

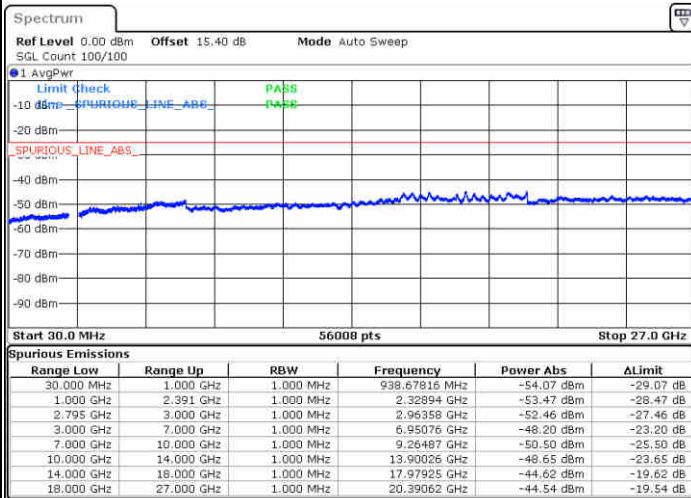


Conducted Spurious Emission

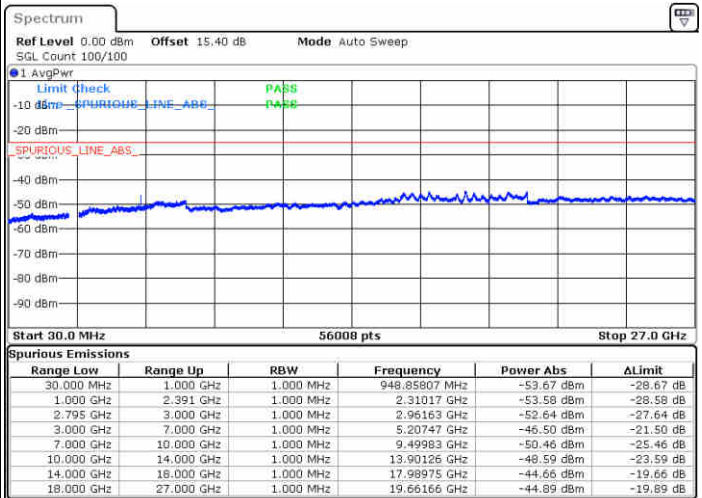
FR1 n41+2A / 20MHz / DFT-S OFDM / BPSK

Lowest Channel / 1RB

Middle Channel / 1RB

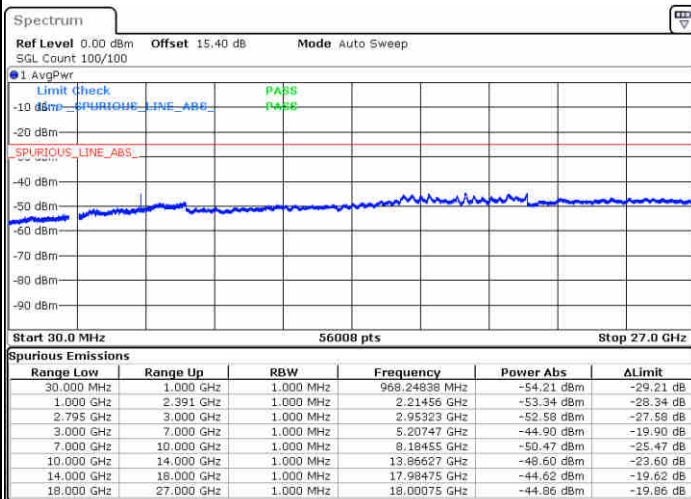


Date: 2.AUG.2020 12:20:04



Date: 2.AUG.2020 12:24:45

Highest Channel / 1RB



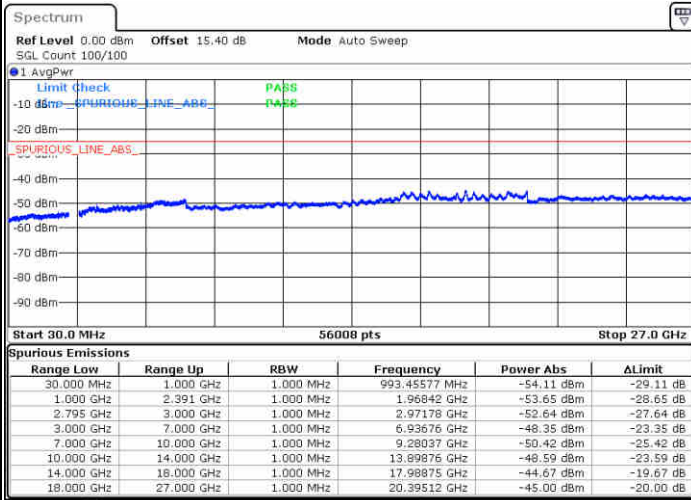
Date: 2.AUG.2020 12:26:11



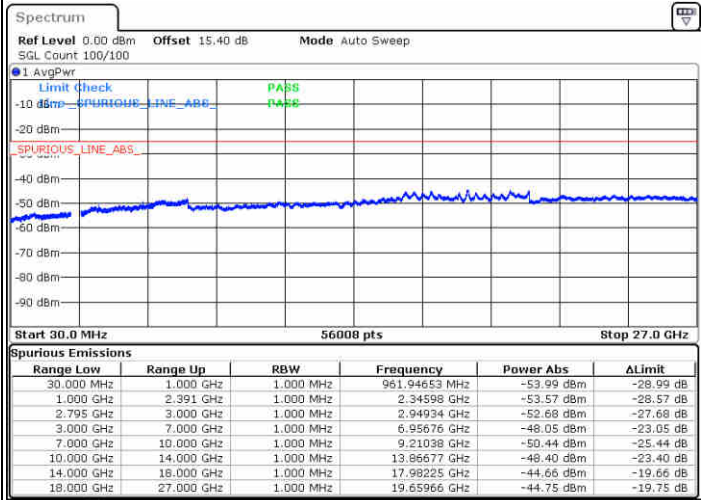
FR1 n41+2A / 20MHz / DFT-S OFDM / QPSK

Lowest Channel / 1RB

Middle Channel / 1RB

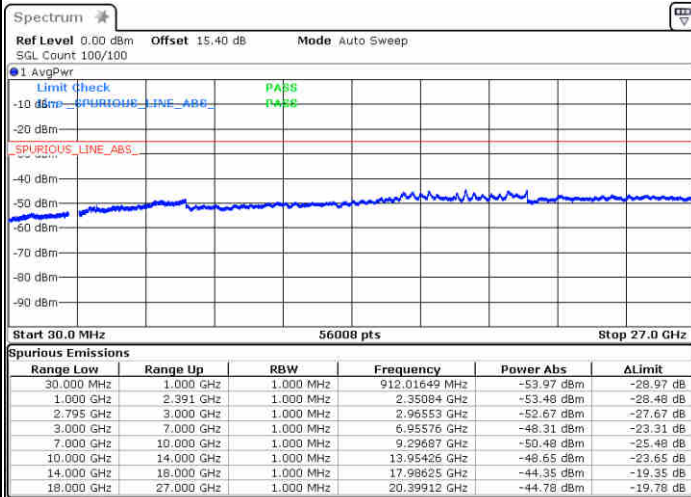


Date: 2.AUG.2020 12:21:15



Date: 2.AUG.2020 12:22:41

Highest Channel / 1RB



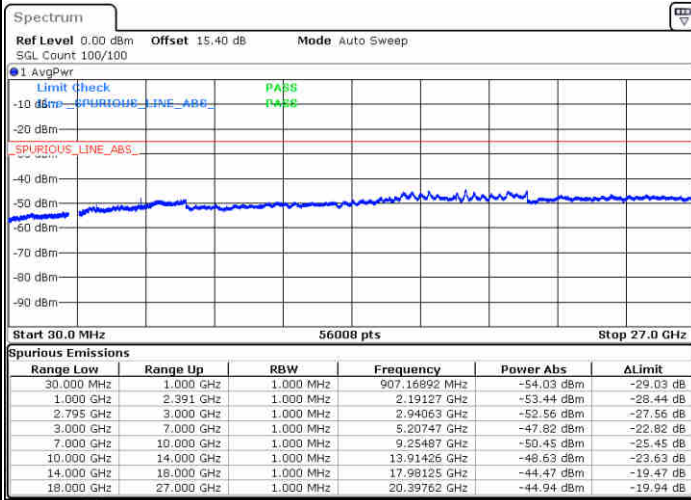
Date: 4.AUG.2020 09:59:12



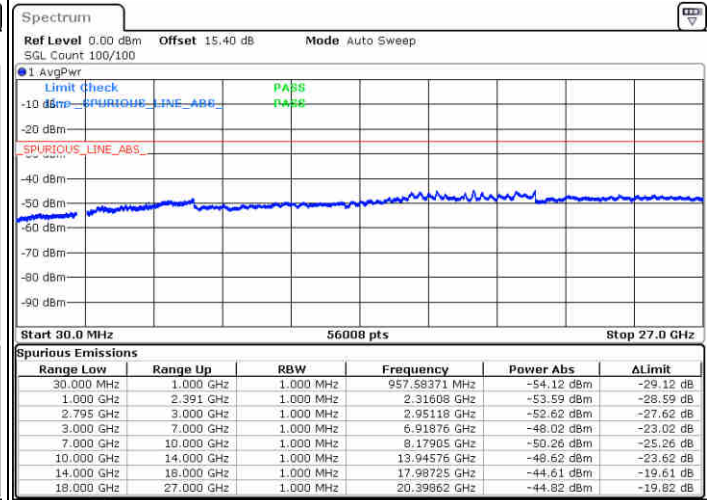
FR1 n41+2A / 60MHz / DFT-S OFDM / BPSK

Lowest Channel / 1RB

Middle Channel / 1RB

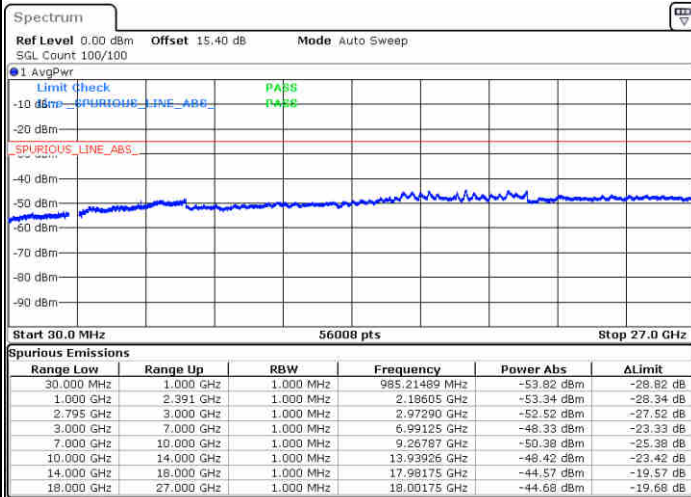


Date: 2.AUG.2020 12:06:38



Date: 2.AUG.2020 12:12:08

Highest Channel / 1RB



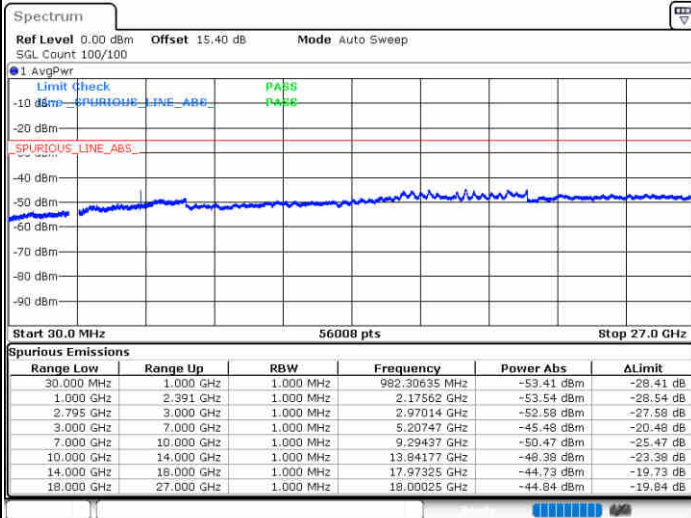
Date: 2.AUG.2020 12:13:16



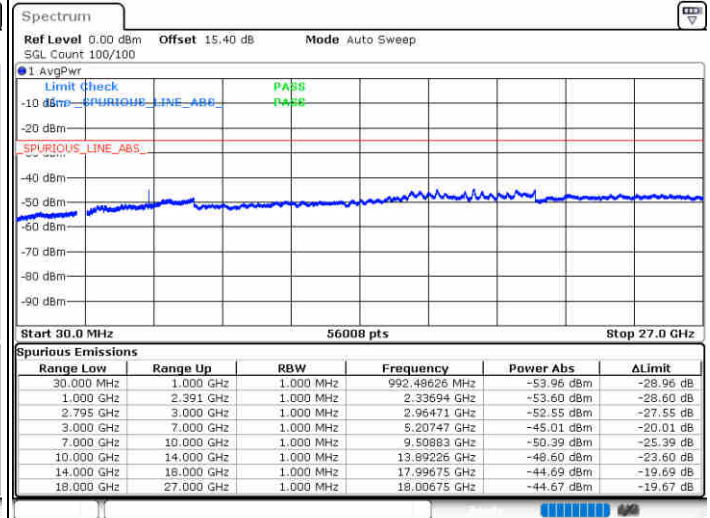
FR1 n41+2A / 60MHz / DFT-S OFDM / QPSK

Lowest Channel / 1RB

Middle Channel / 1RB

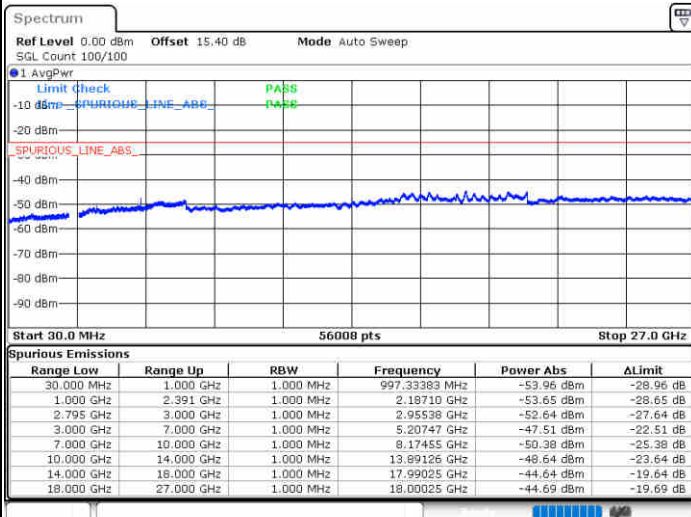


Date: 2.AUG.2020 12:08:33



Date: 2.AUG.2020 12:09:44

Highest Channel / 1RB

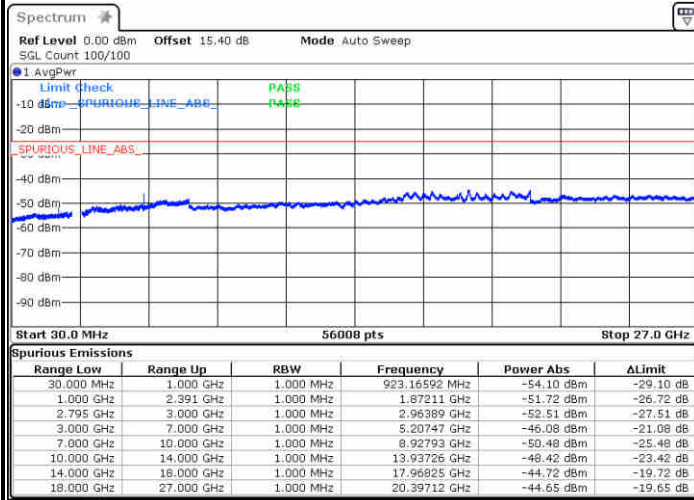


Date: 2.AUG.2020 12:16:55



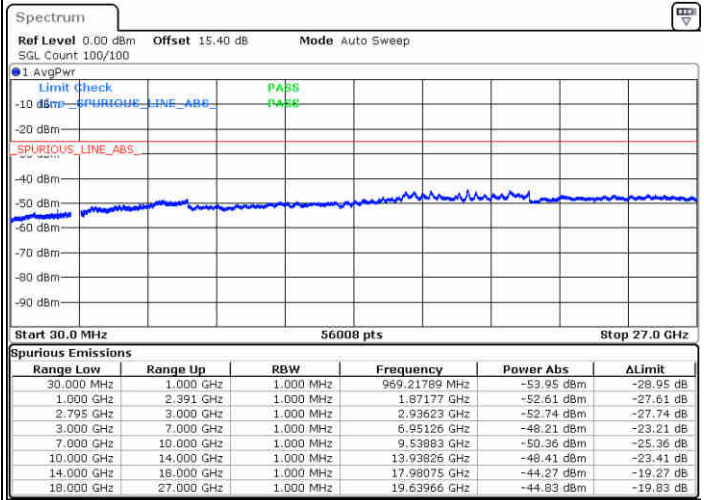
FR1 n41+2A / 100MHz / DFT-S OFDM / BPSK

Lowest Channel / 1RB



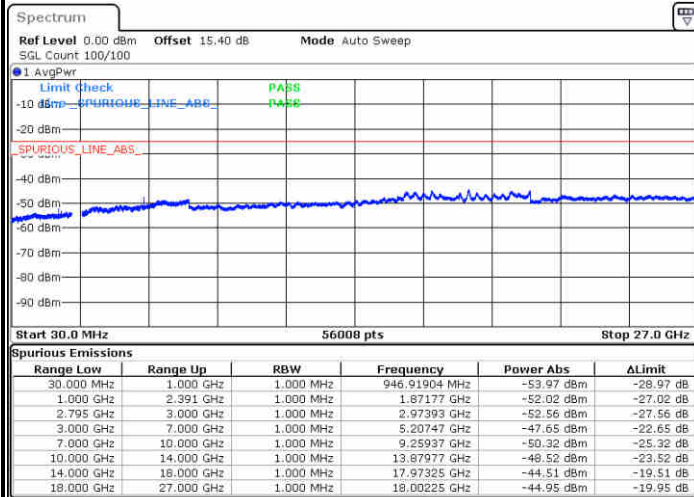
Date: 2.AUG.2020 11:29:28

Middle Channel / 1RB



Date: 2.AUG.2020 11:58:13

Highest Channel / 1RB

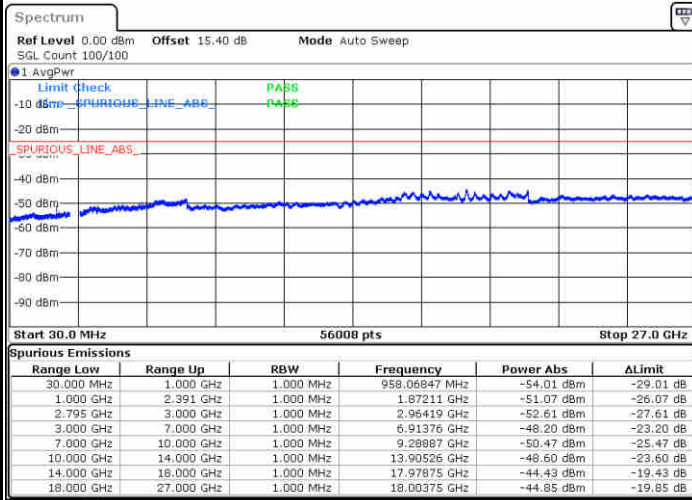


Date: 2.AUG.2020 12:00:32



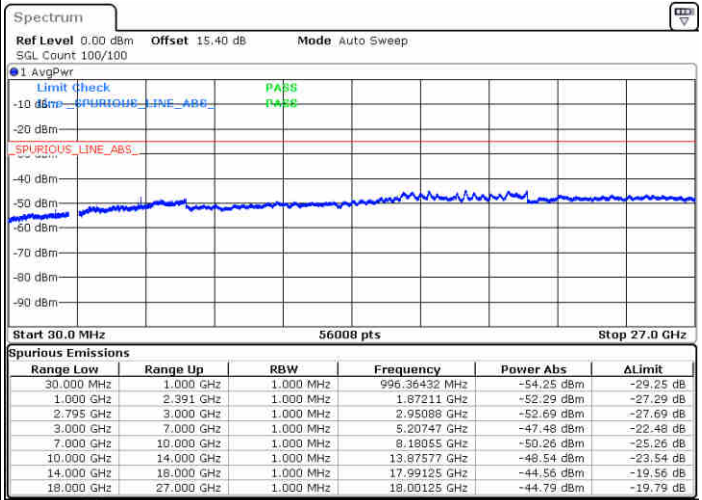
FR1 n41+2A / 100MHz / DFT-S OFDM / QPSK

Lowest Channel / 1RB



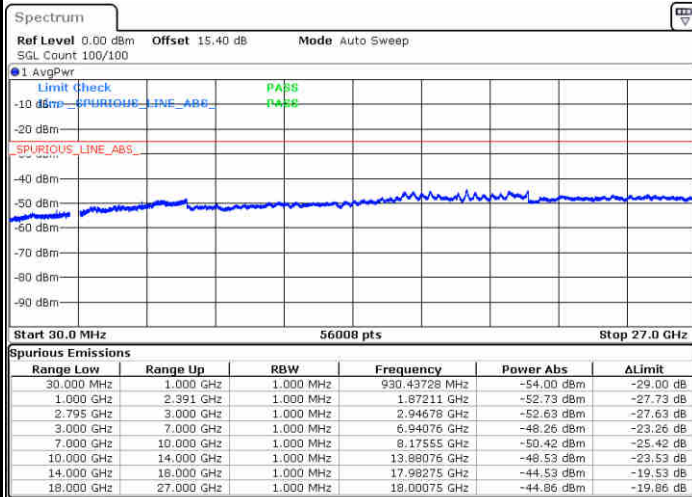
Date: 2.AUG.2020 11:32:07

Middle Channel / 1RB



Date: 2.AUG.2020 11:52:57

