

TEST REPORT**4 Occupied Bandwidth**

Test result: Pass

4.1 Measurement Procedure

The EUT was set to transmit at maximum power and testing was carried out on bottom, middle and top channels. Using the Occupied Bandwidth measurement function in the spectrum analyzer, the 26dB bandwidth was measured in accordance with FCC KDB 971168 D01 Clause 4.2.

The measurement method is from KDB 971168 4.2:

- a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be set wide enough to capture all modulation products including the emission skirts (i.e., two to five times the OBW).
- b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1 to 5 % of the anticipated OBW, and the VBW shall be at least 3 times the RBW.
- c) Set the reference level of the instrument as required to keep the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope must be at least $10\log(\text{OBW} / \text{RBW})$ below the reference level.
- d) Set the detection mode to peak, and the trace mode to max hold.
- e) Use the 99 % power bandwidth function of the spectrum analyzer and report the measured bandwidth.

TEST REPORT

4.2 Measurement result

NR-1C

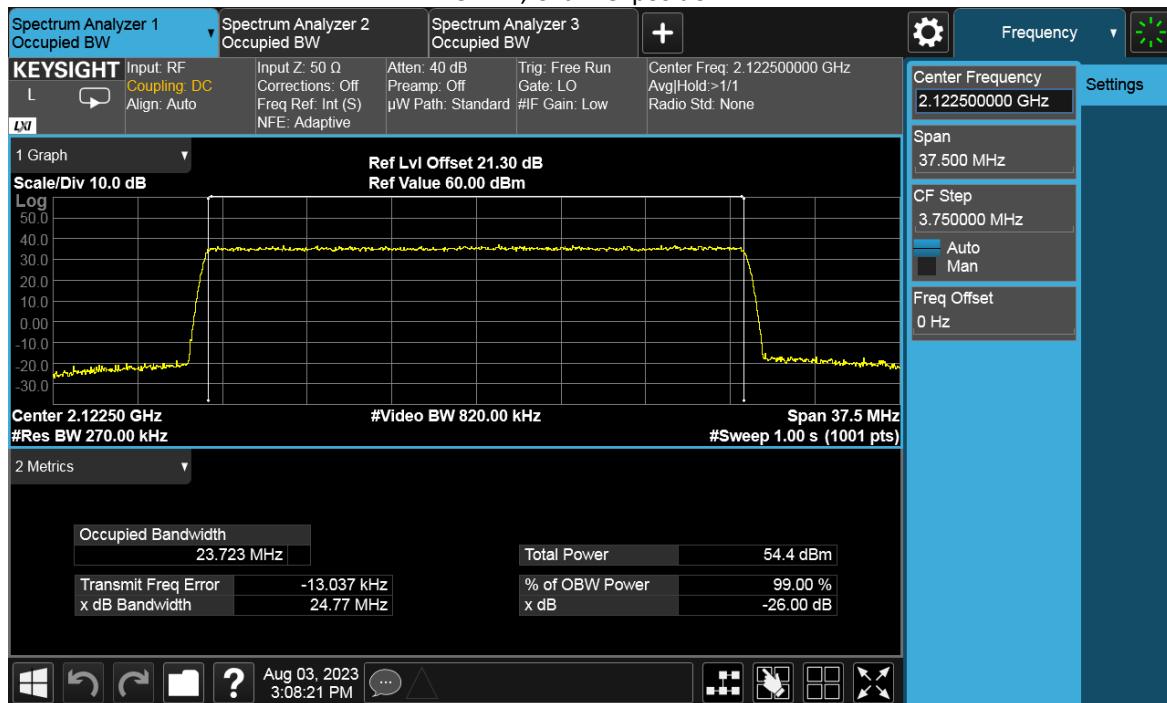
99% Occupied Bandwidth

Antenna Port	Modulation	Bandwidth	Occupied Bandwidth (MHz)		
			Channel Position B	Channel Position M	Channel Position T
B	QPSK	25MHz	23.723	23.725	23.728
B	QPSK	30MHz	28.503	28.508	28.512
B	QPSK	35MHz	33.510	33.516	33.506
B	QPSK	40MHz	38.534	38.508	38.513

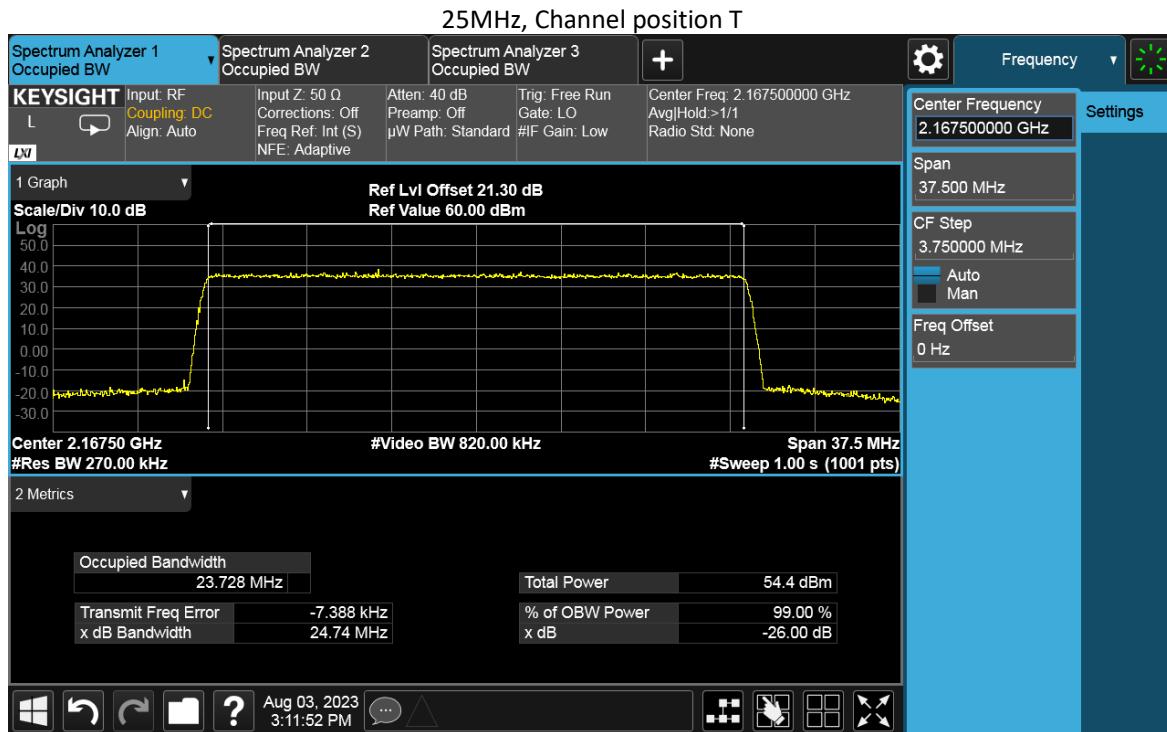
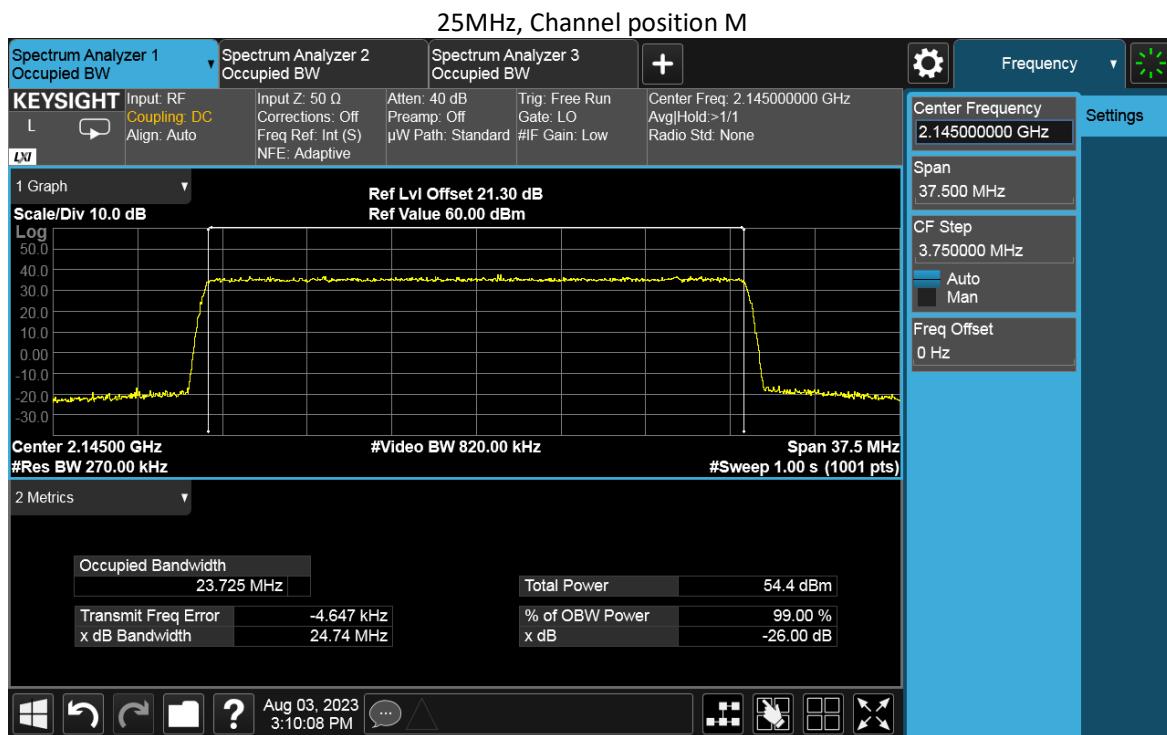
-26dBc Occupied Bandwidth

Antenna Port	Modulation	Bandwidth	Occupied Bandwidth (MHz)		
			Channel Position B	Channel Position M	Channel Position T
B	QPSK	25MHz	24.77	24.74	24.74
B	QPSK	30MHz	29.56	29.56	29.53
B	QPSK	35MHz	34.70	34.71	34.70
B	QPSK	40MHz	40.04	40.08	40.03

