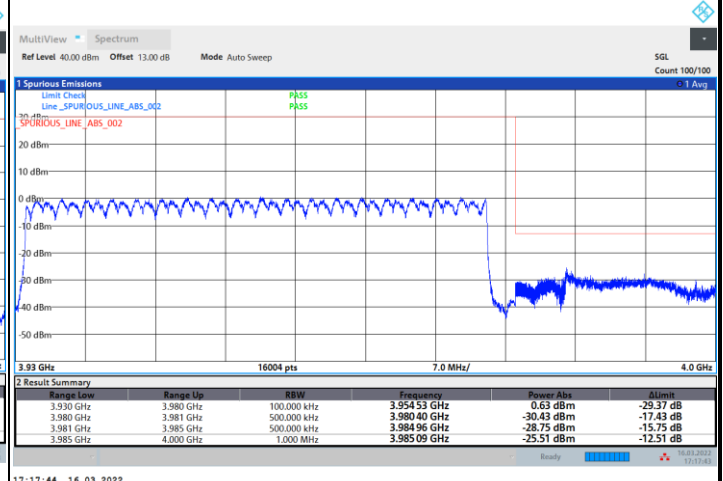
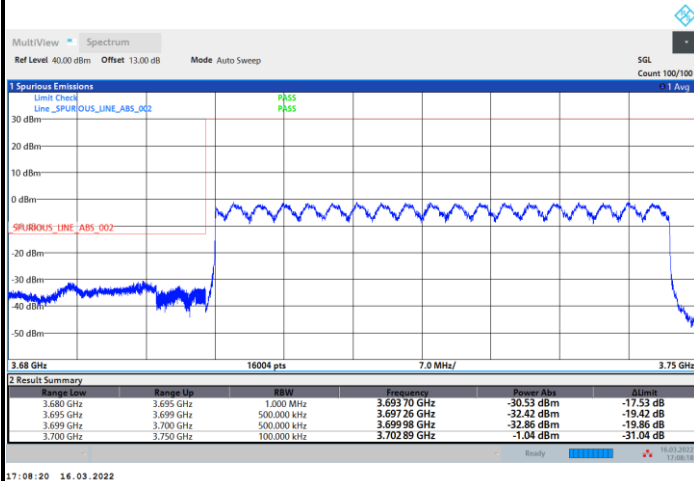




FR1 n77 / 50MHz / DFT-S OFDM / 64QAM / Full RB

Lowest Band Edge

Highest Band Edge

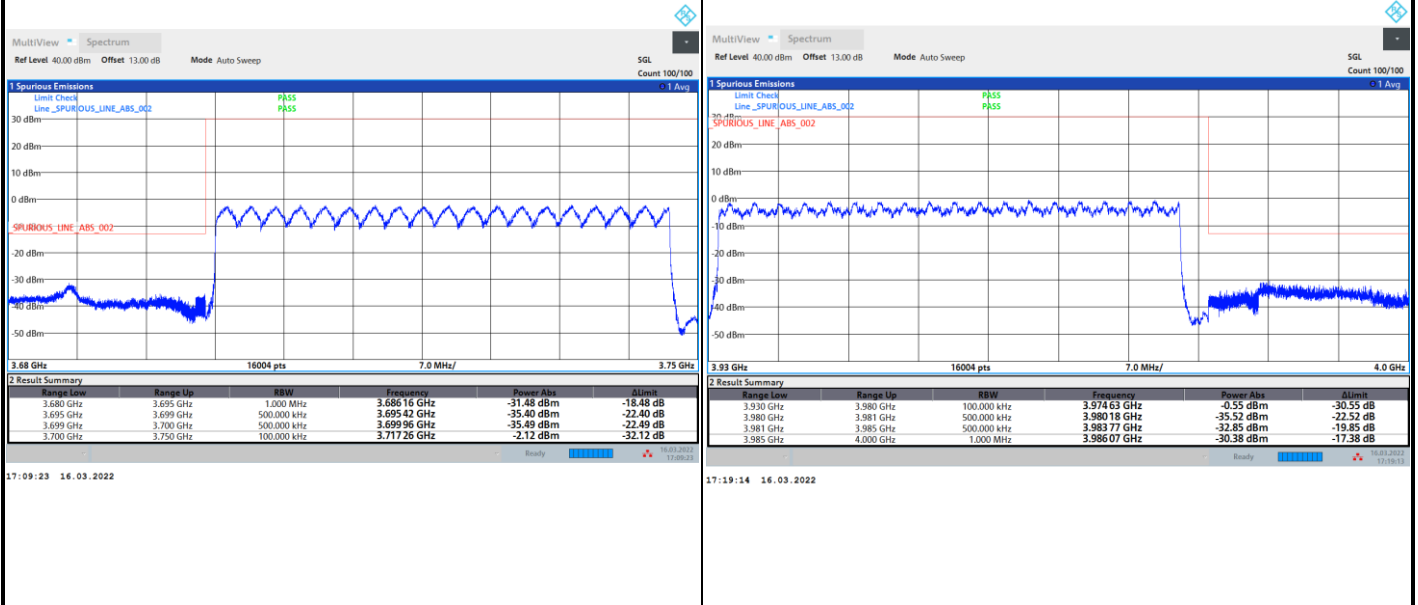




FR1 n77 / 50MHz / DFT-S OFDM / 256QAM / Full RB

Lowest Band Edge

Highest Band Edge

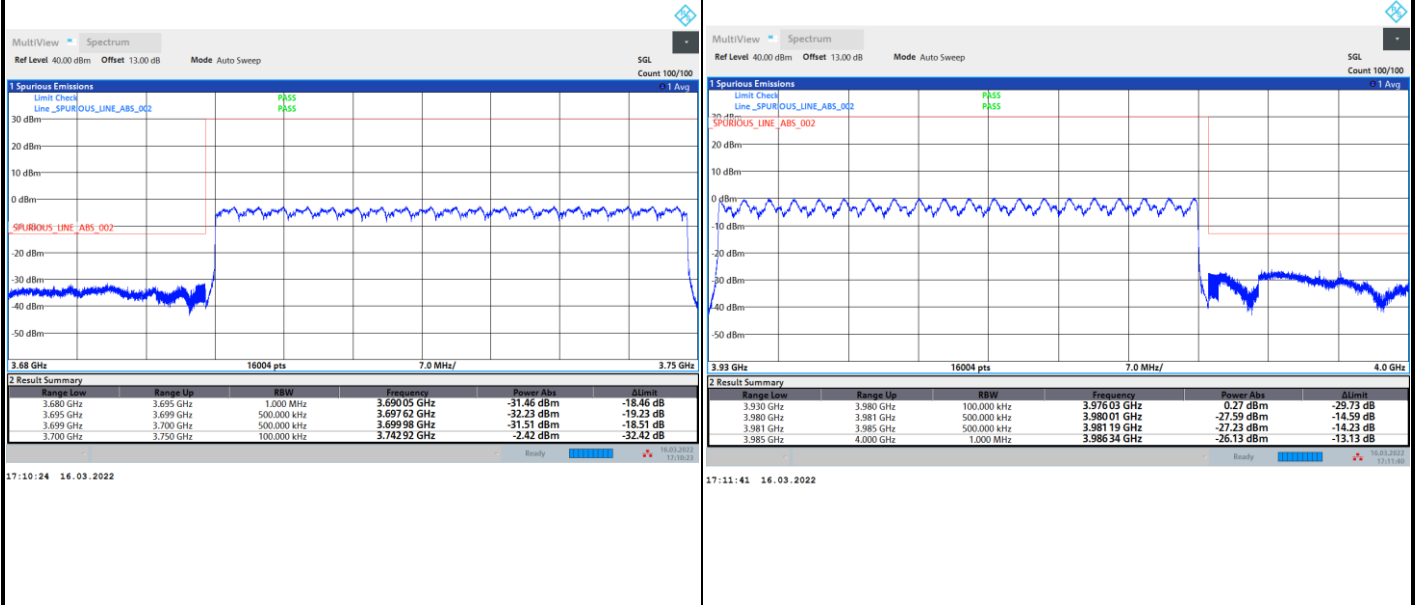




FR1 n77 / 50MHz / CP OFDM / QPSK / Full RB

Lowest Band Edge

Highest Band Edge

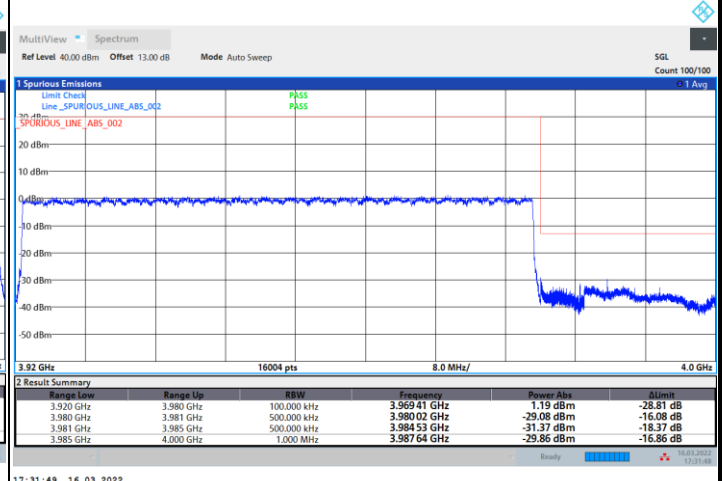
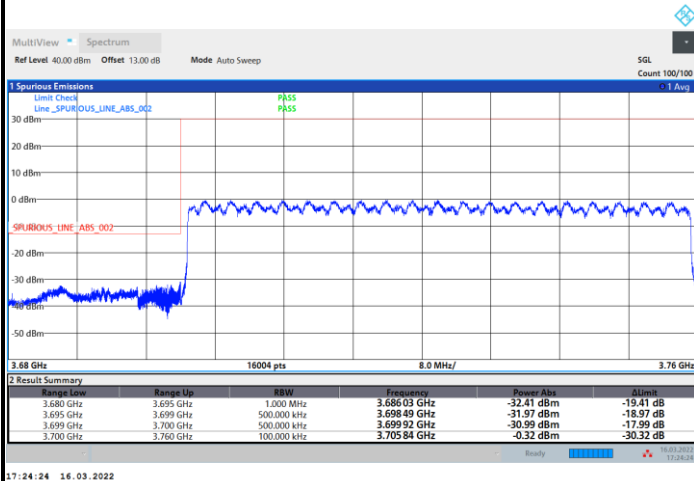




