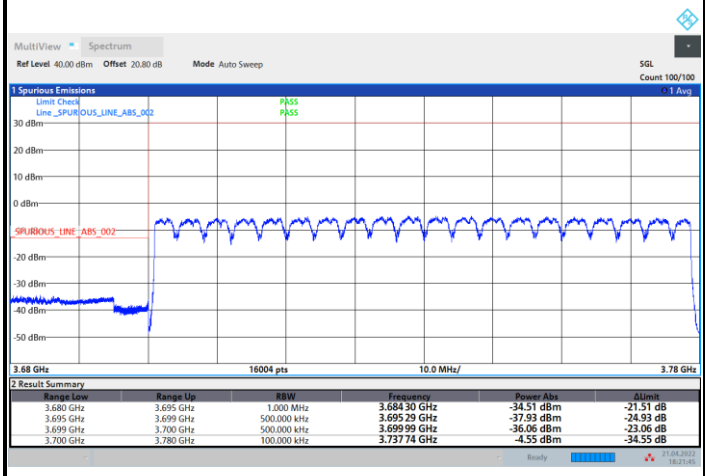
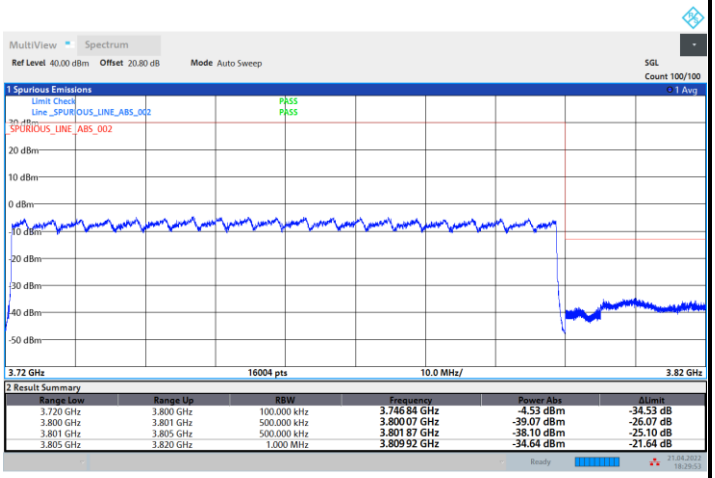
FR1 n78 / 80MHz / DFT-S OFDM / PI/2 BPSK / Full RB