Highest Channel / 1RB



Date: 2.AUG.2020 12:02:24

**Frequency Stability**

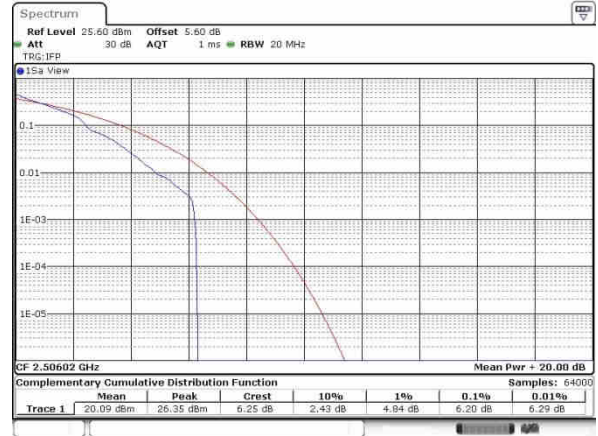
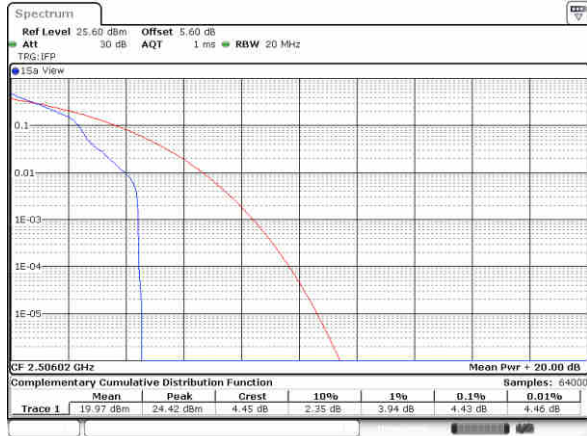
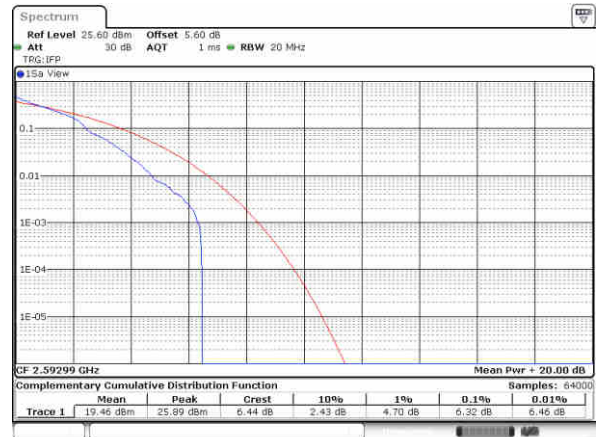
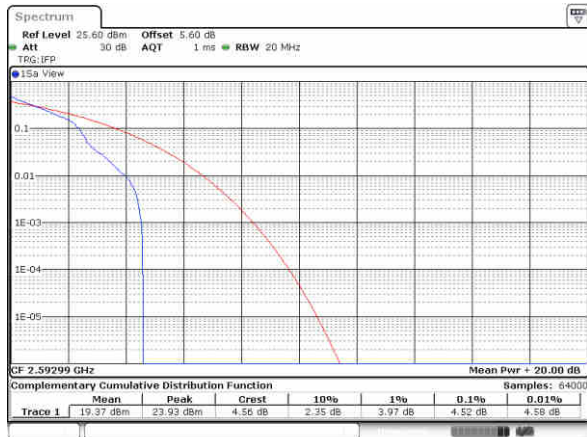
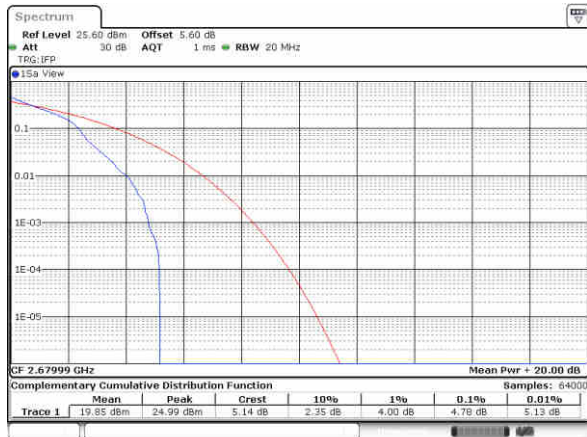
Test Conditions		NR n41 (BPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 20MHz	Within Band
		Deviation (ppm)	Result
50	Normal Voltage	0.0005	PASS
40	Normal Voltage	0.0012	
30	Normal Voltage	0.0013	
20(Ref.)	Normal Voltage	0.0015	
10	Normal Voltage	0.0018	
0	Normal Voltage	0.0012	
-10	Normal Voltage	0.0017	
-20	Normal Voltage	0.0011	
-30	Normal Voltage	0.0028	
20	Maximum Voltage	0.0025	
20	Normal Voltage	0.0012	
20	Battery End Point	0.0015	



SA

Peak-to-Average Ratio

Mode	FR1 n41 / 20MHz / 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	4.43	3.62	6.2	5.16	PASS
Middle CH	4.52	3.59	6.32	5.07	
Highest CH	4.78	3.28	5.97	4.9	

FR1 n41 / 20MHz / DFT-S OFDM
PI/2 BPSK
QPSK
Lowest Channel / 1RB
Lowest Channel / 1RB

Middle Channel / 1 RB
Middle Channel / 1 RB

Highest Channel / 1 RB
Highest Channel / 1 RB




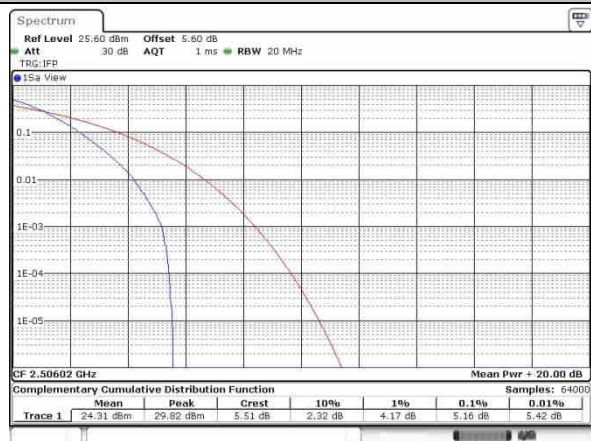
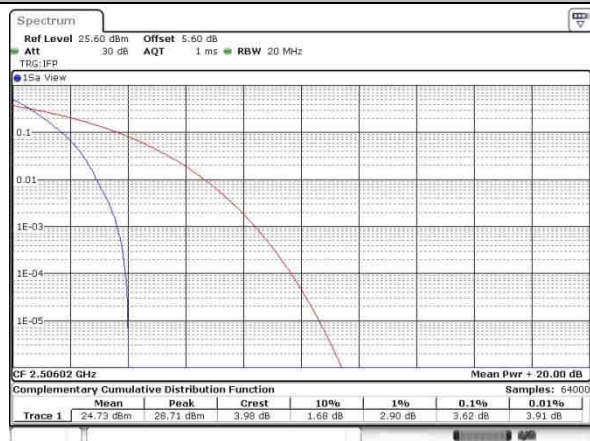
FR1 n41 / 20MHz / DFT-S OFDM

PI/2 BPSK

QPSK

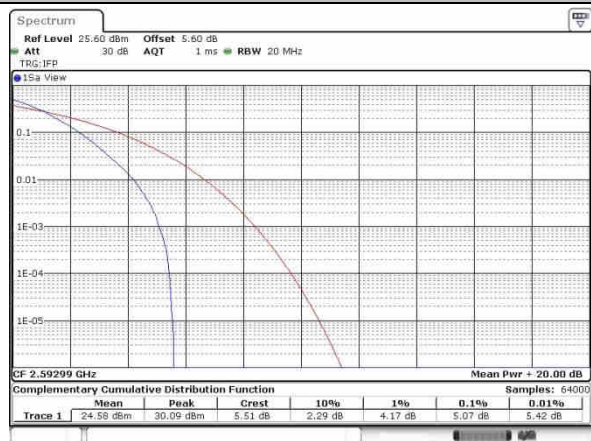
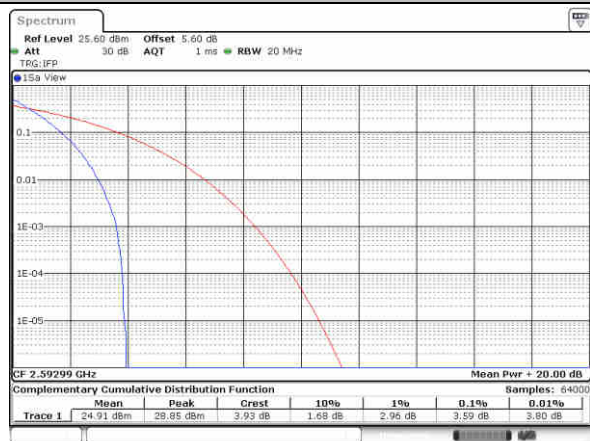
Lowest Channel / Full RB

Lowest Channel / Full RB



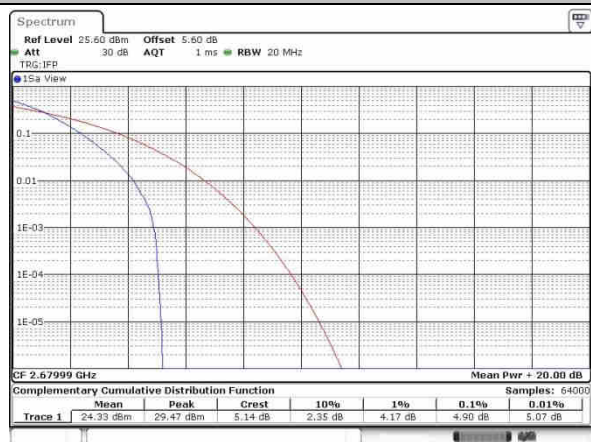
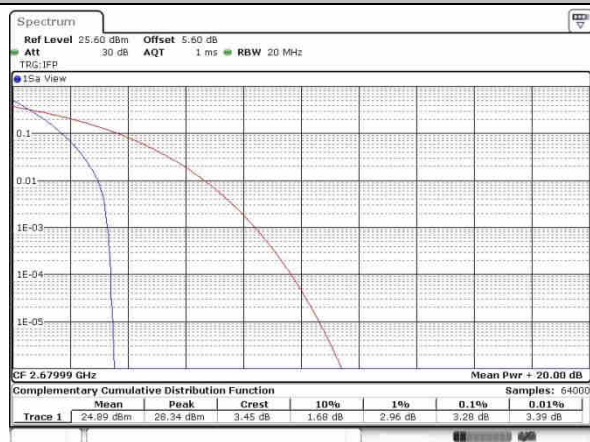
Middle Channel / Full RB

Middle Channel / Full RB



Highest Channel / Full RB

Highest Channel / Full RB



**26dB Bandwidth**

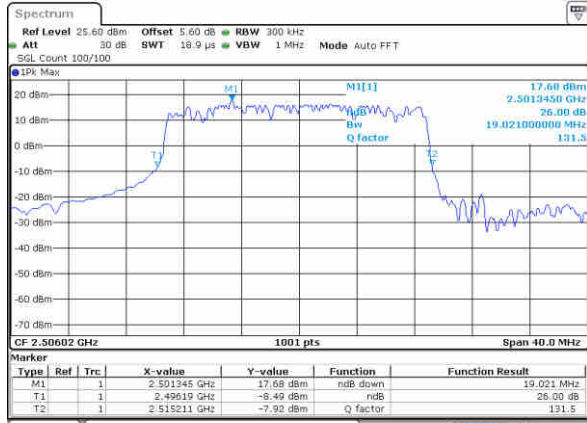
Mode	FR1 n41 : 26dB BW(MHz) / DFT-S OFDM							
BW	20MHz	20MHz	60MHz	60MHz	100MHz	100MHz		
Mod.	PI/2 BPSK	QPSK	PI/2 BPSK	QPSK	PI/2 BPSK	QPSK		
Lowest CH	19.02	18.74	60.3	60.66	99.5	99.3		
Middle CH	19.02	18.66	60.54	60.54	99.3	99.3		
Highest CH	18.66	18.98	60.3	60.78	99.3	99.5		



