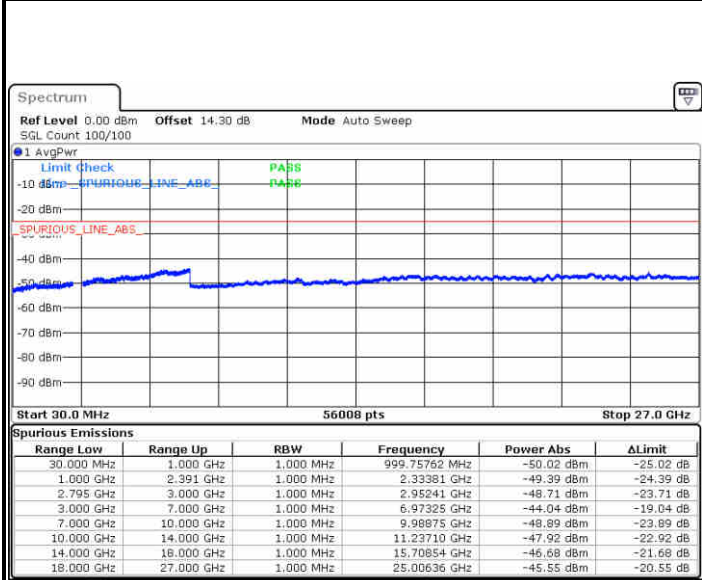




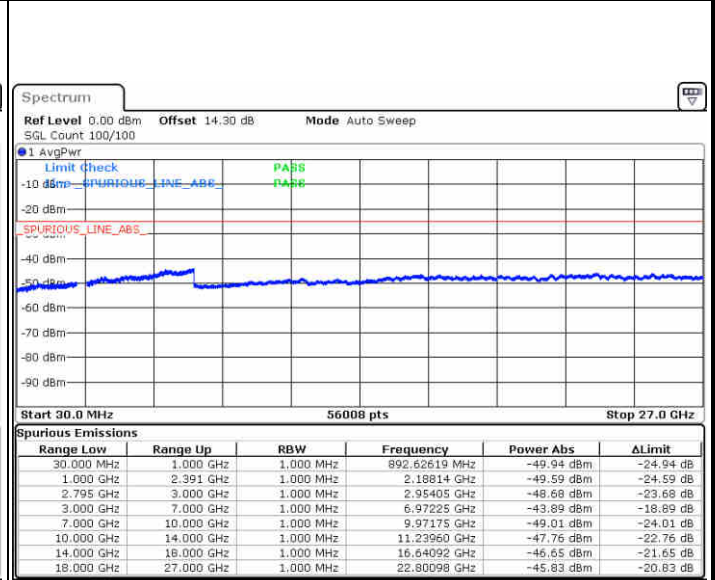
FR1 UL-MIMO n41 / 80MHz / CP-OFDM QPSK (M)

Lowest Channel / 1RB



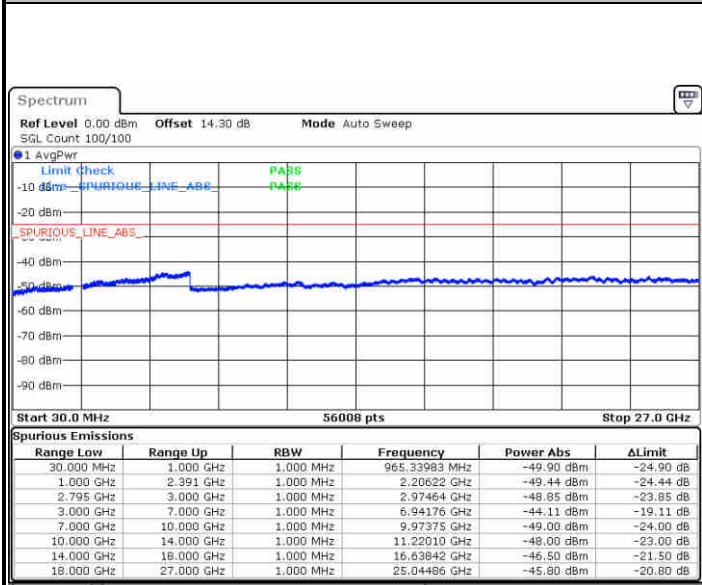
Date: 19.JAN.2021 22:08:49

Middle Channel / 1RB



Date: 19.JAN.2021 22:08:39

Highest Channel / 1RB



Date: 19.JAN.2021 22:07:29



Frequency Stability

Test Conditions		NR UL-MIMO n41 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 20MHz	Within Band
		Deviation (ppm)	Result
50	Normal Voltage	0.0035	PASS
40	Normal Voltage	0.0018	
30	Normal Voltage	0.0012	
20(Ref.)	Normal Voltage	0.0025	
10	Normal Voltage	0.0015	
0	Normal Voltage	0.0012	
-10	Normal Voltage	0.0025	
-20	Normal Voltage	0.0022	
-30	Normal Voltage	0.0017	
20	Maximum Voltage	0.0029	
20	Normal Voltage	0.0024	
20	Battery End Point	0.0038	

Note:

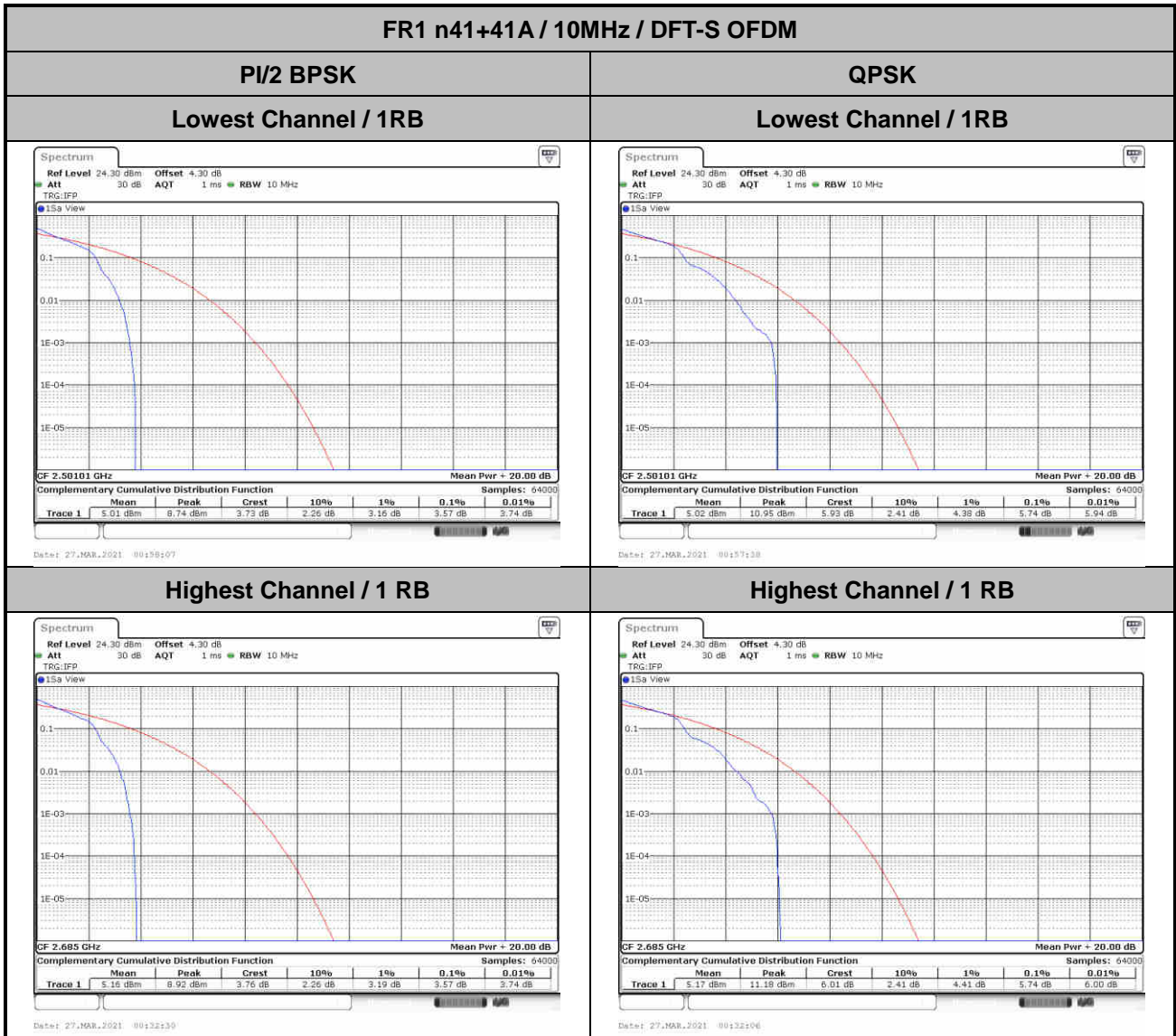
- 1. Normal Voltage =3.3 V. ; Battery End Point (BEP) =3.14 V. ; Maximum Voltage =4.4 V.
- 2. Note: The frequency fundamental emissions stay within the authorized frequency block.

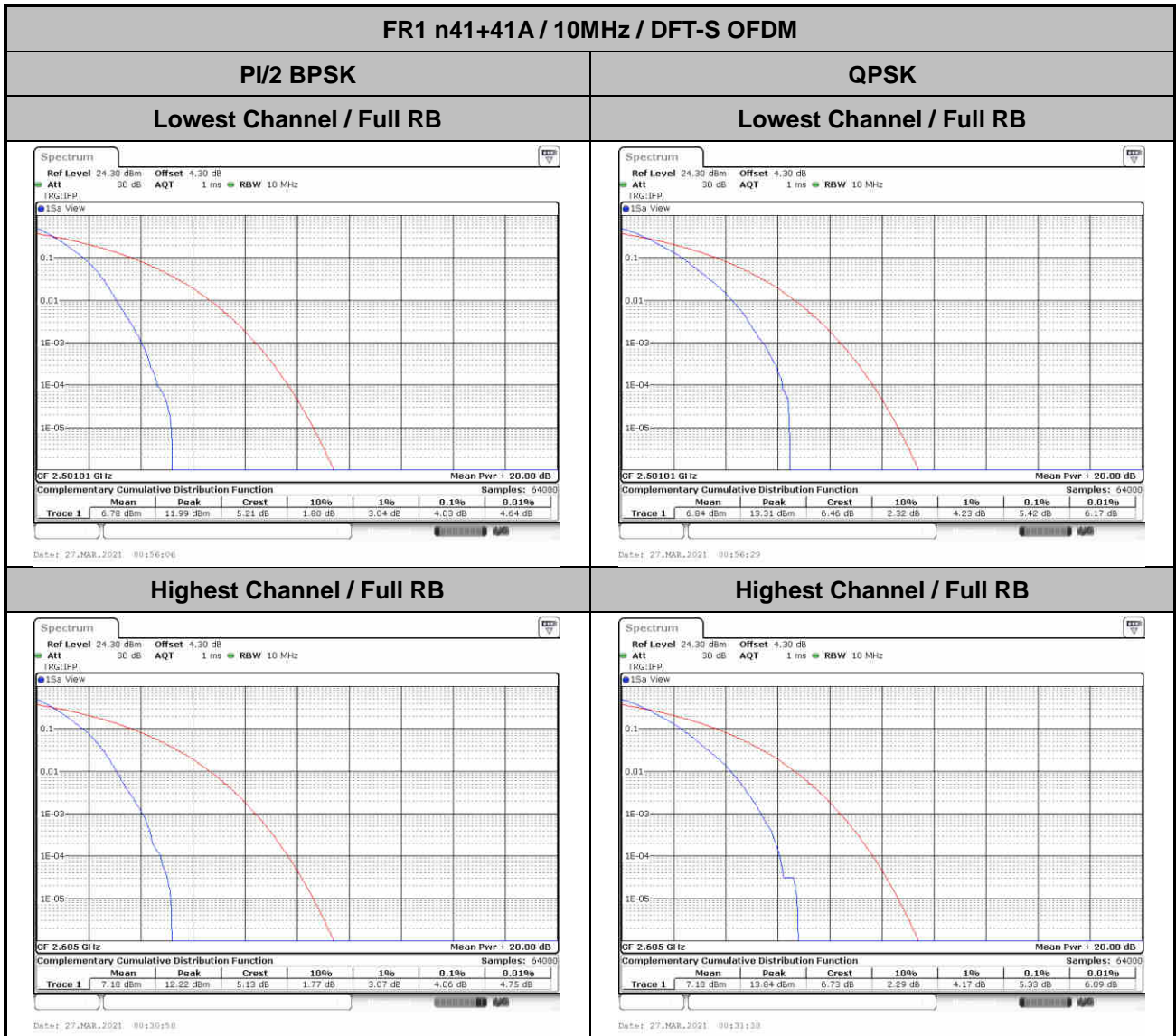


5G NR n41 NSA-SCS 15K

Peak-to-Average Ratio

Mode	FR1 n41+41A / 10MHz / DFT-S OFDM				
Mod.	PI/2 BPSK	PI/2 BPSK	QPSK	QPSK	Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	3.57	4.03	5.74	5.42	PASS
Middle CH	-	-	-	-	
Highest CH	3.57	4.06	5.74	5.33	







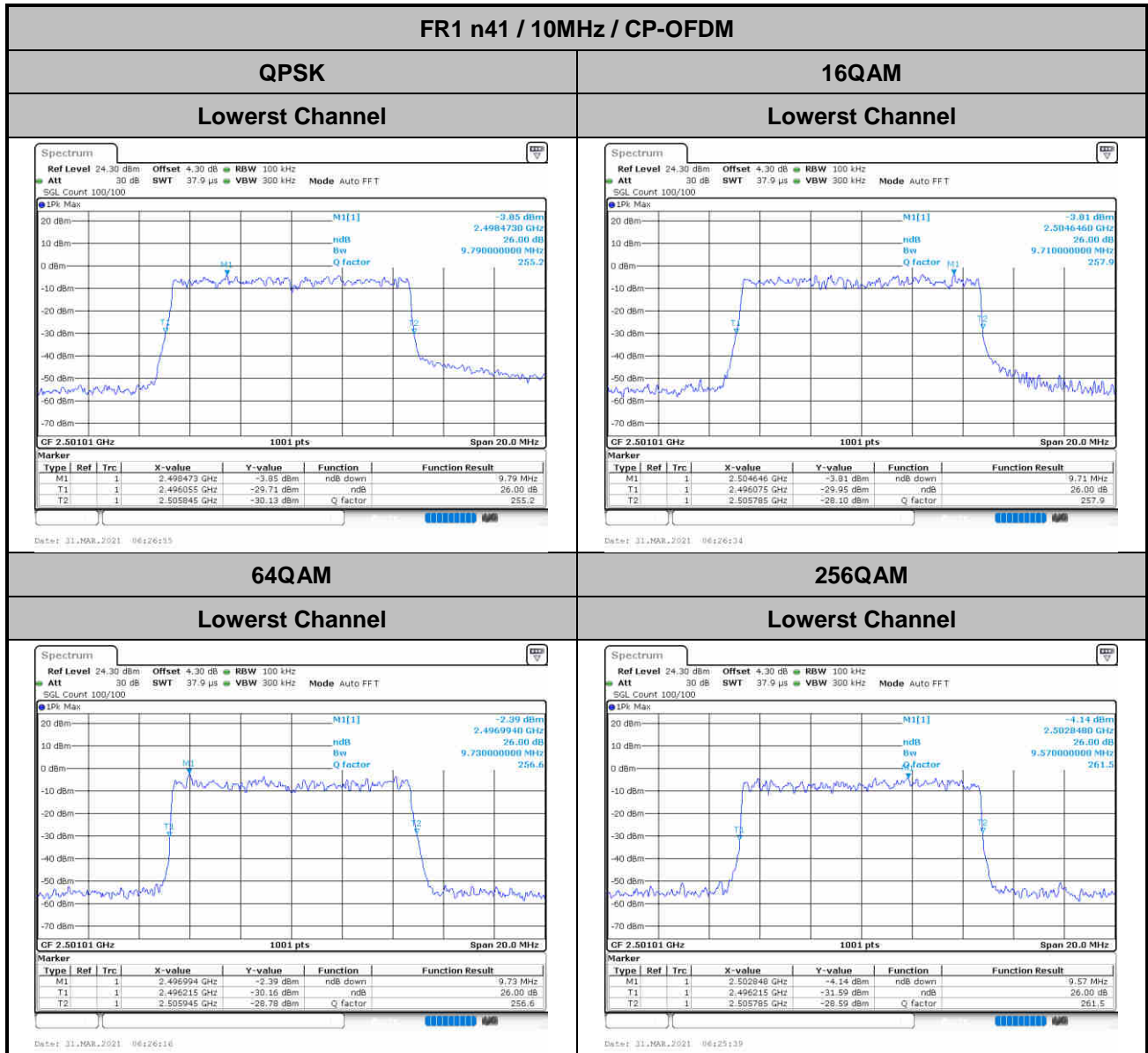
26dB Bandwidth

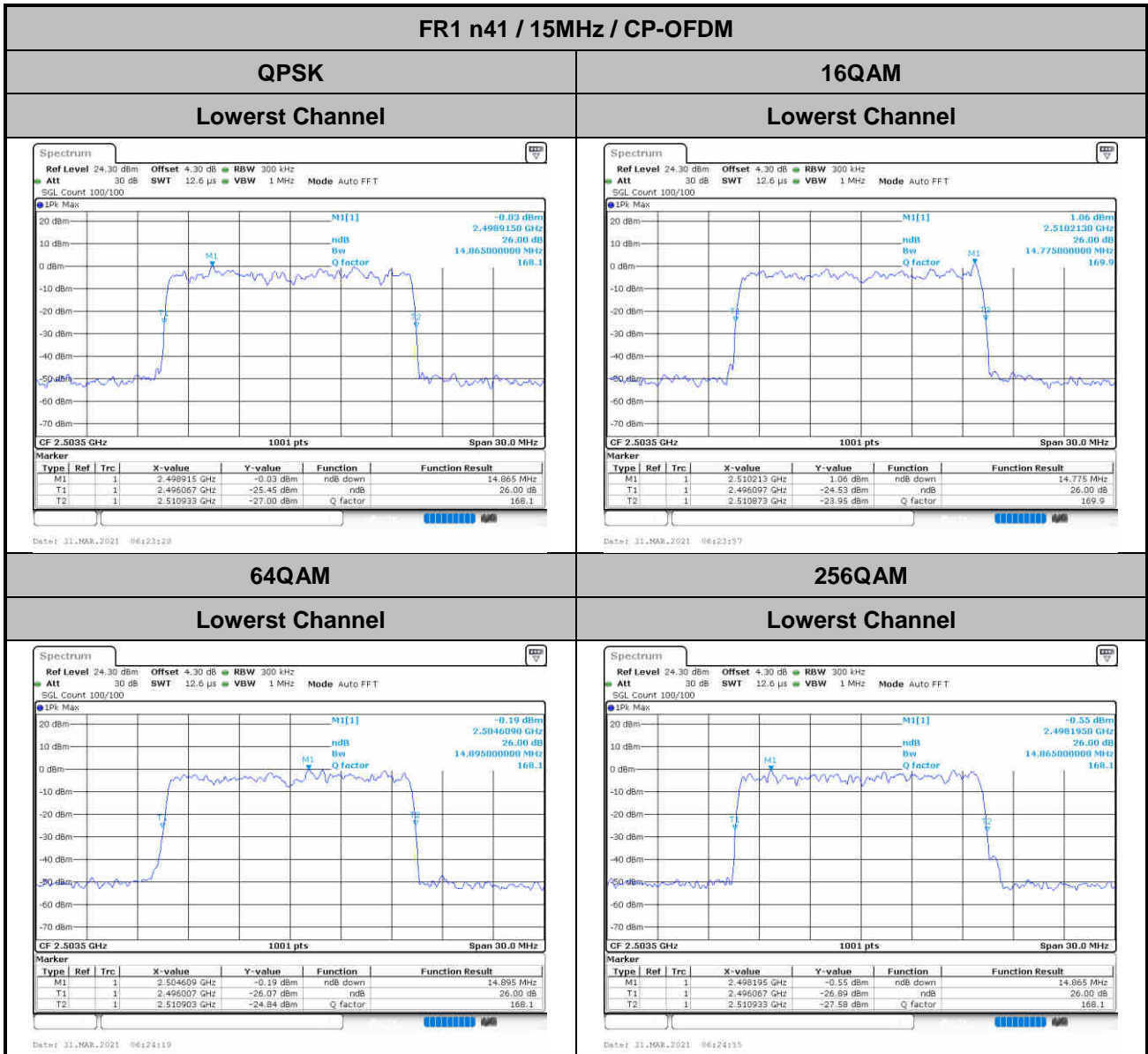
Mode	FR1 n41 : 26dB BW(MHz) / CP-OFDM							
BW	10MHz	10MHz	10MHz	10MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Lowerst CH	9.79	9.71	9.73	9.57				