Lowest Band Edge

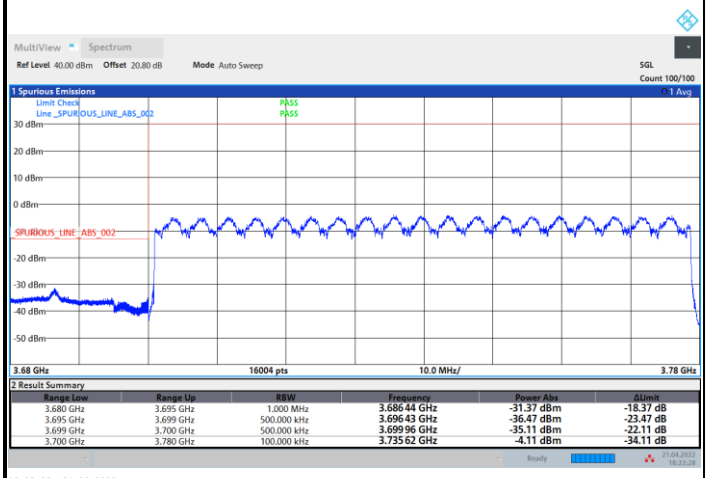


Highest Band Edge

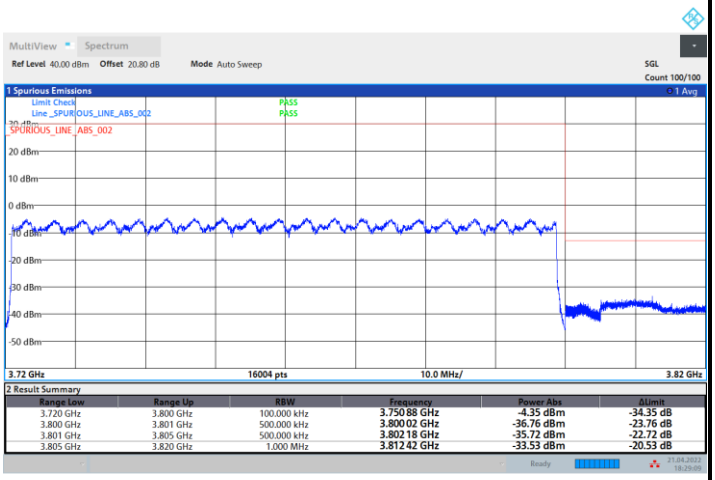


FR1 n78 / 80MHz / DFT-S OFDM / QPSK / Full RB

Lowest Band Edge

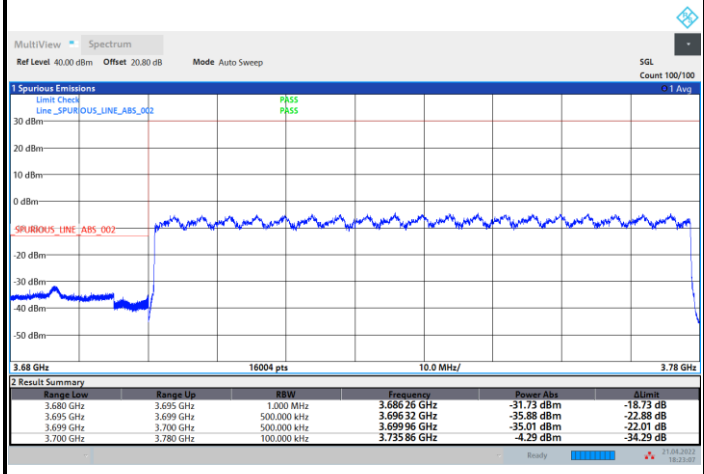


Highest Band Edge

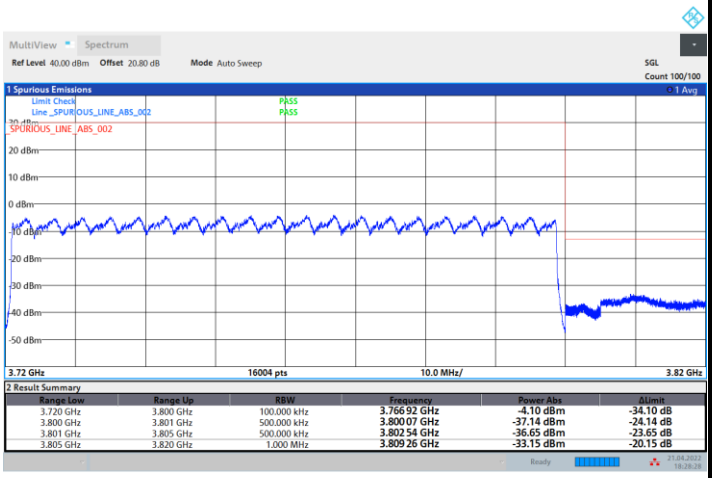


FR1 n78 / 80MHz / DFT-S OFDM / 16QAM / Full RB

Lowest Band Edge

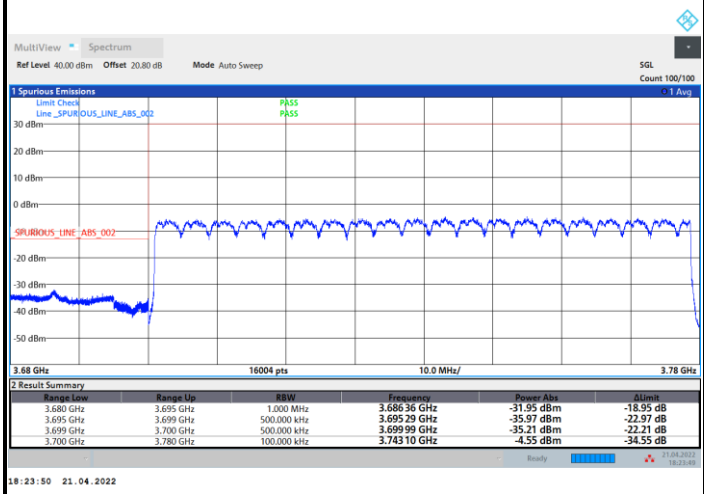


Highest Band Edge

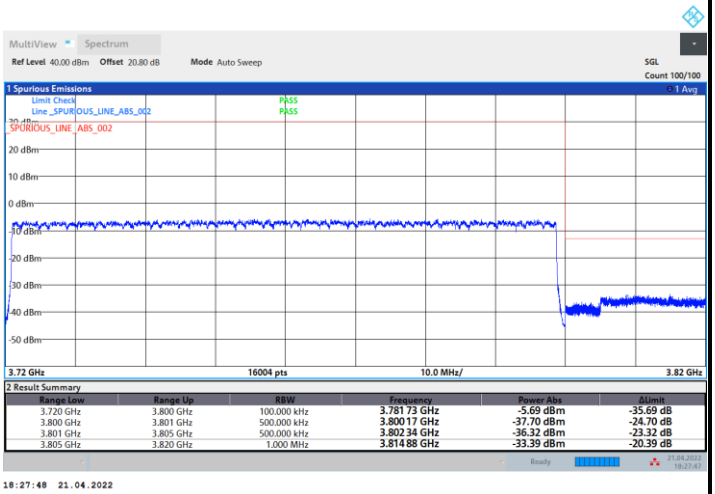


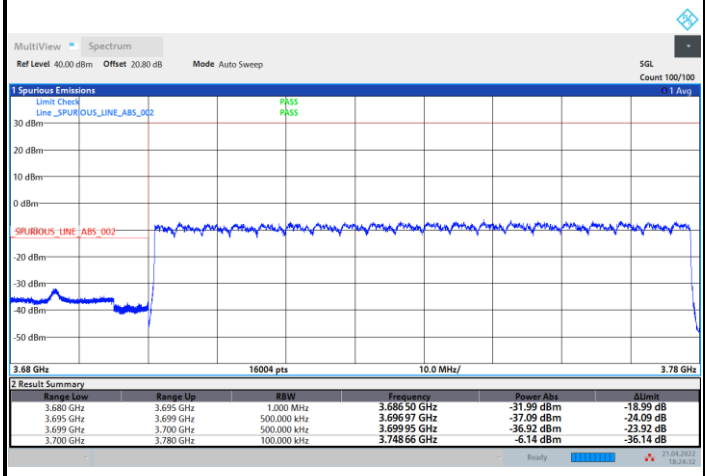
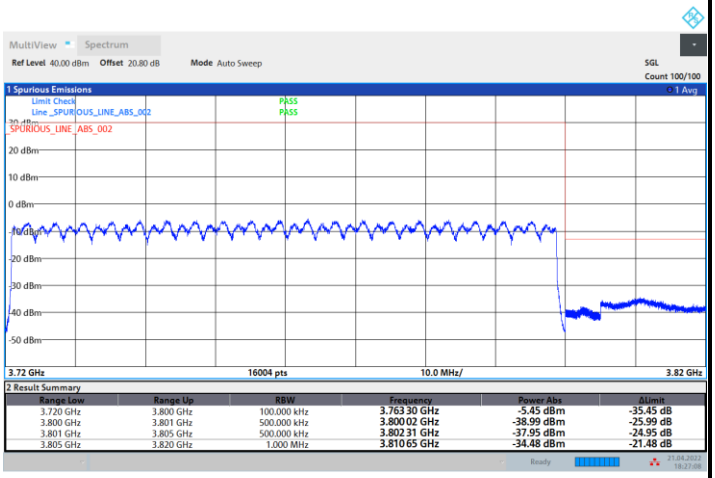
FR1 n78 / 80MHz / DFT-S OFDM / 64QAM / Full RB

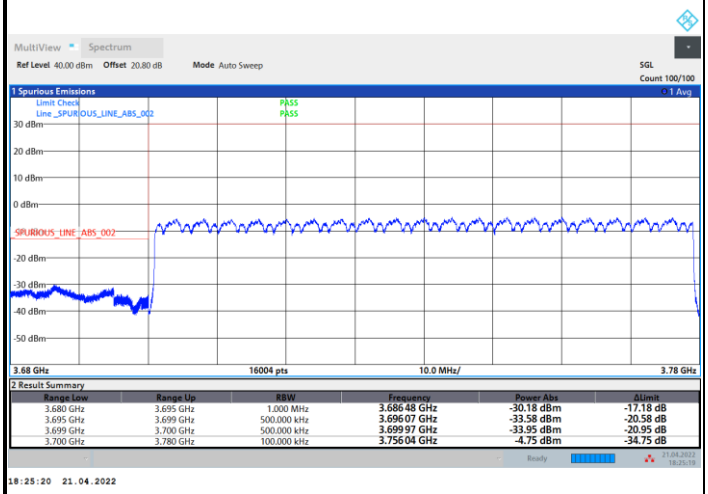
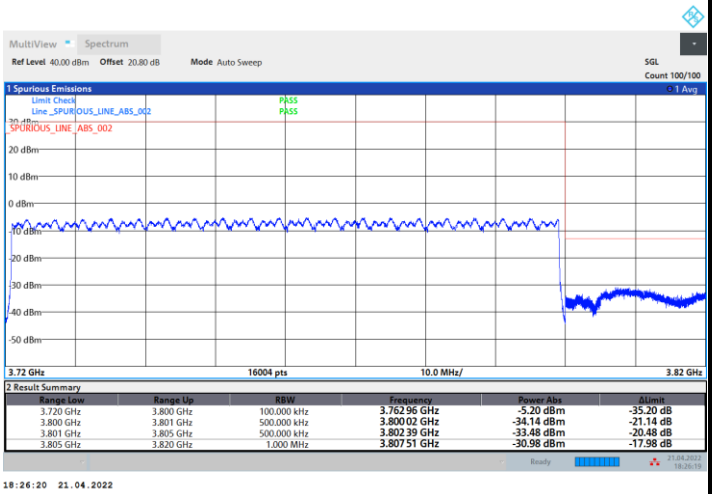
Lowest Band Edge



Highest Band Edge

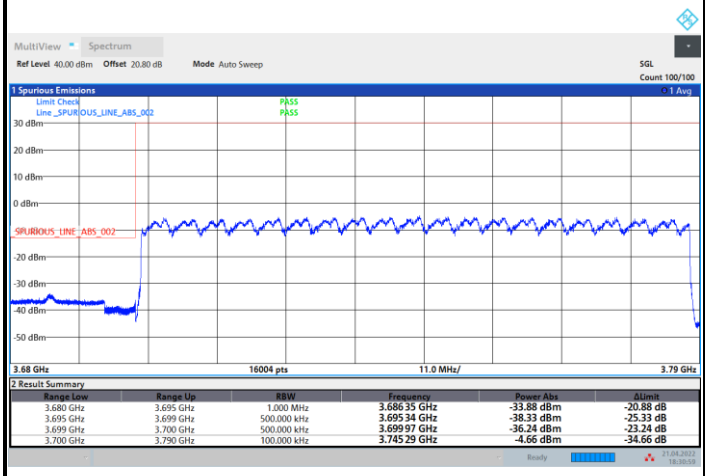


FR1 n78 / 80MHz / DFT-S OFDM / 256QAM / Full RB	
Lowest Band Edge	**Highest Band Edge**
	