FR1 n41 / 20MHz / DFT-S OFDM

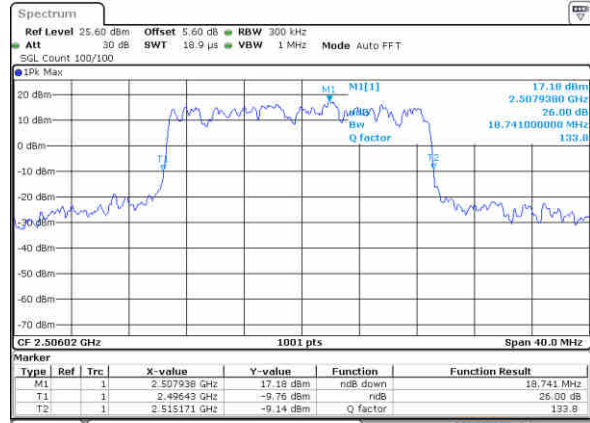
PI/2 BPSK

Lowest Channel

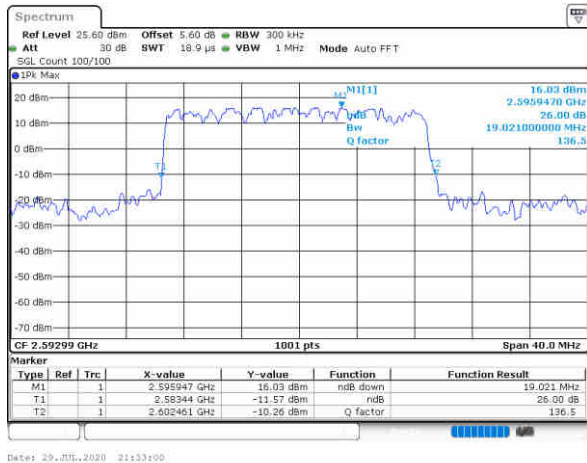


QPSK

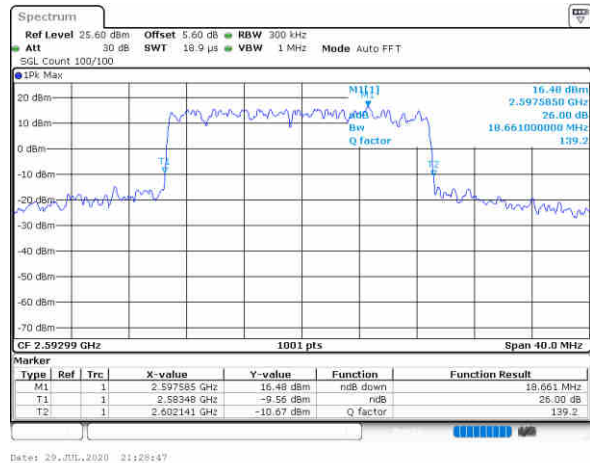
Lowest Channel



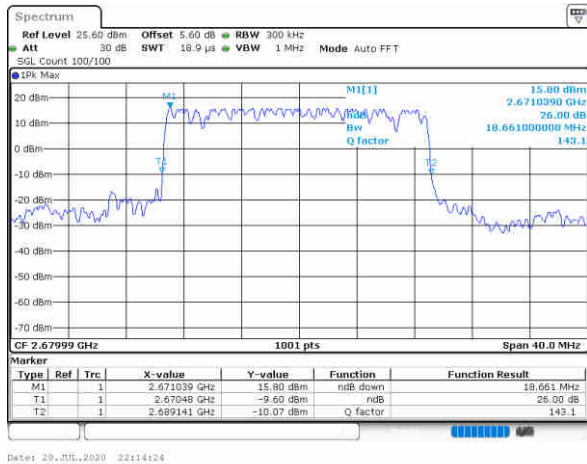
Middle Channel



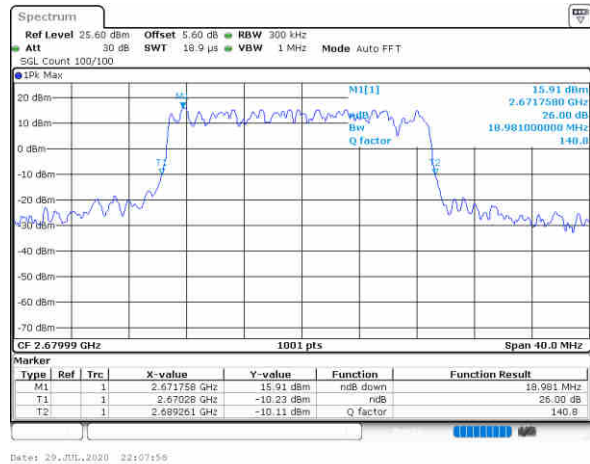
Middle Channel



Highest Channel



Highest Channel

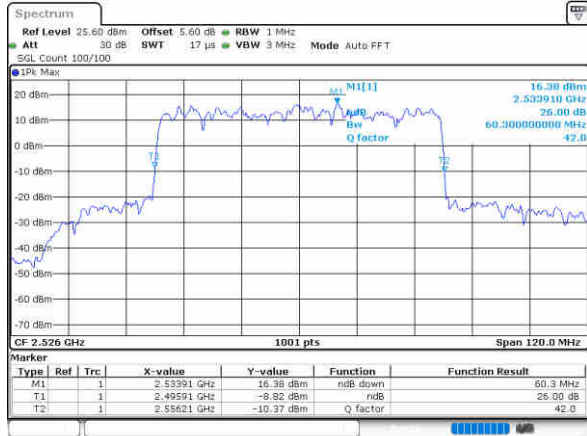




FR1 n41 / 60MHz / DFT-S OFDM

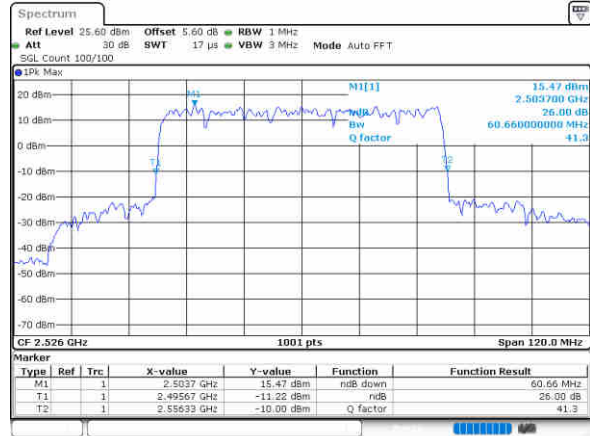
PI/2 BPSK

Lowest Channel

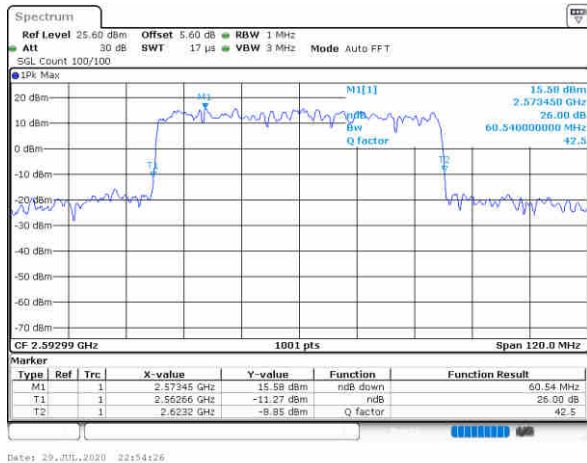


QPSK

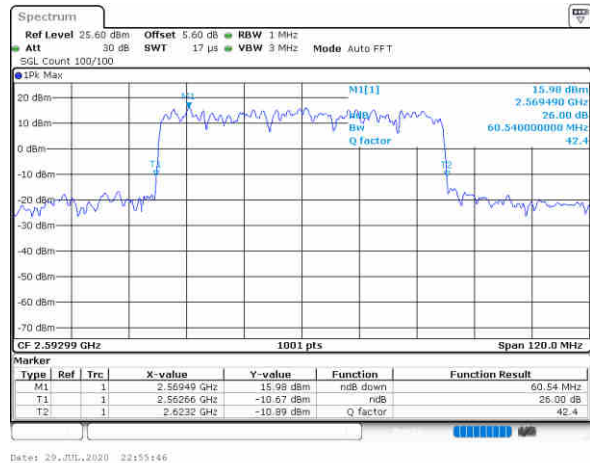
Lowest Channel



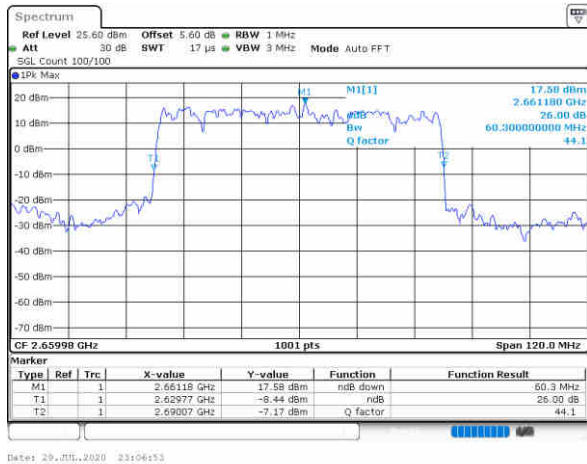
Middle Channel



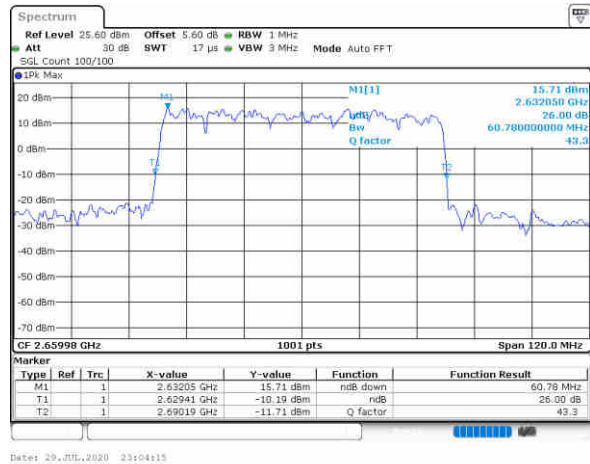
Middle Channel



Highest Channel



Highest Channel





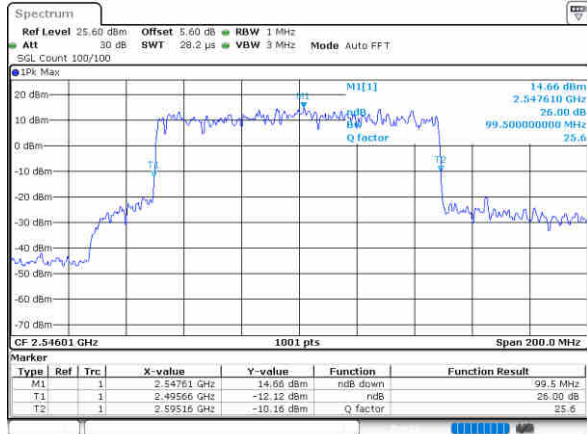
FR1 n41 / 100MHz / DFT-S OFDM

PI/2 BPSK

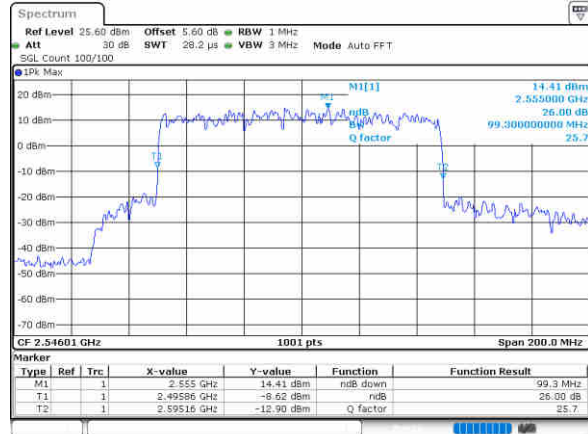
QPSK

Lowest Channel

Lowest Channel



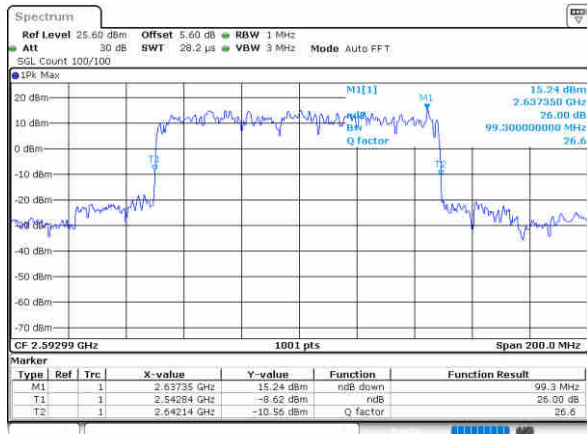
Date: 30_JUL_2020 00:13:29



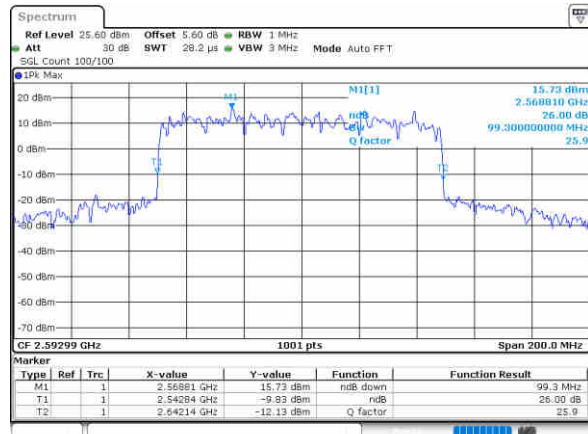
Date: 30_JUL_2020 00:13:48

Middle Channel

Middle Channel



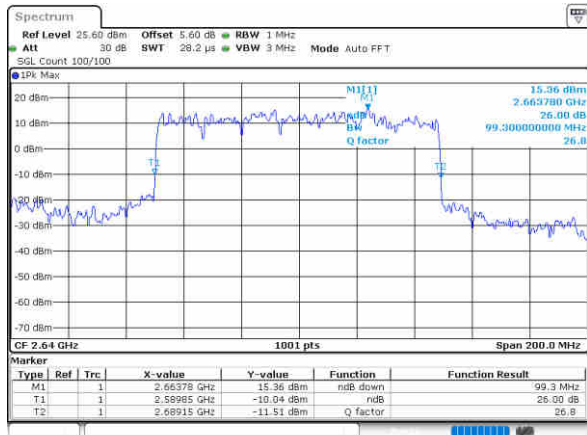
Date: 29_JUL_2020 23:27:49



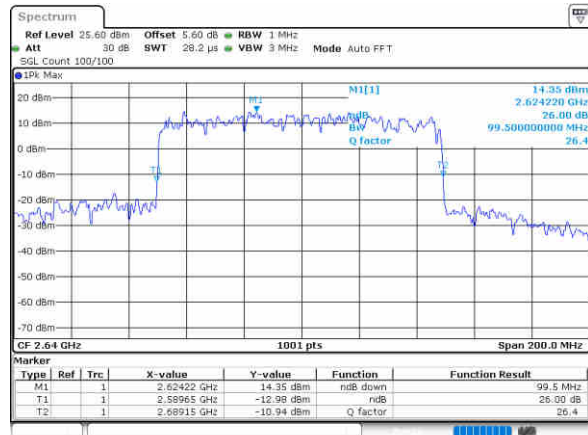
Date: 29_JUL_2020 23:29:29

Highest Channel

Highest Channel



Date: 30_JUL_2020 00:22:01



Date: 30_JUL_2020 00:23:22



Occupied Bandwidth

Mode	FR1 n41 : OB BW(MHz) / DFT-S OFDM							
BW	20MHz	20MHz	60MHz	60MHz	100MHz	100MHz		
Mod.	PI/2 BPSK	QPSK	PI/2 BPSK	QPSK	PI/2 BPSK	QPSK		
Lowest CH	17.86	17.86	58.02	57.78	96.1	96.3		
Middle CH	17.94	17.94	58.02	58.14	96.3	96.1		
Highest CH	17.74	17.9	57.78	58.02	96.3	96.3		



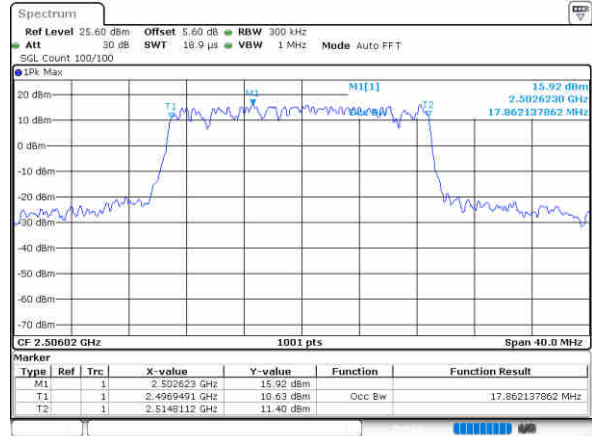
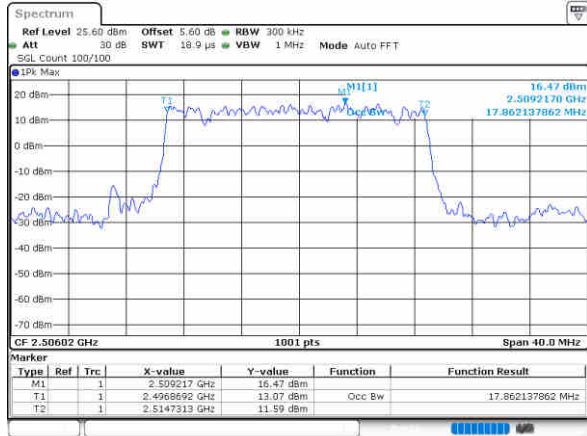
FR1 n41 / 20MHz / DFT-S OFDM

PI/2 BPSK

QPSK

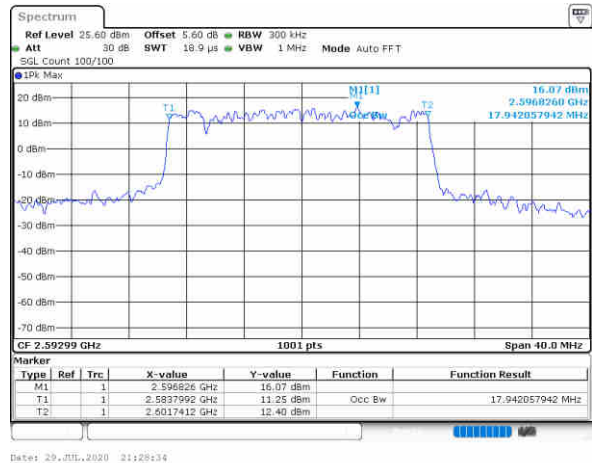
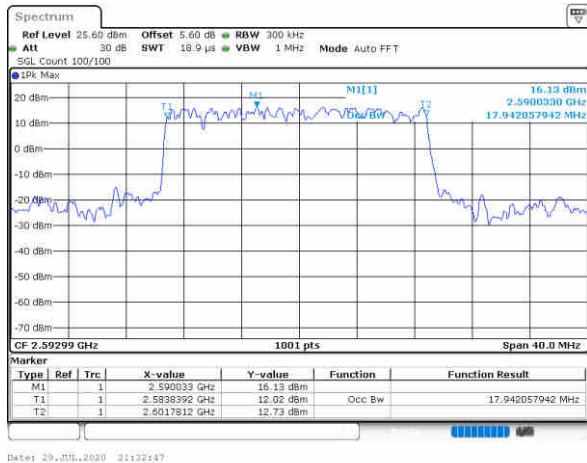
Lowest Channel