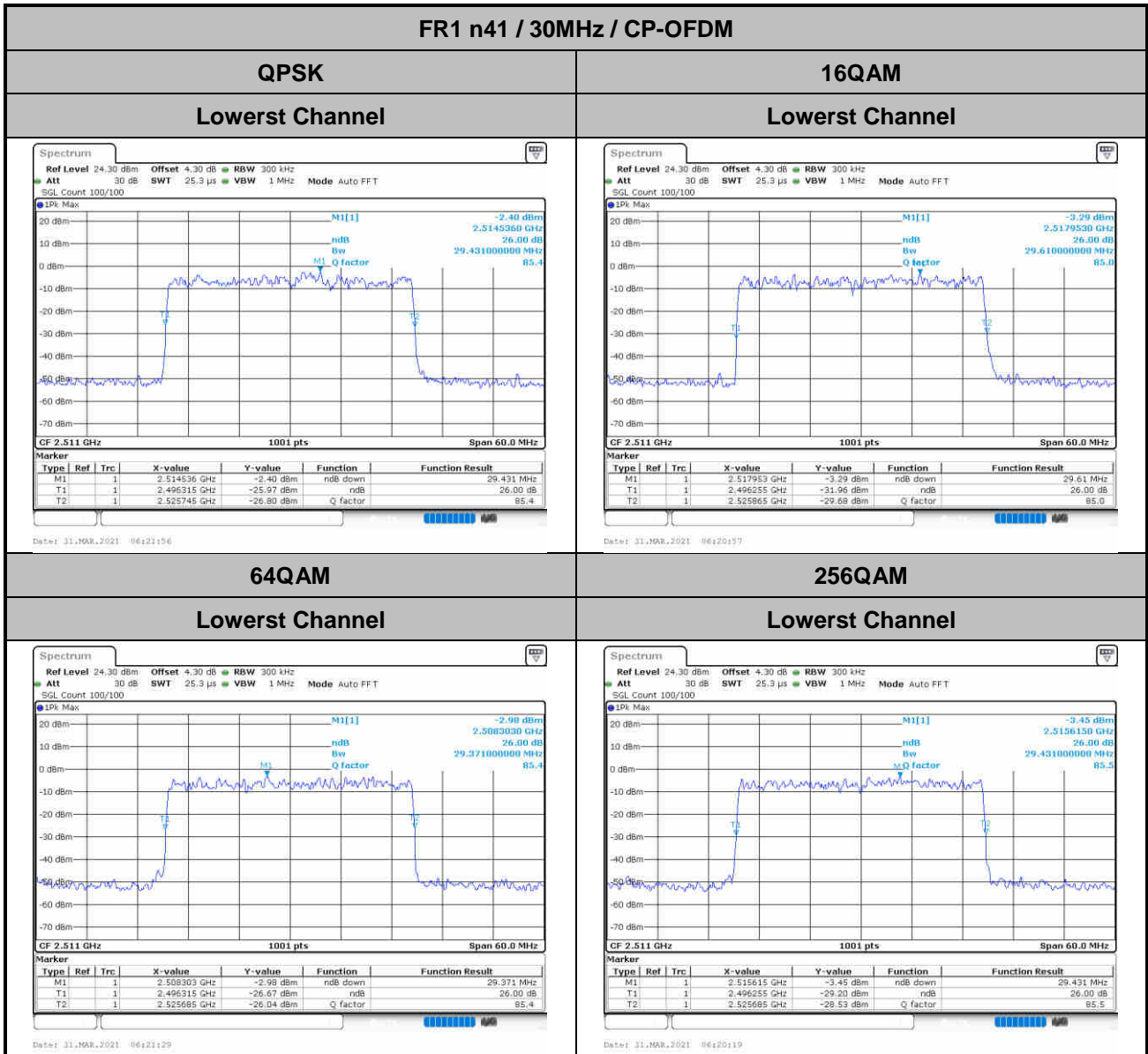
Mode	FR1 n41 : 26dB BW(MHz) / CP-OFDM							
BW	15MHz	15MHz	15MHz	15MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Lowerst CH	14.87	14.78	14.90	14.87				

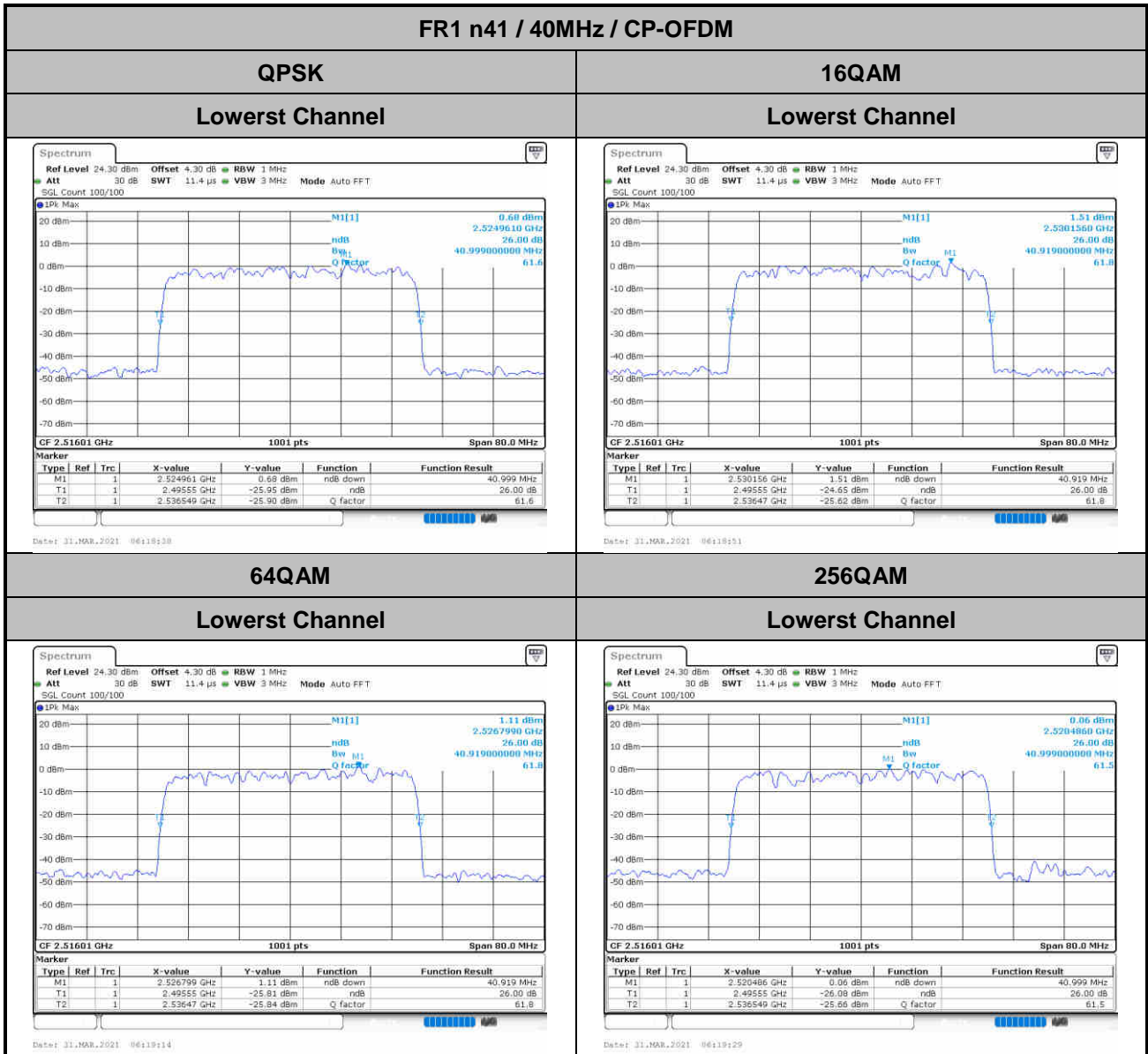
Mode	FR1 n41 : 26dB BW(MHz) / CP-OFDM							
BW	30MHz	30MHz	30MHz	30MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Lowerst CH	29.43	29.61	29.37	29.43				

Mode	FR1 n41 : 26dB BW(MHz) / CP-OFDM							
BW	40MHz	40MHz	40MHz	40MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Lowerst CH	41.00	40.92	40.92	41.00				











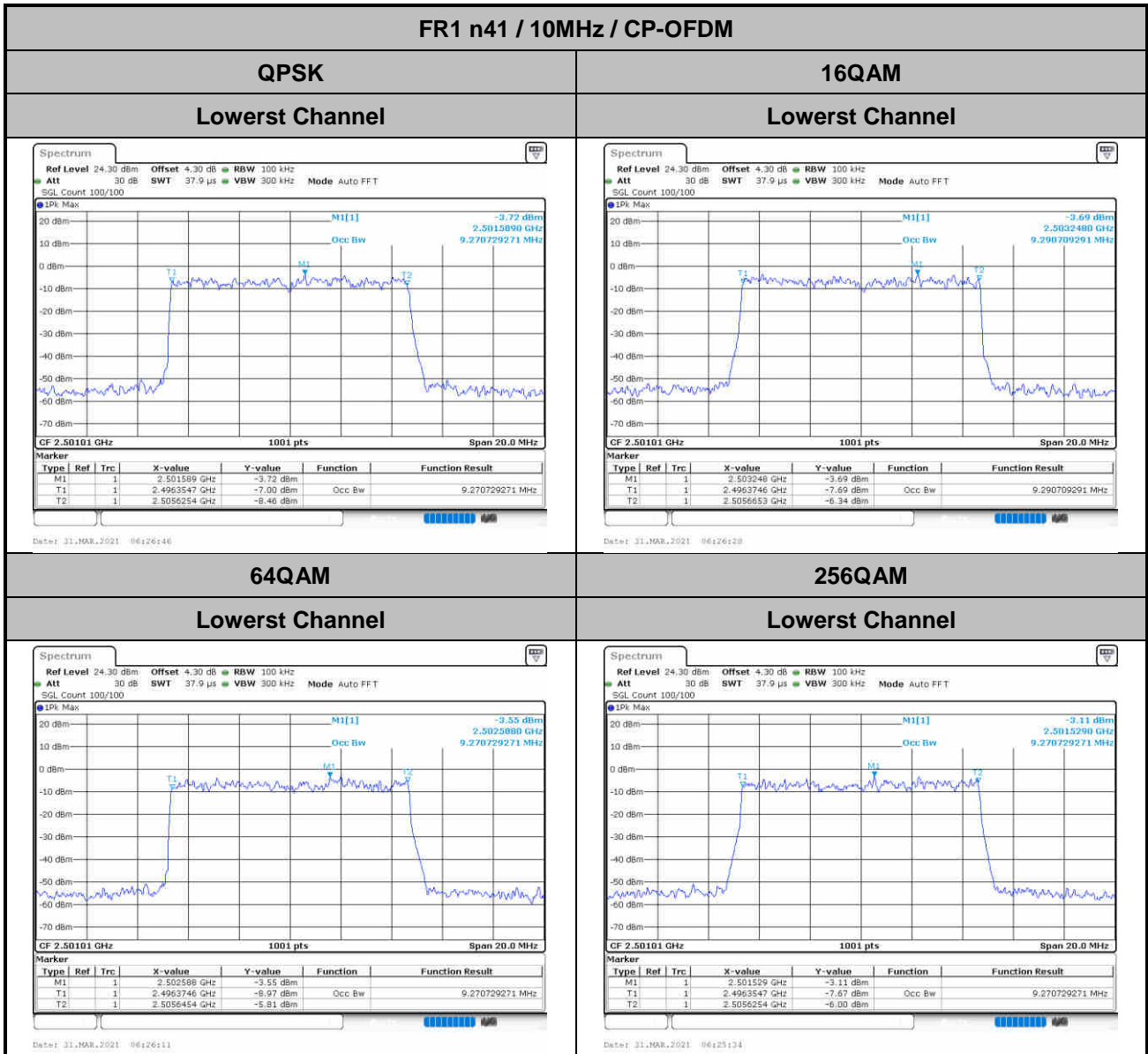
Occupied Bandwidth

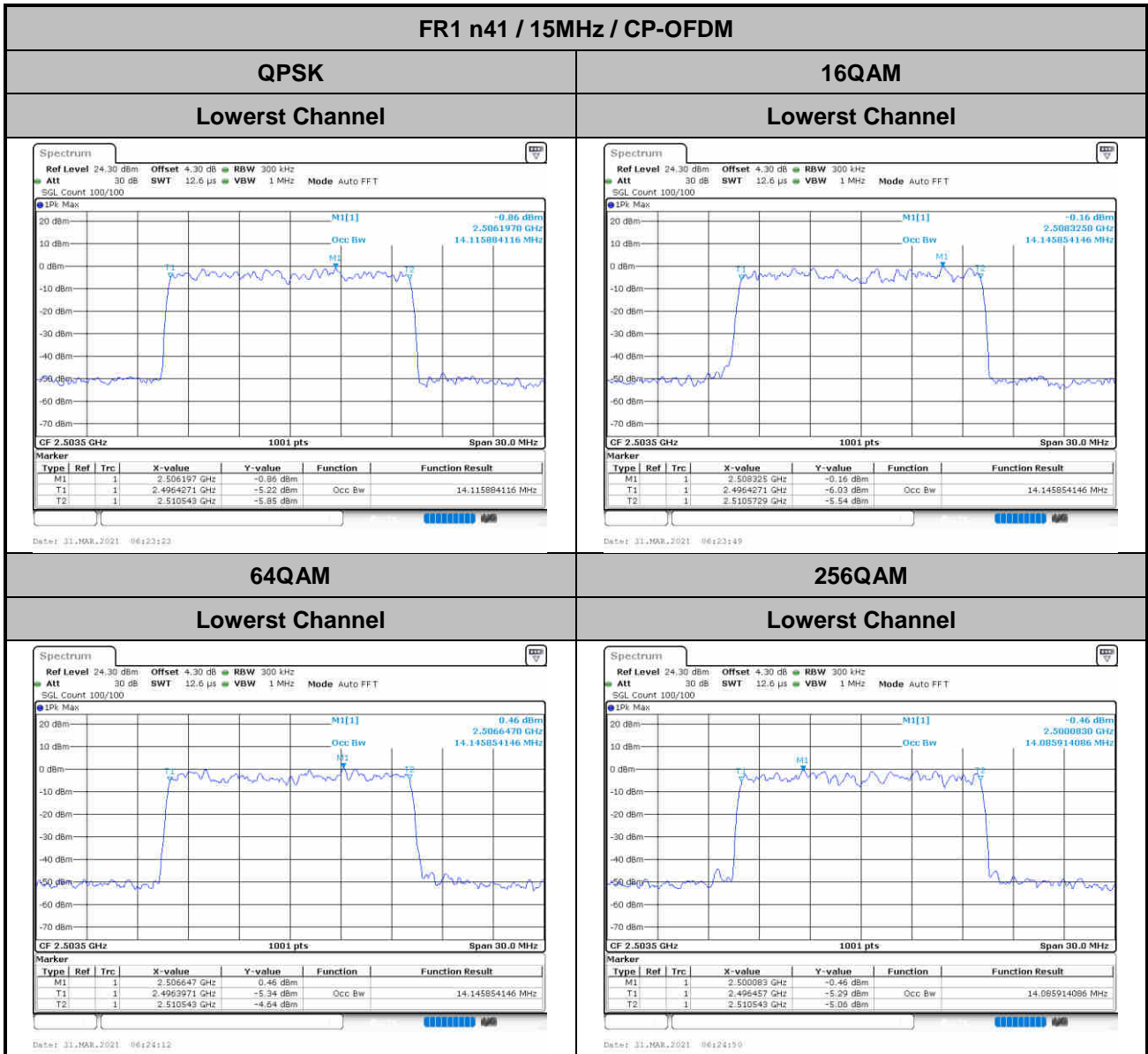
Mode	FR1 n41 : OBW(MHz) / CP-OFDM							
BW	10MHz	10MHz	10MHz	10MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Lowerst CH	9.27	9.29	9.27	9.27				

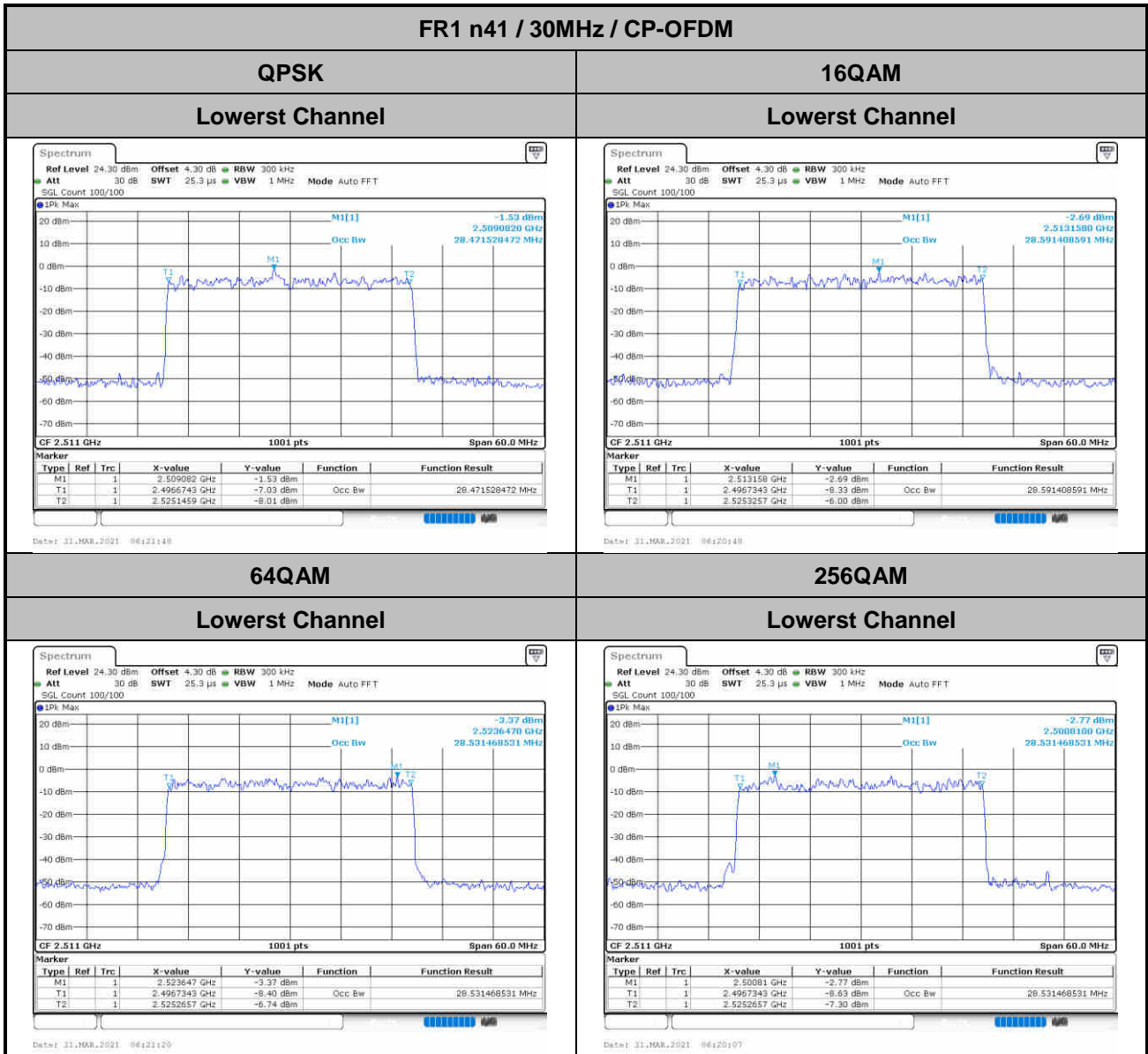
Mode	FR1 n41 : OBW(MHz) / CP-OFDM							
BW	15MHz	15MHz	15MHz	15MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Lowerst CH	14.12	14.15	14.15	14.09				

Mode	FR1 n41 : OBW(MHz) / CP-OFDM							
BW	30MHz	30MHz	30MHz	30MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Lowerst CH	28.47	28.59	28.53	28.53				

Mode	FR1 n41 : OBW(MHz) / CP-OFDM							
BW	40MHz	40MHz	40MHz	40MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Lowerst CH	38.84	38.84	38.76	38.52				









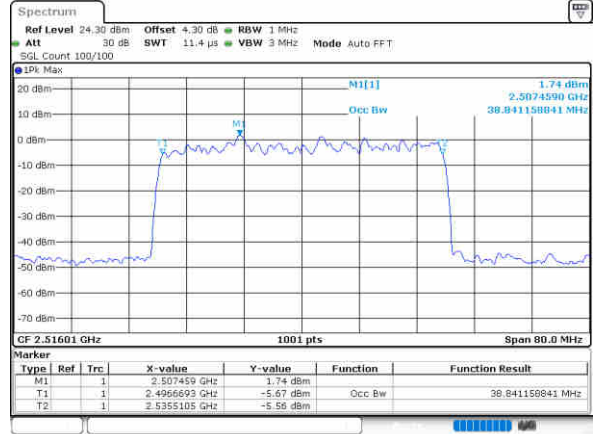
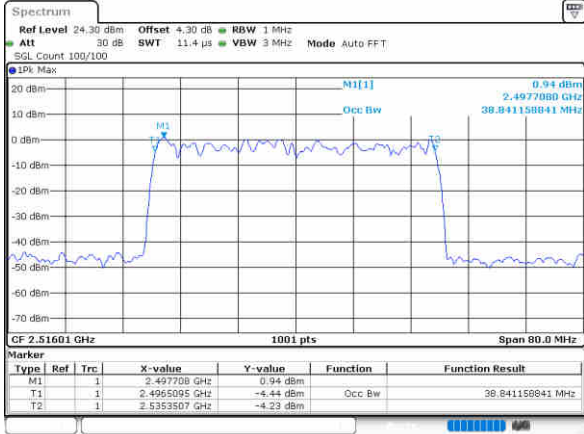
FR1 n41 / 40MHz / CP-OFDM

