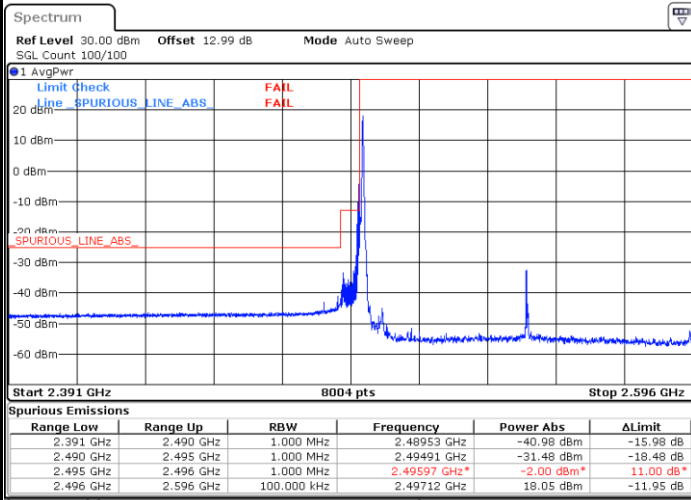




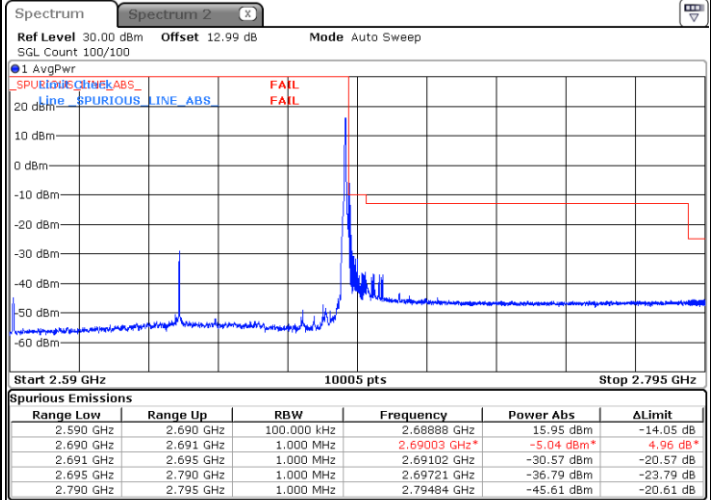
FR1 n41 / 100MHz / DFT-S OFDM / 64Q

Lowest Band Edge / 1RB0



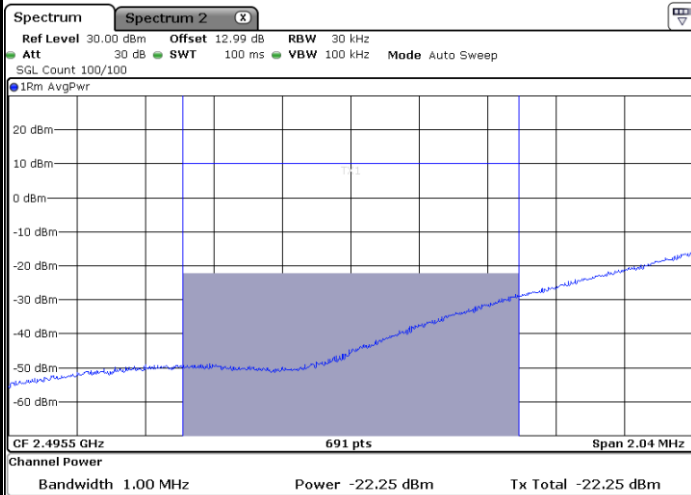
Date: 18 JAN 2021 11:34:19

Highest Band Edge / 1RB24



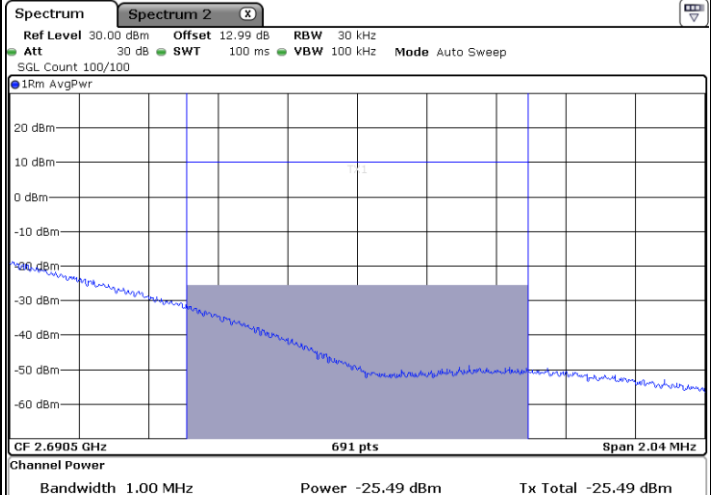
Date: 18 JAN 2021 11:57:13

Channel Power < -13dBm

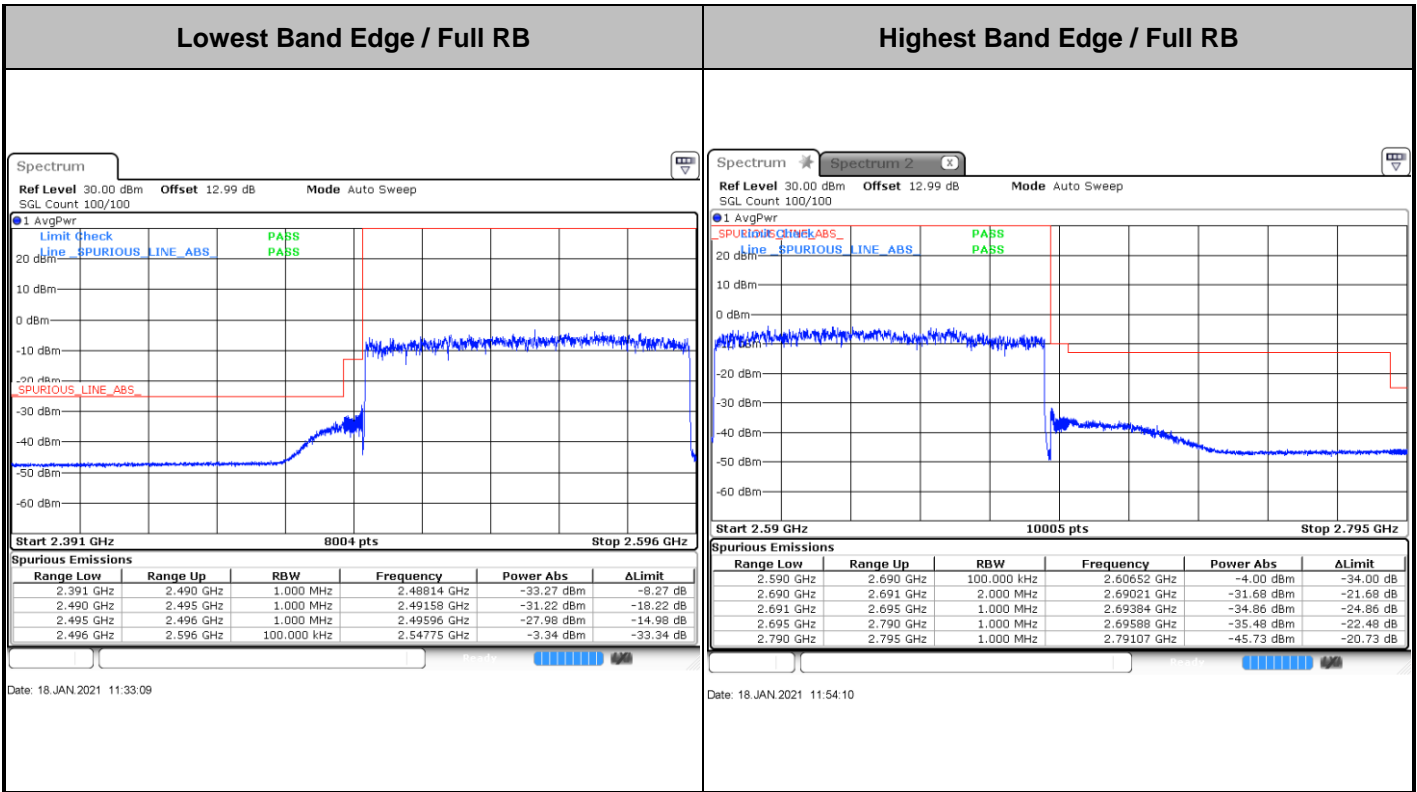


Date: 18 JAN 2021 12:05:03

Channel Power < -10dBm



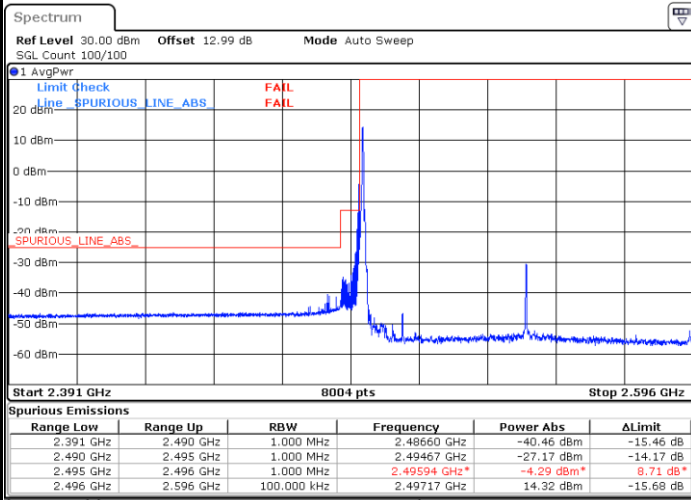
Date: 18 JAN 2021 12:00:37





