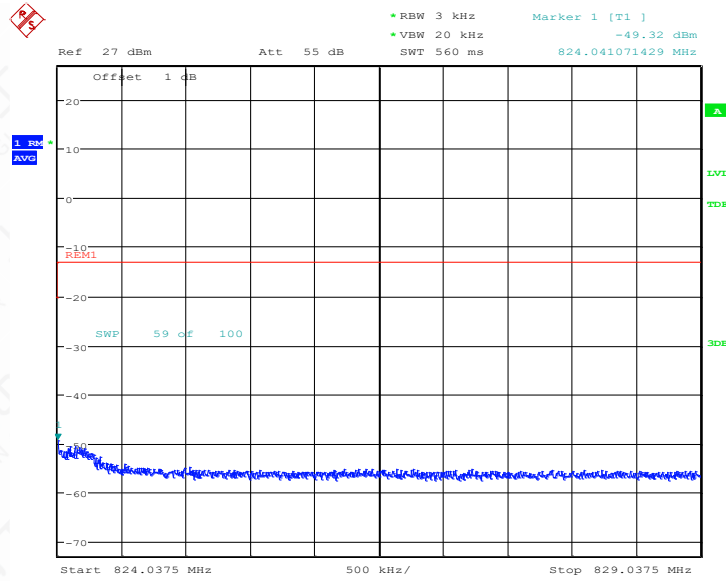


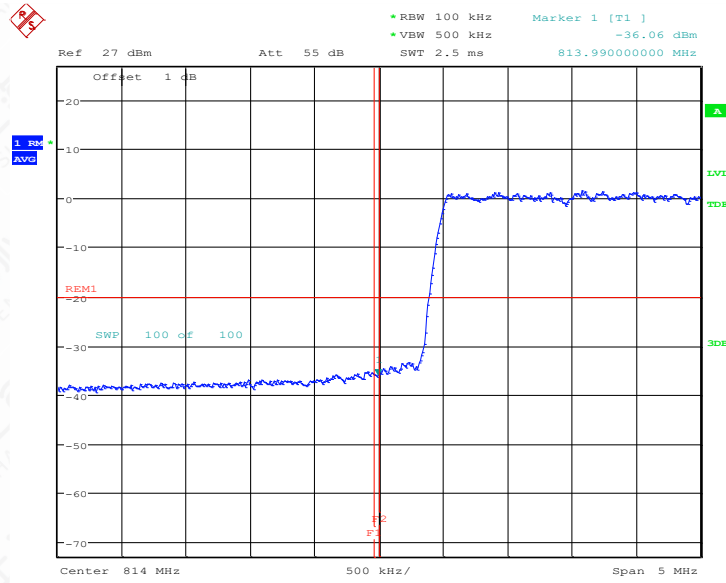
Date: 7.FEB.2023 15:30:08

HIGH BAND EDGE BLOCK-1RB-HIGH_offset



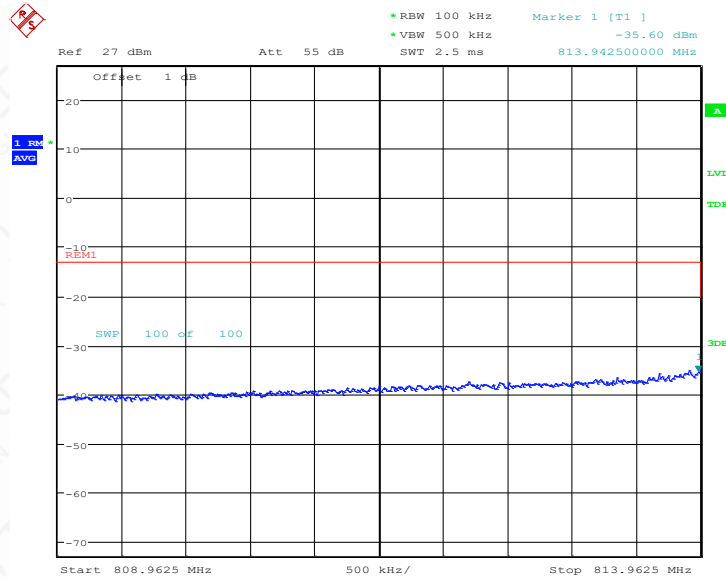
Date: 7.FEB.2023 15:31:56

LOW BAND EDGE BLOCK-10M-100%RB



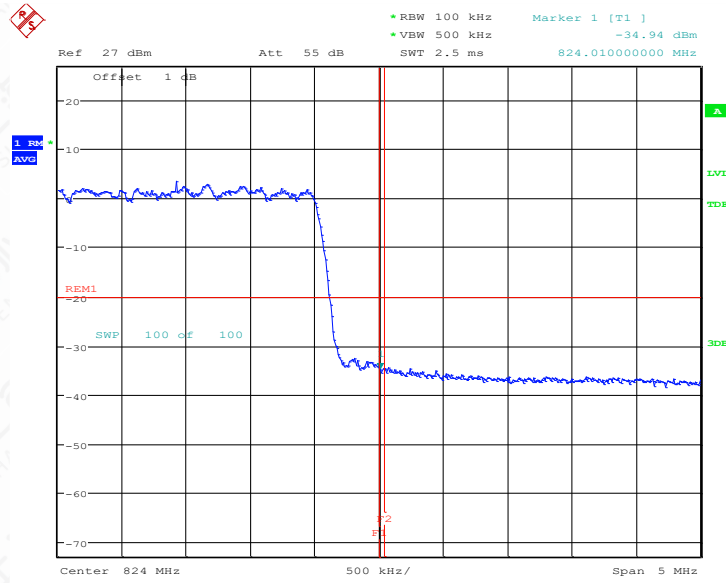
Date: 7.FEB.2023 15:27:56

LOW BAND EDGE BLOCK-10M-100%RB



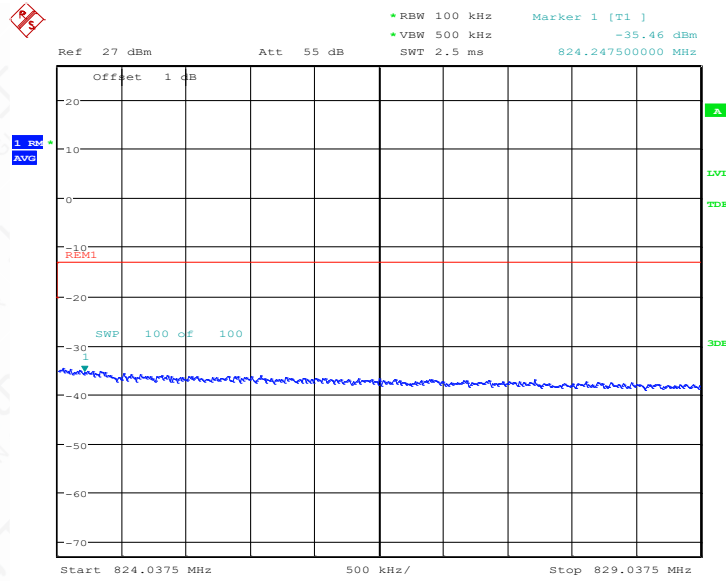
Date: 7.FEB.2023 15:28:39

HIGH BAND EDGE BLOCK-10M-100%RB



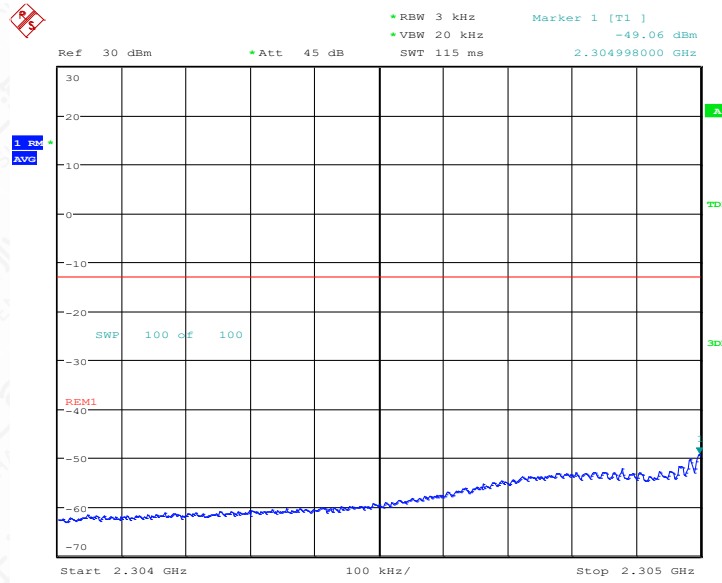
Date: 7.FEB.2023 15:32:40

HIGH BAND EDGE BLOCK-10M-100%RB



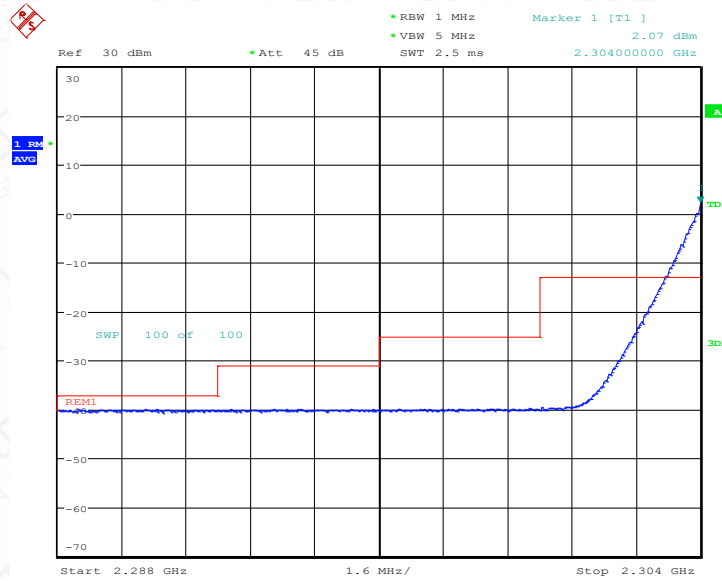
Date: 7.FEB.2023 15:33:23

Band 30
LOW BAND EDGE BLOCK-1RB-LOW_offset



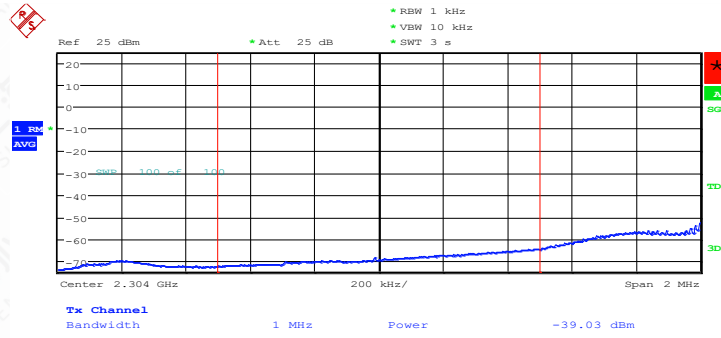
Date: 20.FEB.2023 09:14:01

LOW BAND EDGE BLOCK-1RB-LOW_offset



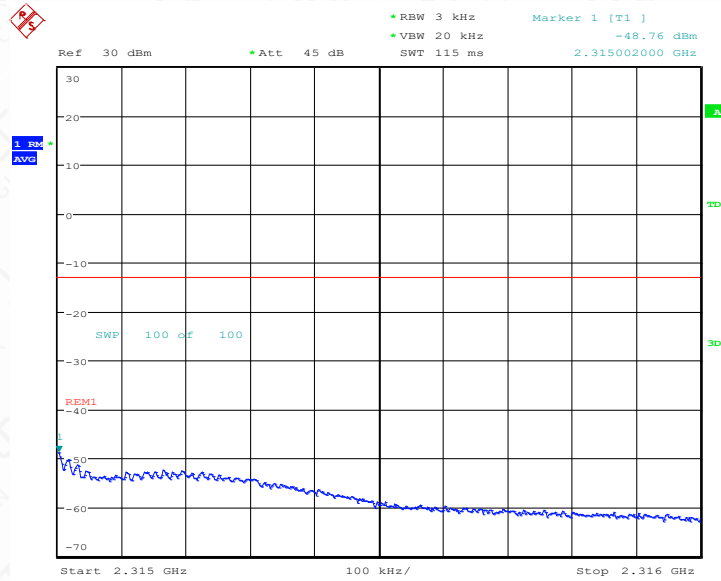
Date: 20.FEB.2023 09:14:45

Channel power



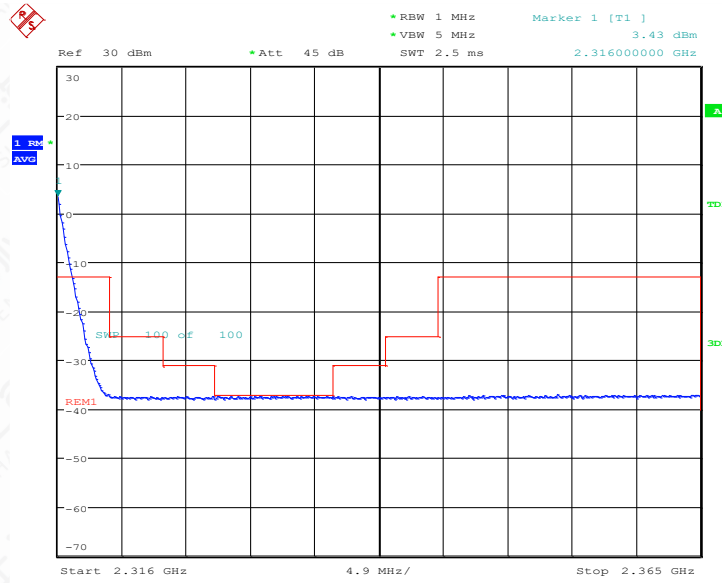
Date: 20.FEB.2023 09:19:51

HIGH BAND EDGE BLOCK-1RB-HIGH_offset



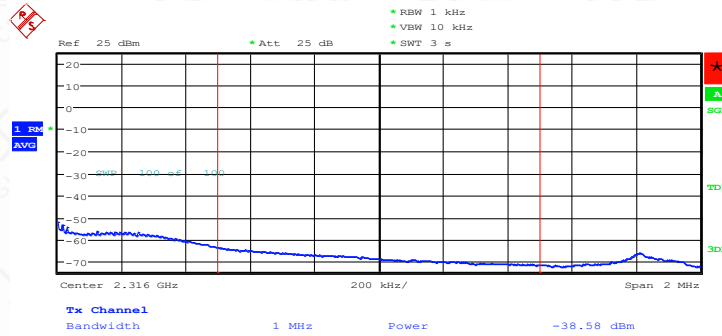
Date: 20.FEB.2023 09:30:10

HIGH BAND EDGE BLOCK-1RB-HIGH_offset



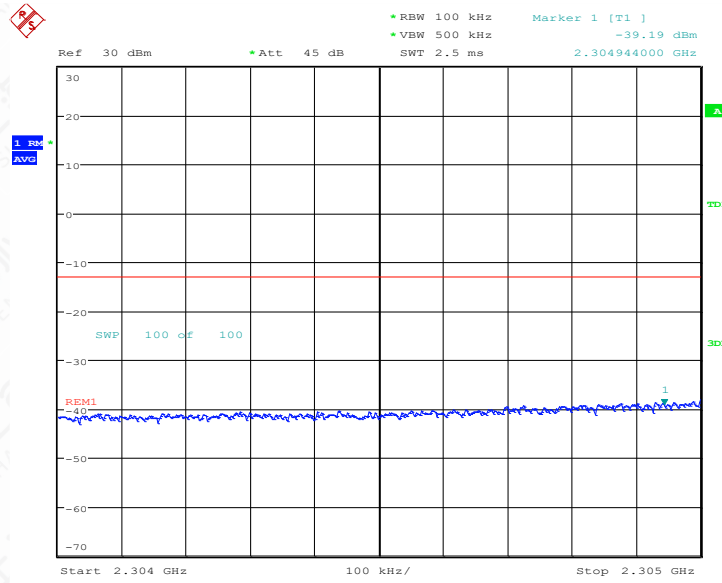
Date: 20.FEB.2023 09:30:55

Channel power



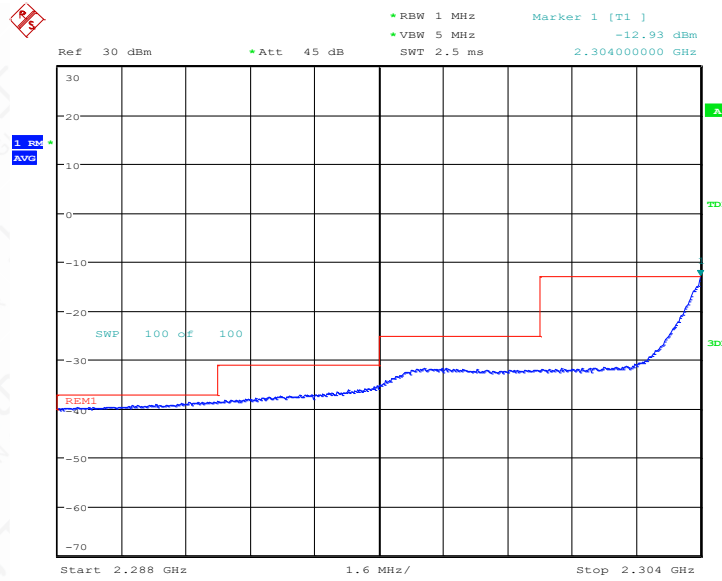