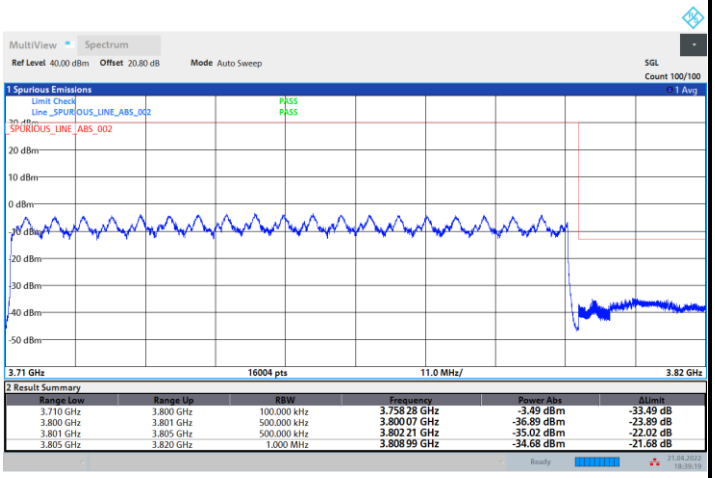
FR1 n78 / 80MHz / CP OFDM / QPSK / Full RB	
Lowest Band Edge	**Highest Band Edge**
	

