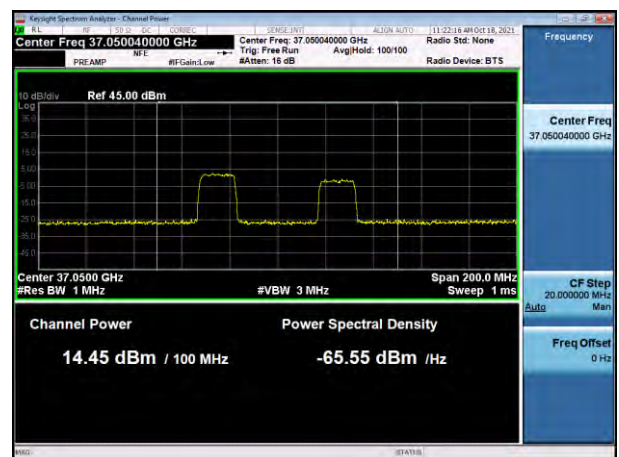
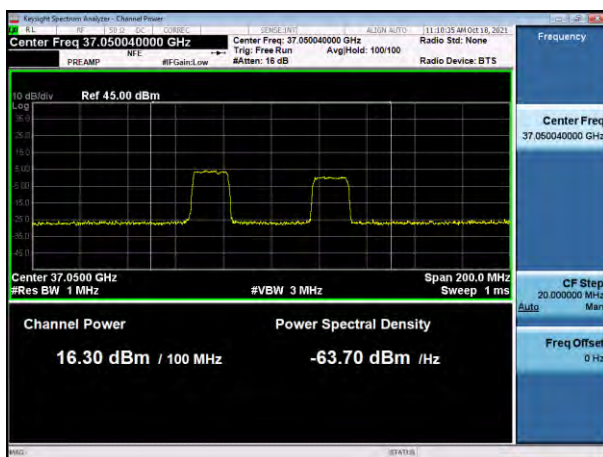
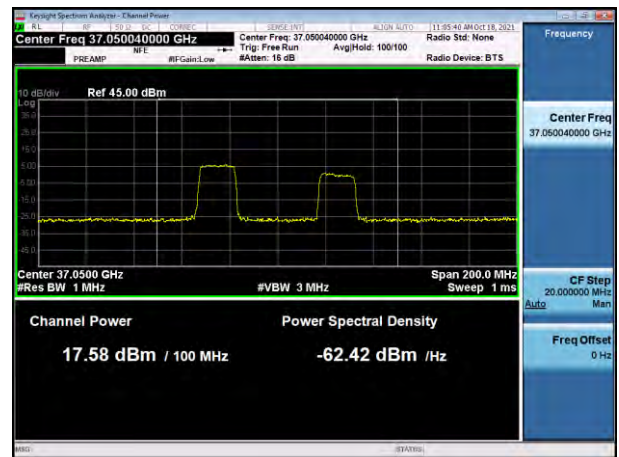
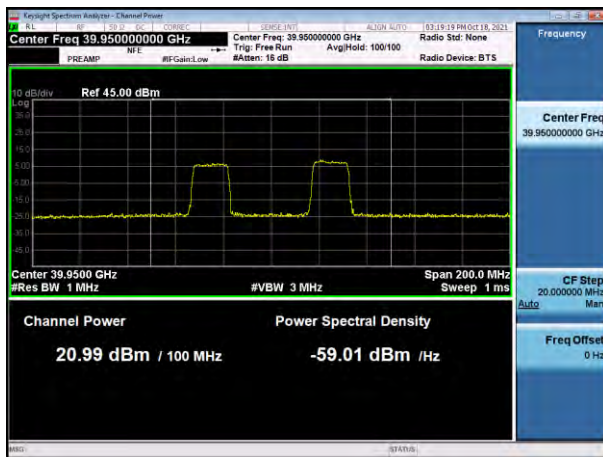
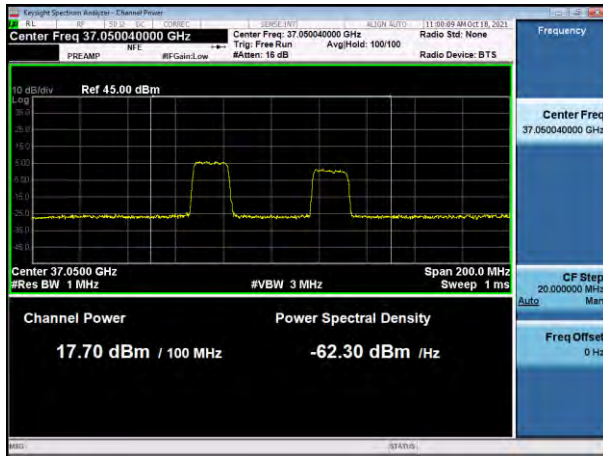
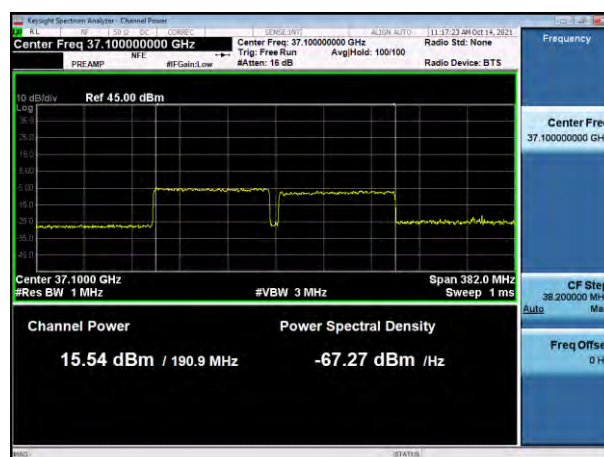
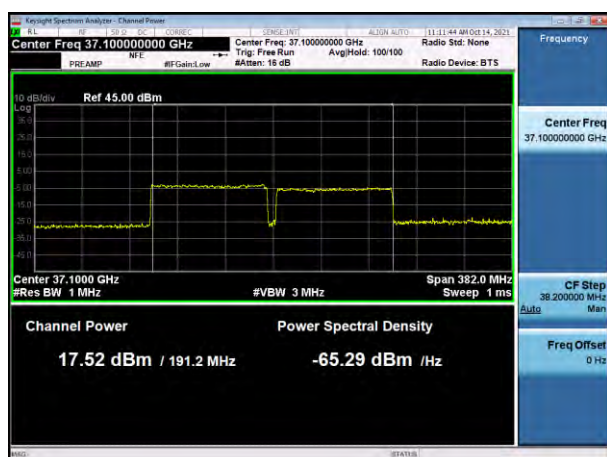
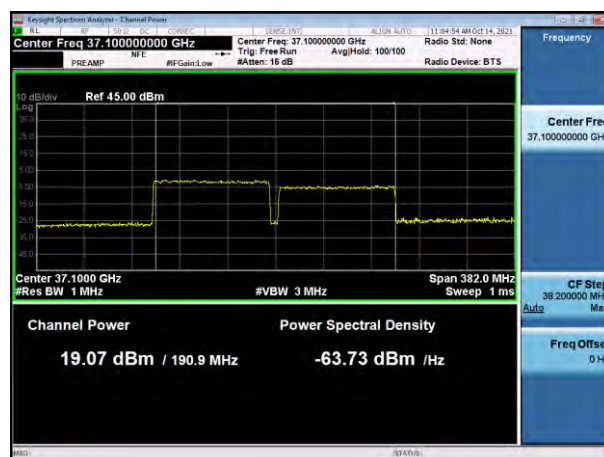
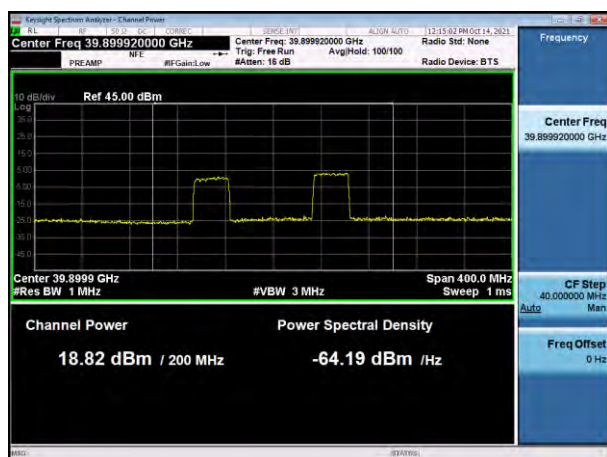
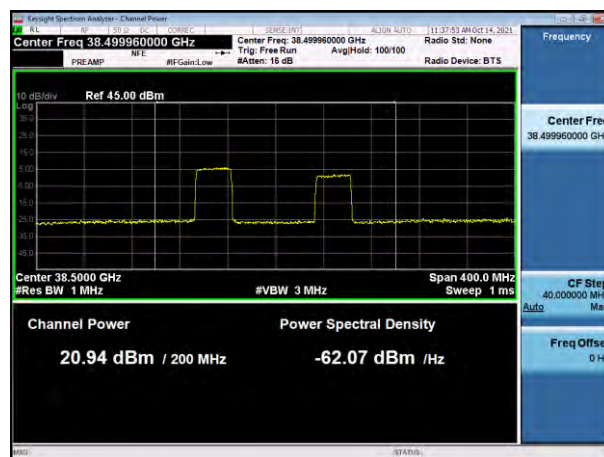
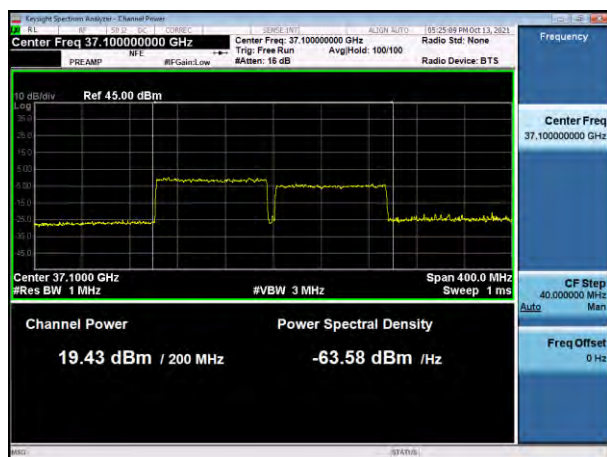


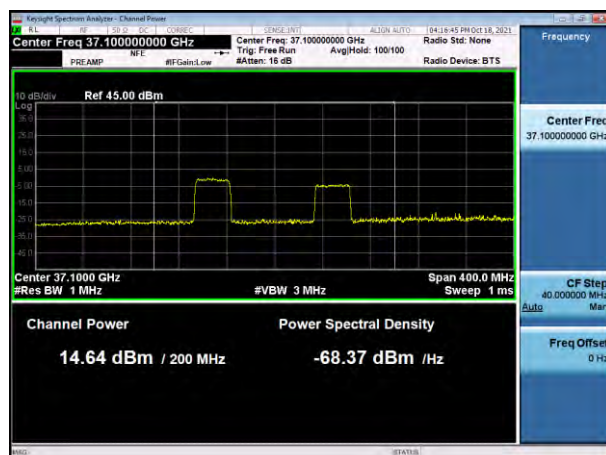
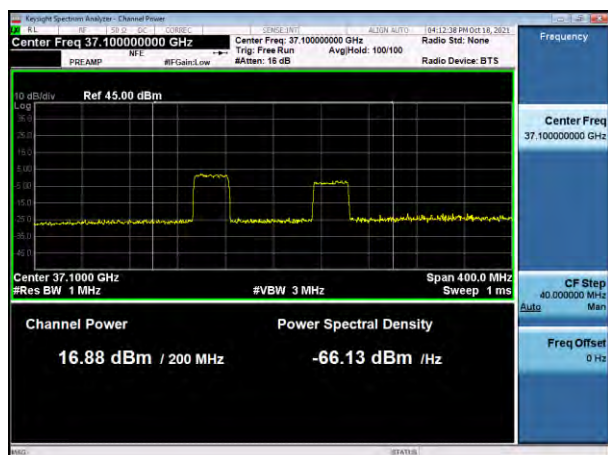
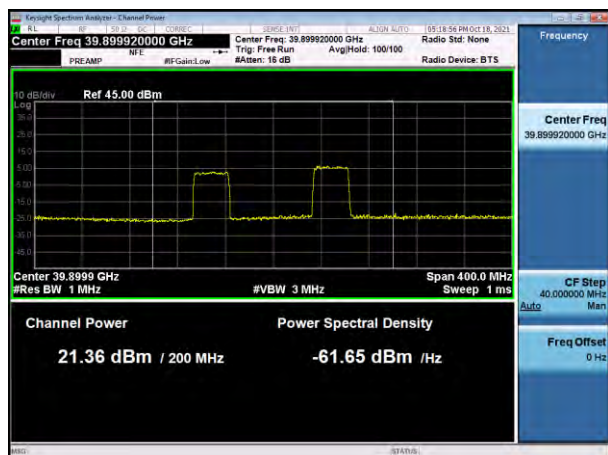
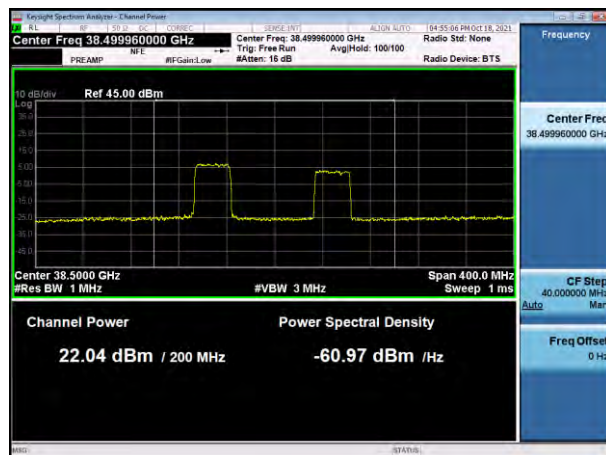
50 MHz, 2CC SISO Dual



100 MHz, 2CC SISO

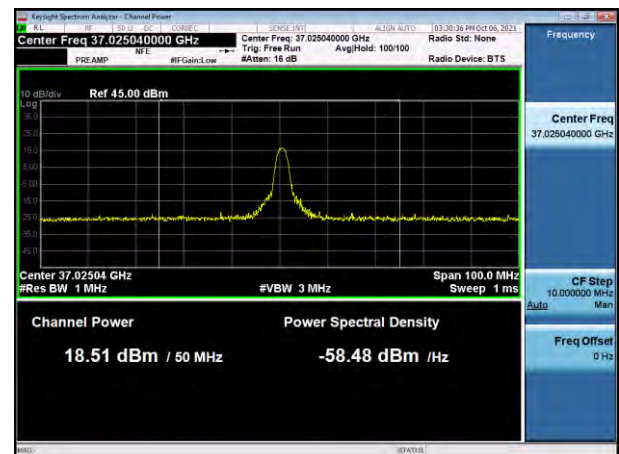
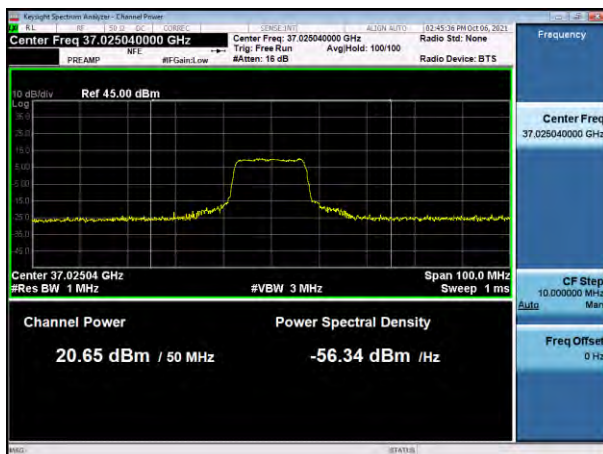
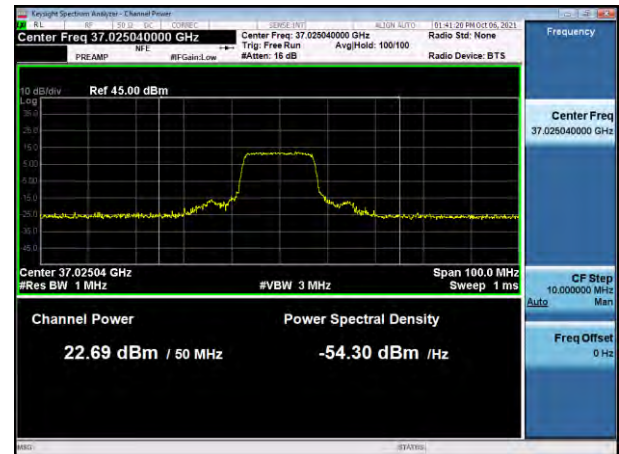
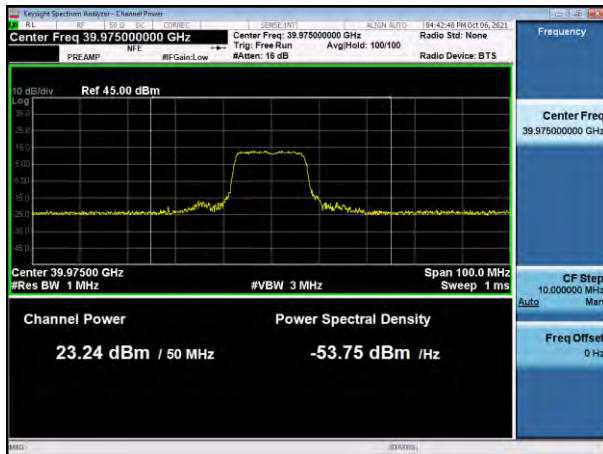
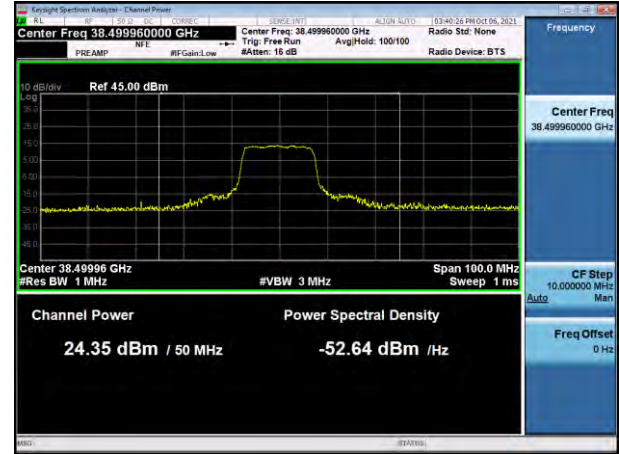
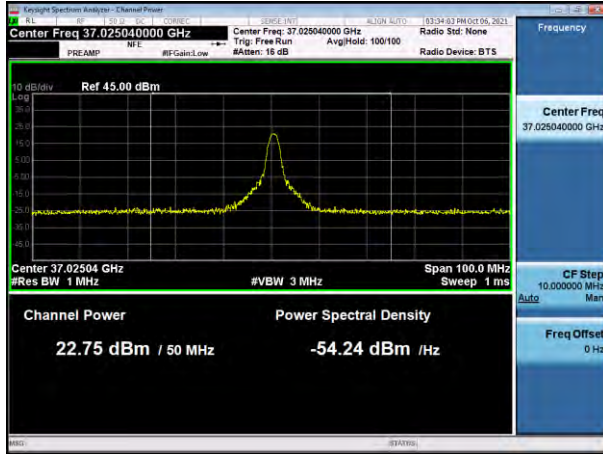


100 MHz, 2CC SISO Dual

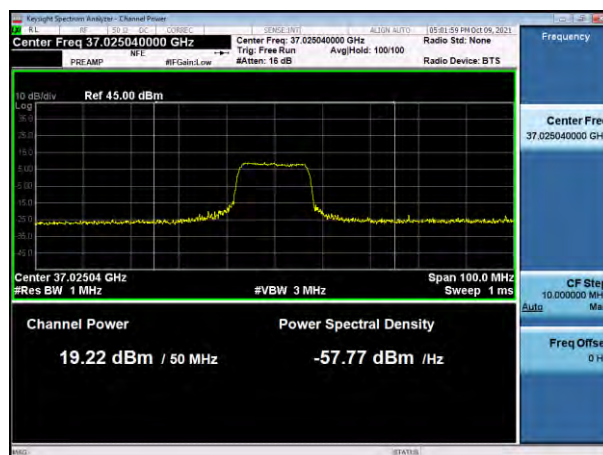
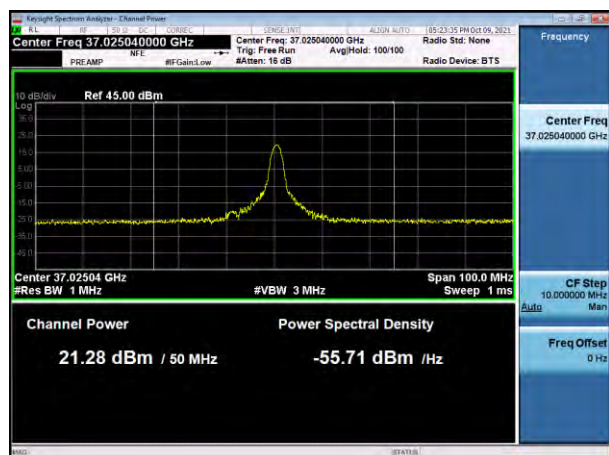
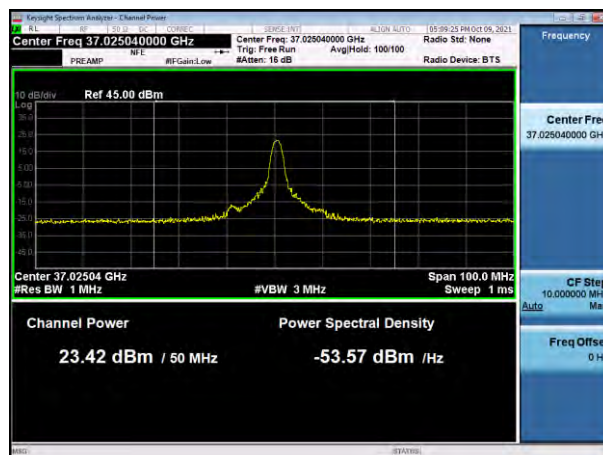
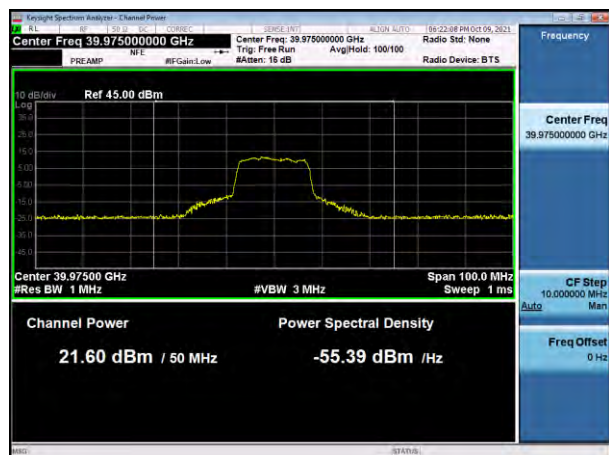
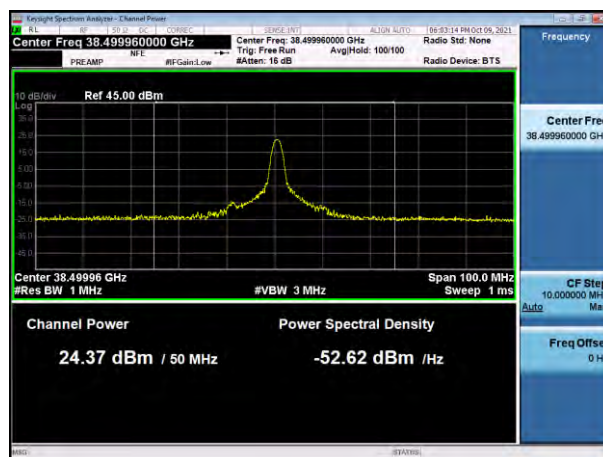
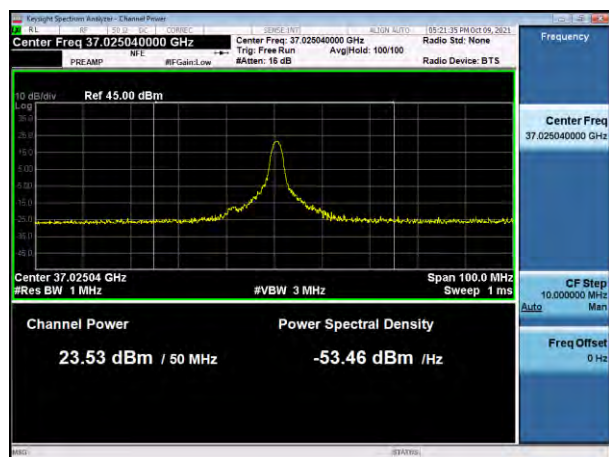


4. L patch: module 1, n260

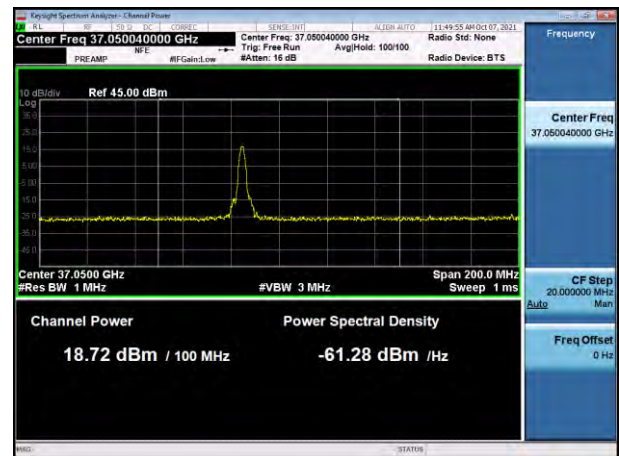
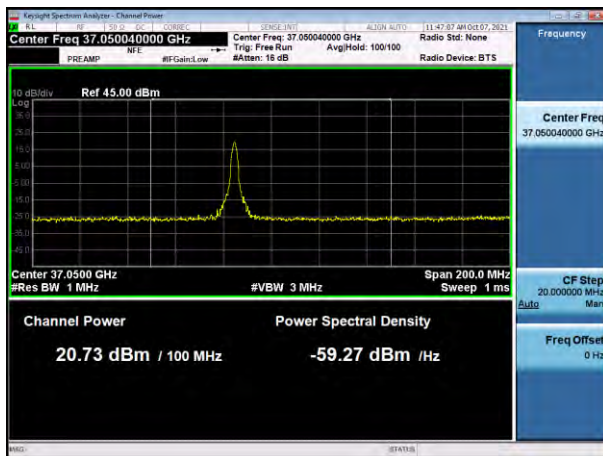
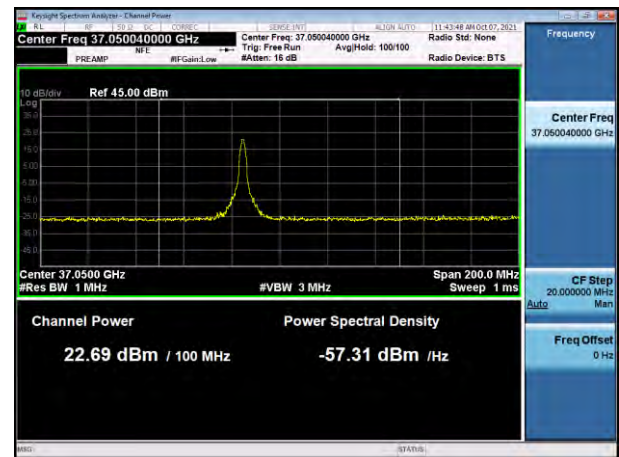
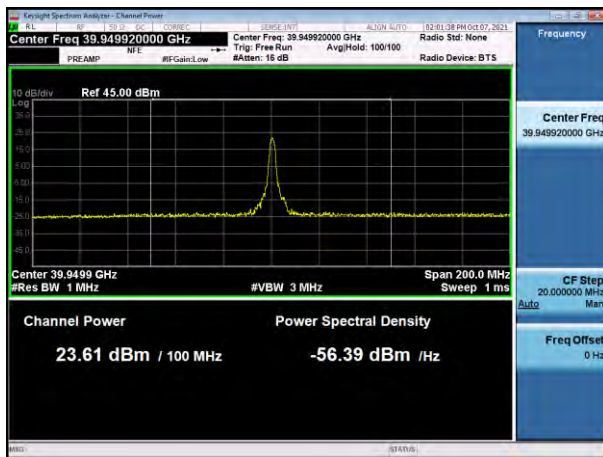
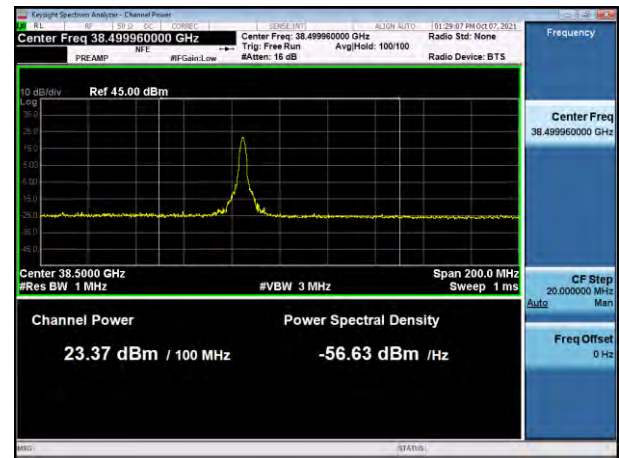
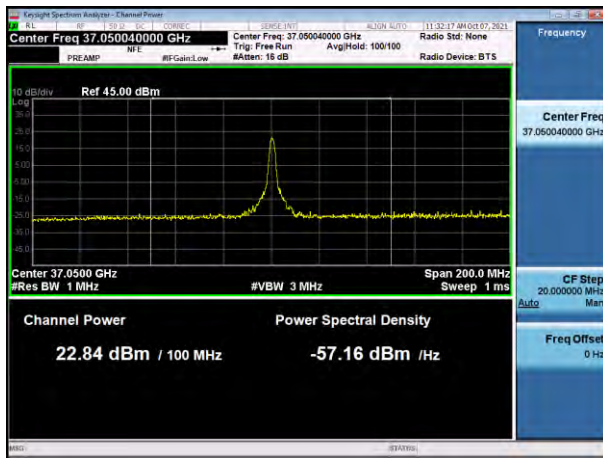
50 MHz, 1CC SISO