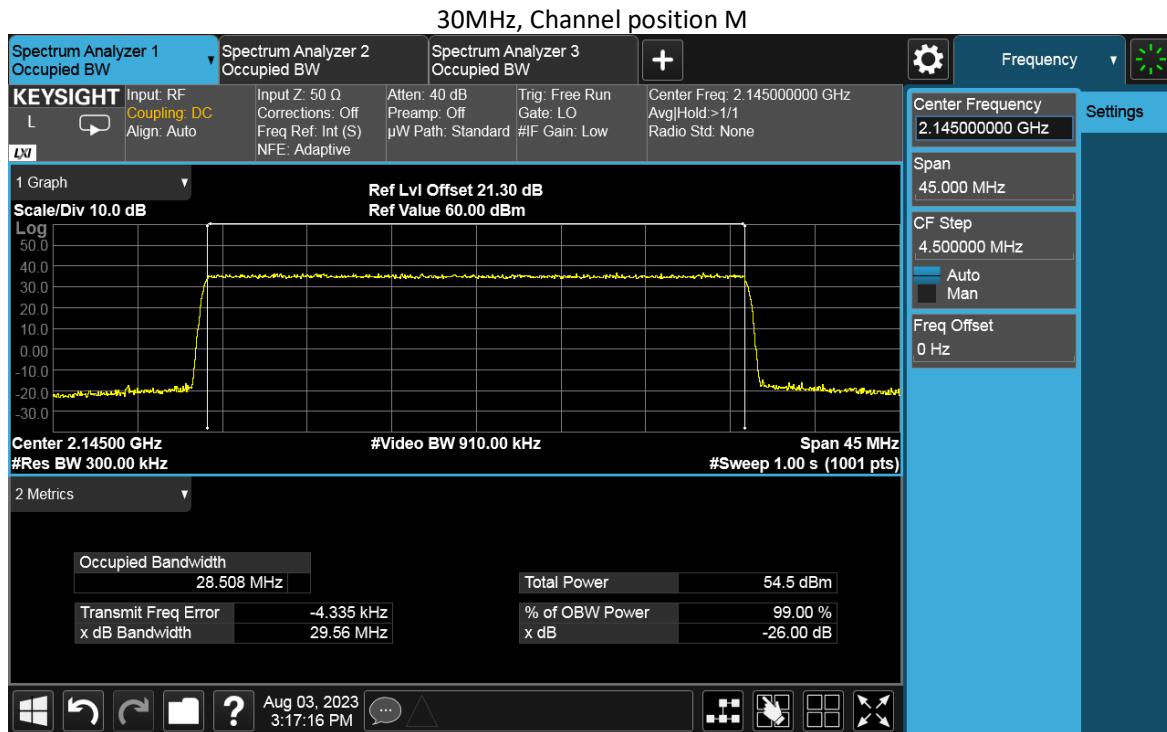
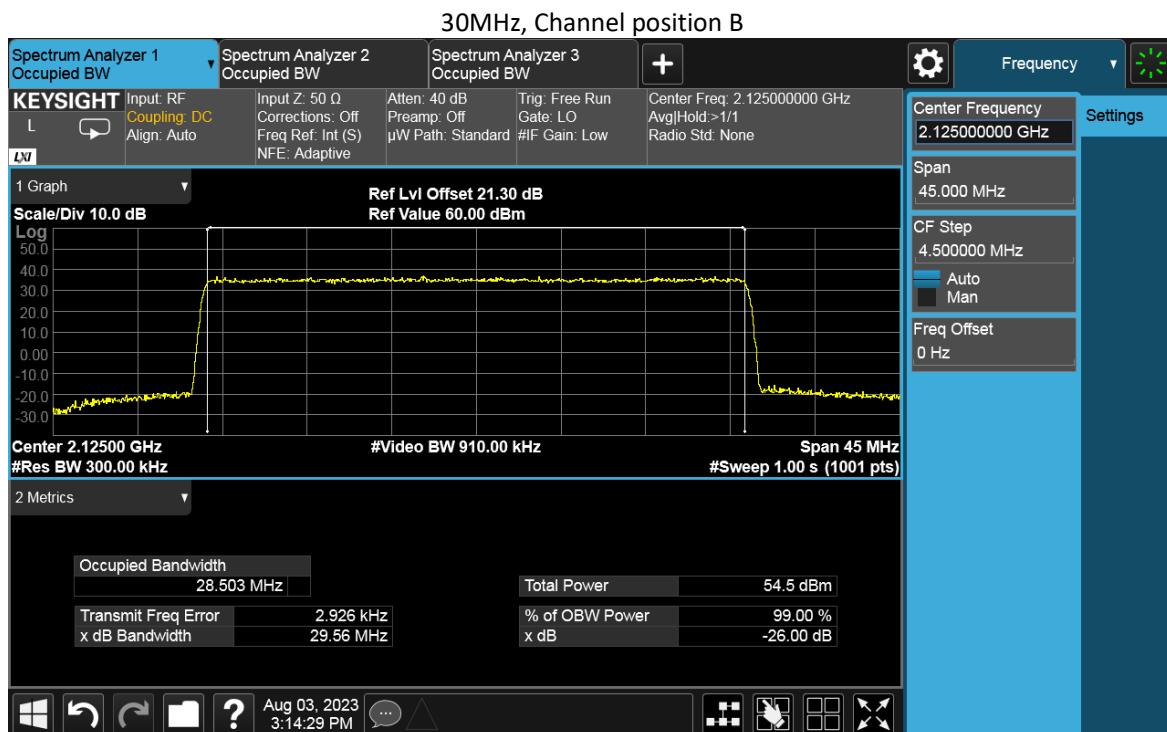
25MHz, Channel position B