Lowest Channel



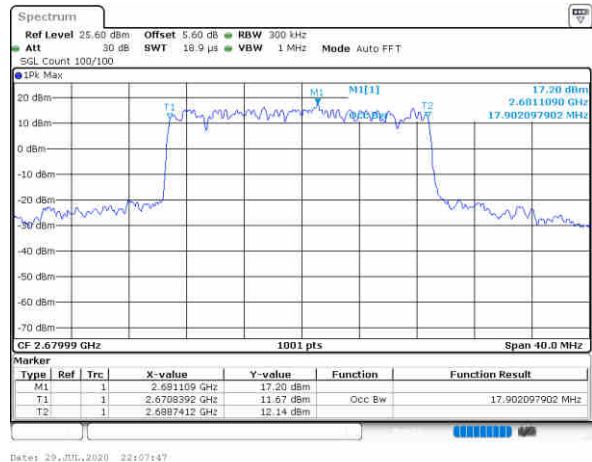
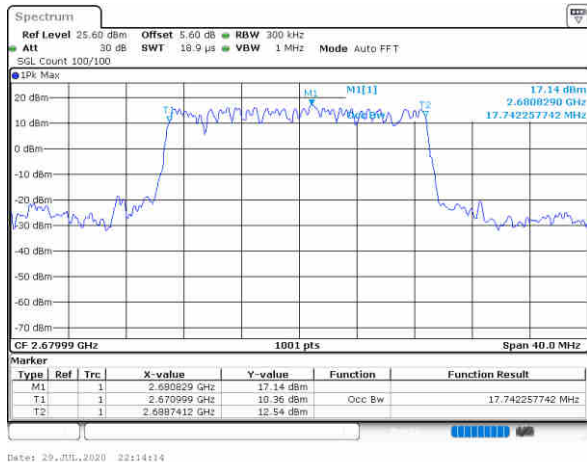
Middle Channel

Middle Channel



Highest Channel

Highest Channel





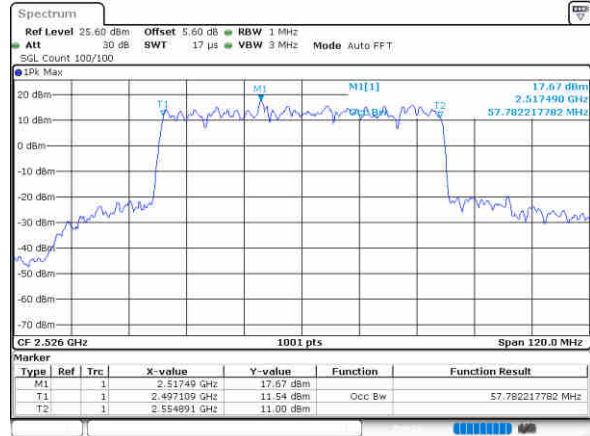
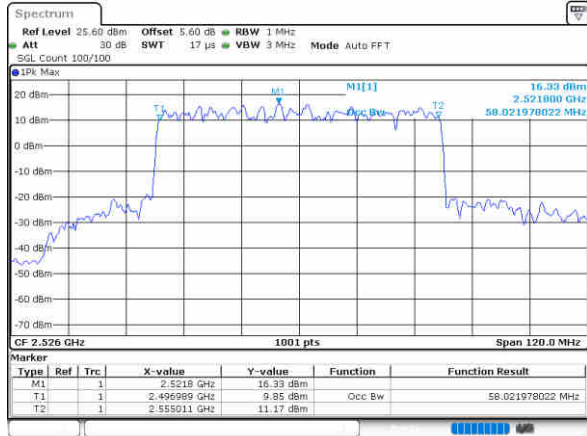
FR1 n41 / 60MHz / DFT-S OFDM

PI/2 BPSK

QPSK

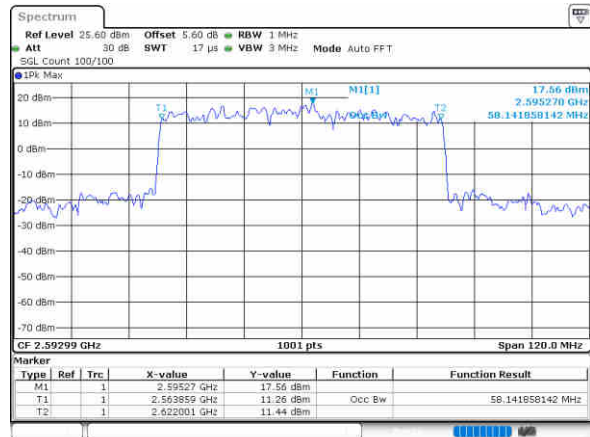
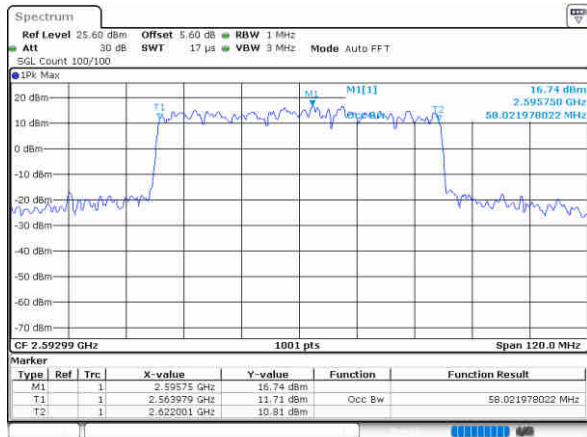
Lowest Channel

Lowest Channel



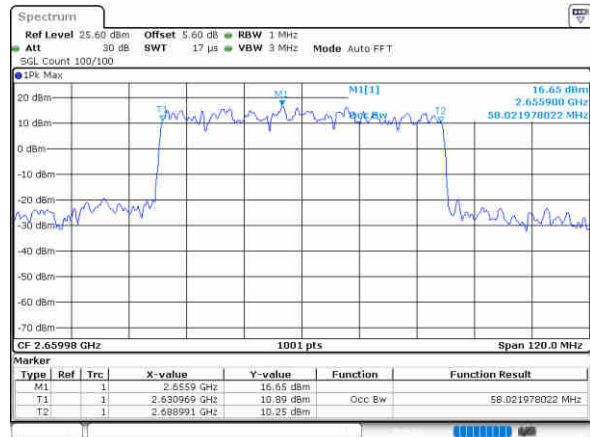
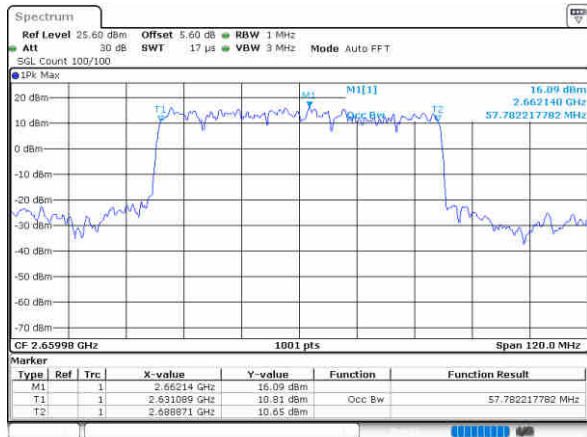
Middle Channel

Middle Channel



Highest Channel

Highest Channel





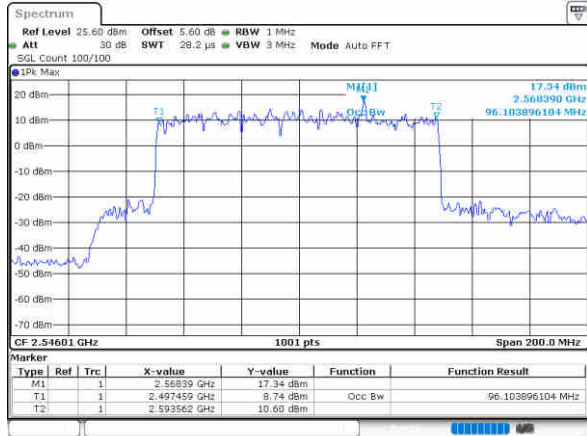
FR1 n41 / 100MHz / DFT-S OFDM

PI/2 BPSK

QPSK

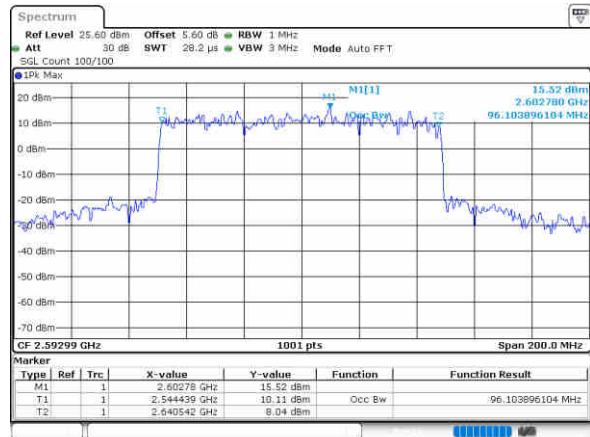
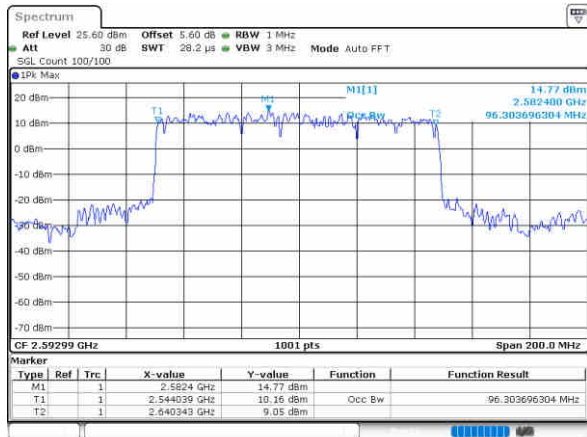
Lowest Channel

Lowest Channel



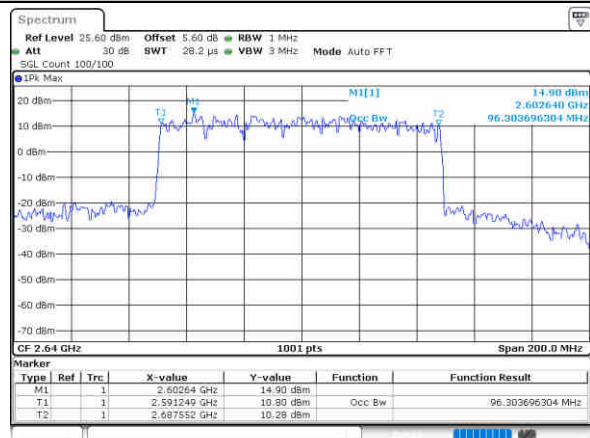
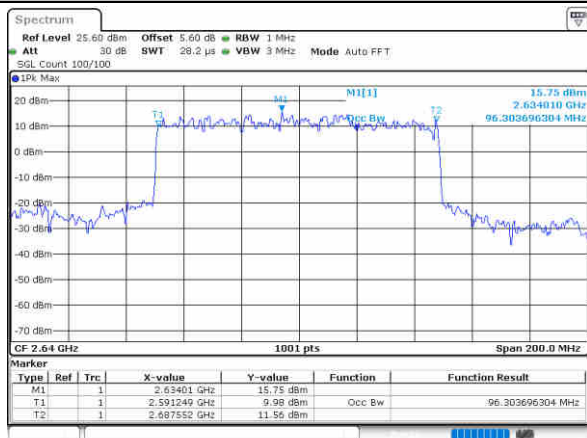
Middle Channel

Middle Channel



Highest Channel

Highest Channel



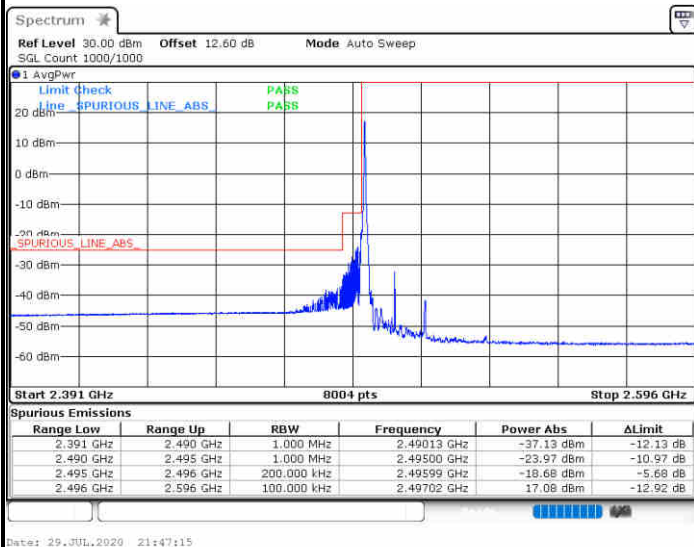


Conducted Band Edge

FR1 n41 / 20MHz / DFT-S OFDM BPSK

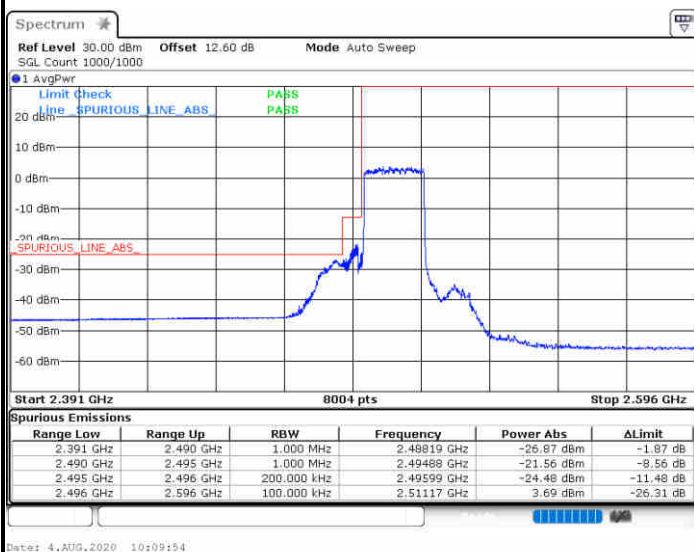
Lowest Band Edge / 1 RB

Channel Power < -25dBm Pass



Lowest Band Edge / Full RB

Channel Power < -25dBm Pass

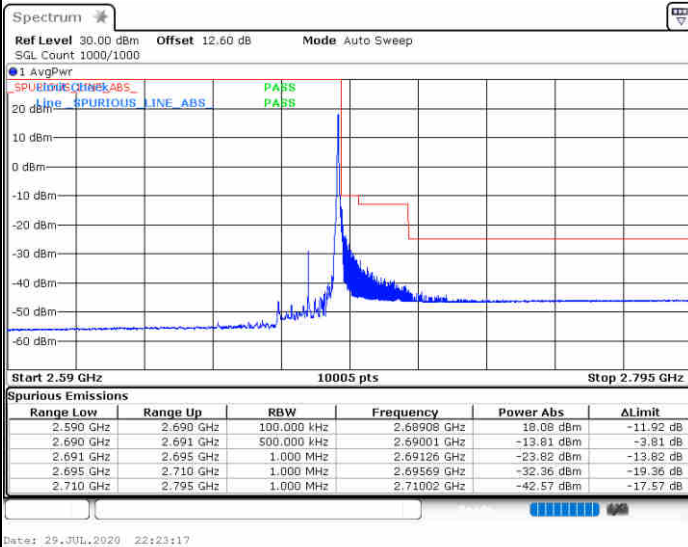




FR1 n41 / 20MHz / DFT-S OFDM BPSK

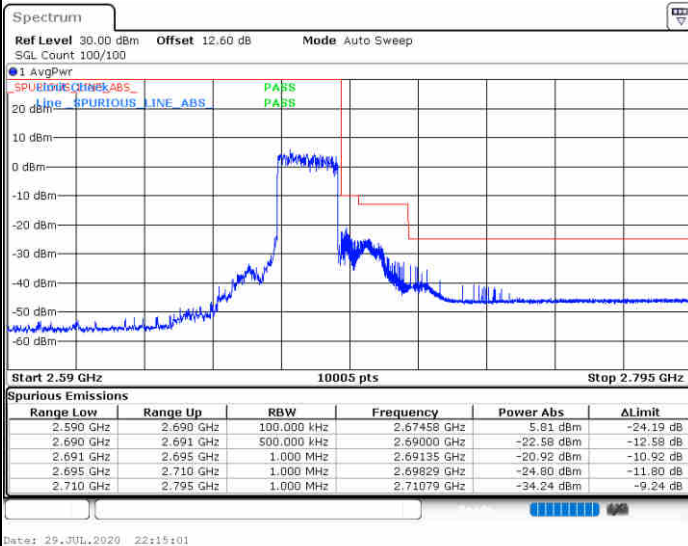
Highest Band Edge / 1 RB

Channel Power < -10dBm Pass



Highest Band Edge / Full RB

Channel Power < -10dBm Pass

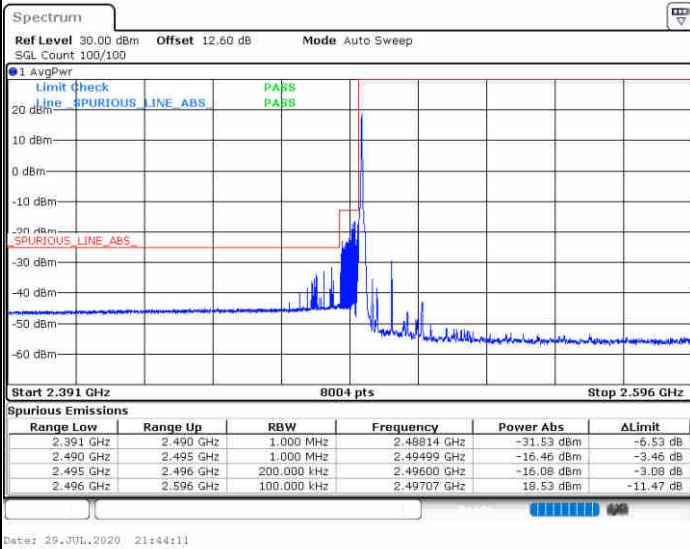




FR1 n41 / 20MHz / DFT-S OFDM QPSK

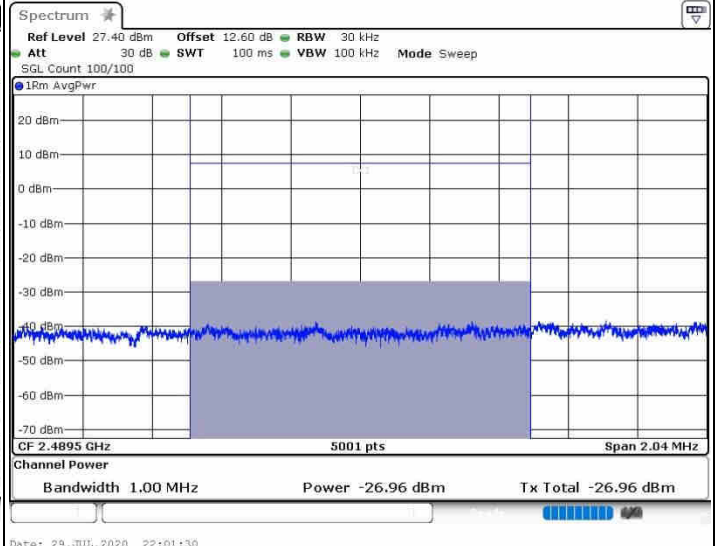
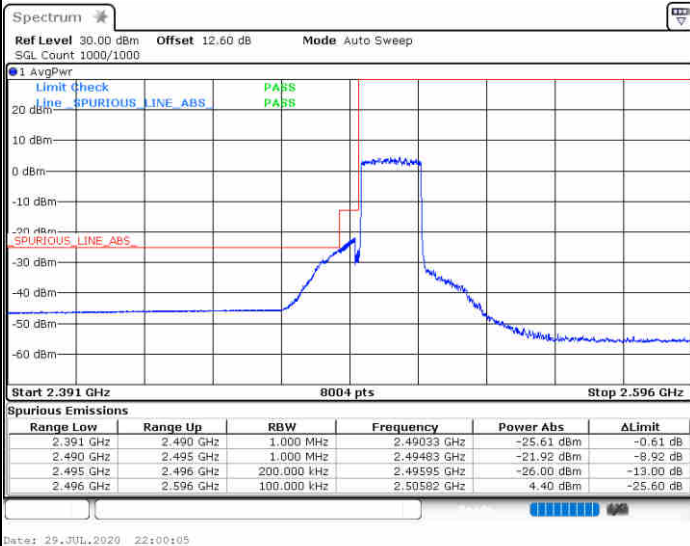
Lowest Band Edge / 1 RB