Date: 20.FEB.2023 09:36:03

LOW BAND EDGE BLOCK-10M-100%RB



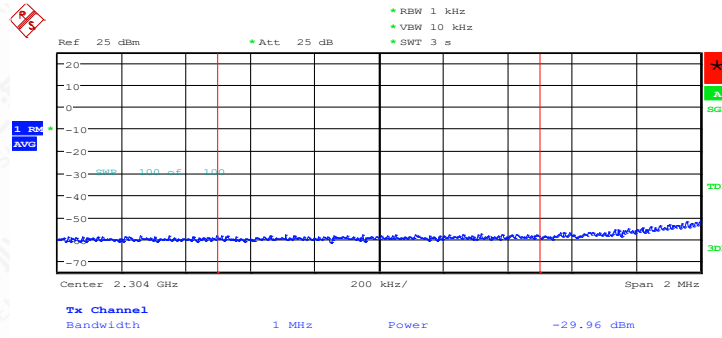
Date: 20.FEB.2023 09:21:51

LOW BAND EDGE BLOCK-10M-100%RB



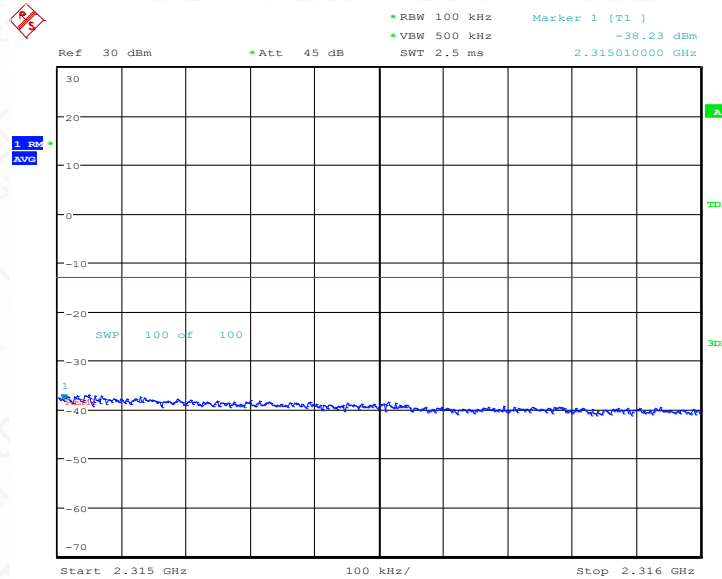
Date: 20.FEB.2023 09:22:36

Channel power



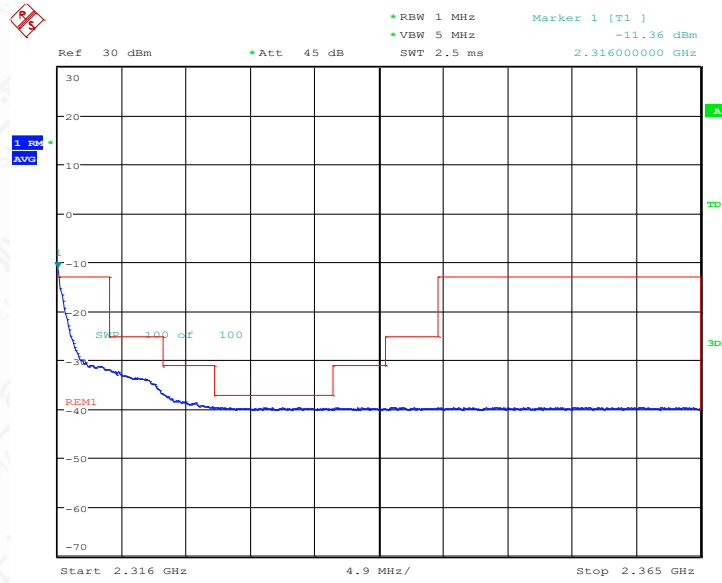
Date: 20.FEB.2023 09:27:41

HIGH BAND EDGE BLOCK-10M-100%RB



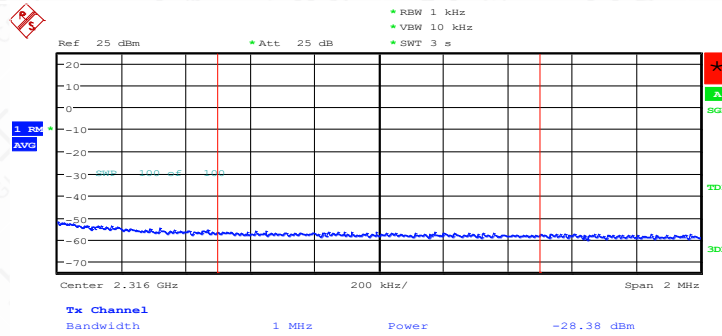
Date: 20.FEB.2023 09:37:12

HIGH BAND EDGE BLOCK-10M-100%RB



Date: 20.FEB.2023 09:37:57

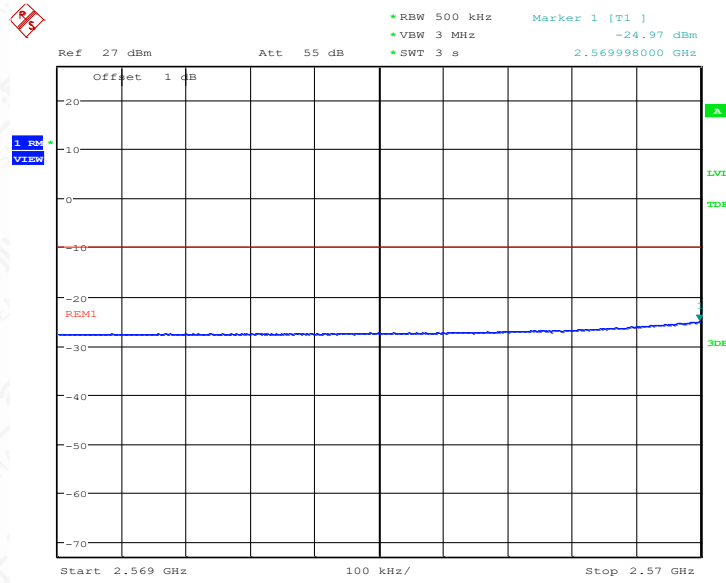
Channel power



Date: 20.FEB.2023 09:43:05

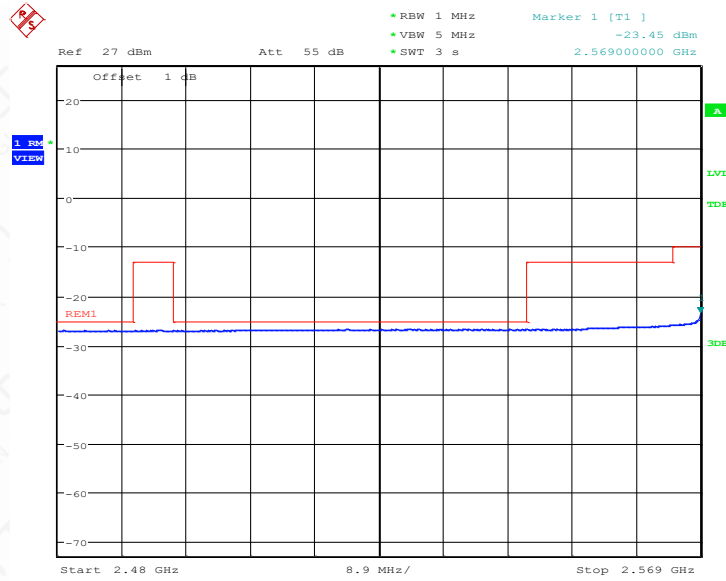
LTE band 38

LOW BAND EDGE BLOCK-20M-100%RB



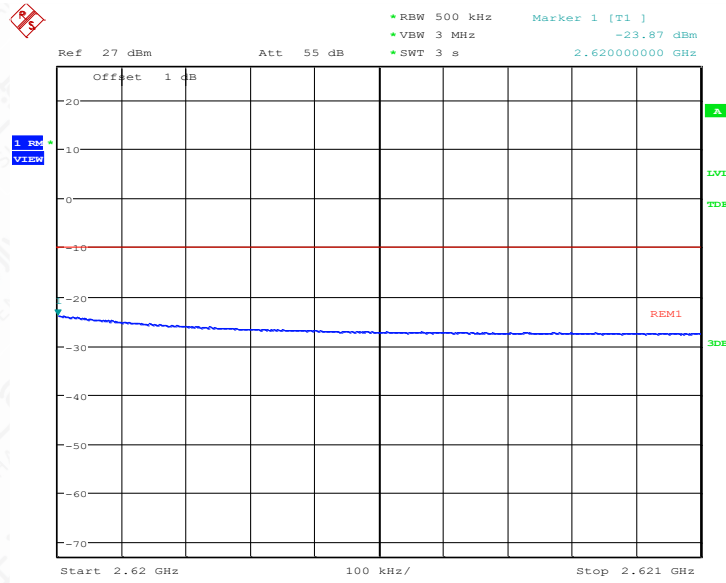
Date: 21.FEB.2023 16:20:49

LOW BAND EDGE BLOCK-20M-100%RB



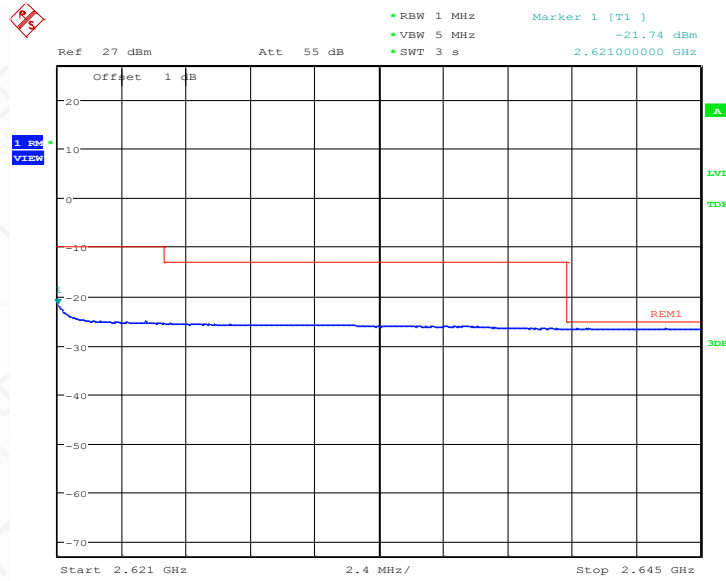
Date: 21.FEB.2023 16:21:31

HIGH BAND EDGE BLOCK-20M-100%RB



Date: 21.FEB.2023 16:22:20

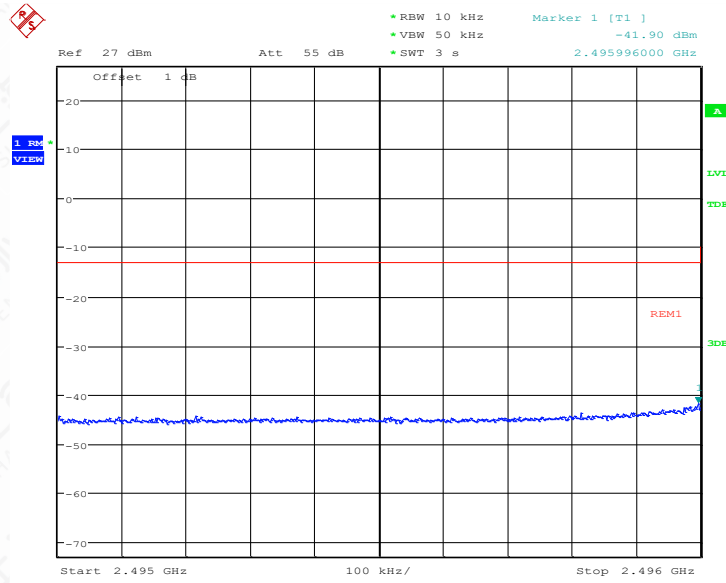
HIGH BAND EDGE BLOCK-20M-100%RB



Date: 21.FEB.2023 16:23:02

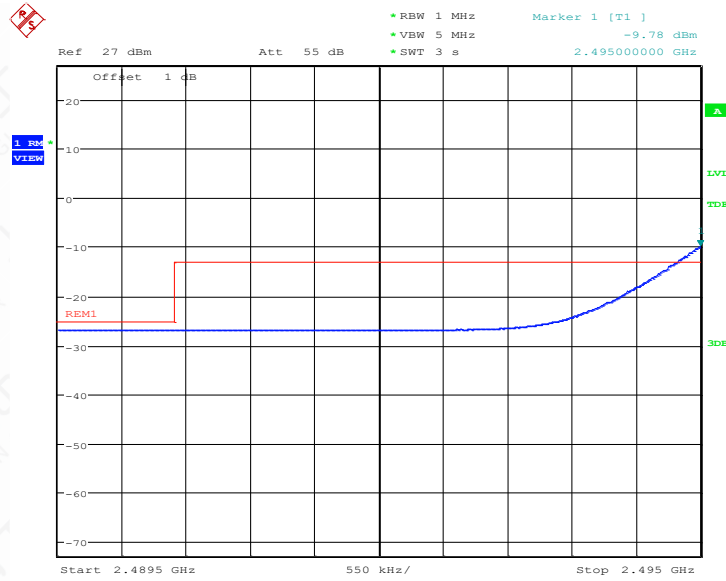
LTE band 41

LOW BAND EDGE BLOCK-1RB-LOW_offset



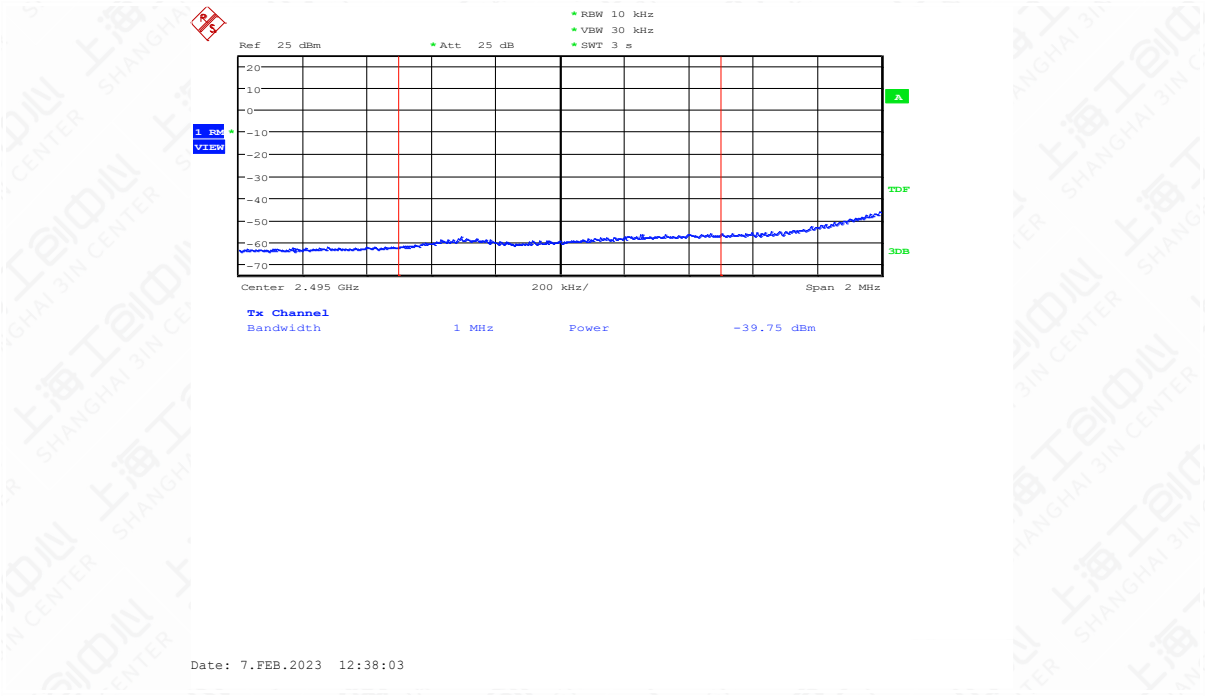
Date: 7.FEB.2023 12:36:56

LOW BAND EDGE BLOCK-1RB-LOW_offset

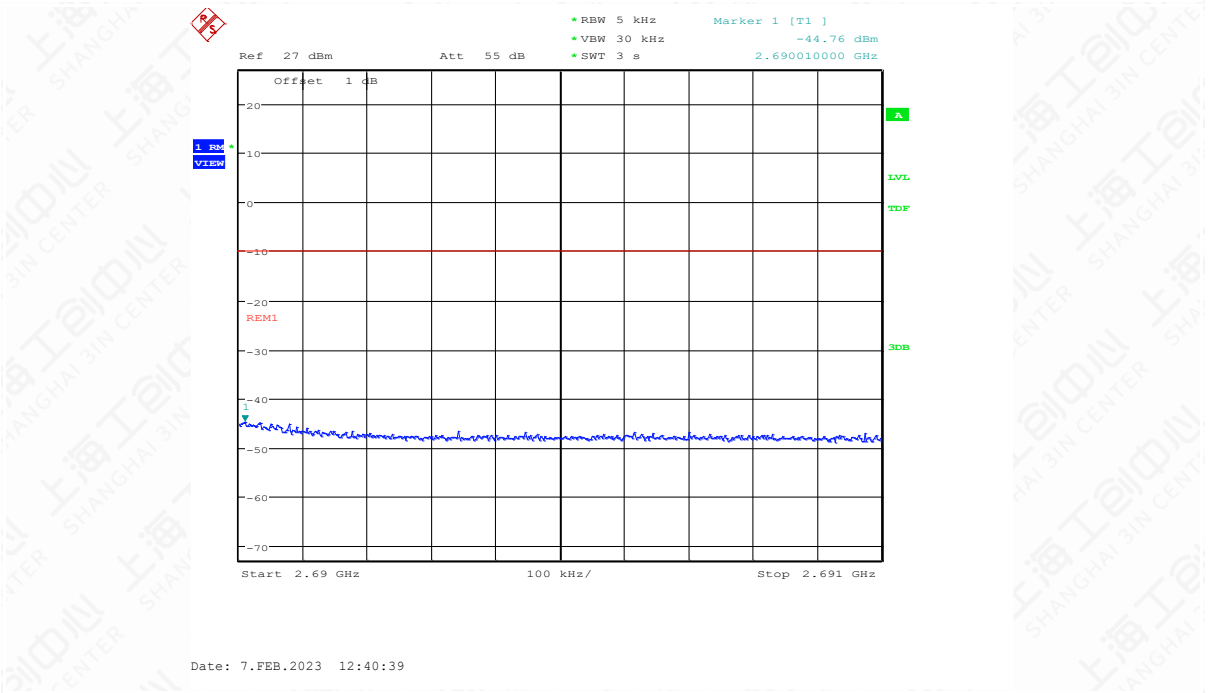


