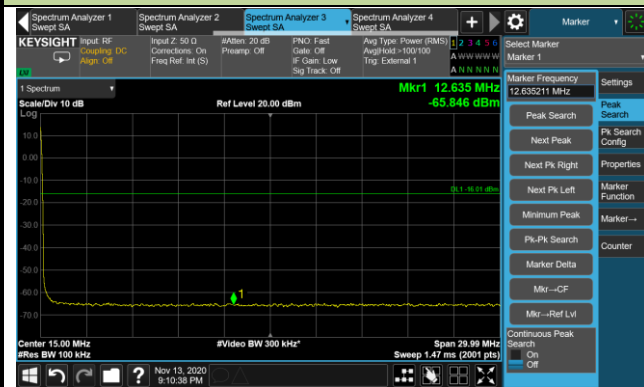


30MHz ~ 26500MHz



1987.5 MHz

9kHz ~ 30MHz



30MHz ~ 26500MHz