Channel Power < -25dBm Pass



Lowest Band Edge / Full RB

Channel Power < -25dBm Pass

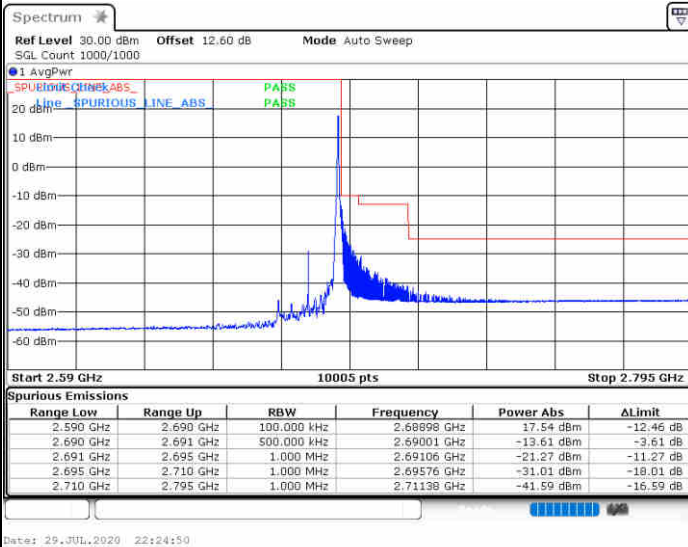




FR1 n41 / 20MHz / DFT-S OFDM QPSK

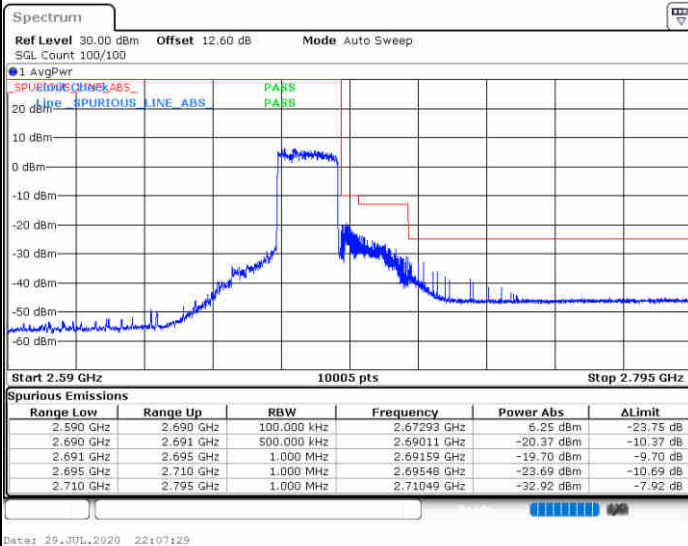
Highest Band Edge / 1 RB

Channel Power < -10dBm Pass



Highest Band Edge / Full RB

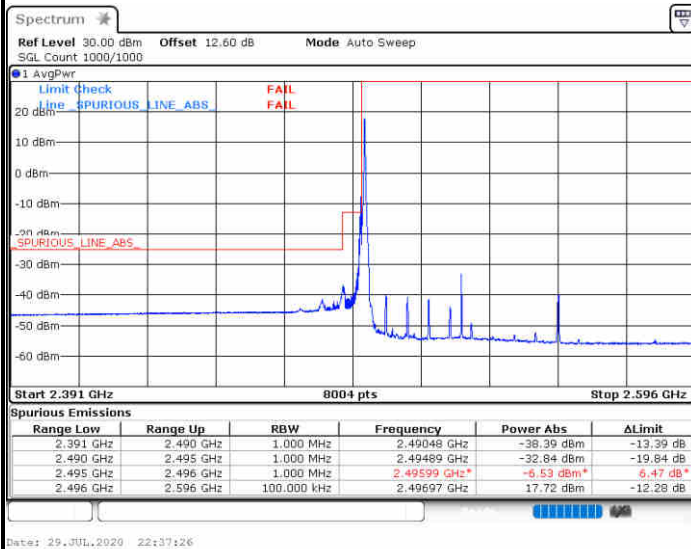
Channel Power < -10dBm Pass



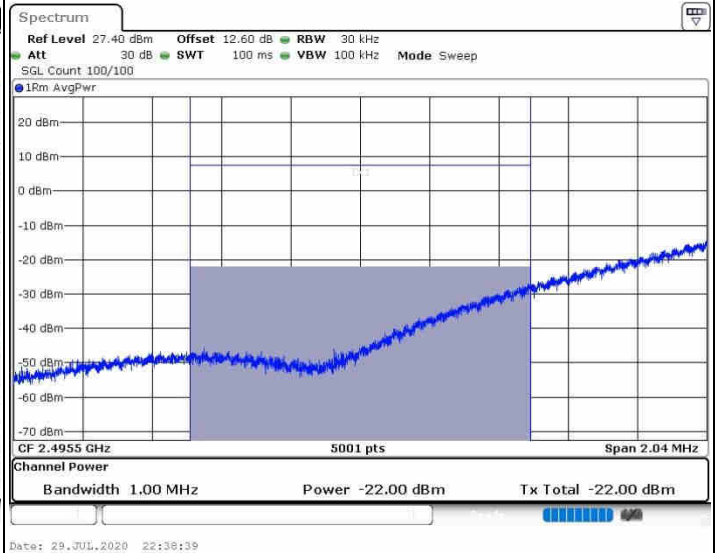


FR1 n41 / 60MHz / DFT-S OFDM BPSK

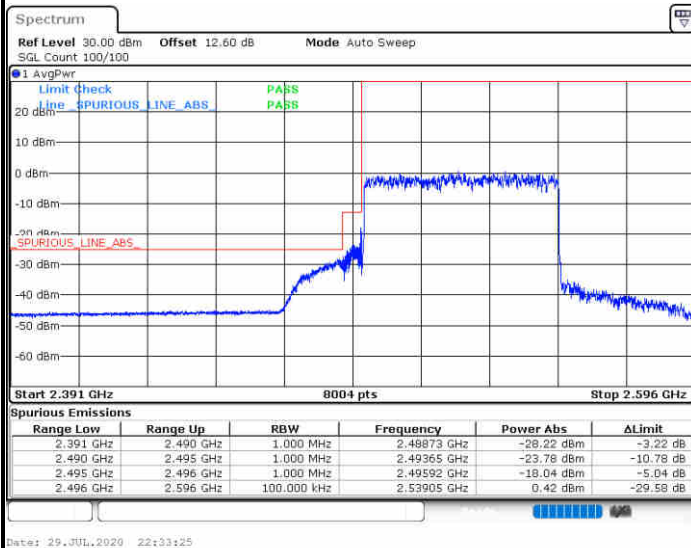
Lowest Band Edge / 1 RB



Channel Power < -13dBm Pass



Lowest Band Edge / Full RB



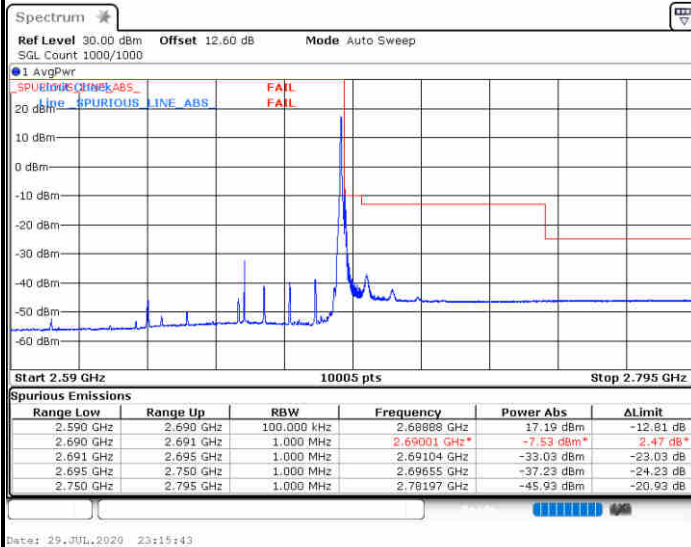
Channel Power < -13dBm Pass

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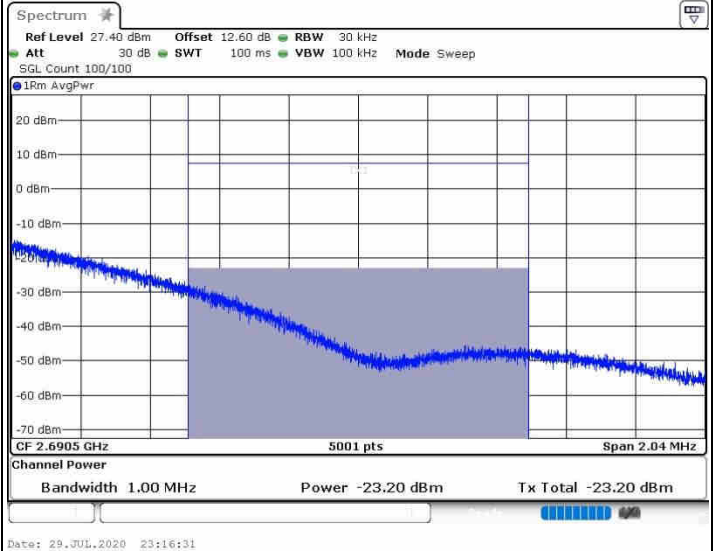


FR1 n41 / 60MHz / DFT-S OFDM BPSK

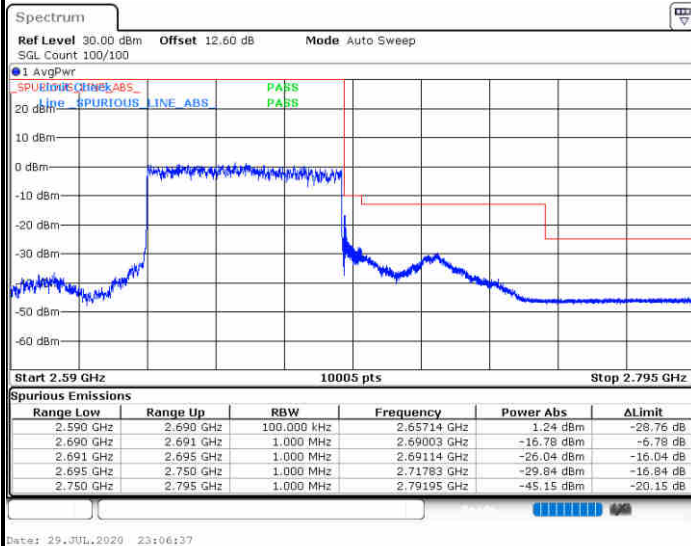
Highest Band Edge / 1 RB



Channel Power < -10dBm Pass



Highest Band Edge / Full RB



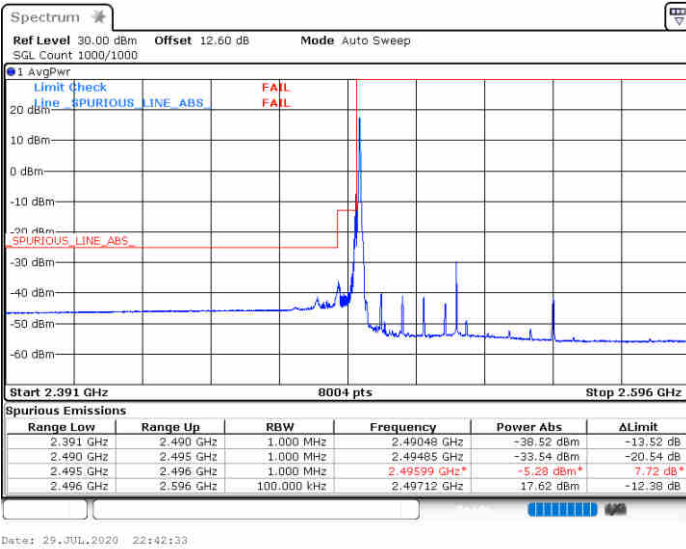
Channel Power < -10dBm Pass

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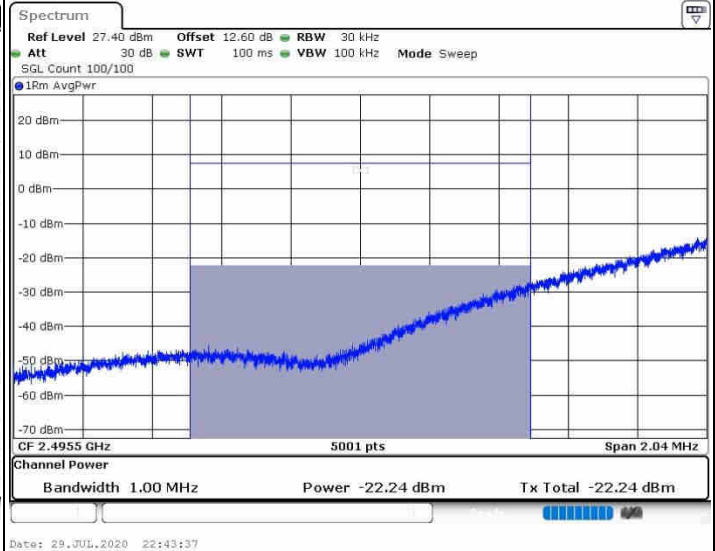


FR1 n41 / 60MHz / DFT-S OFDM QPSK

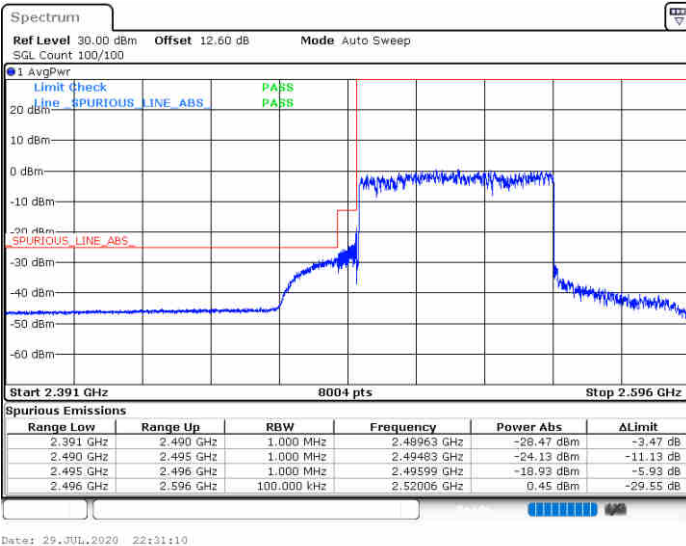
Lowest Band Edge / 1 RB



Channel Power < -13dBm Pass



Lowest Band Edge / Full RB



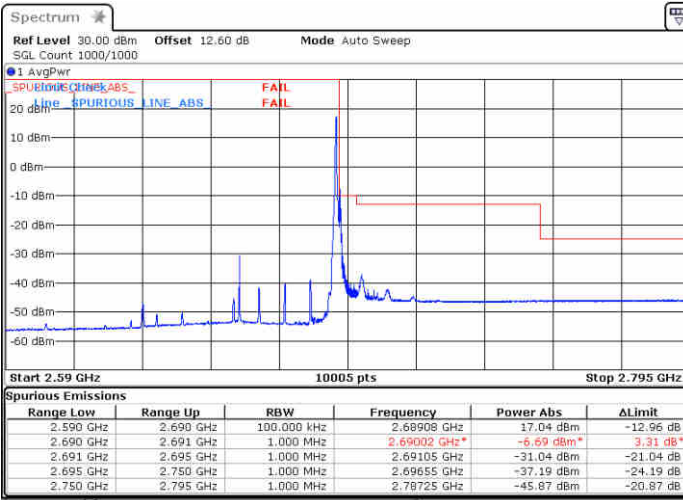
Channel Power < -13dBm Pass

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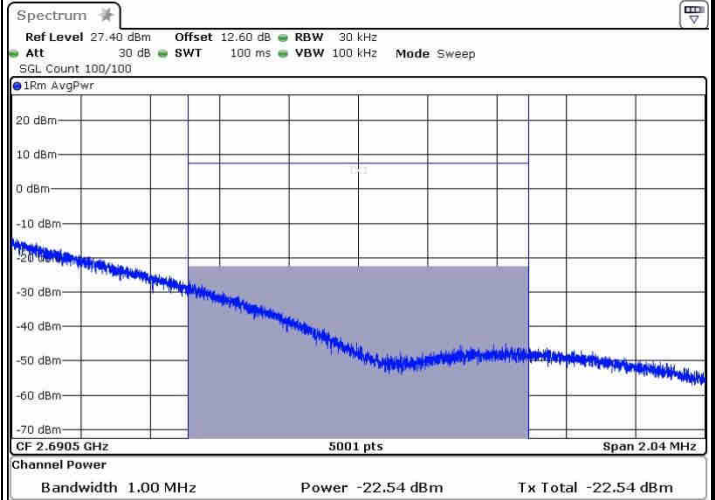


