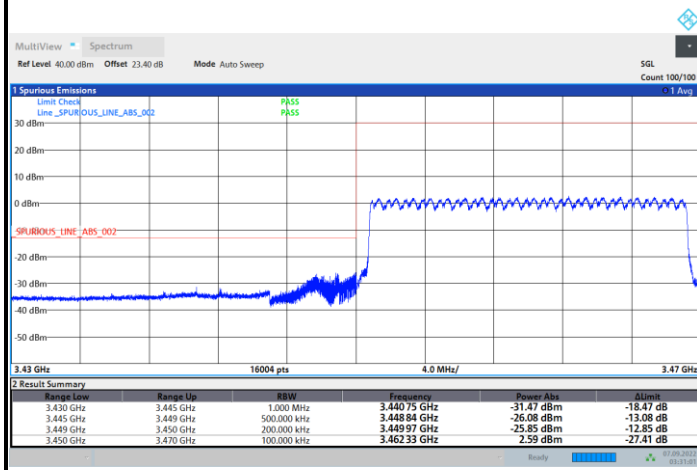




Conducted Band Edge

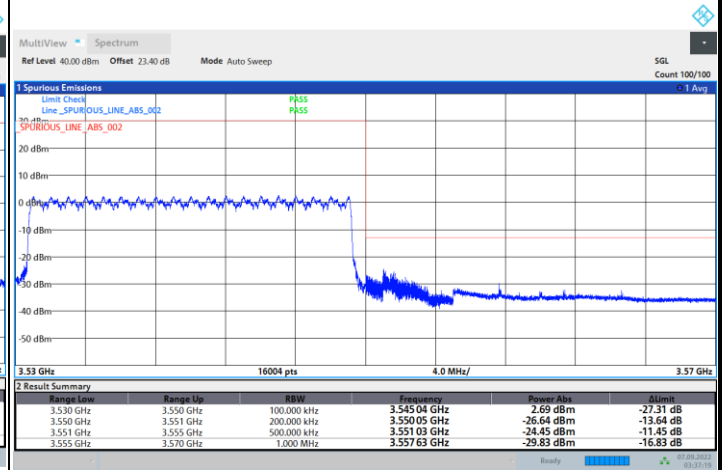
FR1 n78 / 20MHz / CP OFDM / QPSK

Lowest Band Edge / Full RB



03:31:02 07.09.2022

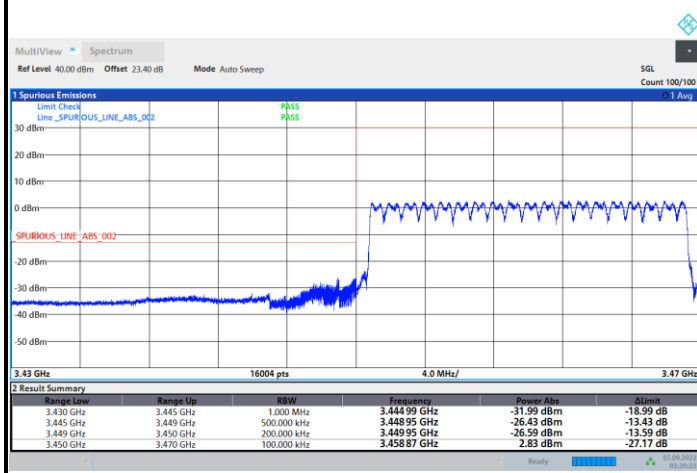
Highest Band Edge / Full RB



03:37:20 07.09.2022

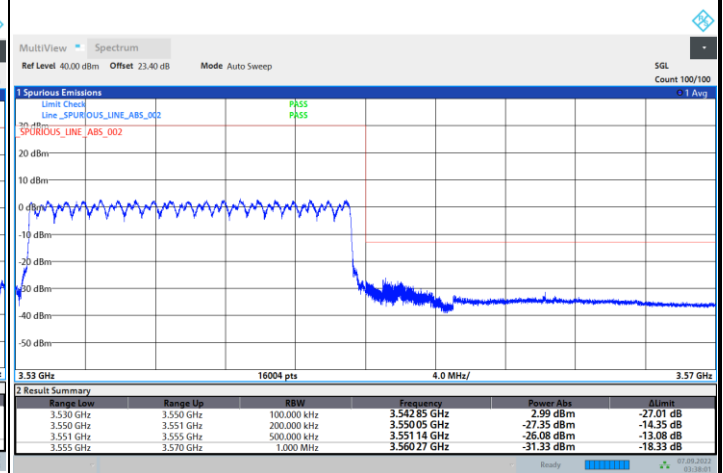
FR1 n78 / 20MHz / CP OFDM / 16QAM

Lowest Band Edge / Full RB



03:30:24 07.09.2022

Highest Band Edge / Full RB

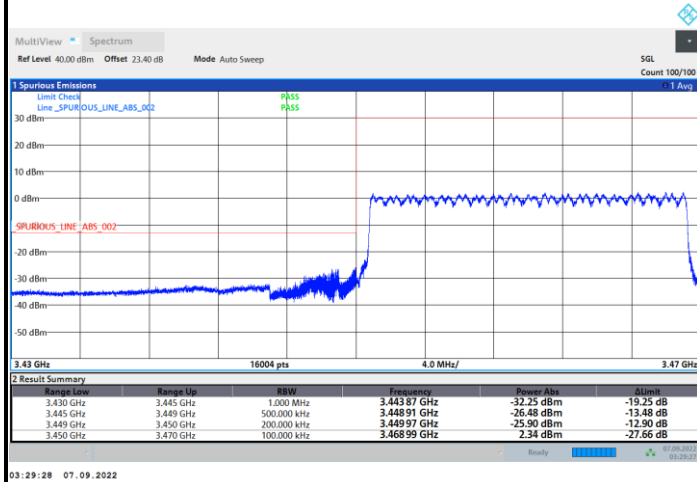


03:38:01 07.09.2022

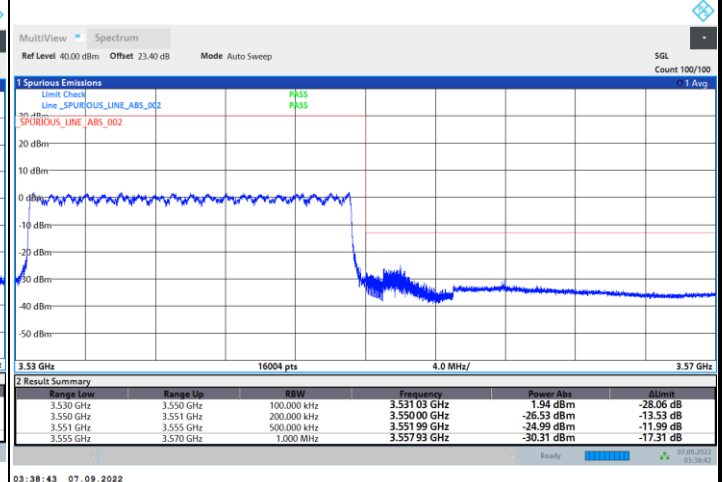


FR1 n78 / 20MHz / CP OFDM / 64QAM

Lowest Band Edge / Full RB

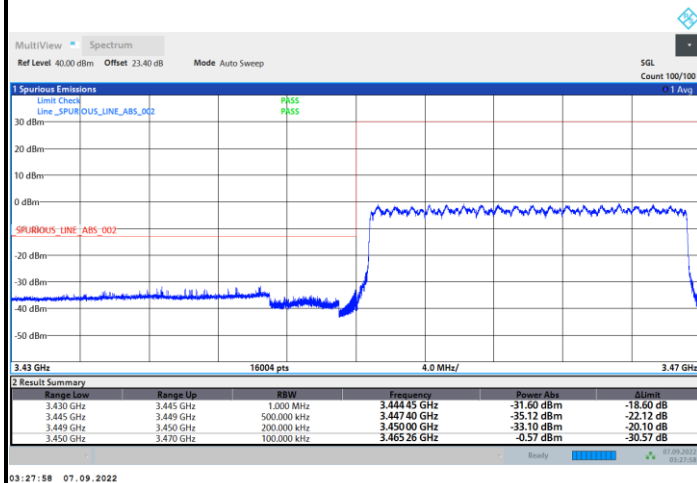


Highest Band Edge / Full RB

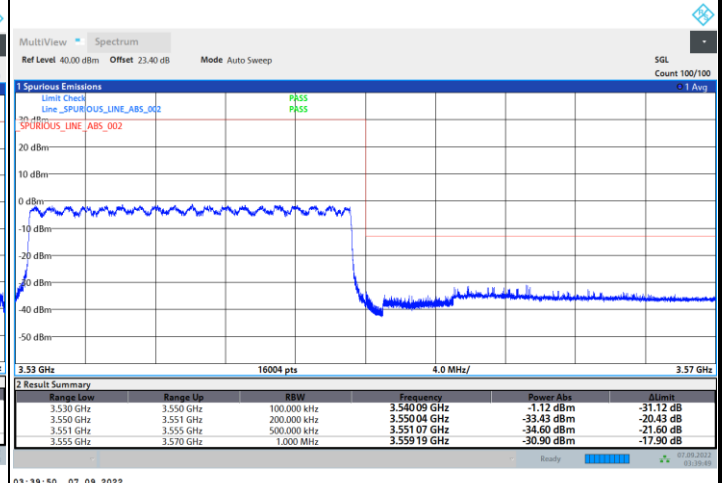


FR1 n78 / 20MHz / CP OFDM / 256QAM

Lowest Band Edge / Full RB



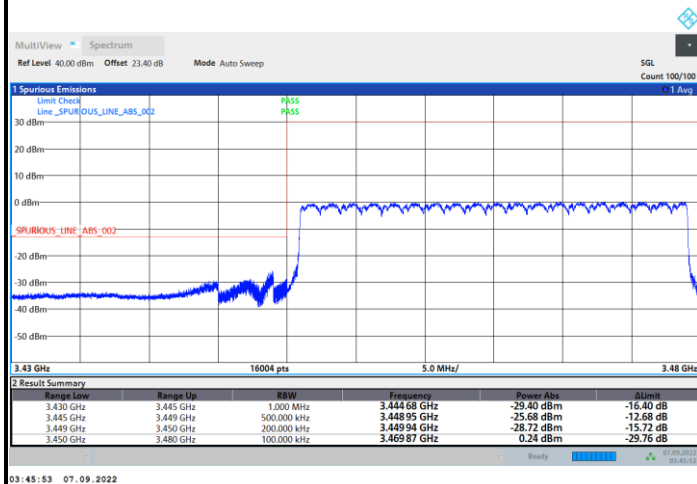
Highest Band Edge / Full RB



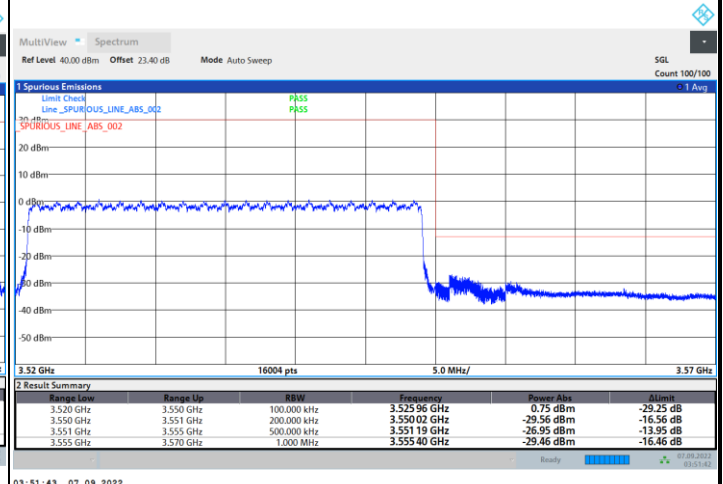


FR1 n78 / 30MHz / CP OFDM / QPSK

Lowest Band Edge / Full RB

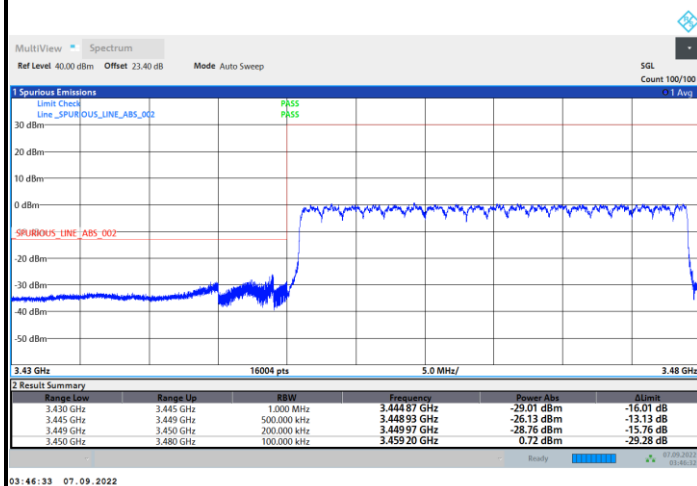


Highest Band Edge / Full RB

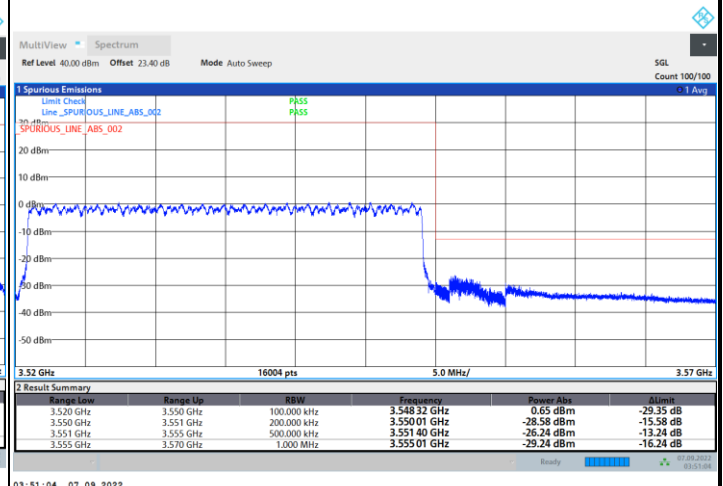