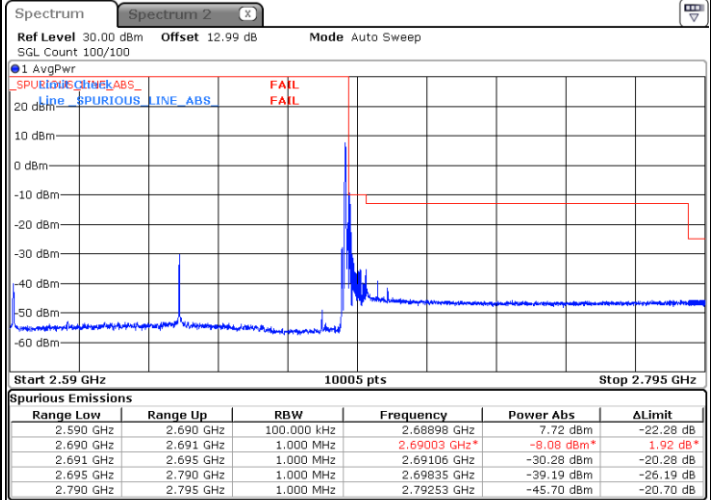
FR1 n41 / 100MHz / DFT-S OFDM / 256Q

Lowest Band Edge / 1RB0



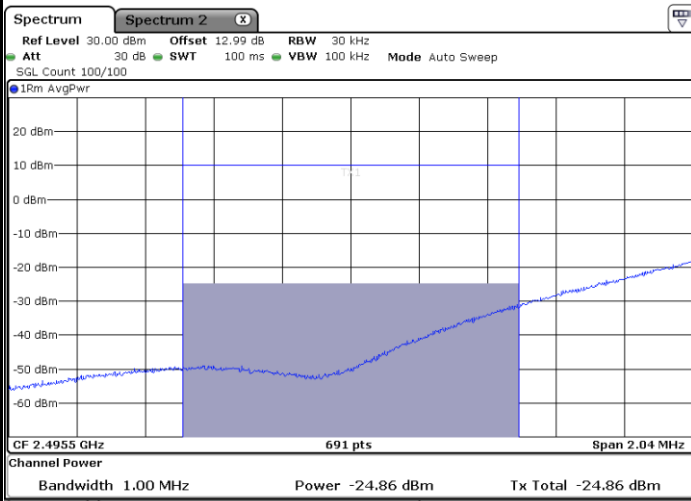
Date: 18 JAN 2021 11:33:58

Highest Band Edge / 1RB24



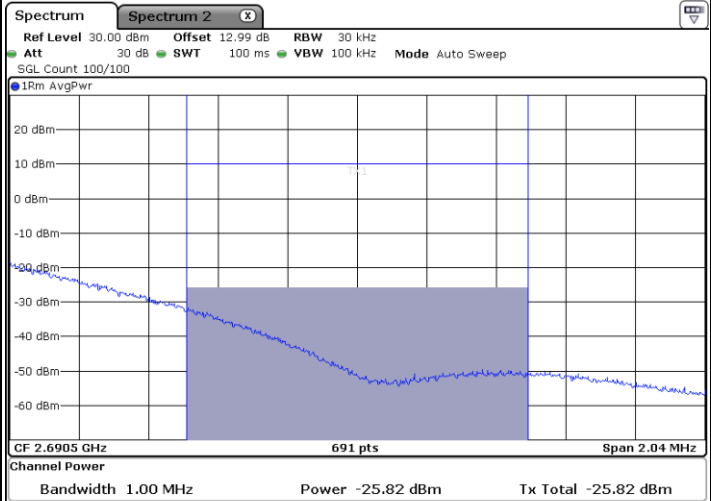
Date: 18 JAN 2021 11:57:47

Channel Power < -13dBm

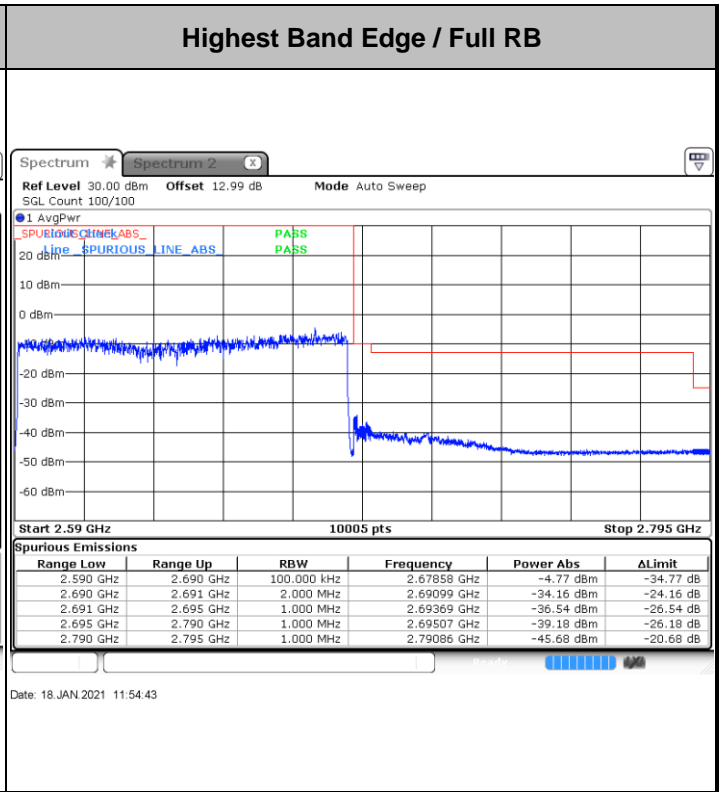
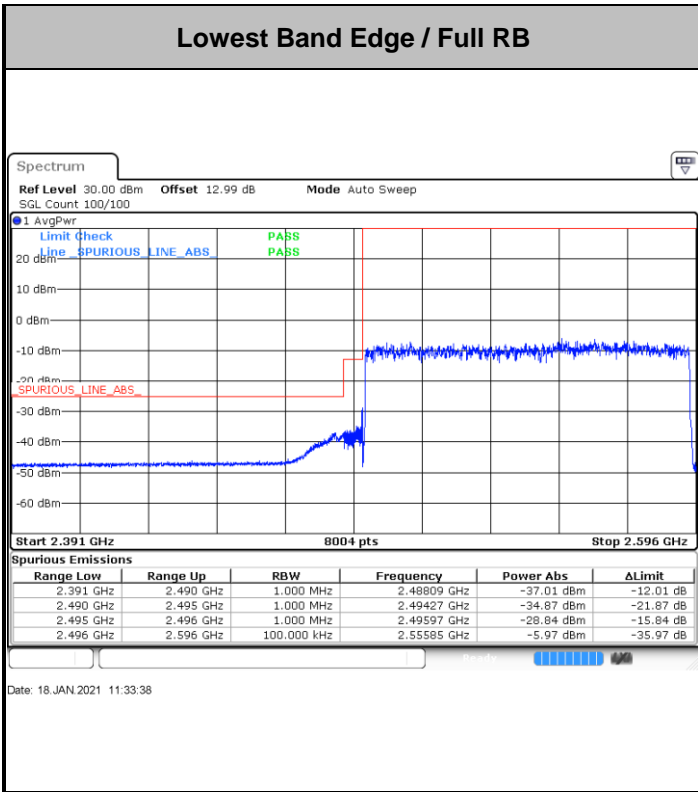


Date: 18 JAN 2021 12:06:48

Channel Power < -10dBm



Date: 18 JAN 2021 11:59:42



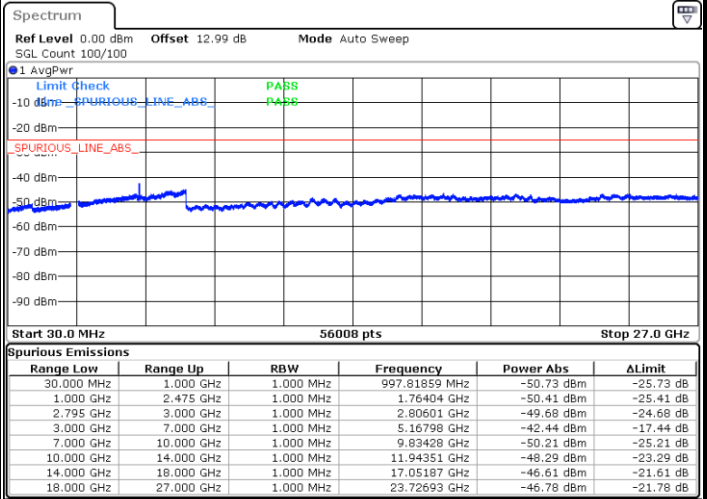
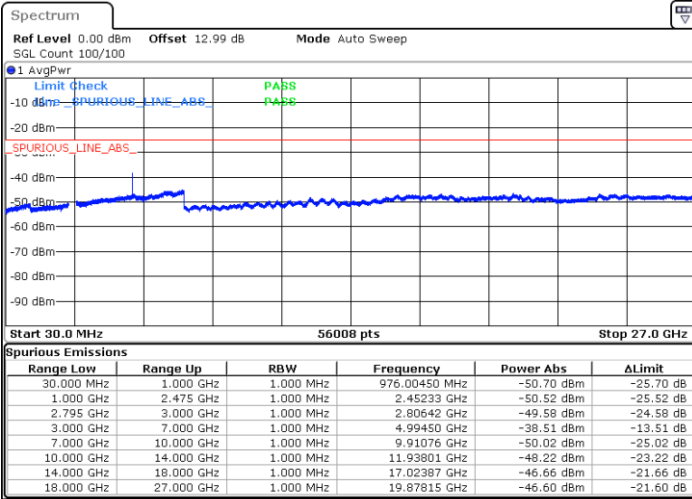