FR1 n78 / 90MHz / DFT-S OFDM / PI/2 BPSK / Full RB

Lowest Band Edge

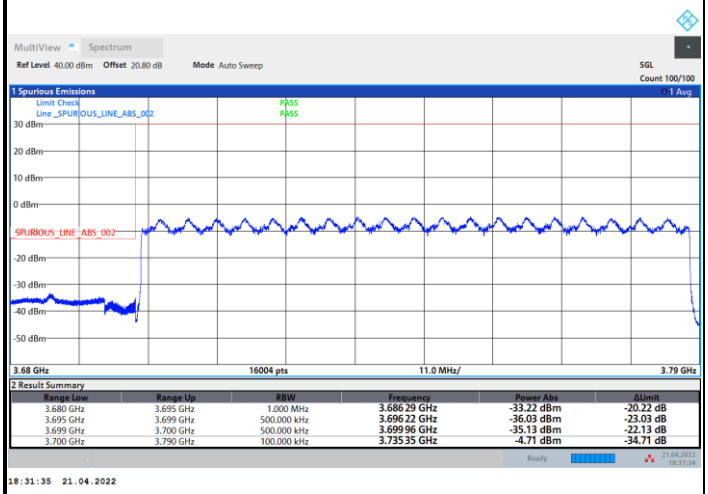


Highest Band Edge

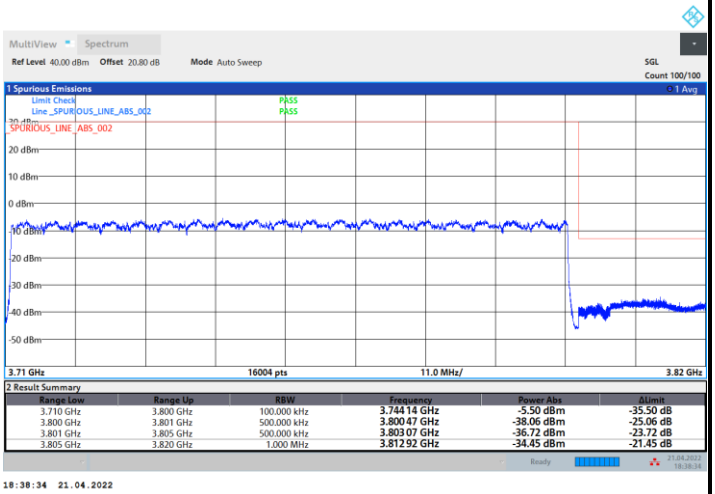


FR1 n78 / 90MHz / DFT-S OFDM / QPSK / Full RB

Lowest Band Edge

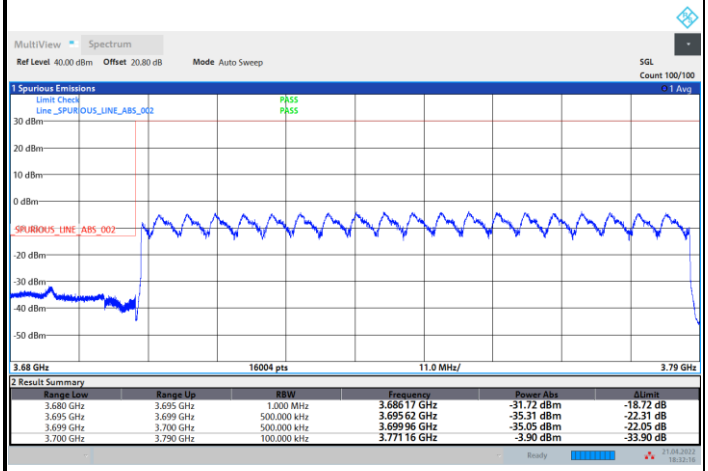


Highest Band Edge

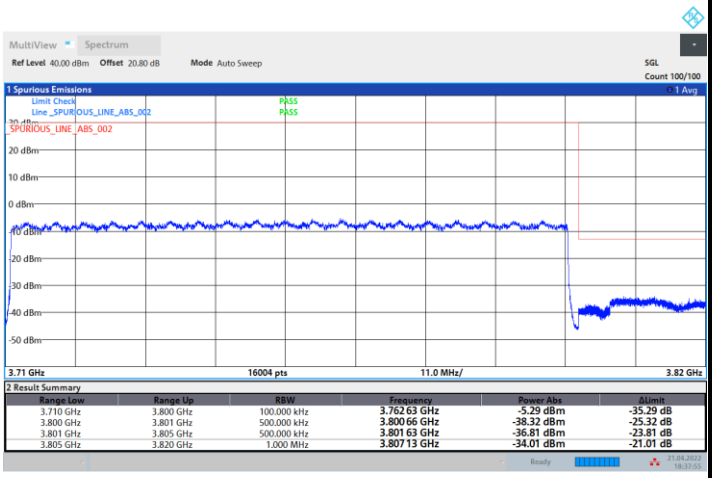


FR1 n78 / 90MHz / DFT-S OFDM / 16QAM / Full RB

Lowest Band Edge

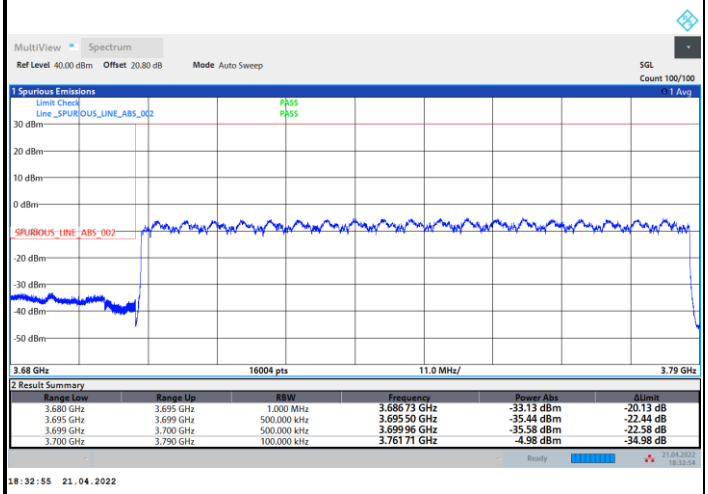


Highest Band Edge

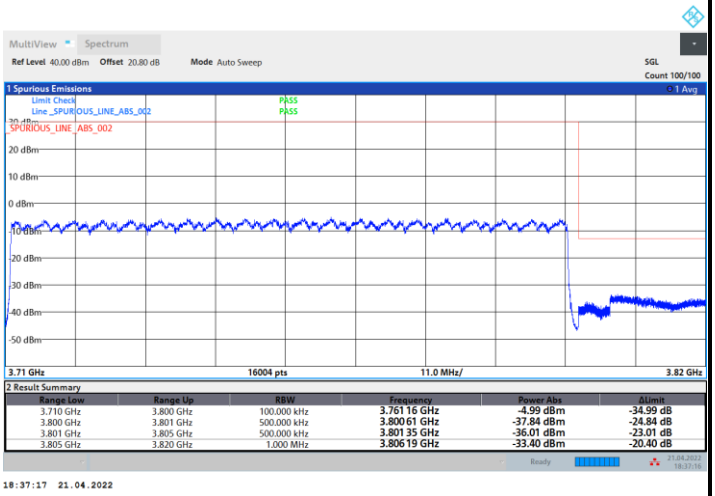


FR1 n78 / 90MHz / DFT-S OFDM / 64QAM / Full RB

Lowest Band Edge

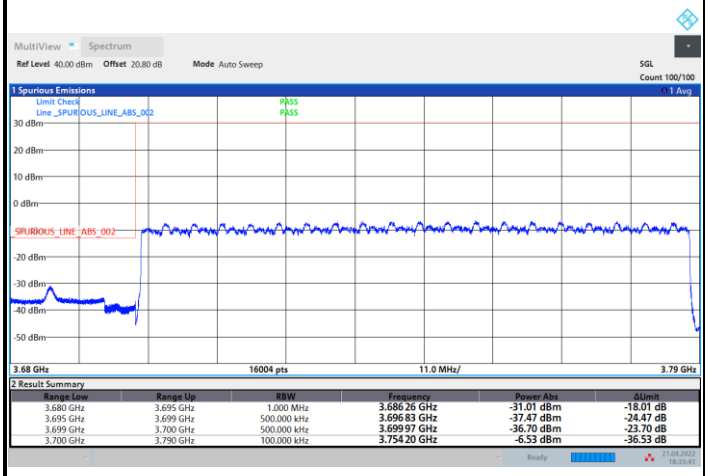


Highest Band Edge

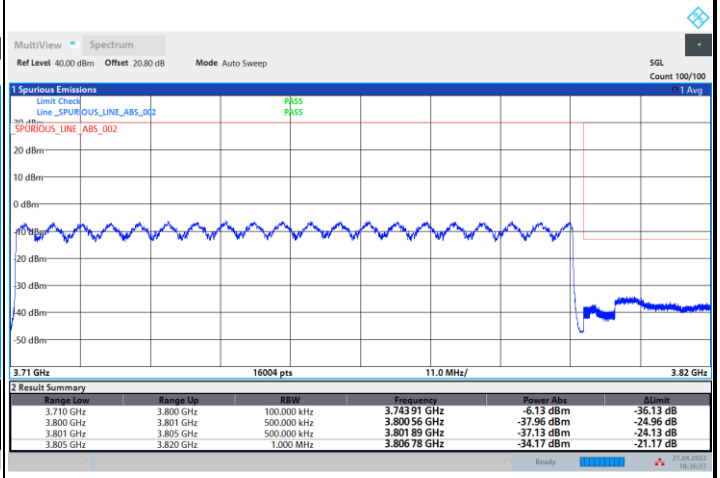