Date: 7.FEB.2023 12:37:38

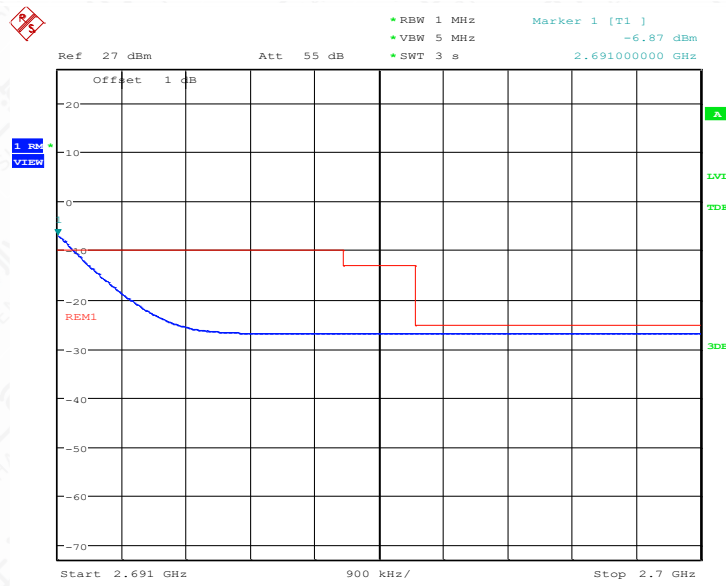
Channel power



HIGH BAND EDGE BLOCK-1RB-HIGH_offset

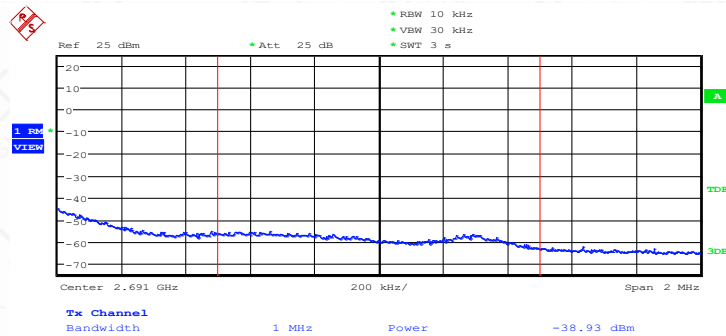


HIGH BAND EDGE BLOCK-1RB-HIGH_offset



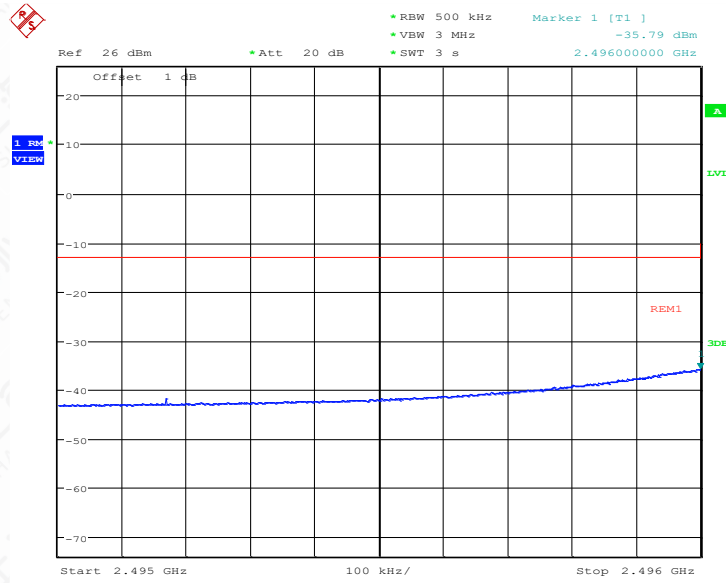
Date: 7.FEB.2023 12:41:23

Channel power



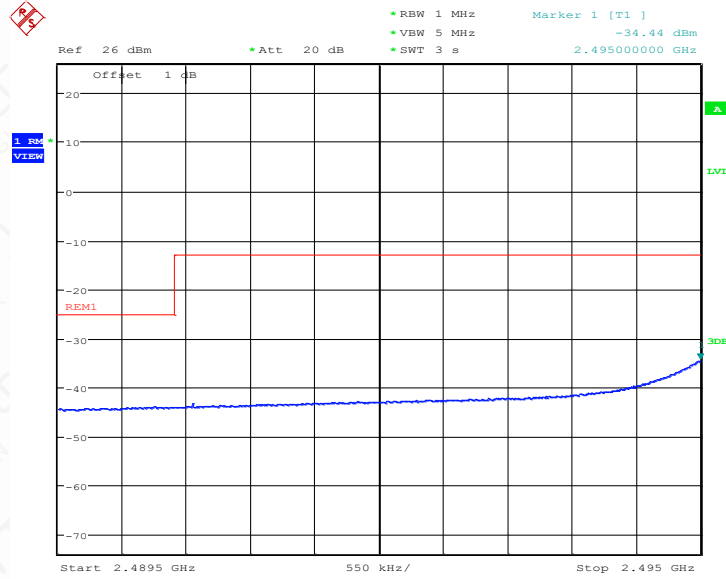
Date: 7.FEB.2023 12:41:49

LOW BAND EDGE BLOCK-20M-100%RB



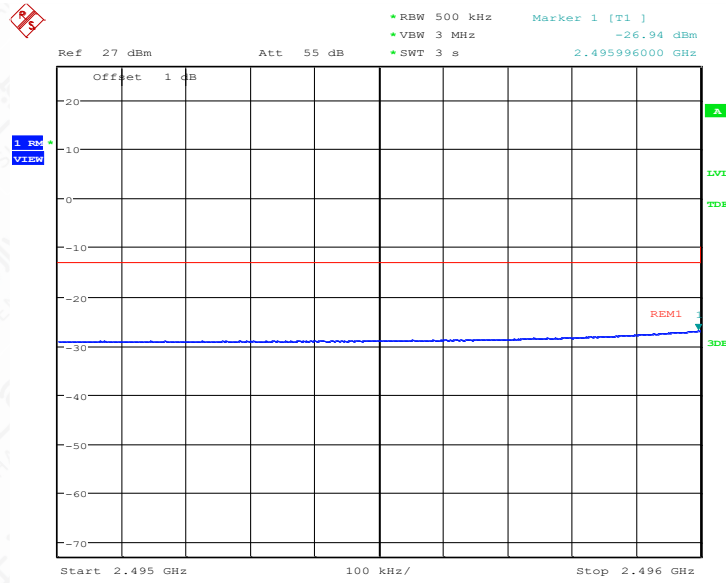
Date: 5.NOV.2022 00:45:39

LOW BAND EDGE BLOCK-20M-100%RB



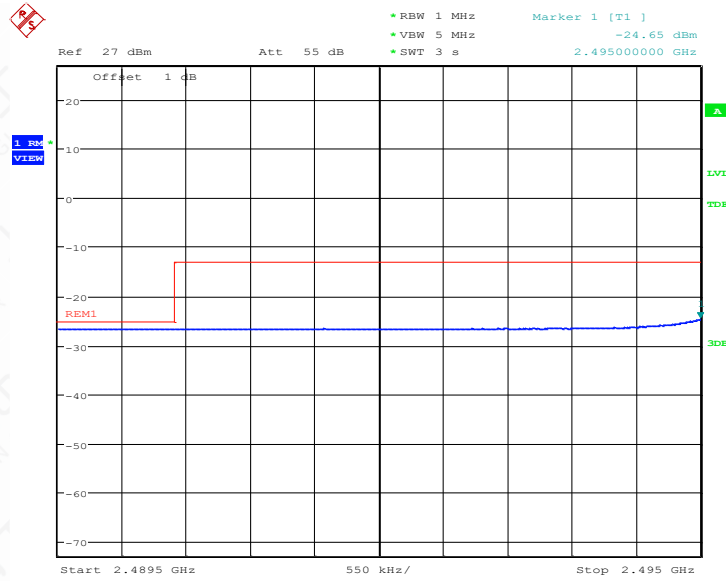
Date: 5.NOV.2022 00:46:22

LOW BAND EDGE BLOCK-20M-100%RB



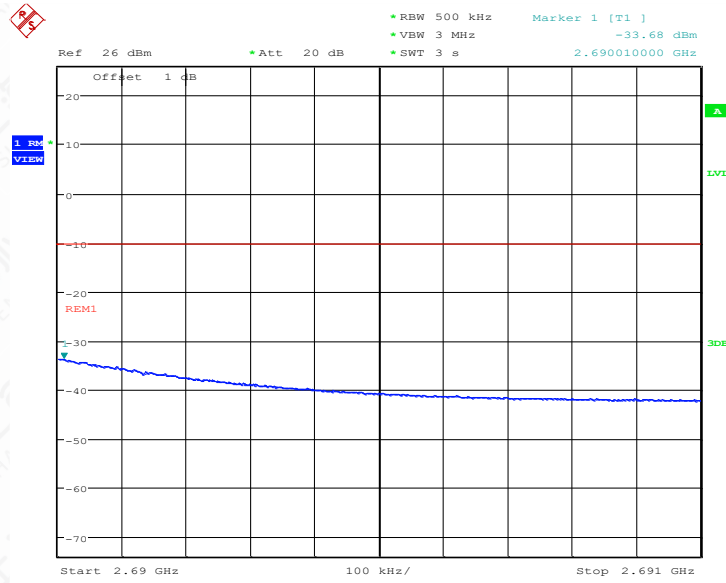
Date: 7.FEB.2023 12:38:47

LOW BAND EDGE BLOCK-20M-100%RB



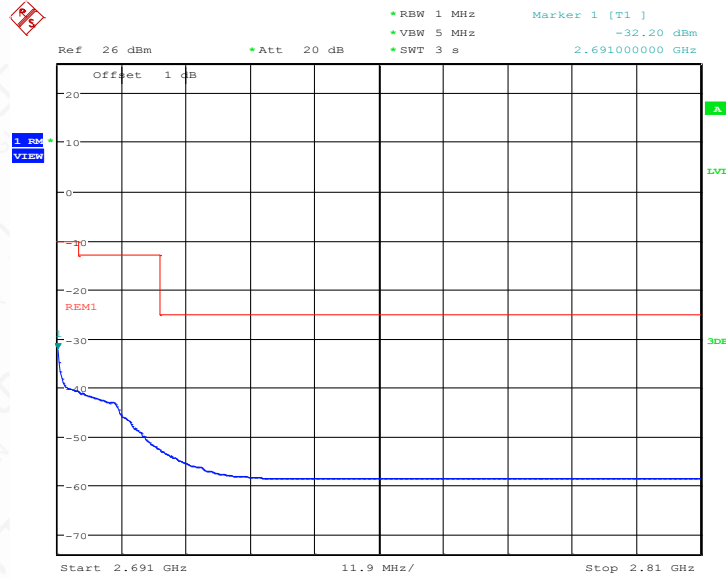
Date: 7.FEB.2023 12:39:31

HIGH BAND EDGE BLOCK-20M-100%RB



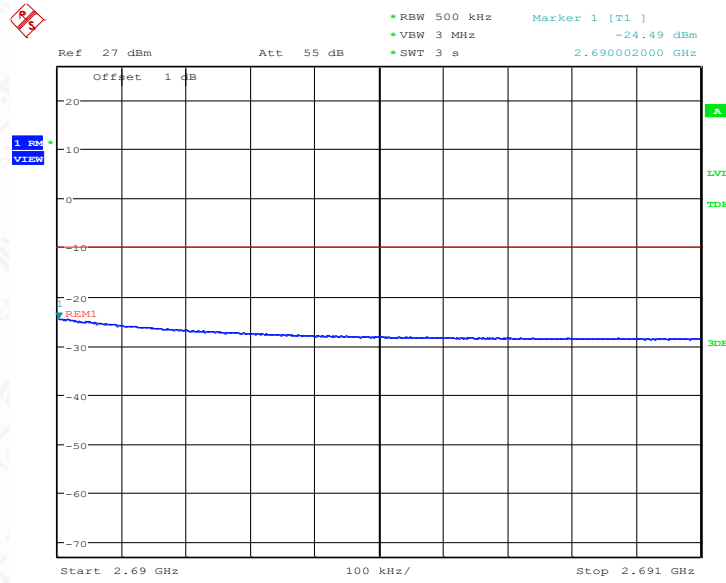
Date: 5.NOV.2022 00:47:12

HIGH BAND EDGE BLOCK-20M-100%RB



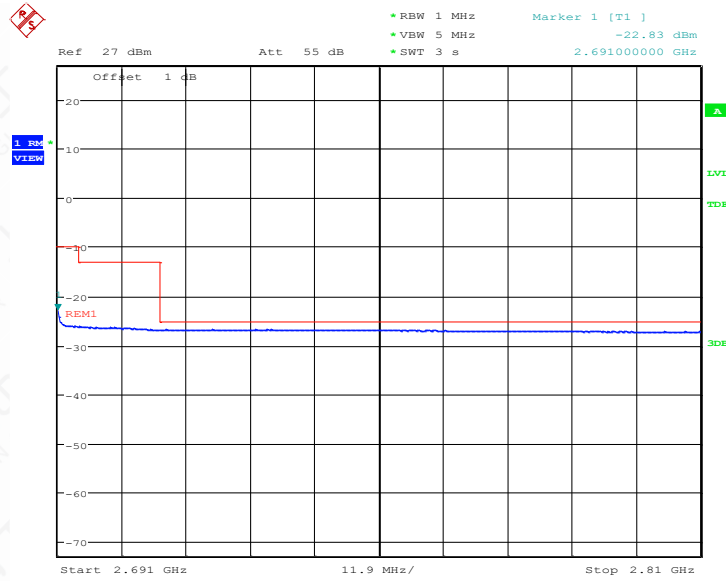
Date: 5.NOV.2022 00:47:54

HIGH BAND EDGE BLOCK-20M-100%RB



Date: 7.FEB.2023 12:42:33

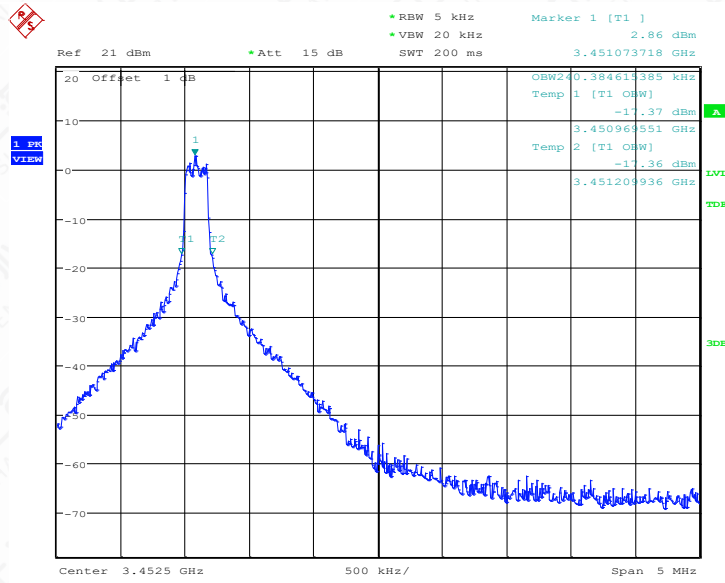
HIGH BAND EDGE BLOCK-20M-100%RB



Date: 7.FEB.2023 12:43:16

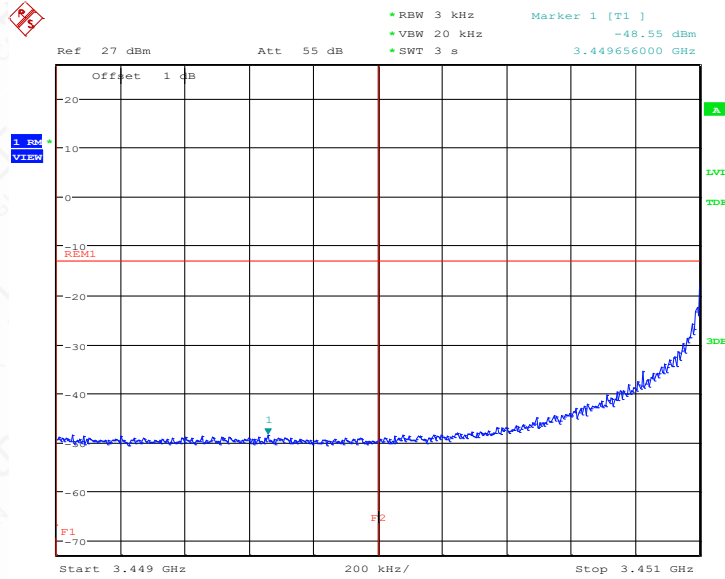
LTE band 42(part 27)