Conducted Spurious Emission

FR1 n41 / 20MHz / DFT-S OFDM / QPSK

Lowest Channel / 1RB1

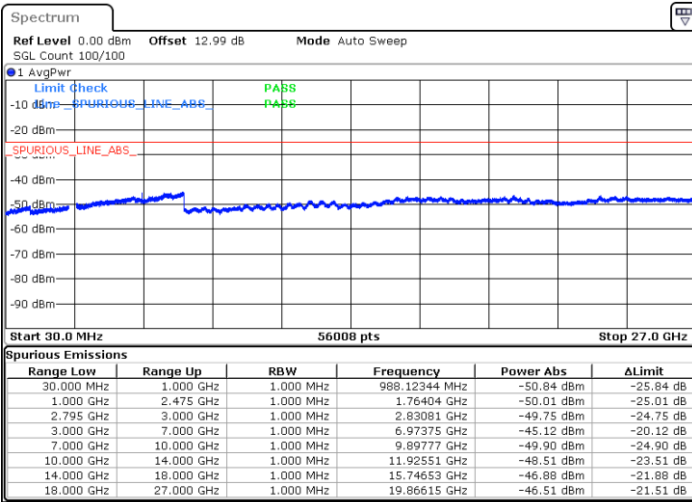
Middle Channel / 1RB1



Date: 18 JAN 2021 09:57:20

Date: 18 JAN 2021 09:58:37

Highest Channel / 1RB1



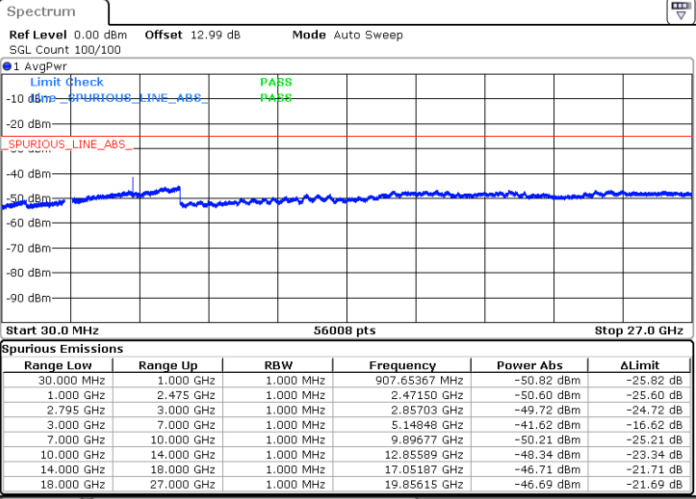
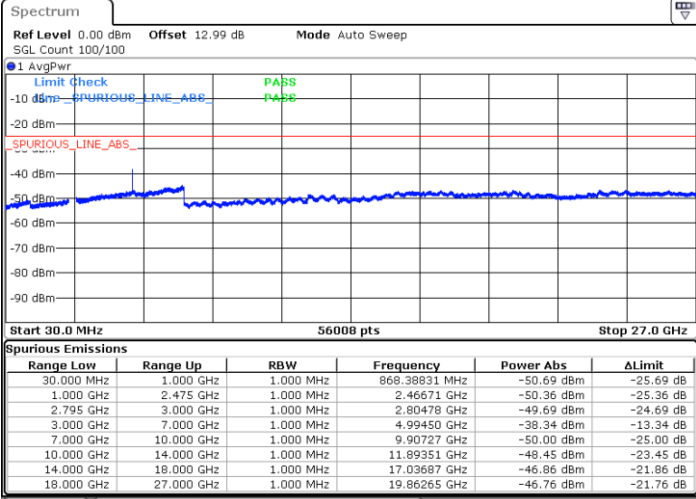
Date: 18 JAN 2021 10:03:42



FR1 n41 / 40MHz / DFT-S OFDM / QPSK

Lowest Channel / 1RB1

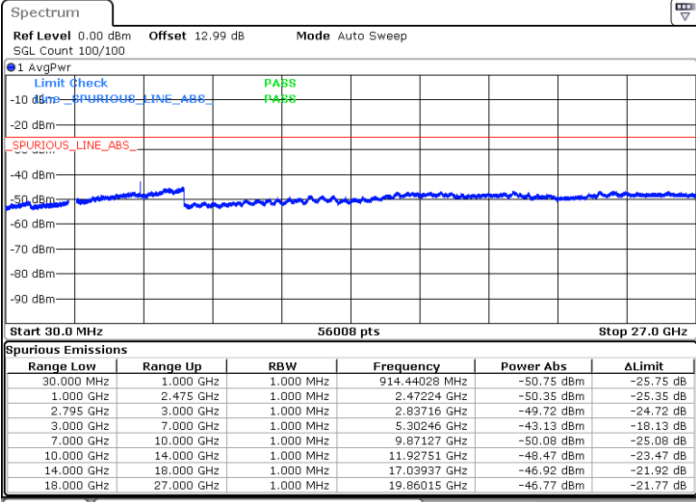
Middle Channel / 1RB1



Date: 18 JAN 2021 10:22:22

Date: 18 JAN 2021 10:24:17

Highest Channel / 1RB1



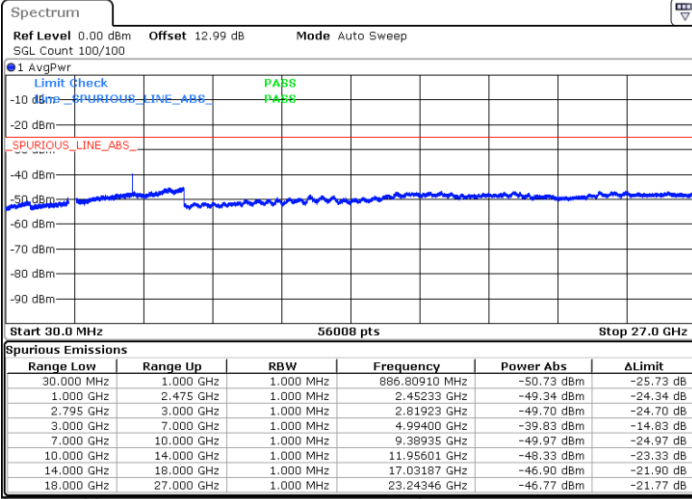
Date: 18 JAN 2021 10:25:31



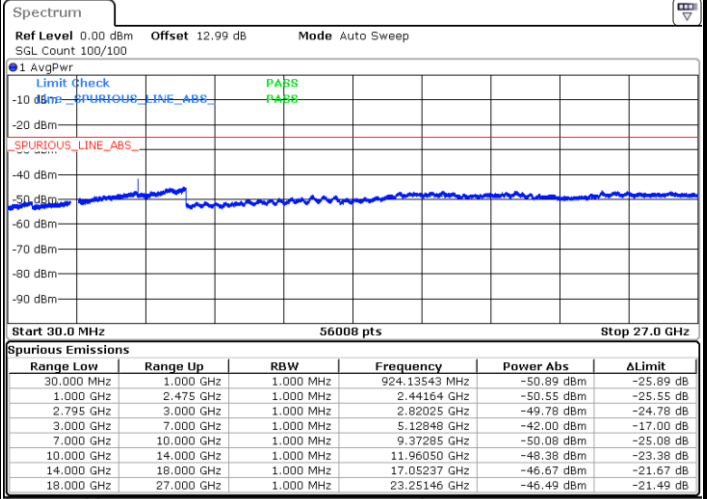
FR1 n41 / 60MHz / DFT-S OFDM / QPSK

Lowest Channel / 1RB1

Middle Channel / 1RB1

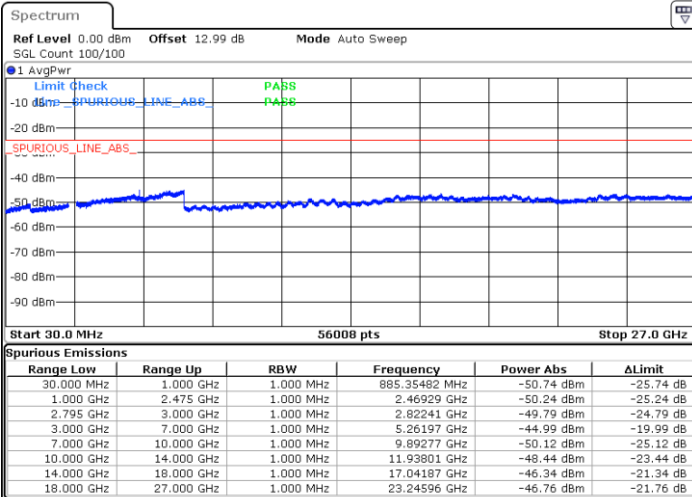


Date: 18 JAN 2021 10:38:52



Date: 18 JAN 2021 10:42:54

Highest Channel / 1RB1



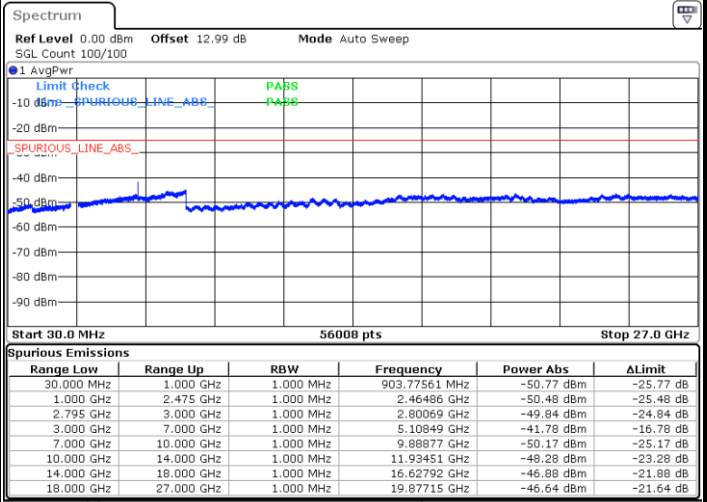
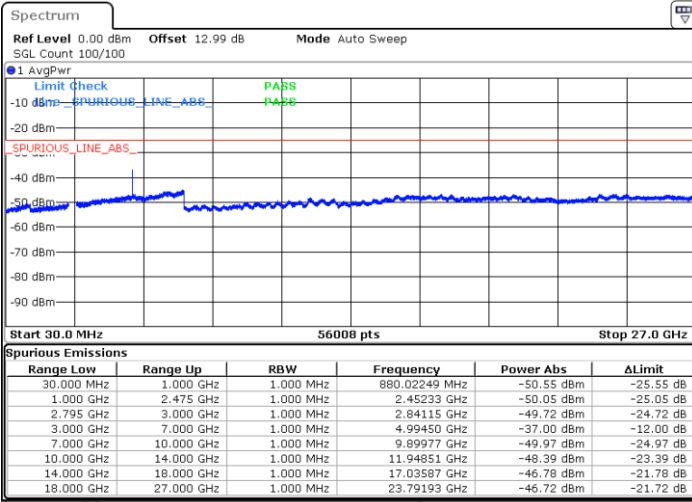
Date: 18 JAN 2021 10:48:25