TEST REPORT

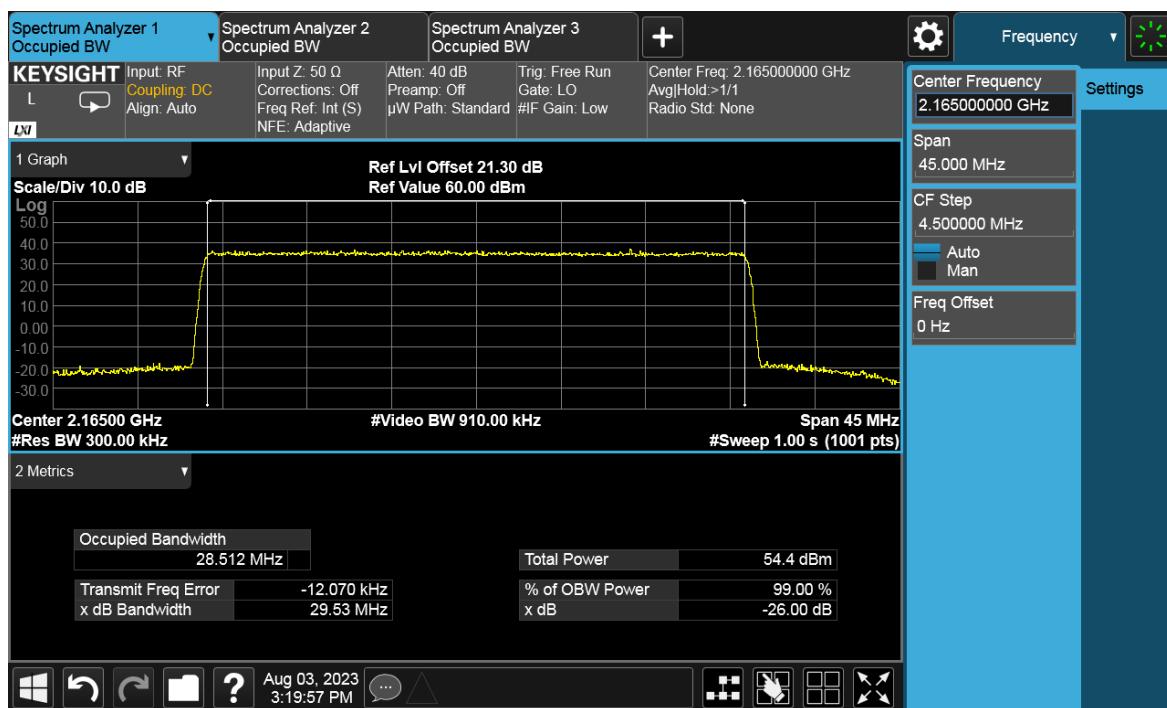


TEST REPORT

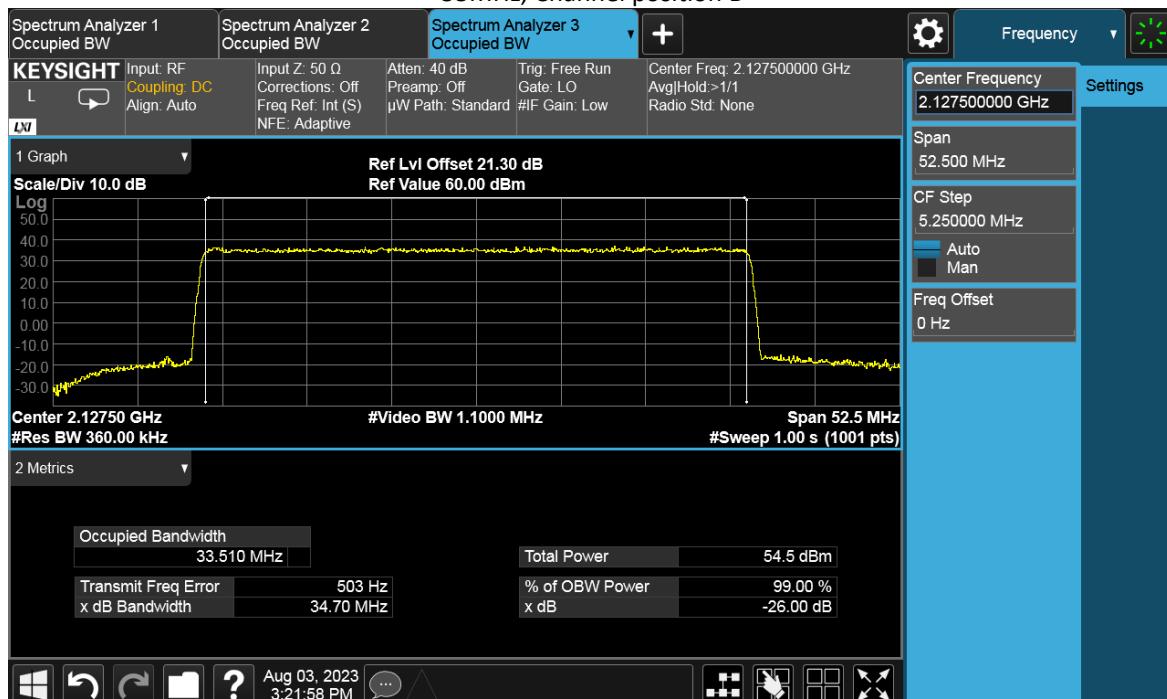


30MHz, Channel position T

TEST REPORT

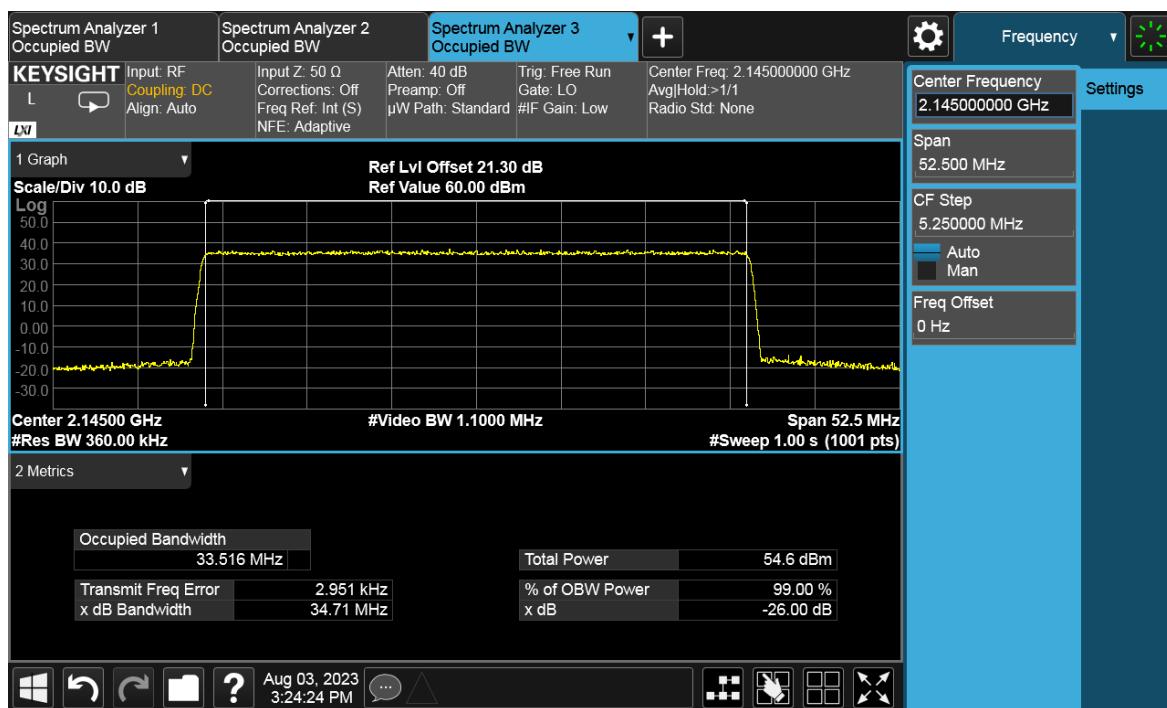


35MHz, Channel position B

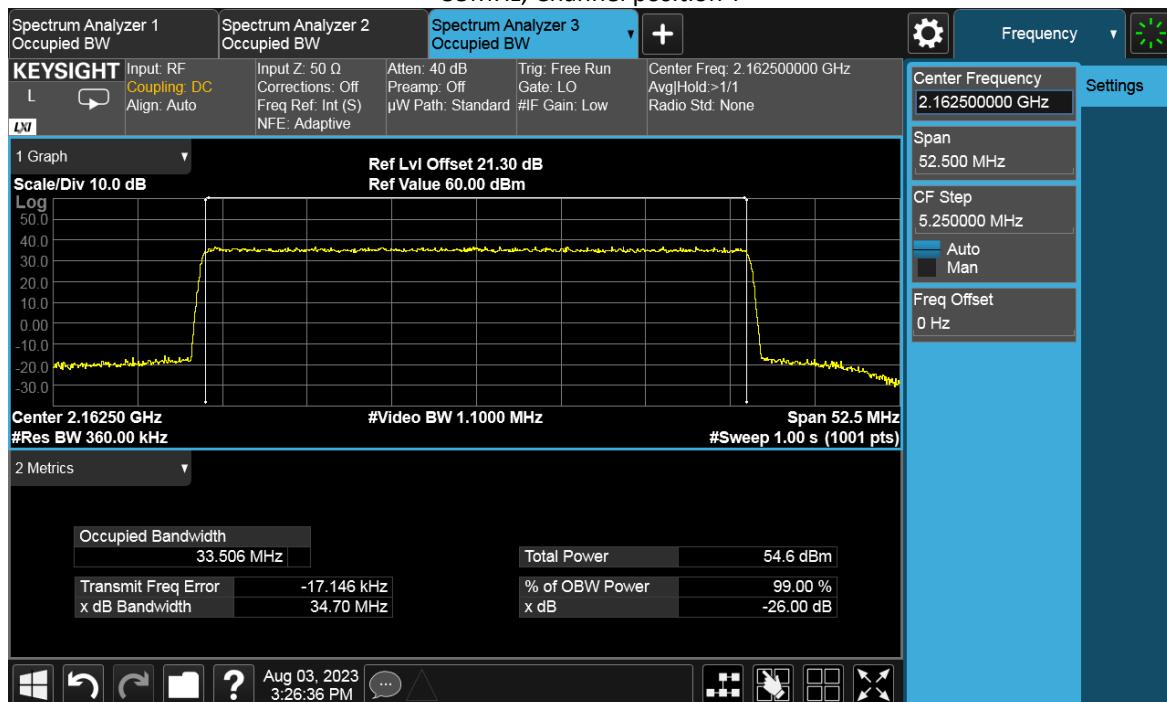


35MHz, Channel position M

TEST REPORT

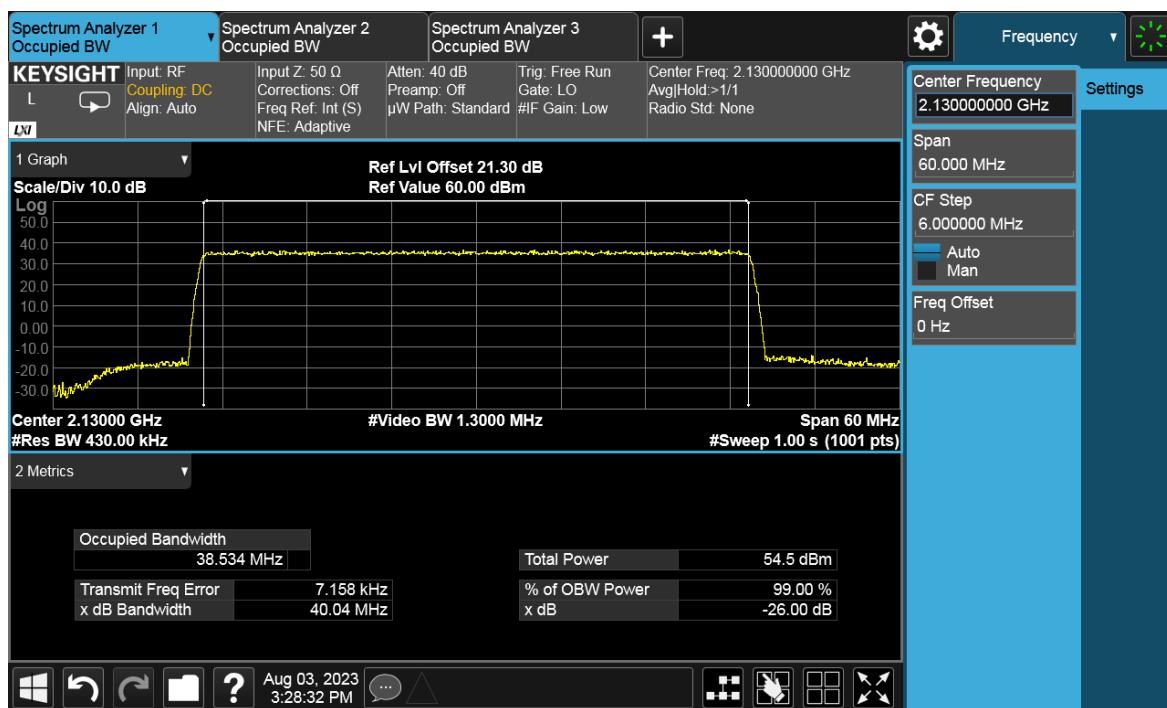


35MHz, Channel position T

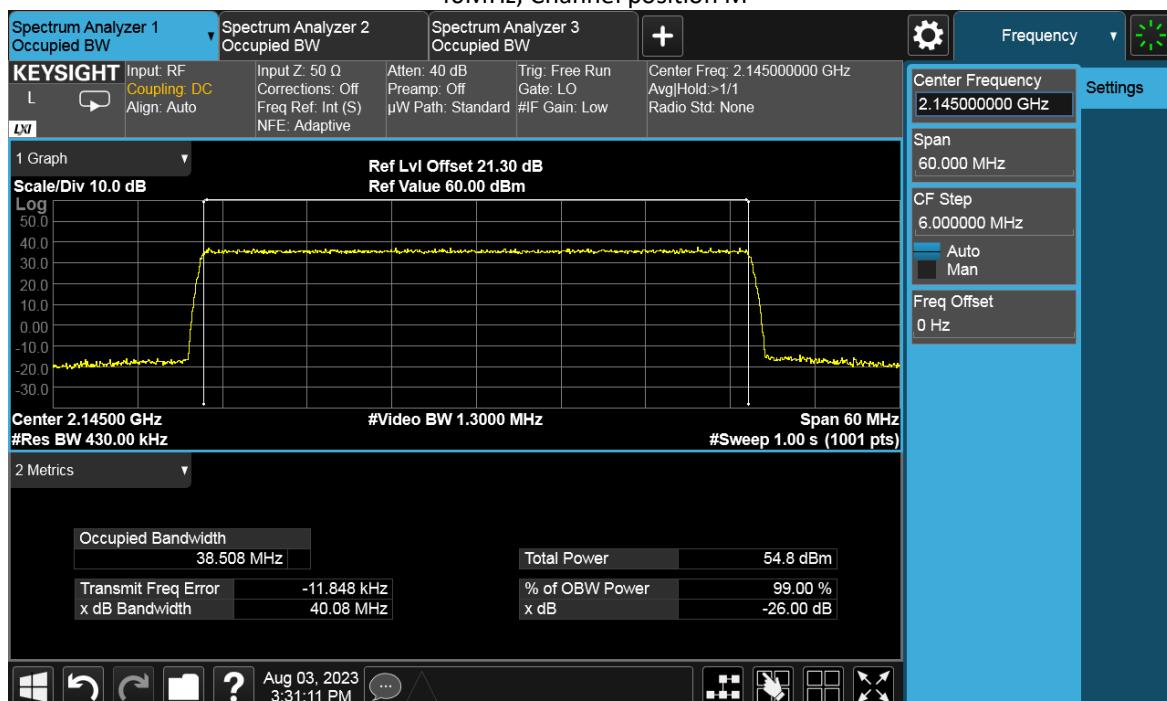


40MHz, Channel position B

TEST REPORT

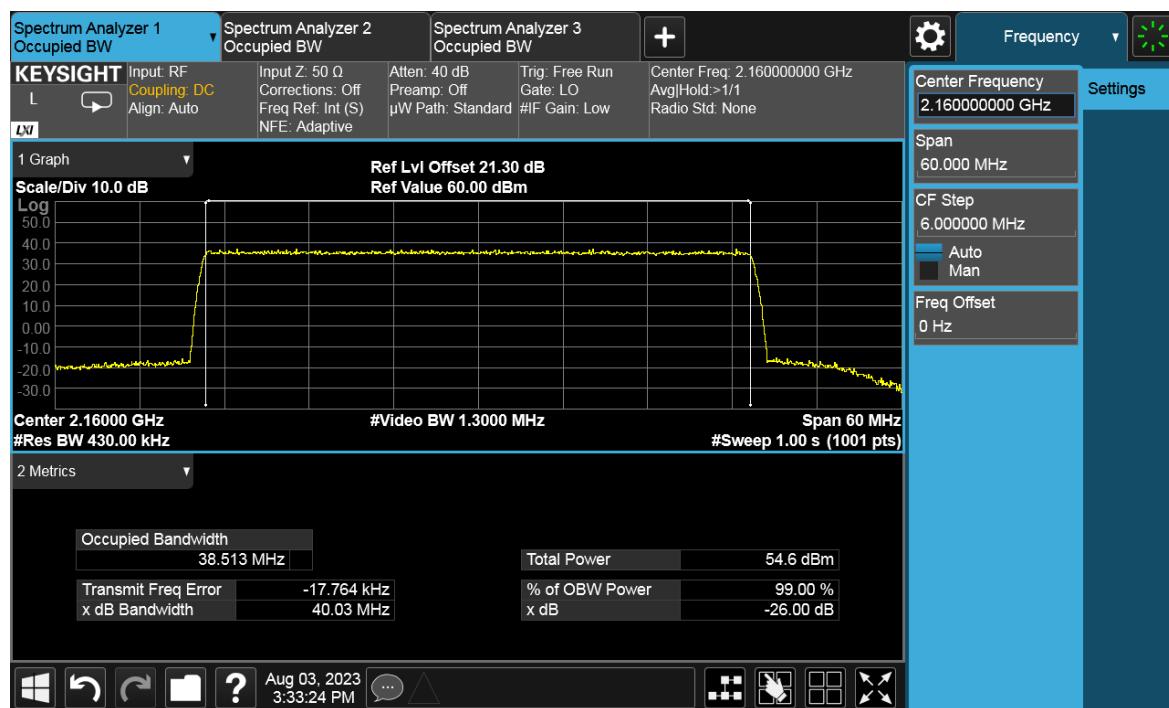


40MHz, Channel position M



40MHz, Channel position T

TEST REPORT



TEST REPORT**5 Unwanted Emissions at Band Edge**

Test result: **Pass**

5.1 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.

5.2 Measurement Procedure

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.

For MIMO mode configurations, the limit was adjusted with a correction of -6.02dB [10Log(1/4)] by using the Measure and Add 10Log(N) dB technique according to KDB 662911 D01 Multiple Transmitter Output accounting for simultaneous transmission from antenna ports . Then the limit was adjusted to -19.02dBm.

Spectrum analyzer detector was set as RMS.

