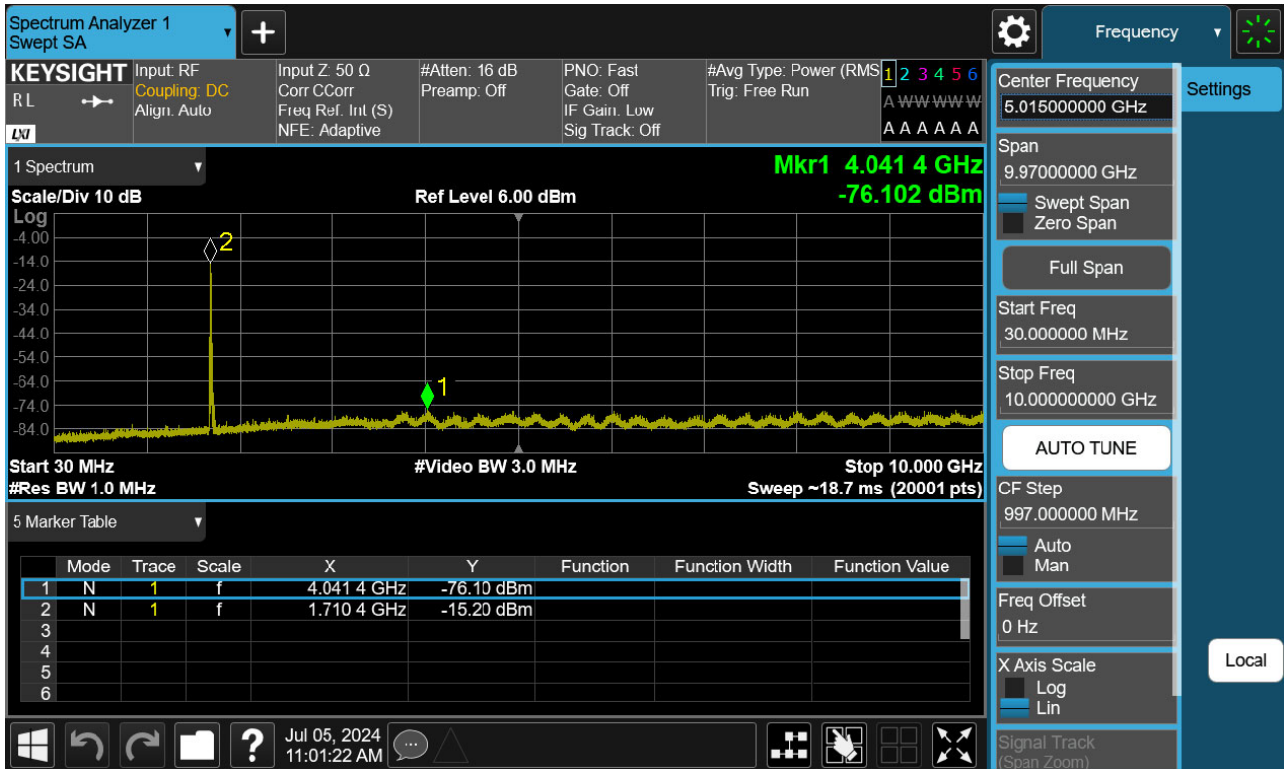


PCC 5MHz Ch131997 RB1 Offset24 SCC 5MHz Ch132045 RB1 Offset0

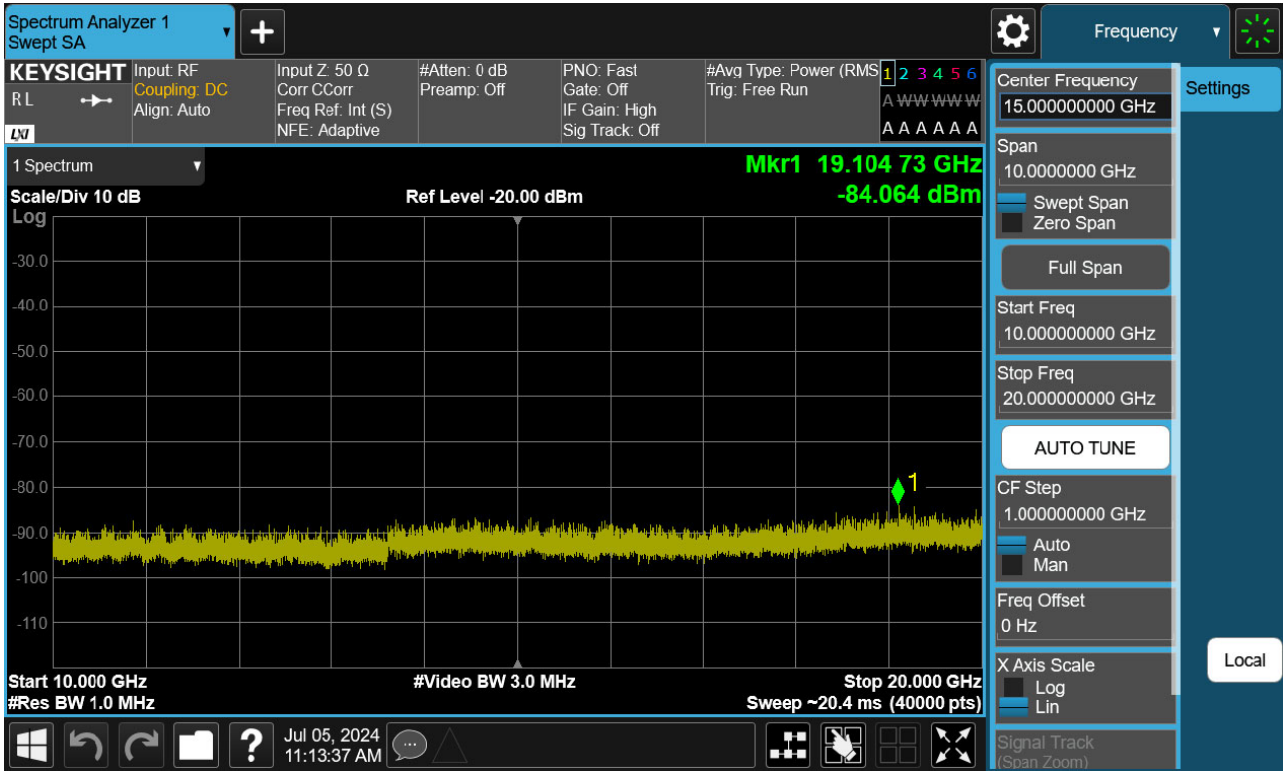


PCC 5MHz Ch131997 RB1 Offset0 SCC 5MHz Ch132045 RB1 Offset24

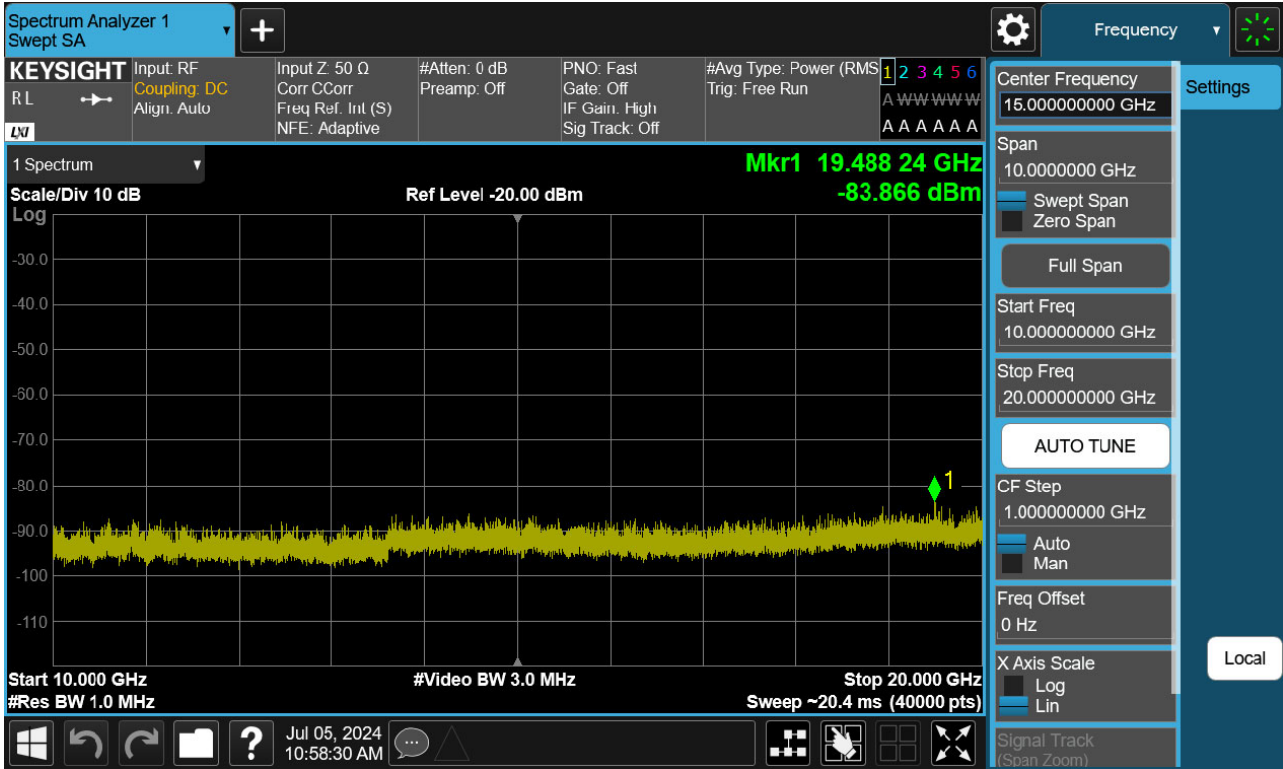


Frequency Range : 10 GHz ~ 20 GHz

