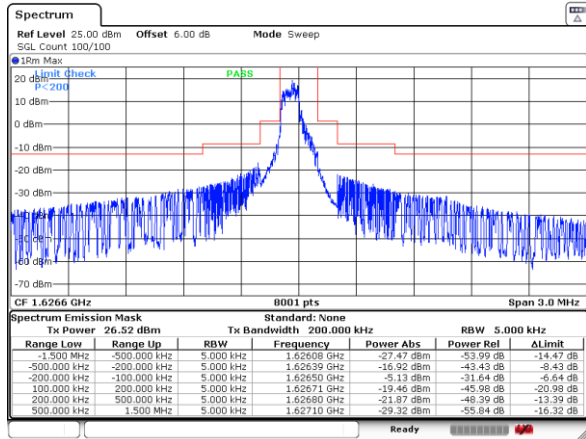




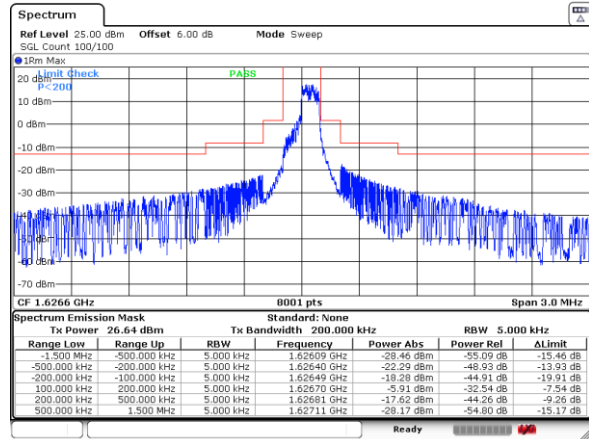
Band 255 SCS15KHz

Lowest Channel / 6SC0/ QPSK



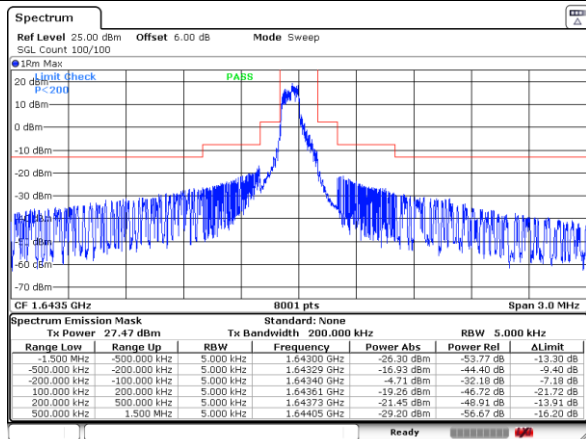
Date: 8.NOV.2023 14:06:57

Lowest Channel / 6SC6 / QPSK



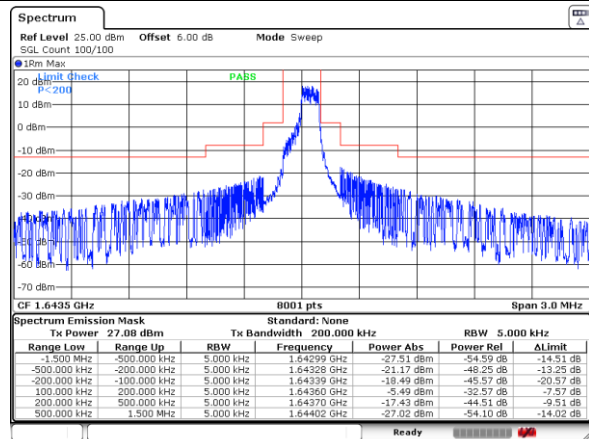
Date: 8.NOV.2023 14:10:15

Middle Channel / 6SC0/ QPSK



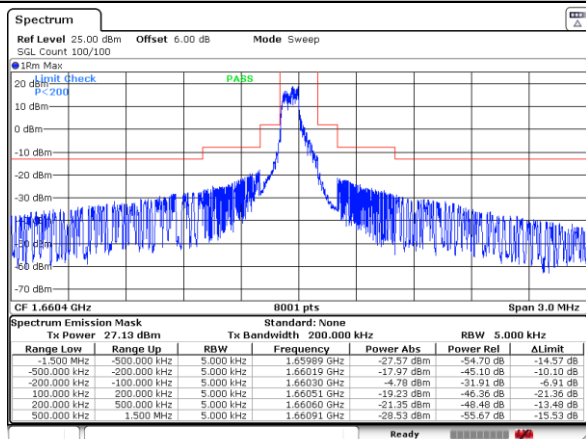
Date: 8.NOV.2023 15:43:06

Middle Channel / 6SC6 / QPSK



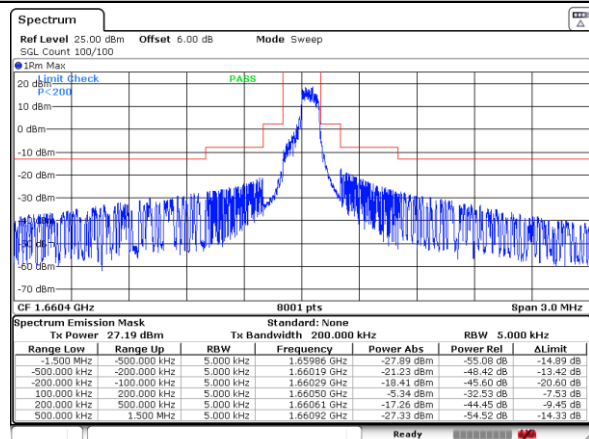
Date: 8.NOV.2023 15:47:14

Highest Channel / 6SC0/ QPSK



Date: 8.NOV.2023 17:38:35

Highest Channel / 6SC6 / QPSK



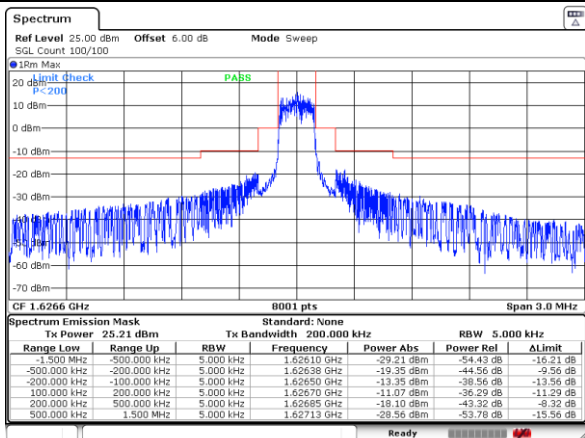
Date: 8.NOV.2023 17:47:46



Band 255 SCS15KHz

Lowest Channel / 12SC0 / QPSK

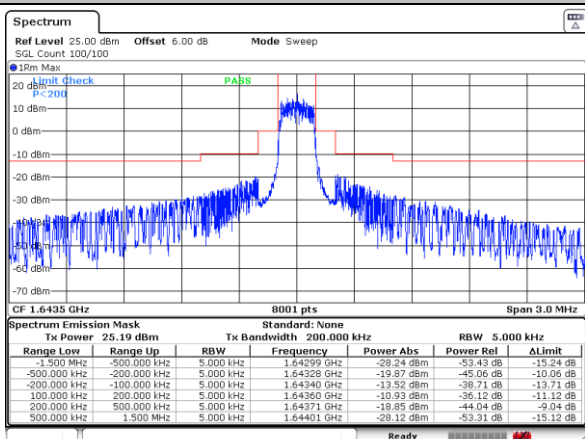
N/A



Date: 8.NOV.2023 14:13:36