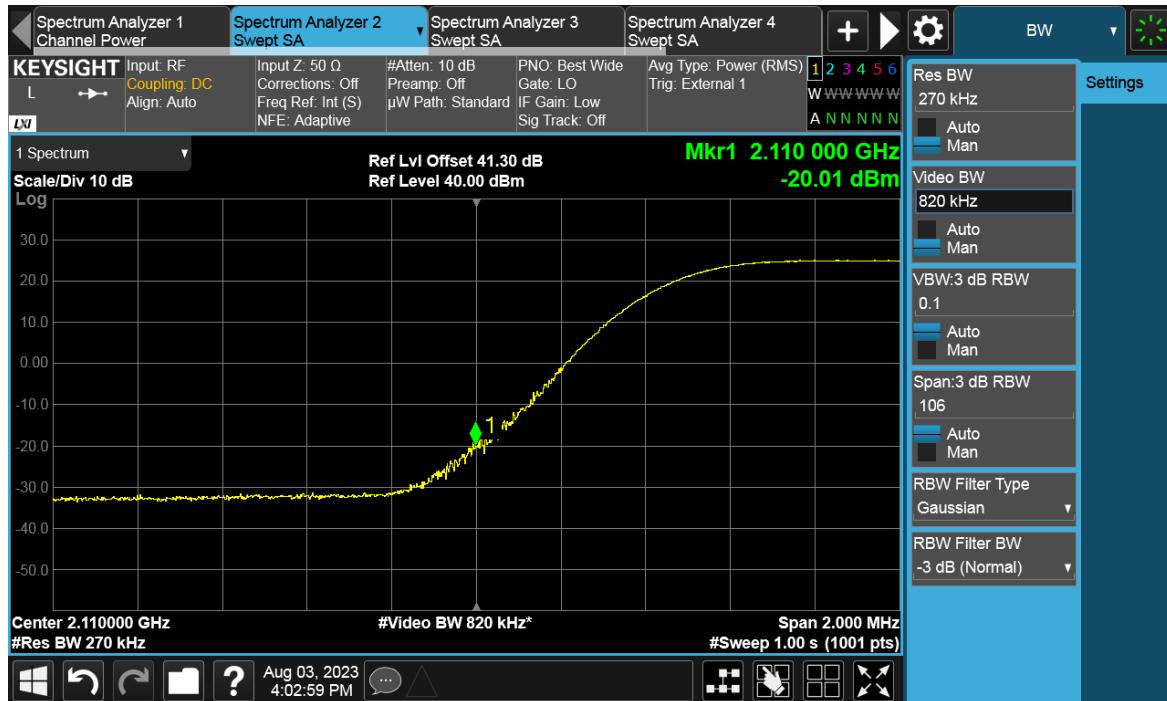
TEST REPORT

5.3 Measurement result

NR-1C-BE

Antenna Port	Channel Position	Modulation	Carrier BW (MHz)	RBW (kHz)	Limit (dBm)
B	B	QPSK	25	270	-19.02
B	T	QPSK	25	270	-19.02

Channel Position B



Channel Position T



TEST REPORT

Antenna Port	Channel Position	Modulation	Carrier BW (MHz)	RBW (kHz)	Limit (dBm)
B	B	QPSK	30	300	-19.02
B	T	QPSK	30	300	-19.02



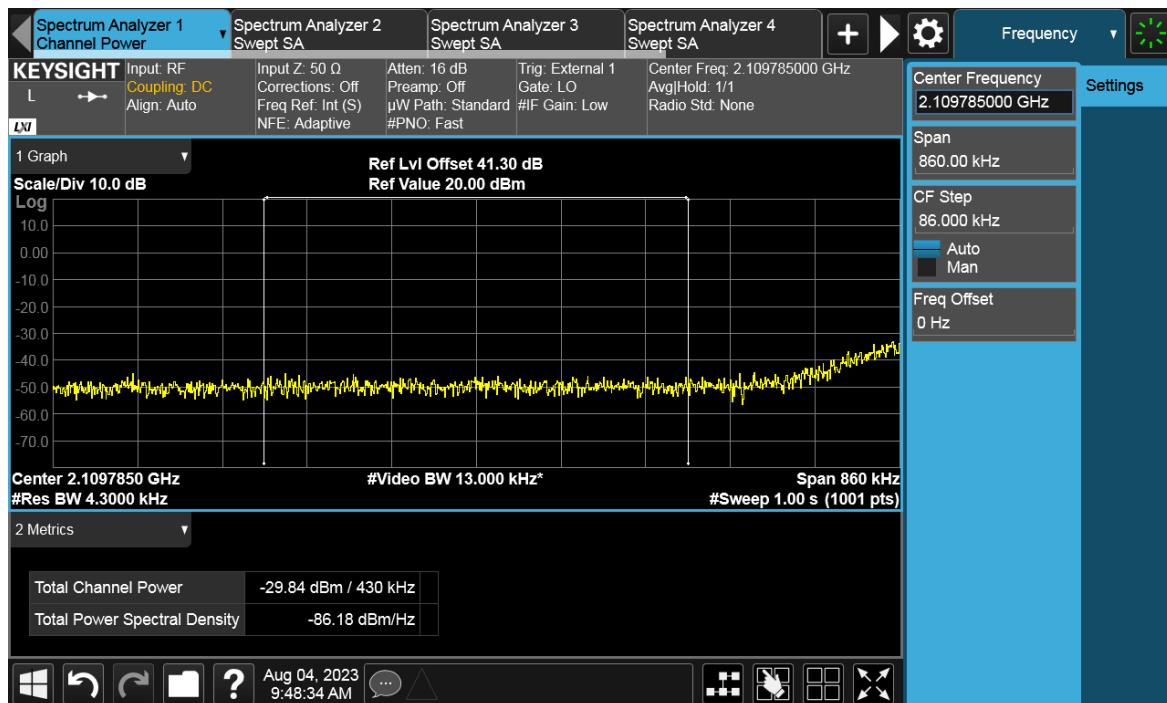
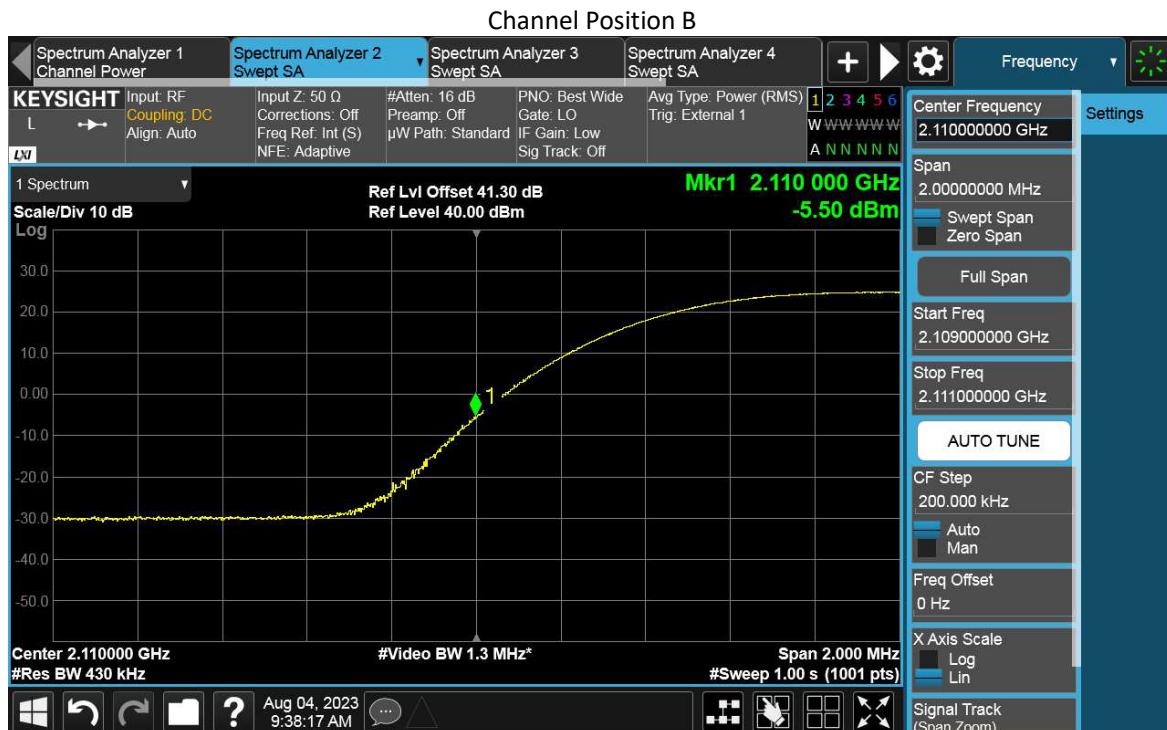
TEST REPORT

Antenna Port	Channel Position	Modulation	Carrier BW (MHz)	RBW (kHz)	Limit (dBm)
B	B	QPSK	35	360	-19.02
B	T	QPSK	35	360	-19.02

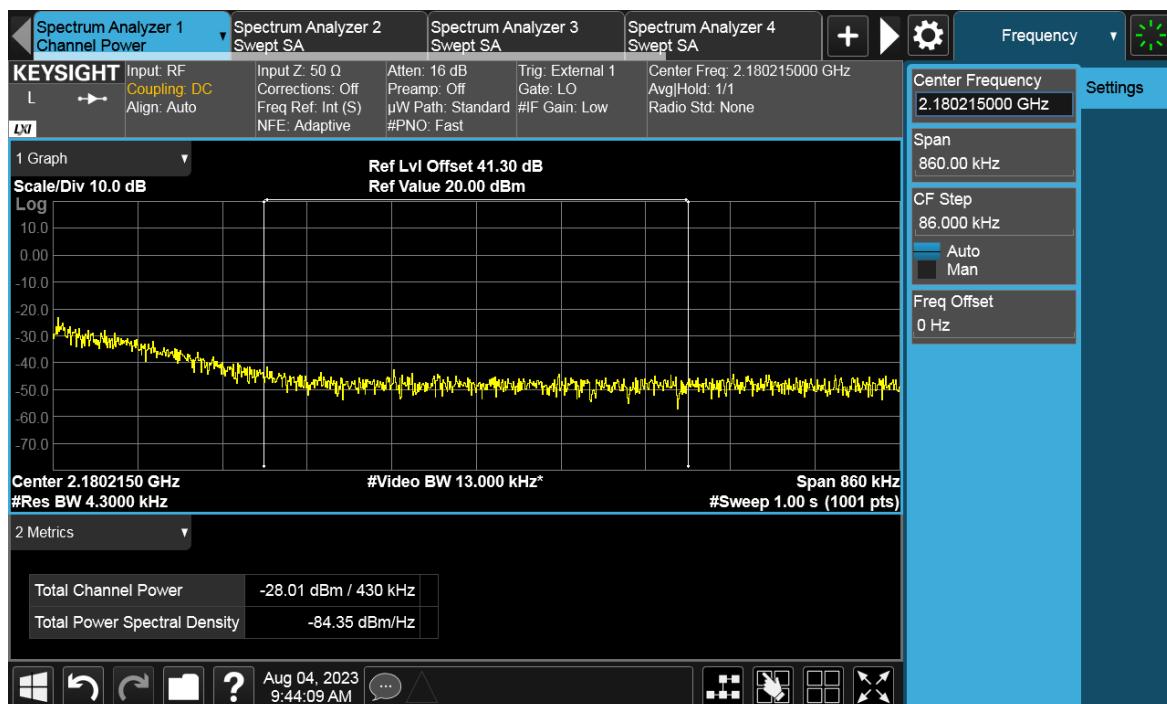


TEST REPORT

Antenna Port	Channel Position	Modulation	Carrier BW (MHz)	RBW (kHz)	Limit (dBm)
B	B	QPSK	40	430	-19.02
B	T	QPSK	40	430	-19.02



TEST REPORT



NR-2C-BE

TEST REPORT

Antenna Port	Channel Position	Modulation	Carrier BW (MHz)	RBW (kHz)	Limit (dBm)
B	B	QPSK	25	270	-19.02
B	T	QPSK	25	270	-19.02