QPSK

16QAM

Lowerst Channel

Lowerst Channel



Date: 31.MAR.2021 06:18:33

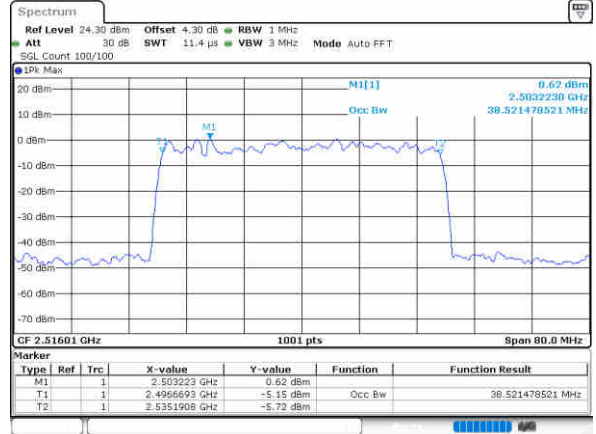
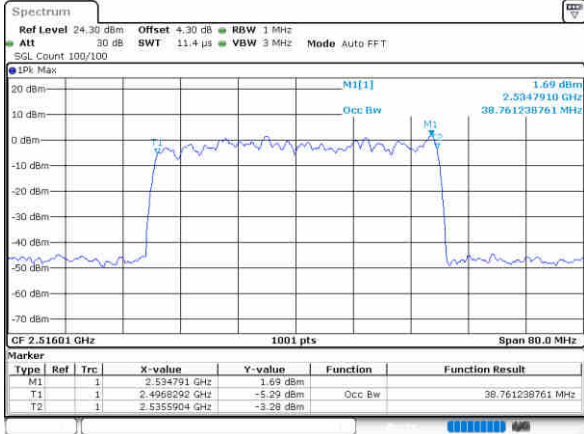
Date: 31.MAR.2021 06:18:46

64QAM

256QAM

Lowerst Channel

Lowerst Channel

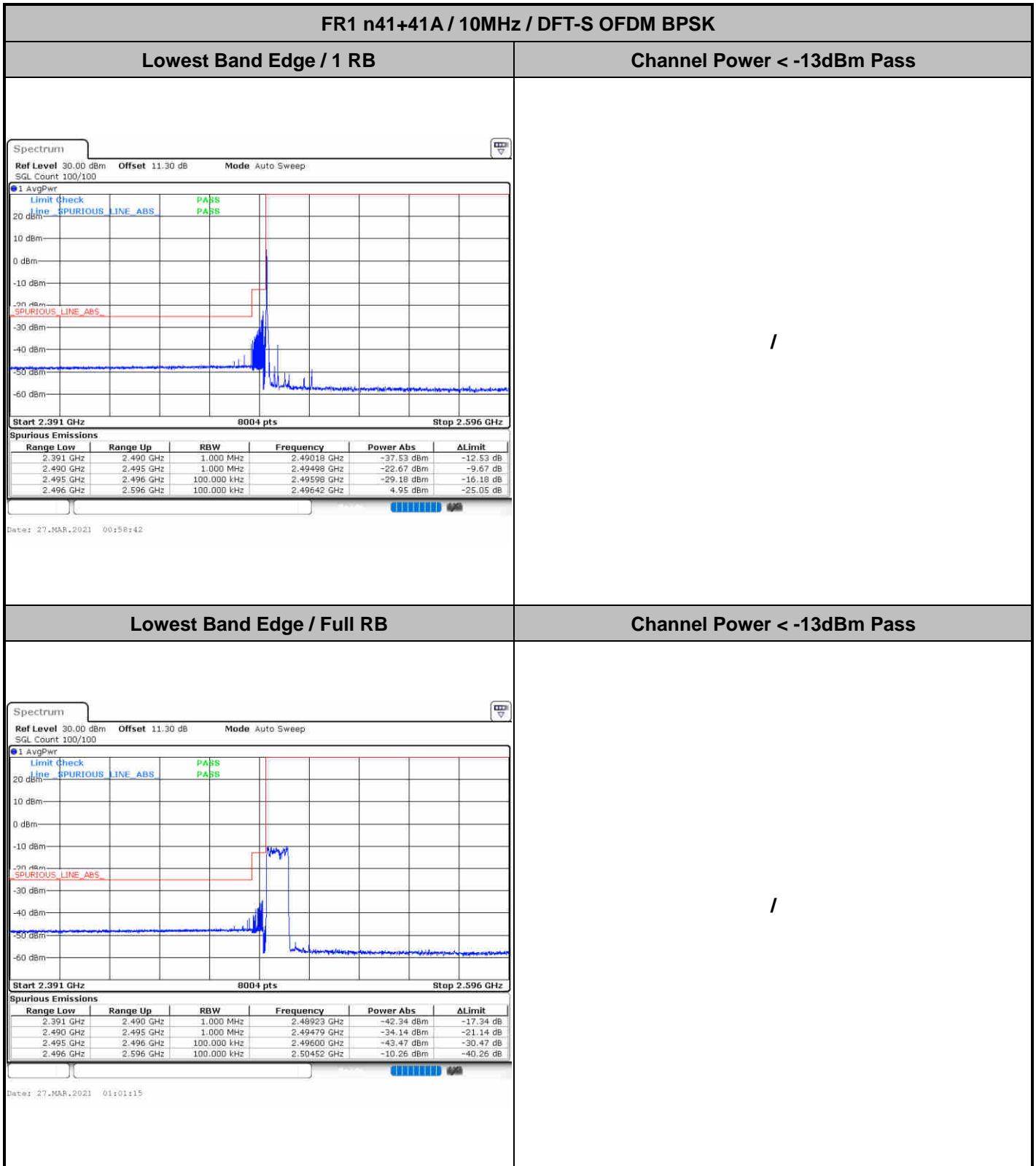


Date: 31.MAR.2021 06:19:09

Date: 31.MAR.2021 06:19:23

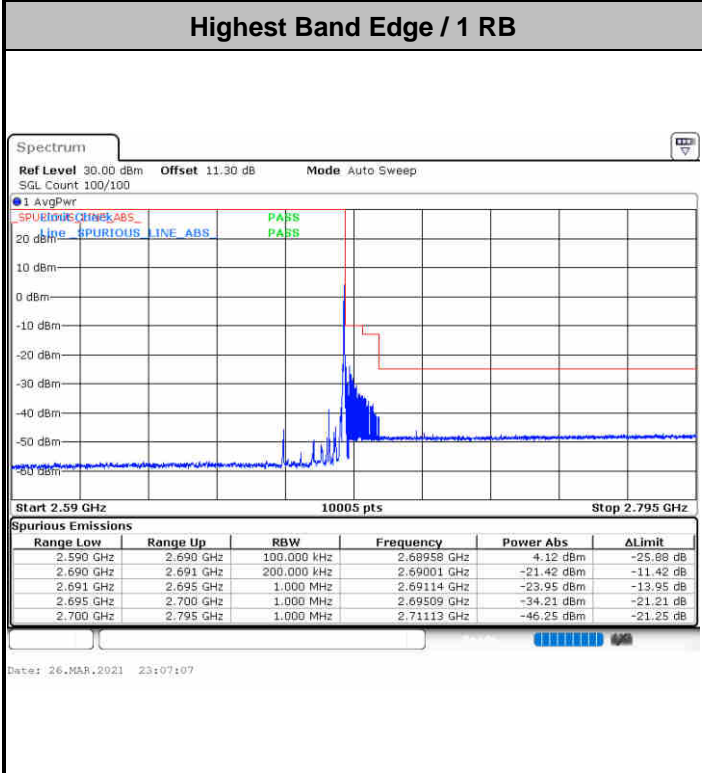


Conducted Band Edge

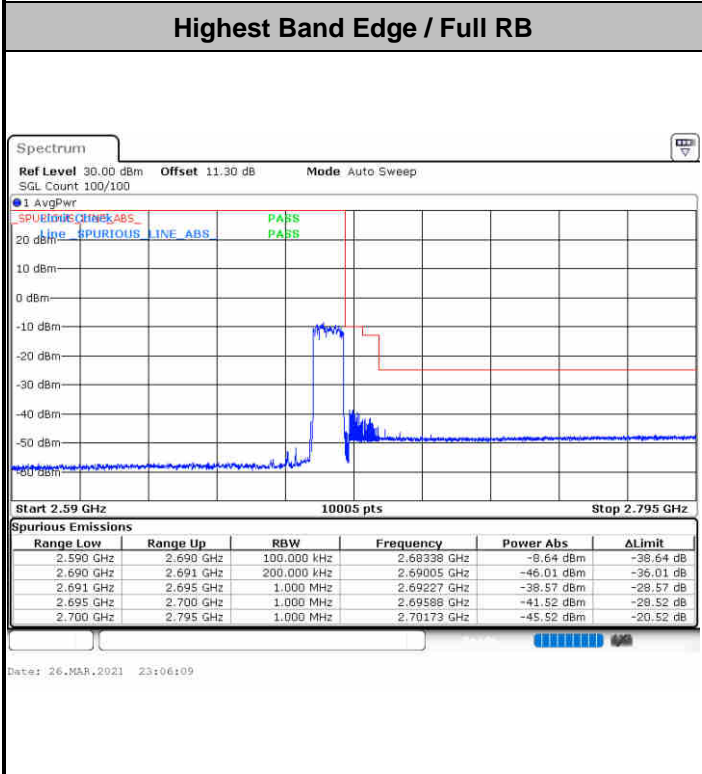




FR1 n41+41A / 10MHz / DFT-S OFDM BPSK



Channel Power < -13dBm Pass /



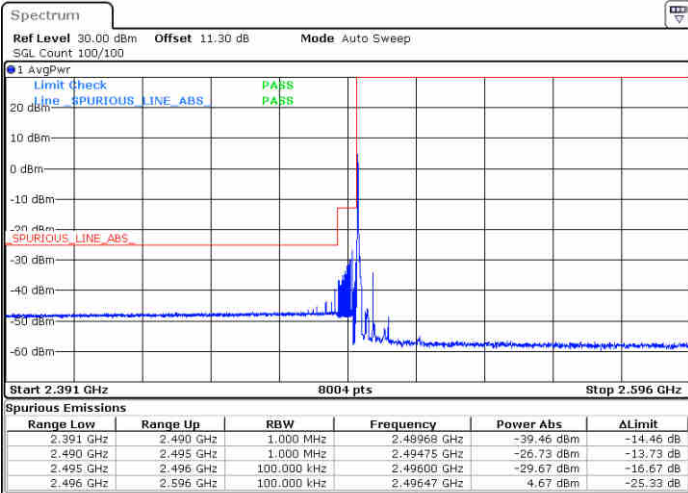
Channel Power < -13dBm Pass /



FR1 n41+41A / 10MHz / DFT-S OFDM QPSK

Lowest Band Edge / 1 RB

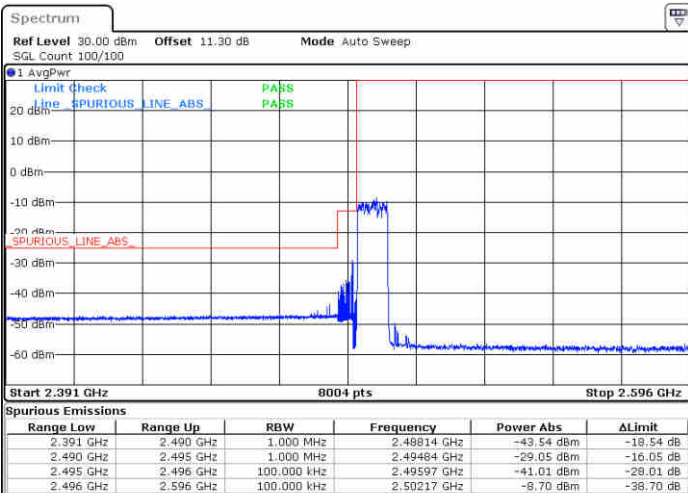
Channel Power < -13dBm Pass



Date: 27.MAR.2021 01:00:21

Lowest Band Edge / Full RB

Channel Power < -13dBm Pass



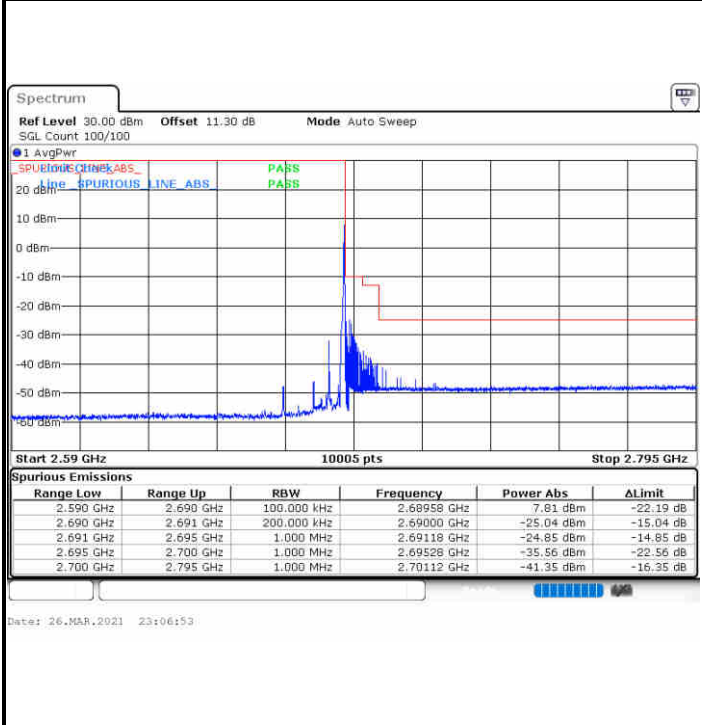
Date: 27.MAR.2021 01:00:56



FR1 n41+41A / 10MHz / DFT-S OFDM QPSK

Highest Band Edge / 1 RB

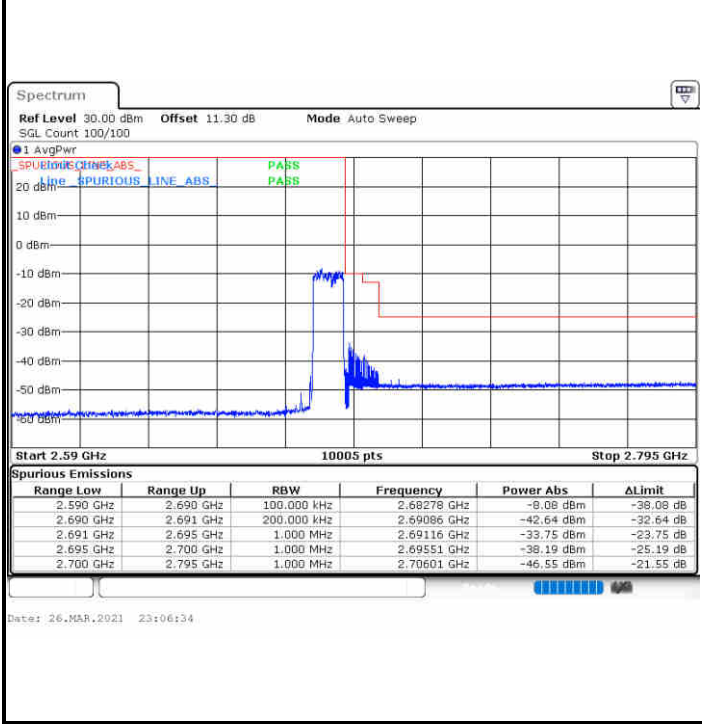
Channel Power < -13dBm Pass



/

Highest Band Edge / Full RB

Channel Power < -13dBm Pass



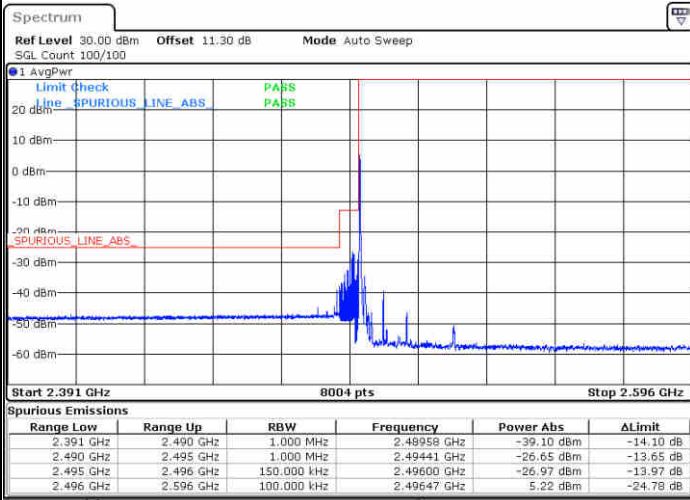
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FR1 n41+41A / 15MHz / DFT-S OFDM BPSK