Middle Channel /12SC0 / QPSK

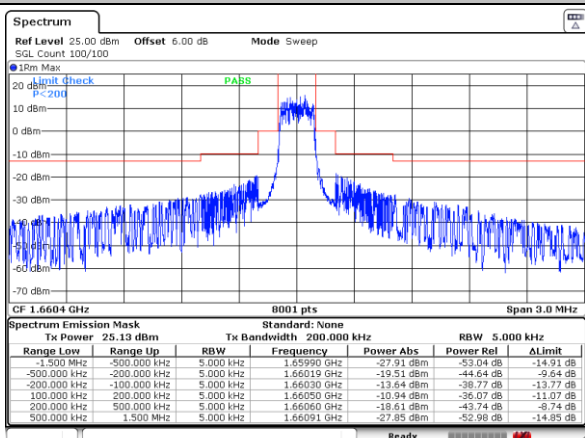
N/A



Date: 8.NOV.2023 15:50:30

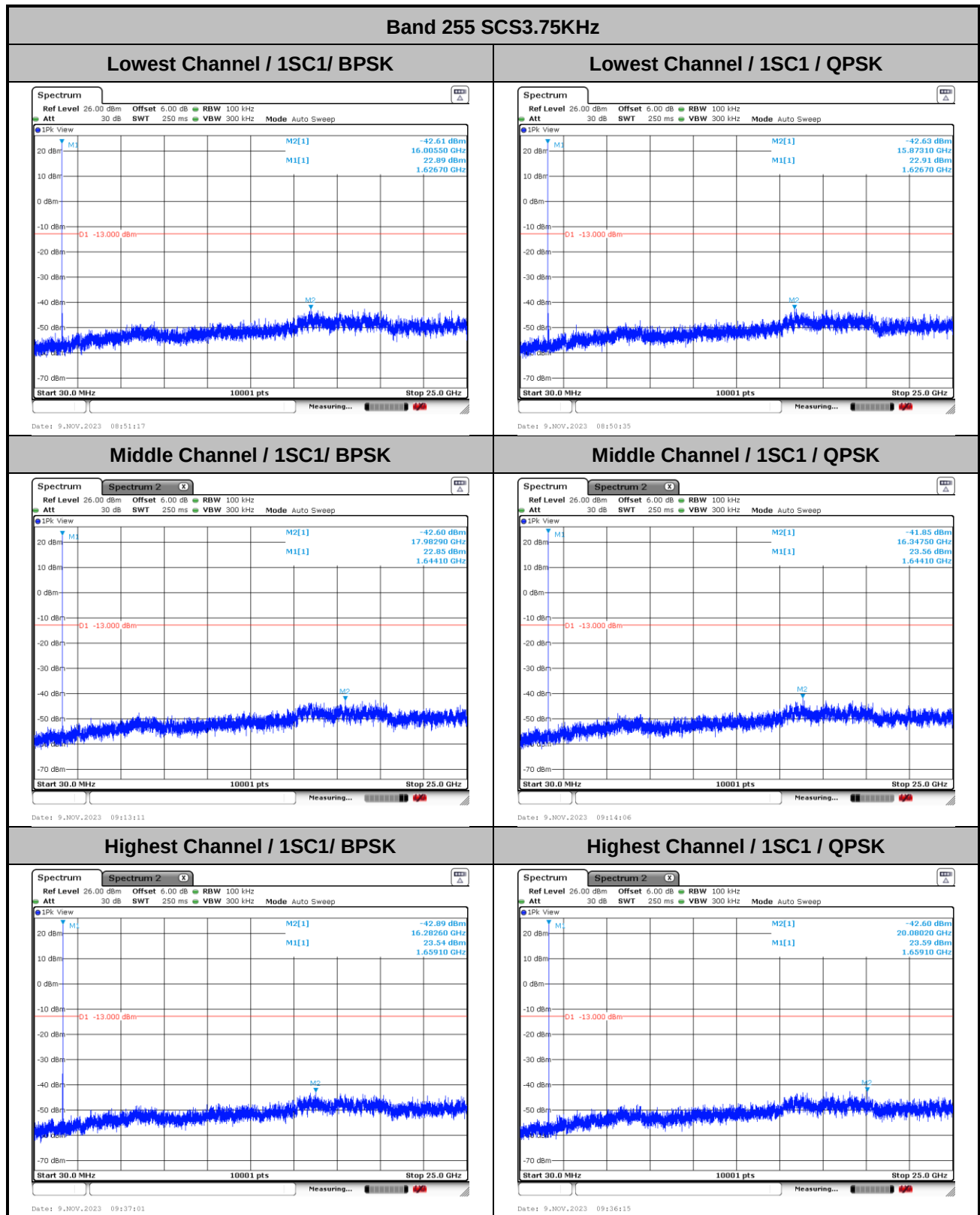
Highest Channel /12SC0 / QPSK

N/A



Date: 8.NOV.2023 17:51:37

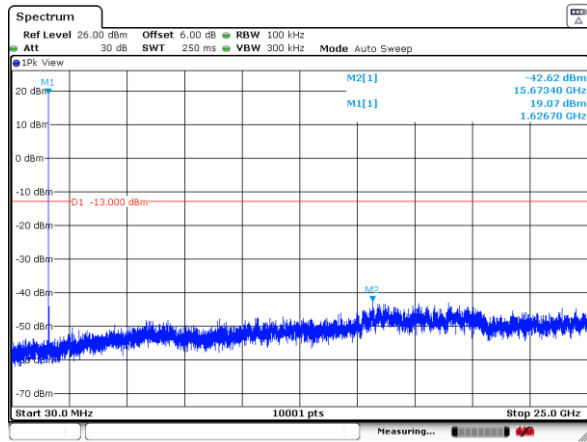
Conducted Spurious Emission



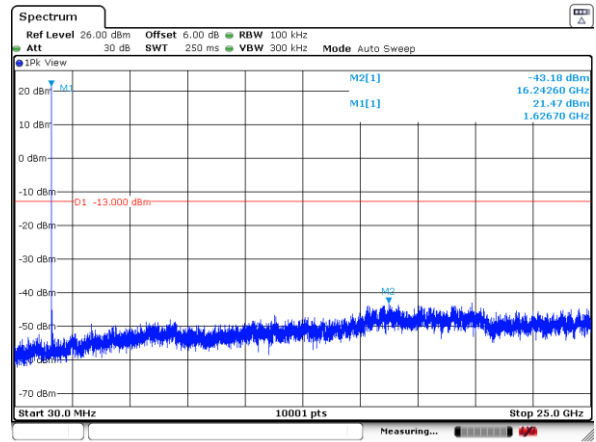


Band 255 SCS15KHz

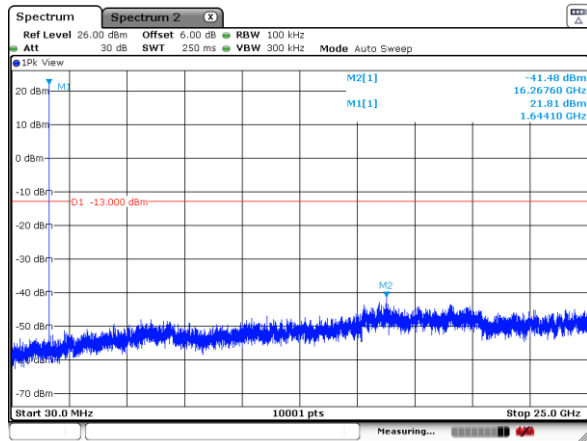
Lowest Channel / 1SC1/ BPSK



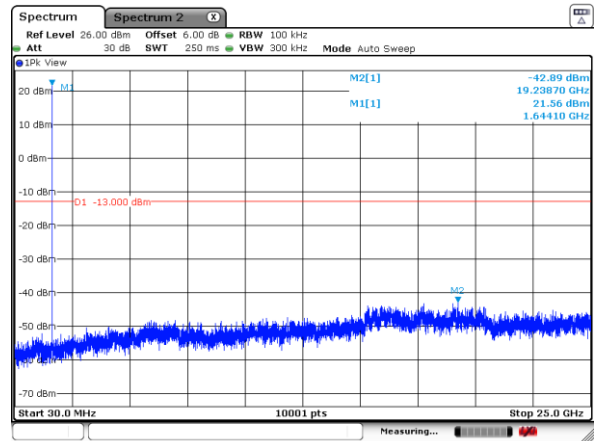
Lowest Channel / 1SC1/ QPSK



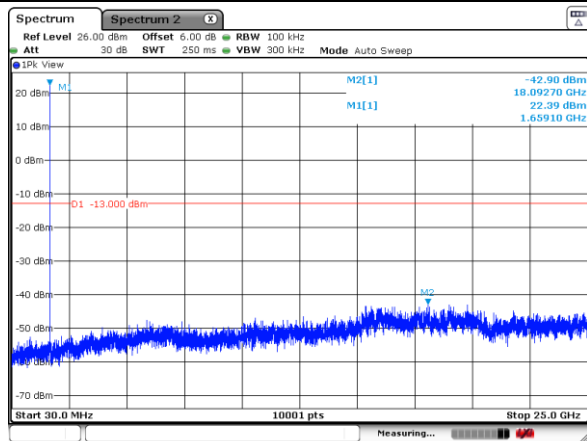
Middle Channel / 1SC1/ BPSK



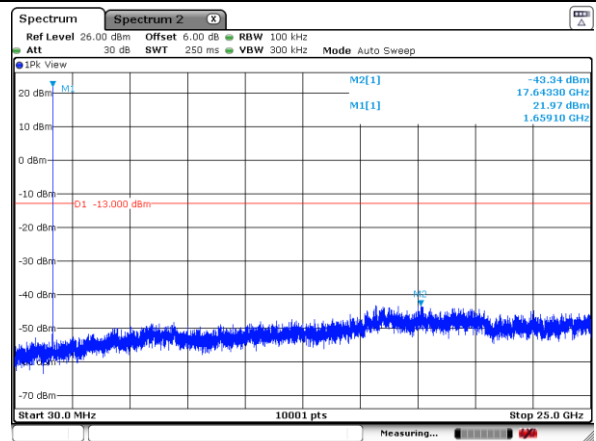
Middle Channel / 1SC1/ QPSK



Highest Channel / 1SC1/ BPSK



Highest Channel / 1SC1/ QPSK



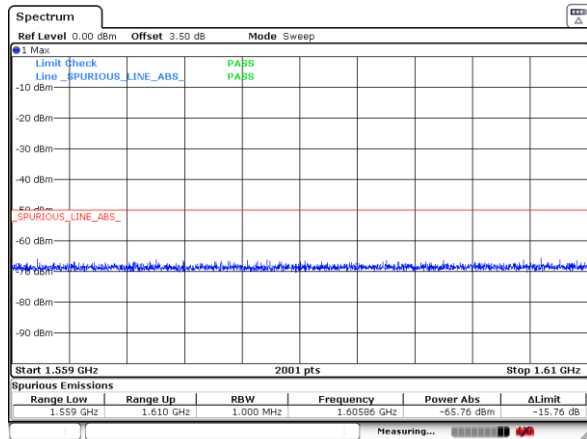


Emission limits for protection of aeronautical service

Band 255 SCS3.75KHz

