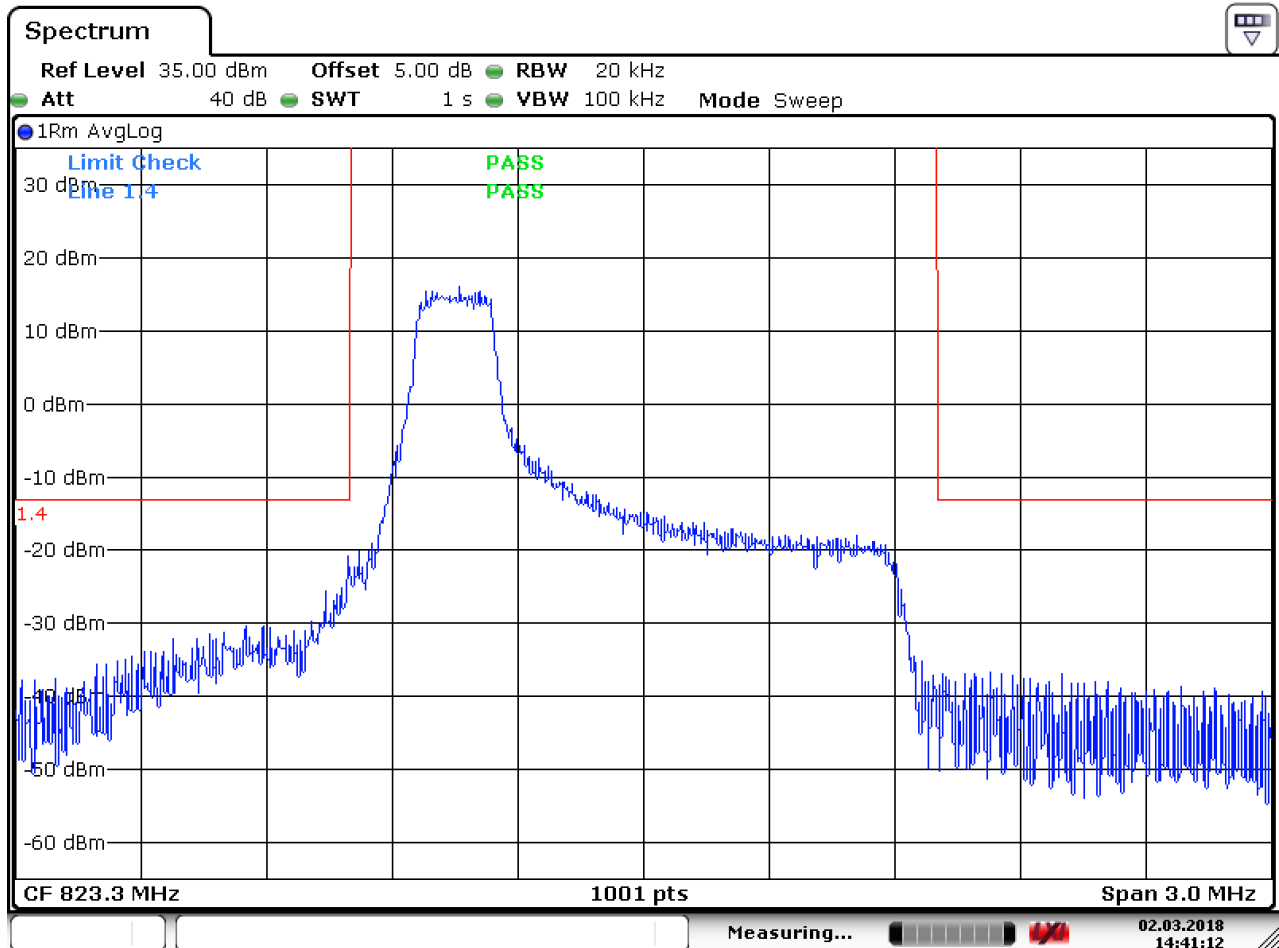### 6.1.1.1.2   Test Channel = HCH
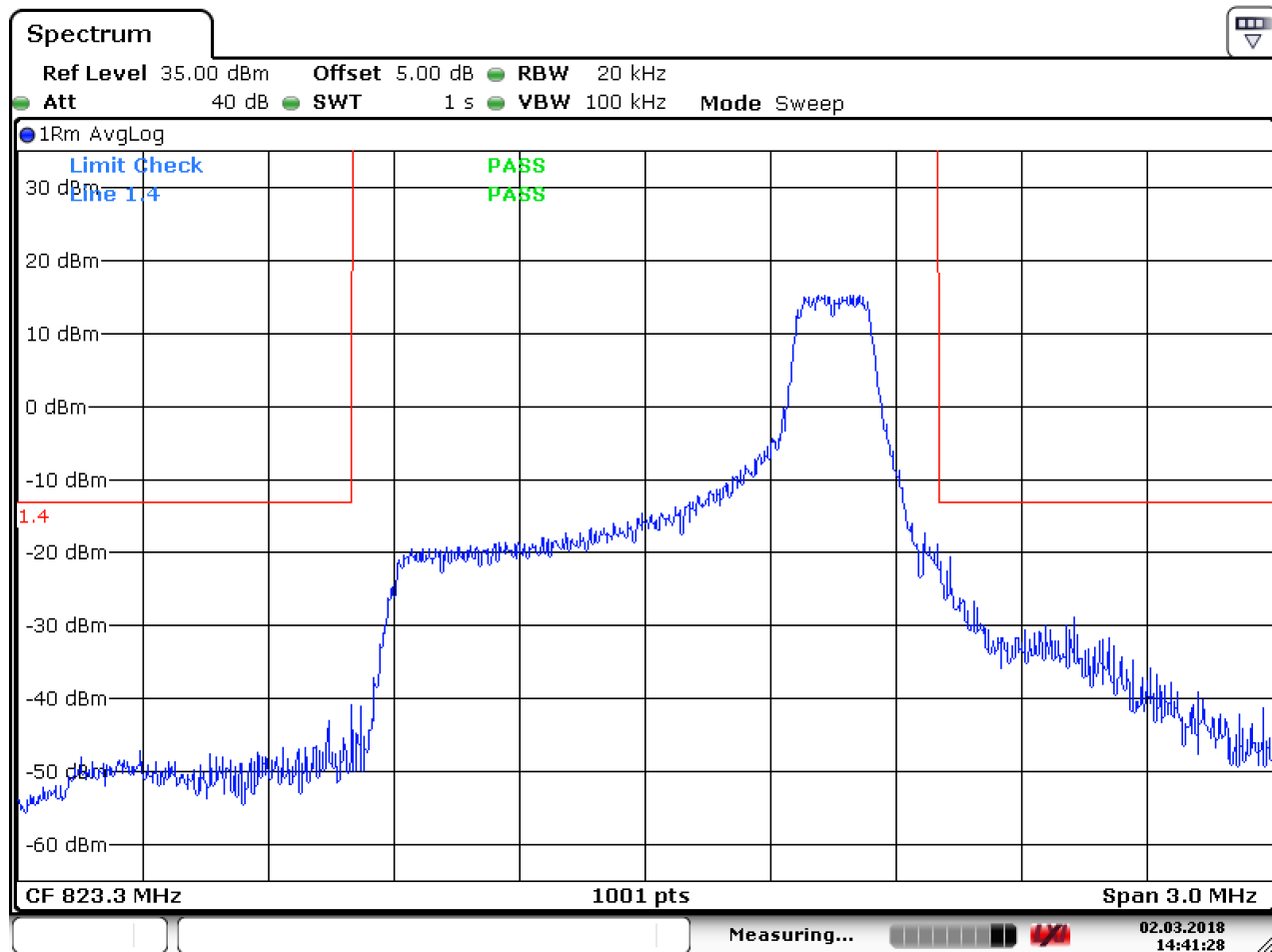
6.1.1.1.2.1 Test RB=1RB