FR1 n41 / 80MHz / DFT-S OFDM / QPSK

Lowest Channel / 1RB1

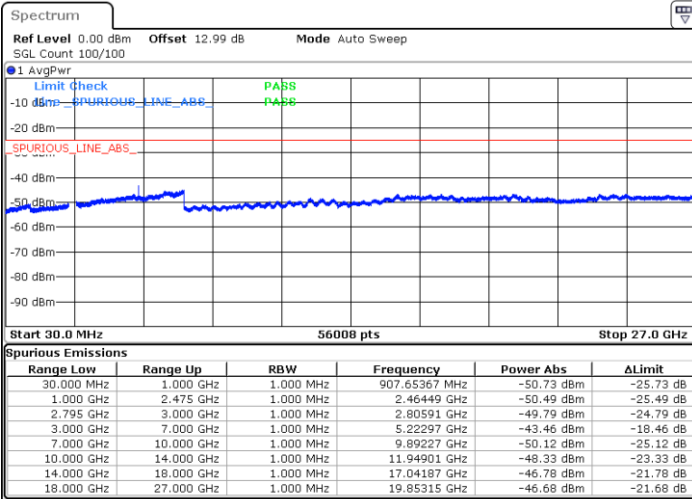
Middle Channel / 1RB1



Date: 18 JAN 2021 11:06:20

Date: 18 JAN 2021 11:21:36

Highest Channel / 1RB1



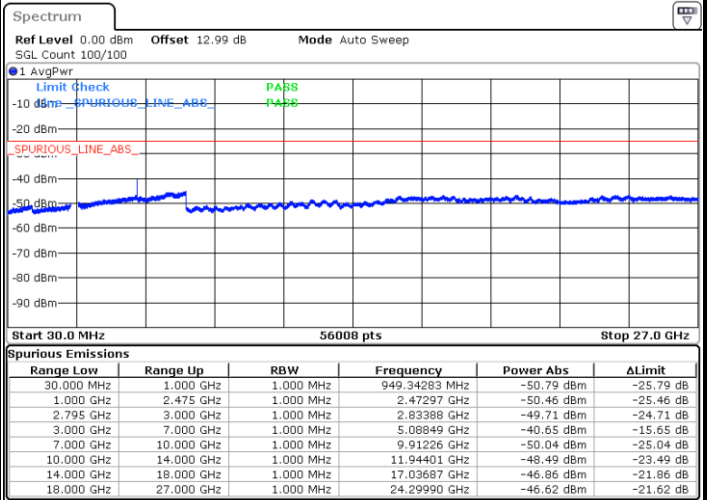
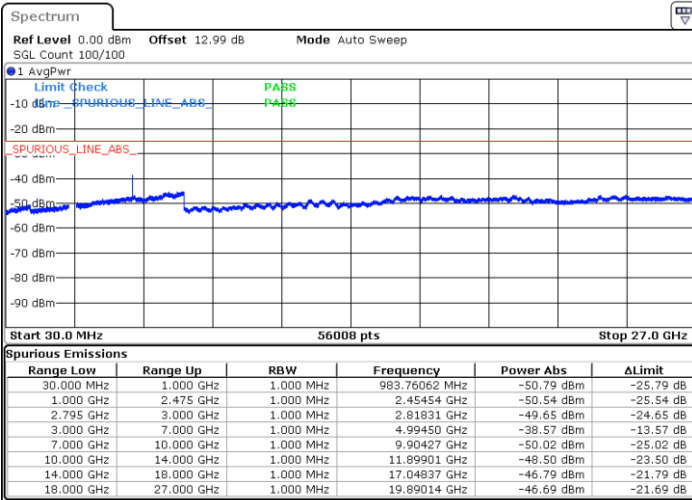
Date: 18 JAN 2021 11:26:01



FR1 n41 / 100MHz / DFT-S OFDM / QPSK

Lowest Channel / 1RB1

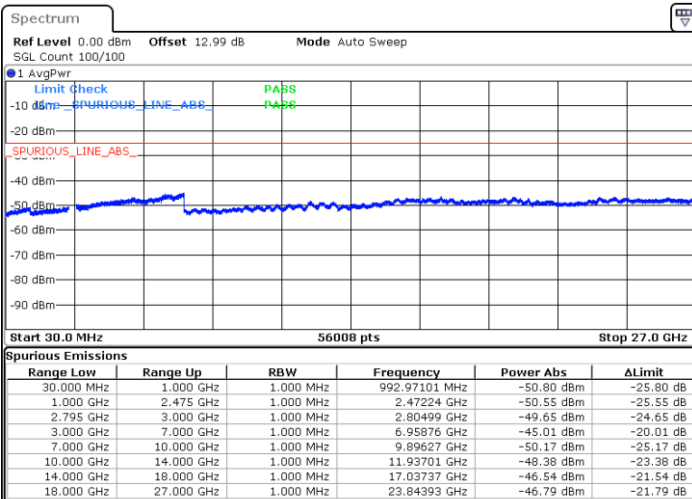
Middle Channel / 1RB1



Date: 18 JAN 2021 11:36:25

Date: 18 JAN 2021 11:37:53

Highest Channel / 1RB1



Date: 19 JAN 2021 09:35:57



Frequency Stability

Test Conditions		FR1 n41 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 100MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0011	PASS
40	Normal Voltage	0.0013	
30	Normal Voltage	0.0009	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0015	
0	Normal Voltage	0.0025	
-10	Normal Voltage	0.0008	
-20	Normal Voltage	0.0016	
-30	Normal Voltage	0.0023	
20	Maximum Voltage	0.0008	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0021	

Note:

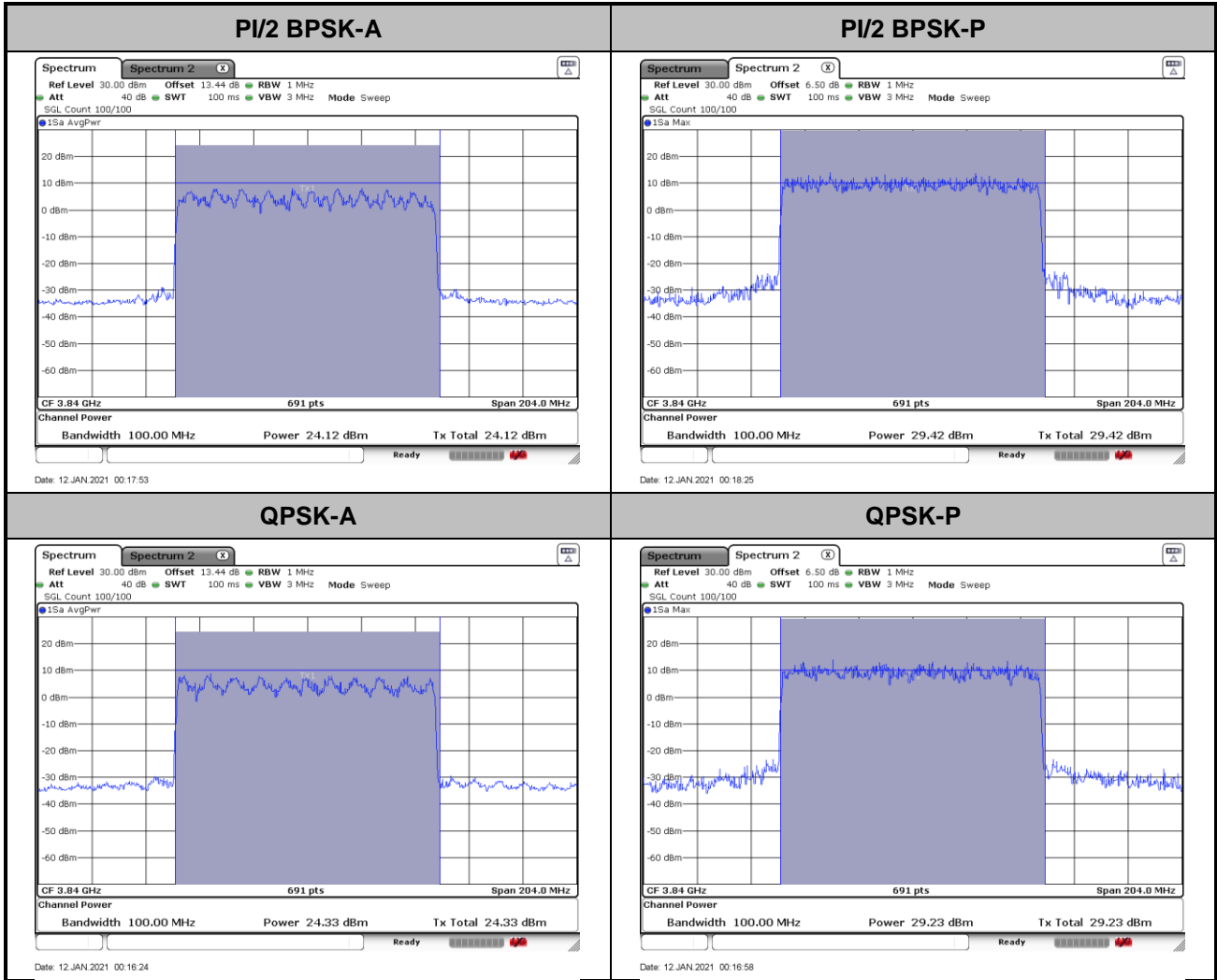
1. Normal Voltage =3.87 V. ; Battery End Point (BEP) =3.4 V. ; Maximum Voltage =4.48 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.