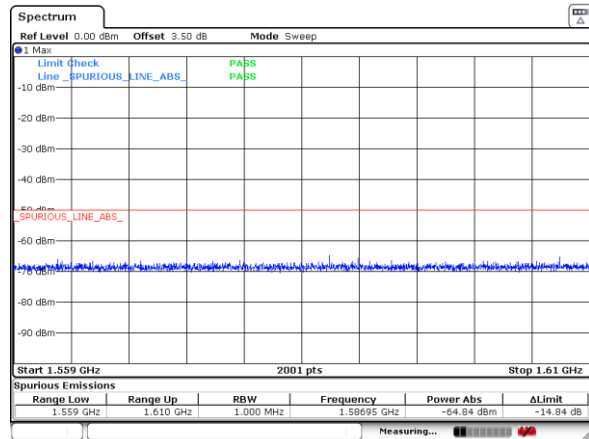
BPSK

Lowest Channel / 1SC1/ Carrier off



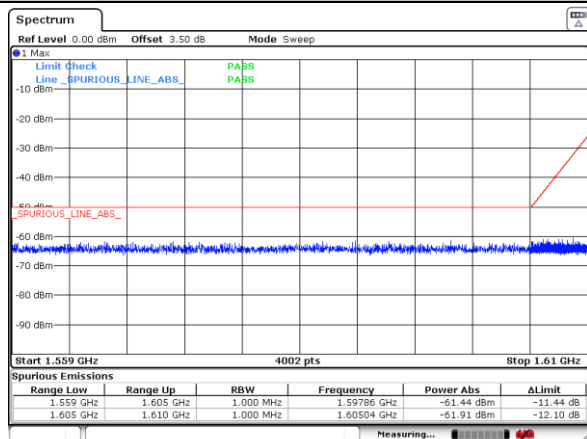
Date: 9.NOV.2023 13:59:50

Middle Channel / 1SC1/ Carrier off



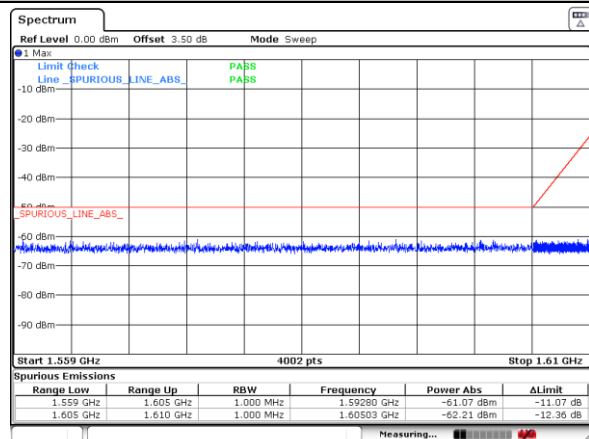
Date: 9.NOV.2023 13:59:21

Lowest Channel / 1SC1/ Carrier on



Date: 9.NOV.2023 14:40:36

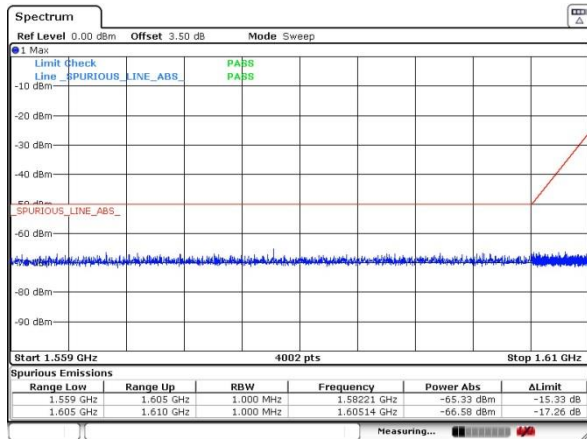
Middle Channel / 1SC1 / Carrier on



Date: 9.NOV.2023 14:43:02

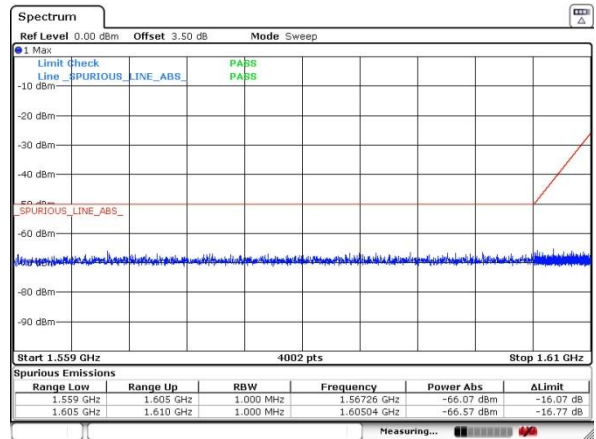


Lowest Channel / 1SC1/ Discrete



Date: 9.NOV.2023 14:22:07

Middle Channel / 1SC1 / Discrete



Date: 9.NOV.2023 14:23:09

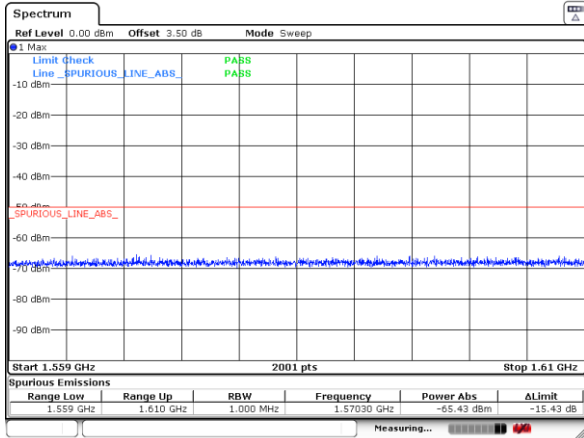


Band 255 SCS3.75KHz

BPSK

Highest Channel / 1SC1/ Carrier off

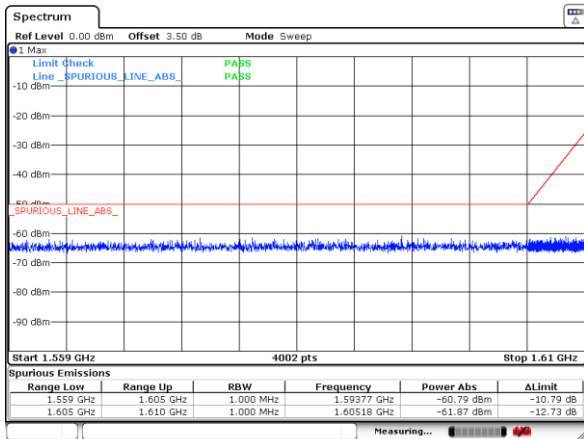
N/A



Date: 9.NOV.2023 14:01:28