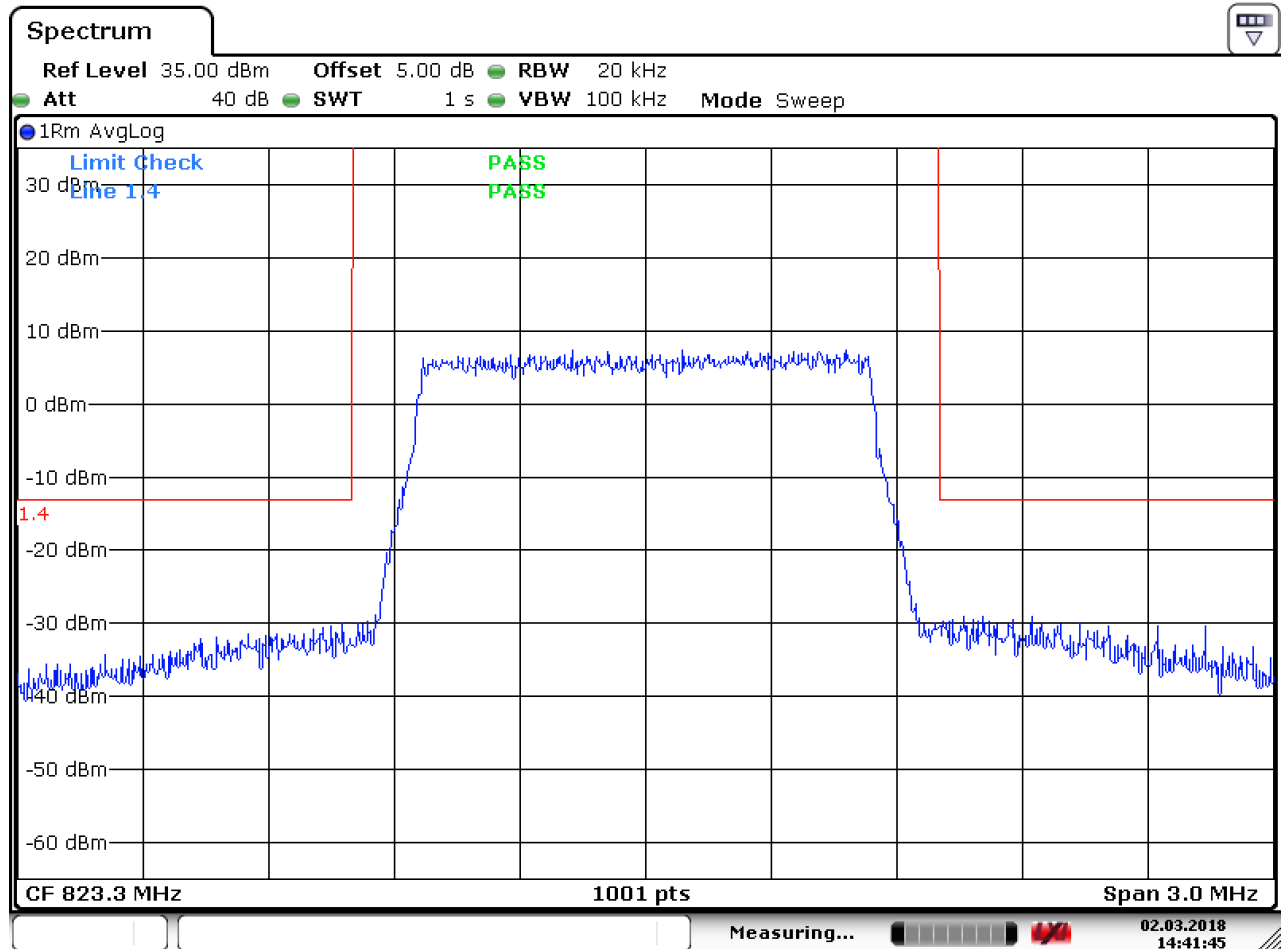Date: 2.MAR.2018 14:41:12

6.1.1.1.2.2 Test RB=1RB#5

Date: 2.MAR.2018 14:41:28

6.1.1.1.2.3 Test RB=6RB
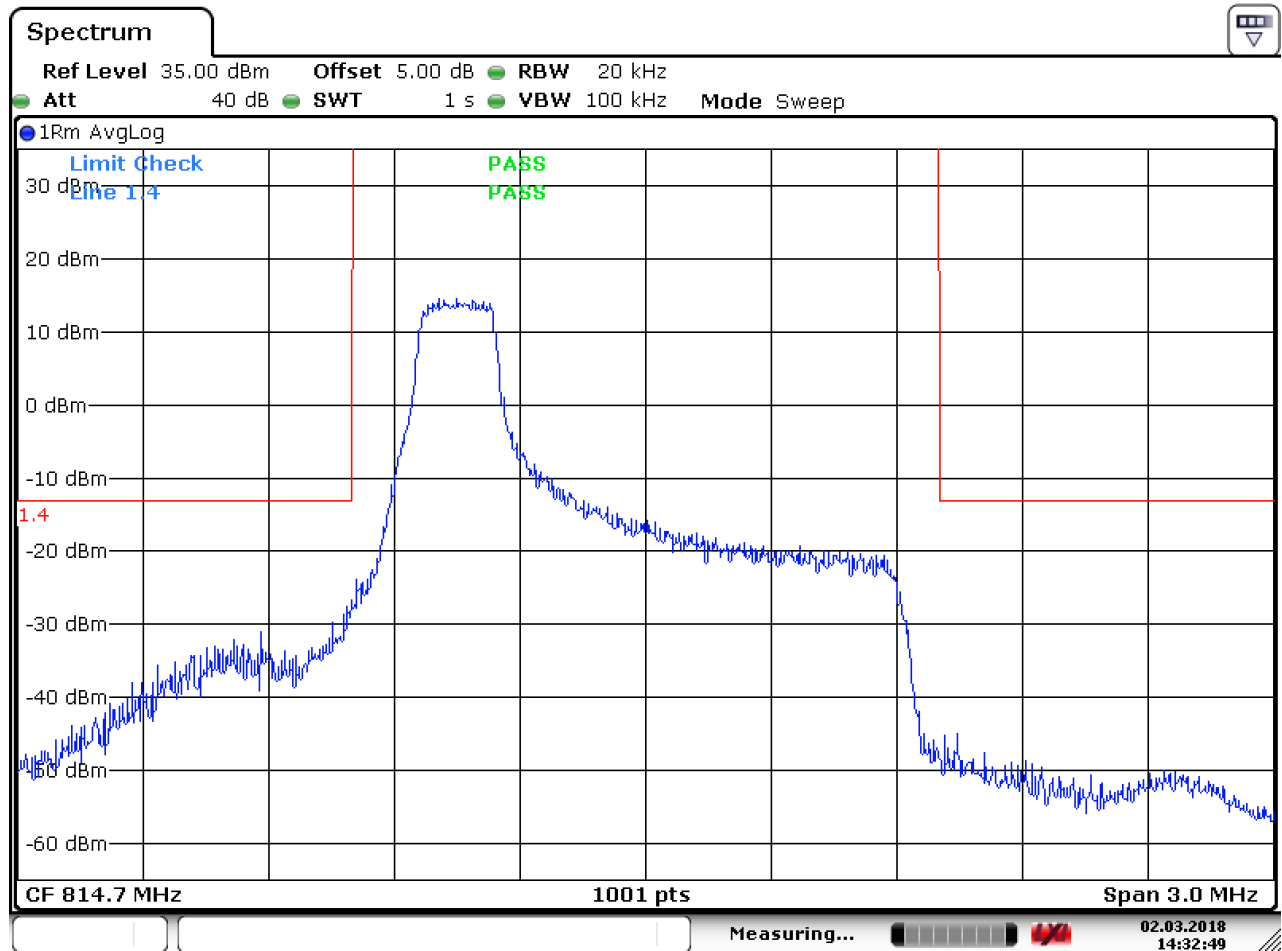

Date: 2.MAR.2018 14:41:45

6.1.1.2   Test Mode = LTE/TM2 1.4MHz

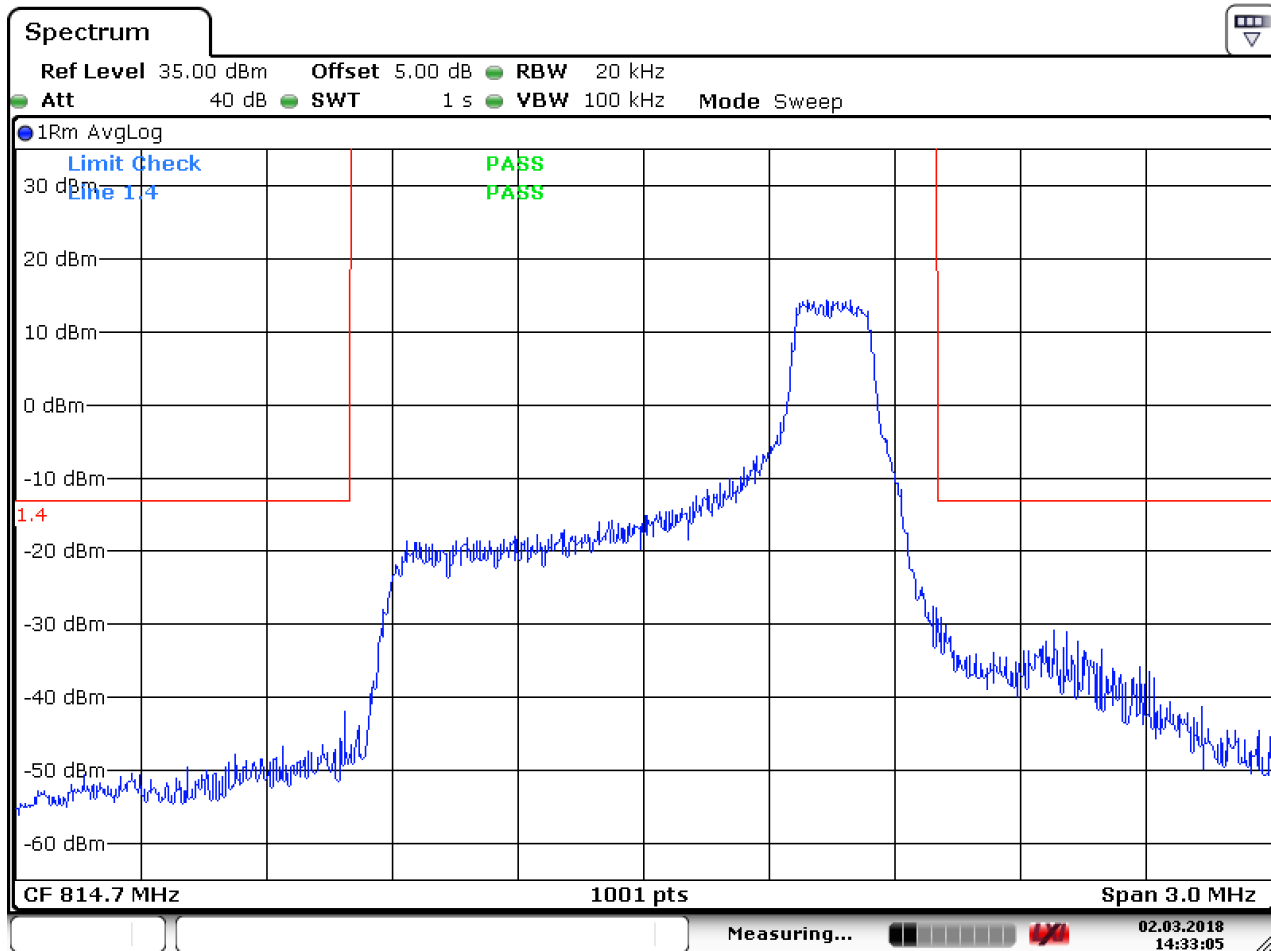#### 6.1.1.2.1   Test Channel = LCH

6.1.1.2.1.1 Test RB=1RB#0
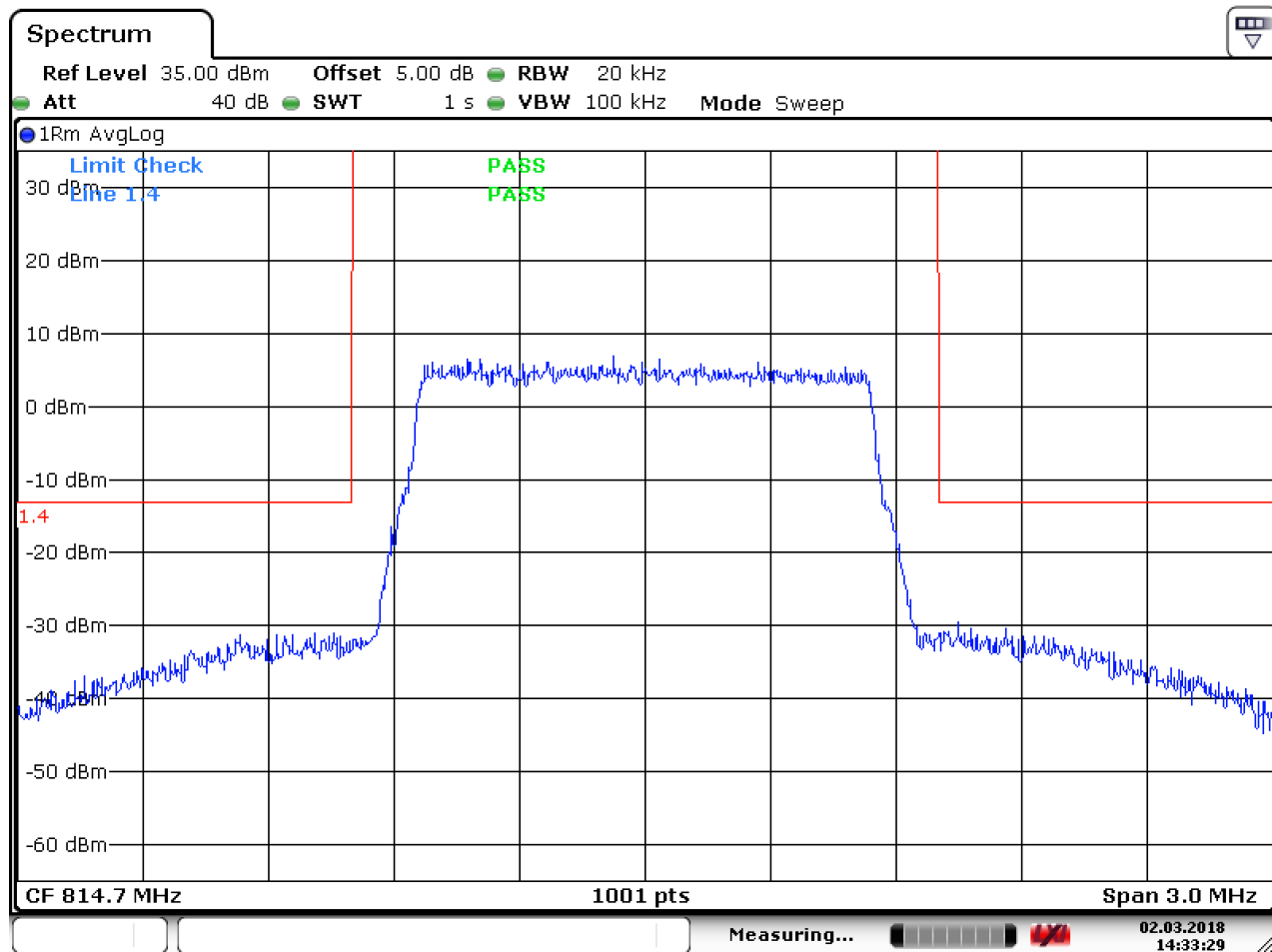

Date: 2.MAR.2018 14:32:49

6.1.1.2.1.2 Test RB=1RB#5

Date: 2.MAR.2018 14:33:06

6.1.1.2.1.3 Test RB=6RB

Date: 2.MAR.2018 14:33:29

6.1.1.2.2   Test Channel = MCH

6.1.1.2.2.1 Test RB=1RB#0
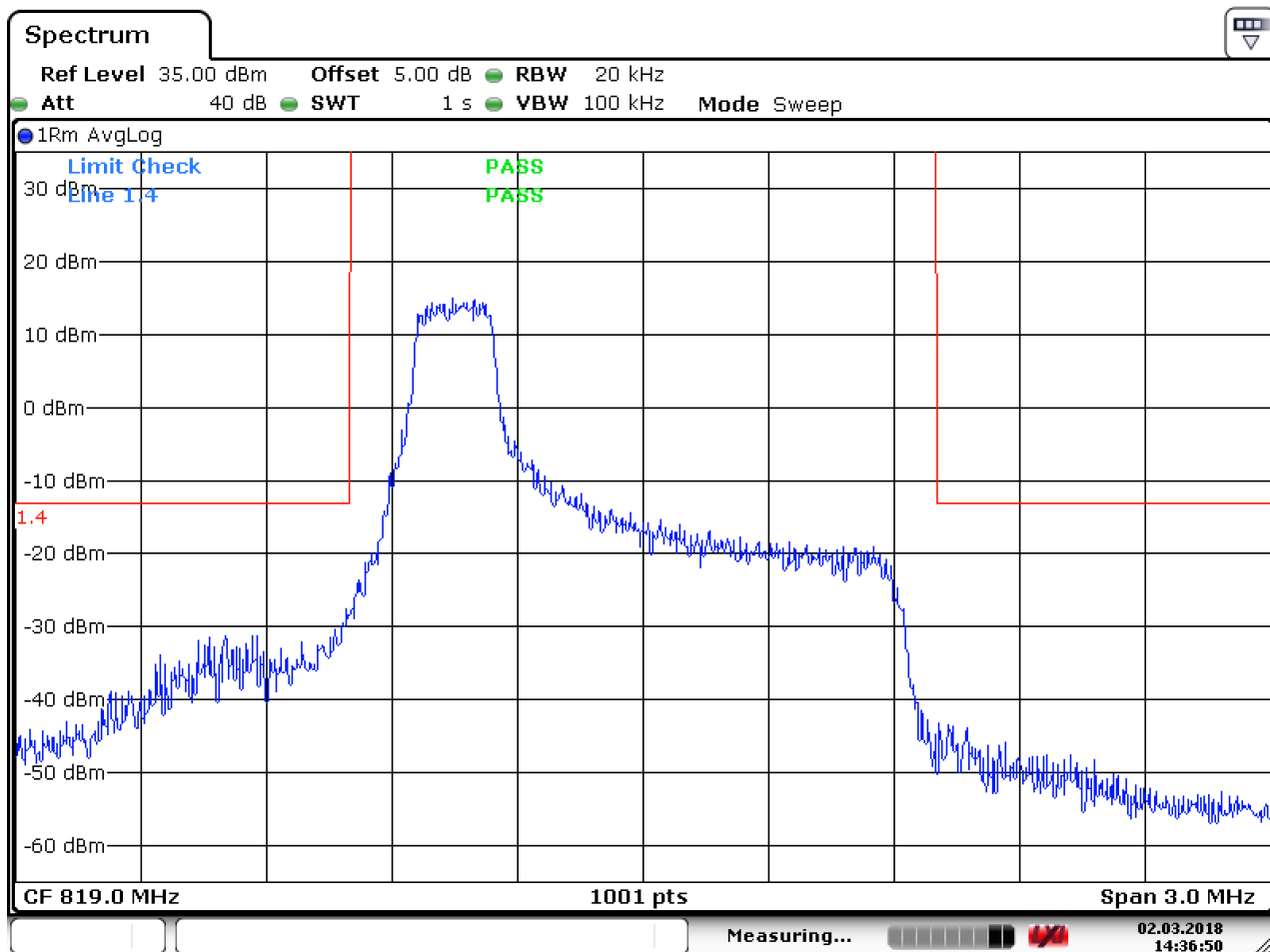
Date: 2.MAR.2018 14:36:50

6.1.1.2.2.2 Test RB=1RB#5
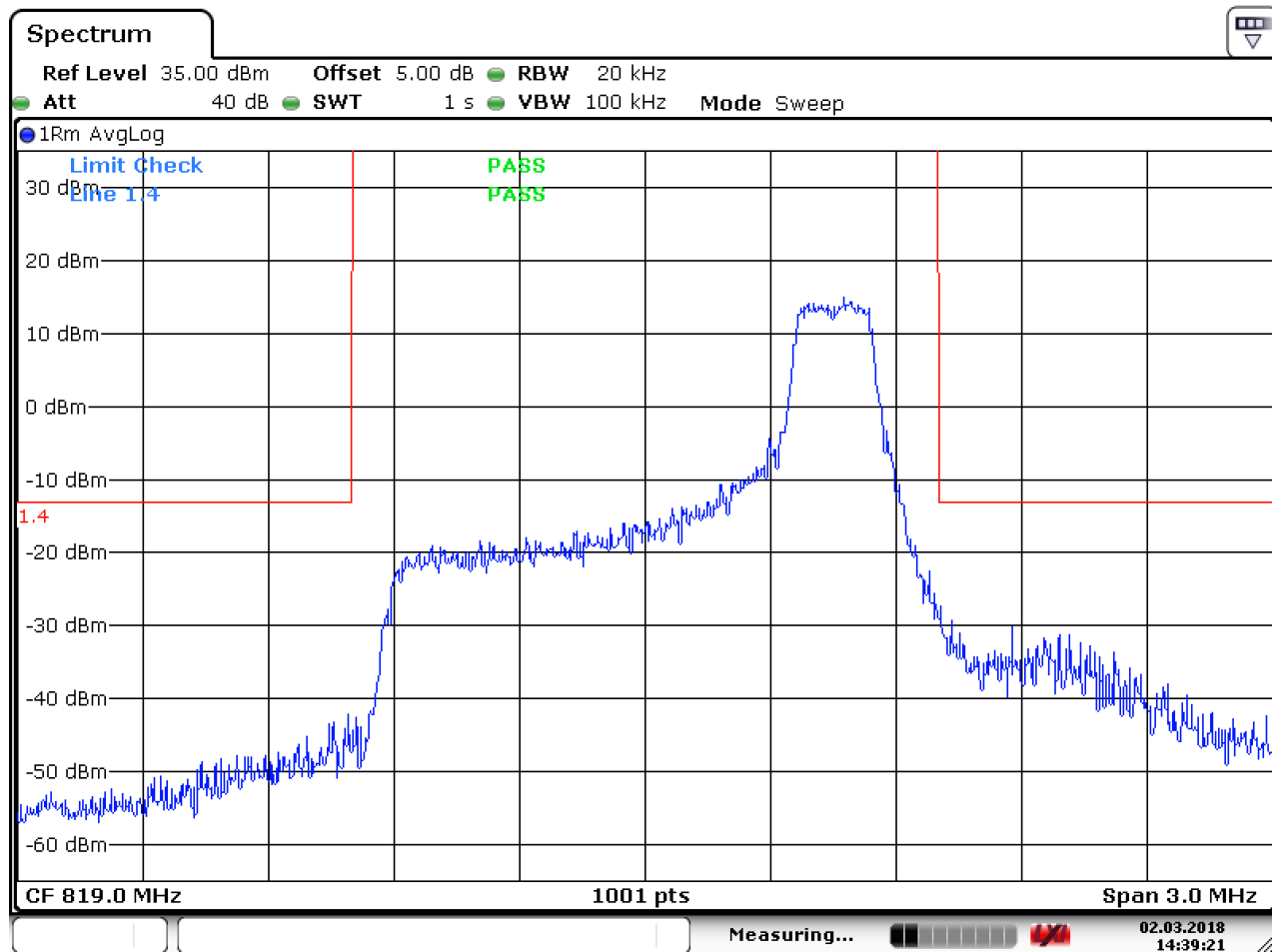
Date: 2.MAR.2018 14:39:21

6.1.1.2.2.3 Test RB=6RB
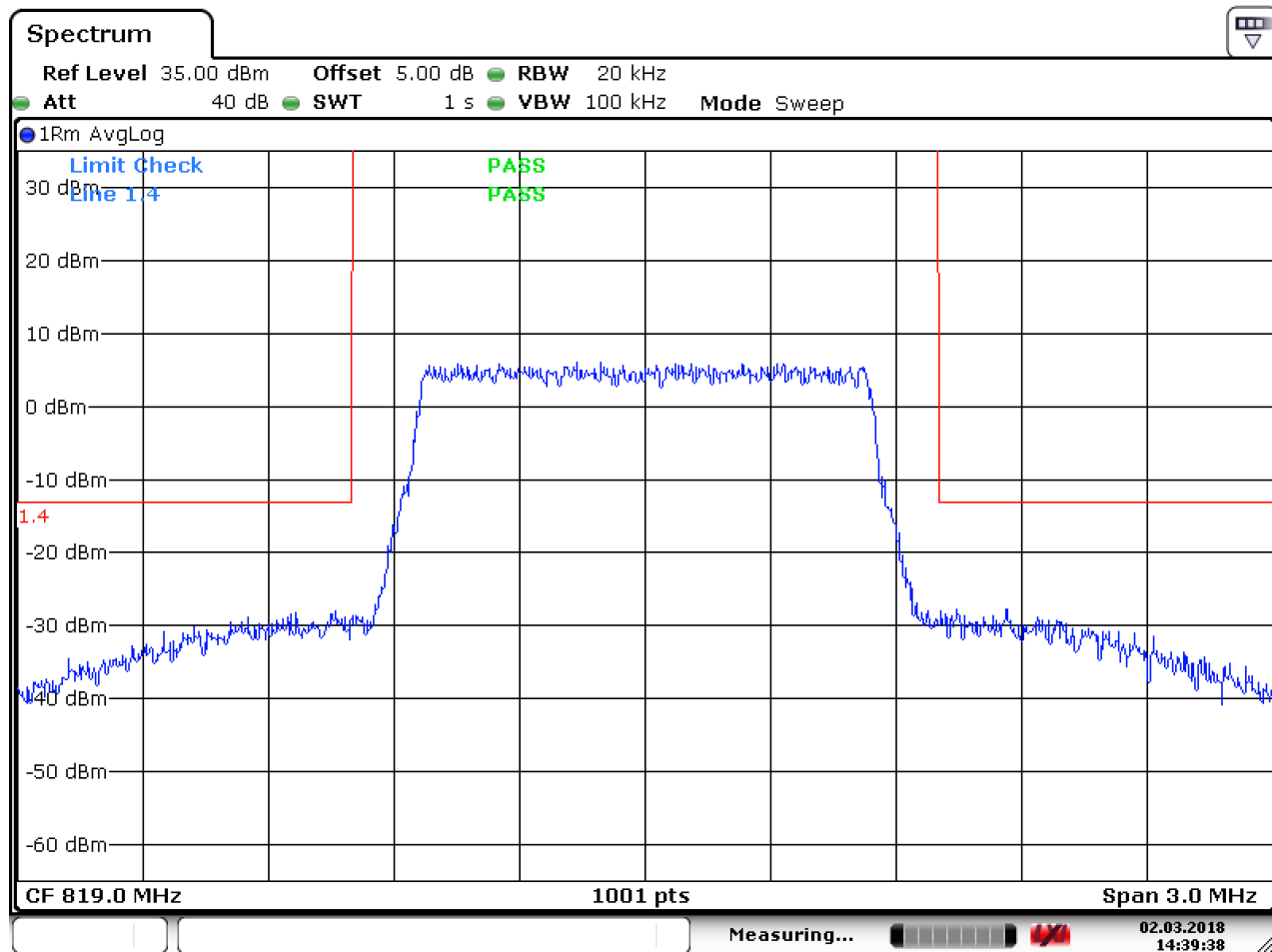
Date: 2.MAR.2018 14:39:39

6.1.1.2.3   Test Channel = HCH

6.1.1.2.3.1 Test RB=1RB
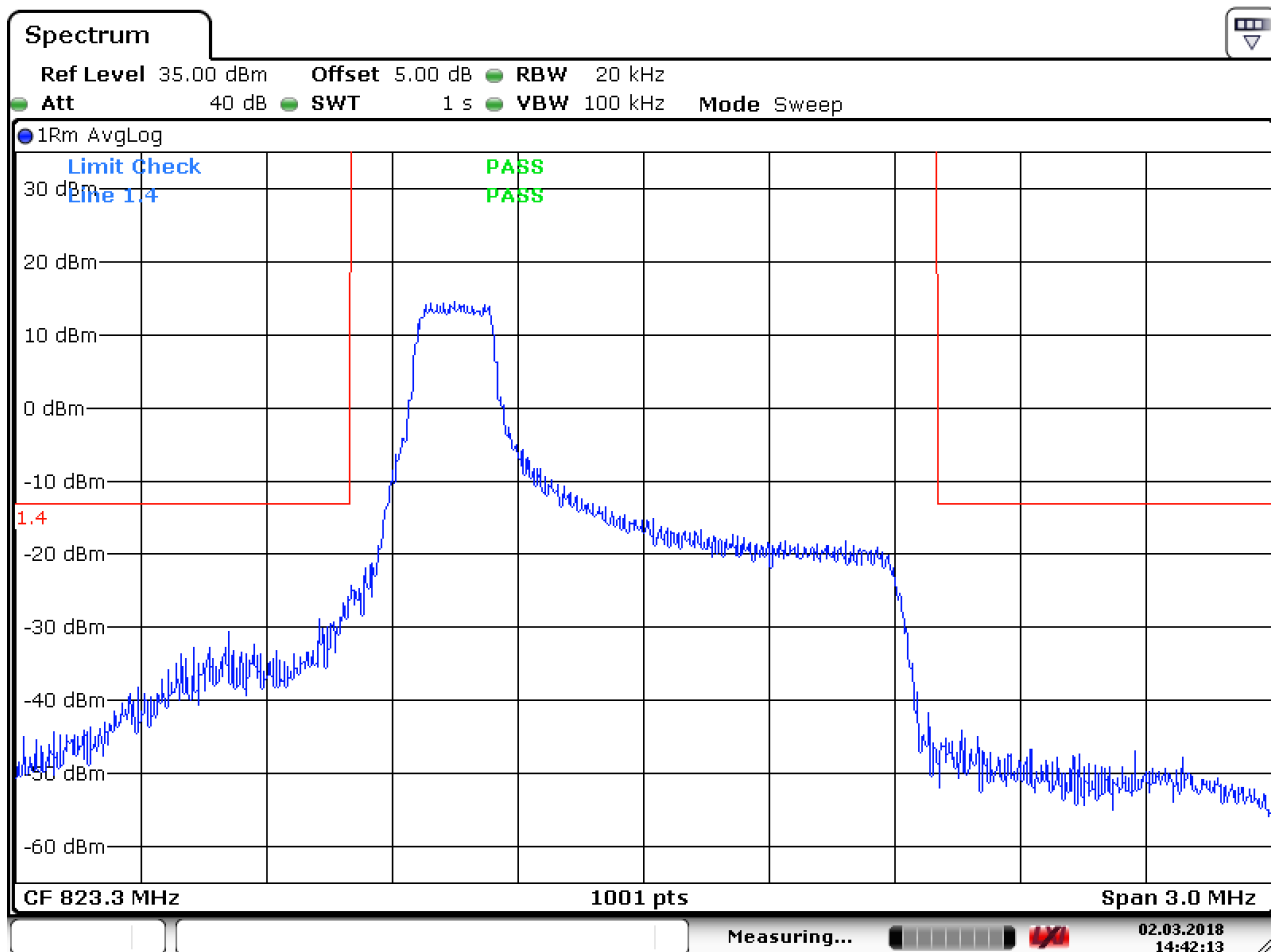
Date: 2.MAR.2018 14:42:13

6.1.1.2.3.2 Test RB=1RB#5
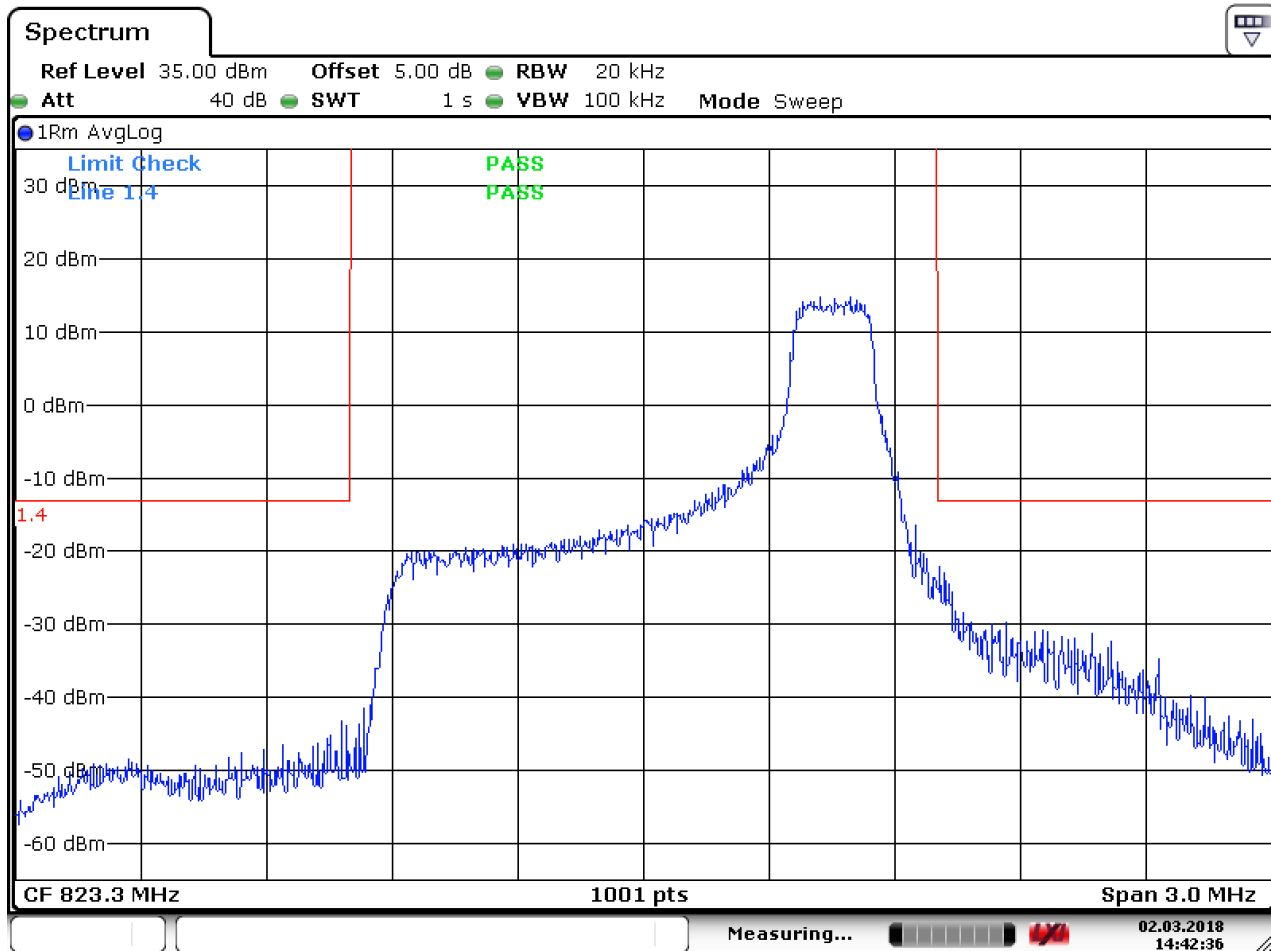
Date: 2.MAR.2018 14:42:37

6.1.1.2.3.3 Test RB=6RB
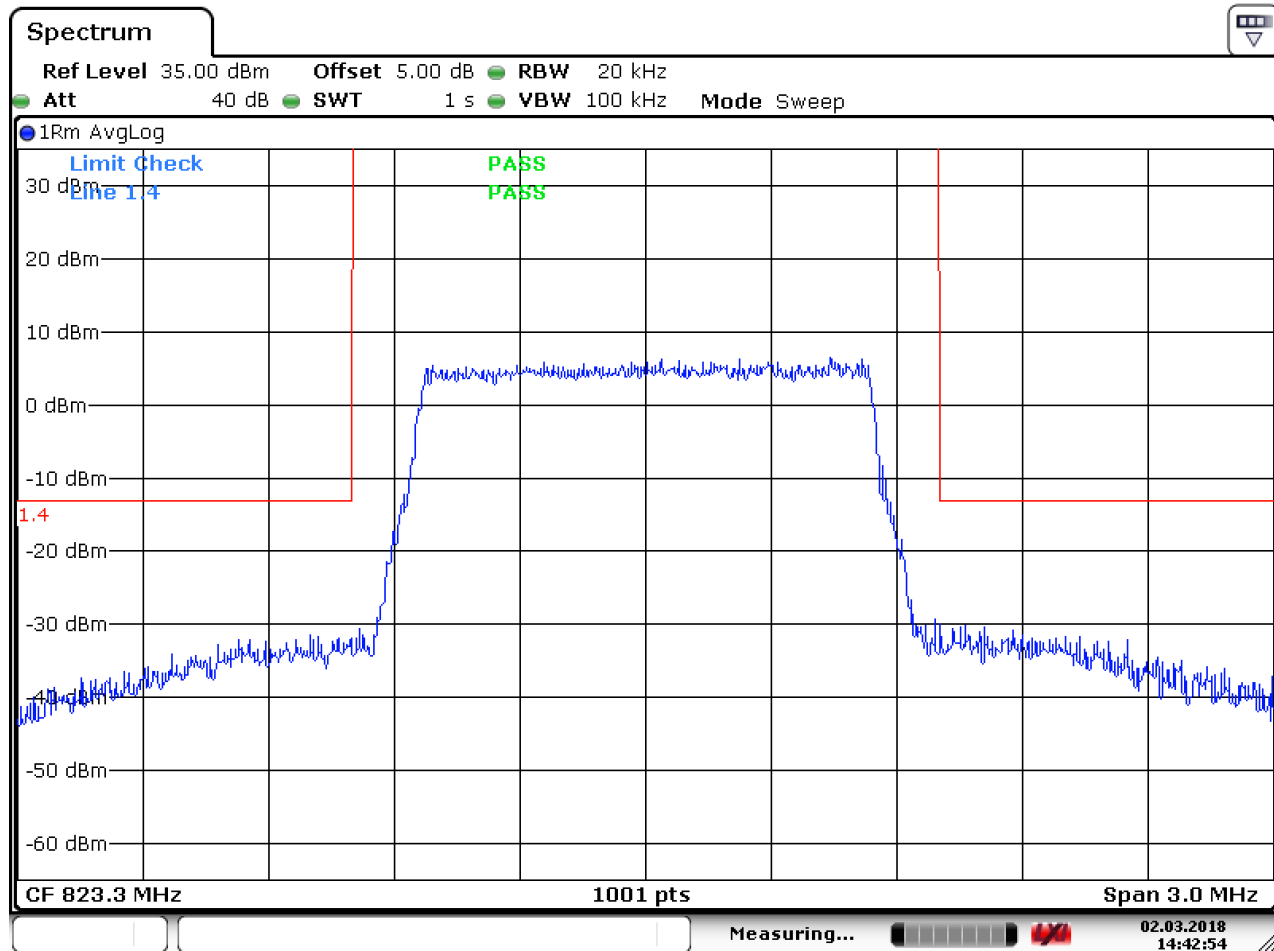
Date: 2.MAR.2018 14:42:54

6.1.1.3   Test Mode = LTE/TM3 1.4MHz

6.1.1.3.1   Test Channel = LCH

6.1.1.3.1.1 Test RB=1RB#0
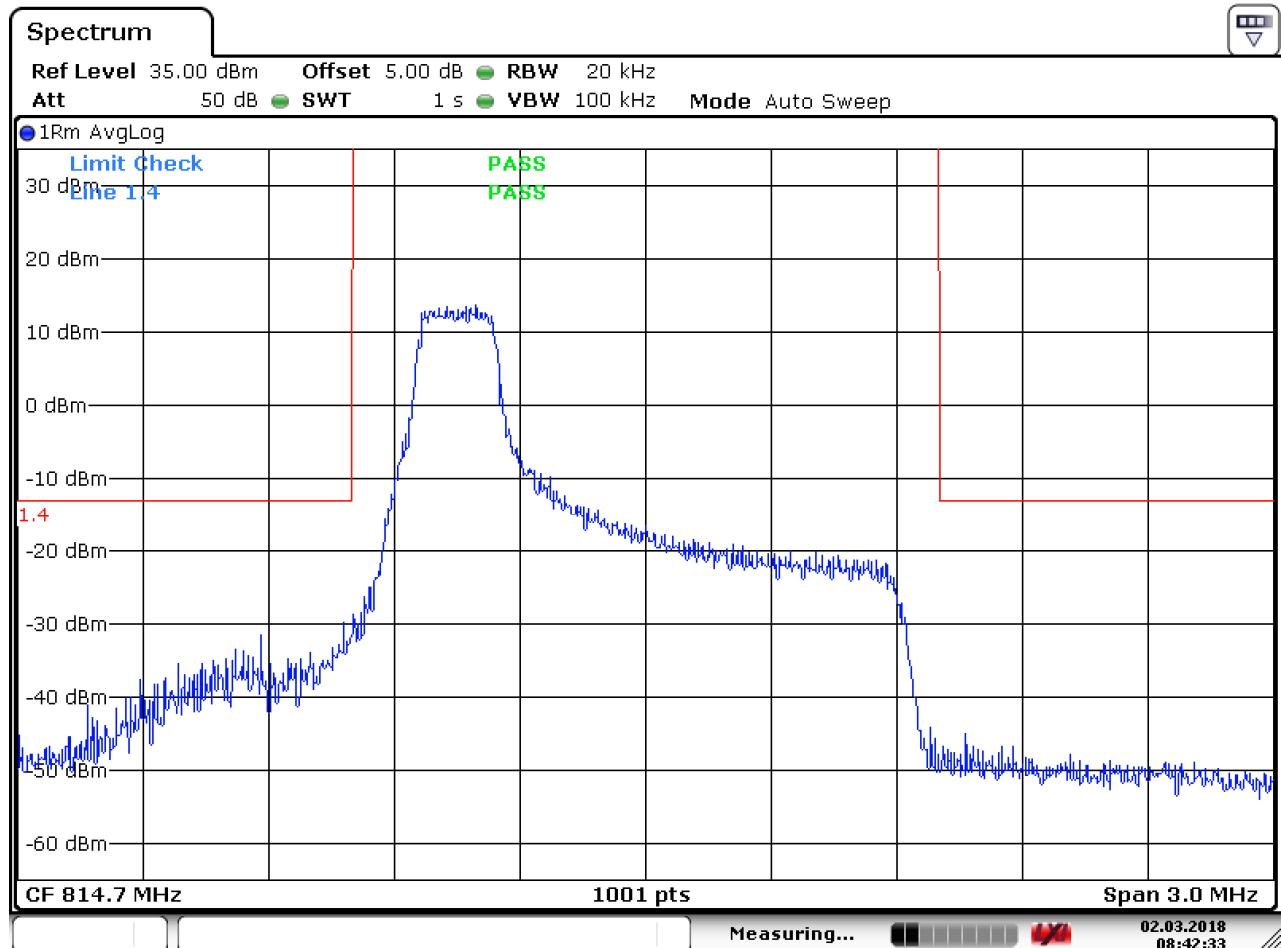
Date: 2.MAR.2018 08:42:33

6.1.1.3.1.2 Test RB=1RB#5

Date: 2.MAR.2018 08:42:46

6.1.1.3.1.3 Test RB=6RB
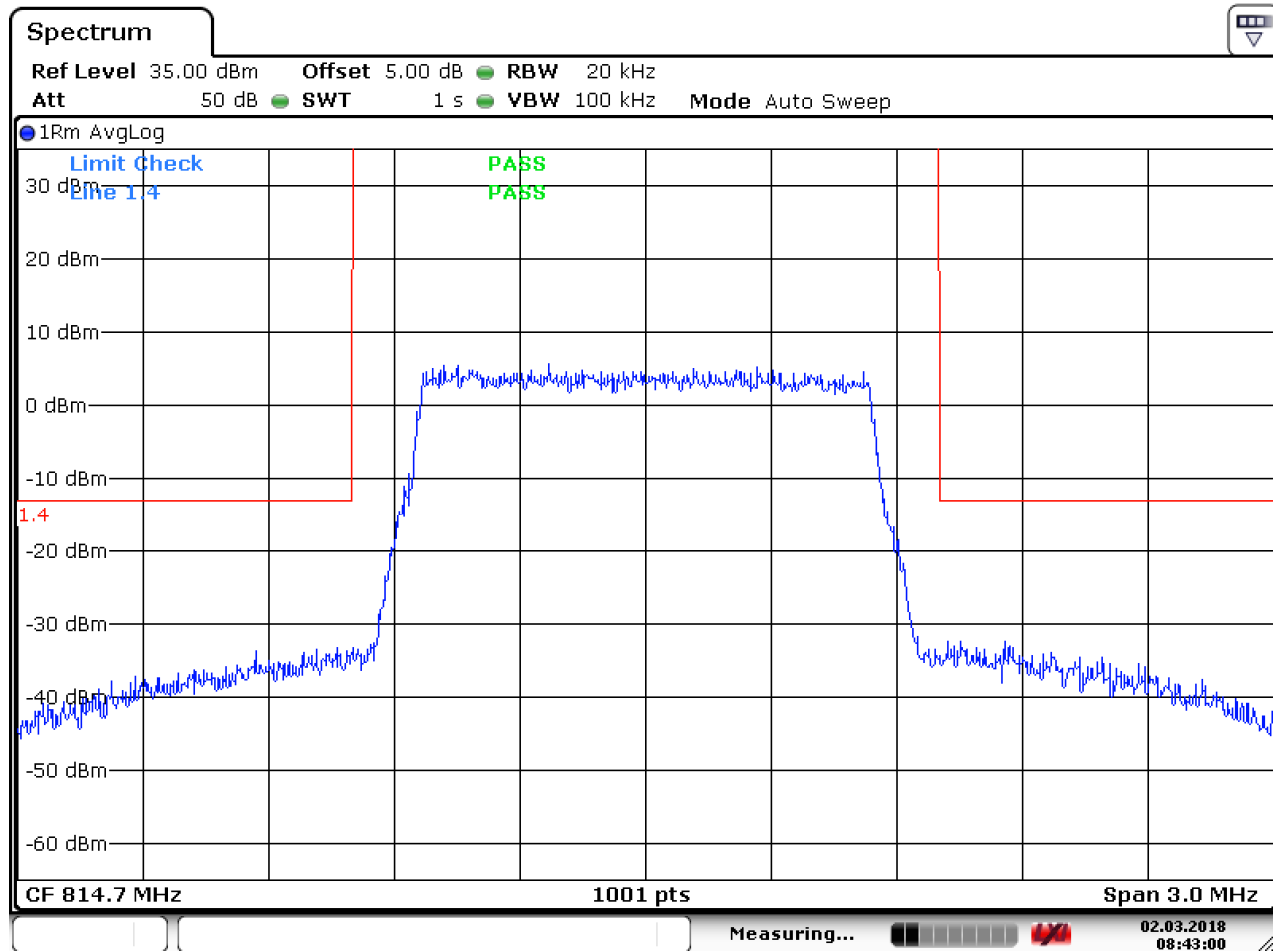
Date: 2.MAR.2018 08:43:01

6.1.1.3.2   Test Channel = MCH

6.1.1.3.2.1 Test RB=1RB#0

Date: 2.MAR.2018 08:34:23

SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch
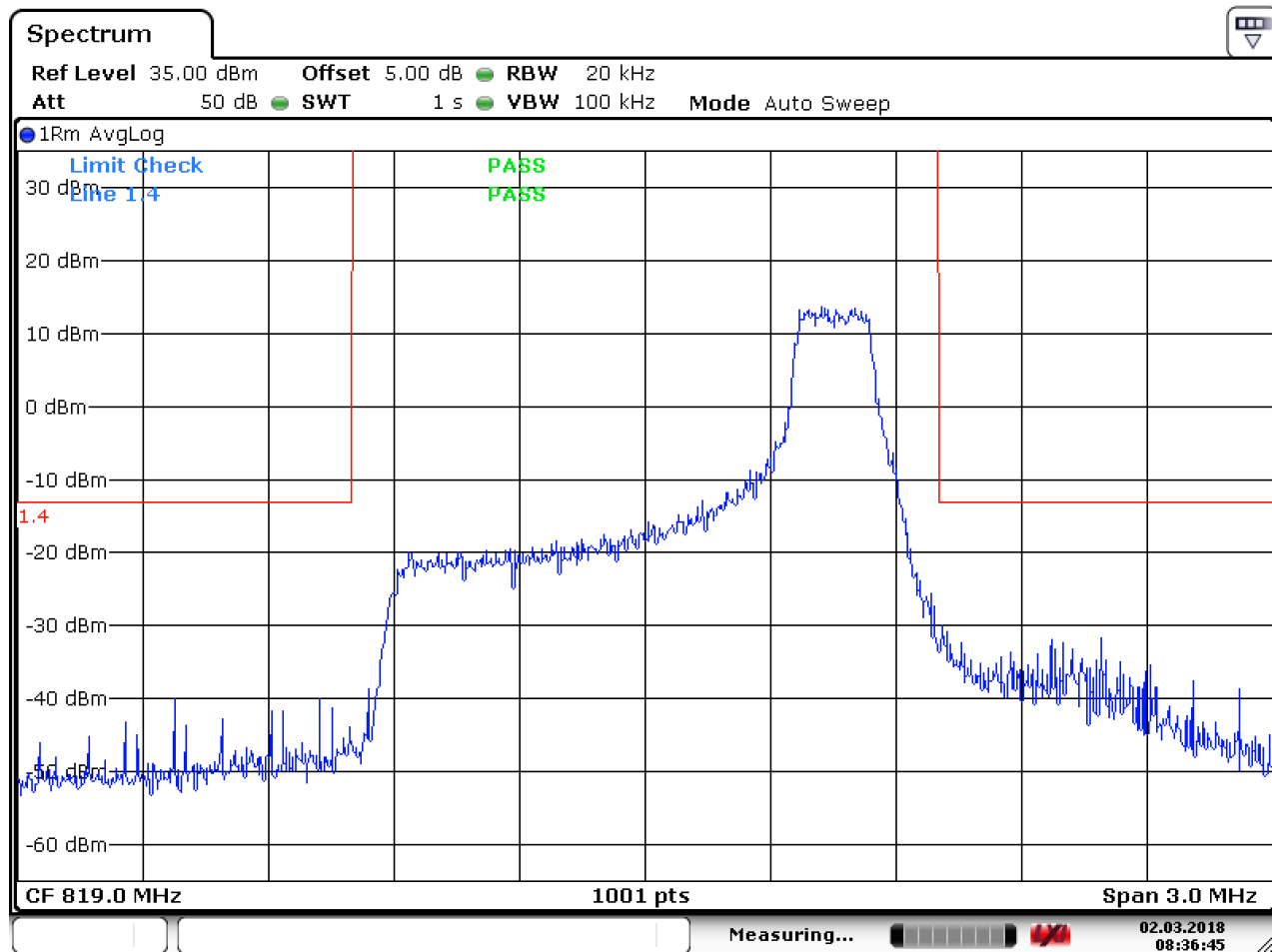
6.1.1.3.2.2 Test RB=1RB#5

Date: 2.MAR.2018 08:36:46

6.1.1.3.2.3 Test RB=6RB

```
Spectrum                                                                    ▤

Ref Level 35.00 dBm    Offset 5.00 dB  ● RBW   20 kHz
Att           50 dB  ● SWT        1 s  ● VBW  100 kHz   Mode Auto Sweep

● 1Rm AvgLog
          Limit Check                    PASS
30 dBm    Line 1 4                       PASS

20 dBm

10 dBm

 0 dBm

-10 dBm

1.4

-20 dBm

-30 dBm

-40 dBm

-50 dBm

-60 dBm

CF 819.0 MHz                    1001 pts                     Span 3.0 MHz

                              Measuring...  ▮▮▮▮▮▮    LXI    02.03.2018
                                                             08:37:03
```
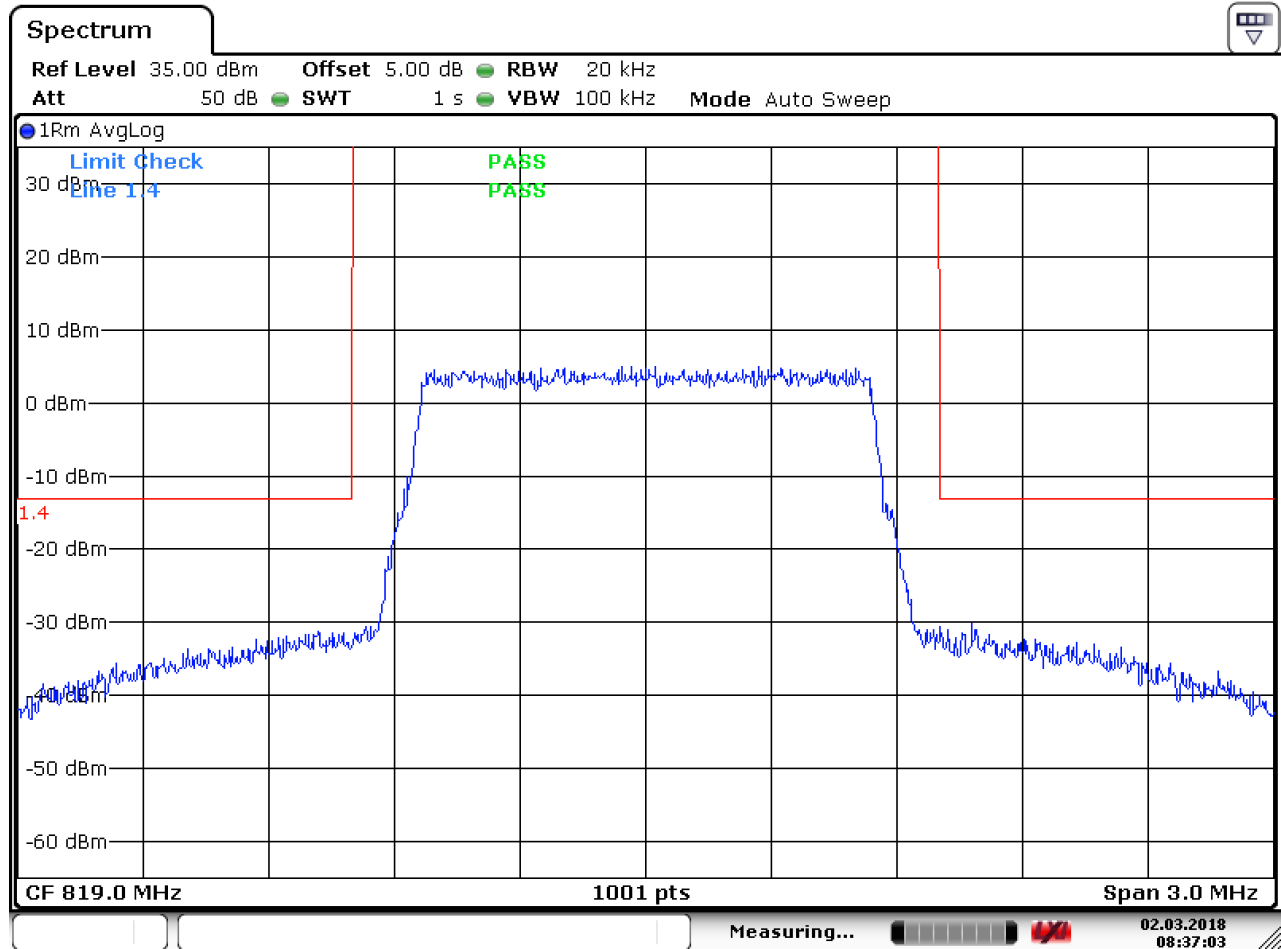
Date: 2.MAR.2018 08:37:04

6.1.1.3.3   Test Channel = HCH

6.1.1.3.3.1 Test RB=1RB
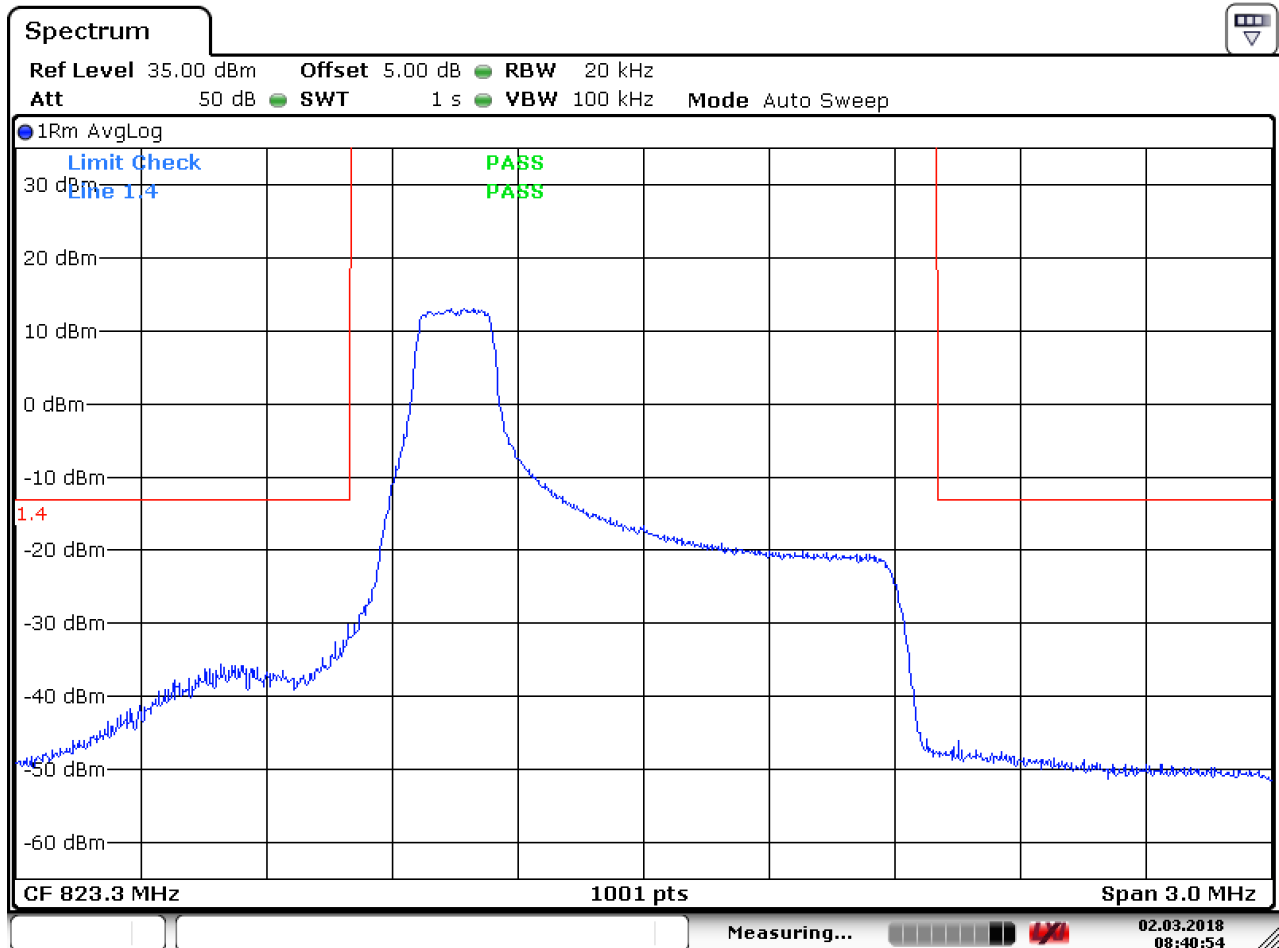
Date: 2.MAR.2018 08:40:55

6.1.1.3.3.2 Test RB=1RB#5
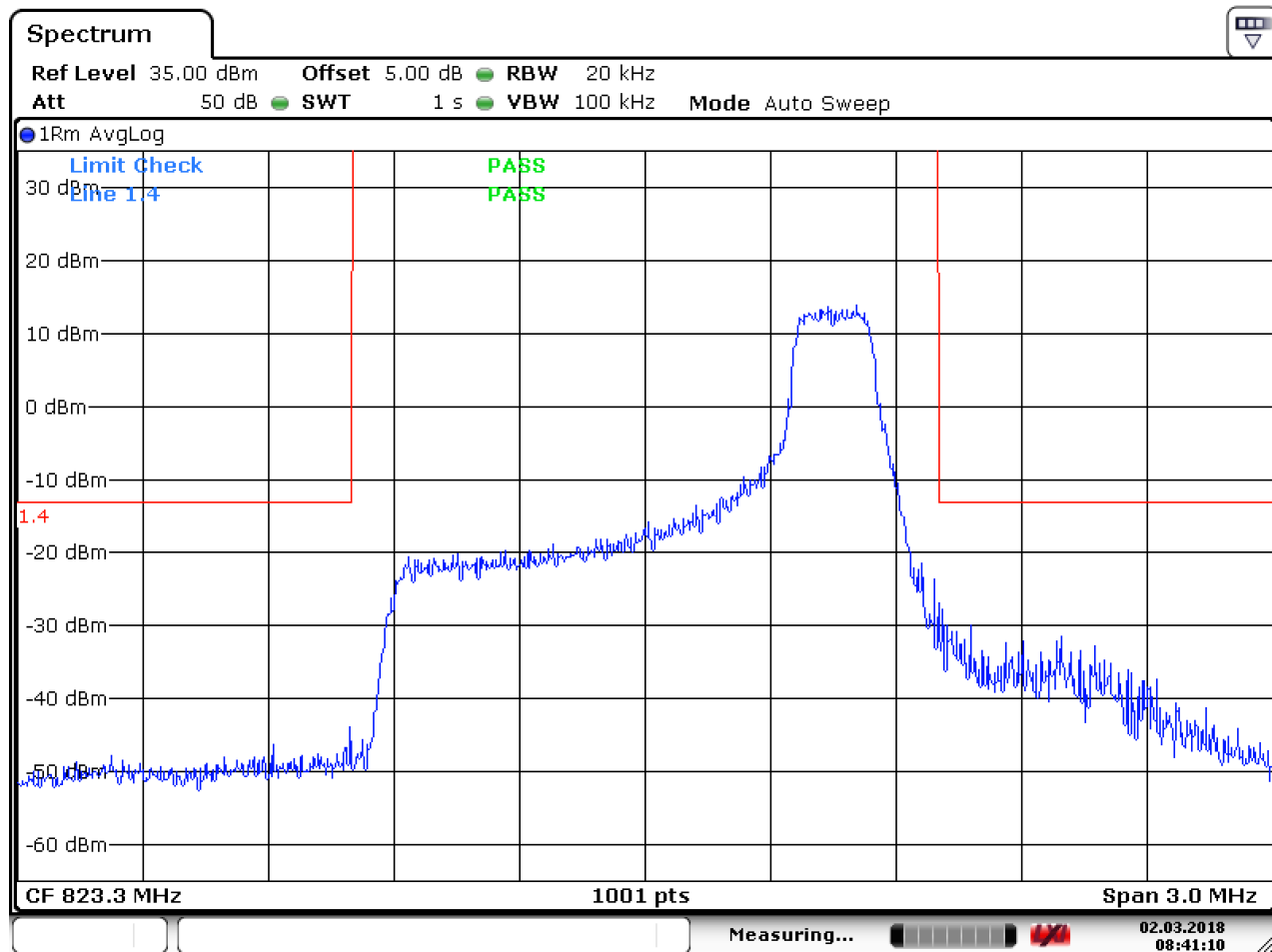
Date: 2.MAR.2018 08:41:10
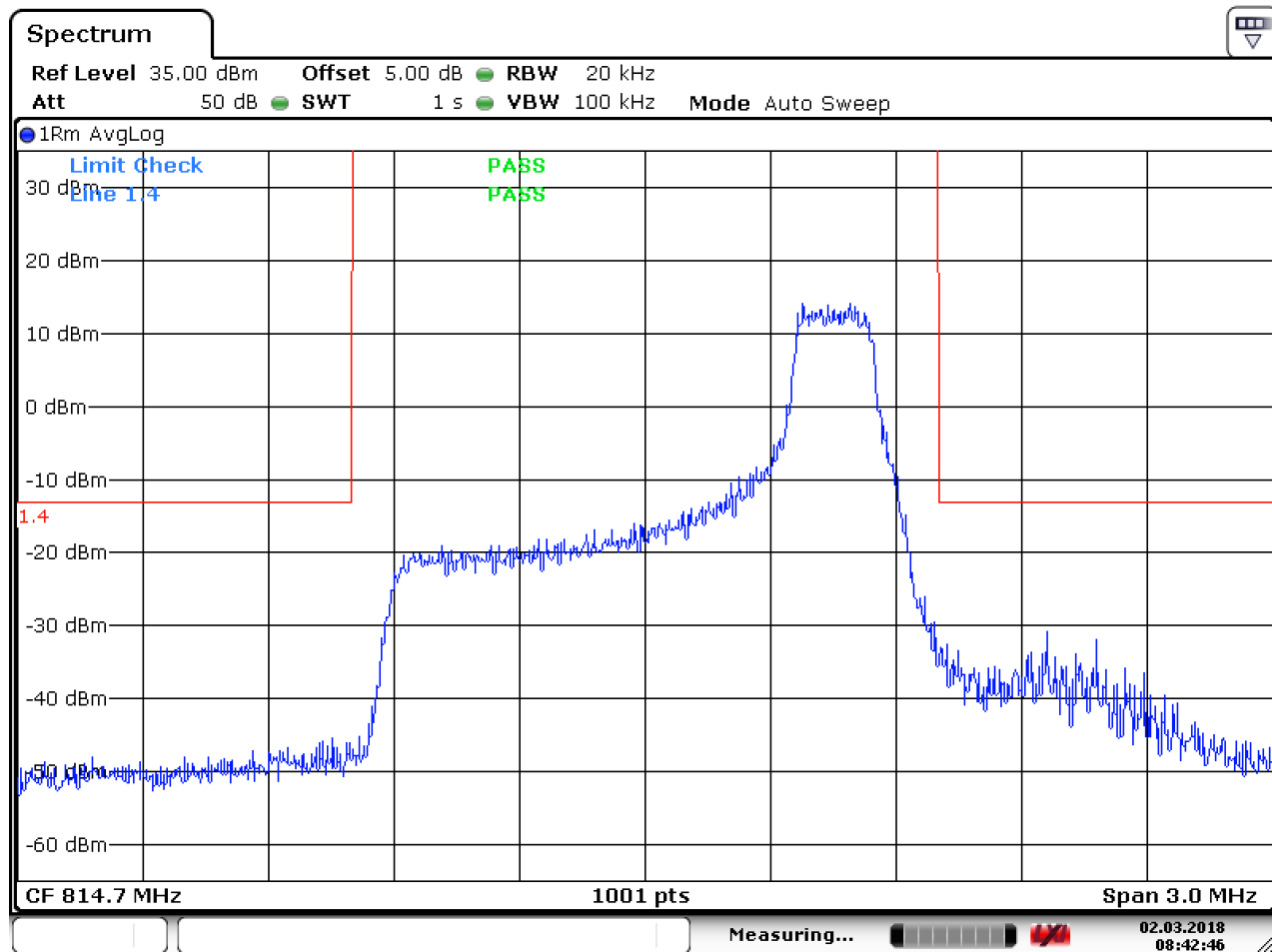
6.1.1.3.3.3 Test RB=6RB
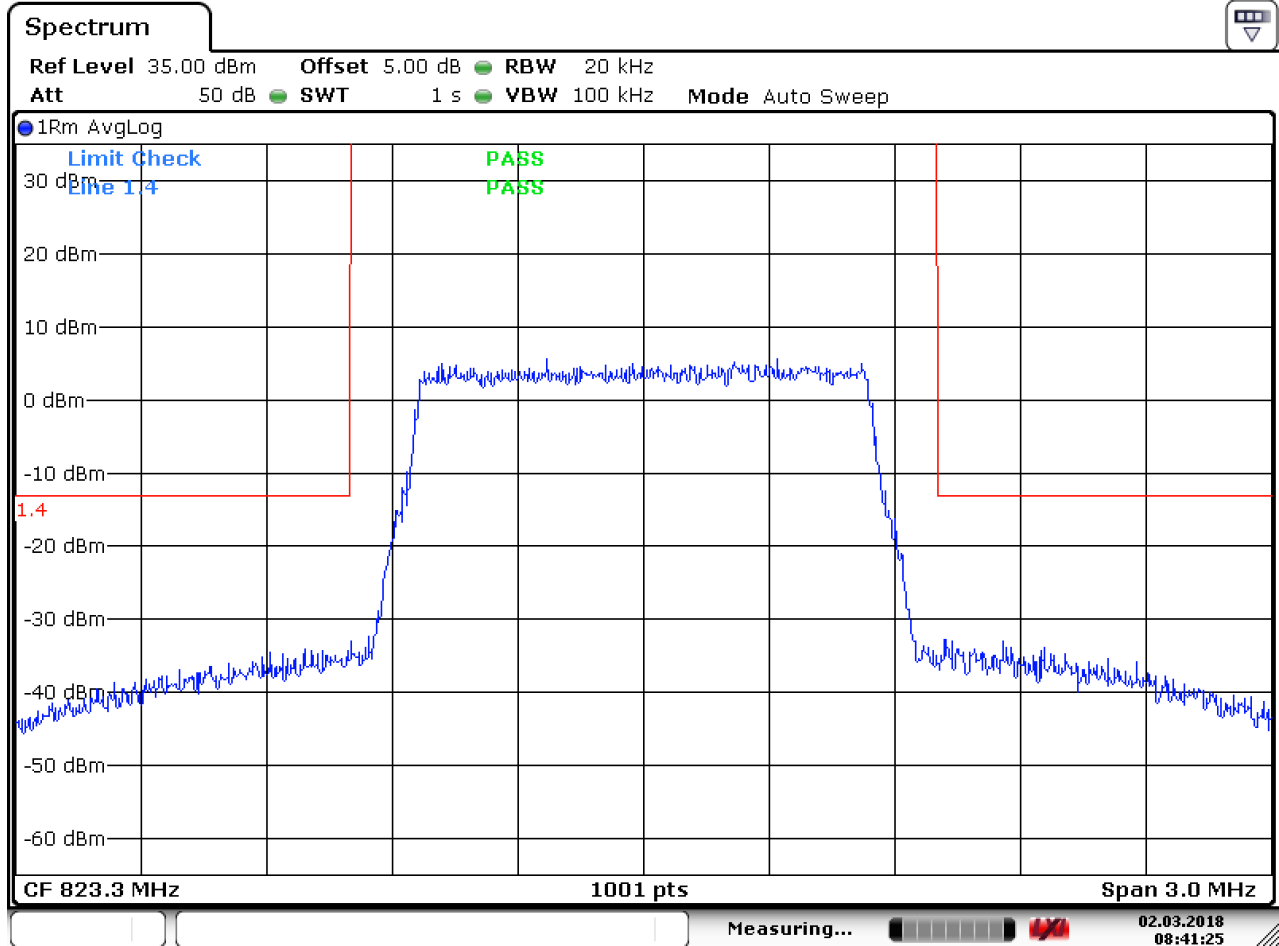
Date: 2.MAR.2018 08:41:25

6.1.1.4   Test Mode = LTE/TM1 3MHz

6.1.1.4.1   Test Channel = LCH
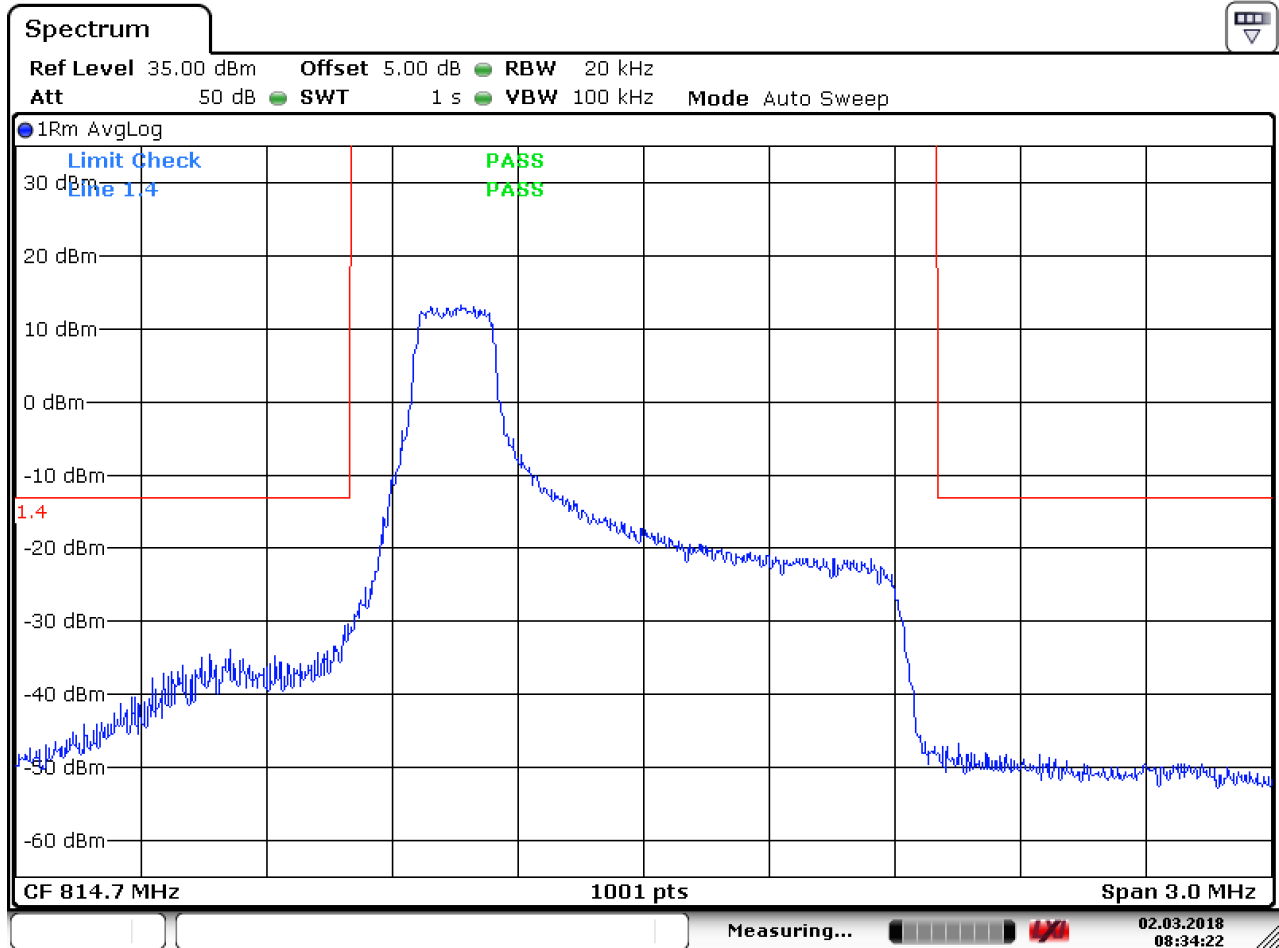
6.1.1.4.1.1 Test RB=1RB#0
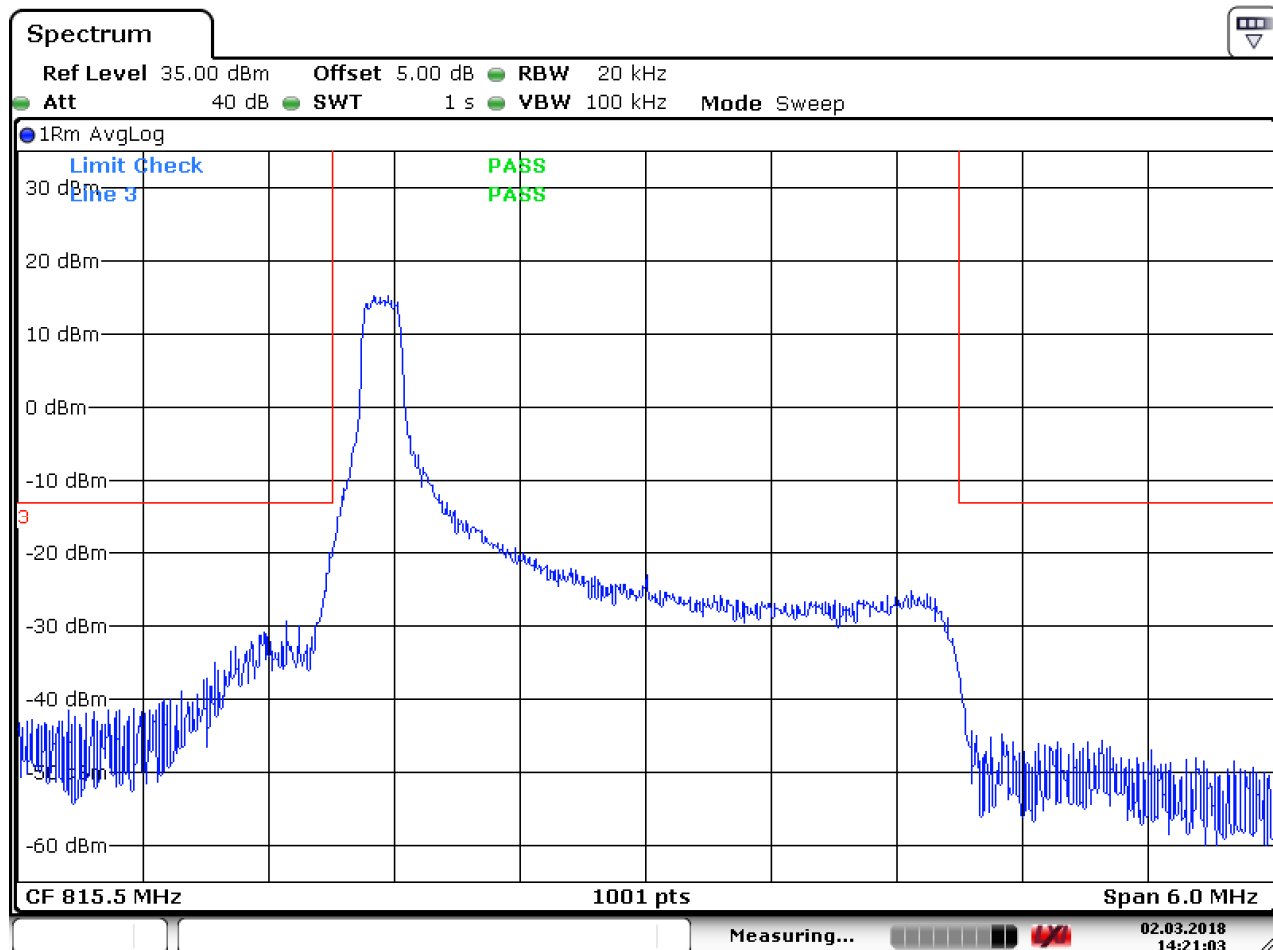
Date: 2.MAR.2018 14:21:04

