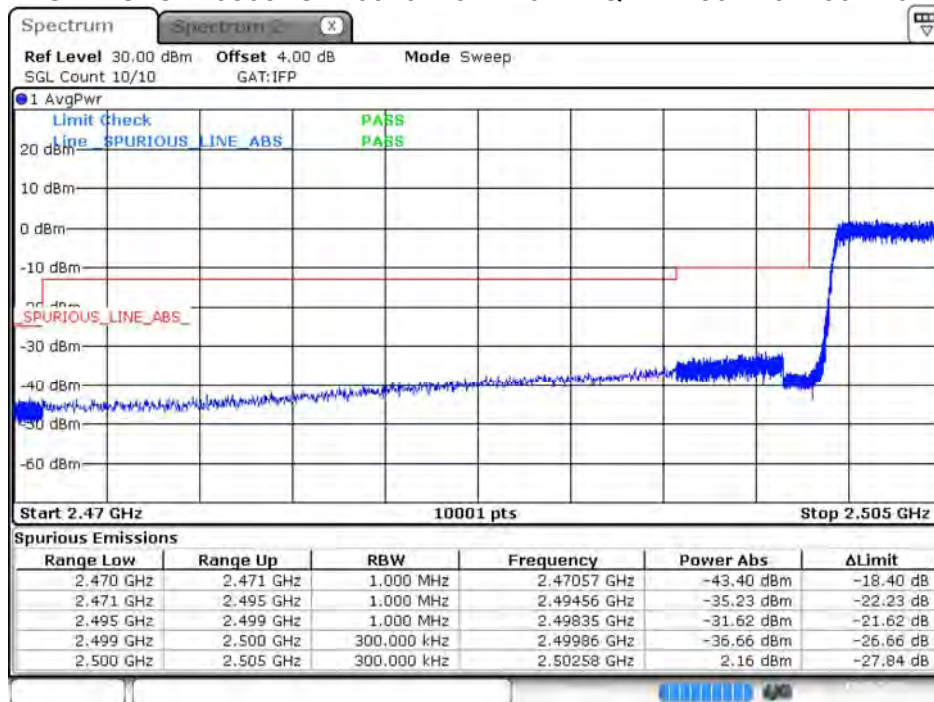


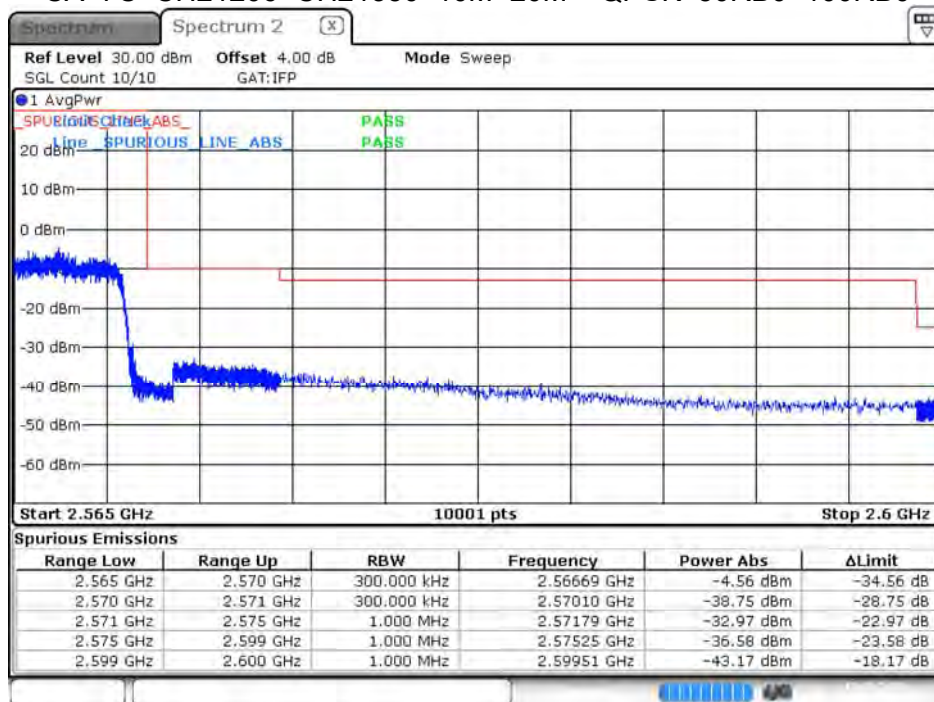
Product	Module		
Test Item	Spurious Emission at Antenna Terminals		
Test Mode	Mode 12: LTE CA Band 7C		
Date of Test	2020/09/01	Test Site	SR12-H
Temperature(°C)	23	Humidity (%RH)	64