Highest Channel / 1SC1/ Carrier on

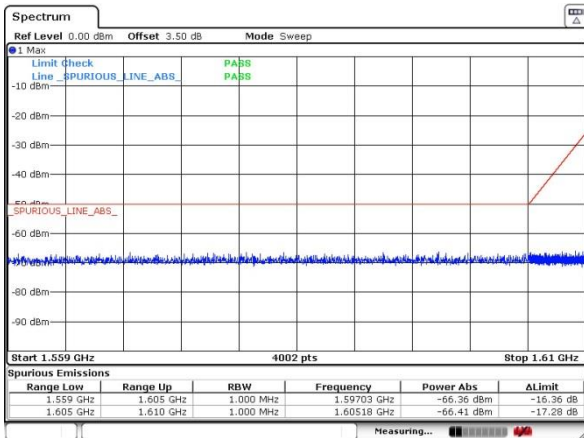
N/A



Date: 9.NOV.2023 14:45:45

Highest Channel / 1SC1/ Discrete

N/A



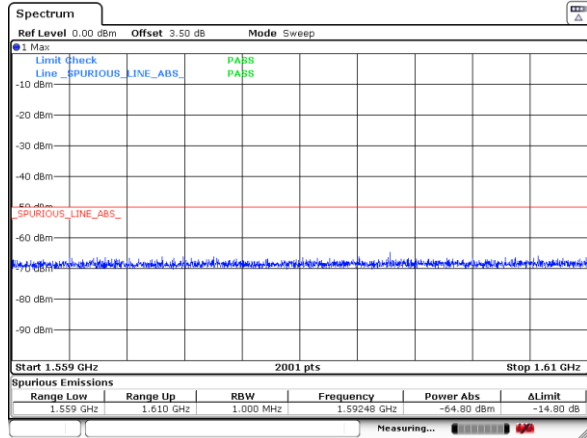
Date: 9.NOV.2023 14:17:46



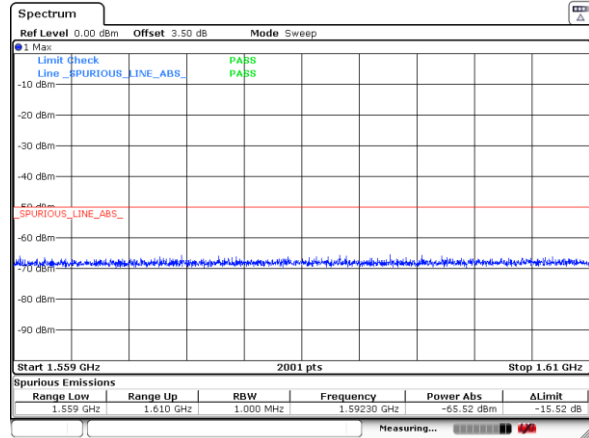
Band 255 SCS3.75KHz

QPSK

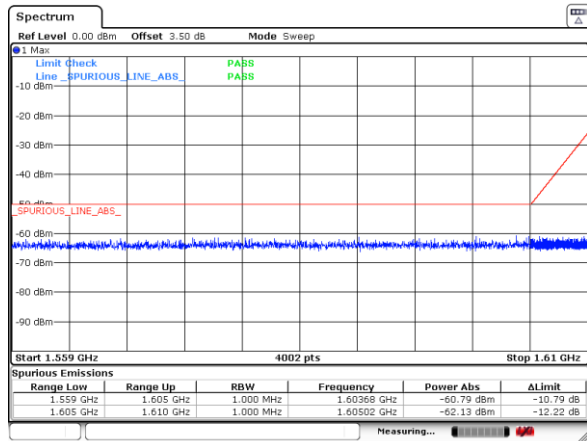
Lowest Channel / 1SC1/ Carrier off



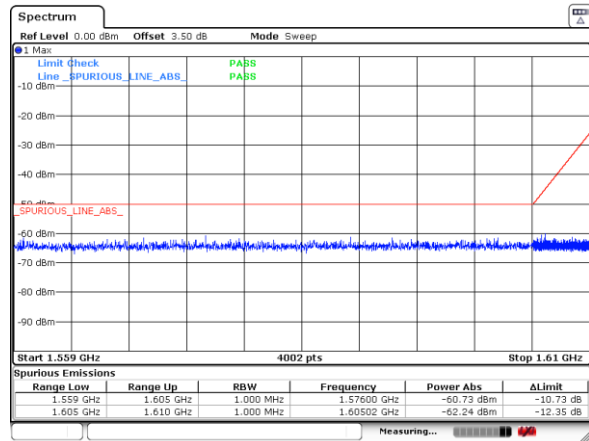
Middle Channel / 1SC1/ Carrier off



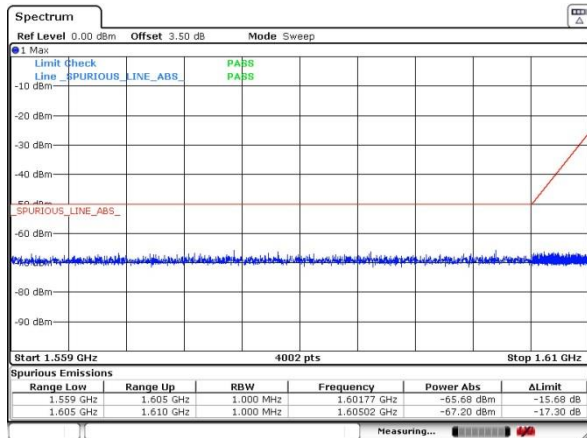
Lowest Channel / 1SC1/ Carrier on



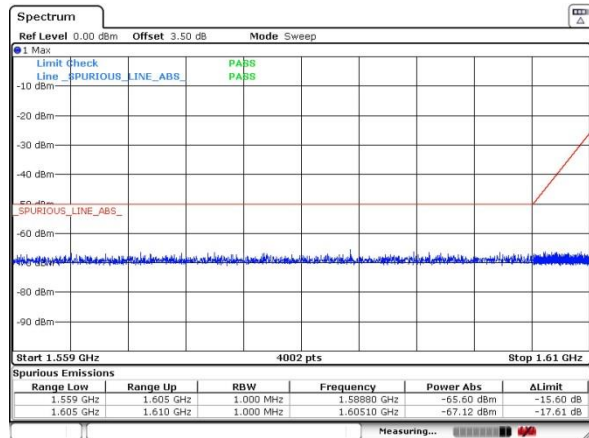
Middle Channel / 1SC1 / Carrier on



Lowest Channel / 1SC1/ Discrete



Middle Channel / 1SC1 / Discrete



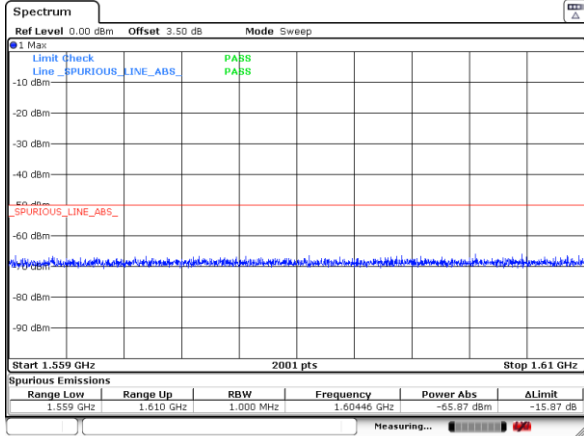


Band 255 SCS3.75KHz

QPSK

Highest Channel / 1SC1/ Carrier off

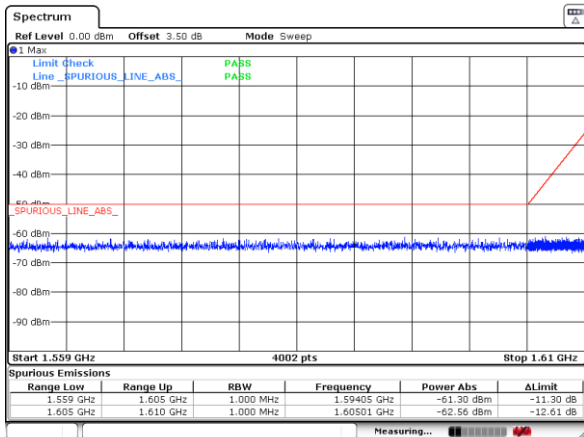