FR1 n41 / 60MHz / DFT-S OFDM QPSK

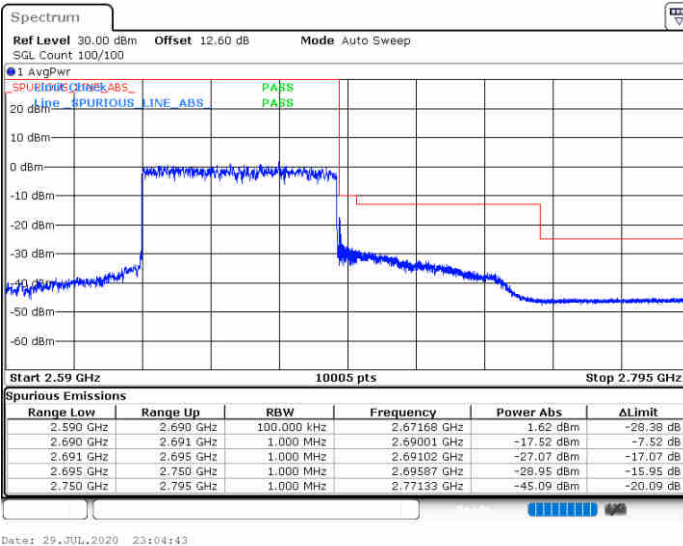
Highest Band Edge / 1 RB



Channel Power < -10dBm Pass



Highest Band Edge / Full RB



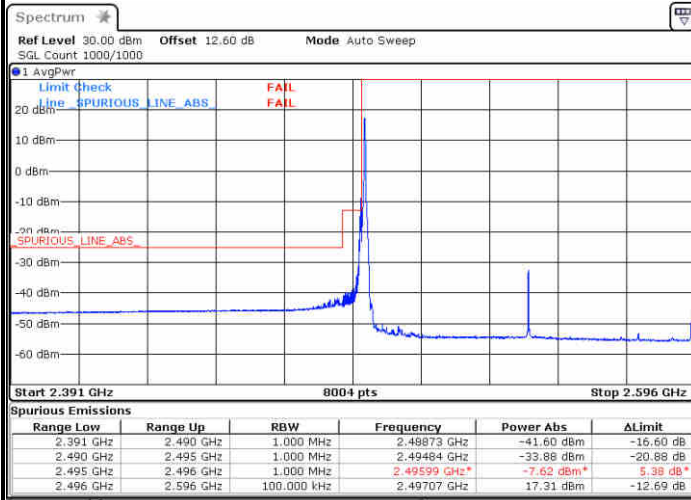
Channel Power < -10dBm Pass

/

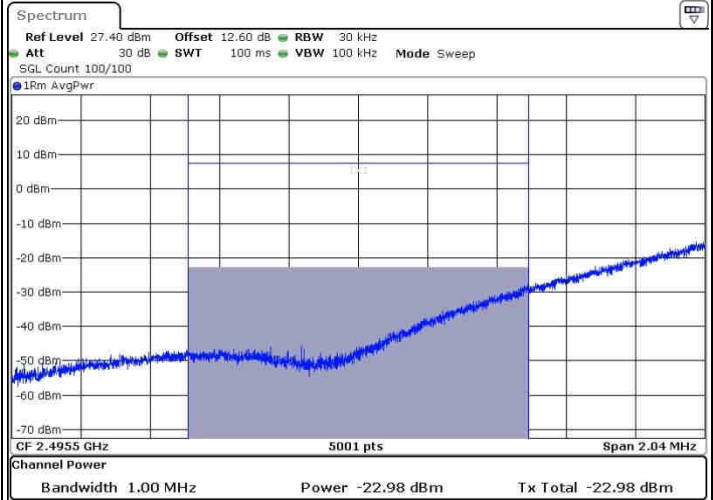


FR1 n41 / 100MHz / DFT-S OFDM BPSK

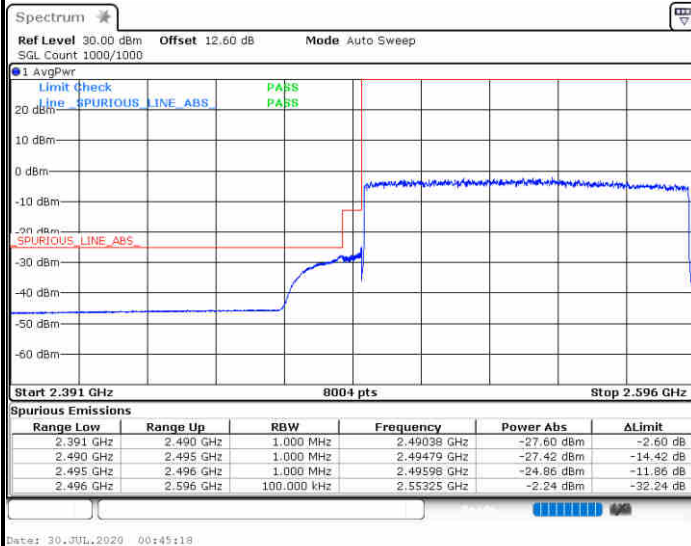
Lowest Band Edge / 1 RB



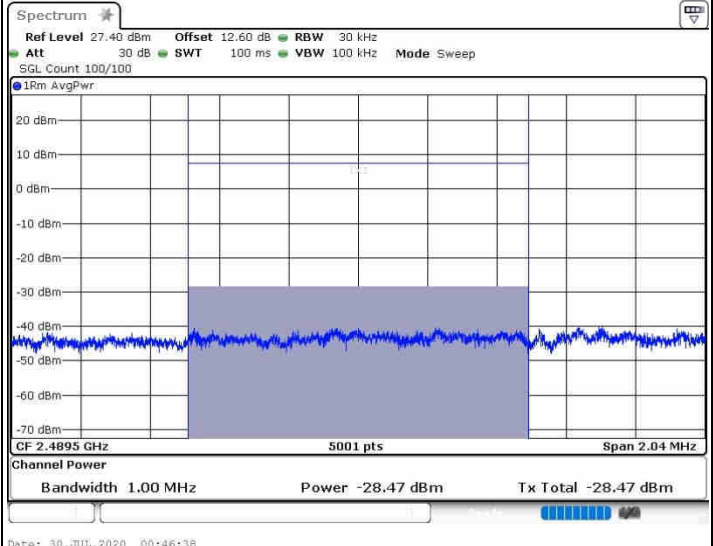
Channel Power < -13dBm Pass



Lowest Band Edge / Full RB



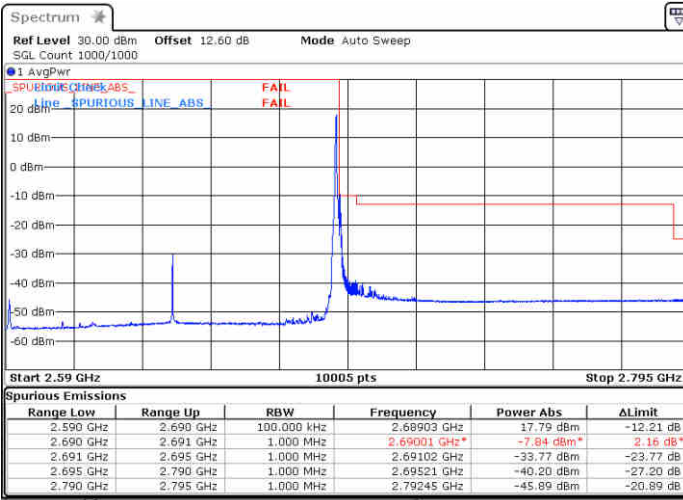
Channel Power < -13dBm Pass



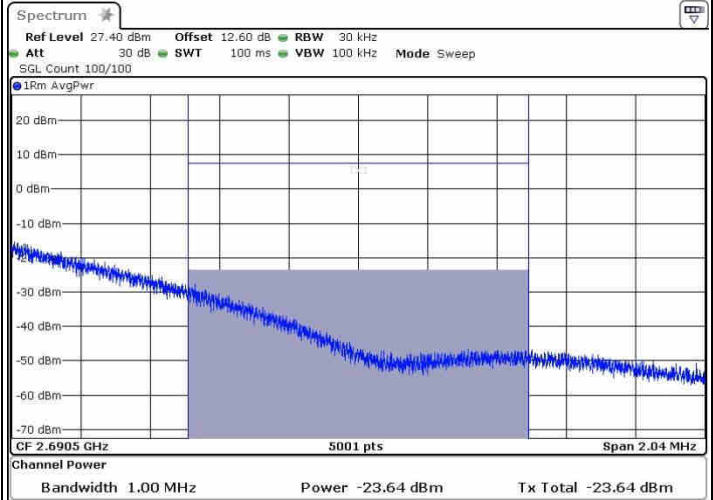


FR1 n41 / 100MHz / DFT-S OFDM BPSK

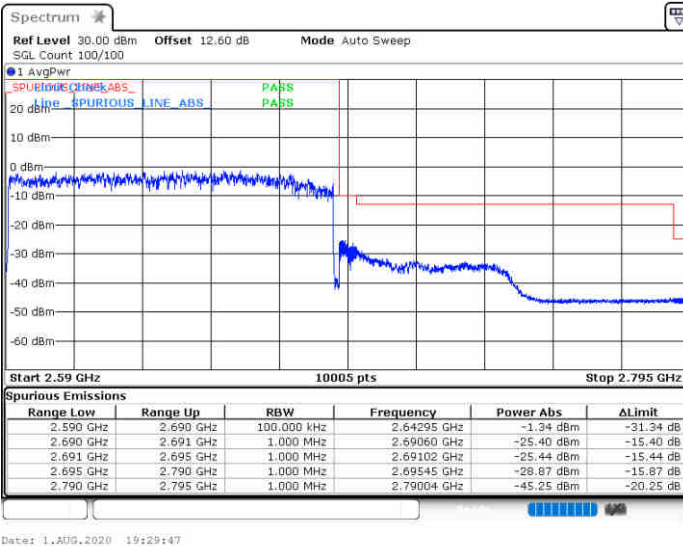
Highest Band Edge / 1 RB



Channel Power < -10dBm Pass



Highest Band Edge / Full RB



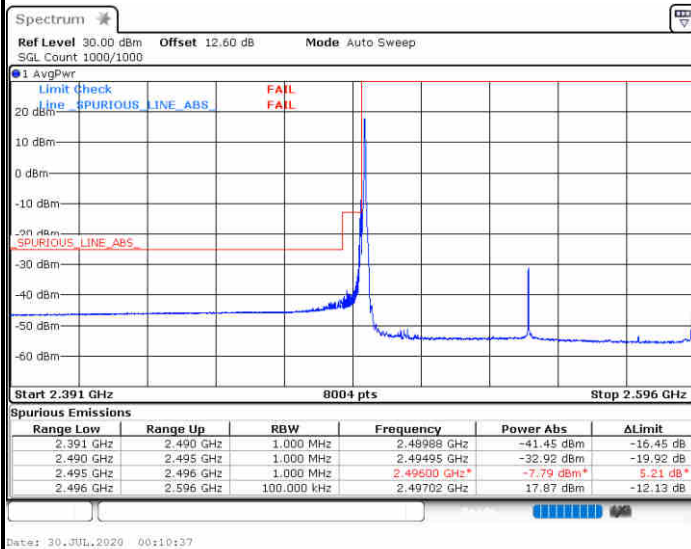
Channel Power < -10dBm Pass

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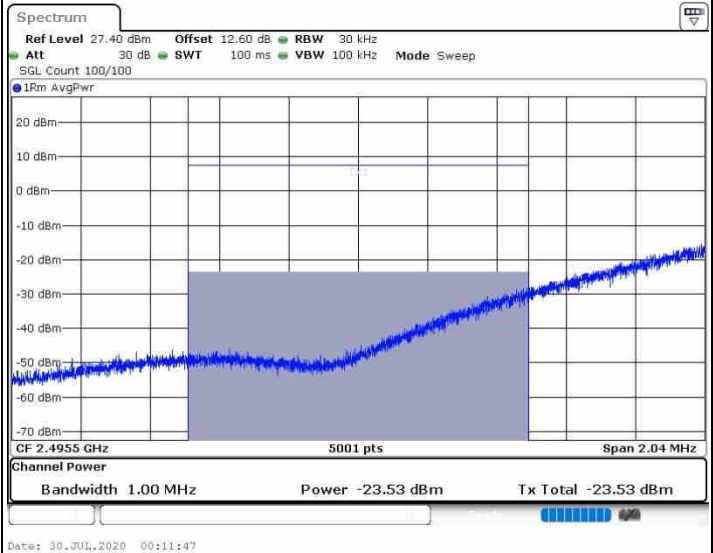