FR1 n78 / 30MHz / CP OFDM / 16QAM

Lowest Band Edge / Full RB



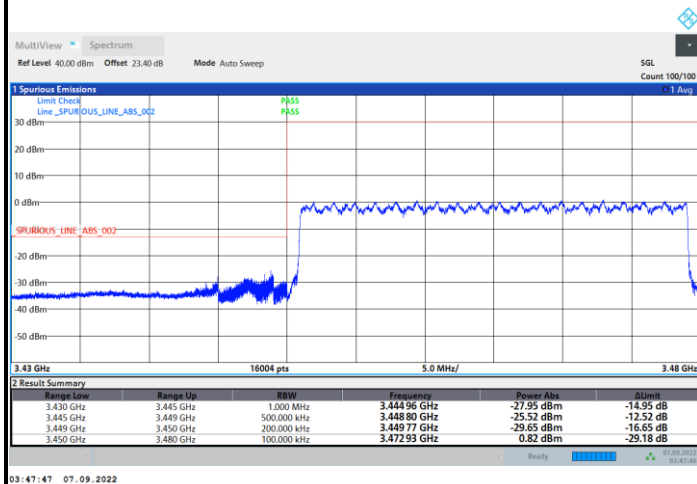
Highest Band Edge / Full RB



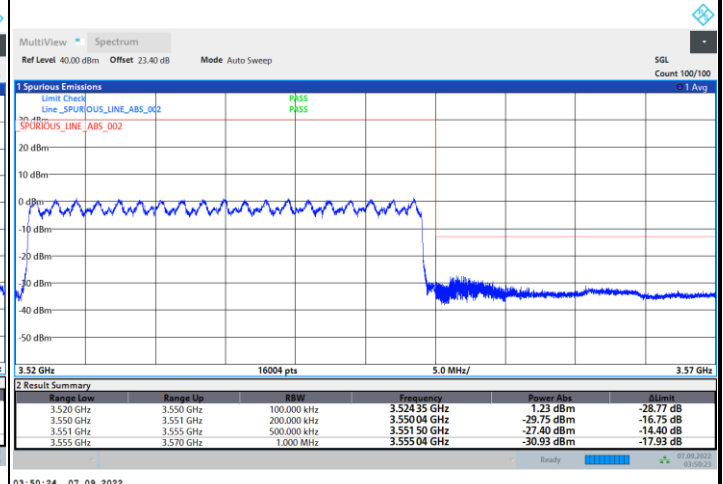


FR1 n78 / 30MHz / CP OFDM / 64QAM

Lowest Band Edge / Full RB

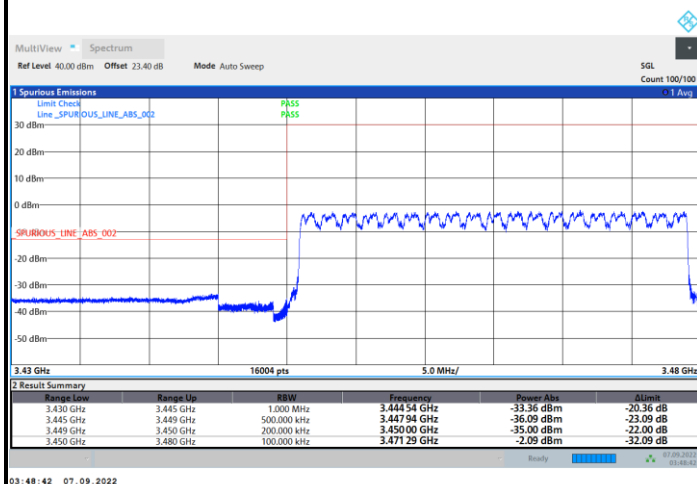


Highest Band Edge / Full RB

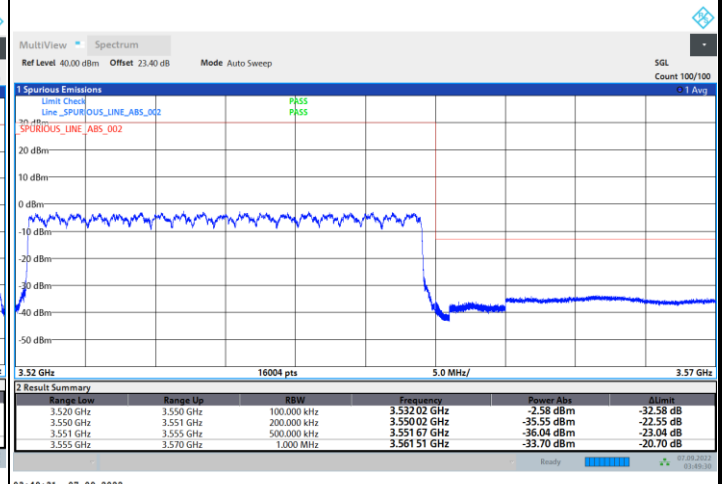


FR1 n78 / 30MHz / CP OFDM / 256QAM

Lowest Band Edge / Full RB



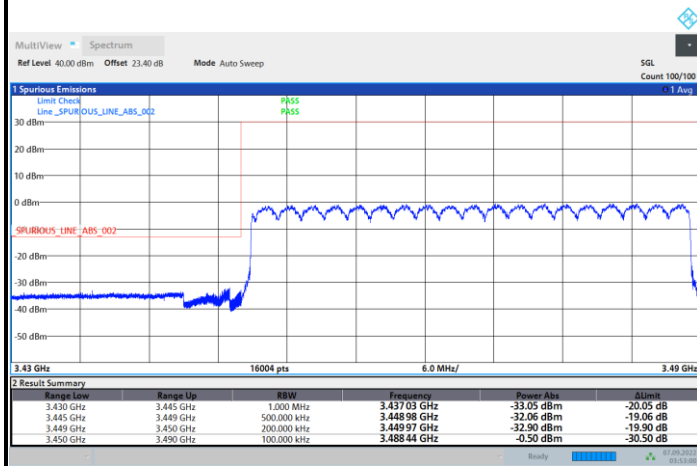
Highest Band Edge / Full RB



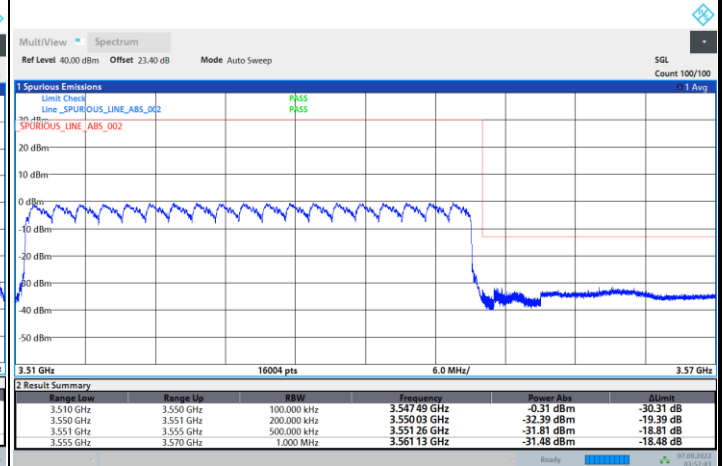


FR1 n78 / 40MHz / CP OFDM / QPSK

Lowest Band Edge / Full RB

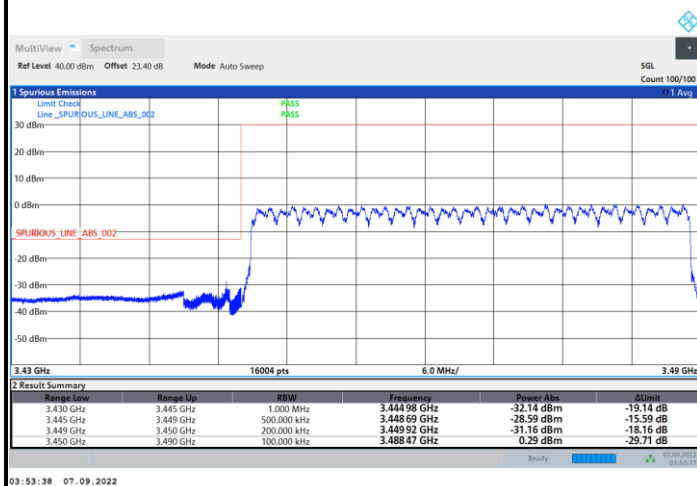


Highest Band Edge / Full RB

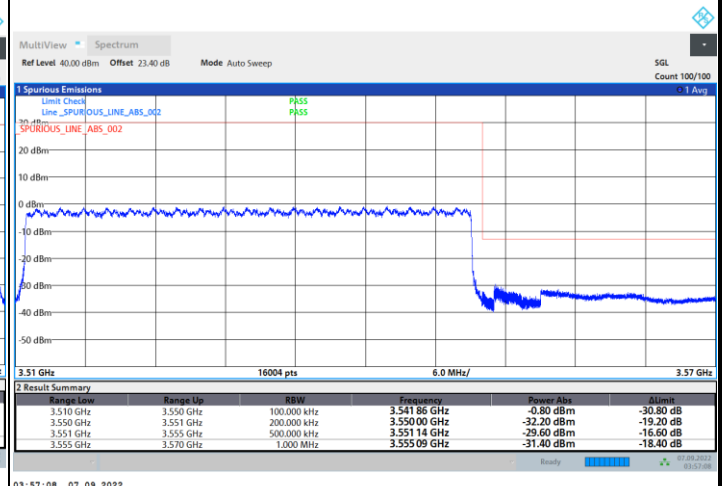


FR1 n78 / 40MHz / CP OFDM / 16QAM

Lowest Band Edge / Full RB



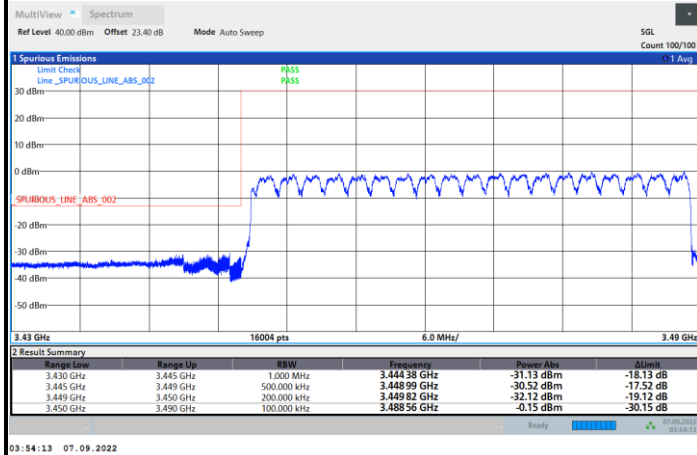
Highest Band Edge / Full RB



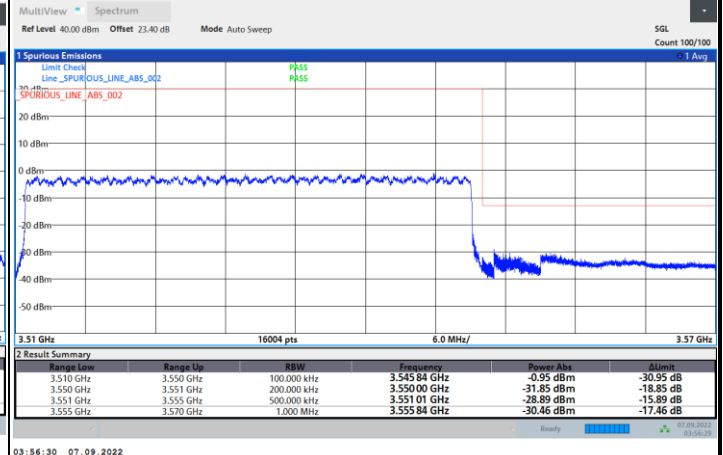


FR1 n78 / 40MHz / CP OFDM / 64QAM

Lowest Band Edge / Full RB

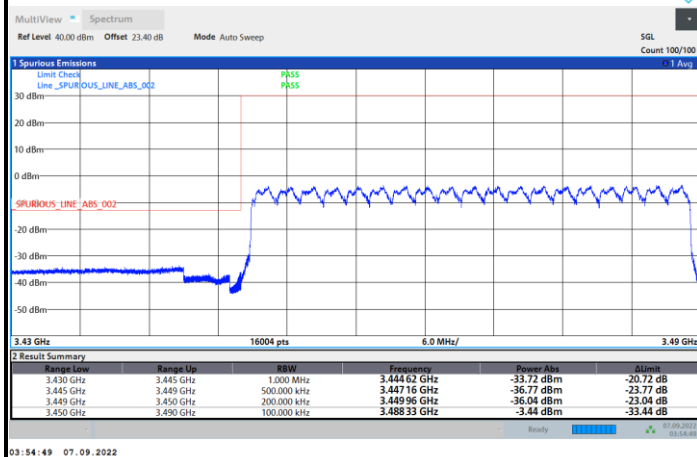


Highest Band Edge / Full RB