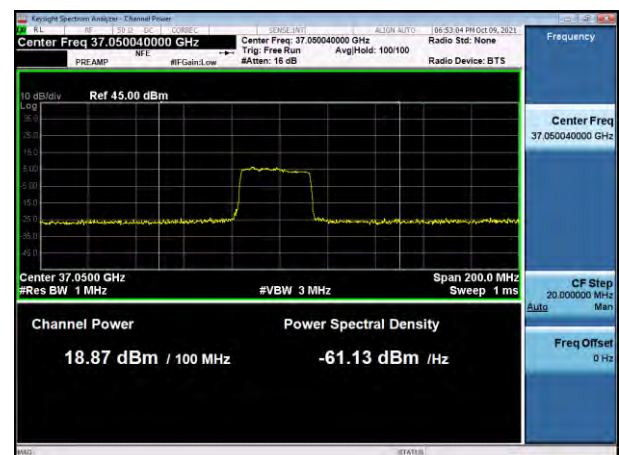
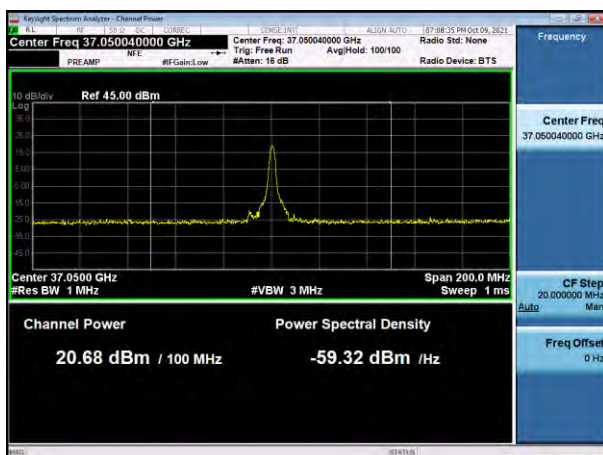
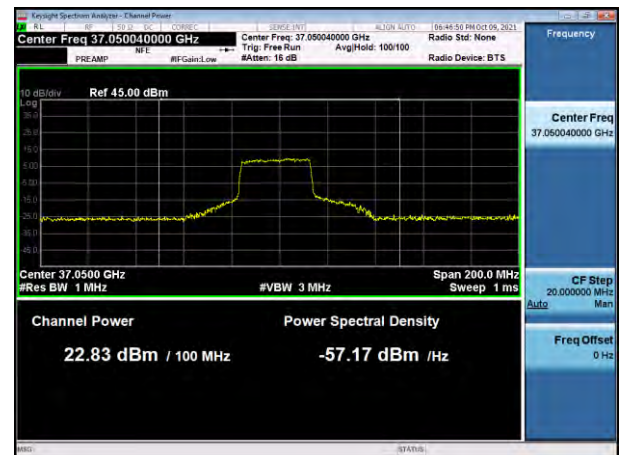
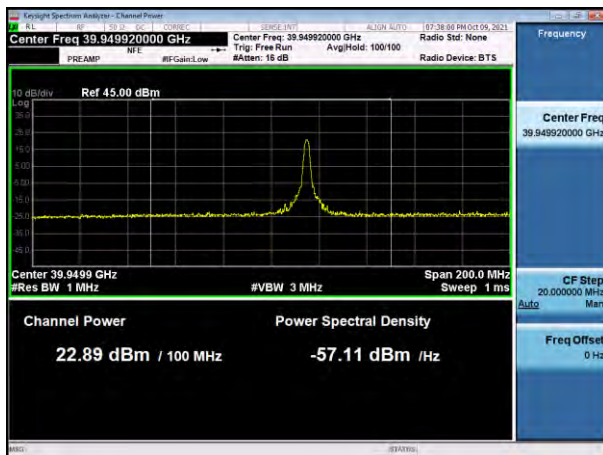
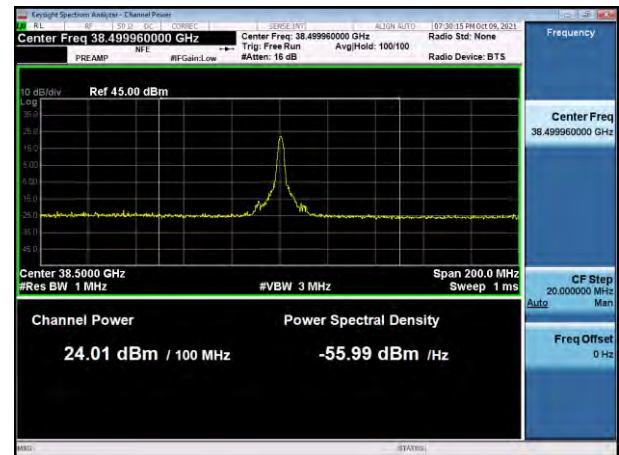
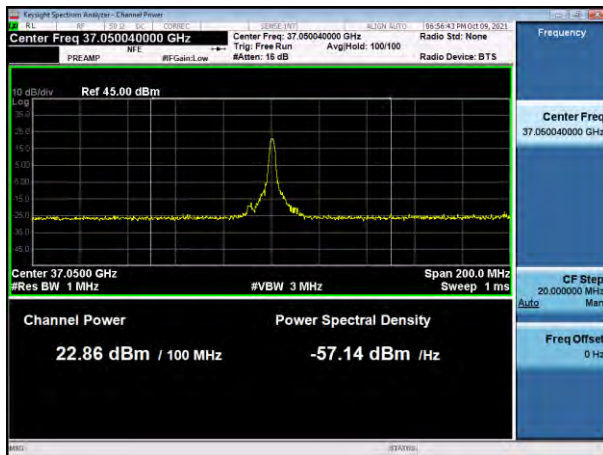
50 MHz, 1CC SISO Dual



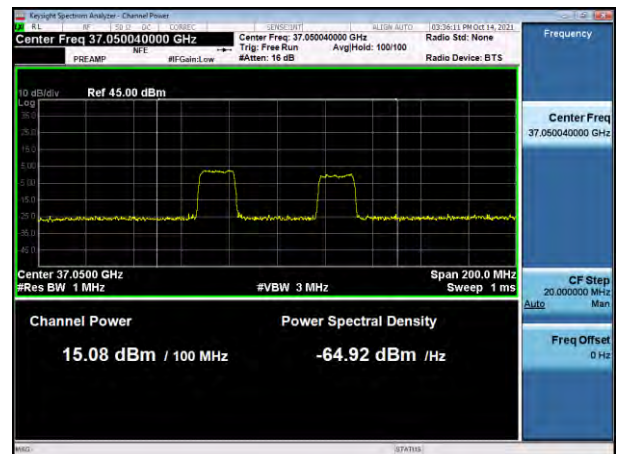
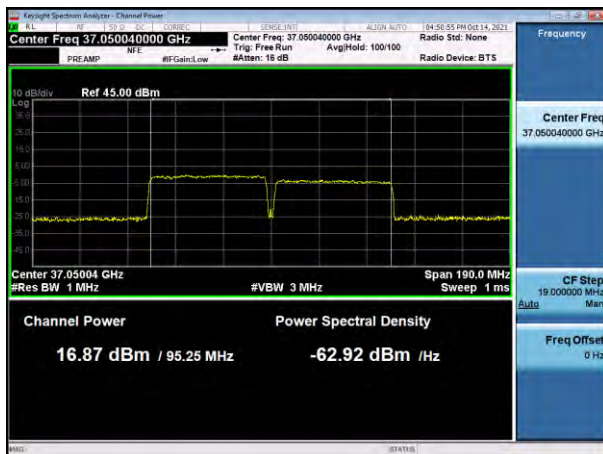
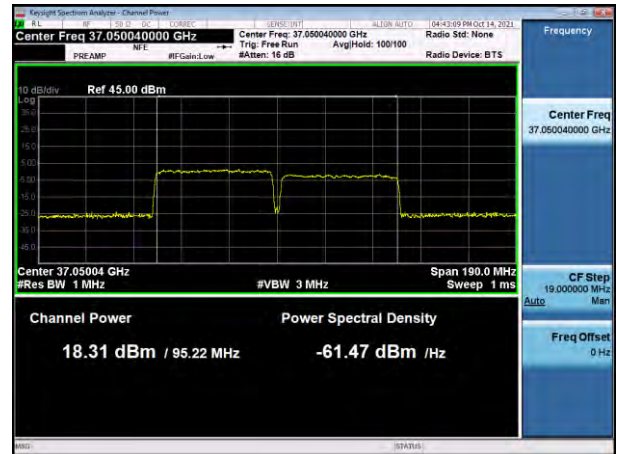
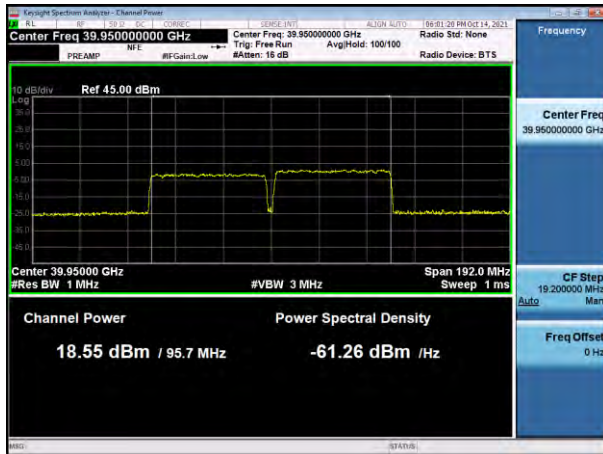
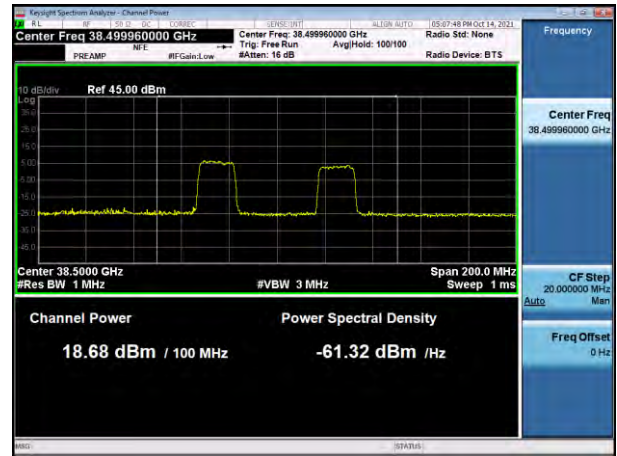
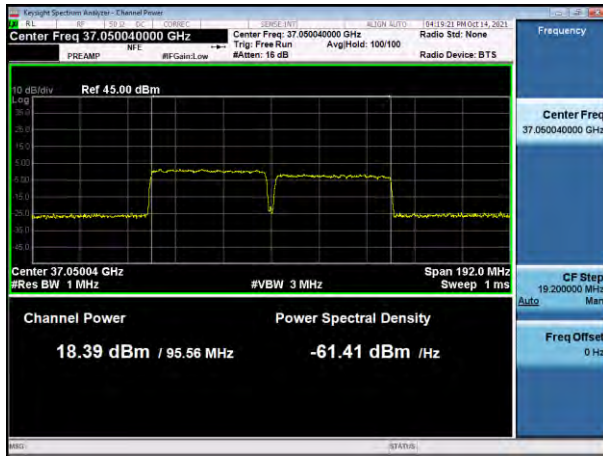
100 MHz, 1CC SISO



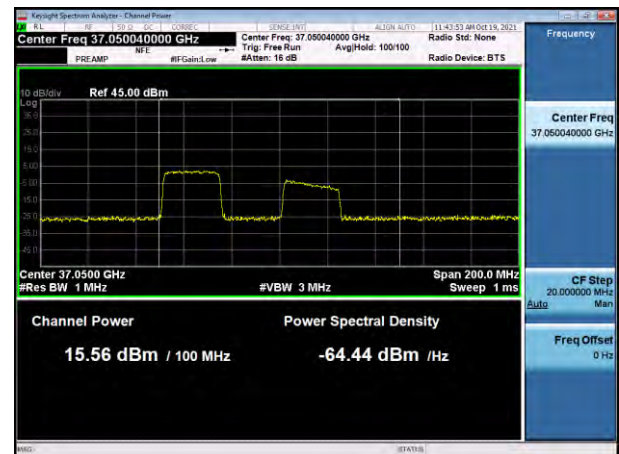
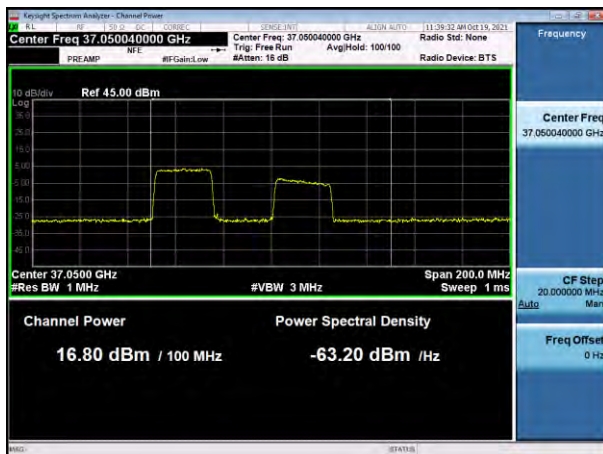
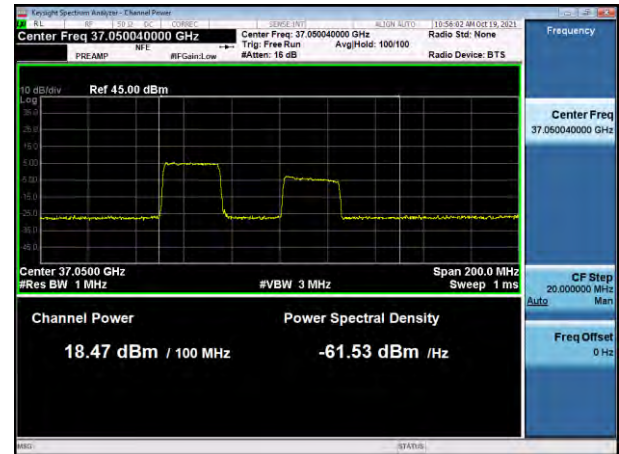
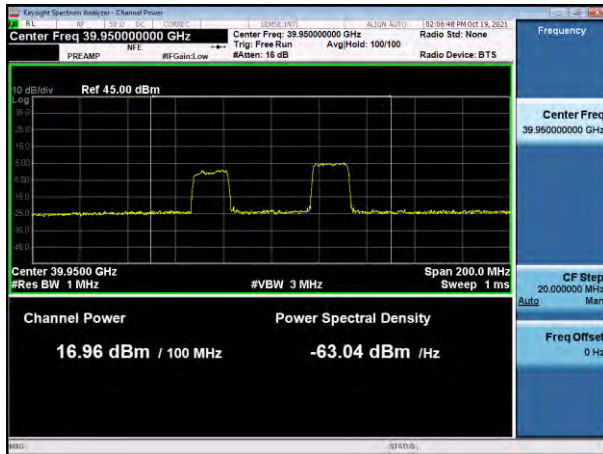
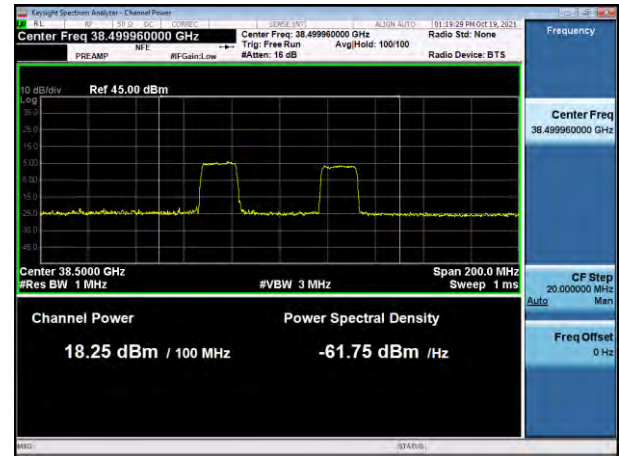
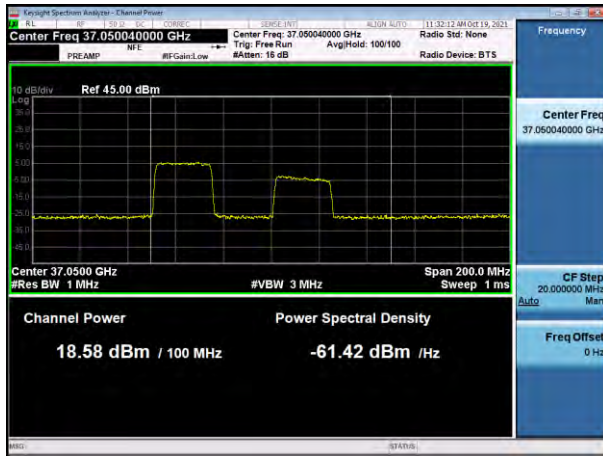
100 MHz, 1CC SISO Dual



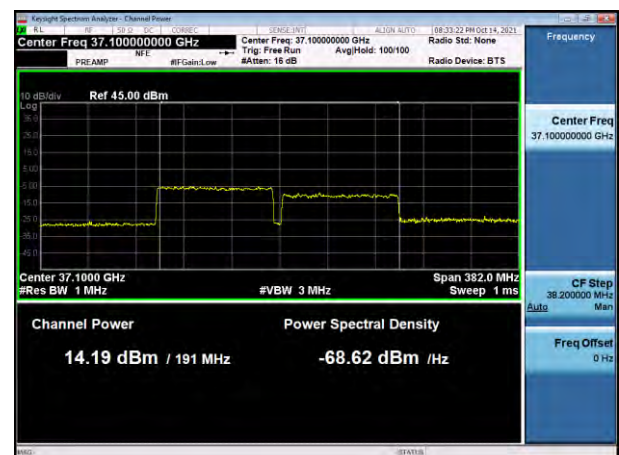
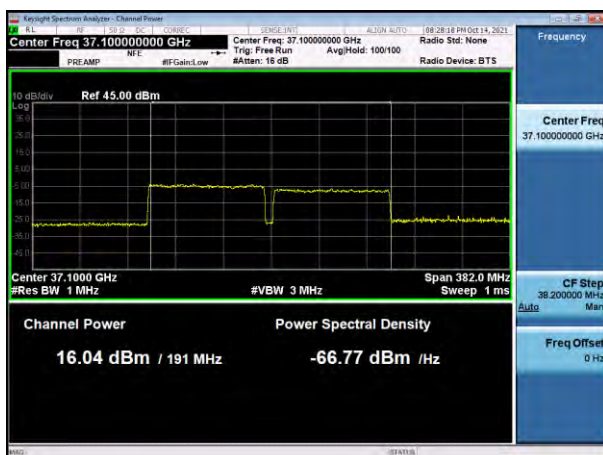
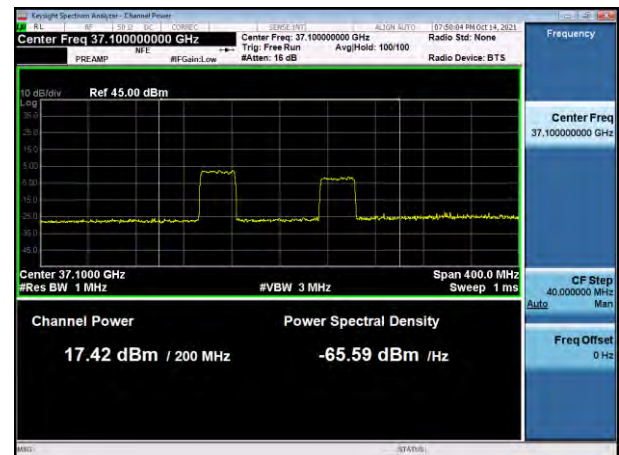
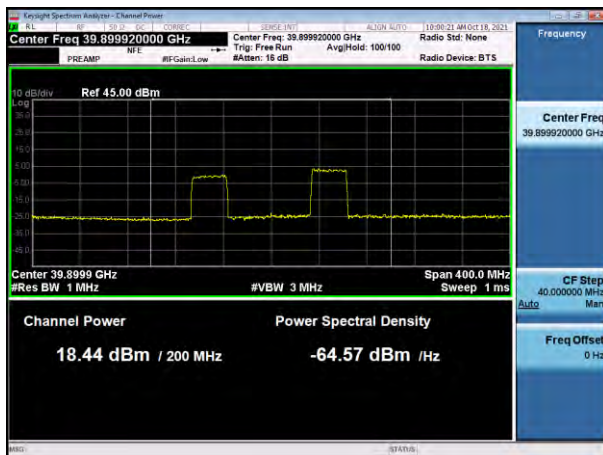
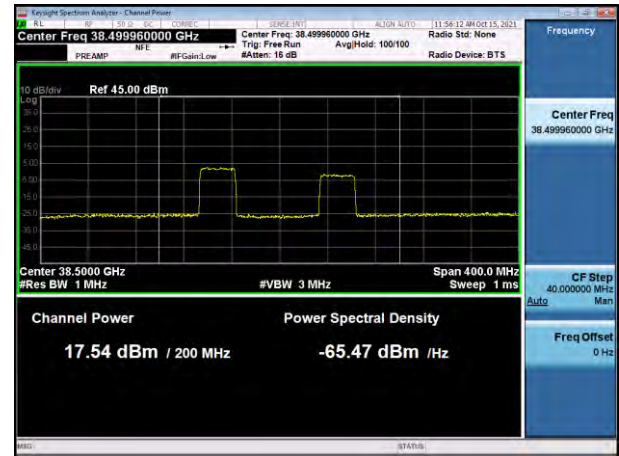
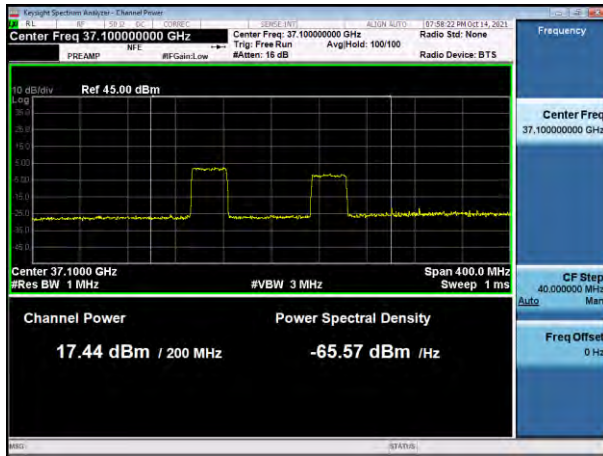
50 MHz, 2CC SISO



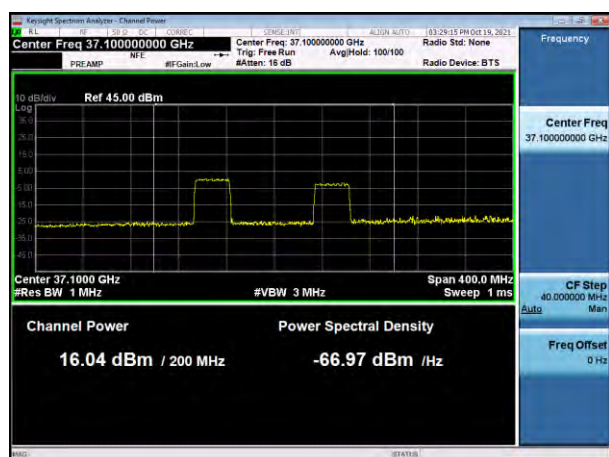
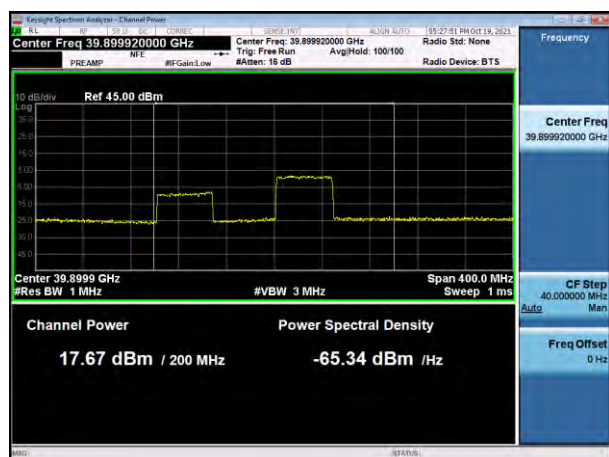
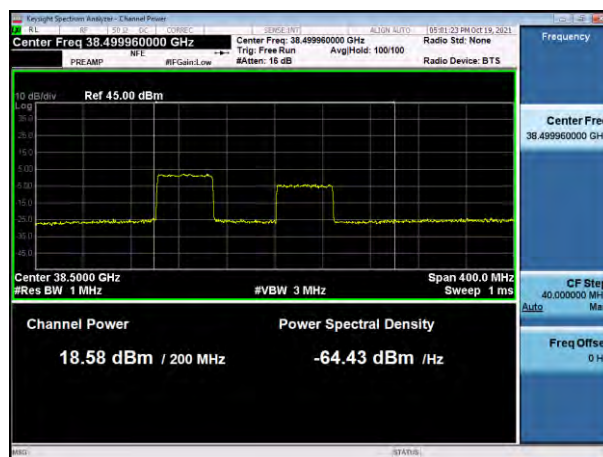
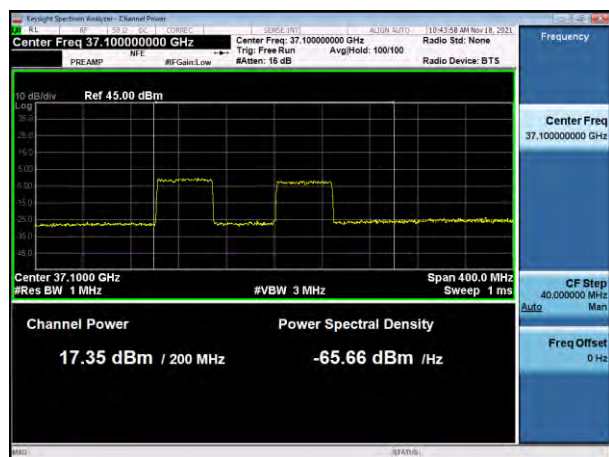
50 MHz, 2CC SISO Dual



100 MHz, 2CC SISO



100 MHz, 2CC SISO Dual



5.3. BAND EDGE

Test Overview

All out of band emissions are measured in a radiated setup while the EUT is operating at maximum power, and at the appropriate frequencies. All modulations were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.