N/A



Date: 9.NOV.2023 14:01:54

Highest Channel / 1SC1/ Carrier on

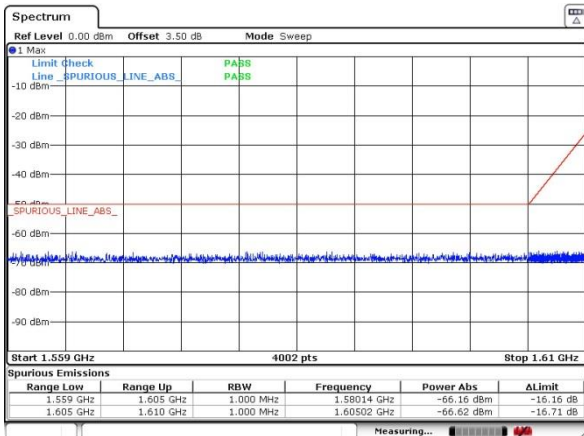
N/A



Date: 9.NOV.2023 14:45:11

Highest Channel / 1SC1/ Discrete

N/A



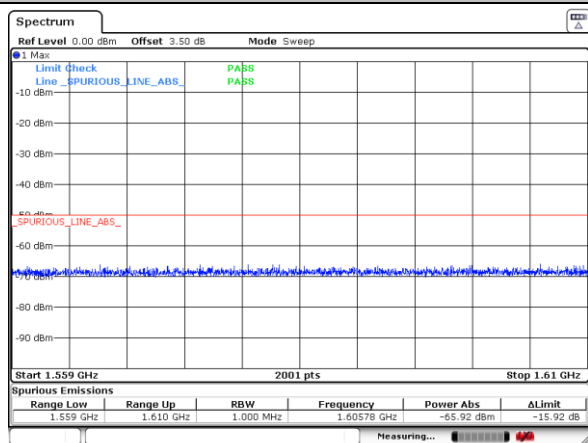
Date: 9.NOV.2023 14:19:21



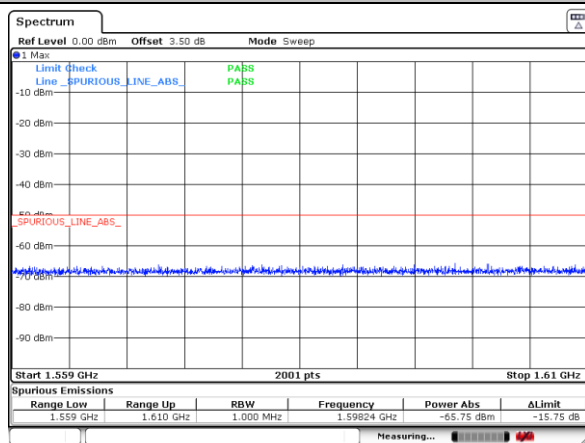
Band 255 SCS15KHz

BPSK

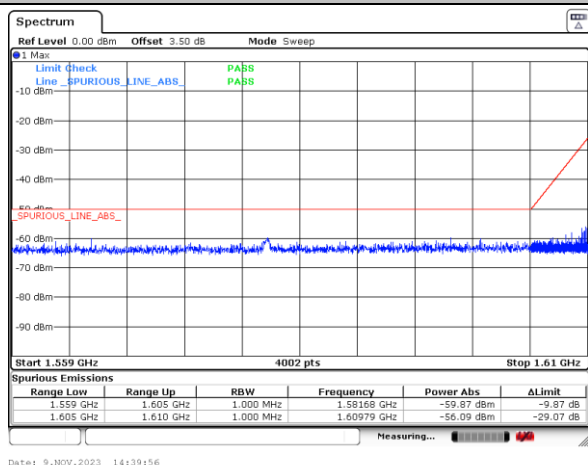
Lowest Channel / 1SC1/ Carrier off



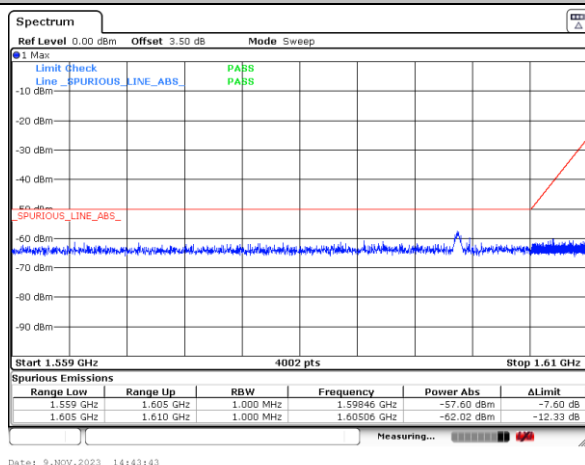
Middle Channel / 1SC1/ Carrier off



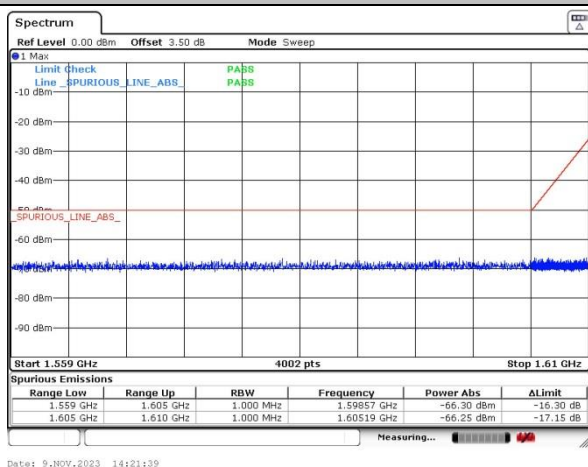
Lowest Channel / 1SC1/ Carrier on



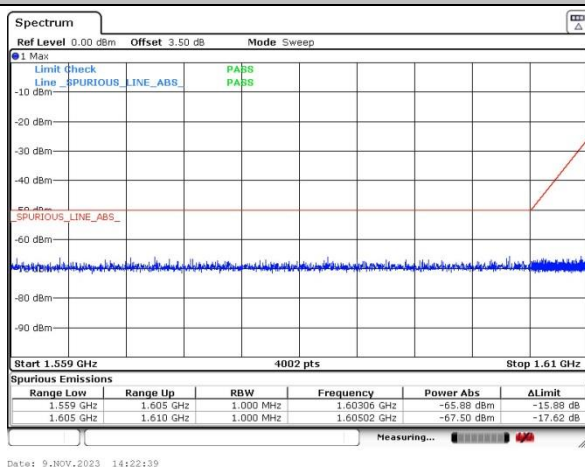
Middle Channel / 1SC1 / Carrier on



Lowest Channel / 1SC1/ Discrete



Middle Channel / 1SC1 / Discrete



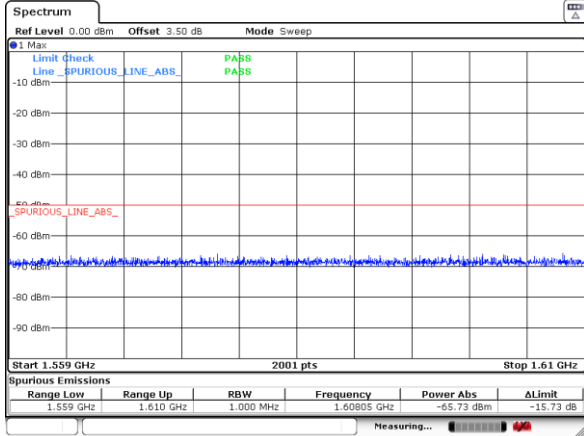


Band 255 SCS15KHz

BPSK