FR1 n77 / 60MHz / DFT-S OFDM / PI/2 BPSK / Full RB

Lowest Band Edge

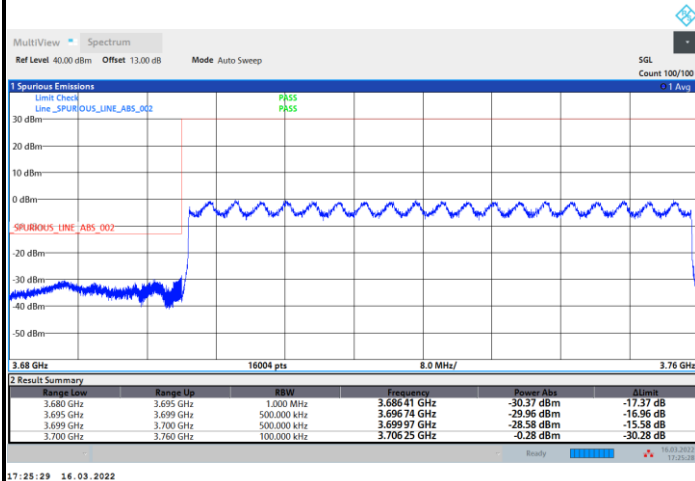
Highest Band Edge



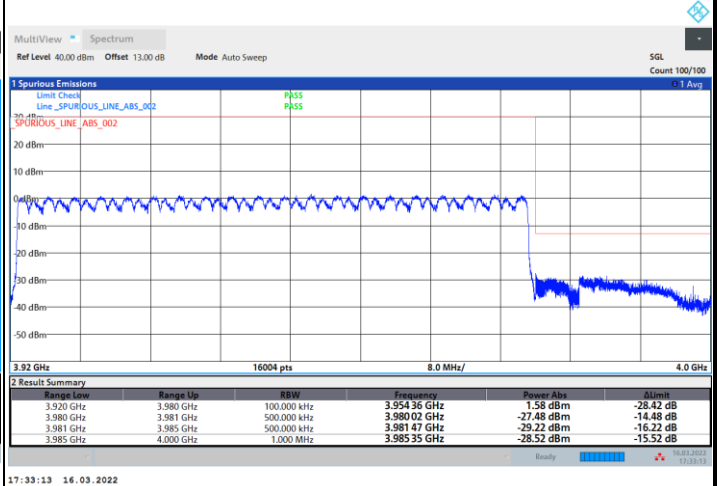


FR1 n77 / 60MHz / DFT-S OFDM / QPSK / Full RB

Lowest Band Edge



Highest Band Edge

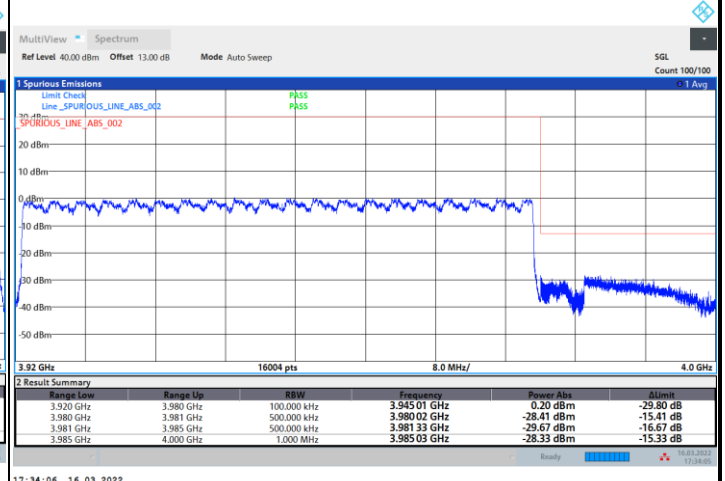
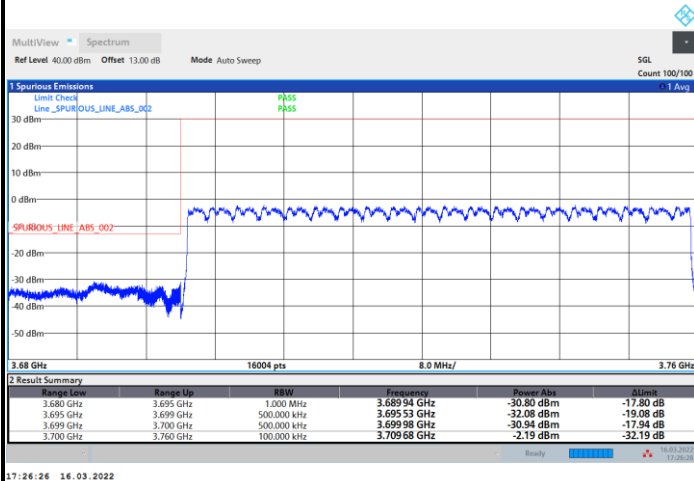




FR1 n77 / 60MHz / DFT-S OFDM / 16QAM / Full RB

Lowest Band Edge

Highest Band Edge

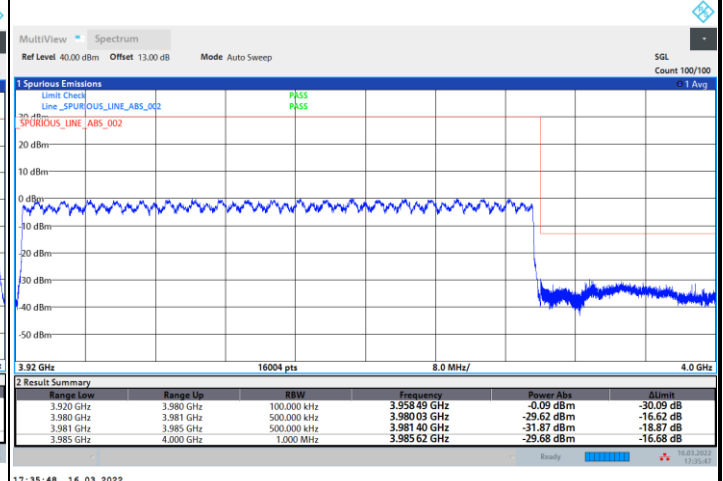
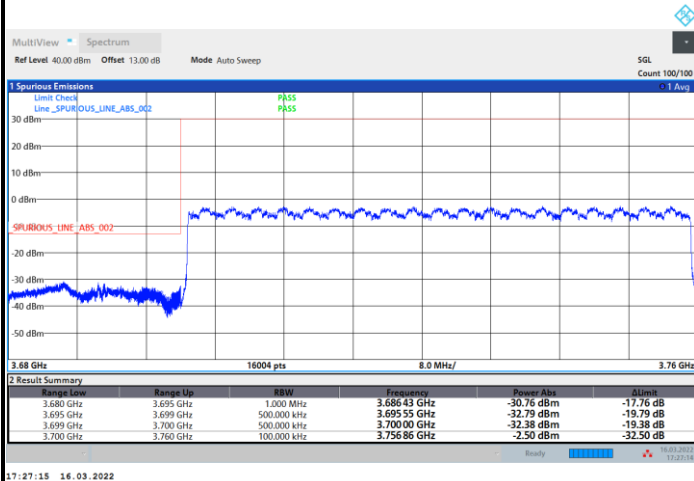