The minimum permissible attenuation level of any spurious emission is -13dBm/1MHz. However, in the bands immediately outside and adjacent to the licensee's frequency block, having a bandwidth equal to 10 percent of the channel bandwidth, the conductive power or the total radiated power of any emission shall be -5 dBm/MHz or lower.

FCC Rules

Test Requirements:

§ 30.203 Emission limits.

- (a) The conductive power or the total radiated power of any emission outside a licensee's frequency block shall be -13 dBm/MHz or lower. However, in the bands immediately outside and adjacent to the licensee's frequency block, having a bandwidth equal to 10 percent of the channel bandwidth, the conductive power or the total radiated power of any emission shall be -5 dBm/MHz or lower.
- (b)(1) Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater.
- (2) When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the licensee's frequency block edges as the design permits.
- (3) The measurements of emission power can be expressed in peak or average values.

Test Procedures:

The measurement is performed in accordance with Section 5.7.3 of ANSI C63.26.

5.7.3 Out-of-band unwanted emissions measurements

- a) Set the spectrum analyzer center frequency to the block, band, or channel edge frequency.
- b) Set the span wide enough to capture the fundamental emission closest to the authorized block or band edge, and to include all modulation products that spill into the immediately adjacent frequency band. In some cases, it may be possible to set the center frequency and span so as to encompass the fundamental emission and the unwanted out-of-band (band-edge) emissions on either side of the authorized block, band, or channel. This can be accomplished with a single (slow) sweep, if adequate overload protection and sufficient dynamic range can be maintained.
- c) Set the number of points in sweep $\geq 2 \times \text{span} / \text{RBW}$.

d) Sweep time should be auto for peak detection. For rms detection the sweep time should be set as follows:

1), 2) Omitted

3) If the device cannot be configured to transmit continuously (duty cycle < 98%) and a free running sweep must be used, set the sweep time so that the averaging is performed over multiple on/off cycles by setting the sweep time > (number of points in sweep) × (transmitter period) (i.e., the transmit on-time + the off-time). The spectrum analyzer readings shall subsequently be corrected by $[10 \log (1/\text{duty cycle})]$. This assumes that the transmission period and duty cycle is relatively constant (duty cycle variation $\leq \pm 2\%$).

4) Omitted

e) The test report shall include the plots of the measuring instrument display and the measured data.

- The TRP measurement is performed in accordance with Section 4.4.2.4 of KDB 842590 v01r02 (2021-04).

4.4.2.4 Spherical Grid Method

a) Measure the antenna dimensions, i.e., depth (d), width (w), and height (h) (see Figure A.1 in Appendix A). If the antenna dimensions are not accessible use the mechanical dimensions of the entire device.

b) Calculate the spherical and cylindrical diameters (D and D_{cyl}) using Equations (A.1) and (A.2) in Appendix A in KDB 842590 v01r02.

c) For the highest frequency (smallest wavelength) of the frequency band measured, calculate the reference angular steps $\Delta\theta_{\text{ref}}$ and $\Delta\theta_{\text{ref}}$ using Equations (A.3) and (A.4) in Appendix A in KDB 842590 v01r02.

d) Set the grid spatial sampling step $\Delta\theta \leq \Delta\theta_{\text{ref}}$ for the vertical angle and $\Delta\theta \leq \Delta\theta_{\text{ref}}$ for the horizontal angle.

e) For each emission frequency, measure the total EIRP (sum of two orthogonal polarizations) on the selected grid.

f) For each emission frequency, calculate the TRP using weighted angular average value using numerical integration as described in Appendix B in KDB 842590 v01r02.

g) Compare measured TRP with the applicable TRP limit to make a pass/fail decision.

Test Results:
K patch: module 0, n261

CCs active	BW	Frequency [MHz]	Channel	Beam Pol.	Modulation	Ant. Pol. [H/V]	RB Size/Offset	Band Edge [dBm]
1	50 MHz	27525.00	Low	H+V	BPSK	H	1/0	-15.889 [※]
		27525.00	Low	H+V	QPSK	H	32/0	-21.660 [※]
		28324.92	High	H	QPSK	V	1/31	-14.936 [※]
		28324.92	High	V	QPSK	V	32/0	-19.595 [※]
	100 MHz	27559.32	Low	H	BPSK	H	1/0	-14.378 [※]
		27550.08	Low	H+V	QPSK	H	64/0	-24.881 [※]
		28292.16	High	H	QPSK	V	1/65	-12.376 [※]
		28292.16	High	V	QPSK	V	64/0	-23.213 [※]
2	50 MHz	27550.00	Low	H+V	BPSK	H	1/11	-19.618
		27550.00	Low	H+V	QPSK	H	10/11	-24.054
		28299.92	High	H	BPSK	V	1/31	-20.027 [※]
		28299.92	High	H+V	QPSK	H	10/11	-25.006
	100 MHz	27600.08	Low	H+V	BPSK	H	1/0	-19.782
		27600.08	Low	H+V	QPSK	H	20/22	-26.600
		28249.96	High	V	BPSK	V	1/43	-20.543
		28249.96	High	V	BPSK	V	20/22	-26.200

※ **Note** : Limit: -5 dBm

L patch: module 1, n261

CCs active	BW	Frequency [MHz]	Channel	Beam Pol.	Modulation	Ant. Pol. [H/V]	RB Size/Offset	Band Edge [dBm]
1	50 MHz	27525.00	Low	H+V	BPSK	H	1/0	-11.485 [*]
		27525.00	Low	H+V	QPSK	H	32/0	-19.933 [*]
		28324.92	High	V	QPSK	V	1/31	-13.981 [*]
		28324.92	High	H+V	QPSK	H	32/0	-20.248 [*]
	100 MHz	27550.08	Low	H	BPSK	V	1/0	-15.251 [*]
		27550.08	Low	H+V	QPSK	H	64/0	-22.517 [*]
		28299.96	High	H	QPSK	V	1/65	-15.039 [*]
		28299.96	High	H+V	QPSK	H	64/0	-22.267 [*]
2	50 MHz	27550.00	Low	H	BPSK	V	1/0	-17.139
		27550.00	Low	H	QPSK	V	10/11	-23.357 [*]
		28299.92	High	H+V	QPSK	H	1/31	-18.923
		28299.92	High	H+V	QPSK	H	10/11	-24.173
	100 MHz	27600.08	Low	H+V	BPSK	H	1/0	-17.249
		27600.08	Low	H+V	QPSK	H	20/22	-22.384
		28249.96	High	H+V	QPSK	H	1/43	-17.753
		28249.96	High	H+V	QPSK	H	20/22	-24.309

^{*} **Note** : Limit: -5 dBm

K patch: module 0, n260

CCs active	BW	Frequency [MHz]	Channel	Beam Pol.	Modulation	Ant. Pol. [H/V]	RB Size/Offset	Band Edge [dBm]
1	50 MHz	37025.04	Low	H+V	BPSK	H	1/0	-12.687 [*]
		37025.04	Low	H	BPSK	V	10/11	-17.925
		39975.00	High	H+V	QPSK	H	1/31	-14.201 [*]
		39975.00	High	H+V	QPSK	H	10/11	-18.627
	100 MHz	37050.00	Low	H	BPSK	V	1/0	-14.332
		37050.00	Low	H	16QAM	V	20/22	-22.055
		39949.92	High	H	QPSK	V	1/65	-15.878
		39949.92	High	V	BPSK	V	20/22	-19.105
2	50 MHz	37050.04	Low	H	BPSK	V	1/11	-20.204
		37050.04	Low	H+V	16QAM	H	32/0	-22.474
		39950.00	High	V	BPSK	V	1/21	-18.832
		39950.00	High	V	QPSK	V	32/0	-18.856
	100 MHz	37101.80	Low	H	BPSK	V	1/22	-21.269
		37100.00	Low	H+V	16QAM	H	20/22	-22.817
		39899.92	High	H+V	BPSK	H	1/65	-18.099
		39899.92	High	H+V	BPSK	H	64/0	-19.213

^{*} **Note** : Limit: -5 dBm

L patch: module 1, n260

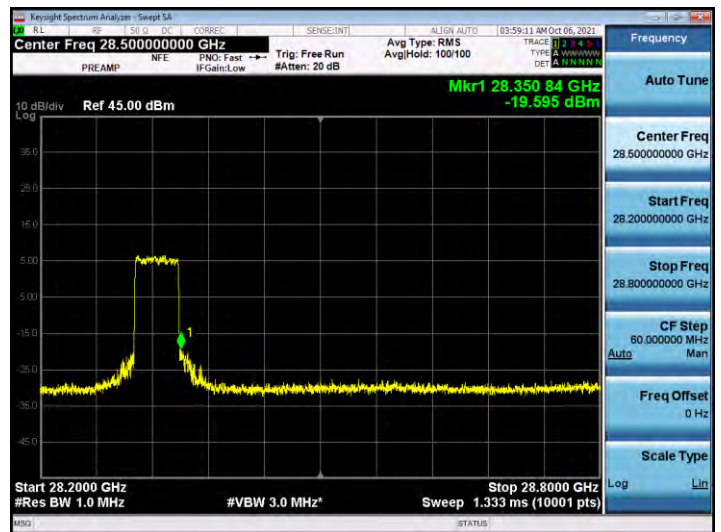
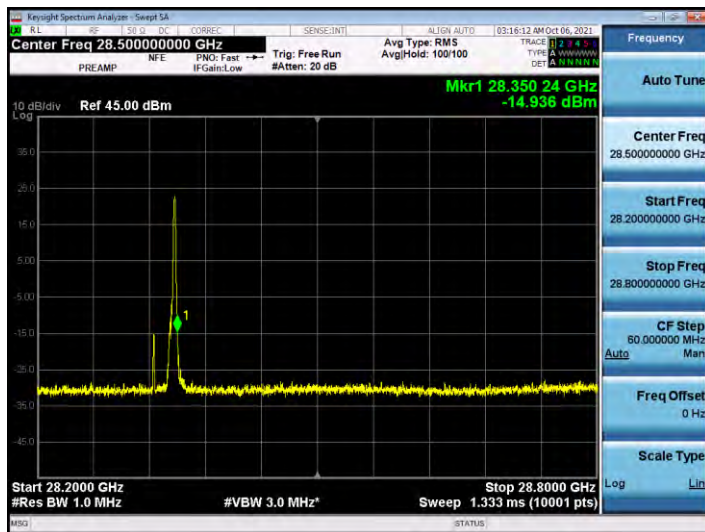
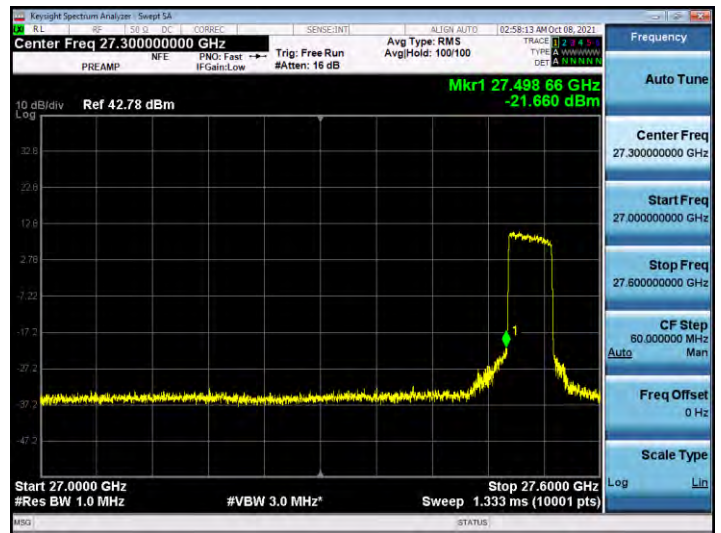
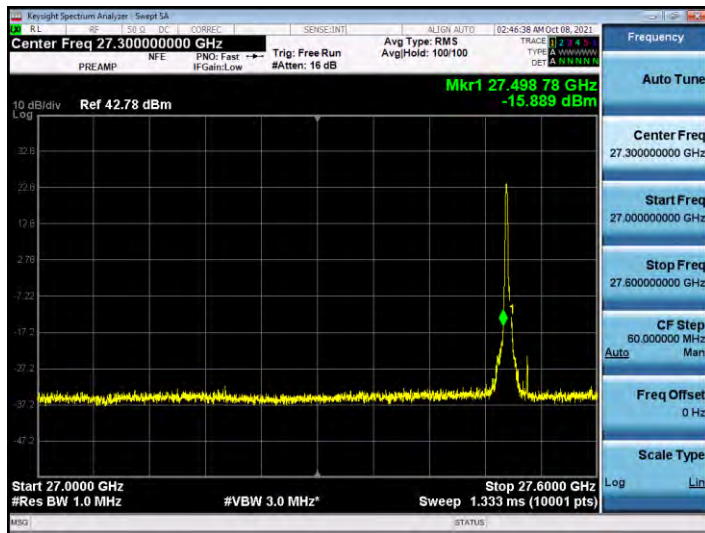
CCs active	BW	Frequency [MHz]	Channel	Beam Pol.	Modulation	Ant. Pol. [H/V]	RB Size/Offset	Band Edge [dBm]
1	50 MHz	37025.04	Low	H+V	BPSK	H	1/0	-11.858 [※]
		37025.04	Low	V	BPSK	H	32/0	-20.163
		39975.00	High	H	QPSK	V	1/31	-15.733
		39975.00	High	V	QPSK	V	32/0	-18.565
	100 MHz	37050.00	Low	V	BPSK	H	1/0	-17.992
		37050.00	Low	H+V	16QAM	H	64/0	-22.758
		39949.92	High	H	BPSK	V	1/65	-15.429
		39949.92	High	H	QPSK	V	20/22	-17.182
2	50 MHz	37050.04	Low	V	BPSK	H	1/0	-21.106
		37050.04	Low	H+V	QPSK	H	32/0	-20.674
		39950.00	High	H+V	QPSK	H	1/31	-19.247
		39950	High	V	BPSK	V	10/11	-18.085
	100 MHz	37100.00	Low	H+V	BPSK	H	1/0	-21.417
		37100.00	Low	H+V	BPSK	H	64/0	-22.822
		39899.92	High	H+V	BPSK	H	1/65	-19.218
		39899.92	High	H+V	BPSK	H	64/0	-19.484

※ **Note** : Limit: -5 dBm

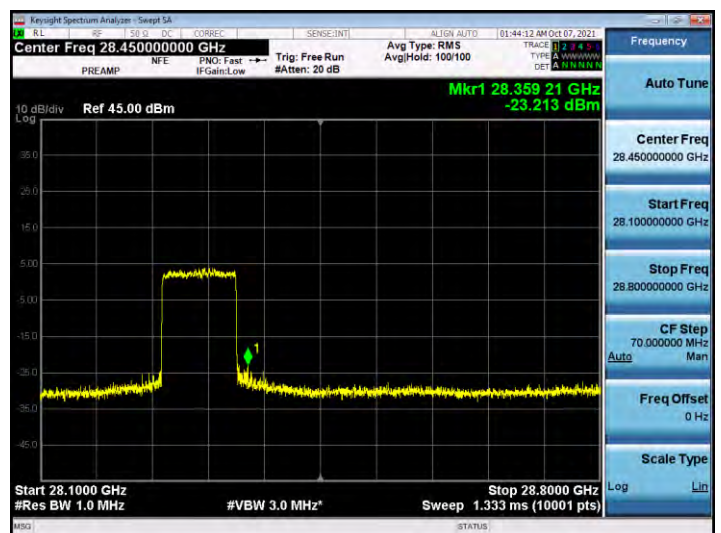
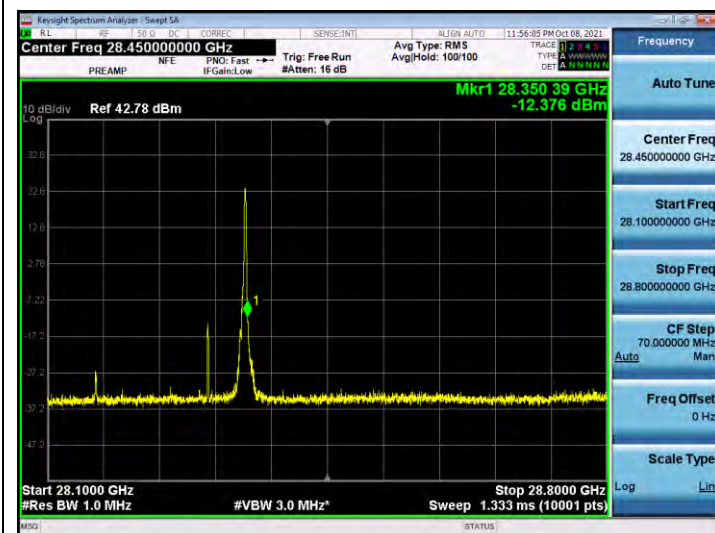
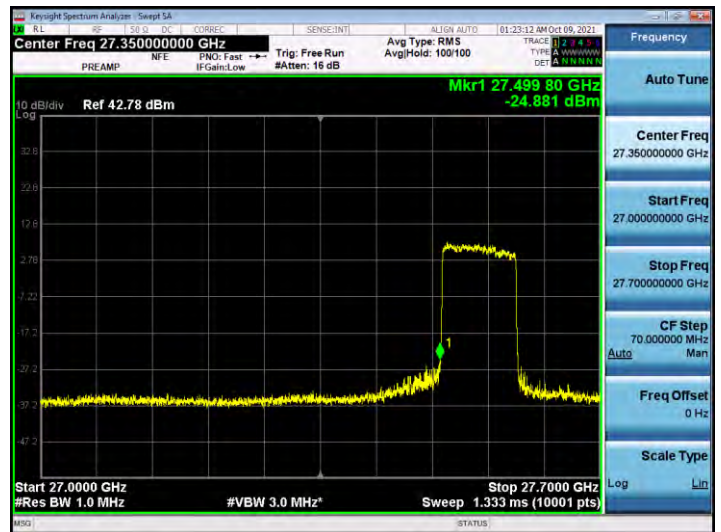
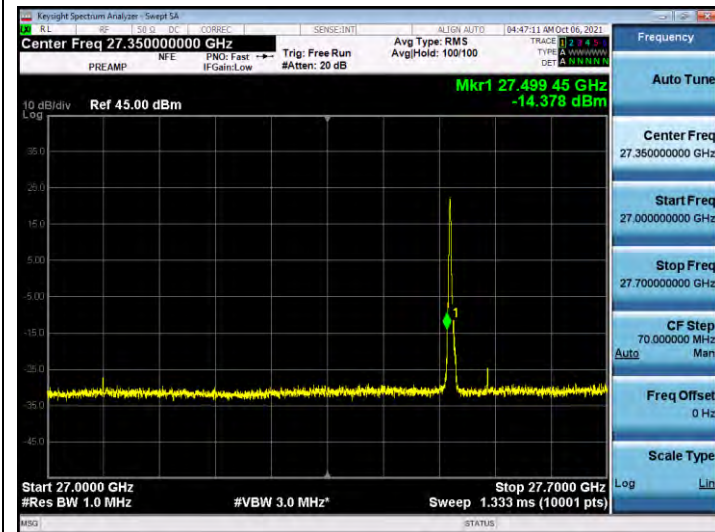
Plot data of Band Edge

1. K patch: module 0, n261

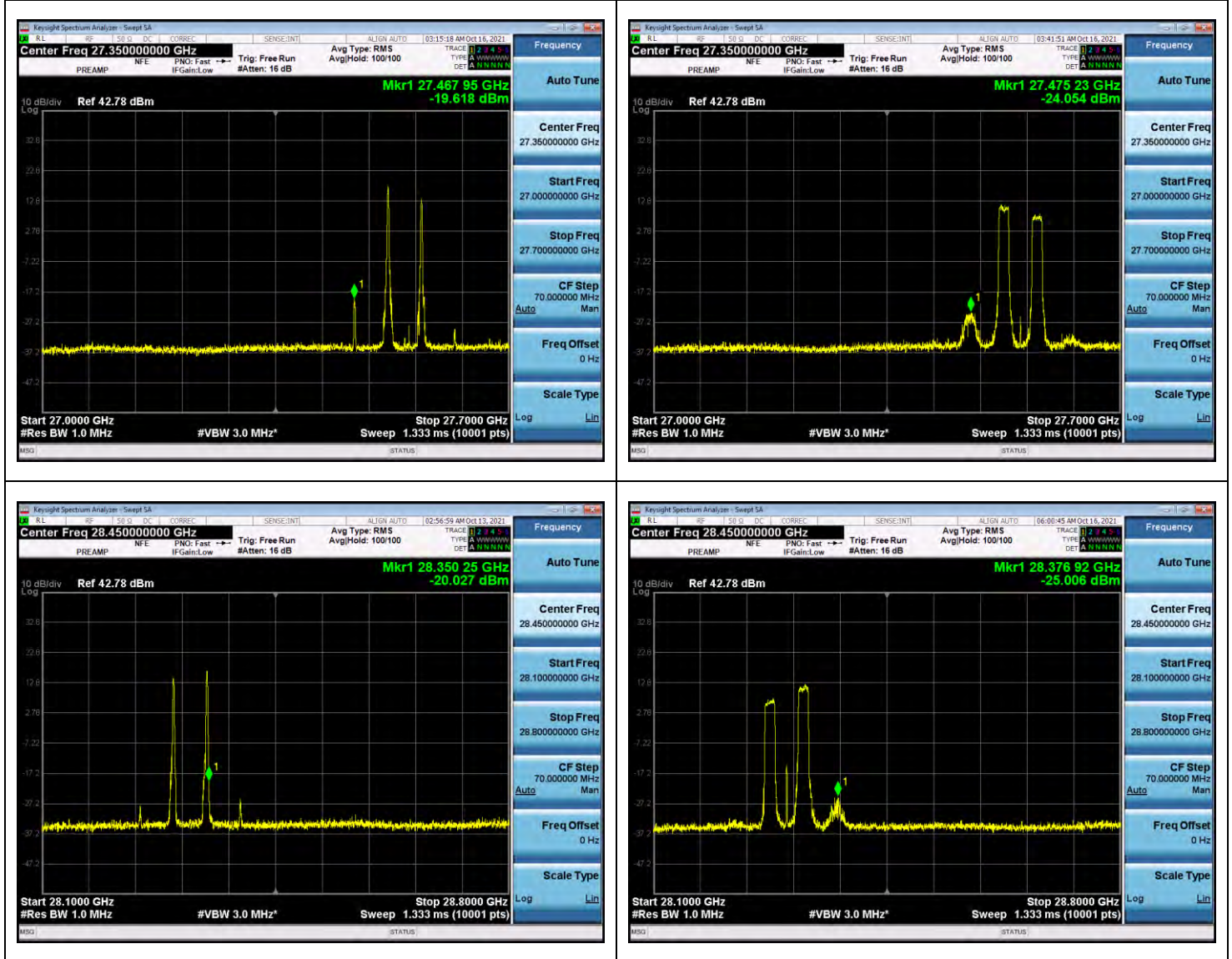
50 MHz, 1CC SISO Dual



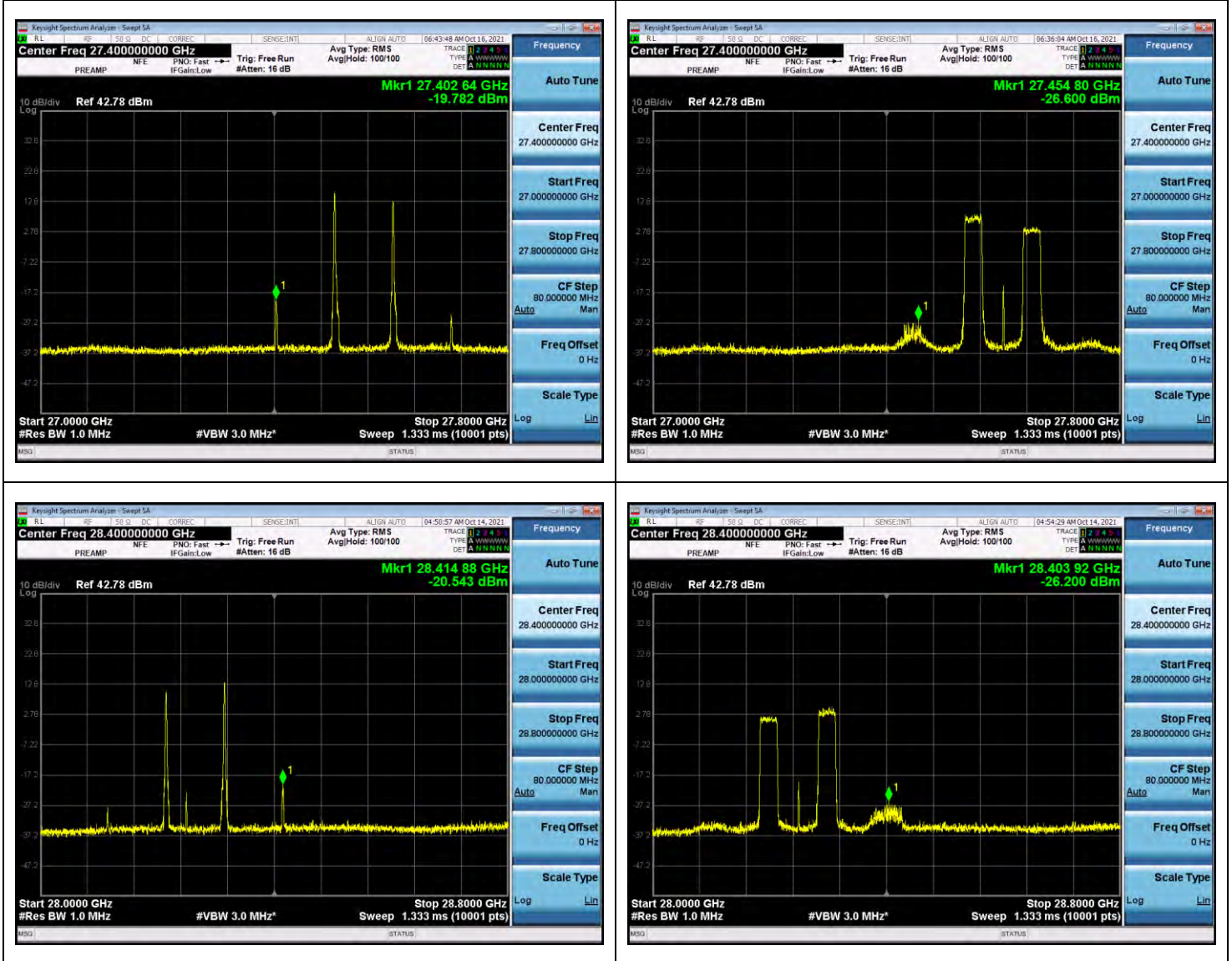
100 MHz, 1CC SISO Dual



50 MHz, 2CC SISO Dual

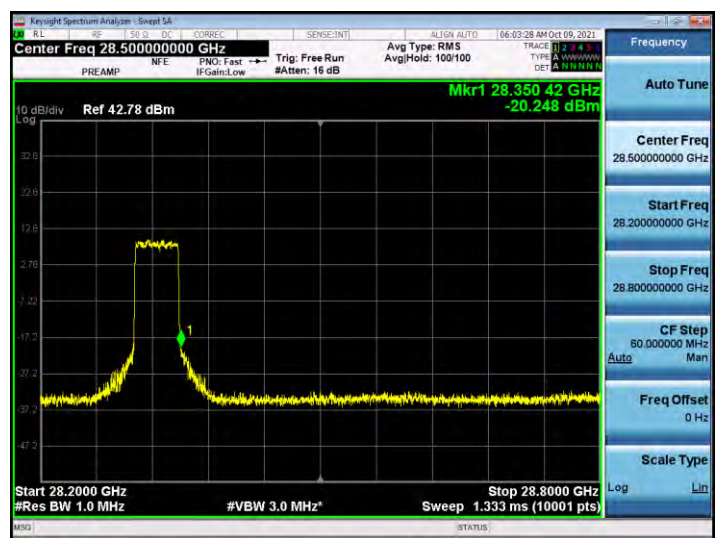
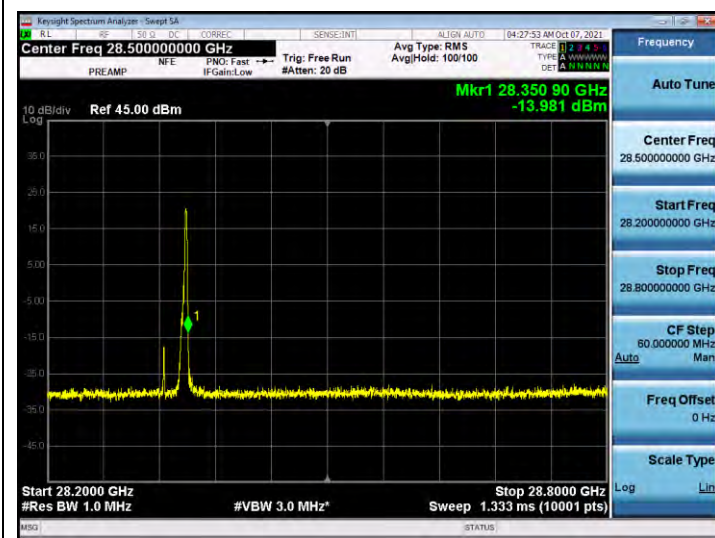
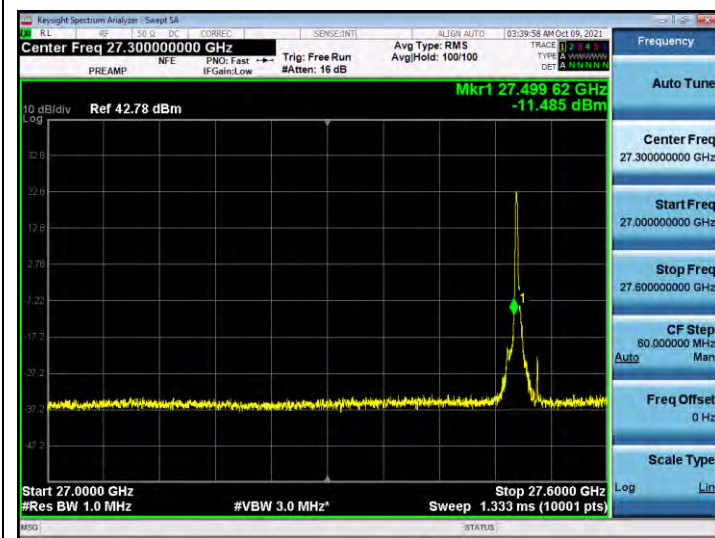