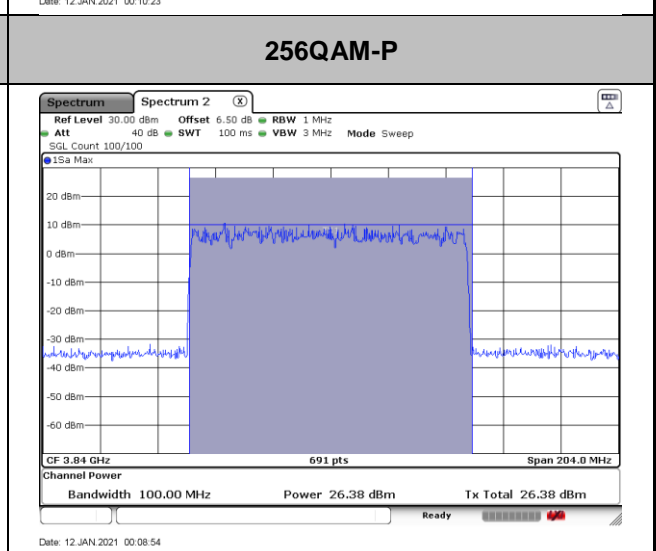
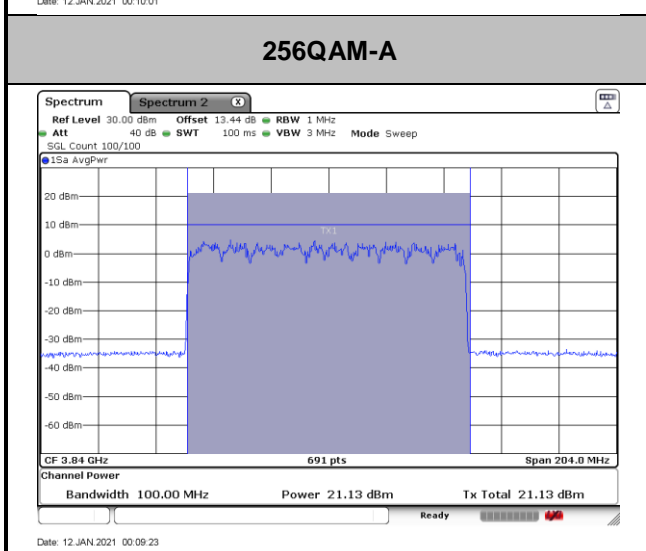
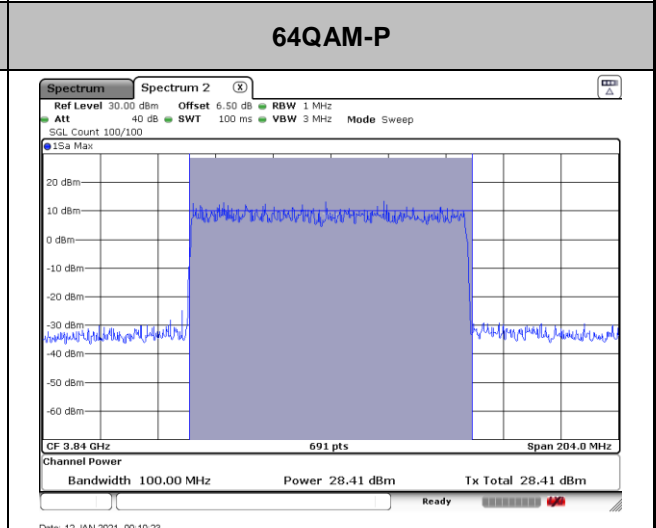
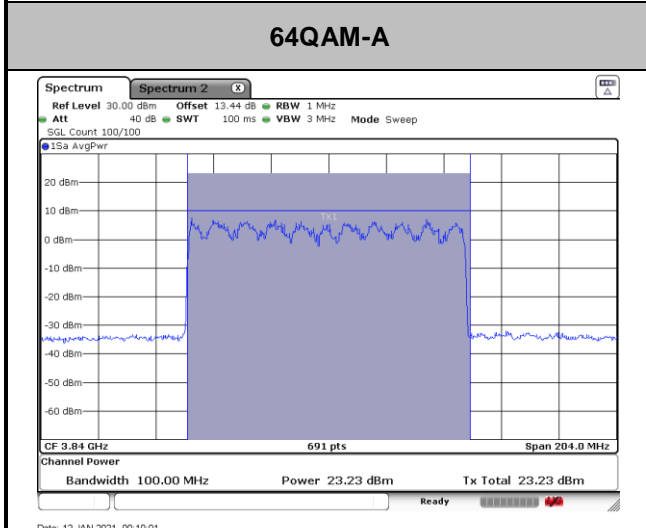
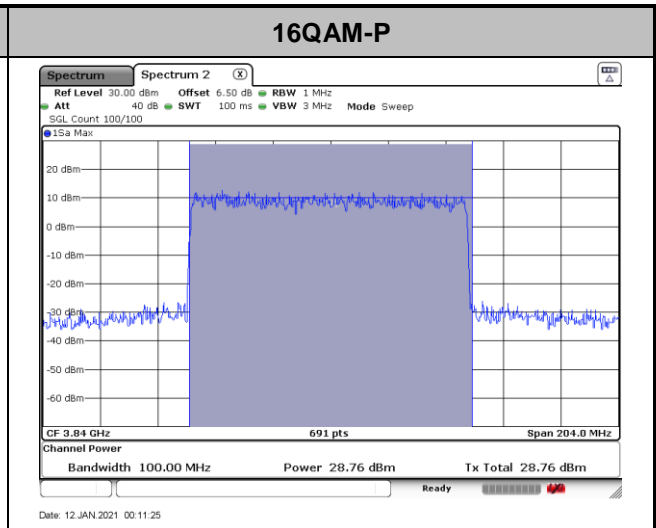
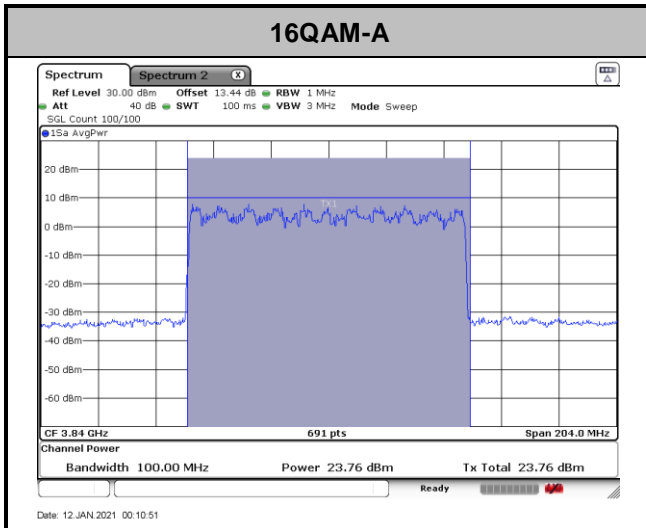


FR1 n77

Peak-to-Average Ratio

Mode	FR1 n77 / 100MHz / DFT-S OFDM				
Mod.	PI/2 BPSK	QPSK	16QAM	64QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Full RB	Result
Middle CH	5.3	4.9	5	5.18	PASS
Mode	FR1 n77 / 100MHz / DFT-S OFDM				
Mod.	256QAM				Limit: 13dB
RB Size	Full RB				Result
Middle CH	5.25				PASS

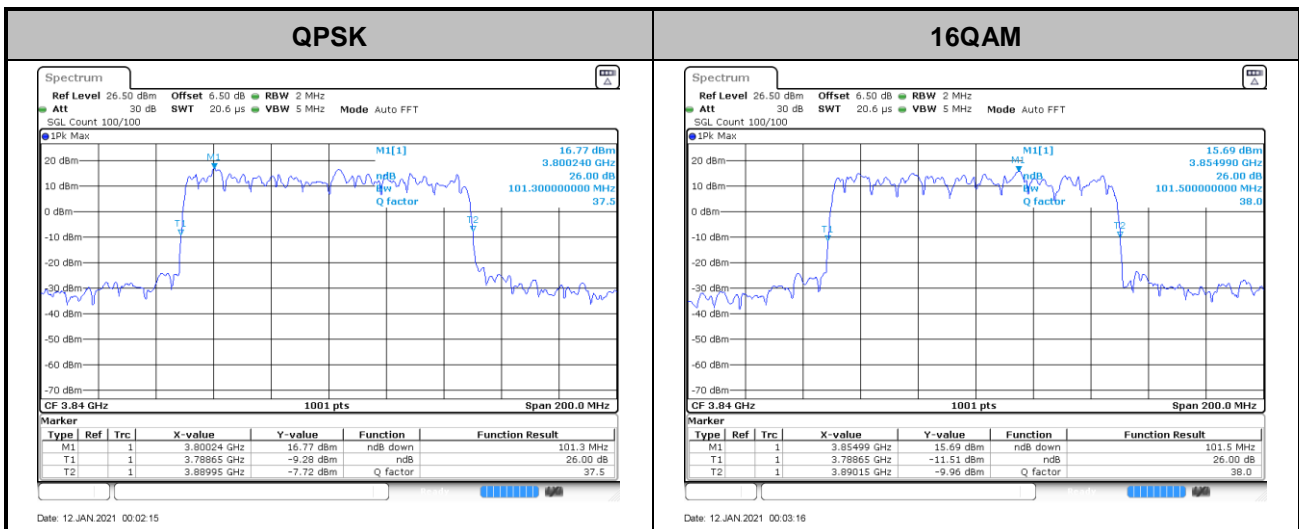






26dB Bandwidth

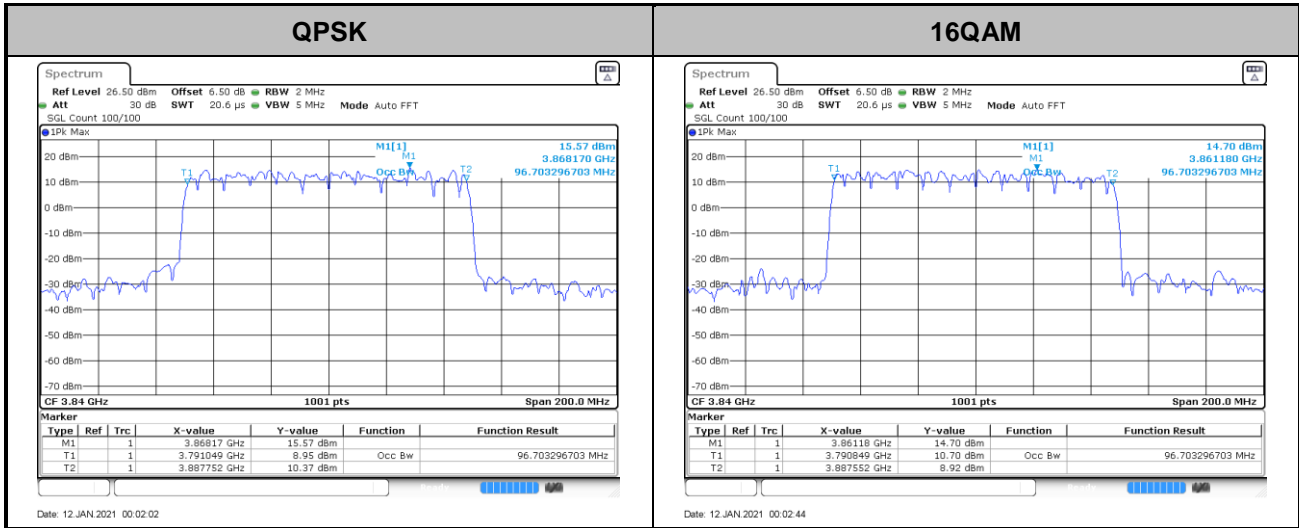
Mode	FR1 n77 : 26dB BW(MHz) / DFT-S OFDM						
BW	100M						
Mod.	QPSK	16QAM					
Middle CH	101.3	101.5					