6.1.1.4.1.2 Test RB=1RB#14
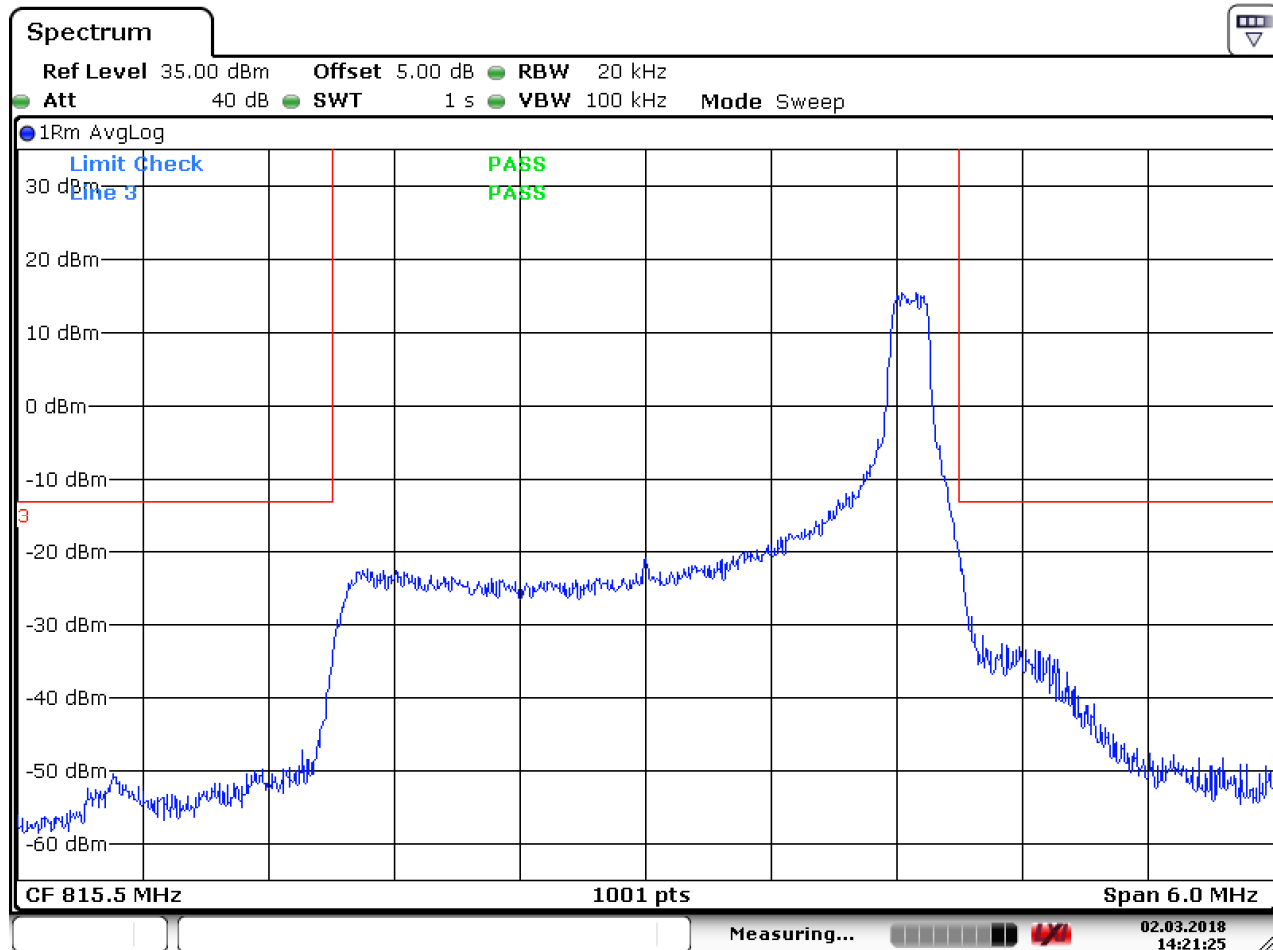
Date: 2.MAR.2018 14:21:25

6.1.1.4.1.3 Test RB=15RB

Date: 2.MAR.2018 14:21:43

SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch
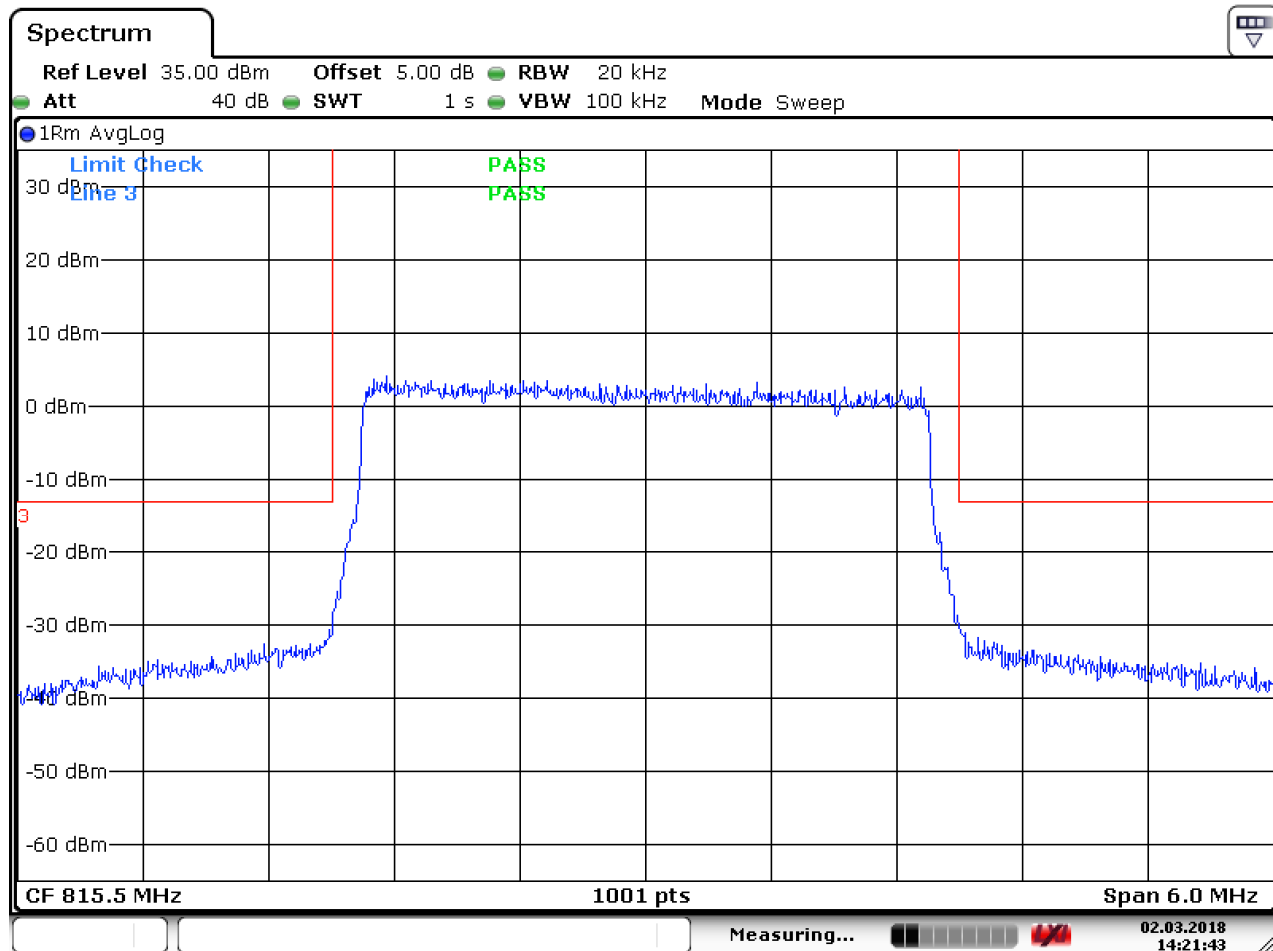
6.1.1.4.2 Test Channel = MCH

6.1.1.4.2.1 Test RB=1RB#0
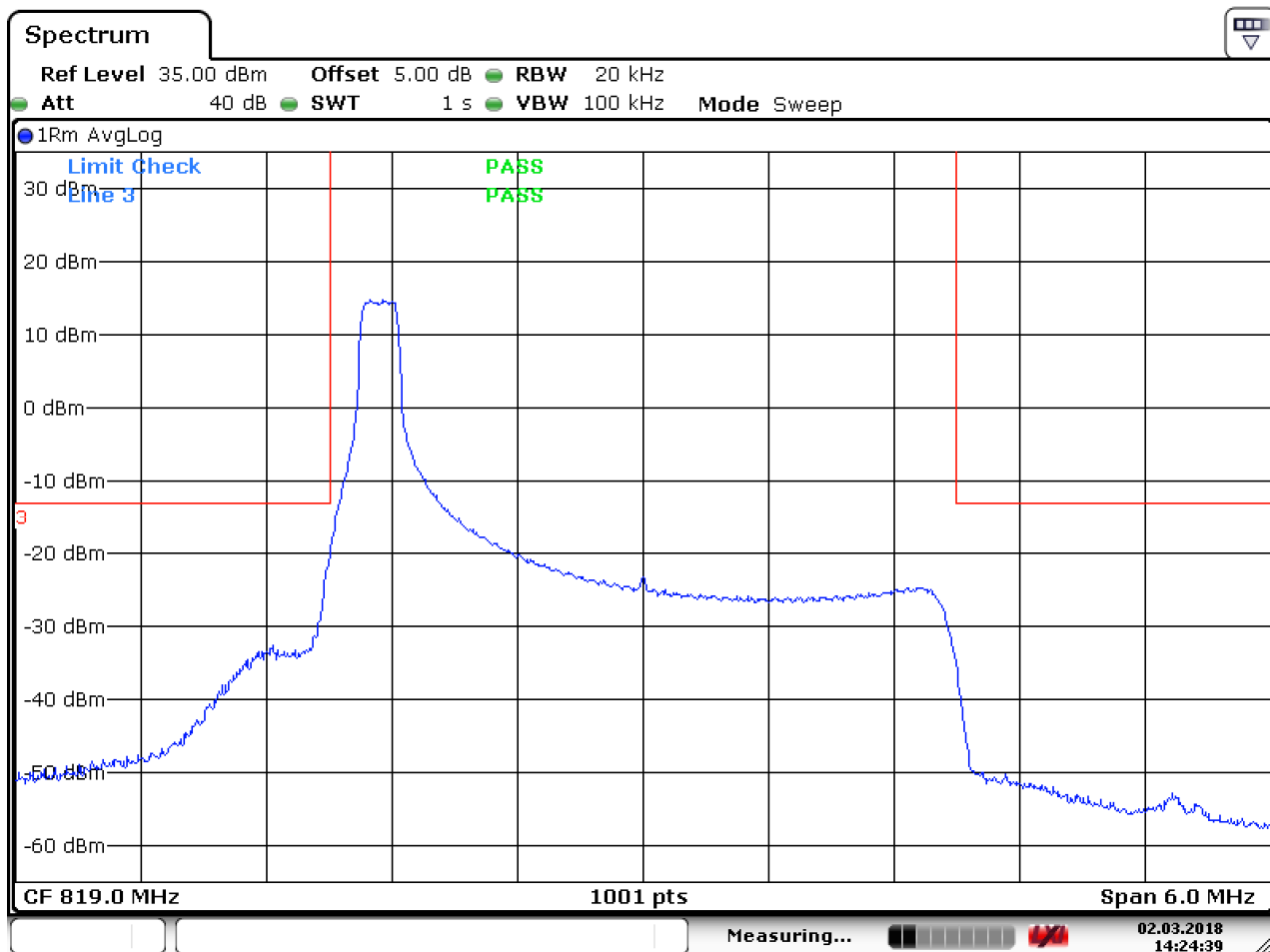
Date: 2.MAR.2018 14:24:40

6.1.1.4.2.2 Test RB=1RB#14

Date: 2.MAR.2018 14:25:04

6.1.1.4.2.3 Test RB=15RB
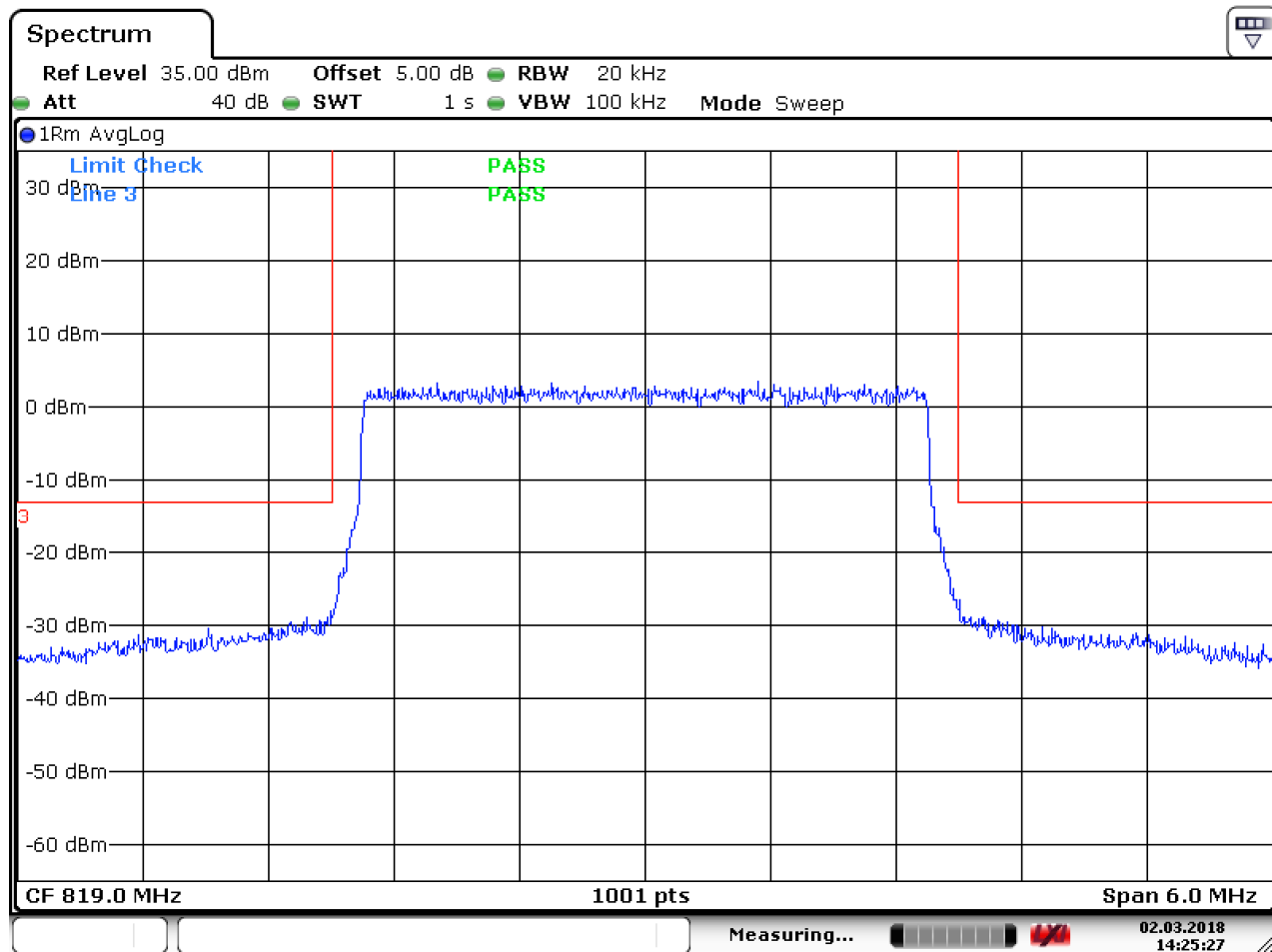
Date: 2.MAR.2018 14:25:28

6.1.1.4.3   Test Channel = HCH

6.1.1.4.3.1 Test RB=1RB#0
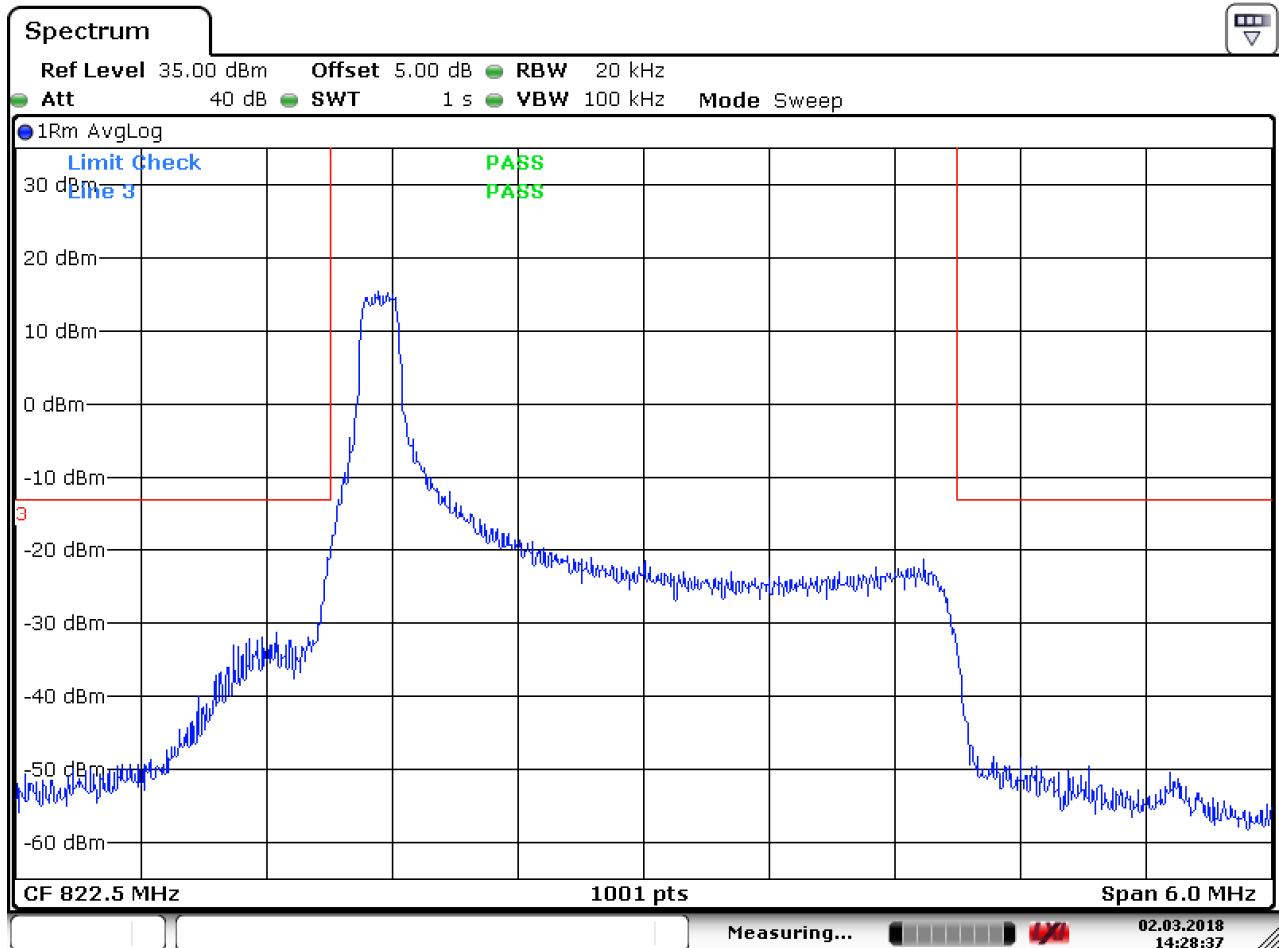
Date: 2.MAR.2018 14:28:37

6.1.1.4.3.2 Test RB=1RB#14
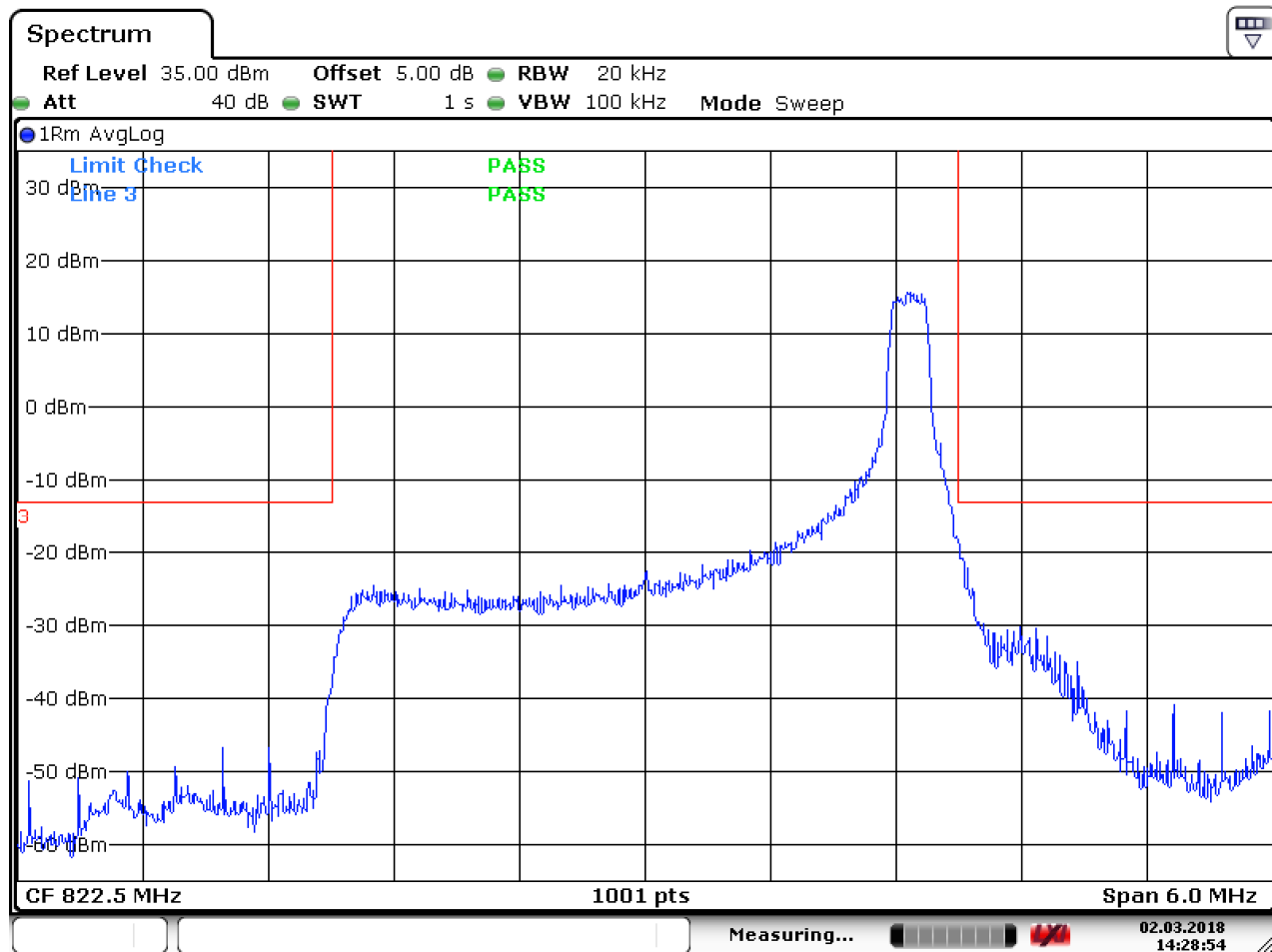
Date: 2.MAR.2018 14:28:55

6.1.1.4.3.3 Test RB=15RB

Date: 2.MAR.2018 14:29:18

SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch
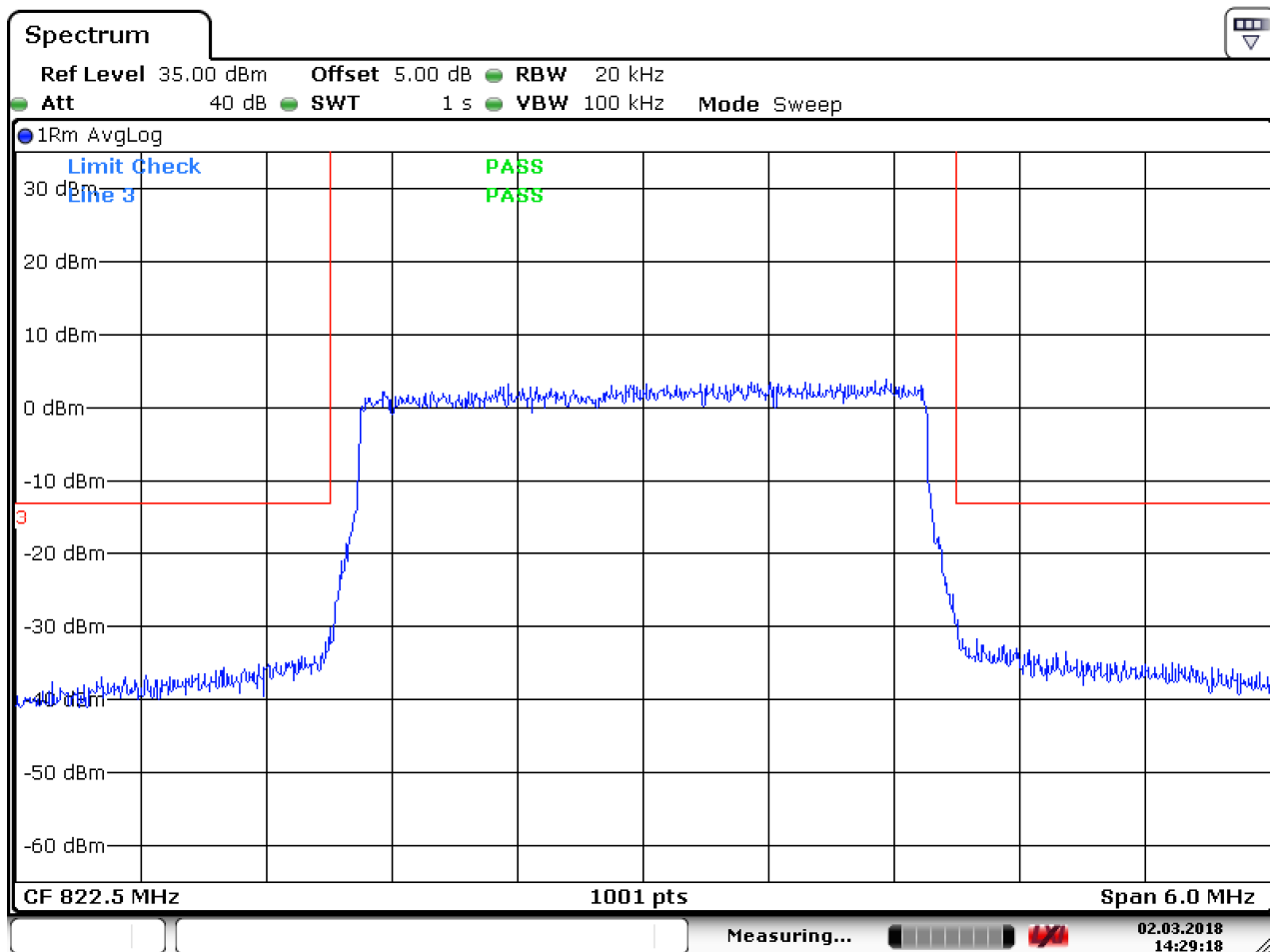
6.1.1.5   Test Mode = LTE/TM2 3MHz

6.1.1.5.1   Test Channel = LCH

6.1.1.5.1.1 Test RB=1RB#0
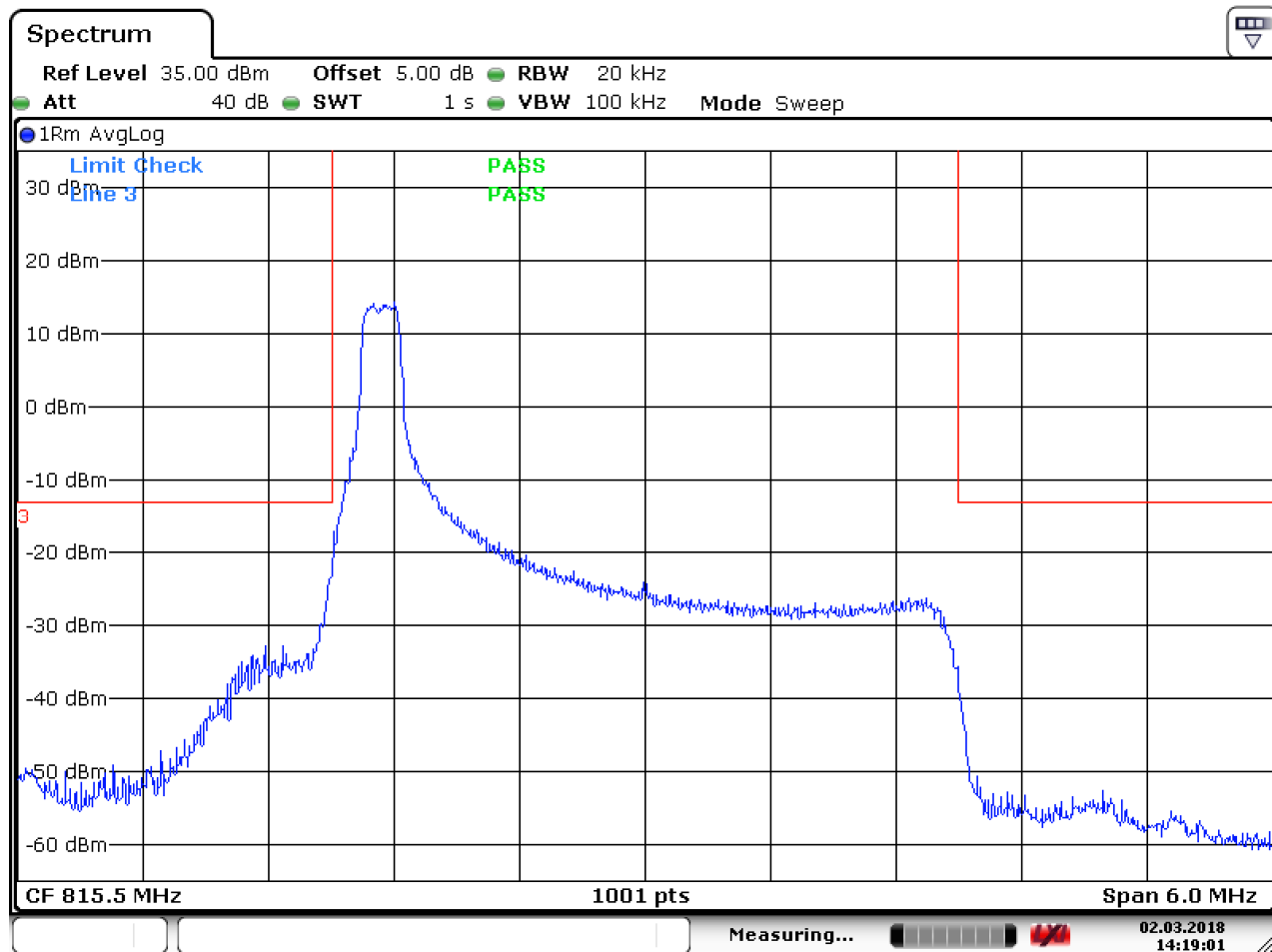
Date: 2.MAR.2018 14:19:01

6.1.1.5.1.2 Test RB=1RB#14

Date: 2.MAR.2018 14:19:17

SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch
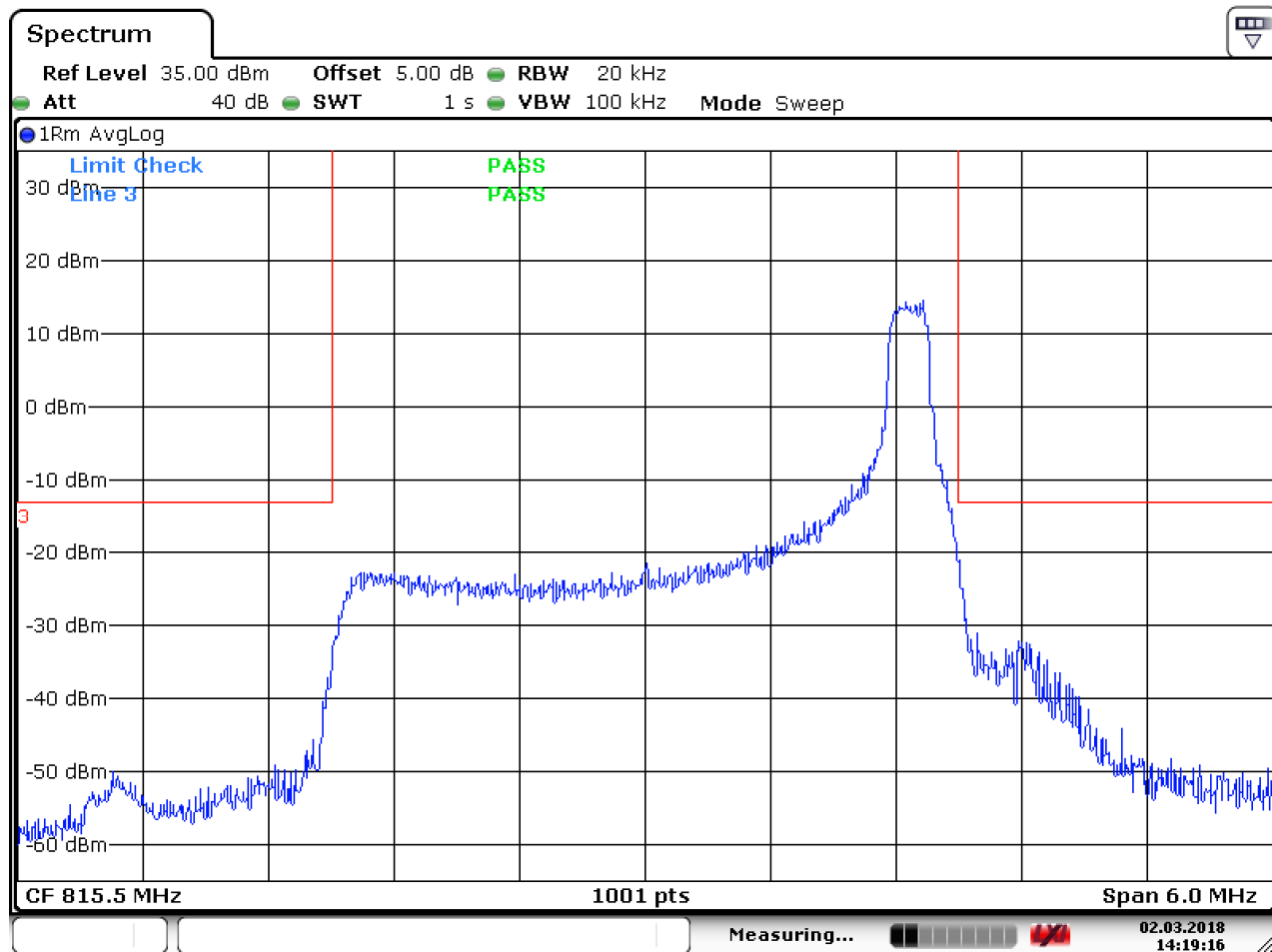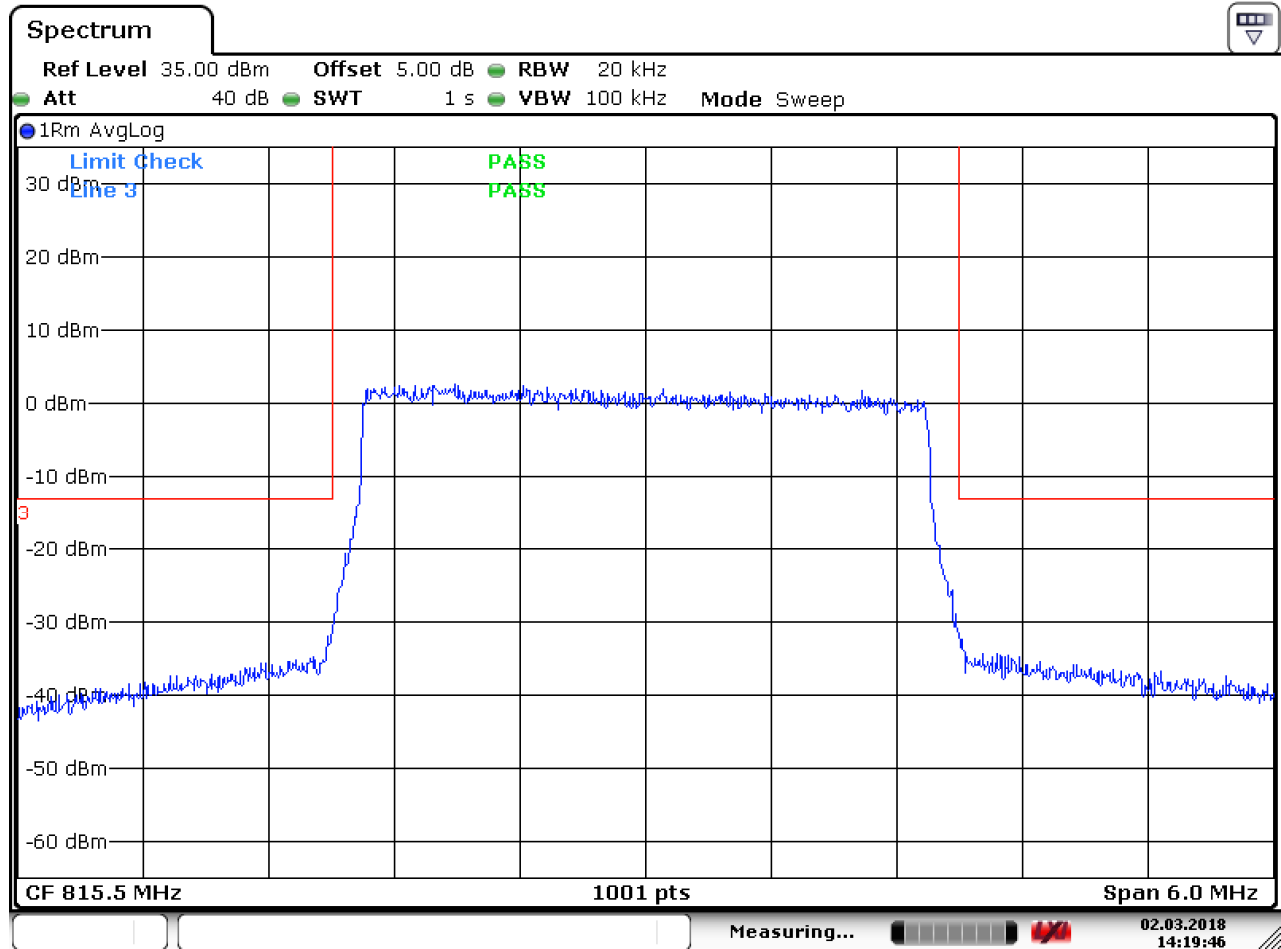
6.1.1.5.1.3 Test RB=15RB