Lowest Band Edge / 1 RB

Channel Power < -13dBm Pass

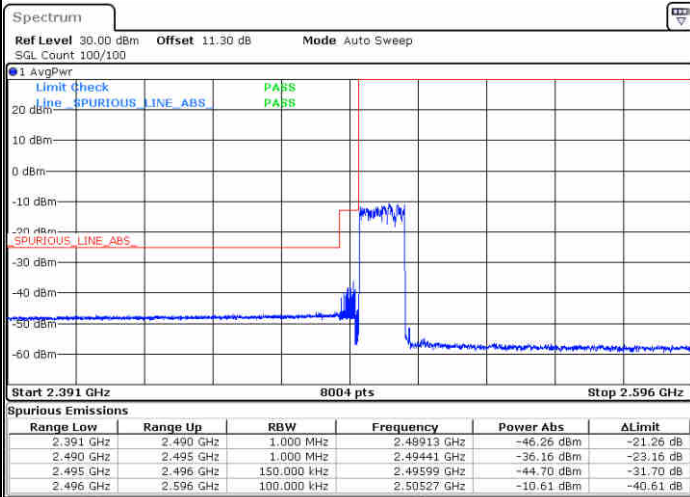


/

Date: 27_MAR_2021 00:53:37

Lowest Band Edge / Full RB

Channel Power < -13dBm Pass



/

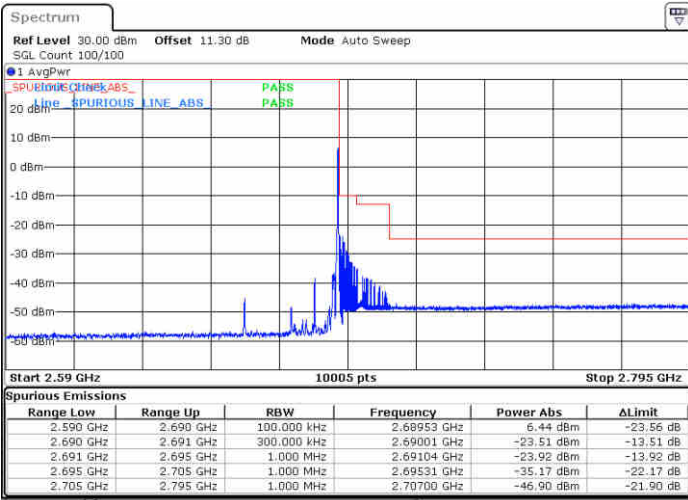
Date: 27_MAR_2021 00:50:56



FR1 n41+41A / 15MHz / DFT-S OFDM BPSK

Highest Band Edge / 1 RB

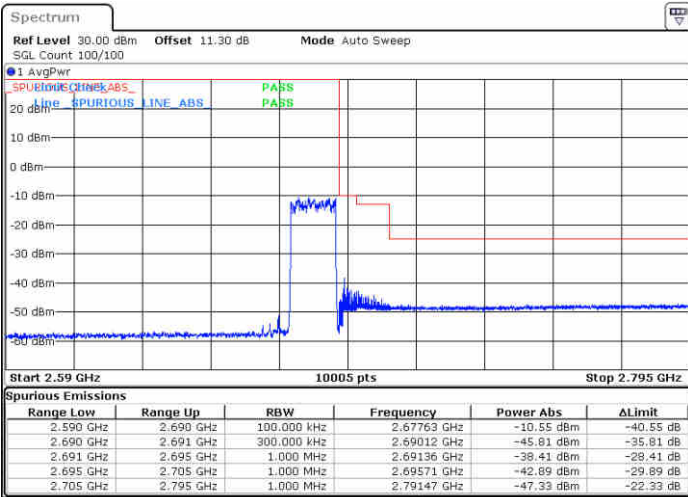
Channel Power < -13dBm Pass



Date: 27_MAR_2021 00:36:22

Highest Band Edge / Full RB

Channel Power < -13dBm Pass



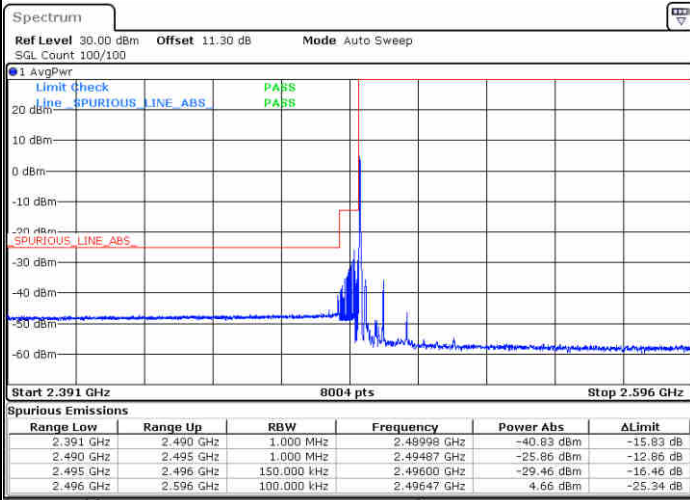
Date: 27_MAR_2021 00:35:43



FR1 n41+41A / 15MHz / DFT-S OFDM QPSK

Lowest Band Edge / 1 RB

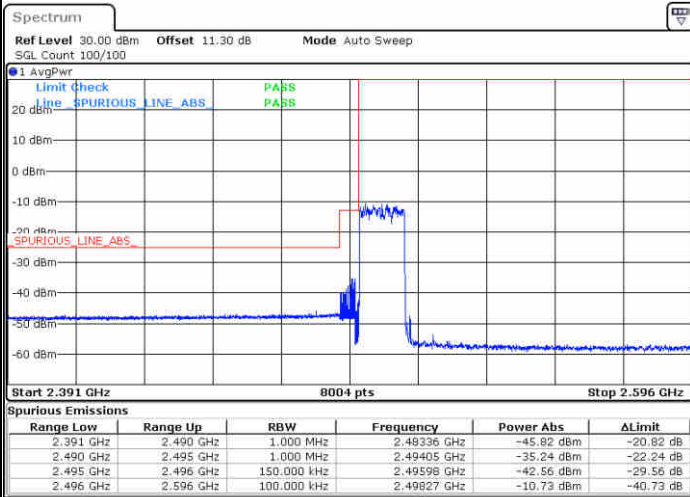
Channel Power < -13dBm Pass



Date: 27_MAR_2021 00:53:52

Lowest Band Edge / Full RB

Channel Power < -13dBm Pass



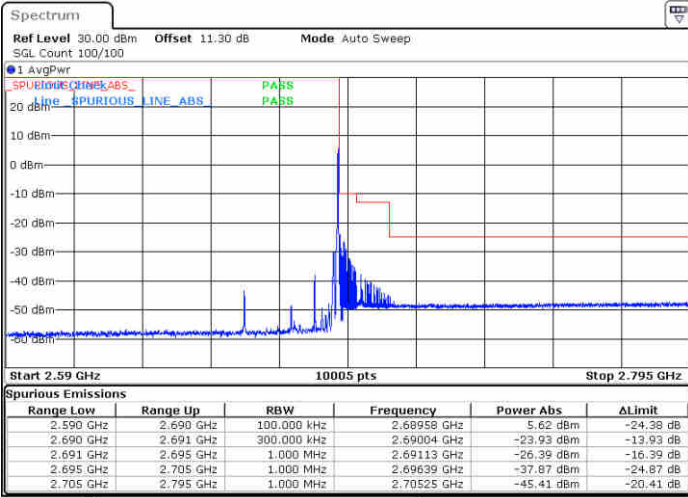
Date: 27_MAR_2021 00:50:18



FR1 n41+41A / 15MHz / DFT-S OFDM QPSK

Highest Band Edge / 1 RB

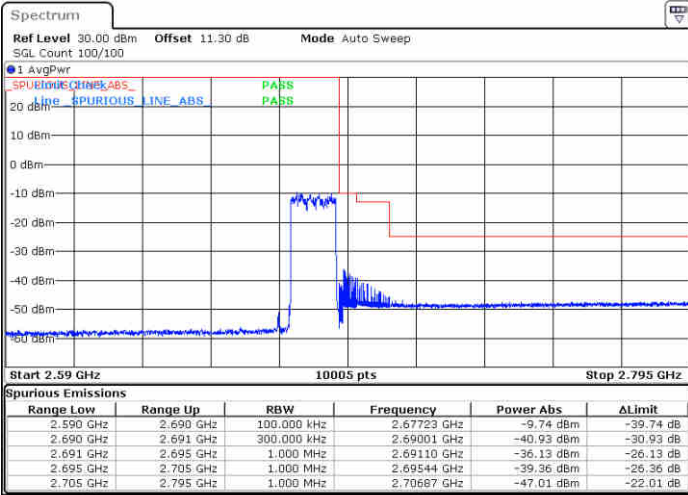
Channel Power < -13dBm Pass



Date: 27.MAR.2021 00:36:36

Highest Band Edge / Full RB

Channel Power < -13dBm Pass



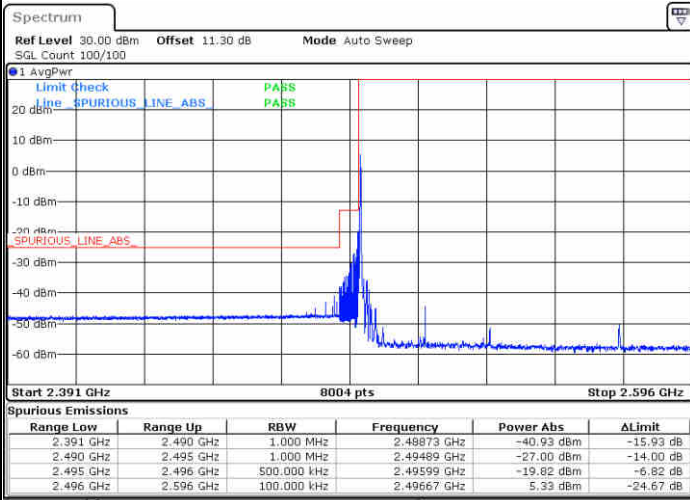
Date: 27.MAR.2021 00:34:44



FR1 n41+41A / 40MHz / DFT-S OFDM BPSK

Lowest Band Edge / 1 RB

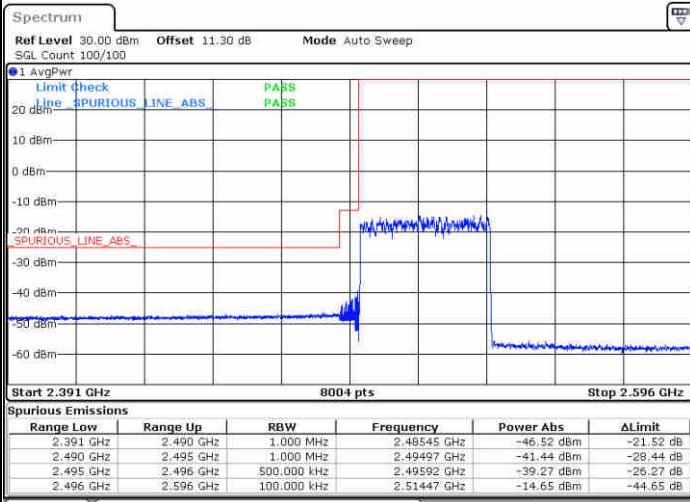
Channel Power < -13dBm Pass



Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.391 GHz	2.490 GHz	1.000 MHz	2.48873 GHz	-40.93 dBm	-15.93 dB
2.490 GHz	2.495 GHz	1.000 MHz	2.49489 GHz	-27.00 dBm	-14.00 dB
2.495 GHz	2.496 GHz	500.000 kHz	2.49599 GHz	-19.82 dBm	-6.82 dB
2.496 GHz	2.596 GHz	100.000 kHz	2.49667 GHz	5.33 dBm	-24.67 dB

Lowest Band Edge / Full RB

Channel Power < -13dBm Pass



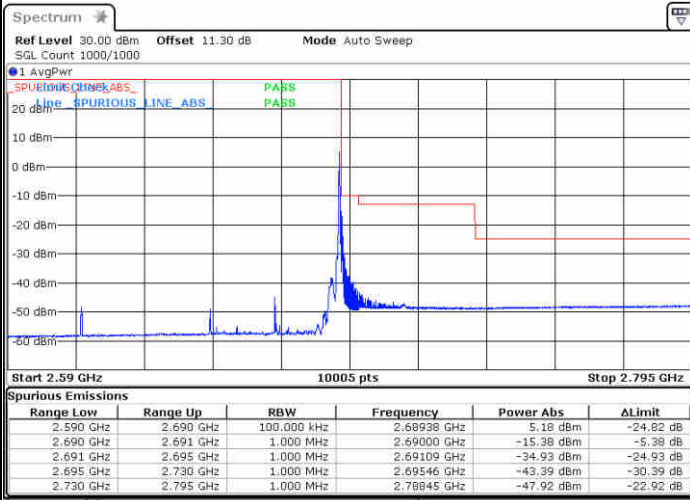
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.391 GHz	2.490 GHz	1.000 MHz	2.48545 GHz	-46.52 dBm	-21.52 dB
2.490 GHz	2.495 GHz	1.000 MHz	2.49497 GHz	-41.44 dBm	-28.44 dB
2.495 GHz	2.496 GHz	500.000 kHz	2.49592 GHz	-39.27 dBm	-26.27 dB
2.496 GHz	2.596 GHz	100.000 kHz	2.51447 GHz	-14.65 dBm	-44.65 dB



FR1 n41+41A / 40MHz / DFT-S OFDM BPSK

Highest Band Edge / 1 RB

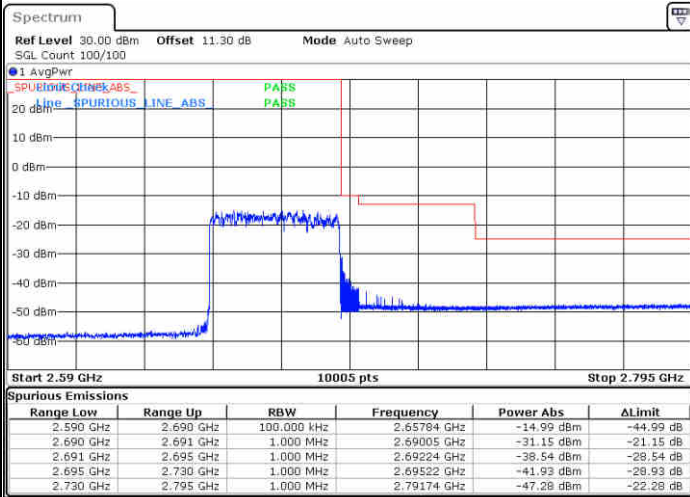
Channel Power < -13dBm Pass



Date: 27_MAR_2021 00:40:54

Highest Band Edge / Full RB

Channel Power < -13dBm Pass



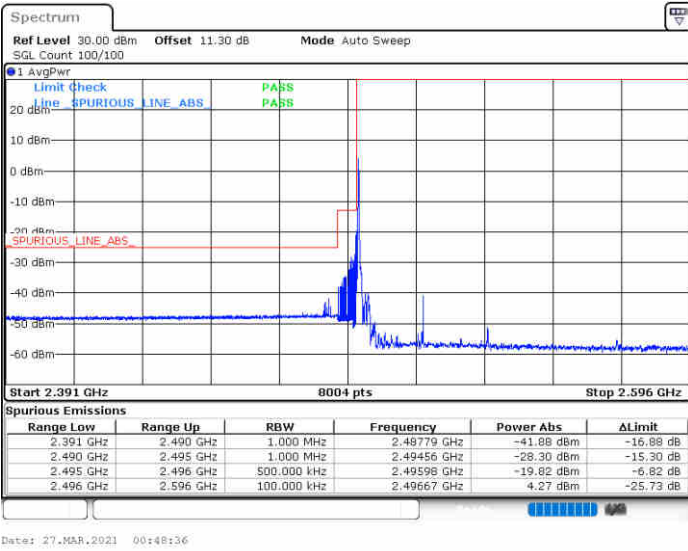
Date: 27_MAR_2021 00:40:00



FR1 n41+41A / 40MHz / DFT-S OFDM QPSK

Lowest Band Edge / 1 RB

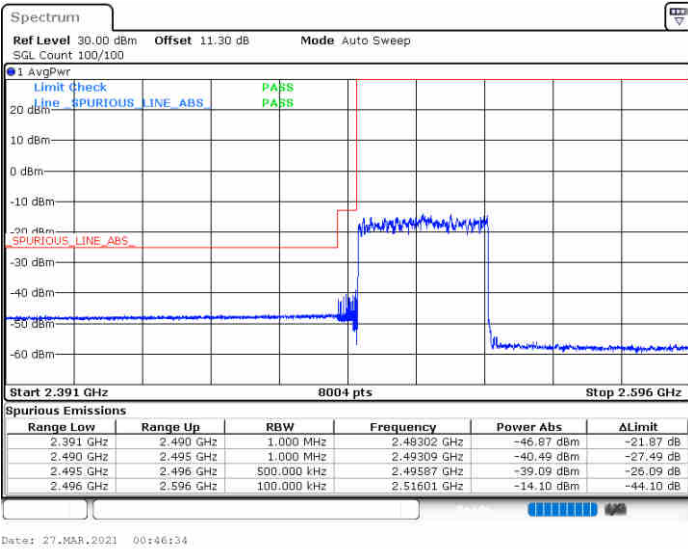
Channel Power < -13dBm Pass



/

Lowest Band Edge / Full RB

Channel Power < -13dBm Pass



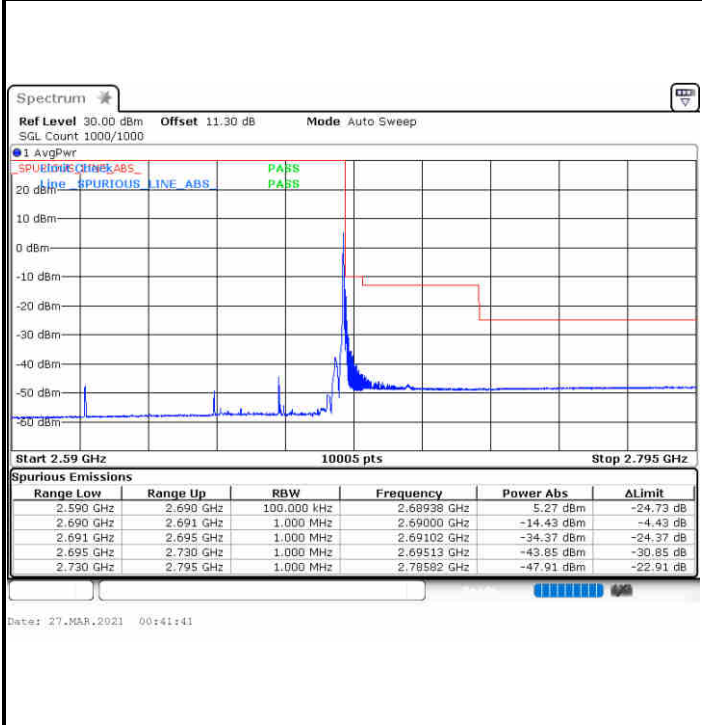
/



FR1 n41+41A / 40MHz / DFT-S OFDM QPSK

Highest Band Edge / 1 RB

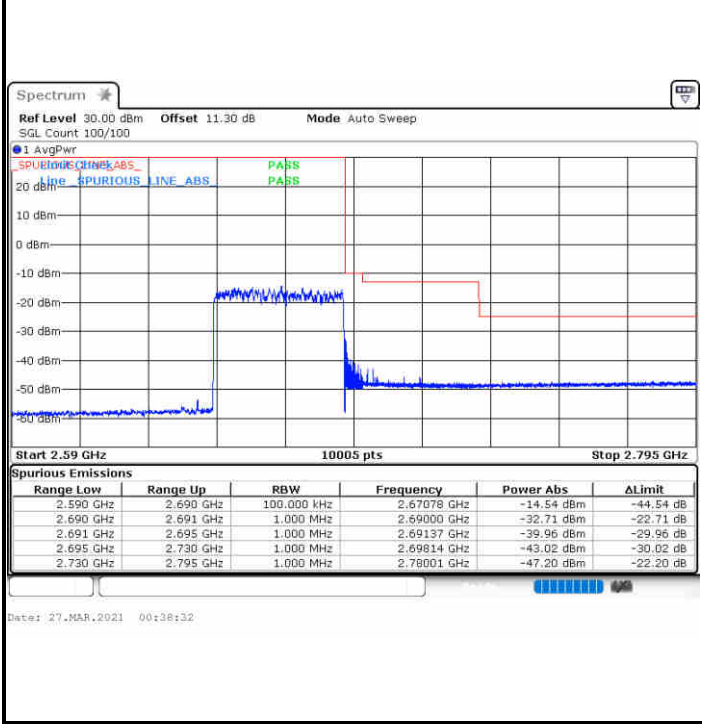
Channel Power < -13dBm Pass



/

Highest Band Edge / Full RB

Channel Power < -13dBm Pass



/

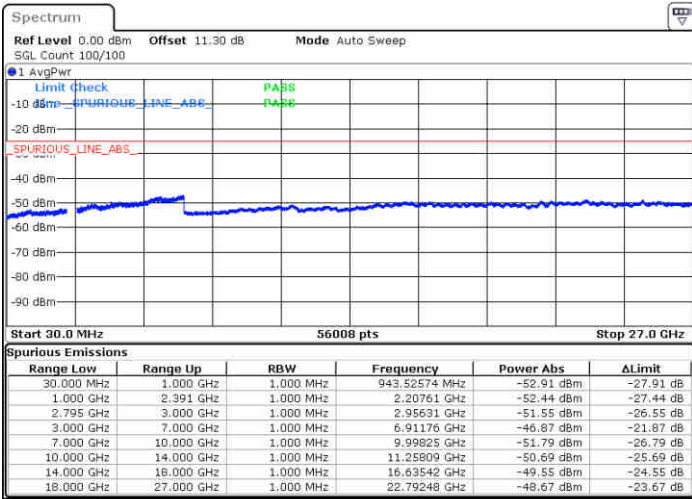


Conducted Spurious Emission

FR1 n41+41A / 10MHz / DFT-S OFDM / BPSK

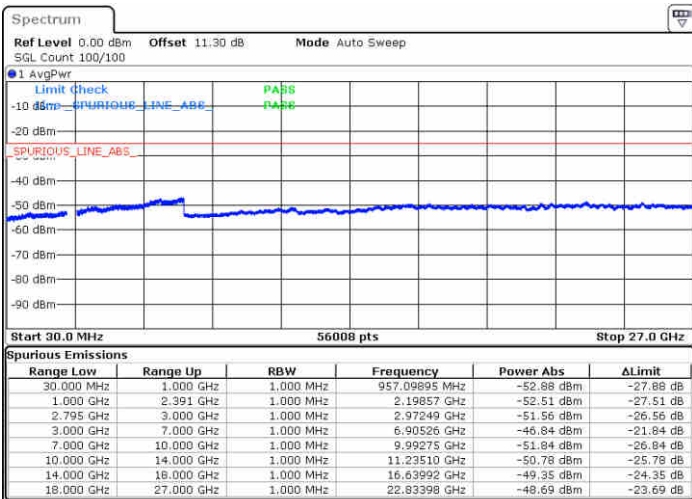
Lowest Channel / 1RB

Middle Channel / 1RB



Date: 26.MAR.2021 23:16:10

Highest Channel / 1RB

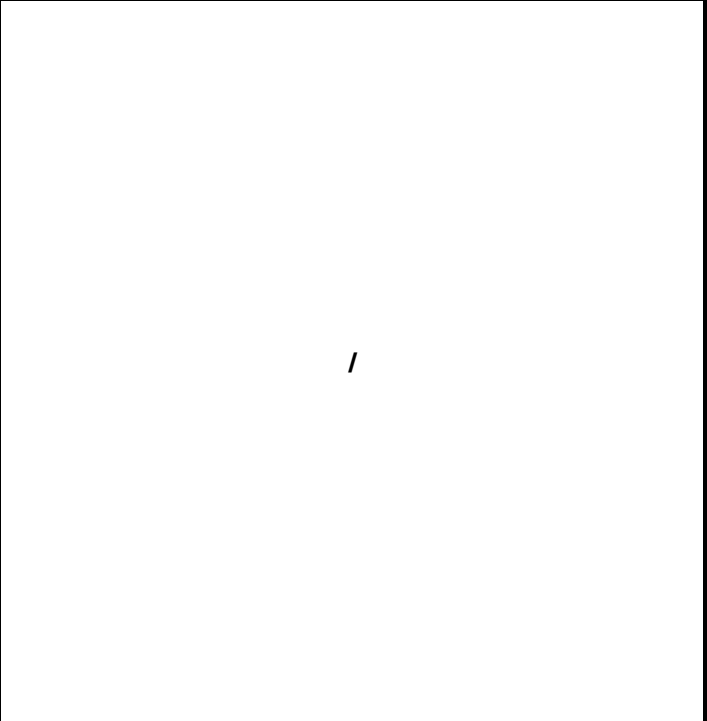
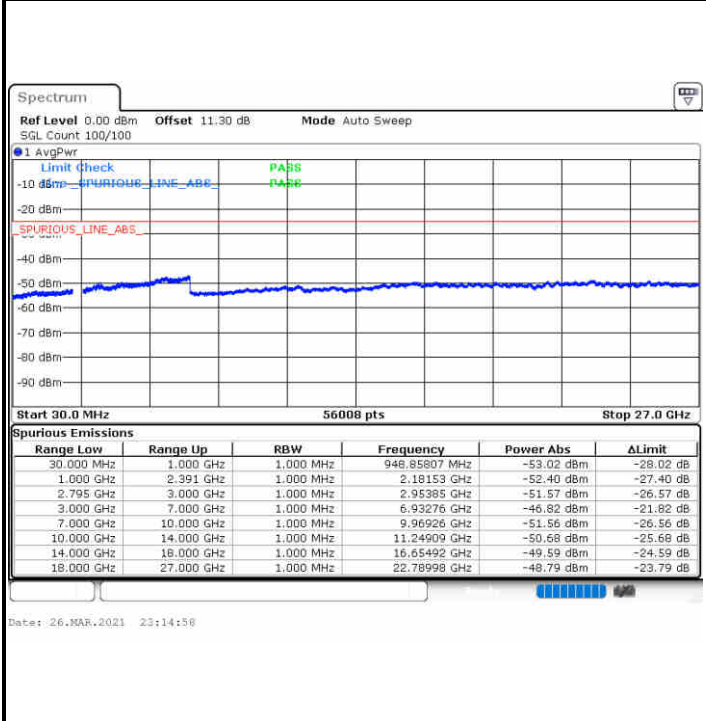