FR1 n77 / 60MHz / DFT-S OFDM / 64QAM / Full RB

Lowest Band Edge

Highest Band Edge

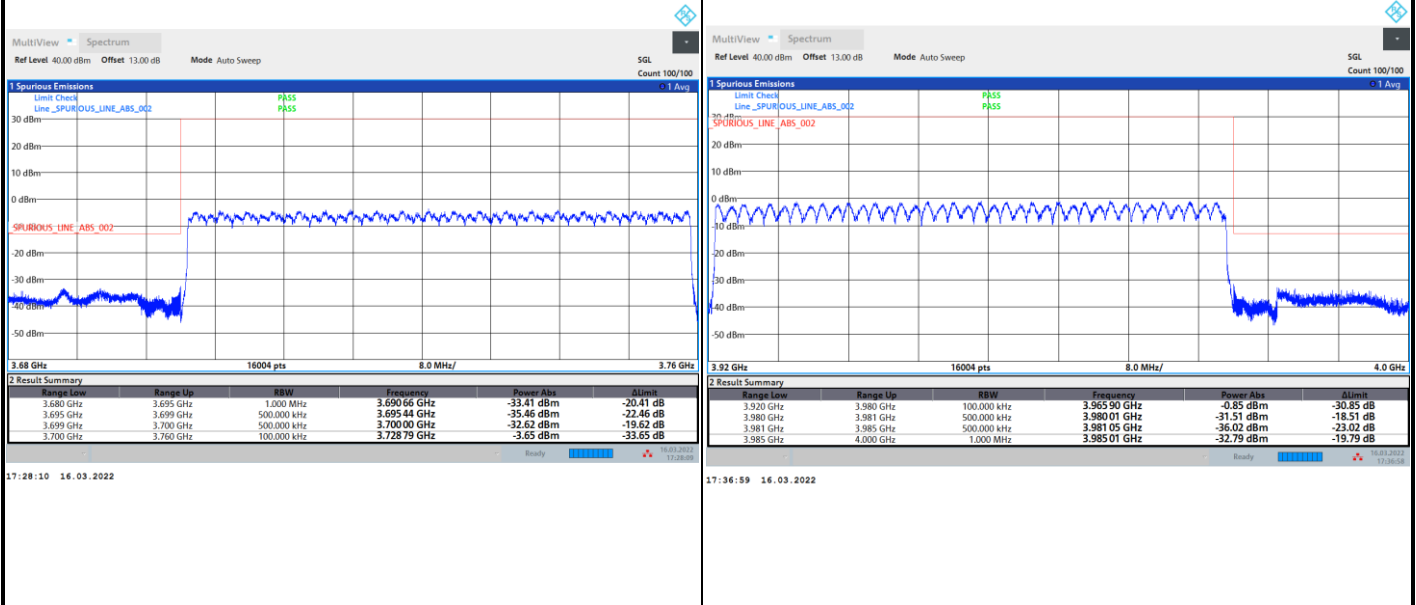




FR1 n77 / 60MHz / DFT-S OFDM / 256QAM / Full RB

Lowest Band Edge

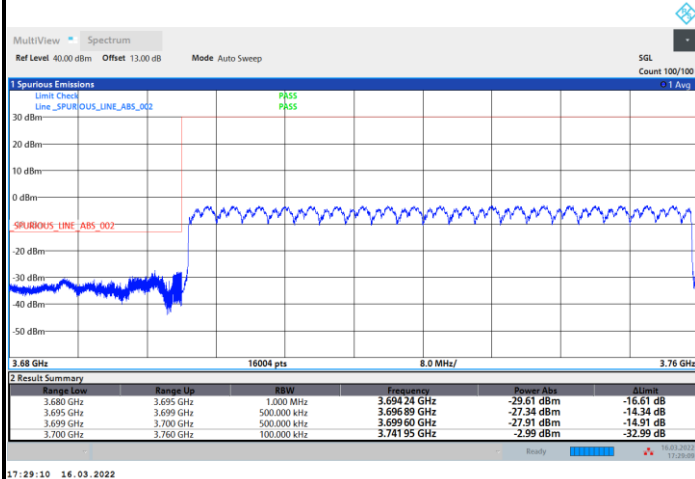
Highest Band Edge



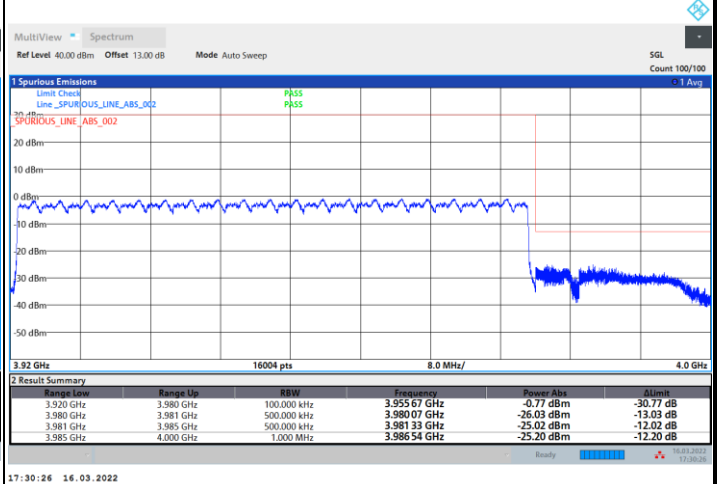


FR1 n77 / 60MHz / CP OFDM / QPSK / Full RB

Lowest Band Edge



Highest Band Edge

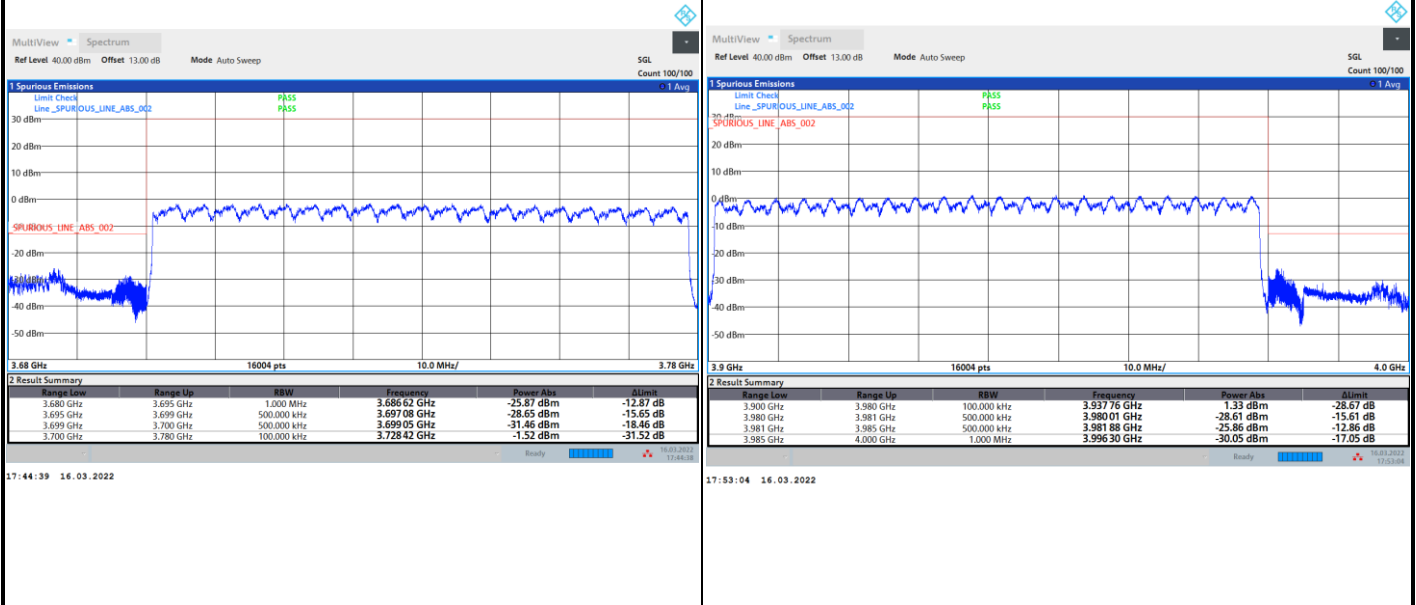




FR1 n77 / 80MHz / DFT-S OFDM / PI/2 BPSK / Full RB

Lowest Band Edge

Highest Band Edge

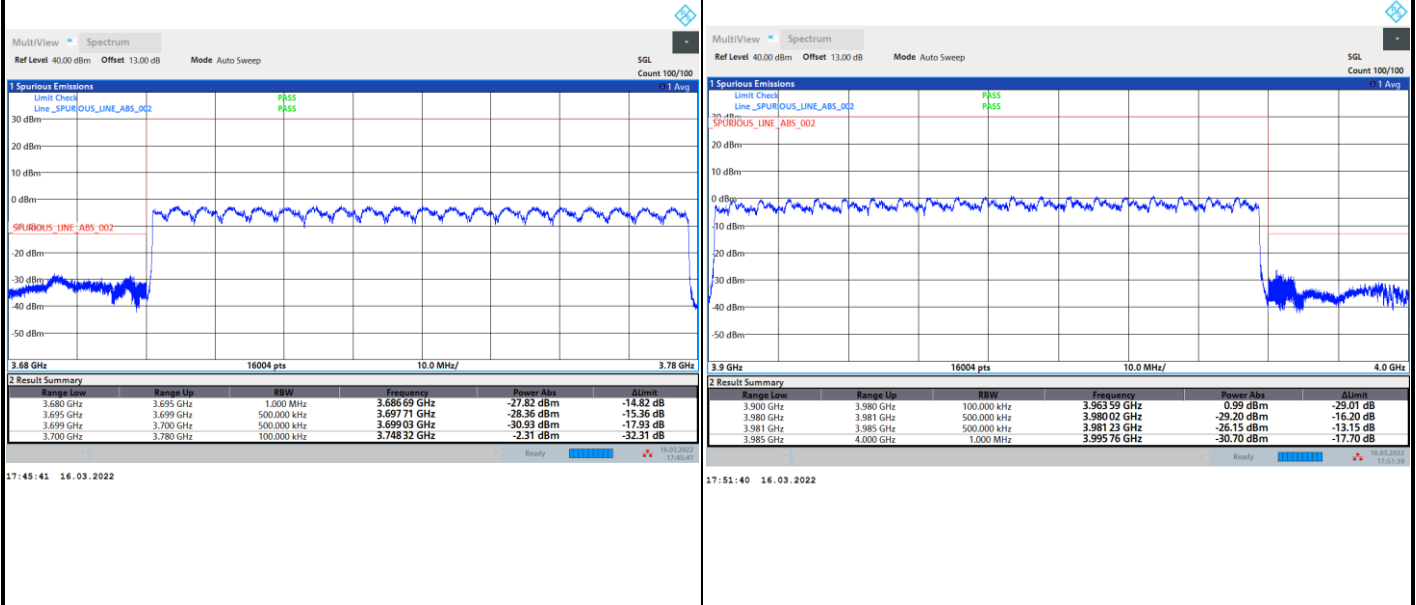




FR1 n77 / 80MHz / DFT-S OFDM / QPSK / Full RB

Lowest Band Edge

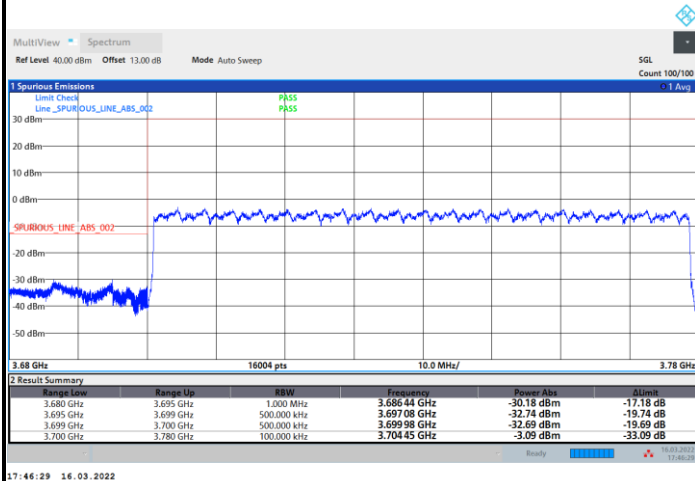
Highest Band Edge