Date: 2.MAR.2018 14:19:46

6.1.1.5.2   Test Channel = MCH

6.1.1.5.2.1 Test RB=1RB#0

Date: 2.MAR.2018 14:26:03

SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch
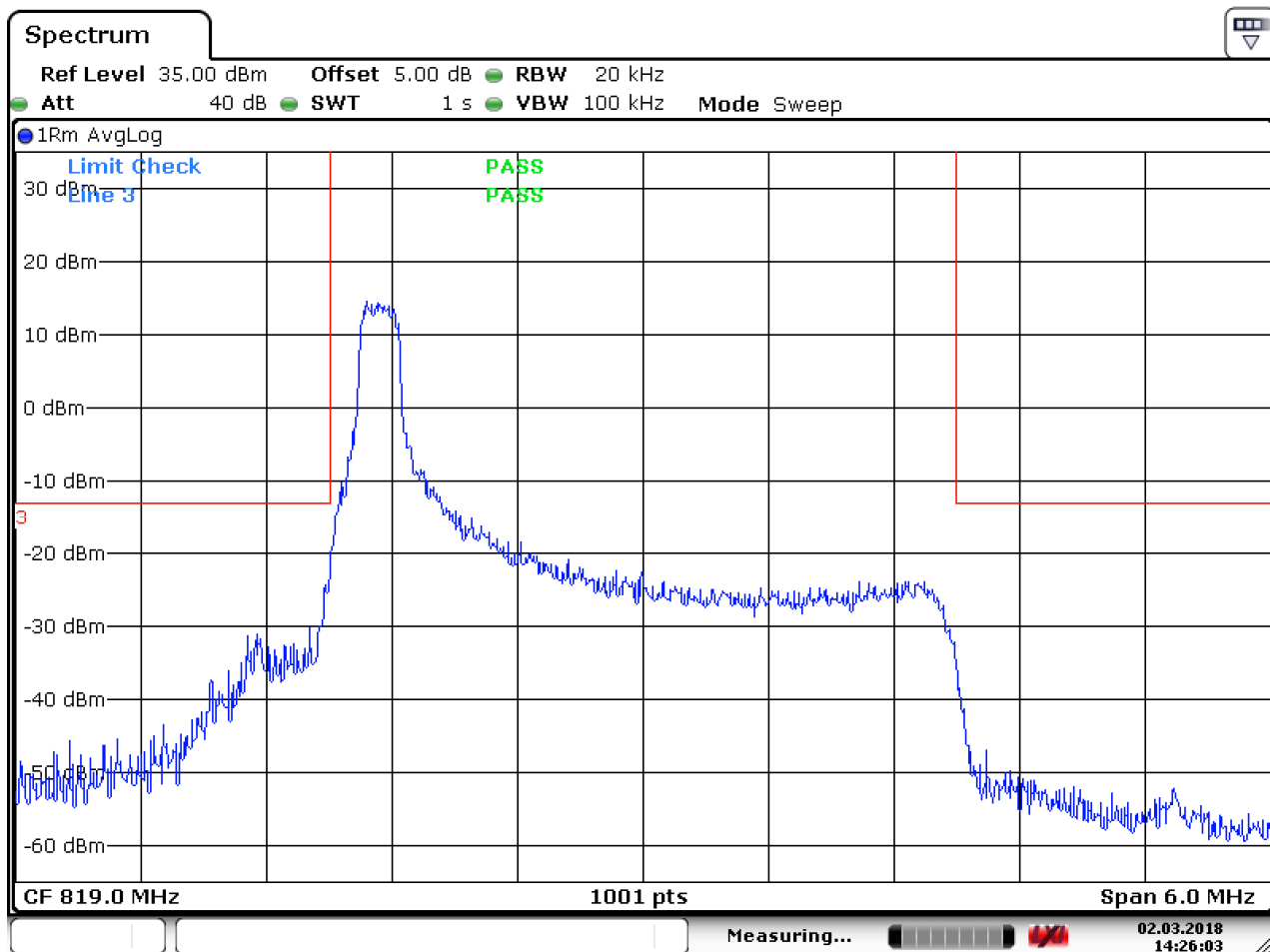
6.1.1.5.2.2 Test RB=1RB#14
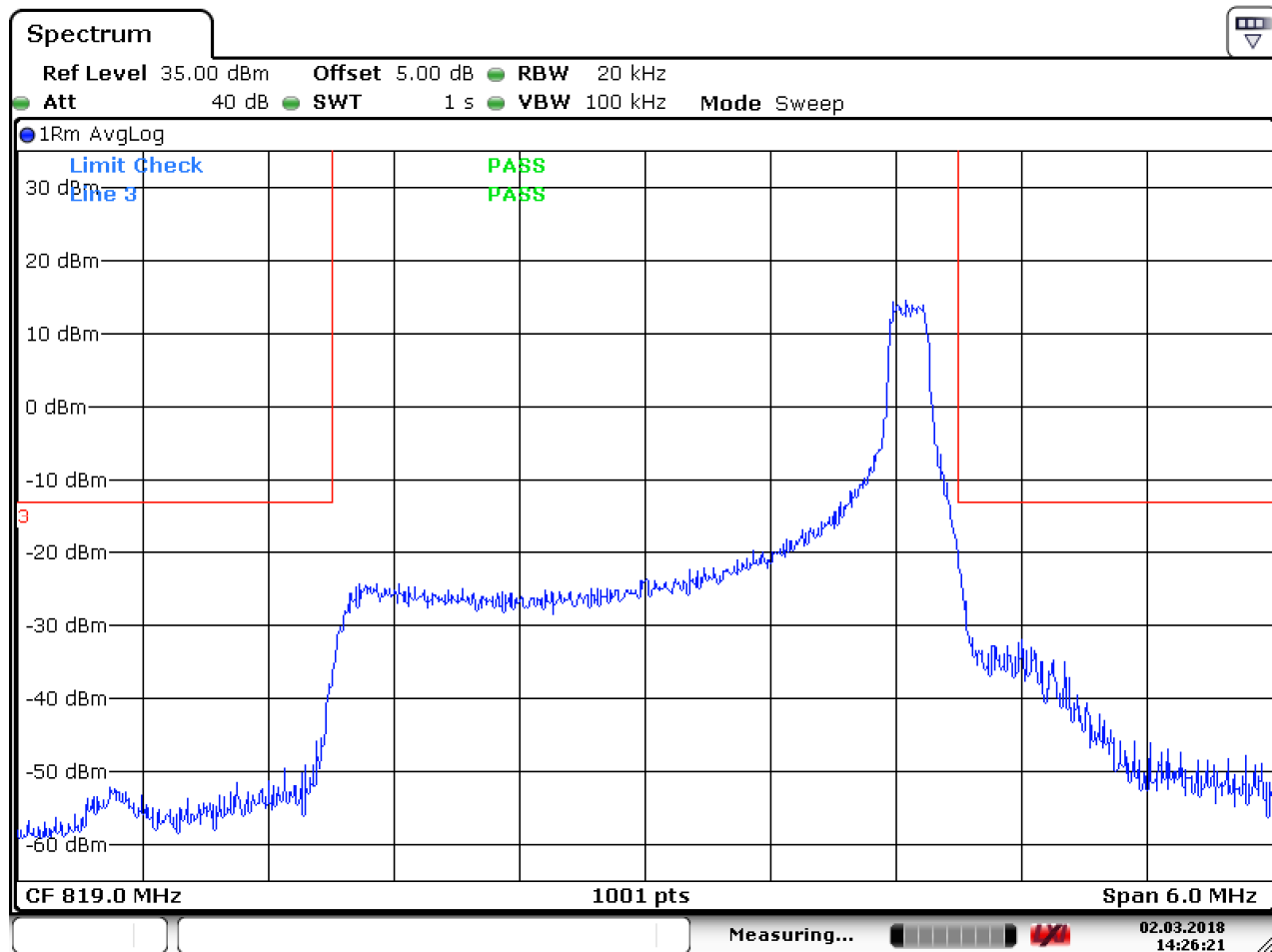
Date: 2.MAR.2018 14:26:21

6.1.1.5.2.3 Test RB=15RB

Date: 2.MAR.2018 14:25:44

SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch
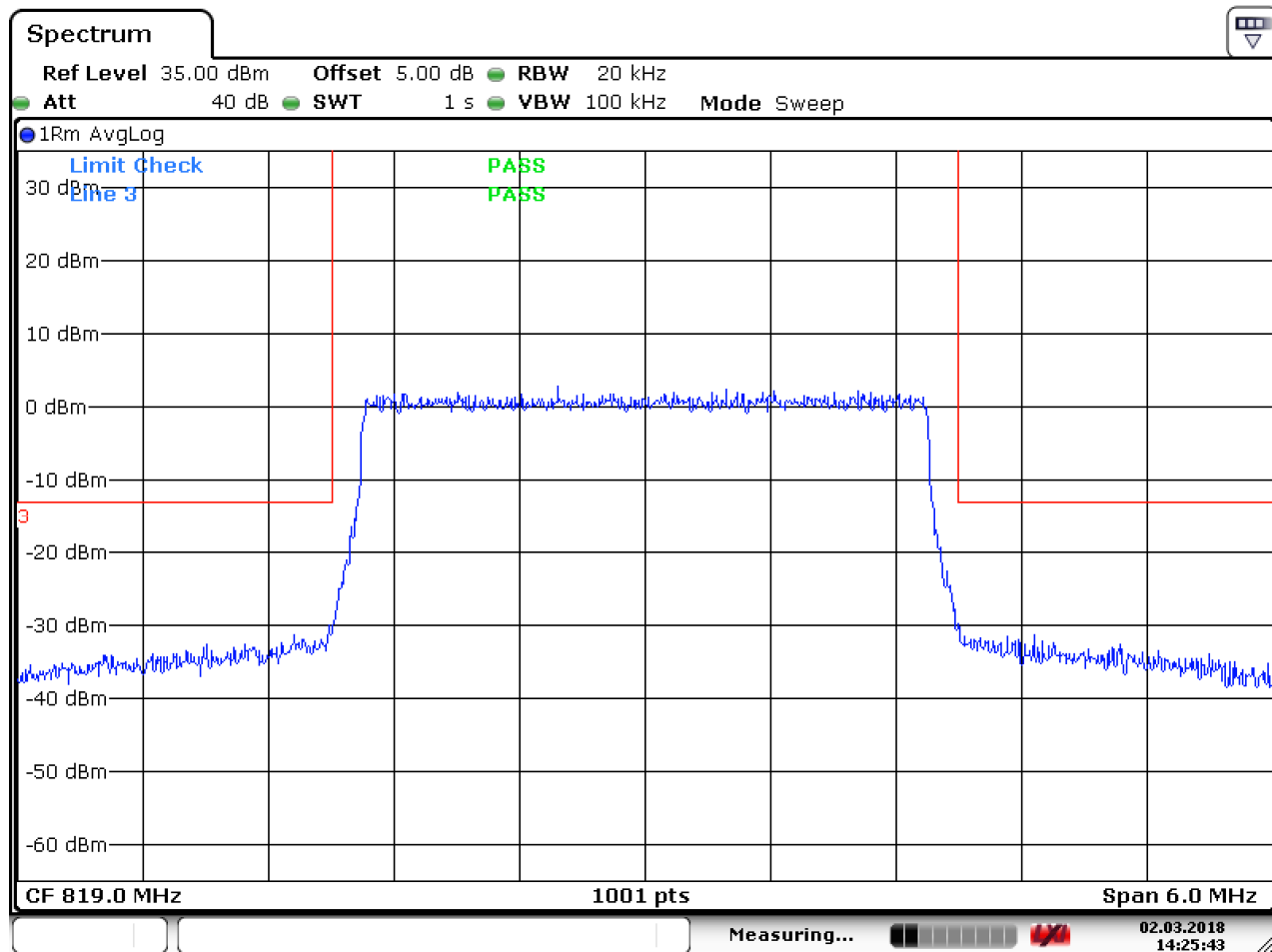
6.1.1.5.3   Test Channel = HCH

6.1.1.5.3.1 Test RB=1RB#0

Date: 2.MAR.2018 14:29:53

6.1.1.5.3.2 Test RB=1RB#14

Date: 2.MAR.2018 14:30:08

SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch
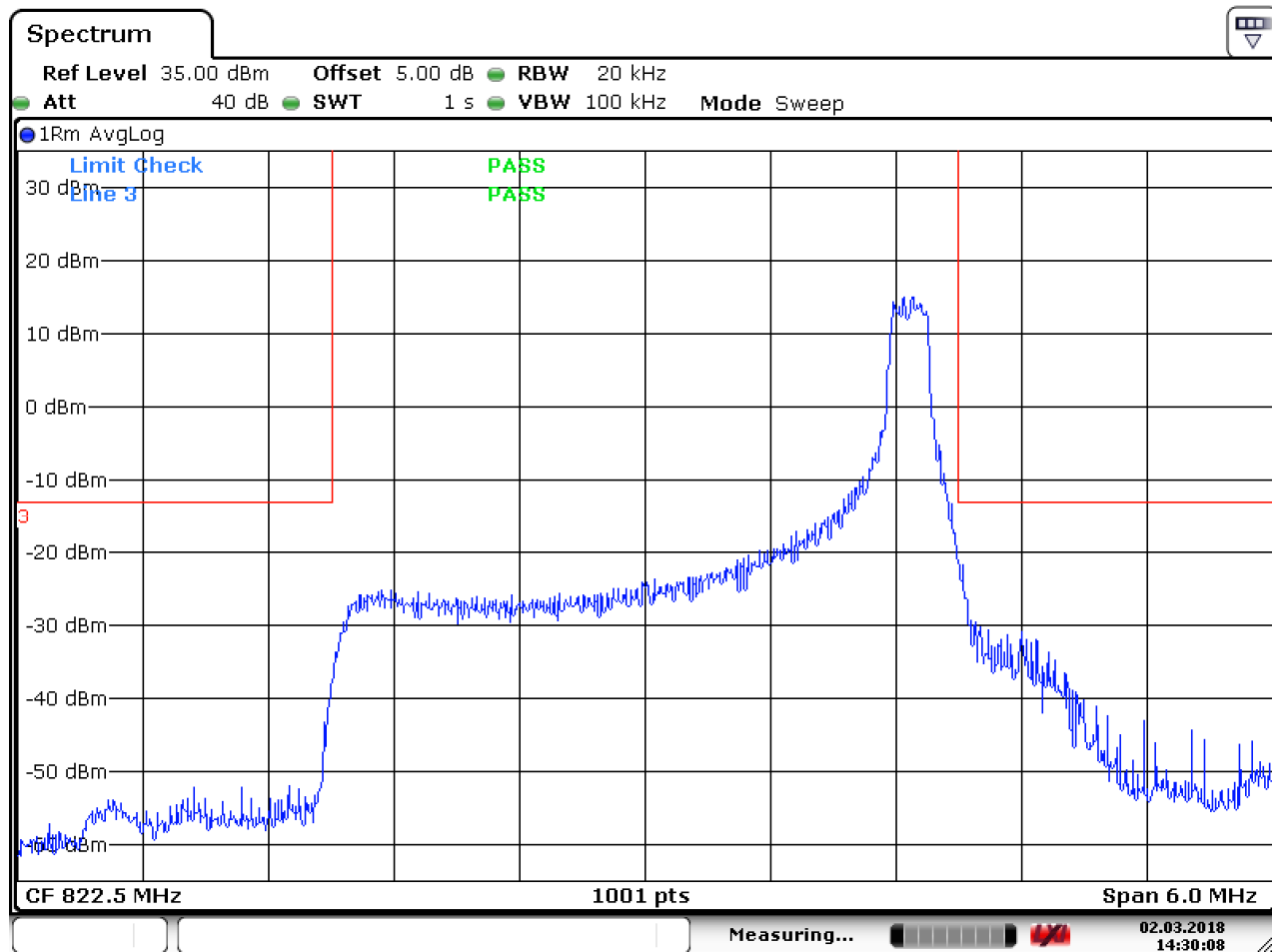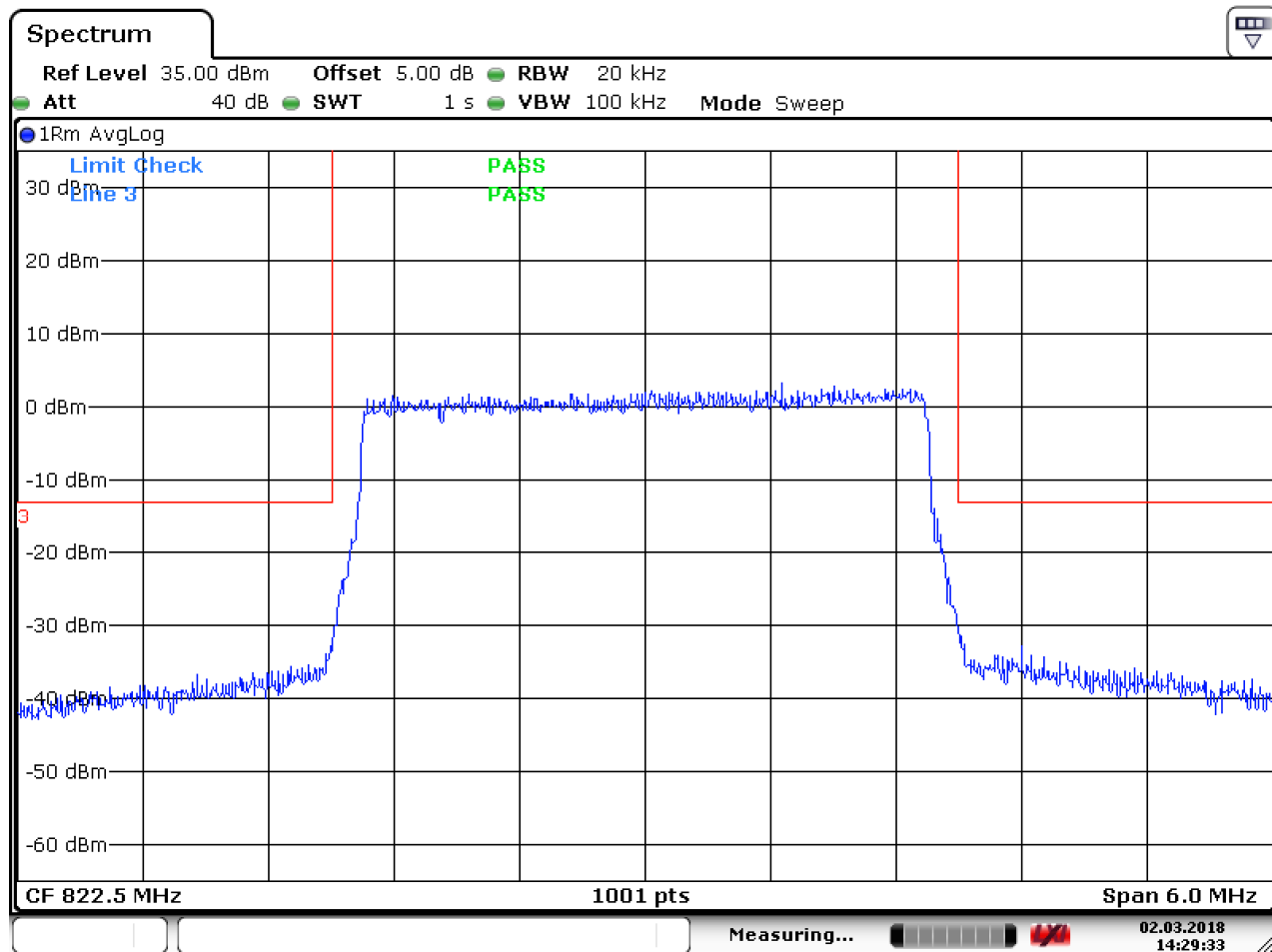
6.1.1.5.3.3 Test RB=15RB

Date: 2.MAR.2018 14:29:33

6.1.1.6 Test Mode = LTE/TM3 3MHz

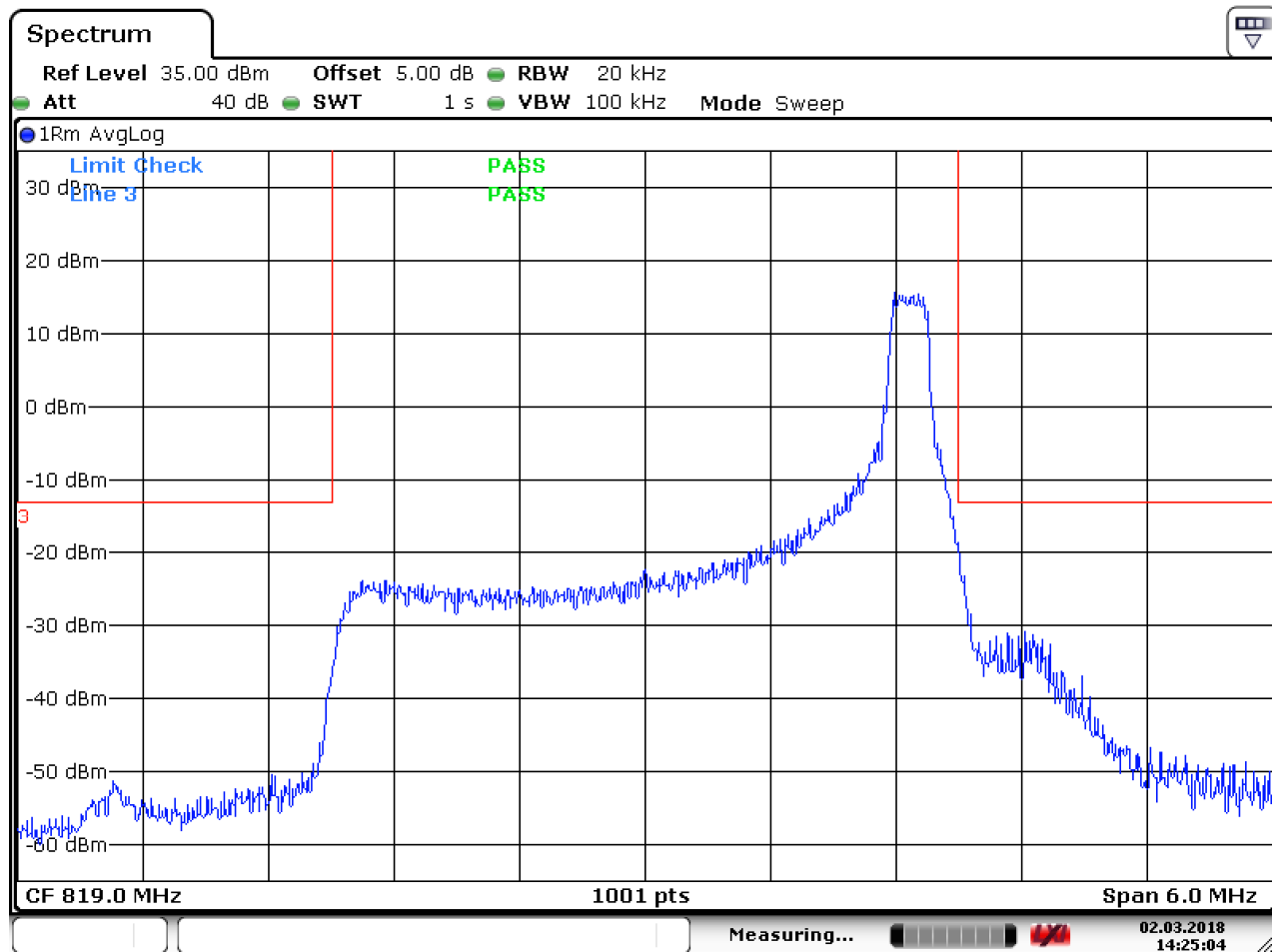#### 6.1.1.6.1 Test Channel = LCH

6.1.1.6.1.1 Test RB=1RB#0
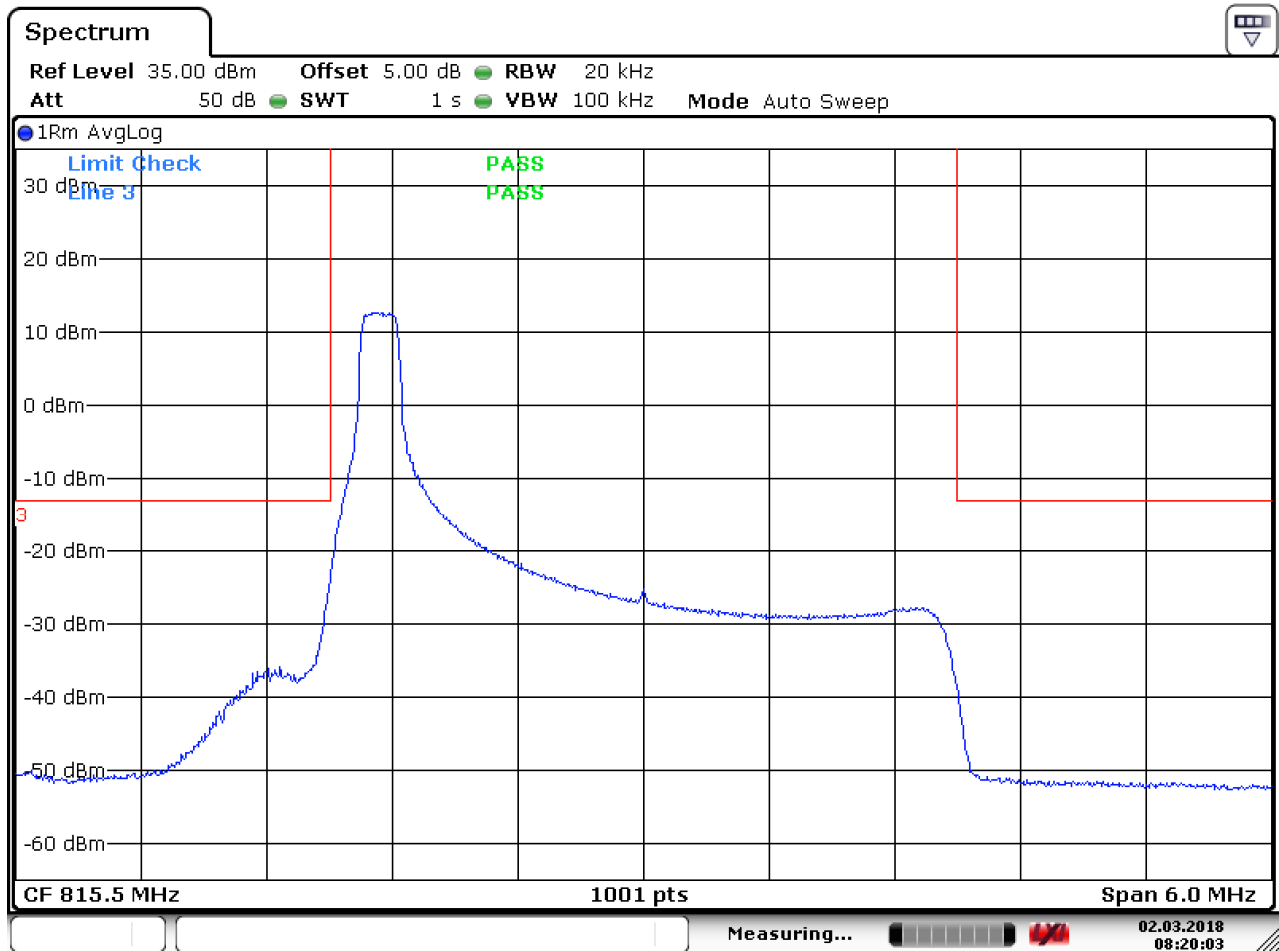
Date: 2.MAR.2018 08:20:04

6.1.1.6.1.2 Test RB=1RB#14
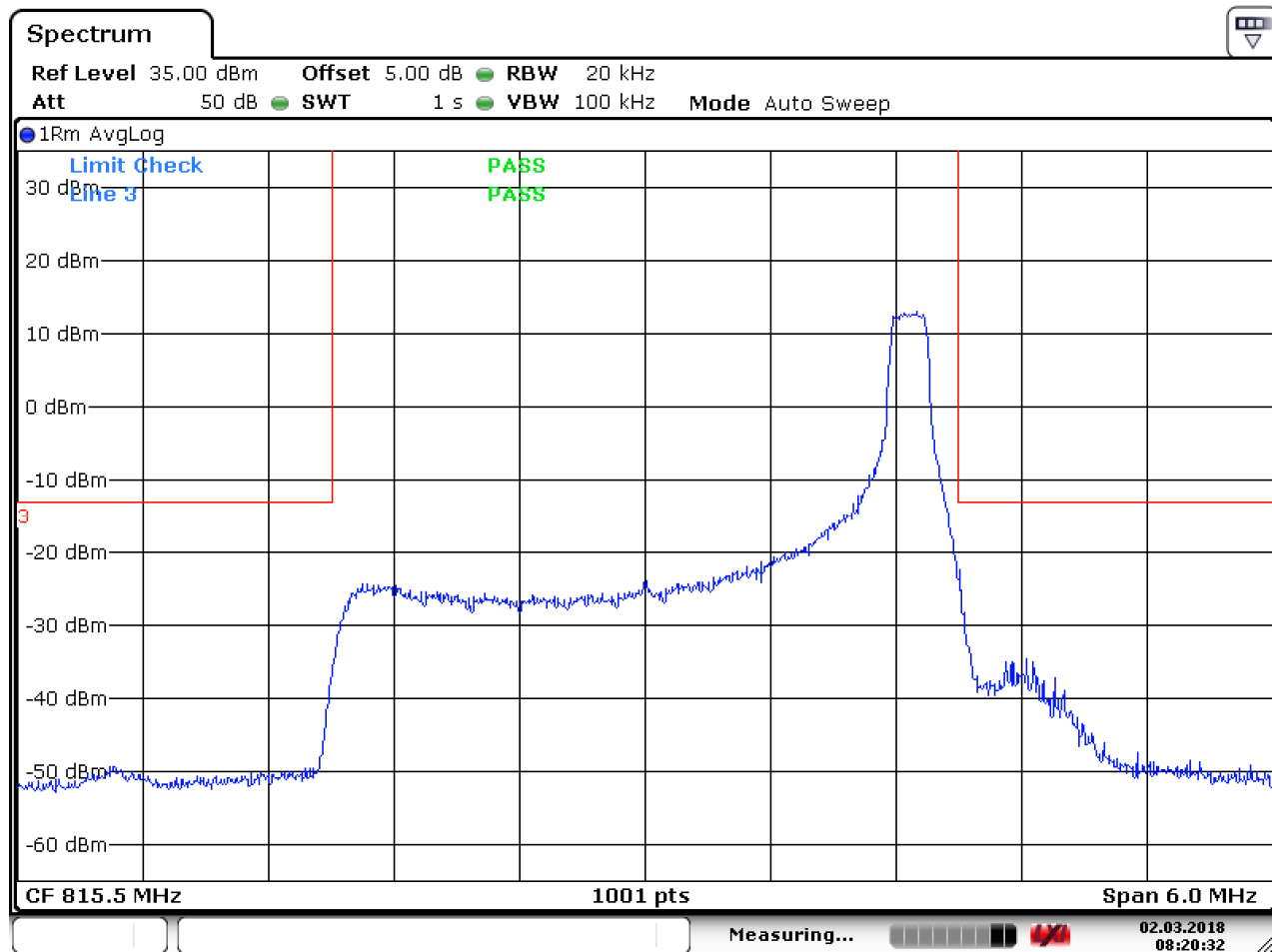
Date: 2.MAR.2018 08:20:33

6.1.1.6.1.3 Test RB=15RB
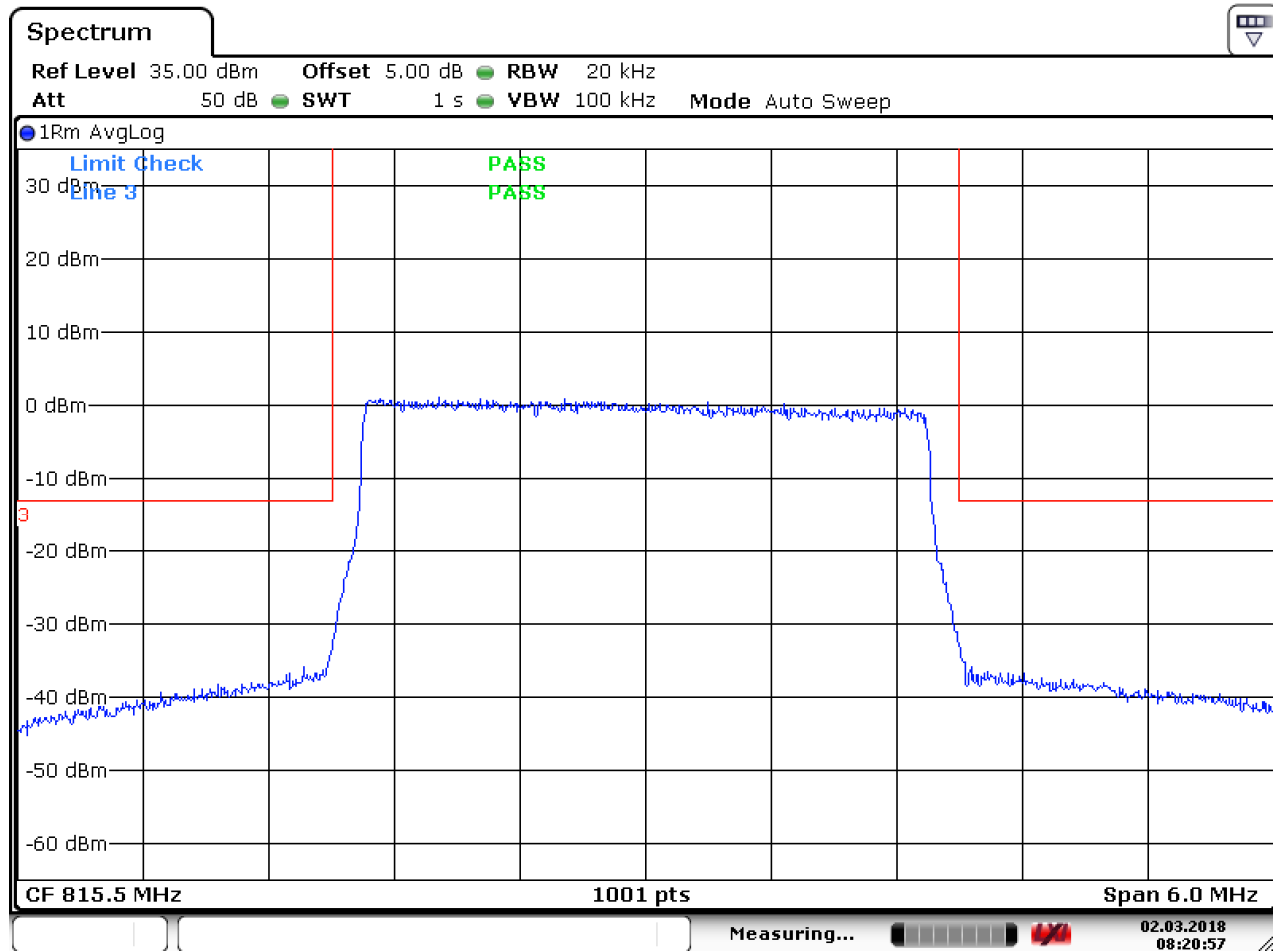
Date: 2.MAR.2018 08:20:57

6.1.1.6.2   Test Channel = MCH

6.1.1.6.2.1 Test RB=1RB#0

Date: 2.MAR.2018 08:22:43

SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch
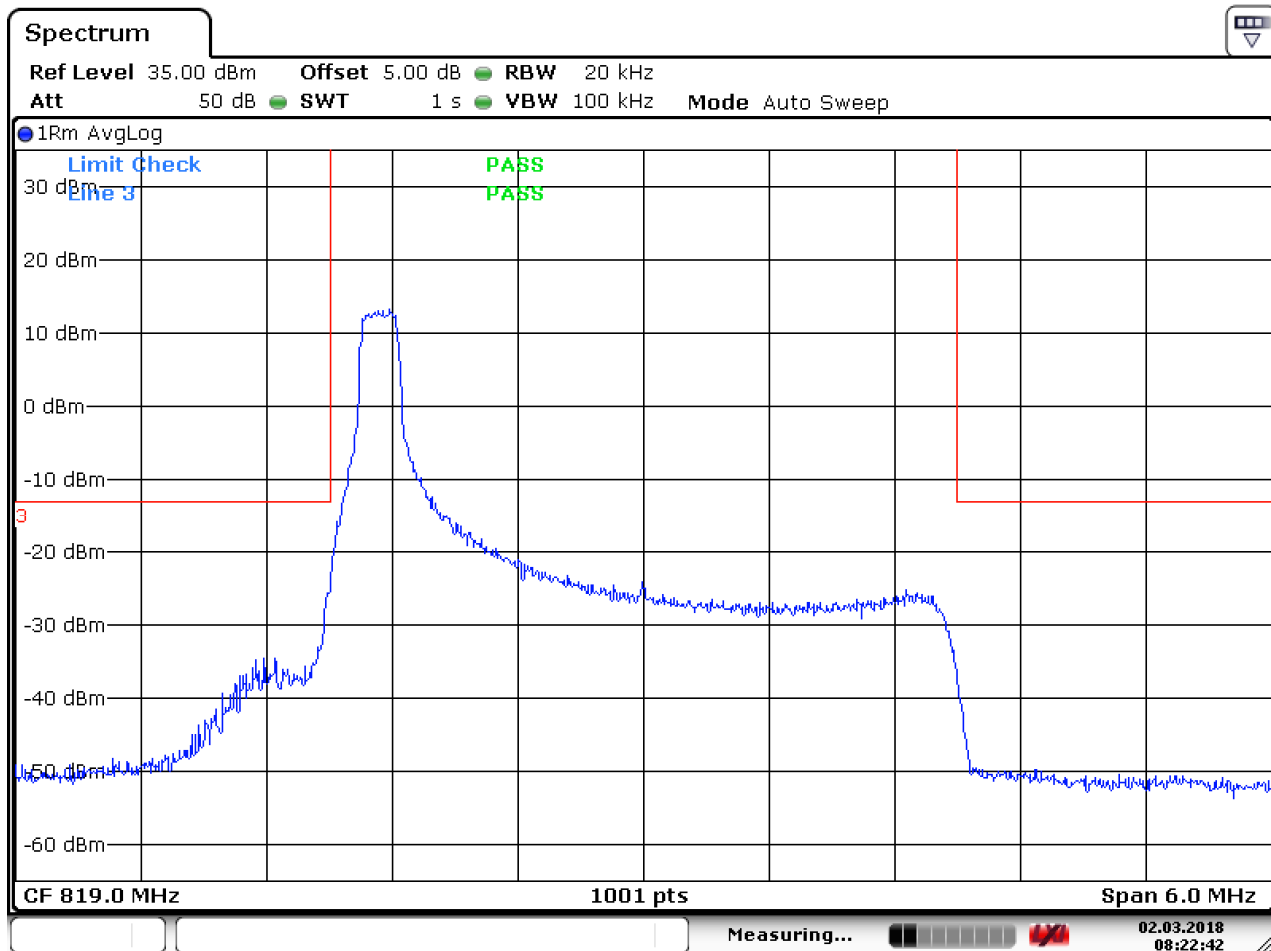
6.1.1.6.2.2 Test RB=1RB#14
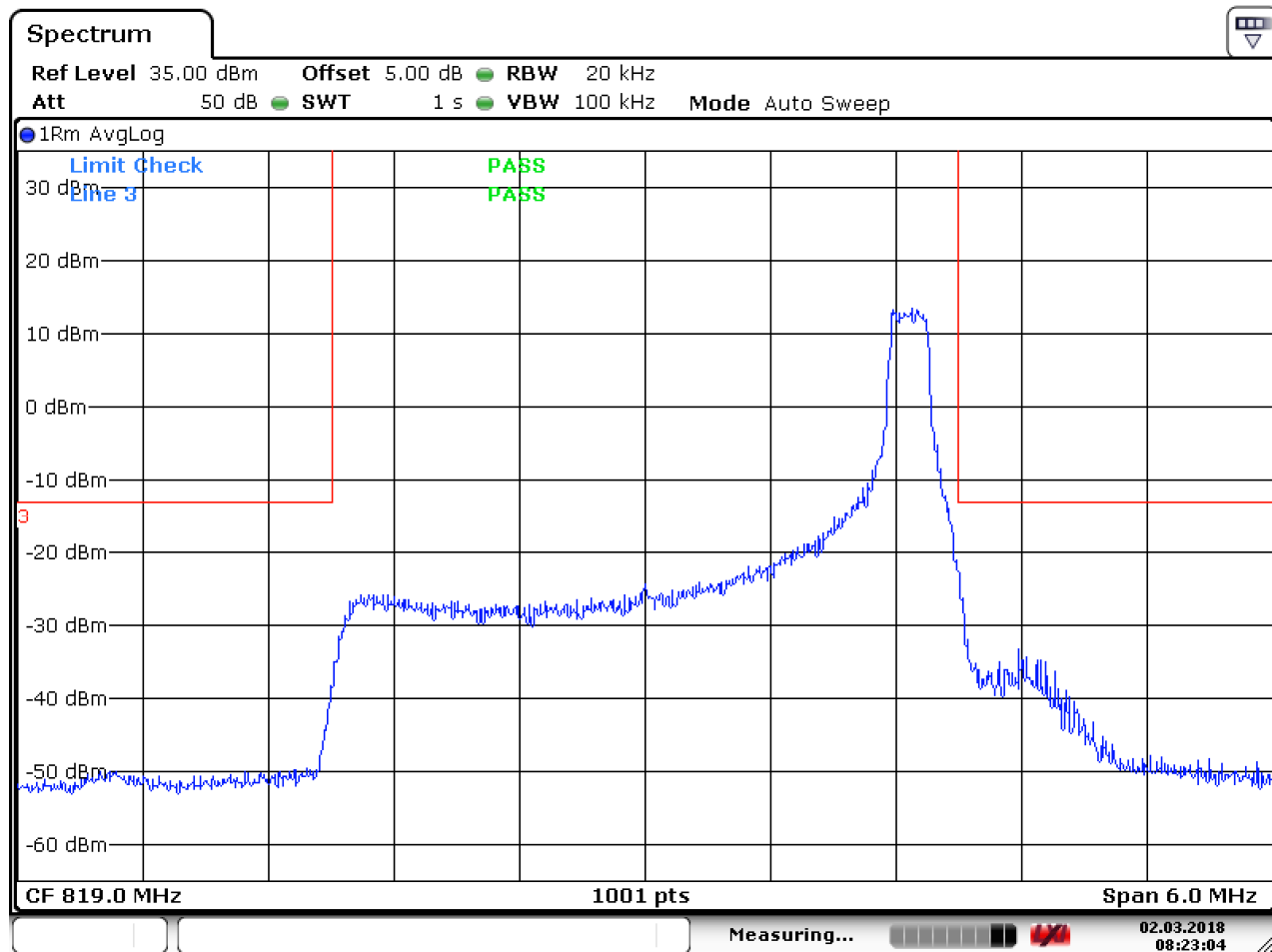
Date: 2.MAR.2018 08:23:04