Date: 26.MAR.2021 23:11:48

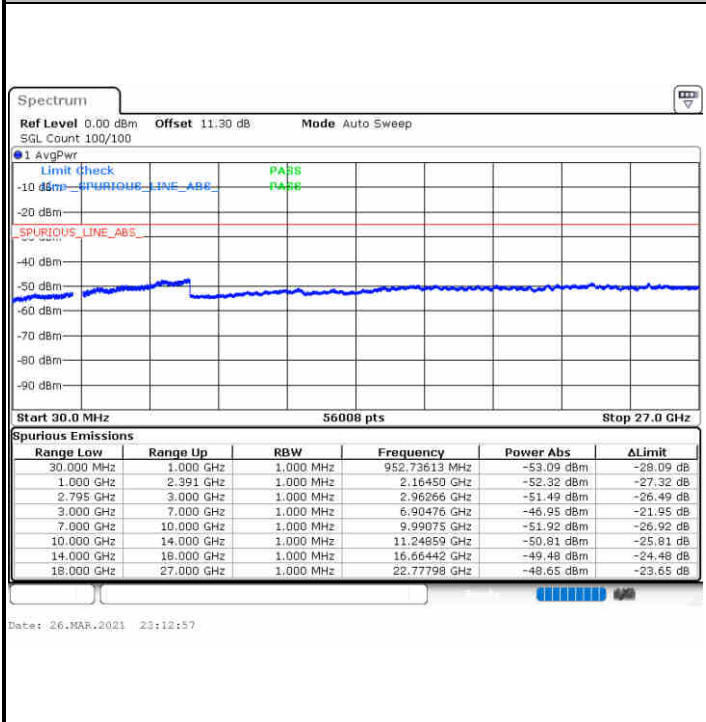


FR1 n41+41A / 10MHz / DFT-S OFDM / QPSK

Lowest Channel / 1RB	Middle Channel / 1RB
-----------------------------	-----------------------------



Highest Channel / 1RB	
------------------------------	--

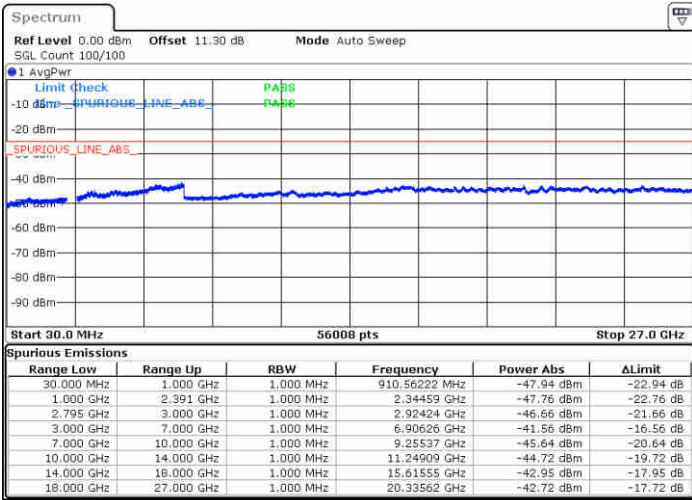




FR1 n41+41A / 15MHz / DFT-S OFDM / BPSK

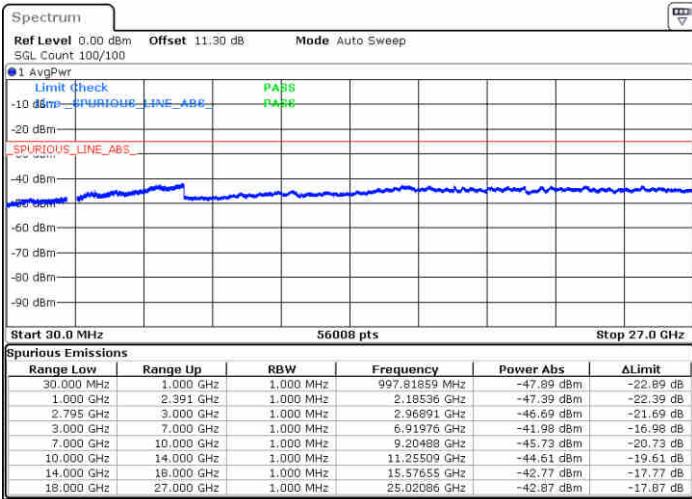
Lowest Channel / 1RB

Middle Channel / 1RB



Date: 26.MAR.2021 23:17:23

Highest Channel / 1RB



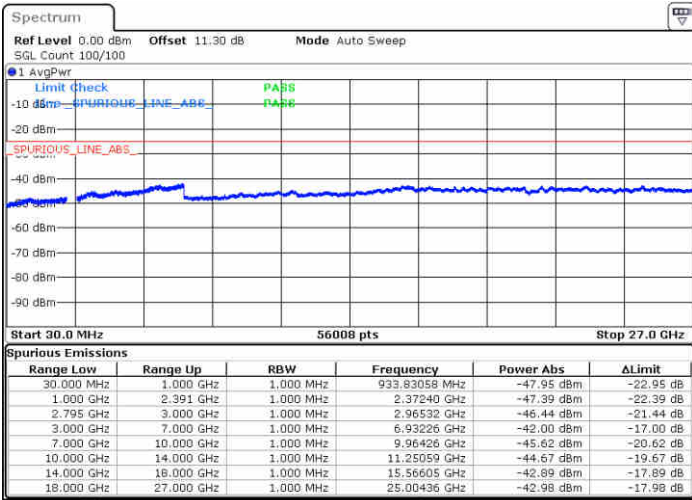
Date: 26.MAR.2021 23:20:20



FR1 n41+41A / 40MHz / DFT-S OFDM / QPSK

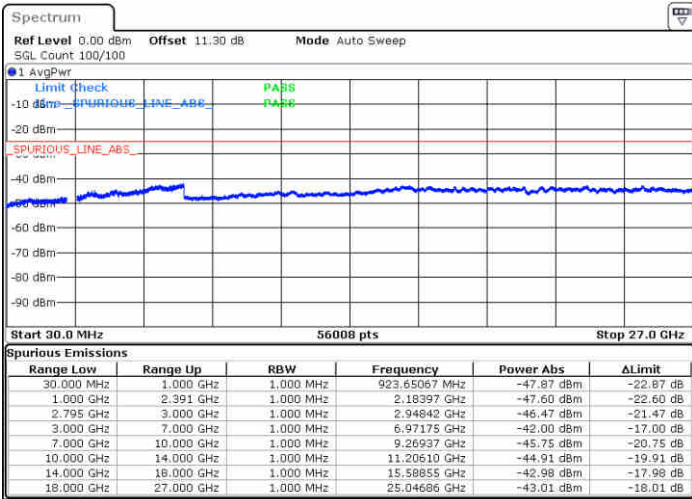
Lowest Channel / 1RB

Middle Channel / 1RB



Date: 26.MAR.2021 23:18:19

Highest Channel / 1RB



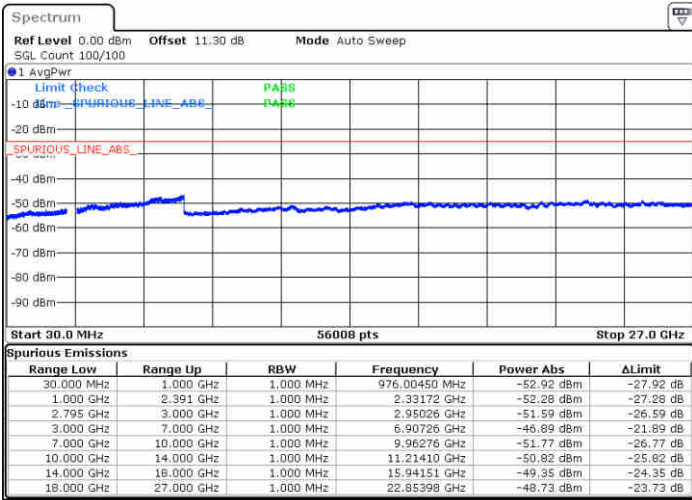
Date: 26.MAR.2021 23:19:19



FR1 n41+41A / 40MHz / DFT-S OFDM / BPSK

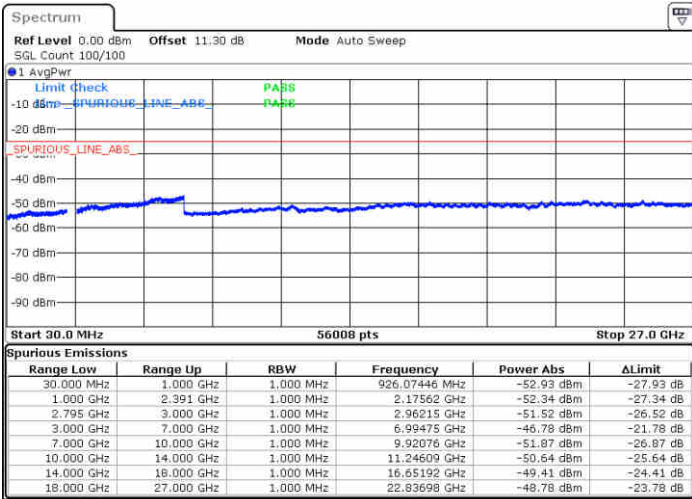
Lowest Channel / 1RB

Middle Channel / 1RB



Date: 26.MAR.2021 23:22:52

Highest Channel / 1RB



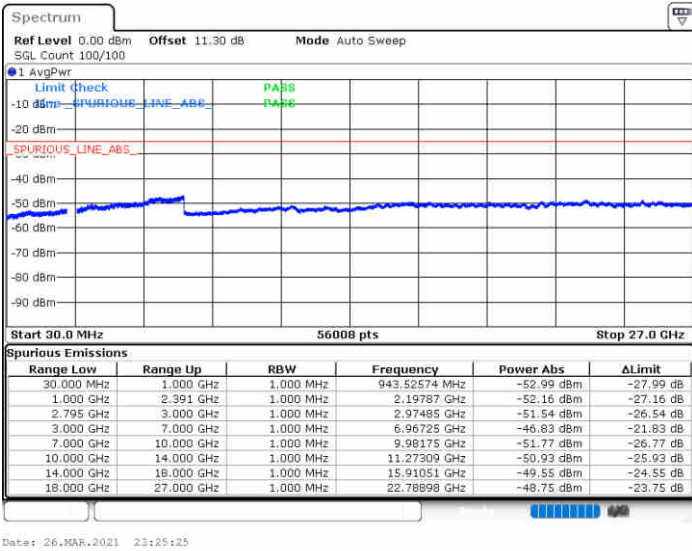
Date: 26.MAR.2021 23:27:50



FR1 n41+41A / 80MHz / DFT-S OFDM / QPSK

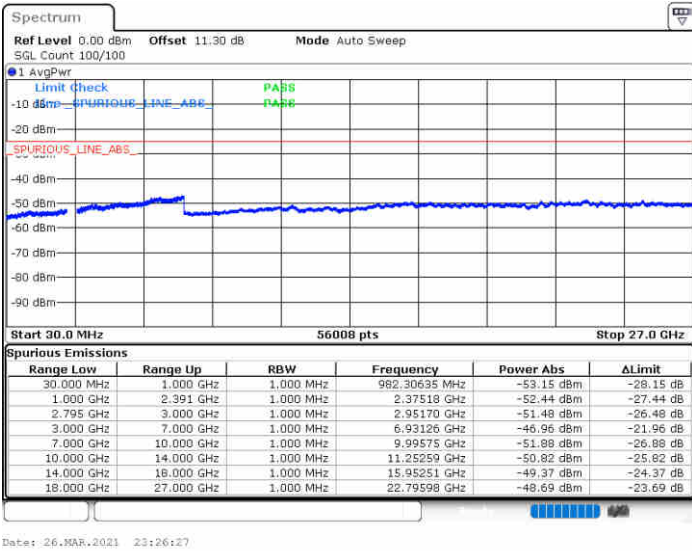
Lowest Channel / 1RB

Middle Channel / 1RB



/

Highest Channel / 1RB





Frequency Stability

Test Conditions		NR n41+41A (BPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Within Band
		Deviation (ppm)	Result
50	Normal Voltage	0.0002	PASS
40	Normal Voltage	0.0019	
30	Normal Voltage	0.0009	
20(Ref.)	Normal Voltage	0.0003	
10	Normal Voltage	0.0014	
0	Normal Voltage	0.0022	
-10	Normal Voltage	0.0014	
-20	Normal Voltage	0.0017	
-30	Normal Voltage	0.0018	
20	Maximum Voltage	0.0015	
20	Normal Voltage	0.0018	
20	Battery End Point	0.0003	

Note:

1. Normal Voltage =3.3 V. ; Battery End Point (BEP) =3.14 V. ; Maximum Voltage =4.4 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



5G NR n41 NSA-SCS 30K

Peak-to-Average Ratio

Mode	FR1 n41+41A / 10MHz / DFT-S OFDM				
Mod.	PI/2 BPSK	PI/2 BPSK	QPSK	QPSK	Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	4.20	4.00	6.14	5.42	PASS
Middle CH	-	-	-	-	
Highest CH	4.20	3.97	5.74	5.59	



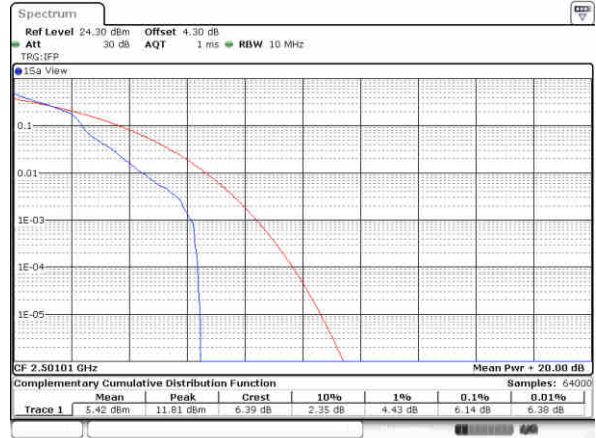
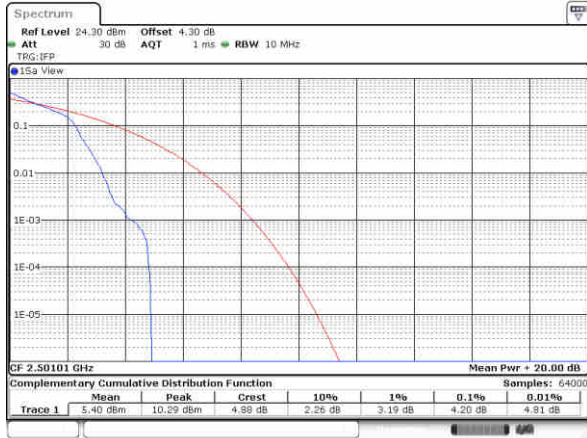
FR1 n41+41A / 10MHz / DFT-S OFDM

PI/2 BPSK

QPSK

Lowest Channel / 1RB

Lowest Channel / 1RB

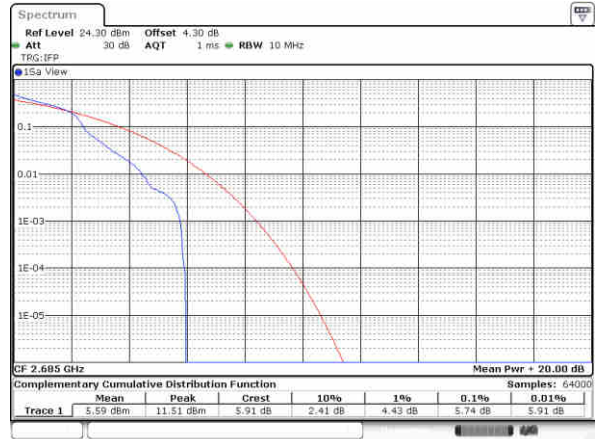
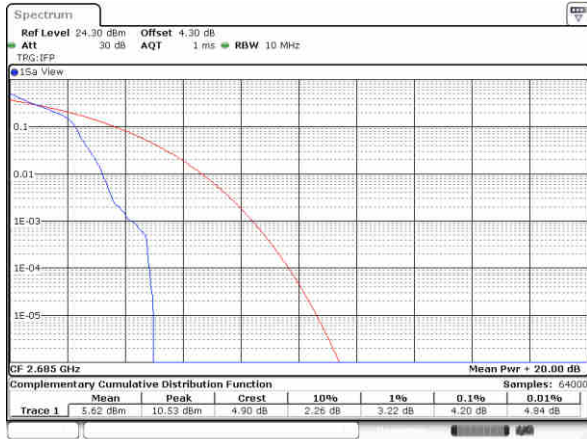


Date: 26, MAR, 2021 22:10:08

Date: 26, MAR, 2021 22:10:12

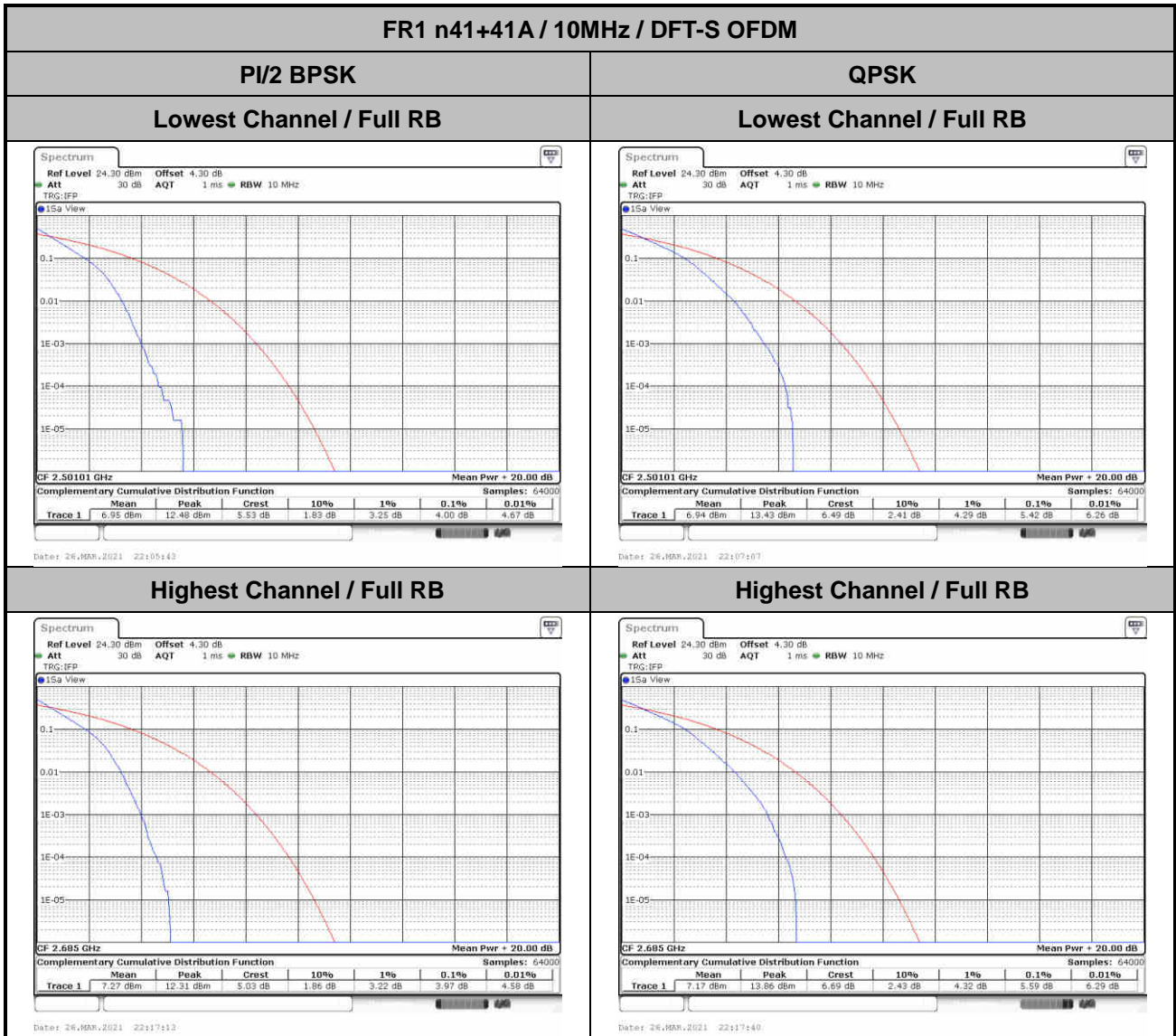
Highest Channel / 1 RB

Highest Channel / 1 RB



Date: 26, MAR, 2021 22:16:35

Date: 26, MAR, 2021 22:16:06





26dB Bandwidth

Mode	FR1 n41 : 26dB BW(MHz) / CP-OFDM							
BW	10MHz	10MHz	10MHz	10MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Lowerst CH	9.27	9.29	9.37	9.13				