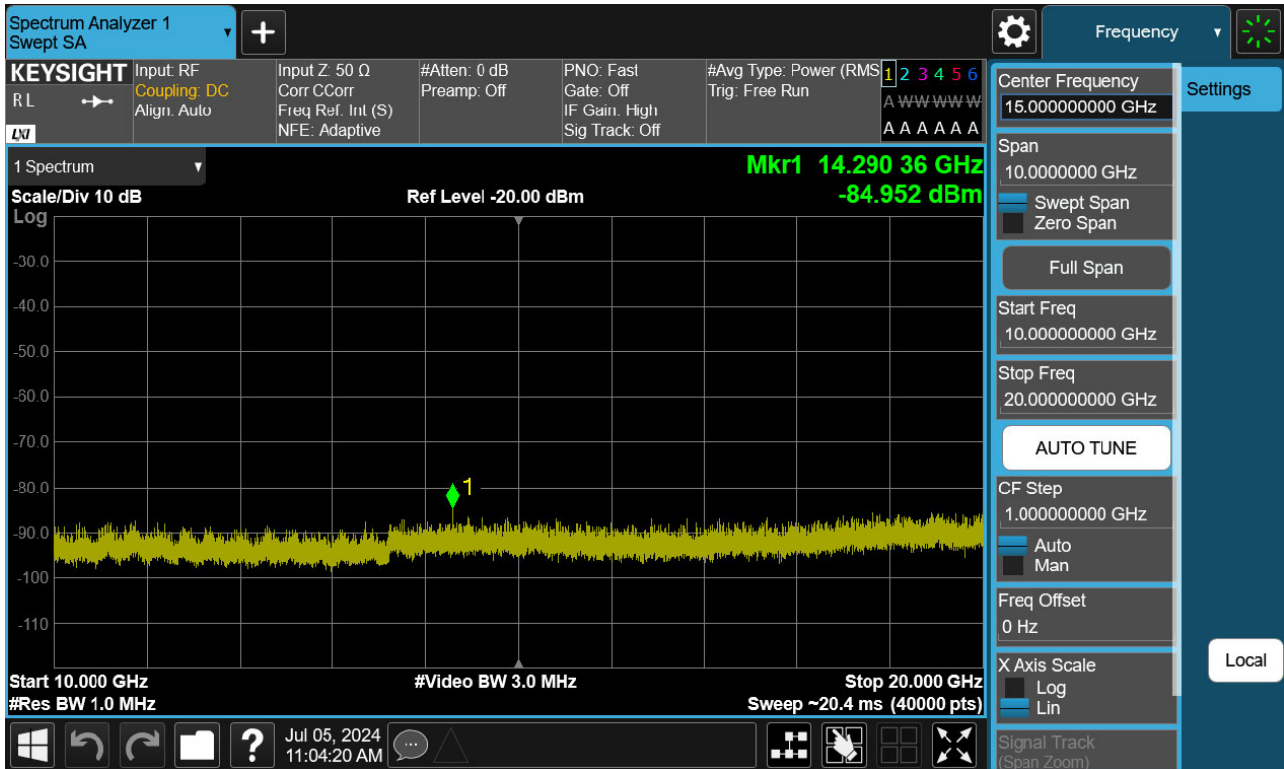
PCC 10MHz Ch132523 RB50 Offset0, SCC 10MHz Ch132622 RB50 Offset0



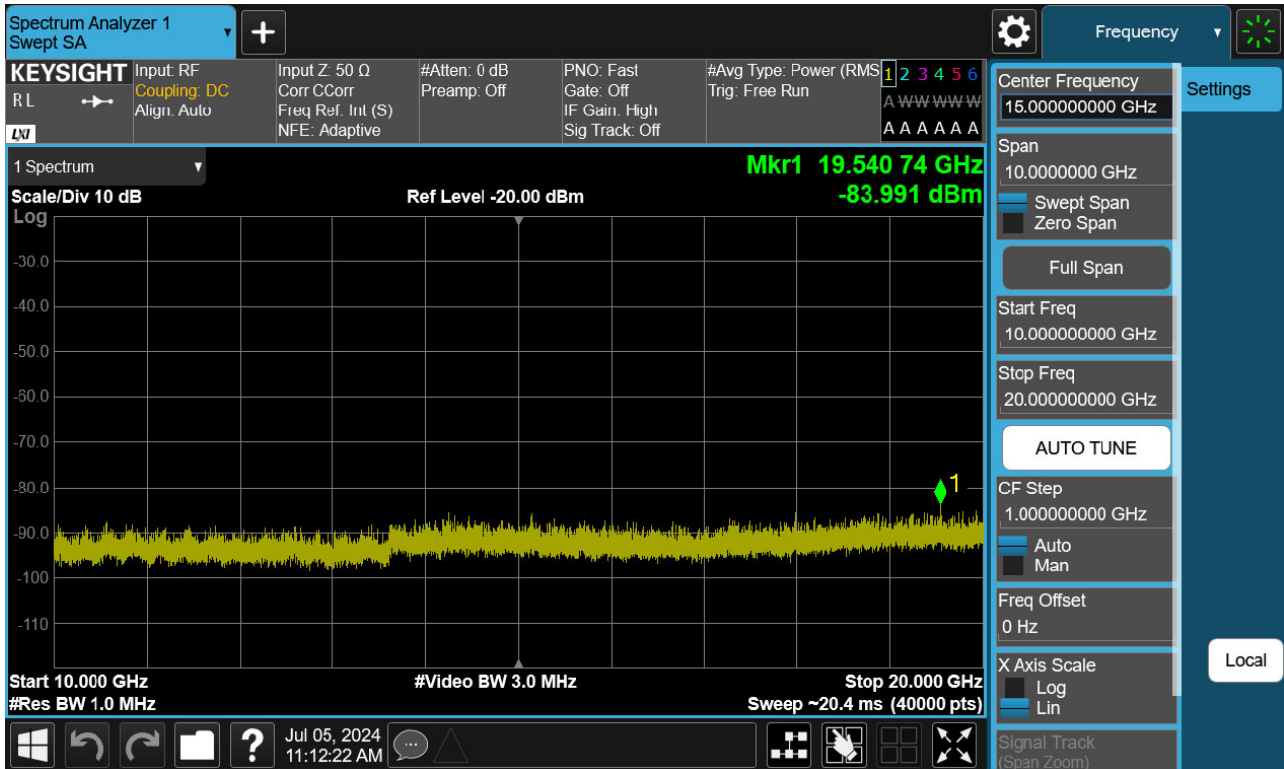
PCC 10MHz Ch132397 RB1 Offset49, SCC 5MHz Ch132469 RB1 Offset0



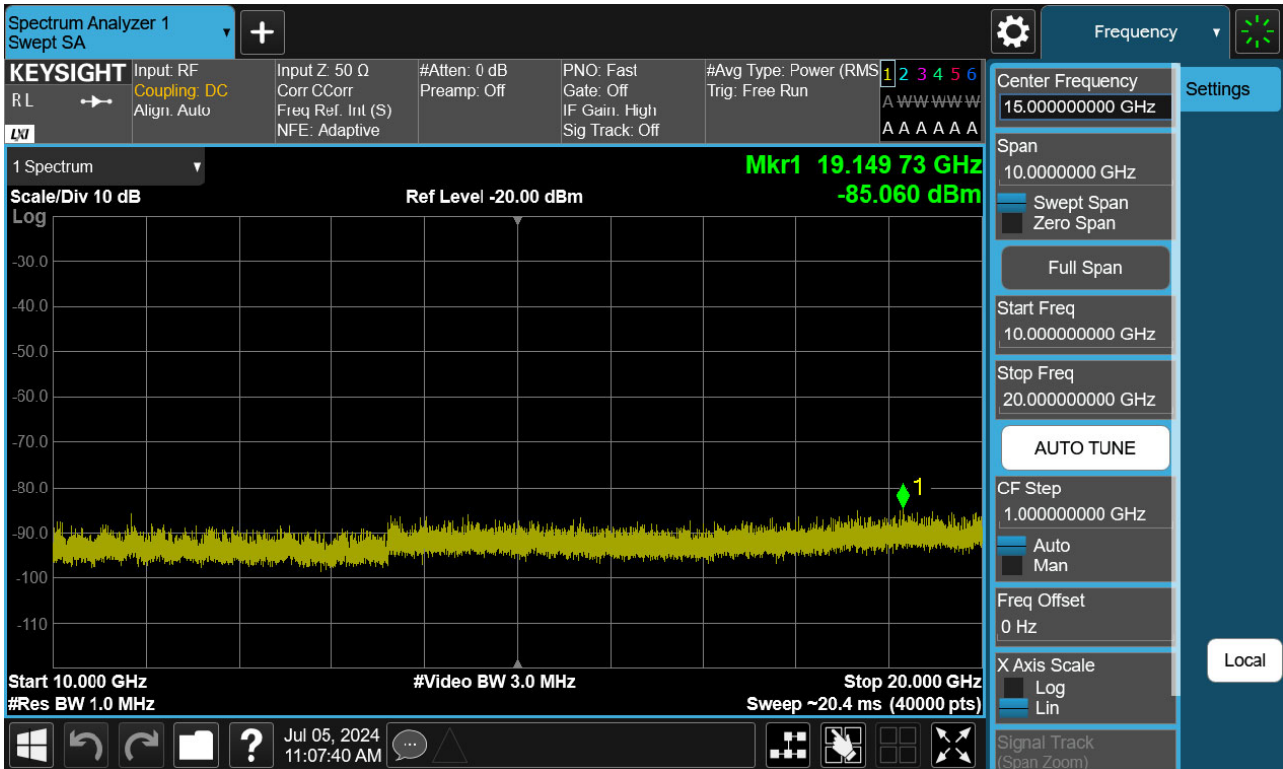
PCC 10MHz Ch132397 RB1 Offset0, SCC 5MHz Ch132469 RB1 Offset24