6.1.1.6.2.3 Test RB=15RB
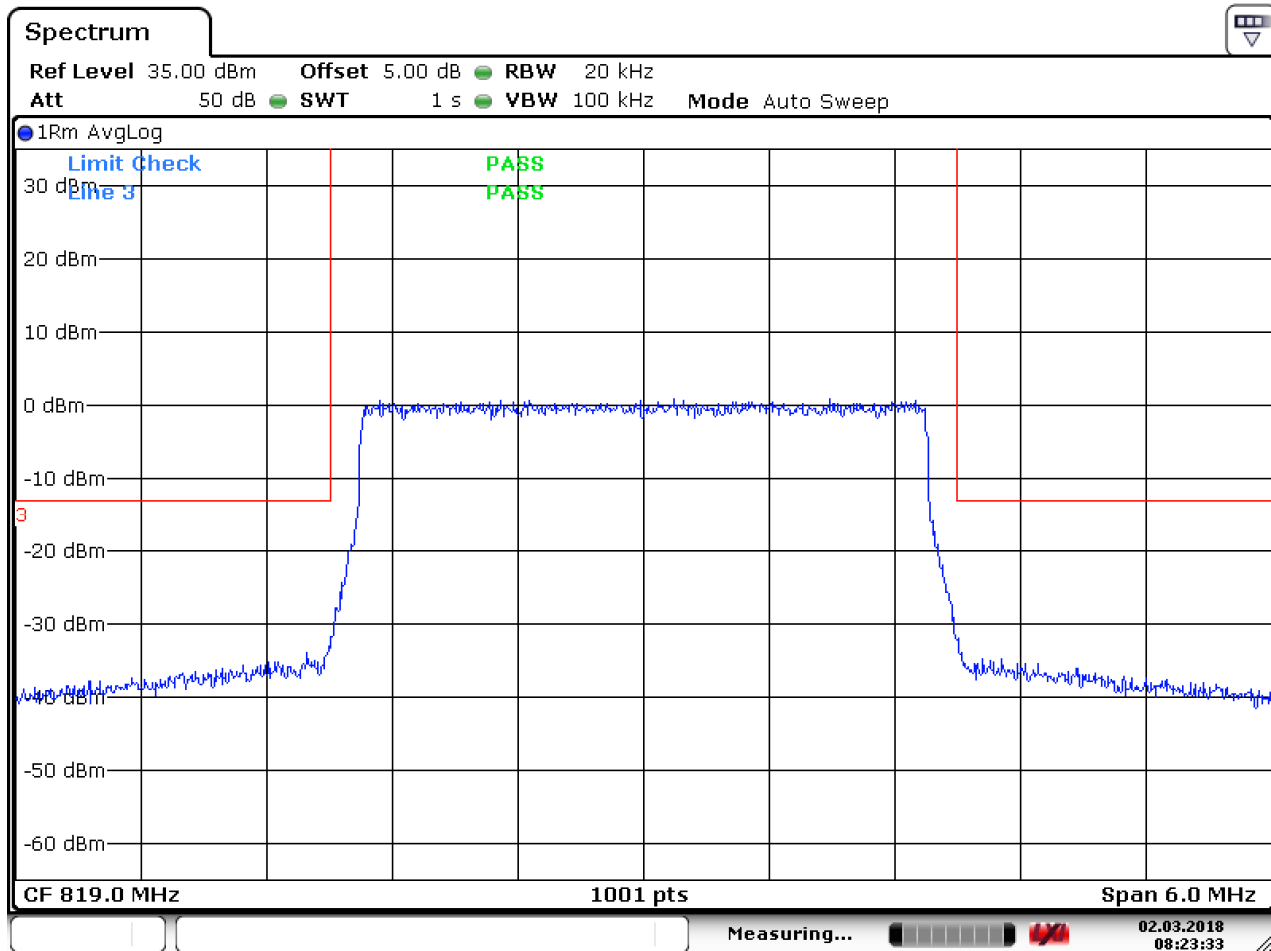
Date: 2.MAR.2018 08:23:33

6.1.1.6.3 Test Channel = HCH

6.1.1.6.3.1 Test RB=1RB#0
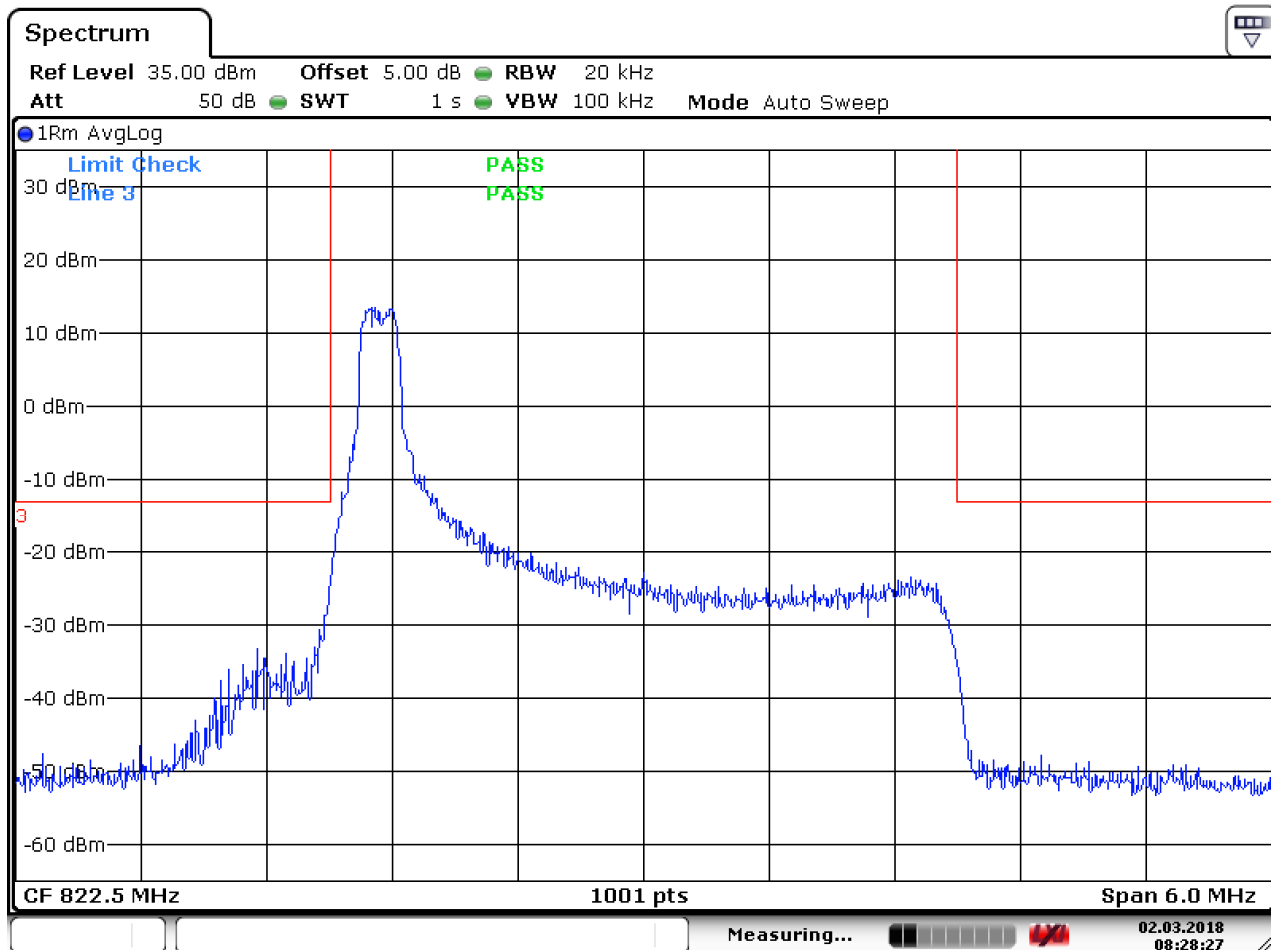
Date: 2.MAR.2018 08:28:27

6.1.1.6.3.2 Test RB=1RB#14
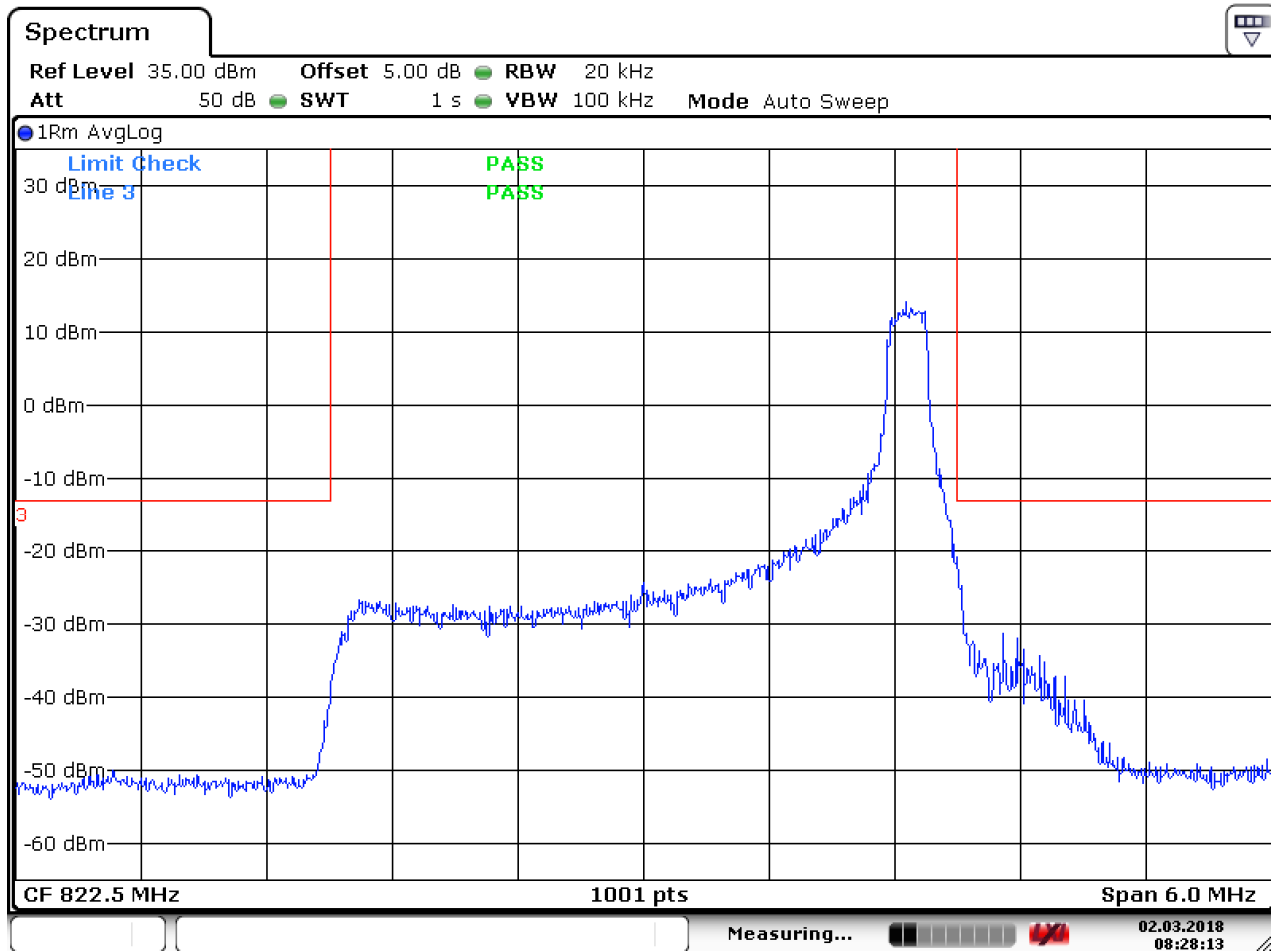
Date: 2.MAR.2018 08:28:13

6.1.1.6.3.3 Test RB=15RB
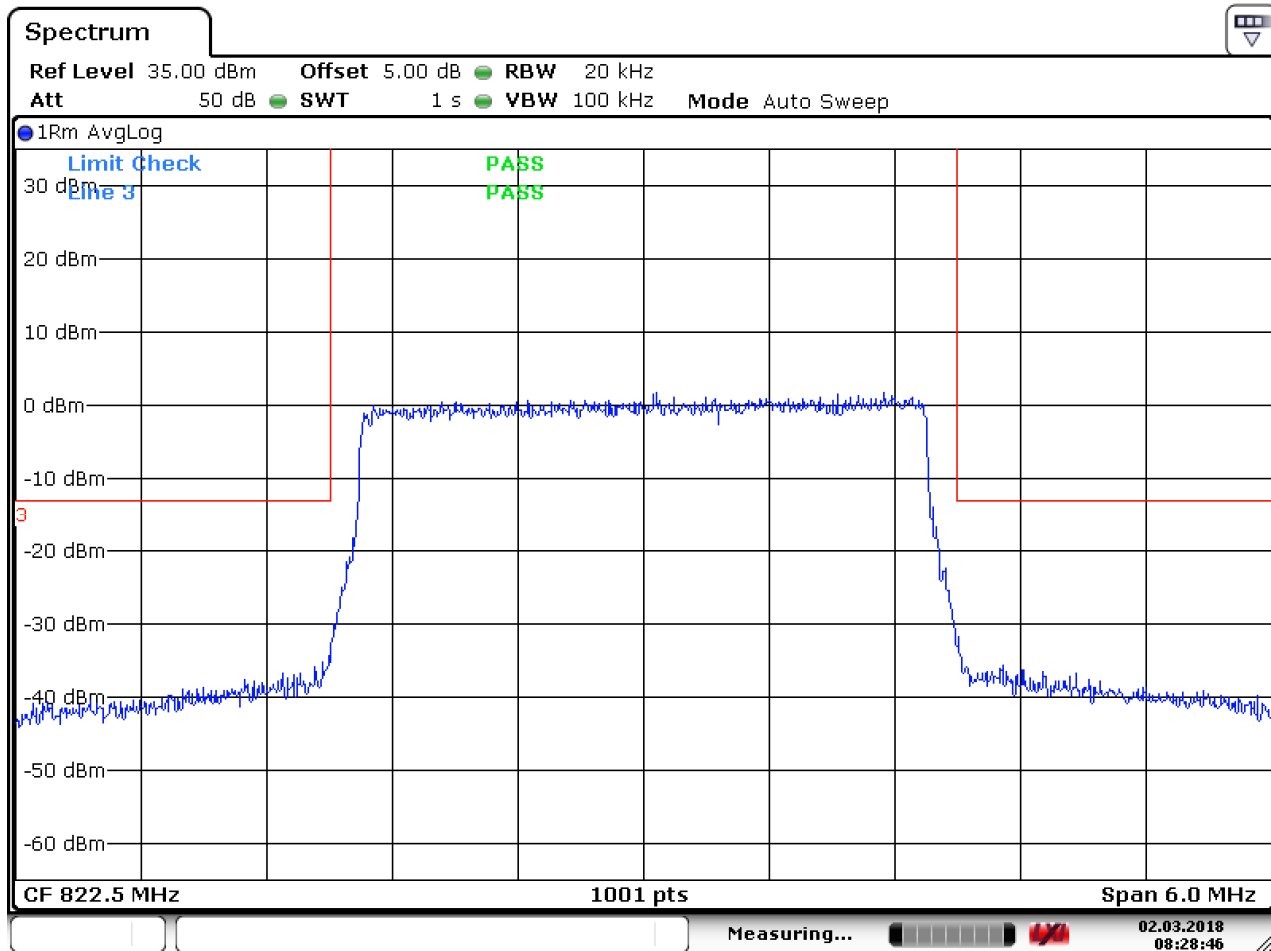
Date: 2.MAR.2018 08:28:47

6.1.1.7 Test Mode = LTE/TM1 5MHz

6.1.1.7.1 Test Channel = LCH

6.1.1.7.1.1 Test RB=1RB#0
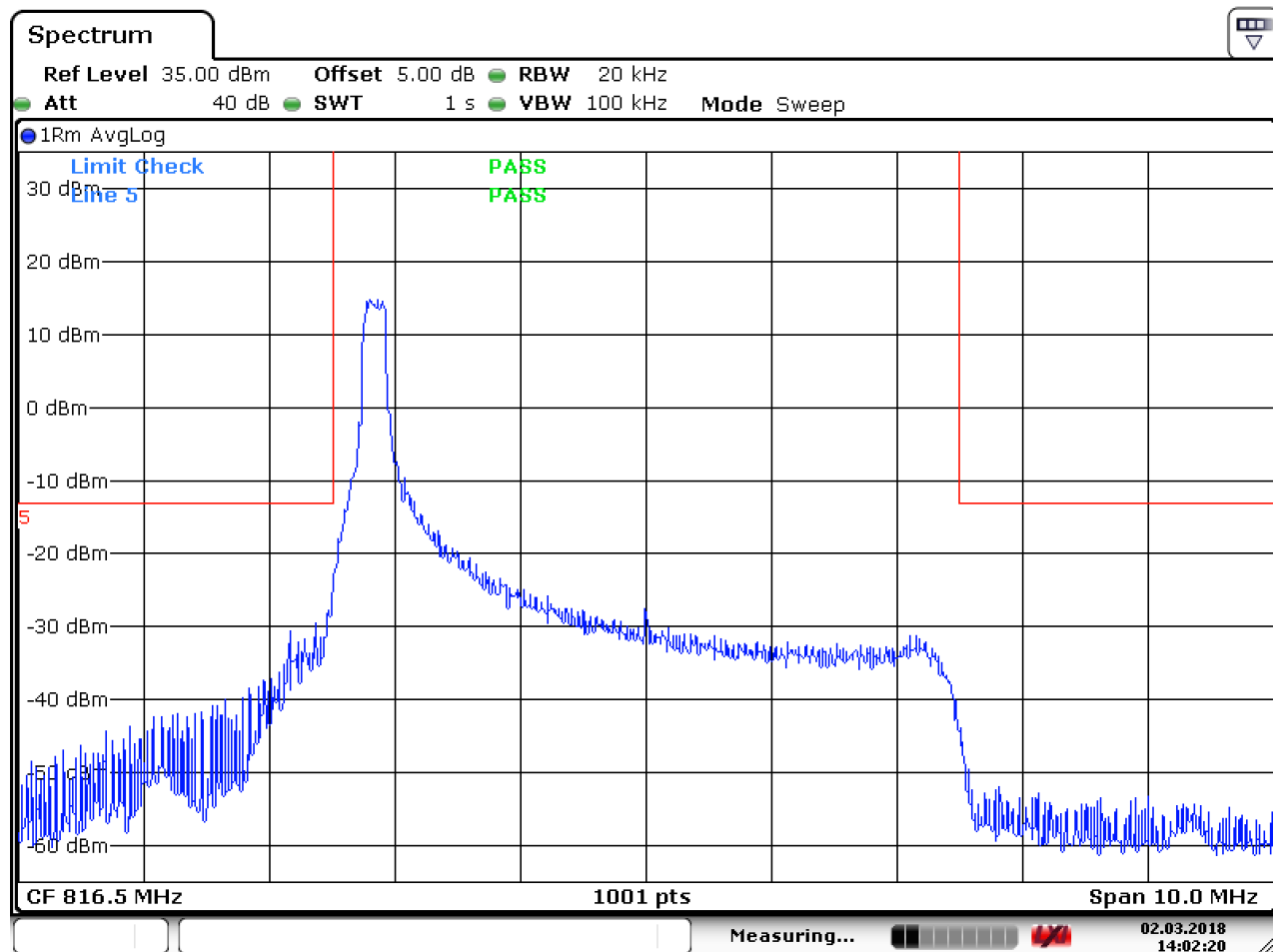
Date: 2.MAR.2018 14:02:21

6.1.1.7.1.2 Test RB=1RB#24

Date: 2.MAR.2018 14:02:41

SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch
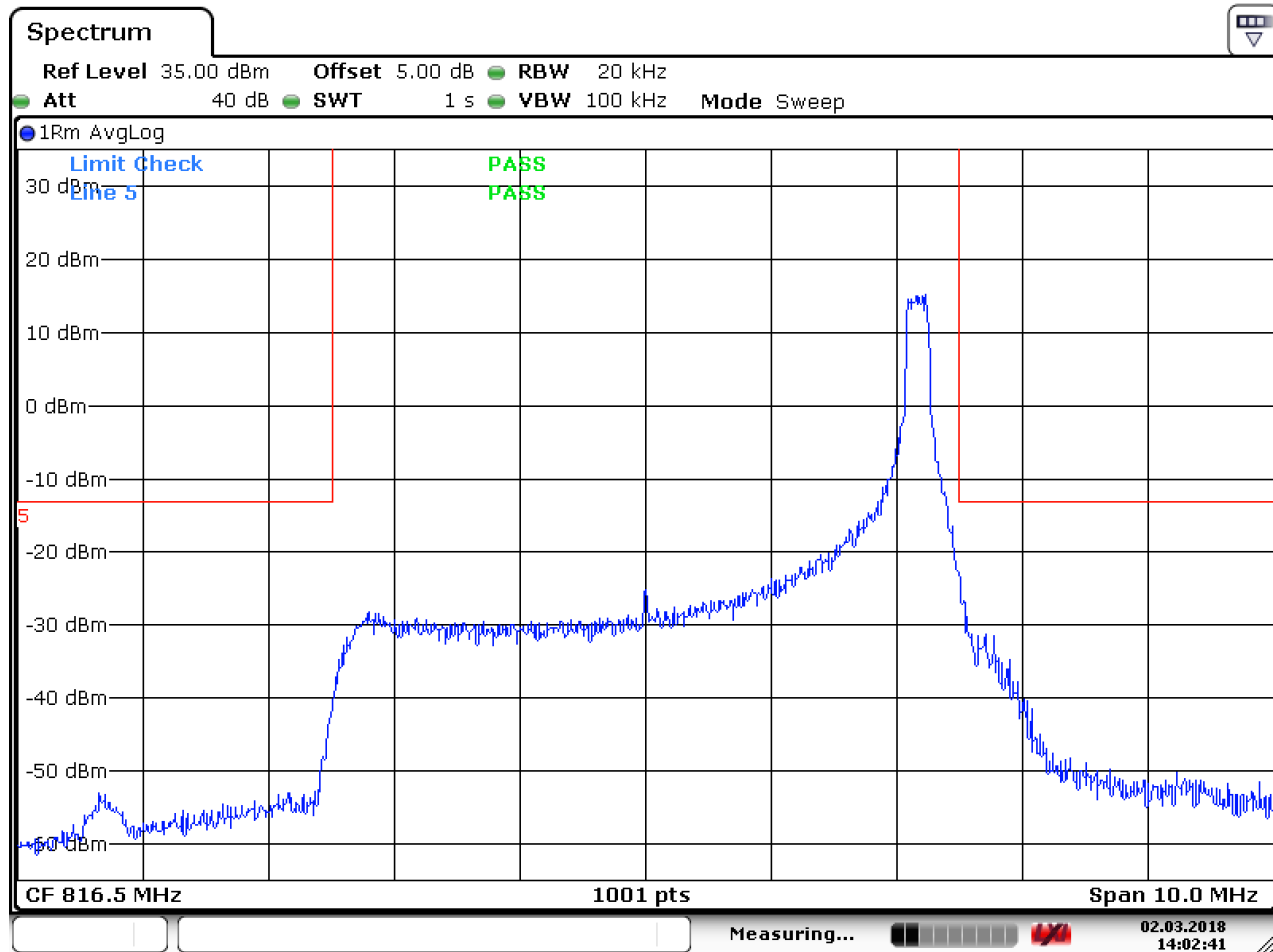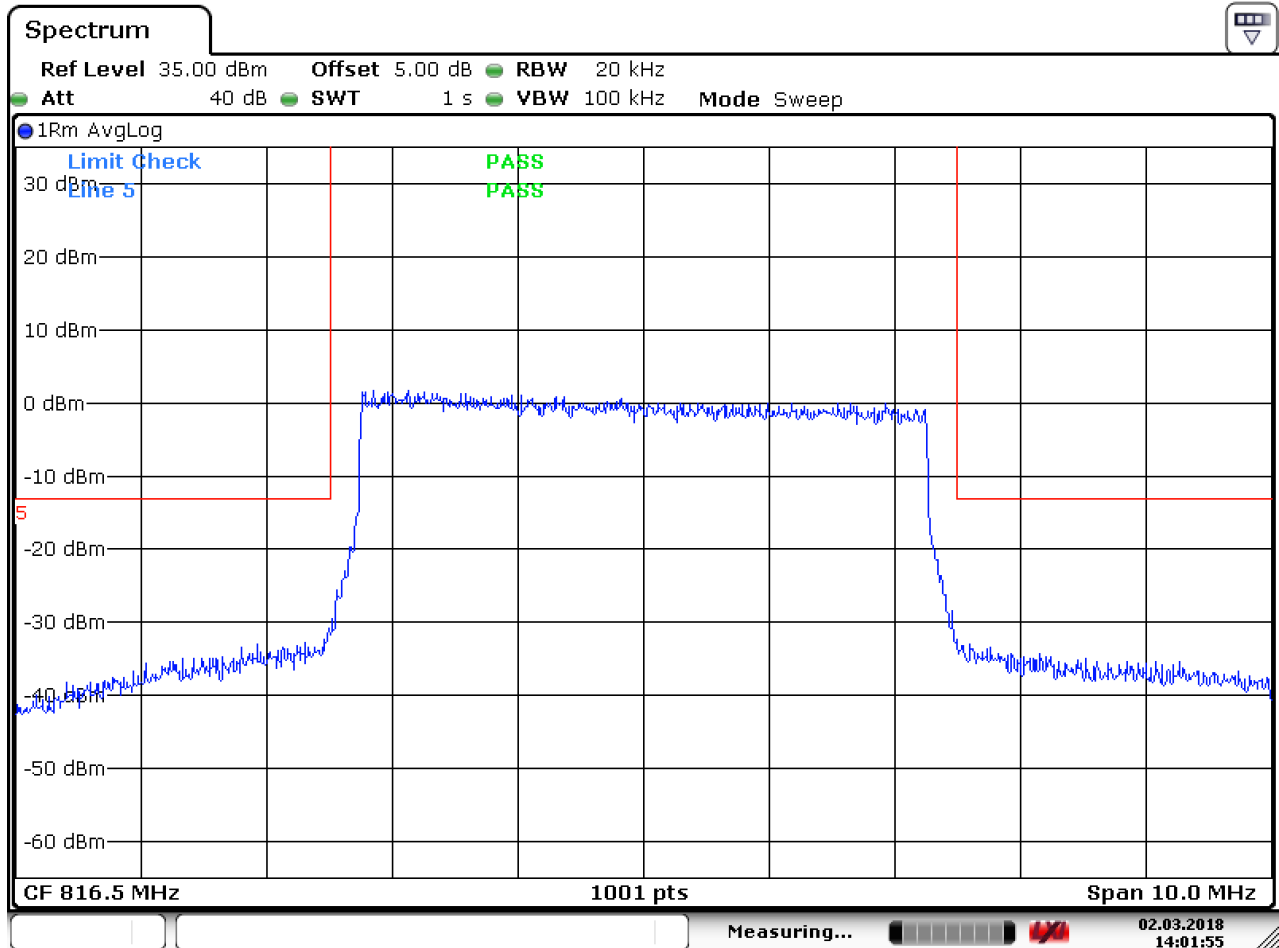
6.1.1.7.1.3 Test RB=25RB

Date: 2.MAR.2018 14:01:55

6.1.1.7.2 Test Channel = MCH

6.1.1.7.2.1 Test RB=1RB#0
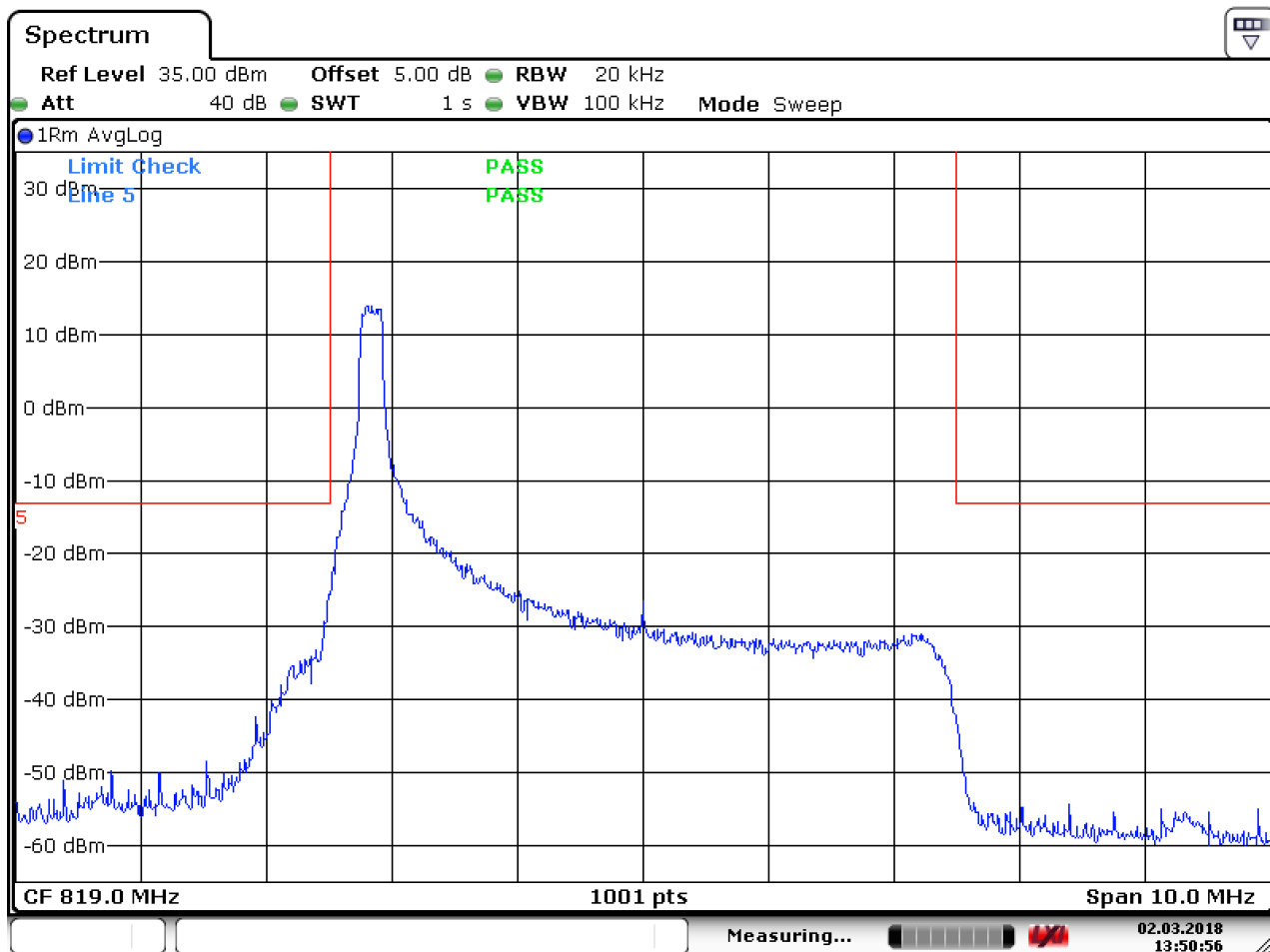
Date: 2.MAR.2018 13:50:57

6.1.1.7.2.2 Test RB=1RB#24
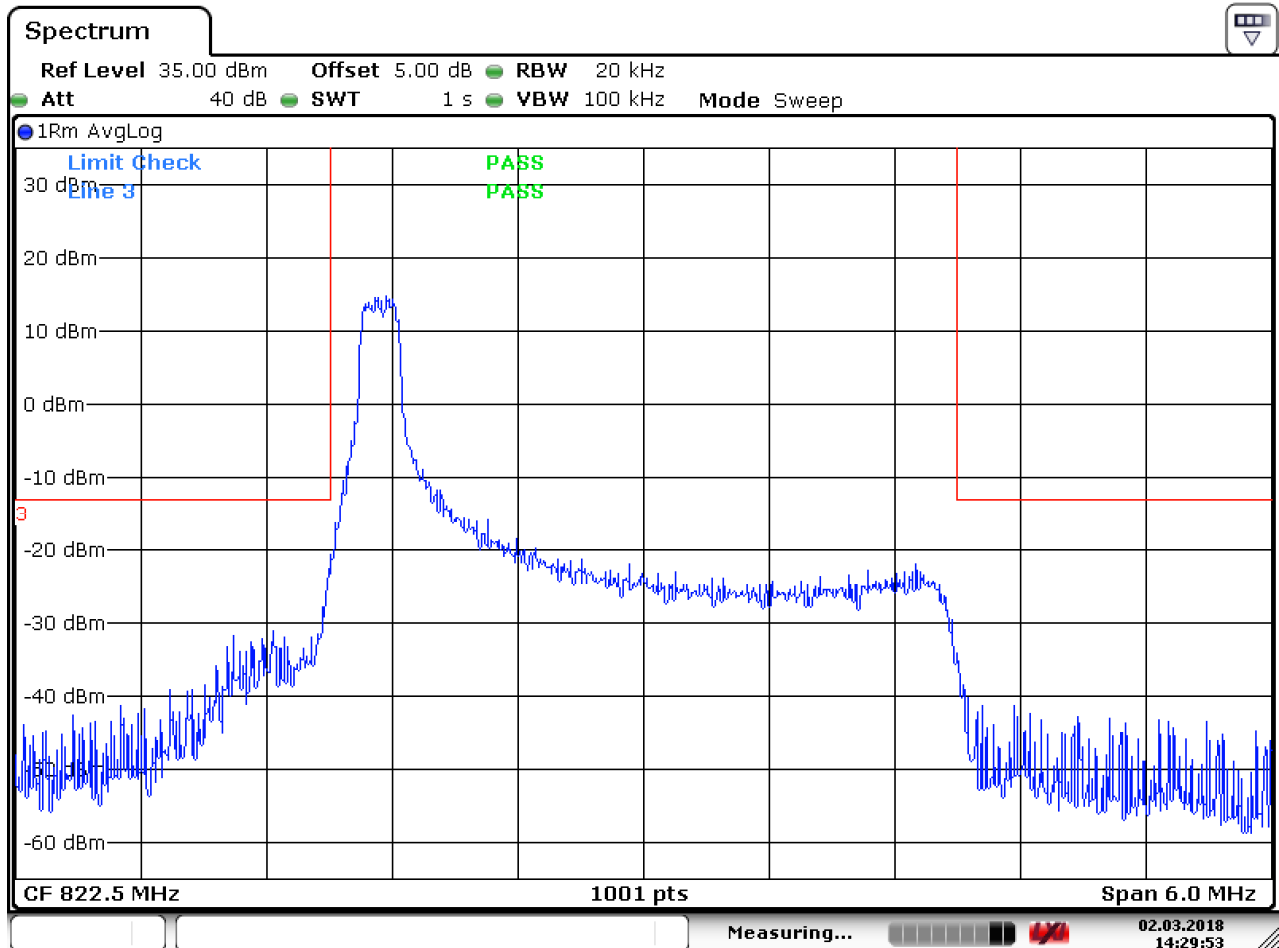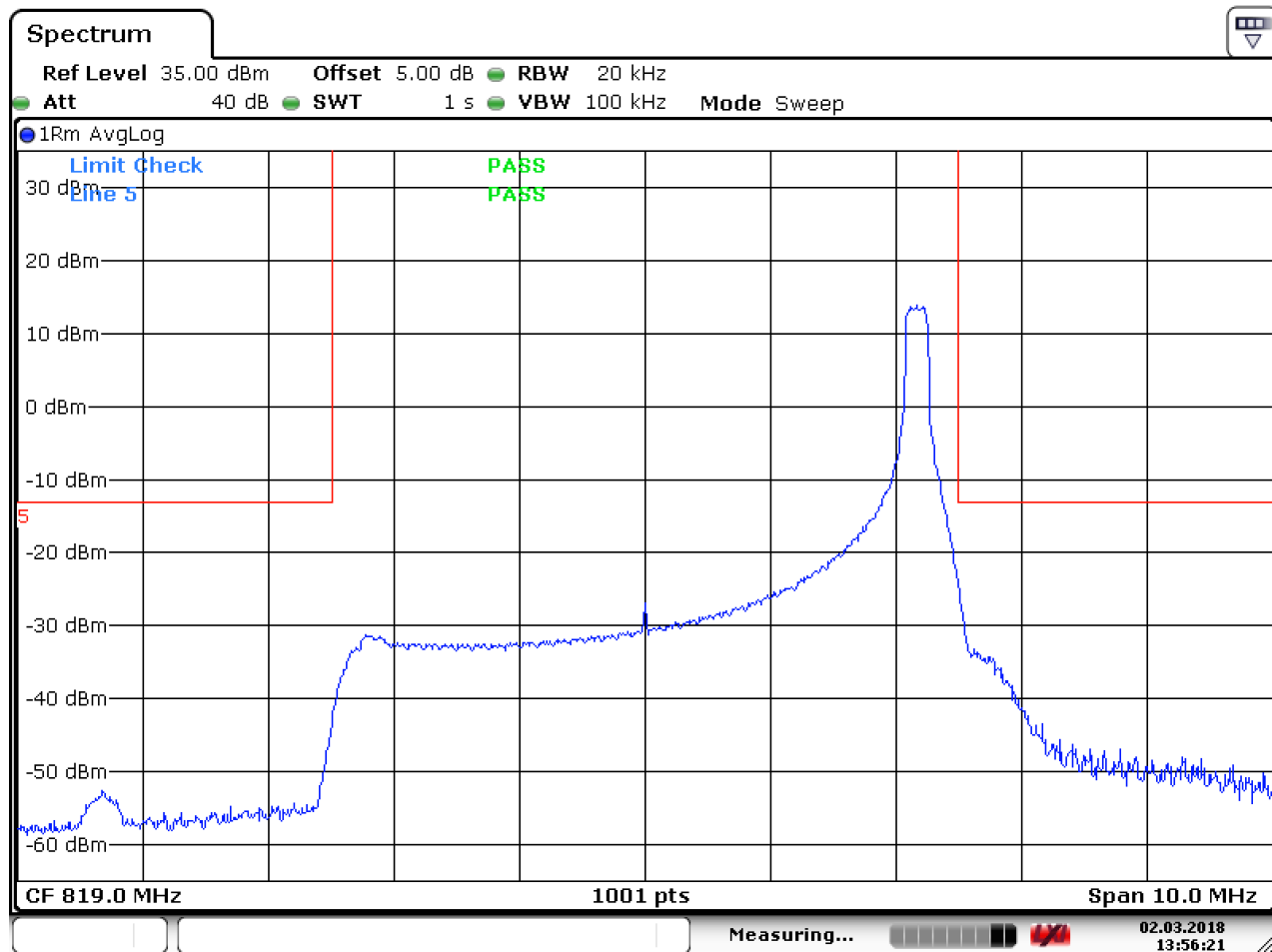

Date: 2.MAR.2018 13:56:21

6.1.1.7.2.3 Test RB=25RB

Spectrum							
Ref Level 35.00 dBm	**Offset** 5.00 dB	**RBW** 20 kHz					
Att 40 dB	**SWT** 1 s	**VBW** 100 kHz	**Mode** Sweep				

● 1Rm AvgLog

Limit Check   PASS

Line 5   PASS

30 dBm

20 dBm

10 dBm

0 dBm

-10 dBm

5

-20 dBm

-30 dBm

-40 dBm

-50 dBm

-60 dBm

CF 819.0 MHz   1001 pts   Span 10.0 MHz

Measuring...

02.03.2018 13:51:33
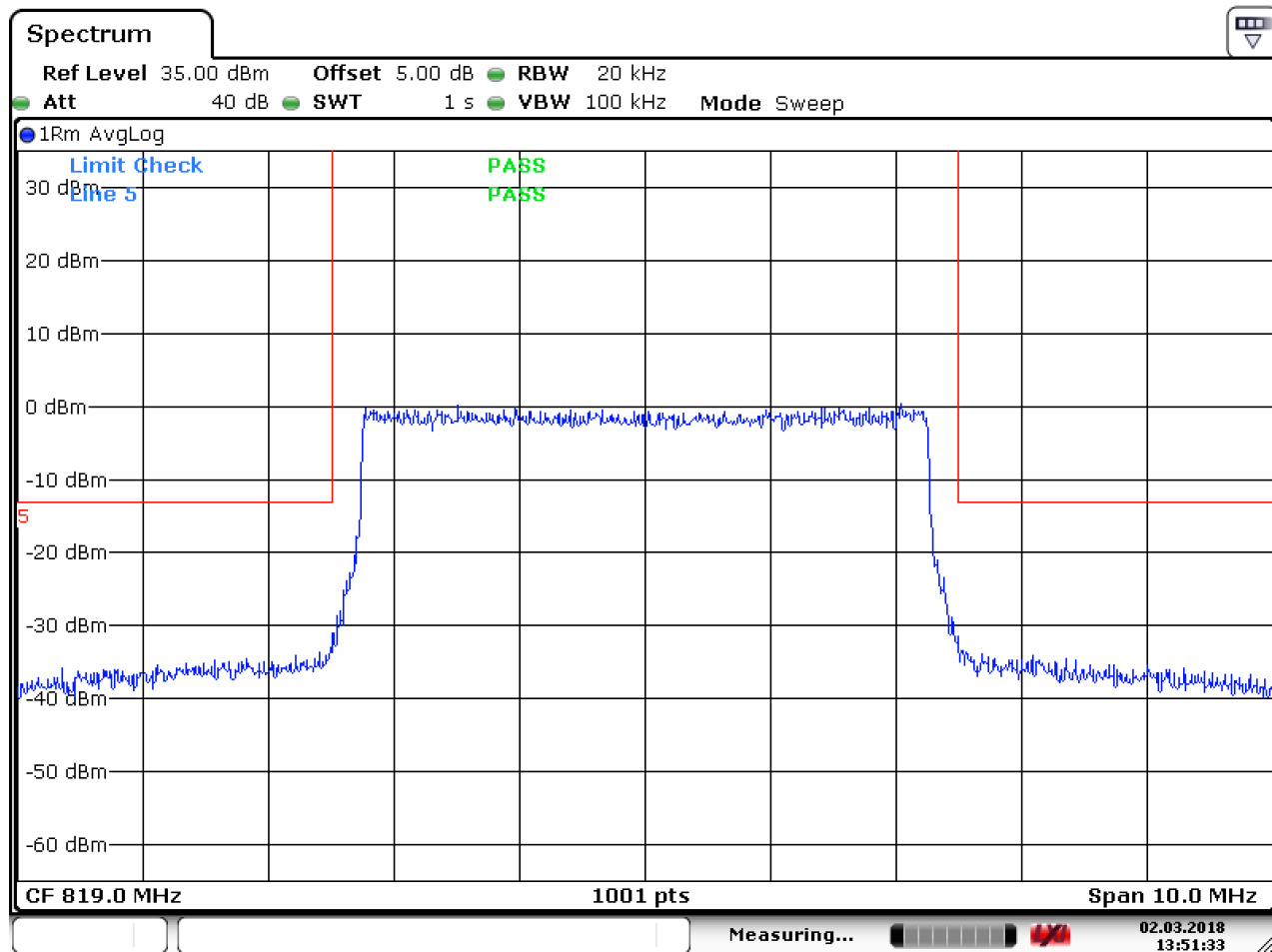
Date: 2.MAR.2018 13:51:34