CA 7C CH20805+CH20949 10M+20M QPSK 50RB0+100RB0



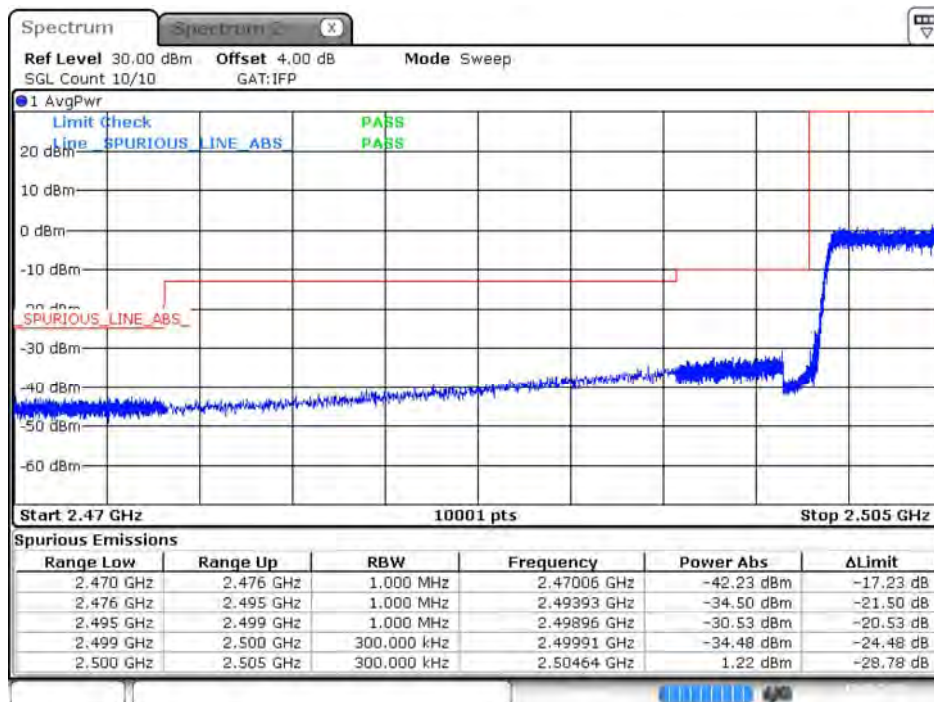
Date: 15.SEP.2020 13:55:05

CA 7C CH21206+CH21350 10M+20M QPSK 50RB0+100RB0



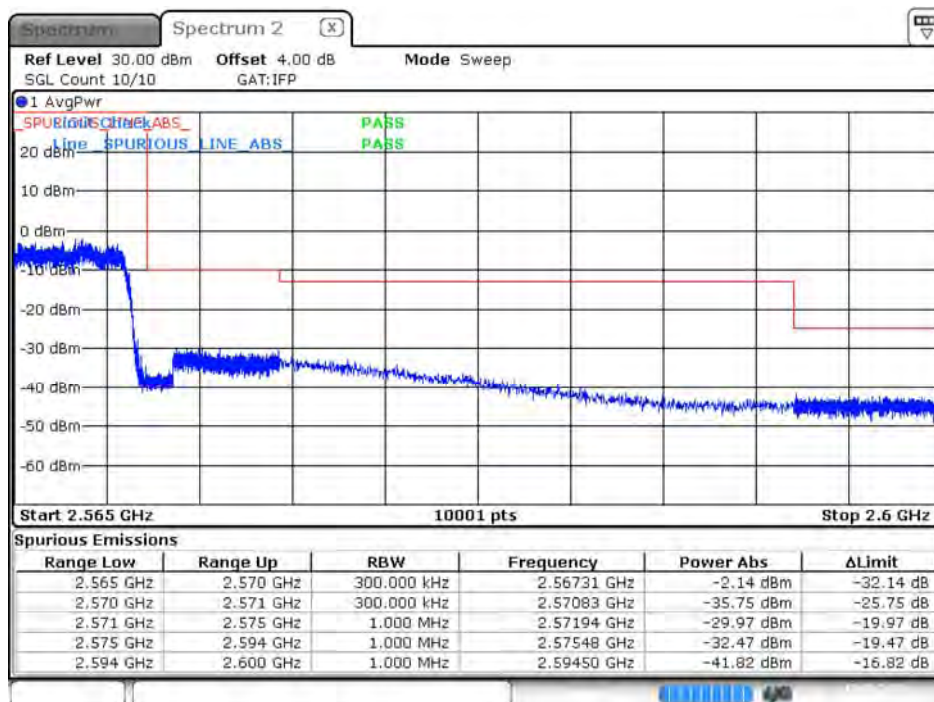
Date: 15.SEP.2020 13:57:10

CA_7C_CH20825+CH20945_15M+10M__QPSK_75RB0+50RB0



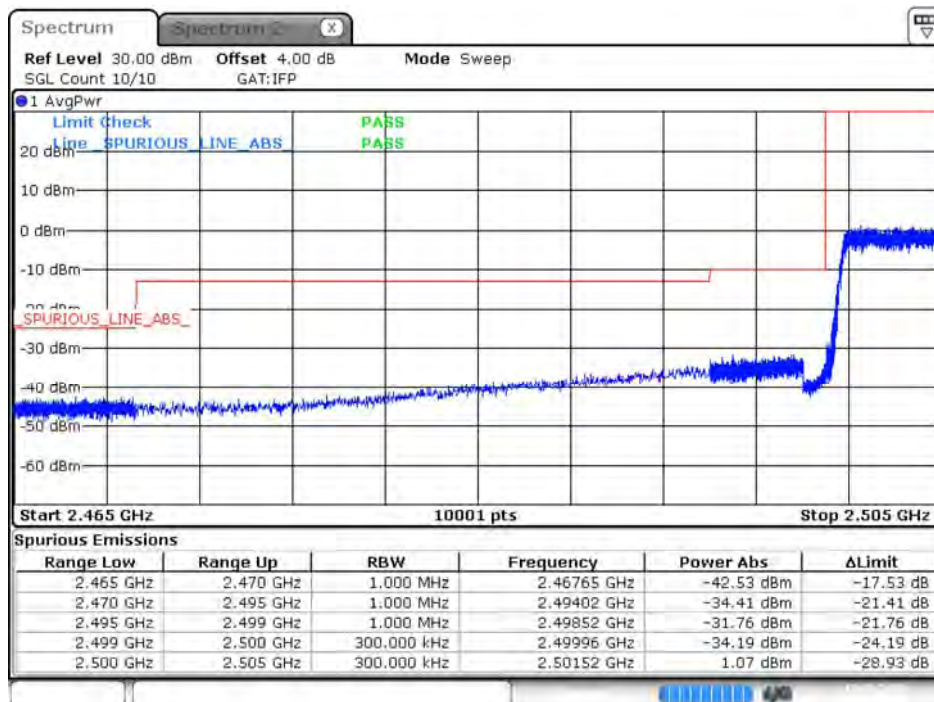
Date: 15.SEP.2020 14:04:06

CA_7C_CH21277+CH21397_15M+10M__QPSK_75RB0+50RB0



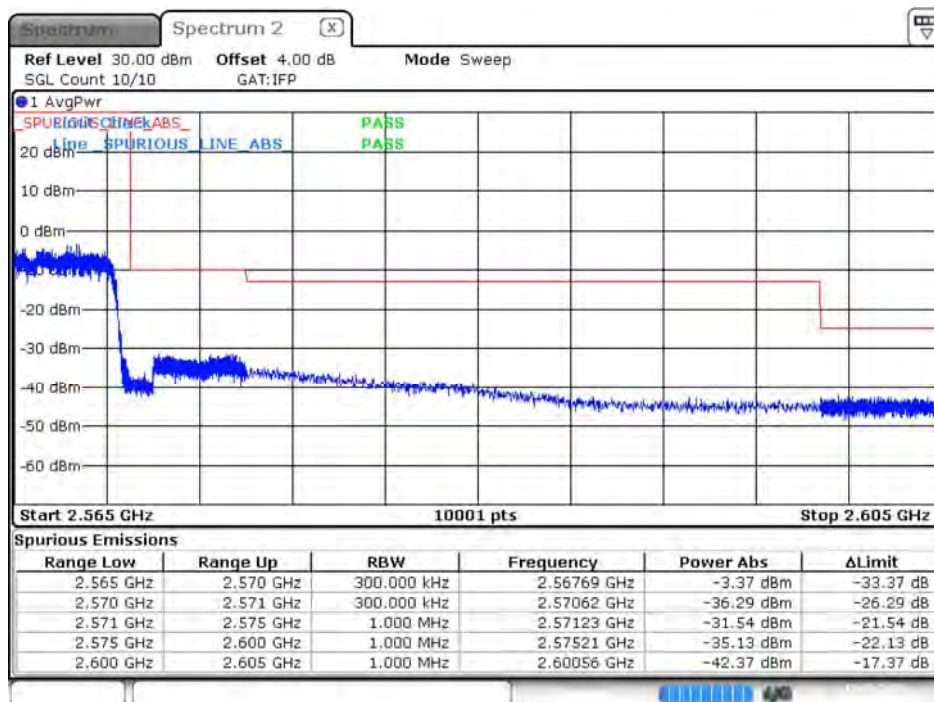
Date: 15.SEP.2020 14:05:07

CA_7C_CH20825+CH20975_15M+15M__QPSK_75RB0+75RB0



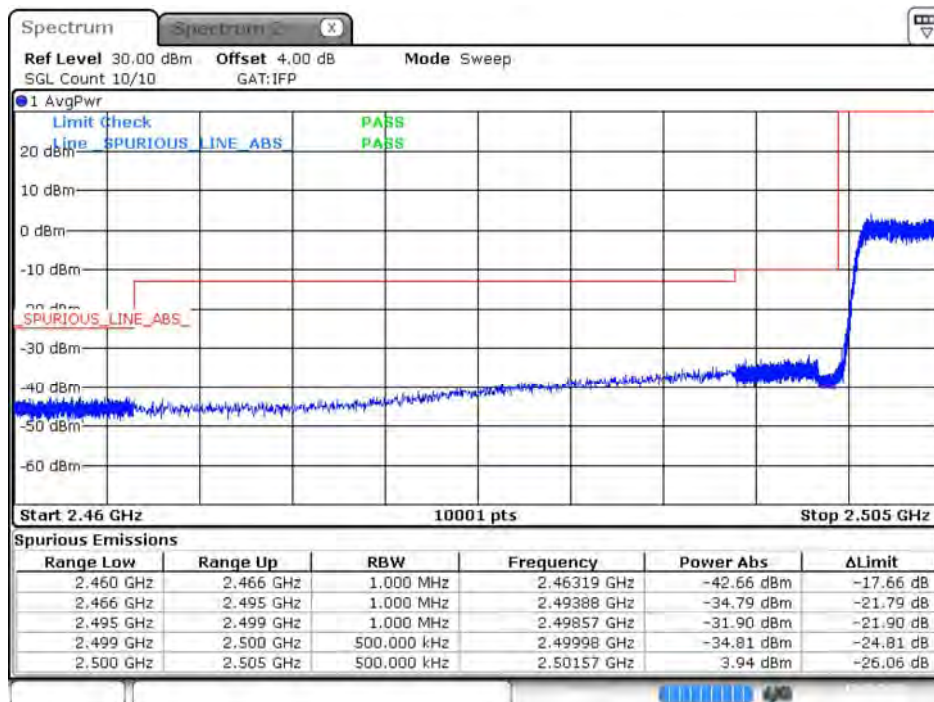
Date: 15.SEP.2020 14:09:23

CA_7C_CH21225+CH21375_15M+15M__QPSK_75RB0+75RB0



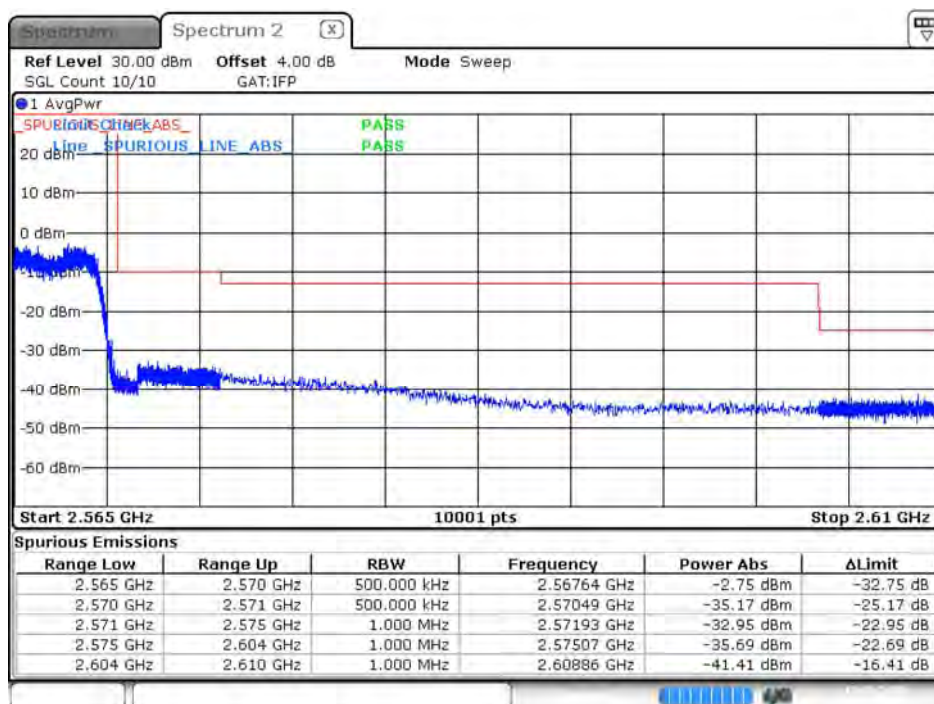
Date: 15.SEP.2020 14:10:20

CA_7C_CH20828+CH20999_15M+20M__QPSK_75RB0+100RB0



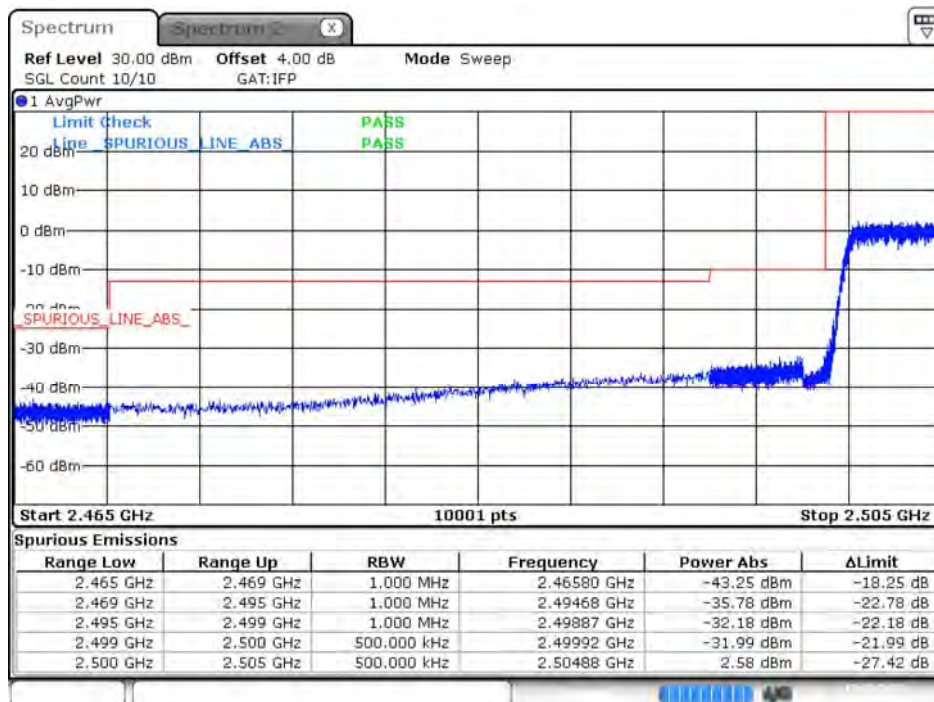
Date: 15.SEP.2020 14:13:13

CA_7C_CH21179+CH21350_15M+20M__QPSK_75RB0+100RB0



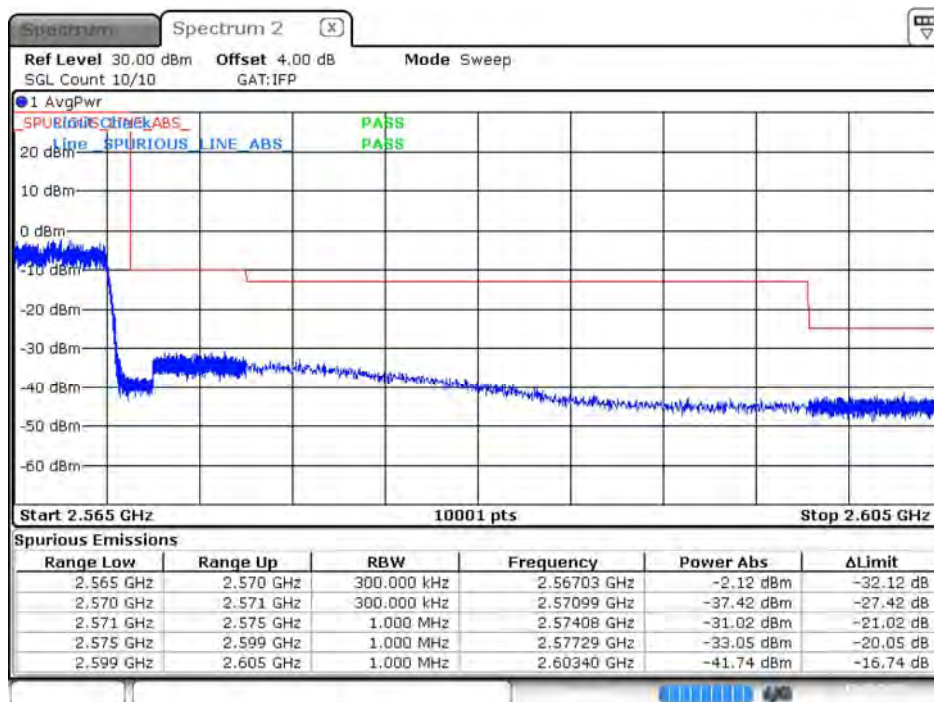
Date: 15.SEP.2020 14:14:08

CA_7C_CH20850+CH20994_20M+10M__QPSK_100RB0+50RB0



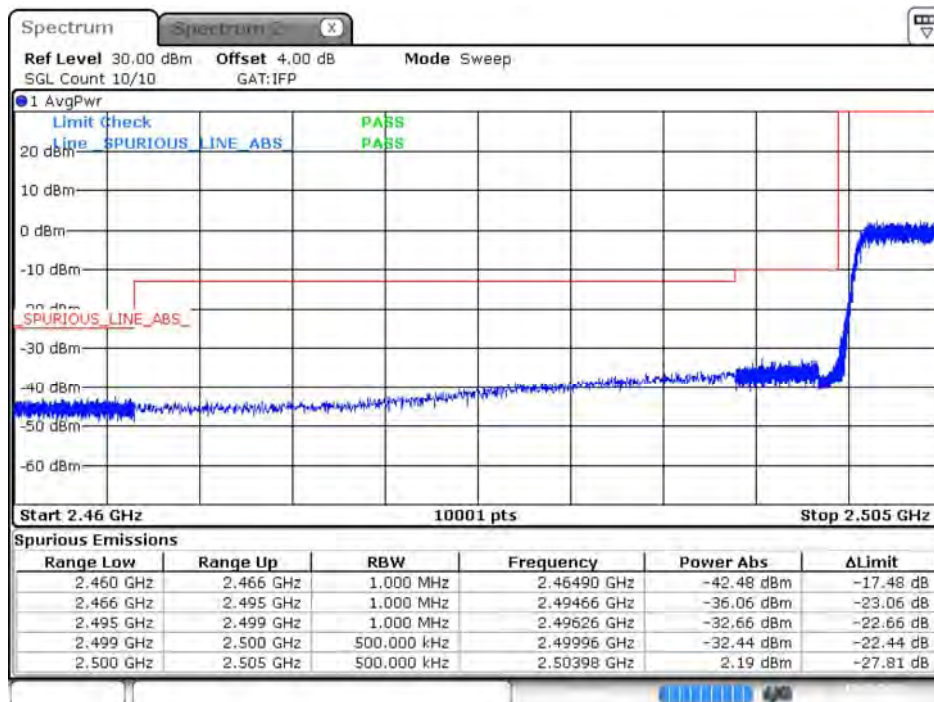
Date: 15.SEP.2020 14:17:29

CA_7C_CH21251+CH21395_20M+10M__QPSK_100RB0+50RB0



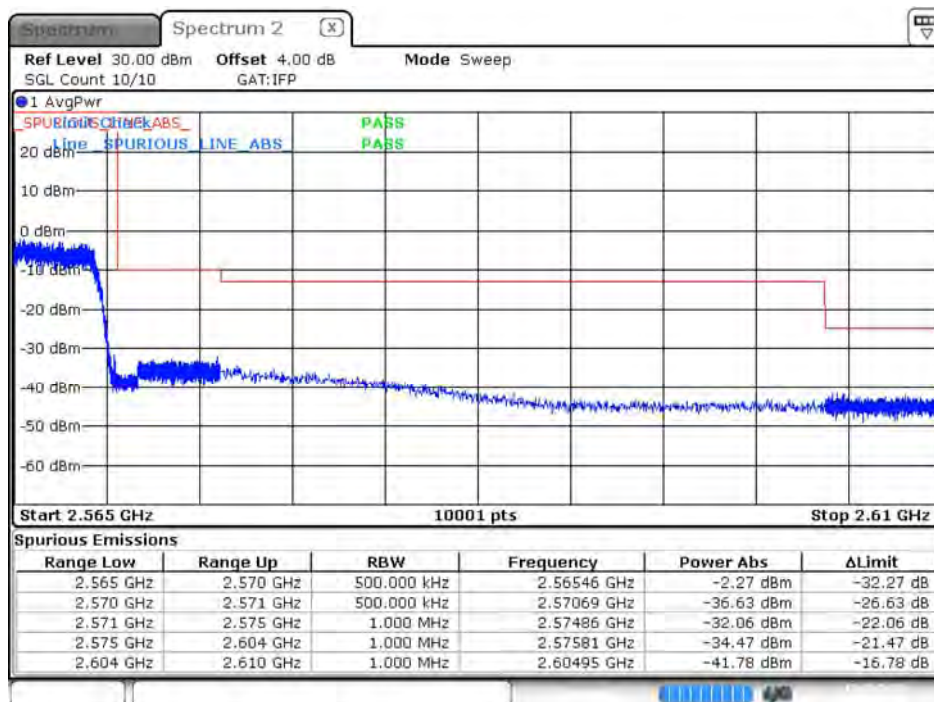
Date: 15.SEP.2020 14:18:46

CA_7C_CH20850+CH21021_20M+15M__QPSK_100RB0+75RB0



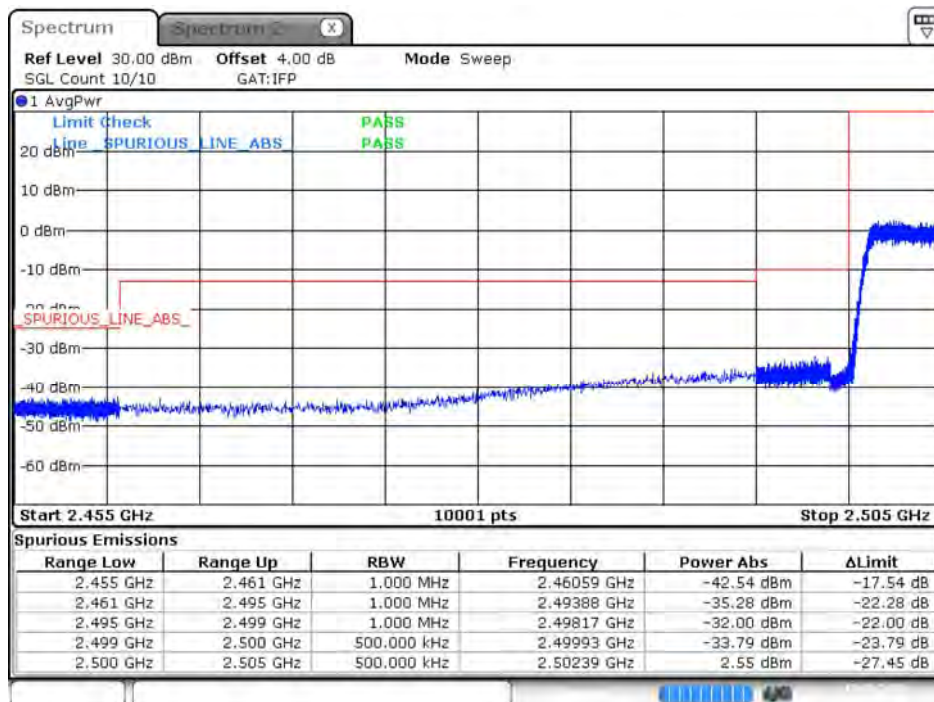
Date: 15.SEP.2020 14:23:35

CA_7C_CH21201+CH21372_20M+15M__QPSK_100RB0+75RB0



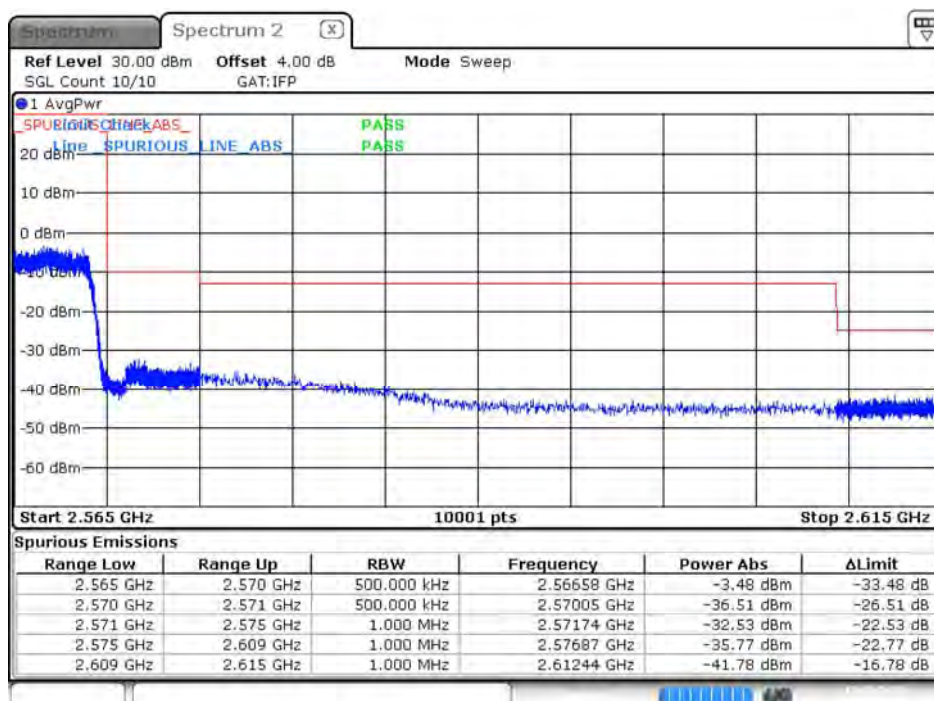
Date: 15.SEP.2020 14:25:43

CA_7C_CH20850+CH21048_20M+20M__QPSK_100RB0+100RB0



Date: 15.SEP.2020 14:46:38

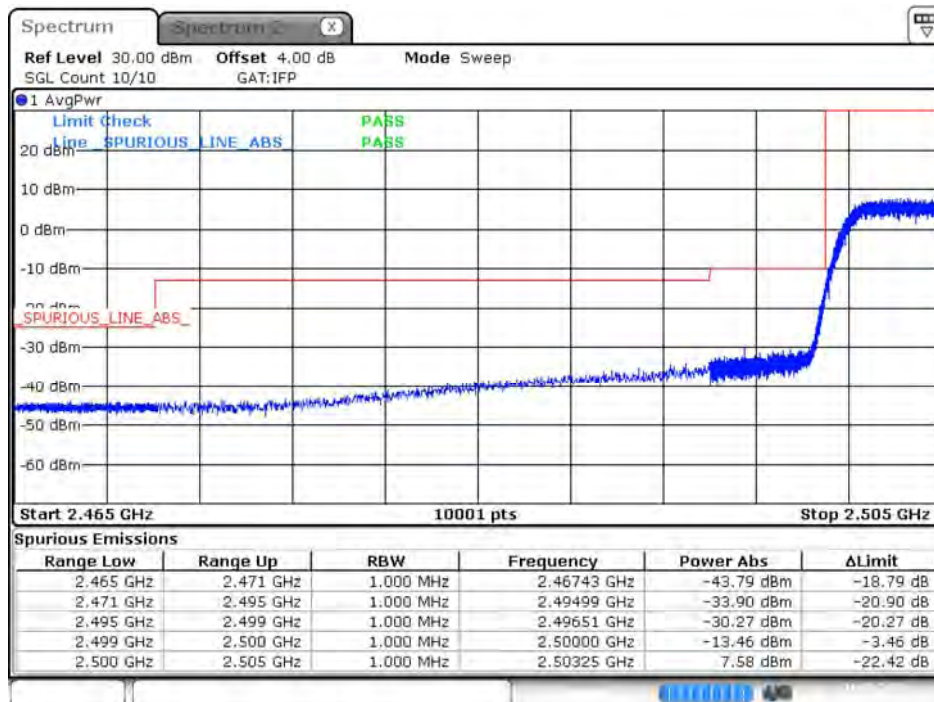
CA_7C_CH21152+CH21350_20M+20M__QPSK_100RB0+100RB0



Date: 15.SEP.2020 14:53:29

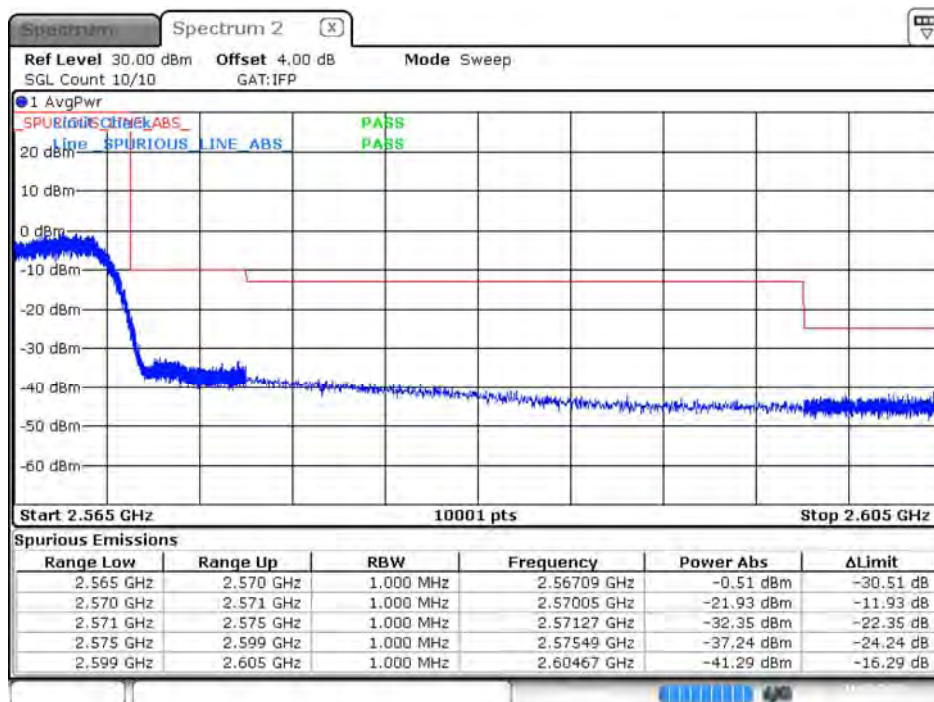
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CA_7C_CH20805+CH20949_10M+20M__QPSK_50RB0+100RB0