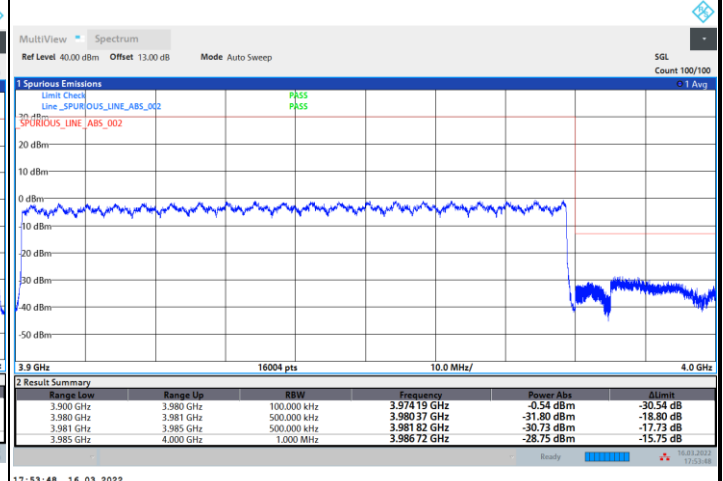


FR1 n77 / 80MHz / DFT-S OFDM / 16QAM / Full RB

Lowest Band Edge



Highest Band Edge

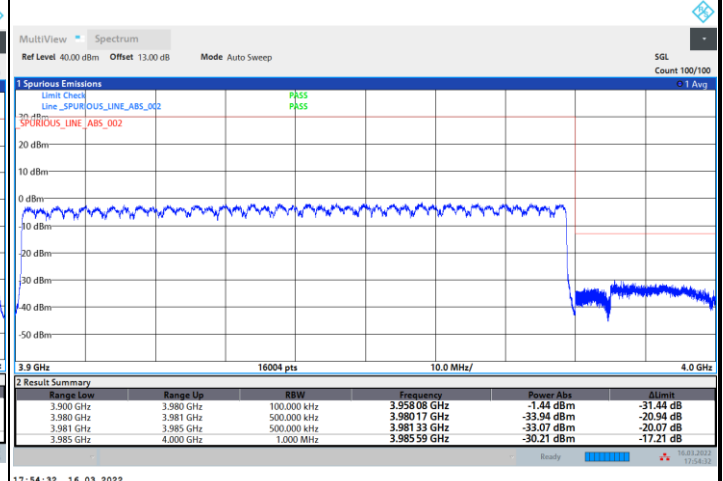
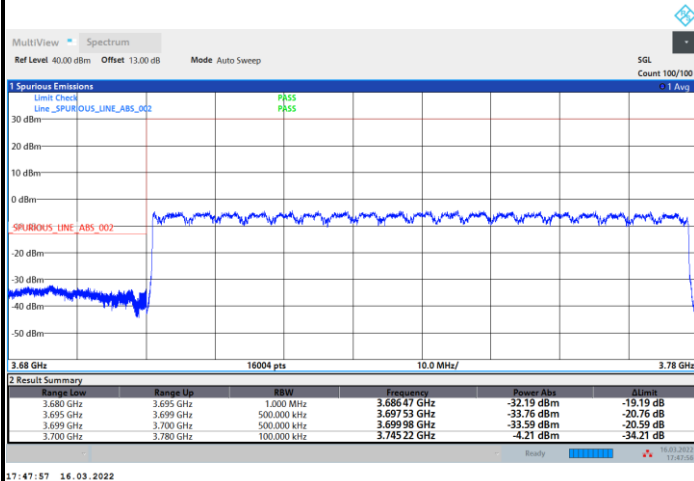




FR1 n77 / 80MHz / DFT-S OFDM / 64QAM / Full RB

Lowest Band Edge

Highest Band Edge

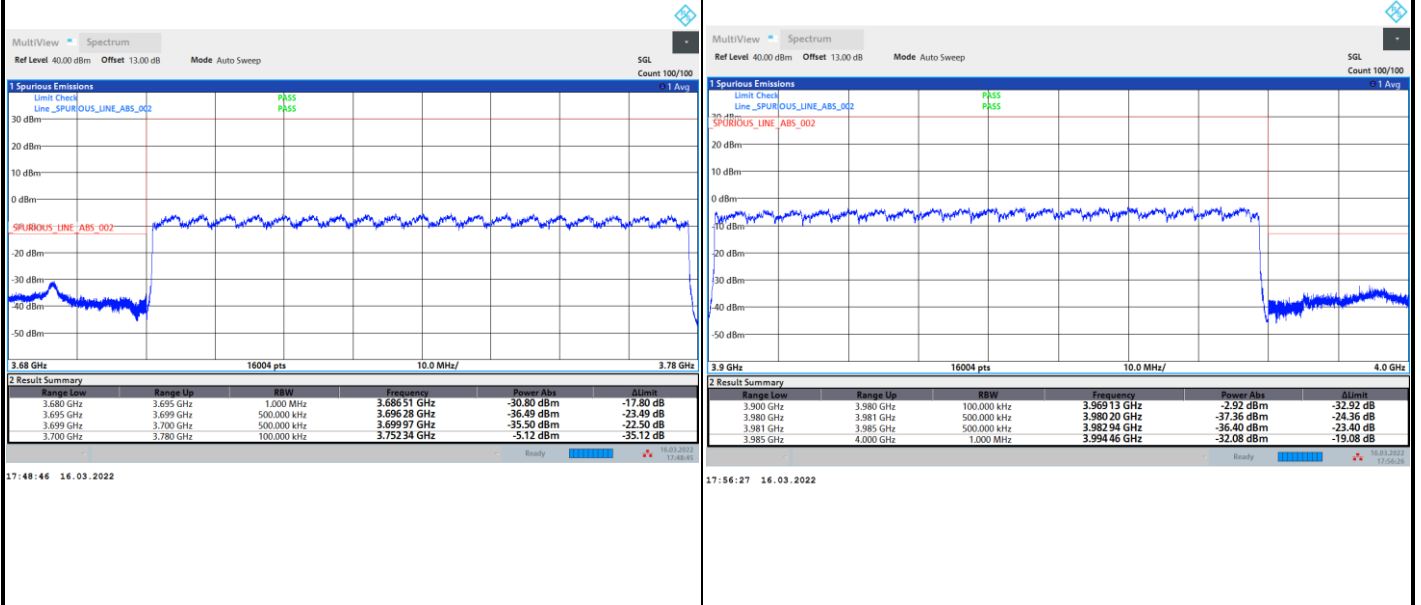




FR1 n77 / 80MHz / DFT-S OFDM / 256QAM / Full RB

Lowest Band Edge

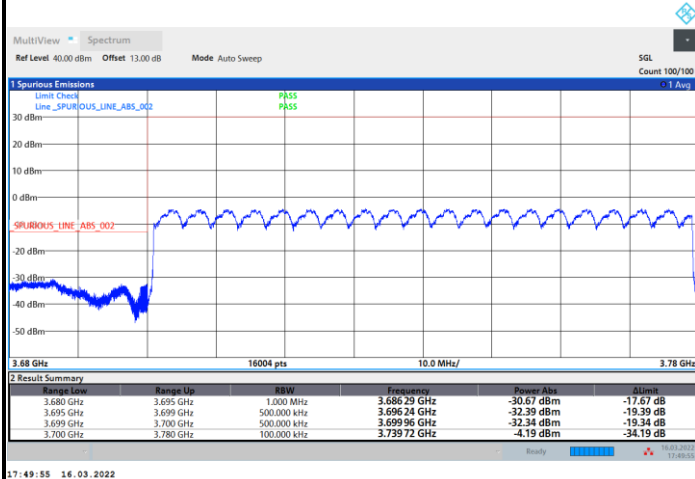
Highest Band Edge



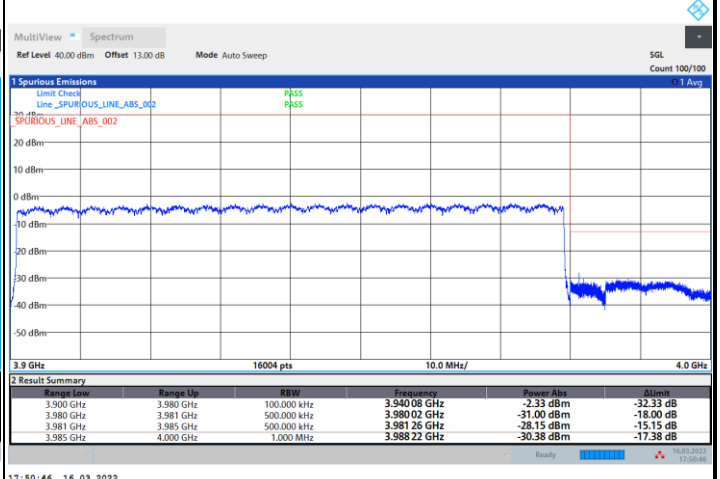


FR1 n77 / 80MHz / CP OFDM / QPSK / Full RB

Lowest Band Edge



Highest Band Edge

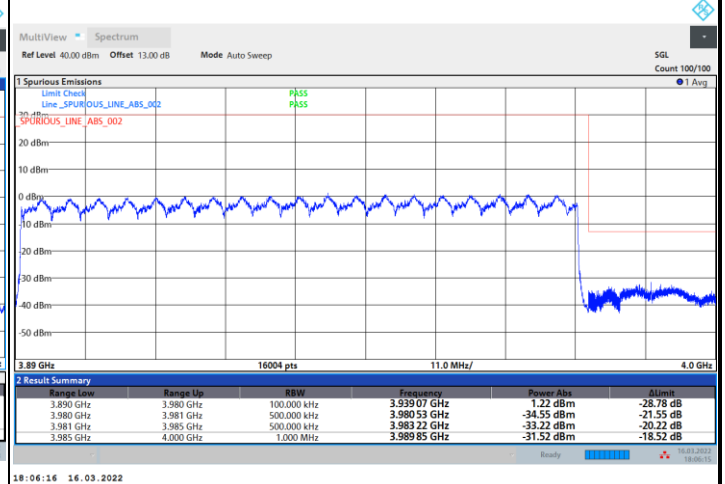
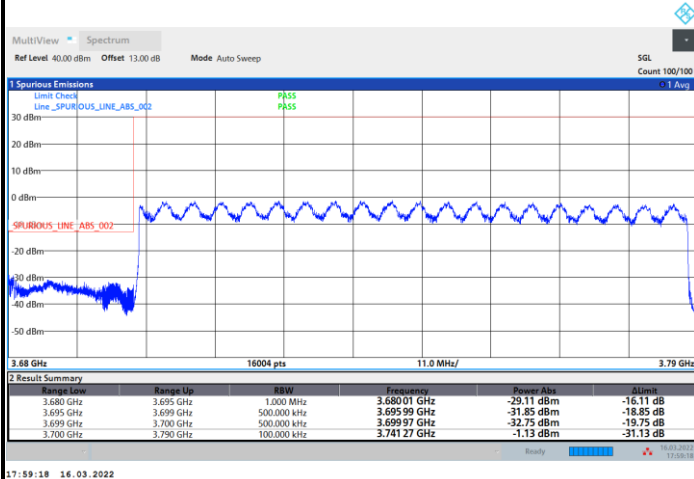