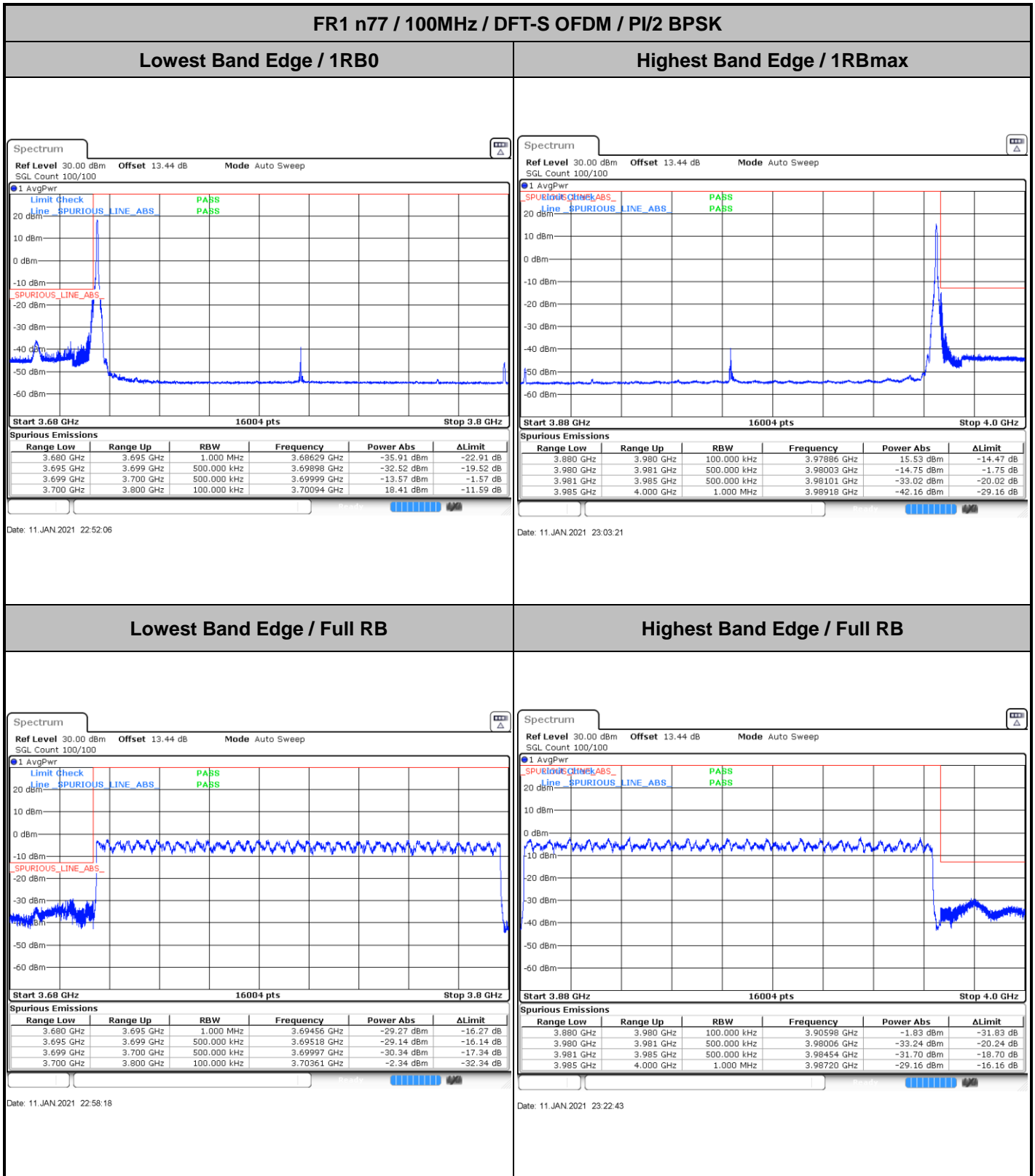
Occupied Bandwidth

Mode	FR1 n77 : OB BW(MHz) / DFT-S OFDM						
BW	100M						
Mod.	QPSK	16QAM					
Middle CH	96.703	96.703					





Conducted Band Edge

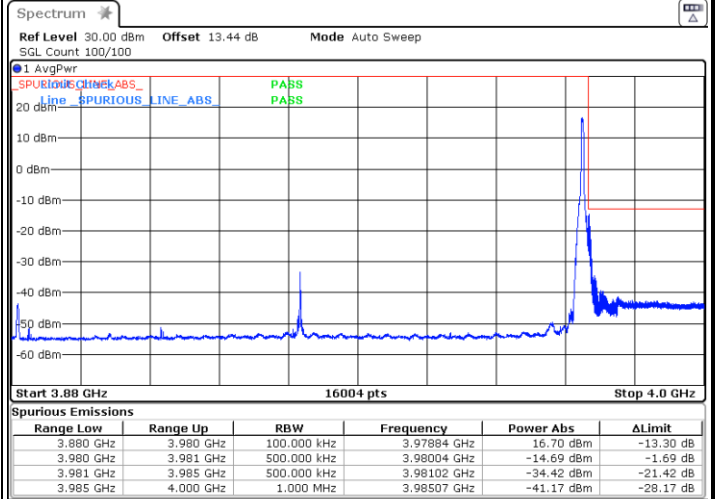
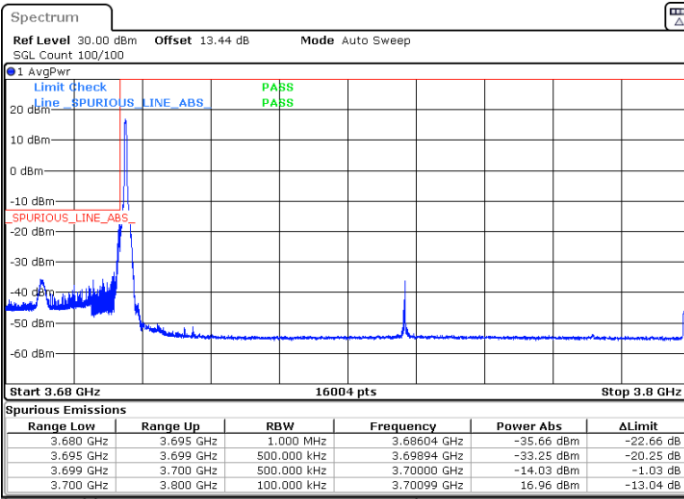




FR1 n77 / 100MHz / DFT-S OFDM / QPSK

Lowest Band Edge / 1RB0

Highest Band Edge / 1RBmax

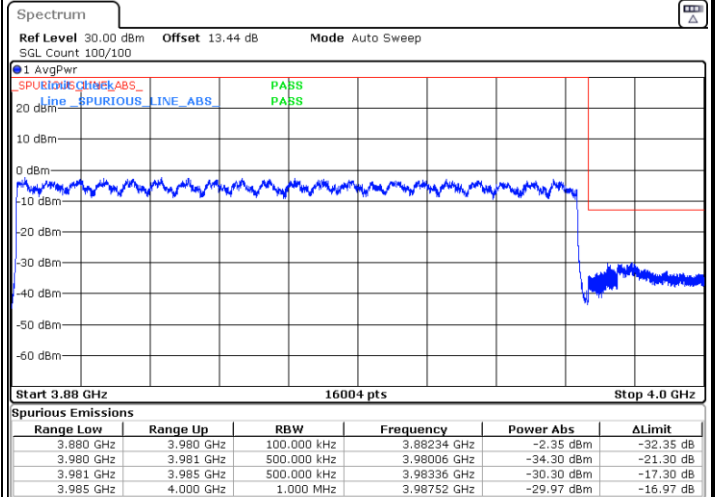
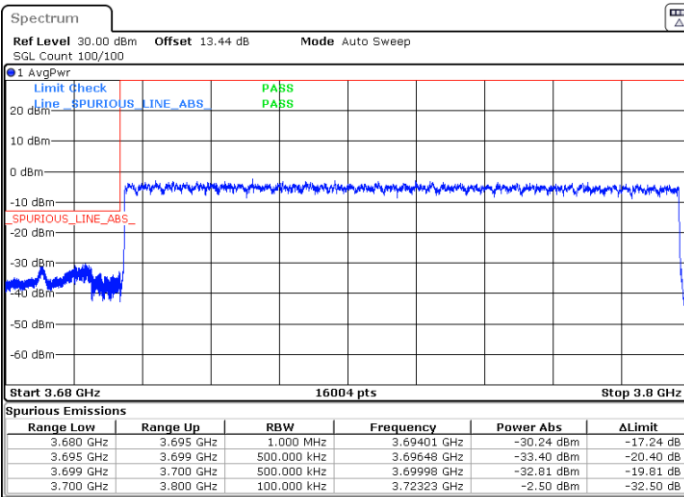


Date: 11. JAN 2021 22:52:48

Date: 11. JAN 2021 23:07:42

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 11. JAN 2021 22:58:58

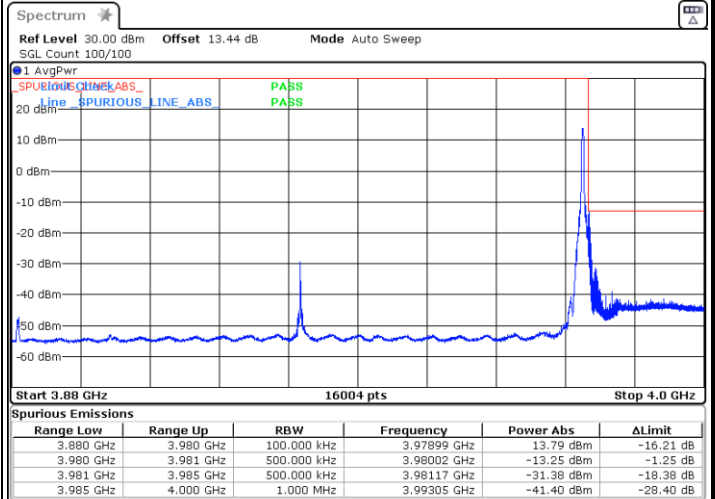
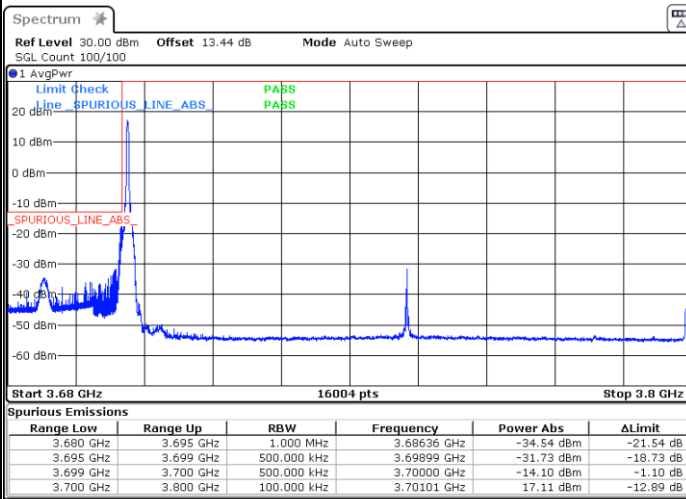
Date: 11. JAN 2021 23:23:17