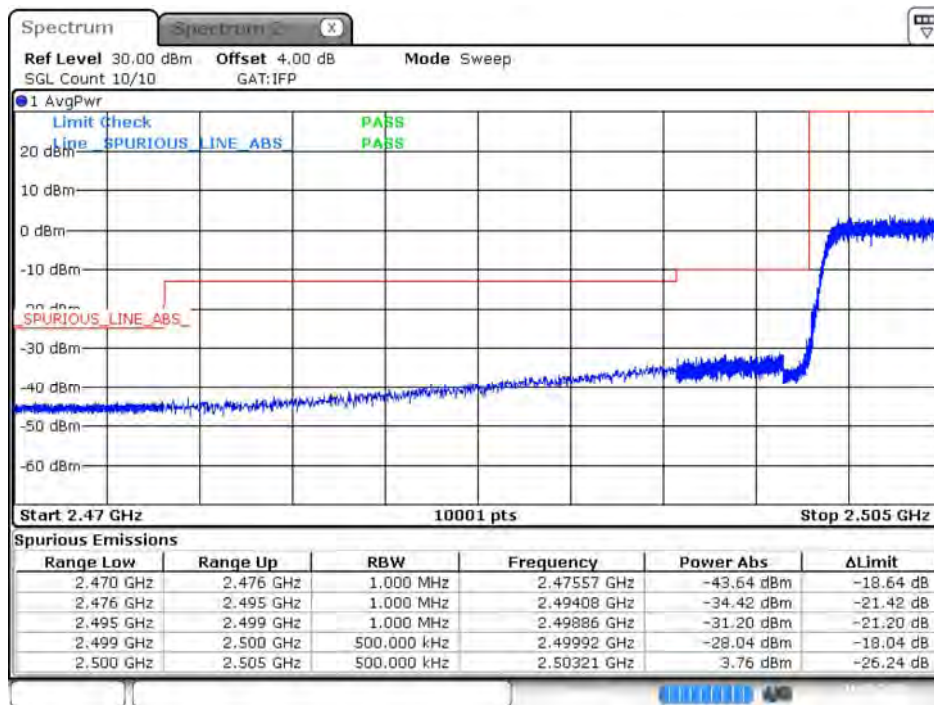
Date: 16.SEP.2020 11:50:51

CA_7C_CH21206+CH21350_10M+20M__QPSK_50RB0+100RB0



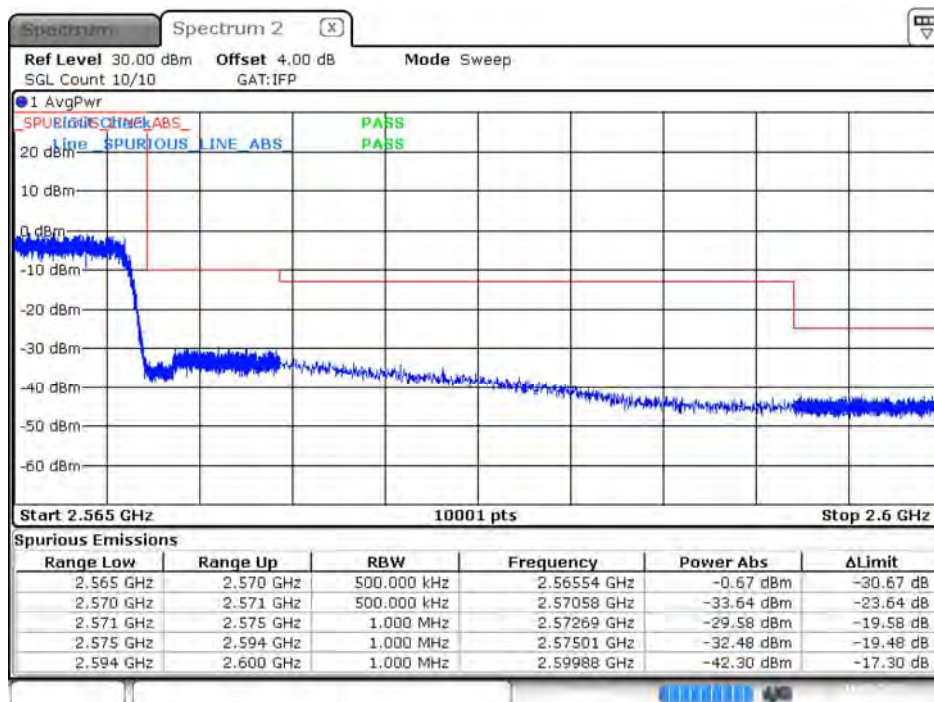
Date: 16.SEP.2020 11:53:46

CA_7C_CH20825+CH20945_15M+10M__QPSK_75RB0+50RB0



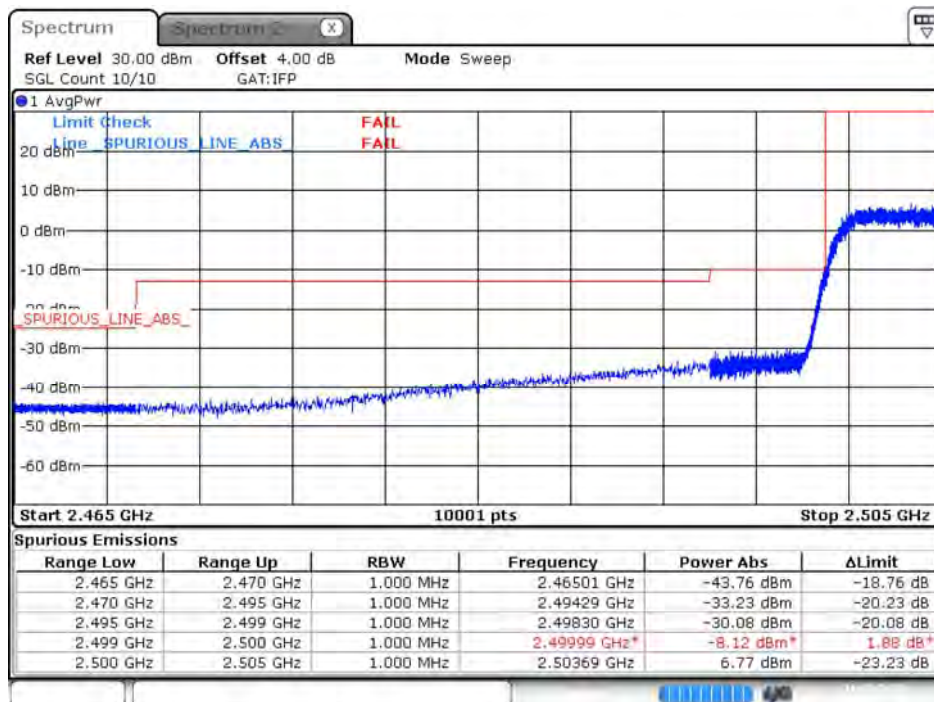
Date: 16.SEP.2020 11:56:18

CA_7C_CH21277+CH21397_15M+10M__QPSK_75RB0+50RB0



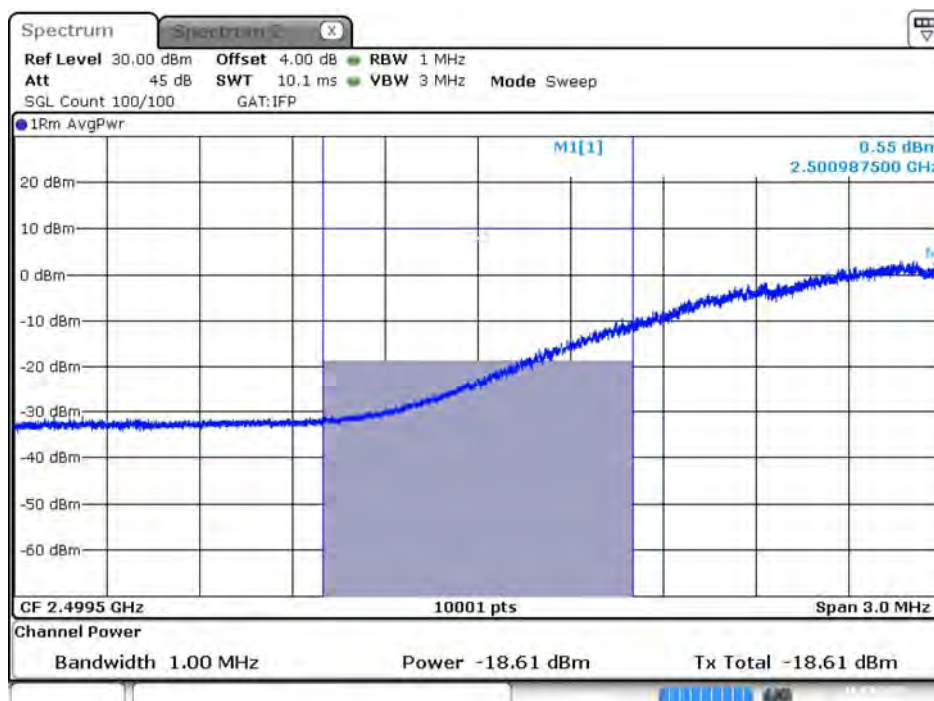
Date: 16.SEP.2020 11:57:23

CA_7C_CH20825+CH20975_15M+15M__QPSK_75RB0+75RB0-1



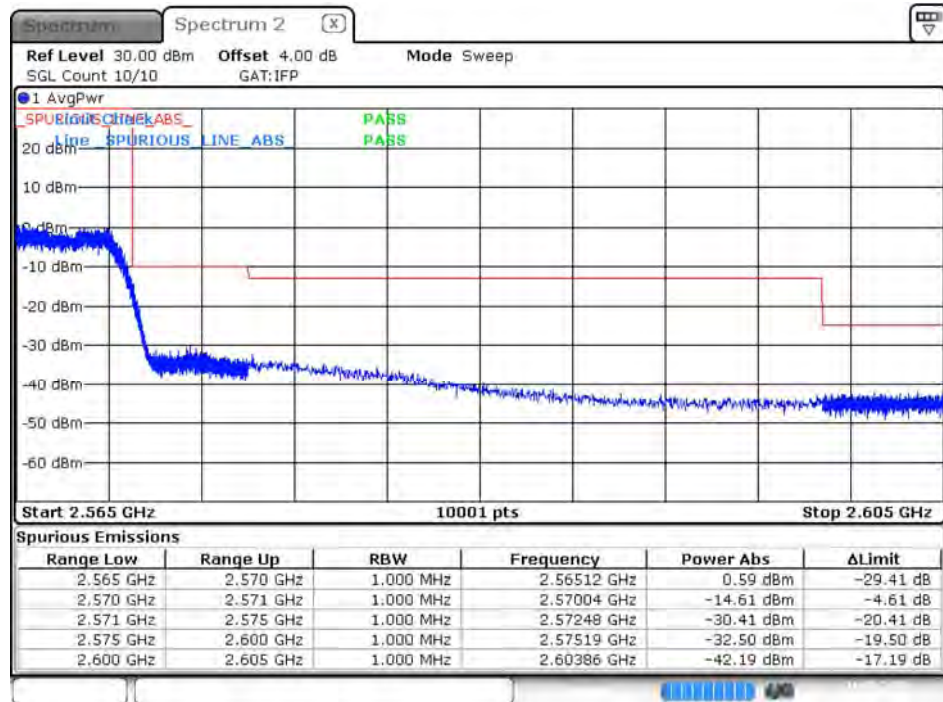
Date: 16.SEP.2020 13:55:27

CA_7C_CH20825+CH20975_15M+15M__QPSK_75RB0+75RB0-2



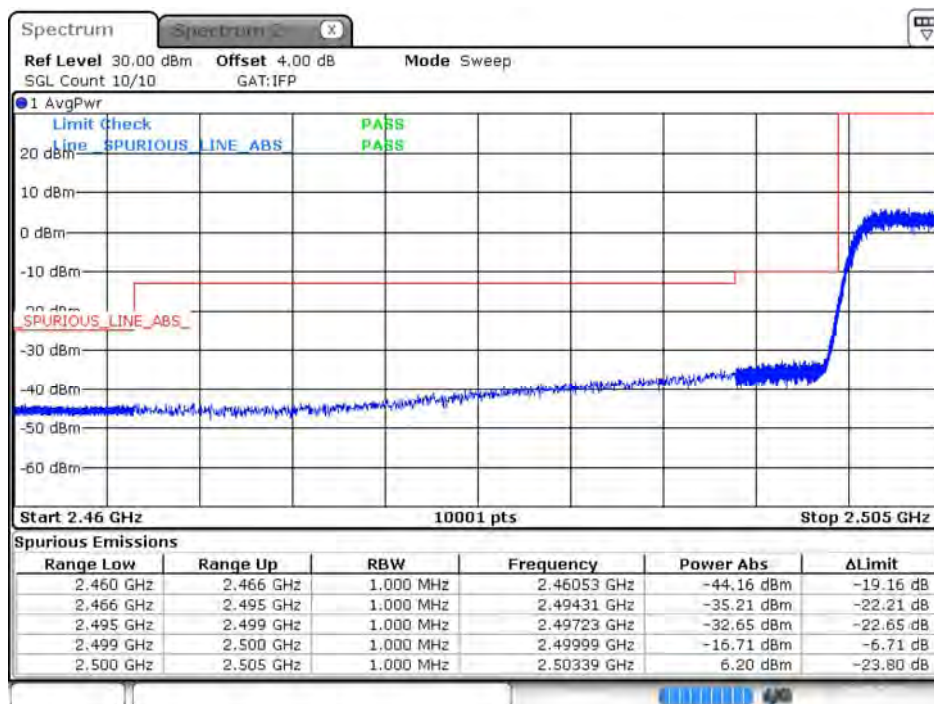
Date: 16.SEP.2020 14:44:45

CA_7C_CH21225+CH21375_15M+15M__QPSK_75RB0+75RB0



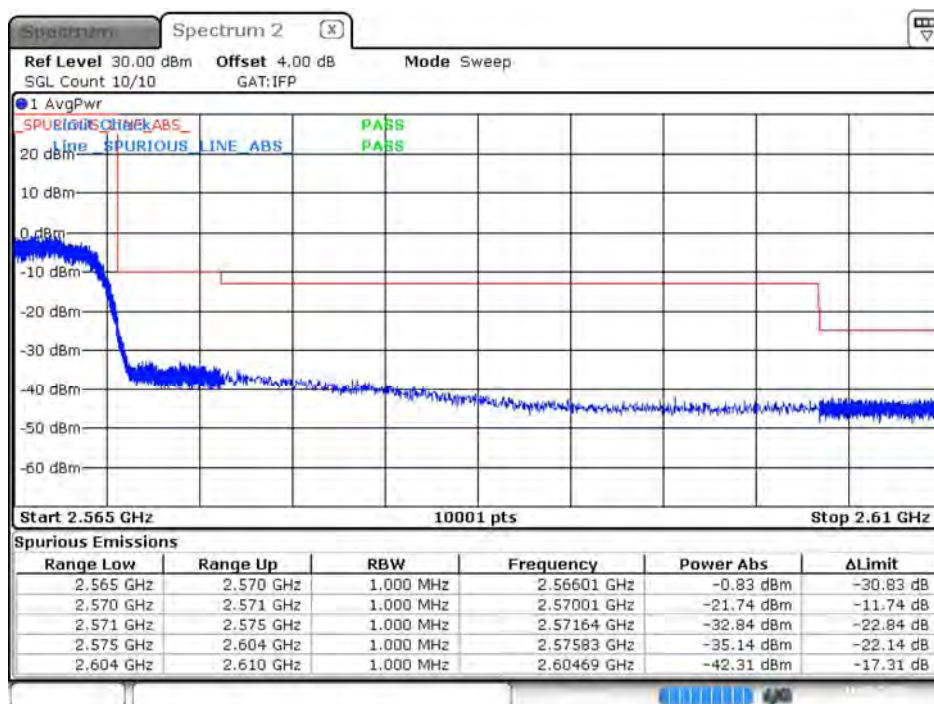
Date: 16.SEP.2020 12:01:02

CA_7C_CH20828+CH20999_15M+20M__QPSK_75RB0+100RB0



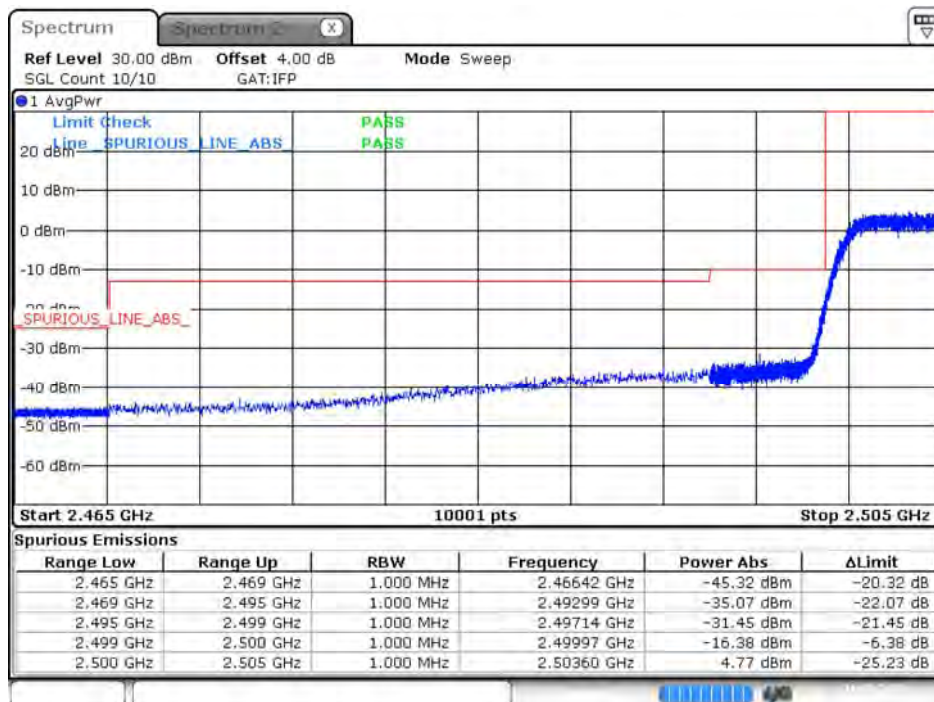
Date: 16.SEP.2020 12:04:16

CA_7C_CH21179+CH21350_15M+20M__QPSK_75RB0+100RB0



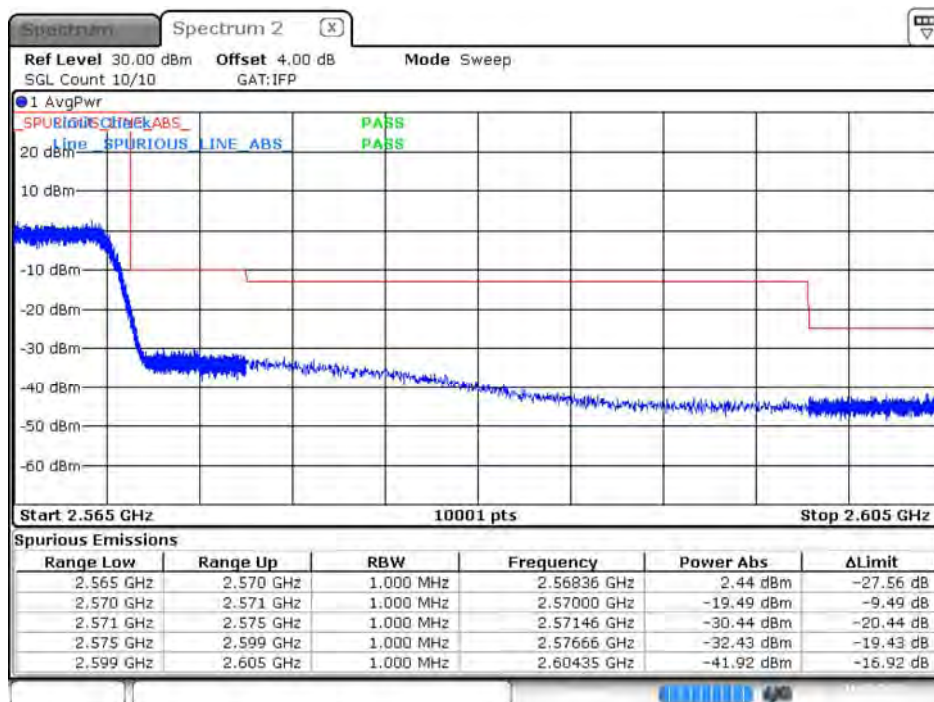
Date: 16.SEP.2020 12:05:18

CA_7C_CH20850+CH20994_20M+10M__QPSK_100RB0+50RB0



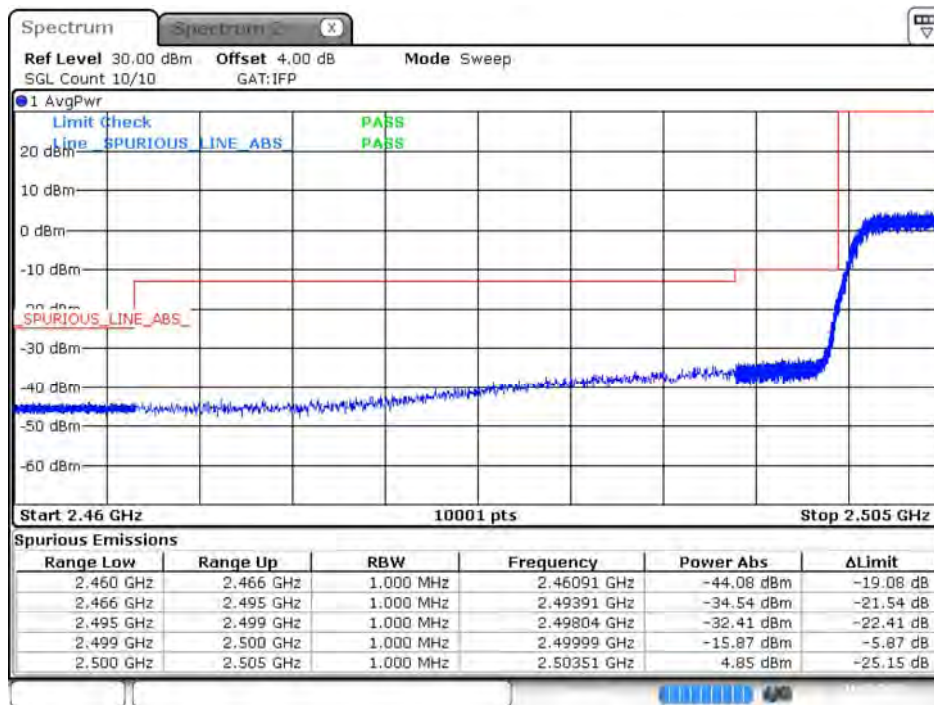
Date: 16.SEP.2020 13:26:53

CA_7C_CH21251+CH21395_20M+10M__QPSK_100RB0+50RB0



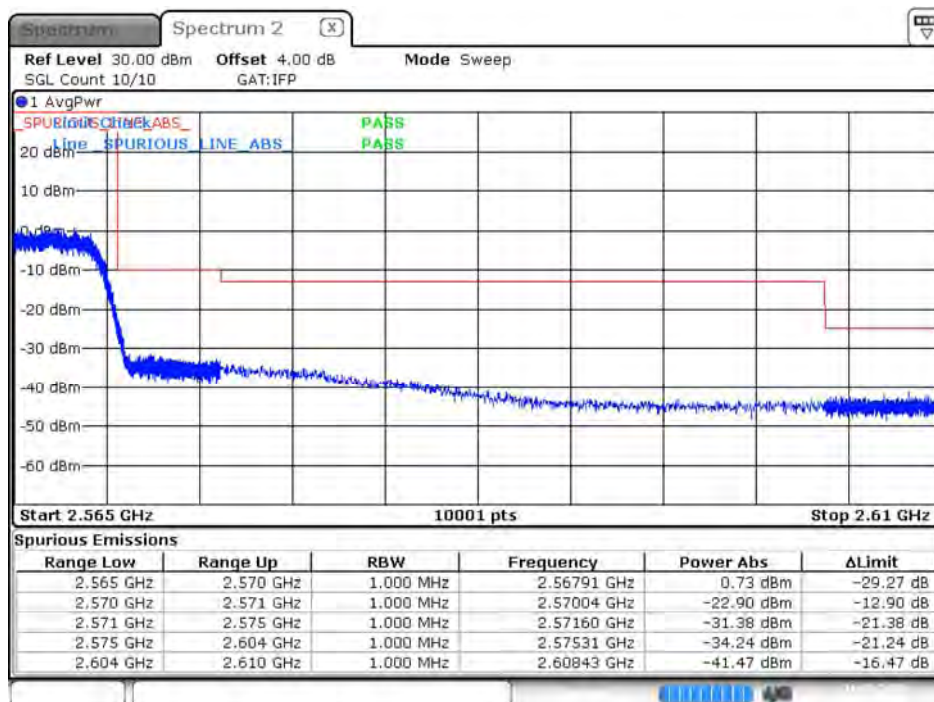
Date: 16.SEP.2020 13:28:02

CA_7C_CH20850+CH21021_20M+15M__QPSK_100RB0+75RB0



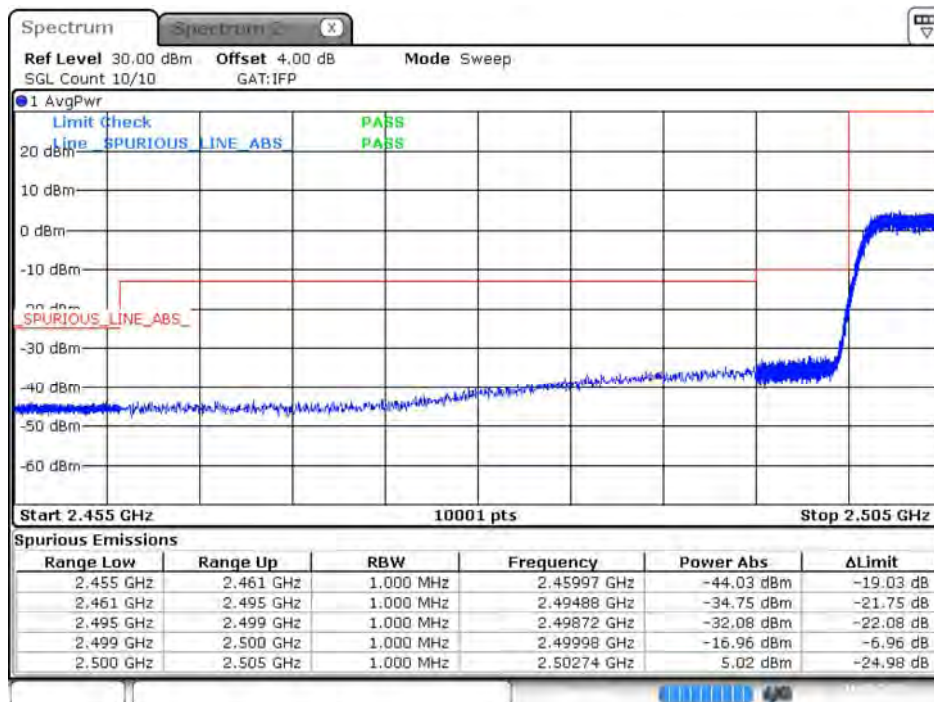
Date: 16.SEP.2020 13:29:52

CA_7C_CH21201+CH21372_20M+15M__QPSK_100RB0+75RB0



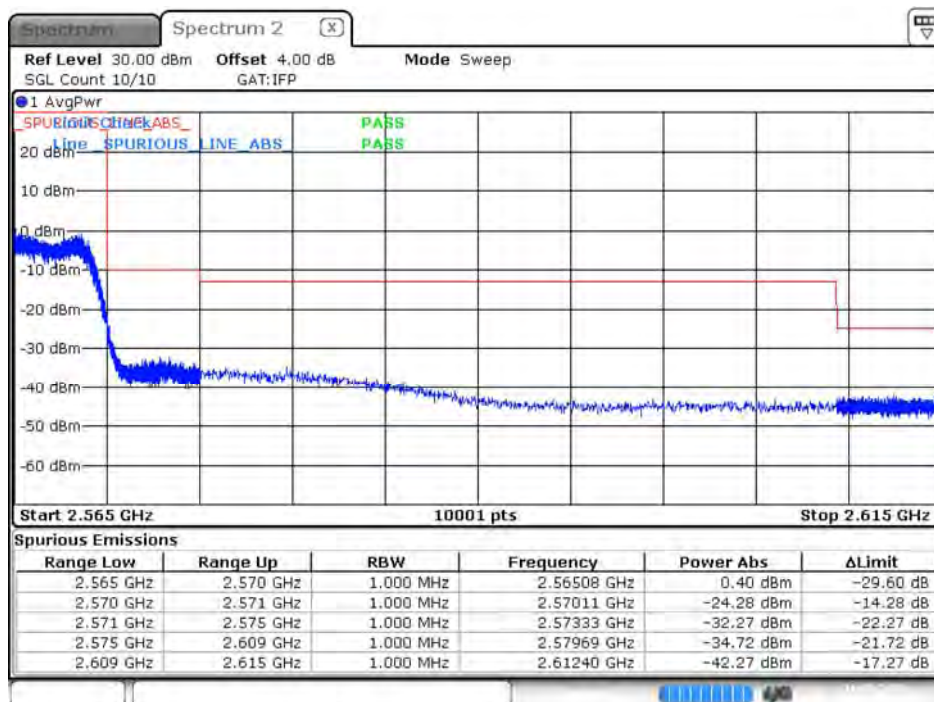
Date: 16.SEP.2020 13:30:39

CA_7C_CH20850+CH21048_20M+20M__QPSK_100RB0+100RB0



Date: 16.SEP.2020 13:34:07

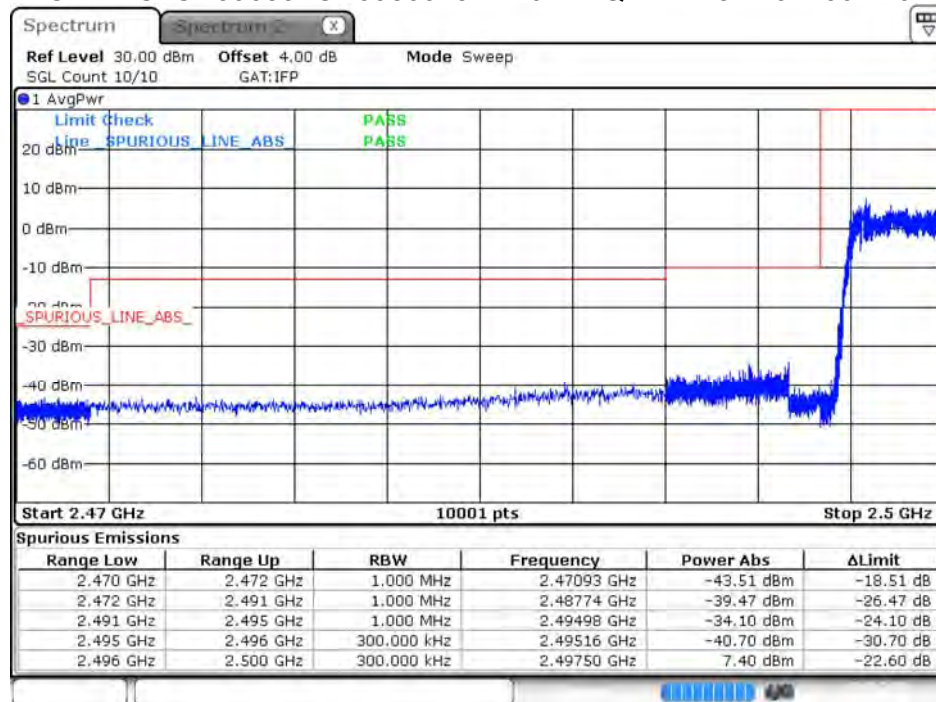
CA_7C_CH21152+CH21350_20M+20M__QPSK_100RB0+100RB0



Date: 16.SEP.2020 13:34:44

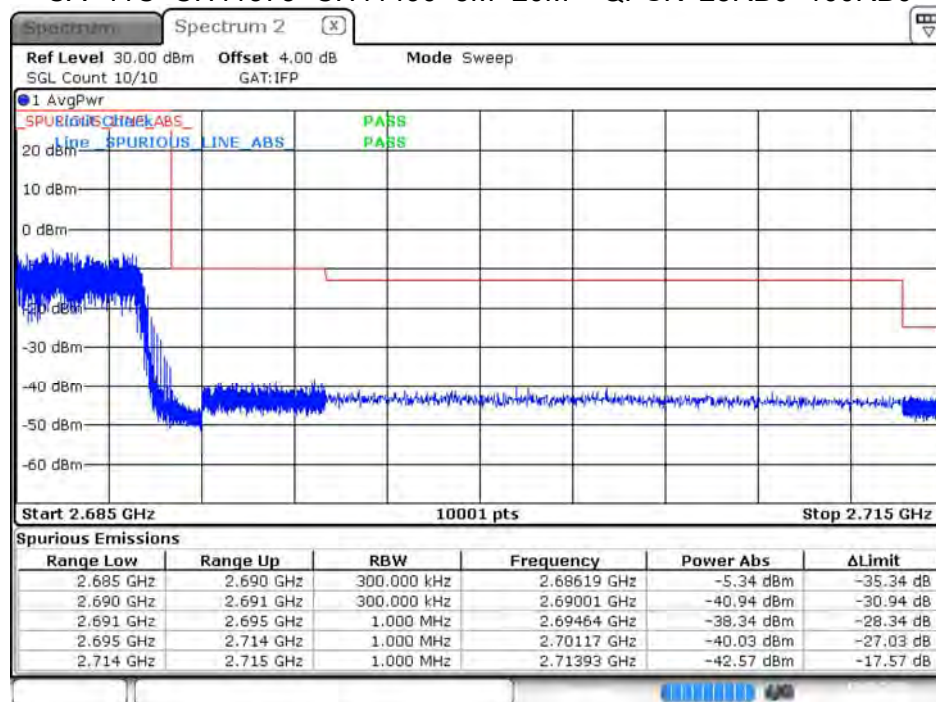
Product	Module		
Test Item	Spurious Emission at Antenna Terminals		
Test Mode	Mode 13: LTE CA Band 41C (FCC)		
Date of Test	2020/09/15	Test Site	SR12-H
Temperature(°C)	23	Humidity (%RH)	64