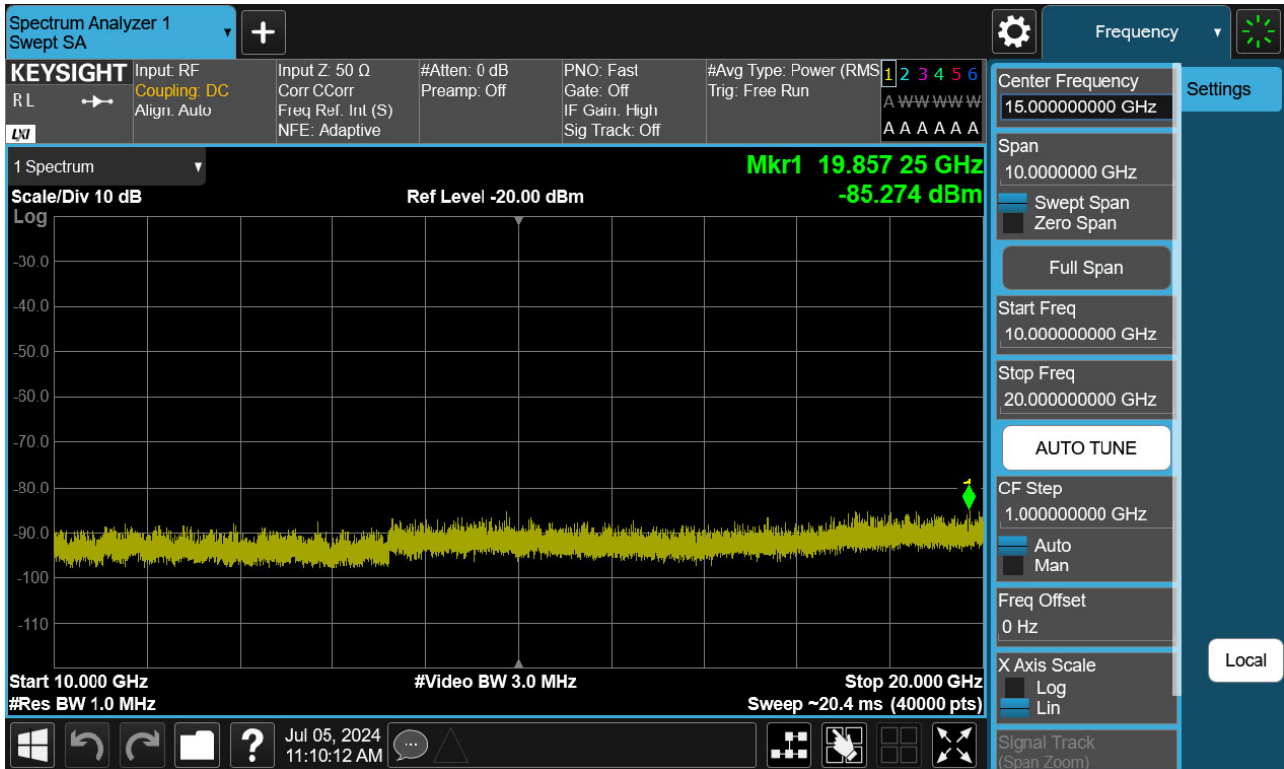
PCC 10MHz Ch132373 RB50 Offset0, SCC 10MHz Ch132472 RB50 Offset0