FR1 n41 / 100MHz / DFT-S OFDM QPSK

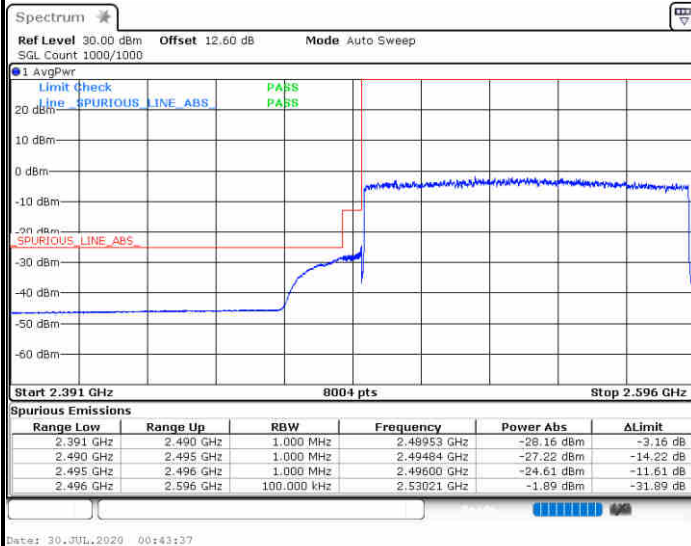
Lowest Band Edge / 1 RB



Channel Power < -13dBm Pass



Lowest Band Edge / Full RB



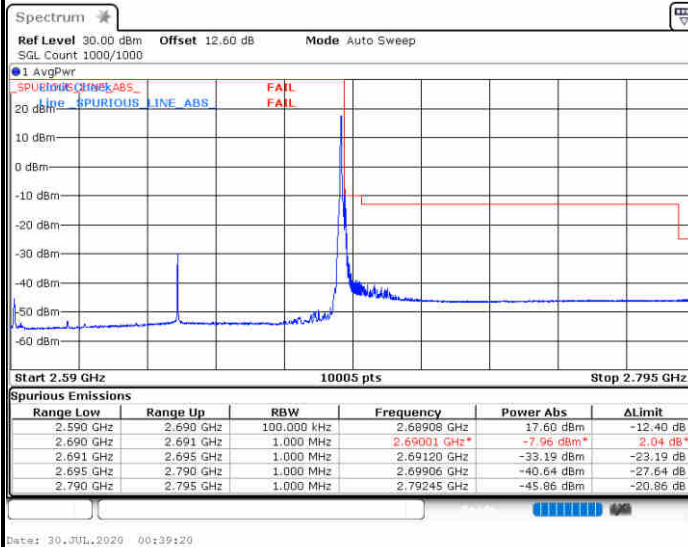
Channel Power < -13dBm Pass

/

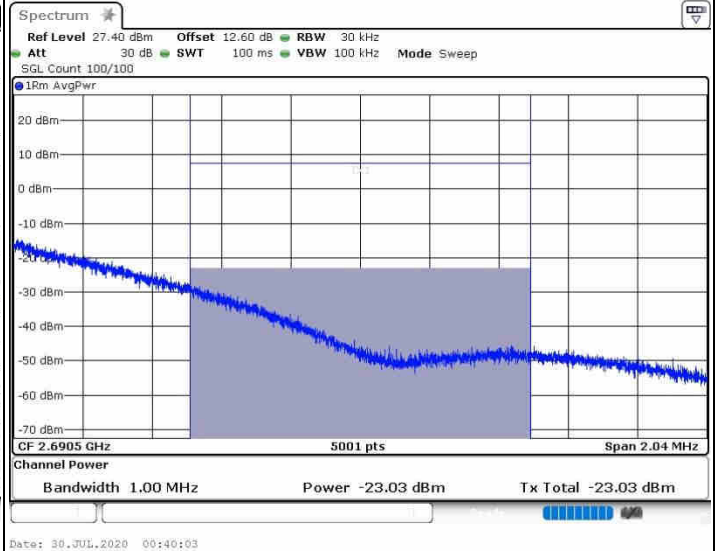


FR1 n41 / 100MHz / DFT-S OFDM QPSK

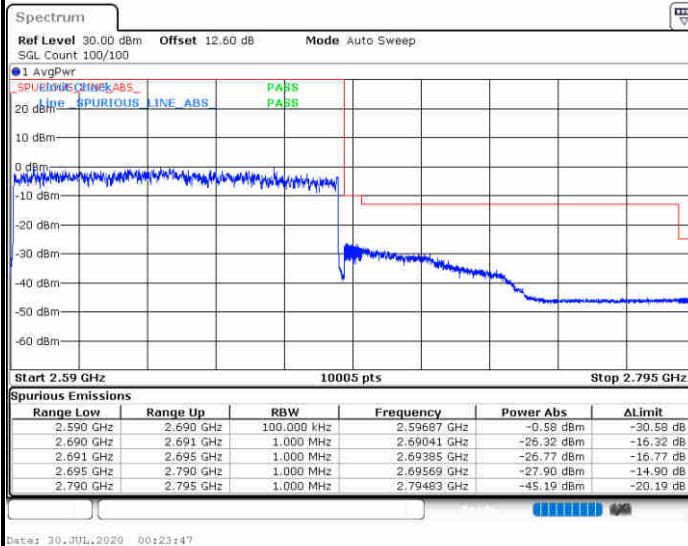
Highest Band Edge / 1 RB



Channel Power < -10dBm Pass



Highest Band Edge / Full RB



Channel Power < -10dBm Pass

/

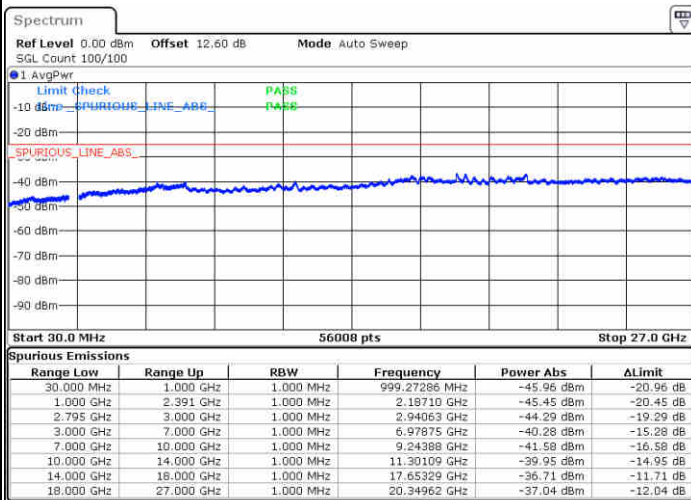


Conducted Spurious Emission

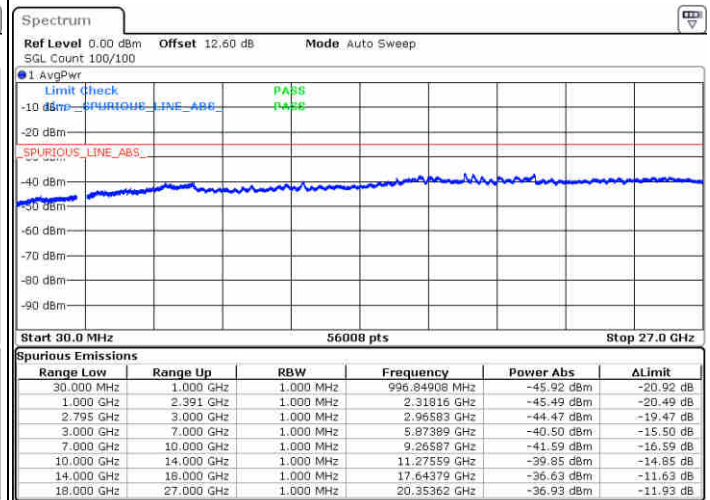
FR1 n41 / 20MHz / DFT-S OFDM / BPSK

Lowest Channel / 1RB

Middle Channel / 1RB

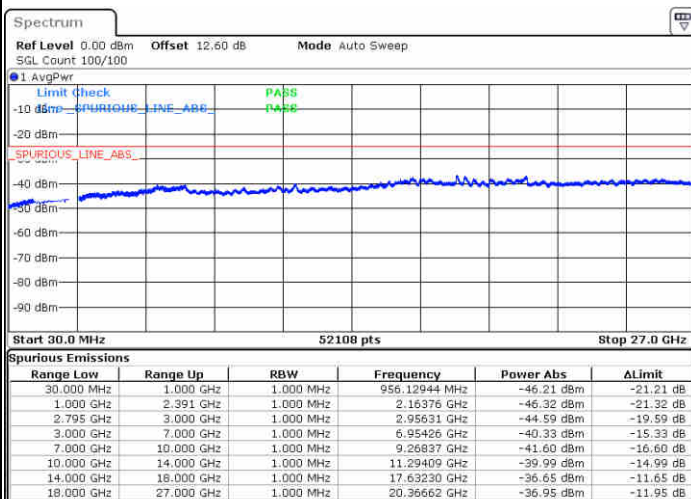


Date: 29.JUL.2020 21:51:20



Date: 29.JUL.2020 21:35:38

Highest Channel / 1RB

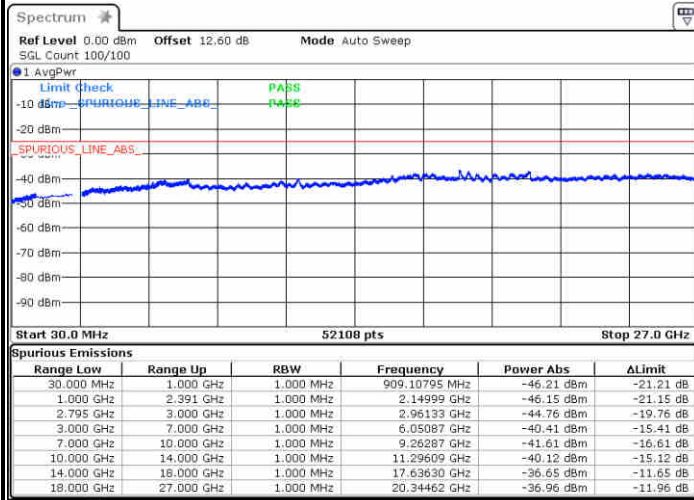


Date: 29.JUL.2020 22:17:28



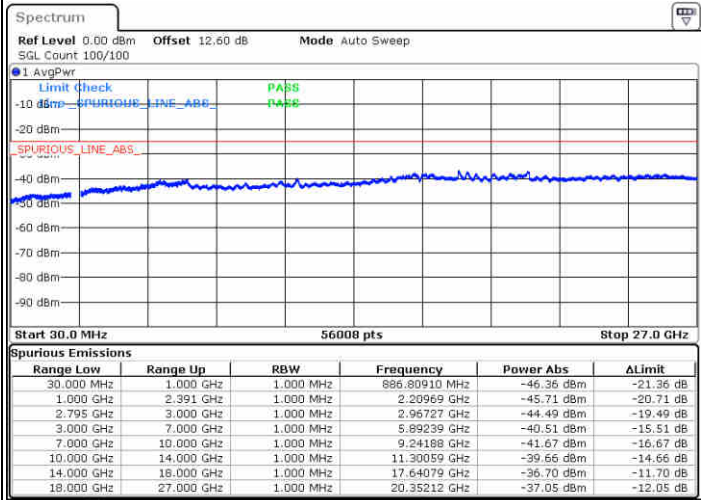
FR1 n41 / 20MHz / DFT-S OFDM / QPSK

Lowest Channel / 1RB



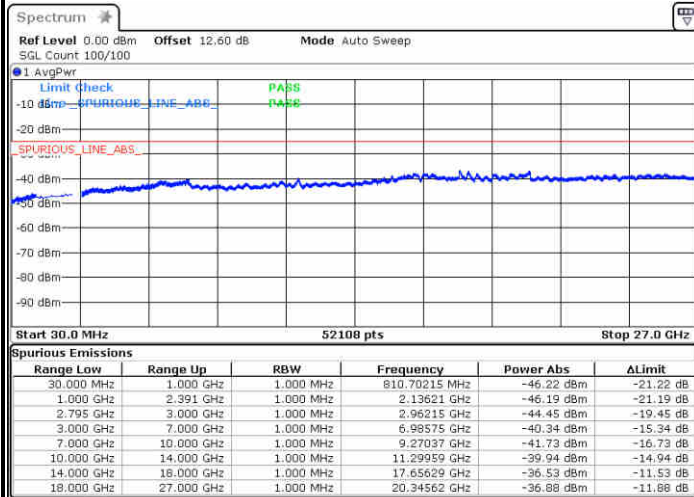
Date: 29.JUL.2020 21:45:33

Middle Channel / 1RB



Date: 29.JUL.2020 21:38:30

Highest Channel / 1RB

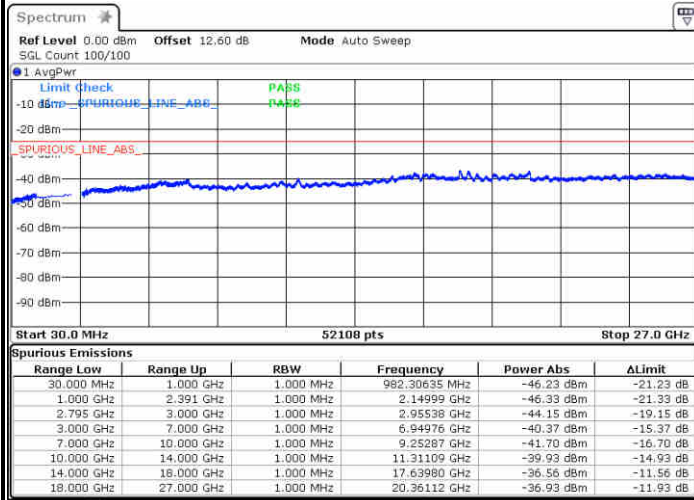


Date: 29.JUL.2020 22:19:30



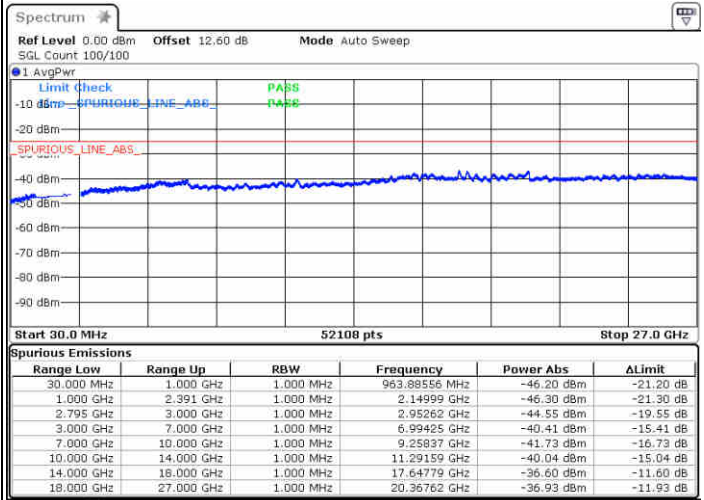
FR1 n41 / 60MHz / DFT-S OFDM / BPSK

Lowest Channel / 1RB



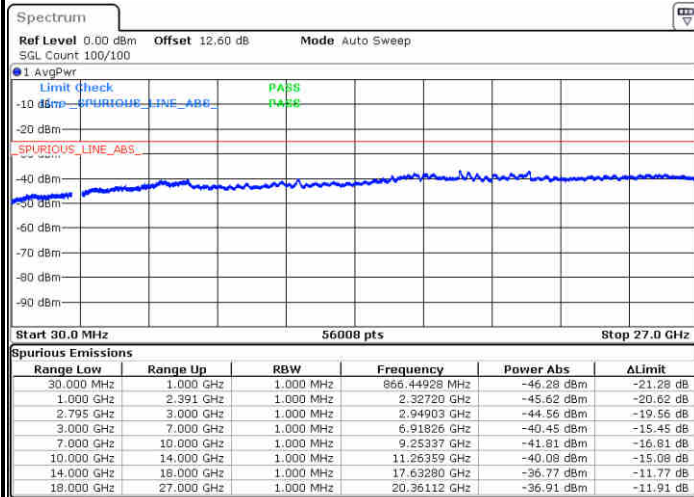
Date: 29.JUL.2020 22:39:48

Middle Channel / 1RB



Date: 29.JUL.2020 22:53:42

Highest Channel / 1RB



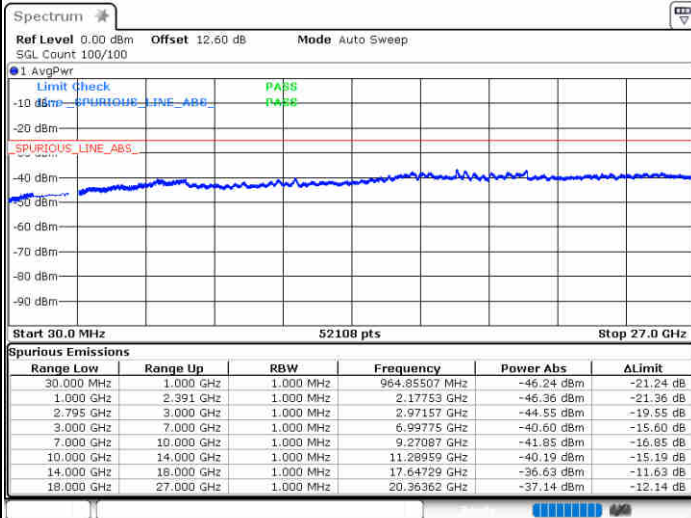
Date: 29.JUL.2020 23:08:36



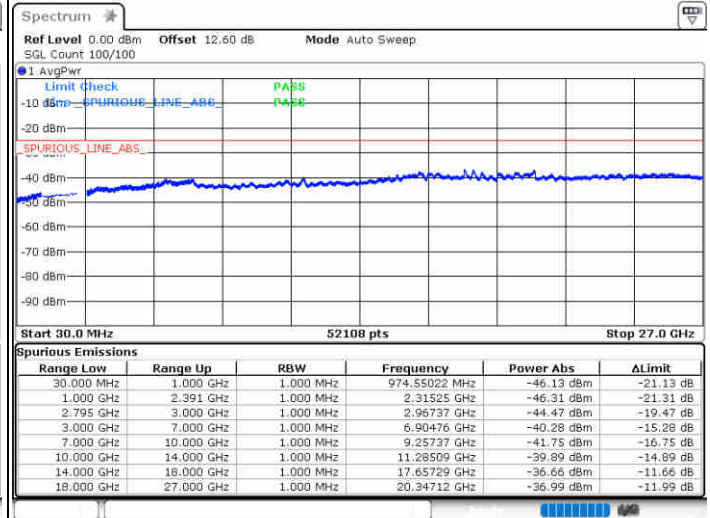
FR1 n41 / 60MHz / DFT-S OFDM / QPSK

Lowest Channel / 1RB

Middle Channel / 1RB

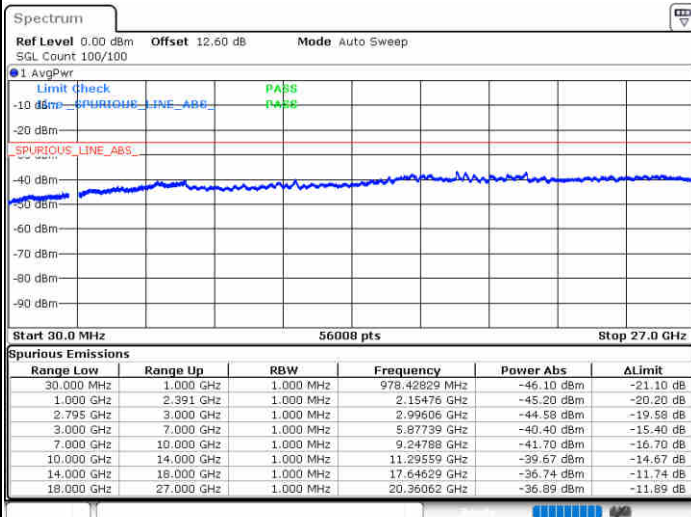


Date: 29.JUL.2020 22:41:42



Date: 29.JUL.2020 22:52:15

Highest Channel / 1RB

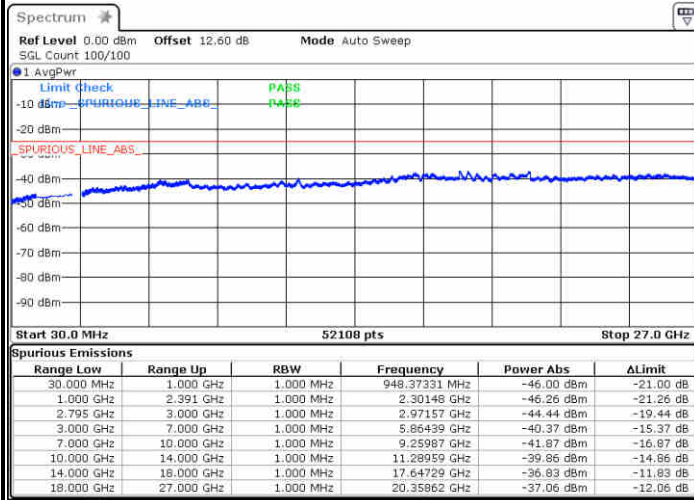


Date: 29.JUL.2020 23:11:07



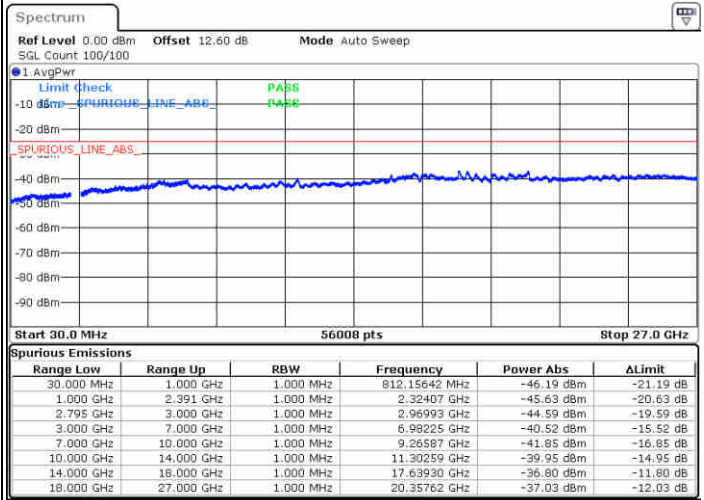
FR1 n41 / 100MHz / DFT-S OFDM / BPSK

Lowest Channel / 1RB



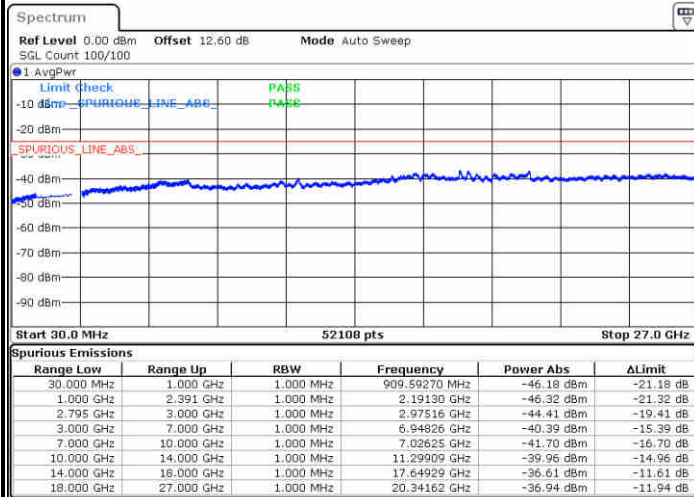
Date: 30.JUL.2020 00:08:15

Middle Channel / 1RB



Date: 29.JUL.2020 23:33:15

Highest Channel / 1RB



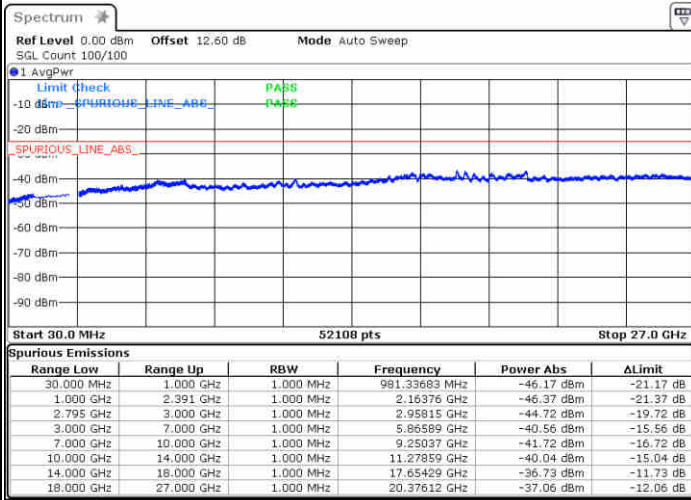
Date: 30.JUL.2020 00:28:08



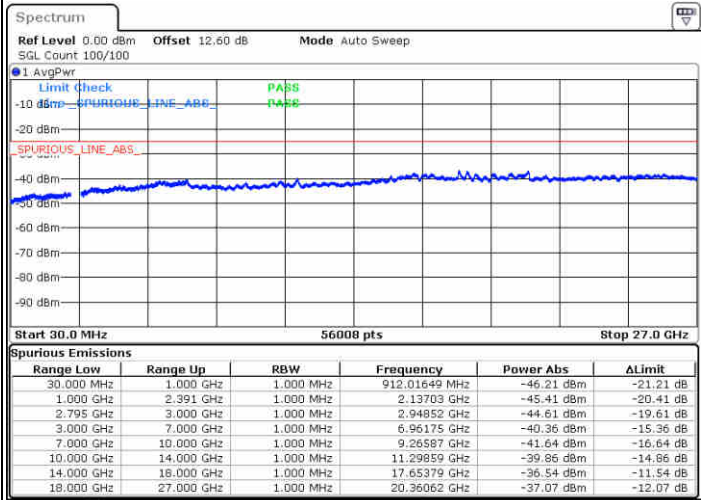
FR1 n41 / 100MHz / DFT-S OFDM / QPSK

Lowest Channel / 1RB

Middle Channel / 1RB