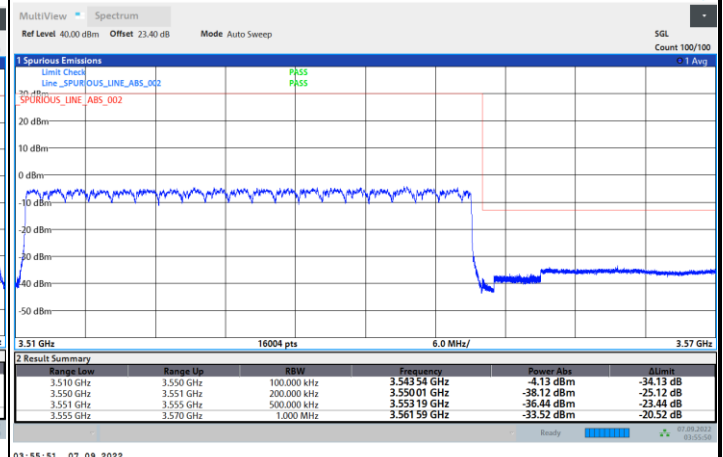


FR1 n78 / 40MHz / CP OFDM / 256QAM

Lowest Band Edge / Full RB



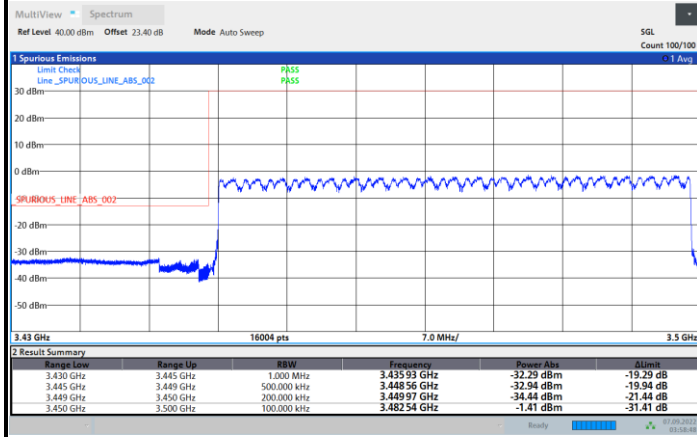
Highest Band Edge / Full RB



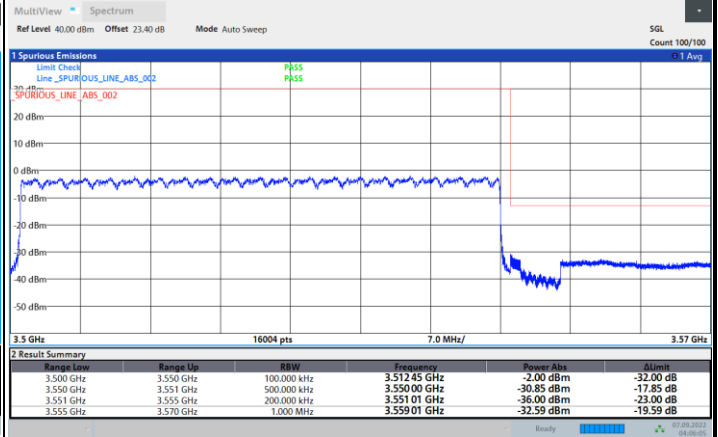


FR1 n78 / 50MHz / CP OFDM / QPSK

Lowest Band Edge / Full RB

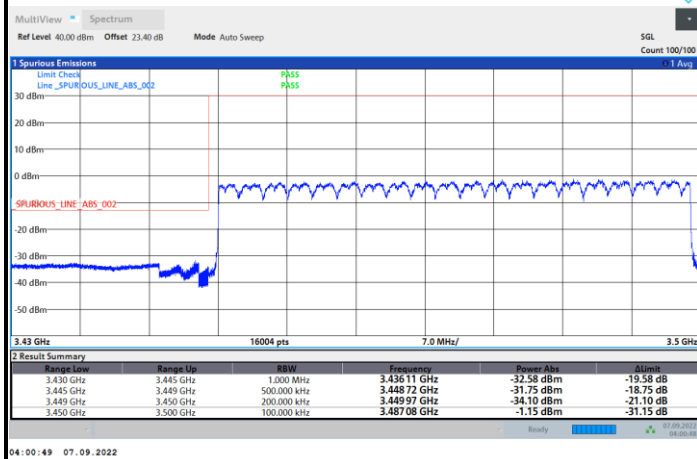


Highest Band Edge / Full RB

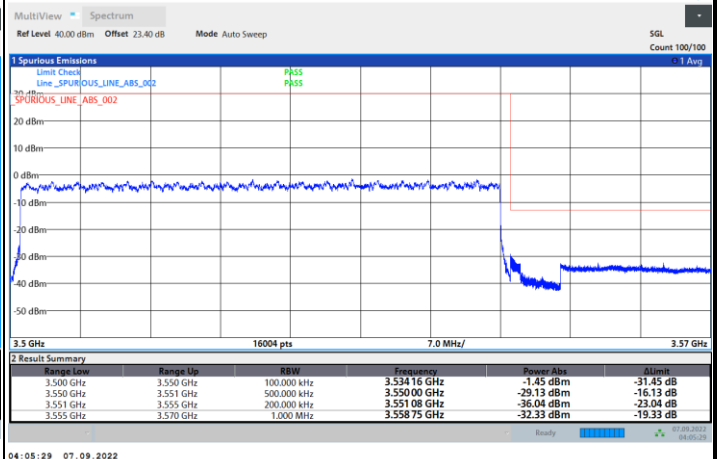


FR1 n78 / 50MHz / CP OFDM / 16QAM

Lowest Band Edge / Full RB



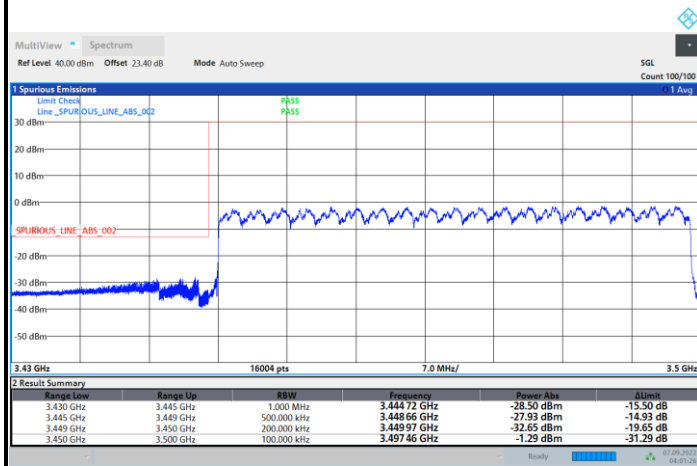
Highest Band Edge / Full RB



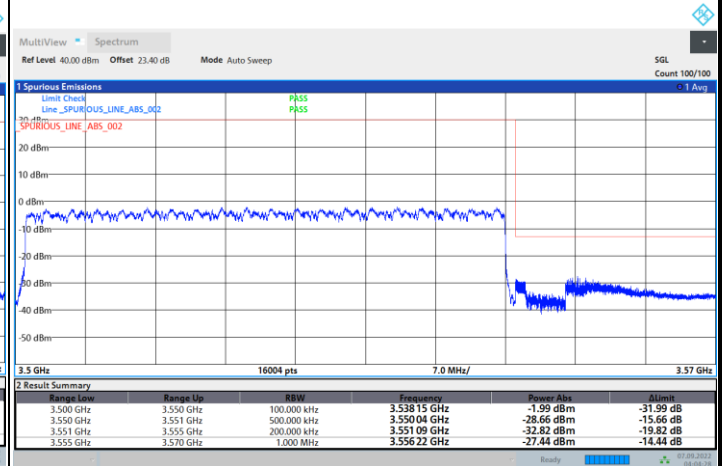


FR1 n78 / 50MHz / CP OFDM / 64QAM

Lowest Band Edge / Full RB

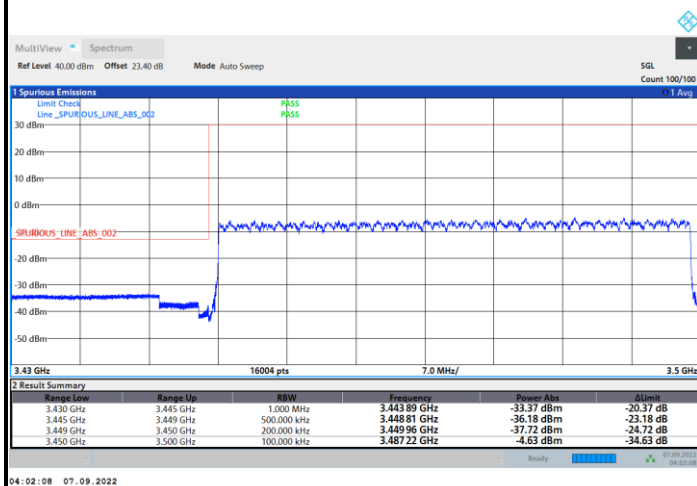


Highest Band Edge / Full RB

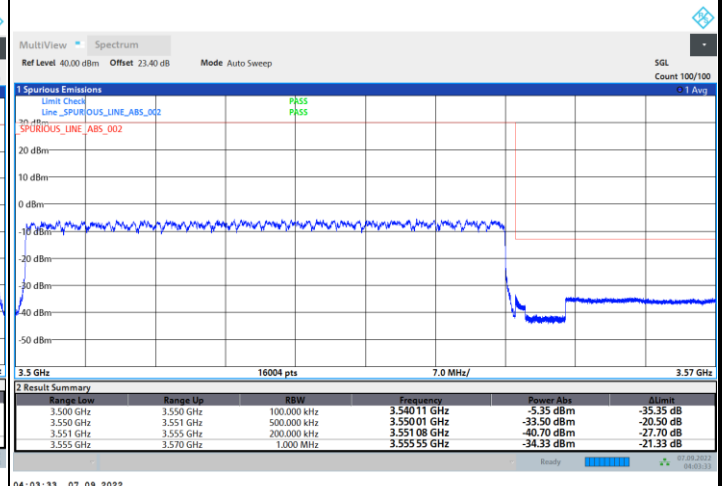


FR1 n78 / 50MHz / CP OFDM / 256QAM

Lowest Band Edge / Full RB



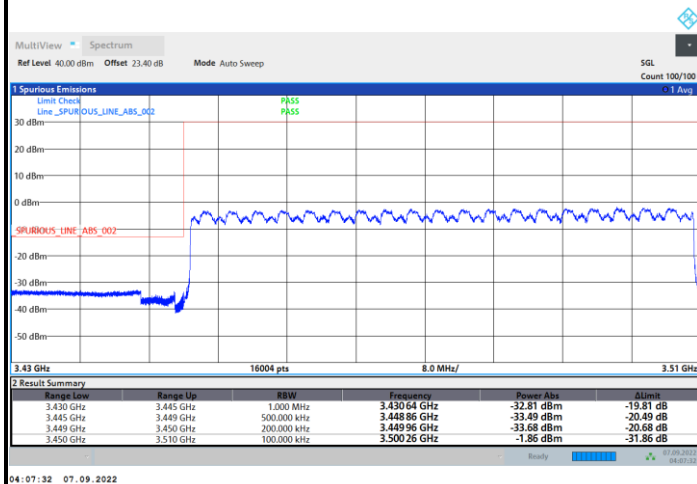
Highest Band Edge / Full RB



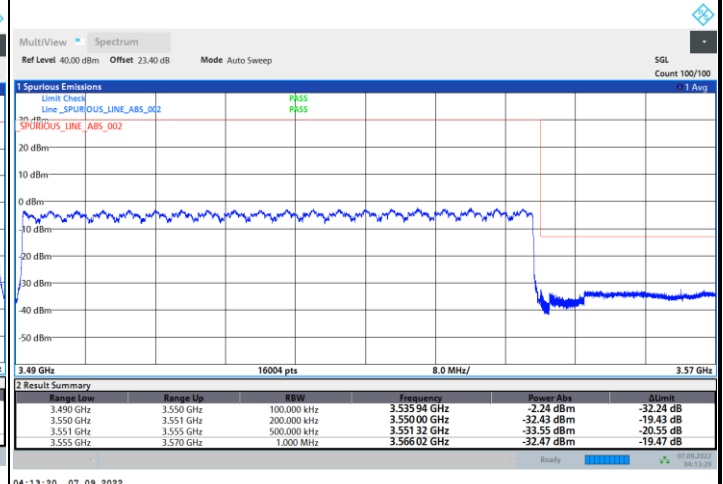


FR1 n78 / 60MHz / CP OFDM / QPSK

Lowest Band Edge / Full RB

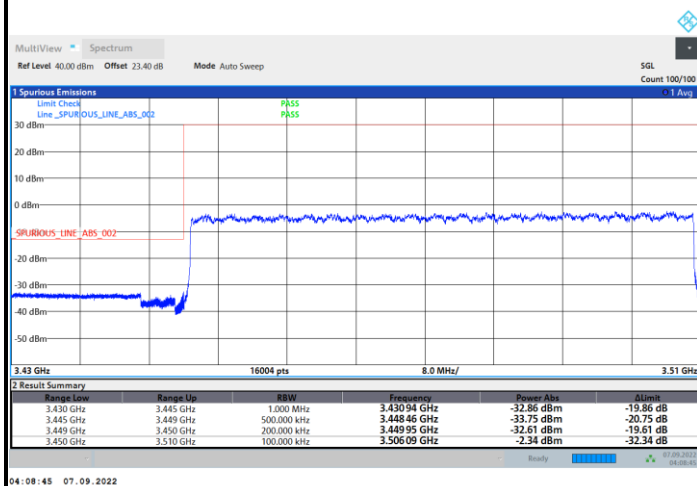


Highest Band Edge / Full RB