PCC 10MHz Ch132022 RB50 Offset0, SCC 10MHz Ch132121 RB50 Offset0

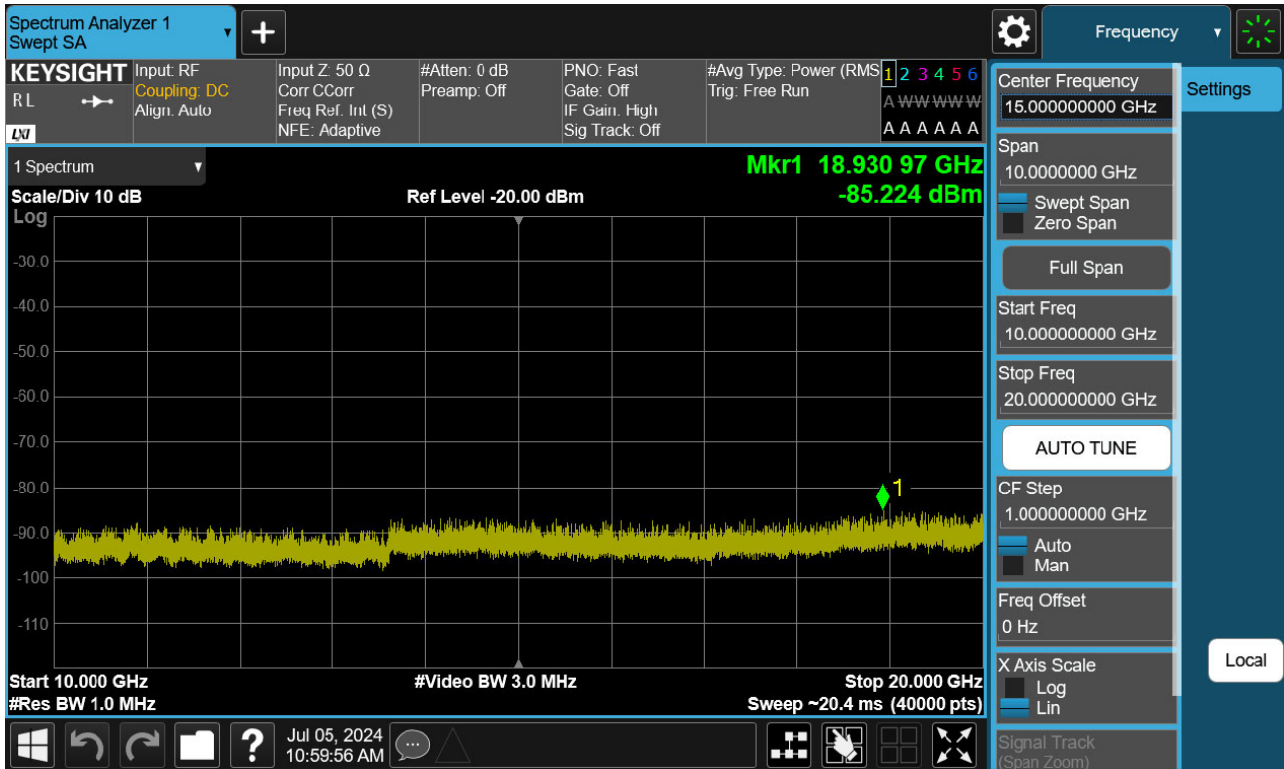


PCC 5MHz Ch132599 RB25 Offset0, SCC 5MHz Ch132647 RB25 Offset0

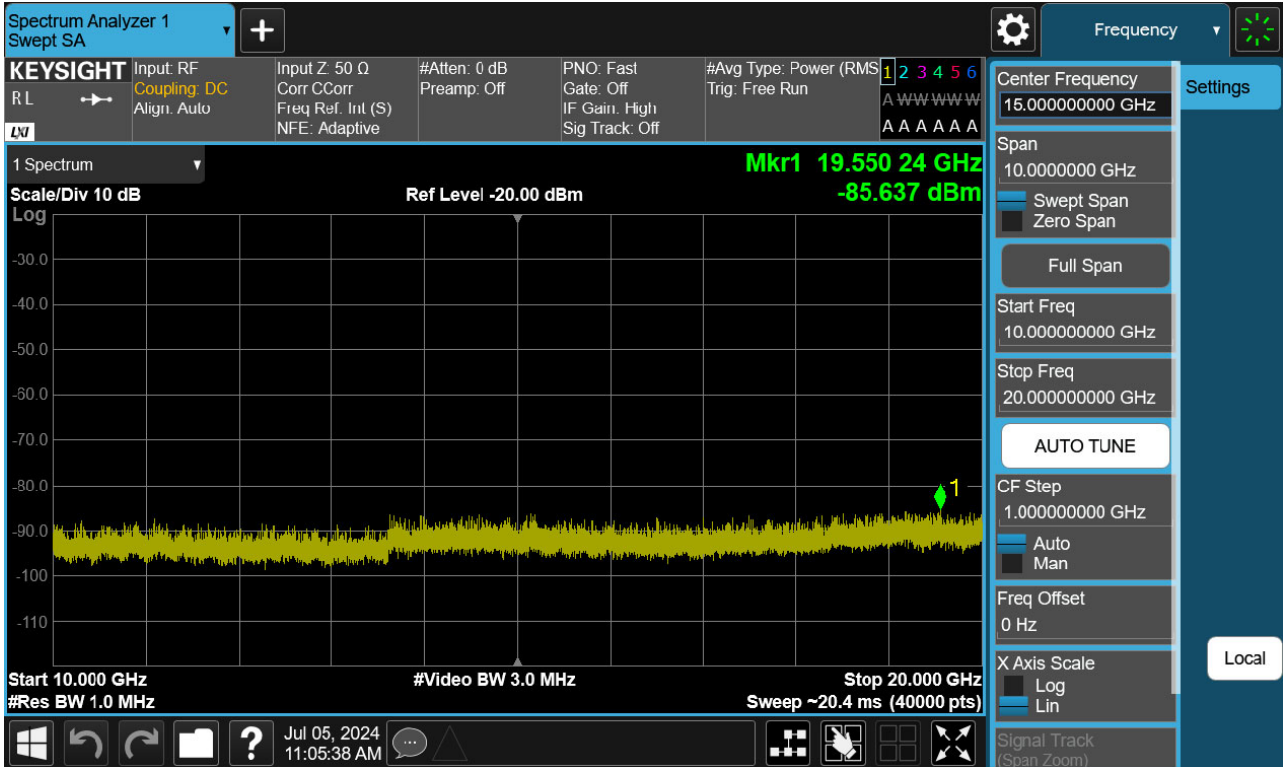




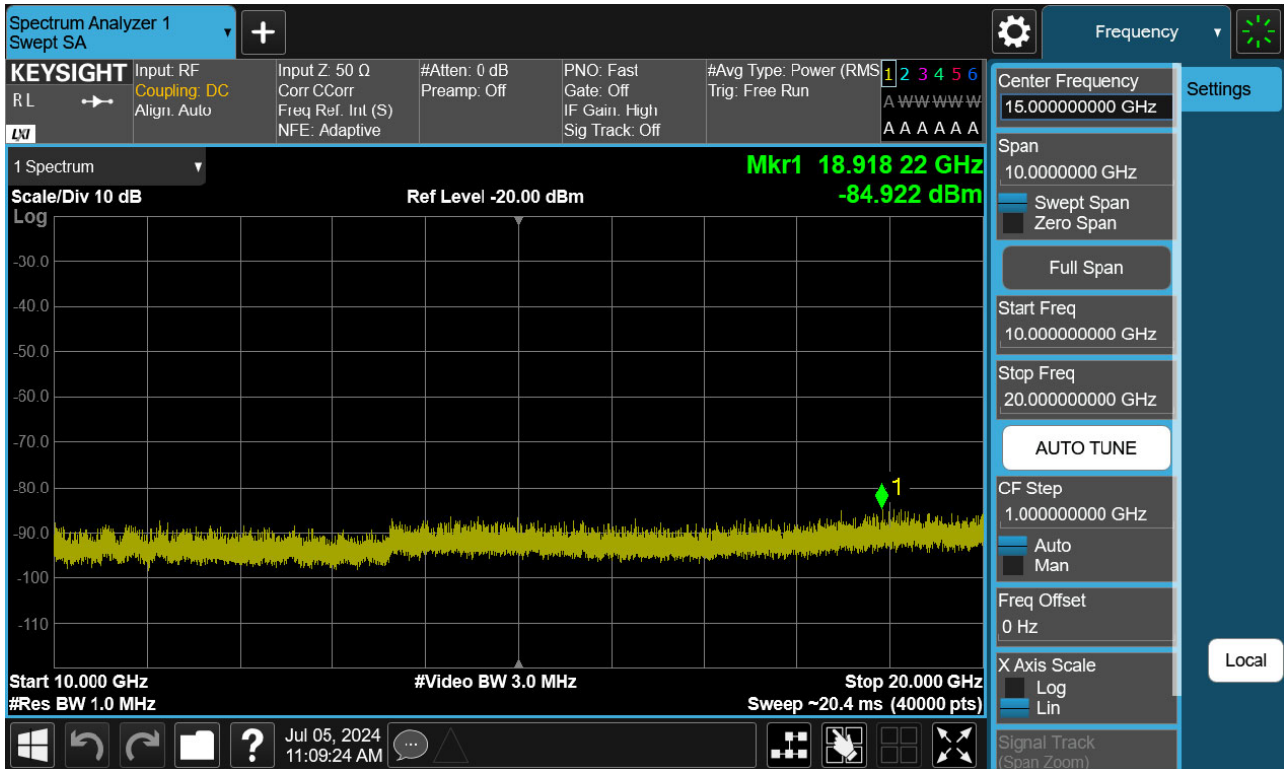
PCC 5MHz Ch132504 RB1 Offset24, SCC 15MHz Ch132597 RB1 Offset0



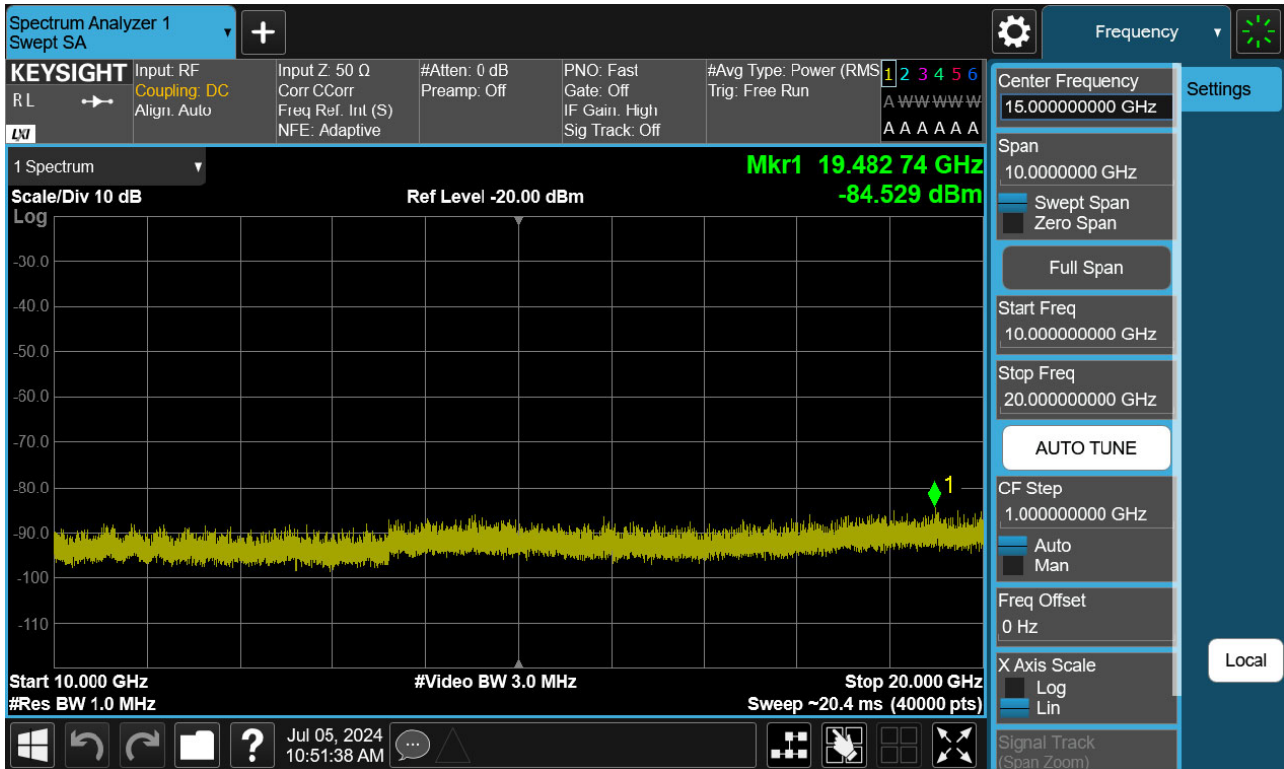
PCC 5MHz Ch132504 RB1 Offset0, SCC 15MHz Ch132597 RB1 Offset74



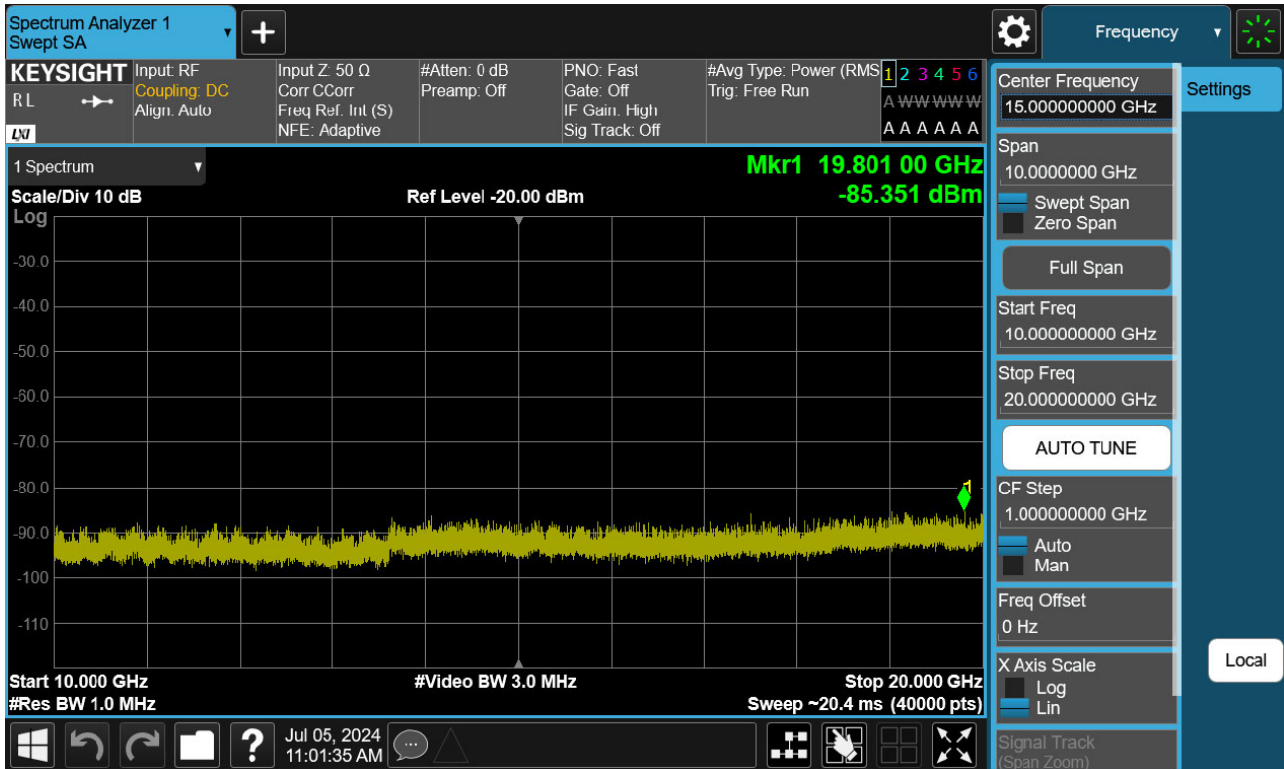
PCC 5MHz Ch132375 RB25 Offset0, SCC 10MHz Ch132447 RB50 Offset0