100 MHz, 2CC SISO Dual

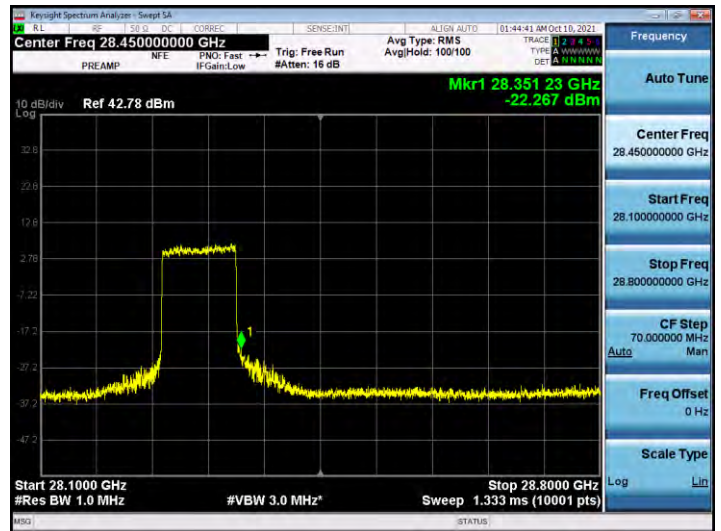
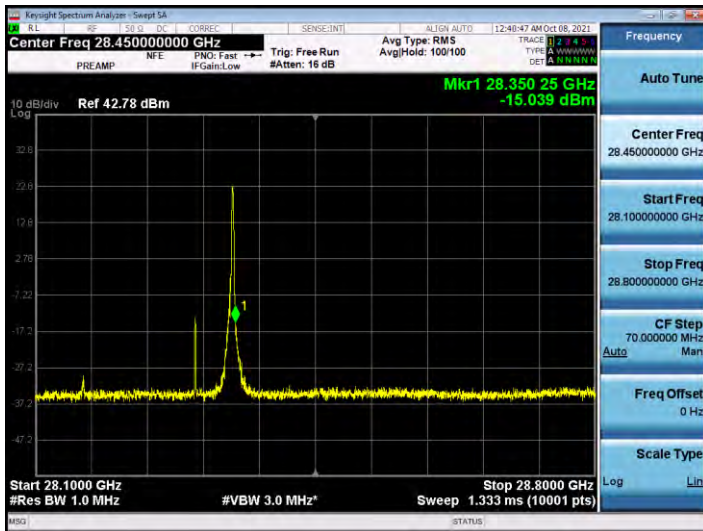
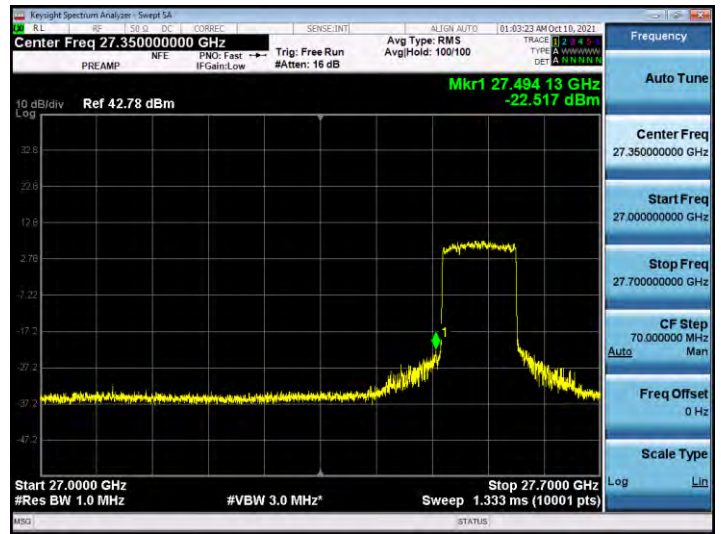
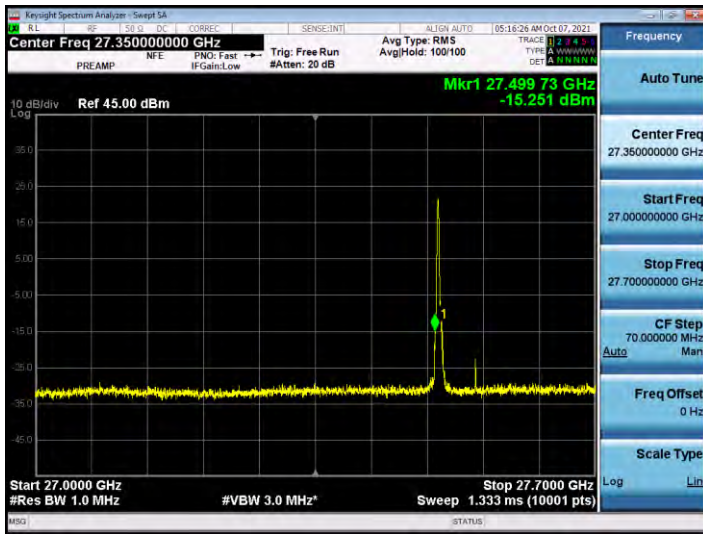


2. L patch: module 1, n261

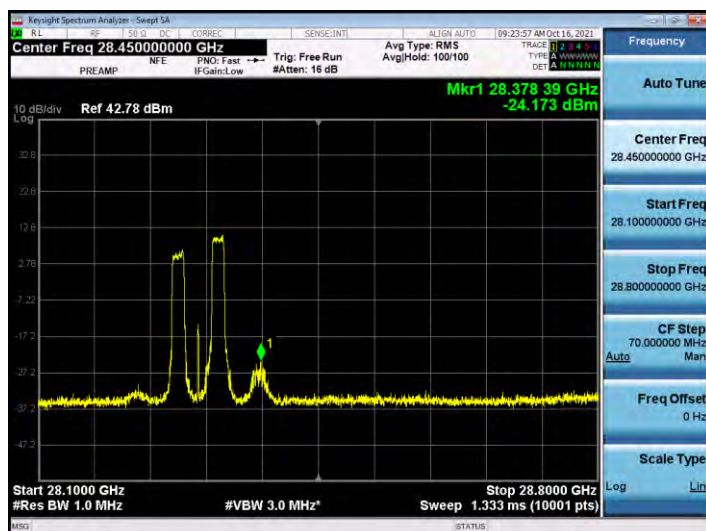
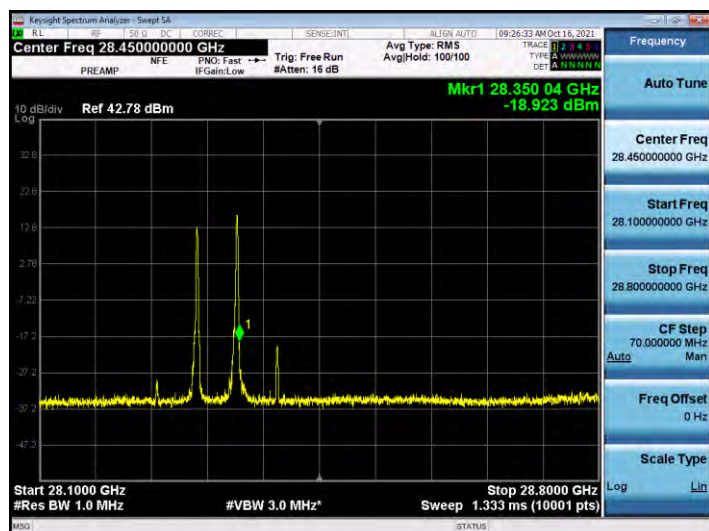
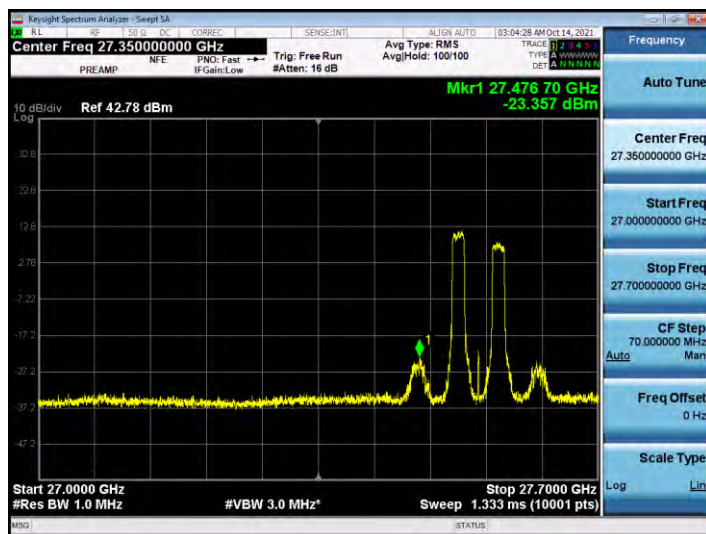
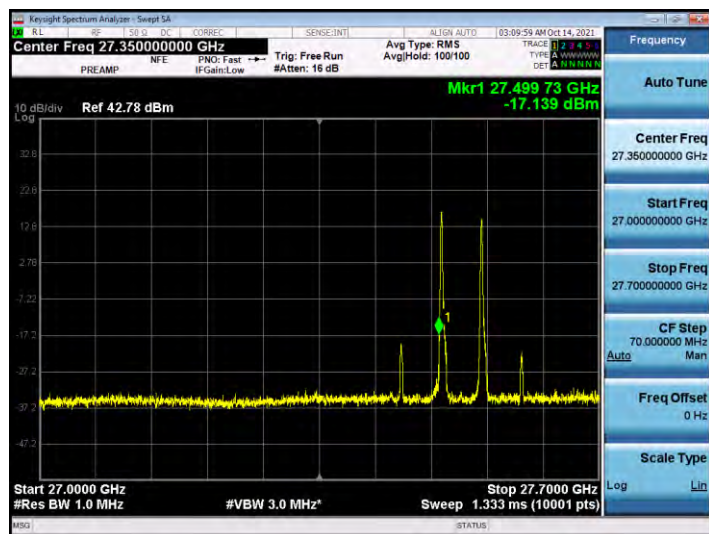
50 MHz, 1CC SISO Dual



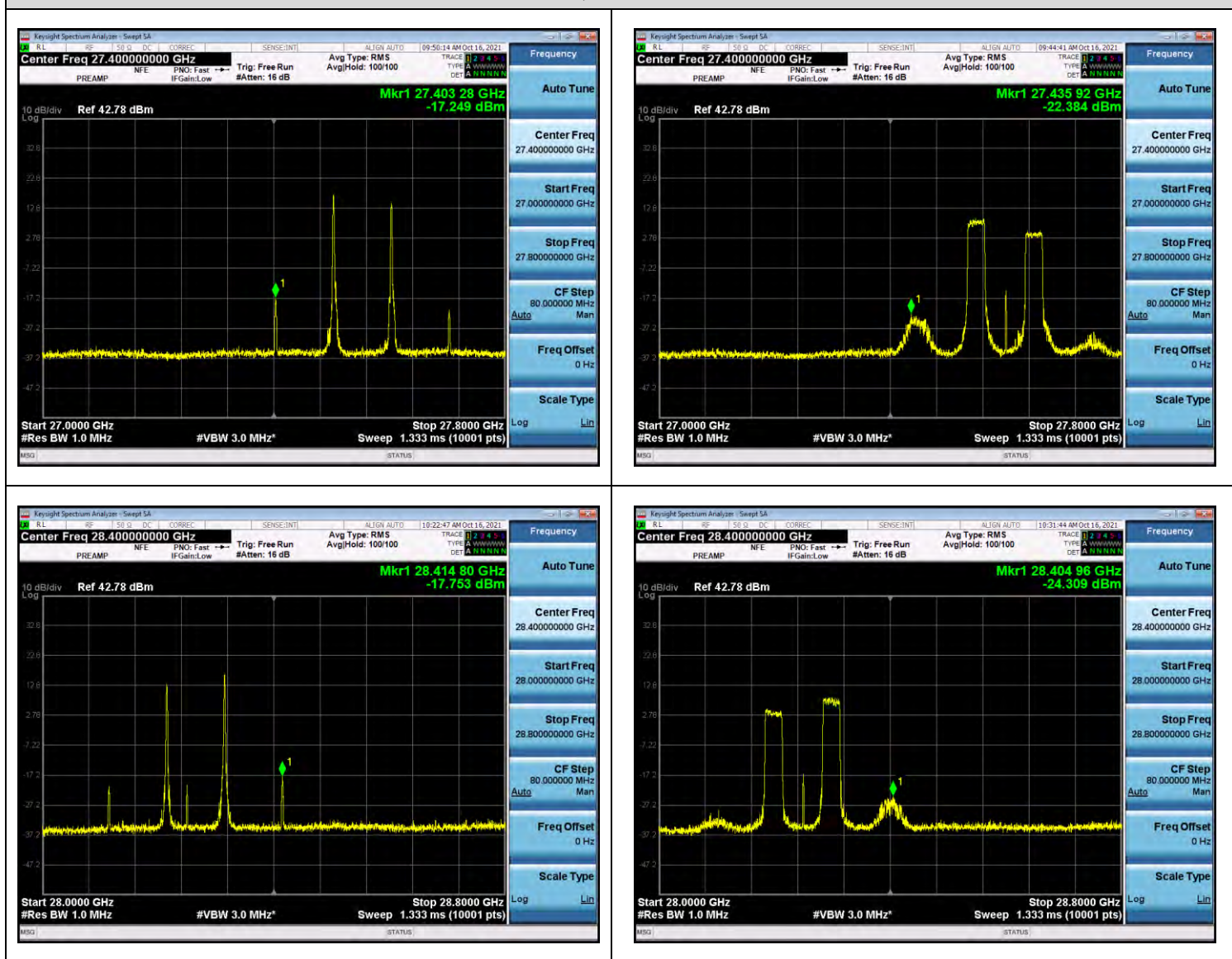
100 MHz, 1CC SISO Dual



50 MHz, 2CC SISO Dual

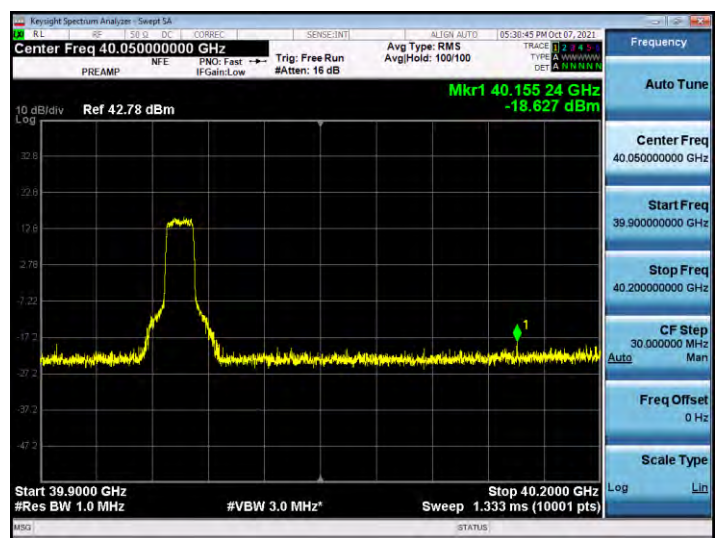
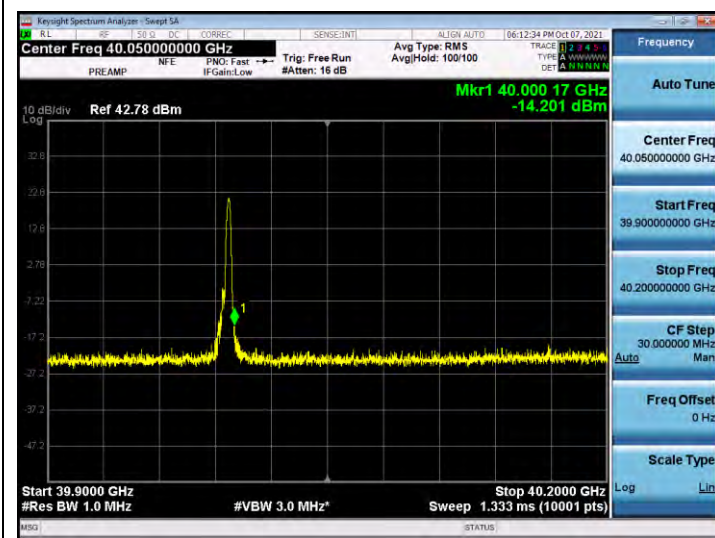
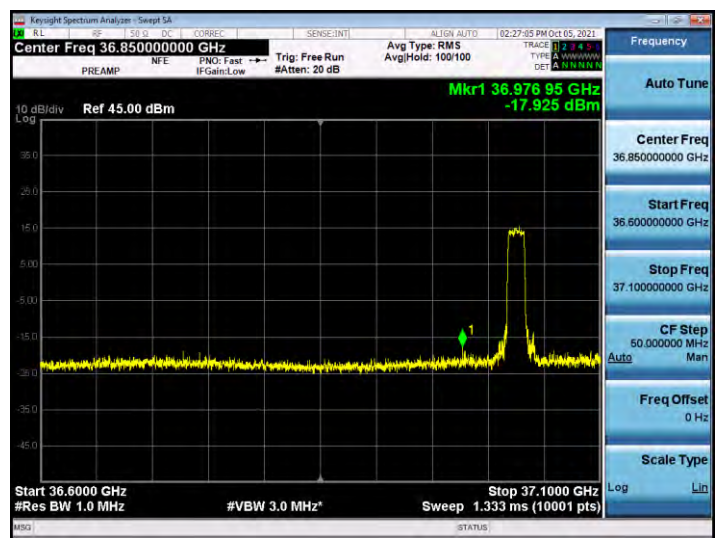
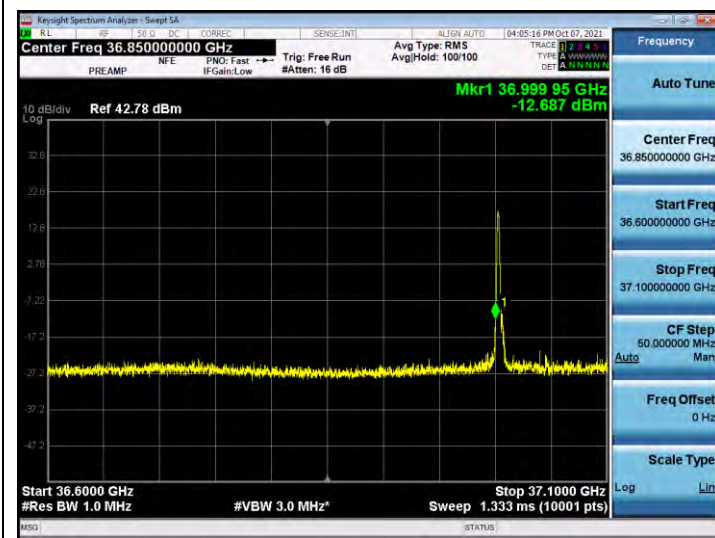


100 MHz, 2CC SISO Dual

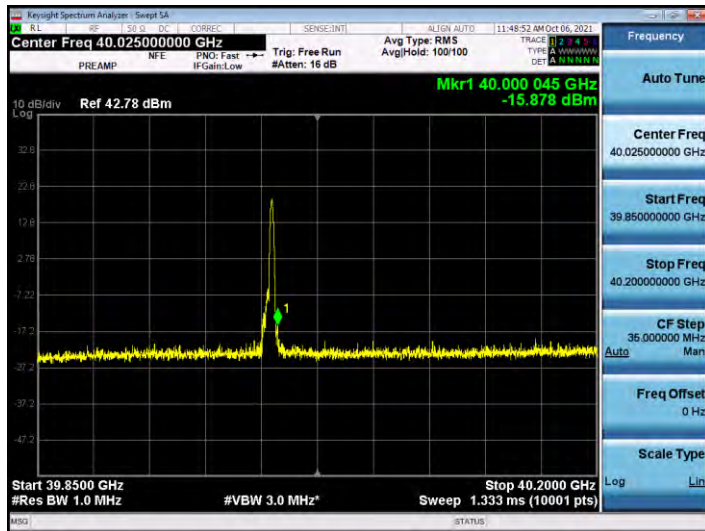
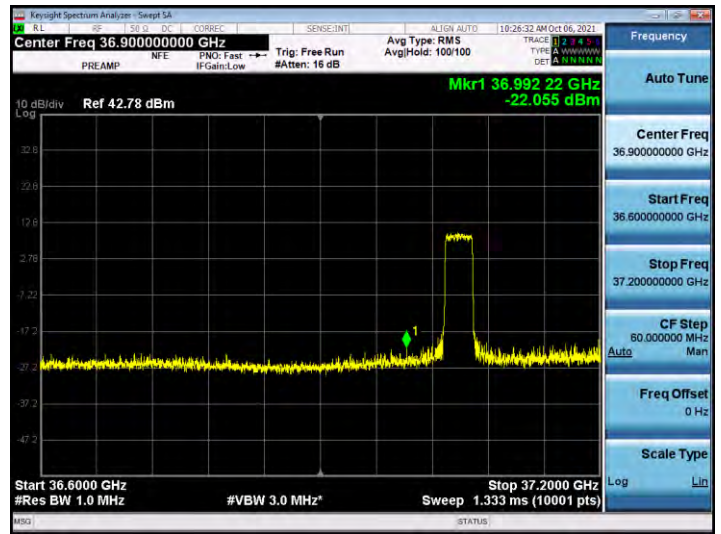
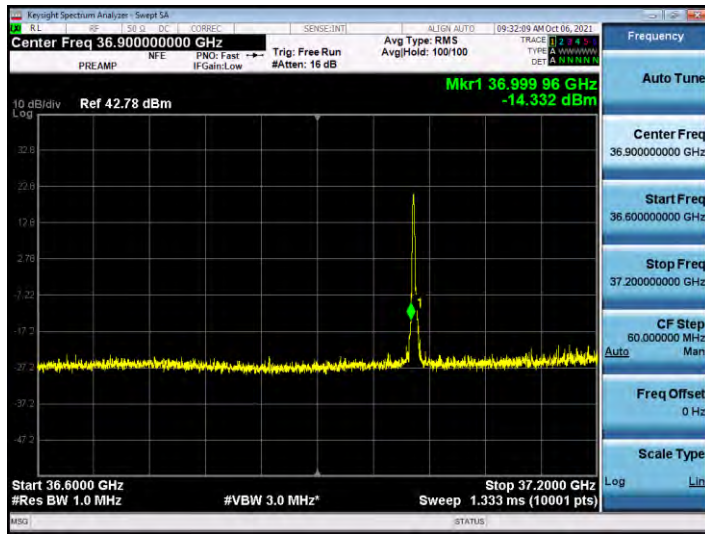