FR1 n78 / 90MHz / DFT-S OFDM / 256QAM / Full RB

Lowest Band Edge

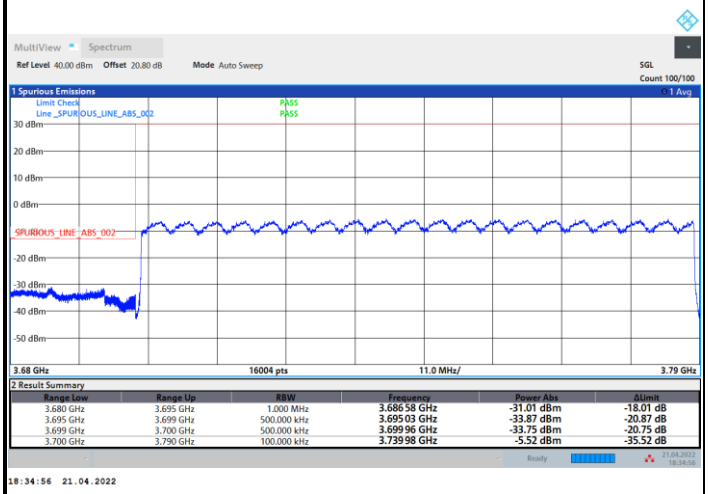


Highest Band Edge

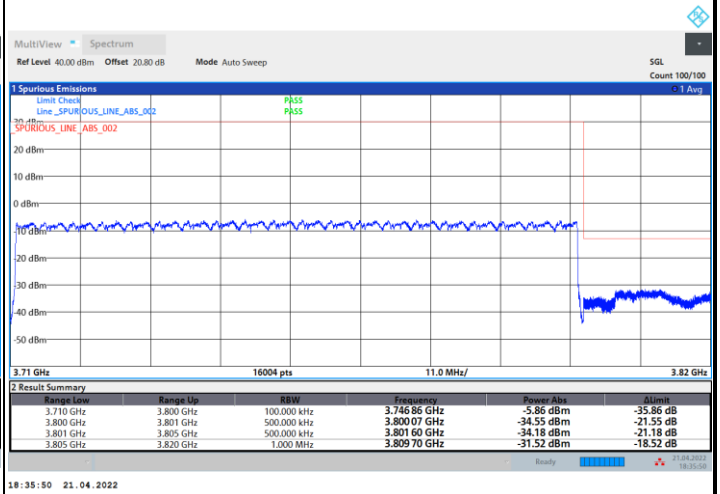


FR1 n78 / 90MHz / CP OFDM / QPSK / Full RB

Lowest Band Edge

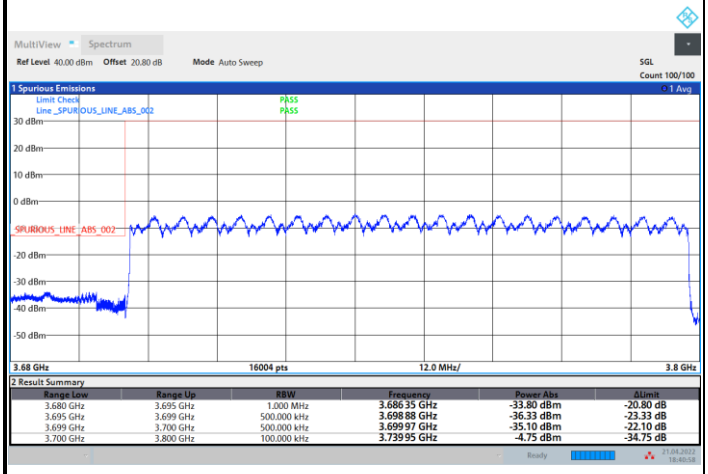


Highest Band Edge

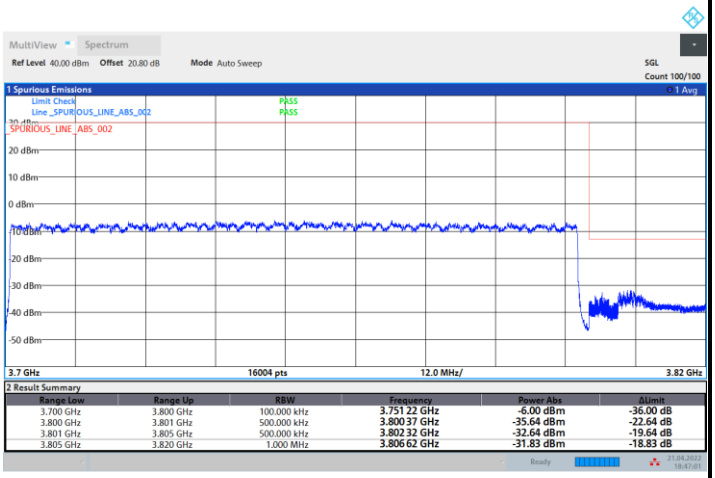


FR1 n78 / 100MHz / DFT-S OFDM / PI/2 BPSK / Full RB

Lowest Band Edge

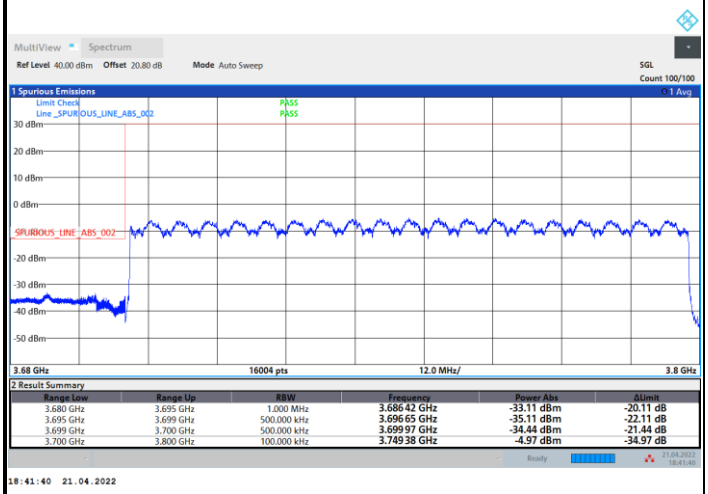


Highest Band Edge

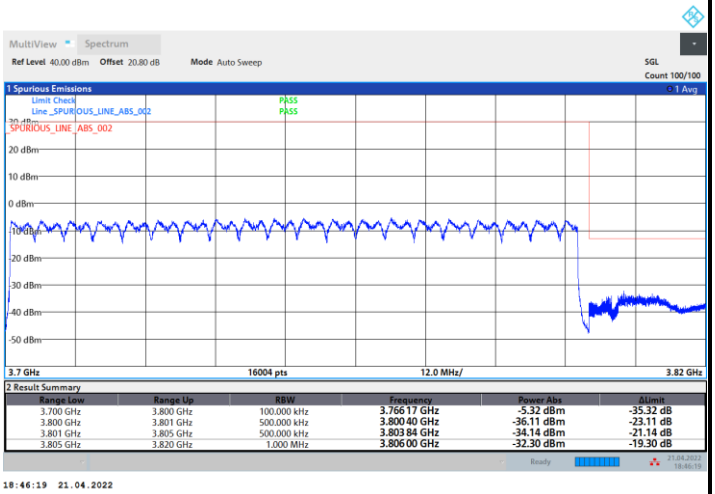


FR1 n78 / 100MHz / DFT-S OFDM / QPSK / Full RB

Lowest Band Edge

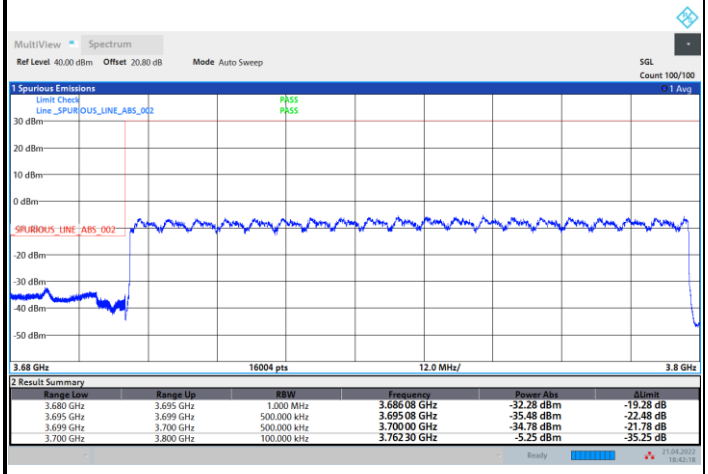


Highest Band Edge

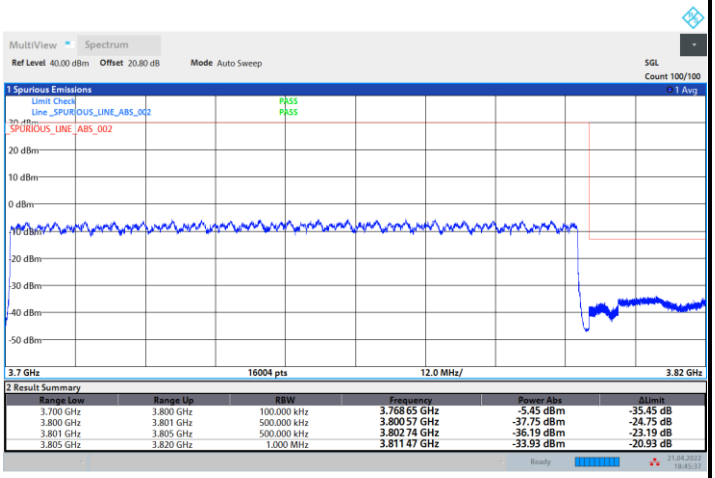