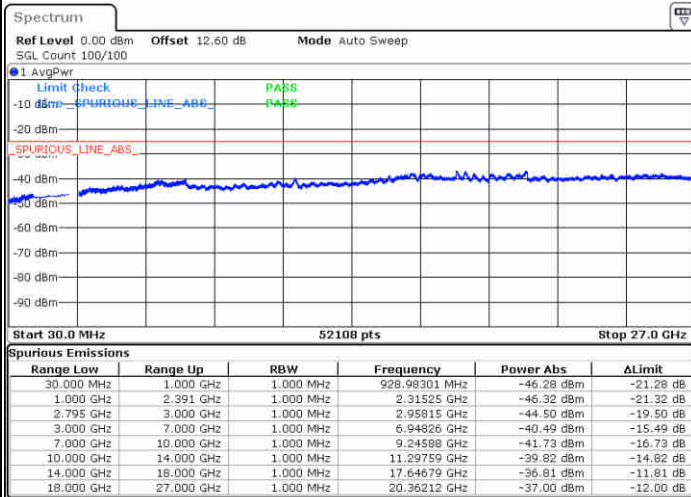


Date: 30.JUL.2020 00:09:53



Date: 29.JUL.2020 23:30:52

Highest Channel / 1RB



Date: 30.JUL.2020 00:26:35

**Frequency Stability**

Test Conditions		NR n41 (BPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 20MHz	Within Band
		Deviation (ppm)	Result
50	Normal Voltage	0.0015	PASS
40	Normal Voltage	0.0023	
30	Normal Voltage	0.0013	
20(Ref.)	Normal Voltage	0.0015	
10	Normal Voltage	0.0021	
0	Normal Voltage	0.0013	
-10	Normal Voltage	0.0012	
-20	Normal Voltage	0.0017	
-30	Normal Voltage	0.0018	
20	Maximum Voltage	0.0013	
20	Normal Voltage	0.0011	
20	Battery End Point	0.0016	



5G NR n66

NSA

Peak-to-Average Ratio

Mode	FR1 n66+5A / 20MHz / 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	4.78	5.1	5.65	5.13	PASS
Middle CH	4.29	3.68	5.59	5.48	
Highest CH	4.58	3.88	5.65	5.19	



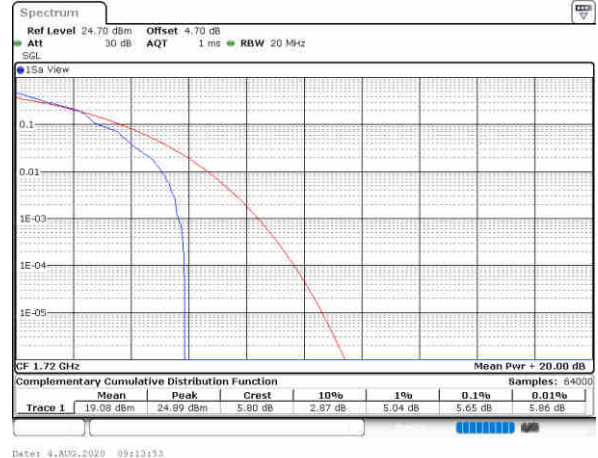
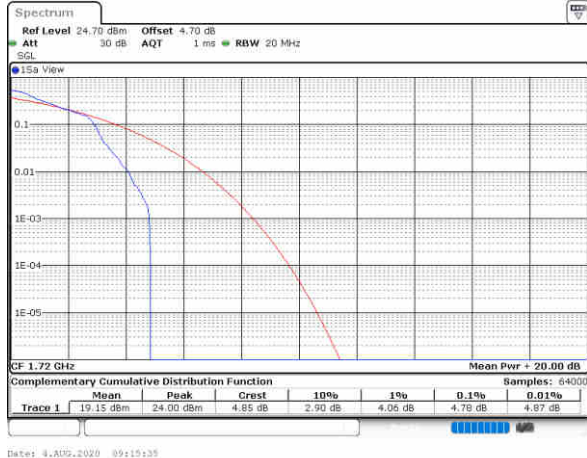
FR1 n66+5A / 20MHz / DFT-S OFDM

PI/2 BPSK

QPSK

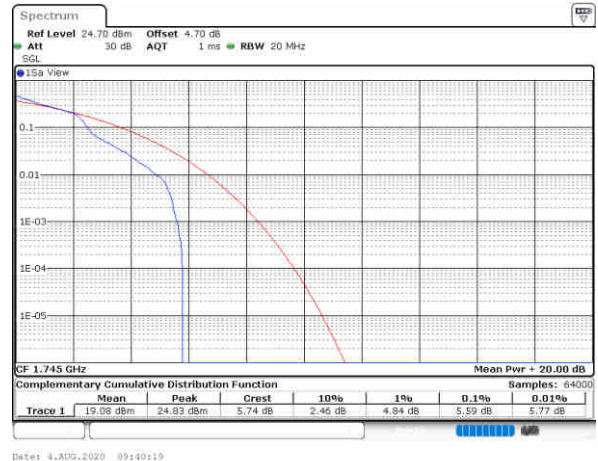
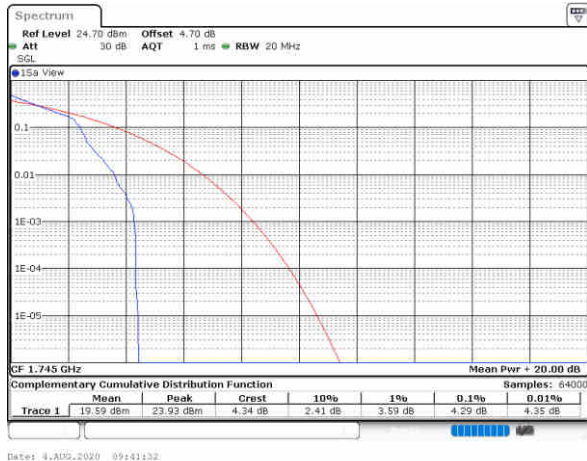
Lowest Channel / 1RB

Lowest Channel / 1RB



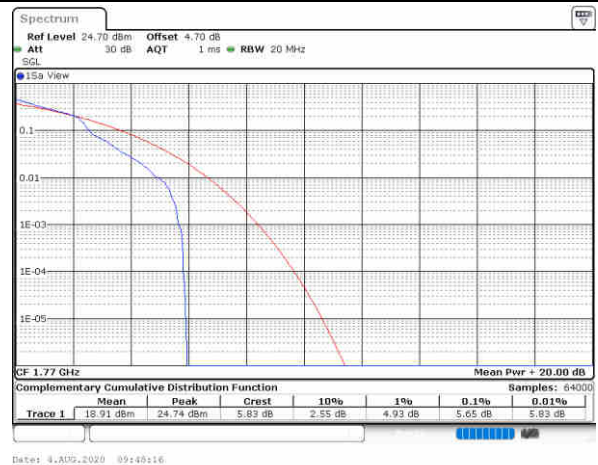
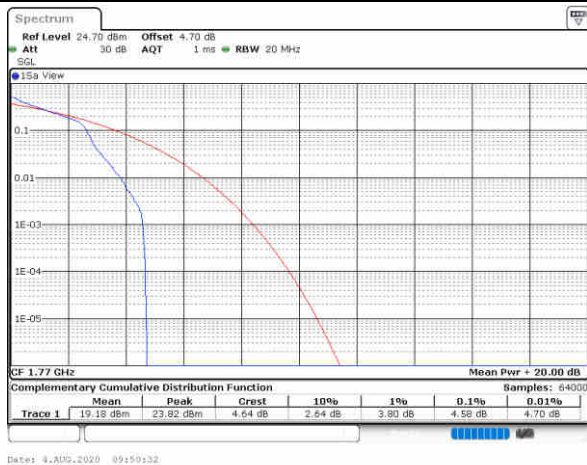
Middle Channel / 1 RB

Middle Channel / 1 RB



Highest Channel / 1 RB

Highest Channel / 1 RB





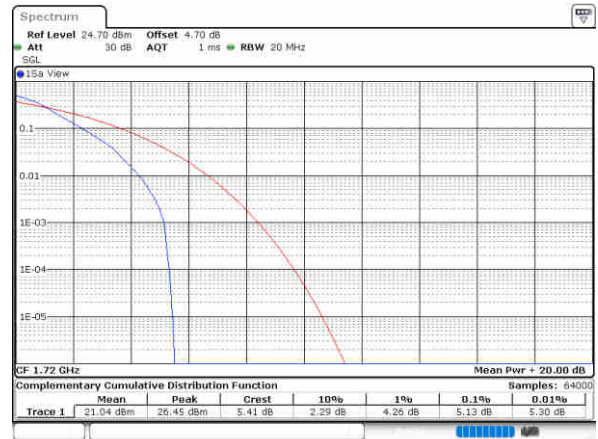
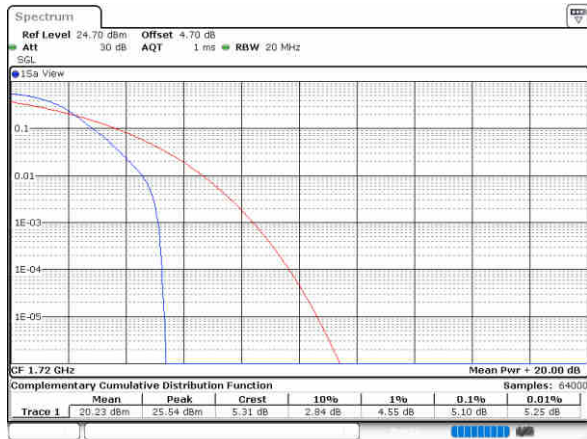
FR1 n66+5A / 20MHz / DFT-S OFDM

PI/2 BPSK

QPSK

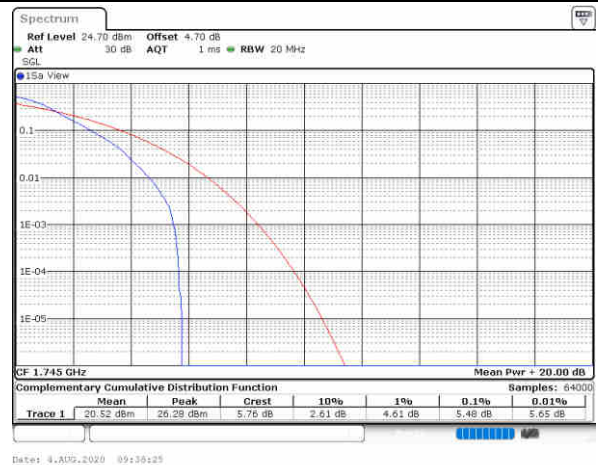
Lowest Channel / Full RB

Lowest Channel / Full RB



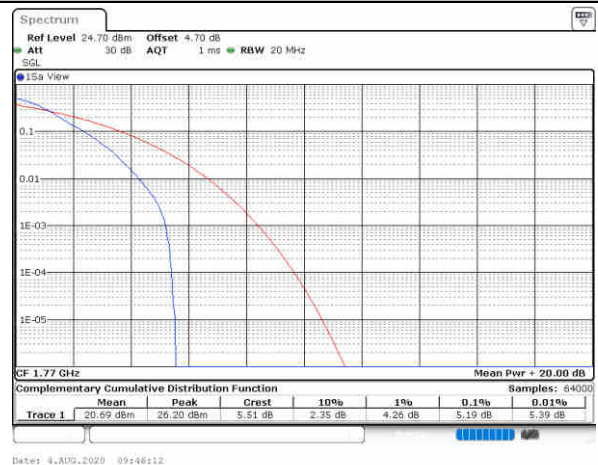
Middle Channel / Full RB

Middle Channel / Full RB



Highest Channel / Full RB

Highest Channel / Full RB





26dB Bandwidth

Mode	FR1 n66+5A : 26dB BW(MHz) / DFT-S OFDM							
BW	5MHz	5MHz	10MHz	10MHz	20MHz	20MHz		
Mod.	PI/2 BPSK	QPSK	PI/2 BPSK	QPSK	PI/2 BPSK	QPSK		
Lowest CH	4.86	5.02	9.23	9.31	18.58	18.62		
Middle CH	4.78	4.78	9.35	9.21	18.82	18.66		
Highest CH	4.7	4.9	9.39	9.37	18.66	18.62		



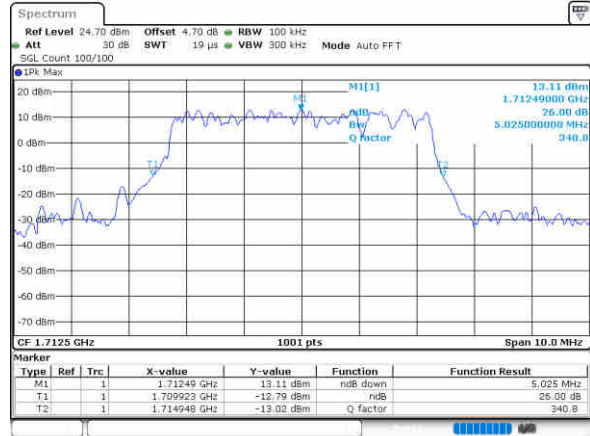
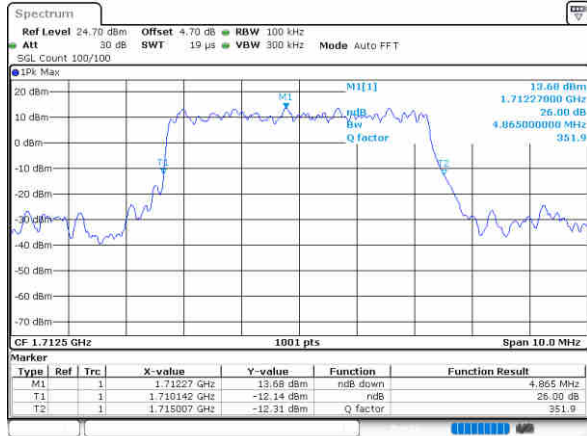
FR1 n66+5A / 5MHz / DFT-S OFDM

PI/2 BPSK

QPSK

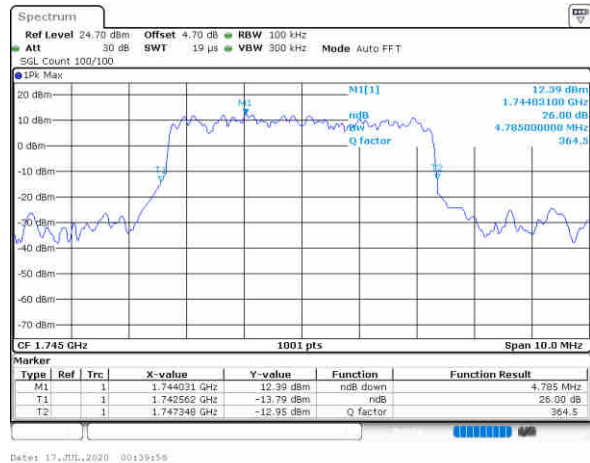
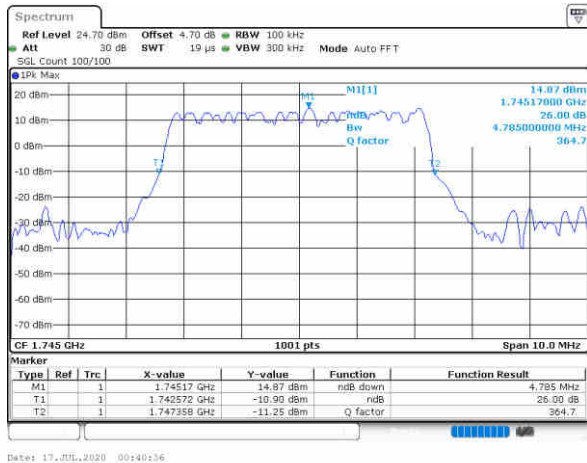
Lowest Channel

Lowest Channel



Middle Channel

Middle Channel



Highest Channel

Highest Channel