Highest Channel / 1SC1/ Carrier off

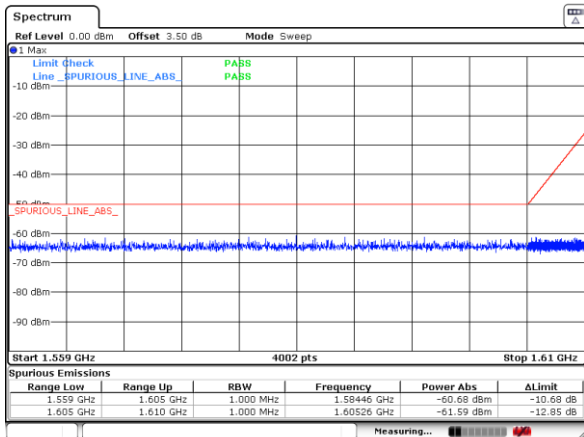
N/A



Date: 9.NOV.2023 14:00:44

Highest Channel / 1SC1/ Carrier on

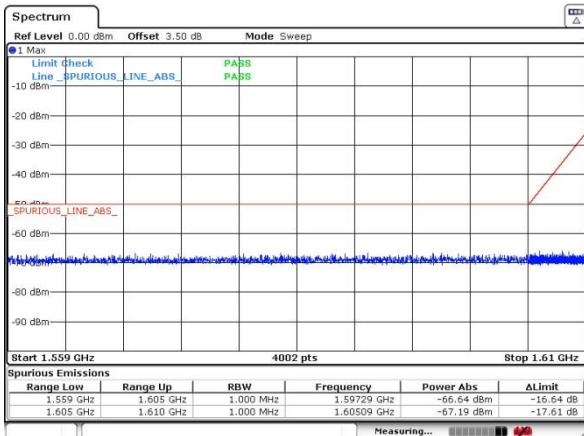
N/A



Date: 9.NOV.2023 14:46:01

Highest Channel / 1SC1/ Discrete

N/A



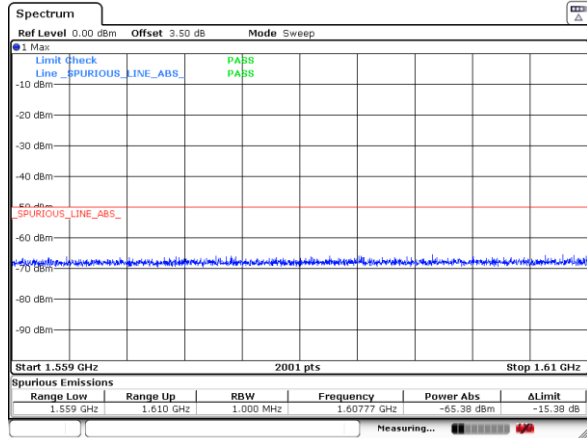
Date: 9.NOV.2023 14:19:39



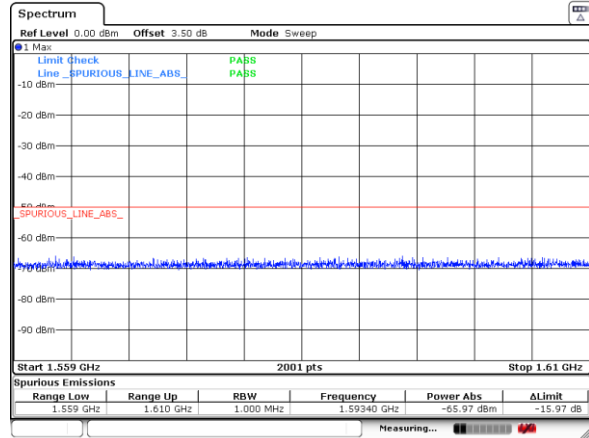
Band 255 SCS15KHz

QPSK

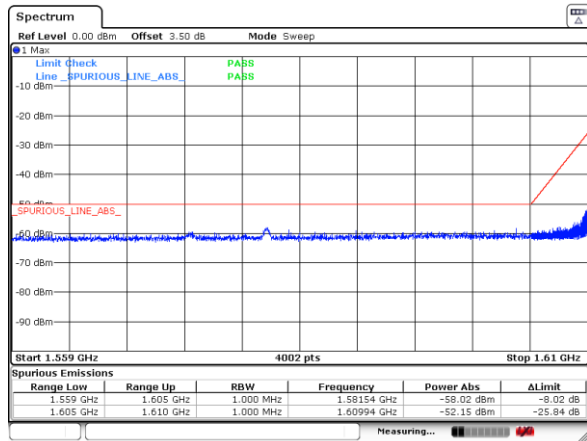
Lowest Channel / 1SC1/ Carrier off



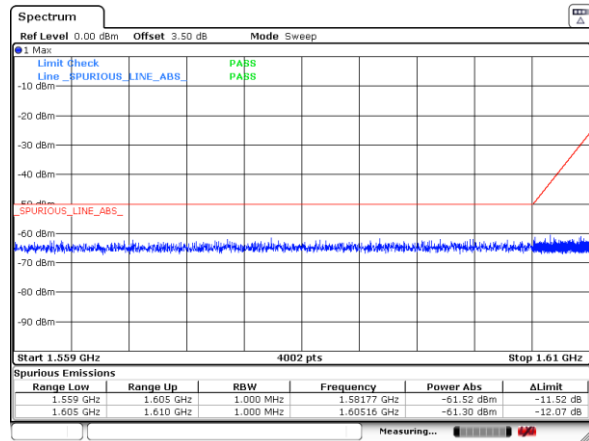
Middle Channel / 1SC1/ Carrier off



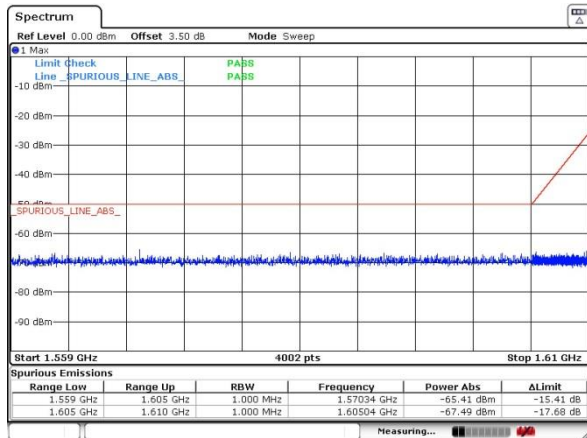
Lowest Channel / 1SC1/ Carrier on



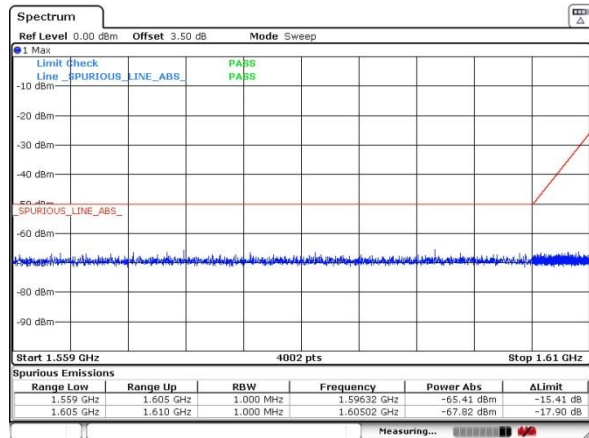
Middle Channel / 1SC1 / Carrier on



Lowest Channel / 1SC1/ Discrete



Middle Channel / 1SC1 / Discrete



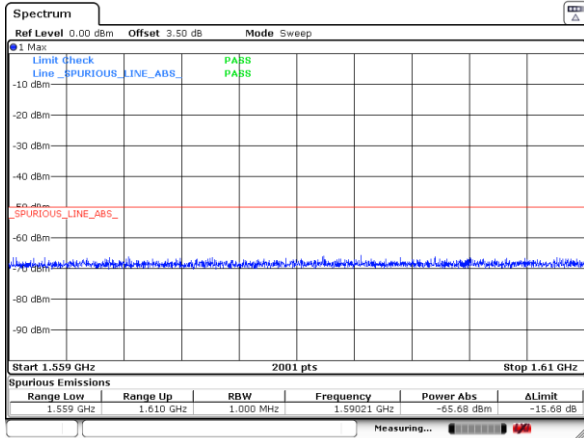