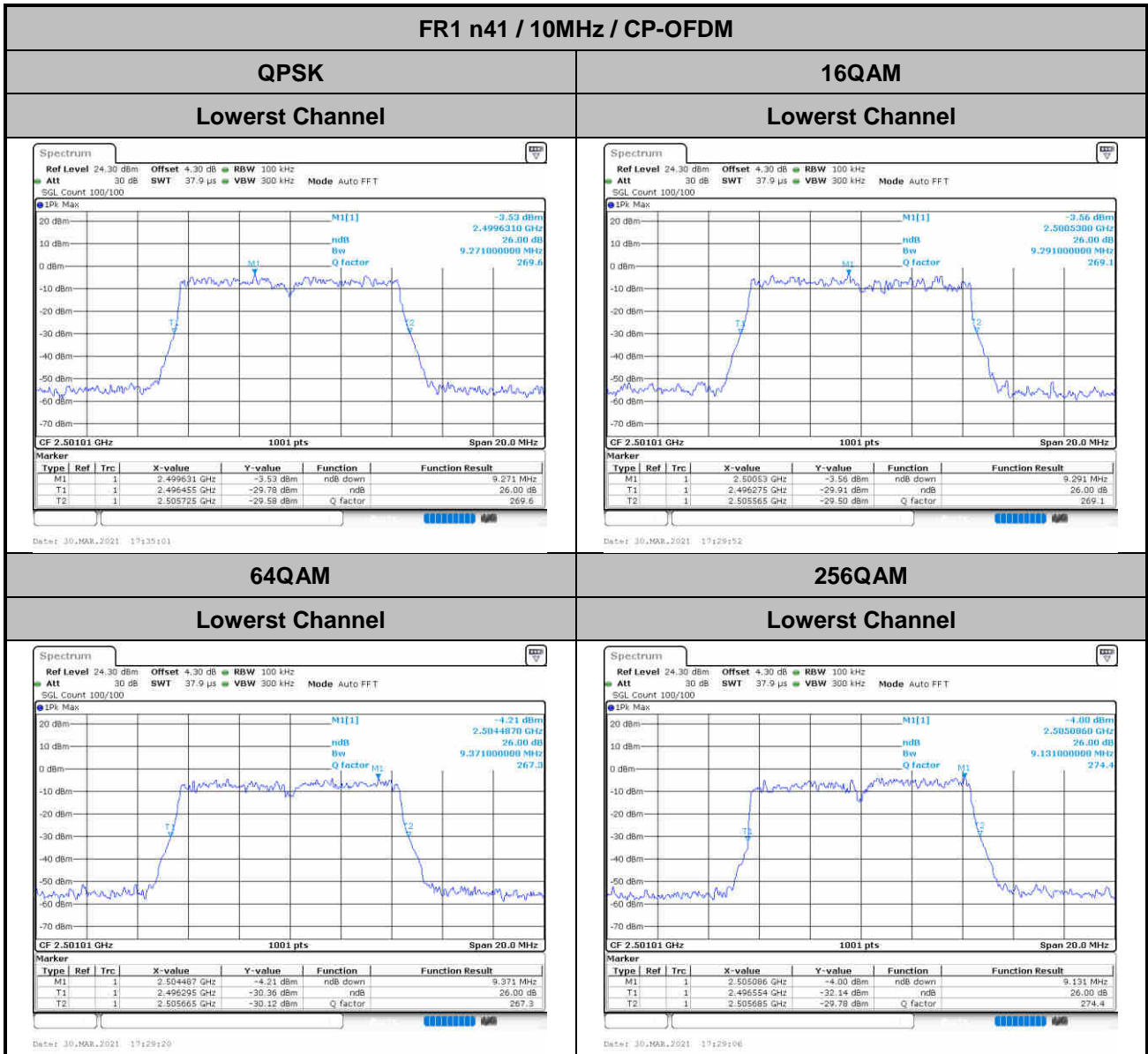
Mode	FR1 n41 : 26dB BW(MHz) / CP-OFDM							
BW	15MHz	15MHz	15MHz	15MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Lowerst CH	14.27	14.75	14.30	14.48				

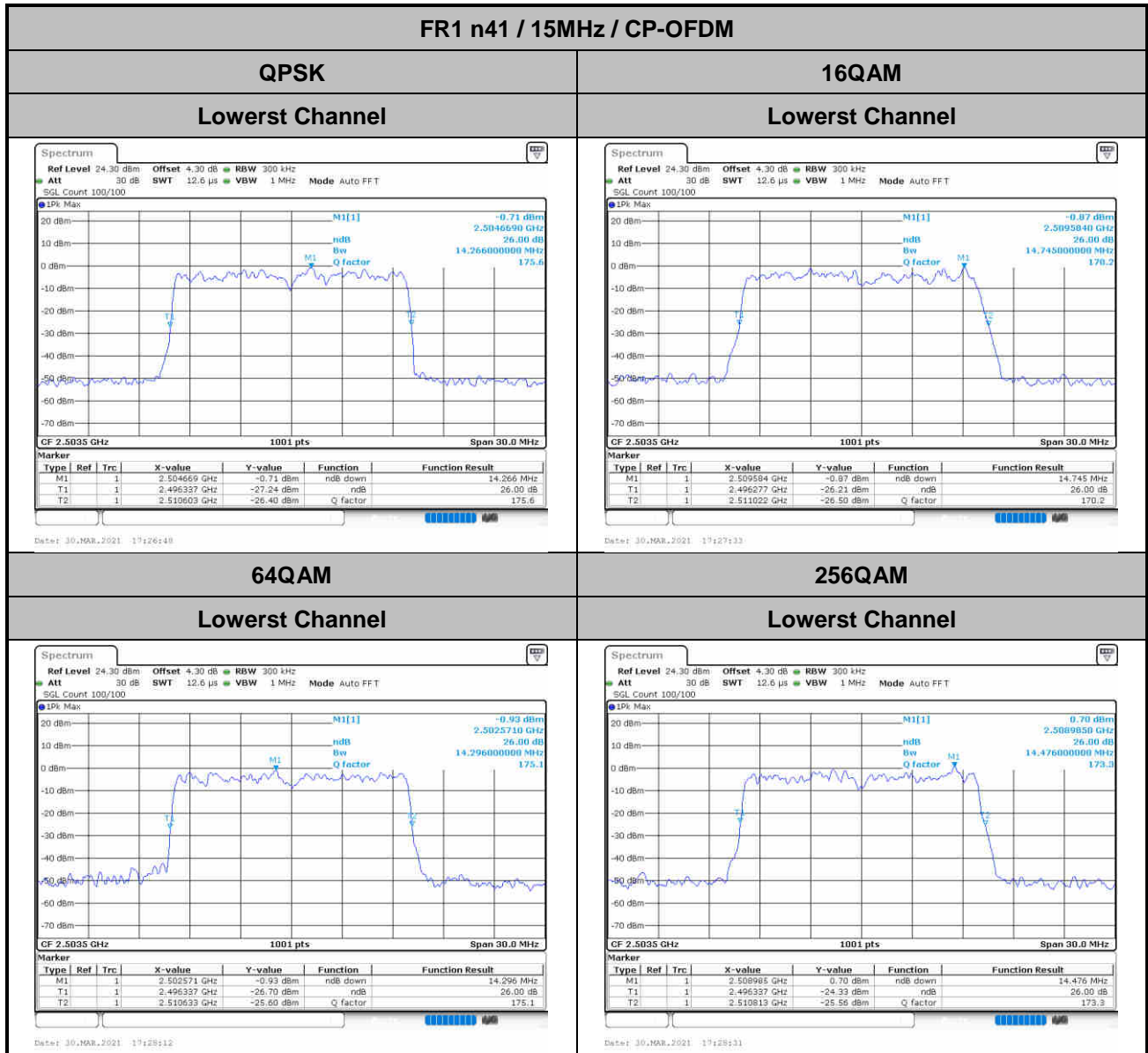
Mode	FR1 n41 : 26dB BW(MHz) / CP-OFDM							
BW	30MHz	30MHz	30MHz	30MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Lowerst CH	28.95	29.13	29.07	28.83				

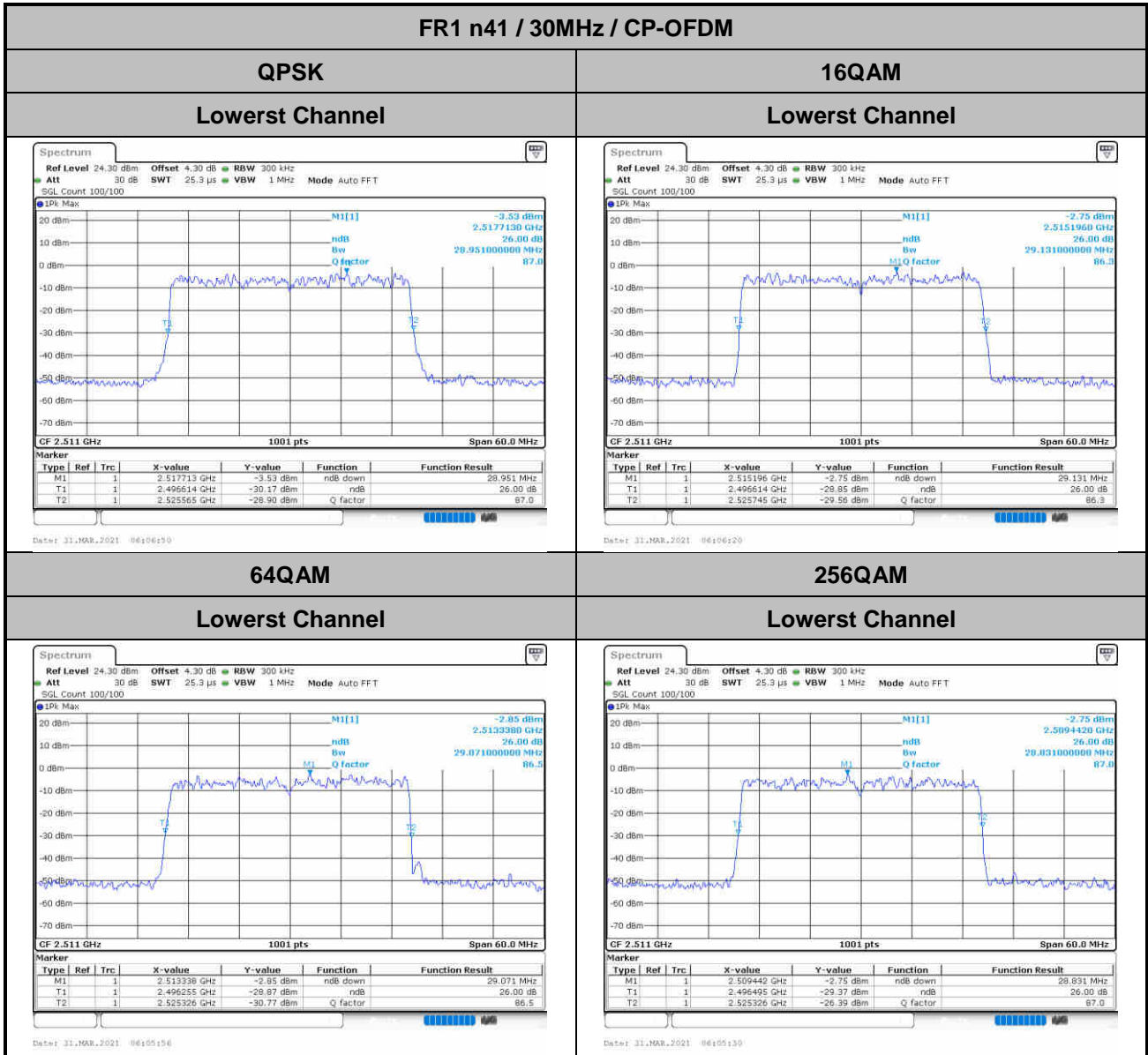
Mode	FR1 n41 : 26dB BW(MHz) / CP-OFDM							
BW	40MHz	40MHz	40MHz	40MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Lowerst CH	40.2	40.04	40.2	40.12				

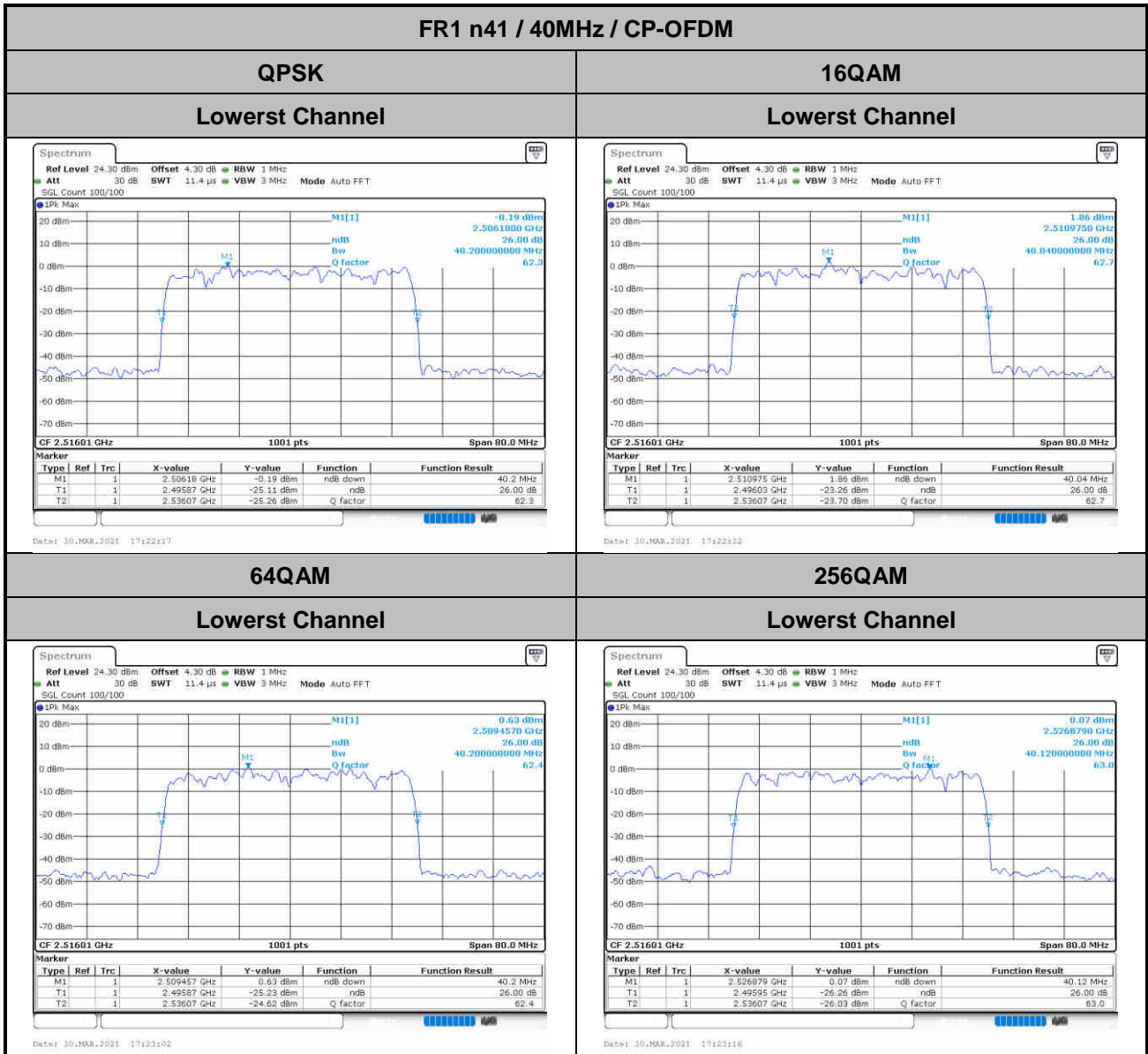
Mode	FR1 n41 : 26dB BW(MHz) / CP-OFDM							
BW	50MHz	50MHz	50MHz	50MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Lowerst CH	49.75	49.75	49.75	49.75				

Mode	FR1 n41 : 26dB BW(MHz) / CP-OFDM							
BW	80MHz	80MHz	80MHz	80MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Lowerst CH	79.92	79.92	79.76	79.92				











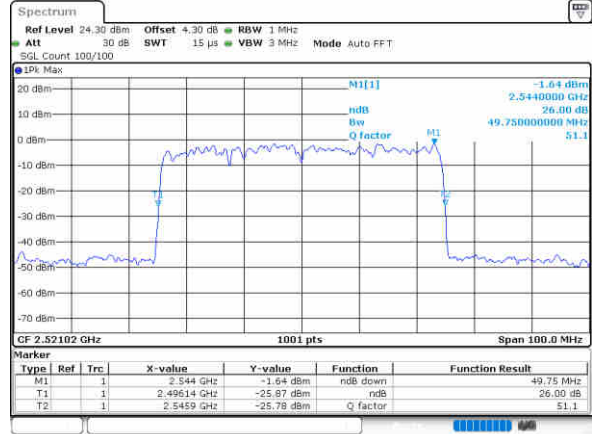
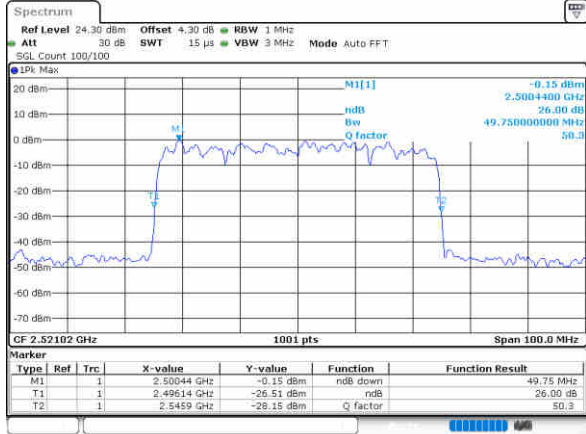
FR1 n41 / 50MHz / CP-OFDM

QPSK

16QAM

Lowerst Channel

Lowerst Channel



Date: 30.MAR.2021 17:21:24

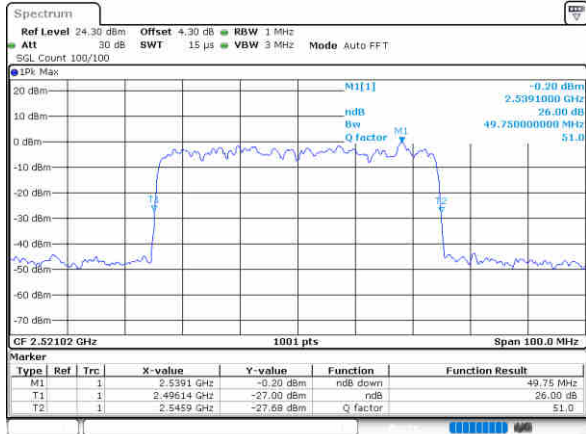
Date: 30.MAR.2021 17:21:03

64QAM

256QAM

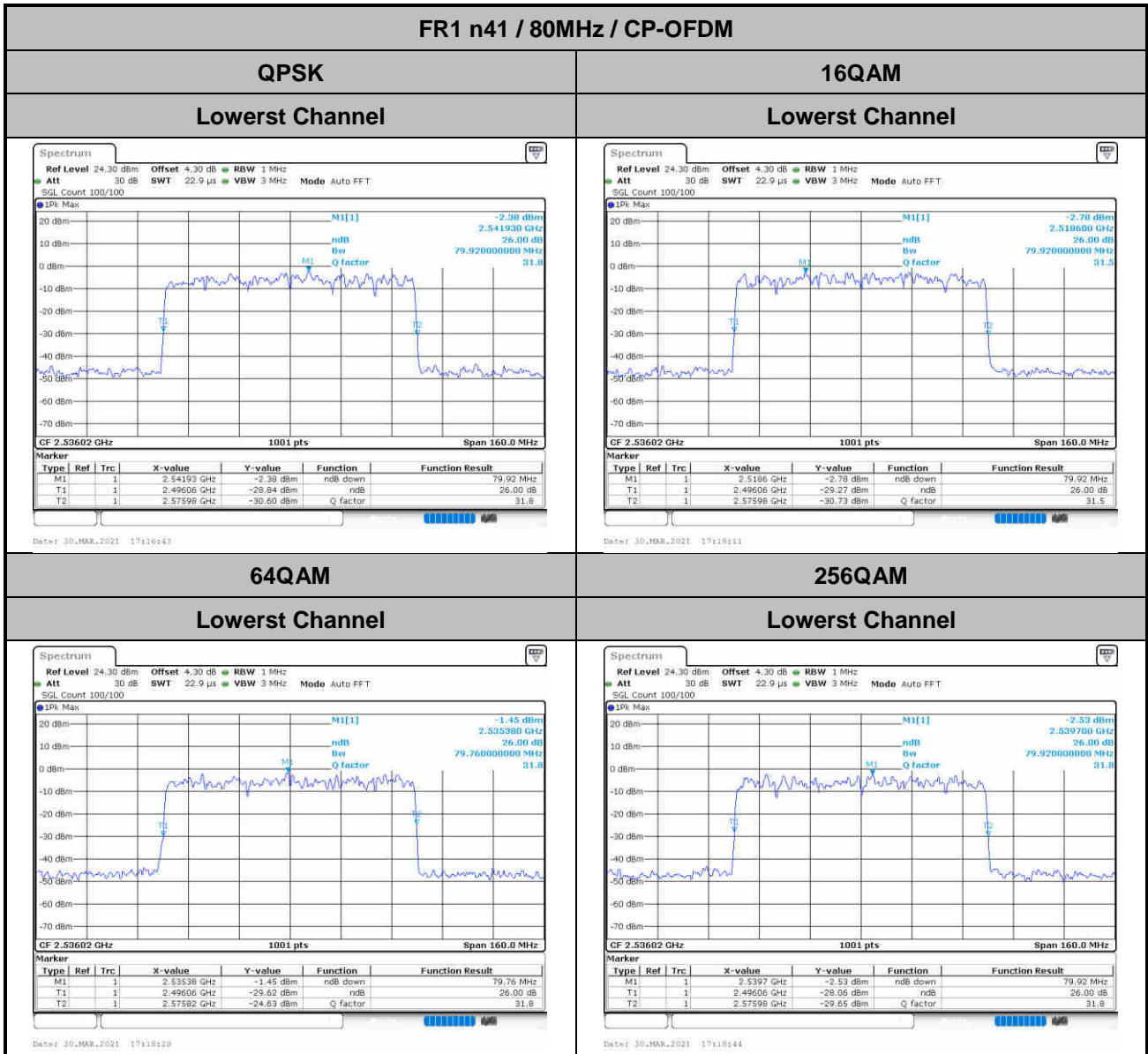
Lowerst Channel

Lowerst Channel



Date: 30.MAR.2021 17:20:34

Date: 30.MAR.2021 17:19:37





Occupied Bandwidth

Mode	FR1 n41 : OBW(MHz) / CP-OFDM							
BW	10MHz	10MHz	10MHz	10MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Lowerst CH	8.57	8.57	8.57	8.53				