FR1 n77 / 90MHz / DFT-S OFDM / PI/2 BPSK / Full RB

Lowest Band Edge

Highest Band Edge

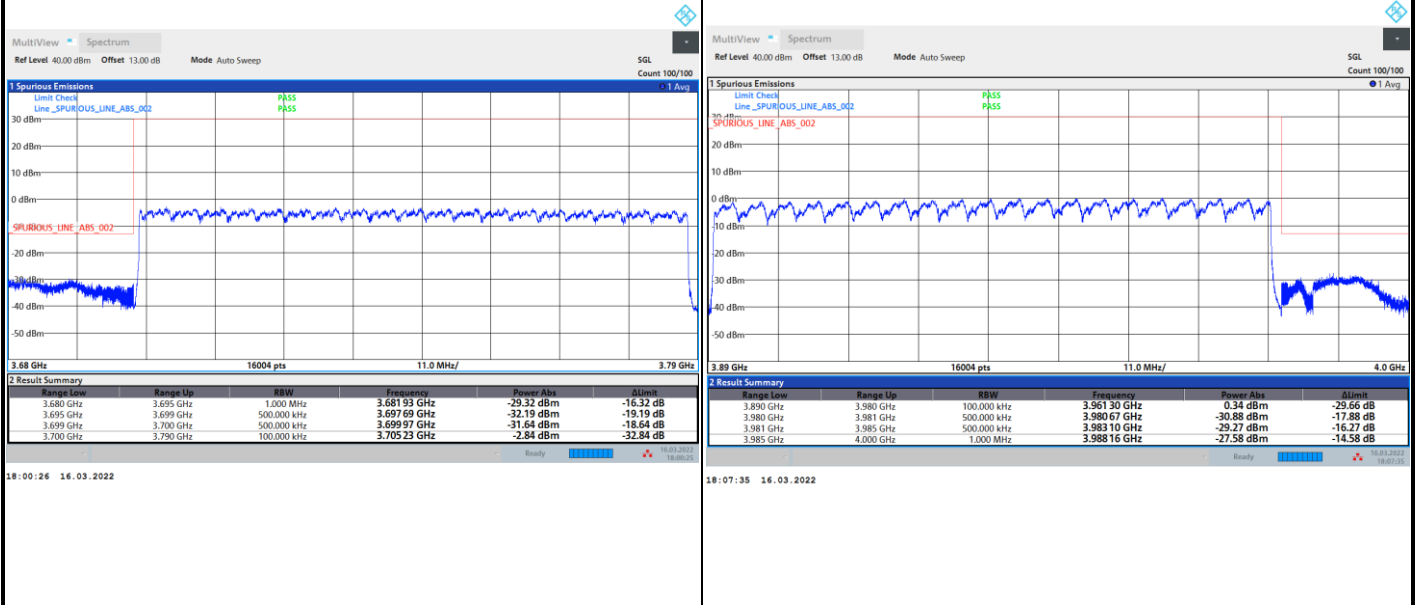




FR1 n77 / 90MHz / DFT-S OFDM / QPSK / Full RB

Lowest Band Edge

Highest Band Edge

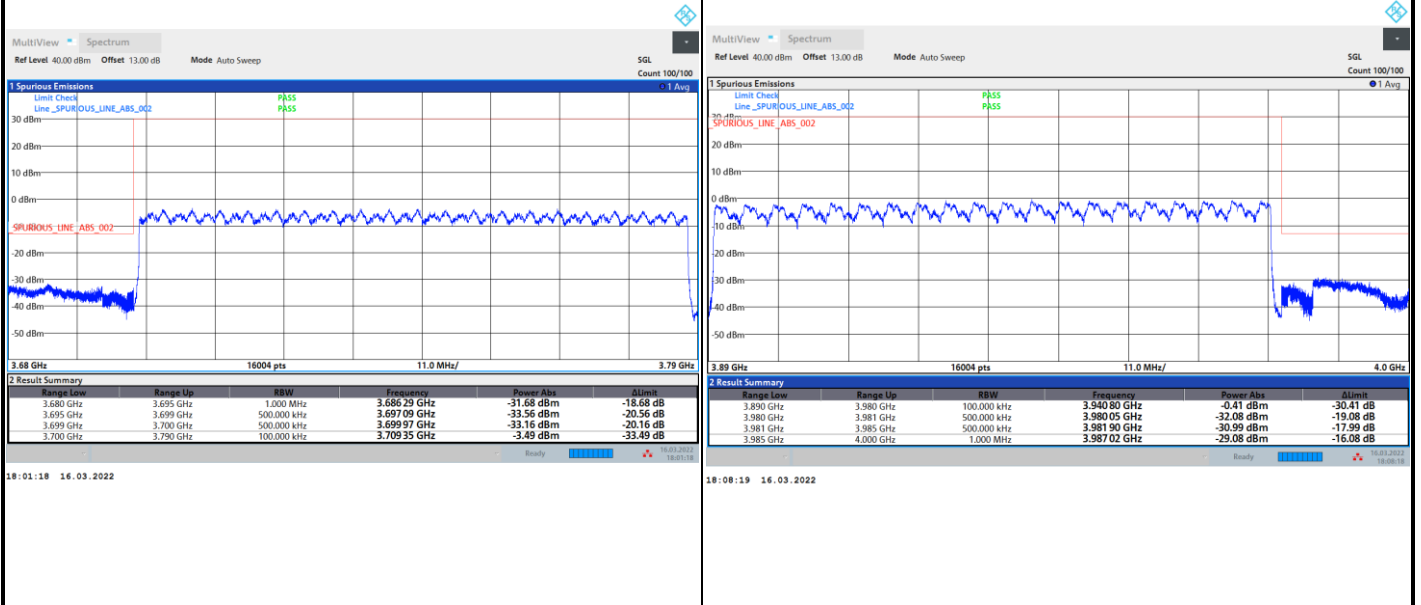




FR1 n77 / 90MHz / DFT-S OFDM / 16QAM / Full RB

Lowest Band Edge

Highest Band Edge

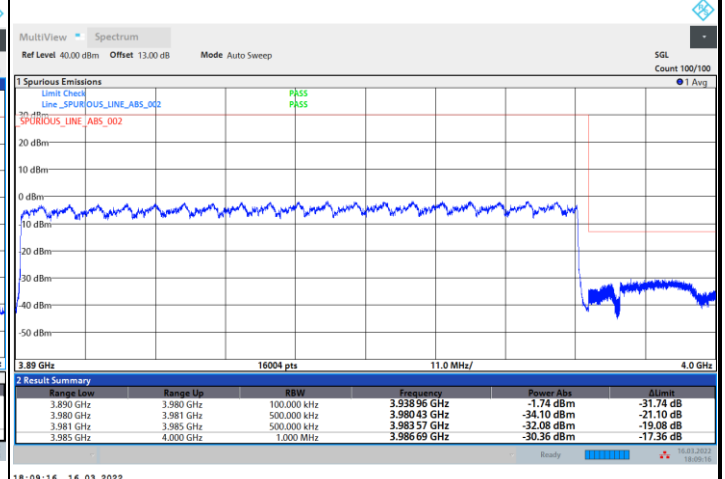
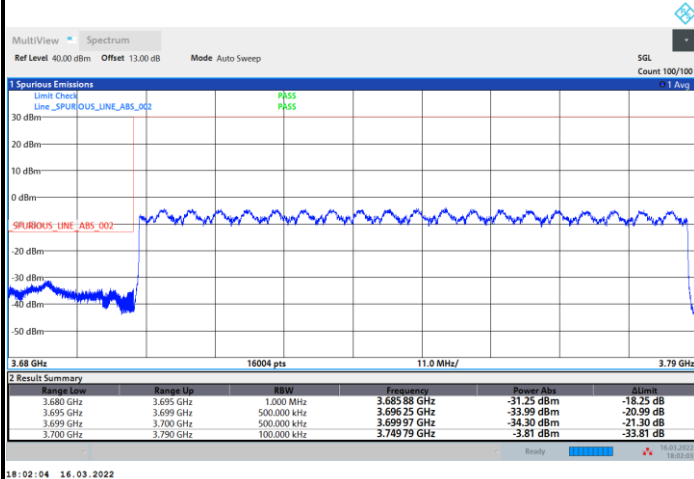




FR1 n77 / 90MHz / DFT-S OFDM / 64QAM / Full RB

Lowest Band Edge

Highest Band Edge

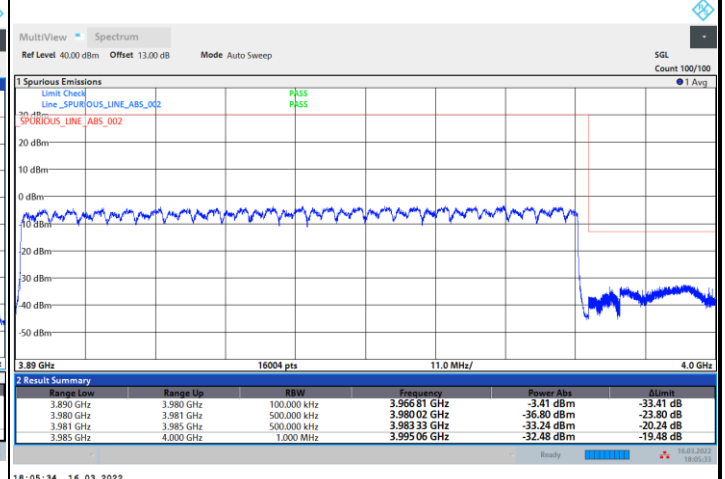
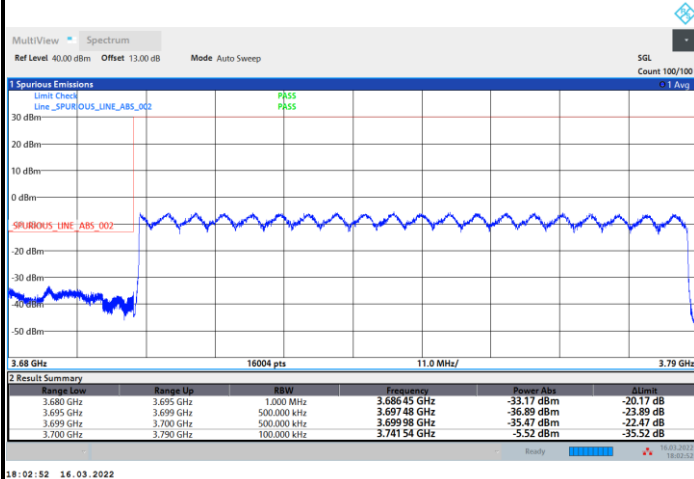