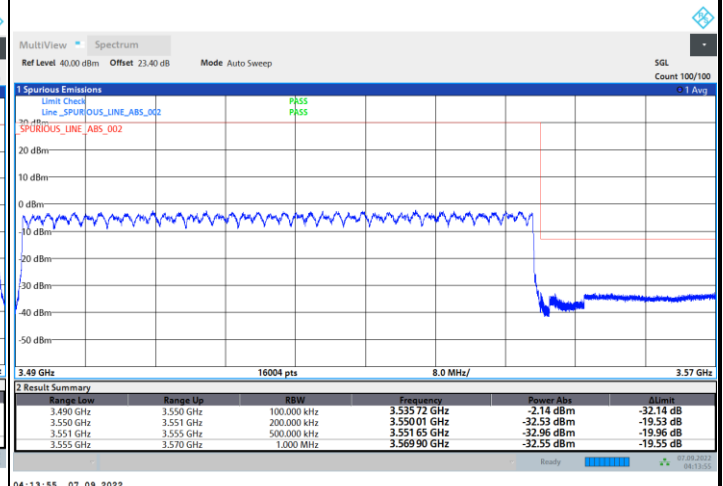


FR1 n78 / 60MHz / CP OFDM / 16QAM

Lowest Band Edge / Full RB



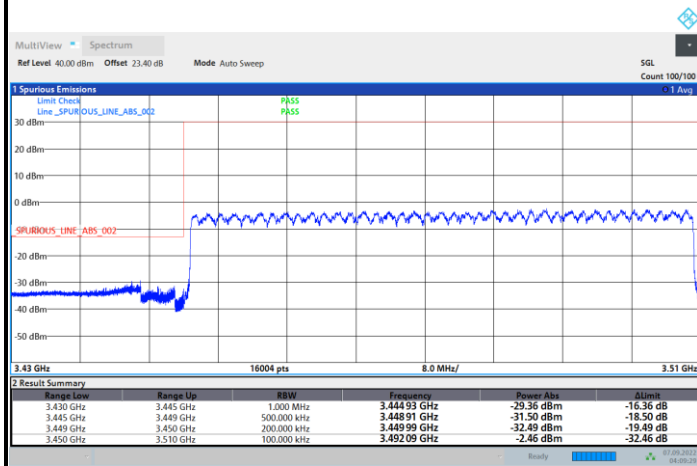
Highest Band Edge / Full RB



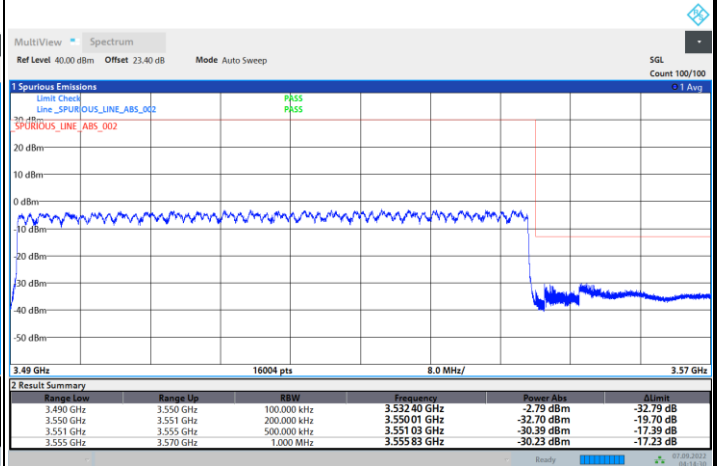


FR1 n78 / 60MHz / CP OFDM / 64QAM

Lowest Band Edge / Full RB

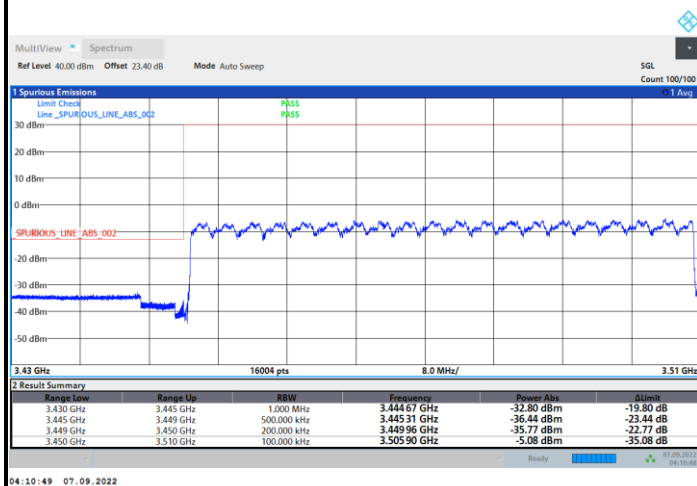


Highest Band Edge / Full RB

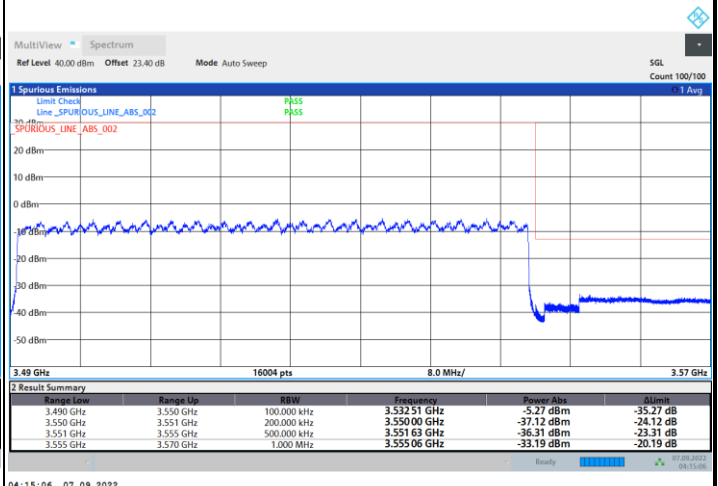


FR1 n78 / 60MHz / CP OFDM / 256QAM

Lowest Band Edge / Full RB



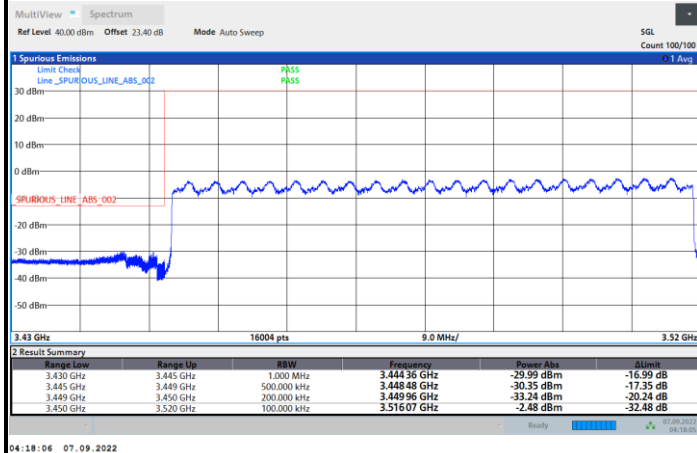
Highest Band Edge / Full RB



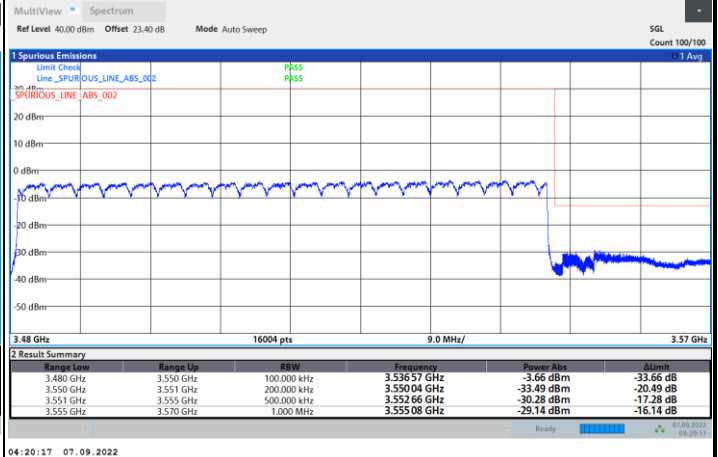


FR1 n78 / 70MHz / CP OFDM / QPSK

Lowest Band Edge / Full RB

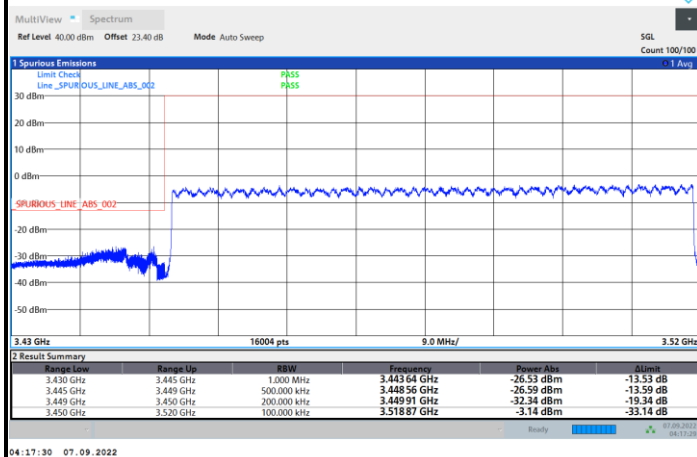


Highest Band Edge / Full RB

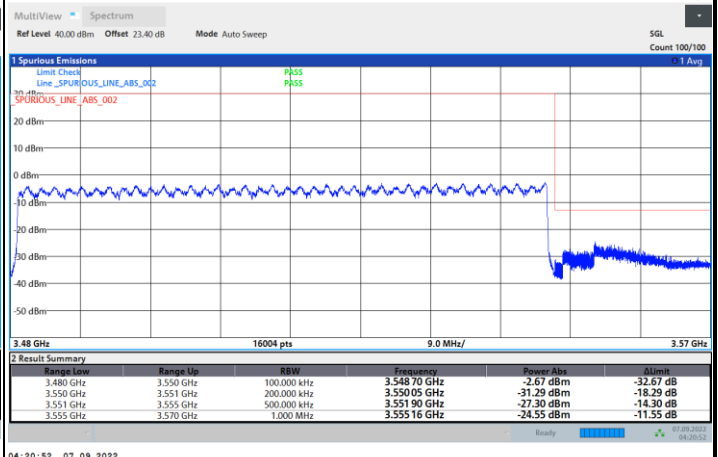


FR1 n78 / 70MHz / CP OFDM / 16QAM

Lowest Band Edge / Full RB



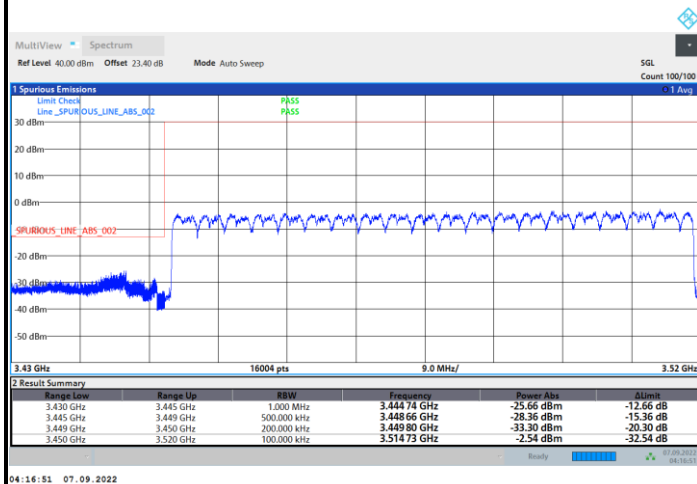
Highest Band Edge / Full RB



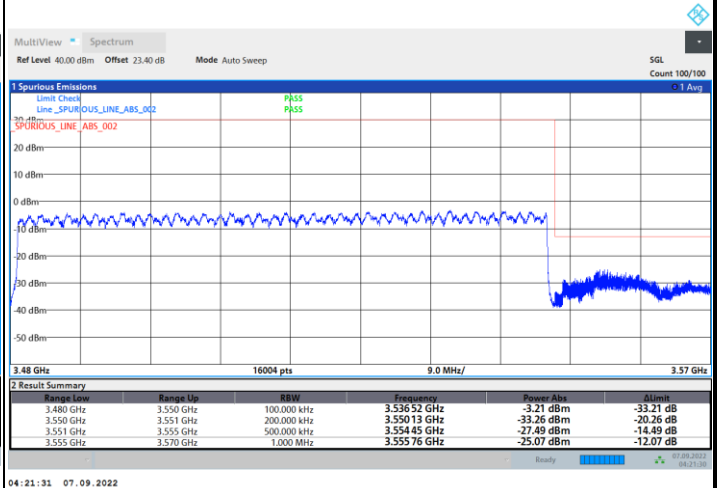


FR1 n78 / 70MHz / CP OFDM / 64QAM

Lowest Band Edge / Full RB

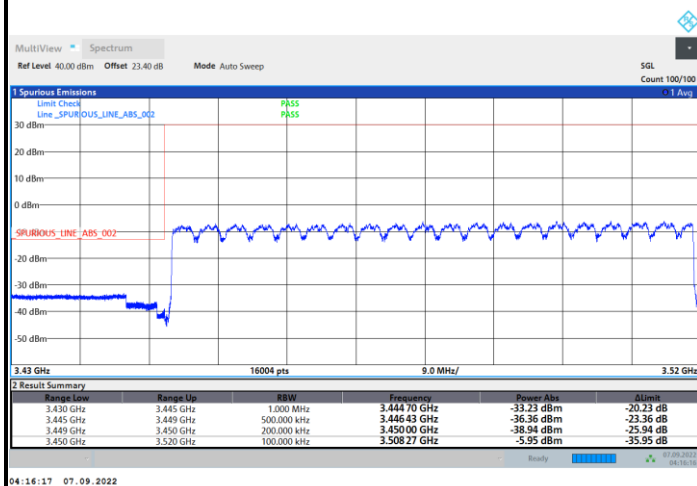


Highest Band Edge / Full RB