3. K patch: module 0, n260

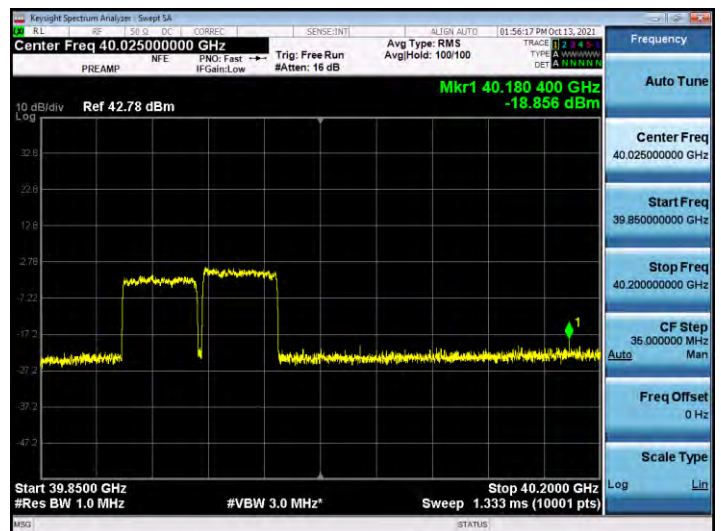
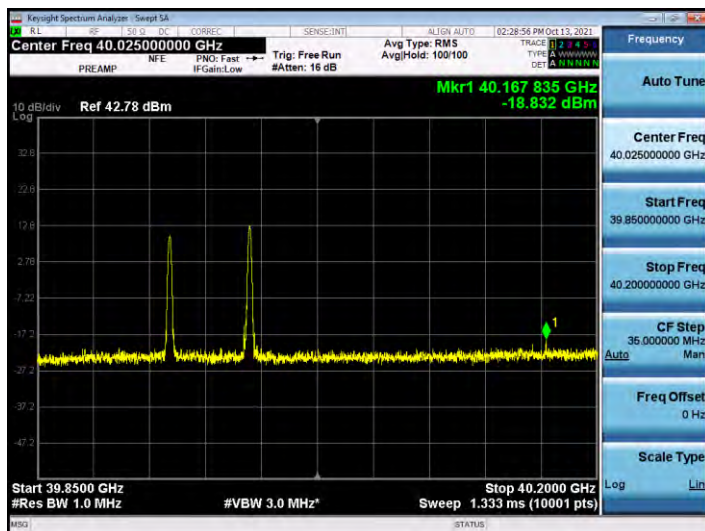
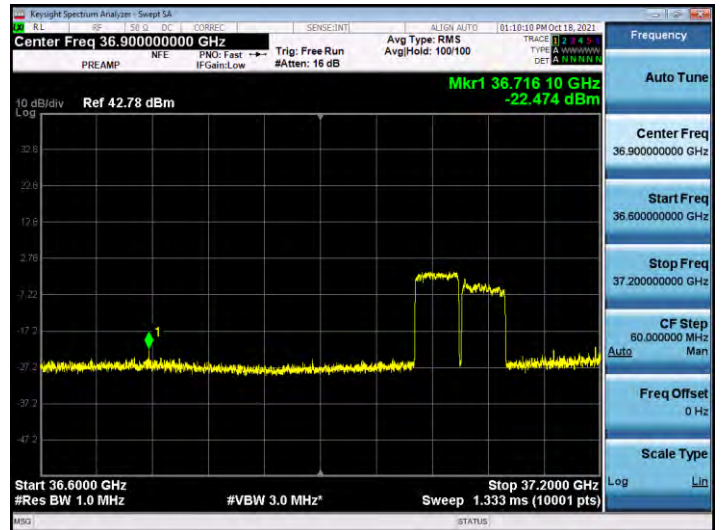
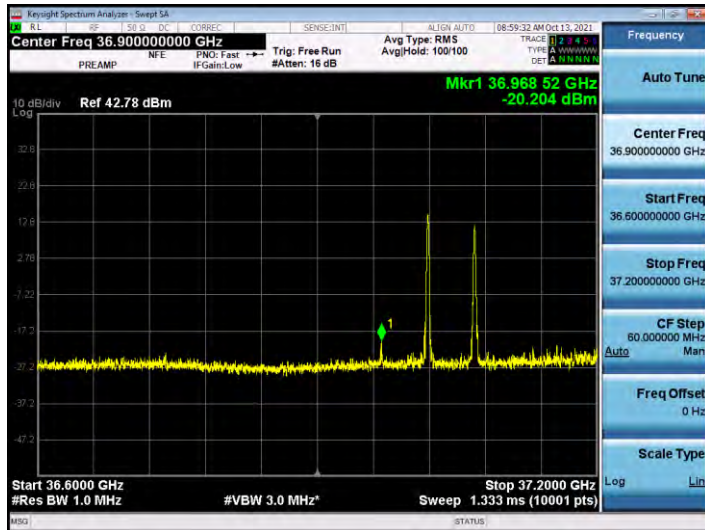
50 MHz, 1CC SISO Dual



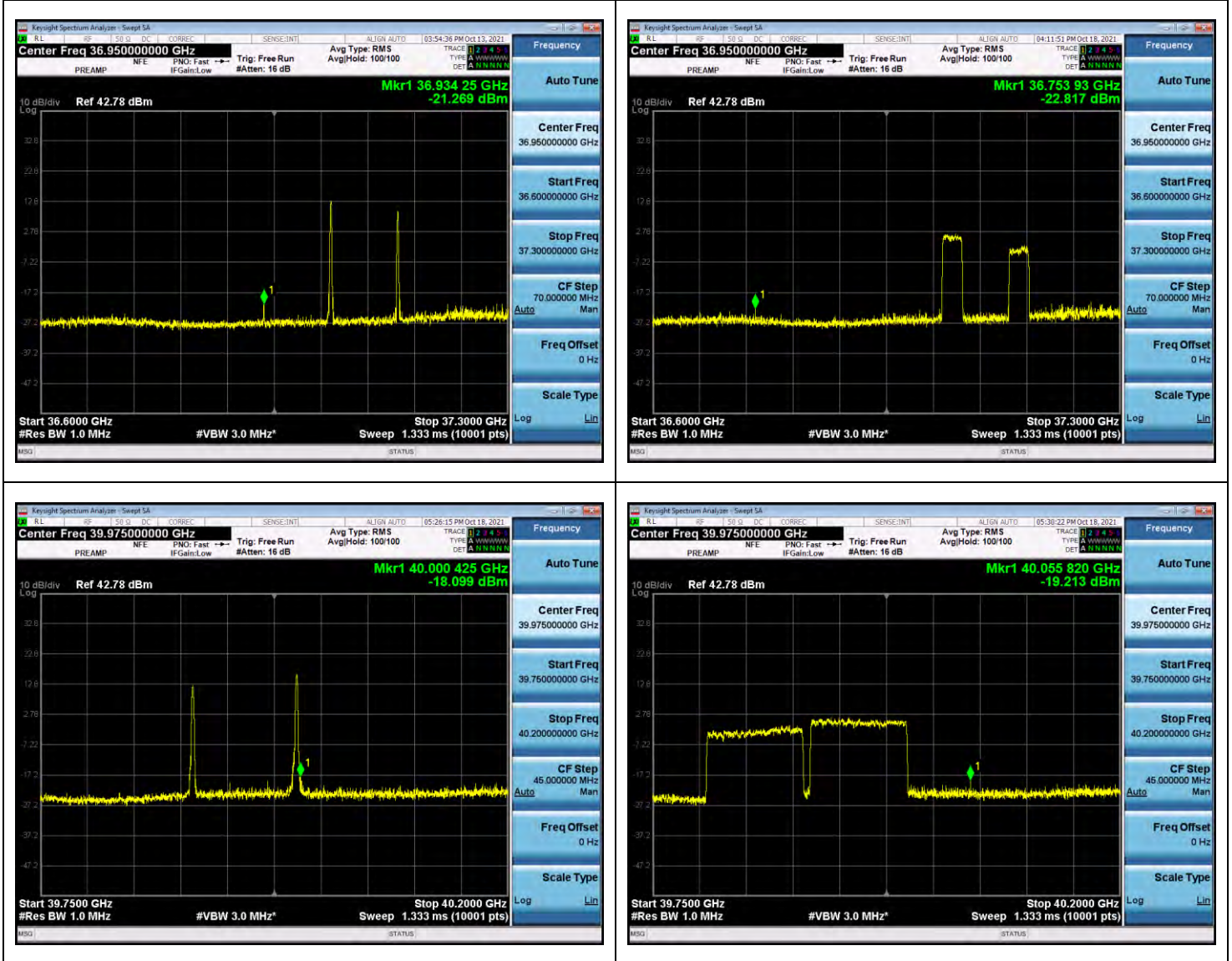
100 MHz, 1CC SISO Dual



50 MHz, 2CC SISO Dual

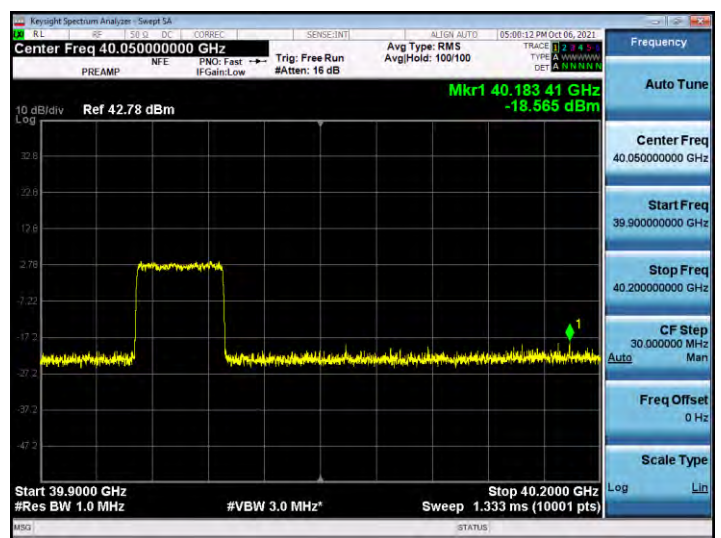
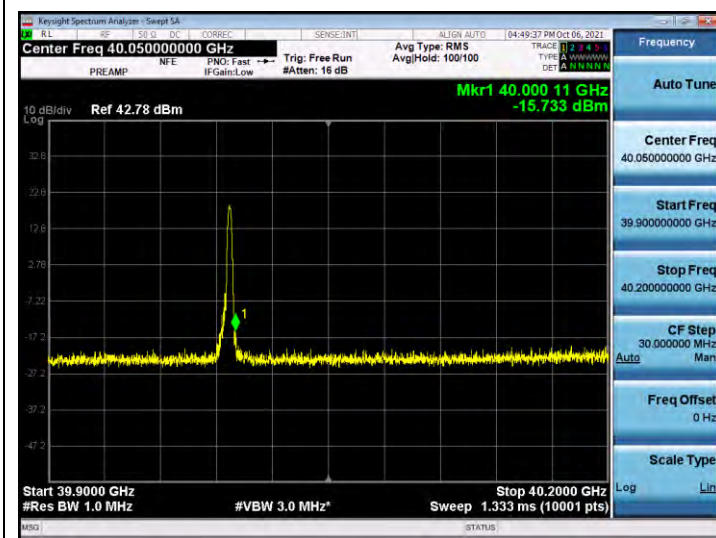
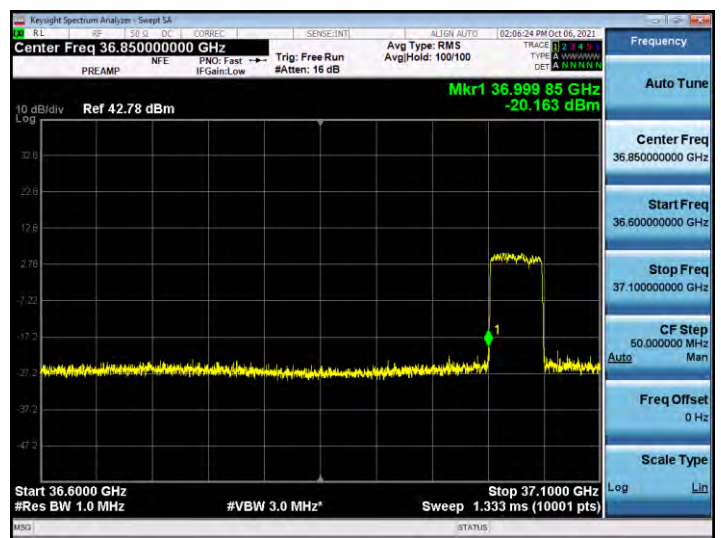
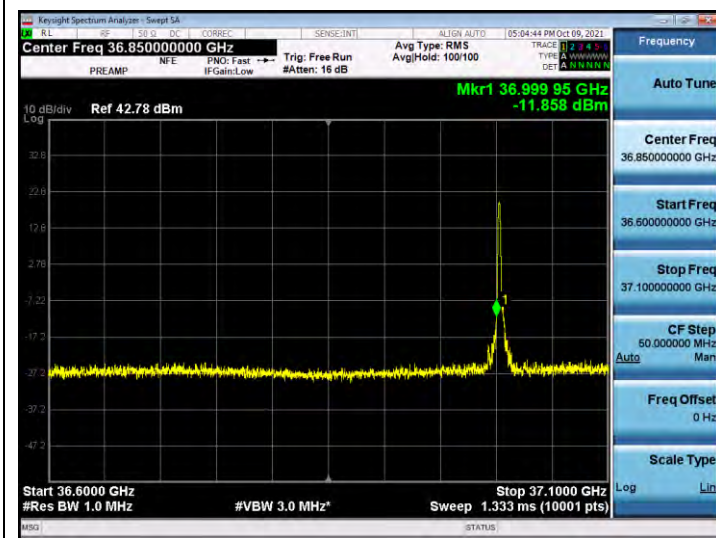


100 MHz, 2CC SISO Dual

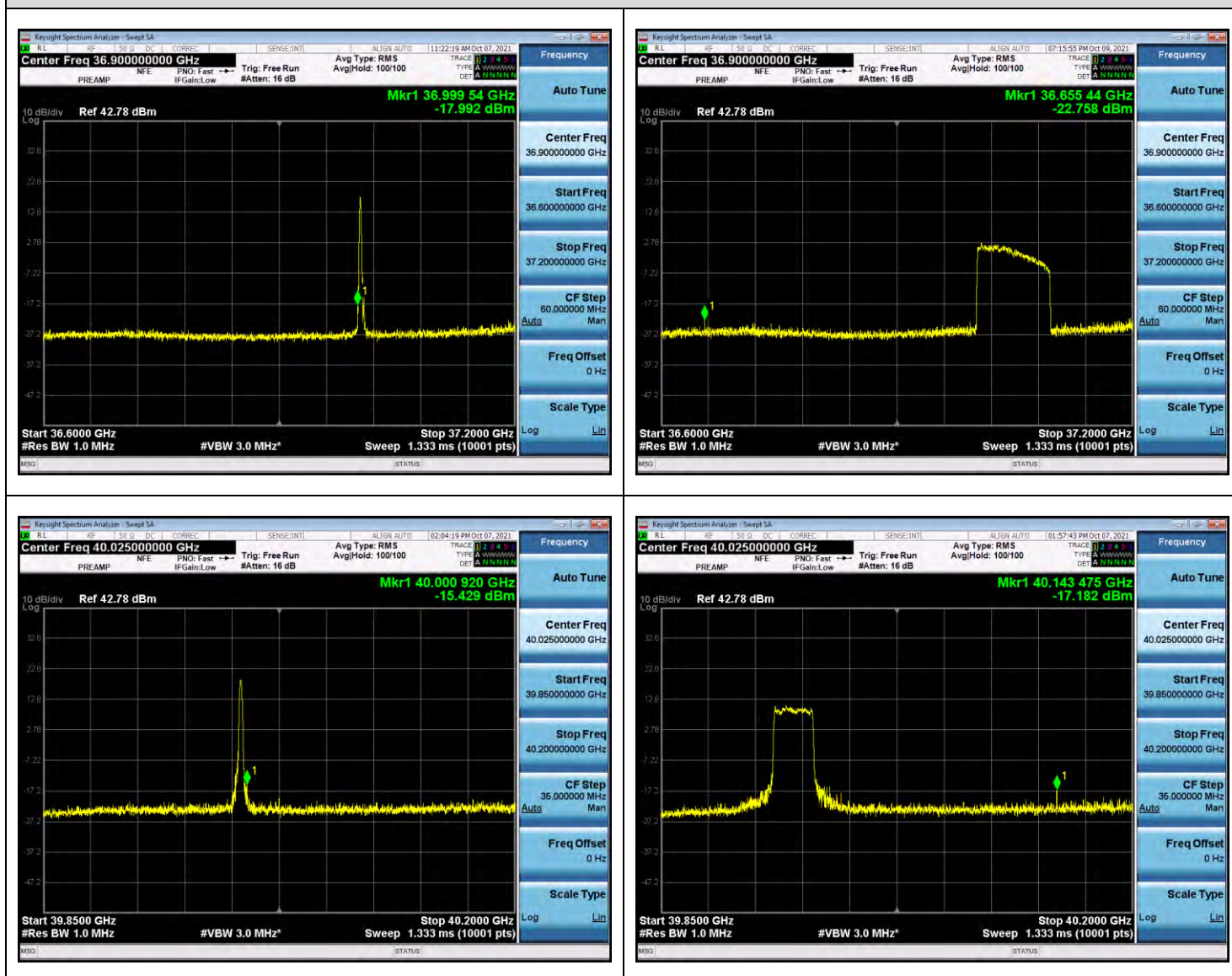


4. L patch: module 1, n260

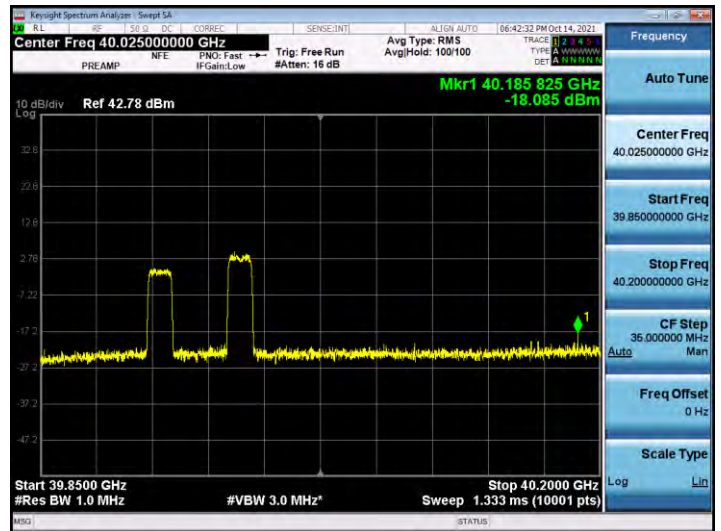
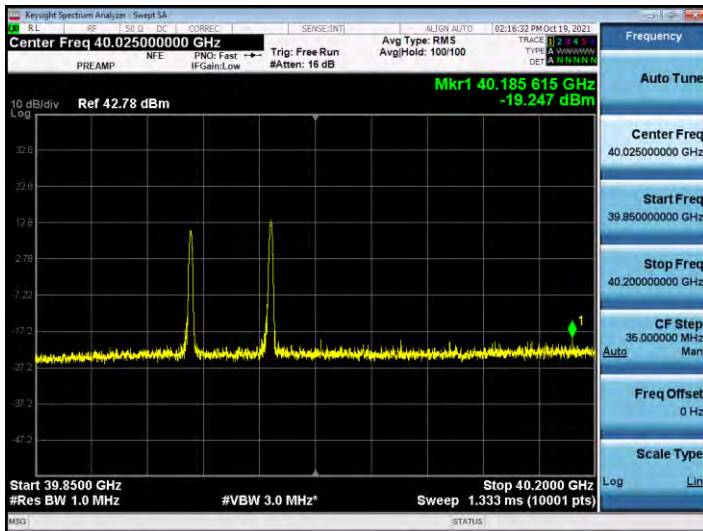
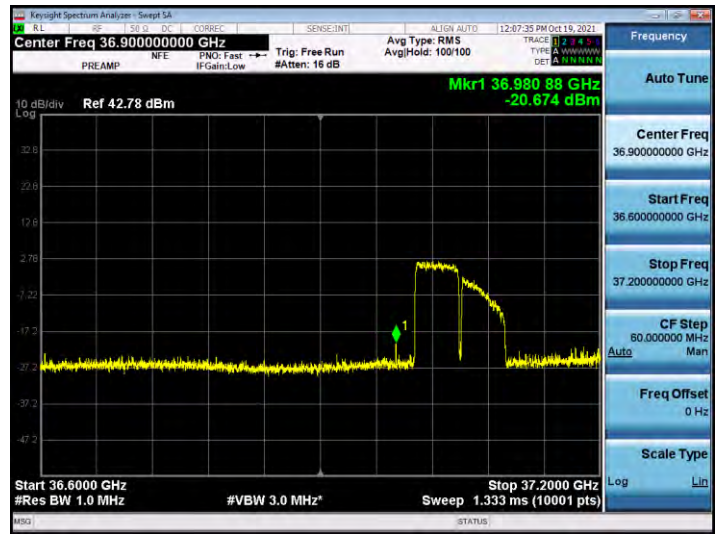
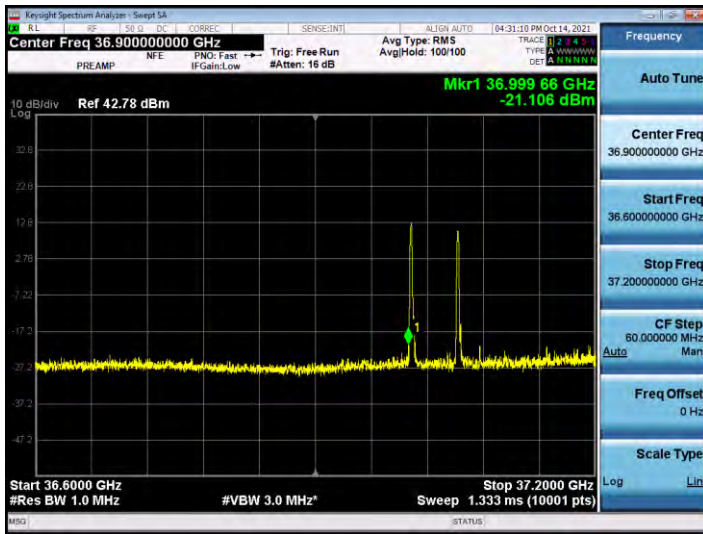
50 MHz, 1CC SISO Dual



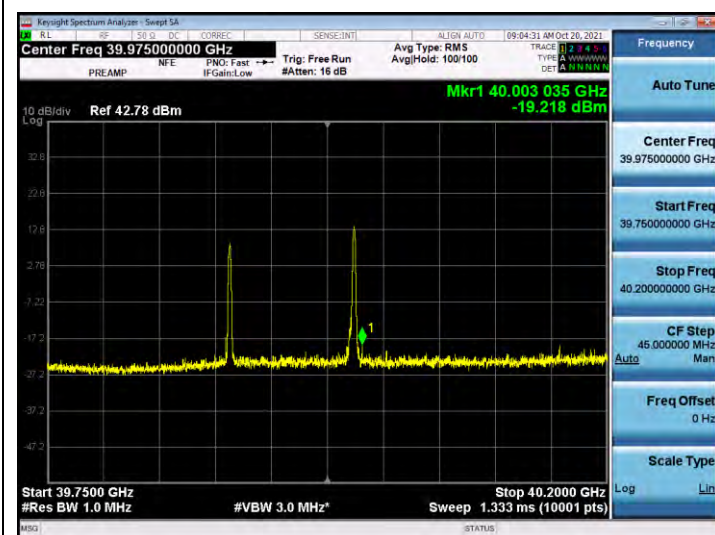
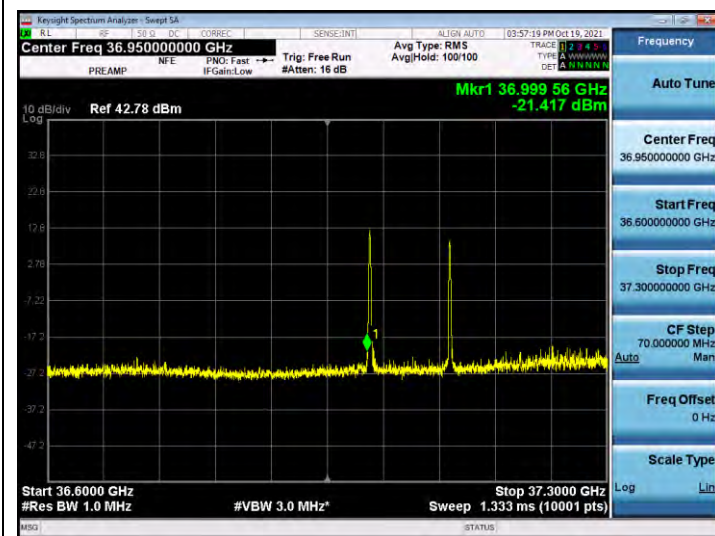
100 MHz, 1CC SISO Dual



50 MHz, 2CC SISO Dual



100 MHz, 2CC SISO Dual



5.4. RADIATED SPURIOUS EMISSIONS

Test Overview

The test frequency range is from 9 kHz to 200GHz. All out of band emissions are measured in a radiated test setup while the EUT is operating at maximum power, and at the appropriate frequencies. All modulations were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.

The conductive power or total radiated power of any emissions outside a licensee's frequency block shall be -13dBm/1MHz.

FCC Rules

Test Requirements:

§ 30.203 Emission limits.

- (a) The conductive power or the total radiated power of any emission outside a licensee's frequency block shall be -13 dBm/MHz or lower. However, in the bands immediately outside and adjacent to the licensee's frequency block, having a bandwidth equal to 10 percent of the channel bandwidth, the conductive power or the total radiated power of any emission shall be -5 dBm/MHz or lower.
- (b)(1) Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater.
- (2) When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the licensee's frequency block edges as the design permits.
- (3) The measurements of emission power can be expressed in peak or average values.

EIRP Test Procedures:

The measurement is performed in accordance with Section 5.7.4 of ANSI C63.26.

5.7.4 Spurious unwanted emission measurements

- a) Set the spectrum analyzer start frequency to the lowest frequency generated by the EUT, without going below 9 kHz, and the stop frequency to the lower frequency covered by the measurements previously performed in 5.7.3. As an alternative, the stop frequency can be set to the value specified in 5.1.1, depending on the EUT operating range, if the resulting plot can clearly demonstrate compliance for all frequencies not addressed by the out-of-band emissions measurements performed as per 5.7.3.
- b) When using an average power (rms) detector, ensure that the number of points in the sweep $\geq 2 \times (\text{span} / \text{RBW})$. This may require that the measurement range defined by the start and stop frequencies be subdivided, depending on the spectrum analyzer capabilities. This requirement does not apply to peak-detected power measurements. When average power is specified by the applicable regulation, a peak-

detector can be utilized for preliminary measurements to accommodate wider frequency spans. Any emissions found in the preliminary measurement to exceed the applicable limit(s) shall be further examined using a power averaging (rms) detector with the minimum number of measurement points as defined above.

c) The sweep time should be set to auto-couple for performing peak-detector measurements. For measurements that use a power averaging (rms) detector, the sweep time shall be set as described for out-of-band emissions measurements in item d) of 5.7.3.

d) Identify and measure the highest spurious emission levels in each frequency range. It is not necessary to re-measure the out-of-band emissions as a part of this test. Record the frequencies and amplitudes corresponding to the measured emissions and capture the data plots.

e) Repeat step b) through step d) for the upper spurious emission frequency range if not already captured by a wide span measurement performed as per the alternative provided in step a). The upper frequency for this measurement is defined in 5.1.1 as a function of the EUT operating range.

f) Compare the results with the corresponding limit in the applicable regulation.

g) The test report shall include the data plots of the measuring instrument display and the measured data.

TRP Test Procedures:

The measurement is performed in accordance with Section 4.4.3.3.2 of KDB 842590 v01r02 (2021-04).

a) Align the EUT with a chosen xy-plane and the xz-plane of the antenna measurement coordinate system.

NOTE 1 For harmonics and spurious emission frequencies which are beamforming as identified in exploratory scan, it may be required to align the orthogonal cuts to include the peak based on exploratory scans.

b) Measure the EUT dimensions, i.e., depth (d), width (w), and height (h); see Figure A.1 in Appendix A.

c) Calculate the spherical and cylindrical diameters (D and D_{cyl}) using Equations (A.1) and (A.2) (see Appendix A).

d) For the highest frequency (smallest wavelength) of the frequency band measured, calculate the reference angular steps $\Delta\theta_{ref}$ and $\Delta\phi_{ref}$ using Equations (A.3) and (A.4).

e) Set the grid spatial sampling step $\Delta\theta \leq \Delta\theta_{ref}$ for the vertical angle and $\Delta\phi \leq \Delta\phi_{ref}$ for the horizontal cut.

f) For each emission frequency, measure the EIRP (as a sum of two orthogonal polarizations) at each spatial sampling step on the selected grid.

g) For each emission frequency, calculate the average EIRP for both the cuts separately, and then take the average of these two average values.

h) Add 2 dB as a correction factor to the averaged value computed in step g).

i) If the TRP limit is exceeded, a third orthogonal cut in the yz-plane and using the $\Delta\theta$ angular step, can be added. Now, calculate the average values in all three cuts separately, and then take the average value of these three average values.

j) Add 1.5 dB as a correction factor to the averaged value computed in step i).

k) Evaluate the pass/fail decision by comparing TRP from step h) or step j) against the applicable TRP limit.

Note:

1. Spurious emission test is performed up to 200 GHz(up to 100 GHz for n261) frequency according to section 5.1.1 of ANSI C63.26 -2015.
2. Measurement distance is applied far field condition on page 17.
3. Additionally, we were performed the RSE test in EN-DC mode. It was determined that there is no new emission introduced by EN-DC mode.
4. All RSE were measured with 1CC and 2CC. The worst case is 1CC with QPSK or PI/2BPSK modulation.
5. All factors except spectrum analyzer level are applied as correction factor each band in the analyzer and calculated in tabular data.