TEST REPORT

B	B	QPSK	30	300	-19.02
B	T	QPSK	30	300	-19.02

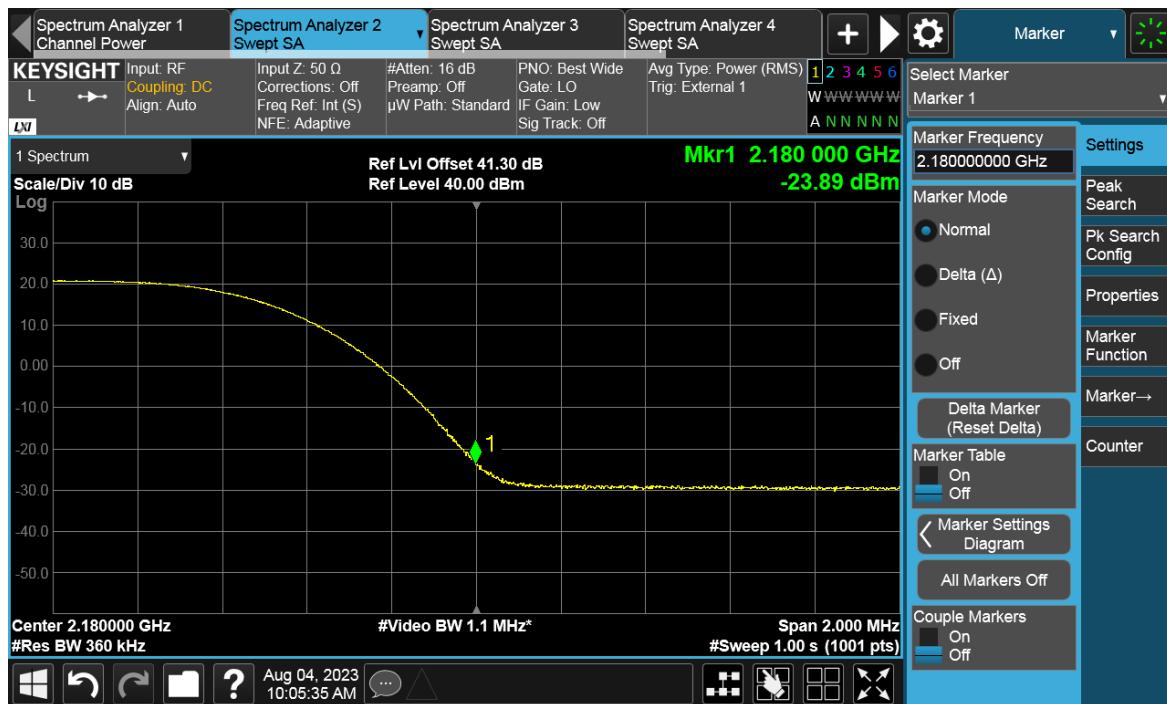
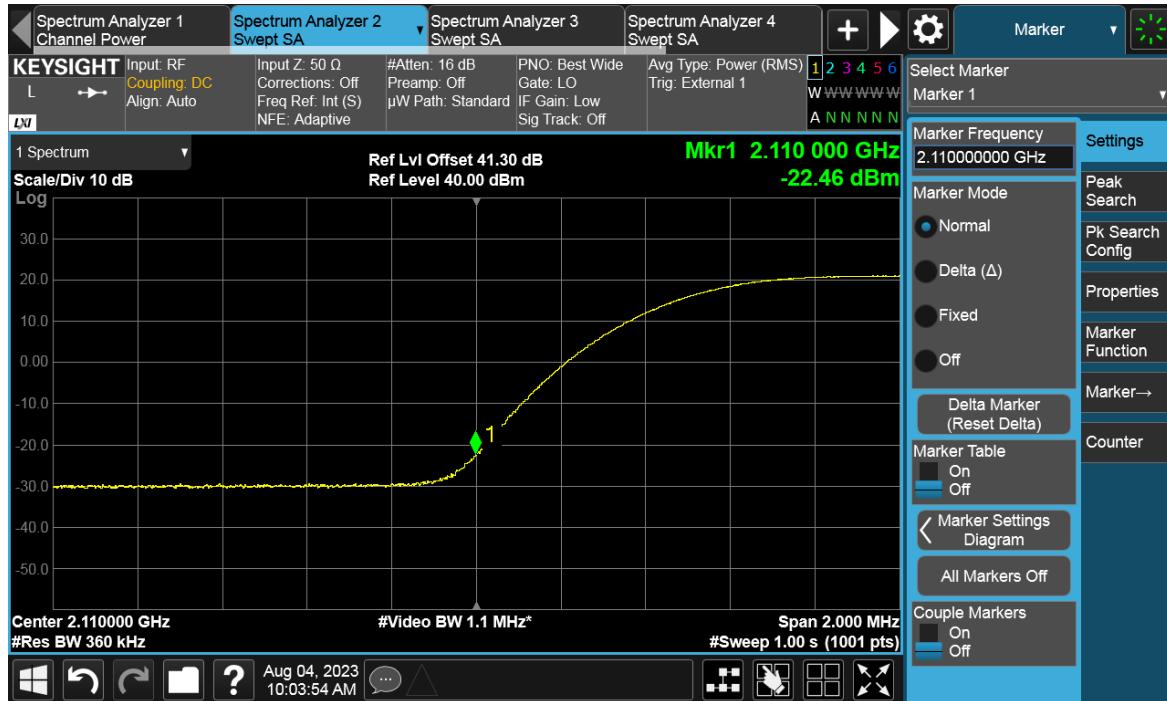
Channel Position B

Channel Position T


TEST REPORT

M	B	QPSK	35	360	-19.02
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Channel Position M



TEST REPORT**6 Conducted Unwanted Emission**

Test result: **Pass**

6.1 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.

6.2 Measurement Procedure

In accordance with FCC rules, 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.

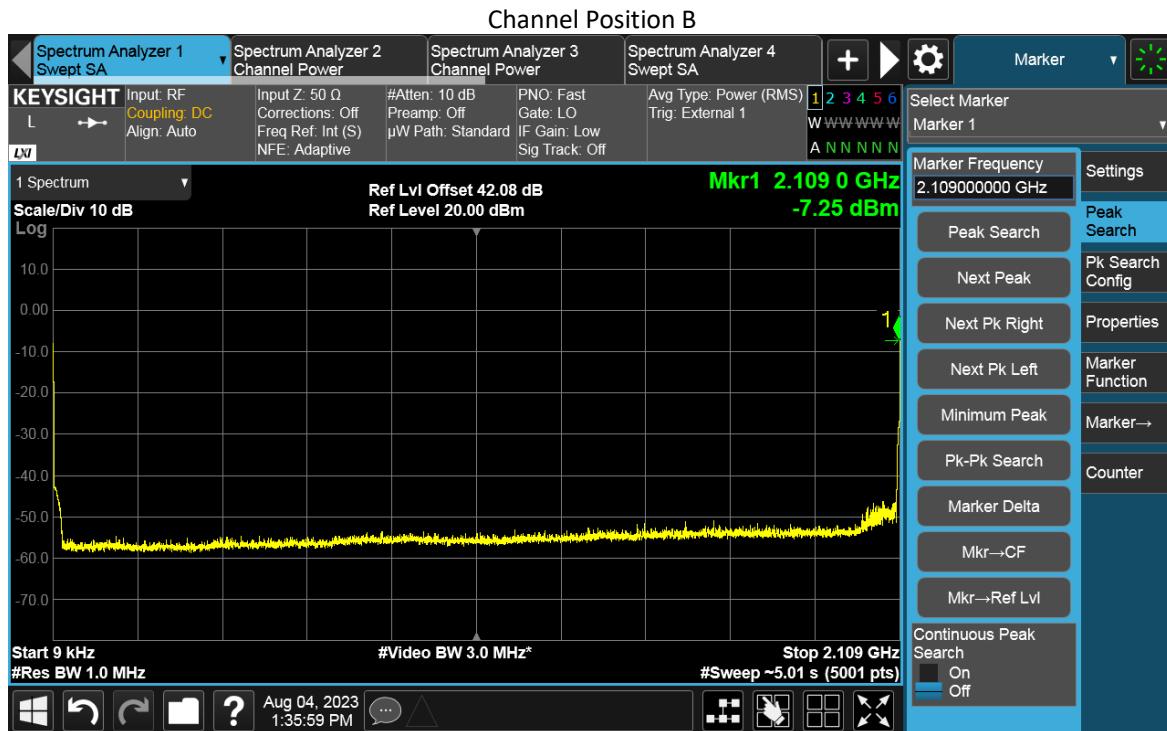
The spurious emissions from the antenna terminal were measured. The transmitter output power was attenuated using an attenuator and the frequency spectrum investigated from 9kHz to 22GHz. The resolution bandwidth of 1MHz was employed for frequency band 9kHz to 22GHz. The spectrum analyzer detector was set to RMS.

For MIMO mode configurations, the limit was adjusted with a correction of -6.02dB [10Log(1/4)] by using the Measure and Add 10Log(N) dB technique according to KDB 662911 D01 Multiple Transmitter Output accounting for simultaneous transmission from antenna ports. Then the limit was adjusted to -19.02dBm.

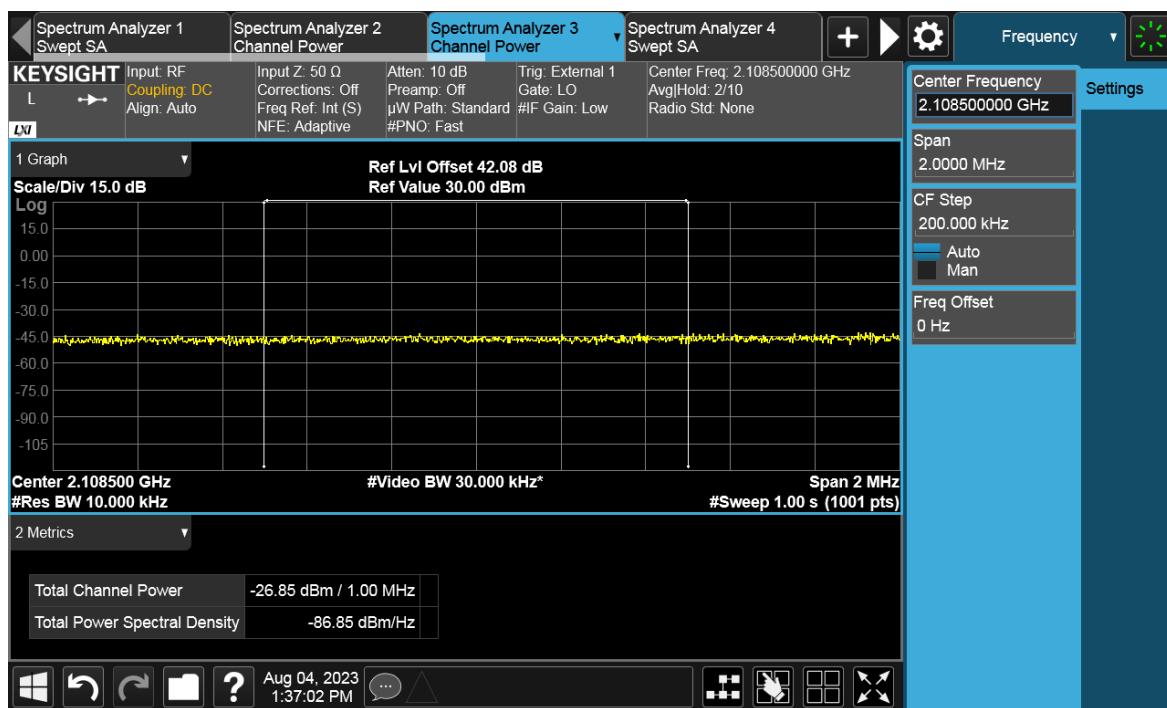
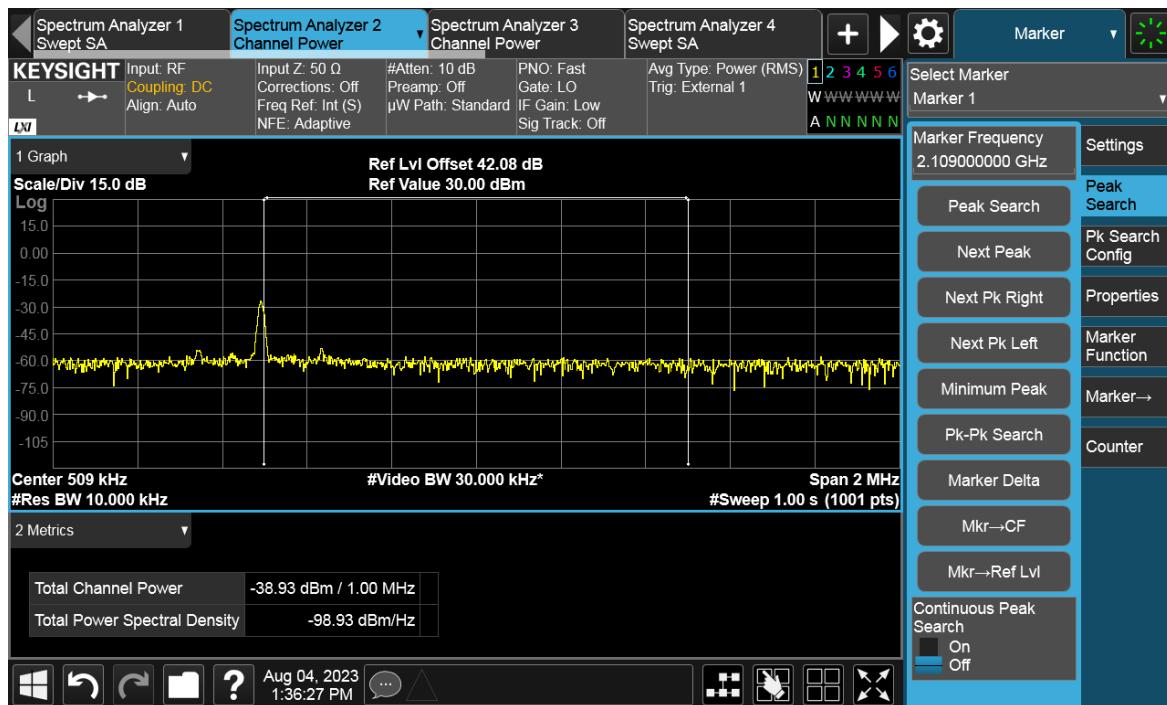
TEST REPORT
6.3 Measurement result