OBW: 1RB-LOW_offset



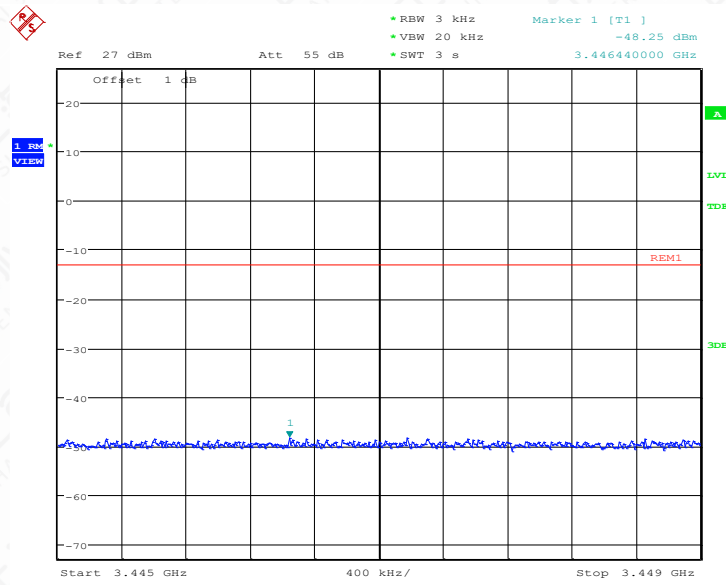
Date: 6.FEB.2023 17:13:06

LOW BAND EDGE BLOCK-1RB-LOW_offset



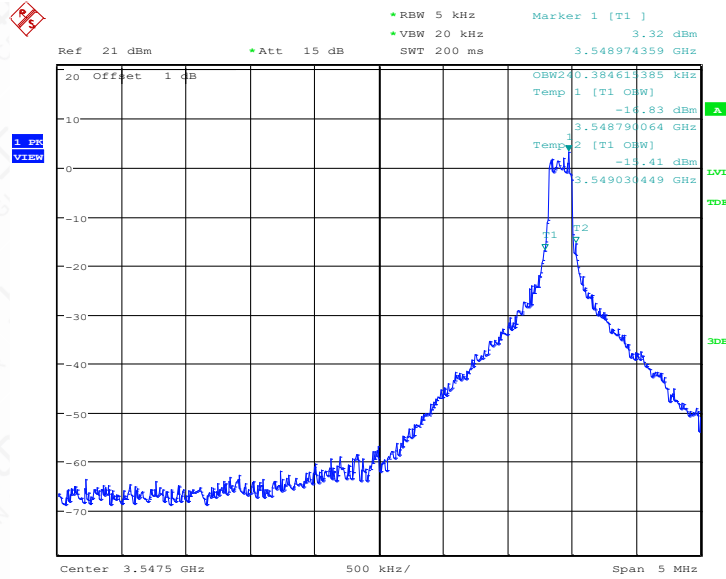
Date: 6.FEB.2023 17:13:51

LOW BAND EDGE BLOCK-1RB-LOW_offset



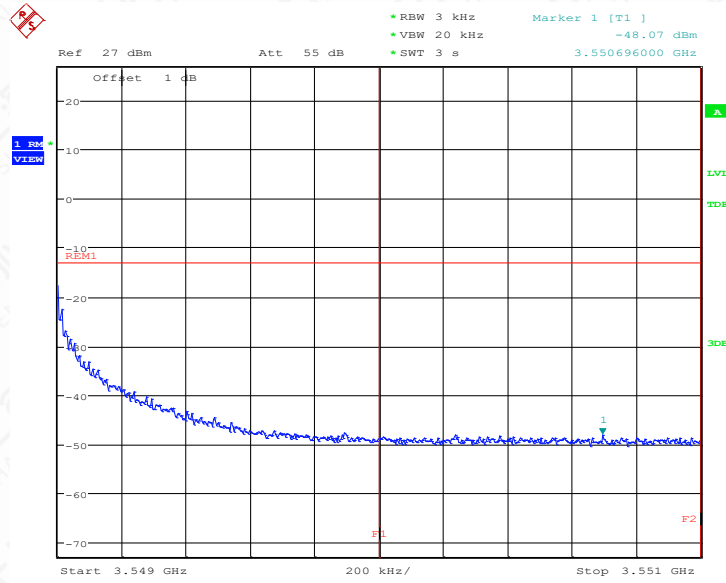
Date: 6.FEB.2023 17:14:34

OBW: 1RB-HIGH_offset



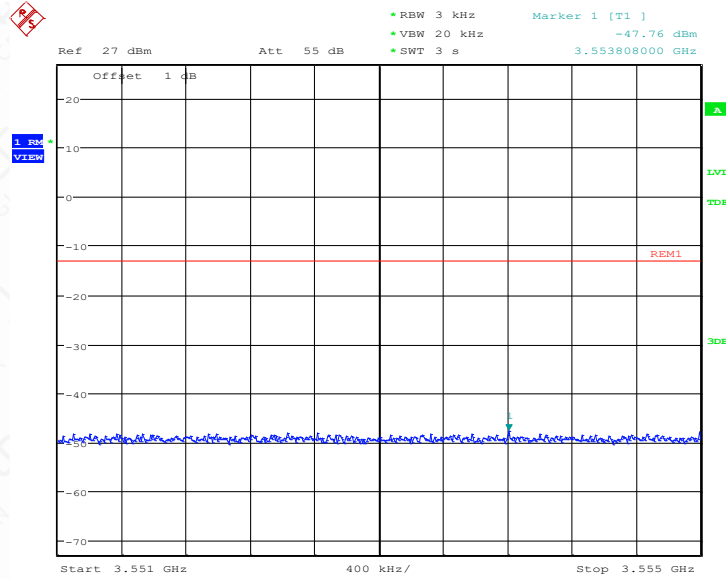
Date: 6.FEB.2023 17:16:30

HIGH BAND EDGE BLOCK-1RB-HIGH_offset



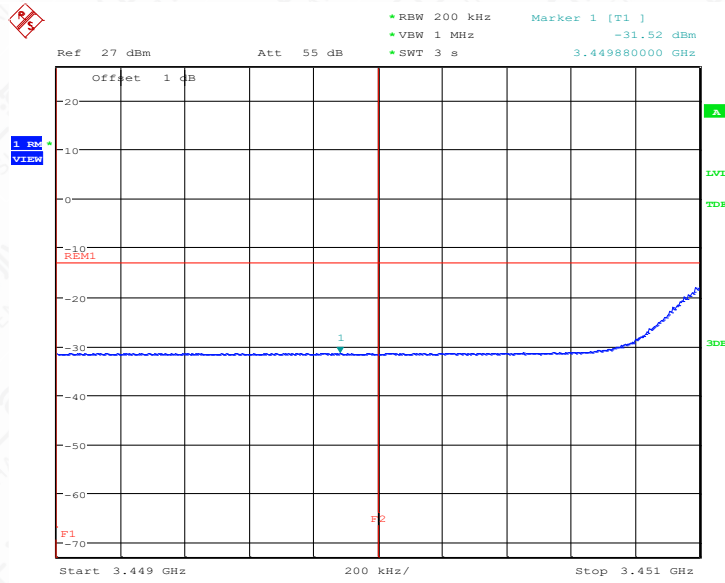
Date: 6.FEB.2023 17:17:14

HIGH BAND EDGE BLOCK-1RB-HIGH_offset



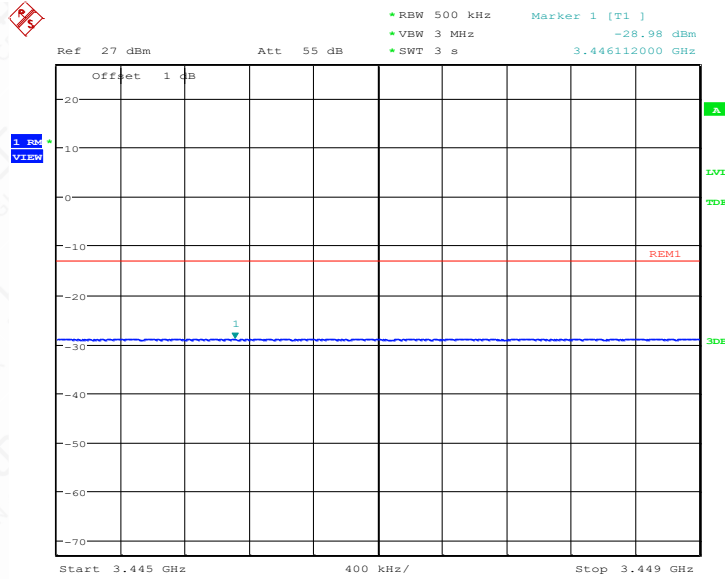
Date: 6.FEB.2023 17:17:58

LOW BAND EDGE BLOCK-20M-100%RB



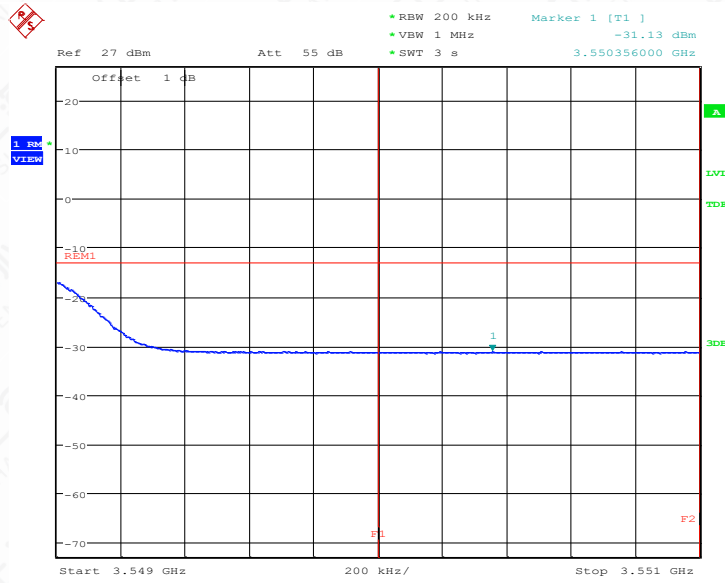
Date: 6.FEB.2023 17:15:20

LOW BAND EDGE BLOCK-20M-100%RB



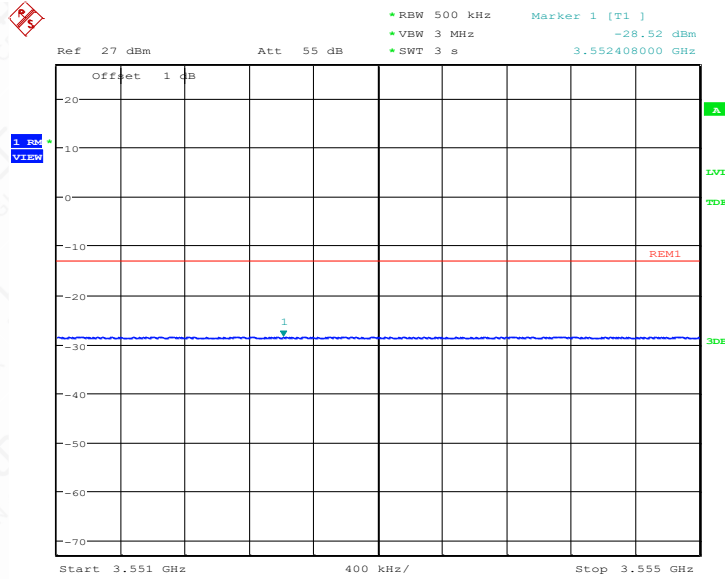
Date: 6.FEB.2023 17:16:04

HIGH BAND EDGE BLOCK-20M-100%RB



Date: 6.FEB.2023 17:18:44

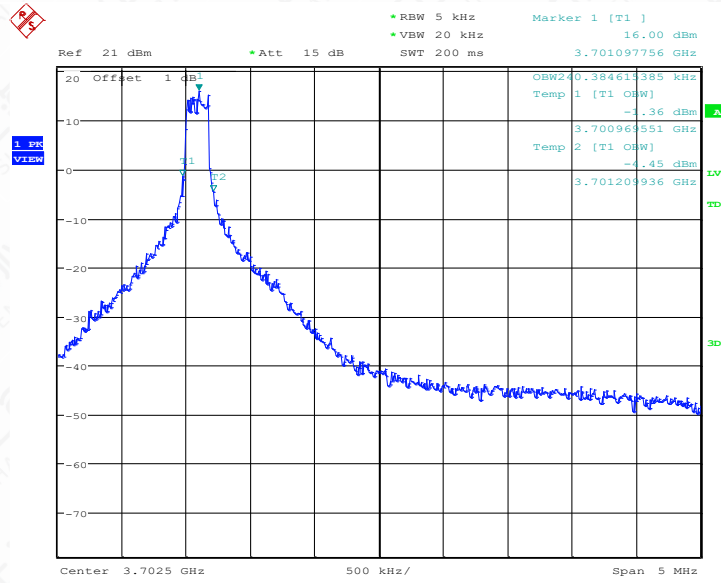
HIGH BAND EDGE BLOCK-20M-100%RB



Date: 6.FEB.2023 17:19:27

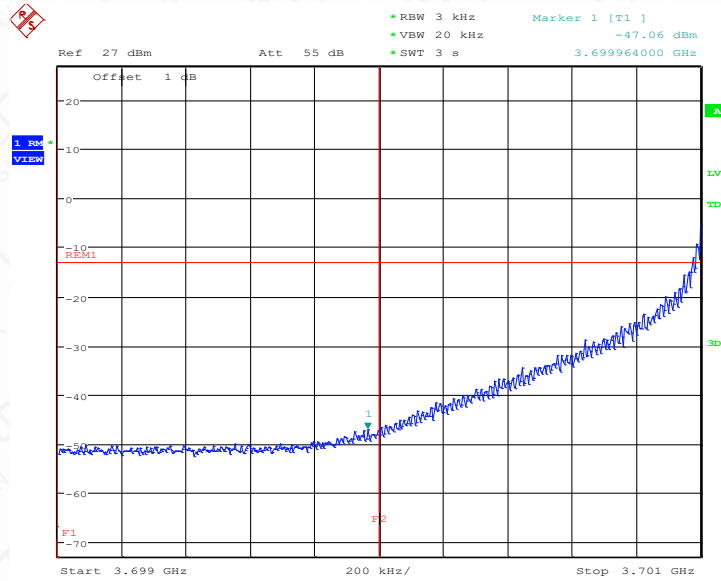
LTE band 43(part 27)