FR1 n77 / 90MHz / DFT-S OFDM / 256QAM / Full RB

Lowest Band Edge

Highest Band Edge

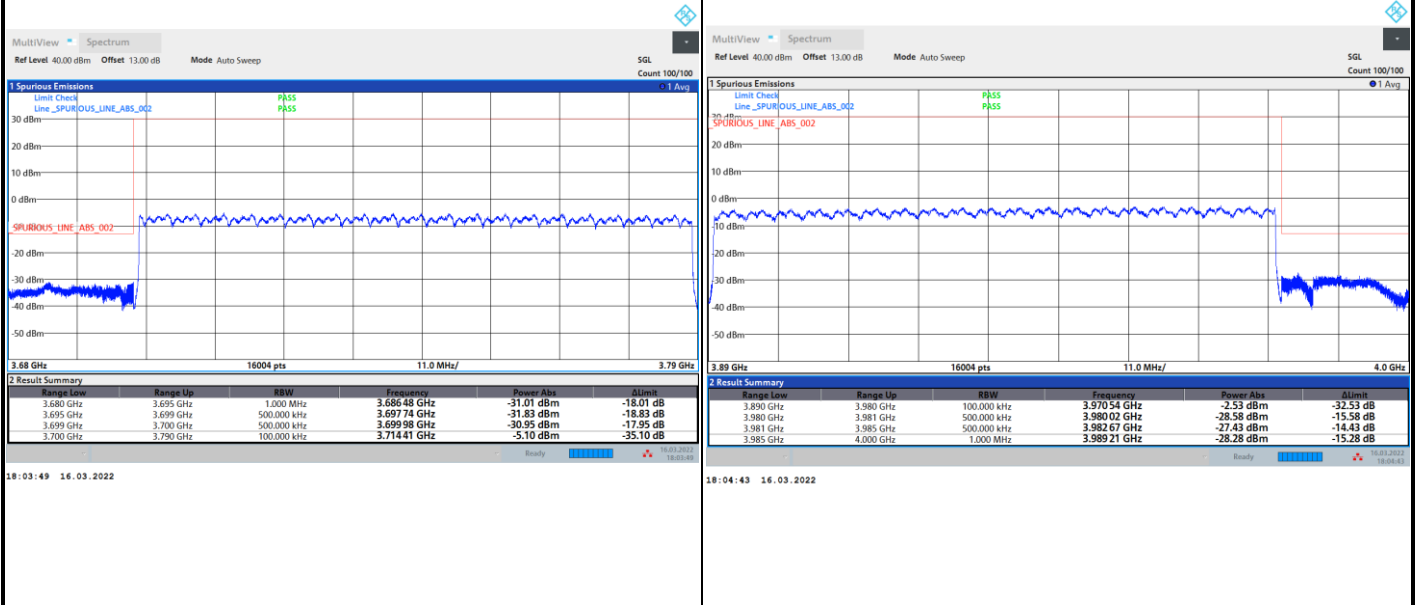




FR1 n77 / 90MHz / CP OFDM / QPSK / Full RB

Lowest Band Edge

Highest Band Edge

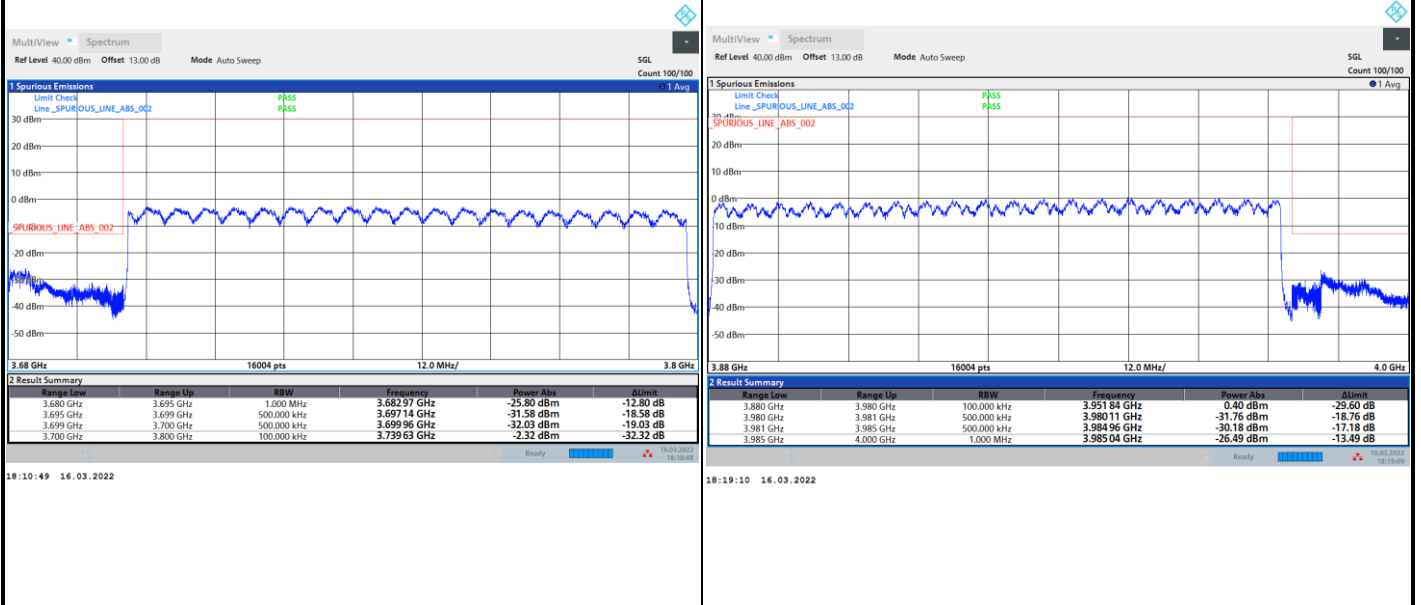




FR1 n77 / 100MHz / DFT-S OFDM / PI/2 BPSK / Full RB

Lowest Band Edge

Highest Band Edge

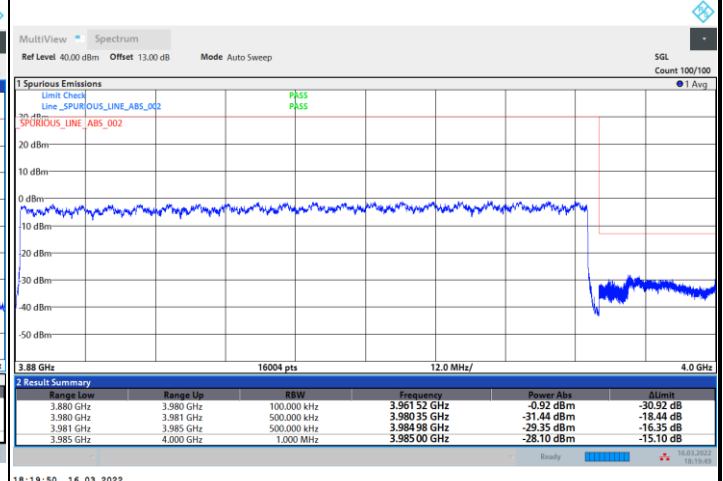
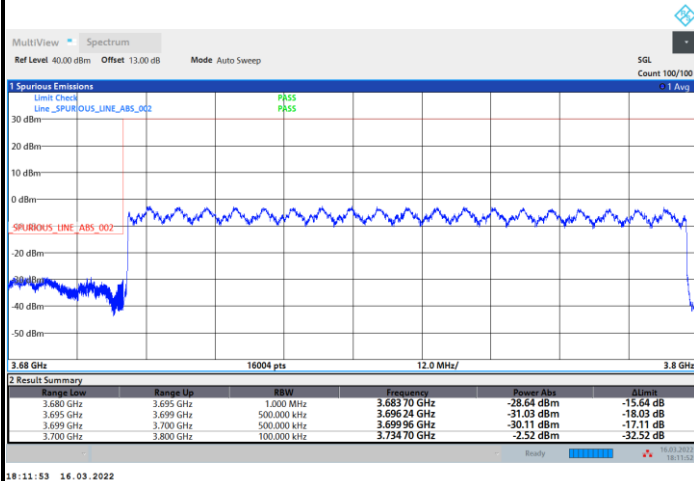