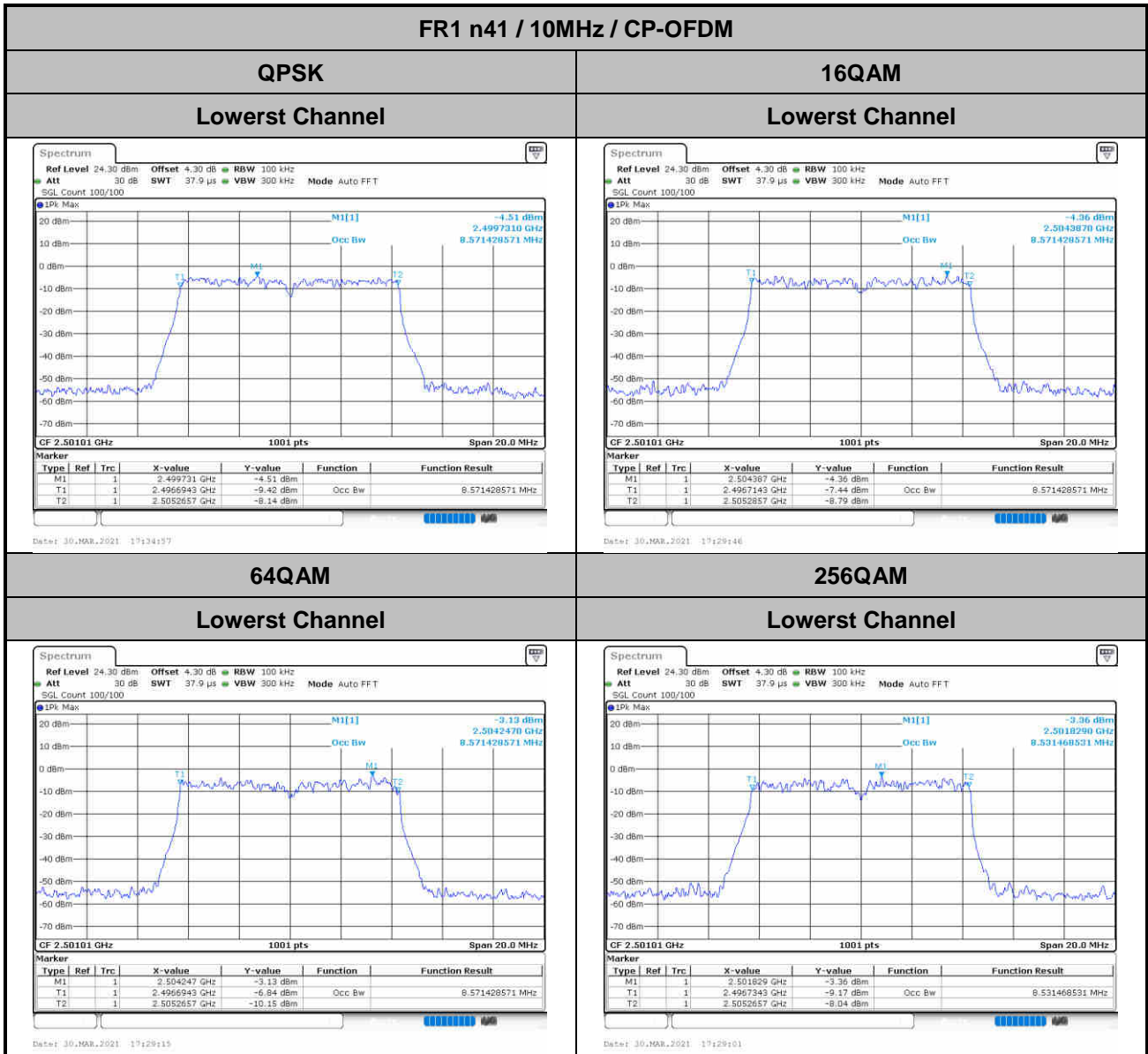
Mode	FR1 n41 : OBW(MHz) / CP-OFDM							
BW	15MHz	15MHz	15MHz	15MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Lowerst CH	13.58	13.49	13.55	13.52				

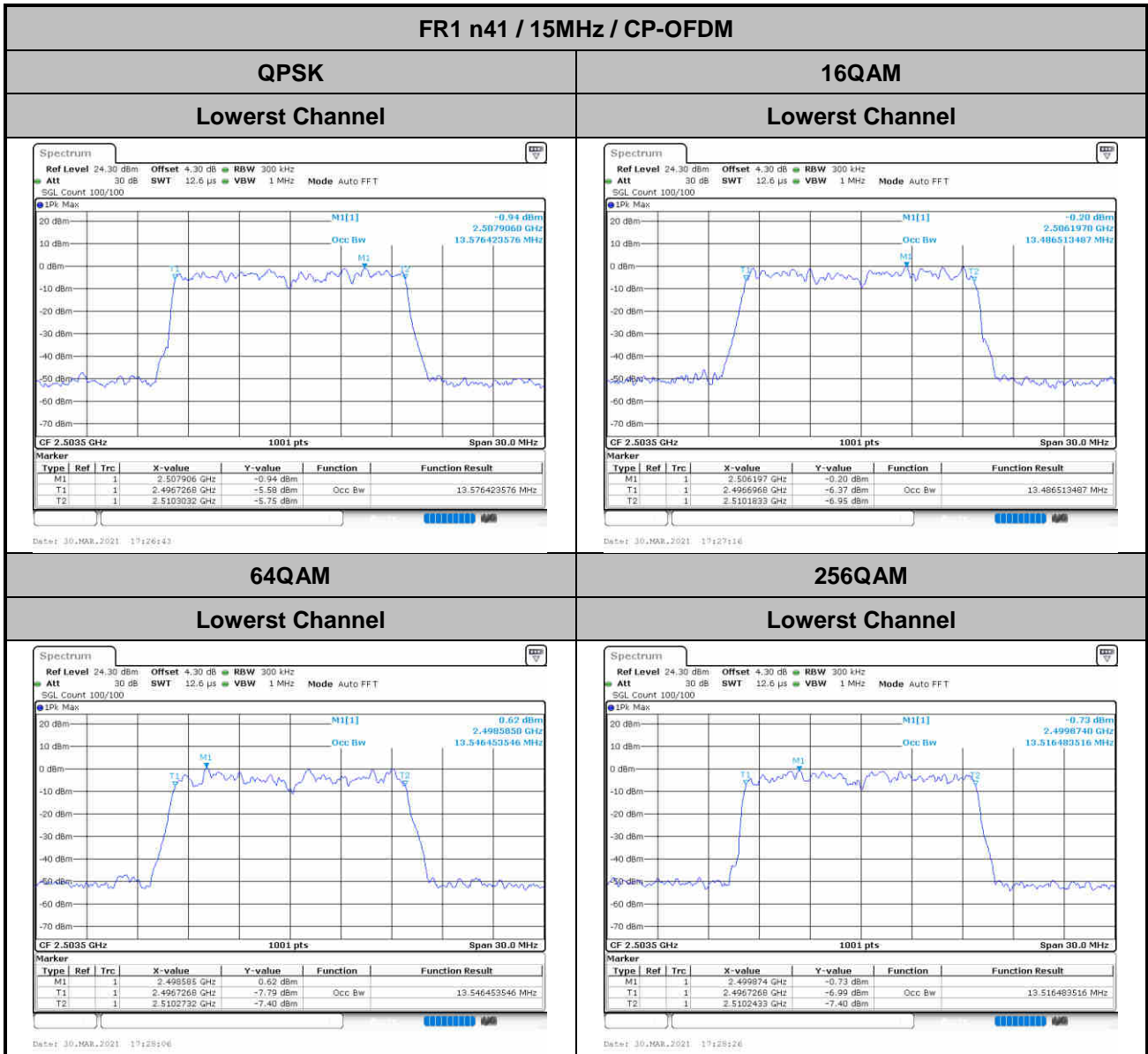
Mode	FR1 n41 : OBW(MHz) / CP-OFDM							
BW	30MHz	30MHz	30MHz	30MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Lowerst CH	27.81	27.87	27.75	27.75				

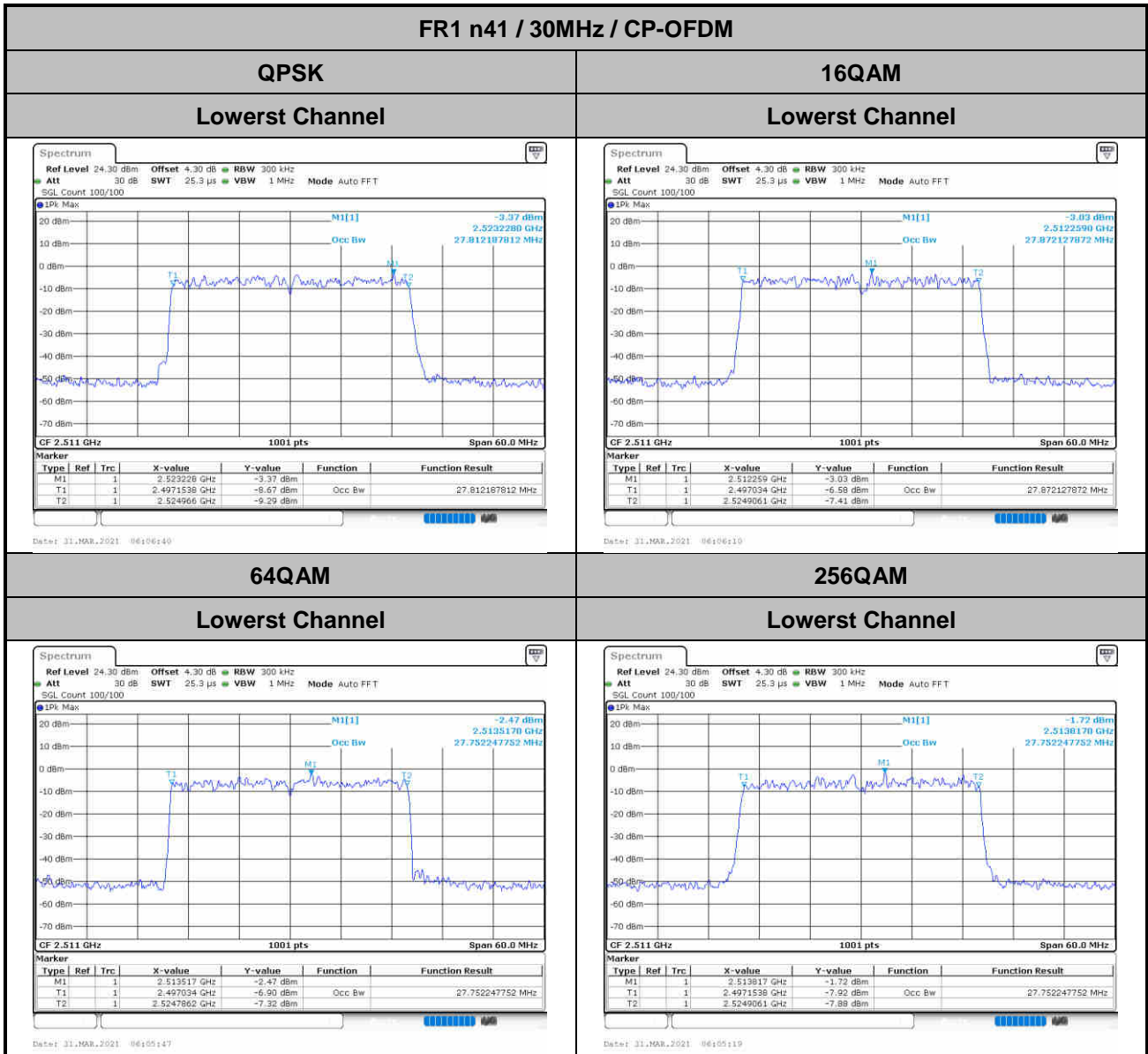
Mode	FR1 n41 : OBW(MHz) / CP-OFDM							
BW	40MHz	40MHz	40MHz	40MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Lowerst CH	38.12	37.80	37.88	37.72				

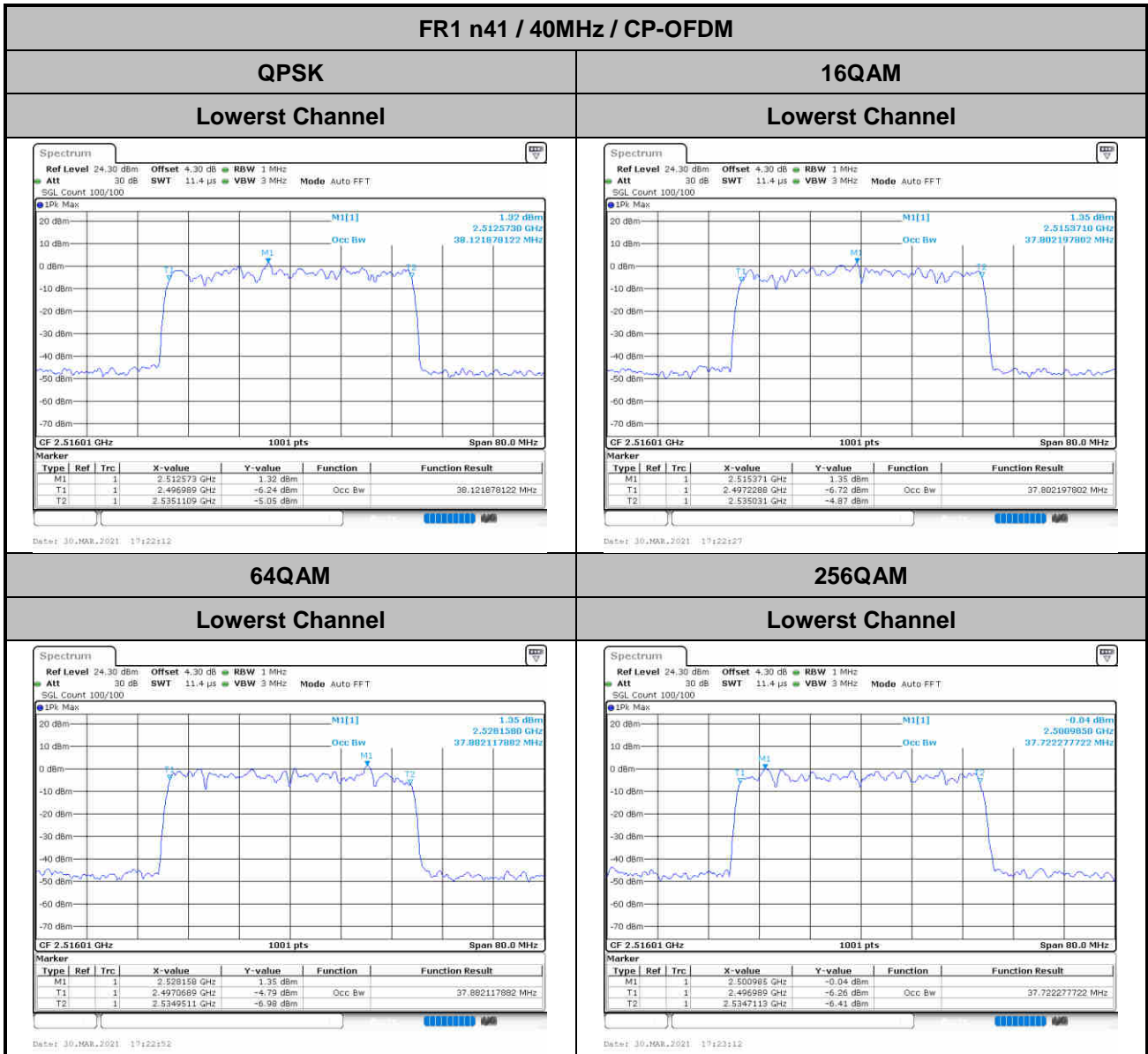
Mode	FR1 n41 : OBW(MHz) / CP-OFDM							
BW	50MHz	50MHz	50MHz	50MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Lowerst CH	47.65	47.35	47.65	47.85				

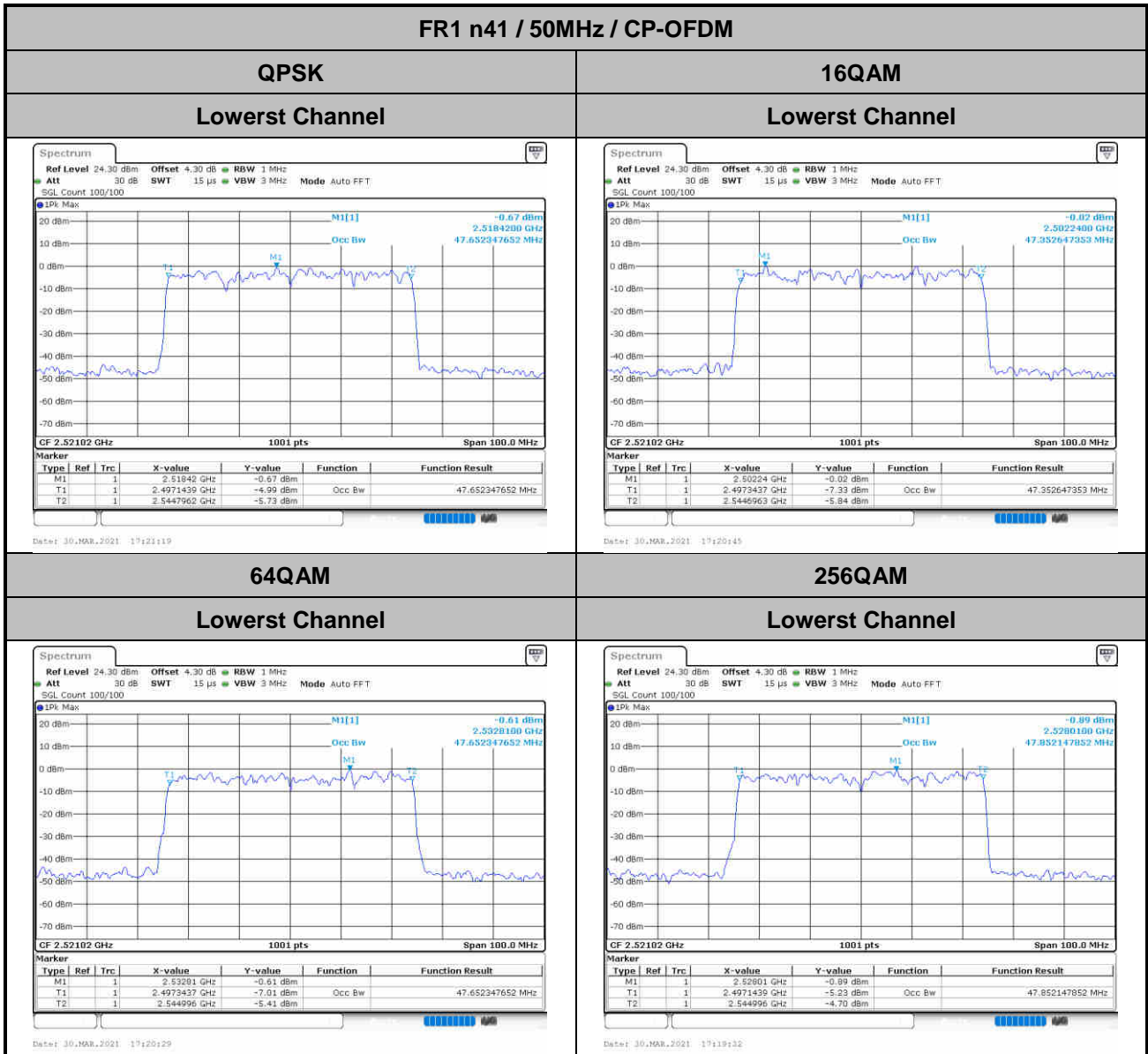
Mode	FR1 n41 : OBW(MHz) / CP-OFDM							
BW	80MHz	80MHz	80MHz	80MHz				
Mod.	QPSK	16QAM	64QAM	256QAM				
Lowerst CH	77.36	77.52	77.20	77.36				