OBW: 1RB-LOW_offset



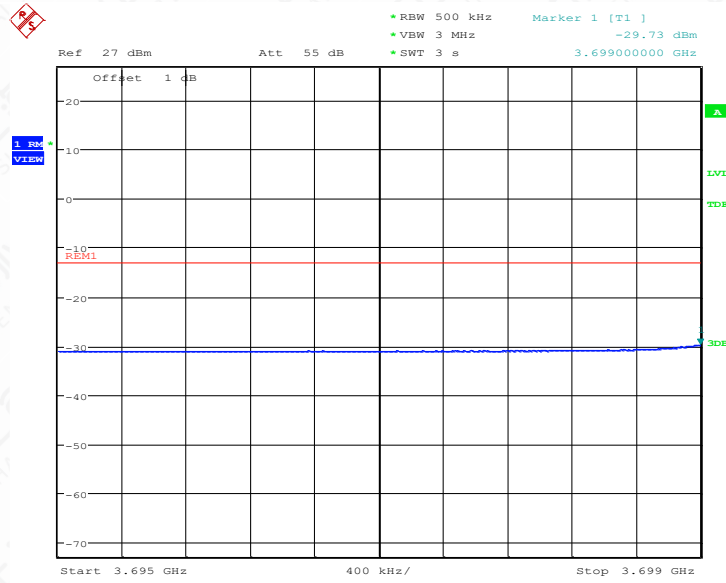
Date: 6.FEB.2023 17:35:50

LOW BAND EDGE BLOCK-1RB-LOW_offset



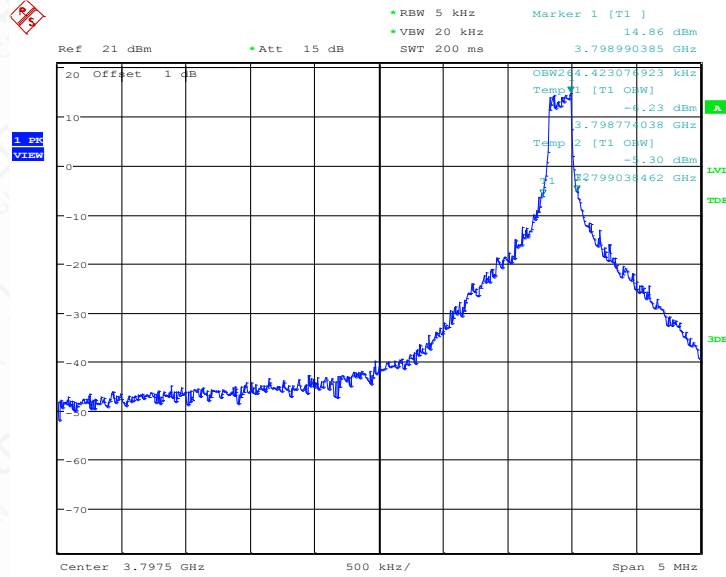
Date: 6.FEB.2023 17:36:34

LOW BAND EDGE BLOCK-1RB-LOW_offset



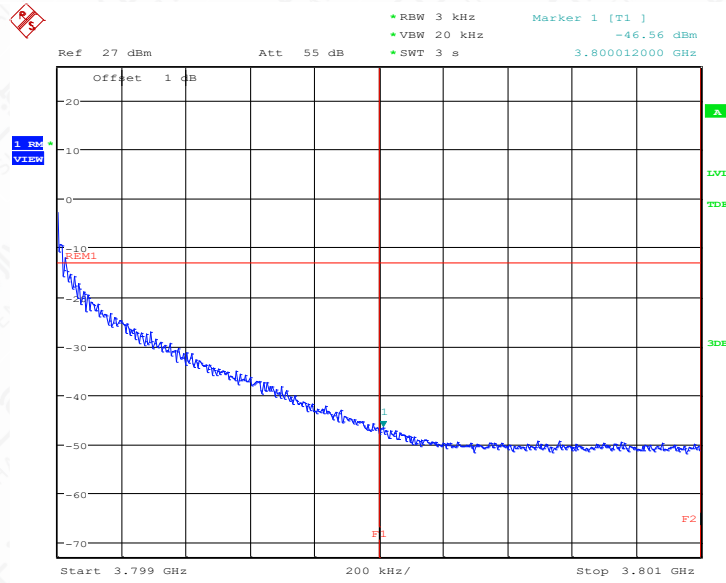
Date: 6.FEB.2023 17:37:18

OBW: 1RB-HIGH_offset



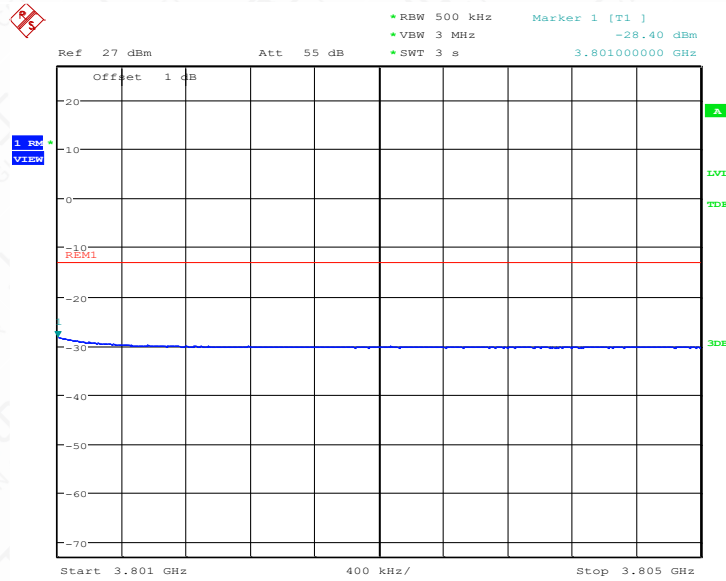
Date: 6.FEB.2023 17:37:44

HIGH BAND EDGE BLOCK-1RB-HIGH_offset



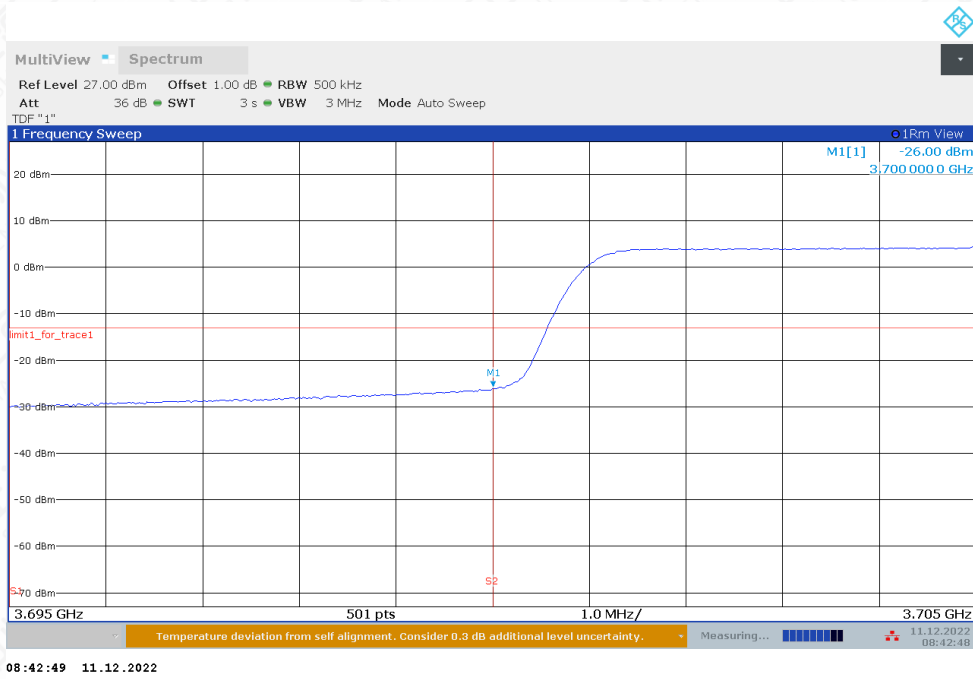
Date: 6.FEB.2023 17:38:28

HIGH BAND EDGE BLOCK-1RB-HIGH_offset

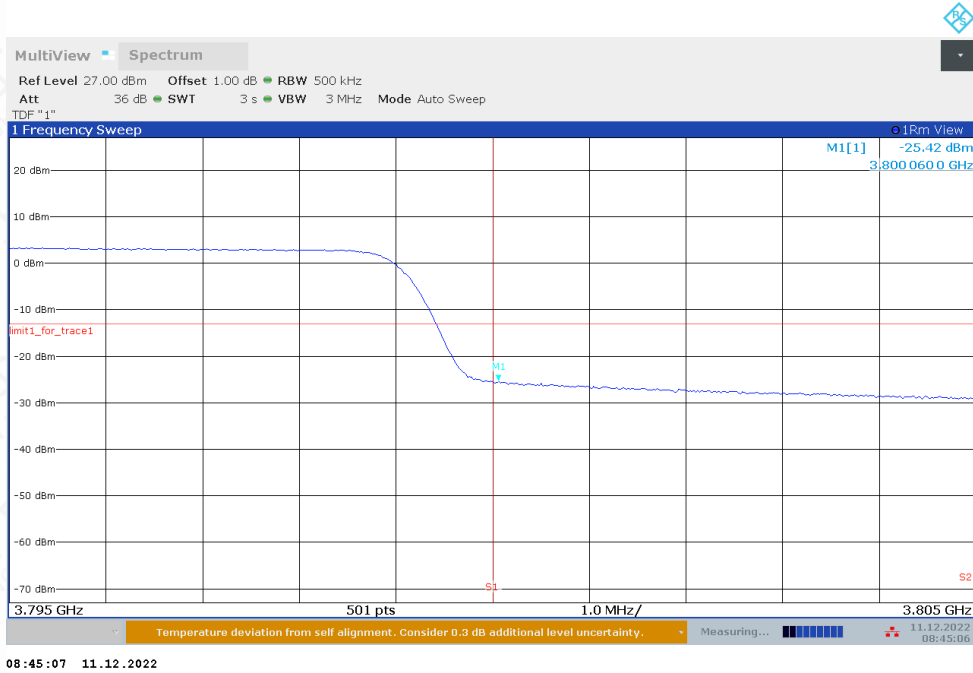


Date: 6.FEB.2023 17:39:11

LOW BAND EDGE BLOCK-20M-100%RB

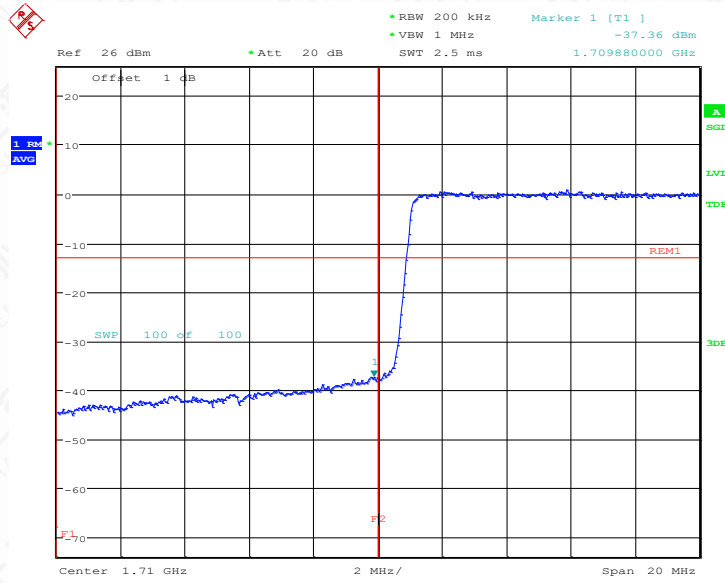


HIGH BAND EDGE BLOCK-20M-100%RB



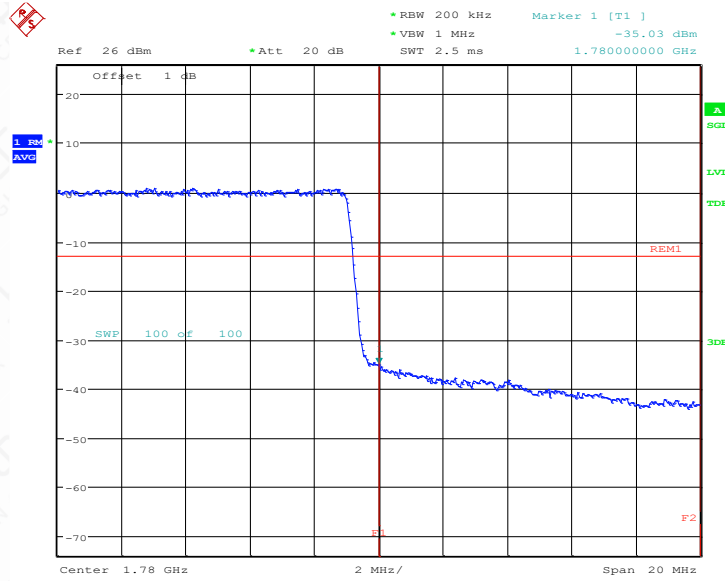
LTE band 66

LOW BAND EDGE BLOCK-20M-100%RB



Date: 7.NOV.2022 21:19:28

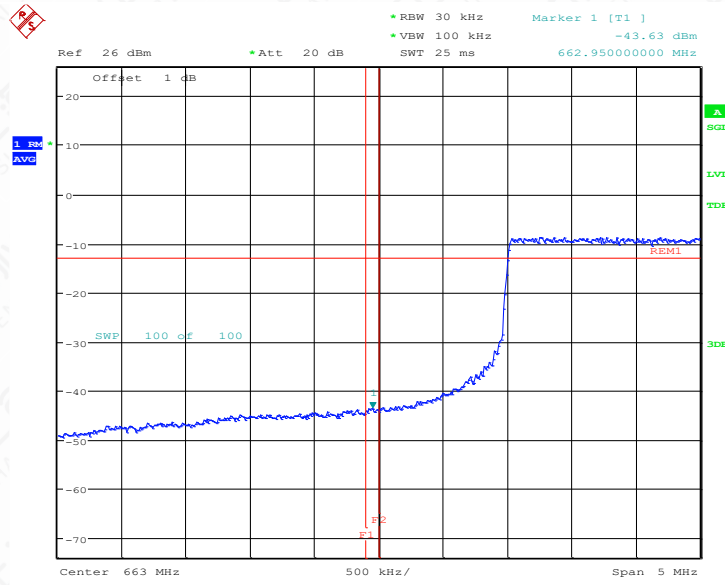
HIGH BAND EDGE BLOCK-20M-100%RB



Date: 7.NOV.2022 21:21:52

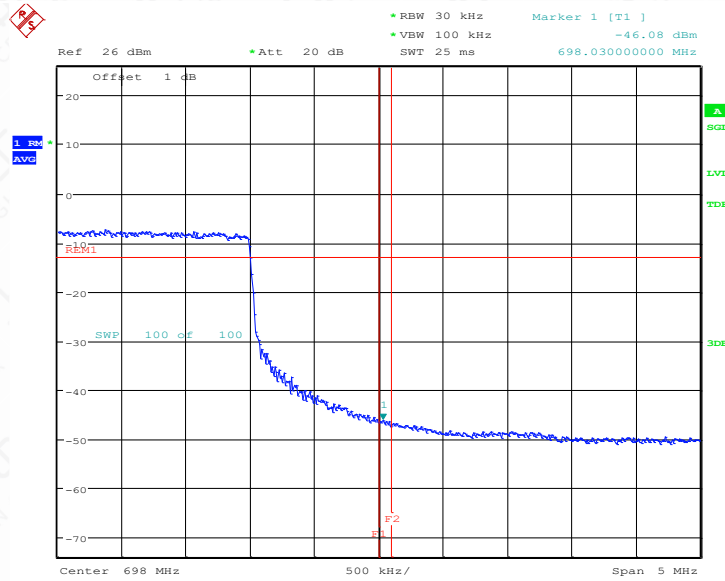
LTE band 77

LOW BAND EDGE BLOCK-20M-100%RB



Date: 7.NOV.2022 21:40:31

HIGH BAND EDGE BLOCK-20M-100%RB

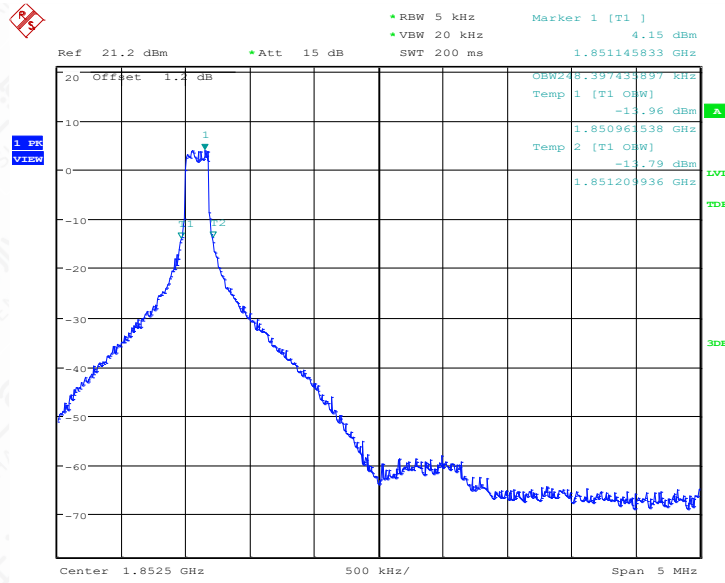


Date: 7.NOV.2022 21:42:52

LTE CA_band 2

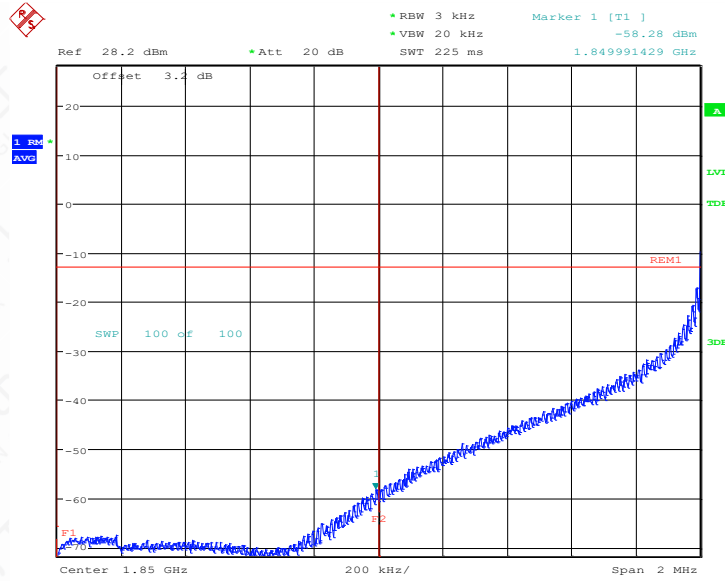
Only the worst case result is given below