In this test, AFCL factor consists of antenna factor, cable loss, mixer loss, amplifier gain and duty correction. Emissions value is first converted by distance factor as follow.

Converted value (dBm) = Measured Value (dBuV) + 20 LOG(D)-104.77

Final spurious emissions result is calculated as follows.

Spurious Emissions = Converted Value (dBm) + AFCL

6. Measurement RBW correction factor(Reference RBW : 1 MHz)
The measured value in table is included the RBW correction factor.

10log(Reference RBW/Measured RBW)

In case of 1 kHz RBW, correction factor is 30 dB.

In case of 10 kHz RBW, correction factor is 20 dB.

In case of 100 kHz RBW, correction factor is 10 dB.

7. Calculations

The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses.

8. In case of 9 kHz to 30 MHz, the reading of emissions are attenuated more than 20 dB below the permissible limits or the field strength is too small to be measured.

9. Corrcction Factor

30MHz ~1GHz		1~18GHz		18~40GHz		40~200GHz	
Freq. (MHz)	AFCL	Freq. (GHz)	AFCL	Freq. (GHz)	AFCL	Freq. (GHz)	AFCL
30	18.56	1	-16.07	18	-12.92	40	20.49
80	15.96	1.5	-14.09	18.5	-12.60	45	34.19
100	15.89	2	-11.78	19	-12.81	50	26.78
150	20.76	2.5	-8.32	19.5	-12.41	55	28.89
200	17.48	3	-5.53	20	-12.15	60	25.98
250	19.57	3.5	-3.57	20.5	-12.05	60	41.01
300	21.36	4	-1.33	21	-11.50	65	40.16
350	22.53	4.5	0.34	21.5	-10.90	70	36.10
400	24.1	5	2.75	22	-10.68	75	33.87
450	25.53	5.5	3.92	22.5	-10.44	80	35.02
500	26.28	6	4.80	23	-9.48	85	39.27
550	27.22	6.5	6.35	23.5	-9.15	90	43.62
600	28.55	7	8.58	24	-9.09	90	36.80
650	29.46	7.5	10.39	24.5	-8.41	95	50.84
700	30.09	8	11.59	25	-7.83	100	43.88
750	31.01	8.5	11.60	25.5	-7.89	105	39.39
800	31.72	9	13.23	26	-7.88	110	42.81
850	32.14	9.5	14.84	26.5	-7.72	115	55.70
900	32.74	10	16.58	27	-8.02	120	42.37
950	33.55	10.5	18.44	27.5	-8.23	125	44.95
1000	34.16	11	18.65	28	-7.81	130	53.71
-	-	11.5	19.51	28.5	-7.76	135	48.91
-	-	12	18.97	29	-7.22	140	47.35
-	-	12.5	19.19	29.5	-7.49	140	51.96
-	-	13	20.28	30	-7.24	145	55.59
-	-	13.5	21.13	30.5	-7.11	150	62.28
-	-	14	20.44	31	-6.54	155	55.19
-	-	14.5	21.76	31.5	-7.04	160	54.60
-	-	15	21.54	32	-6.43	165	54.71
-	-	15.5	20.10	32.5	-6.73	170	60.44
-	-	16	19.65	33	-6.74	175	56.18
-	-	16.5	20.99	33.5	-6.55	180	57.49
-	-	17	23.04	34	-6.19	185	54.04
-	-	17.5	25.84	34.5	-6.92	190	52.76

30MHz ~1GHz		1~18GHz		18~40GHz		40~200GHz	
Freq. (MHz)	AFCL	Freq. (GHz)	AFCL	Freq. (GHz)	AFCL	Freq. (GHz)	AFCL
-	-	18	30.19	35	-6.49	195	54.82
-	-	-	-	35.5	-6.40	200	61.10
-	-	-	-	36	-6.43	-	-
-	-	-	-	36.5	-5.78	-	-
-	-	-	-	37	-4.93	-	-
-	-	-	-	37.5	-4.12	-	-
-	-	-	-	38	-3.85	-	-
-	-	-	-	38.5	-2.27	-	-
-	-	-	-	39	-0.15	-	-
-	-	-	-	39.5	1.40	-	-
-	-	-	-	40	1.11	-	-

*Correction Factor= Antenna Factor + Cable Loss – Amp. Gain + (Harmonic Mixer Conversion Loss)

Test Results: Tabular Data of Radiated Spurious Emissions

1. K patch: module 0, n261

DFT-s OFDM (SISO or SISO Dual)

30 MHz ~ 1 GHz										
CCs active	BW [MHz]	Frequency [MHz]	Channel	Beam Pol.	Modulation	Ant. Pol. [H/V]	RB Size/Offset	Measured Value (dBuV)	Distance (m)	Conversion Value Result (dBm)
1	50	27534.84	Low	H+V	QPSK	H	10/11	64.26	3	-30.97
		27923.52	Mid	H+V	QPSK	H	1/16	64.15	3	-31.08
		28319.52	High	H+V	QPSK	H	1/16	64.52	3	-30.71
	100	27559.32	Low	H+V	BPSK	H	1/33	63.60	3	-31.63
		27923.52	Mid	H+V	BPSK	V	20/22	64.06	3	-31.17
		28292.16	High	H	QPSK	V	1/33	64.50	3	-30.73

1 GHz ~ 10 GHz										
CCs active	BW [MHz]	Frequency [MHz]	Channel	Beam Pol.	Modulation	Ant. Pol. [H/V]	RB Size/Offset	Measured Value (dBuV)	Distance (m)	Conversion Value Result (dBm)
1	50	27534.84	Low	H+V	QPSK	H	10/11	51.60	3	-43.63
		27923.52	Mid	H+V	QPSK	H	1/16	49.63	3	-45.60
		28319.52	High	H+V	QPSK	H	1/16	49.94	3	-45.29
	100	27559.32	Low	H+V	BPSK	H	1/33	49.52	3	-45.71
		27923.52	Mid	H+V	BPSK	V	20/22	51.89	3	-43.34
		28292.16	High	H	QPSK	V	1/33	49.39	3	-45.84

10 GHz ~ 18 GHz										
CCs active	BW [MHz]	Frequency [MHz]	Channel	Beam Pol.	Modulation	Ant. Pol. [H/V]	RB Size/Offset	Measured Value (dBuV)	Distance (m)	Conversion Value Result (dBm)
1	50	27534.84	Low	H+V	QPSK	H	10/11	59.10	3	-36.13
		27923.52	Mid	H+V	QPSK	H	1/16	59.17	3	-36.06
		28319.52	High	H+V	QPSK	H	1/16	58.52	3	-36.71
	100	27559.32	Low	H+V	BPSK	H	1/33	58.51	3	-36.72
		27923.52	Mid	H+V	BPSK	V	20/22	59.75	3	-35.48
		28292.16	High	H	QPSK	V	1/33	59.65	3	-35.58

18 GHz ~ 27 GHz										
CCs active	BW [MHz]	Frequency [MHz]	Channel	Beam Pol.	Modulation	Ant. Pol. [H/V]	RB Size/Offset	Measured Value (dBuV)	Distance (m)	Conversion Value Result (dBm)
1	50	27534.84	Low	H+V	QPSK	H	10/11	52.17	3	-43.06
		27923.52	Mid	H+V	QPSK	H	1/16	52.46	3	-42.77
		28319.52	High	H+V	QPSK	H	1/16	50.71	3	-44.52
	100	27559.32	Low	H+V	BPSK	H	1/33	54.13	3	-41.10
		27923.52	Mid	H+V	BPSK	V	20/22	51.07	3	-44.16
		28292.16	High	H	QPSK	V	1/33	51.02	3	-44.21

28.8 GHz ~ 40 GHz

CCs active	BW [MHz]	Frequency [MHz]	Channel	Beam Pol.	Modulation	Ant. Pol. [H/V]	RB Size/Offset	Measured Value (dBuV)	Distance (m)	Conversion Value Result (dBm)
1	50	27534.84	Low	H+V	QPSK	H	10/11	60.70	3	-34.53
		27923.52	Mid	H+V	QPSK	H	1/16	59.53	3	-35.70
		28319.52	High	H+V	QPSK	H	1/16	60.61	3	-34.62
	100	27559.32	Low	H+V	BPSK	H	1/33	60.58	3	-34.65
		27923.52	Mid	H+V	BPSK	V	20/22	59.76	3	-35.47
		28292.16	High	H	QPSK	V	1/33	60.42	3	-34.81

40 GHz ~ 60 GHz

CCs active	BW [MHz]	Frequency [MHz]	Channel	Beam Pol.	Modulation	Ant. Pol. [H/V]	RB Size/Offset	Measured Value (dBuV)	Distance (m)	Conversion Value Result (dBm)
1	50	27534.84	Low	H+V	QPSK	H	10/11	61.76	3	-33.47
		27923.52	Mid	H+V	QPSK	H	1/16	61.89	3	-33.34
		28319.52	High	H+V	QPSK	H	1/16	61.96	3	-33.27
	100	27559.32	Low	H+V	BPSK	H	1/33	61.67	3	-33.56
		27923.52	Mid	H+V	BPSK	V	20/22	61.67	3	-33.56
		28292.16	High	H	QPSK	V	1/33	62.19	3	-33.04

60 GHz ~ 90 GHz										
CCs active	BW [MHz]	Frequency [MHz]	Channel	Beam Pol.	Modulation	Ant. Pol. [H/V]	RB Size/Offset	Measured Value (dBuV)	Distance (m)	Conversion Value Result (dBm)
1	50	27534.84	Low	H+V	QPSK	H	10/11	61.34	1	-43.43
		27923.52	Mid	H+V	QPSK	H	1/16	61.25	1	-43.52
		28319.52	High	H+V	QPSK	H	1/16	61.12	1	-43.65
	100	27559.32	Low	H+V	BPSK	H	1/33	61.30	1	-43.47
		27923.52	Mid	H+V	BPSK	V	20/22	61.53	1	-43.24
		28292.16	High	H	QPSK	V	1/33	61.10	1	-43.67

90 GHz ~ 100 GHz										
CCs active	BW [MHz]	Frequency [MHz]	Channel	Beam Pol.	Modulation	Ant. Pol. [H/V]	RB Size/Offset	Measured Value (dBuV)	Distance (m)	Conversion Value Result (dBm)
1	50	27534.84	Low	H+V	QPSK	H	10/11	79.20	1	-25.57
		27923.52	Mid	H+V	QPSK	H	1/16	79.30	1	-25.47
		28319.52	High	H+V	QPSK	H	1/16	79.10	1	-25.67
	100	27559.32	Low	H+V	BPSK	H	1/33	79.17	1	-25.60
		27923.52	Mid	H+V	BPSK	V	20/22	79.11	1	-25.66
		28292.16	High	H	QPSK	V	1/33	79.23	1	-25.54

2. K patch: module 0, n260

DFT-s OFDM (SISO or SISO Dual)

30 MHz ~ 1 GHz										
CCs active	BW [MHz]	Frequency [MHz]	Channel	Beam Pol.	Modulation	Ant. Pol. [H/V]	RB Size/Offset	Measured Value (dBuV)	Distance (m)	Conversion Value Result (dBm)
1	50	37027.32	Low	H	BPSK	V	10/11	63.83	3	-31.40
		38497.44	Mid	H+V	QPSK	H	1/16	63.51	3	-31.72
		39966.24	High	H+V	QPSK	H	10/11	63.70	3	-31.53
	50	37051.80	Low	H+V	QPSK	H	1/16	64.22	3	-31.01
		38497.44	Mid	H+V	QPSK	H	1/16	63.70	3	-31.53
		39949.92	High	H	BPSK	V	10/11	64.90	3	-30.33

1 GHz ~ 10 GHz										
CCs active	BW [MHz]	Frequency [MHz]	Channel	Beam Pol.	Modulation	Ant. Pol. [H/V]	RB Size/Offset	Measured Value (dBuV)	Distance (m)	Conversion Value Result (dBm)
1	50	37027.32	Low	H	BPSK	V	10/11	49.13	3	-46.10
		38497.44	Mid	H+V	QPSK	H	1/16	50.06	3	-45.17
		39966.24	High	H+V	QPSK	H	10/11	49.27	3	-45.96
	50	37051.80	Low	H+V	QPSK	H	1/16	49.30	3	-45.93
		38497.44	Mid	H+V	QPSK	H	1/16	49.98	3	-45.25
		39949.92	High	H	BPSK	V	10/11	49.08	3	-46.15

10 GHz ~ 18 GHz										
CCs active	BW [MHz]	Frequency [MHz]	Channel	Beam Pol.	Modulation	Ant. Pol. [H/V]	RB Size/Offset	Measured Value (dBuV)	Distance (m)	Conversion Value Result (dBm)
1	50	37027.32	Low	H	BPSK	V	10/11	59.77	3	-35.46
		38497.44	Mid	H+V	QPSK	H	1/16	58.77	3	-36.46
		39966.24	High	H+V	QPSK	H	10/11	59.37	3	-35.86
	50	37051.80	Low	H+V	QPSK	H	1/16	58.81	3	-36.42
		38497.44	Mid	H+V	QPSK	H	1/16	59.03	3	-36.20
		39949.92	High	H	BPSK	V	10/11	58.07	3	-37.16

18 GHz ~ 26.5 GHz										
CCs active	BW [MHz]	Frequency [MHz]	Channel	Beam Pol.	Modulation	Ant. Pol. [H/V]	RB Size/Offset	Measured Value (dBuV)	Distance (m)	Conversion Value Result (dBm)
1	50	37027.32	Low	H	BPSK	V	10/11	50.06	3	-45.17
		38497.44	Mid	H+V	QPSK	H	1/16	48.94	3	-46.29
		39966.24	High	H+V	QPSK	H	10/11	48.88	3	-46.35
	50	37051.80	Low	H+V	QPSK	H	1/16	50.30	3	-44.93
		38497.44	Mid	H+V	QPSK	H	1/16	50.82	3	-44.41
		39949.92	High	H	BPSK	V	10/11	50.21	3	-45.02

26.5 GHz ~ 36.6 GHz

CCs active	BW [MHz]	Frequency [MHz]	Channel	Beam Pol.	Modulation	Ant. Pol. [H/V]	RB Size/Offset	Measured Value (dBuV)	Distance (m)	Conversion Value Result (dBm)
1	50	37027.32	Low	H	BPSK	V	10/11	56.67	3	-38.56
		38497.44	Mid	H+V	QPSK	H	1/16	56.78	3	-38.45
		39966.24	High	H+V	QPSK	H	10/11	56.67	3	-38.56
	50	37051.80	Low	H+V	QPSK	H	1/16	56.40	3	-38.83
		38497.44	Mid	H+V	QPSK	H	1/16	56.52	3	-38.71
		39949.92	High	H	BPSK	V	10/11	57.02	3	-38.21

40 GHz ~ 60 GHz

CCs active	BW [MHz]	Frequency [MHz]	Channel	Beam Pol.	Modulation	Ant. Pol. [H/V]	RB Size/Offset	Measured Value (dBuV)	Distance (m)	Conversion Value Result (dBm)
1	50	37027.32	Low	H	BPSK	V	10/11	61.66	3	-33.57
		38497.44	Mid	H+V	QPSK	H	1/16	61.64	3	-33.59
		39966.24	High	H+V	QPSK	H	10/11	61.67	3	-33.56
	50	37051.80	Low	H+V	QPSK	H	1/16	61.60	3	-33.63
		38497.44	Mid	H+V	QPSK	H	1/16	61.52	3	-33.71
		39949.92	High	H	BPSK	V	10/11	61.68	3	-33.55

60 GHz ~ 90 GHz										
CCs active	BW [MHz]	Frequency [MHz]	Channel	Beam Pol.	Modulation	Ant. Pol. [H/V]	RB Size/Offset	Measured Value (dBuV)	Distance (m)	Conversion Value Result (dBm)
1	50	37027.32	Low	H	BPSK	V	10/11	61.24	1	-43.53
		38497.44	Mid	H+V	QPSK	H	1/16	61.43	1	-43.34
		39966.24	High	H+V	QPSK	H	10/11	61.27	1	-43.50
	50	37051.80	Low	H+V	QPSK	H	1/16	61.09	1	-43.68
		38497.44	Mid	H+V	QPSK	H	1/16	61.30	1	-43.47
		39949.92	High	H	BPSK	V	10/11	61.34	1	-43.43

90 GHz ~ 140 GHz										
CCs active	BW [MHz]	Frequency [MHz]	Channel	Beam Pol.	Modulation	Ant. Pol. [H/V]	RB Size/Offset	Measured Value (dBuV)	Distance (m)	Conversion Value Result (dBm)
1	50	37027.32	Low	H	BPSK	V	10/11	84.93	1	-19.84
		38497.44	Mid	H+V	QPSK	H	1/16	85.13	1	-19.64
		39966.24	High	H+V	QPSK	H	10/11	85.00	1	-19.77
	50	37051.80	Low	H+V	QPSK	H	1/16	85.09	1	-19.68
		38497.44	Mid	H+V	QPSK	H	1/16	85.06	1	-19.71
		39949.92	High	H	BPSK	V	10/11	85.08	1	-19.69

140 GHz ~ 170 GHz

CCs active	BW [MHz]	Frequency [MHz]	Channel	Beam Pol.	Modulation	Ant. Pol. [H/V]	RB Size/Offset	Measured Value (dBuV)	Distance (m)	Conversion Value Result (dBm)
1	50	37027.32	Low	H	BPSK	V	10/11	80.57	0.5	-30.22
		38497.44	Mid	H+V	QPSK	H	1/16	80.33	0.5	-30.46
		39966.24	High	H+V	QPSK	H	10/11	80.46	0.5	-30.33
	50	37051.80	Low	H+V	QPSK	H	1/16	80.51	0.5	-30.28
		38497.44	Mid	H+V	QPSK	H	1/16	80.62	0.5	-30.17
		39949.92	High	H	BPSK	V	10/11	80.52	0.5	-30.27

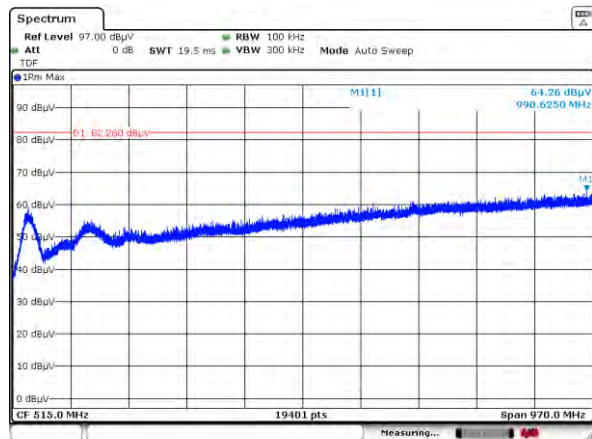
170 GHz ~ 200 GHz

CCs active	BW [MHz]	Frequency [MHz]	Channel	Beam Pol.	Modulation	Ant. Pol. [H/V]	RB Size/Offset	Measured Value (dBuV)	Distance (m)	Conversion Value Result (dBm)
1	50	37027.32	Low	H	BPSK	V	10/11	74.68	0.5	-36.11
		38497.44	Mid	H+V	QPSK	H	1/16	74.44	0.5	-36.35
		39966.24	High	H+V	QPSK	H	10/11	74.49	0.5	-36.30
	50	37051.80	Low	H+V	QPSK	H	1/16	74.51	0.5	-36.28
		38497.44	Mid	H+V	QPSK	H	1/16	74.45	0.5	-36.34
		39949.92	High	H	BPSK	V	10/11	74.70	0.5	-36.09

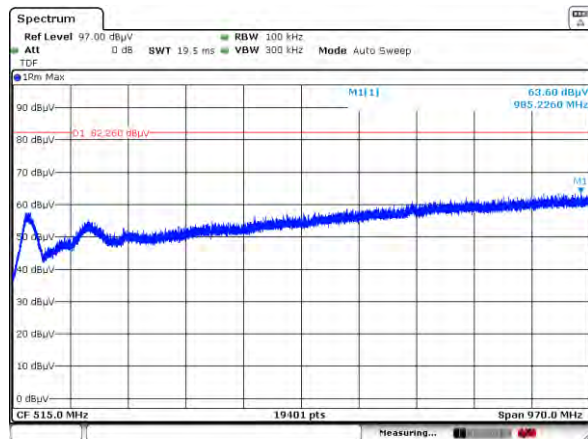
Plot data of Radiated Spurious Emissions

n261 SISO Dual [30 MHz ~ 1 GHz]

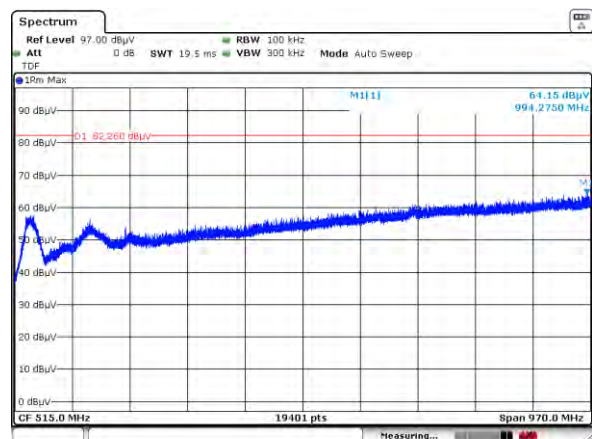
50 MHz 1 CC K patch: module 0
Low Channel Pol. H



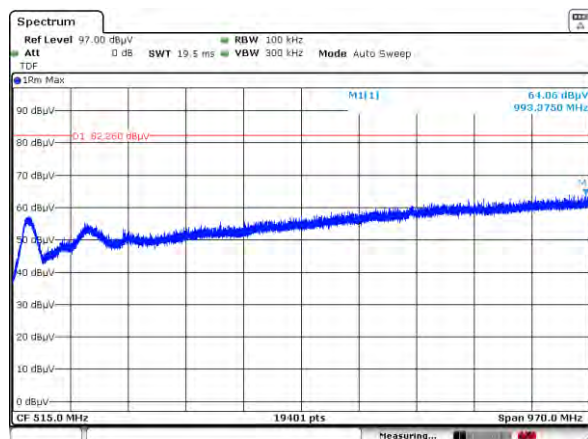
100 MHz 1 CC L patch: module 1
Low Channel Pol. H



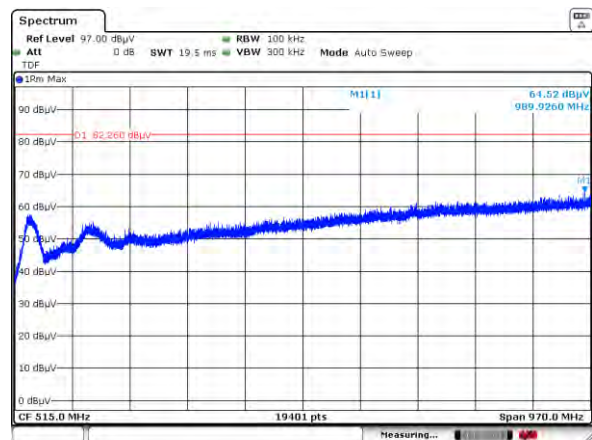
Middle Channel Pol. V



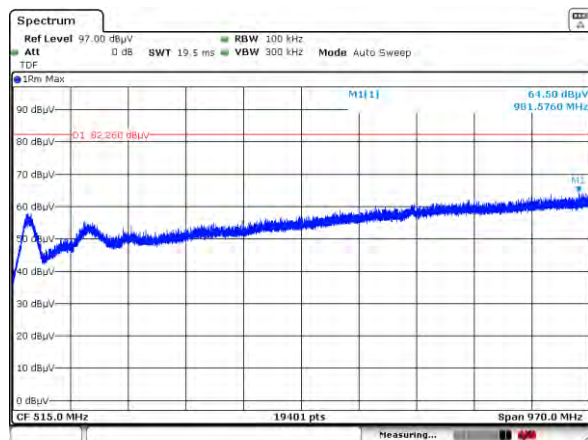
Middle Channel Pol. V



High Channel Pol. H

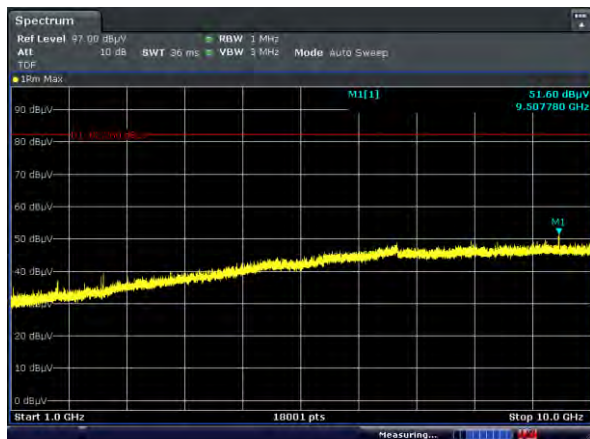


High Channel Pol. H

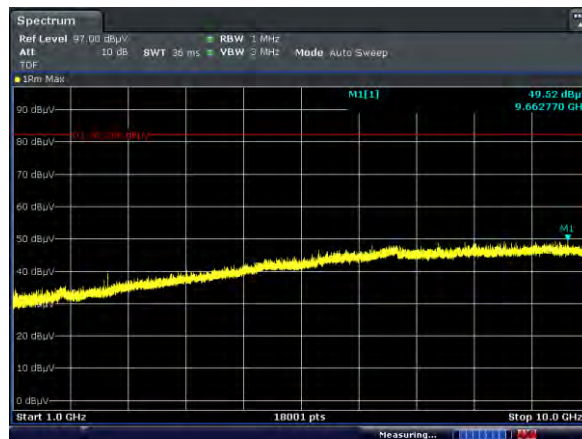


n261 SISO Dual [1 GHz ~ 10 GHz]

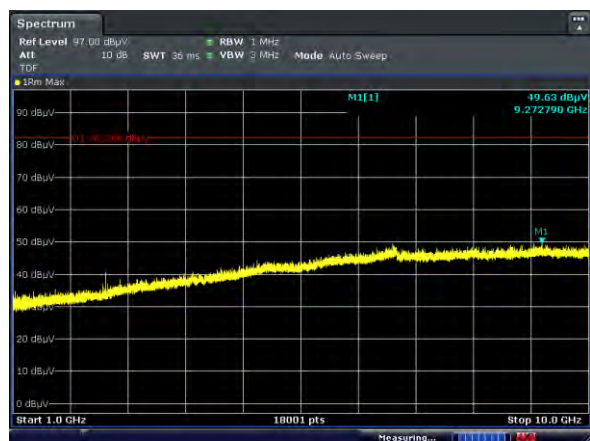
50 MHz 1 CC K patch: module 0
Low Channel Pol. H



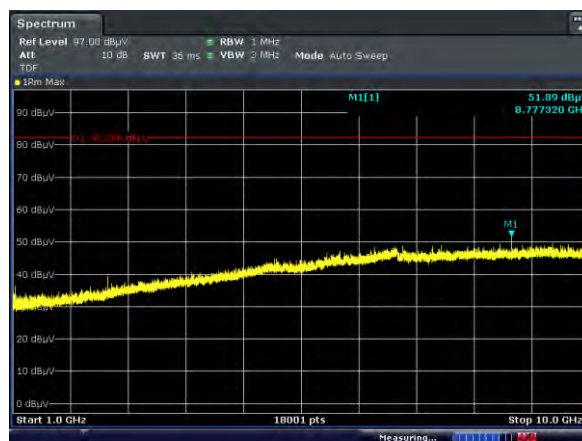
100 MHz 1 CC L patch: module 1
Low Channel Pol. H