FR1 n77 / 100MHz / DFT-S OFDM / QPSK / Full RB

Lowest Band Edge

Highest Band Edge

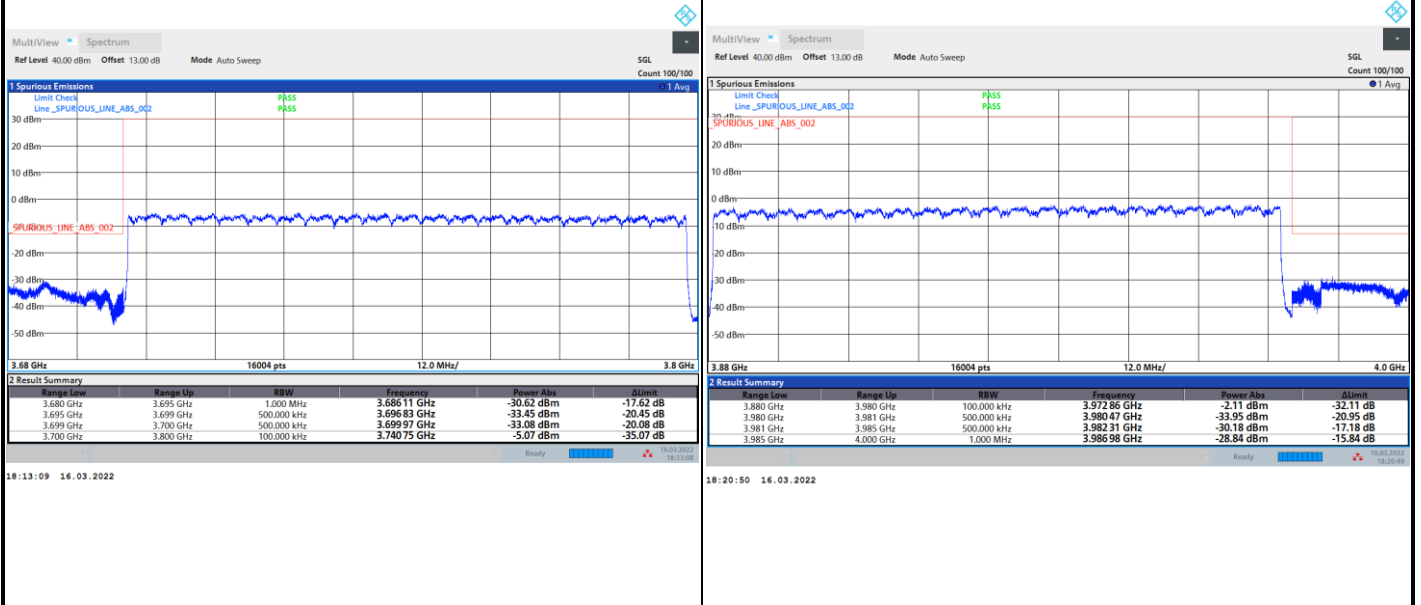




FR1 n77 / 100MHz / DFT-S OFDM / 16QAM / Full RB

Lowest Band Edge

Highest Band Edge

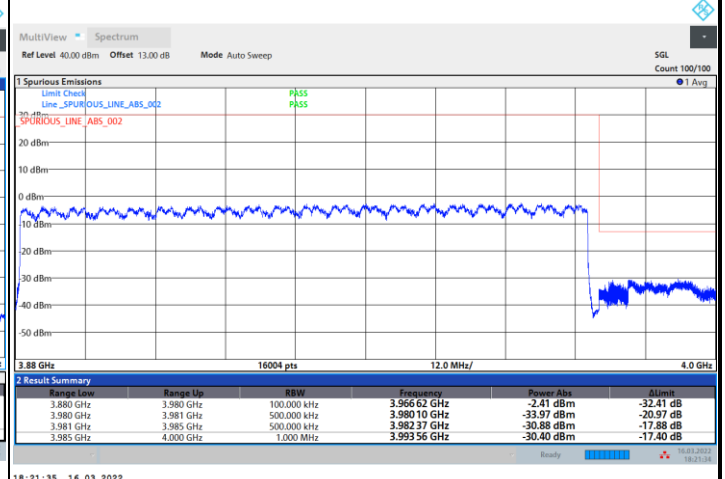
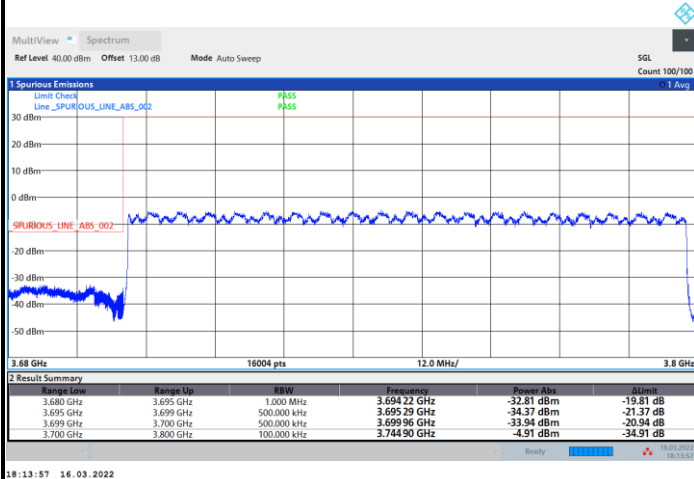




FR1 n77 / 100MHz / DFT-S OFDM / 64QAM / Full RB

Lowest Band Edge

Highest Band Edge

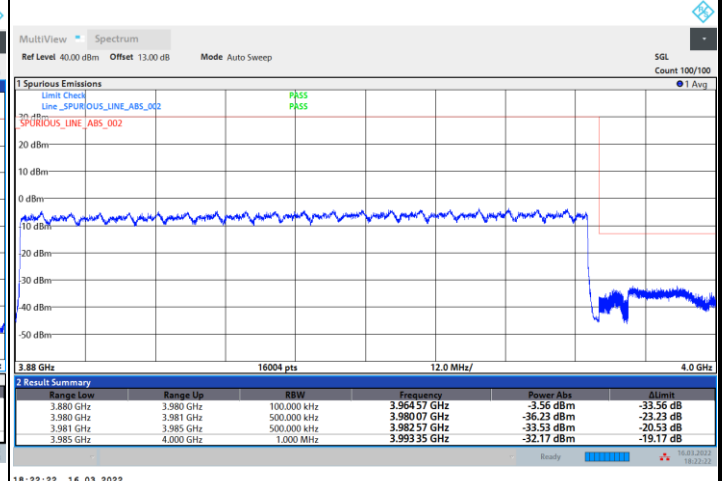
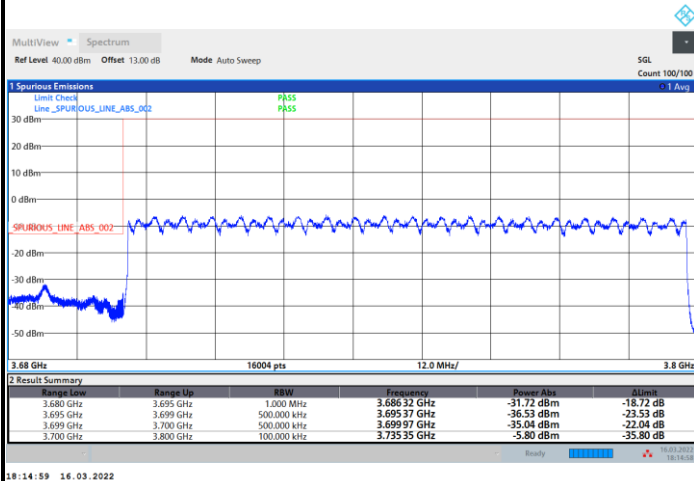




FR1 n77 / 100MHz / DFT-S OFDM / 256QAM / Full RB

Lowest Band Edge / Full RB

Highest Band Edge / Full RB

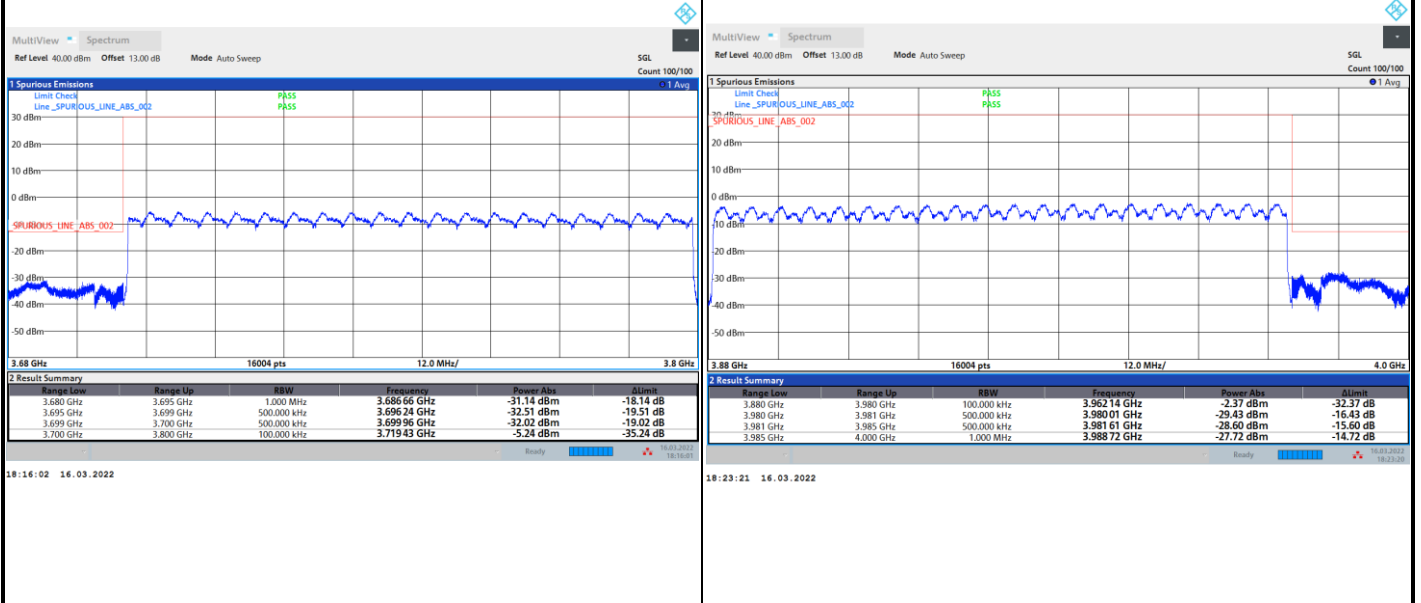




FR1 n77 / 100MHz / CP OFDM / QPSK / Full RB

Lowest Band Edge

Highest Band Edge

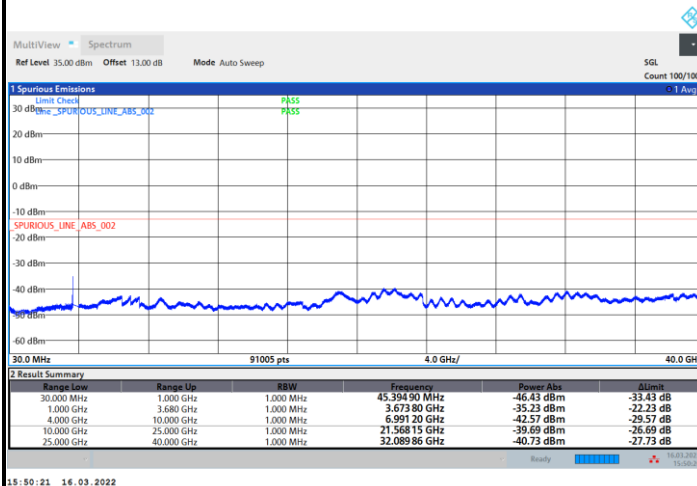




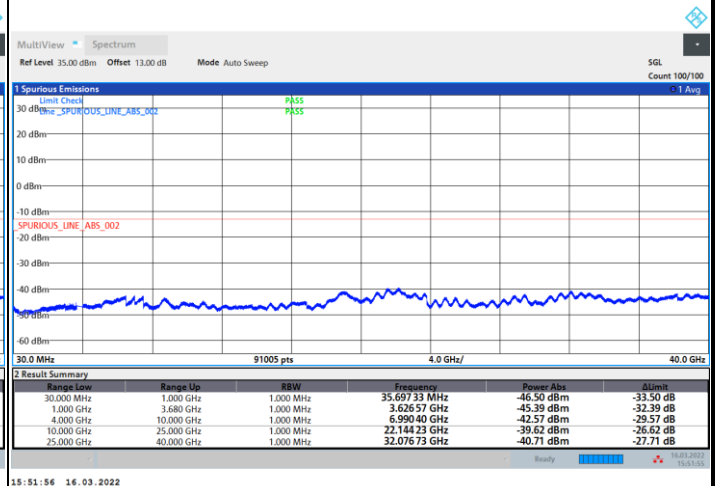
Conducted Spurious Emission

FR1 n77 / 20MHz / DFT-S OFDM / QPSK / 1RB1

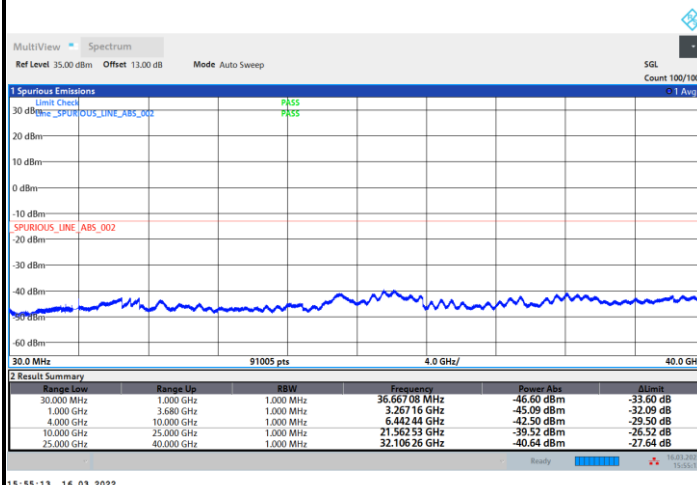
Lowest Channel



Middle Channel



Highest Channel



Frequency Stability

Test Conditions		FR1 n77 (PI/2 BPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 20MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0012	PASS
40	Normal Voltage	0.0043	
30	Normal Voltage	0.0016	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0004	
0	Normal Voltage	0.0013	
-10	Normal Voltage	0.0000	
-20	Normal Voltage	0.0027	
-30	Normal Voltage	0.0015	
20	Maximum Voltage	0.0025	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0016	

Note:

1. Normal Voltage =48 V. ; Battery End Point (BEP) =42.5 V. ; Maximum Voltage =57 V.
2. The frequency fundamental emissions stay within the authorized frequency block.