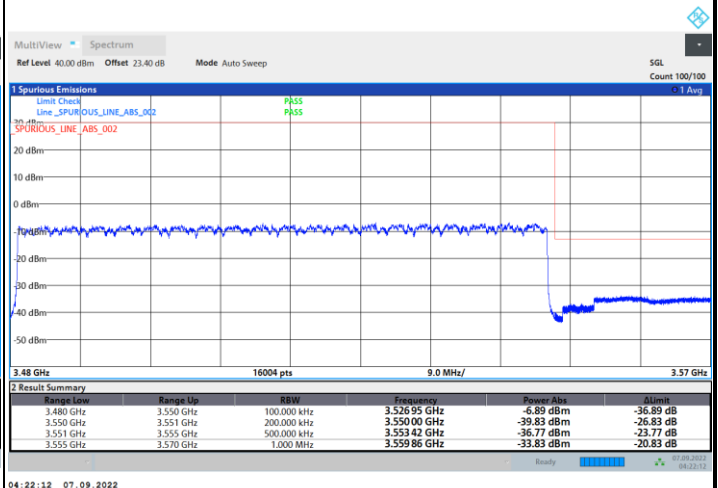


FR1 n78 / 70MHz / CP OFDM / 256QAM

Lowest Band Edge / Full RB



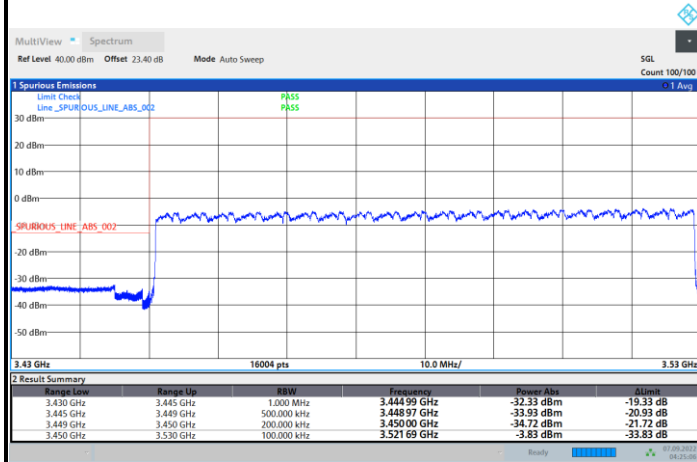
Highest Band Edge / Full RB



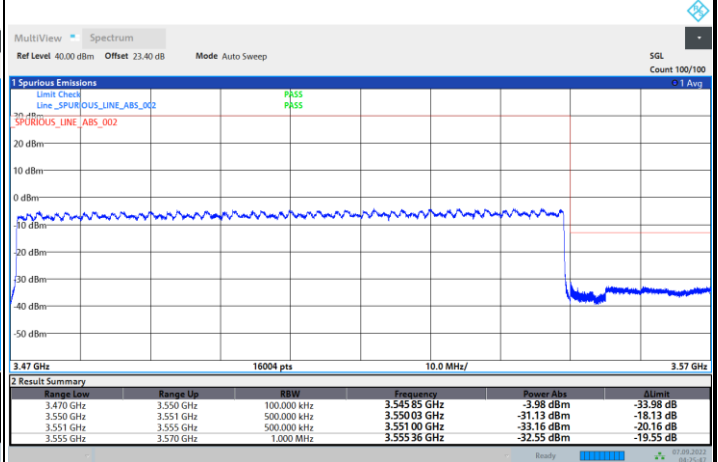


FR1 n78 / 80MHz / CP OFDM / QPSK

Lowest Band Edge / Full RB

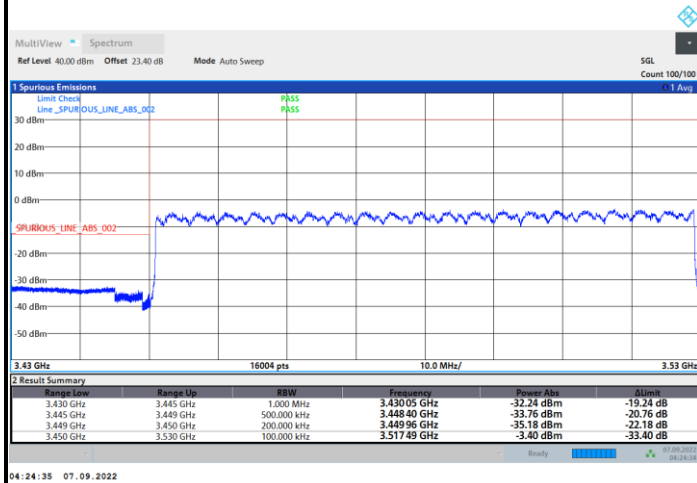


Highest Band Edge / Full RB

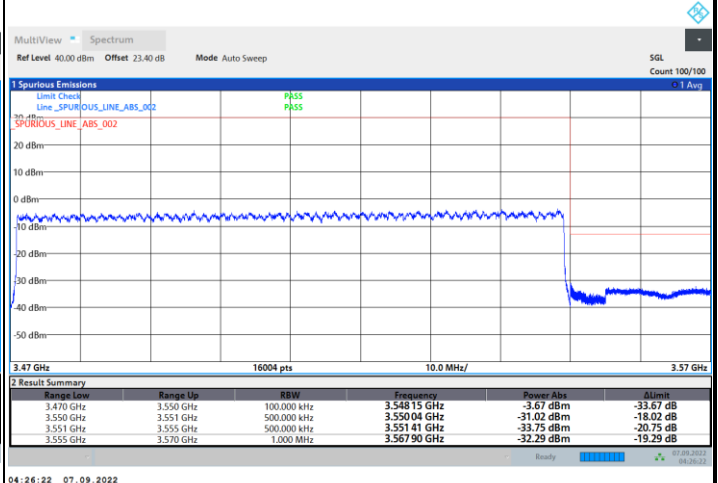


FR1 n78 / 80MHz / CP OFDM / 16QAM

Lowest Band Edge / Full RB



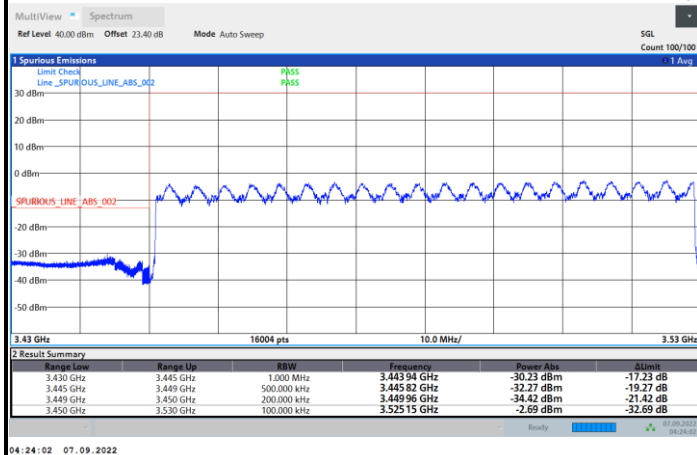
Highest Band Edge / Full RB



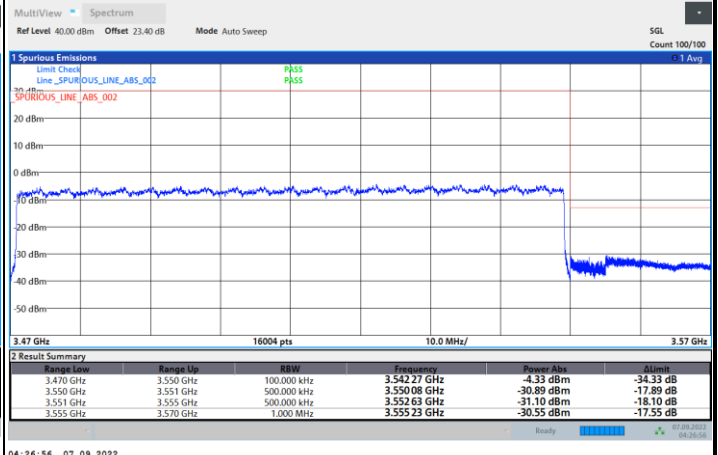


FR1 n78 / 80MHz / CP OFDM / 64QAM

Lowest Band Edge / Full RB

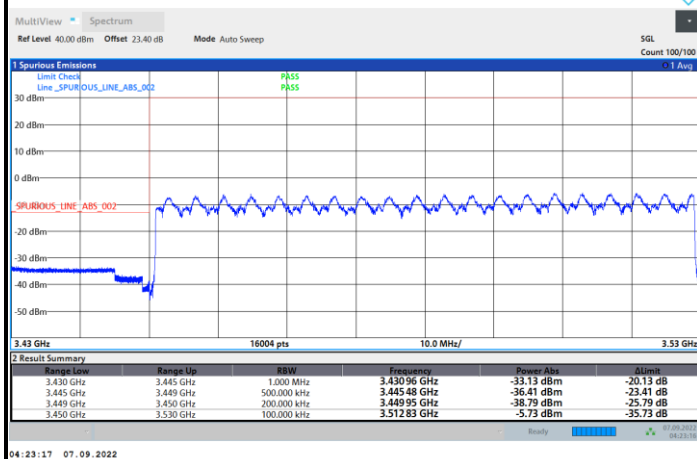


Highest Band Edge / Full RB

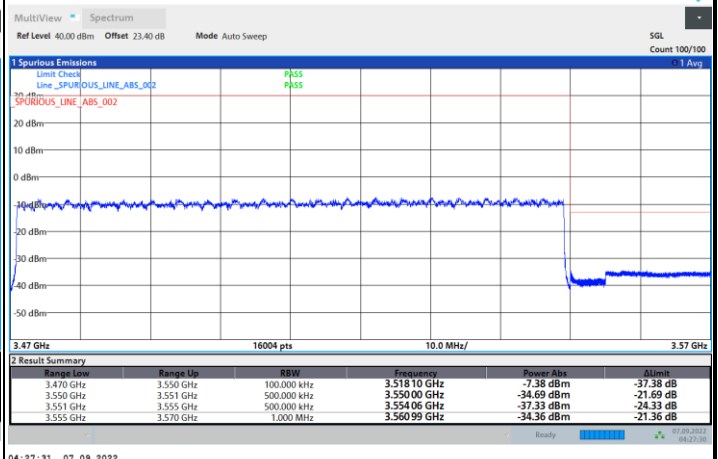


FR1 n78 / 80MHz / CP OFDM / 256QAM

Lowest Band Edge / Full RB



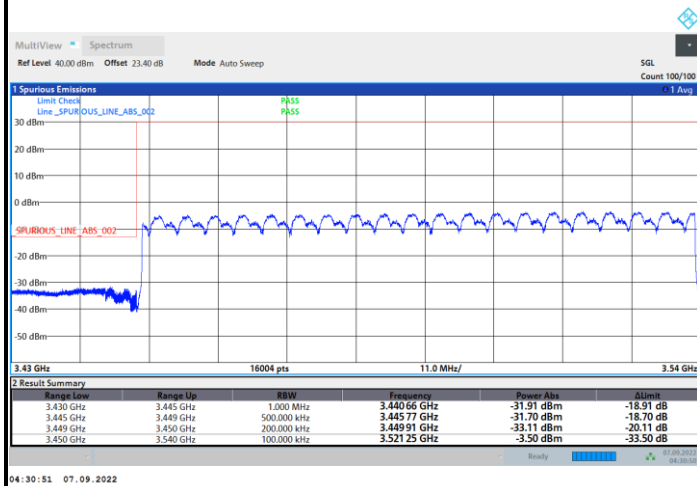
Highest Band Edge / Full RB



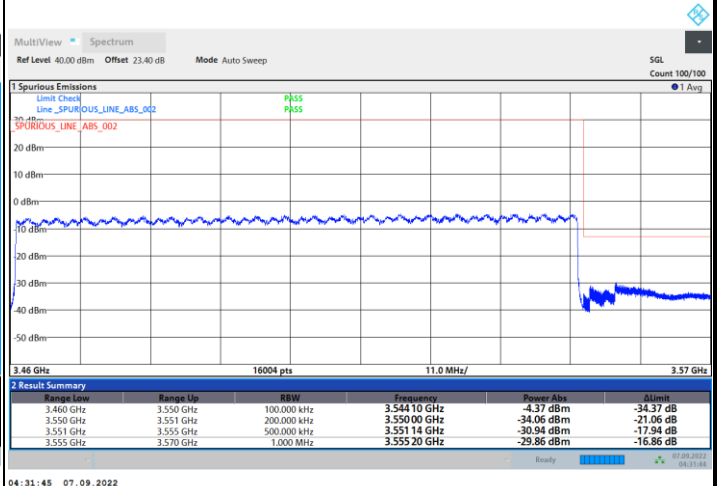


FR1 n78 / 90MHz / CP OFDM / QPSK

Lowest Band Edge / Full RB

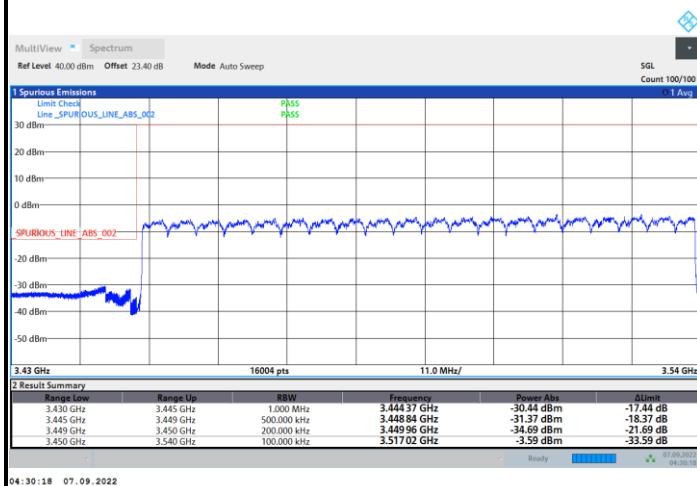


Highest Band Edge / Full RB