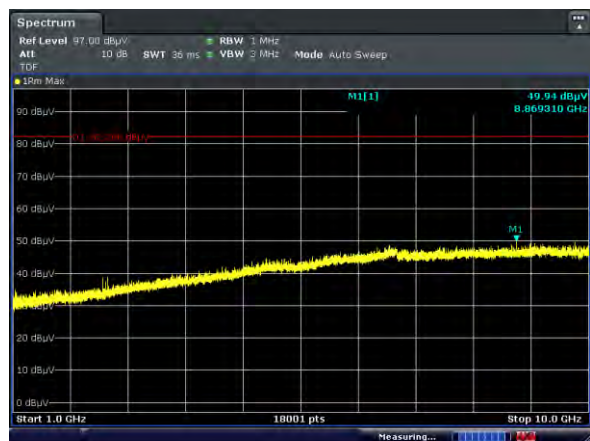
Middle Channel Pol. V



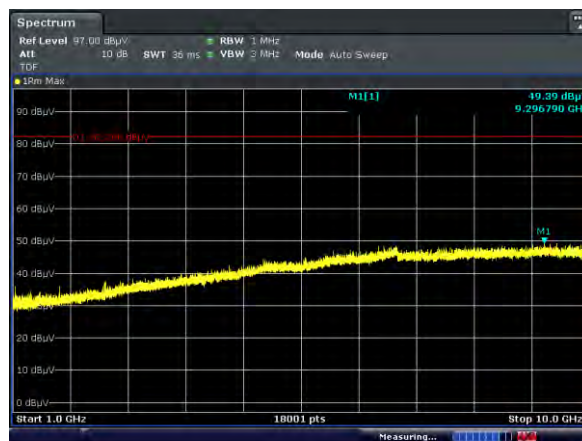
Middle Channel Pol. V



High Channel Pol. H

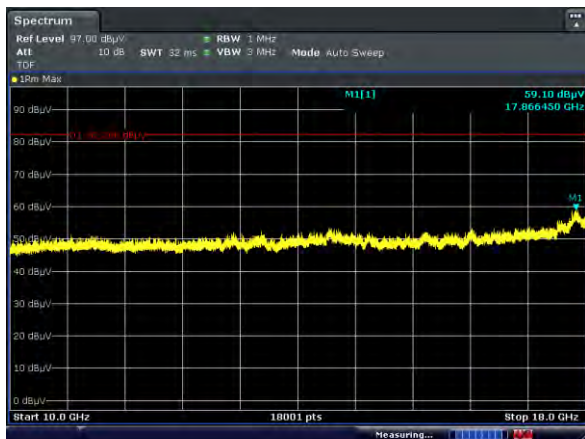


High Channel Pol. H

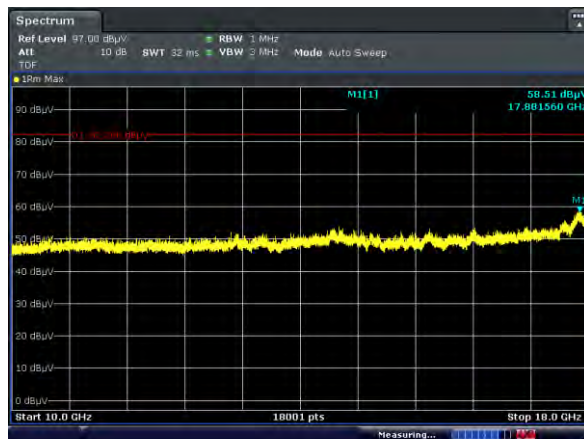


n261 SISO Dual [10 GHz ~ 18 GHz]

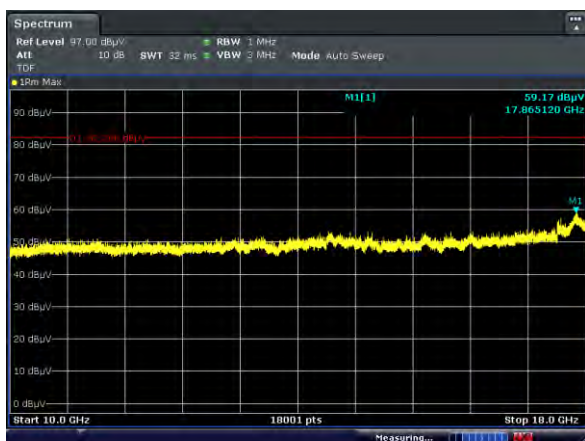
50 MHz 1 CC K patch: module 0
Low Channel Pol. H



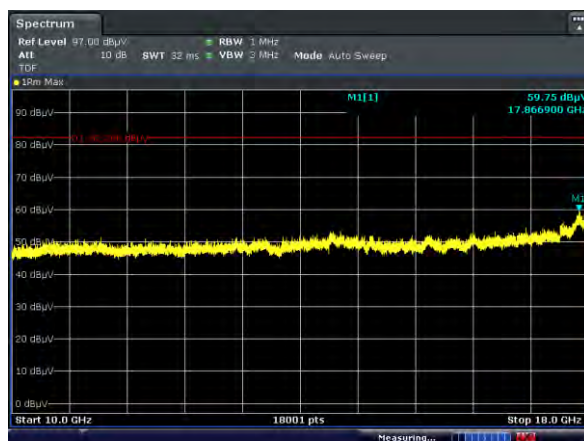
100 MHz 1 CC L patch: module 1
Low Channel Pol. H



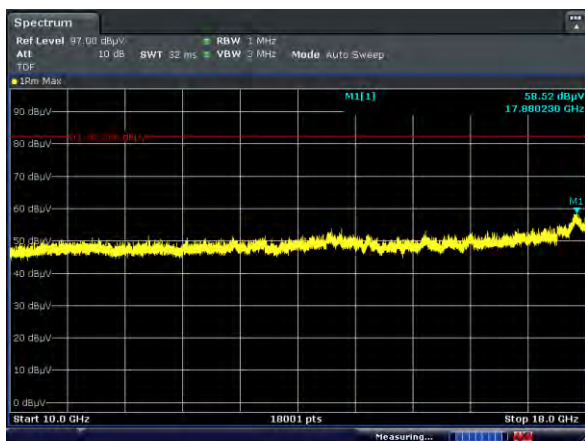
Middle Channel Pol. V



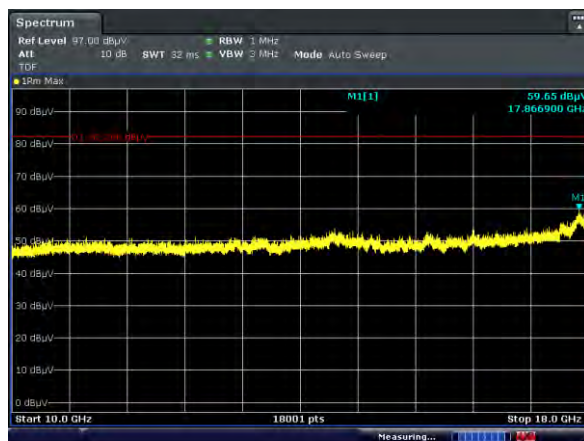
Middle Channel Pol. V



High Channel Pol. H



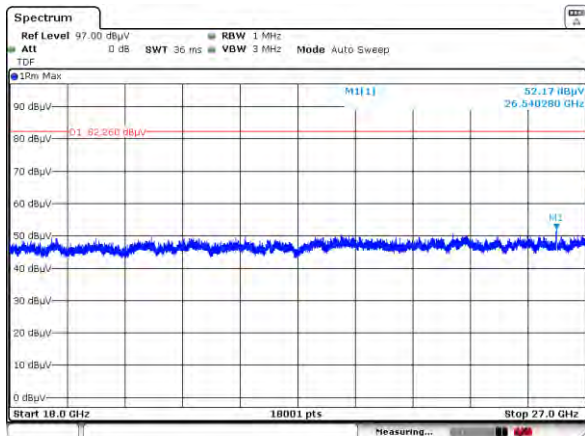
High Channel Pol. H



n261 SISO Dual [18 GHz ~ 27 GHz]

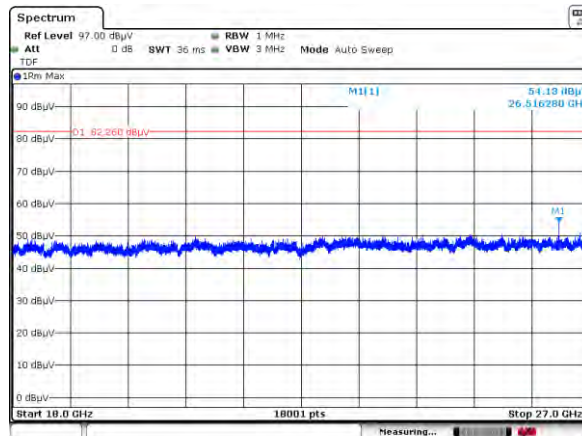
50 MHz 1 CC K patch: module 0

Low Channel Pol. H

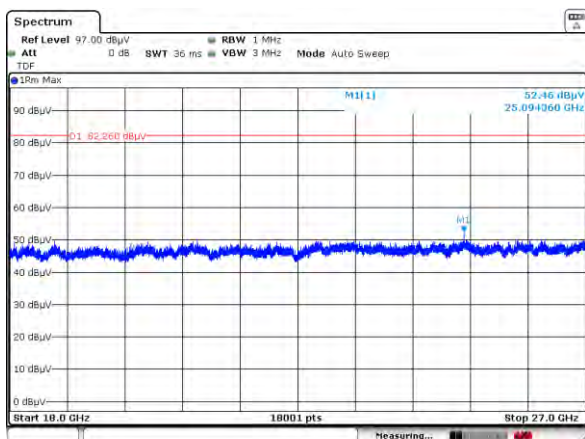


100 MHz 1 CC L patch: module 1

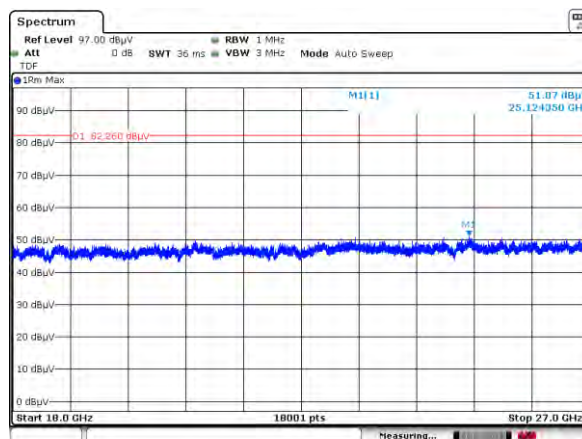
Low Channel Pol. H



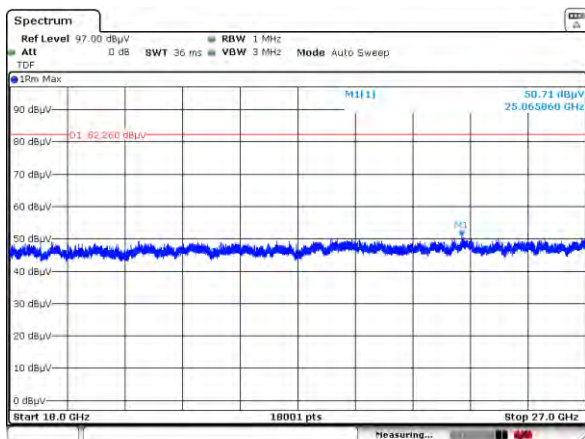
Middle Channel Pol. V



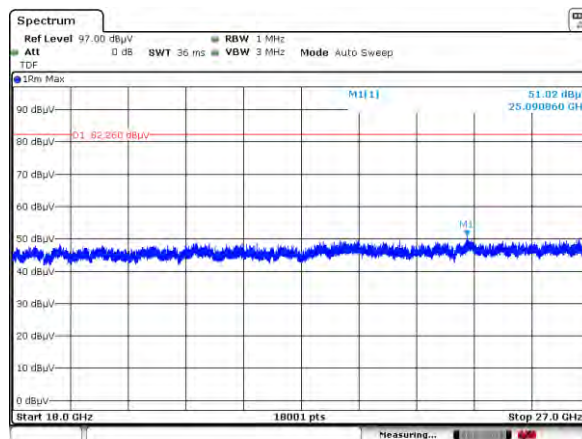
Middle Channel Pol. V



High Channel Pol. H



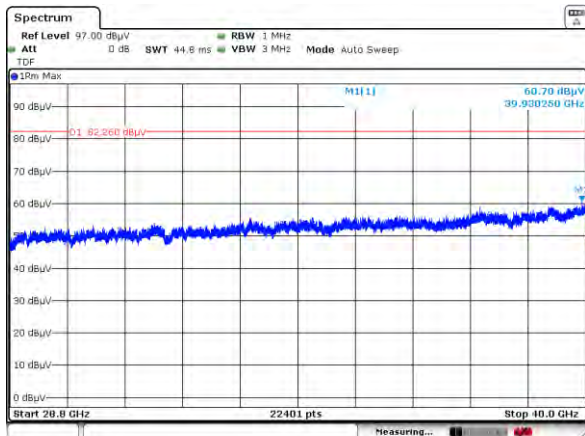
High Channel Pol. H



n261 SISO Dual [28.8 GHz ~ 40 GHz]

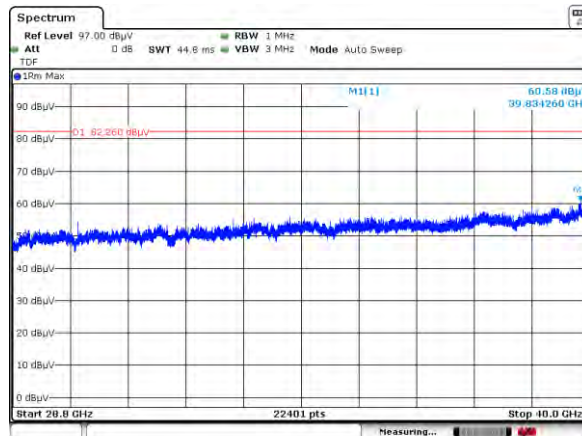
50 MHz 1 CC K patch: module 0

Low Channel Pol. H

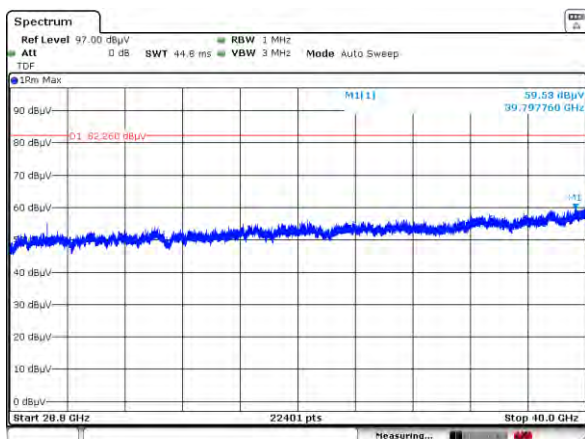


100 MHz 1 CC L patch: module 1

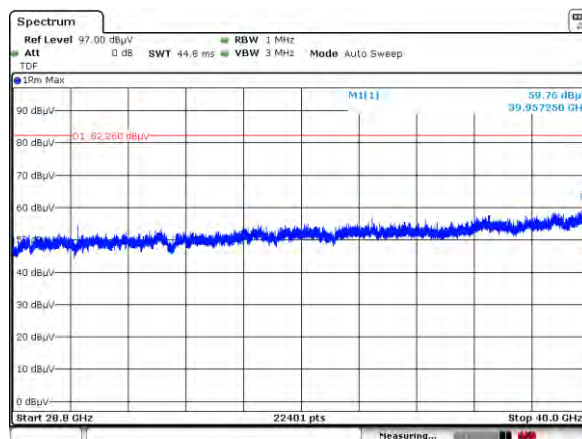
Low Channel Pol. H



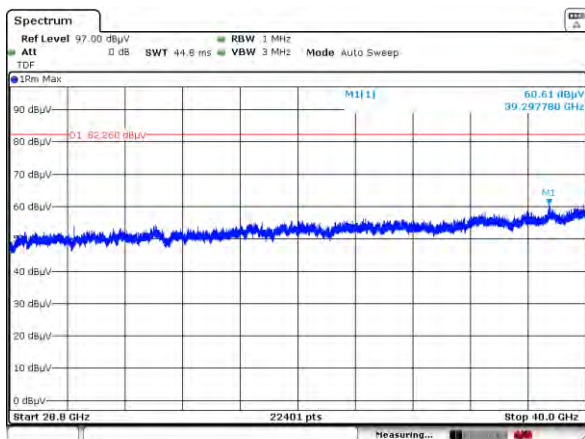
Middle Channel Pol. V



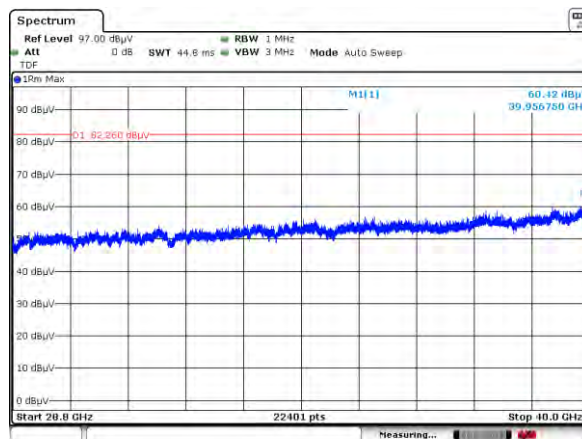
Middle Channel Pol. V



High Channel Pol. H



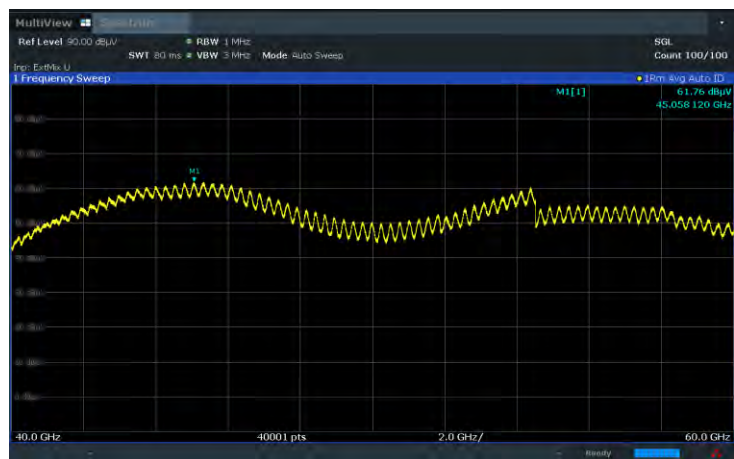
High Channel Pol. H



n261 SISO Dual [40 GHz ~ 60 GHz]

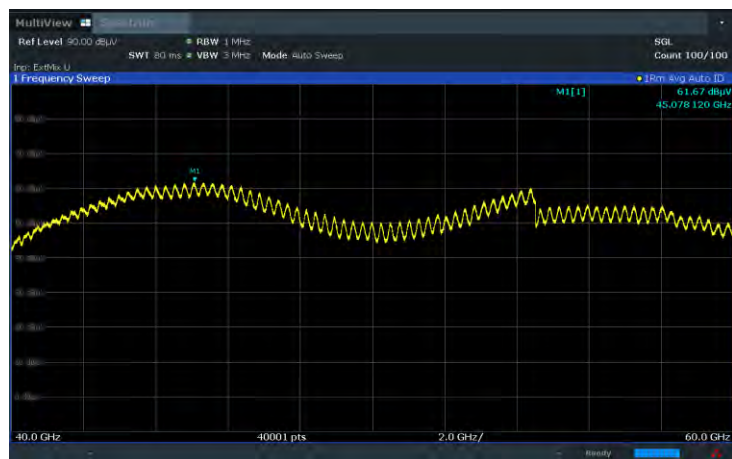
50 MHz 1 CC K patch: module 0

Low Channel Pol. H

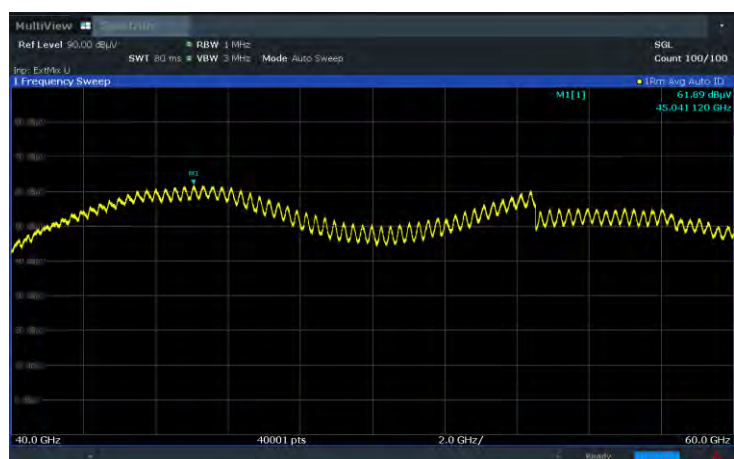


100 MHz 1 CC L patch: module 1

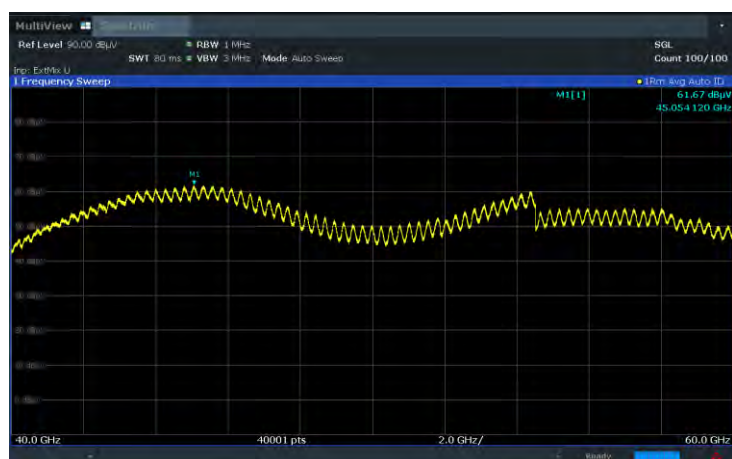
Low Channel Pol. H



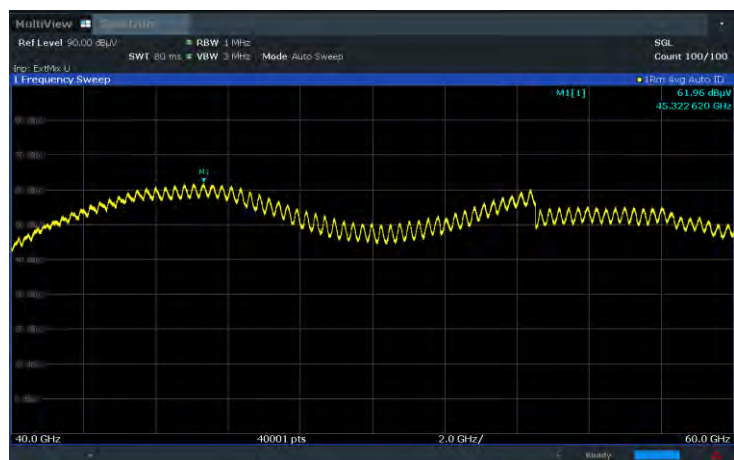
Middle Channel Pol. V



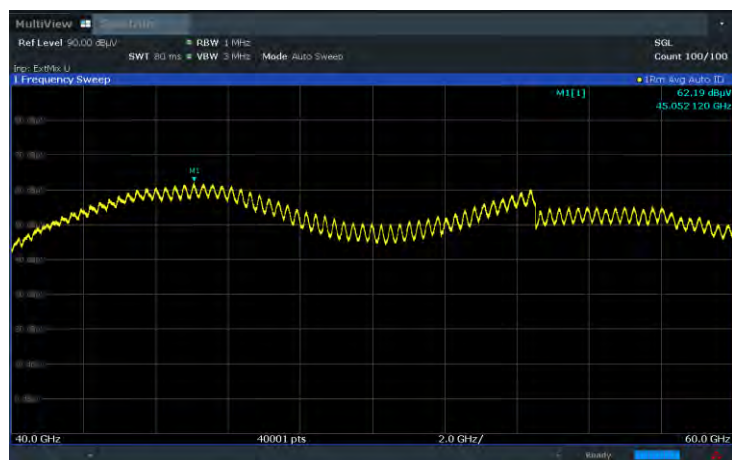
Middle Channel Pol. V



High Channel Pol. H

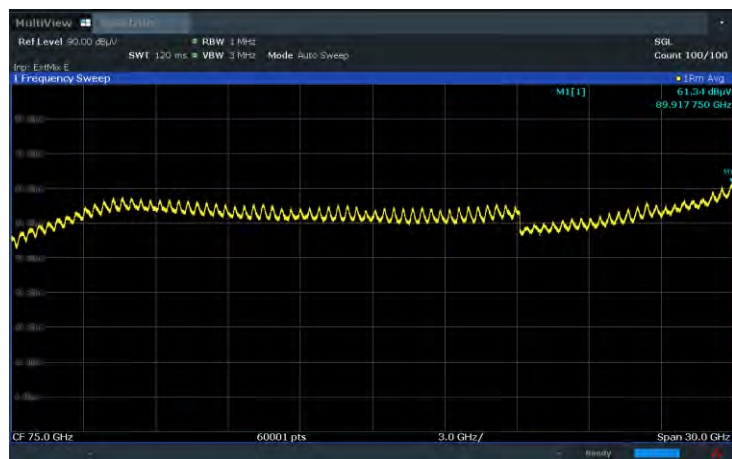


High Channel Pol. H

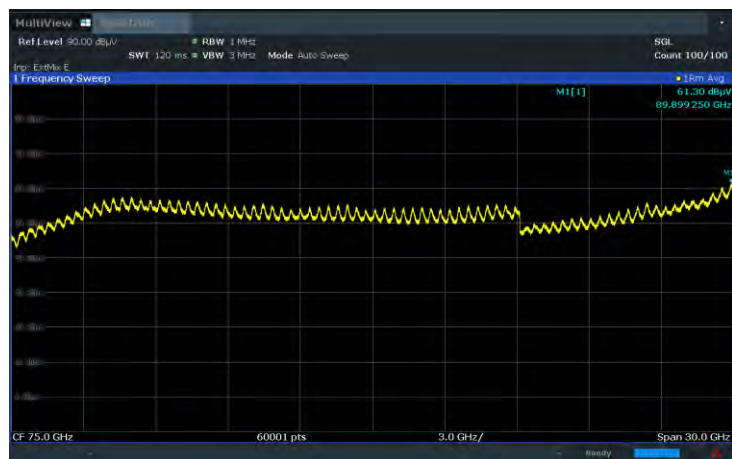


n261 SISO Dual [60 GHz ~ 90 GHz]

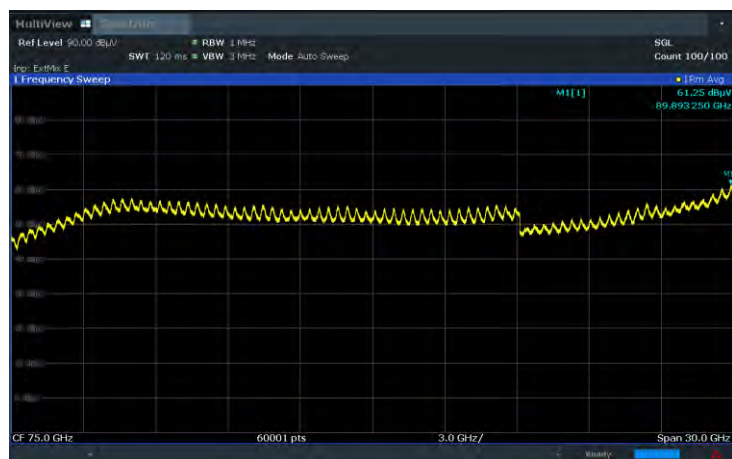
50 MHz 1 CC K patch: module 0
Low Channel Pol. H