CA 41C CH39683+CH39800 5M+20M QPSK 25RB0+100RB0



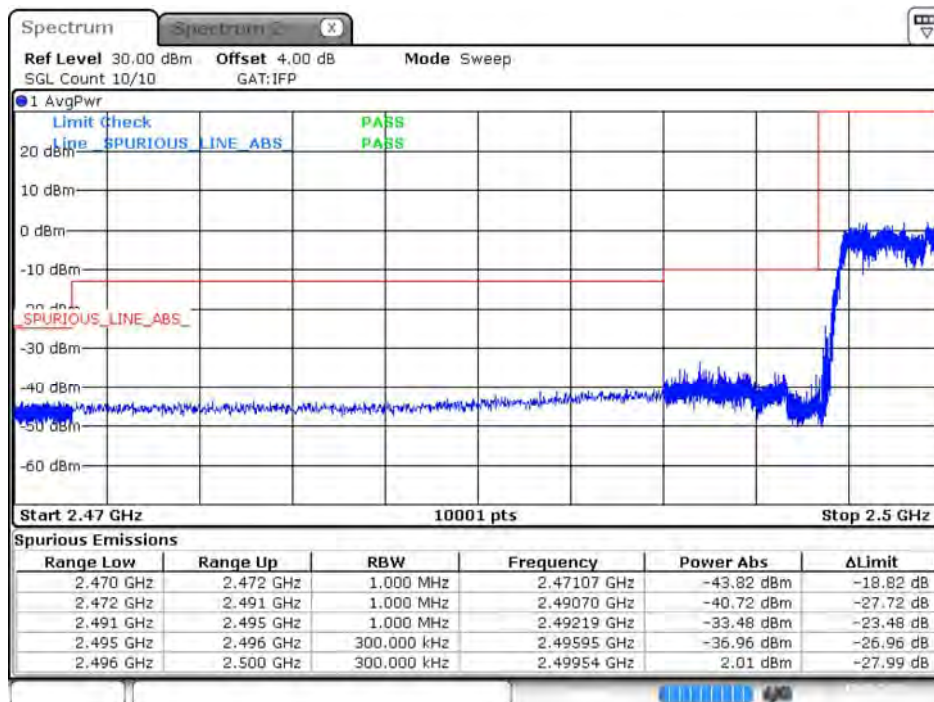
Date: 15.SEP.2020 09:47:37

CA 41C CH41373+CH41490 5M+20M QPSK 25RB0+100RB0



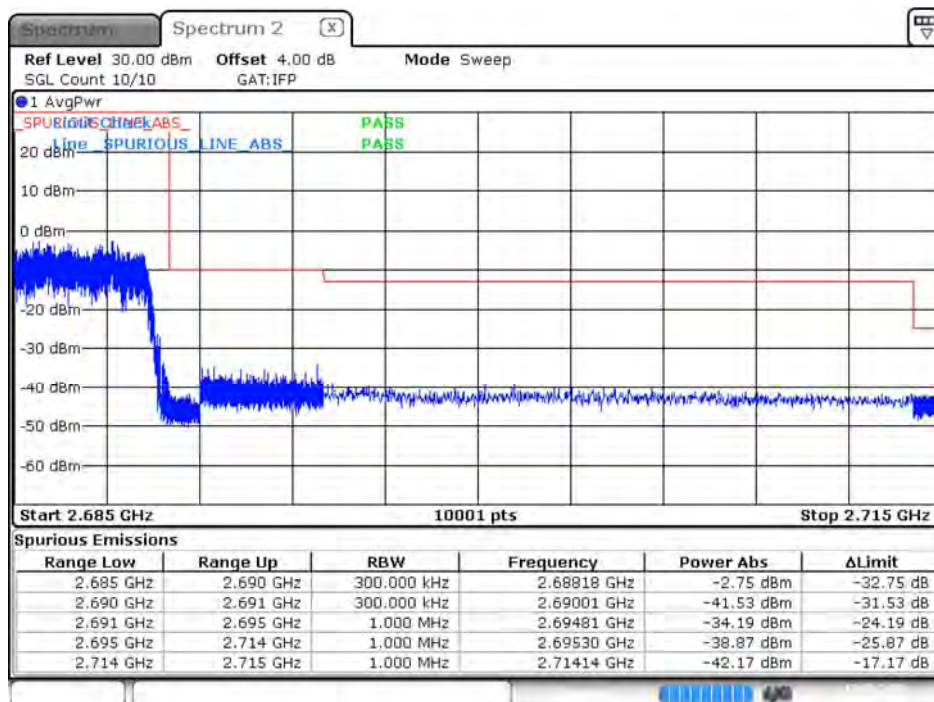
Date: 15.SEP.2020 09:50:34

CA_41C_CH39703+CH39823_10M+15M__QPSK_50RB0+75RB0



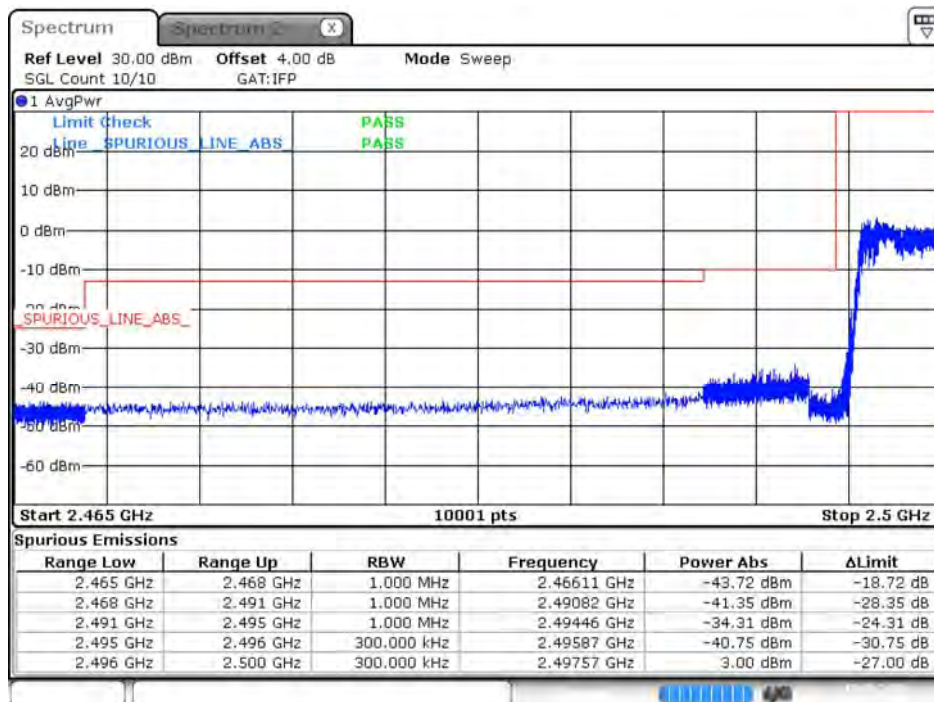
Date: 15.SEP.2020 09:53:25

CA_41C_CH41395+CH41515_10M+15M__QPSK_50RB0+75RB0



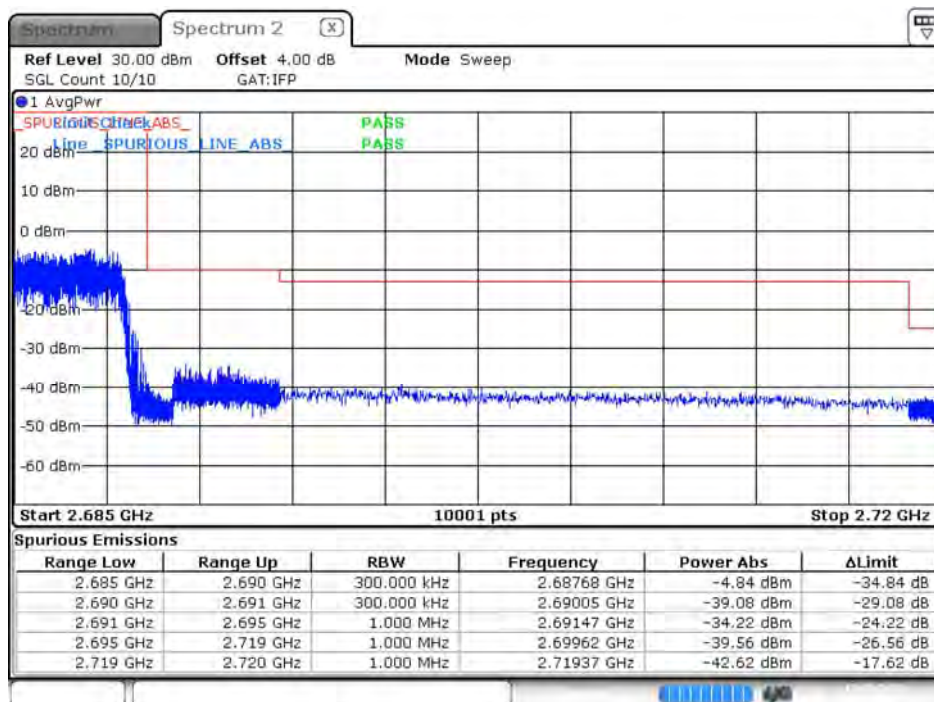
Date: 15.SEP.2020 09:54:19

CA_41C_CH39705+CH39849_10M+20M__QPSK_50RB0+100RB0



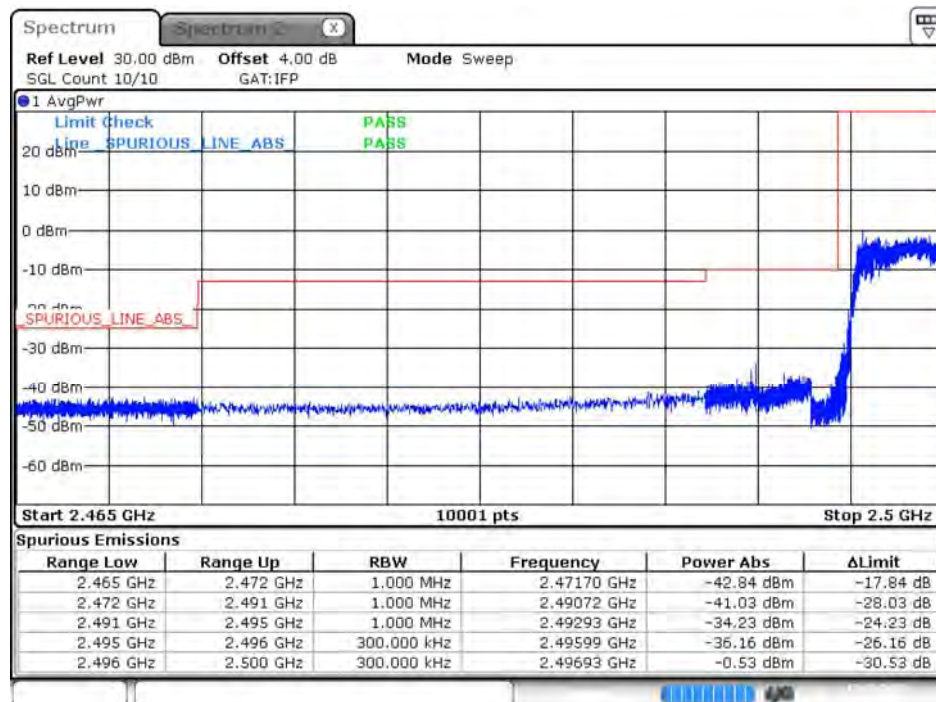
Date: 15.SEP.2020 10:10:36

CA_41C_CH41346+CH41490_10M+20M__QPSK_50RB0+100RB0



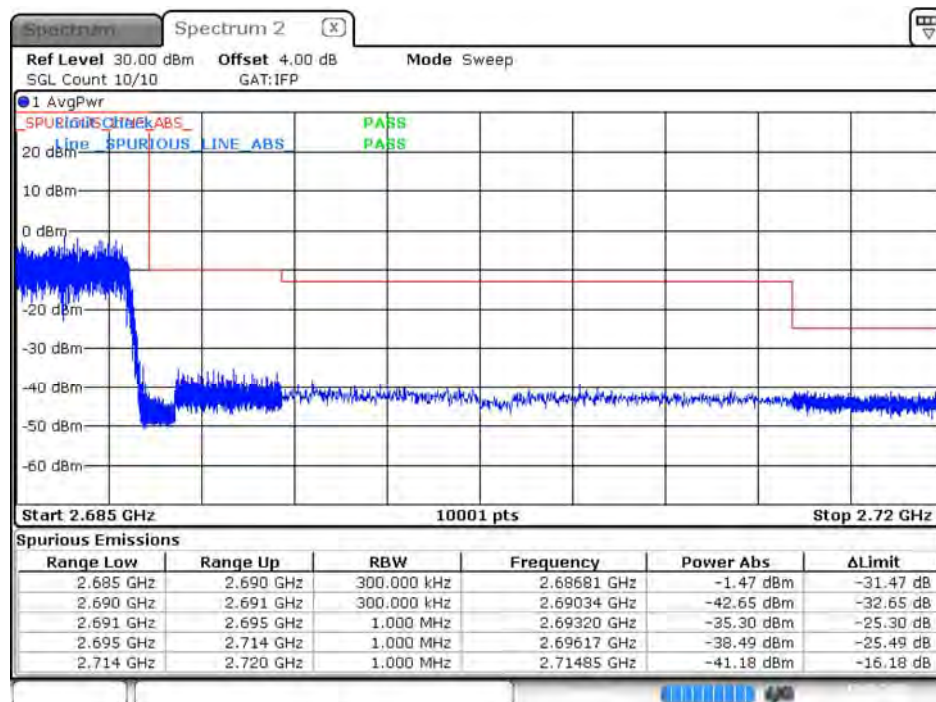
Date: 15.SEP.2020 10:11:21

CA_41C_CH39725+CH39845_15M+10M__QPSK_75RB0+50RB0



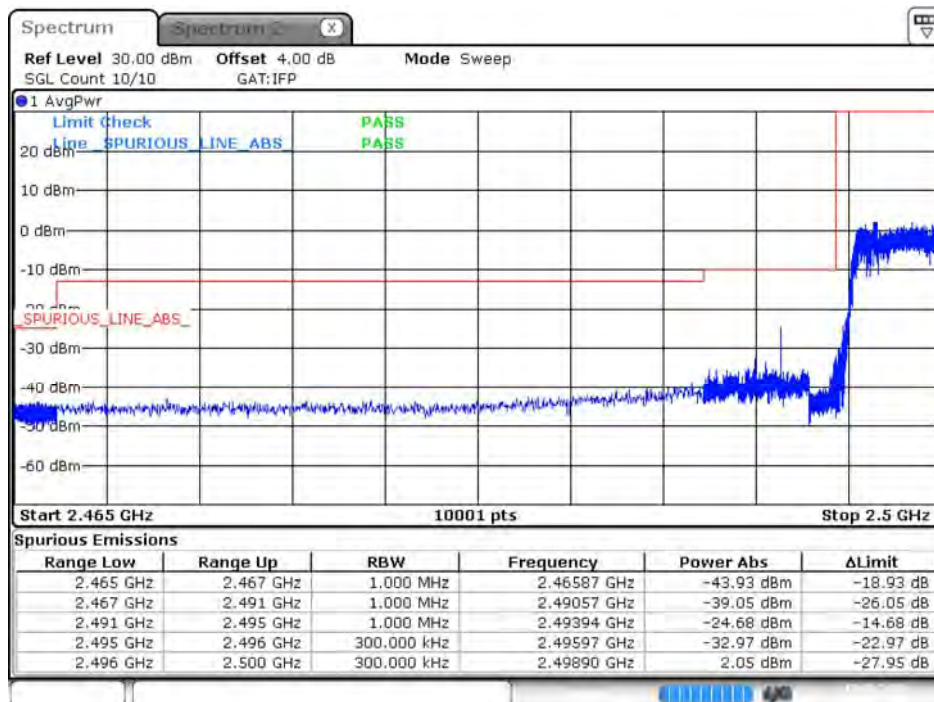
Date: 15.SEP.2020 10:14:11

CA_41C_CH41417+CH41537_15M+10M__QPSK_75RB0+50RB0



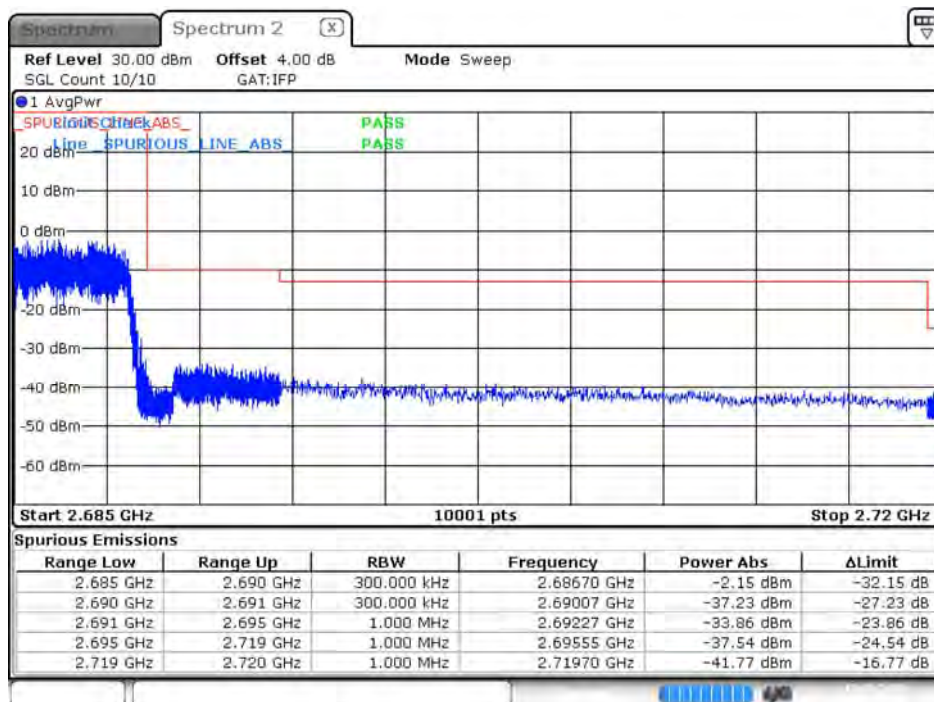
Date: 15.SEP.2020 10:14:53

CA_41C_CH39725+CH39875_15M+15M__QPSK_75RB0+75RB0



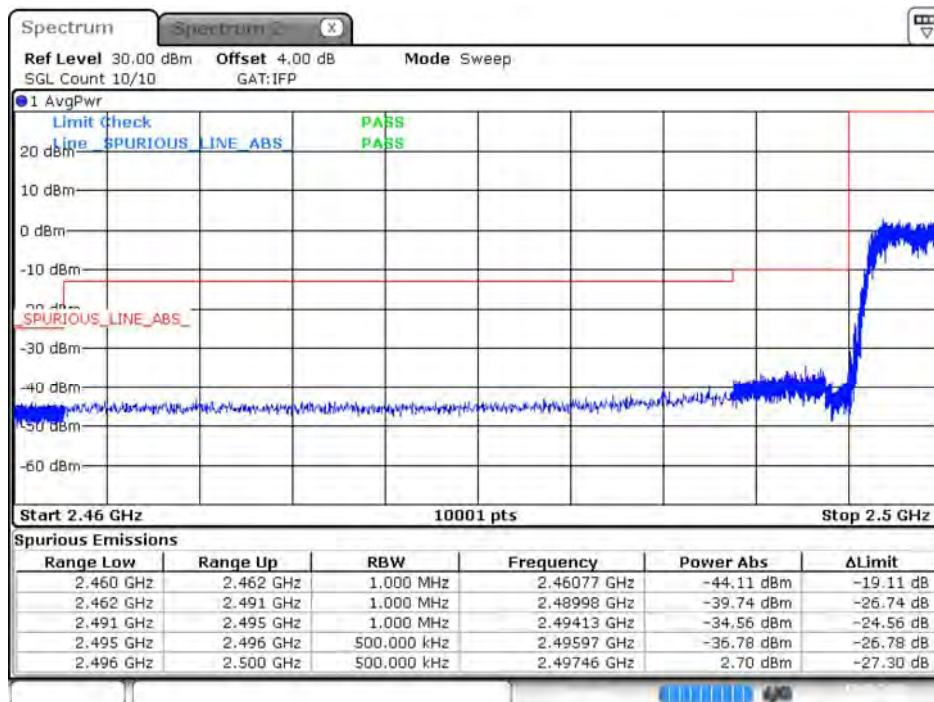
Date: 15.SEP.2020 10:39:11

CA_41C_CH41365+CH41515_15M+15M__QPSK_75RB0+75RB0



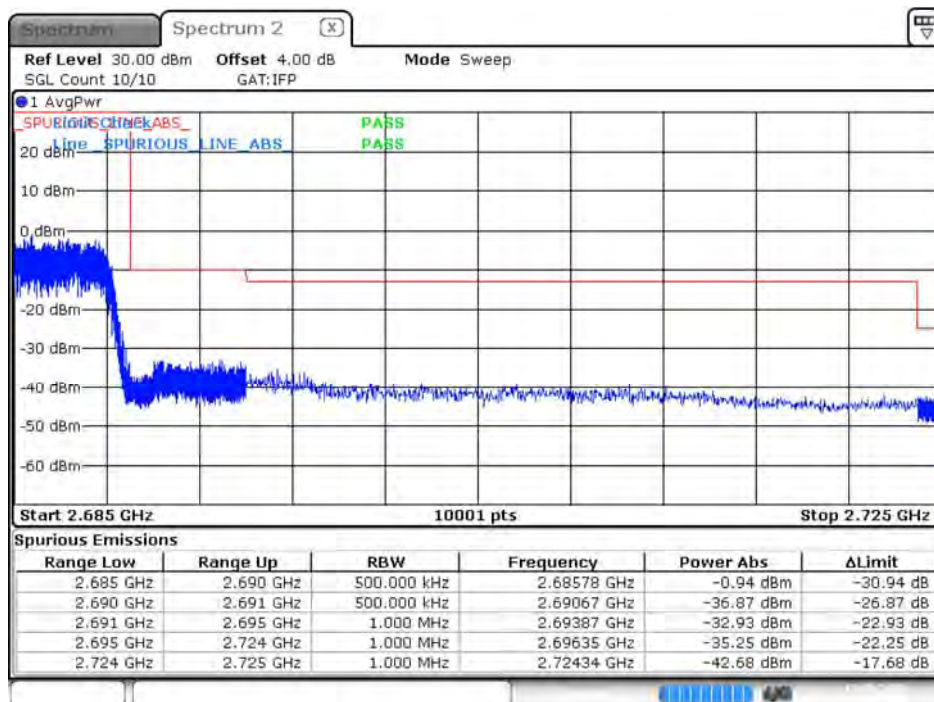
Date: 15.SEP.2020 10:40:51

CA_41C_CH39728+CH39899_15M+20M__QPSK_75RB0+100RB0



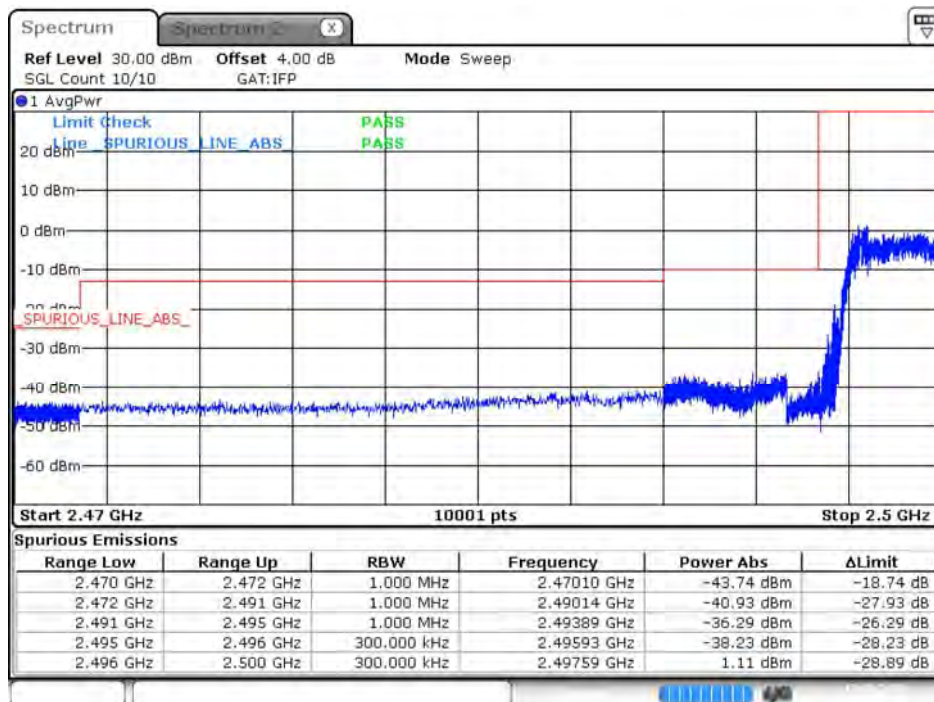