OBW: 1RB-LOW_offset



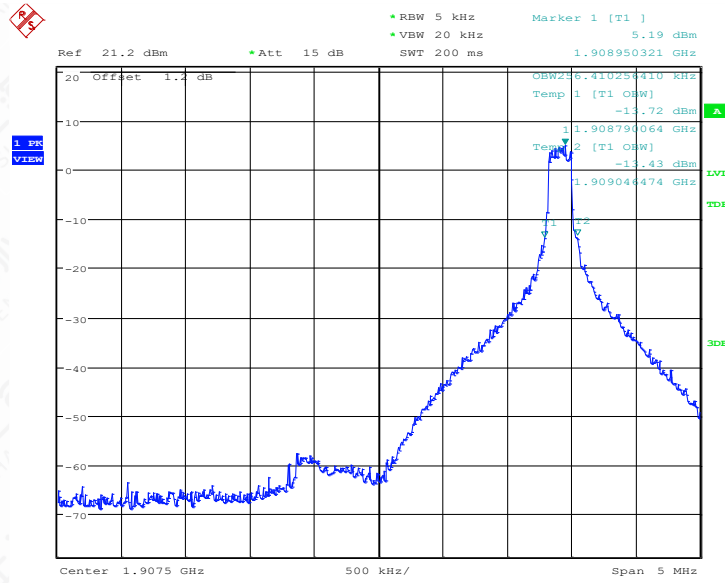
Date: 8.FEB.2023 19:42:56

LOW BAND EDGE BLOCK-1RB-20MHz+20M_offset



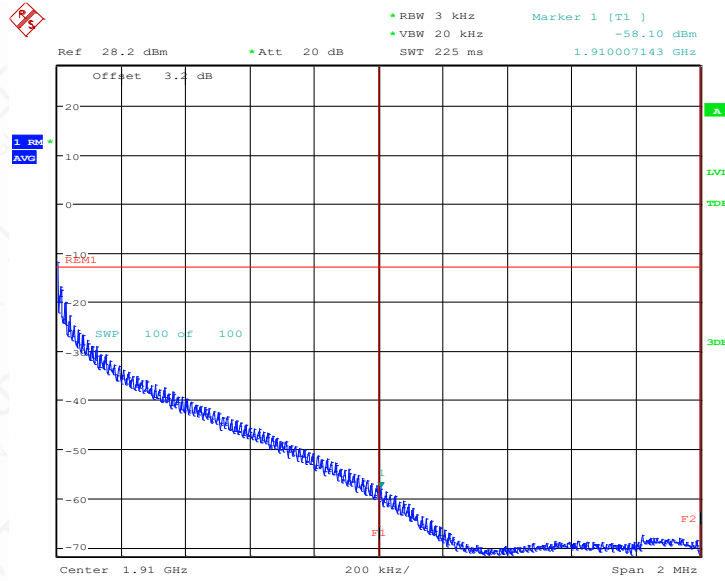
Date: 8.FEB.2023 19:44:03

OBW: 1RB-HIGH_offset



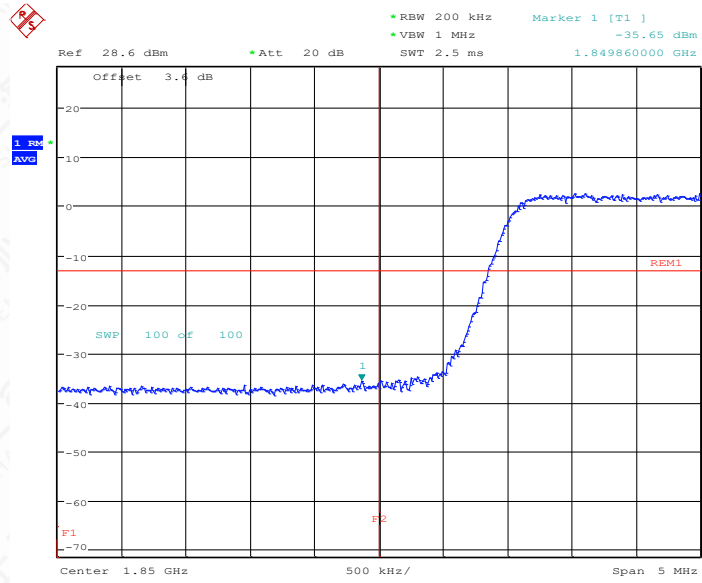
Date: 8.FEB.2023 19:47:45

HIGH BAND EDGE BLOCK-1RB-20MHz+20M_offset



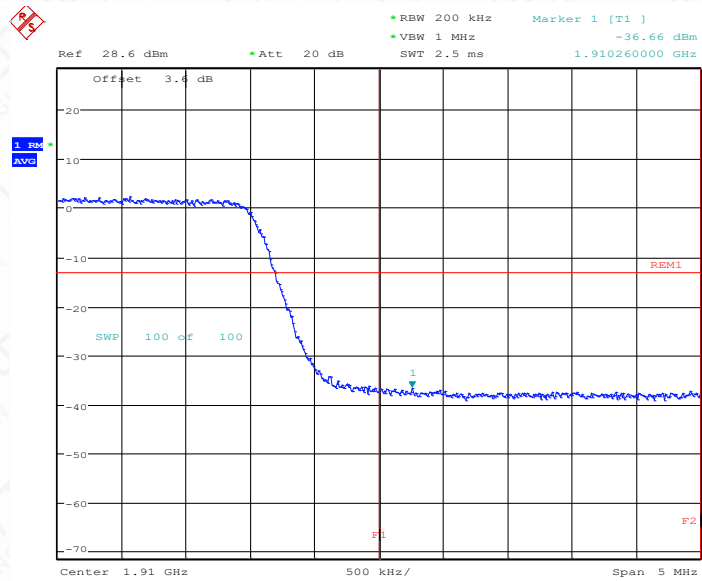
Date: 8.FEB.2023 19:48:53

LOW BAND EDGE BLOCK-20MHz+20MHz-100%RB



Date: 1.FEB.2023 18:18:09

HIGH BAND EDGE BLOCK-20MHz+20MHz-100%RB

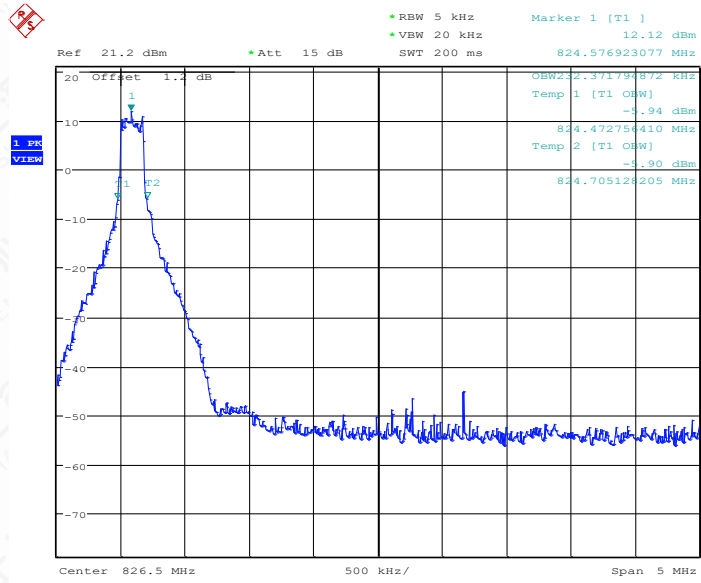


Date: 1.FEB.2023 18:22:06

LTE CA_band 5

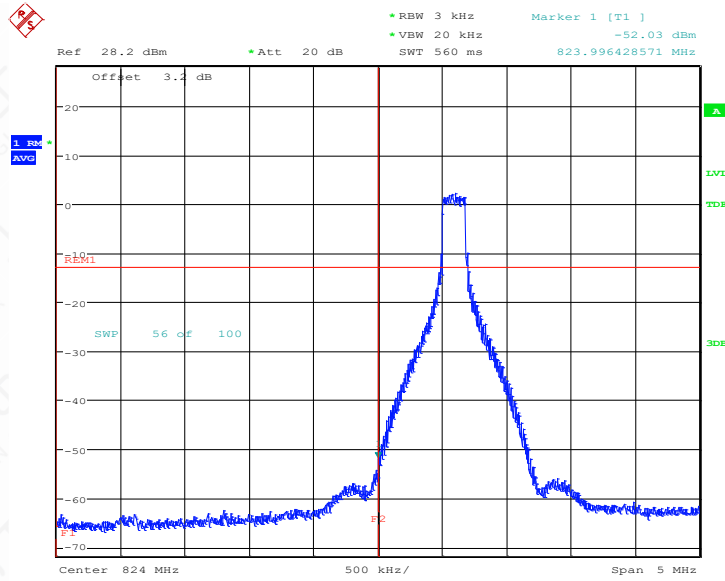
Only the worst case result is given below