Band 255 SCS15KHz

QPSK

Highest Channel / 1SC1/ Carrier off

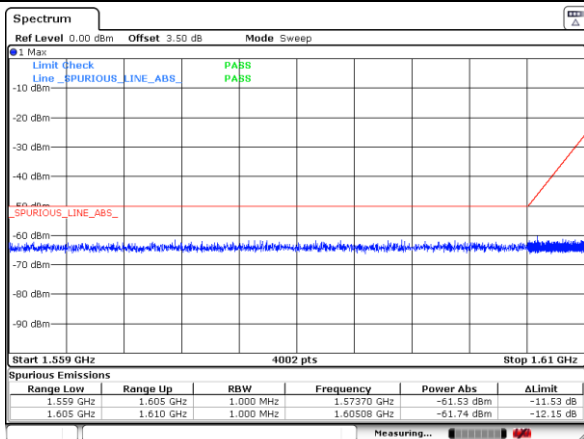
N/A



Date: 9.NOV.2023 14:01:04

Highest Channel / 1SC1/ Carrier on

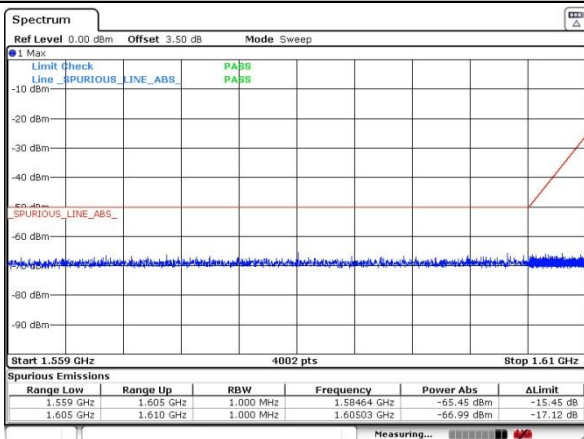
N/A



Date: 9.NOV.2023 14:46:16

Highest Channel / 1SC1/ Discrete

N/A



Date: 9.NOV.2023 14:42:10

**Frequency Stability**

Test Conditions		LTE Band 255 (QPSK) / Middle Channel	Result
Temperature (°C)	Voltage (Volt)	3.75 KHz	
		Deviation (ppm)	
50	Normal Voltage	0.0029	PASS
40	Normal Voltage	0.0008	
30	Normal Voltage	0.0016	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0032	
0	Normal Voltage	0.0045	
-10	Normal Voltage	0.0067	
-20	Normal Voltage	0.0014	
-30	Normal Voltage	0.0003	
20	Maximum Voltage	0.0059	
20	Normal Voltage	0.0024	
20	Minimum Voltage	0.0022	