Appendix B. Test Results of Radiated Test

5G NR n77A

5G NR n77A / 20MHz / PI/2 BPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	7663	-40.85	-13	-27.85	-71.45	-48.44	1.89	11.63	H
	11494	-34.48	-13	-21.48	-71.75	-41.03	2.40	11.09	H
	15325	-29.40	-13	-16.40	-71.07	-39.24	2.64	14.63	H
	19156	-57.54	-13	-44.54	-69.37	-69.37	3.25	17.22	H
	22988	-59.46	-13	-46.46	-76.4	-72.35	3.57	18.60	H
	26819	-55.84	-13	-42.84	-76.08	-68.81	3.92	19.05	H
									H
	7663	-41.23	-13	-28.23	-72.05	-48.82	1.89	11.63	V
	11494	-34.90	-13	-21.90	-72.29	-41.45	2.40	11.09	V
	15325	-28.97	-13	-15.97	-71.34	-38.81	2.64	14.63	V
	19156	-57.15	-13	-44.15	-68.74	-68.98	3.25	17.22	V
	22988	-59.75	-13	-46.75	-76.36	-72.64	3.57	18.60	V
	26819	-57.18	-13	-44.18	-77.03	-70.15	3.92	19.05	V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

EN-DC 2A-n77A

EN-DC 2A-n77A / 20MHz / PI/2 BPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	7663	-41.65	-13	-28.65	-72.25	-49.24	1.89	11.63	H
	11494	-35.10	-13	-22.10	-72.37	-41.65	2.40	11.09	H
	15325	-29.43	-13	-16.43	-71.1	-39.27	2.64	14.63	H
	19156	-58.40	-13	-45.40	-70.23	-70.23	3.25	17.22	H
	22988	-59.84	-13	-46.84	-76.78	-72.73	3.57	18.60	H
	26819	-56.88	-13	-43.88	-77.12	-69.85	3.92	19.05	H
									H
	7663	-41.25	-13	-28.25	-72.07	-48.84	1.89	11.63	V
	11494	-35.21	-13	-22.21	-72.6	-41.76	2.40	11.09	V
	15325	-28.86	-13	-15.86	-71.23	-38.70	2.64	14.63	V
	19156	-62.68	-13	-49.68	-74.27	-74.51	3.25	17.22	V
	22988	-59.71	-13	-46.71	-76.32	-72.60	3.57	18.60	V
	26819	-57.29	-13	-44.29	-77.14	-70.26	3.92	19.05	V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

EN-DC 5A-n77A

EN-DC 5A-n77A / 20MHz / PI/2 BPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	7663	-41.42	-13	-28.42	-72.02	-49.01	1.89	11.63	H
	11494	-35.39	-13	-22.39	-72.66	-41.94	2.40	11.09	H
	15325	-29.42	-13	-16.42	-71.09	-39.26	2.64	14.63	H
	19156	-56.53	-13	-43.53	-68.36	-68.36	3.25	17.22	H
	22988	-59.82	-13	-46.82	-76.76	-72.71	3.57	18.60	H
	26819	-56.71	-13	-43.71	-76.95	-69.68	3.92	19.05	H
									H
	7663	-40.75	-13	-27.75	-71.57	-48.34	1.89	11.63	V
	11494	-35.31	-13	-22.31	-72.7	-41.86	2.40	11.09	V
	15325	-28.88	-13	-15.88	-71.25	-38.72	2.64	14.63	V
	19156	-59.94	-13	-46.94	-71.53	-71.77	3.25	17.22	V
	22988	-60.01	-13	-47.01	-76.62	-72.90	3.57	18.60	V
	26819	-57.32	-13	-44.32	-77.17	-70.29	3.92	19.05	V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

EN-DC 12A-n77A

EN-DC 12A-n77A / 20MHz / PI/2 BPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	7663	-41.24	-13	-28.24	-71.84	-48.83	1.89	11.63	H
	11494	-35.35	-13	-22.35	-72.62	-41.90	2.40	11.09	H
	15325	-29.73	-13	-16.73	-71.4	-39.57	2.64	14.63	H
	19156	-56.20	-13	-43.20	-68.03	-68.03	3.25	17.22	H
	22988	-59.45	-13	-46.45	-76.39	-72.34	3.57	18.60	H
	26819	-55.99	-13	-42.99	-76.23	-68.96	3.92	19.05	H
									H
	7663	-41.23	-13	-28.23	-72.05	-48.82	1.89	11.63	V
	11494	-35.15	-13	-22.15	-72.54	-41.70	2.40	11.09	V
	15325	-28.87	-13	-15.87	-71.24	-38.71	2.64	14.63	V
	19156	-58.72	-13	-45.72	-70.31	-70.55	3.25	17.22	V
	22988	-60.16	-13	-47.16	-76.77	-73.05	3.57	18.60	V
	26819	-57.30	-13	-44.30	-77.15	-70.27	3.92	19.05	V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

EN-DC 13A-n77A

EN-DC 13A-n77A / 20MHz / PI/2 BPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	7663	-41.42	-13	-28.42	-72.02	-49.01	1.89	11.63	H
	11494	-34.47	-13	-21.47	-71.74	-41.02	2.40	11.09	H
	15325	-29.65	-13	-16.65	-71.32	-39.49	2.64	14.63	H
	19156	-58.69	-13	-45.69	-70.52	-70.52	3.25	17.22	H
	22988	-59.45	-13	-46.45	-76.39	-72.34	3.57	18.60	H
	26819	-56.59	-13	-43.59	-76.83	-69.56	3.92	19.05	H
									H
	7663	-41.16	-13	-28.16	-71.98	-48.75	1.89	11.63	V
	11494	-35.44	-13	-22.44	-72.83	-41.99	2.40	11.09	V
	15325	-28.64	-13	-15.64	-71.01	-38.48	2.64	14.63	V
	19156	-60.06	-13	-47.06	-71.65	-71.89	3.25	17.22	V
	22988	-60.01	-13	-47.01	-76.62	-72.90	3.57	18.60	V
	26819	-57.10	-13	-44.10	-76.95	-70.07	3.92	19.05	V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

EN-DC 14A-n77A

EN-DC 14A-n77A / 20MHz / PI/2 BPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	7663	-41.47	-13	-28.47	-72.07	-49.06	1.89	11.63	H
	11494	-34.98	-13	-21.98	-72.25	-41.53	2.40	11.09	H
	15325	-29.70	-13	-16.70	-71.37	-39.54	2.64	14.63	H
	19156	-58.83	-13	-45.83	-70.66	-70.66	3.25	17.22	H
	22988	-59.84	-13	-46.84	-76.78	-72.73	3.57	18.60	H
	26819	-56.17	-13	-43.17	-76.41	-69.14	3.92	19.05	H
									H
	7663	-41.13	-13	-28.13	-71.95	-48.72	1.89	11.63	V
	11494	-34.95	-13	-21.95	-72.34	-41.50	2.40	11.09	V
	15325	-29.06	-13	-16.06	-71.43	-38.90	2.64	14.63	V
	19156	-60.45	-13	-47.45	-72.04	-72.28	3.25	17.22	V
	22988	-59.72	-13	-46.72	-76.33	-72.61	3.57	18.60	V
	26819	-57.06	-13	-44.06	-76.91	-70.03	3.92	19.05	V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

EN-DC 30A-n77A

EN-DC 30A-n77A / 20MHz / PI/2 BPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	7663	-41.31	-13	-28.31	-71.91	-48.90	1.89	11.63	H
	11494	-35.08	-13	-22.08	-72.35	-41.63	2.40	11.09	H
	15325	-29.62	-13	-16.62	-71.29	-39.46	2.64	14.63	H
	19156	-56.37	-13	-43.37	-68.2	-68.20	3.25	17.22	H
	22988	-59.14	-13	-46.14	-76.08	-72.03	3.57	18.60	H
	26819	-55.93	-13	-42.93	-76.17	-68.90	3.92	19.05	H
									H
	7663	-40.74	-13	-27.74	-71.56	-48.33	1.89	11.63	V
	11494	-35.25	-13	-22.25	-72.64	-41.80	2.40	11.09	V
	15325	-28.71	-13	-15.71	-71.08	-38.55	2.64	14.63	V
	19156	-60.46	-13	-47.46	-72.05	-72.29	3.25	17.22	V
	22988	-59.95	-13	-46.95	-76.56	-72.84	3.57	18.60	V
	26819	-57.40	-13	-44.40	-77.25	-70.37	3.92	19.05	V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

EN-DC 66A-n77A

EN-DC 66A-n77A / 20MHz / PI/2 BPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	7663	-41.21	-13	-28.21	-71.81	-48.80	1.89	11.63	H
	11494	-35.42	-13	-22.42	-72.69	-41.97	2.40	11.09	H
	15325	-29.60	-13	-16.60	-71.27	-39.44	2.64	14.63	H
	19156	-57.91	-13	-44.91	-69.74	-69.74	3.25	17.22	H
	22988	-59.14	-13	-46.14	-76.08	-72.03	3.57	18.60	H
	26819	-56.02	-13	-43.02	-76.26	-68.99	3.92	19.05	H
									H
	7663	-41.07	-13	-28.07	-71.89	-48.66	1.89	11.63	V
	11494	-35.65	-13	-22.65	-73.04	-42.20	2.40	11.09	V
	15325	-28.86	-13	-15.86	-71.23	-38.70	2.64	14.63	V
	19156	-60.45	-13	-47.45	-72.04	-72.28	3.25	17.22	V
	22988	-59.95	-13	-46.95	-76.56	-72.84	3.57	18.60	V
	26819	-57.26	-13	-44.26	-77.11	-70.23	3.92	19.05	V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.