OBW: 1RB-LOW_offset



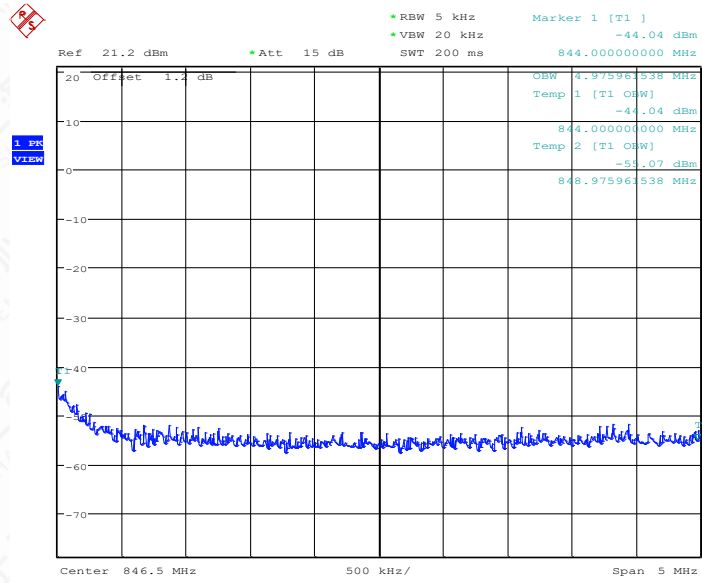
Date: 8.FEB.2023 12:09:30

LOW BAND EDGE BLOCK-1RB-10MHz+10M_offset



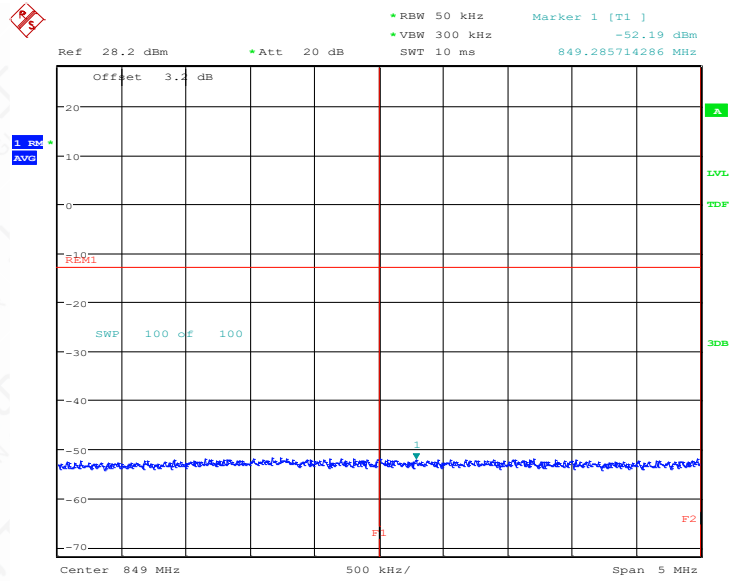
Date: 8.FEB.2023 12:11:17

OBW: 1RB-HIGH_offset



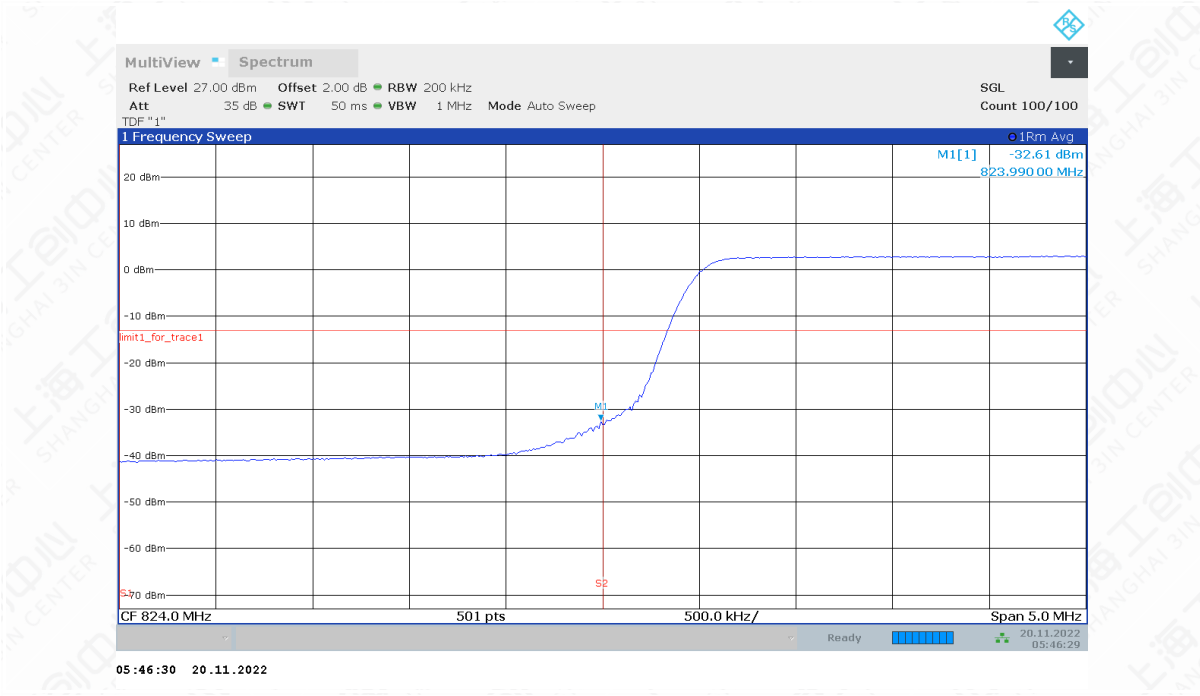
Date: 8.FEB.2023 12:15:57

HIGH BAND EDGE BLOCK-1RB-10MHz+10M_offset

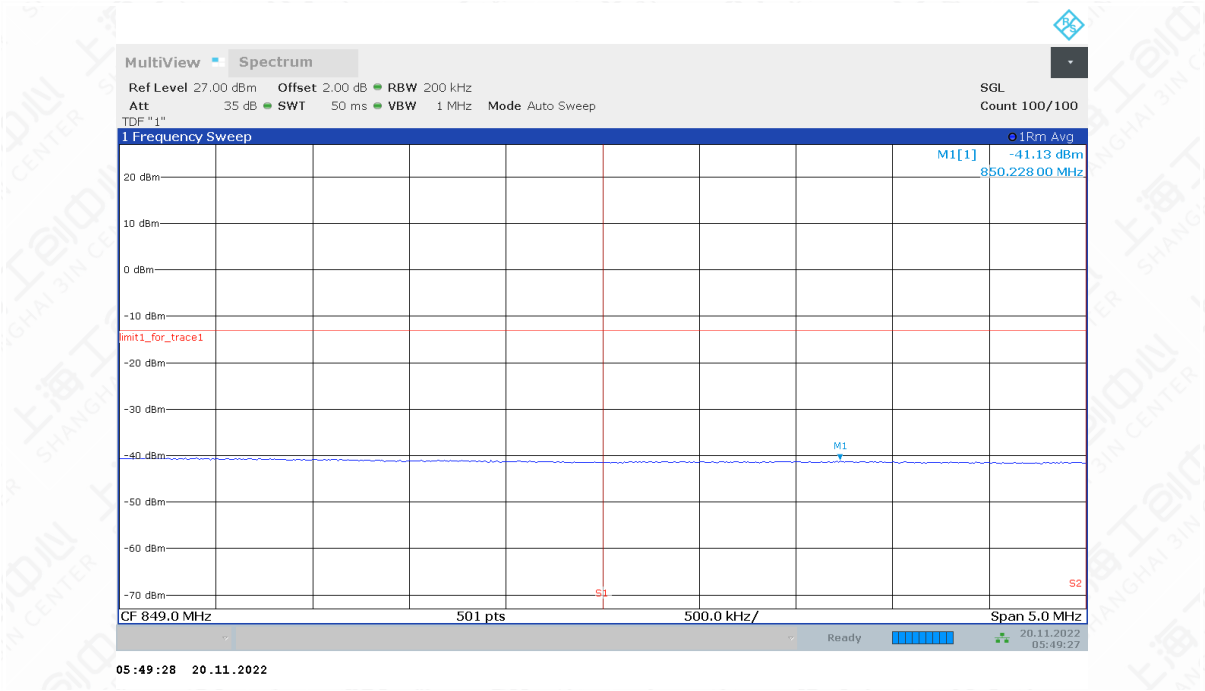


Date: 8.FEB.2023 12:16:41

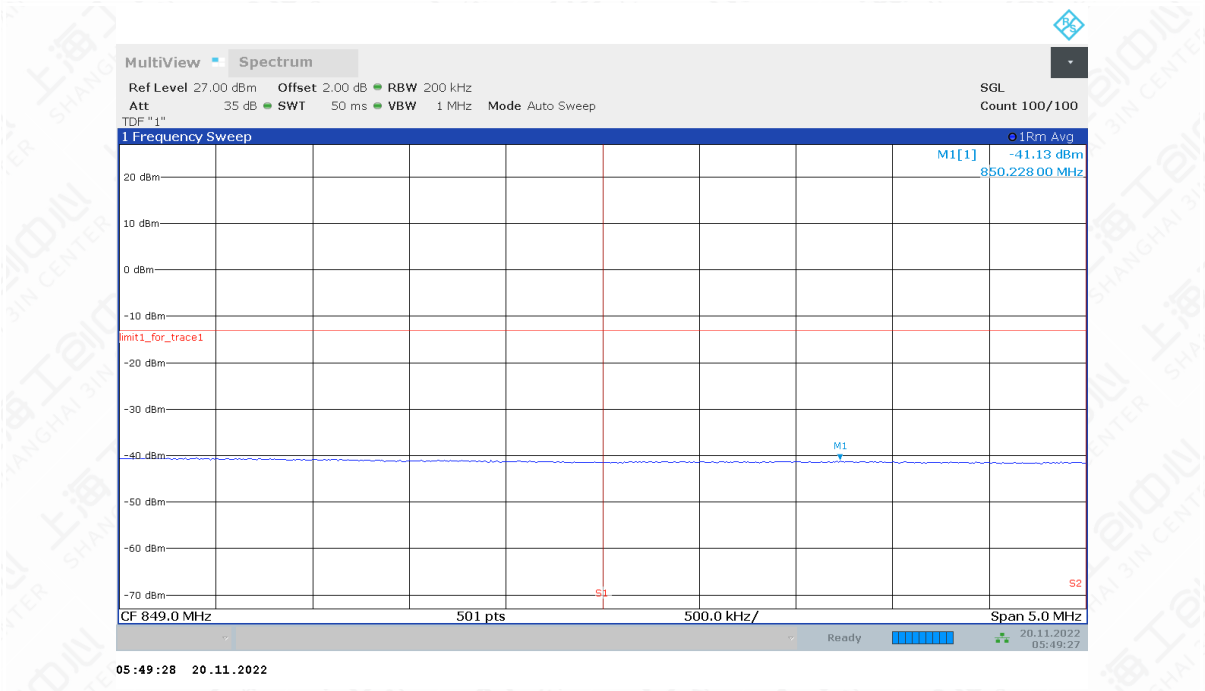
LOW BAND EDGE BLOCK-10MHz+10MHz-100%RB



HIGH BAND EDGE BLOCK-10MHz+10MHz-100%RB



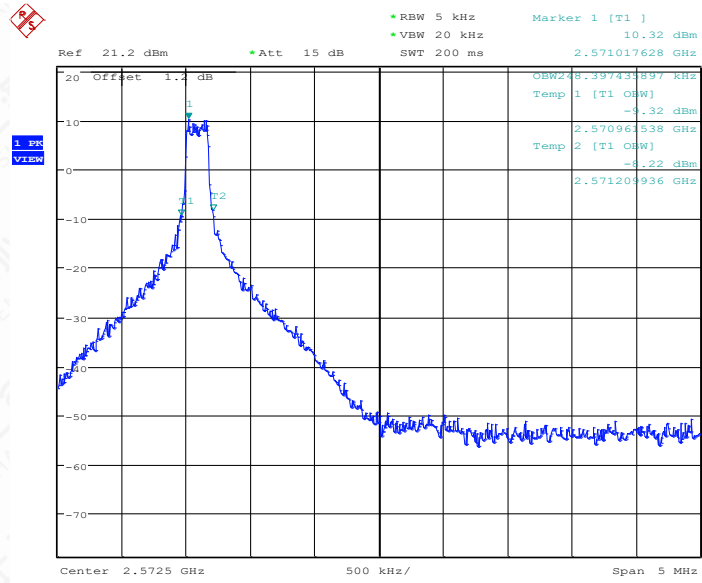
HIGH BAND EDGE BLOCK-10MHz+10MHz-100%RB