PCC 5MHz Ch131997 RB1 Offset24, SCC 5MHz Ch132045 RB1 Offset0

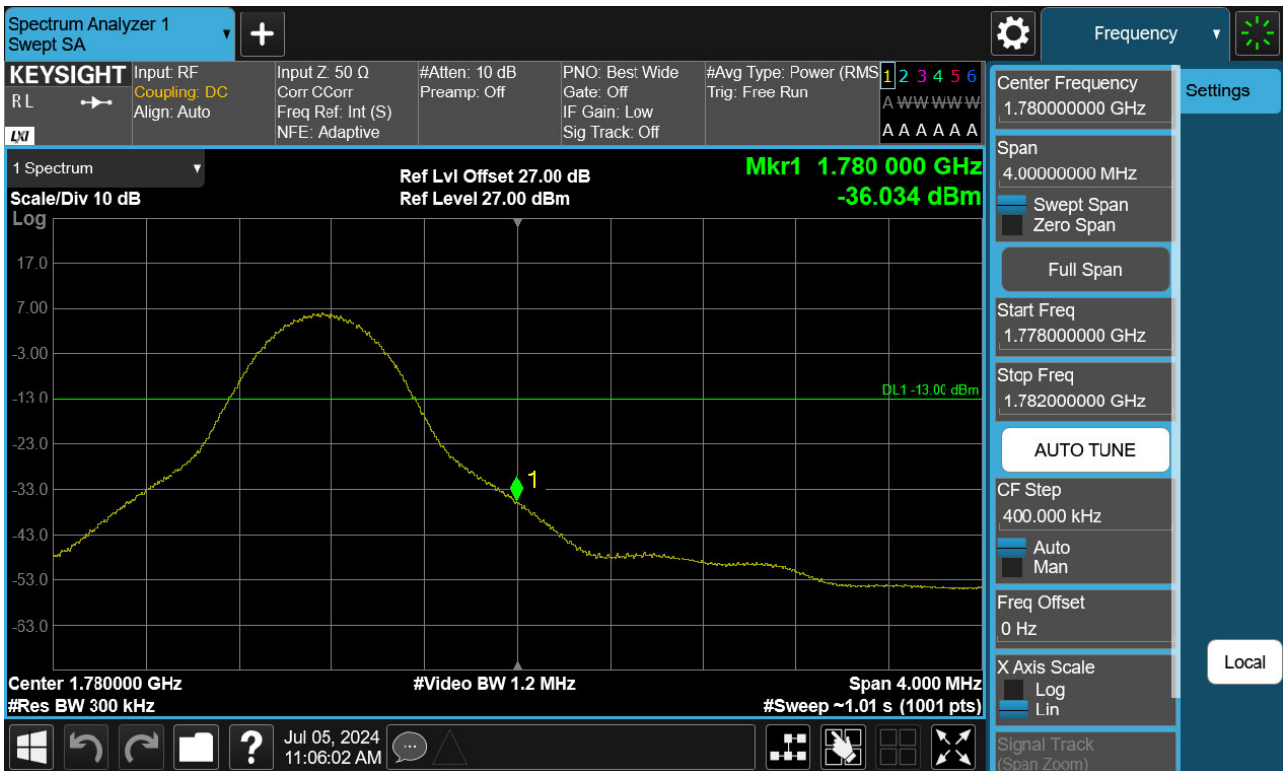


PCC 5MHz Ch131997 RB1 Offset0, SCC 5MHz Ch132045 RB1 Offset24



### 9.4 Channel Edge

Highest Channel\_PCC 5MHz Ch132504 RB1 Offset0 SCC 15MHz Ch132597 RB1 Offset74(1)



Highest Channel\_PCC 5MHz Ch132504 RB1 Offset0 SCC 15MHz Ch132597 RB1 Offset74(2)



Highest Channel\_PCC 5MHz Ch132504 RB1 Offset24 SCC 15MHz Ch132597 RB1 Offset0(1)

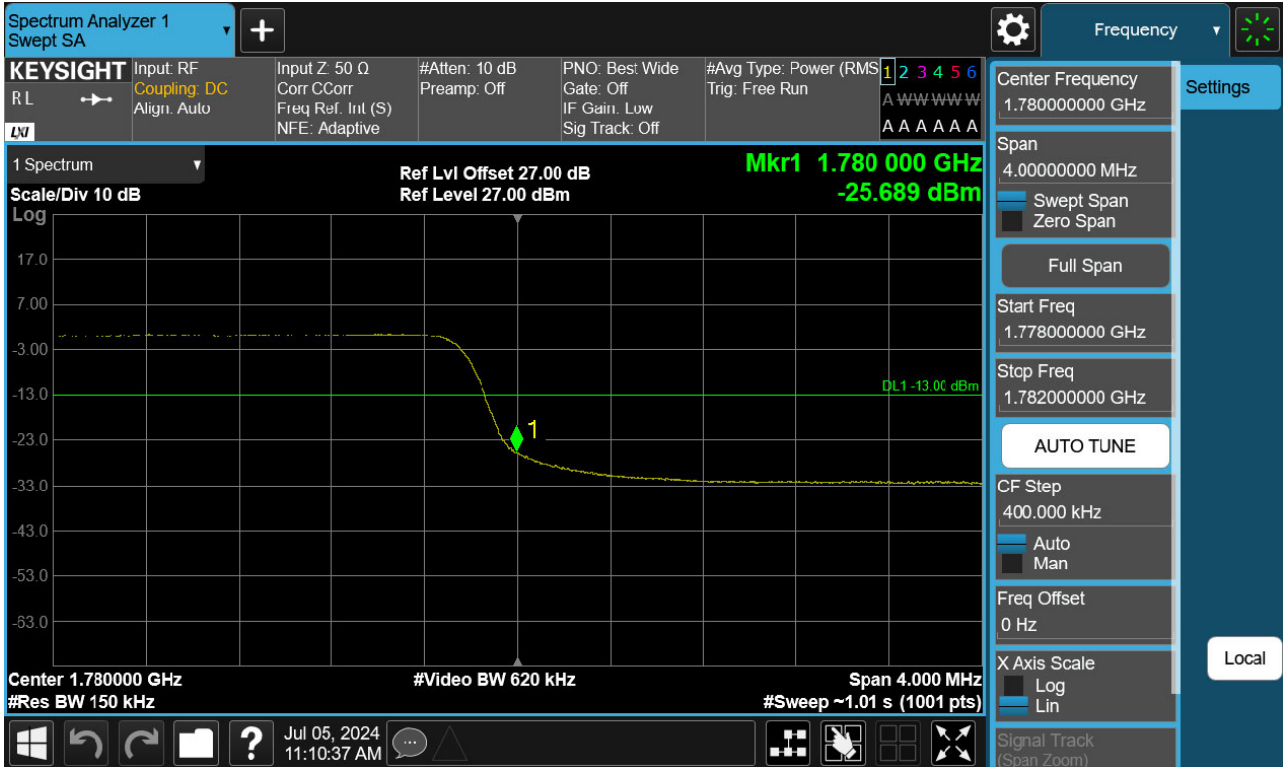




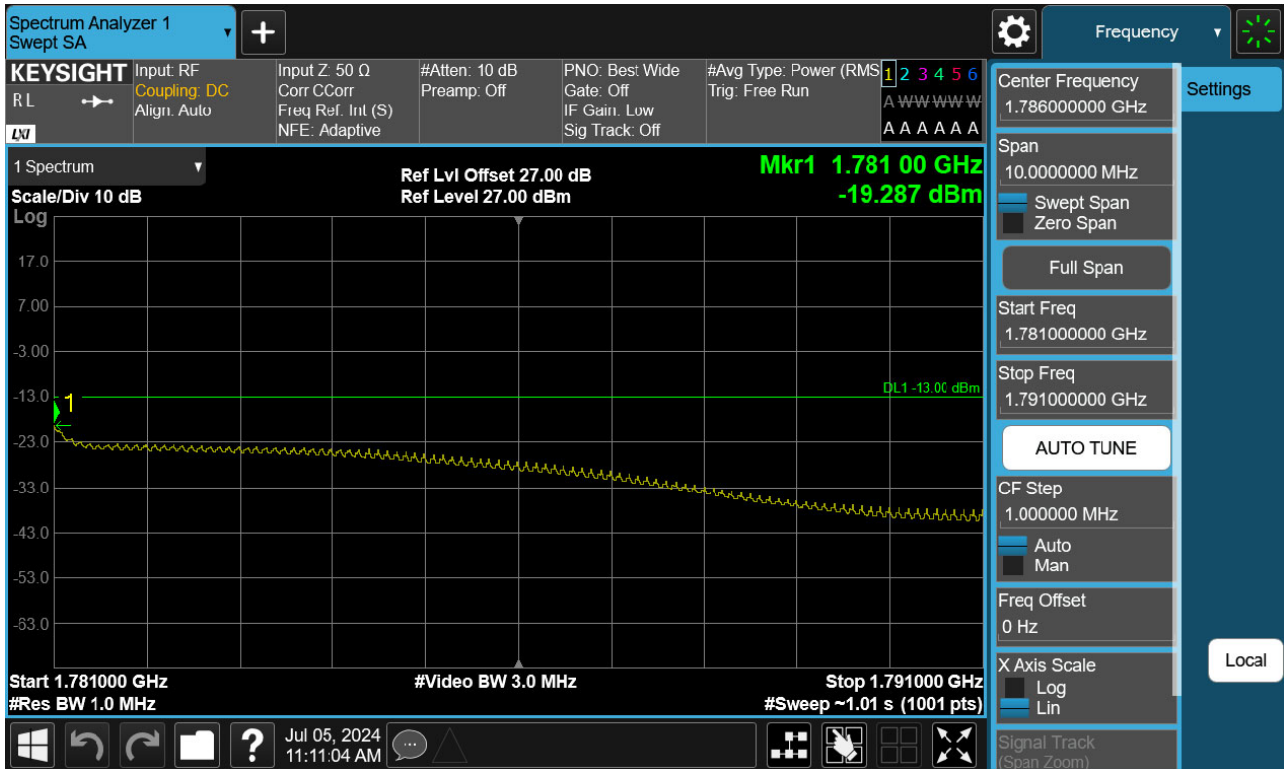
Highest Channel\_PCC 5MHz Ch132504 RB1 Offset24 SCC 15MHz Ch132597 RB1 Offset0(2)



Highest Channel\_PCC 5MHz Ch132599 RB25 Offset0 SCC 5MHz Ch132647 RB25 Offset0(1)