FR1 n78 / 100MHz / DFT-S OFDM / 16QAM / Full RB

Lowest Band Edge

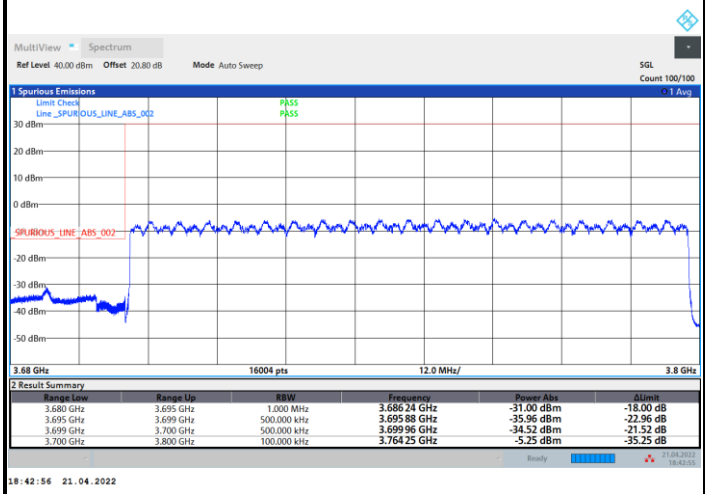


Highest Band Edge

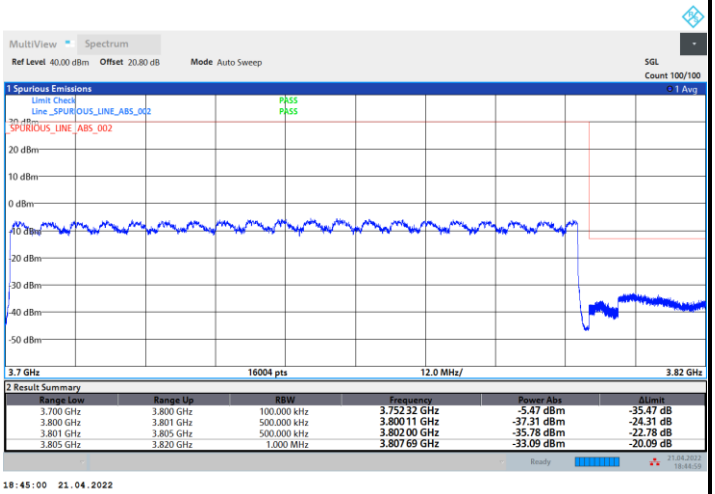


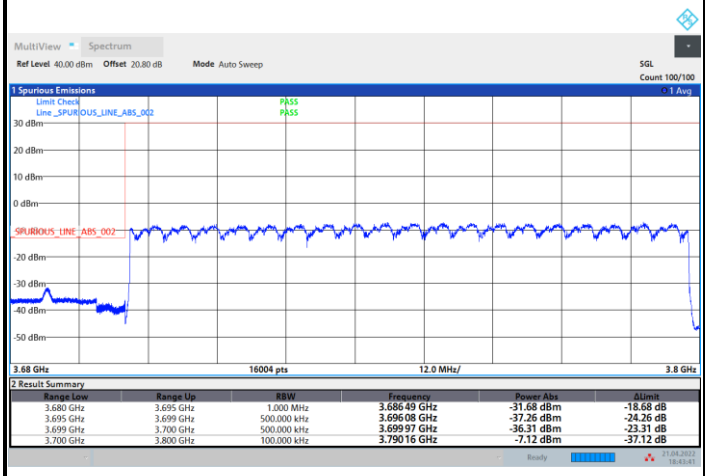
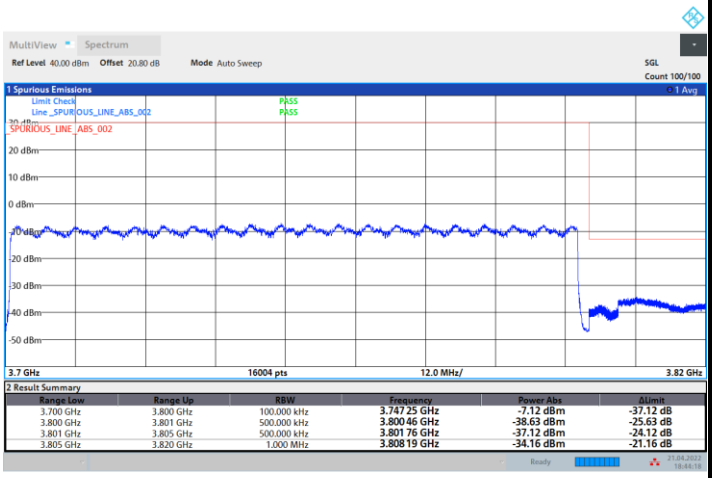
FR1 n78 / 100MHz / DFT-S OFDM / 64QAM / Full RB

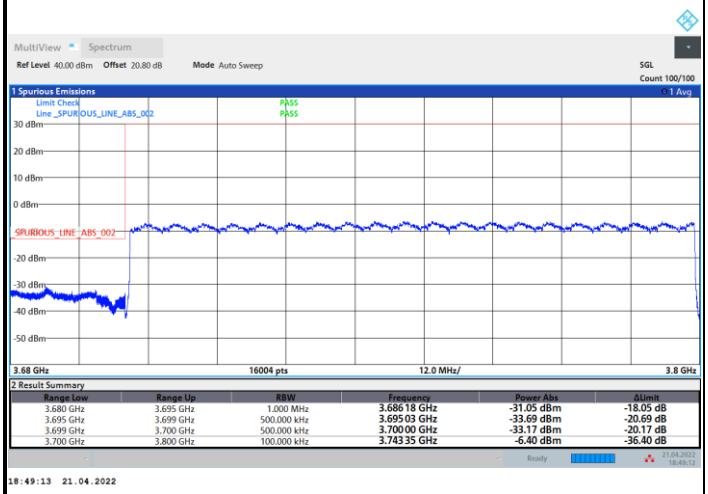
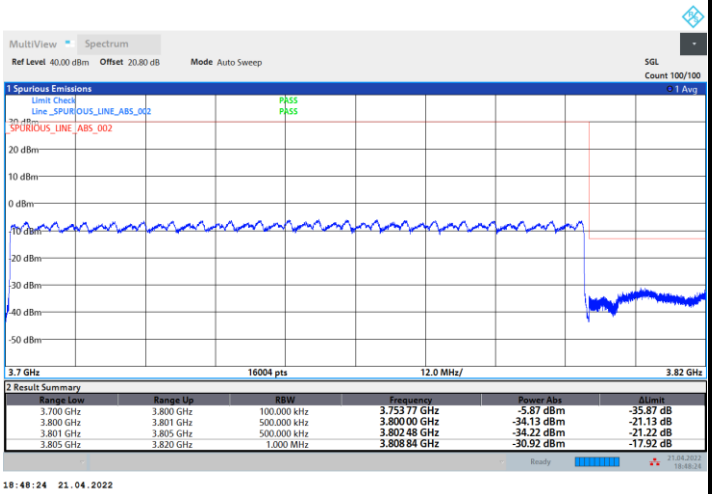
Lowest Band Edge



Highest Band Edge



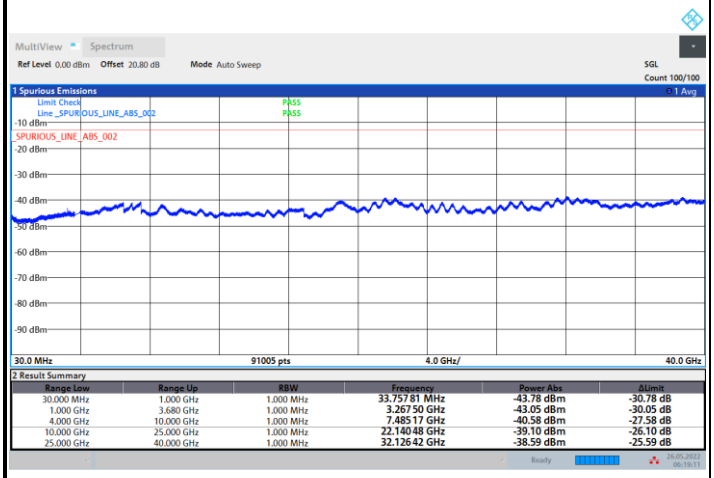
FR1 n78 / 100MHz / DFT-S OFDM / 256QAM / Full RB	
Lowest Band Edge / Full RB	**Highest Band Edge / Full RB**
	

FR1 n78 / 100MHz / CP OFDM / QPSK / Full RB	
Lowest Band Edge	**Highest Band Edge**
	