Note: Normal Voltage =7.74 V. ; Minimum Voltage =6.8 V. ; Maximum Voltage =8.9V



Band 24

Conducted Output Power (Average power) and EIRP

Band 24 SCS 3.75kHz							Limit
Test Frequency (MHz)	SC Size	Conducted Power (dBm)		Antenna Gain (dBi)	EIRP Power (dBm)		Result
		BPSK	QPSK		BPSK	QPSK	
1626.6	1SC1	23.51	23.09	-2.5	21.01	20.59	PASS
	1SC46	23.48	23.06	-2.5	20.98	20.56	
1643.5	1SC1	22.09	22.08	-2.5	19.59	19.58	
	1SC46	22.02	22.06	-2.5	19.52	19.56	
1660.4	1SC1	22.04	22.05	-2.5	19.54	19.55	
	1SC46	22.08	22.13	-2.5	19.58	19.63	

Band 24 SCS 15kHz							Limit
Test Frequency (MHz)	SC Size	Conducted Power (dBm)		Antenna Gain (dBi)	EIRP Power (dBm)		Result
		BPSK	QPSK		BPSK	QPSK	
1626.6	1SC1	23.15	23.41	-2.5	20.65	20.91	PASS
	1SC10	23.18	23.24	-2.5	20.68	20.74	
	3SC0	-	22.50	-2.5	-	20.00	
	3SC9	-	22.71	-2.5	-	20.21	
	6SC0	-	22.24	-2.5	-	19.74	
	6SC6	-	22.04	-2.5	-	19.54	
	12SC0	-	21.51	-2.5	-	19.01	
1643.5	1SC1	22.27	22.09	-2.5	19.77	19.59	
	1SC10	22.25	22.26	-2.5	19.75	19.76	
	3SC0	-	21.79	-2.5	-	19.29	
	3SC9	-	21.94	-2.5	-	19.44	
	6SC0	-	21.38	-2.5	-	18.88	
	6SC6	-	21.04	-2.5	-	18.54	
	12SC0	-	20.51	-2.5	-	18.01	
1660.4	1SC1	22.20	22.23	-2.5	19.70	19.73	
	1SC10	22.27	22.28	-2.5	19.77	19.78	
	3SC0	-	21.73	-2.5	-	19.23	
	3SC9	-	21.55	-2.5	-	19.05	
	6SC0	-	21.38	-2.5	-	18.88	
	6SC6	-	21.41	-2.5	-	18.91	
	12SC0	-	20.31	-2.5	-	17.81	



Appendix C. Test Results of Radiated Test

Radiated Spurious Emission

Test Engineer :	Zhaohui Liang	Temperature :	22~25°C
		Relative Humidity :	48~52%

Pre-scanned harmonic for SCS3.75kHz and SCS15kHz testing, we choose the worst mode to test.

Band 23 / SCS 15kHz / QPSK									
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)
Lowest	4000.2	-58.71	-13	-45.71	-82.50	-65.47	5.82	12.58	H
	6000.3	-55.80	-13	-42.80	-81.43	-61.52	7.28	13.00	H
	8000.4	-51.99	-13	-38.99	-78.99	-55.15	8.32	11.48	H
	4000.2	-54.69	-13	-41.69	-79.61	-61.45	5.82	12.58	V
	6000.3	-48.13	-13	-35.13	-75.26	-53.85	7.28	13.00	V
	8000.4	-46.10	-13	-33.10	-75.31	-49.26	8.32	11.48	V
Middle	4020	-57.61	-13	-44.61	-81.01	-64.36	5.85	12.60	H
	6030	-57.77	-13	-44.77	-83.52	-63.57	7.30	13.10	H
	8040	-48.27	-13	-35.27	-75.18	-51.42	8.35	11.50	H
	4020	-56.95	-13	-43.95	-81.73	-63.70	5.85	12.60	V
	6030	-51.26	-13	-38.26	-78.12	-57.06	7.30	13.10	V
	8040	-44.13	-13	-31.13	-73.41	-47.28	8.35	11.50	V
Highest	4039.8	-57.03	-13	-44.03	-80.25	-63.77	5.88	12.62	H
	6059.7	-54.43	-13	-41.43	-80.31	-60.24	7.32	13.13	H
	8079.6	-52.17	-13	-39.17	-78.96	-55.33	8.38	11.54	H
	4039.8	-58.00	-13	-45.00	-82.73	-64.74	5.88	12.62	V
	6059.7	-47.33	-13	-34.33	-73.91	-53.14	7.32	13.13	V
	8079.6	-47.55	-13	-34.55	-76.86	-50.71	8.38	11.54	V

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



Band 255 / SCS 3.75kHz / QPSK									
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)
Lowest	3253.03	-59.79	-13	-46.79	-80.66	-66.55	5.82	12.58	H
	4879.55	-56.76	-13	-43.76	-80.88	-62.48	7.28	13.00	H
	6506.06	-50.65	-13	-37.65	-76.67	-53.81	8.32	11.48	H
	8132.58	-52.25	-13	-39.25	-78.86	-54.40	9.83	11.98	H
	3253.03	-55.74	-13	-42.74	-77.88	-62.50	5.82	12.58	V
	4879.55	-56.88	-13	-43.88	-81.93	-62.60	7.28	13.00	V
	6506.06	-45.02	-13	-32.02	-72.8	-48.18	8.32	11.48	V
	8132.58	-48.13	-13	-35.13	-77.58	-50.28	9.83	11.98	V
Middle	3286.83	-56.78	-13	-43.78	-77.83	-63.53	5.85	12.60	H
	4930.25	-58.72	-13	-45.72	-82.63	-64.52	7.30	13.10	H
	6573.66	-54.34	-13	-41.34	-80.68	-57.49	8.35	11.50	H
	8217.08	-53.11	-13	-40.11	-79.39	-55.26	9.85	12.00	H
	3286.83	-50.94	-13	-37.94	-72.88	-57.69	5.85	12.60	V
	4930.25	-56.56	-13	-43.56	-81.73	-62.36	7.30	13.10	V
	6573.66	-48.59	-13	-35.59	-77.11	-51.74	8.35	11.50	V
	8217.08	-48.18	-13	-35.18	-77.65	-50.33	9.85	12.00	V
Highest	3320.63	-58.78	-13	-45.78	-80.03	-65.52	5.88	12.62	H
	4980.95	-58.15	-13	-45.15	-81.86	-63.96	7.32	13.13	H
	6641.26	-50.08	-13	-37.08	-76.37	-53.24	8.38	11.54	H
	8301.58	-57.20	-13	-44.20	-82.76	-59.34	9.88	12.02	H
	3320.63	-59.79	-13	-46.79	-81.54	-66.53	5.88	12.62	V
	4980.95	-55.81	-13	-42.81	-81.09	-61.62	7.32	13.13	V
	6641.26	-45.27	-13	-32.27	-73.87	-48.43	8.38	11.54	V
	8301.58	-50.24	-13	-37.24	-79.17	-52.38	9.88	12.02	V

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