6.1.1.7.3 Test Channel = HCH

6.1.1.7.3.1 Test RB=1RB#0
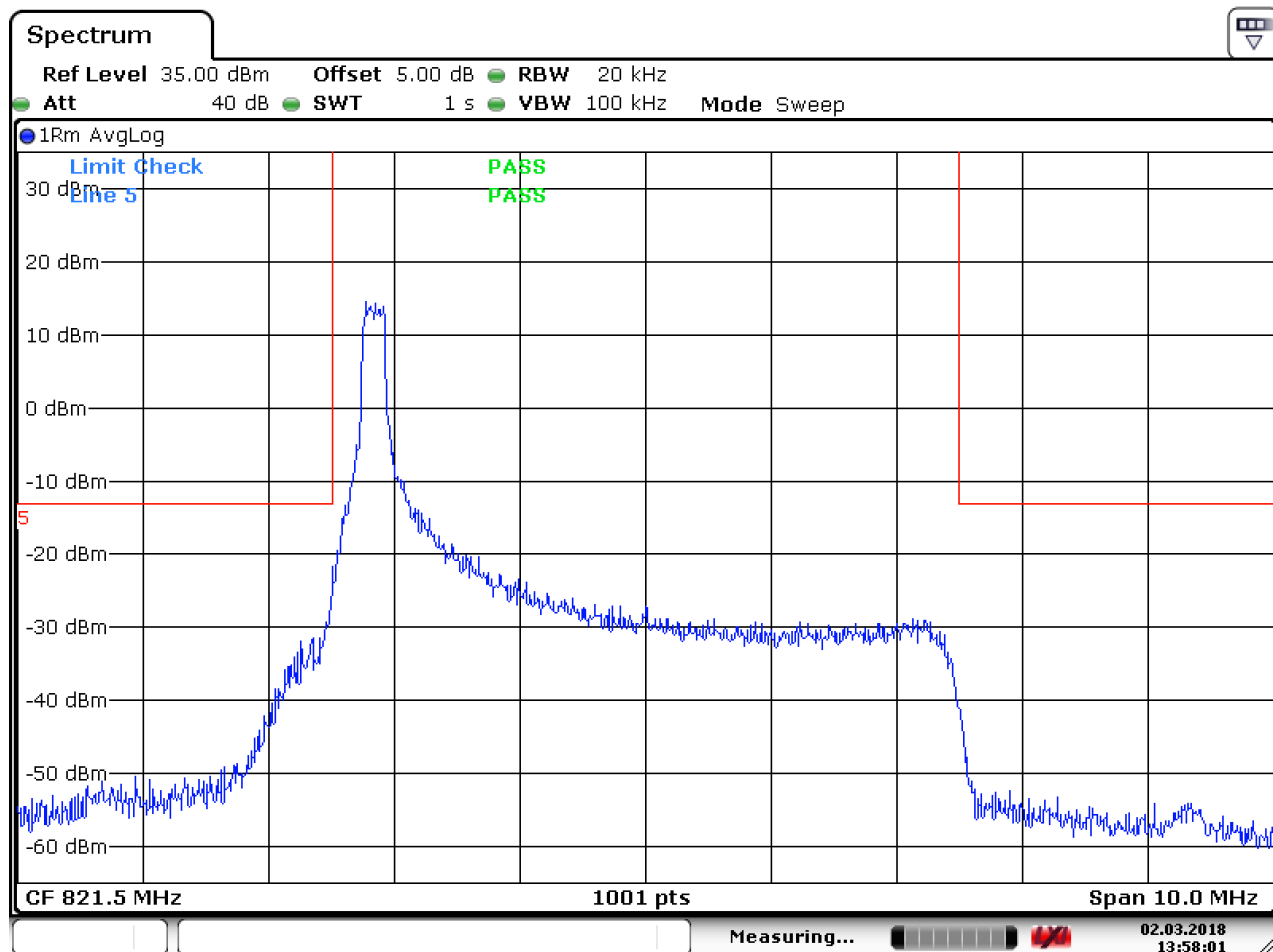
Date: 2.MAR.2018 13:58:02

6.1.1.7.3.2 Test RB=1RB#24

Date: 2.MAR.2018 13:58:24

SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch
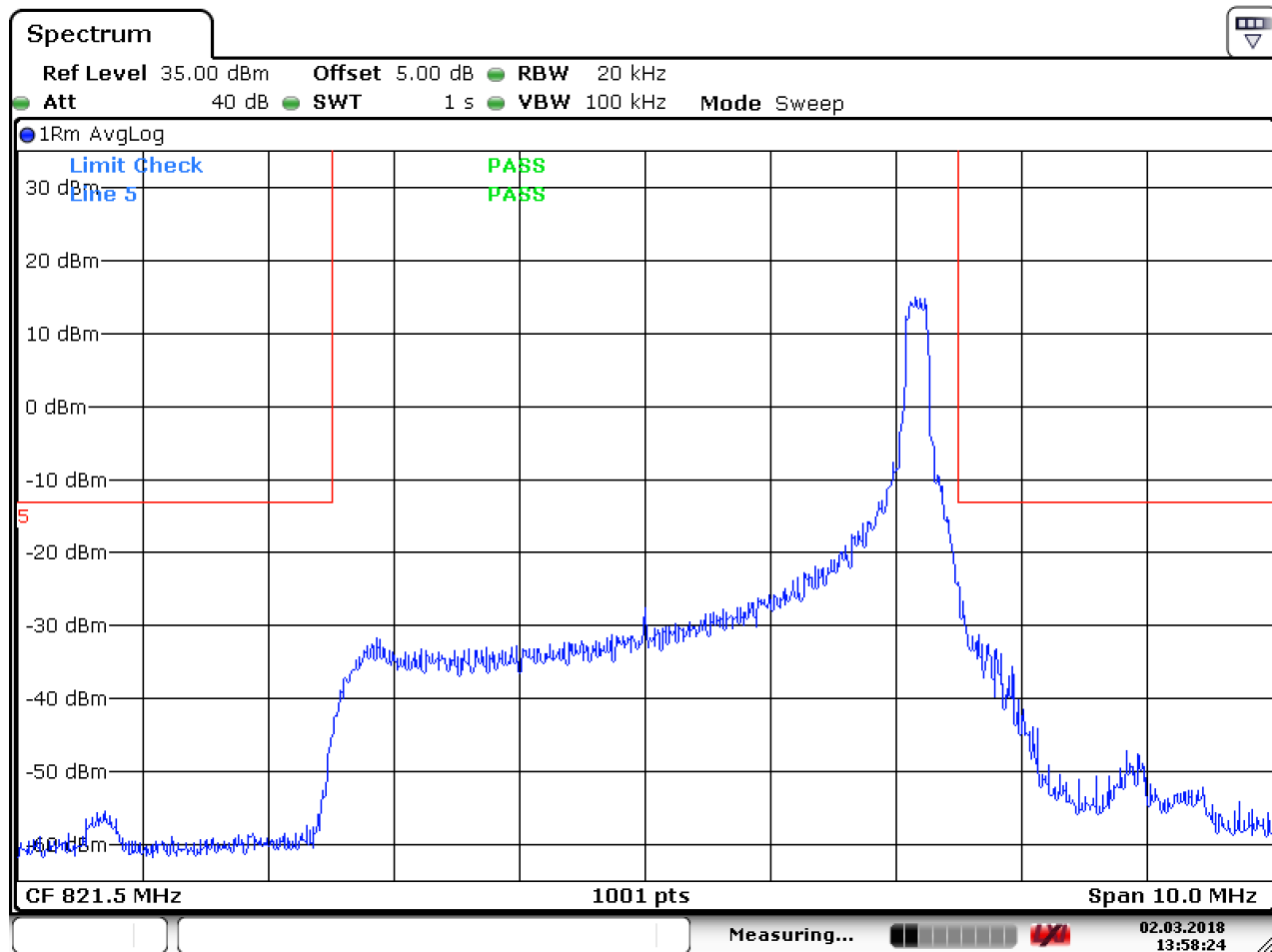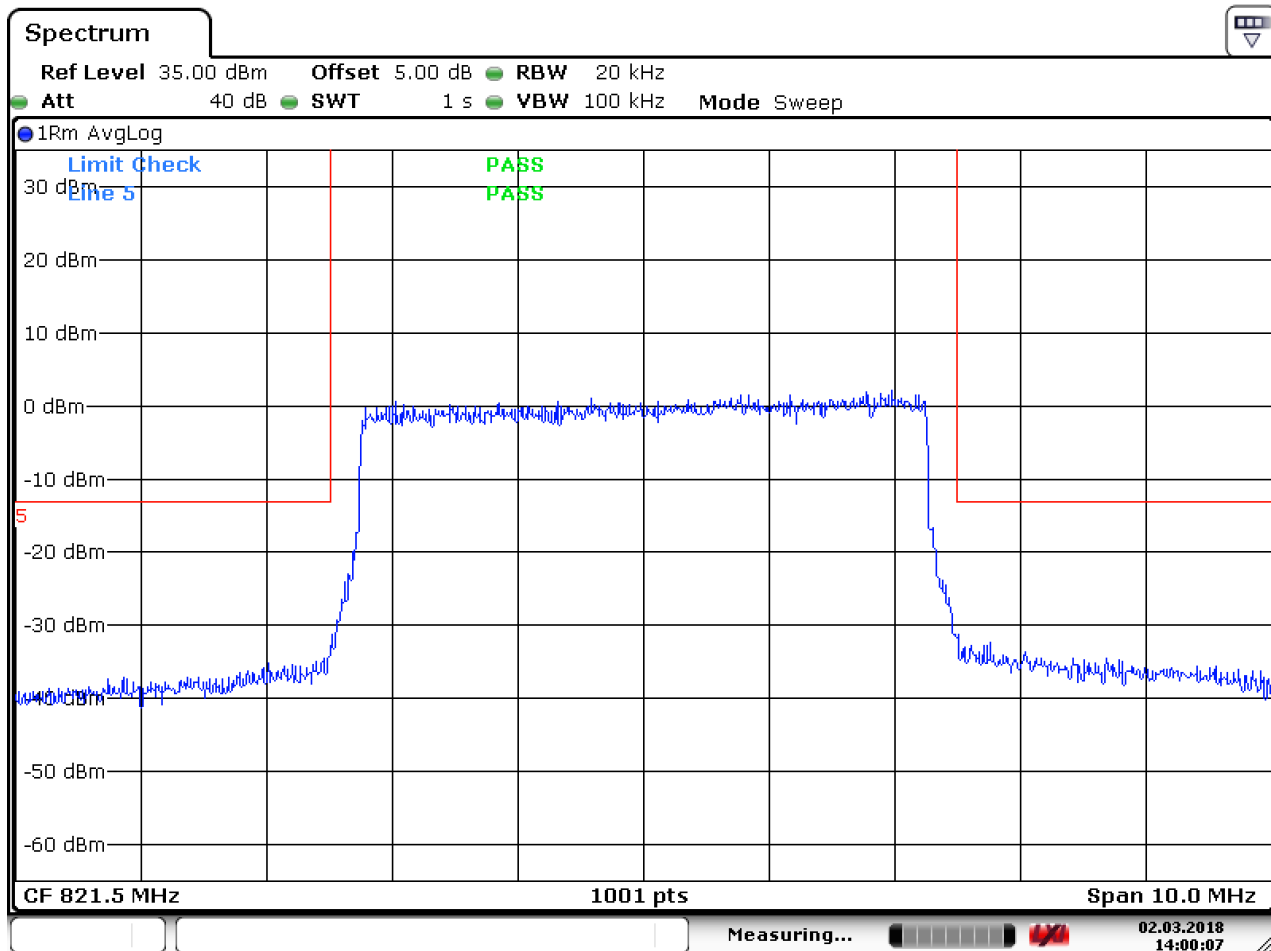
6.1.1.7.3.3 Test RB=25RB

Date: 2.MAR.2018 14:00:08

6.1.1.8   Test Mode = LTE/TM2 5MHz

6.1.1.8.1   Test Channel = LCH

6.1.1.8.1.1 Test RB=1RB#0

Date: 2.MAR.2018 14:03:32

SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch
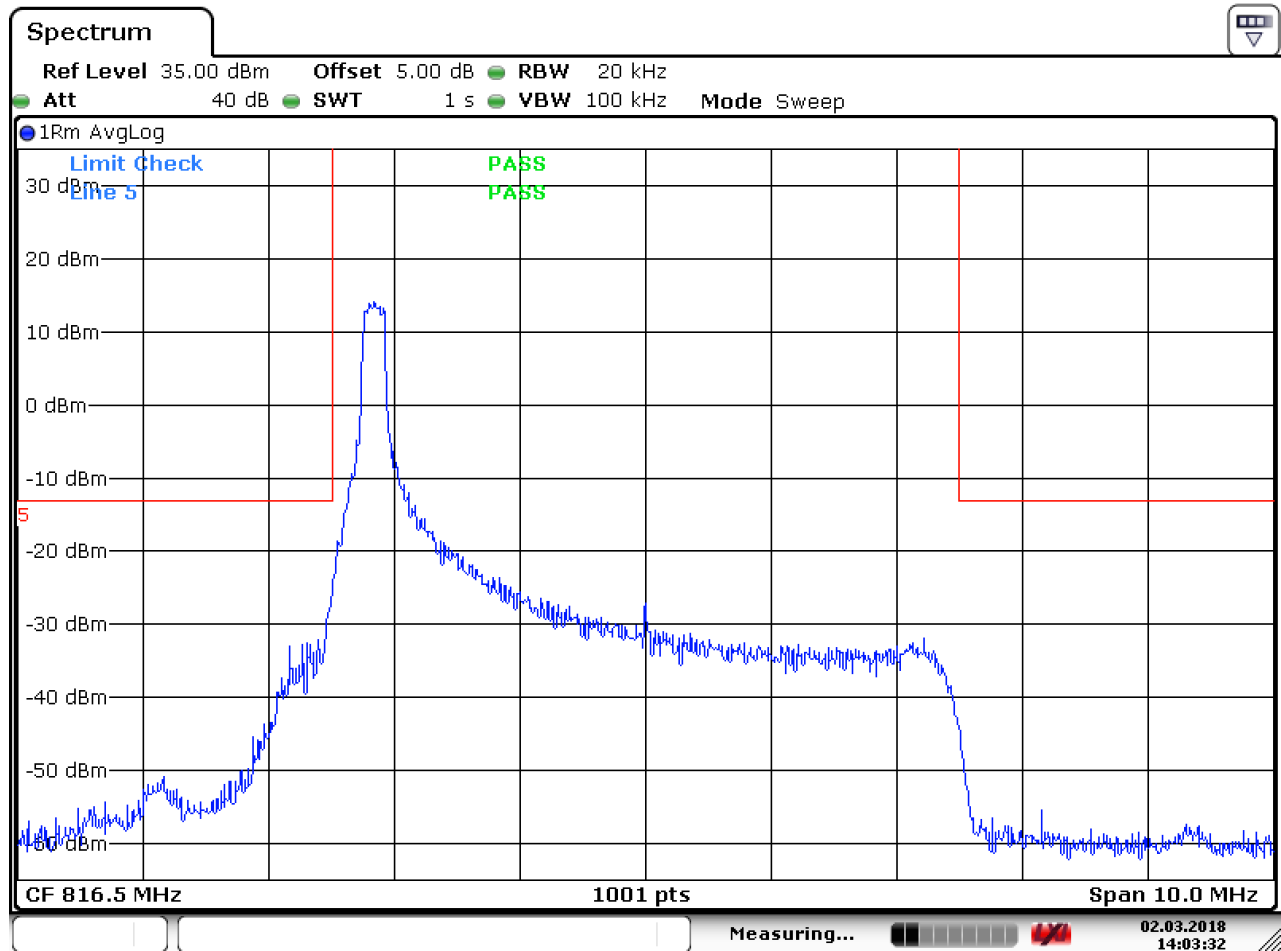
6.1.1.8.1.2 Test RB=1RB#24
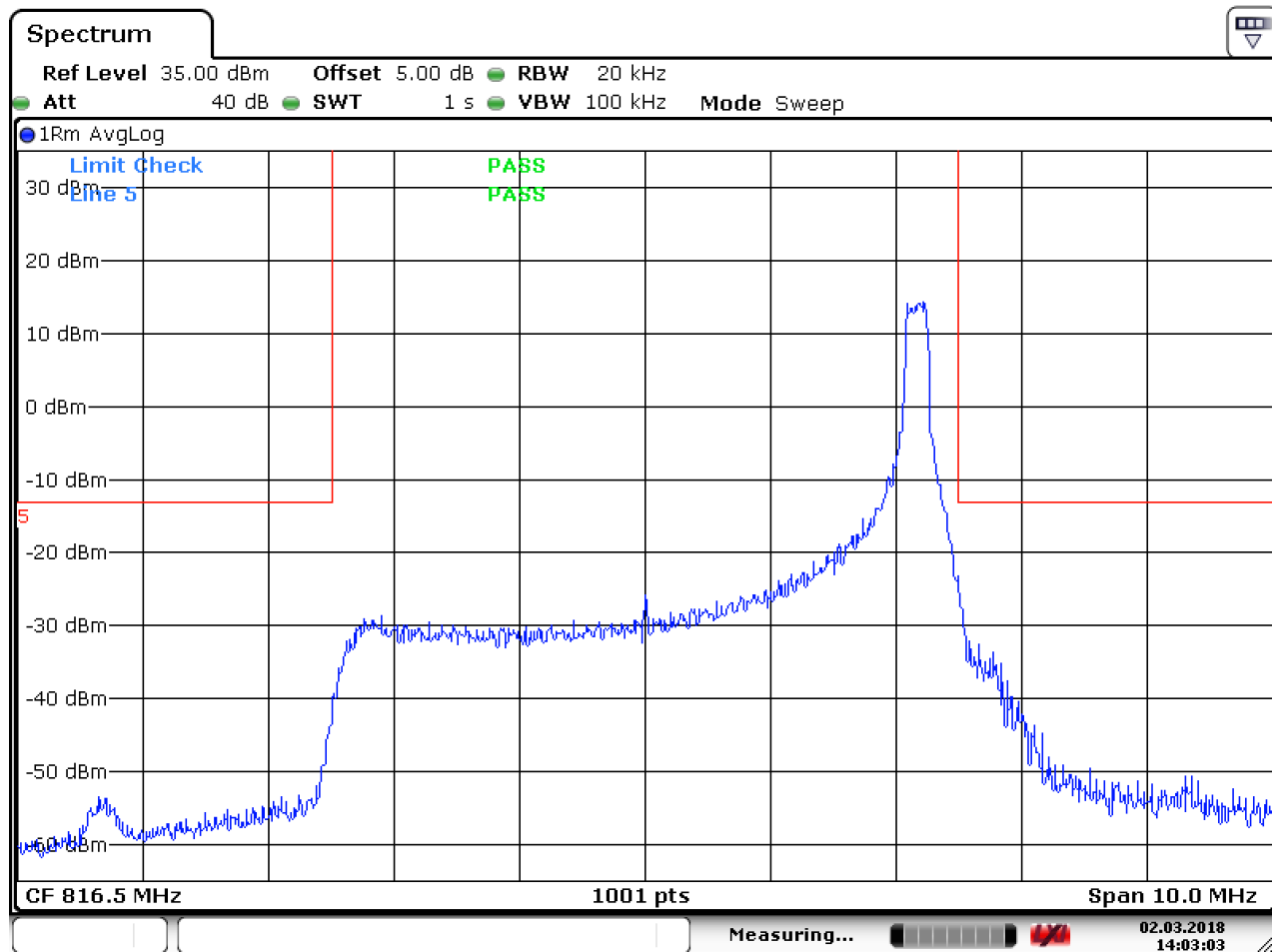
Date: 2.MAR.2018 14:03:02

6.1.1.8.1.3 Test RB=25RB

```
Spectrum                                                    [icon]

  Ref Level  35.00 dBm    Offset  5.00 dB  ● RBW    20 kHz
● Att            40 dB  ● SWT      1 s  ● VBW  100 kHz   Mode Sweep
● 1Rm AvgLog
      Limit Check                    PASS
30 dBm Line 5                        PASS

20 dBm

10 dBm

 0 dBm ─────────────────────────────────────────────

-10 dBm

-20 dBm

-30 dBm

-40 dBm

-50 dBm

-60 dBm

CF 816.5 MHz              1001 pts              Span 10.0 MHz

                              Measuring...  [bar]  02.03.2018
                                                   14:03:49
```

Date: 2.MAR.2018 14:03:49

SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch
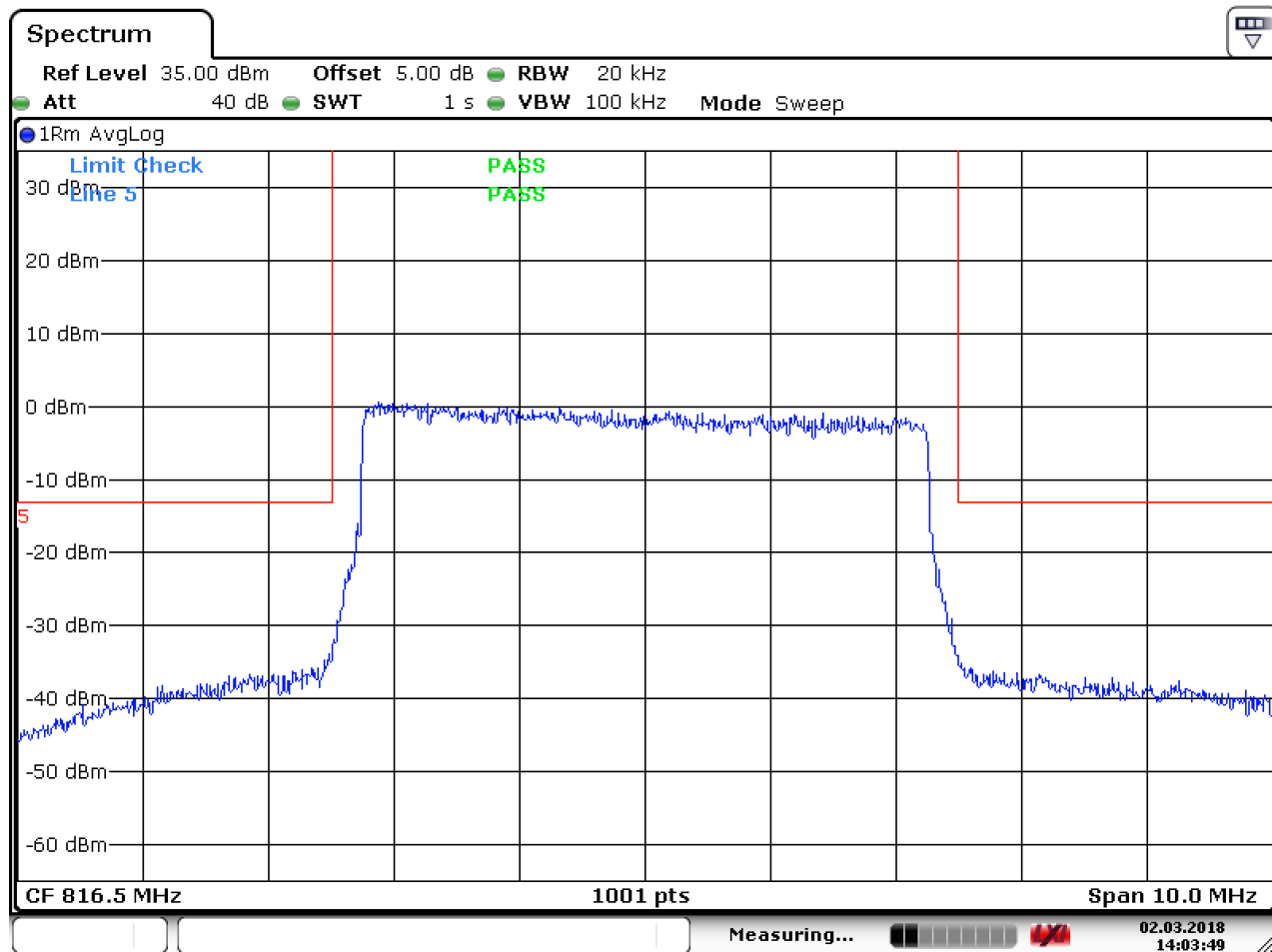
6.1.1.8.2   Test Channel = MCH

6.1.1.8.2.1 Test RB=1RB#0
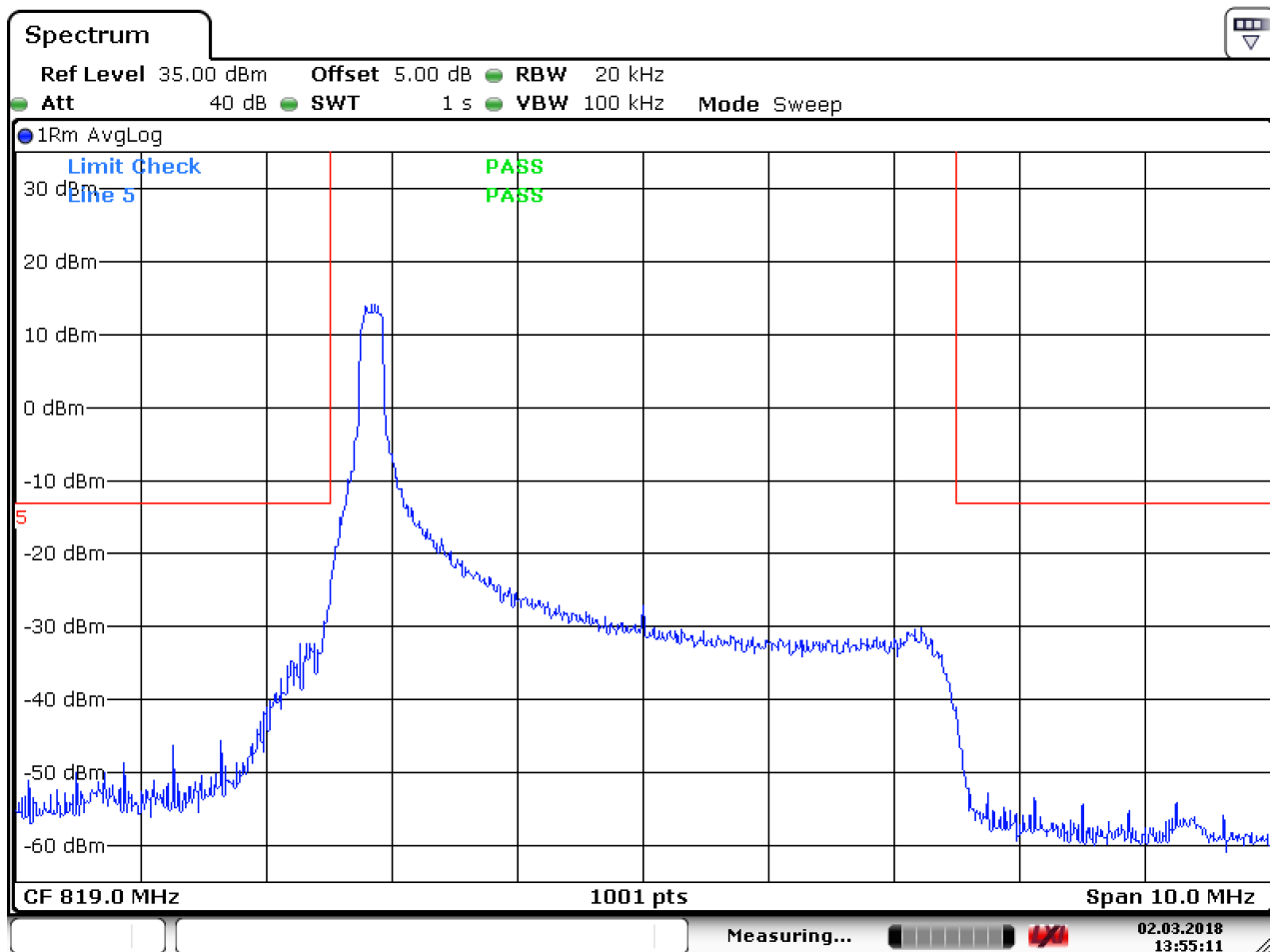
Date: 2.MAR.2018 13:55:12

6.1.1.8.2.2 Test RB=1RB#24
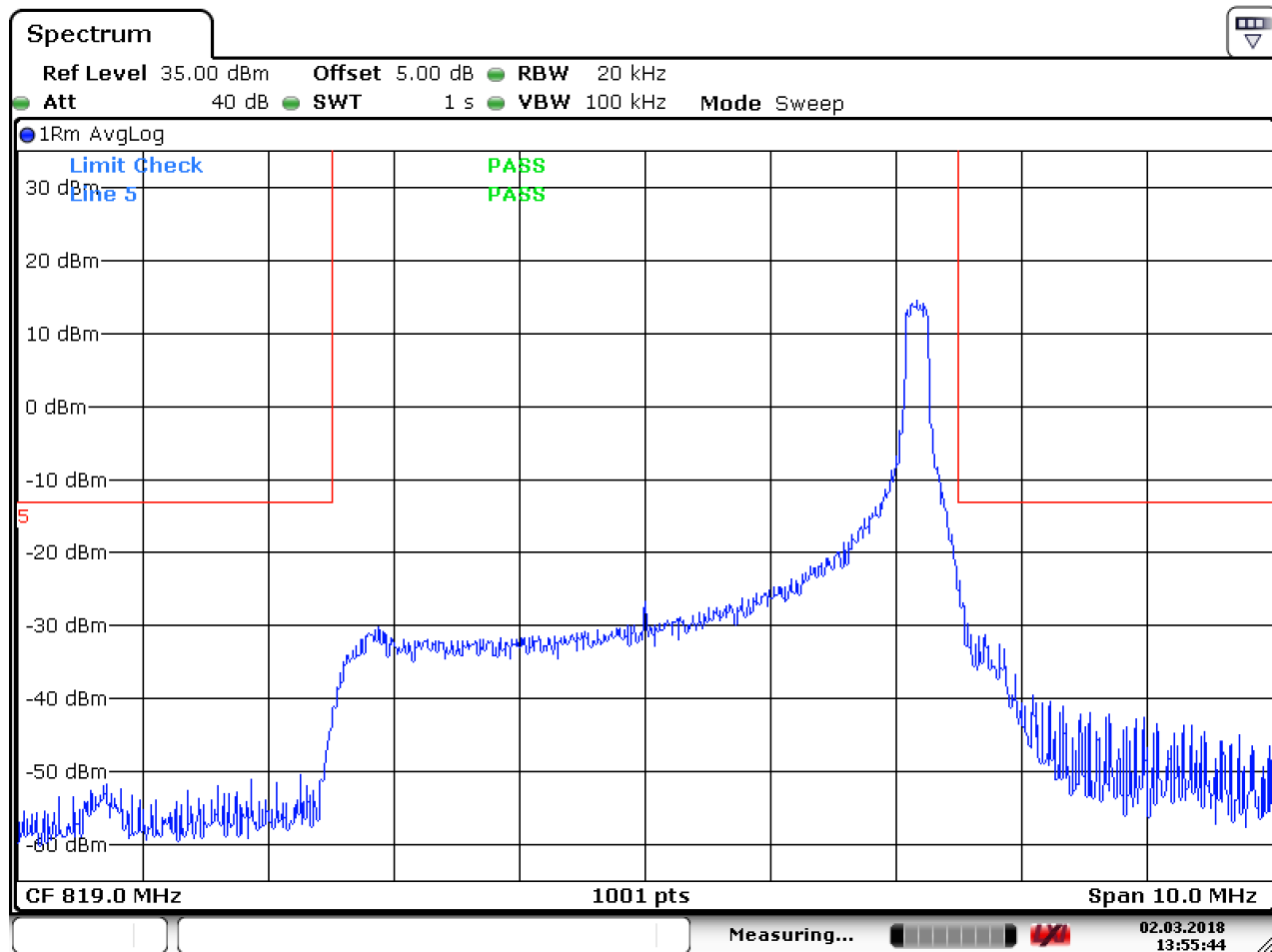
Date: 2.MAR.2018 13:55:45

6.1.1.8.2.3 Test RB=25RB

Spectrum				
Ref Level 35.00 dBm	Offset 5.00 dB	RBW 20 kHz		
Att 40 dB	SWT 1 s	VBW 100 kHz	Mode Sweep	

1Rm AvgLog

Limit Check PASS
Line 5 PASS

30 dBm

20 dBm

10 dBm

0 dBm

-10 dBm

5

-20 dBm

-30 dBm

-40 dBm

-50 dBm

-60 dBm

CF 819.0 MHz   1001 pts   Span 10.0 MHz

Measuring...   02.03.2018 13:54:43
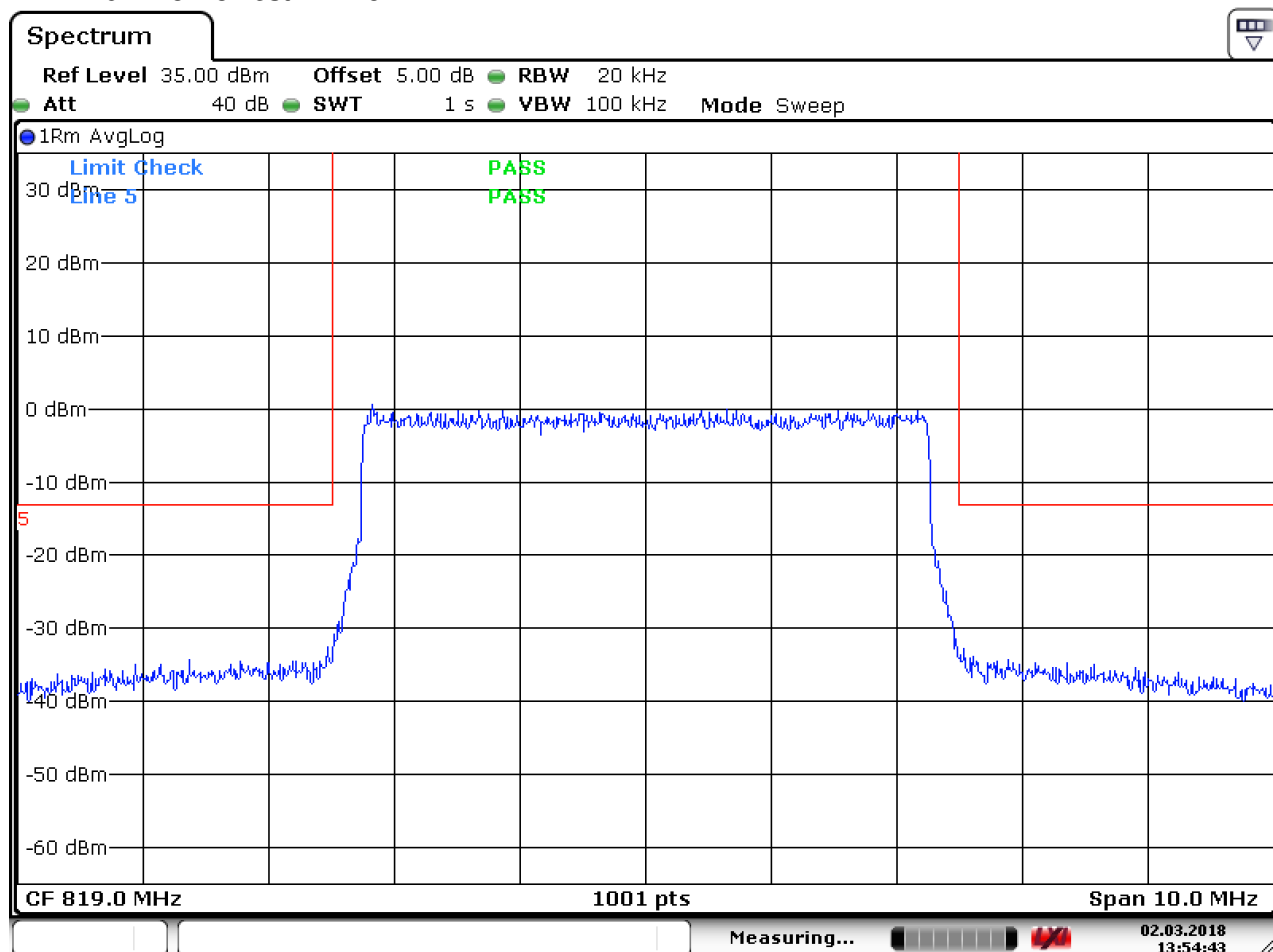
Date: 2.MAR.2018 13:54:43

6.1.1.8.3 Test Channel = HCH

6.1.1.8.3.1 Test RB=1RB#0

Date: 2.MAR.2018 13:59:21

SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch
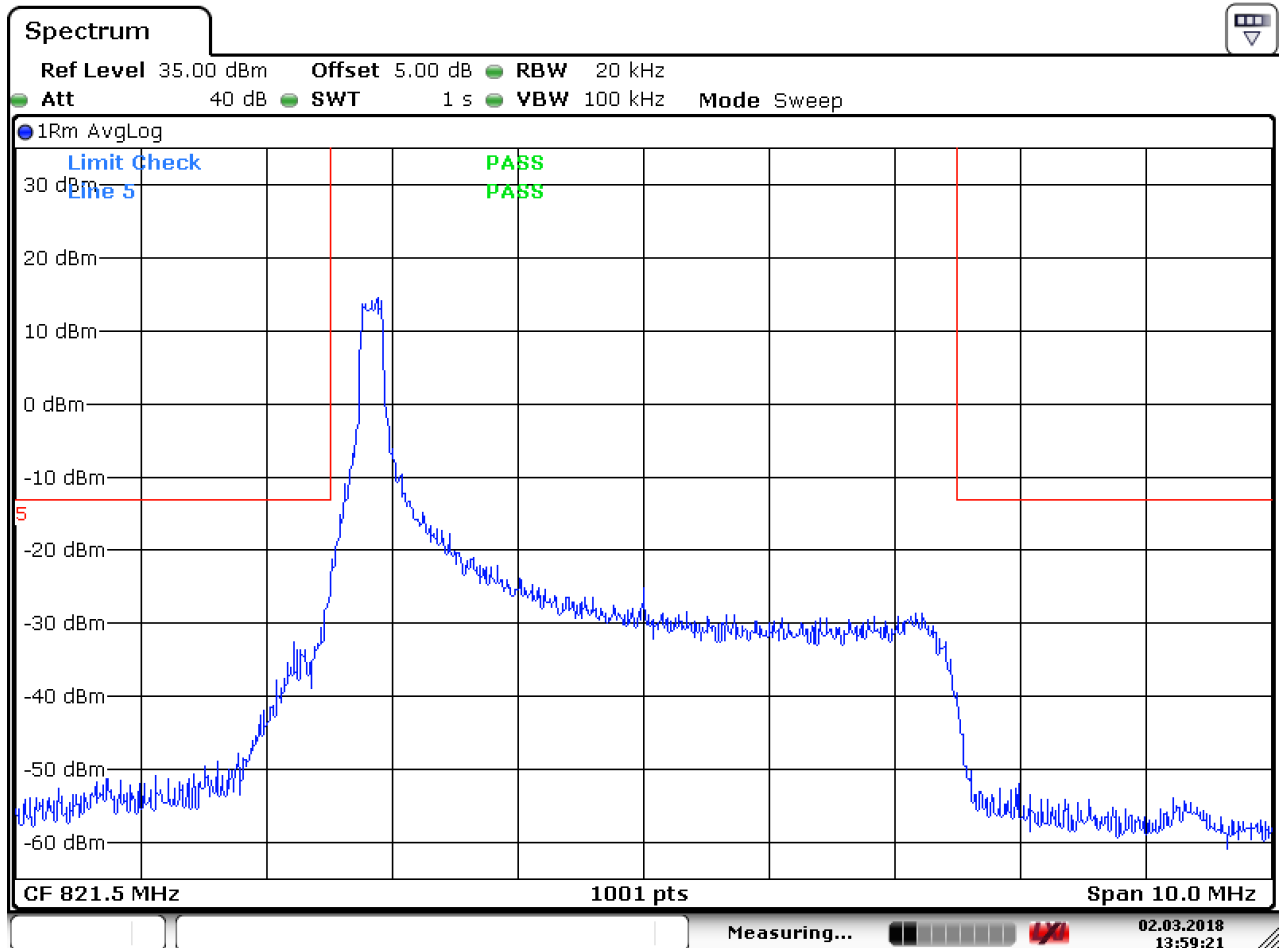
6.1.1.8.3.2 Test RB=1RB#24
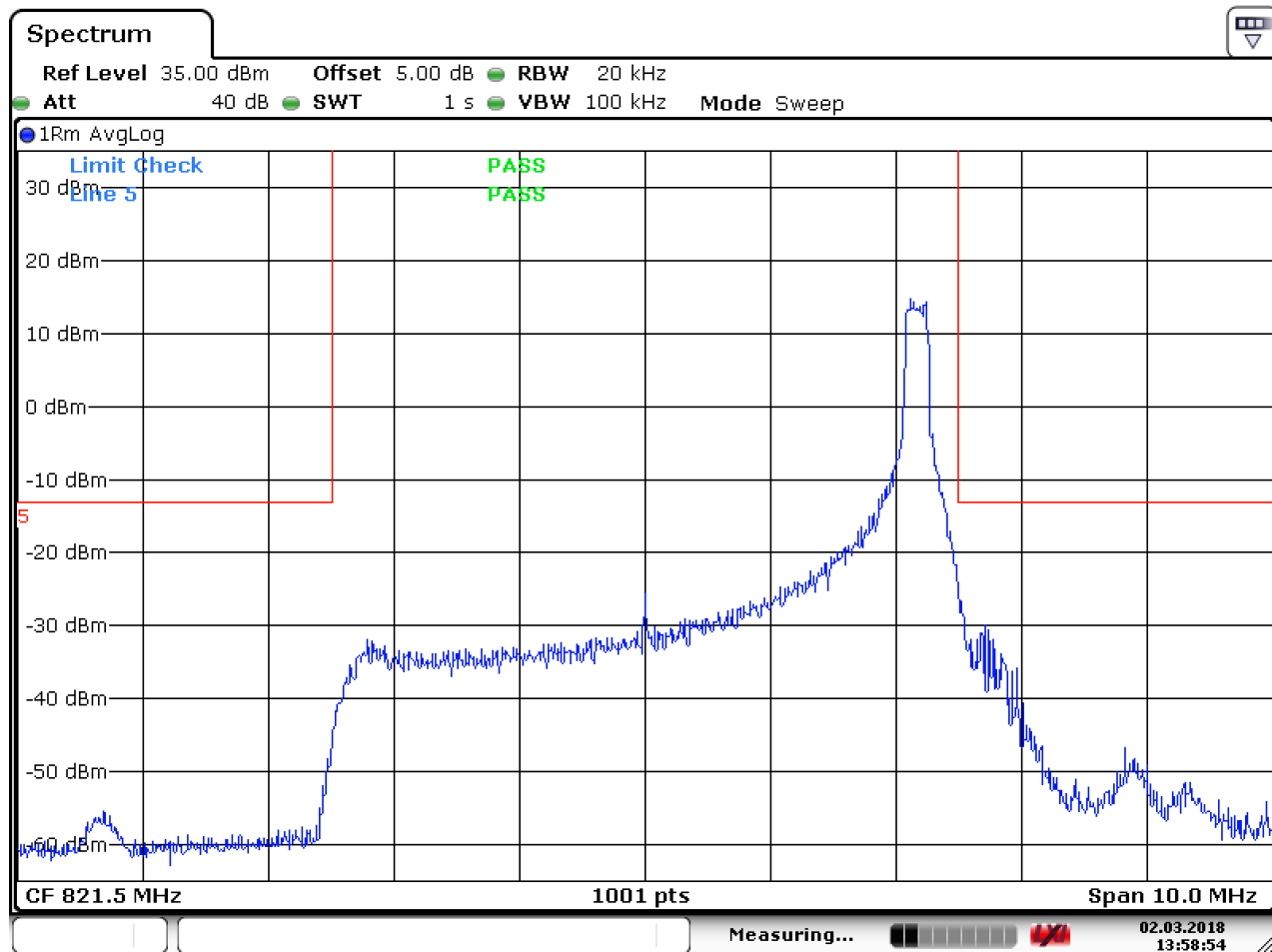
Date: 2.MAR.2018 13:58:54