Date: 15.SEP.2020 10:58:25

CA_41C_CH41319+CH41490_15M+20M__QPSK_75RB0+100RB0



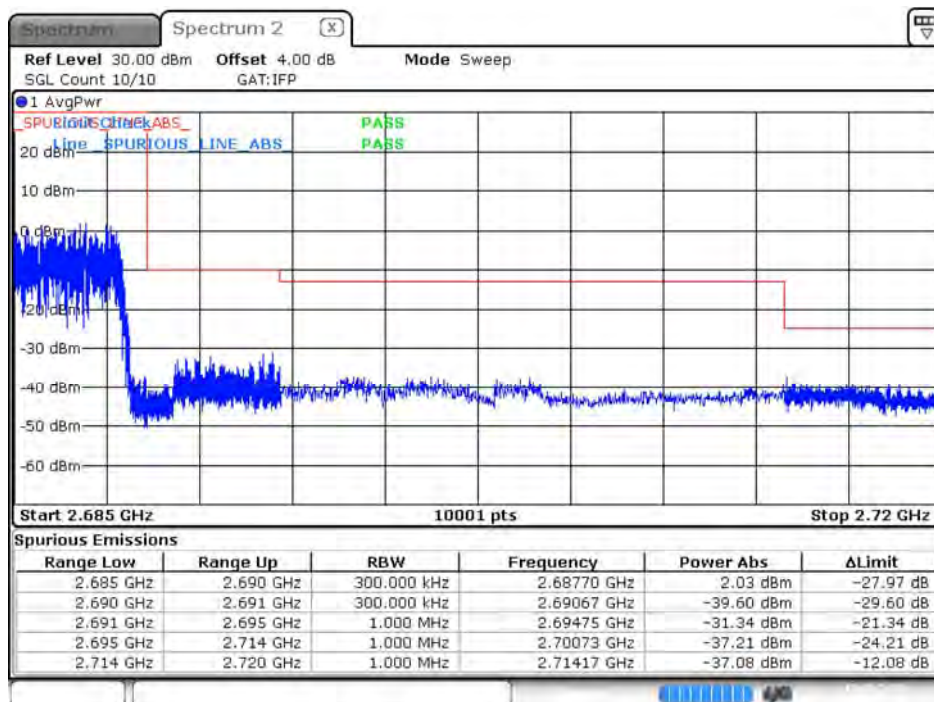
Date: 15.SEP.2020 10:59:04

CA_41C_CH39750+CH39867_20M+5M__QPSK_100RB0+25RB0



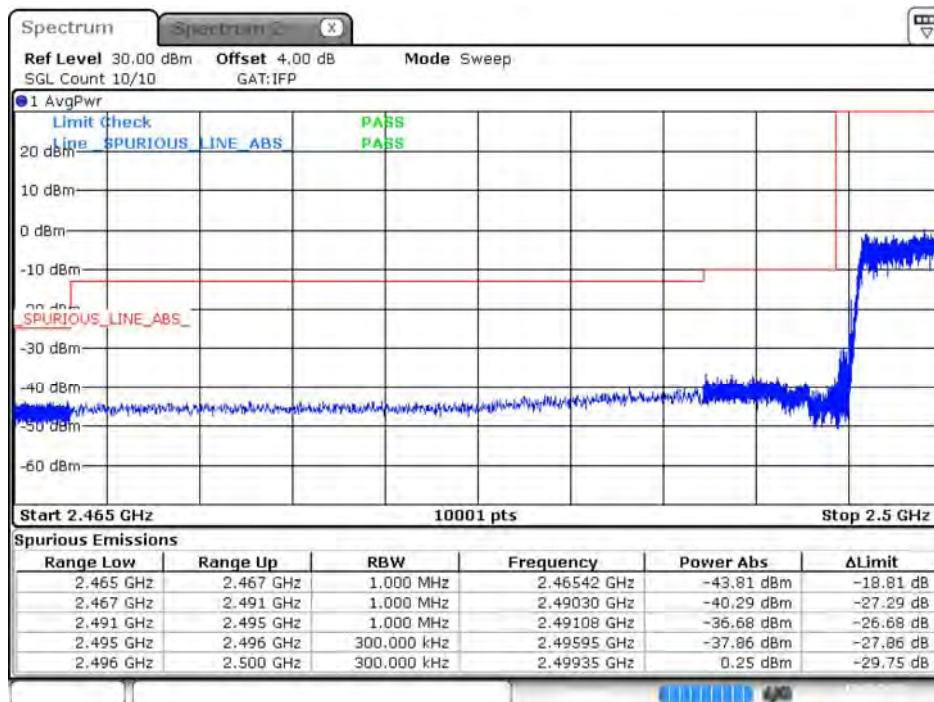
Date: 15.SEP.2020 11:04:04

CA_41C_CH41440+CH41557_20M+5M__QPSK_100RB0+25RB0



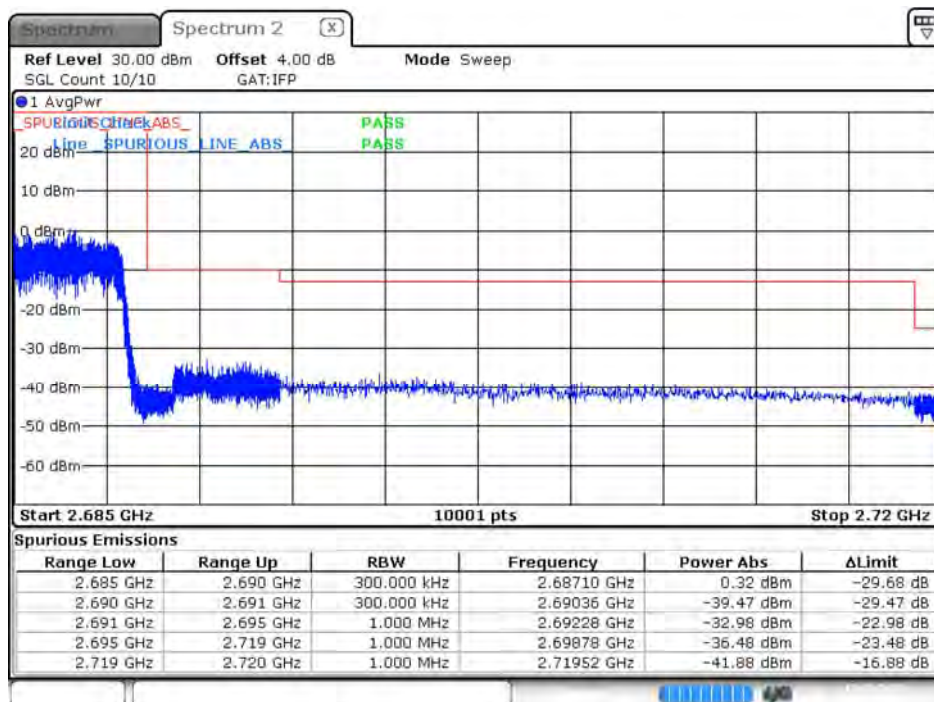
Date: 15.SEP.2020 11:04:54

CA_41C_CH39750+CH39894_20M+10M__QPSK_100RB0+50RB0



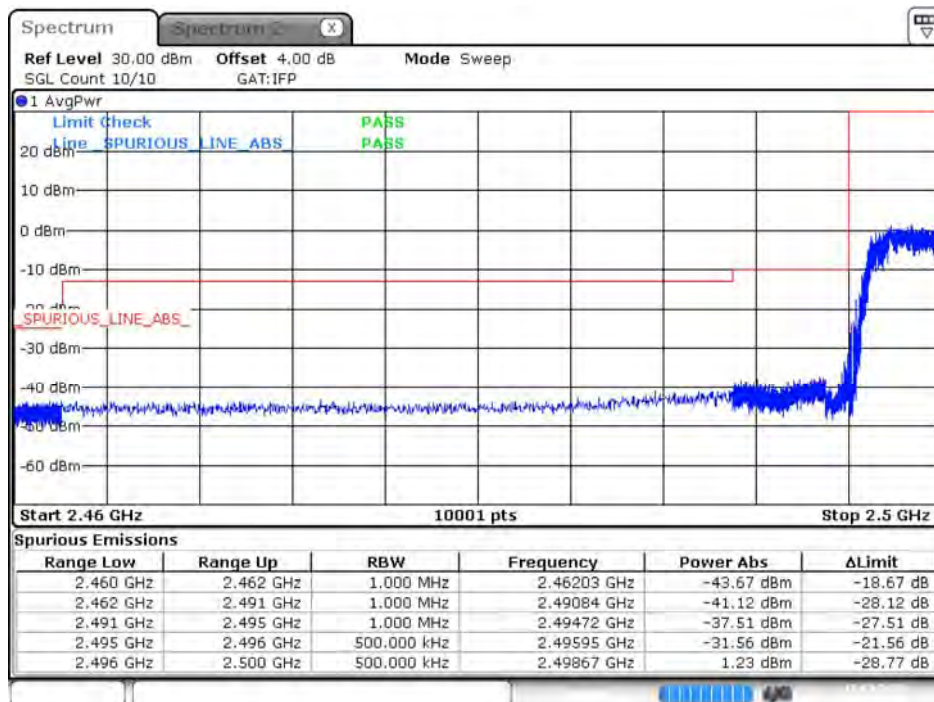
Date: 15.SEP.2020 11:14:02

CA_41C_CH41391+CH41535_20M+10M__QPSK_100RB0+50RB0



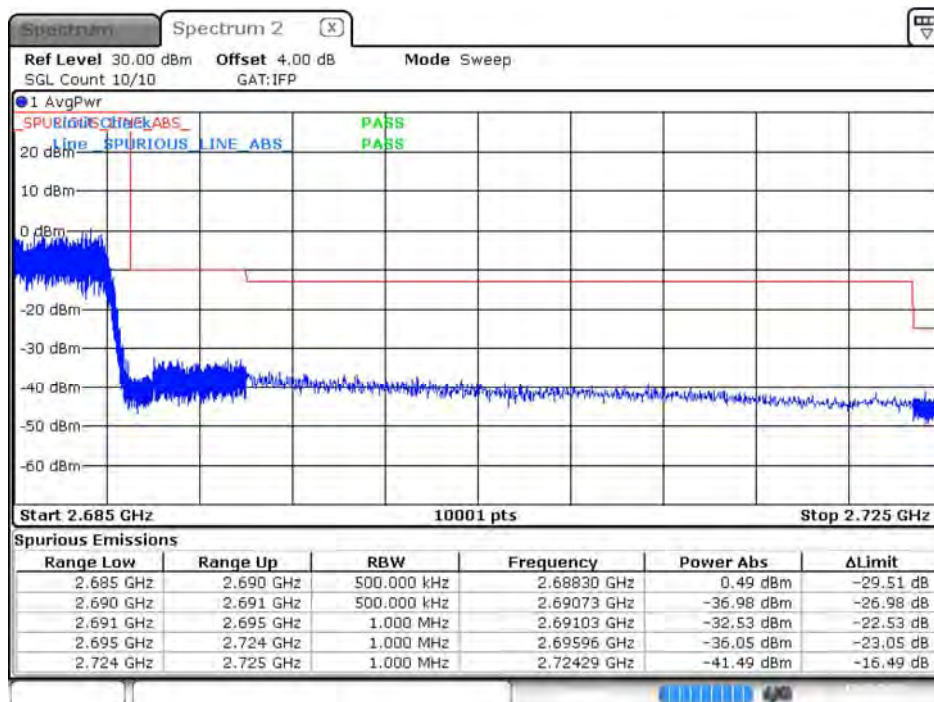
Date: 15.SEP.2020 11:14:43

CA_41C_CH39750+CH39921_20M+15M__QPSK_100RB0+75RB0



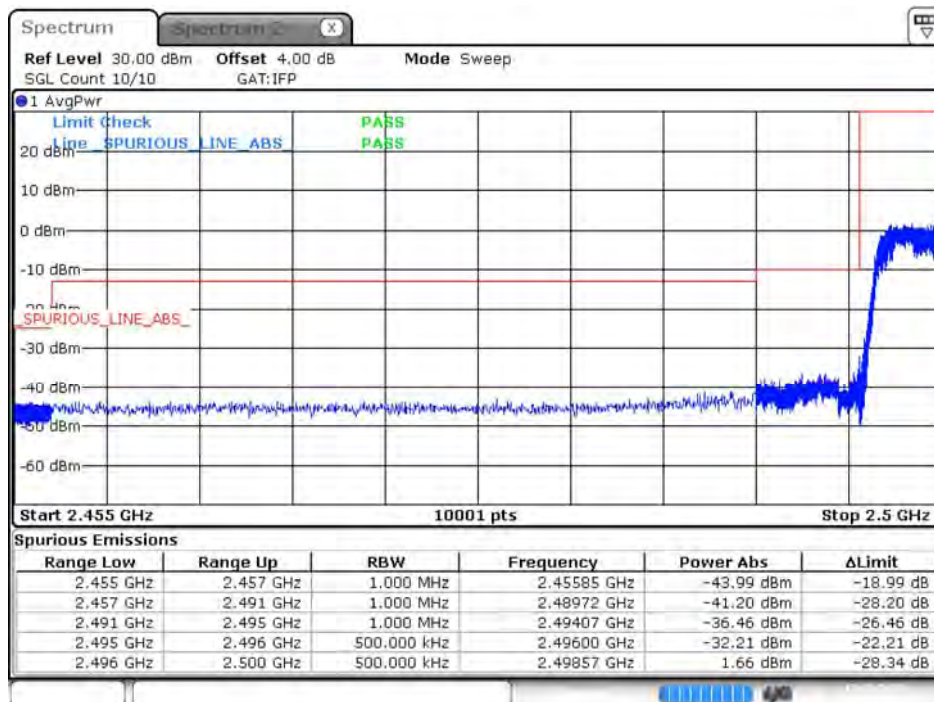
Date: 15.SEP.2020 13:23:13

CA_41C_CH41341+CH41512_20M+15M__QPSK_100RB0+75RB0



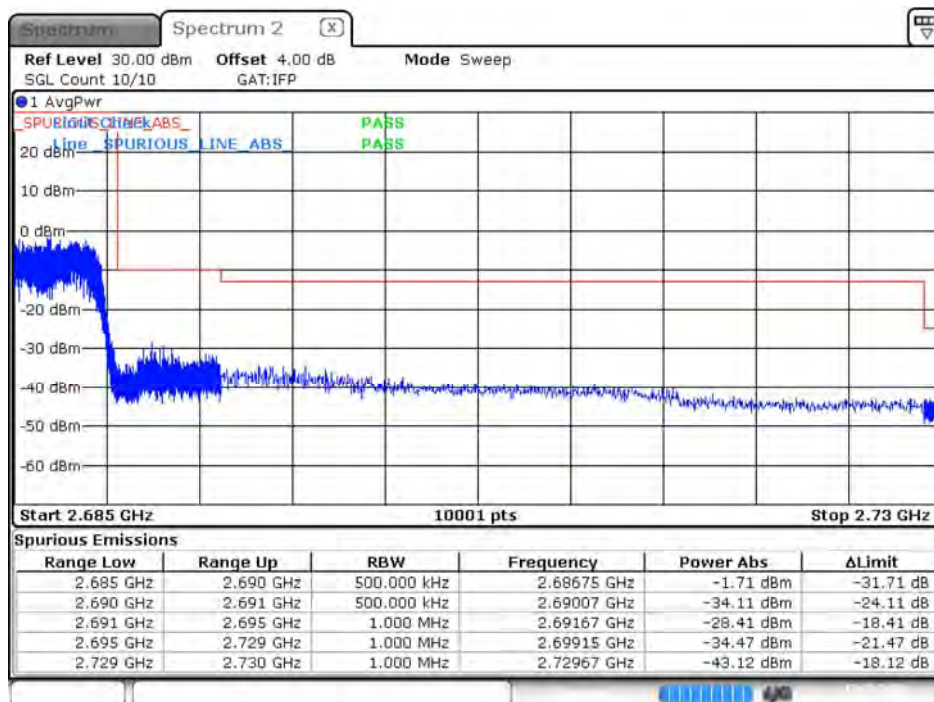
Date: 15.SEP.2020 13:25:09

CA_41C_CH39750+CH39948_20M+20M__QPSK_100RB0+100RB0



Date: 15.SEP.2020 13:27:37

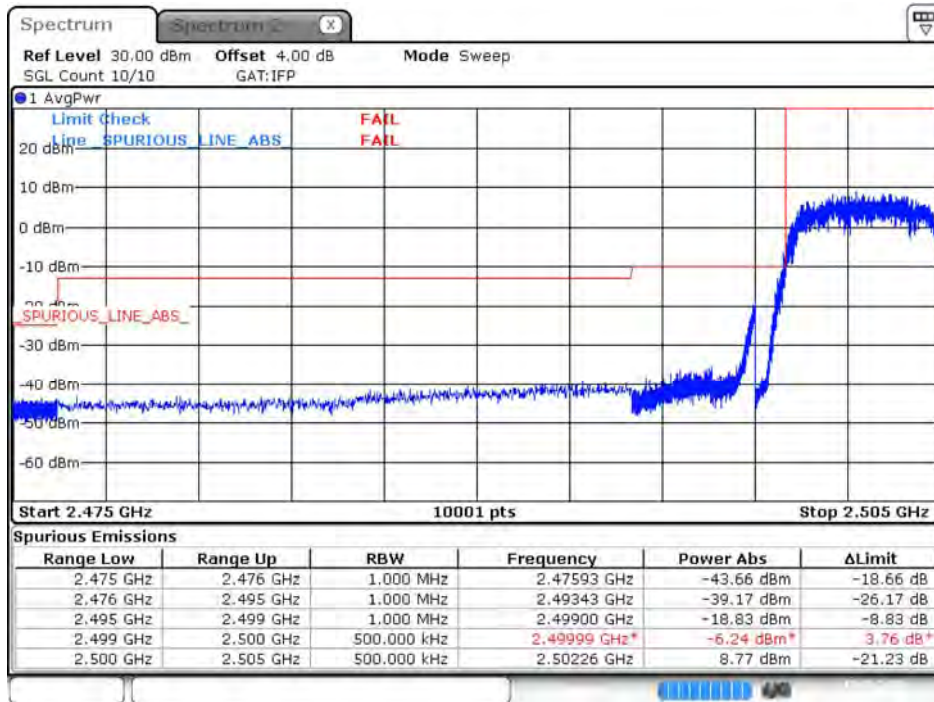
CA_41C_CH41292+CH41490_20M+20M__QPSK_100RB0+100RB0



Date: 15.SEP.2020 13:28:43

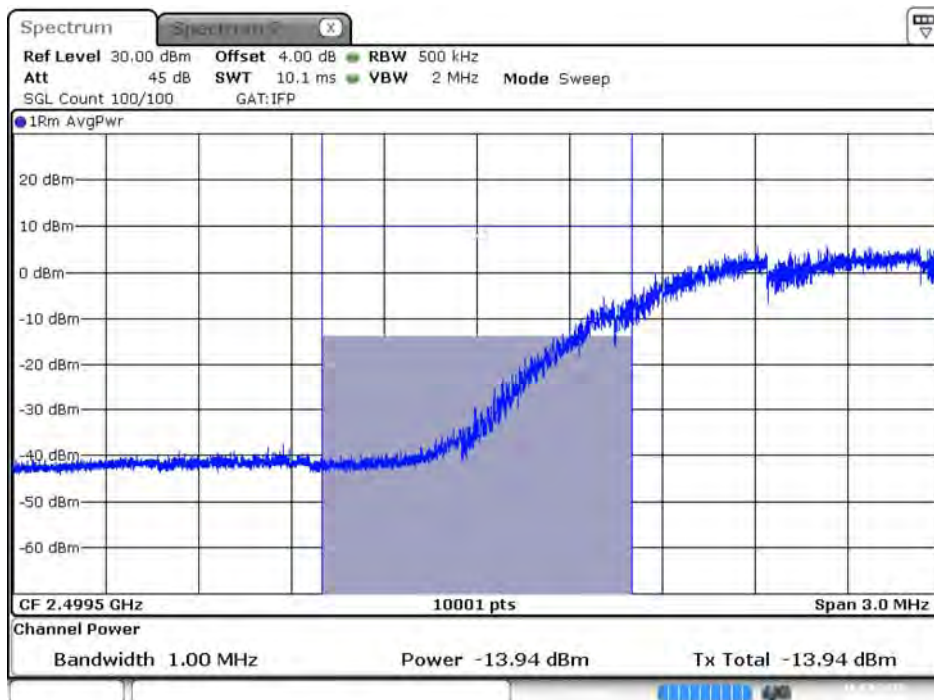
Product	Module		
Test Item	Spurious Emission at Antenna Terminals		
Test Mode	Mode 13: LTE CA Band 41C (ISED)		
Date of Test	2020/09/15	Test Site	SR12-H
Temperature(°C)	23	Humidity (%RH)	64