NR-1C

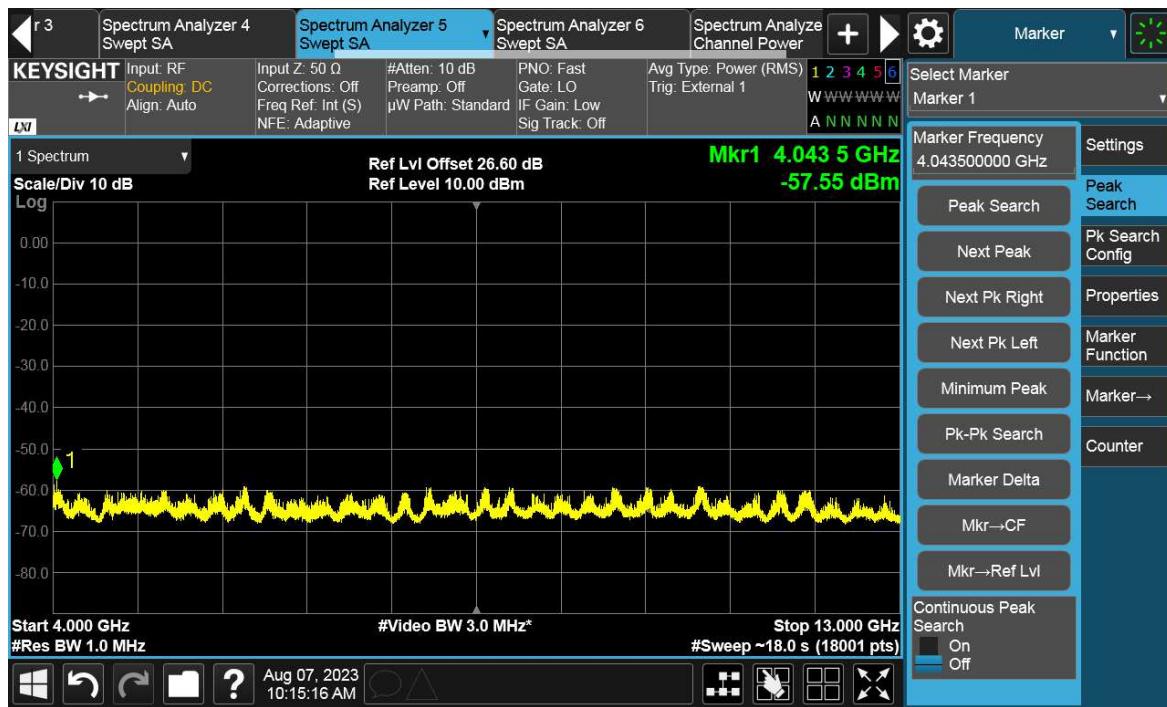
Antenna Port	Channel Position	Modulation	Carrier BW (MHz)	RBW (kHz)	Limit (dBm)
B	B	QPSK	25	1000	-19.02
B	T	QPSK	25	1000	-19.02