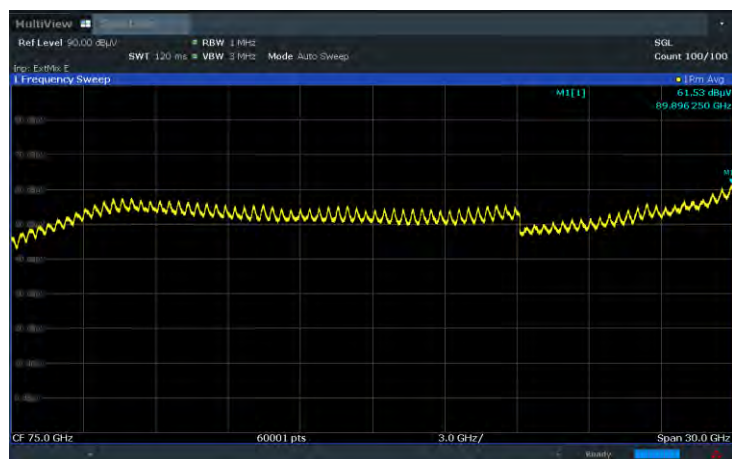
100 MHz 1 CC L patch: module 1
Low Channel Pol. H



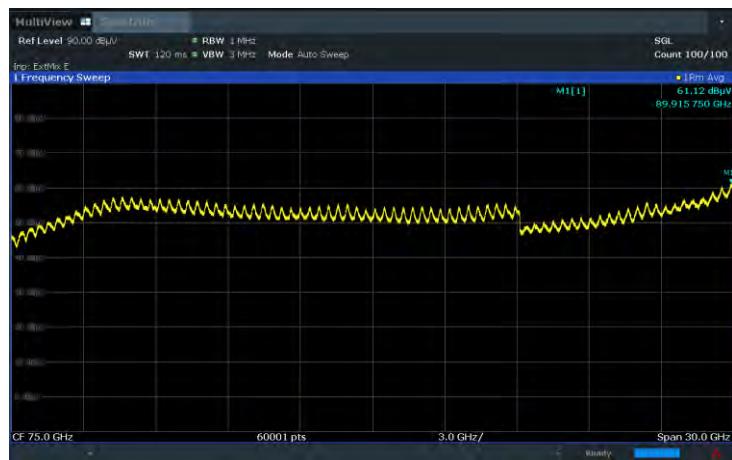
Middle Channel Pol. V



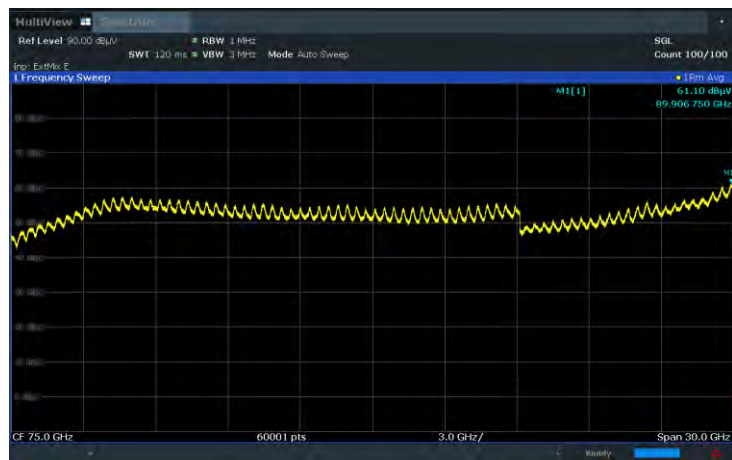
Middle Channel Pol. V



High Channel Pol. H



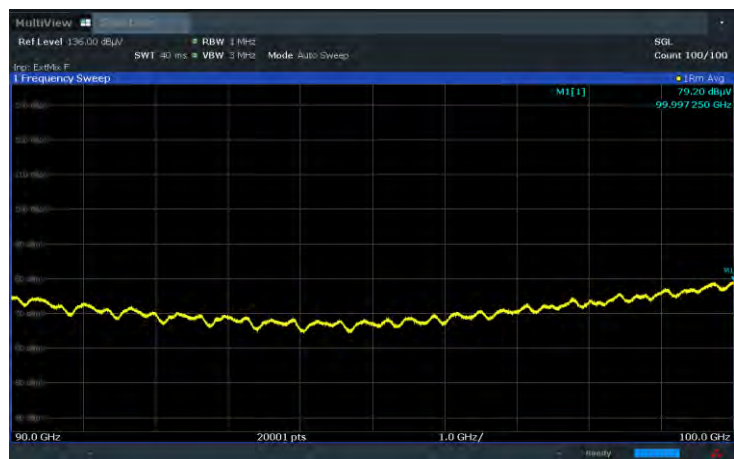
High Channel Pol. H



n261 SISO Dual [90 GHz ~ 100 GHz]

50 MHz 1 CC K patch: module 0

Low Channel Pol. H

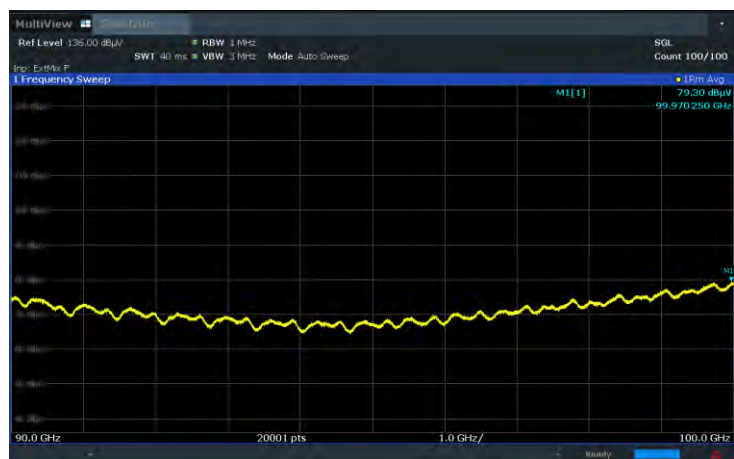


100 MHz 1 CC L patch: module 1

Low Channel Pol. H



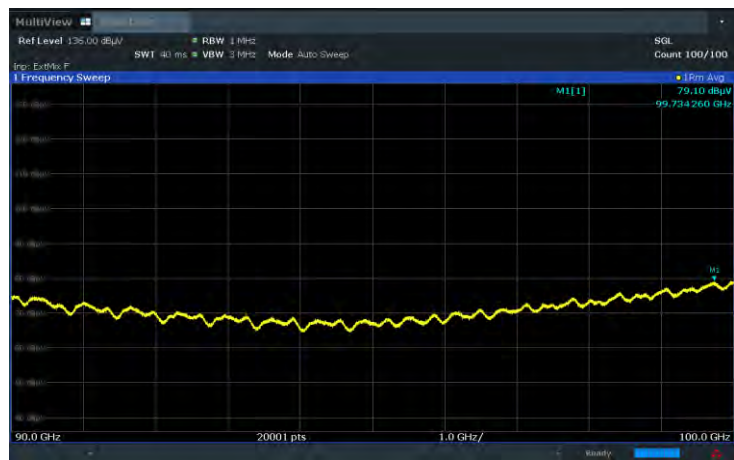
Middle Channel Pol. V



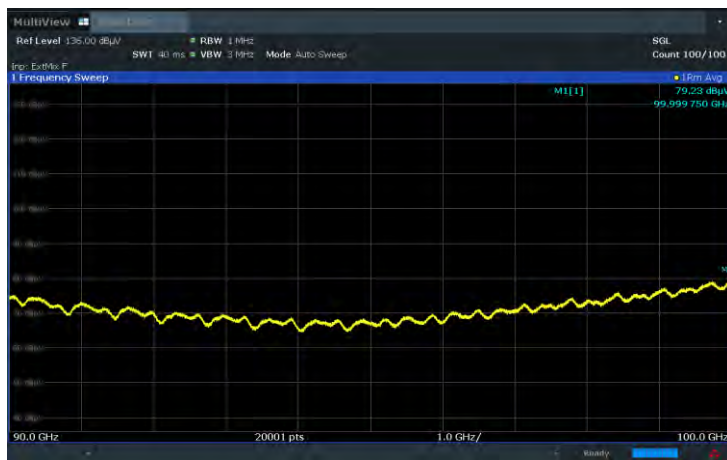
Middle Channel Pol. V



High Channel Pol. H



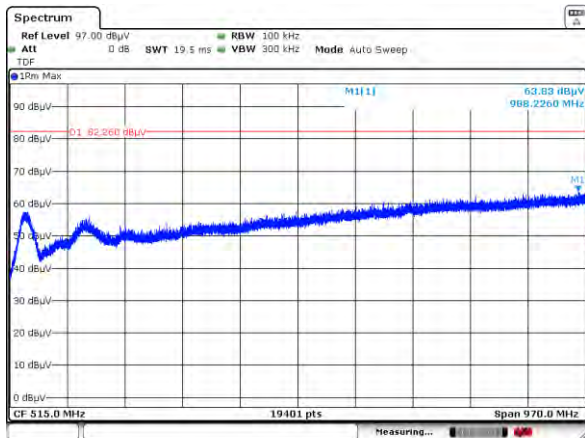
High Channel Pol. H



n260 SISO Dual [30 MHz ~ 1 GHz]

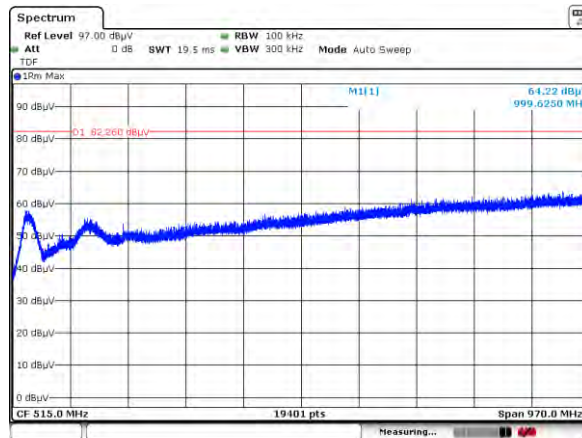
50 MHz 1 CC K patch: module 0

Low Channel Pol. H

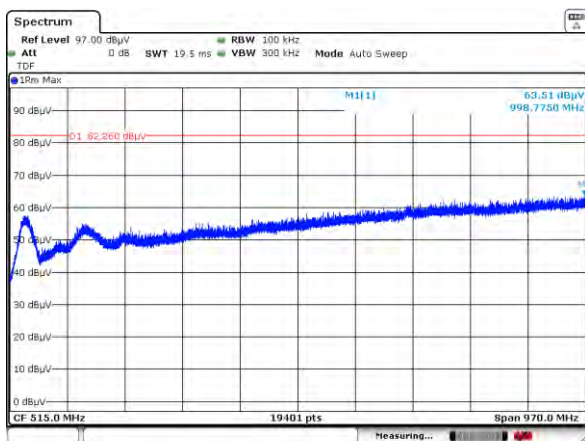


50 MHz 1 CC L patch: module 1

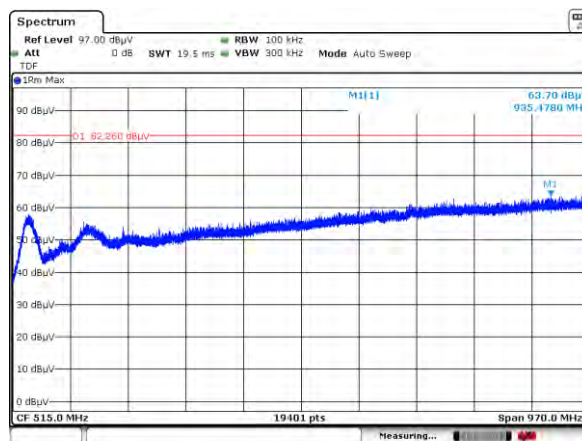
Low Channel Pol. H



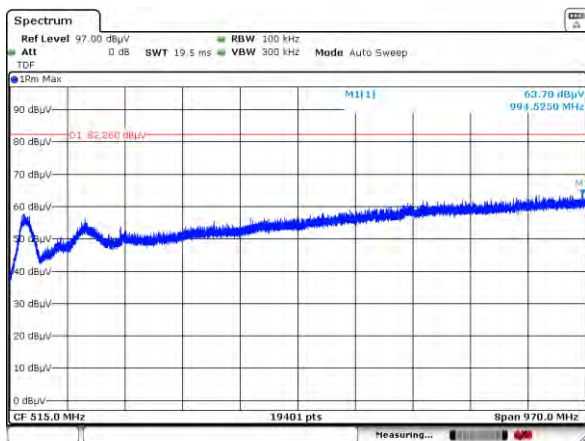
Middle Channel Pol. V



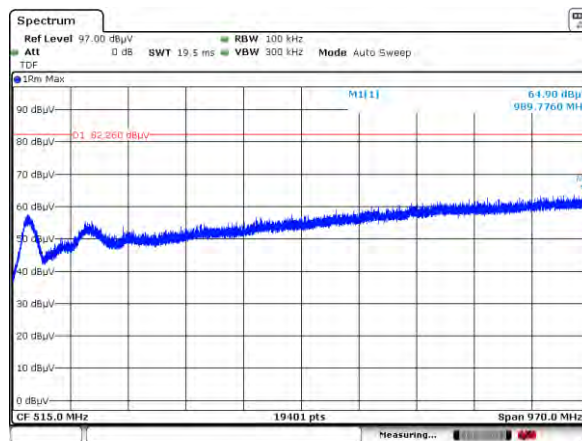
Middle Channel Pol. V



High Channel Pol. H

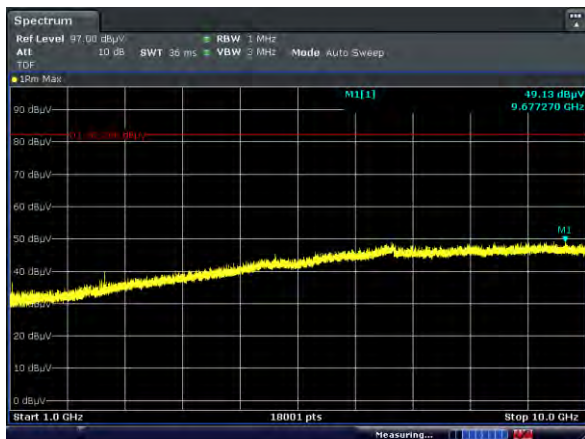


High Channel Pol. H

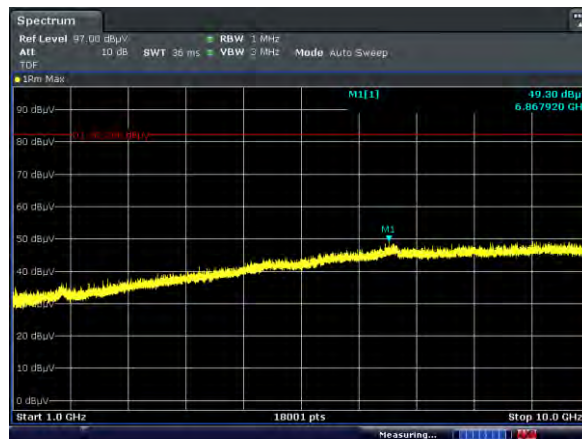


n260 SISO Dual [1 GHz ~ 10 GHz]

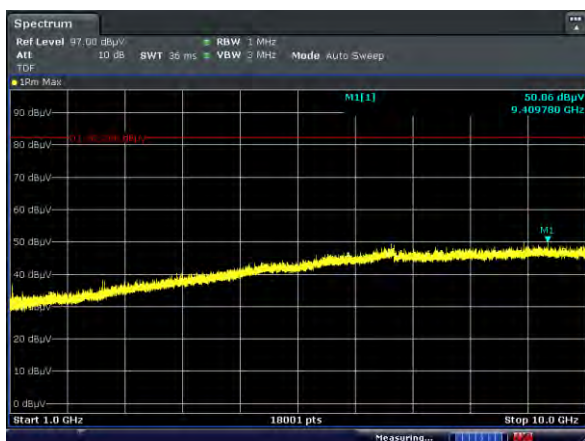
50 MHz 1 CC K patch: module 0
Low Channel Pol. H



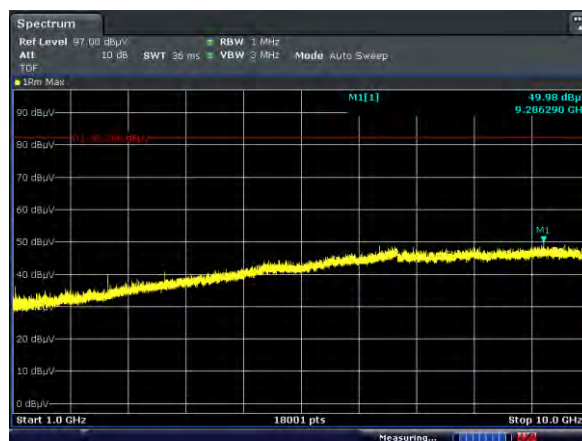
50 MHz 1 CC L patch: module 1
Low Channel Pol. H



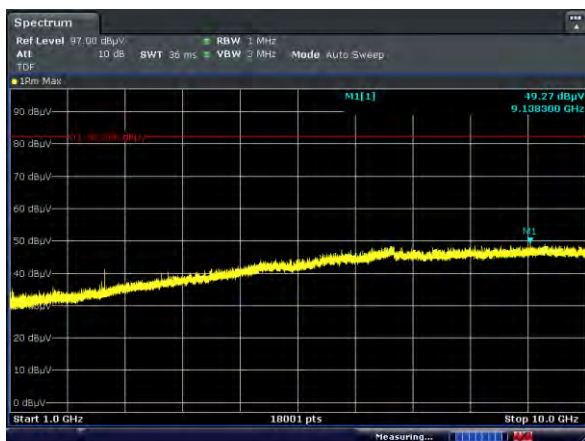
Middle Channel Pol. V



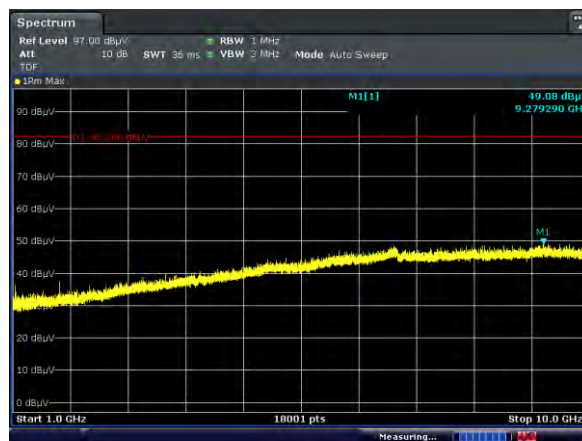
Middle Channel Pol. V



High Channel Pol. H

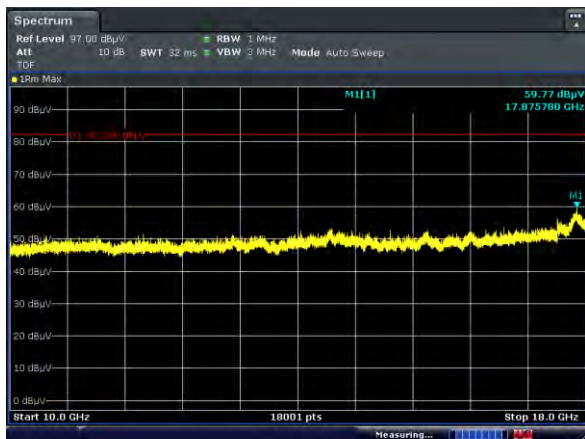


High Channel Pol. H

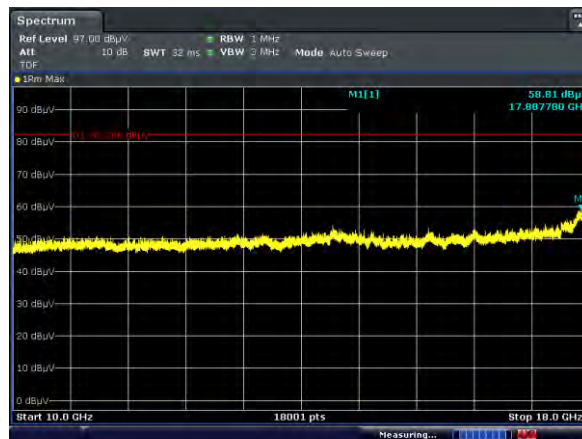


n260 SISO Dual [10 GHz ~ 18 GHz]

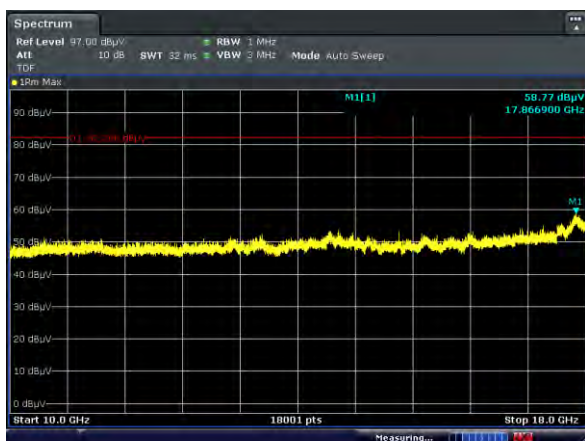
50 MHz 1 CC K patch: module 0
Low Channel Pol. H



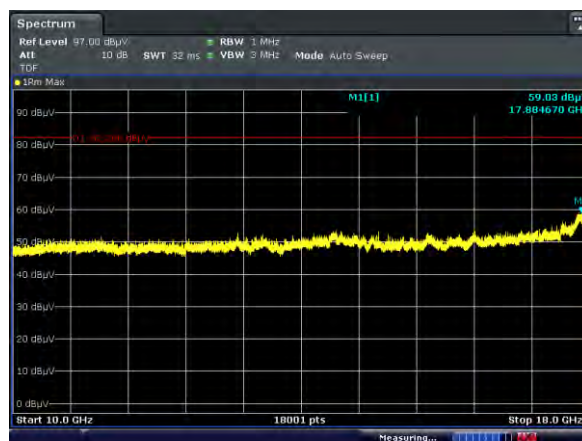
50 MHz 1 CC L patch: module 1
Low Channel Pol. H



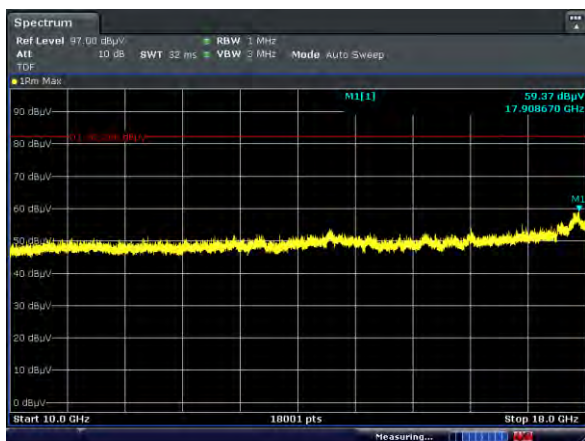
Middle Channel Pol. V



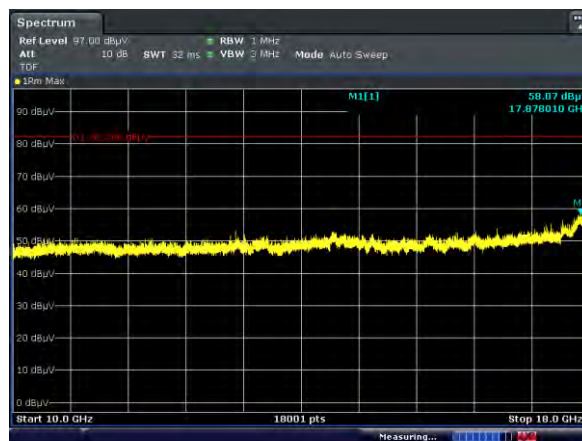
Middle Channel Pol. V



High Channel Pol. H

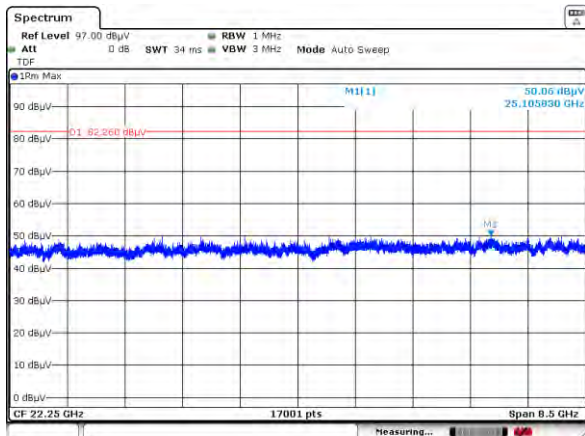


High Channel Pol. H

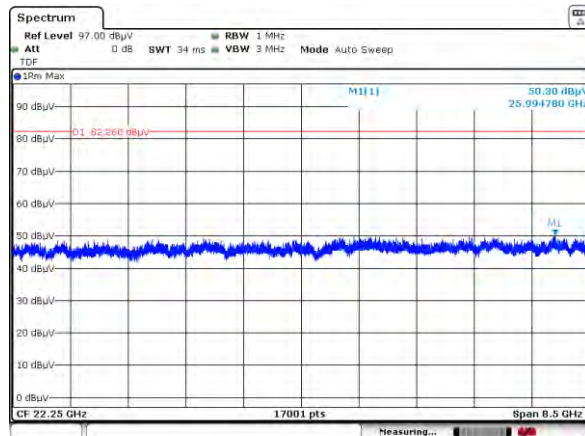


n260 SISO Dual [18 GHz ~ 26.5 GHz]

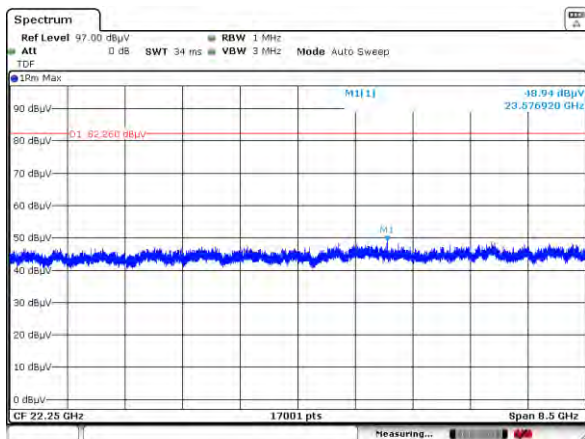
50 MHz 1 CC K patch: module 0
Low Channel Pol. H



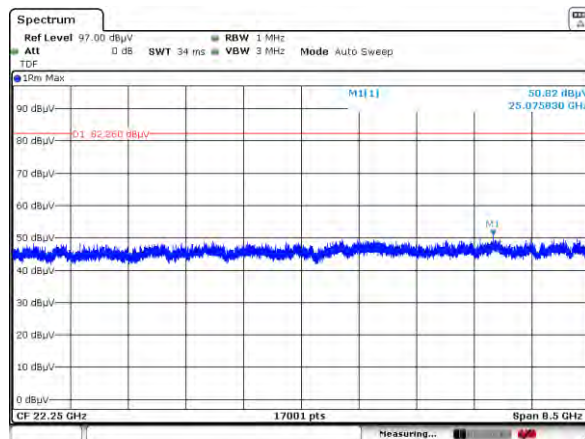
50 MHz 1 CC L patch: module 1
Low Channel Pol. H



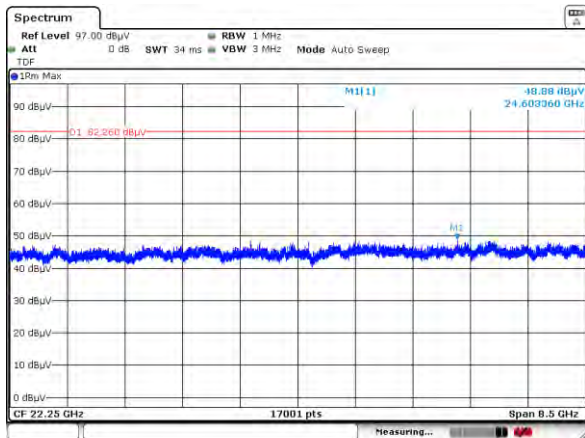
Middle Channel Pol. V



Middle Channel Pol. V



High Channel Pol. H



High Channel Pol. H