Conducted Spurious Emission

FR1 n78 / 20MHz / DFT-S OFDM / QPSK / 1RB1

Lowest Channel

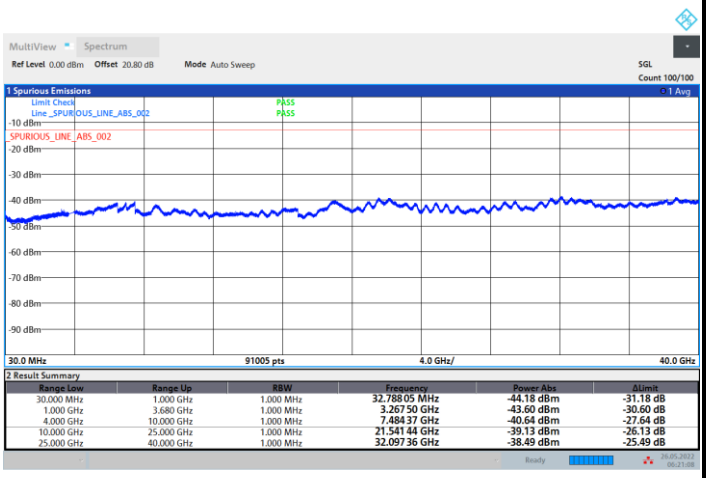


2 Result Summary

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	33.757 81 MHz	-43.78 dBm	-30.78 dB
1.000 GHz	3.680 GHz	1.000 MHz	3.267 50 GHz	-43.05 dBm	-30.05 dB
4.000 GHz	10.000 GHz	1.000 MHz	7.485 17 GHz	-40.58 dBm	-27.58 dB
10.000 GHz	25.000 GHz	1.000 MHz	22.140 48 GHz	-39.10 dBm	-26.10 dB
25.000 GHz	40.000 GHz	1.000 MHz	32.126 42 GHz	-38.59 dBm	-25.59 dB

06:19:12 26.05.2022

Middle Channel

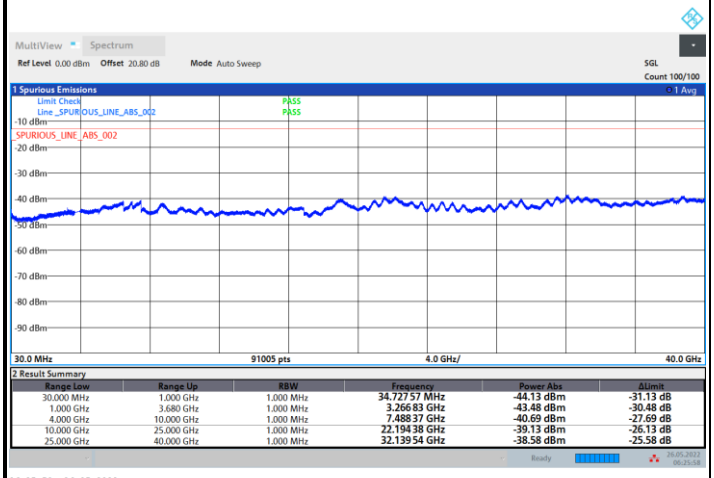


2 Result Summary

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	32.788 05 MHz	-44.18 dBm	-31.18 dB
1.000 GHz	3.680 GHz	1.000 MHz	3.267 50 GHz	-43.60 dBm	-30.60 dB
4.000 GHz	10.000 GHz	1.000 MHz	7.484 37 GHz	-40.64 dBm	-27.64 dB
10.000 GHz	25.000 GHz	1.000 MHz	21.541 44 GHz	-39.13 dBm	-26.13 dB
25.000 GHz	40.000 GHz	1.000 MHz	32.097 36 GHz	-38.49 dBm	-25.49 dB

06:21:09 26.05.2022

Highest Channel



2 Result Summary

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	34.727 57 MHz	-44.13 dBm	-31.13 dB
1.000 GHz	3.680 GHz	1.000 MHz	3.266 83 GHz	-43.48 dBm	-30.48 dB
4.000 GHz	10.000 GHz	1.000 MHz	7.488 37 GHz	-40.69 dBm	-27.69 dB
10.000 GHz	25.000 GHz	1.000 MHz	22.194 38 GHz	-39.13 dBm	-26.13 dB
25.000 GHz	40.000 GHz	1.000 MHz	32.139 54 GHz	-38.58 dBm	-25.58 dB

06:25:59 26.05.2022

Frequency Stability

Test Conditions		FR1 n78 (BPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 20MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0003	PASS
40	Normal Voltage	0.0032	
30	Normal Voltage	0.0004	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0028	
0	Normal Voltage	0.0007	
-10	Normal Voltage	0.0026	
-20	Normal Voltage	0.0002	
-30	Normal Voltage	0.0007	
20	Maximum Voltage	0.0015	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0013	

Note:

1. Normal Voltage = 3.3 V.；Battery End Point (BEP) = 3.1 V.；Maximum Voltage = 3.6 V.
2. The frequency fundamental emissions stay within the authorized frequency block.

Appendix B. Test Results of Radiated Test

<Ant. 1>

EN-DC 2A-n77A

EN-DC 2A-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	7402	-40.99	-13	-27.99	-71.91	-48.30	1.94	11.40	H
	11103	-34.88	-13	-21.88	-71.74	-41.11	2.24	10.62	H
	14808	-28.38	-13	-15.38	-71.42	-36.42	2.58	12.78	H
	18506	-61.40	-13	-48.40	-73.28	-73.60	3.24	17.59	H
	22206	-60.50	-13	-47.50	-76.23	-73.69	3.52	18.86	H
	25914	-56.09	-13	-43.09	-74.92	-69.10	3.92	19.08	H
									H
	7402	-40.84	-13	-27.84	-71.85	-48.15	1.94	11.40	V
	11103	-35.40	-13	-22.40	-72.21	-41.63	2.24	10.62	V
	14808	-27.56	-13	-14.56	-71.72	-35.60	2.58	12.78	V
	18506	-52.89	-13	-39.89	-64.54	-65.09	3.24	17.59	V
	22206	-60.10	-13	-47.10	-75.43	-73.29	3.52	18.86	V
	25914	-53.60	-13	-40.60	-72.13	-66.61	3.92	19.08	V
Middle	7662	-40.99	-13	-27.99	-71.59	-48.58	1.89	11.63	H
	11493	-34.46	-13	-21.46	-71.73	-41.00	2.40	11.09	H
	15324	-29.31	-13	-16.31	-70.99	-39.14	2.64	14.63	H
	19156	-50.32	-13	-37.32	-62.15	-62.15	3.25	17.22	H
	22988	-60.15	-13	-47.15	-77.09	-73.04	3.57	18.60	H
	26819	-56.97	-13	-43.97	-77.21	-69.94	3.92	19.05	H
									H
	7662	-40.71	-13	-27.71	-71.52	-48.30	1.89	11.63	V
	11493	-34.84	-13	-21.84	-72.23	-41.38	2.40	11.09	V
	15324	-28.67	-13	-15.67	-71.05	-38.50	2.64	14.63	V
	19156	-43.61	-13	-30.61	-55.2	-55.44	3.25	17.22	V
	22988	-57.54	-13	-44.54	-74.15	-70.43	3.57	18.60	V
	26819	-53.05	-13	-40.05	-72.9	-66.02	3.92	19.05	V

Highest	7922	-40.87	-13	-27.87	-72.03	-48.17	1.95	11.40	H
	11883	-33.12	-13	-20.12	-72.23	-40.89	2.56	12.48	H
	15846	-31.38	-13	-18.38	-71.63	-42.82	2.78	16.37	H
	19809	-52.12	-13	-39.12	-64.61	-64.21	3.20	17.44	H
	23768	-54.45	-13	-41.45	-71.75	-67.09	3.74	18.54	H
	27729	-56.79	-13	-43.79	-77.29	-70.28	3.95	19.59	H
									H
	7762	-40.42	-13	-27.42	-71.94	-48.07	1.88	11.68	V
	11643	-33.49	-13	-20.49	-72.18	-40.49	2.46	11.61	V
	15846	-31.07	-13	-18.07	-71.54	-42.51	2.78	16.37	V
	19809	-43.14	-13	-30.14	-55.33	-55.23	3.20	17.44	V
	23768	-52.41	-13	-39.41	-69.35	-65.05	3.74	18.54	V
	27729	-56.72	-13	-43.72	-76.89	-70.21	3.95	19.59	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)	Margin (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	7662	-40.40	-13	-27.40	-71	-47.99	1.89	11.63	H
	11493	-33.75	-13	-20.75	-71.02	-40.29	2.40	11.09	H
	15324	-28.64	-13	-15.64	-70.31	-38.47	2.64	14.63	H
	19154	-51.56	-13	-38.56	-63.39	-63.39	3.25	17.22	H
	22983	-60.49	-13	-47.49	-77.42	-73.38	3.57	18.61	H
	26824	-56.83	-13	-43.83	-77.08	-69.81	3.92	19.05	H
									H
	7662	-40.12	-13	-27.12	-70.94	-47.71	1.89	11.63	V
	11493	-33.61	-13	-20.61	-71	-40.15	2.40	11.09	V
	15324	-28.31	-13	-15.31	-70.68	-38.14	2.64	14.63	V
	19154	-44.77	-13	-31.77	-56.36	-56.60	3.25	17.22	V
	22983	-57.32	-13	-44.32	-73.92	-70.21	3.57	18.61	V
	26824	-52.42	-13	-39.42	-72.28	-65.40	3.92	19.05	V
									V