6.1.1.8.3.3 Test RB=25RB
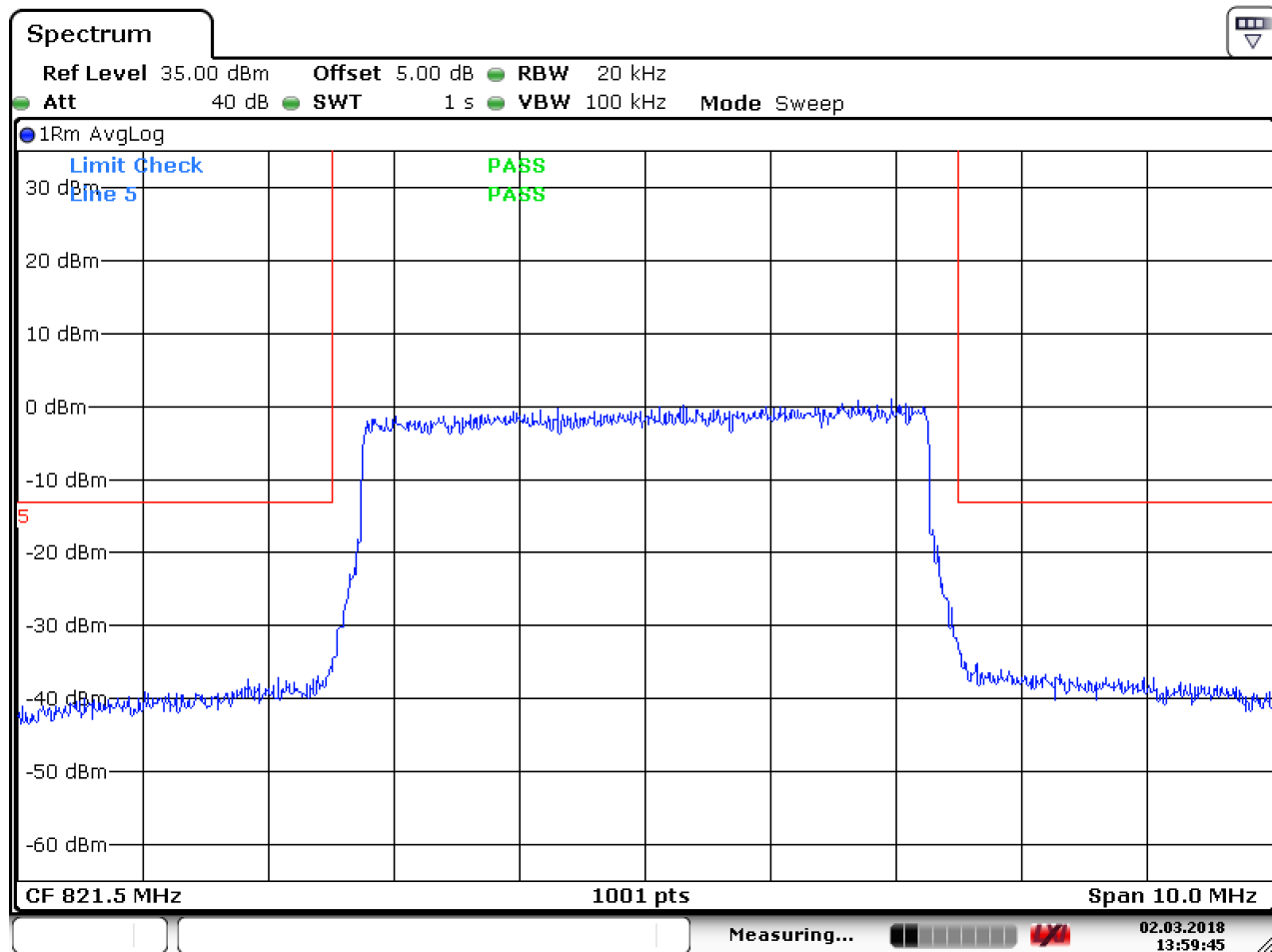
6.1.1.9   Test Mode = LTE/TM3 5MHz

6.1.1.9.1   Test Channel = LCH

6.1.1.9.1.1 Test RB=1RB#0

```
Spectrum

Ref Level 35.00 dBm      Offset 5.00 dB  ⬤ RBW   20 kHz
Att             50 dB  ⬤ SWT        1 s  ⬤ VBW  100 kHz   Mode Auto Sweep

⬤1Rm AvgLog
     Limit Check              PASS
30 dBm  Line 5              PASS

20 dBm

10 dBm

0 dBm

-10 dBm

5

-20 dBm

-30 dBm

-40 dBm

-50 dBm

-60 dBm

CF 816.5 MHz                     1001 pts              Span 10.0 MHz

                          Measuring...  ▮▮▮▮▮▮  ▯       02.03.2018
                                                         08:47:16
```

Date: 2.MAR.2018 08:47:16

SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch
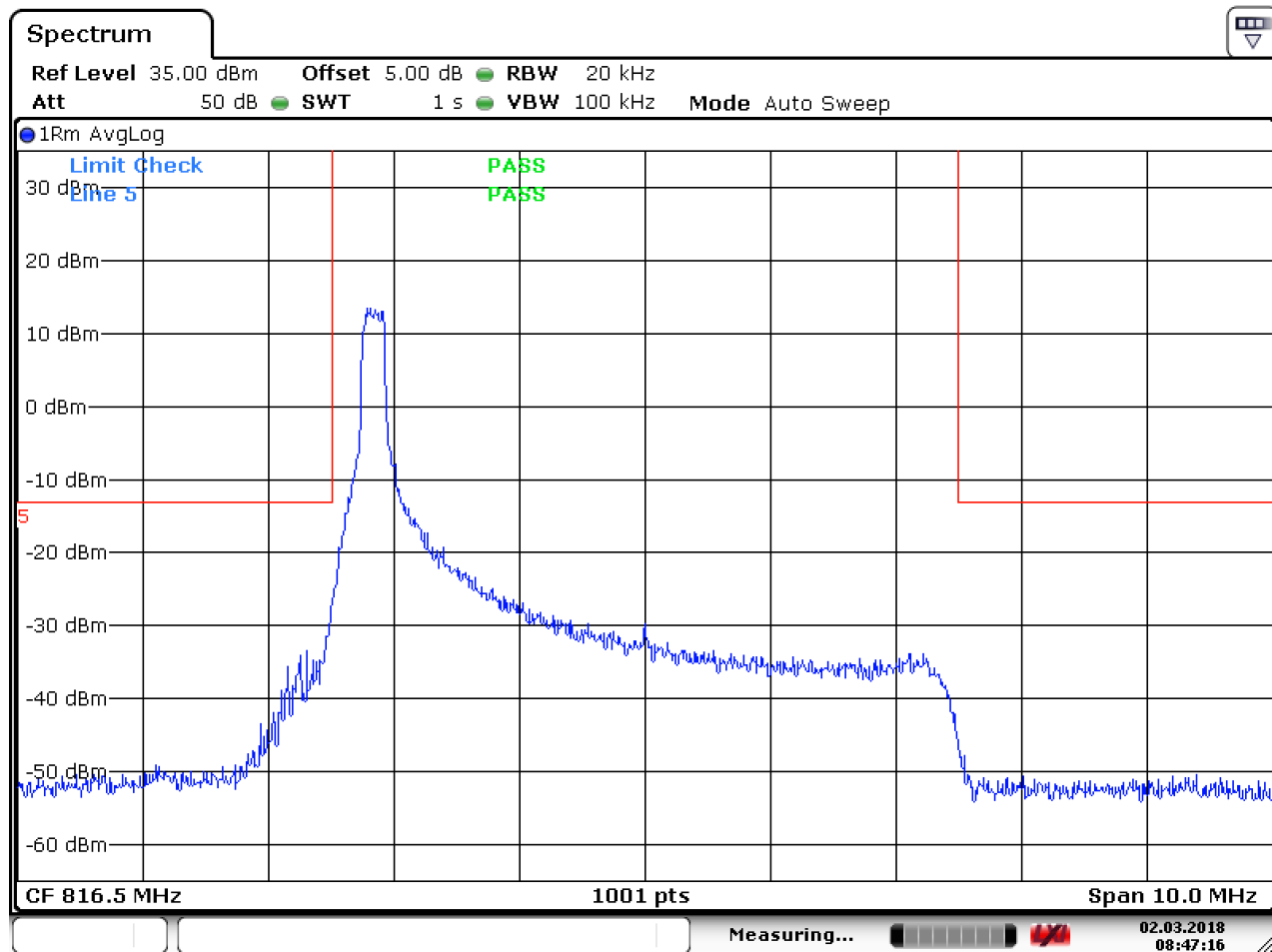
6.1.1.9.1.2 Test RB=1RB#24
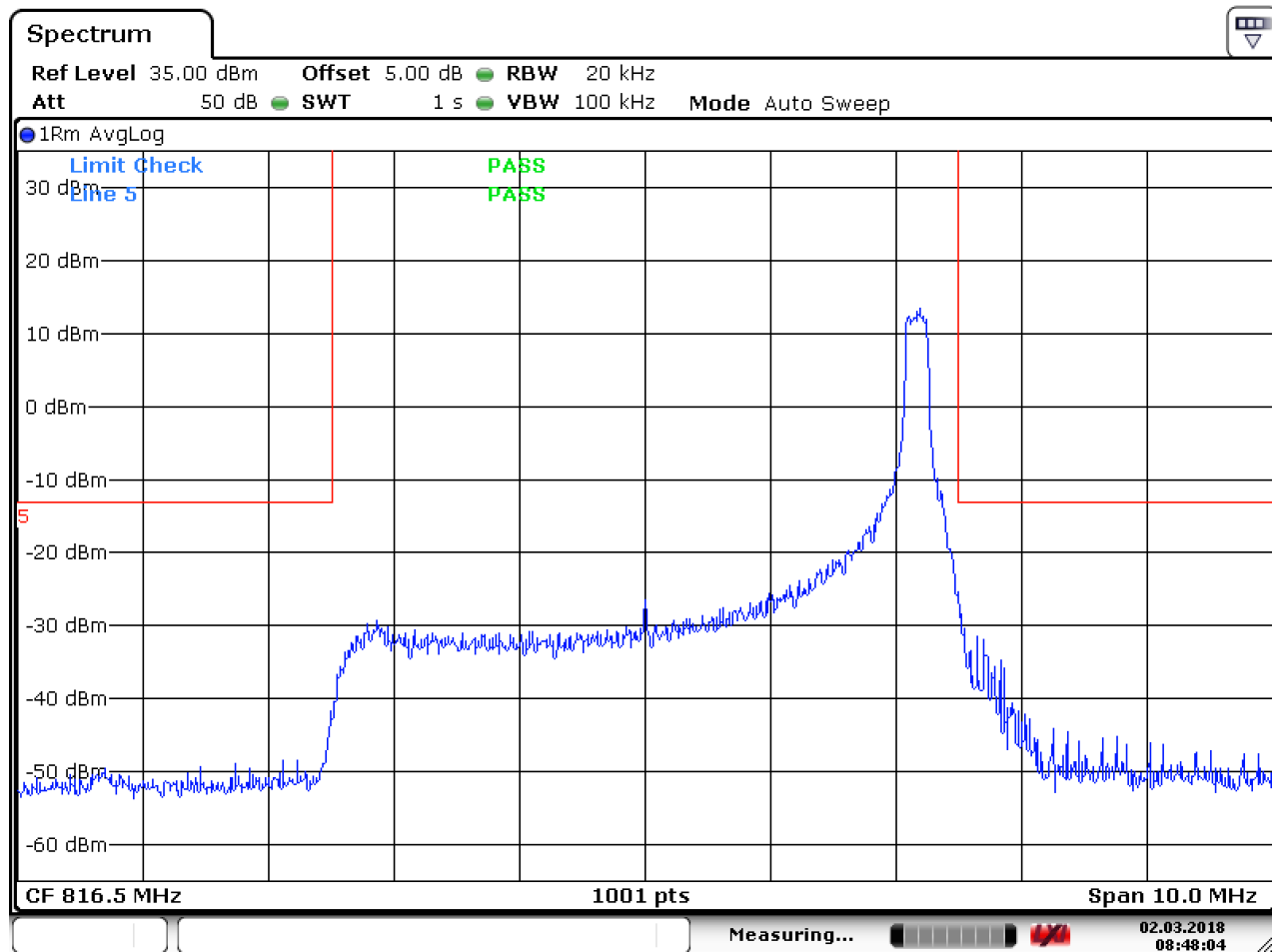
Date: 2.MAR.2018 08:48:05

6.1.1.9.1.3 Test RB=25RB
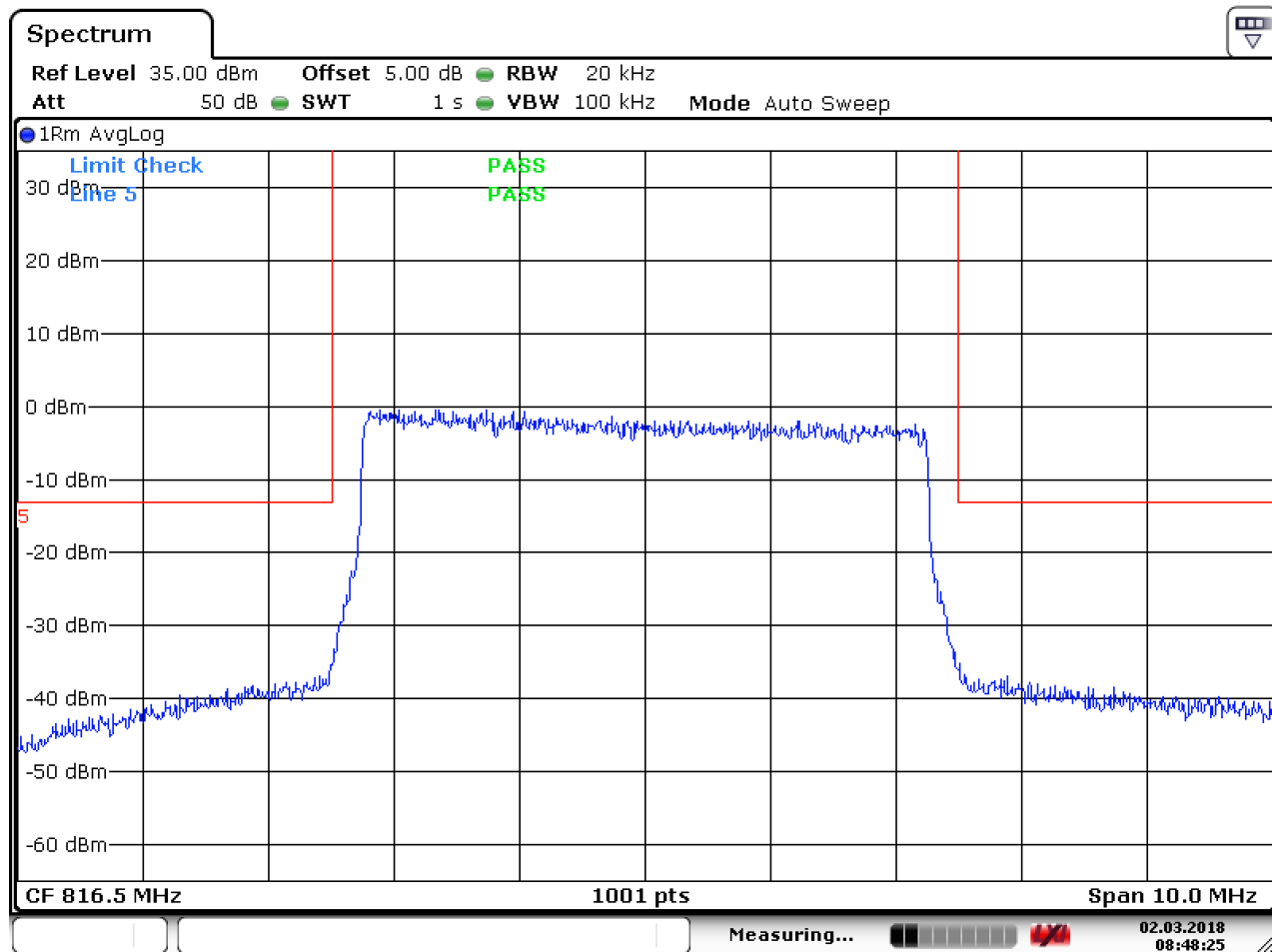
Date: 2.MAR.2018 08:48:25

6.1.1.9.2   Test Channel = MCH

6.1.1.9.2.1 Test RB=1RB#0

Spectrum

| Ref Level | 35.00 dBm | Offset | 5.00 dB | ⬤ RBW | 20 kHz |
| Att | 50 dB | ⬤ SWT | 1 s | ⬤ VBW | 100 kHz | Mode Auto Sweep |

1Rm AvgLog

Limit Check   PASS
Line 5   PASS

CF 819.0 MHz   1001 pts   Span 10.0 MHz

Measuring...   02.03.2018 08:50:37
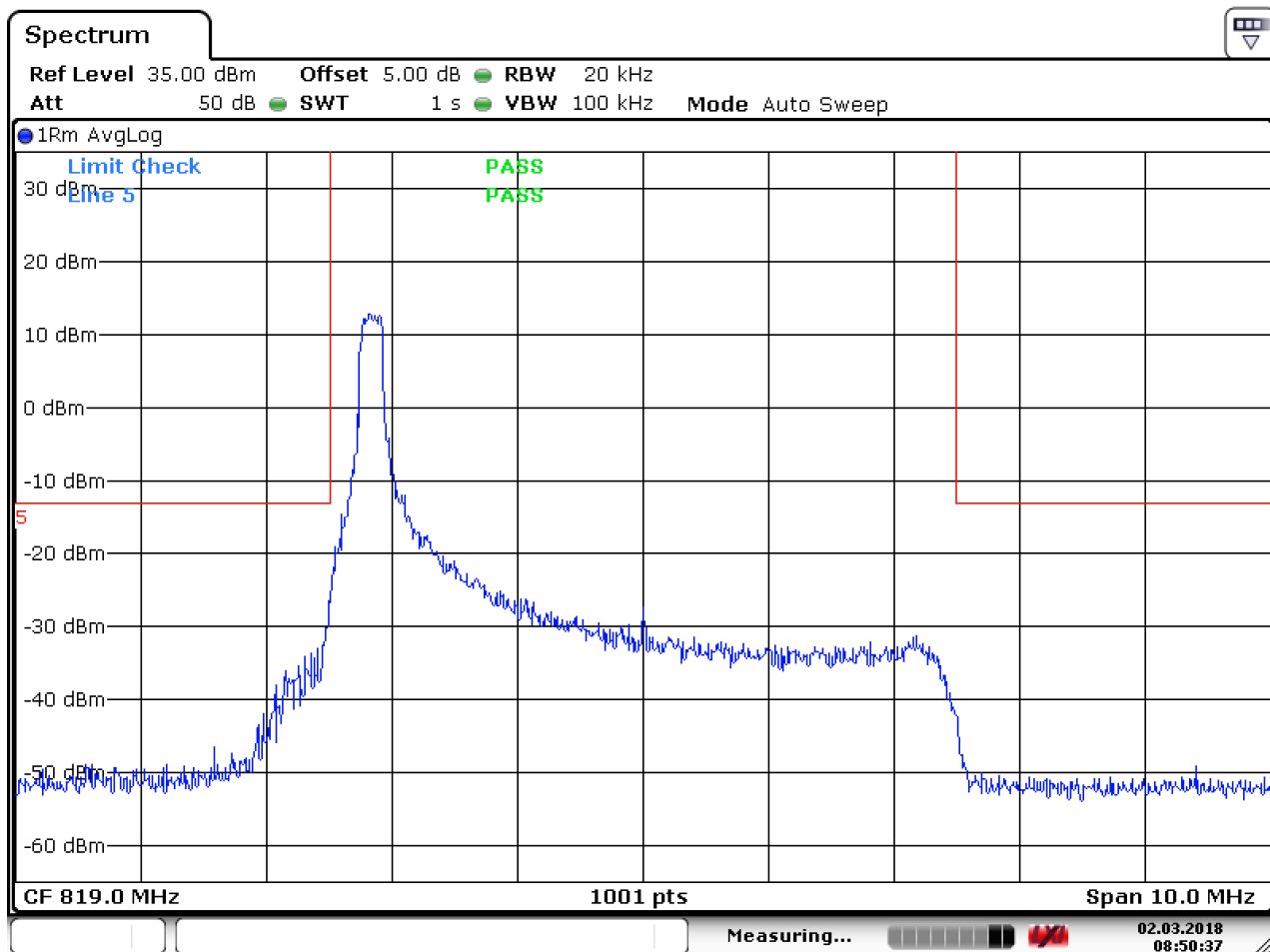
Date: 2.MAR.2018 08:50:37

6.1.1.9.2.2 Test RB=1RB#24

Spectrum

Ref Level 35.00 dBm   Offset 5.00 dB   RBW   20 kHz
Att   50 dB   SWT   1 s   VBW 100 kHz   Mode Auto Sweep

1Rm AvgLog

Limit Check   PASS
Line 5   PASS

30 dBm
20 dBm
10 dBm
0 dBm
-10 dBm
5
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm

CF 819.0 MHz   1001 pts   Span 10.0 MHz

Measuring...   02.03.2018 08:50:53

Date: 2.MAR.2018 08:50:53

6.1.1.9.2.3 Test RB=25RB

Date: 2.MAR.2018 08:51:08

SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch
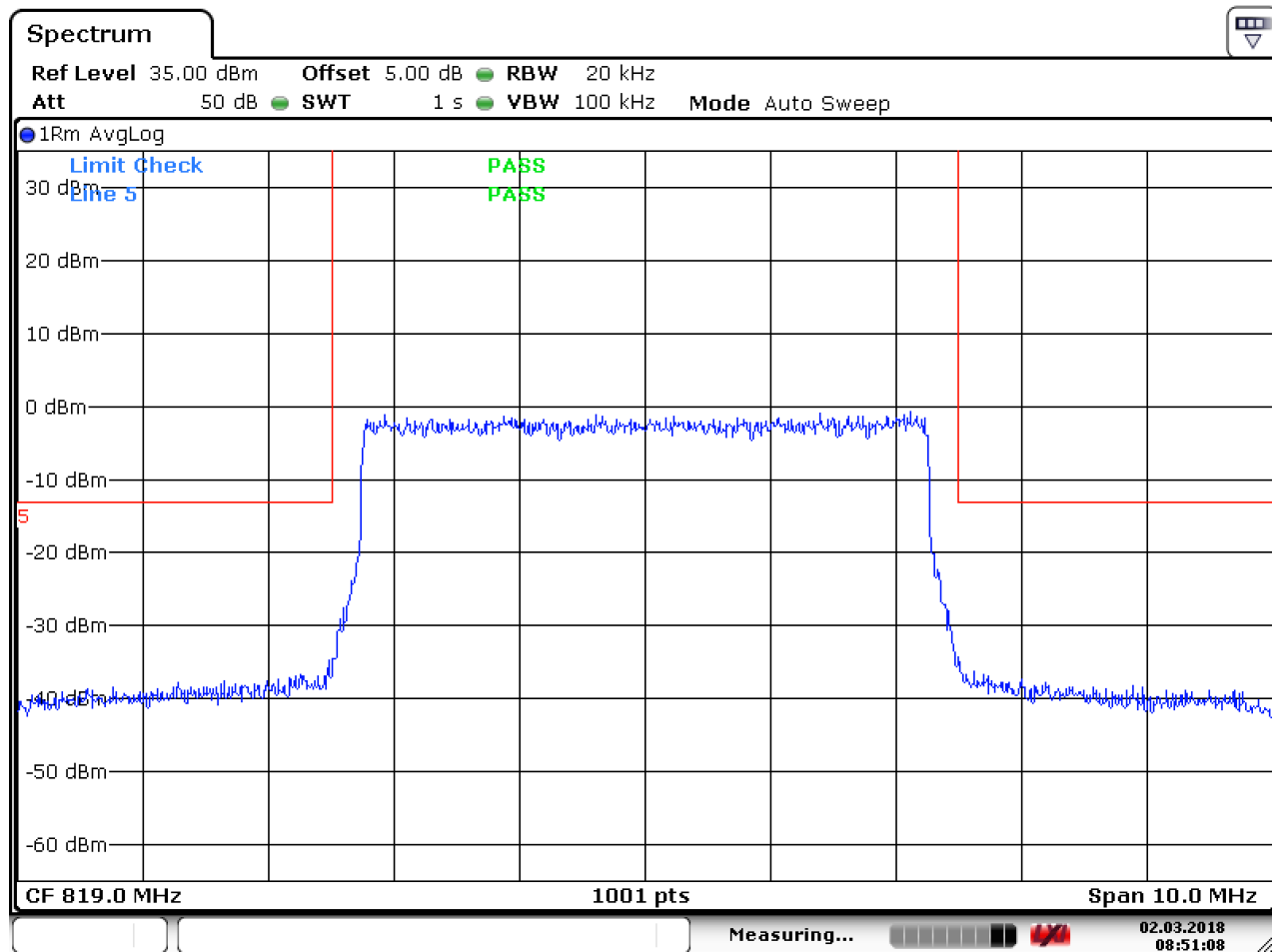
6.1.1.9.3   Test Channel = HCH

6.1.1.9.3.1 Test RB=1RB#0
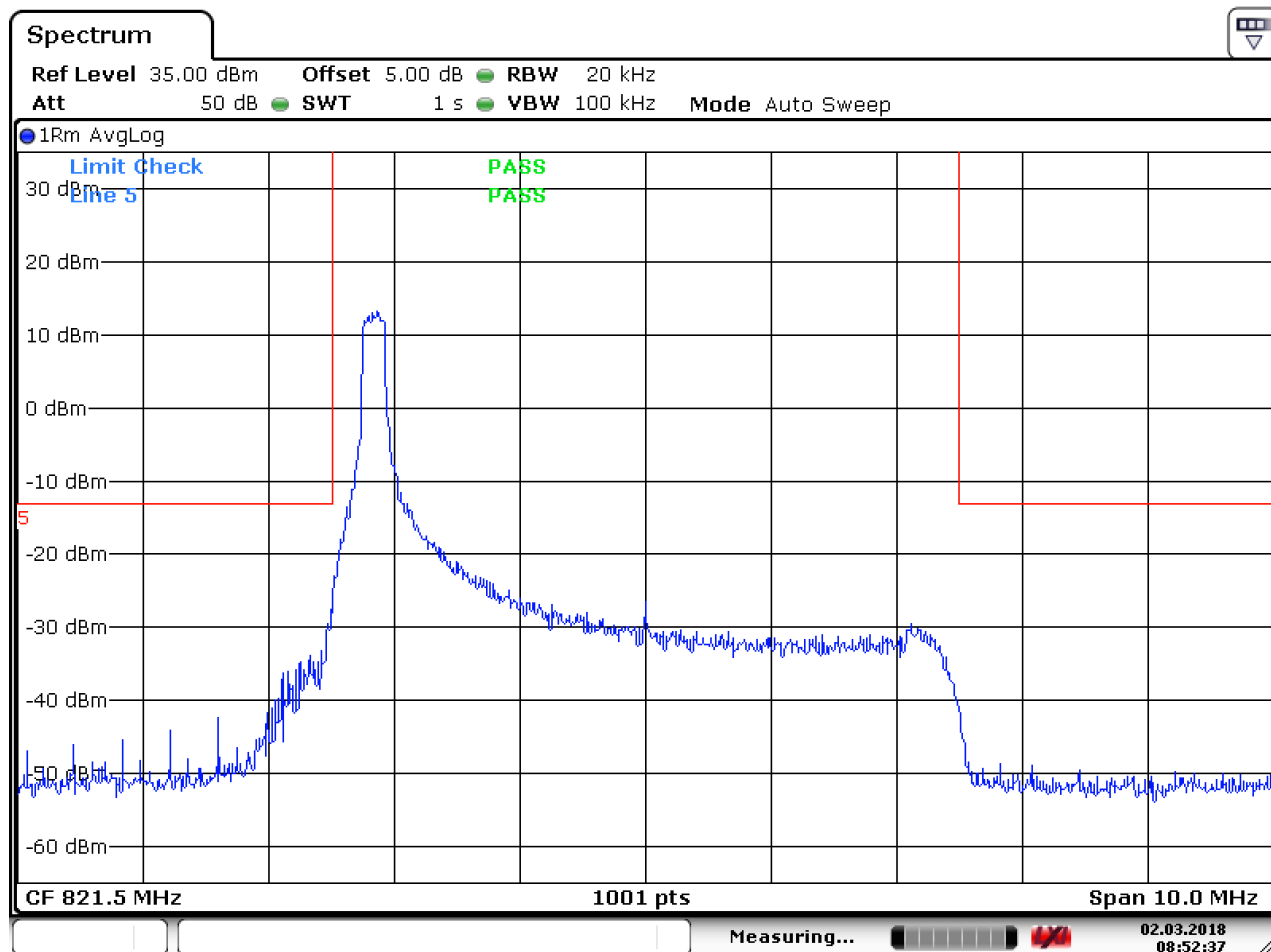
Date: 2.MAR.2018 08:52:38

6.1.1.9.3.2 Test RB=1RB#24

Date: 2.MAR.2018 08:52:59

6.1.1.9.3.3 Test RB=25RB

Date: 2.MAR.2018 08:53:17

SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch
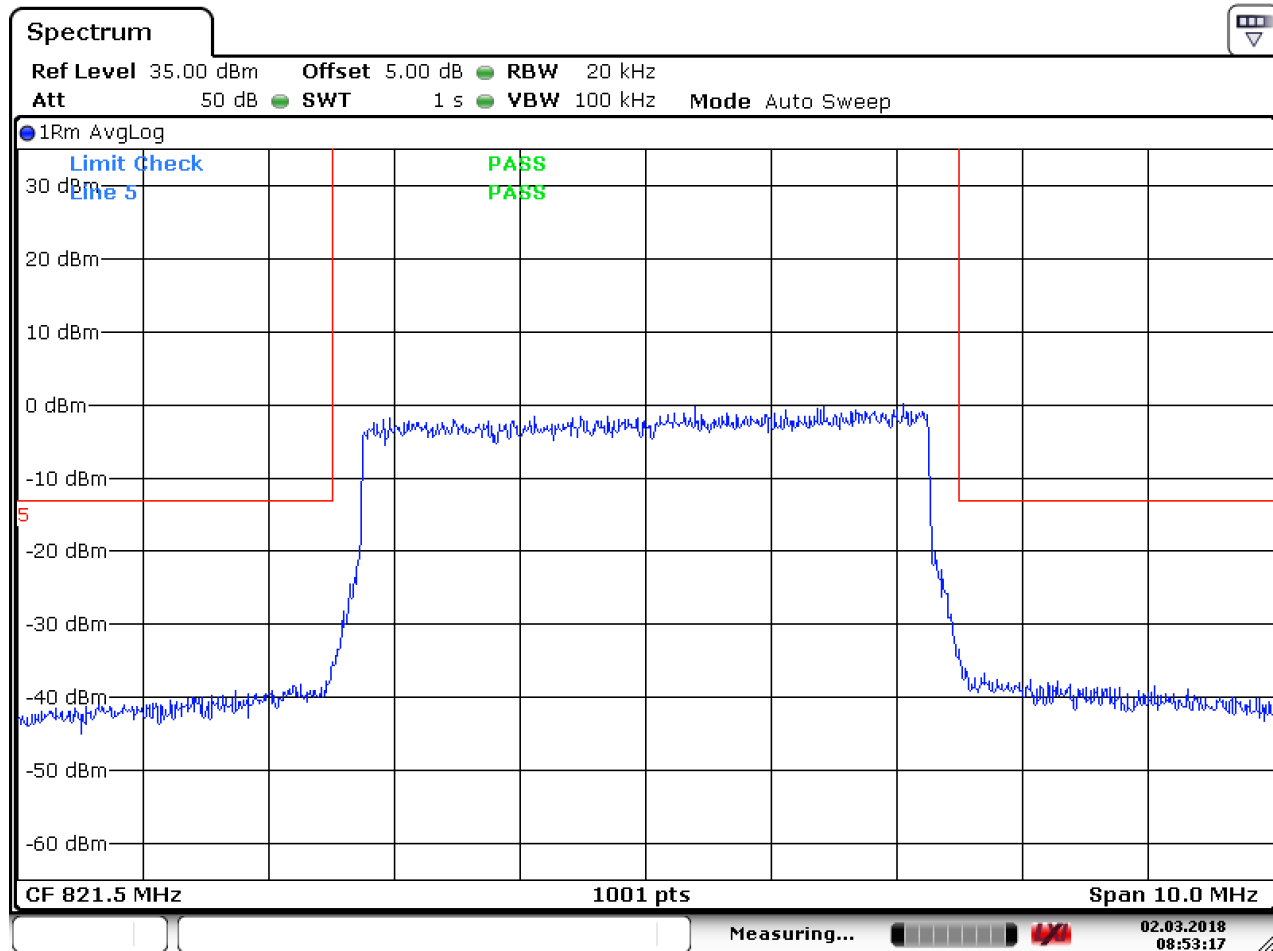
6.1.1.10 Test Mode = LTE/TM1 10MHz

6.1.1.10.1 Test Channel = LCH/ MCH/HCH

6.1.1.10.1.1 Test RB=1RB#0
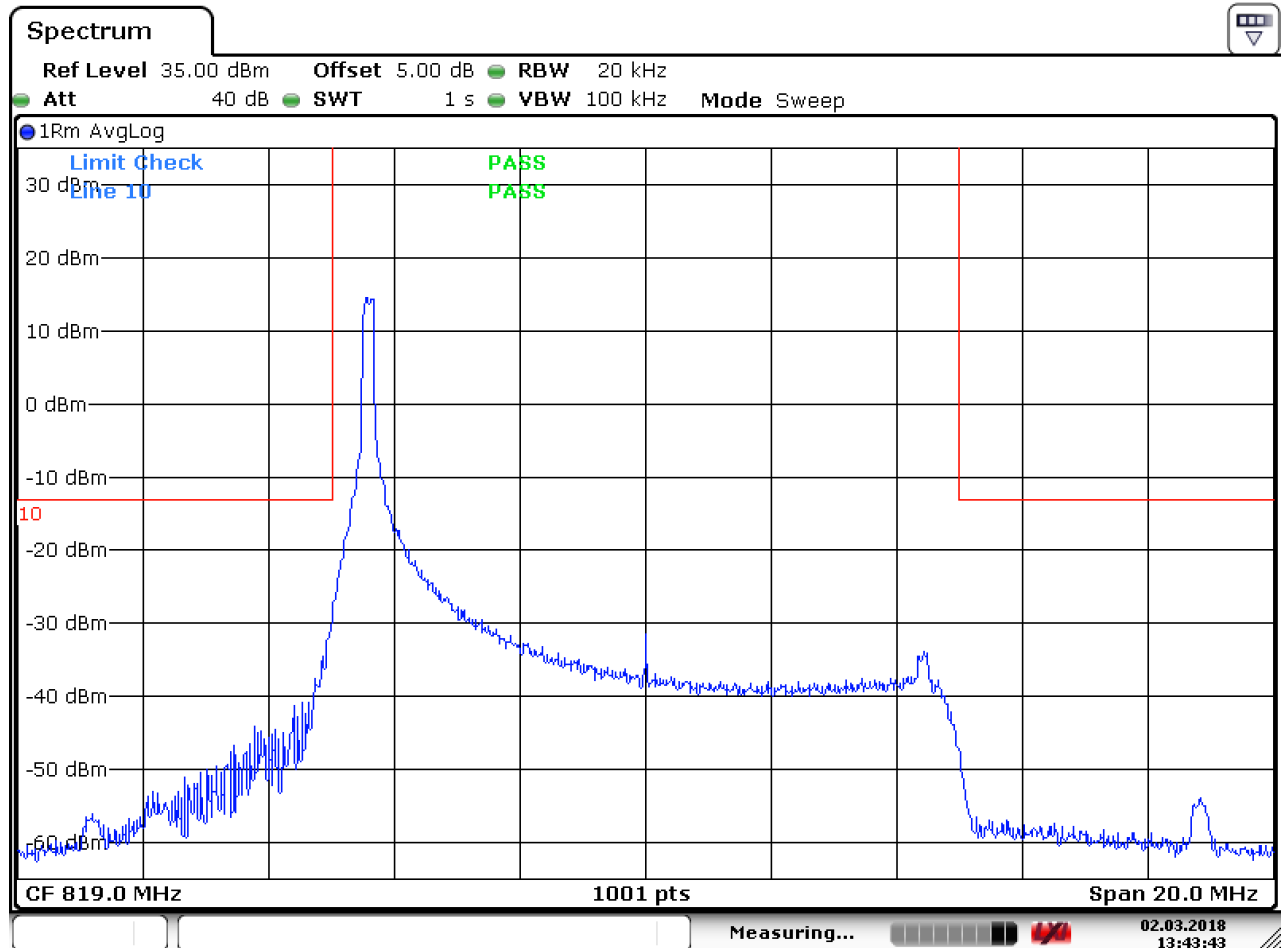
Date: 2.MAR.2018 13:43:44

6.1.1.10.1.2 Test RB=1RB#49
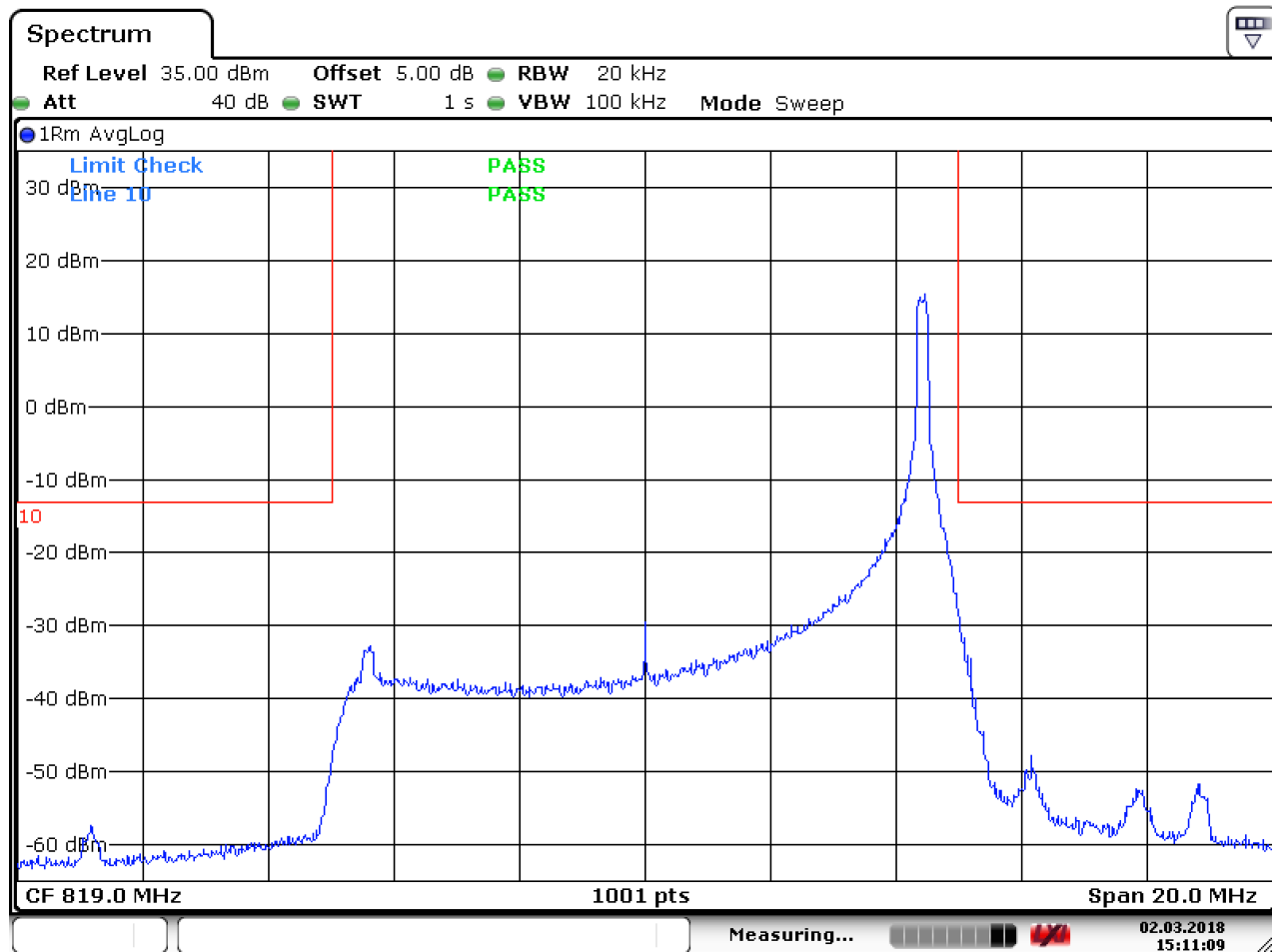
6.1.1.10.1.3 Test RB=50RB
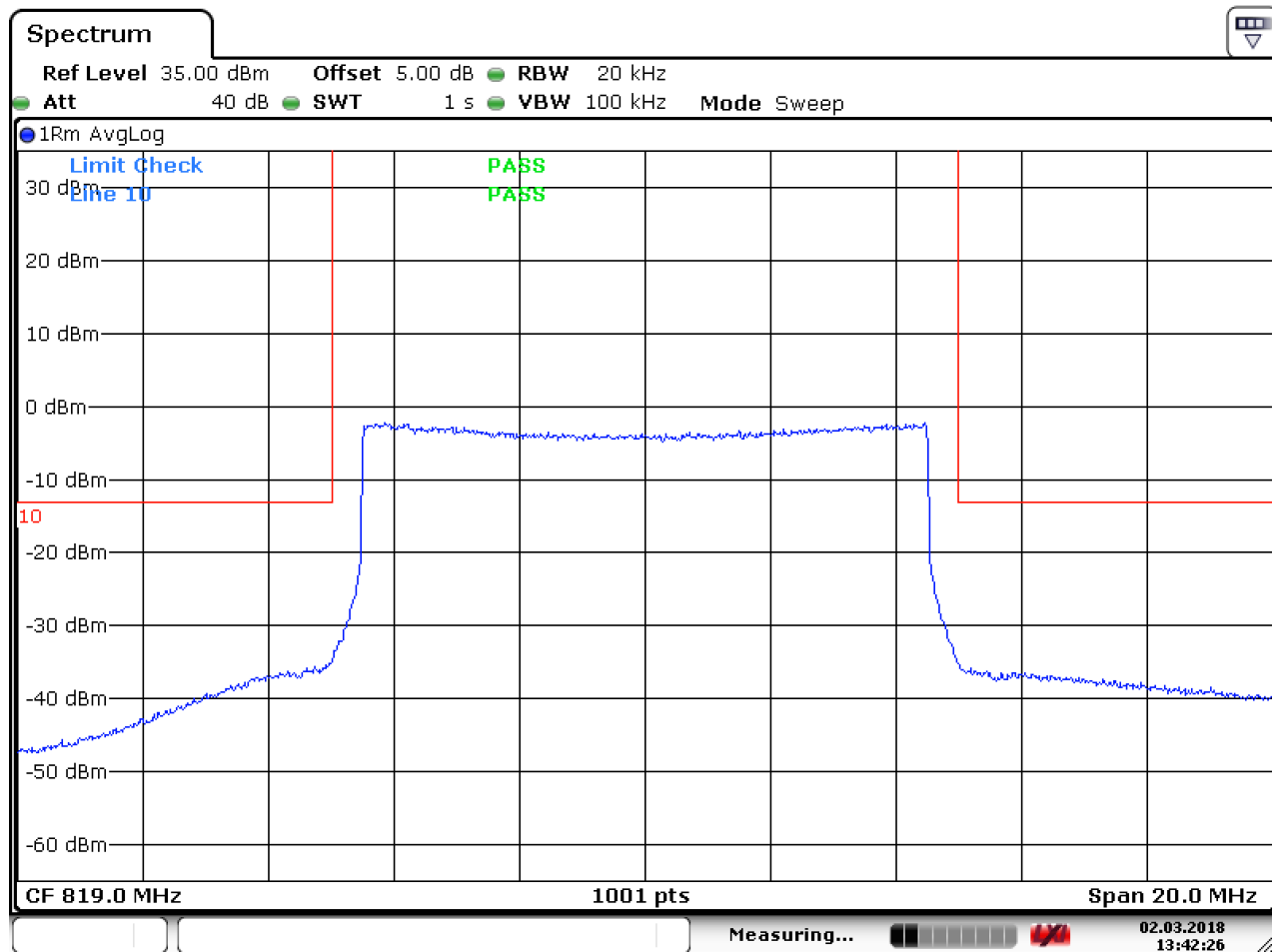
Date: 2.MAR.2018 13:42:27