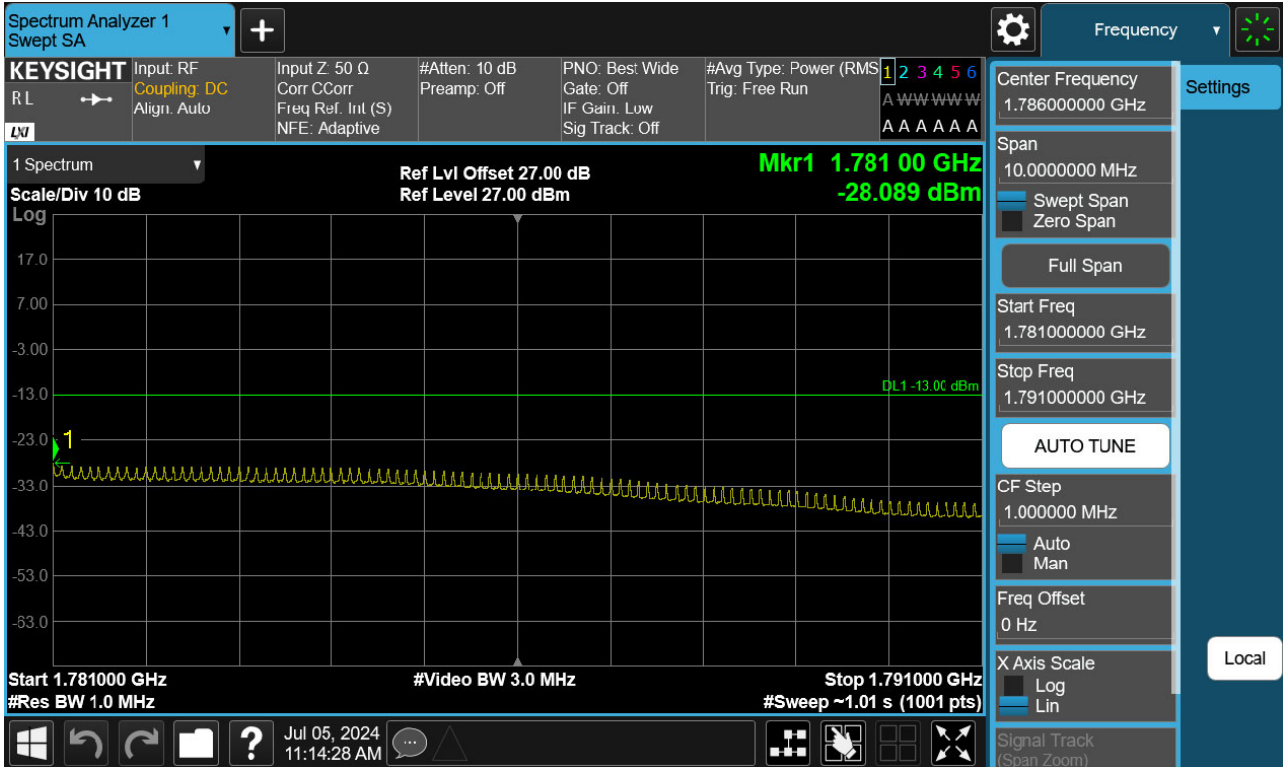
Highest Channel\_PCC 5MHz Ch132599 RB25 Offset0 SCC 5MHz Ch132647 RB25 Offset0(2)



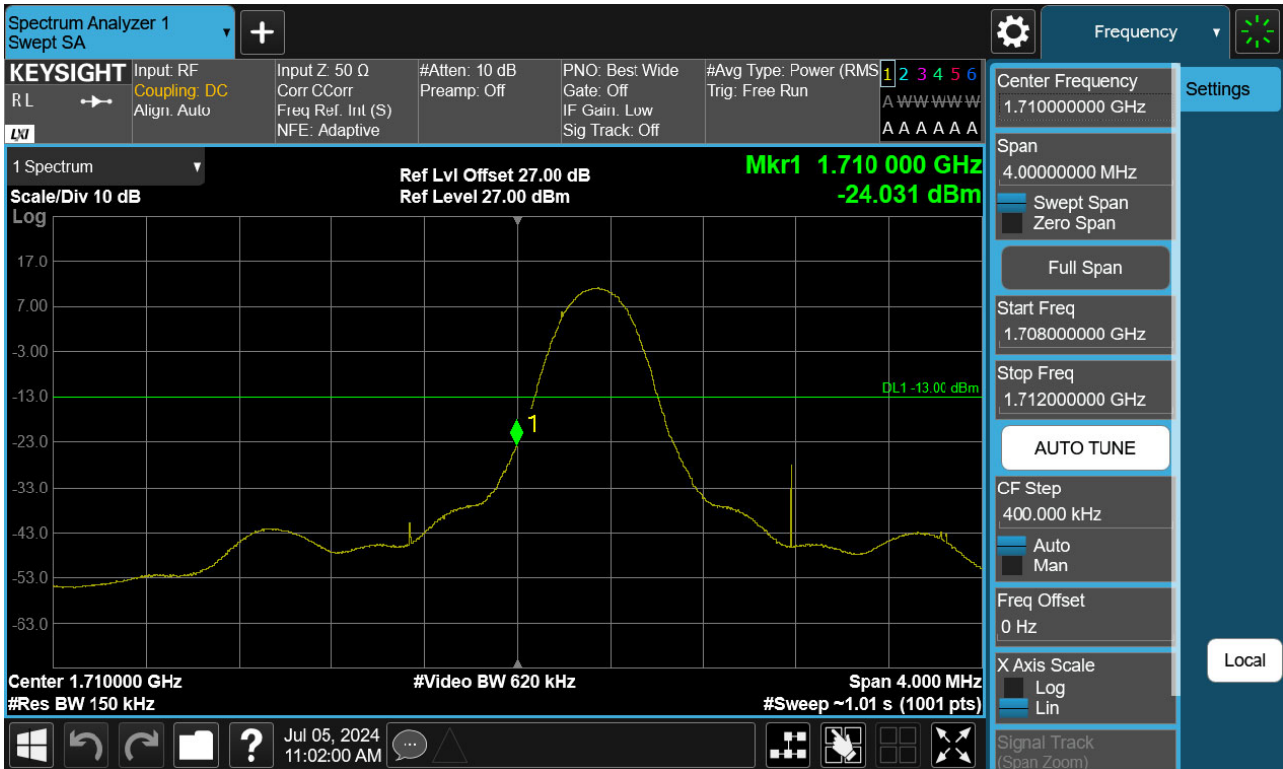
Highest Channel\_PCC 10MHz Ch132523 RB50 Offset0 SCC 10MHz Ch132622 RB50 Offset0(1)



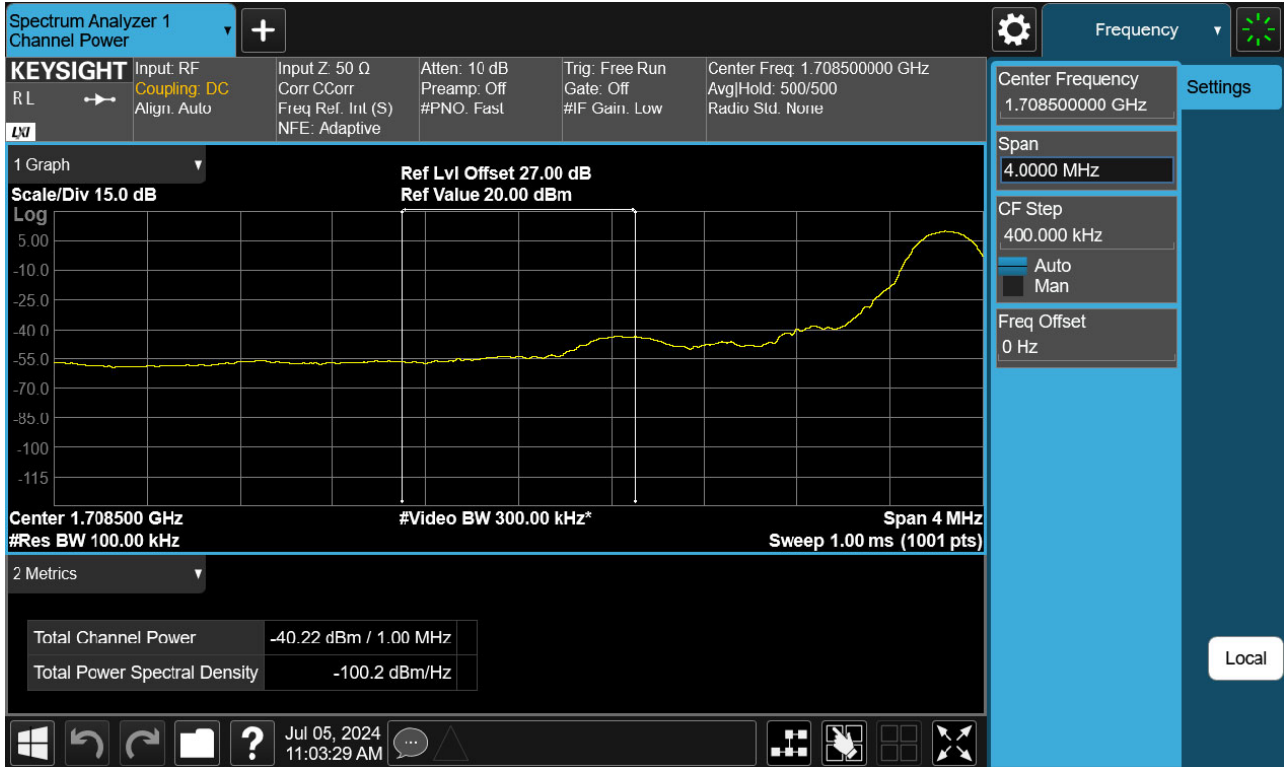
Highest Channel\_PCC 10MHz Ch132523 RB50 Offset0 SCC 10MHz Ch132622 RB50 Offset0(2)