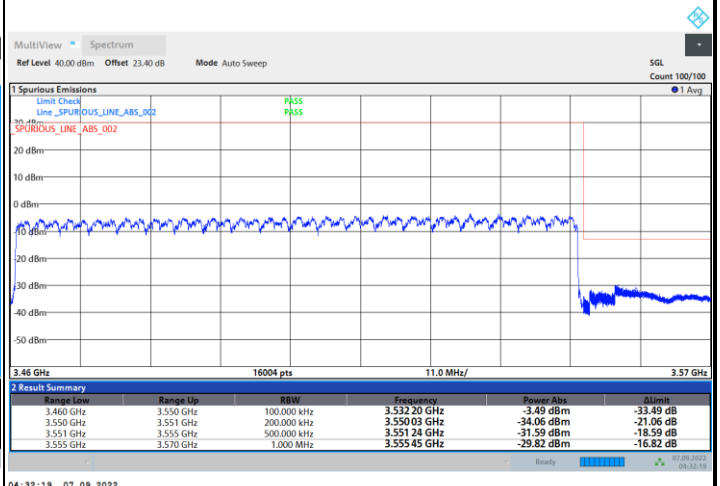


FR1 n78 / 90MHz / CP OFDM / 16QAM

Lowest Band Edge / Full RB



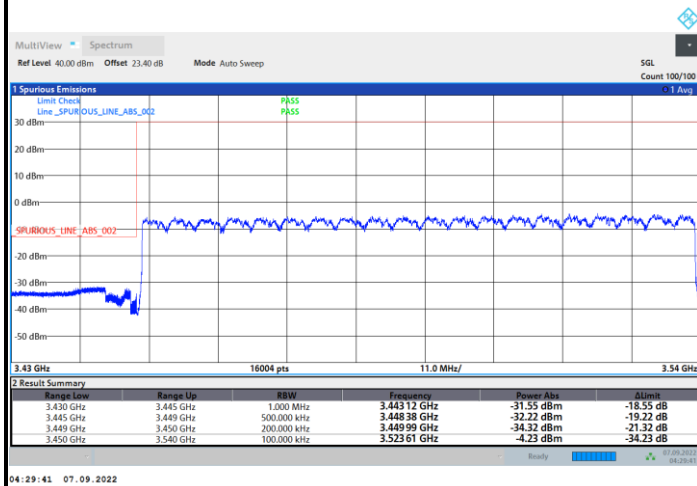
Highest Band Edge / Full RB



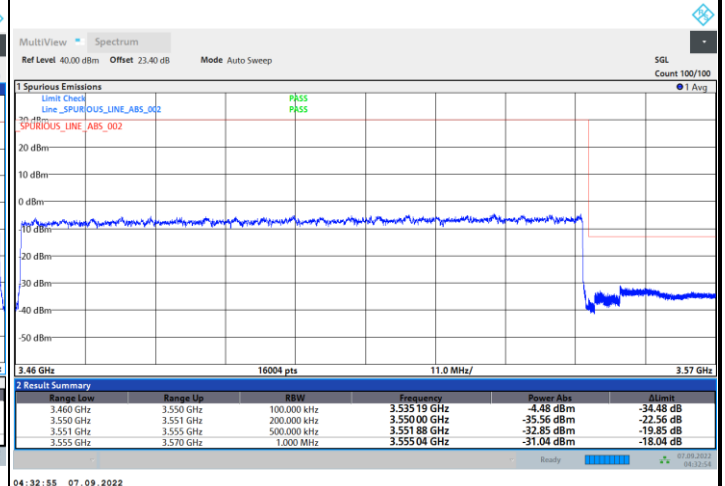


FR1 n78 / 90MHz / CP OFDM / 64QAM

Lowest Band Edge / Full RB

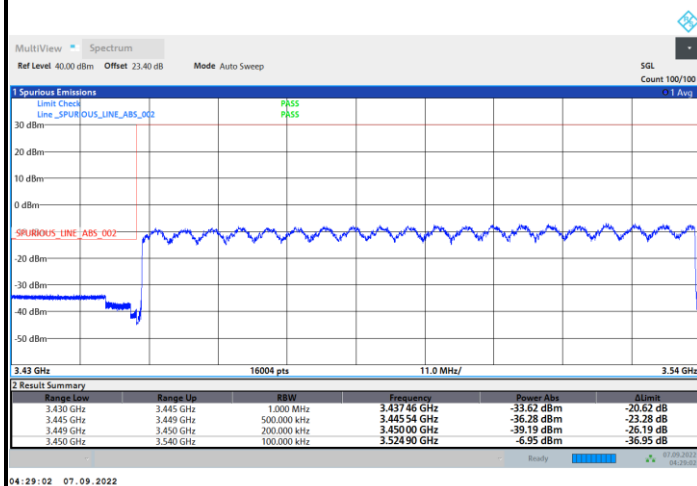


Highest Band Edge / Full RB

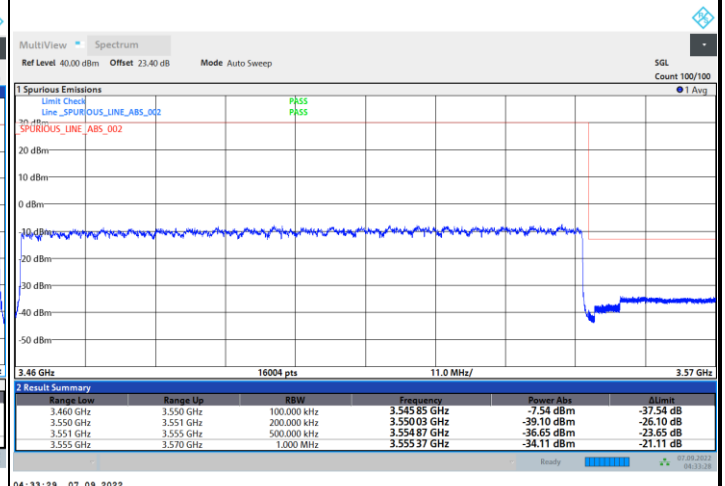


FR1 n78 / 90MHz / CP OFDM / 256QAM

Lowest Band Edge / Full RB



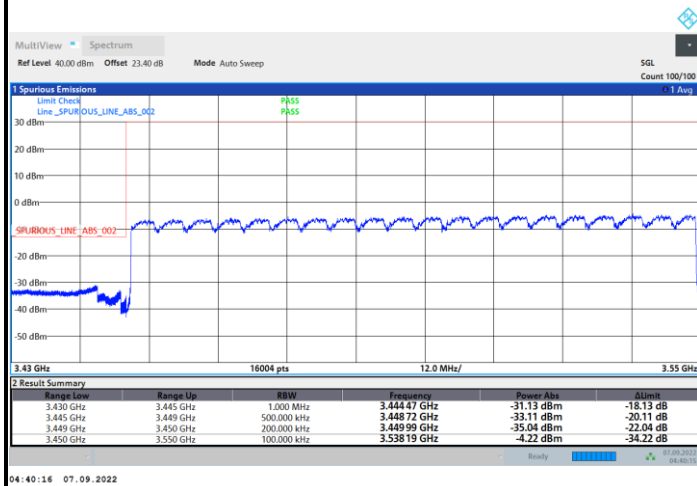
Highest Band Edge / Full RB



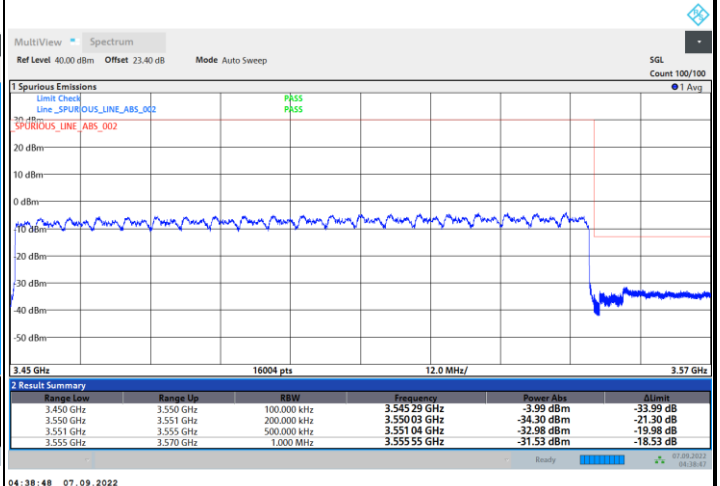


FR1 n78 / 100MHz / CP OFDM / QPSK

Lowest Band Edge / Full RB

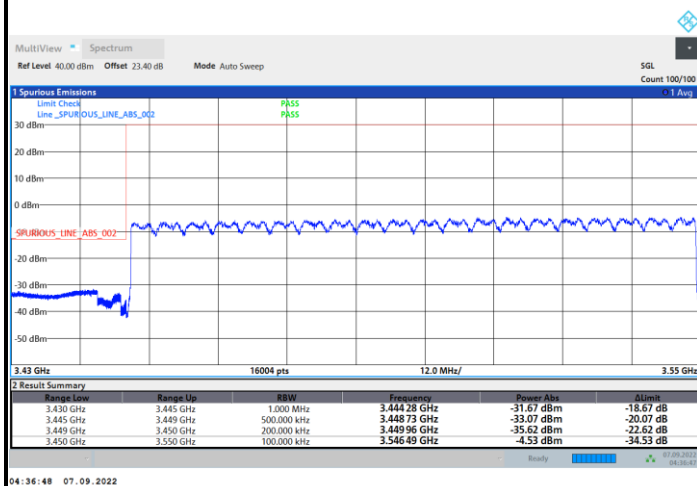


Highest Band Edge / Full RB

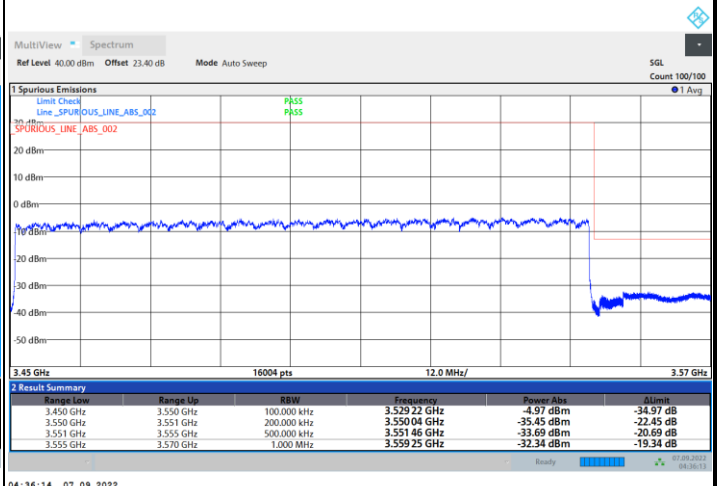


FR1 n78 / 100MHz / CP OFDM / 16QAM

Lowest Band Edge / Full RB



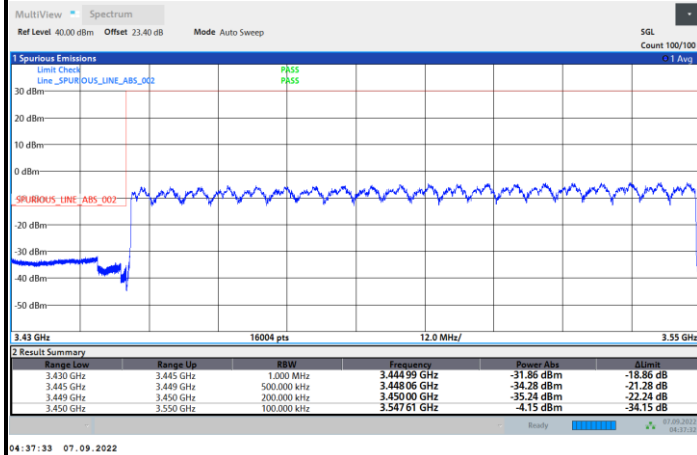
Highest Band Edge / Full RB



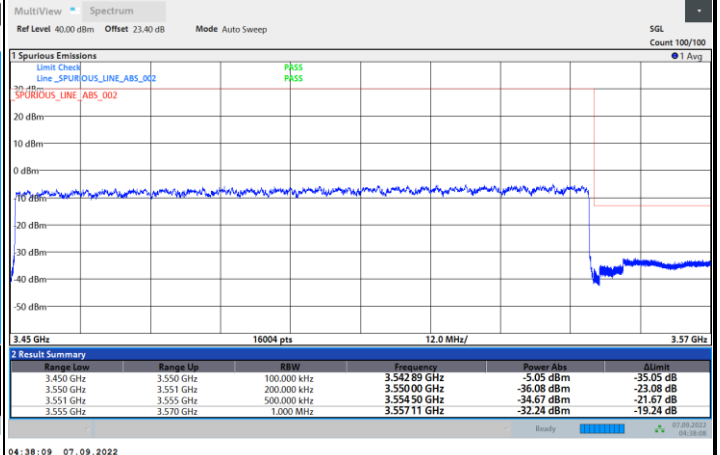


FR1 n78 / 100MHz / CP OFDM / 64QAM

Lowest Band Edge / Full RB

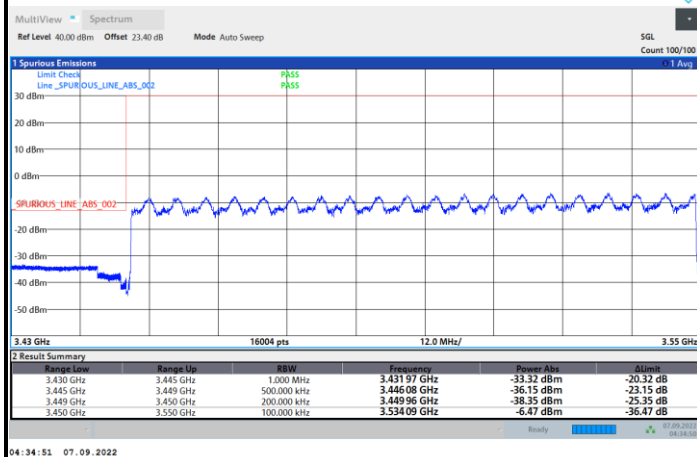