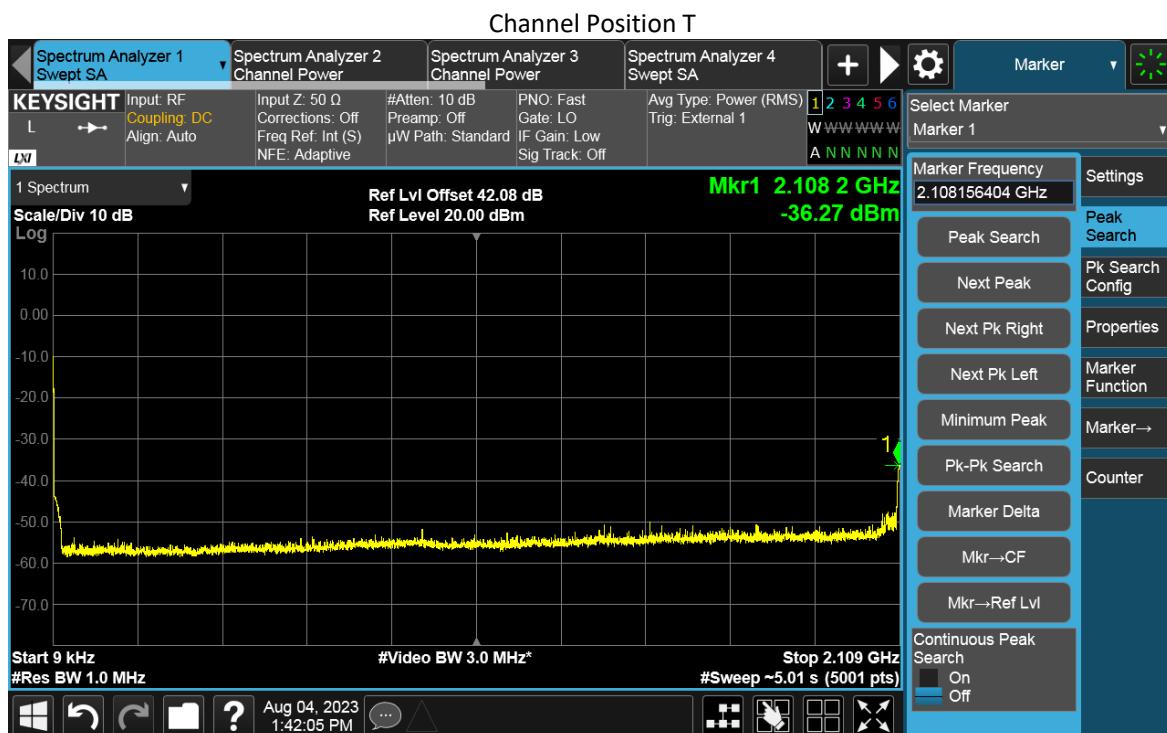
TEST REPORT



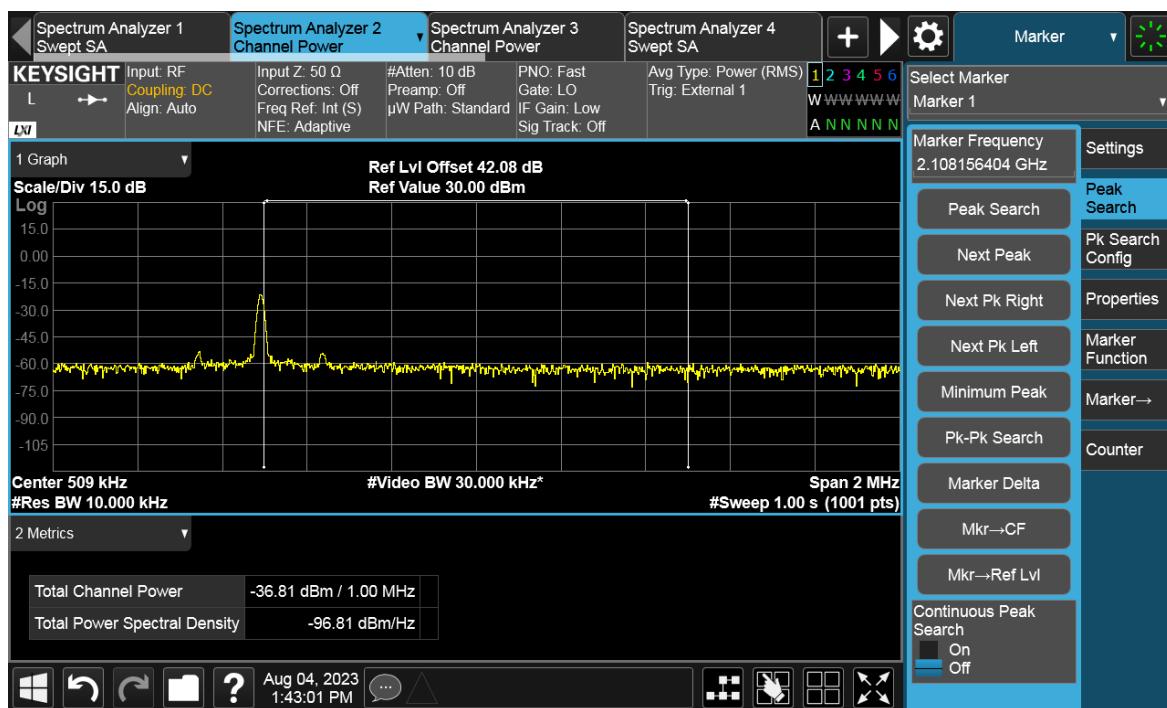
TEST REPORT



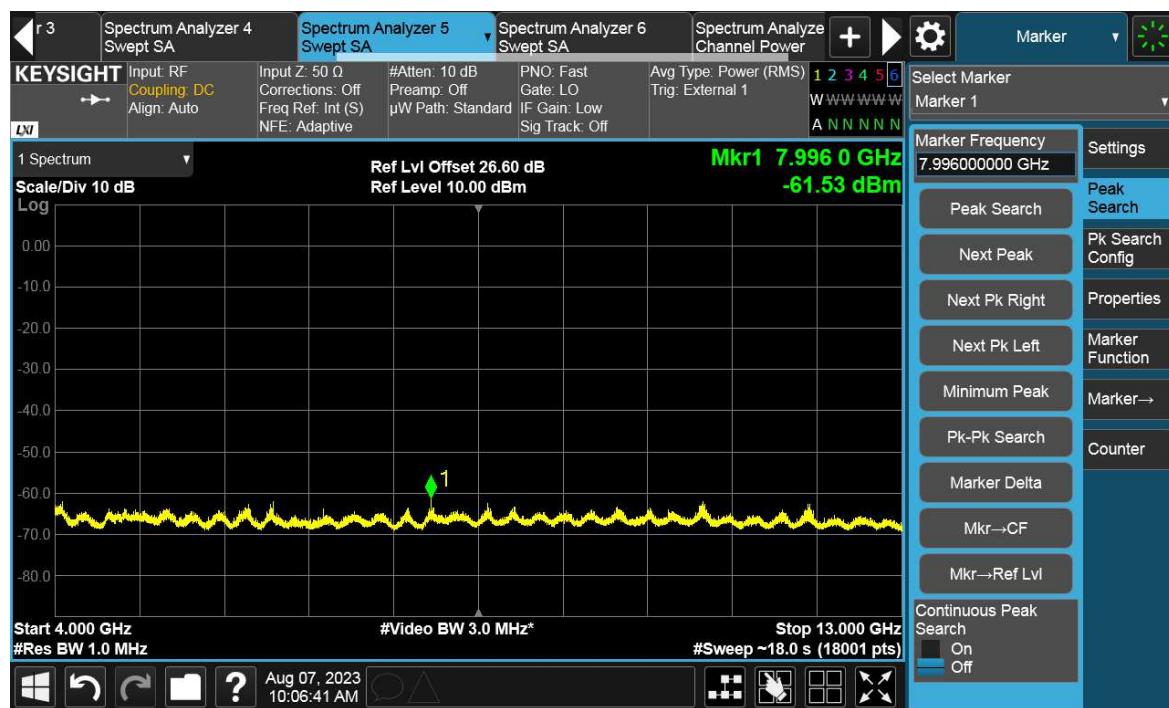
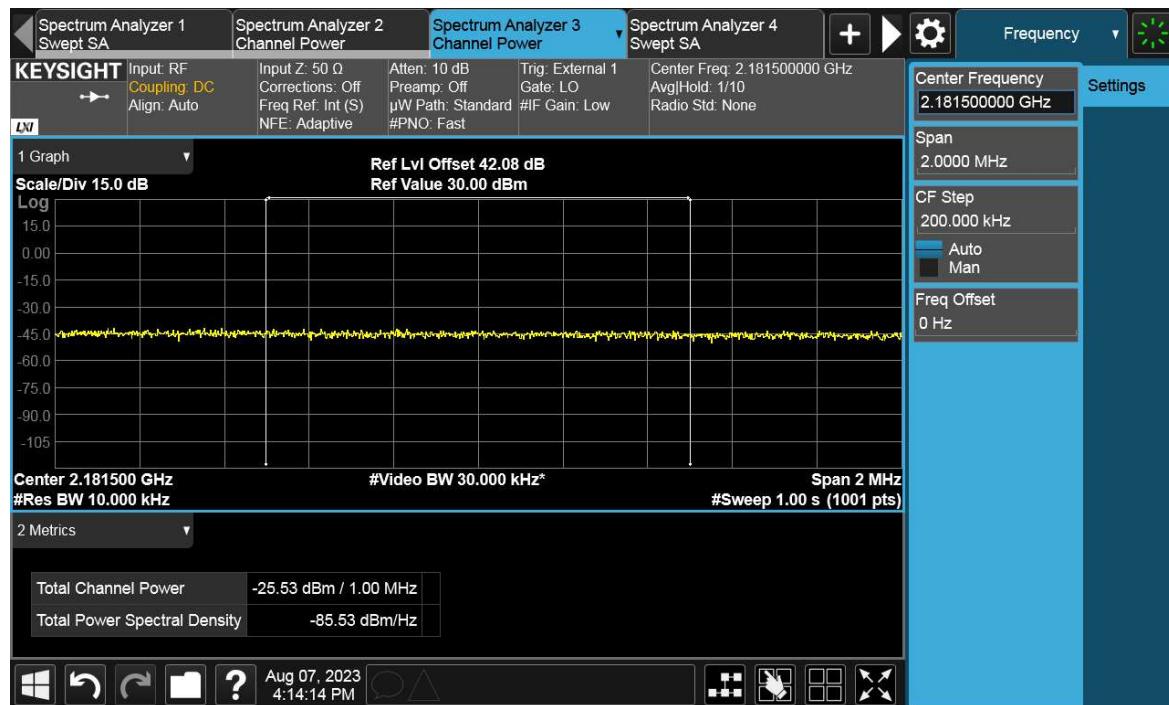
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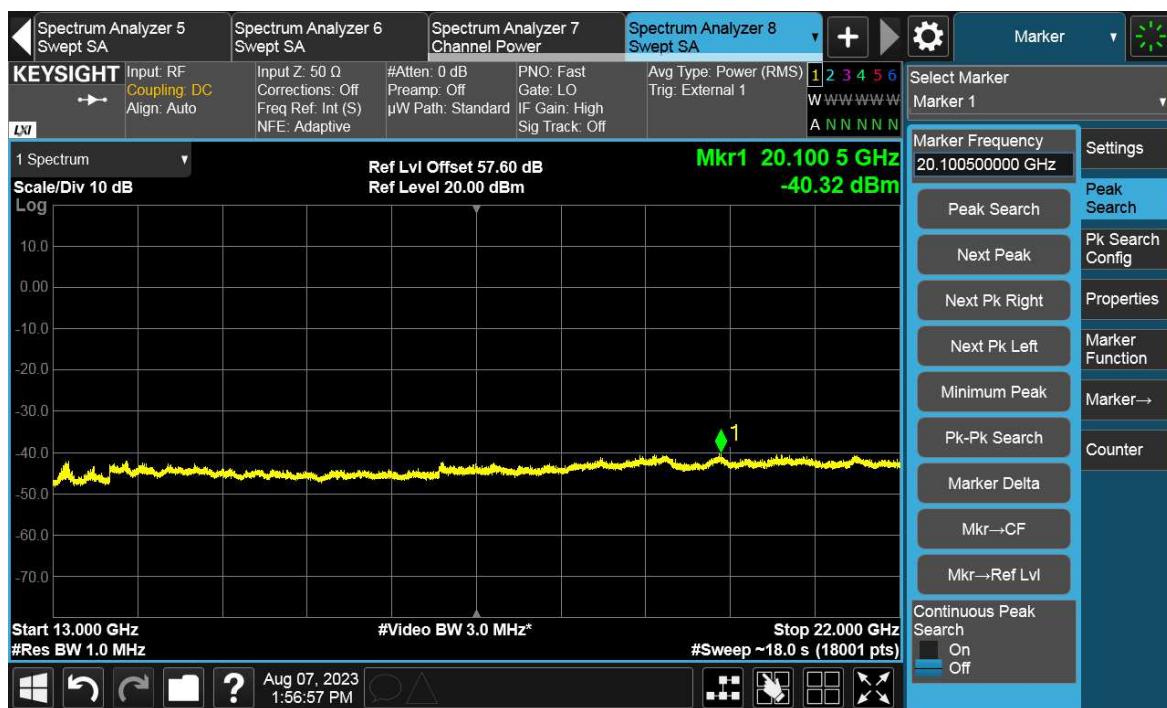
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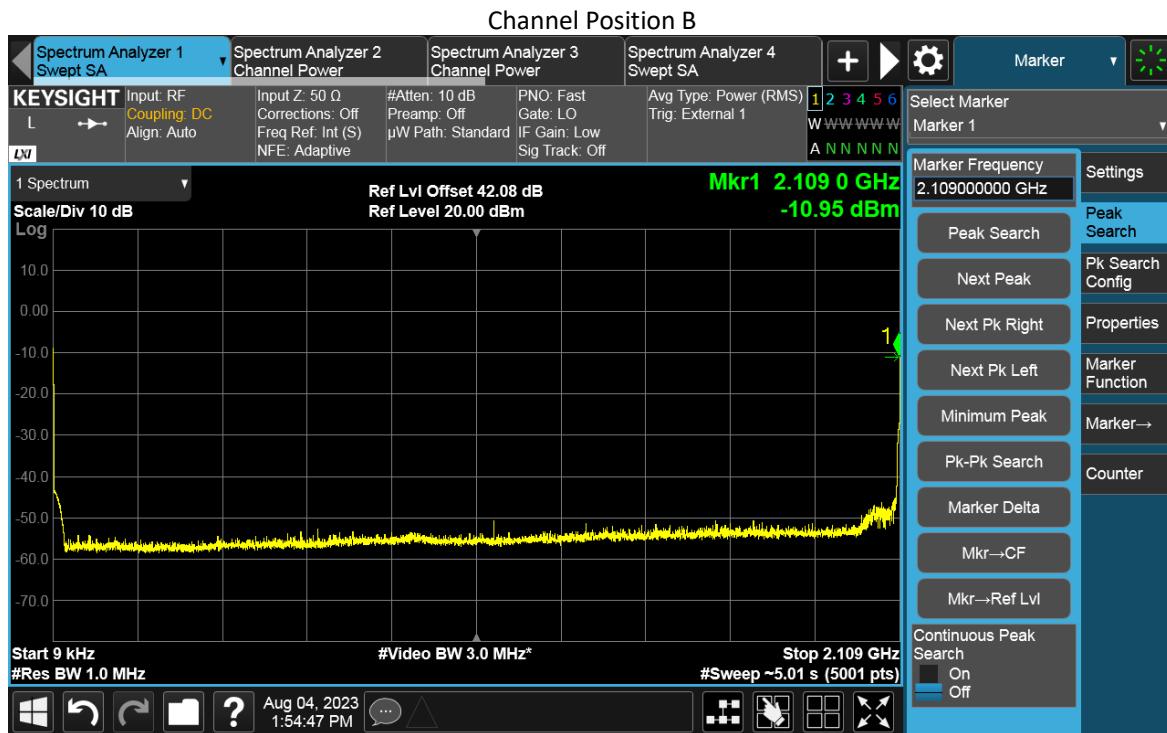
TEST REPORT