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

Lowest Band Edge / 1RB0

Highest Band Edge / 1RBmax

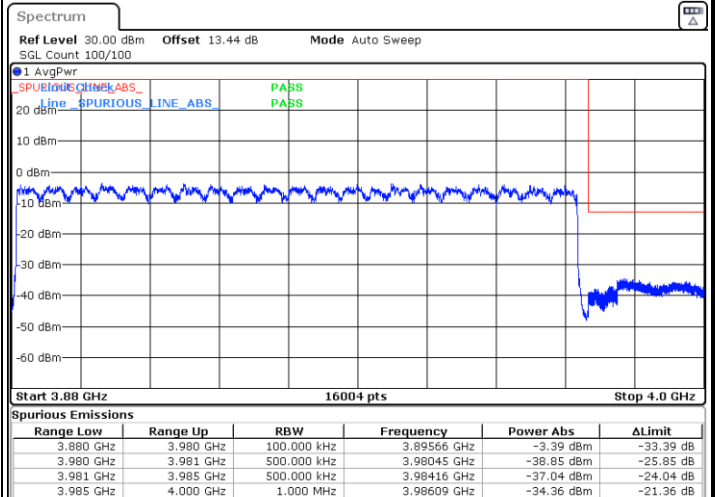
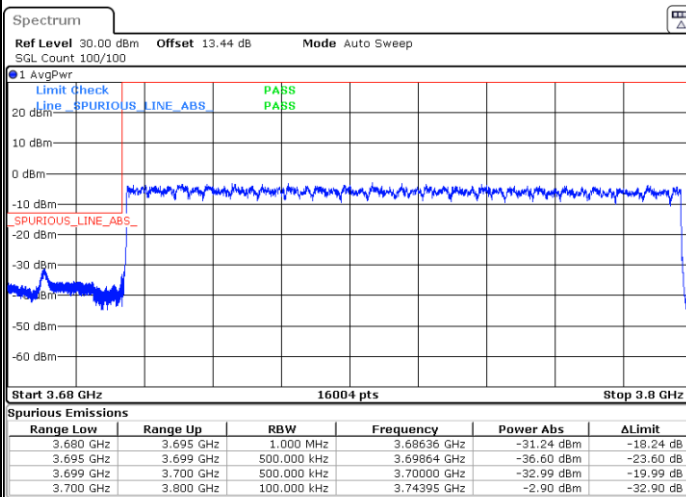


Date: 11. JAN 2021 22:54:24

Date: 11. JAN 2021 23:10:39

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 11. JAN 2021 22:59:34

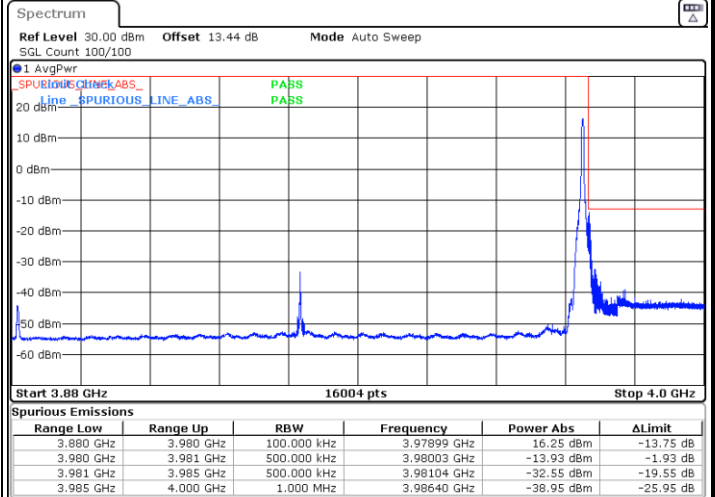
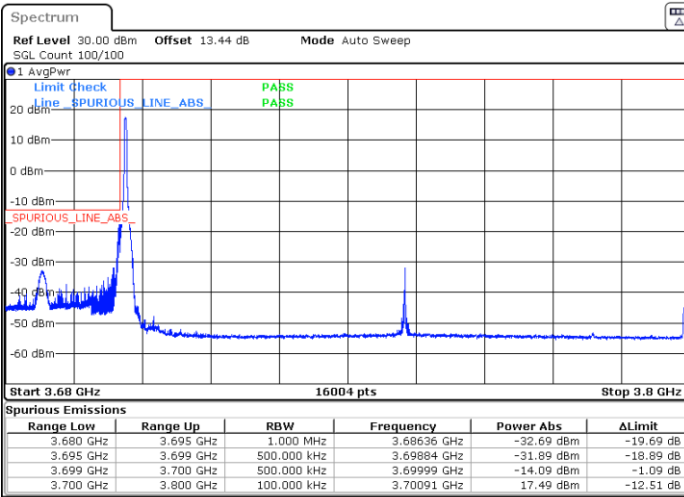
Date: 11. JAN 2021 23:25:02



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

Lowest Band Edge / 1RB0

Highest Band Edge / 1RBmax

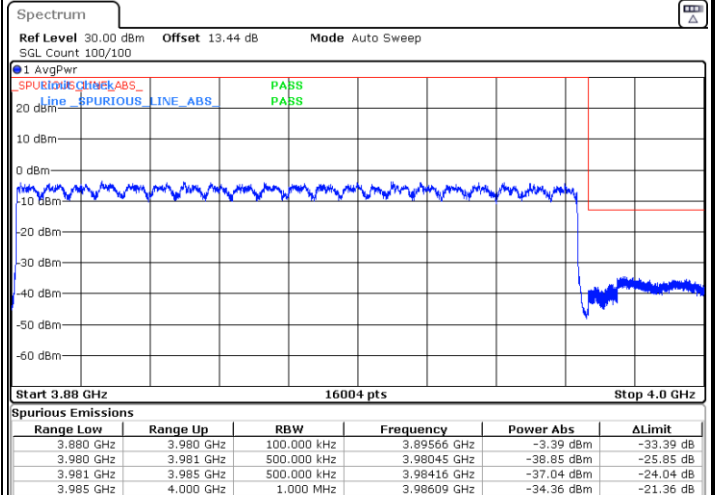
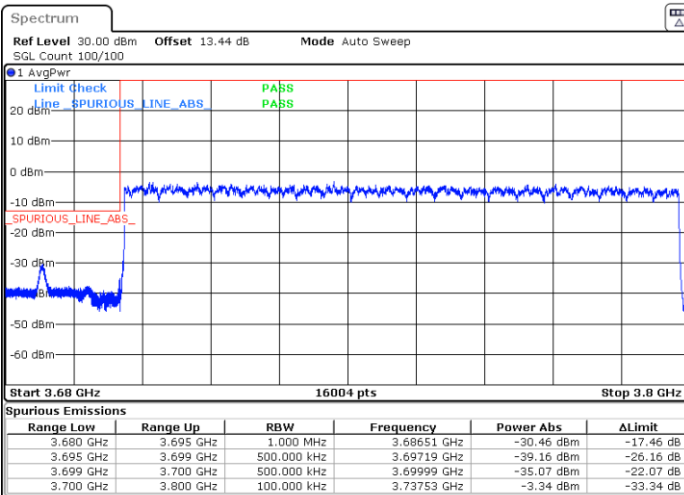