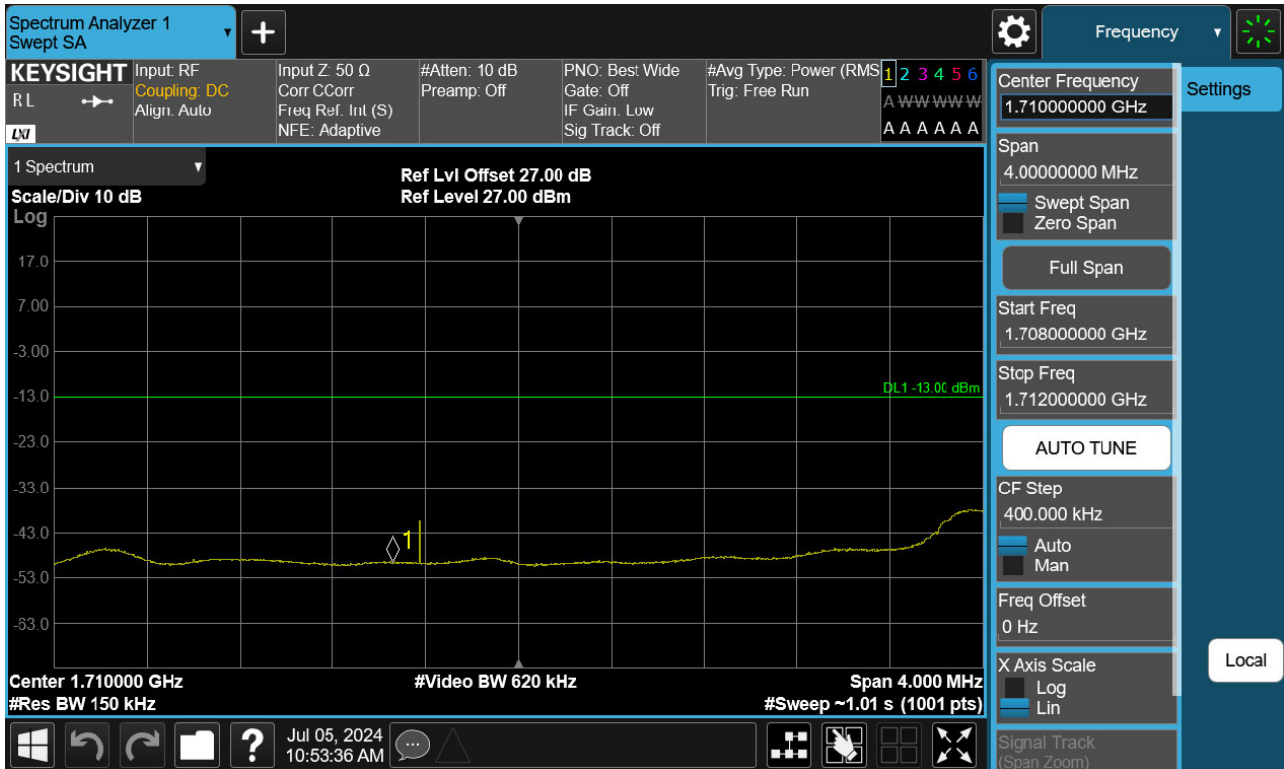
Lowest Channel\_PCC 5MHz Ch131997 RB1 Offset0 SCC 5MHz Ch132045 RB1 Offset24(1)



Lowest Channel\_PCC 5MHz Ch131997 RB1 Offset0 SCC 5MHz Ch132045 RB1 Offset24(2)



Lowest Channel\_PCC 5MHz Ch131997 RB1 Offset24 SCC 5MHz Ch132045 RB1 Offset0(1)

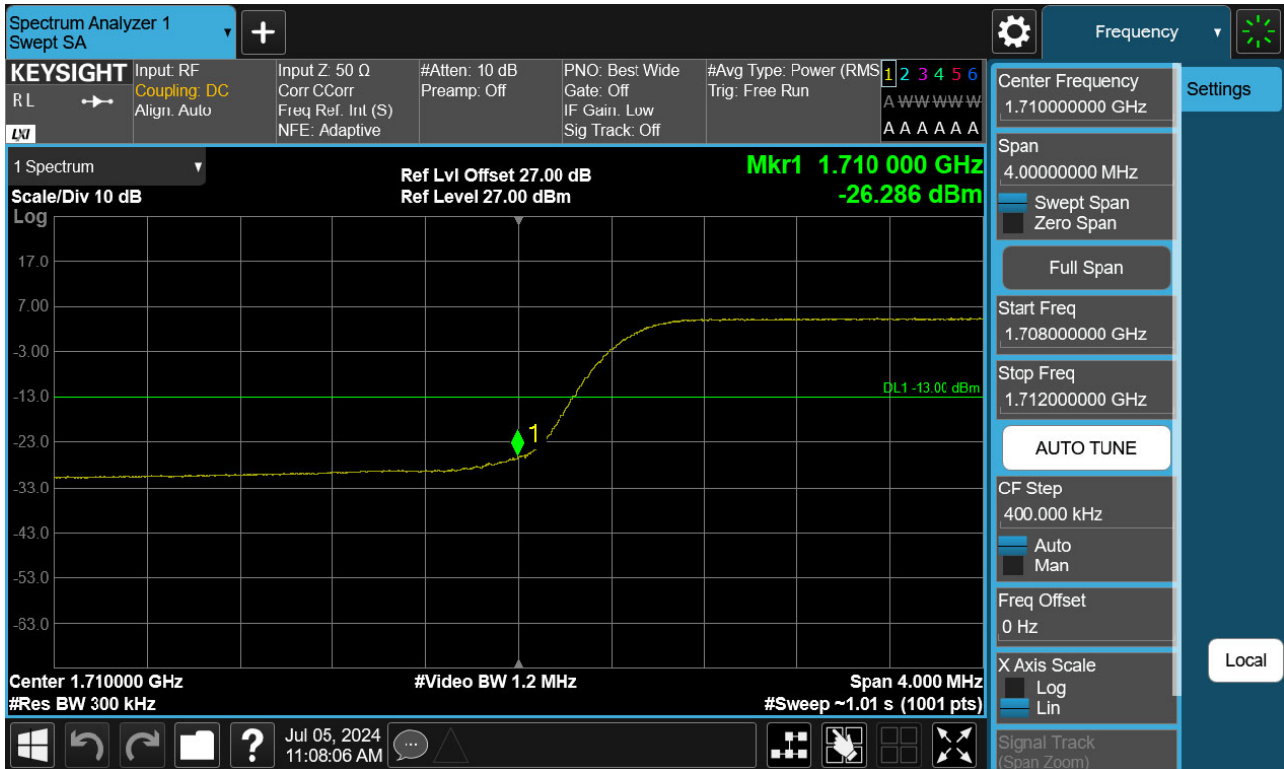




Lowest Channel\_PCC 5MHz Ch131997 RB1 Offset24 SCC 5MHz Ch132045 RB1 Offset0(2)



Lowest Channel\_PCC 10MHz Ch132022 RB50 Offset0 SCC 10MHz Ch132121 RB50 Offset0(1)



Lowest Channel\_PCC 10MHz Ch132022 RB50 Offset0 SCC 10MHz Ch132121 RB50 Offset0(2)



### 9.5 Frequency Stability / Variation Of Ambient Temperature

- ▣ PCC Channel: 131997
- ▣ PCC Frequency: 1712.5 MHz
- ▣ PCC BandWidth: 5 MHz
- ▣ SCC Channel: 132045
- ▣ SCC Frequency: 1717.3 MHz
- ▣ SCC BandWidth: 5 MHz
- ▣ Voltage : 3.880 VDC
- ▣ LIMIT: Emission must remain in band

Voltage (%)	Power (VDC)	Temp. (°C)	PPM		Frequency Error (MHz)	
			PCC	SCC	PCC	SCC
100 %	3.880	+20(Ref)	0.001	-0.011	1712.49864	1717.31056
100 %		-30	-0.007	-0.008	1712.50665	1717.30839
100 %		-20	-0.012	-0.007	1712.51211	1717.30695
100 %		-10	0.000	-0.009	1712.50006	1717.30875
100 %		0	-0.020	-0.002	1712.52032	1717.30220
100 %		10	-0.007	0.000	1712.50694	1717.29997
100 %		30	-0.001	-0.023	1712.50137	1717.32292
100 %		40	0.002	-0.003	1712.49796	1717.30308
100 %		50	0.004	0.003	1712.49604	1717.29699
Batt. Endpoint	3.300	20	-0.003	-0.001	1712.50278	1717.30143

- ▣ PCC Channel: 132022
- ▣ PCC Frequency: 1715.0 MHz
- ▣ PCC BandWidth: 10 MHz
- ▣ SCC Channel: 132094
- ▣ SCC Frequency: 1722.2 MHz
- ▣ SCC BandWidth: 5 MHz
- ▣ Voltage : 3.880 VDC
- ▣ LIMIT: Emission must remain in band

Voltage (%)	Power (VDC)	Temp. (°C)	PPM		Frequency Error (MHz)	
			PCC	SCC	PCC	SCC
100 %	3.880	+20(Ref)	0.006	-0.012	1714.99434	1722.21196
100 %		-30	-0.004	-0.003	1715.00415	1722.20289
100 %		-20	-0.013	-0.009	1715.01291	1722.20905
100 %		-10	0.006	-0.002	1714.99396	1722.20165
100 %		0	-0.015	-0.005	1715.01522	1722.20530
100 %		10	-0.002	0.004	1715.00204	1722.19617
100 %		30	-0.005	-0.023	1715.00517	1722.22272
100 %		40	0.006	-0.005	1714.99386	1722.20478
100 %		50	-0.004	0.002	1715.00434	1722.19789
Batt. Endpoint		3.300	20	-0.010	-0.009	1715.00968

- ▣ PCC Channel: 132047
- ▣ PCC Frequency: 1717.5 MHz
- ▣ PCC BandWidth: 15 MHz
- ▣ SCC Channel: 132140
- ▣ SCC Frequency: 1726.8 MHz
- ▣ SCC BandWidth: 5 MHz
- ▣ Voltage : 3.880 VDC
- ▣ LIMIT: Emission must remain in band

Voltage (%)	Power (VDC)	Temp. (°C)	PPM		Frequency Error (MHz)	
			PCC	SCC	PCC	SCC
100 %	3.880	+20(Ref)	0.008	-0.010	1717.49224	1726.81046
100 %		-30	0.000	-0.004	1717.49965	1726.80409
100 %		-20	-0.013	-0.006	1717.51321	1726.80625
100 %		-10	0.001	-0.007	1717.49856	1726.80735
100 %		0	-0.011	0.000	1717.51142	1726.79990
100 %		10	-0.006	0.003	1717.50574	1726.79687
100 %		30	-0.002	-0.017	1717.50237	1726.81672
100 %		40	0.007	-0.008	1717.49266	1726.80778
100 %		50	-0.001	-0.003	1717.50074	1726.80319
Batt. Endpoint		3.300	20	-0.005	-0.004	1717.50478