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

EN-DC 7A-n77A

EN-DC 7A-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	7662	-40.58	-13	-27.58	-71.18	-48.17	1.89	11.63	H
	11493	-34.06	-13	-21.06	-71.33	-40.60	2.40	11.09	H
	15324	-29.08	-13	-16.08	-70.75	-38.91	2.64	14.63	H
	19154	-53.34	-13	-40.34	-65.17	-65.17	3.25	17.22	H
	22983	-60.50	-13	-47.50	-77.43	-73.39	3.57	18.61	H
	26824	-57.18	-13	-44.18	-77.43	-70.16	3.92	19.05	H
									H
	7662	-40.46	-13	-27.46	-71.28	-48.05	1.89	11.63	V
	11493	-33.83	-13	-20.83	-71.22	-40.37	2.40	11.09	V
	15324	-28.22	-13	-15.22	-70.59	-38.05	2.64	14.63	V
	19154	-48.75	-13	-35.75	-60.34	-60.58	3.25	17.22	V
	22983	-60.14	-13	-47.14	-76.74	-73.03	3.57	18.61	V
	26824	-55.41	-13	-42.41	-75.27	-68.39	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)	Margin (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	7662	-40.99	-13	-27.99	-71.59	-48.58	1.89	11.63	H
	11493	-34.72	-13	-21.72	-71.99	-41.26	2.40	11.09	H
	15324	-29.33	-13	-16.33	-71	-39.16	2.64	14.63	H
	19154	-49.29	-13	-36.29	-61.12	-61.12	3.25	17.22	H
	22983	-60.29	-13	-47.29	-77.22	-73.18	3.57	18.61	H
	26824	-55.48	-13	-42.48	-75.73	-68.46	3.92	19.05	H
									H
	7662	-40.58	-13	-27.58	-71.4	-48.17	1.89	11.63	V
	11493	-34.31	-13	-21.31	-71.7	-40.85	2.40	11.09	V
	15324	-28.43	-13	-15.43	-70.8	-38.26	2.64	14.63	V
	19154	-42.52	-13	-29.52	-54.11	-54.35	3.25	17.22	V
	22983	-58.18	-13	-45.18	-74.78	-71.07	3.57	18.61	V
	26824	-53.61	-13	-40.61	-73.47	-66.59	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)	Margin (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	7662	-41.28	-13	-28.28	-71.88	-48.87	1.89	11.63	H
	11493	-35.32	-13	-22.32	-72.59	-41.86	2.40	11.09	H
	15324	-29.43	-13	-16.43	-71.1	-39.26	2.64	14.63	H
	19154	-46.27	-13	-33.27	-58.1	-58.10	3.25	17.22	H
	22983	-59.79	-13	-46.79	-76.72	-72.68	3.57	18.61	H
	26824	-56.42	-13	-43.42	-76.67	-69.40	3.92	19.05	H
									H
	7662	-41.22	-13	-28.22	-72.04	-48.81	1.89	11.63	V
	11493	-35.10	-13	-22.10	-72.49	-41.64	2.40	11.09	V
	15324	-28.68	-13	-15.68	-71.05	-38.51	2.64	14.63	V
	19154	-42.64	-13	-29.64	-54.23	-54.47	3.25	17.22	V
	22983	-56.37	-13	-43.37	-72.97	-69.26	3.57	18.61	V
	26824	-52.13	-13	-39.13	-71.99	-65.11	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)	Margin (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	7662	-41.24	-13	-28.24	-71.84	-48.83	1.89	11.63	H
	11493	-35.23	-13	-22.23	-72.5	-41.77	2.40	11.09	H
	15324	-29.34	-13	-16.34	-71.01	-39.17	2.64	14.63	H
	19154	-50.08	-13	-37.08	-61.91	-61.91	3.25	17.22	H
	22983	-60.12	-13	-47.12	-77.06	-73.01	3.57	18.61	H
	26824	-57.04	-13	-44.04	-77.29	-70.02	3.92	19.05	H
									H
	7662	-40.87	-13	-27.87	-71.69	-48.46	1.89	11.63	V
	11493	-35.19	-13	-22.19	-72.58	-41.73	2.40	11.09	V
	15324	-28.74	-13	-15.74	-71.11	-38.57	2.64	14.63	V
	19154	-42.81	-13	-29.81	-54.4	-54.64	3.25	17.22	V
	22983	-56.37	-13	-43.37	-72.97	-69.26	3.57	18.61	V
	26824	-53.72	-13	-40.72	-73.58	-66.70	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)	Margin (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	7662	-41.15	-13	-28.15	-71.75	-48.74	1.89	11.63	H
	11493	-35.00	-13	-22.00	-72.27	-41.54	2.40	11.09	H
	15324	-29.29	-13	-16.29	-70.96	-39.12	2.64	14.63	H
	19154	-50.58	-13	-37.58	-62.41	-62.41	3.25	17.22	H
	22983	-59.64	-13	-46.64	-76.57	-72.53	3.57	18.61	H
	26824	-56.92	-13	-43.92	-77.17	-69.90	3.92	19.05	H
									H
	7662	-40.71	-13	-27.71	-71.53	-48.30	1.89	11.63	V
	11493	-34.78	-13	-21.78	-72.17	-41.32	2.40	11.09	V
	15324	-28.71	-13	-15.71	-71.08	-38.54	2.64	14.63	V
	19154	-42.57	-13	-29.57	-54.16	-54.40	3.25	17.22	V
	22983	-56.41	-13	-43.41	-73.01	-69.30	3.57	18.61	V
	26824	-52.79	-13	-39.79	-72.65	-65.77	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)	Margin (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	7662	-41.11	-13	-28.11	-71.71	-48.70	1.89	11.63	H
	11493	-34.98	-13	-21.98	-72.25	-41.52	2.40	11.09	H
	15324	-29.28	-13	-16.28	-70.95	-39.11	2.64	14.63	H
	19154	-48.08	-13	-35.08	-59.91	-59.91	3.25	17.22	H
	22983	-59.38	-13	-46.38	-76.31	-72.27	3.57	18.61	H
	26824	-57.50	-13	-44.50	-77.75	-70.48	3.92	19.05	H
									H
	7662	-40.91	-13	-27.91	-71.73	-48.50	1.89	11.63	V
	11493	-34.55	-13	-21.55	-71.94	-41.09	2.40	11.09	V
	15324	-28.68	-13	-15.68	-71.05	-38.51	2.64	14.63	V
	19154	-41.19	-13	-28.19	-52.78	-53.02	3.25	17.22	V
	22983	-59.69	-13	-46.69	-76.29	-72.58	3.57	18.61	V
	26824	-53.86	-13	-40.86	-73.72	-66.84	3.92	19.05	V
									V

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