6.1.1.11 Test Mode = LTE/TM2 10MHz

6.1.1.11.1 Test Channel = LCH/ MCH/HCH

6.1.1.11.1.1 Test RB=1RB#0
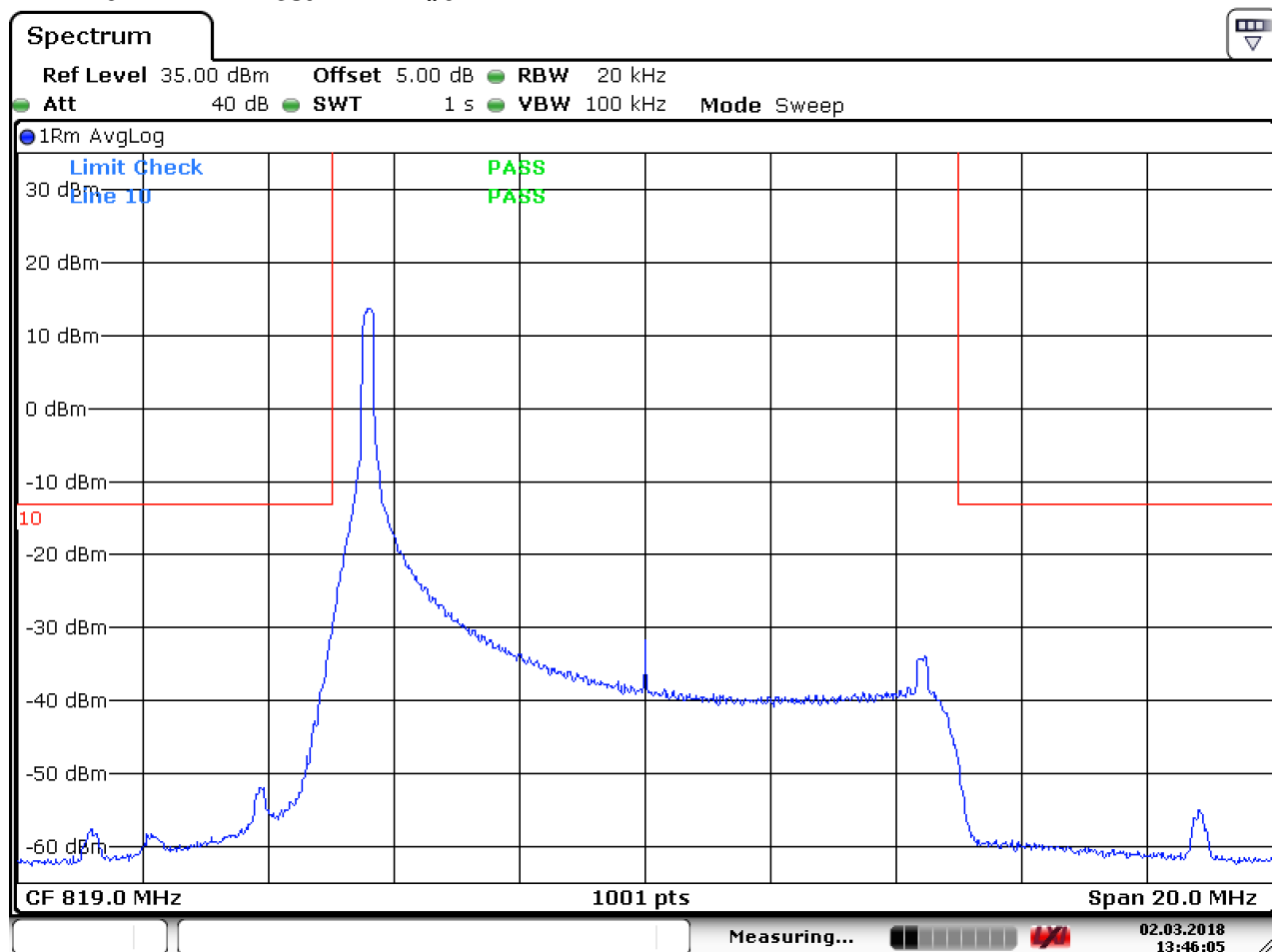
Date: 2.MAR.2018 13:46:06

6.1.1.11.1.2 Test RB=1RB#49
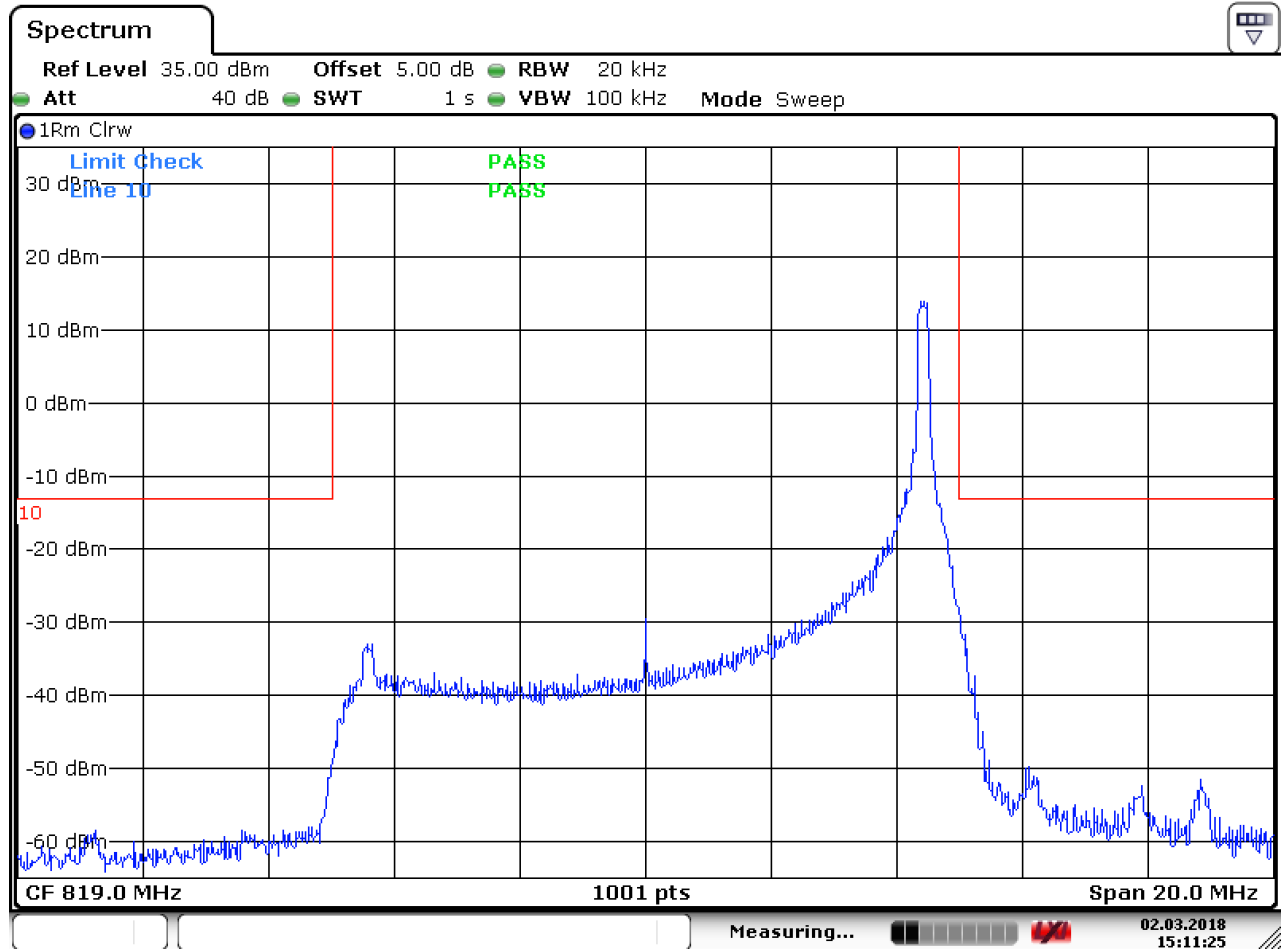
Date: 2.MAR.2018 15:11:25

6.1.1.11.1.3 Test RB=50RB
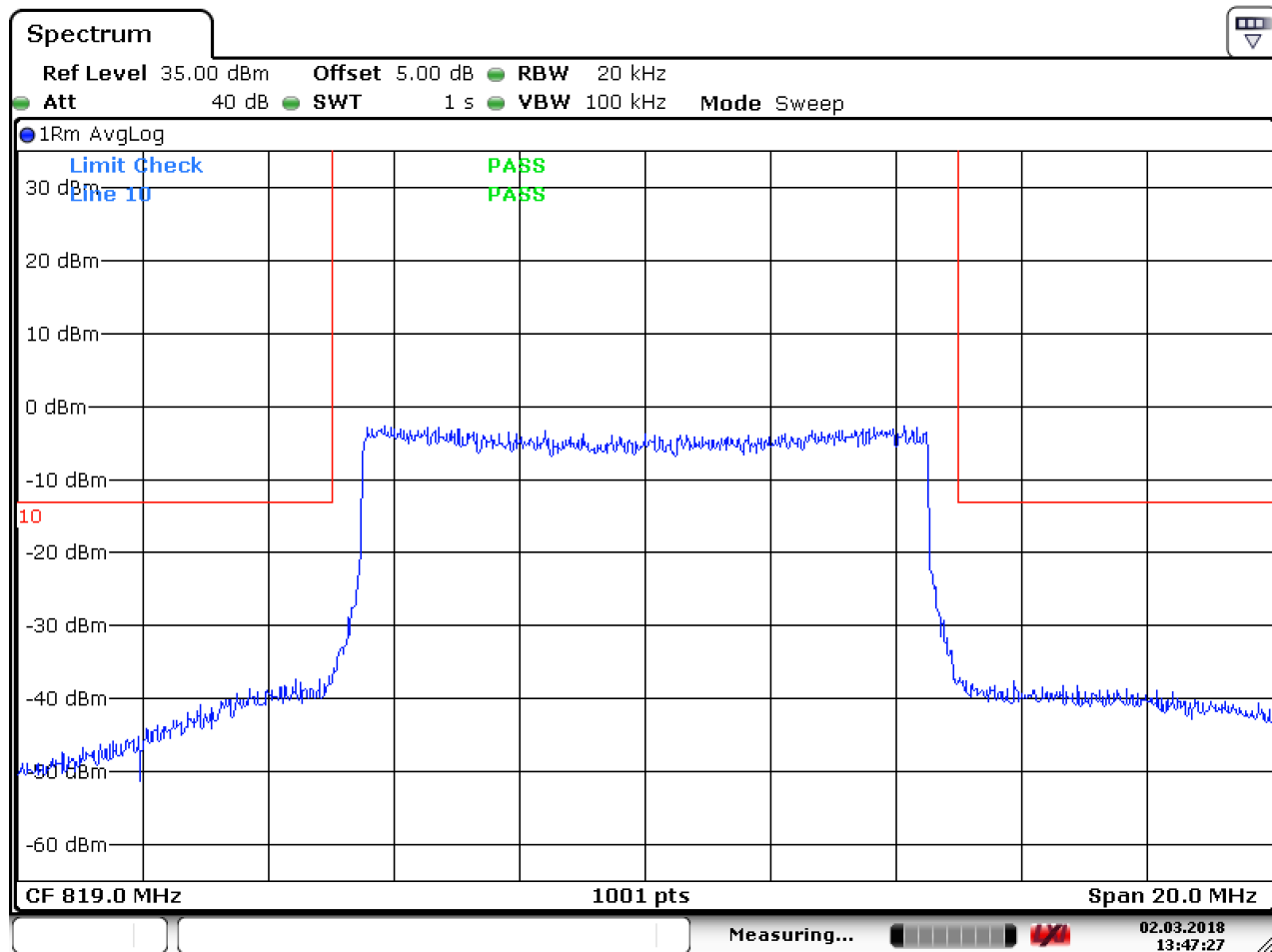
Date: 2.MAR.2018 13:47:27

6.1.1.12   Test Mode = LTE/TM3 10MHz

6.1.1.12.1   Test Channel = LCH/ MCH/HCH

6.1.1.12.1.1   Test RB=1RB#0
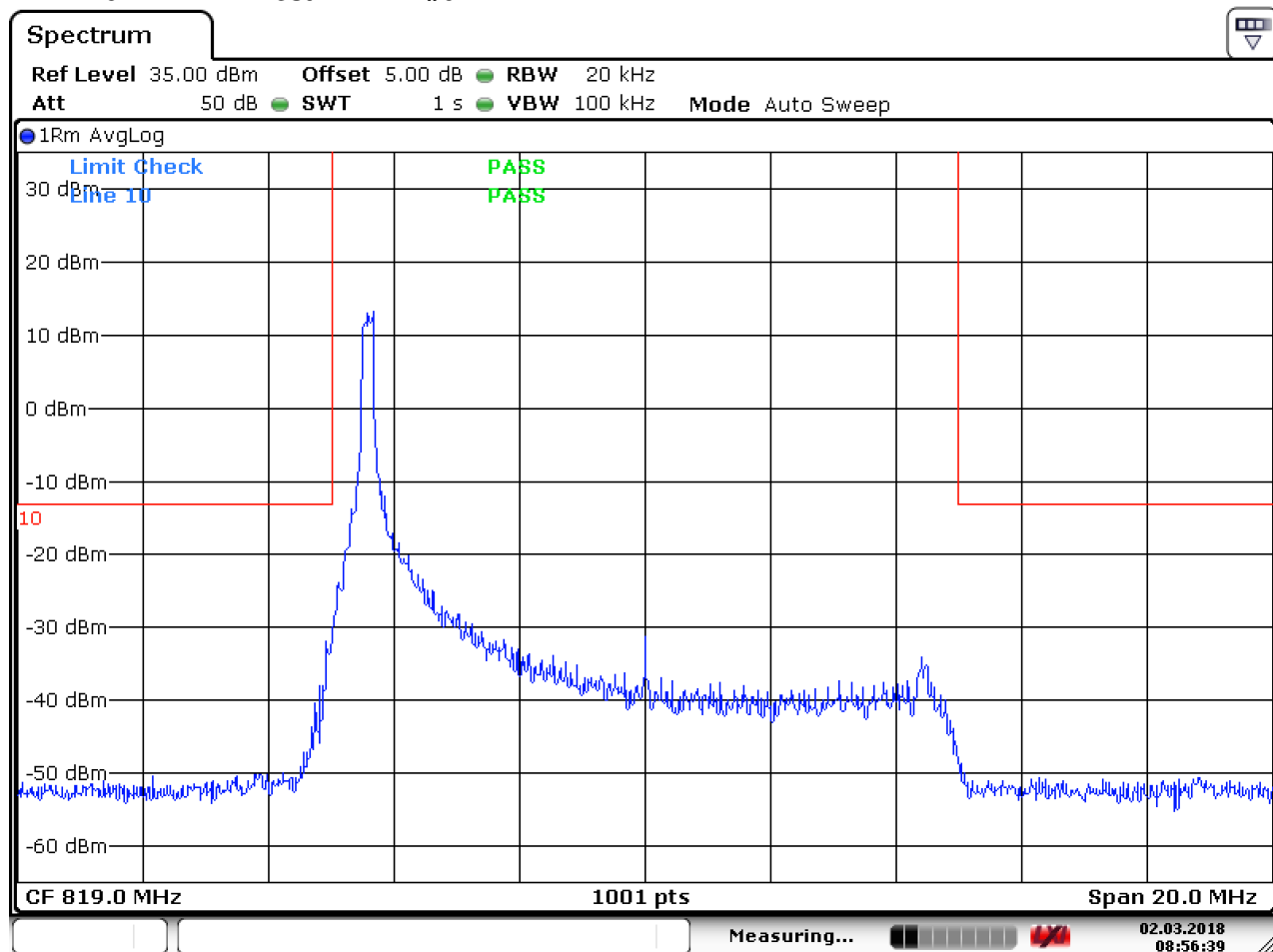
Date: 2.MAR.2018 08:56:39

6.1.1.12.1.2 Test RB=1RB#49

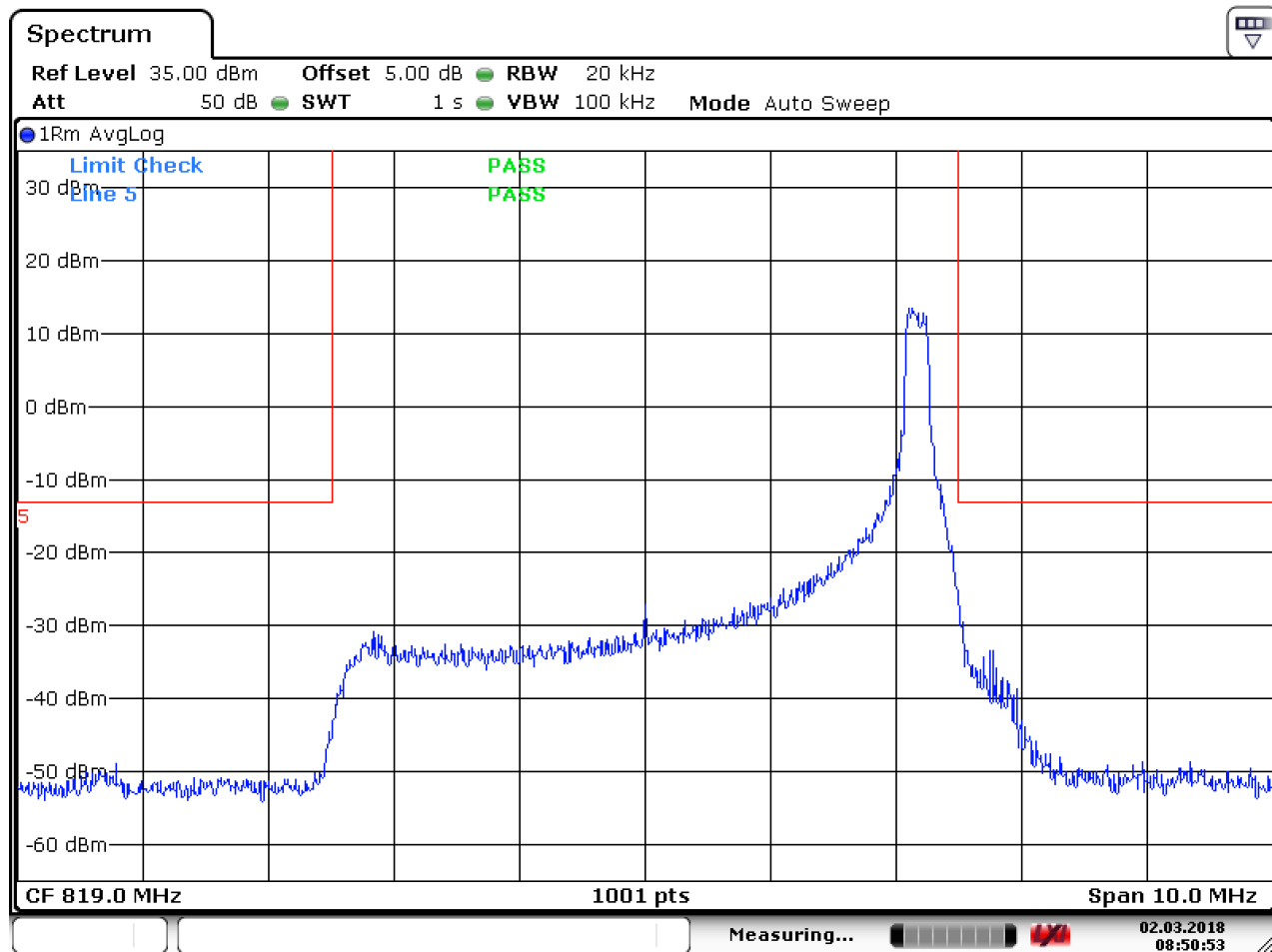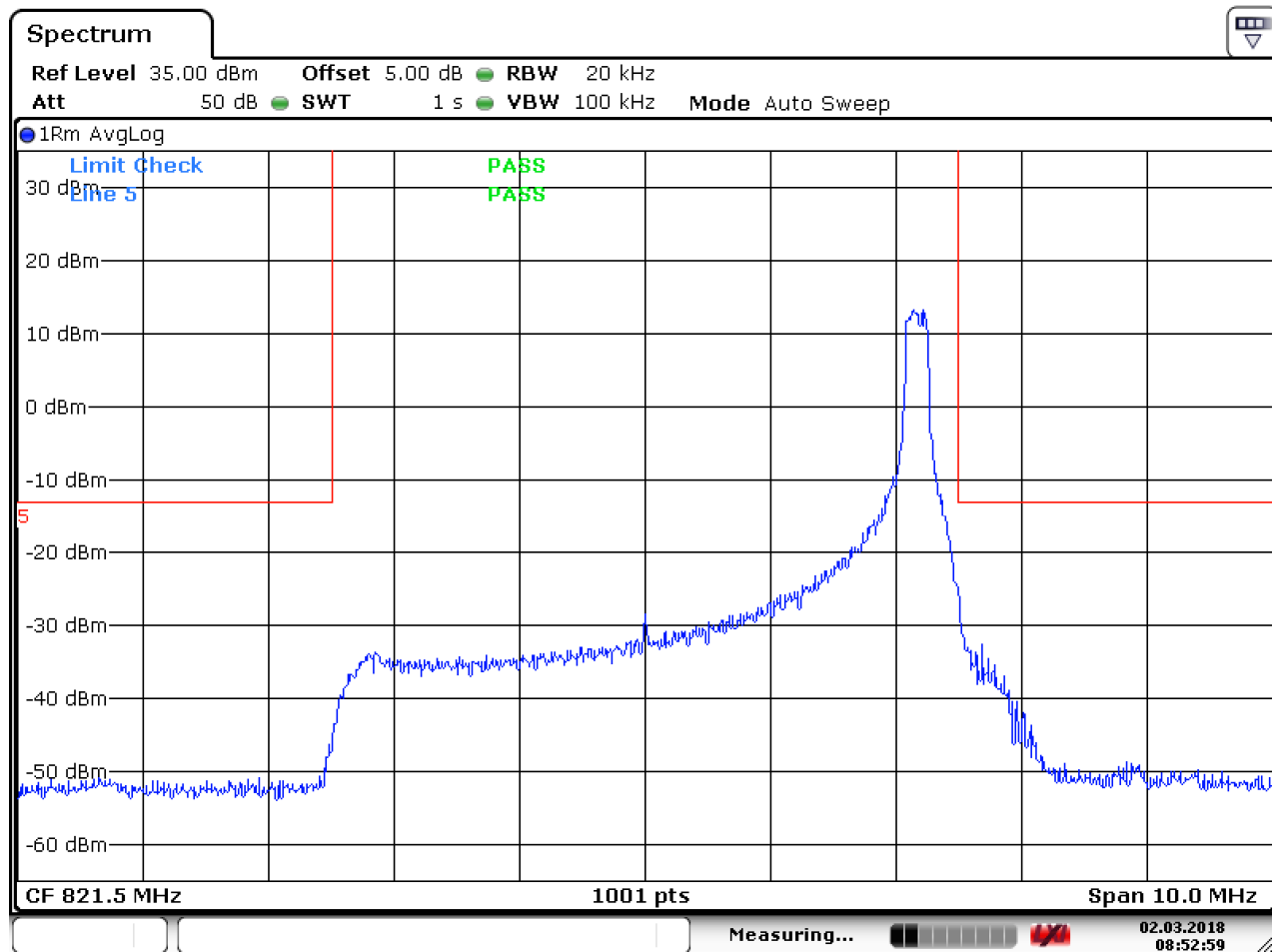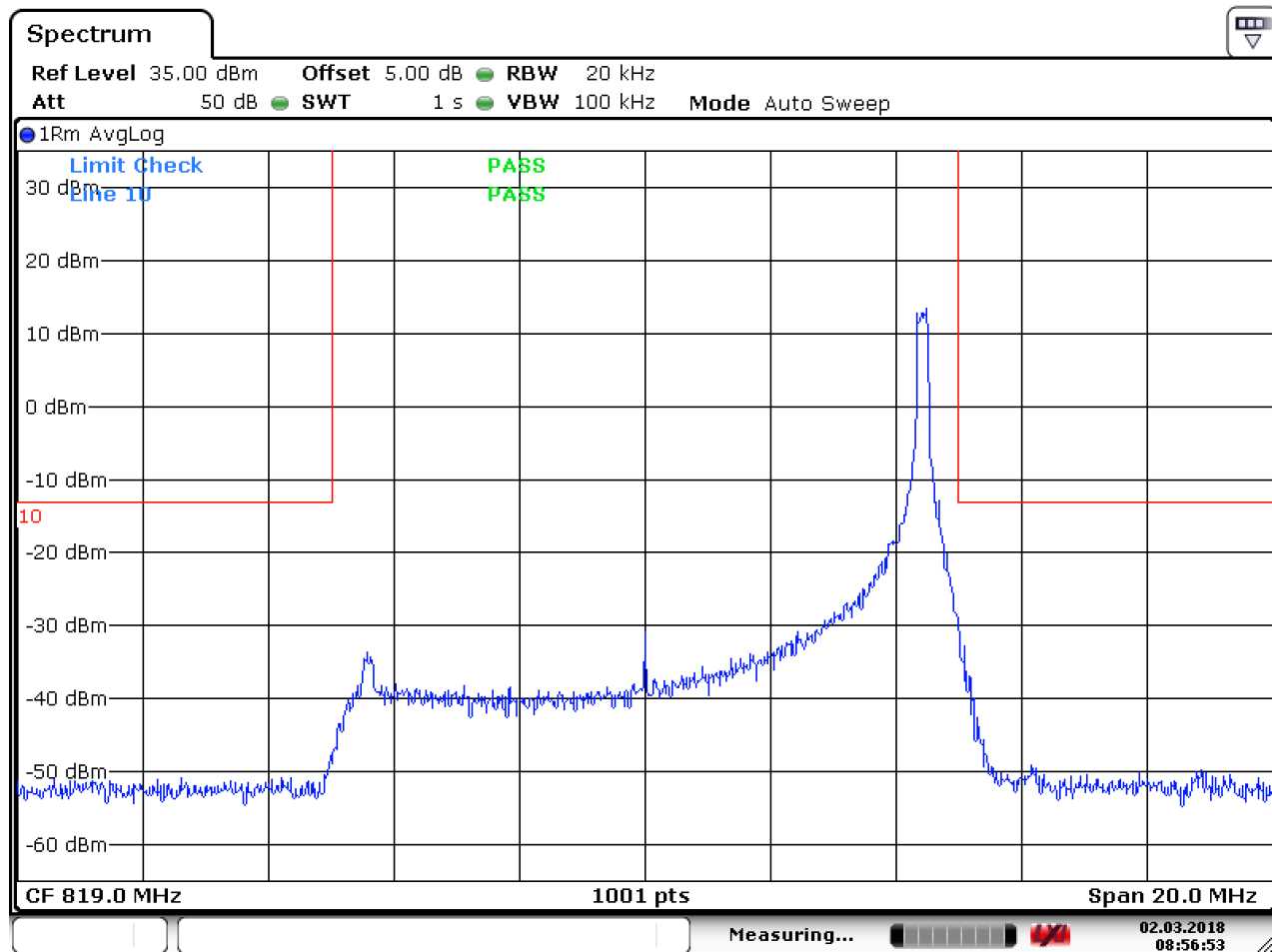
Date: 2.MAR.2018 08:56:54

6.1.1.12.1.3 Test RB=50RB
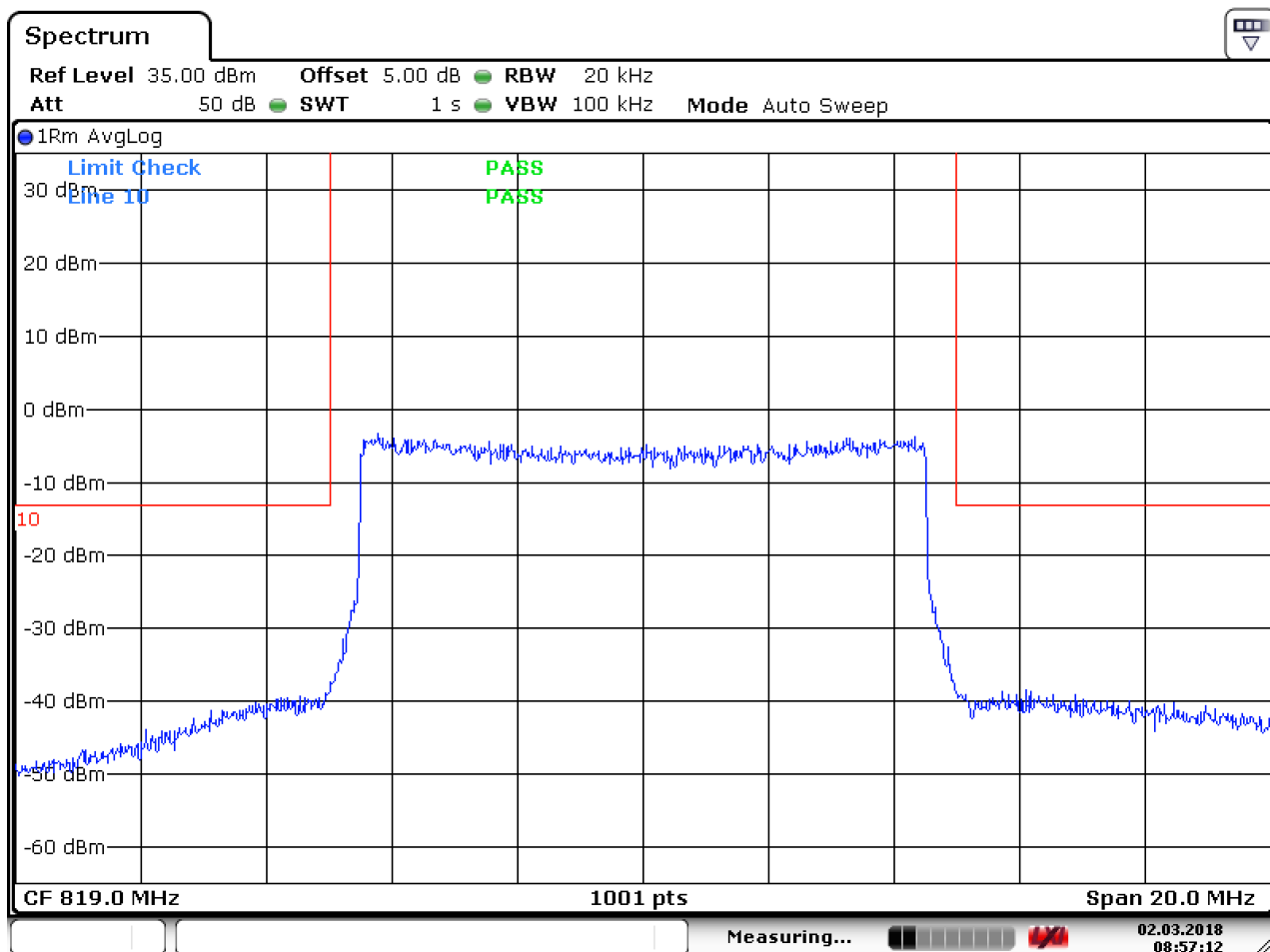
Date: 2.MAR.2018 08:57:11

7   Spurious Emission at Antenna Terminal

NOTE: For the averaged unwanted emissions measurements, the measurement points in each sweep is greater than twice the Span/RBW in order to ensure bin-to-bin spacing of < RBW/2 so that narrowband signals are not lost between frequency bins. As to the present test item, the "Measurement Points = k * (Span / RBW)" with k between 4 and 5, which results in an acceptable level error of less than 0.5 dB.

Part I - Test Plots

7.1 For LTE

7.1.1.1   Test Mode = LTE / TM1 10MHz RB1#0

7.1.1.1.1   Test Channel = LCH/MCH/HCH

Date: 2.MAR.2018 07:28:18

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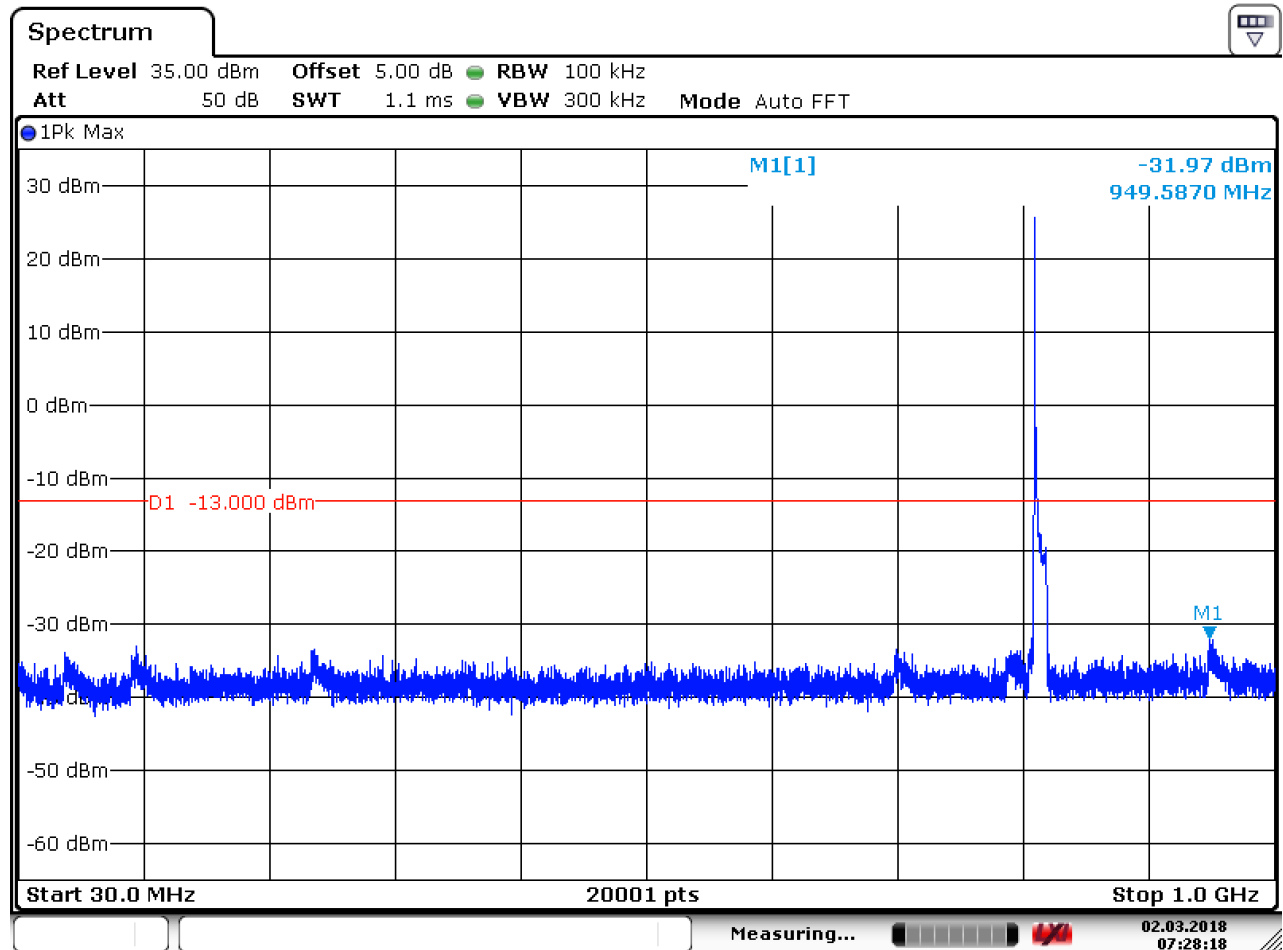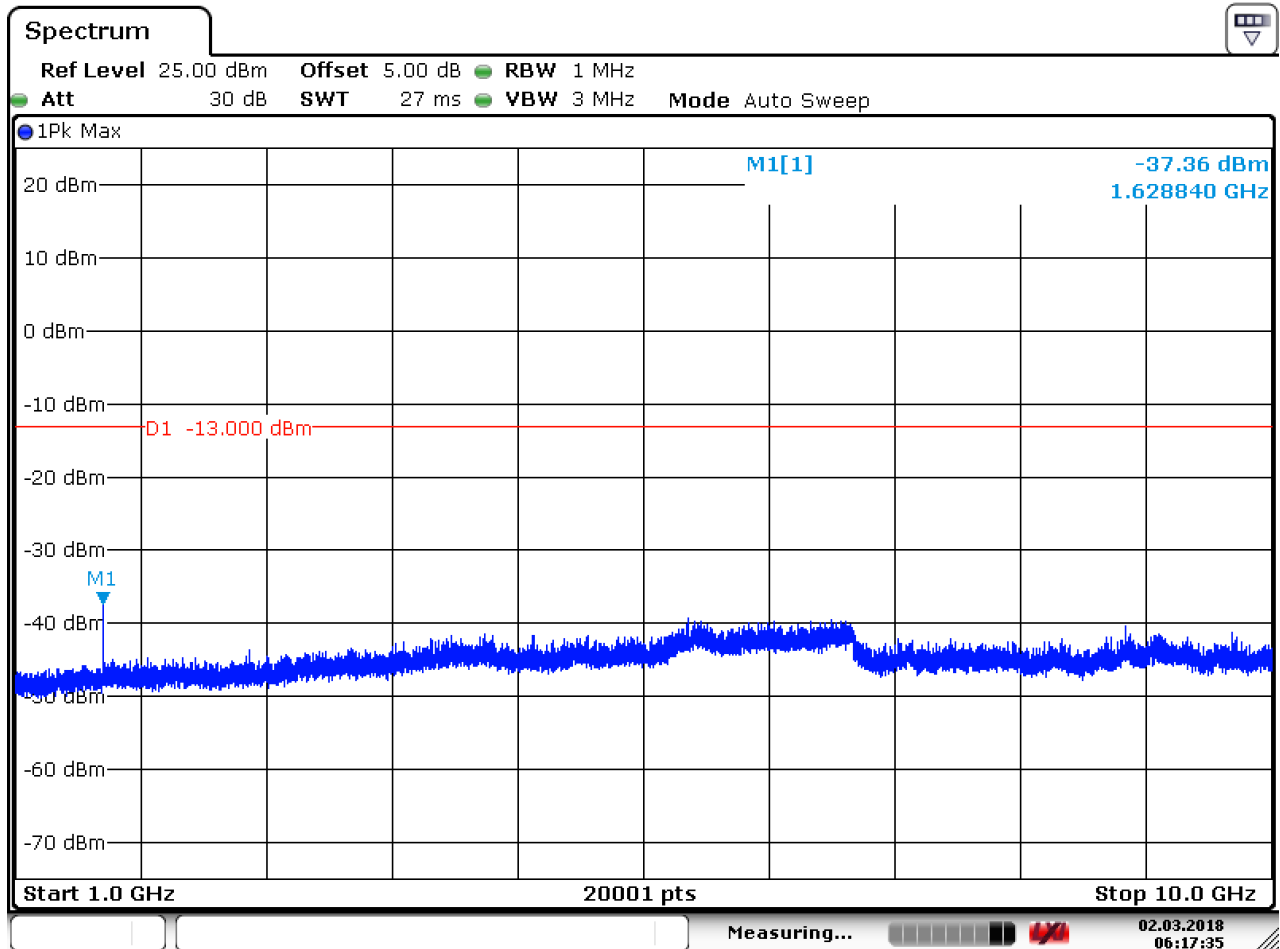
Date: 2.MAR.2018 06:17:35

8 Field Strength of Spurious Radiation

8.1 For LTE

8.1.1 Test Band = LTE band26

Diversity antenna

8.1.1.1   Test Mode =LTE/TM1 10MHz RB1#0

8.1.1.1.1   Test Channel = LCH/MCH/HCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
40.173333	-78.04	-13.00	65.04	Vertical
72.606667	-73.59	-13.00	60.59	Vertical
1103.000000	-66.36	-13.00	53.36	Vertical
2608.000000	-58.15	-13.00	45.15	Vertical
4211.432500	-67.13	-13.00	54.13	Vertical
9265.837500	-64.02	-13.00	51.02	Vertical
62.946667	-77.05	-13.00	64.05	Horizontal
74.006667	-80.04	-13.00	67.04	Horizontal
620.912500	-78.77	-13.00	65.77	Horizontal
1673.500000	-65.05	-13.00	52.05	Horizontal
3955.012500	-68.35	-13.00	55.35	Horizontal
7917.412500	-63.99	-13.00	50.99	Horizontal

Main antenna

8.1.1.2   Test Mode =LTE/TM1 10MHz RB1#0

8.1.1.2.1   Test Channel = LCH/MCH/HCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
69.526667	-82.05	-13.00	69.05	Vertical
621.508333	-80.47	-13.00	67.47	Vertical
1630.500000	-64.27	-13.00	51.27	Vertical
2710.000000	-57.47	-13.00	44.47	Vertical
4461.037500	-67.43	-13.00	54.43	Vertical
7235.400000	-64.62	-13.00	51.62	Vertical
56.553333	-77.93	-13.00	64.93	Horizontal
171.633333	-84.66	-13.00	71.66	Horizontal
1103.000000	-66.44	-13.00	53.44	Horizontal
4298.212500	-66.47	-13.00	53.47	Horizontal
6551.925000	-64.19	-13.00	51.19	Horizontal
9220.500000	-63.28	-13.00	50.28	Horizontal

NOTE:

1) All modes are tested,but the data presented above is the worst case.the disturbance above 13GHz and below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.

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9　Frequency Stability

9.1　Frequency Error VS. Voltage

Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
LTE band26	LTE/TM1 10MHz	LCH/MCH/HCH	TN	VL	-2.65	-0.00323	PASS
				VN	1.41	0.00181	PASS
				VH	-5.22	-0.00624	PASS
	LTE/TM2 10MHz	LCH/MCH/HCH	TN	VL	-4.32	-0.00517	PASS
				VN	-3.34	-0.00404	PASS
				VH	-4.12	-0.00495	PASS
	LTE/TM3 10MHz	LCH/MCH/HCH	TN	VL	4.03	0.00482	PASS
				VN	5.02	0.00603	PASS
				VH	-0.53	-0.00067	PASS

9.2　Frequency Error VS. Temperature

Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
LTE band26	LTE/TM1 10MHz	LCH/MCH/HCH	VN	-30	-4.38	-0.005284	PASS
				-20	-2.61	-0.003132	PASS
				-10	-2.48	-0.00287	PASS
				0	1.23	0.00148	PASS
				10	1.21	0.00144	PASS
				20	3.91	0.00470	PASS
				30	-0.66	-0.00077	PASS
				40	-2.78	-0.00337	PASS
				50	-6.21	-0.00747	PASS

Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
LTE band26	LTE/TM2 10MHz	LCH/MCH/HCH	VN	-30	-3.65	-0.00439	PASS
				-20	-2.46	-0.00296	PASS
				-10	1.27	0.00153	PASS
				0	2.24	0.00268	PASS
				10	1.78	0.00211	PASS
				20	-0.84	-0.00098	PASS
				30	-3.86	-0.00463	PASS
				40	2.27	0.00272	PASS
				50	-4.83	-0.00580	PASS

Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
LTE band26	LTE/TM3 10MHz	LCH/MCH/HCH	VN	-30	-3.67	-0.00441	PASS
				-20	-2.44	-0.00293	PASS
				-10	1.89	0.00227	PASS
				0	2.35	0.00283	PASS
				10	1.78	0.00214	PASS
				20	-0.89	-0.00107	PASS
				30	-3.83	-0.00461	PASS
				40	2.45	0.00295	PASS
				50	-4.38	-0.00527	PASS

The End