- ▣ PCC Channel: 132599
- ▣ PCC Frequency: 1772.7 MHz
- ▣ PCC BandWidth: 5 MHz
- ▣ SCC Channel: 132647
- ▣ SCC Frequency: 1777.5 MHz
- ▣ SCC BandWidth: 5 MHz
- ▣ Voltage : 3.880 VDC
- ▣ LIMIT: Emission must remain in band

Voltage (%)	Power (VDC)	Temp. (°C)	PPM		Frequency Error (MHz)	
			PCC	SCC	PCC	SCC
100 %	3.880	+20(Ref)	0.005	-0.013	1772.69514	1777.51306
100 %		-30	0.003	-0.010	1772.69735	1777.51049
100 %		-20	-0.017	-0.013	1772.71701	1777.51285
100 %		-10	0.005	-0.004	1772.69466	1777.50365
100 %		0	-0.013	0.002	1772.71262	1777.49760
100 %		10	-0.004	-0.005	1772.70404	1777.50507
100 %		30	-0.003	-0.024	1772.70277	1777.52352
100 %		40	0.005	0.001	1772.69506	1777.49948
100 %		50	0.003	-0.003	1772.69744	1777.50299
Batt. Endpoint		3.300	20	-0.010	-0.002	1772.71038

- ▣ PCC Channel: 132572
- ▣ PCC Frequency: 1770.0 MHz
- ▣ PCC BandWidth: 10 MHz
- ▣ SCC Channel: 132644
- ▣ SCC Frequency: 1777.2 MHz
- ▣ SCC BandWidth: 5 MHz
- ▣ Voltage : 3.880 VDC
- ▣ LIMIT: Emission must remain in band

Voltage (%)	Power (VDC)	Temp. (°C)	PPM		Frequency Error (MHz)	
			PCC	SCC	PCC	SCC
100 %	3.880	+20(Ref)	0.000	-0.005	1770.00014	1777.20466
100 %		-30	-0.003	-0.003	1770.00295	1777.20309
100 %		-20	-0.008	-0.013	1770.00831	1777.21345
100 %		-10	0.004	-0.003	1769.99576	1777.20285
100 %		0	-0.017	-0.002	1770.01702	1777.20180
100 %		10	-0.008	0.003	1770.00754	1777.19707
100 %		30	-0.010	-0.023	1770.01007	1777.22262
100 %		40	0.000	-0.002	1770.00036	1777.20178
100 %		50	-0.003	0.002	1770.00284	1777.19789
Batt. Endpoint	3.300	20	-0.011	-0.004	1770.01078	1777.20393



- ▣ PCC Channel: 132549
- ▣ PCC Frequency: 1767.7 MHz
- ▣ PCC BandWidth: 15 MHz
- ▣ SCC Channel: 132642
- ▣ SCC Frequency: 1777.0 MHz
- ▣ SCC BandWidth: 5 MHz
- ▣ Voltage : 3.880 VDC
- ▣ LIMIT: Emission must remain in band

Voltage (%)	Power (VDC)	Temp. (°C)	PPM		Frequency Error (MHz)	
			PCC	SCC	PCC	SCC
100 %	3.880	+20(Ref)	0.007	-0.008	1767.69274	1777.00756
100 %		-30	0.002	-0.011	1767.69765	1777.01149
100 %		-20	-0.008	-0.009	1767.70821	1777.00935
100 %		-10	0.004	-0.003	1767.69626	1777.00265
100 %		0	-0.014	-0.004	1767.71382	1777.00380
100 %		10	-0.004	-0.002	1767.70404	1777.00177
100 %		30	-0.008	-0.018	1767.70787	1777.01802
100 %		40	0.002	0.001	1767.69796	1776.99918
100 %		50	-0.004	-0.004	1767.70434	1777.00359
Batt. Endpoint		3.300	20	-0.004	-0.008	1767.70408

## 9.6 Radiated Spurious Emissions

▣ PCC Channel :	<u>132022 (1715.0 MHz)</u>
▣ PCC BW(MHz) :	10
▣ PCC RB/ RB Offset :	<u>1/ 49</u>
▣ SCC Channel :	<u>132121 (1724.9 MHz)</u>
▣ SCC BW(MHz) :	10
▣ SCC RB/ RB Offset :	<u>1/ 0</u>
▣ DISTANCE:	<u>3 meters</u>
▣ LIMIT:	<u>-13.0 dBm</u>

Freq.(MHz)	Measured Level [dBm]	Ant. Gain (dBi)	Substitute Level [dBm]	C.L	Pol.	Result (dBm)
3 439.90	-45.50	12.40	-51.62	3.14	H	-42.36
5 159.85	-56.41	12.44	-54.57	3.78	H	-45.91
6 879.80	-55.32	11.82	-48.61	4.51	H	-41.30

- ▣ PCC Channel : 132353 (1748.1 MHz)
- ▣ PCC BW(MHz) : 5
- ▣ PCC RB/ RB Offset : 1/ 24
- ▣ SCC Channel : 132446 (1757.4 MHz)
- ▣ SCC BW(MHz) : 15
- ▣ SCC RB/ RB Offset : 1/ 0
- ▣ DISTANCE: 3 meters
- ▣ LIMIT: -13.0 dBm

Freq.(MHz)	Measured Level [dBm]	Ant. Gain (dBi)	Substitute Level [dBm]	C.L	Pol.	Result (dBm)
3 510.10	-54.54	12.34	-60.76	3.11	V	-51.53
5 265.15	-56.04	12.99	-55.72	3.83	V	-46.56
7 020.20	-55.57	11.26	-47.59	4.56	V	-40.89

- ▣ PCC Channel : 132523 (1765.1 MHz)
- ▣ PCC BW(MHz) : 10
- ▣ PCC RB/ RB Offset : 1/ 49
- ▣ SCC Channel : 132622 (1775.0 MHz)
- ▣ SCC BW(MHz) : 10
- ▣ SCC RB/ RB Offset : 1/ 0
- ▣ DISTANCE: 3 meters
- ▣ LIMIT: -13.0 dBm

Freq.(MHz)	Measured Level [dBm]	Ant. Gain (dBi)	Substitute Level [dBm]	C.L	Pol.	Result (dBm)
3 540.10	-51.51	12.34	-57.24	3.18	V	-48.08
5 310.15	-56.42	13.08	-55.76	3.98	H	-46.66
7 080.20	-56.23	10.93	-46.99	4.58	V	-40.64

### 9.7 Occupied Bandwidth

PCC					SCC					Data (MHz)
BW [MHz]	Ch	Freq [MHz]	Mod	RB/Offset	BW [MHz]	Ch	Freq [MHz]	Mod	RB/Offset	
5	132398	1752.6	QPSK	25/0	5	132446	1757.4	QPSK	25/0	9.2654
5	132375	1750.3	QPSK	25/0	10	132447	1757.5	QPSK	50/0	13.919
10	132397	1752.5	QPSK	50/0	5	132469	1759.7	QPSK	25/0	13.894
5	132353	1748.1	QPSK	25/0	15	132446	1757.4	QPSK	75/0	18.291
15	132398	1752.6	QPSK	75/0	5	132491	1761.9	QPSK	25/0	18.282
10	132373	1750.1	QPSK	50/0	10	132472	1760.0	QPSK	50/0	18.744

PCC					SCC					Data (MHz)
BW [MHz]	Ch	Freq [MHz]	Mod	RB/Offset	BW [MHz]	Ch	Freq [MHz]	Mod	RB/Offset	
5	132398	1752.6	16QAM	25/0	5	132446	1757.4	16QAM	25/0	9.2652
5	132375	1750.3	16QAM	25/0	10	132447	1757.5	16QAM	50/0	13.934
10	132397	1752.5	16QAM	50/0	5	132469	1759.7	16QAM	25/0	13.932
5	132353	1748.1	16QAM	25/0	15	132446	1757.4	16QAM	75/0	18.254
15	132398	1752.6	16QAM	75/0	5	132491	1761.9	16QAM	25/0	18.282
10	132373	1750.1	16QAM	50/0	10	132472	1760.0	16QAM	50/0	18.813

PCC					SCC					Data (MHz)
BW [MHz]	Ch	Freq [MHz]	Mod	RB/Offset	BW [MHz]	Ch	Freq [MHz]	Mod	RB/Offset	
5	132398	1752.6	64QAM	25/0	5	132446	1757.4	64QAM	25/0	9.2664
5	132375	1750.3	64QAM	25/0	10	132447	1757.5	64QAM	50/0	13.898
10	132397	1752.5	64QAM	50/0	5	132469	1759.7	64QAM	25/0	13.903
5	132353	1748.1	64QAM	25/0	15	132446	1757.4	64QAM	75/0	18.274
15	132398	1752.6	64QAM	75/0	5	132491	1761.9	64QAM	25/0	18.255
10	132373	1750.1	64QAM	50/0	10	132472	1760.0	64QAM	50/0	18.771

PCC					SCC					Data (MHz)
BW [MHz]	Ch	Freq [MHz]	Mod	RB/Offset	BW [MHz]	Ch	Freq [MHz]	Mod	RB/Offset	
5	132398	1752.6	256QAM	25/0	5	132446	1757.4	256QAM	25/0	9.2745
5	132375	1750.3	256QAM	25/0	10	132447	1757.5	256QAM	50/0	13.923
10	132397	1752.5	256QAM	50/0	5	132469	1759.7	256QAM	25/0	13.880
5	132353	1748.1	256QAM	25/0	15	132446	1757.4	256QAM	75/0	18.210
15	132398	1752.6	256QAM	75/0	5	132491	1761.9	256QAM	25/0	18.223
10	132373	1750.1	256QAM	50/0	10	132472	1760.0	256QAM	50/0	18.853

Note:

In order to simplify the report, attached plots were only widest bandwidth(10+10).

PCC 10 MHz Ch132373 RB50 Offset0, SCC 10 MHz Ch132472 RB50 Offset0\_(QPSK)