CA_41C_CH39715+CH39832_5M+20M__QPSK_25RB0+100RB0-1



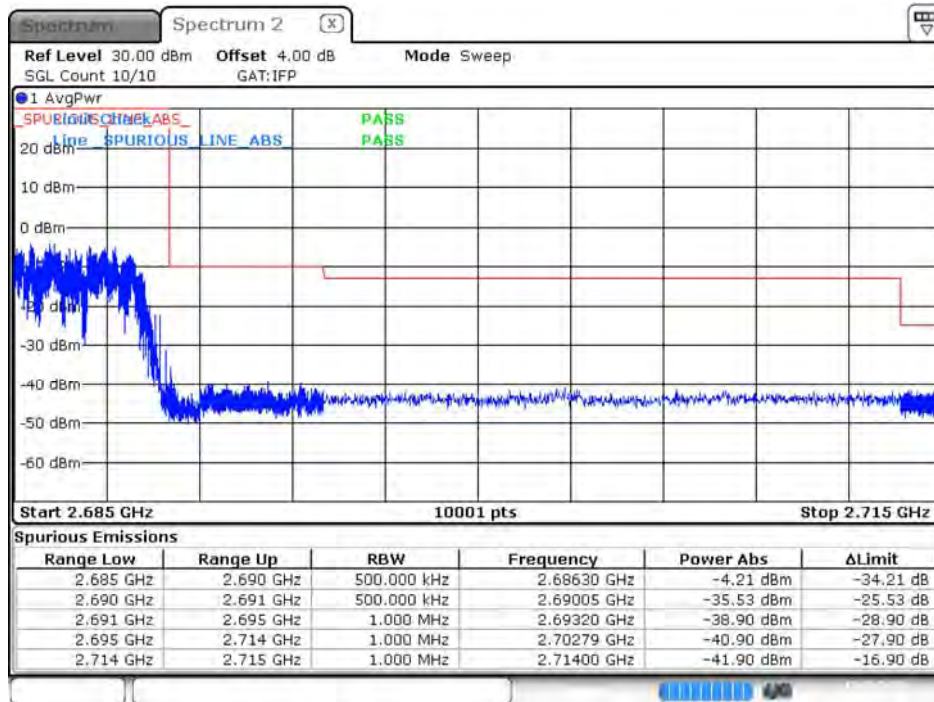
Date: 15.SEP.2020 15:16:31

CA_41C_CH39715+CH39832_5M+20M__QPSK_25RB0+100RB0-2



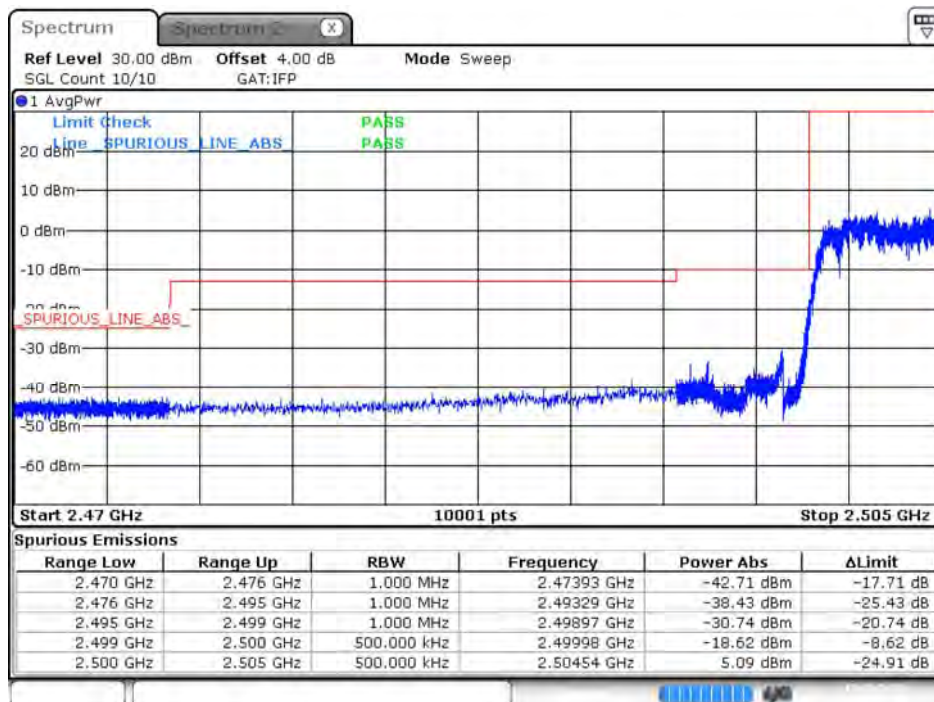
Date: 16.SEP.2020 14:28:38

CA_41C_CH41373+CH41490_5M+20M__QPSK_25RB0+100RB0



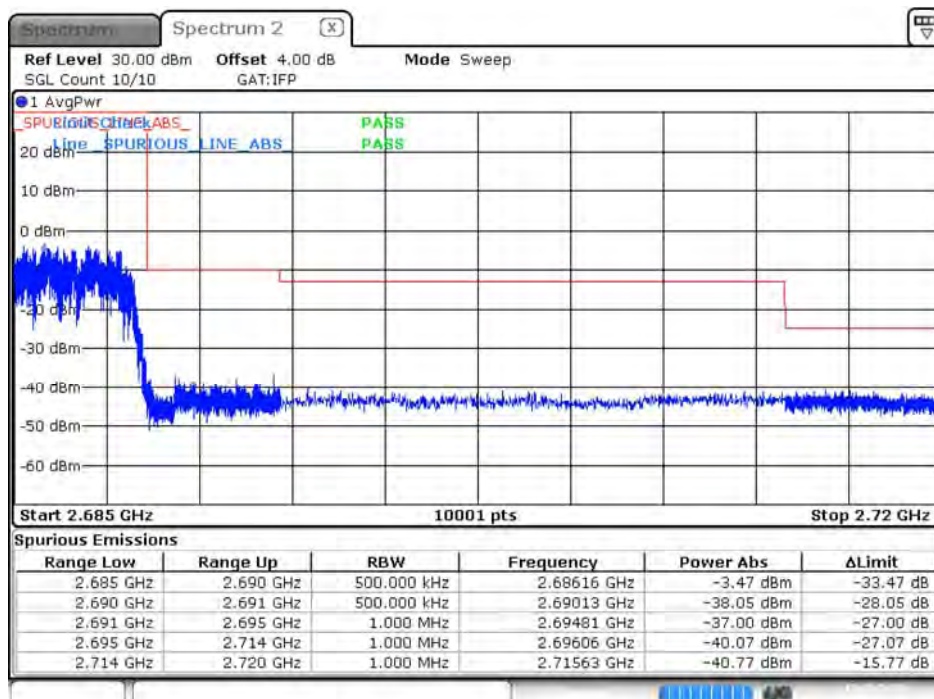
Date: 15.SEP.2020 15:17:57

CA_41C_CH39703+CH39823_10M+15M__QPSK_50RB0+75RB0



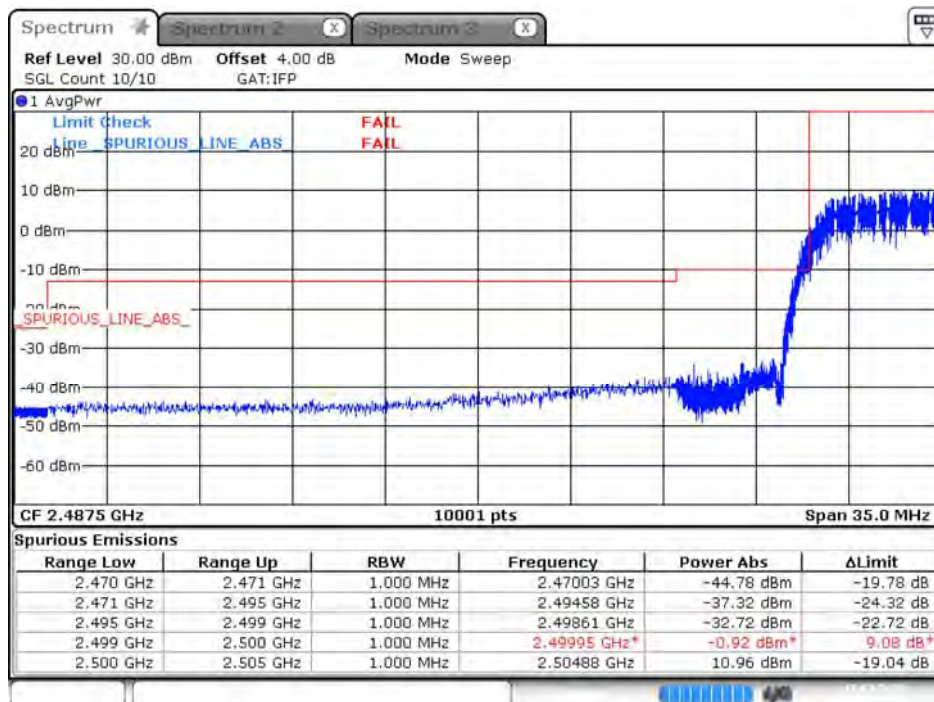
Date: 15.SEP.2020 15:21:22

CA_41C_CH41395+CH41515_10M+15M__QPSK_50RB0+75RB0



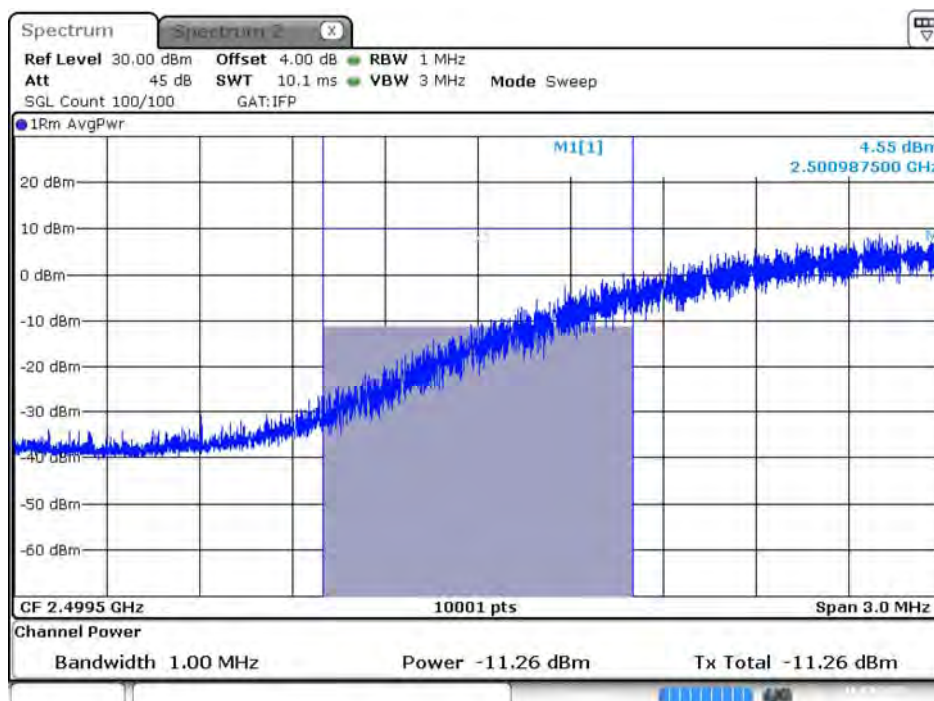
Date: 15.SEP.2020 15:21:51

CA_41C_CH39740+CH39884_10M+20M__QPSK_50RB0+100RB0-1



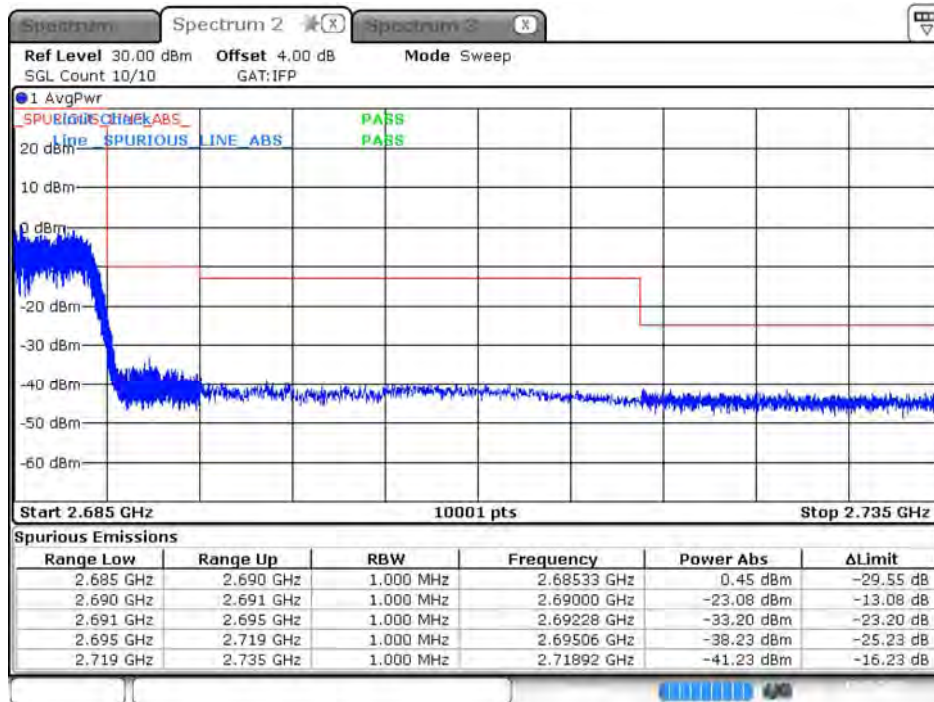
Date: 15.SEP.2020 18:55:12

CA_41C_CH39740+CH39884_10M+20M__QPSK_50RB0+100RB0-2



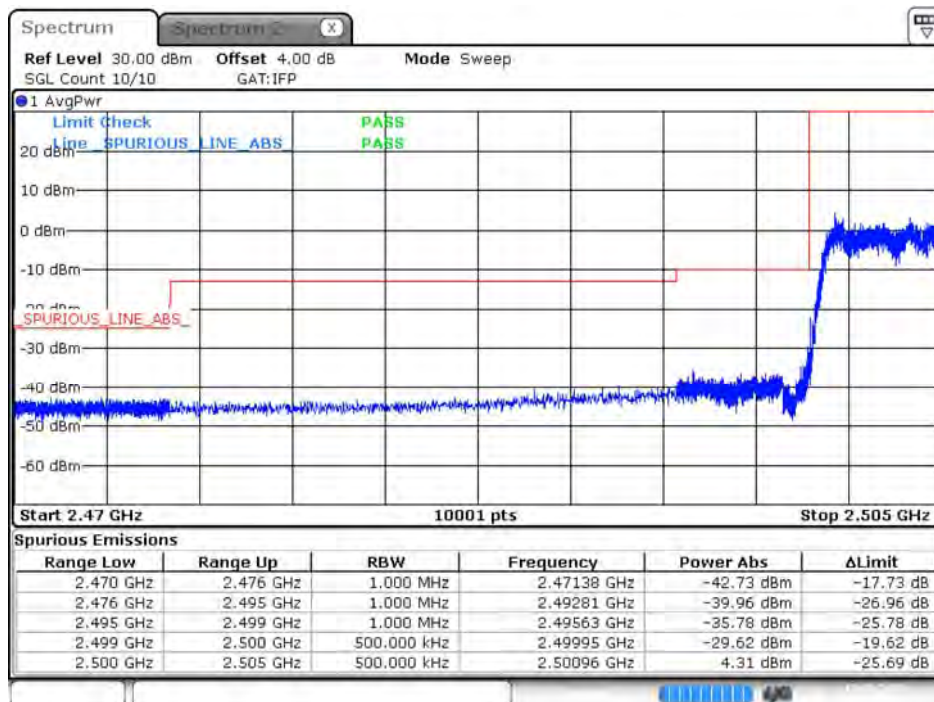
Date: 16.SEP.2020 14:49:16

CA_41C_CH41346+CH41490_10M+20M__QPSK_50RB0+100RB0



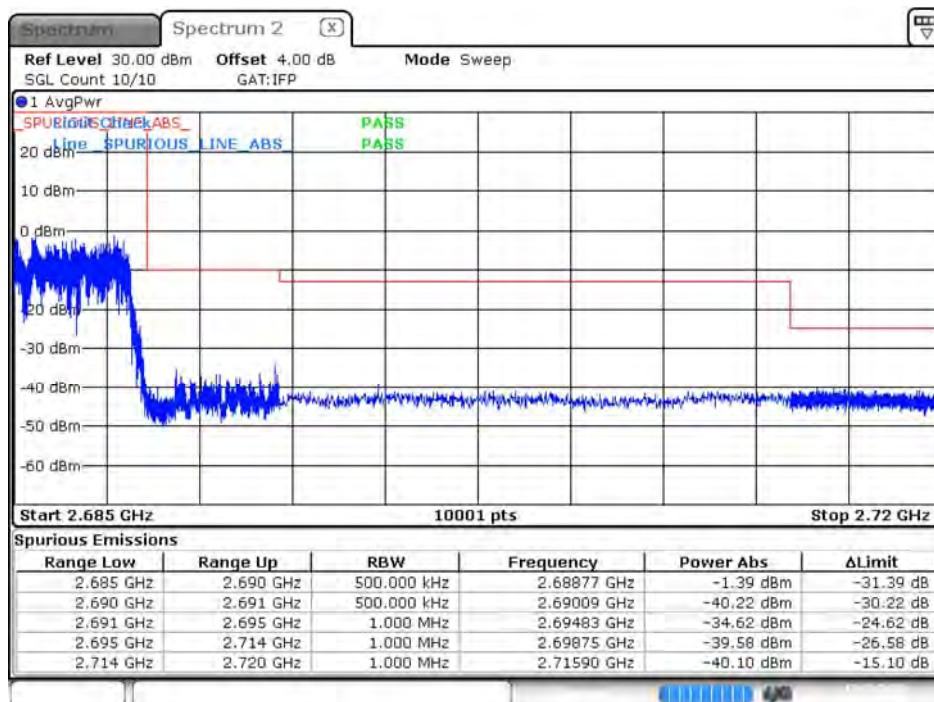
Date: 15.SEP.2020 18:58:49

CA_41C_CH39725+CH39845_15M+10M__QPSK_75RB0+50RB0



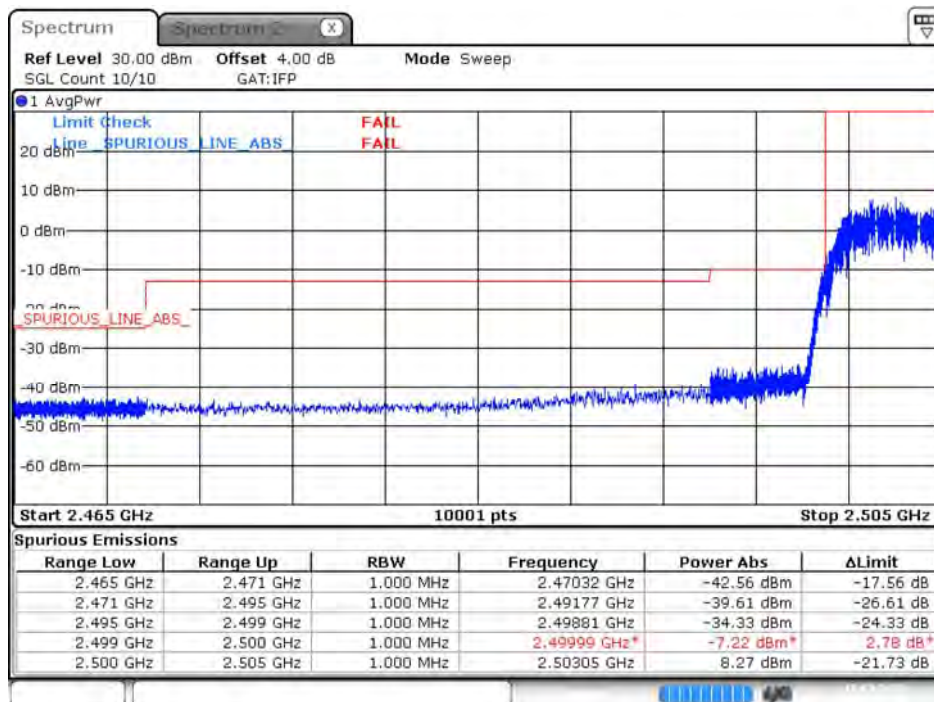
Date: 15.SEP.2020 15:30:47

CA_41C_CH41417+CH41537_15M+10M__QPSK_75RB0+50RB0



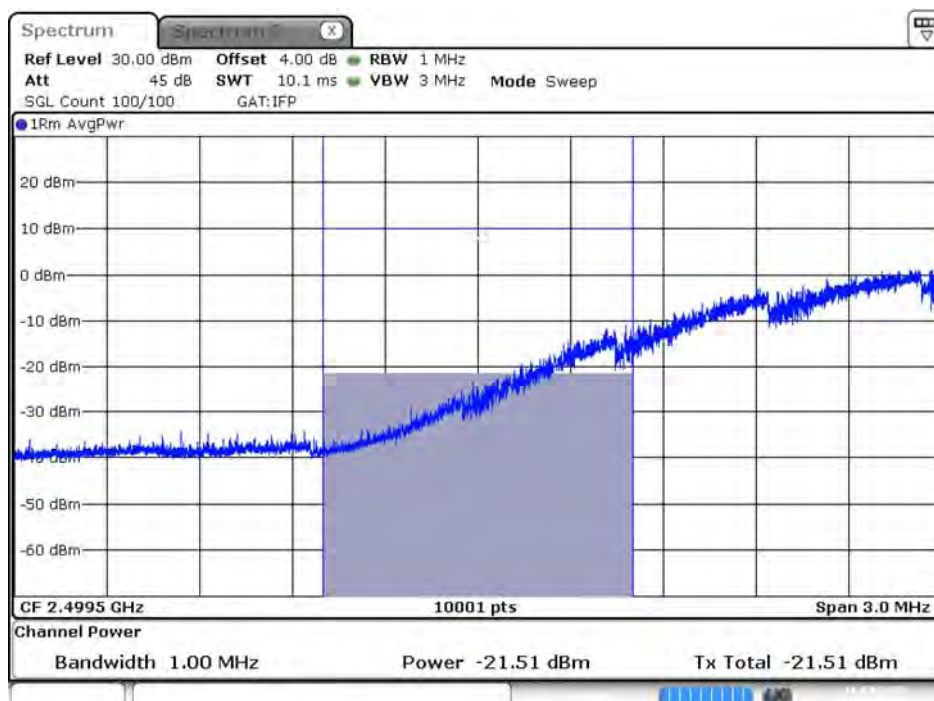
Date: 15.SEP.2020 15:31:28

CA_41C_CH39765+CH39915_15M+15M__QPSK_75RB0+75RB0-1



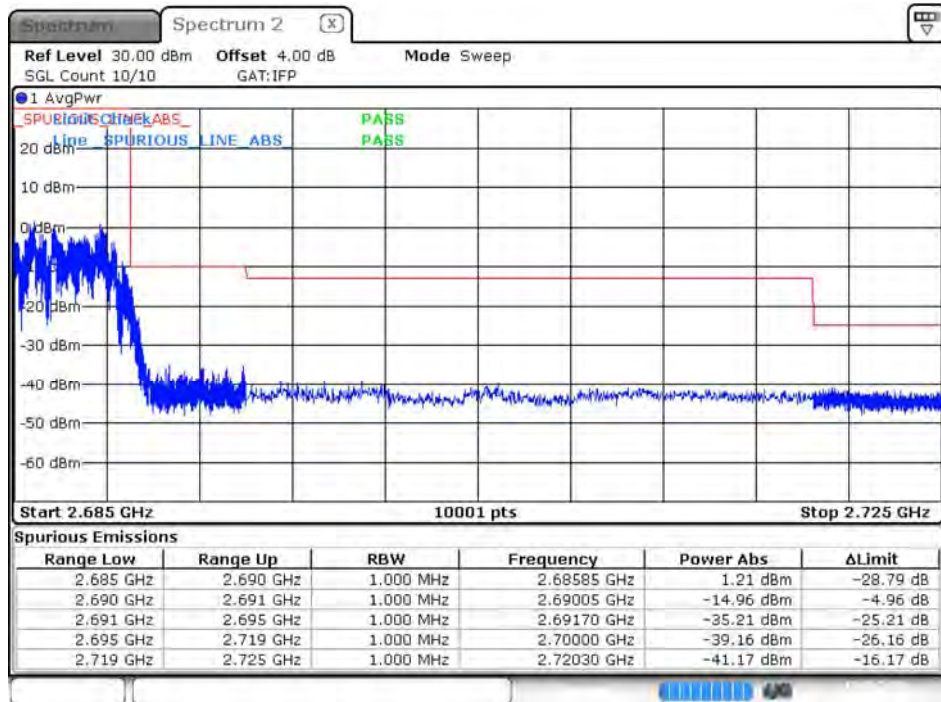
Date: 15.SEP.2020 17:35:22

CA_41C_CH39765+CH39915_15M+15M__QPSK_75RB0+75RB0-2



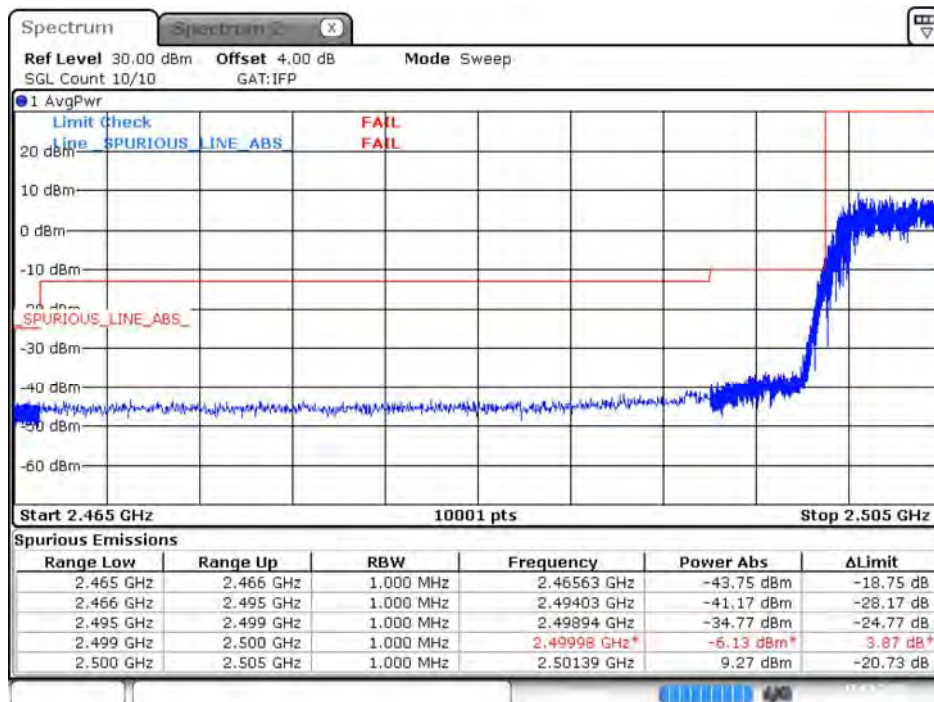
Date: 16.SEP.2020 14:32:55

CA_41C_CH41365+CH41515_15M+15M_QPSK_75RB0+75RB0



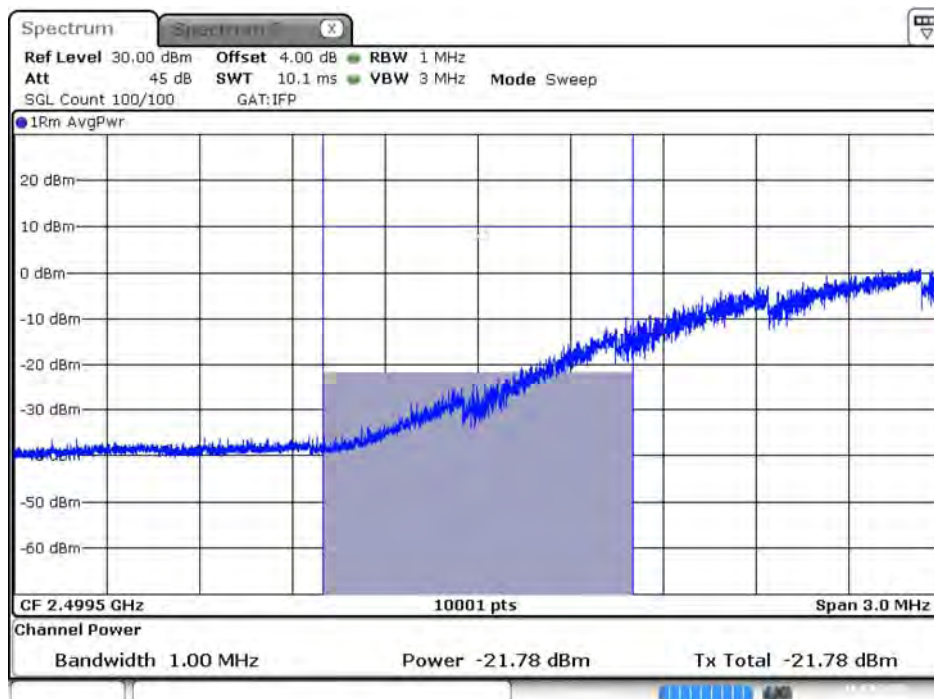
Date: 15.SEP.2020 15:38:35

CA_41C_CH39765+CH39936_15M+20M__QPSK_75RB0+100RB0-1



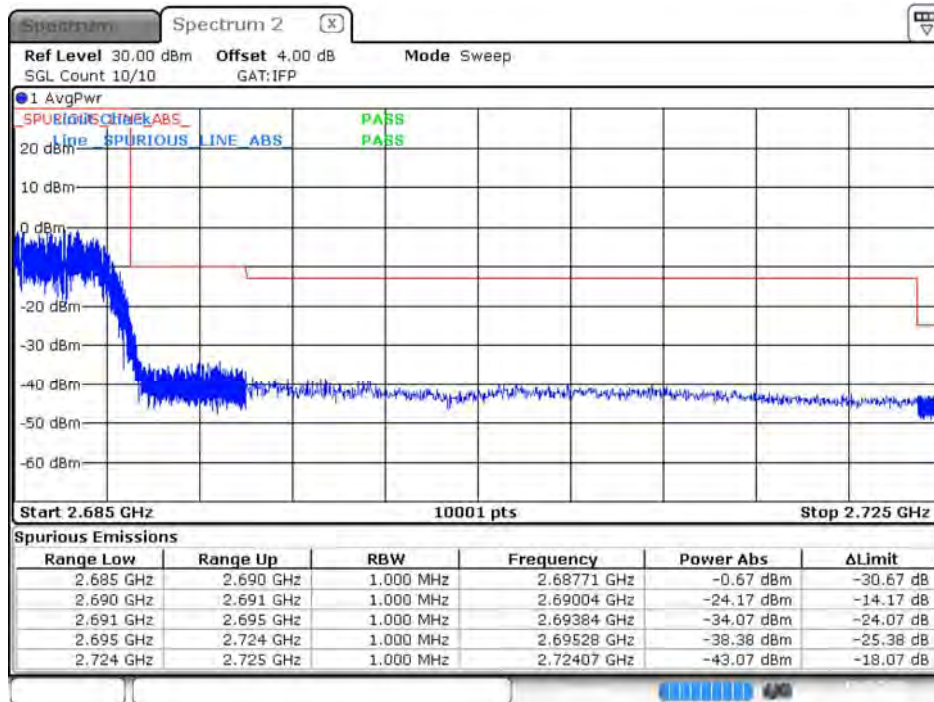
Date: 15.SEP.2020 15:42:33

CA_41C_CH39765+CH39936_15M+20M__QPSK_75RB0+100RB0-2



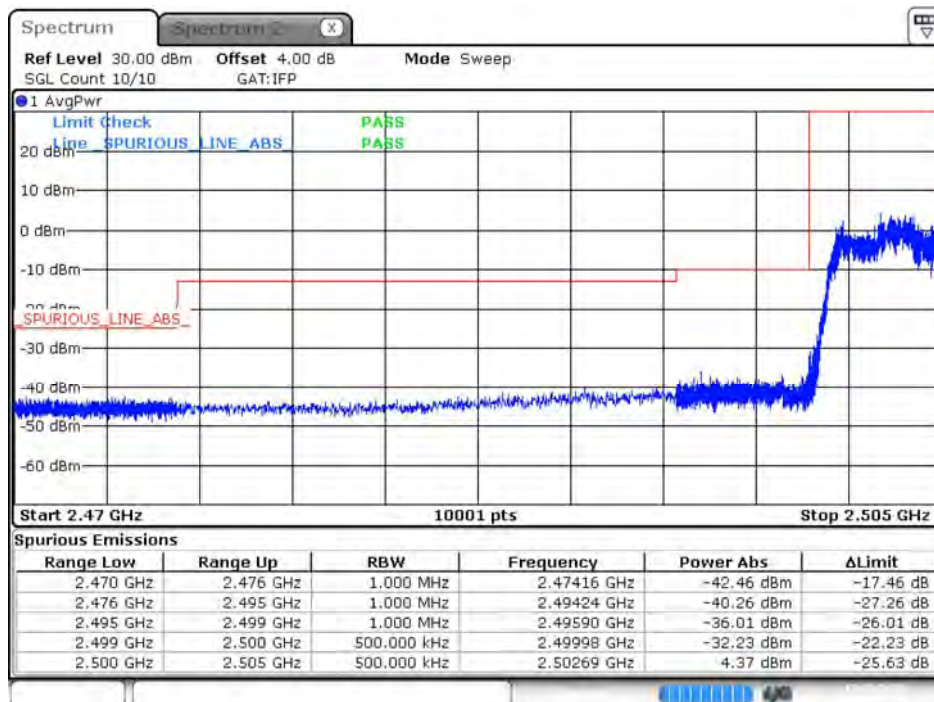
Date: 16.SEP.2020 14:35:16

CA_41C_CH41319+CH41490_15M+20M__QPSK_75RB0+100RB0



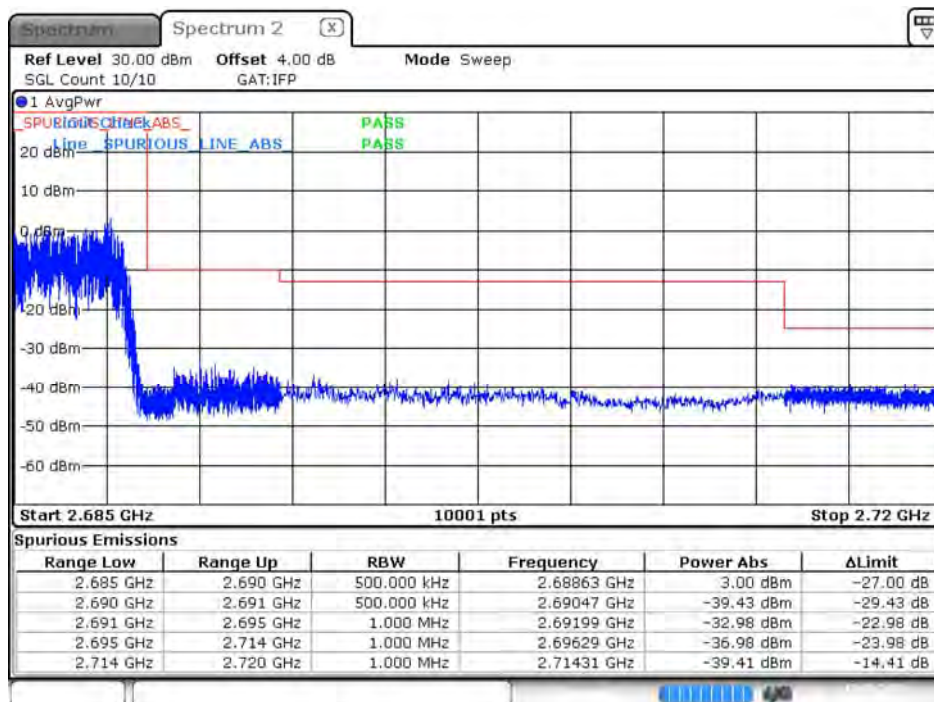
Date: 15.SEP.2020 15:46:32

CA_41C_CH39750+CH39867_20M+5M__QPSK_100RB0+25RB0



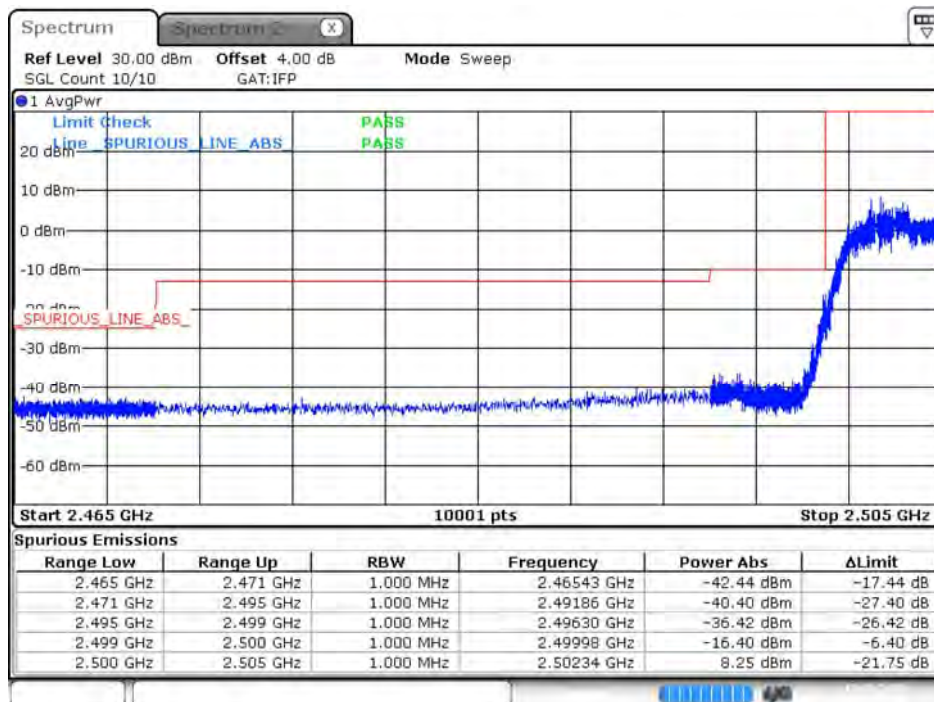
Date: 15.SEP.2020 16:37:14

CA_41C_CH41440+CH41557_20M+5M__QPSK_100RB0+25RB0



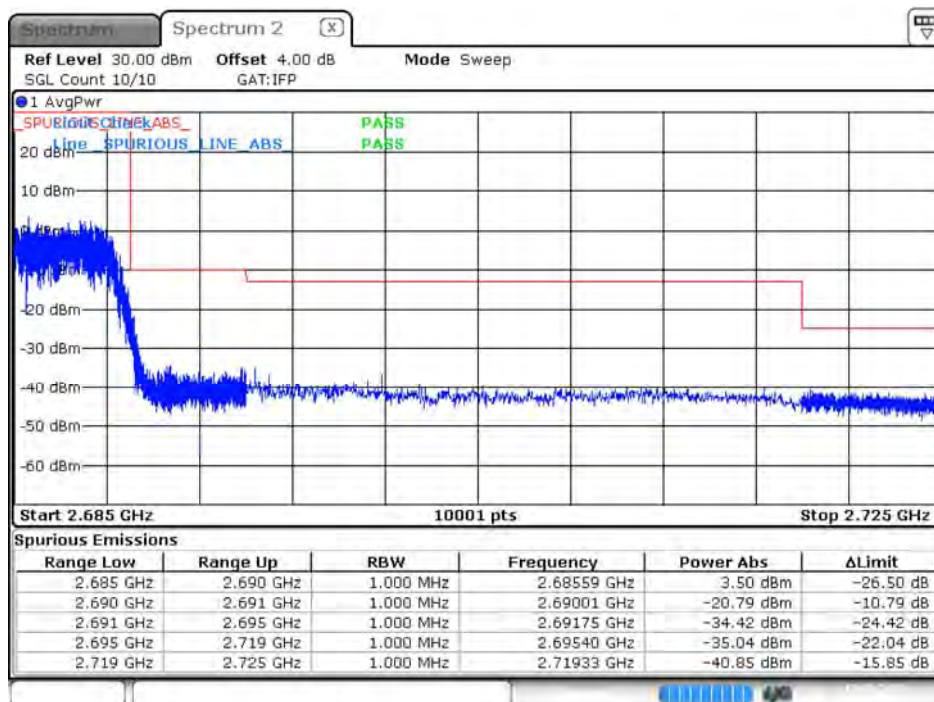
Date: 15.SEP.2020 16:38:14

CA_41C_CH39750+CH39894_20M+10M__QPSK_100RB0+50RB0



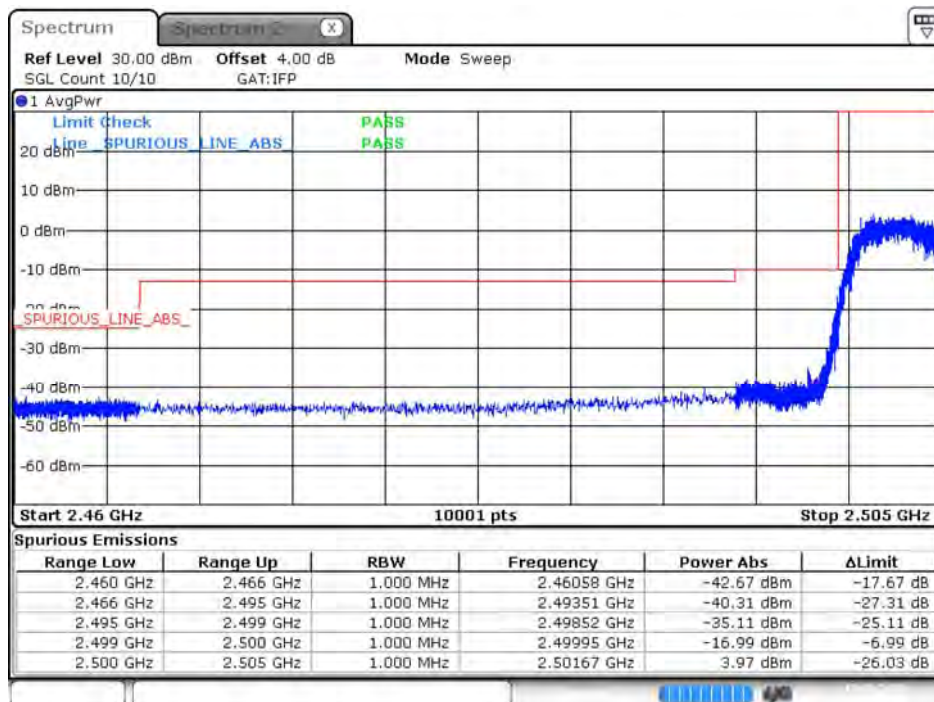
Date: 15.SEP.2020 16:46:05

CA_41C_CH41391+CH41535_20M+10M__QPSK_100RB0+50RB0



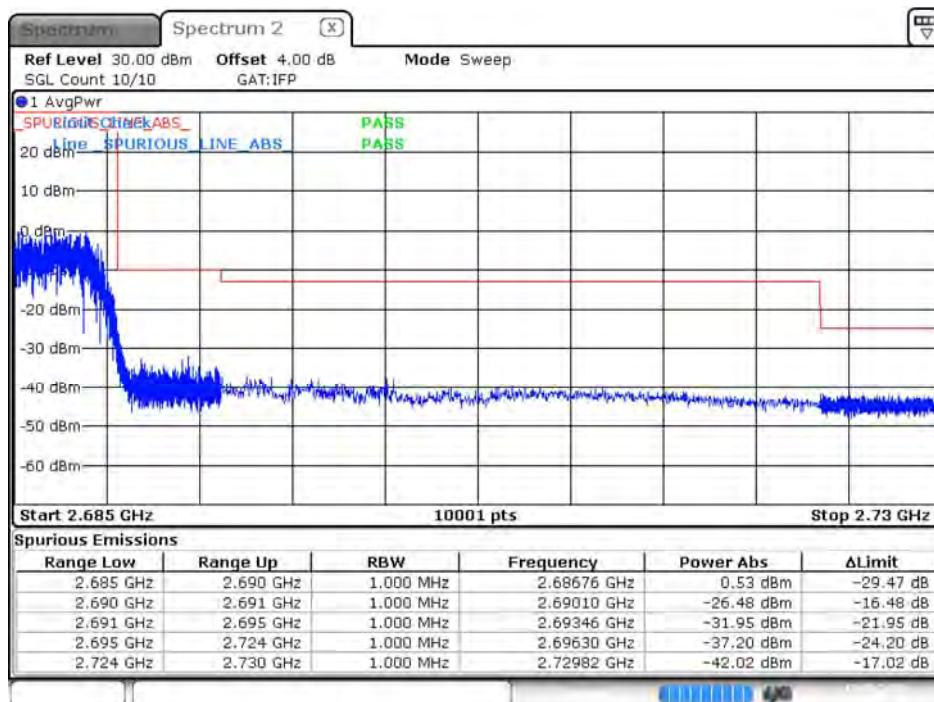
Date: 15.SEP.2020 16:47:27

CA_41C_CH39750+CH39921_20M+15M__QPSK_100RB0+75RB0



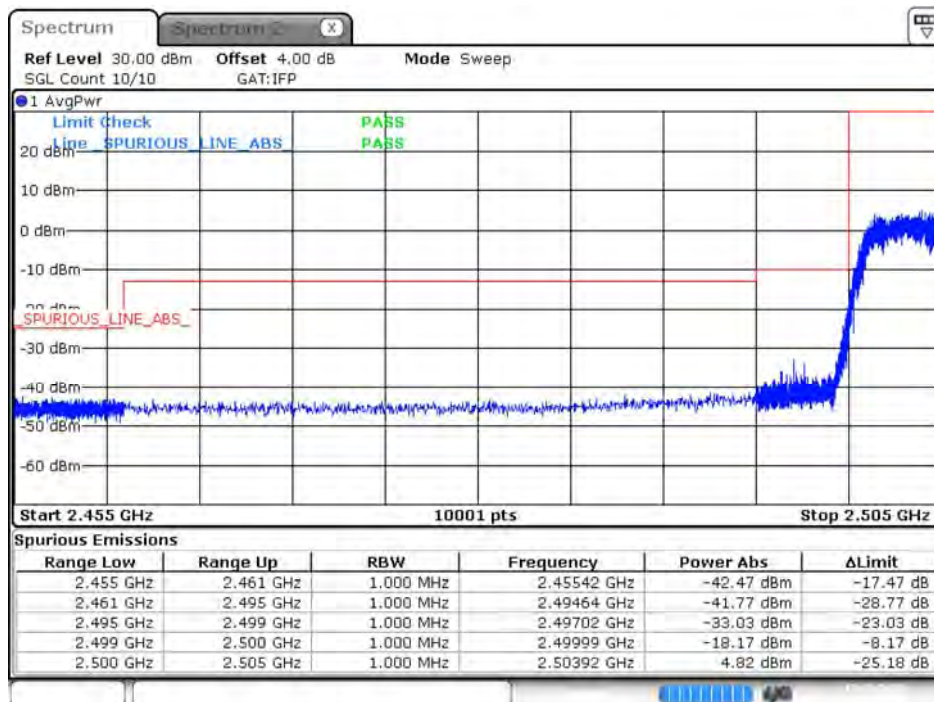
Date: 15.SEP.2020 16:49:10

CA_41C_CH41341+CH41512_20M+15M__QPSK_100RB0+75RB0



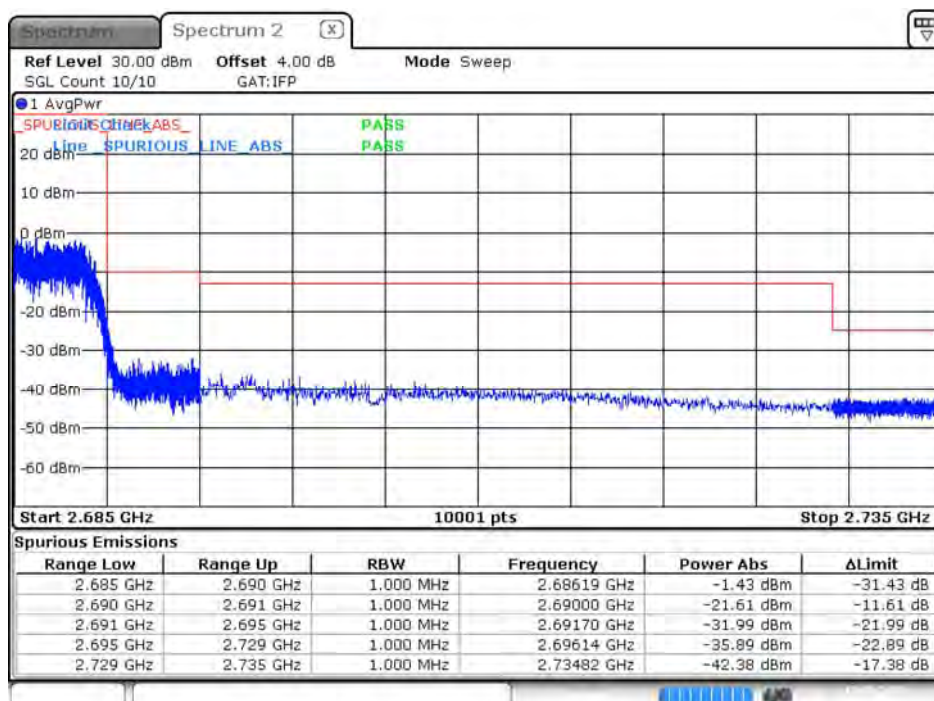
Date: 15.SEP.2020 16:49:49

CA_41C_CH39750+CH39948_20M+20M__QPSK_100RB0+100RB0



Date: 15.SEP.2020 16:51:39

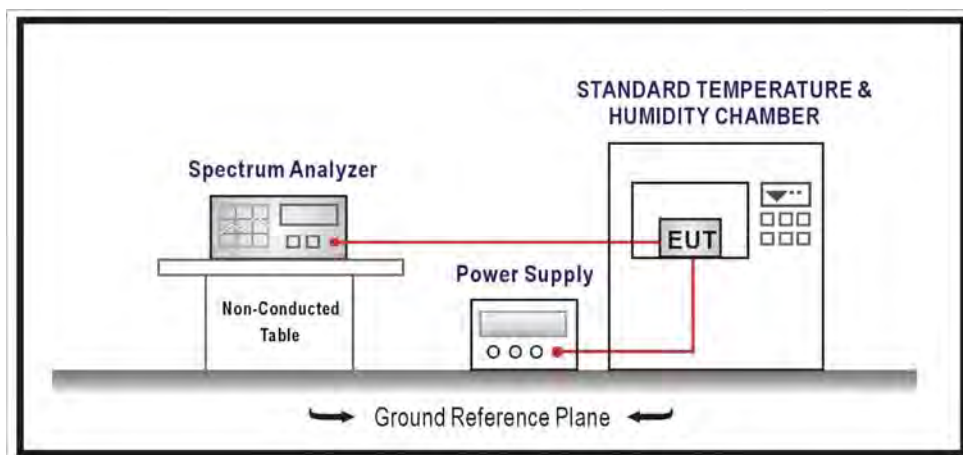
CA_41C_CH41292+CH41490_20M+20M__QPSK_100RB0+100RB0



Date: 15.SEP.2020 16:52:24

8. Frequency Stability

8.1. Test Setup



8.2. Test Procedure

Frequency Stability Under Temperature Variations:

The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 20°C operating frequency as reference frequency. Turn EUT off and set the chamber temperature to -30°C. After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached.

Frequency Stability Under Voltage Variations:

Set chamber temperature to 20°C. Use a variable AC power supply / DC power source to power the EUT and set the voltage to rated voltage. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency. Reduce the input voltage to specify extreme voltage variation ($\pm 15\%$) and endpoint, record the maximum frequency change.

8.3. Test Method

KDB 971168 D01 Power Meas License Digital Systems v03 sub-clause 9
ANSI C63.26-2015 Sub-clause 5.6

8.4. Test Result

Product	Module		
Test Item	Frequency Stability		
Test Mode	Mode 1: LTE Band 2/25		
Date of Test	2020/09/01	Test Site	SR12-H
Temperature(°C)	23	Humidity (%RH)	60

Band 25

1860

MHz

Voltage

Voltage (VDC)	Frequency Error(Hz)	Frequency Error(ppm)
4.26	1.33	0.0007
3.70	1.49	0.0008
3.18	0.69	0.0004

Temperature

TEMPERATURE	Frequency Error(Hz)	Frequency Error (ppm)
-30	0.76	0.0004
-20	-0.17	-0.0001
-10	1.06	0.0006
0	1.01	0.0005
10	0.46	0.0002
20	0.16	0.0001
30	0.96	0.0005
40	1.40	0.0008
50	1.04	0.0006
60	0.95	0.0005
70	0.70	0.0004

Band 25**1882.5****MHz**

Voltage

Voltage (VDC)	Frequency Error(Hz)	Frequency Error(ppm)
4.26	0.98	0.0005
3.70	0.97	0.0005
3.18	0.78	0.0004

Temperature

TEMPERATURE	Frequency Error(Hz)	Frequency Error (ppm)
-30	0.42	0.0002
-20	0.00	0.0000
-10	1.39	0.0007
0	0.94	0.0005
10	1.51	0.0008
20	0.42	0.0002
30	1.27	0.0007
40	1.35	0.0007
50	1.39	0.0007
60	0.07	0.0000
70	0.94	0.0005

Band 25**1905****MHz**

Voltage

Voltage (VDC)	Frequency Error(Hz)	Frequency Error(ppm)
4.26	0.03	0.0000
3.70	0.73	0.0004
3.18	0.80	0.0004

Temperature

TEMPERATURE	Frequency Error(Hz)	Frequency Error (ppm)
-30	0.33	0.0002
-20	0.93	0.0005
-10	0.21	0.0001
0	0.49	0.0003
10	0.69	0.0004
20	0.93	0.0005
30	-0.26	-0.0001
40	0.46	0.0002
50	0.08	0.0000
60	0.46	0.0002
70	0.62	0.0003

Product	Module		
Test Item	Frequency Stability		
Test Mode	Mode 2: LTE Band 4/66		
Date of Test	2020/09/01	Test Site	SR12-H
Temperature(°C)	23	Humidity (%RH)	60

Band 66**1720****MHz**

Voltage