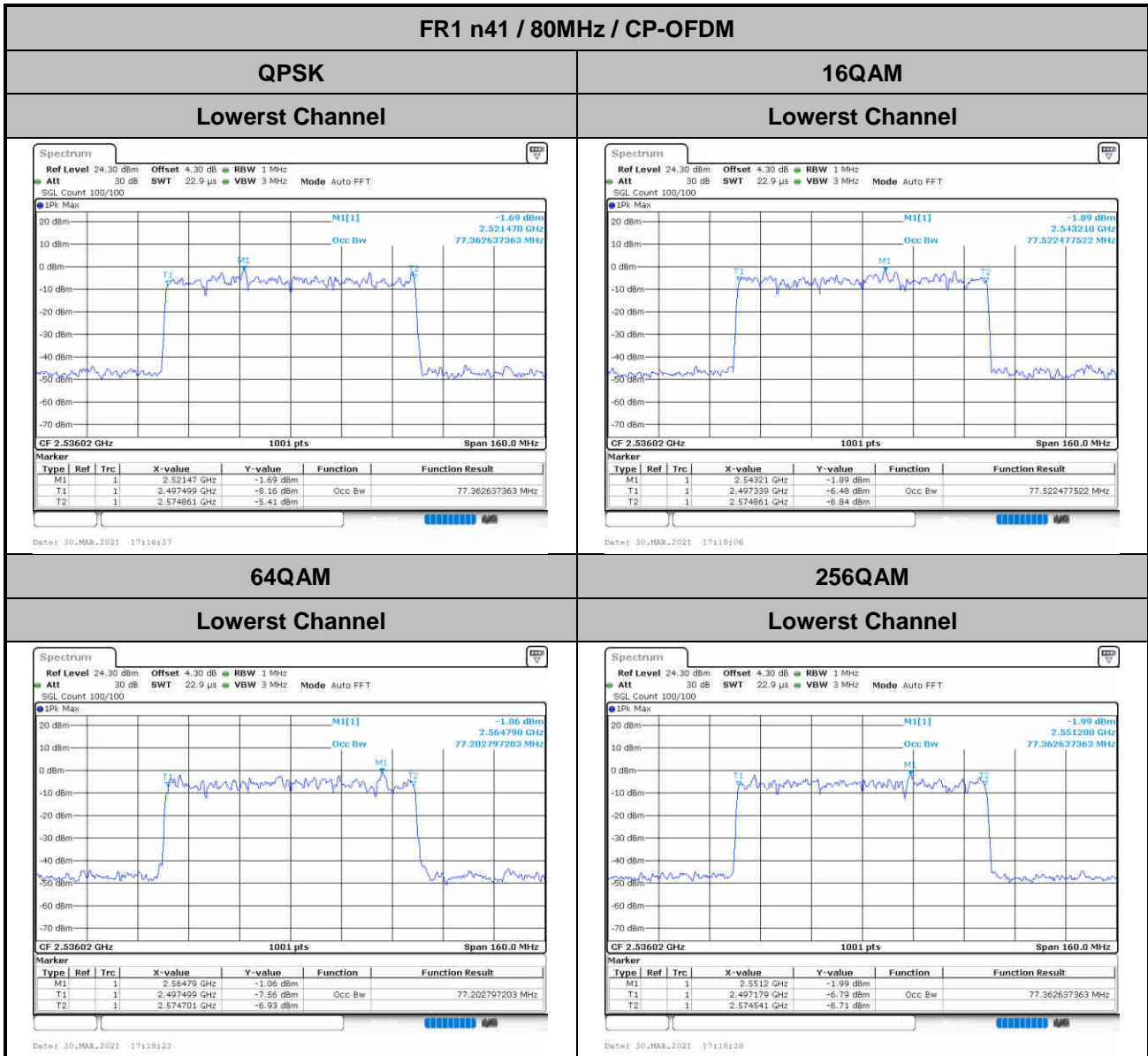






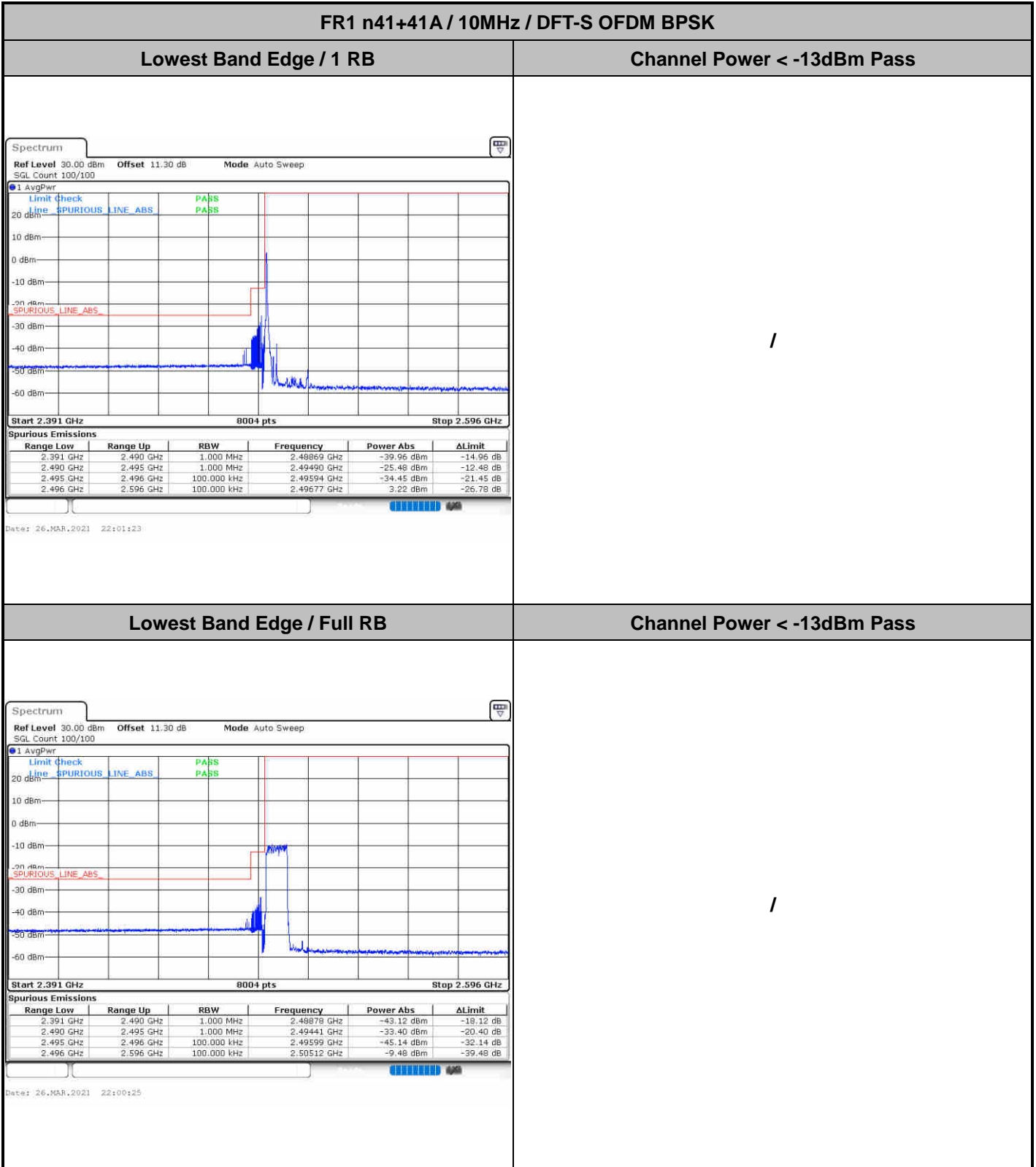








Conducted Band Edge

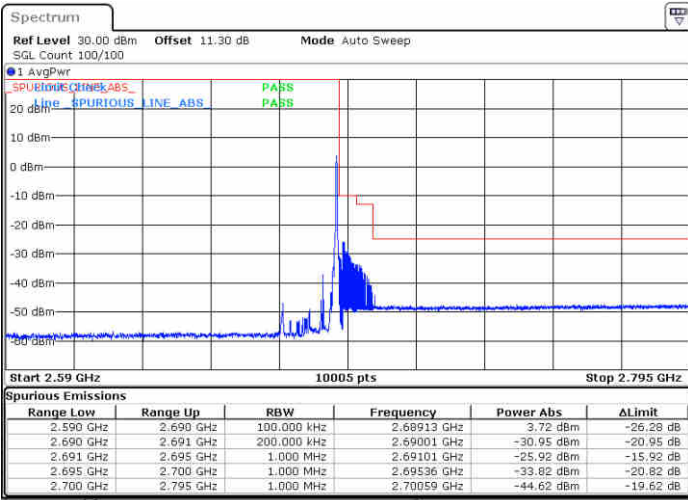




FR1 n41+41A / 10MHz / DFT-S OFDM BPSK

Highest Band Edge / 1 RB

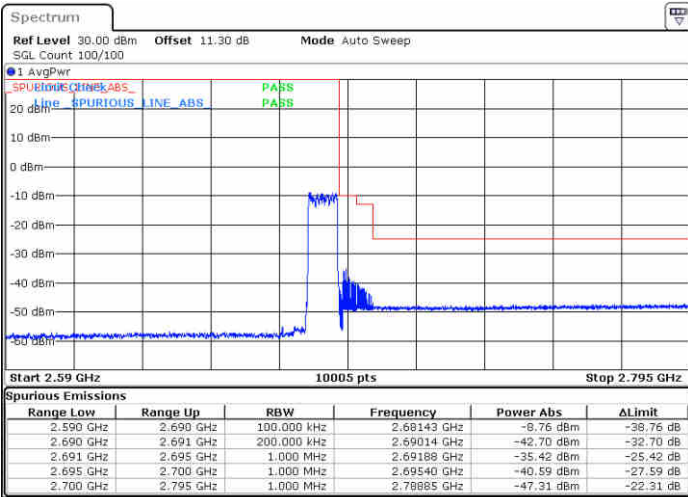
Channel Power < -13dBm Pass



Date: 26.MAR.2021 22:19:36

Highest Band Edge / Full RB

Channel Power < -13dBm Pass



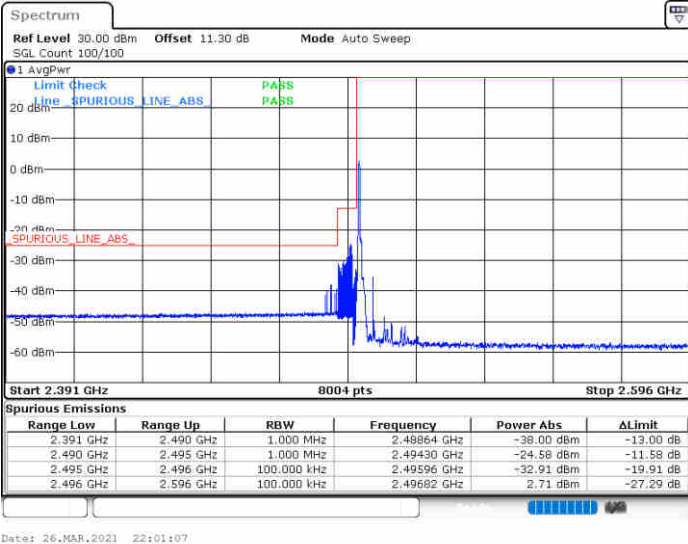
Date: 26.MAR.2021 22:19:11



FR1 n41+41A / 10MHz / DFT-S OFDM QPSK

Lowest Band Edge / 1 RB

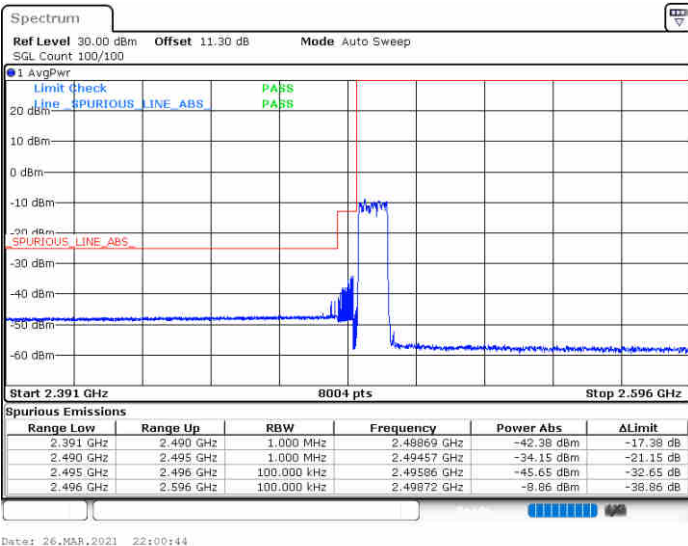
Channel Power < -13dBm Pass



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Lowest Band Edge / Full RB

Channel Power < -13dBm Pass



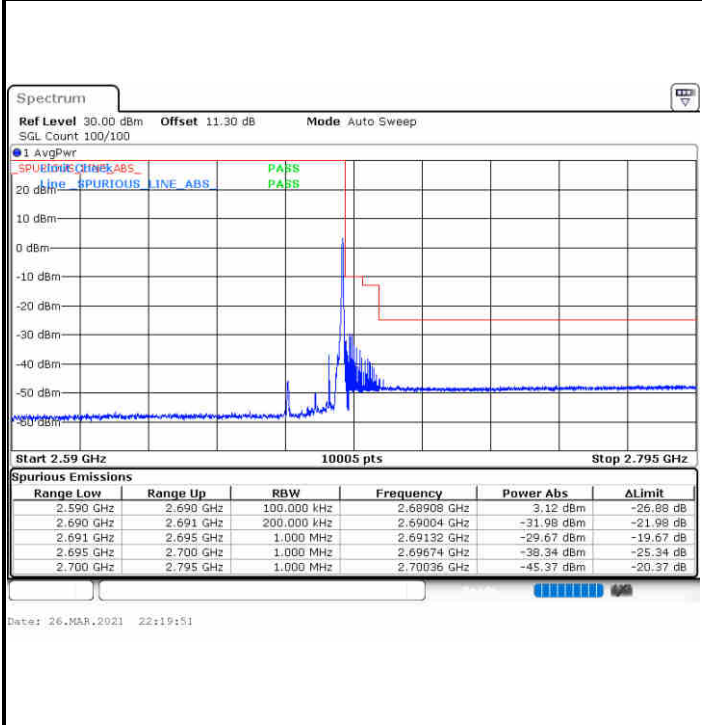
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FR1 n41+41A / 10MHz / DFT-S OFDM QPSK

Highest Band Edge / 1 RB

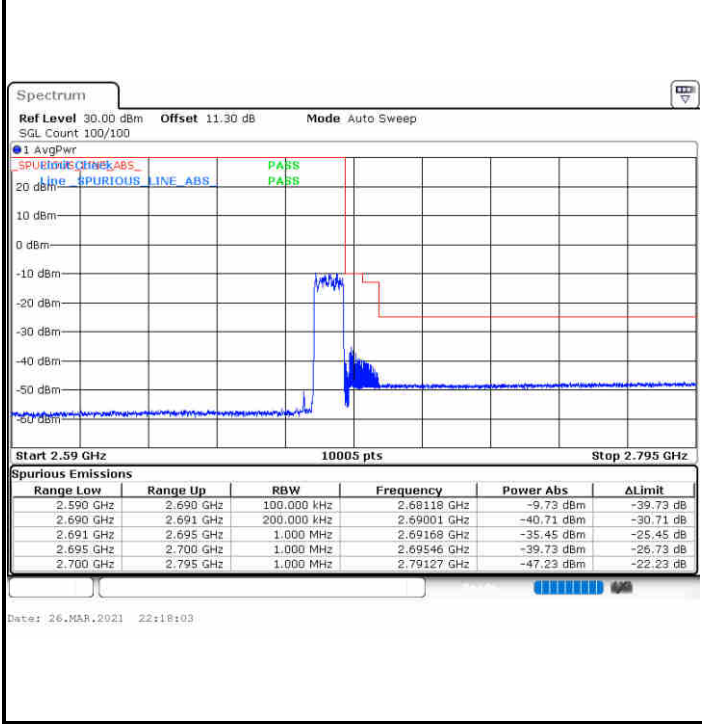
Channel Power < -13dBm Pass



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Highest Band Edge / Full RB

Channel Power < -13dBm Pass



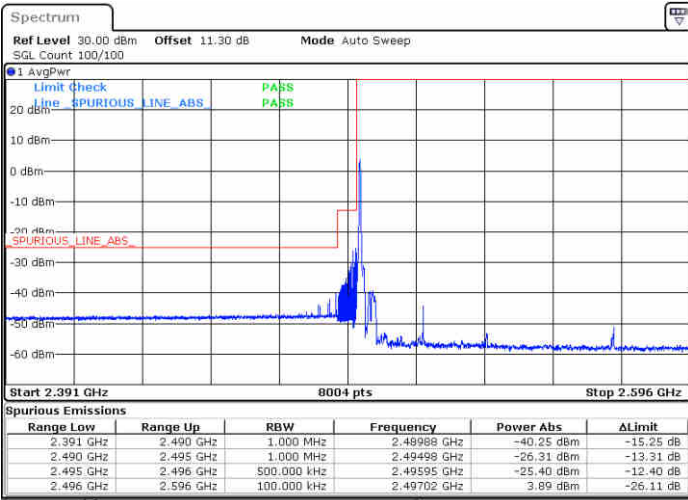
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FR1 n41+41A / 40MHz / DFT-S OFDM BPSK

Lowest Band Edge / 1 RB

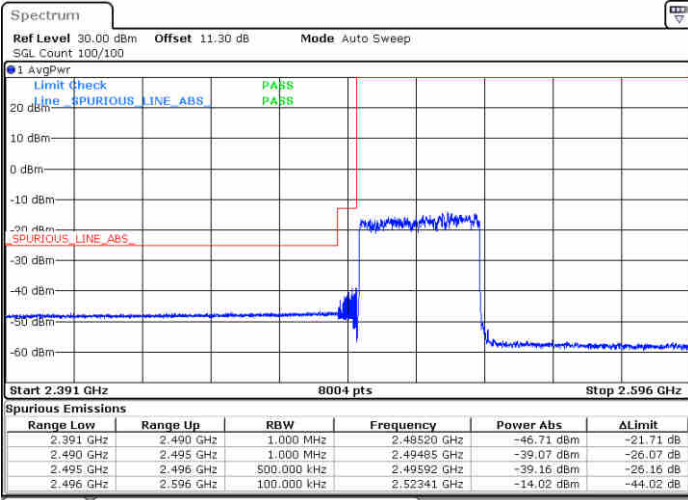
Channel Power < -13dBm Pass



Date: 26.MAR.2021 21:59:10

Lowest Band Edge / Full RB

Channel Power < -13dBm Pass



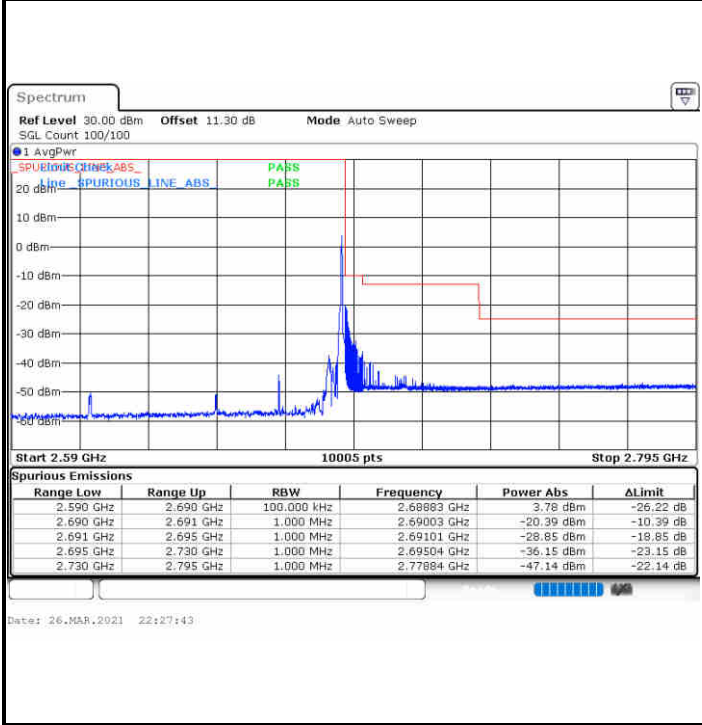
Date: 26.MAR.2021 21:54:15



FR1 n41+41A / 40MHz / DFT-S OFDM BPSK

Highest Band Edge / 1 RB

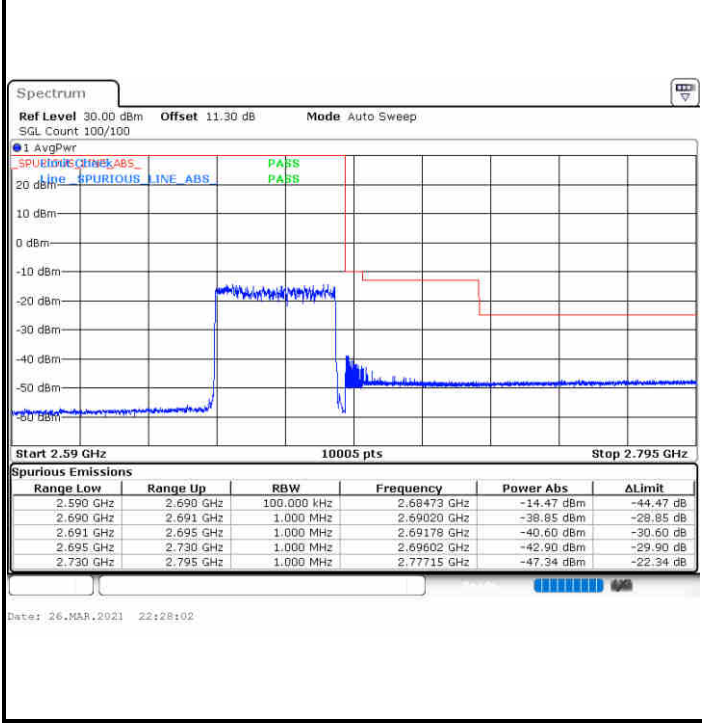
Channel Power < -13dBm Pass



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Highest Band Edge / Full RB

Channel Power < -13dBm Pass



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