Date: 11. JAN 2021 22:55:33

Date: 11. JAN 2021 23:12:53

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 11. JAN 2021 23:00:29

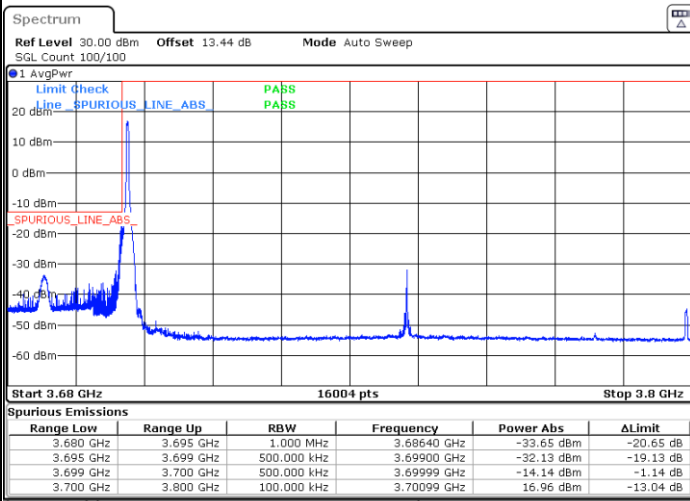
Date: 11. JAN 2021 23:25:02



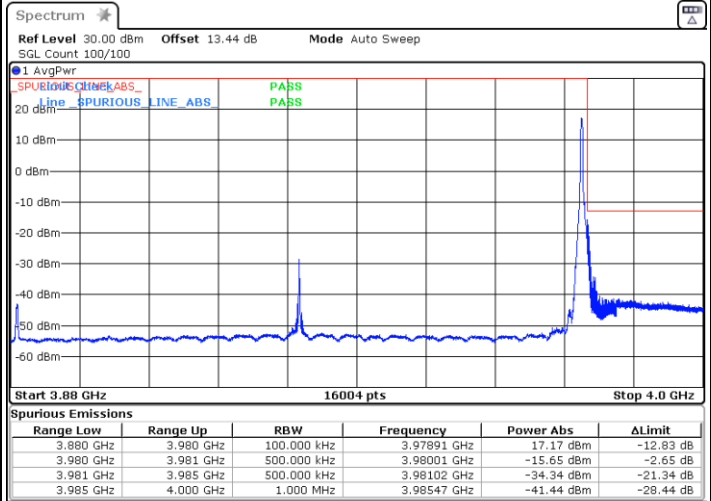
FR1 n77 / 100MHz / DFT-S OFDM / 256QAM

Lowest Band Edge / 1RB0

Highest Band Edge / 1RBmax



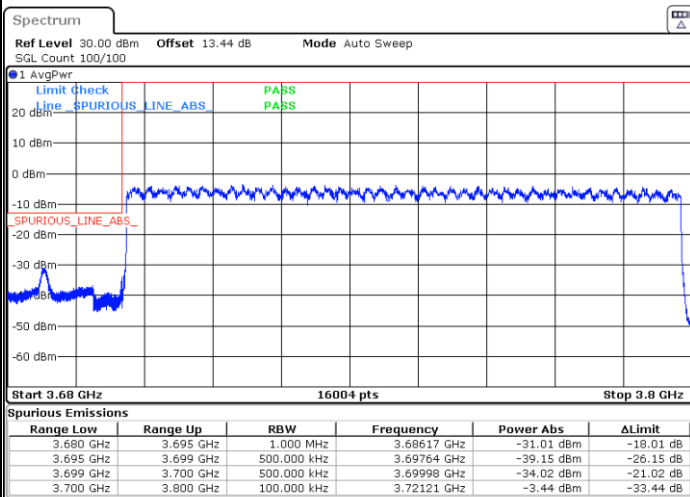
Date: 11. JAN 2021 22:56:46



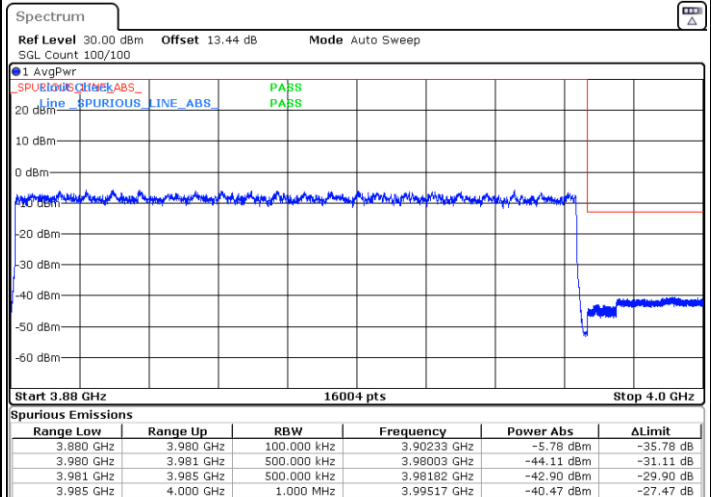
Date: 11. JAN 2021 23:15:16

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 11. JAN 2021 23:01:06



Date: 11. JAN 2021 23:26:16

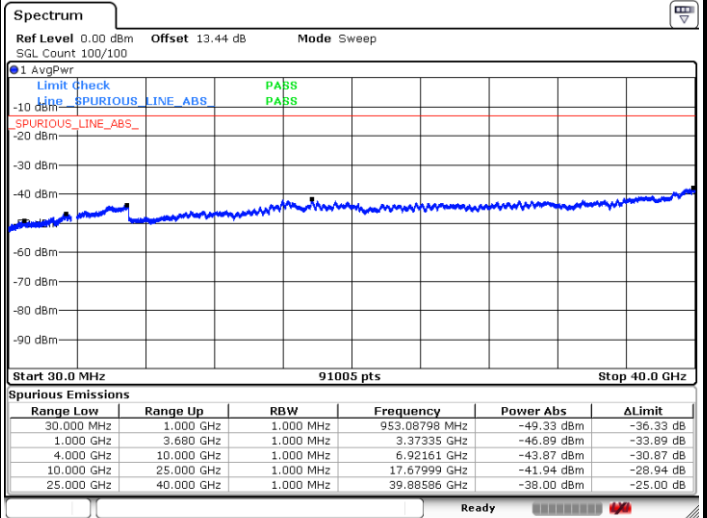
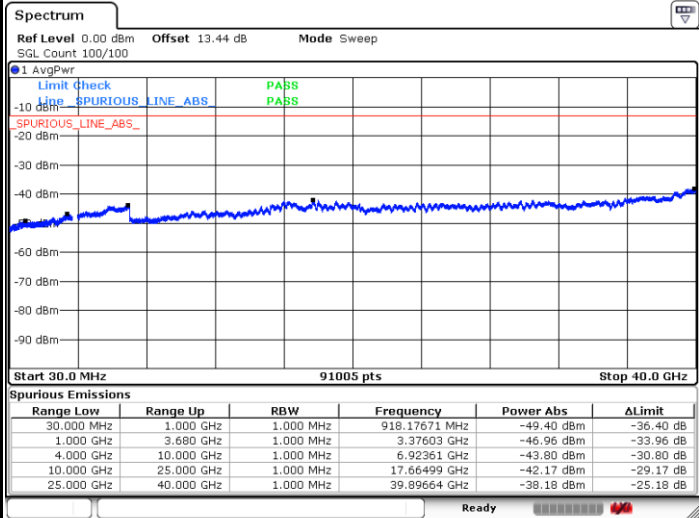


Conducted Spurious Emission

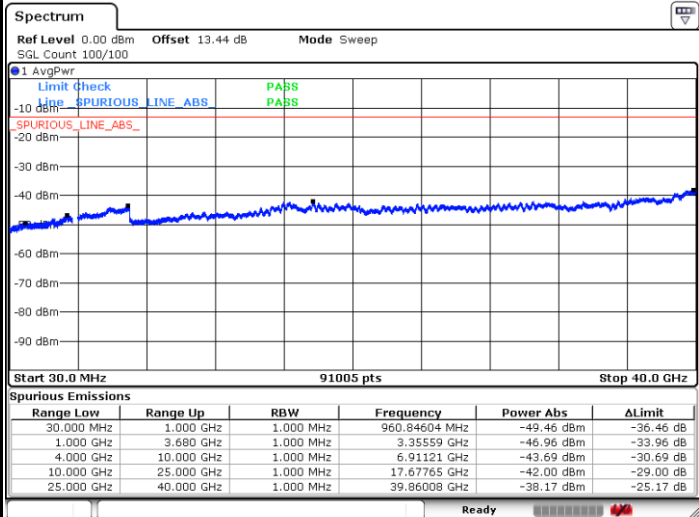
FR1 n77 / 100MHz / DFT-S OFDM / QPSK

Lowest Channel / 1RB1

Middle Channel / 1RB1



Highest Channel / 1RB1





Frequency Stability

Test Conditions		FR1 n77 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 100MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0026	PASS
40	Normal Voltage	0.0031	
30	Normal Voltage	0.0014	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0035	
0	Normal Voltage	0.0012	
-10	Normal Voltage	0.0025	
-20	Normal Voltage	0.0026	
-30	Normal Voltage	0.0044	
20	Maximum Voltage	0.0007	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0013	

Note:

1. Normal Voltage =3.87 V. ; Battery End Point (BEP) =3.4 V. ; Maximum Voltage =4.48 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



Appendix B. Test Results of Radiated Test

Radiated Spurious Emission

EN-DC_7A_n5A / LTE 10MHz + NR 20MHz / QPSK DFT-s-OFDM								
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1654	-55.37	-13	-42.37	-62.34	1.58	10.70	H
	2482	-60.62	-13	-47.62	-68.87	2.102	12.50	H
	3312	-60.18	-13	-47.18	-69.07	2.856	13.90	H
	1654	-56.91	-13	-43.91	-63.88	1.58	10.70	V
	2482	-58.95	-13	-45.95	-67.20	2.10	12.50	V
	3312	-60.34	-13	-47.34	-69.23	2.86	13.90	V

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

5G NR n7 / NR 20MHz / QPSK DFT-s-OFDM								
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	5052	-61.98	-25	-36.98	-72.19	3.03	13.24	H
	7580	-60.44	-25	-35.44	-69.89	3.56	13.01	H
	10100	-60.68	-25	-35.68	-70.20	3.92	13.44	H
	5052	-61.03	-25	-36.03	-71.24	3.03	13.24	V
	7580	-59.44	-25	-34.44	-68.89	3.56	13.01	V
	10100	-60.54	-25	-35.54	-70.06	3.92	13.44	V

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



EN-DC_5A_n7A / LTE 10MHz + NR 20MHz / QPSK DFT-s-OFDM								
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	5052	-58.21	-25	-33.21	-68.42	3.03	13.24	H
	7580	-61.39	-25	-36.39	-70.84	3.56	13.01	H
	10100	-60.35	-25	-35.35	-69.87	3.92	13.44	H
	5052	-60.13	-25	-35.13	-70.34	3.03	13.24	V
	7580	-61.39	-25	-36.39	-70.84	3.56	13.01	V
	10100	-60.65	-25	-35.65	-70.17	3.92	13.44	V

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

EN-DC_66A_n7A / LTE 10MHz + NR 20MHz / QPSK DFT-s-OFDM								
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	5052	-60.73	-25	-35.73	-70.94	3.03	13.24	H
	7576	-59.63	-25	-34.63	-69.08	3.56	13.01	H
	10100	-60.32	-25	-35.32	-69.84	3.92	13.44	H
	5052	-61.10	-25	-36.10	-71.31	3.03	13.24	V
	7576	-57.80	-25	-32.80	-67.25	3.56	13.01	V
	10100	-60.62	-25	-35.62	-70.14	3.92	13.44	V

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



5G NR n41 / NR 100MHz / QPSK DFT-s-OFDM								
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	5088	-60.54	-25	-35.54	-70.75	3.03	13.24	H
	7632	-57.63	-25	-32.63	-67.08	3.56	13.01	H
	10190	-59.40	-25	-34.40	-68.92	3.92	13.44	H
	5088	-59.96	-25	-34.96	-70.17	3.03	13.24	V
	7632	-56.27	-25	-31.27	-65.72	3.56	13.01	V
	10190	-59.44	-25	-34.44	-68.96	3.92	13.44	V

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

5G NR n77 / NR 100MHz / QPSK DFT-s-OFDM								
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	7584	-59.66	-13	-46.66	-70.40	2.604	13.34	H
	11376	-54.13	-13	-41.13	-64.64	3.011	13.52	H
	15180	-59.19	-13	-46.19	-69.39	3.271	13.47	H
	7584	-60.04	-13	-47.04	-70.78	2.604	13.34	V
	11376	-54.86	-13	-41.86	-65.37	3.011	13.52	V
	15180	-58.40	-13	-45.40	-68.60	3.271	13.47	V

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