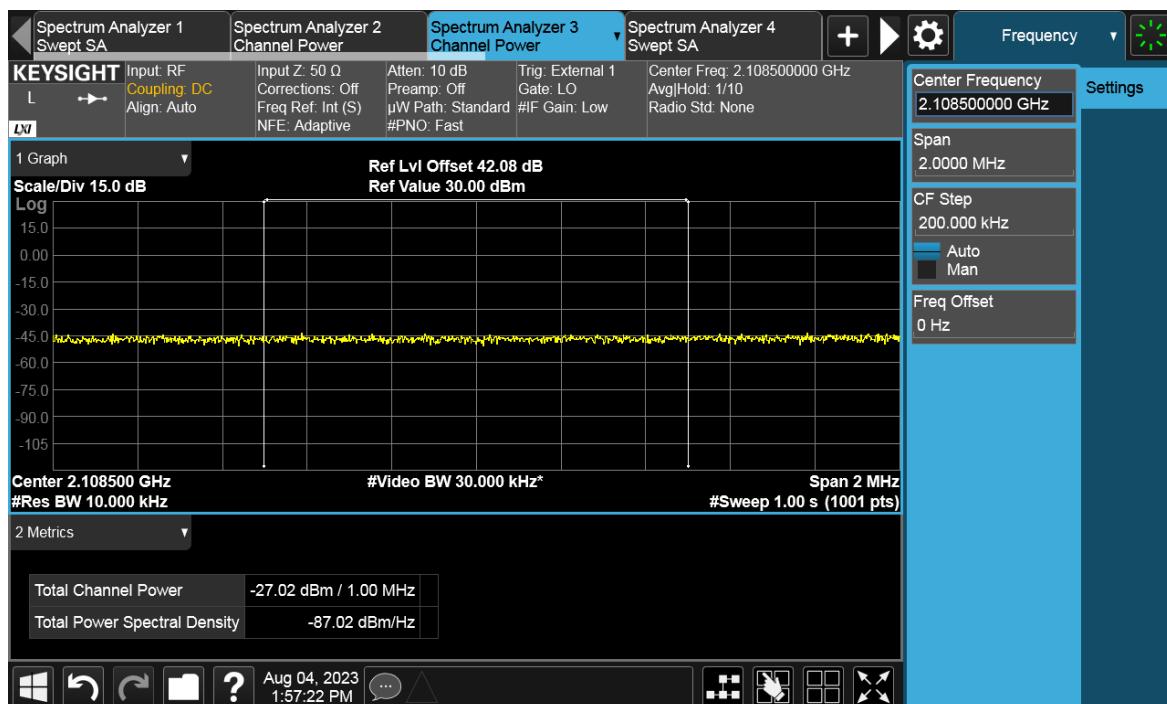
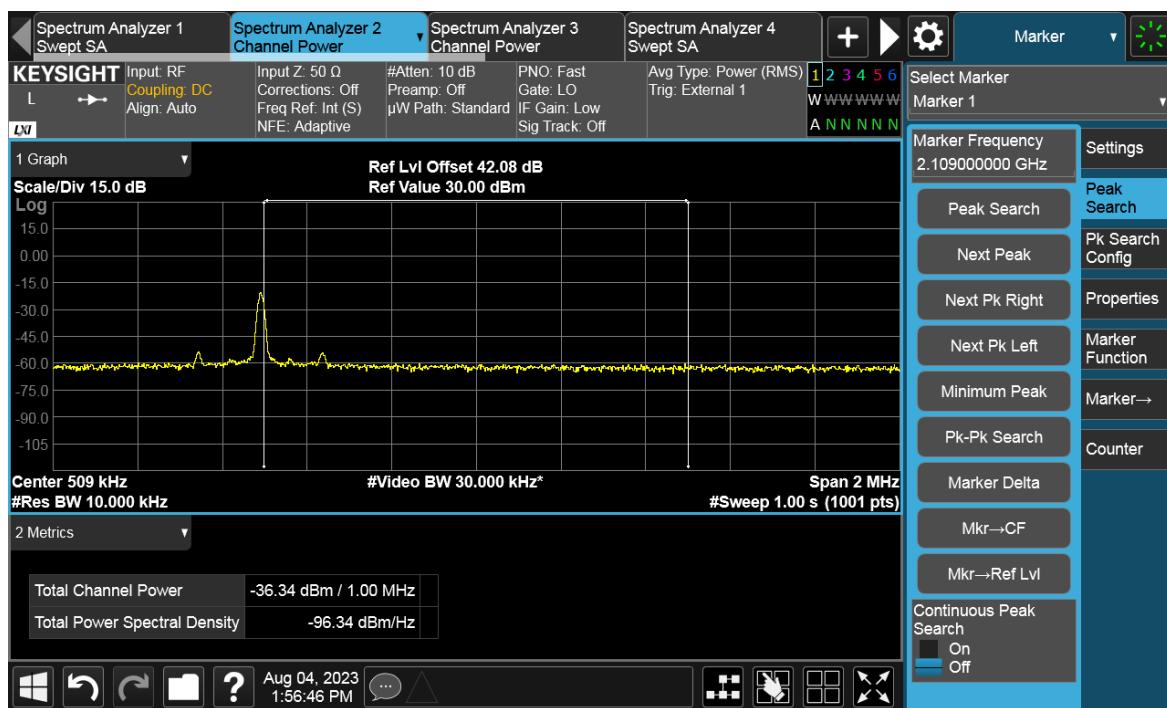
TEST REPORT



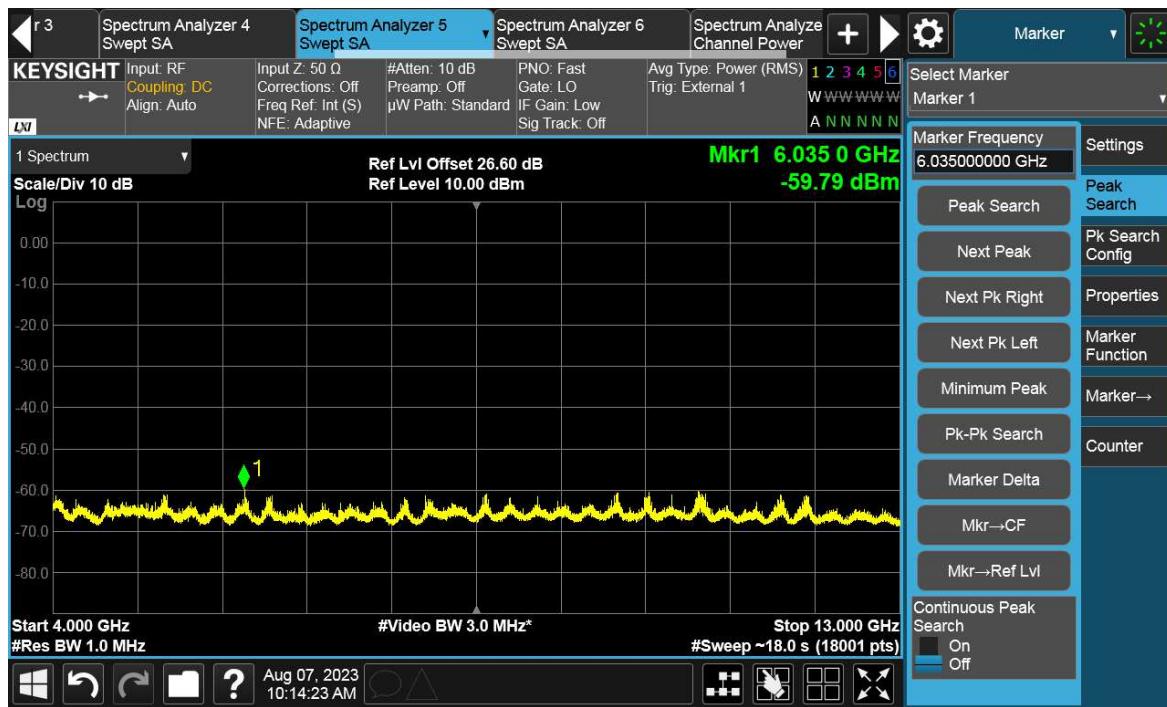
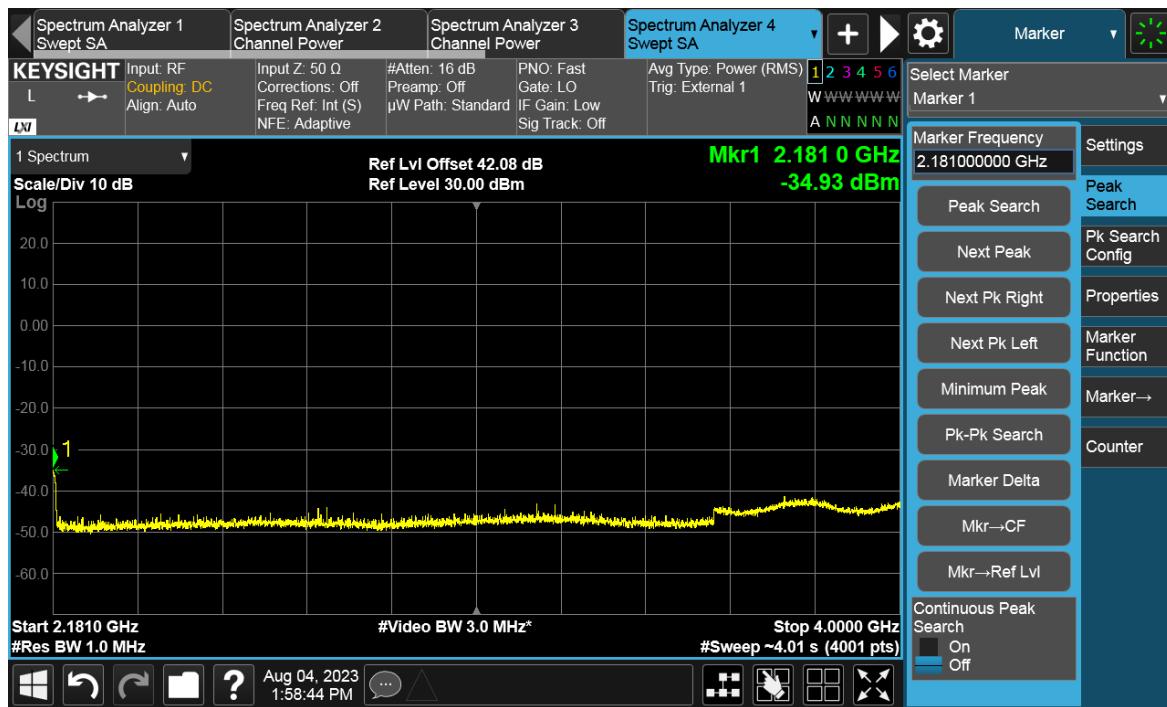
Antenna Port	Channel Position	Modulation	Carrier BW (MHz)	RBW (kHz)	Limit (dBm)
B	B	QPSK	30	1000	-19.02
B	T	QPSK	30	1000	-19.02

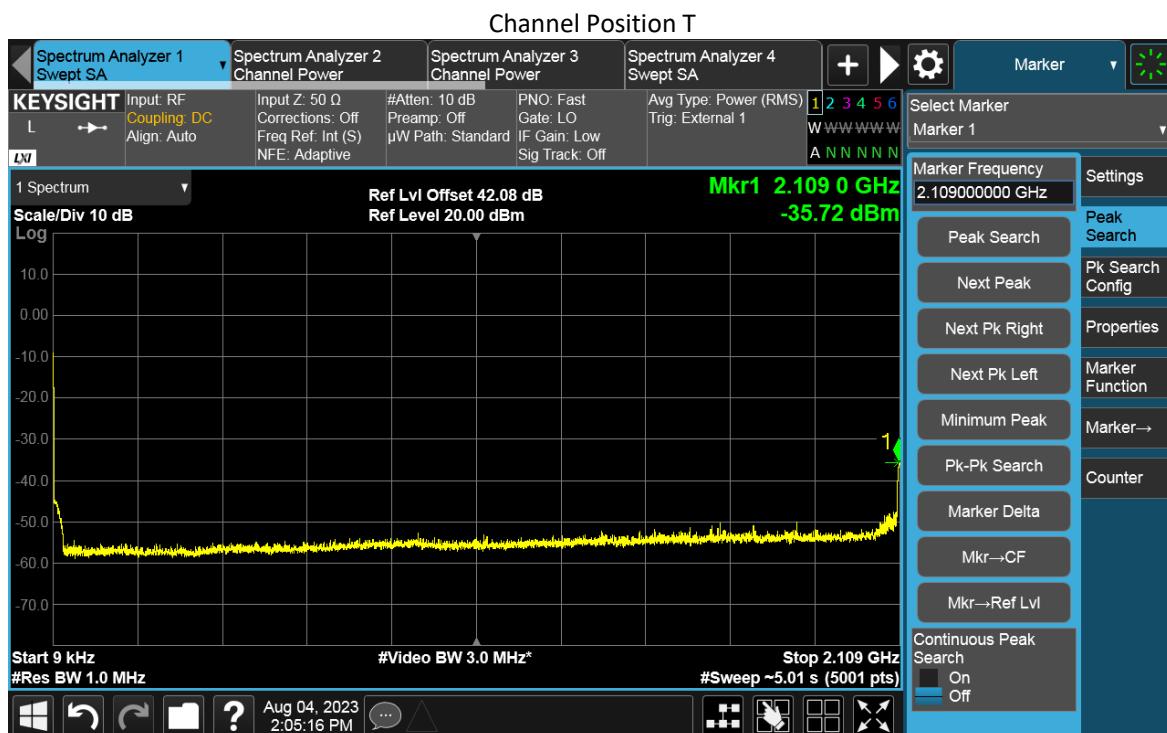


TEST REPORT



TEST REPORT



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