Highest Band Edge / Full RB

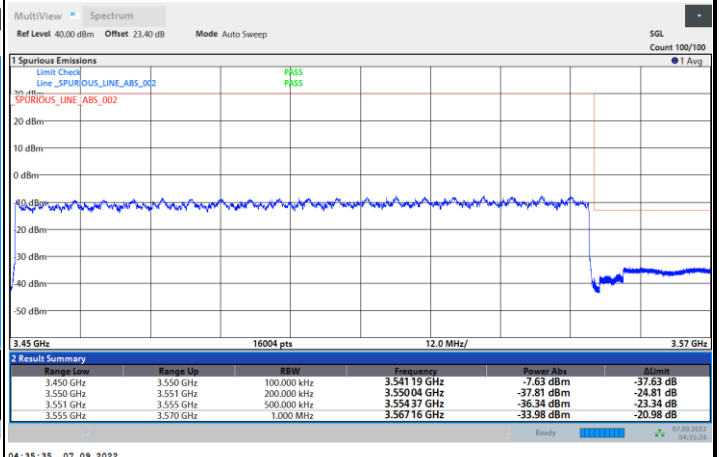


FR1 n78 / 100MHz / CP OFDM / 256QAM

Lowest Band Edge / Full RB



Highest Band Edge / Full RB

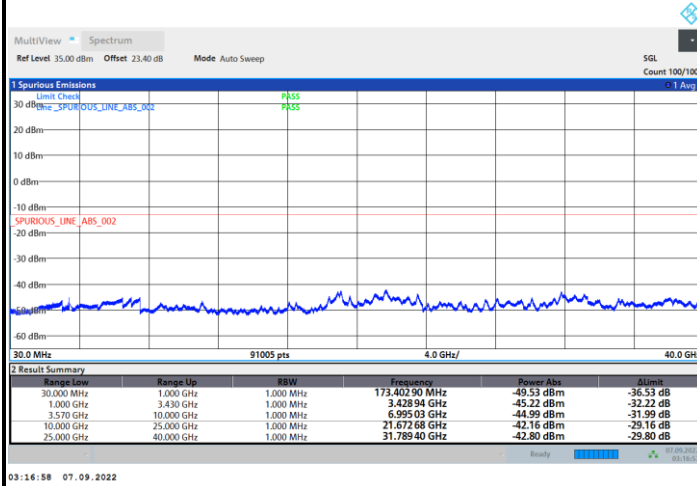




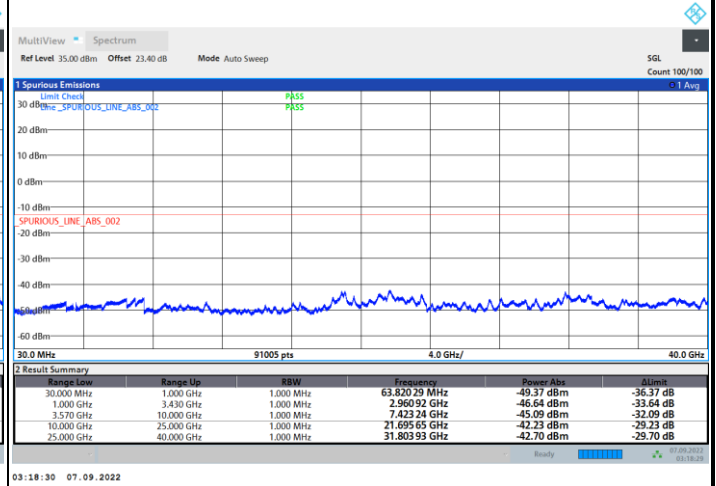
Conducted Spurious Emission

FR1 n78 / 20MHz / CP OFDM / QPSK / 1RB1

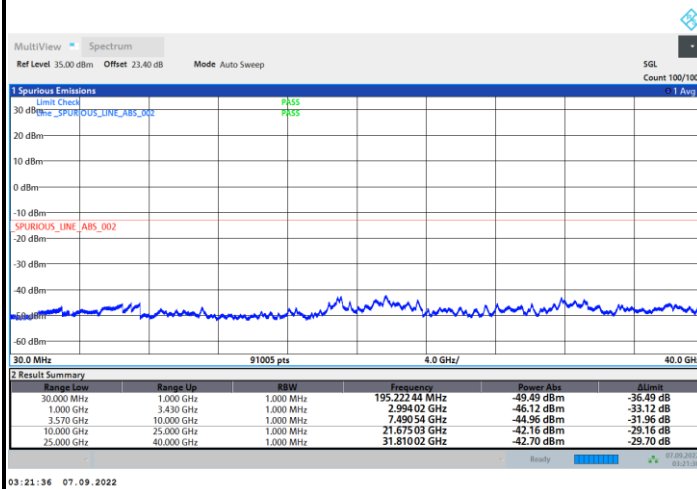
Lowest Channel



Middle Channel



Highest Channel



Frequency Stability

Test Conditions		FR1 n78 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 20MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0004	PASS
40	Normal Voltage	0.0043	
30	Normal Voltage	0.0040	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0021	
0	Normal Voltage	0.0057	
-10	Normal Voltage	0.0010	
-20	Normal Voltage	0.0002	
-30	Normal Voltage	0.0004	
20	Maximum Voltage	0.0034	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0052	

Note:

1. Normal Voltage = 3.3 V. ; Battery End Point (BEP) = 3.135 V. ; Maximum Voltage = 4.4 V.
2. The frequency fundamental emissions stay within the authorized frequency block.