Voltage (VDC)	Frequency Error(Hz)	Frequency Error(ppm)
4.26	1.57	0.0009
3.70	1.91	0.0011
3.18	2.15	0.0013

Temperature

TEMPERATURE	Frequency Error(Hz)	Frequency Error (ppm)
-30	0.99	0.0006
-20	1.39	0.0008
-10	2.38	0.0014
0	0.73	0.0004
10	1.35	0.0008
20	1.52	0.0009
30	1.33	0.0008
40	1.59	0.0009
50	2.07	0.0012
60	1.13	0.0007
70	1.15	0.0007

Band 66**1745****MHz**

Voltage

Voltage (VDC)	Frequency Error(Hz)	Frequency Error(ppm)
4.26	1.48	0.0008
3.70	1.54	0.0009
3.18	1.27	0.0007

Temperature

TEMPERATURE	Frequency Error(Hz)	Frequency Error (ppm)
-30	0.86	0.0005
-20	0.53	0.0003
-10	0.87	0.0005
0	1.08	0.0006
10	0.33	0.0002
20	1.08	0.0006
30	0.75	0.0004
40	1.29	0.0007
50	1.62	0.0009
60	0.96	0.0006
70	1.00	0.0006

Band 66**1770****MHz**

Voltage

Voltage (VDC)	Frequency Error(Hz)	Frequency Error(ppm)
4.26	0.05	0.0000
3.70	0.60	0.0003
3.18	0.32	0.0002

Temperature

TEMPERATURE	Frequency Error(Hz)	Frequency Error (ppm)
-30	0.11	0.0001
-20	-0.23	-0.0001
-10	-0.06	0.0000
0	-0.90	-0.0005
10	0.64	0.0004
20	-0.55	-0.0003
30	0.03	0.0000
40	-0.04	0.0000
50	0.38	0.0002
60	0.12	0.0001
70	0.01	0.0000

Product	Module		
Test Item	Frequency Stability		
Test Mode	Mode 3: LTE Band 5/26 (Part 22)		
Date of Test	2020/09/01	Test Site	SR12-H
Temperature(°C)	23	Humidity (%RH)	60

Band 26**831.5****MHz**

Voltage

Voltage (VDC)	Frequency Error(Hz)	Frequency Error(ppm)
4.26	1.35	0.0016
3.70	1.86	0.0022
3.18	1.38	0.0017

Temperature

TEMPERATURE	Frequency Error(Hz)	Frequency Error (ppm)
-30	1.32	0.0016
-20	1.42	0.0017
-10	0.64	0.0008
0	1.46	0.0018
10	0.52	0.0006
20	1.85	0.0022
30	1.41	0.0017
40	2.17	0.0026
50	2.35	0.0028
60	0.08	0.0001
70	1.60	0.0019

Band 26**836.5****MHz**

Voltage

Voltage (VDC)	Frequency Error(Hz)	Frequency Error(ppm)
4.26	1.59	0.0019
3.70	1.78	0.0021
3.18	1.88	0.0022

Temperature

TEMPERATURE	Frequency Error(Hz)	Frequency Error (ppm)
-30	0.47	0.0006
-20	0.57	0.0007
-10	1.30	0.0016
0	1.97	0.0024
10	1.76	0.0021
20	1.25	0.0015
30	1.64	0.0020
40	1.08	0.0013
50	2.02	0.0024
60	1.26	0.0015
70	0.24	0.0003

Band 26**841.5****MHz**

Voltage

Voltage (VDC)	Frequency Error(Hz)	Frequency Error(ppm)
4.26	0.68	0.0008
3.70	0.92	0.0011
3.18	0.18	0.0002

Temperature

TEMPERATURE	Frequency Error(Hz)	Frequency Error (ppm)
-30	0.96	0.0011
-20	0.78	0.0009
-10	0.95	0.0011
0	0.54	0.0006
10	0.02	0.0000
20	-0.45	-0.0005
30	0.97	0.0012
40	0.99	0.0012
50	-0.48	-0.0006
60	0.29	0.0003
70	0.20	0.0002

Product	Module		
Test Item	Frequency Stability		
Test Mode	Mode 4: LTE Band 7		
Date of Test	2020/09/01	Test Site	SR12-H
Temperature(°C)	23	Humidity (%RH)	60

Band 7**2510****MHz**

Voltage

Voltage (VAC)	Frequency Error(Hz)	Frequency Error(ppm)
4.26	1.37	0.0005
3.70	1.42	0.0006
3.15	1.29	0.0005

Temperature

TEMPERATURE	Frequency Error(Hz)	Frequency Error (ppm)
-30	0.28	0.0001
-20	0.69	0.0003
-10	0.96	0.0004
0	0.21	0.0001
10	1.26	0.0005
20	1.43	0.0006
30	0.85	0.0003
40	0.34	0.0001
50	1.52	0.0006
60	0.88	0.0004
70	1.52	0.0006

Band 7**2535****MHz**

Voltage

Voltage (VAC)	Frequency Error(Hz)	Frequency Error(ppm)
4.26	1.45	0.0006
3.70	1.96	0.0008
3.15	0.81	0.0003

Temperature

TEMPERATURE	Frequency Error(Hz)	Frequency Error (ppm)
-30	2.16	0.0009
-20	0.98	0.0004
-10	1.15	0.0005
0	1.79	0.0007
10	1.79	0.0007
20	1.33	0.0005
30	1.19	0.0005
40	2.60	0.0010
50	1.41	0.0006
60	1.16	0.0005
70	1.28	0.0005

Band 7**2560****MHz**

Voltage

Voltage (VAC)	Frequency Error(Hz)	Frequency Error(ppm)
4.26	-0.02	0.0000
3.70	0.60	0.0002
3.15	-0.49	-0.0002

Temperature

TEMPERATURE	Frequency Error(Hz)	Frequency Error (ppm)
-30	-0.75	-0.0003
-20	-0.40	-0.0002
-10	0.73	0.0003
0	-0.05	0.0000
10	0.25	0.0001
20	0.00	0.0000
30	0.69	0.0003
40	0.10	0.0000
50	-0.76	-0.0003
60	-0.78	-0.0003
70	-0.02	0.0000

Product	Module		
Test Item	Frequency Stability		
Test Mode	Mode 5: LTE Band 12		
Date of Test	2020/09/01	Test Site	SR12-H
Temperature(°C)	23	Humidity (%RH)	60

Band 12**704****MHz**

Voltage

Voltage (VAC)	Frequency Error(Hz)	Frequency Error(ppm)
4.26	0.92	0.0013
3.70	1.78	0.0025
3.15	1.80	0.0026

Temperature

TEMPERATURE	Frequency Error(Hz)	Frequency Error (ppm)
-30	0.27	0.0004
-20	2.15	0.0031
-10	1.35	0.0019
0	1.33	0.0019
10	2.15	0.0031
20	1.63	0.0023
30	1.61	0.0023
40	1.15	0.0016
50	1.16	0.0016
60	1.71	0.0024
70	1.21	0.0017

Band 12**707.5****MHz**

Voltage

Voltage (VAC)	Frequency Error(Hz)	Frequency Error(ppm)
4.26	-0.19	-0.0003
3.70	0.77	0.0011
3.15	-0.03	0.0000

Temperature

TEMPERATURE	Frequency Error(Hz)	Frequency Error (ppm)
-30	1.29	0.0018
-20	0.85	0.0012
-10	1.07	0.0015
0	0.24	0.0003
10	1.12	0.0016
20	0.59	0.0008
30	1.24	0.0018
40	0.73	0.0010
50	1.04	0.0015
60	1.52	0.0021
70	-0.12	-0.0002

Band 12**711****MHz**

Voltage

Voltage (VAC)	Frequency Error(Hz)	Frequency Error(ppm)
4.26	-0.85	-0.0012
3.70	0.79	0.0011
3.15	0.76	0.0011

Temperature

TEMPERATURE	Frequency Error(Hz)	Frequency Error (ppm)
-30	0.95	0.0013
-20	-0.02	0.0000
-10	0.39	0.0005
0	-0.24	-0.0003
10	0.88	0.0012
20	-0.24	-0.0003
30	0.38	0.0005
40	0.60	0.0008
50	0.59	0.0008
60	0.35	0.0005
70	0.08	0.0001

Product	Module		
Test Item	Frequency Stability		
Test Mode	Mode 6: LTE Band 13		
Date of Test	2020/09/01	Test Site	SR12-H
Temperature(°C)	23	Humidity (%RH)	60

Band 13**782****MHz**

Voltage

Voltage (VDC)	Frequency Error(Hz)	Frequency Error(ppm)
4.26	1.07	0.0014
3.70	1.83	0.0023