Appendix B. Test Results of Radiated Test

<Ant. 3>

5G NR n77 (HPUE)

5G NR n77 (HPUE) / 20MHz / PI/2 BPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	6902	-42.81	-13	-29.81	-72.23	-51.01	1.84	12.19	H
	10353	-35.85	-13	-22.85	-71.65	-42.33	2.26	10.89	H
	13805	-29.15	-13	-16.15	-73.05	-36.92	2.63	12.56	H
	20707	-64.72	-13	-51.72	-78.12	-77.26	3.22	17.92	H
	24159	-60.11	-13	-47.11	-77.77	-72.67	3.78	18.50	H
	27610	-56.90	-13	-43.90	-77.43	-70.35	3.95	19.54	H
									H
	6902	-42.30	-13	-29.30	-72.22	-50.50	1.84	12.19	V
	10353	-36.48	-13	-23.48	-71.49	-42.96	2.26	10.89	V
	13805	-30.47	-13	-17.47	-73.34	-38.24	2.63	12.56	V
	20707	-62.94	-13	-49.94	-76.1	-75.48	3.22	17.92	V
	24159	-59.37	-13	-46.37	-76.67	-71.93	3.78	18.50	V
	27610	-56.80	-13	-43.80	-77.01	-70.25	3.95	19.54	V
									V



Middle	6983	-41.97	-13	-28.97	-71.46	-49.85	1.84	11.87	H
	10474	-35.75	-13	-22.75	-71.7	-42.16	2.25	10.82	H
	13965	-29.68	-13	-16.68	-72.93	-37.29	2.66	12.43	H
	20947	-63.32	-13	-50.32	-76.73	-75.75	3.24	17.82	H
	24438	-59.53	-13	-46.53	-77.69	-72.29	3.76	18.66	H
	27930	-56.61	-13	-43.61	-77.07	-70.17	3.97	19.67	H
									H
	6983	-41.84	-13	-28.84	-71.49	-49.72	1.84	11.87	V
	10474	-36.06	-13	-23.06	-71.41	-42.47	2.25	10.82	V
	13965	-30.06	-13	-17.06	-72.65	-37.67	2.66	12.43	V
	20947	-62.32	-13	-49.32	-75.44	-74.75	3.24	17.82	V
	24438	-58.58	-13	-45.58	-76.42	-71.34	3.76	18.66	V
	27930	-56.70	-13	-43.70	-76.77	-70.26	3.97	19.67	V
									V
Highest	7062	-42.02	-13	-29.02	-71.77	-49.67	1.84	11.65	H
	10593	-35.88	-13	-22.88	-72.05	-42.23	2.24	10.74	H
	14125	-29.83	-13	-16.83	-72.92	-37.35	2.66	12.33	H
	21187	-63.69	-13	-50.69	-77.68	-76.28	3.29	18.02	H
	24718	-60.22	-13	-47.22	-78.49	-72.91	3.73	18.57	H
	28250	-56.04	-13	-43.04	-76.52	-69.46	3.98	19.55	H
									H
	7062	-41.83	-13	-28.83	-71.76	-49.48	1.84	11.65	V
	10593	-36.18	-13	-23.18	-71.88	-42.53	2.24	10.74	V
	14125	-29.72	-13	-16.72	-72.51	-37.24	2.66	12.33	V
	21187	-63.58	-13	-50.58	-77.27	-76.17	3.29	18.02	V
	24718	-59.74	-13	-46.74	-77.7	-72.43	3.73	18.57	V
	28250	-56.65	-13	-43.65	-76.72	-70.07	3.98	19.55	V
									V

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



<Ant. 0 + Ant. 3>

EN-DC 66A-n77A

EN-DC A-n77A / 20MHz / PI/2 BPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	6982	-41.71	-13	-28.71	-71.2	-49.59	1.84	11.87	H
	10473	-35.80	-13	-22.80	-71.75	-42.21	2.25	10.82	H
	13965	-29.71	-13	-16.71	-72.96	-37.32	2.66	12.43	H
	20947	-61.28	-13	-48.28	-74.69	-73.71	3.24	17.82	H
	24438	-58.22	-13	-45.22	-76.38	-70.98	3.76	18.66	H
	27930	-56.32	-13	-43.32	-76.78	-69.88	3.97	19.67	H
									H
	6982	-42.25	-13	-29.25	-71.9	-50.13	1.84	11.87	V
	10473	-36.41	-13	-23.41	-71.76	-42.82	2.25	10.82	V
	13965	-30.18	-13	-17.18	-72.77	-37.79	2.66	12.43	V
	20947	-61.98	-13	-48.98	-75.1	-74.41	3.24	17.82	V
	24438	-58.71	-13	-45.71	-76.56	-71.47	3.76	18.66	V
	27930	-56.81	-13	-43.81	-76.88	-70.37	3.97	19.67	V
									V

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



<Ant. 0 + Ant. 1>

EN-DC 5A-n77A

EN-DC 5A-n77A / 20MHz / PI/2 BPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	6902	-42.82	-13	-29.82	-72.23	-51.02	1.84	12.19	H
	10353	-35.83	-13	-22.83	-71.63	-42.31	2.26	10.89	H
	13805	-29.52	-13	-16.52	-73.42	-37.29	2.63	12.56	H
	20707	-61.85	-13	-48.85	-75.25	-74.39	3.22	17.92	H
	24159	-58.72	-13	-45.72	-76.38	-71.28	3.78	18.50	H
	27610	-56.60	-13	-43.60	-77.13	-70.05	3.95	19.54	H
									H
	6902	-42.85	-13	-29.85	-72.76	-51.05	1.84	12.19	V
	10353	-36.57	-13	-23.57	-71.58	-43.05	2.26	10.89	V
	13805	-30.19	-13	-17.19	-73.06	-37.96	2.63	12.56	V
	20707	-61.87	-13	-48.87	-75.03	-74.41	3.22	17.92	V
	24159	-59.01	-13	-46.01	-76.31	-71.57	3.78	18.50	V
	27610	-57.05	-13	-44.05	-77.26	-70.50	3.95	19.54	V
									V



Middle	6982	-42.04	-13	-29.04	-71.64	-49.92	1.84	11.87	H
	10473	-35.66	-13	-22.66	-71.6	-42.07	2.25	10.82	H
	13965	-30.05	-13	-17.05	-73.3	-37.66	2.66	12.43	H
	20947	-61.55	-13	-48.55	-74.96	-73.98	3.24	17.82	H
	24438	-58.06	-13	-45.06	-76.22	-70.82	3.76	18.66	H
	27930	-56.38	-13	-43.38	-76.84	-69.94	3.97	19.67	H
									H
	6982	-42.22	-13	-29.22	-71.87	-50.10	1.84	11.87	V
	10473	-36.15	-13	-23.15	-71.5	-42.56	2.25	10.82	V
	13965	-30.25	-13	-17.25	-72.84	-37.86	2.66	12.43	V
	20947	-62.10	-13	-49.10	-75.22	-74.53	3.24	17.82	V
	24438	-58.46	-13	-45.46	-76.31	-71.22	3.76	18.66	V
	27930	-56.60	-13	-43.60	-76.67	-70.16	3.97	19.67	V
									V
Highest	7063	-42.12	-13	-29.12	-71.87	-49.77	1.84	11.64	H
	10594	-36.00	-13	-23.00	-72.17	-42.35	2.24	10.74	H
	14125	-29.87	-13	-16.87	-72.96	-37.39	2.66	12.33	H
	21187	-60.39	-13	-47.39	-74.39	-72.98	3.29	18.02	H
	24718	-58.91	-13	-45.91	-77.18	-71.60	3.73	18.57	H
	28250	-56.40	-13	-43.40	-76.88	-69.82	3.98	19.55	H
									H
	7063	-42.35	-13	-29.35	-72.28	-50.00	1.84	11.64	V
	10594	-36.38	-13	-23.38	-72.08	-42.73	2.24	10.74	V
	14125	-30.02	-13	-17.02	-72.81	-37.54	2.66	12.33	V
	21187	-61.83	-13	-48.83	-75.52	-74.42	3.29	18.02	V
	24718	-59.27	-13	-46.27	-77.23	-71.96	3.73	18.57	V
	28250	-56.41	-13	-43.41	-76.48	-69.83	3.98	19.55	V
									V

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



<Ant. 0 + Ant. 1>

EN-DC 71A-n77A

EN-DC A-n77A / 20MHz / PI/2 BPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	6982	-42.21	-13	-29.21	-71.07	-50.09	1.84	11.87	H
	10473	-35.30	-13	-22.30	-71.25	-41.71	2.25	10.82	H
	13965	-29.93	-13	-16.93	-73.18	-37.54	2.66	12.43	H
	20947	-61.92	-13	-48.92	-75.33	-74.35	3.24	17.82	H
	24438	-58.18	-13	-45.18	-76.34	-70.94	3.76	18.66	H
	27930	-56.77	-13	-43.77	-77.23	-70.33	3.97	19.67	H
									H
	6982	-41.86	-13	-28.86	-71.51	-49.74	1.84	11.87	V
	10473	-36.35	-13	-23.35	-71.7	-42.76	2.25	10.82	V
	13965	-30.66	-13	-17.66	73.25	-38.27	2.66	12.43	V
	20947	-61.50	-13	-48.50	-74.62	-73.93	3.24	17.82	V
	24438	-58.34	-13	-45.34	-76.19	-71.10	3.76	18.66	V
	27930	-56.70	-13	-43.70	-76.77	-70.26	3.97	19.67	V
									V

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



<MIMO Antenna>

MIMO <Ant. 3+1>

5G NR n77 (HPUE)

5G NR n77 (HPUE) / 20MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	6902	-42.75	-13	-29.75	-72.16	-50.95	1.84	12.19	H
	10353	-35.87	-13	-22.87	-71.67	-42.35	2.26	10.89	H
	13805	-29.22	-13	-16.22	-73.12	-36.99	2.63	12.56	H
	20707	-61.90	-13	-48.90	-75.3	-74.44	3.22	17.92	H
	24159	-58.32	-13	-45.32	-75.98	-70.88	3.78	18.50	H
	27610	-56.69	-13	-43.69	-77.22	-70.14	3.95	19.54	H
									H
	6902	-41.98	-13	-28.98	-71.89	-50.18	1.84	12.19	V
	10353	-36.63	-13	-23.63	-71.64	-43.11	2.26	10.89	V
	13805	-30.15	-13	-17.15	-73.02	-37.92	2.63	12.56	V
	20707	-62.26	-13	-49.26	-75.42	-74.80	3.22	17.92	V
	24159	-59.16	-13	-46.16	-76.46	-71.72	3.78	18.50	V
	27610	-57.28	-13	-44.28	-77.49	-70.73	3.95	19.54	V
									V



Middle	6982	-42.32	-13	-29.32	-71.81	-50.20	1.84		H
	10473	-36.03	-13	-23.03	-71.98	-42.44	2.25		H
	13965	-29.70	-13	-16.70	-72.95	-37.31	2.66		H
	20947	-61.45	-13	-48.45	-74.86	-73.88	3.24		H
	24438	-58.48	-13	-45.48	-76.64	-71.24	3.76		H
	27930	-56.52	-13	-43.52	-76.98	-70.08	3.97		H
									H
	6982	-41.78	-13	-28.78	-71.43	-49.66	1.84	11.87	V
	10473	-36.20	-13	-23.20	-71.55	-42.61	2.25	10.82	V
	13965	-30.82	-13	-17.82	-73.41	-38.43	2.66	12.43	V
	20947	-62.19	-13	-49.19	-75.31	-74.62	3.24	17.82	V
	24438	-58.67	-13	-45.67	-76.52	-71.43	3.76	18.66	V
	27930	-56.97	-13	-43.97	-77.04	-70.53	3.97	19.67	V
									V
Highest	7062	-42.24	-13	-29.24	-71.98	-49.89	1.84	11.65	H
	10593	-35.91	-13	-22.91	-72.08	-42.26	2.24	10.74	H
	14125	-29.23	-13	-16.23	-72.32	-36.75	2.66	12.33	H
	21187	-61.72	-13	-48.72	-75.74	-74.31	3.29	18.02	H
	24718	-58.79	-13	-45.79	-77.06	-71.48	3.73	18.57	H
	28250	-56.19	-13	-43.19	-76.67	-69.61	3.98	19.55	H
									H
	7062	-42.03	-13	-29.03	-71.95	-49.68	1.84	11.65	V
	10593	-36.27	-13	-23.27	-71.97	-42.62	2.24	10.74	V
	14125	-29.34	-13	-16.34	-72.13	-36.86	2.66	12.33	V
	21187	-62.17	-13	-49.17	-75.86	-74.76	3.29	18.02	V
	24718	-58.69	-13	-45.69	-76.65	-71.38	3.73	18.57	V
	28250	-56.37	-13	-43.37	-76.43	-69.79	3.98	19.55	V
									V

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