3.18	1.55	0.0020

Temperature

TEMPERATURE	Frequency Error(Hz)	Frequency Error (ppm)
-30	1.46	0.0019
-20	2.03	0.0026
-10	1.61	0.0021
0	1.95	0.0025
10	0.89	0.0011
20	1.97	0.0025
30	0.86	0.0011
40	2.19	0.0028
50	1.52	0.0019
60	2.10	0.0027
70	2.31	0.0030

Product	Module		
Test Item	Frequency Stability		
Test Mode	Mode 7: LTE Band 14		
Date of Test	2020/09/01	Test Site	SR12-H
Temperature(°C)	23	Humidity (%RH)	60

Band 14**793****MHz**

Voltage

Voltage (VAC)	Frequency Error(Hz)	Frequency Error(ppm)
4.3	1.37	0.0017
3.7	1.79	0.0023
3.2	0.62	0.0008

Temperature

TEMPERATURE	Frequency Error(Hz)	Frequency Error (ppm)
-30	0.93	0.0012
-20	1.85	0.0023
-10	1.57	0.0020
0	1.81	0.0023
10	1.66	0.0021
20	0.89	0.0011
30	1.16	0.0015
40	0.69	0.0009
50	1.69	0.0021
60	1.82	0.0023
70	1.26	0.0016

Product	Module		
Test Item	Frequency Stability		
Test Mode	Mode 8: LTE Band 26 (Part 90)		
Date of Test	2020/09/01	Test Site	SR12-H
Temperature(°C)	23	Humidity (%RH)	60

Band 26**831.5****MHz**

Voltage

Voltage (VDC)	Frequency Error(Hz)	Frequency Error(ppm)
4.26	1.35	0.0016
3.70	1.86	0.0022
3.18	1.38	0.0017

Temperature

TEMPERATURE	Frequency Error(Hz)	Frequency Error (ppm)
-30	1.32	0.0016
-20	1.42	0.0017
-10	0.64	0.0008
0	1.46	0.0018
10	0.52	0.0006
20	1.85	0.0022
30	1.41	0.0017
40	2.17	0.0026
50	2.35	0.0028
60	0.08	0.0001
70	1.60	0.0019

Band 26**836.5****MHz**

Voltage

Voltage (VDC)	Frequency Error(Hz)	Frequency Error(ppm)
4.26	1.59	0.0019
3.70	1.78	0.0021
3.18	1.88	0.0022

Temperature

TEMPERATURE	Frequency Error(Hz)	Frequency Error (ppm)
-30	0.47	0.0006
-20	0.57	0.0007
-10	1.30	0.0016
0	1.97	0.0024
10	1.76	0.0021
20	1.25	0.0015
30	1.64	0.0020
40	1.08	0.0013
50	2.02	0.0024
60	1.26	0.0015
70	0.24	0.0003

Band 26**841.5****MHz**

Voltage

Voltage (VDC)	Frequency Error(Hz)	Frequency Error(ppm)
4.26	0.68	0.0008
3.70	0.92	0.0011
3.18	0.18	0.0002

Temperature

TEMPERATURE	Frequency Error(Hz)	Frequency Error (ppm)
-30	0.96	0.0011
-20	0.78	0.0009
-10	0.95	0.0011
0	0.54	0.0006
10	0.02	0.0000
20	-0.45	-0.0005
30	0.97	0.0012
40	0.99	0.0012
50	-0.48	-0.0006
60	0.29	0.0003
70	0.20	0.0002

Product	Module		
Test Item	Frequency Stability		
Test Mode	Mode 9: LTE Band 41 (FCC)		
Date of Test	2020/09/01	Test Site	SR12-H
Temperature(°C)	23	Humidity (%RH)	60

Band 41**2506****MHz**

Voltage

Voltage (VAC)	Frequency Error(Hz)	Frequency Error(ppm)
4.26	1.20	0.0005
3.70	1.42	0.0006
3.15	0.28	0.0001

Temperature

TEMPERATURE	Frequency Error(Hz)	Frequency Error (ppm)
-30	1.01	0.0004
-20	1.23	0.0005
-10	-0.06	0.0000
0	1.62	0.0006
10	1.39	0.0006
20	0.69	0.0003
30	1.55	0.0006
40	0.29	0.0001
50	1.17	0.0005
60	1.01	0.0004
70	1.32	0.0005

Band 41**2593****MHz**

Voltage

Voltage (VAC)	Frequency Error(Hz)	Frequency Error(ppm)
4.26	-0.46	-0.0002
3.70	0.61	0.0002
3.15	0.71	0.0003

Temperature

TEMPERATURE	Frequency Error(Hz)	Frequency Error (ppm)
-30	-0.80	-0.0003
-20	0.23	0.0001
-10	-0.26	-0.0001
0	0.93	0.0004
10	0.39	0.0002
20	0.38	0.0001
30	0.50	0.0002
40	1.08	0.0004
50	-0.26	-0.0001
60	-0.20	-0.0001
70	-0.31	-0.0001

Band 41**2680****MHz**

Voltage

Voltage (VAC)	Frequency Error(Hz)	Frequency Error(ppm)
4.26	-0.97	-0.0004
3.70	-0.33	-0.0001
3.15	-1.02	-0.0004

Temperature

TEMPERATURE	Frequency Error(Hz)	Frequency Error (ppm)
-30	-1.23	-0.0005
-20	-1.78	-0.0007
-10	-0.91	-0.0003
0	-0.17	-0.0001
10	-0.48	-0.0002
20	-0.72	-0.0003
30	-0.93	-0.0003
40	-0.30	-0.0001
50	-0.99	-0.0004
60	-0.83	-0.0003
70	-0.51	-0.0002

Product	Module		
Test Item	Frequency Stability		
Test Mode	Mode 9: LTE Band 41 (ISED)		
Date of Test	2020/09/01	Test Site	SR12-H
Temperature(°C)	23	Humidity (%RH)	60

Band 41**2510****MHz**

Voltage

Voltage (VAC)	Frequency Error(Hz)	Frequency Error(ppm)
4.26	2.15	0.0009
3.70	3.21	0.0013
3.15	1.11	0.0004

Temperature

TEMPERATURE	Frequency Error(Hz)	Frequency Error (ppm)
-30	2.14	0.0009
-20	3.21	0.0013
-10	0.45	0.0002
0	2.12	0.0008
10	2.17	0.0009
20	0.77	0.0003
30	2.03	0.0008
40	1.19	0.0005
50	2.02	0.0008
60	2.71	0.0011
70	1.31	0.0005

Product	Module		
Test Item	Frequency Stability		
Test Mode	Mode 10: LTE Band 71		
Date of Test	2020/09/01	Test Site	SR12-H
Temperature(°C)	23	Humidity (%RH)	60

Band 71**673****MHz**

Voltage

Voltage (VAC)	Frequency Error(Hz)	Frequency Error(ppm)
4.26	1.11	0.0016
3.70	1.42	0.0021
3.15	1.05	0.0016

Temperature

TEMPERATURE	Frequency Error(Hz)	Frequency Error (ppm)
-30	0.37	0.0005
-20	1.79	0.0027
-10	0.73	0.0011
0	0.67	0.0010
10	0.96	0.0014
20	1.35	0.0020
30	0.91	0.0014
40	1.74	0.0026
50	0.26	0.0004
60	1.05	0.0016
70	1.25	0.0019

Band 71**680.5****MHz**

Voltage

Voltage (VAC)	Frequency Error(Hz)	Frequency Error(ppm)
4.26	1.71	0.0025
3.70	1.40	0.0021
3.15	0.21	0.0003

Temperature

TEMPERATURE	Frequency Error(Hz)	Frequency Error (ppm)
-30	1.16	0.0017
-20	0.80	0.0012
-10	0.46	0.0007
0	0.12	0.0002
10	1.17	0.0017
20	0.57	0.0008
30	0.50	0.0007
40	0.77	0.0011
50	1.00	0.0015
60	0.60	0.0009
70	1.76	0.0026

Band 71**688****MHz**

Voltage

Voltage (VAC)	Frequency Error(Hz)	Frequency Error(ppm)
4.26	0.26	0.0004
3.70	1.27	0.0018
3.15	1.40	0.0020

Temperature

TEMPERATURE	Frequency Error(Hz)	Frequency Error (ppm)
-30	1.18	0.0017
-20	1.34	0.0019
-10	1.31	0.0019
0	0.93	0.0014
10	0.49	0.0007
20	0.92	0.0013
30	1.42	0.0021
40	0.20	0.0003
50	1.30	0.0019
60	0.79	0.0011
70	0.33	0.0005