LTE CA_band 38

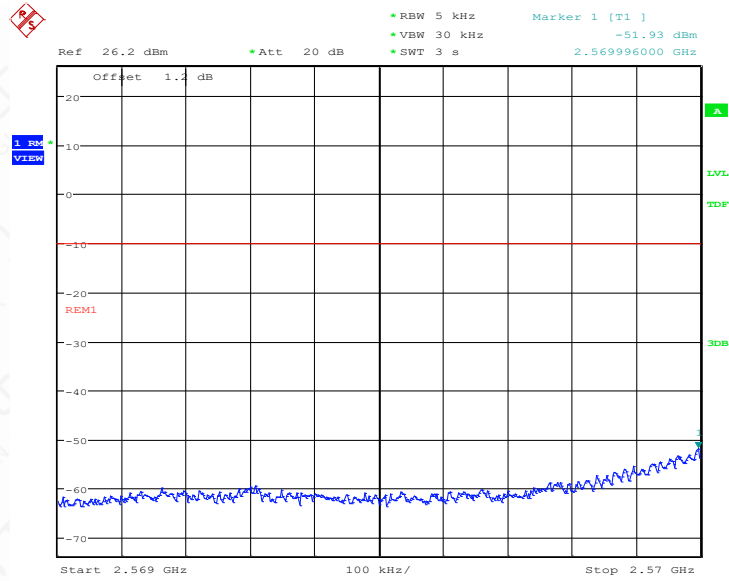
Only the worst case result is given below

OBW: 1RB-LOW_offset



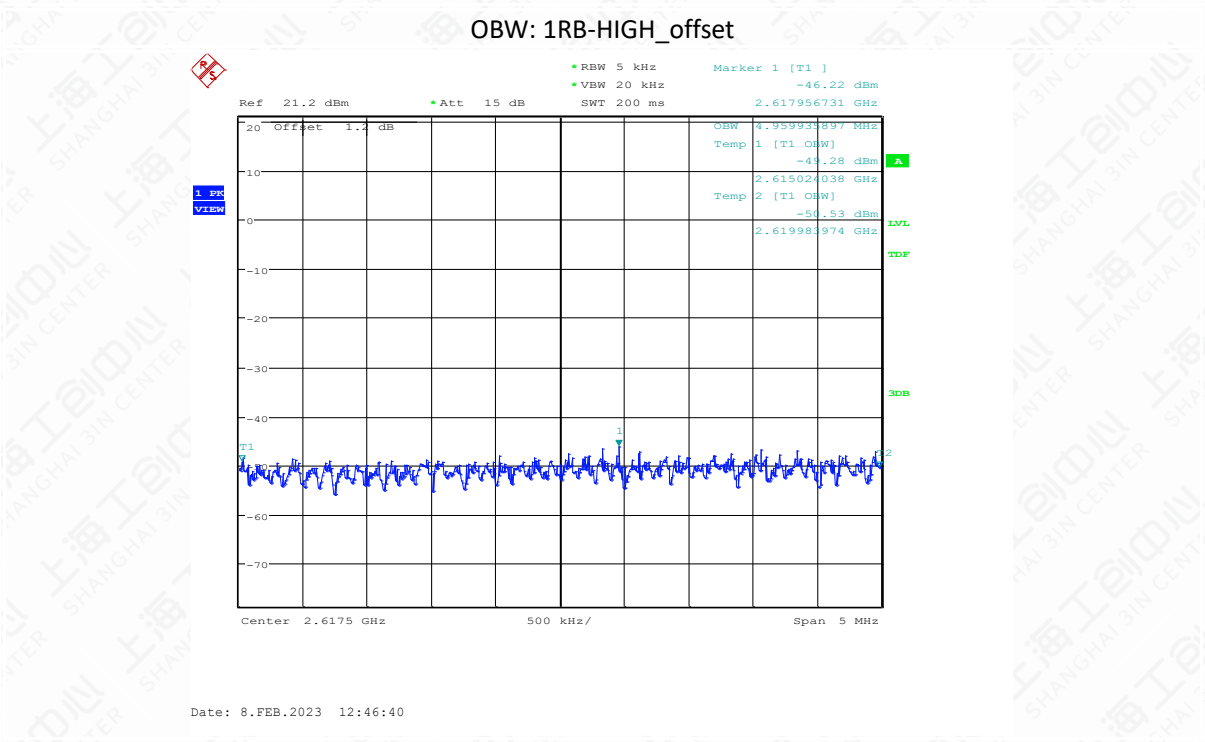
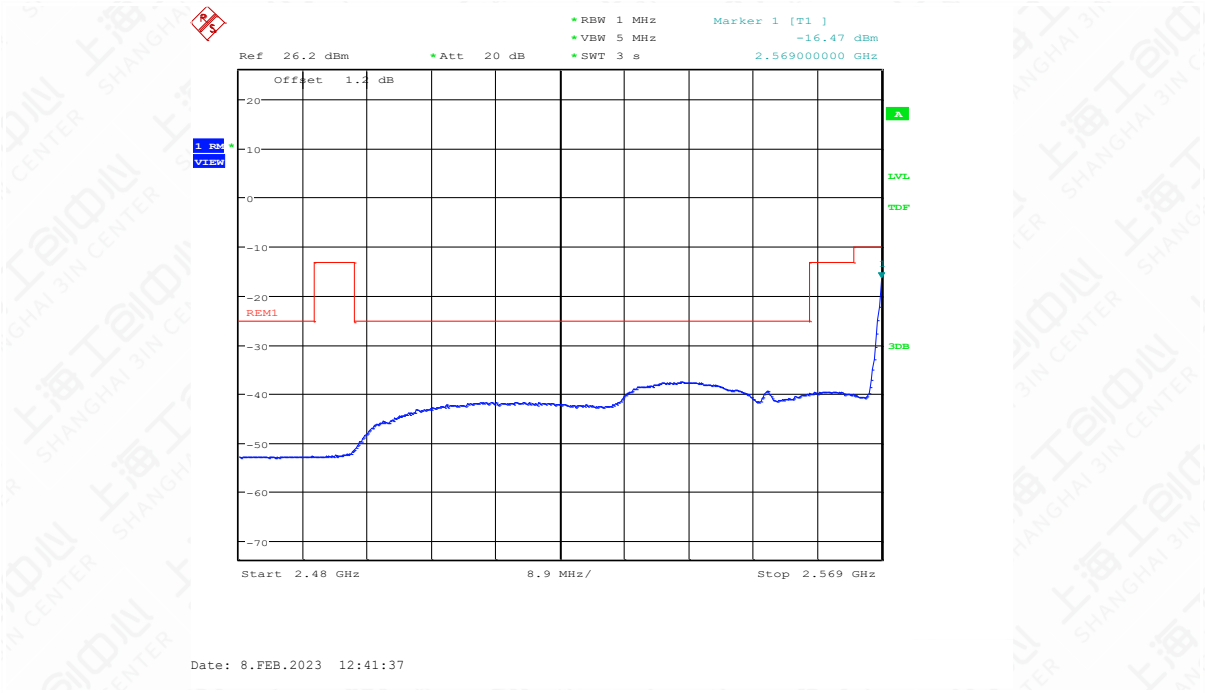
Date: 8.FEB.2023 12:40:10

LOW BAND EDGE BLOCK-1RB-20MHz+20M_offset

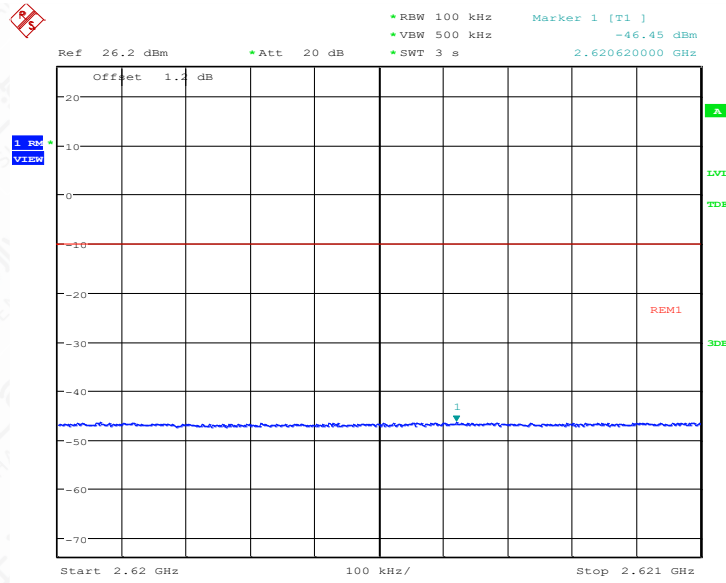


Date: 8.FEB.2023 12:40:53

LOW BAND EDGE BLOCK-1RB-20MHz+20M_offset

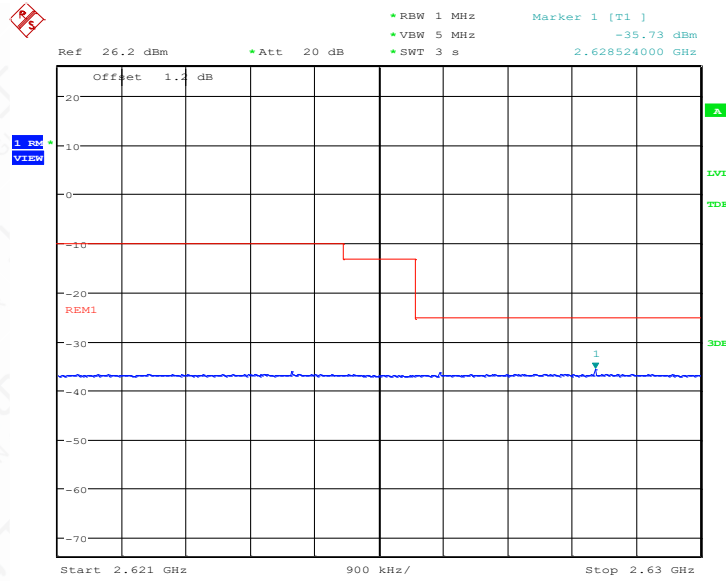


HIGH BAND EDGE BLOCK-1RB-20MHz+20M_offset



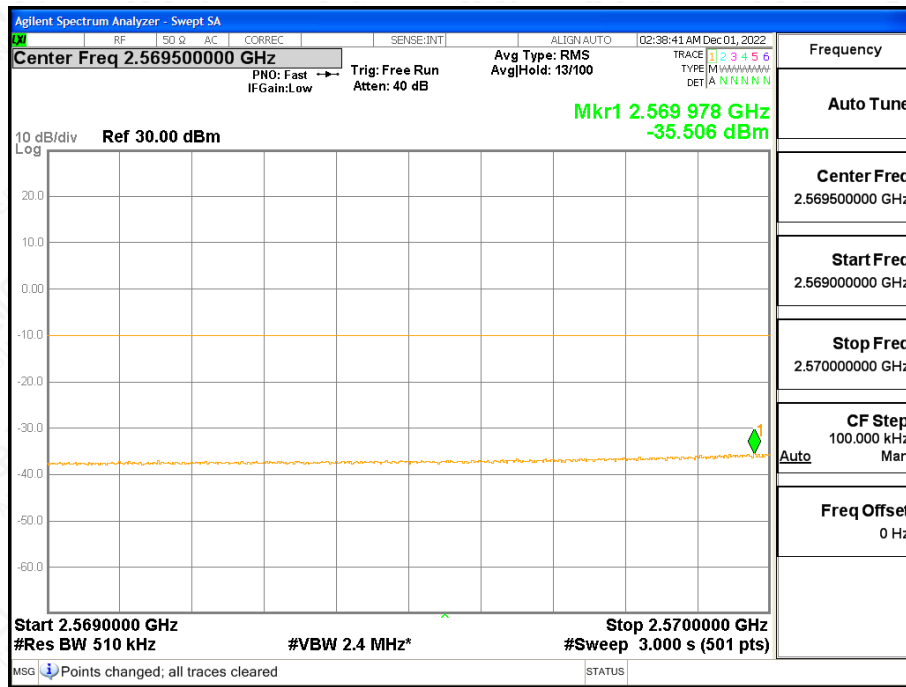
Date: 8.FEB.2023 12:47:23

HIGH BAND EDGE BLOCK-1RB-20MHz+20M_offset

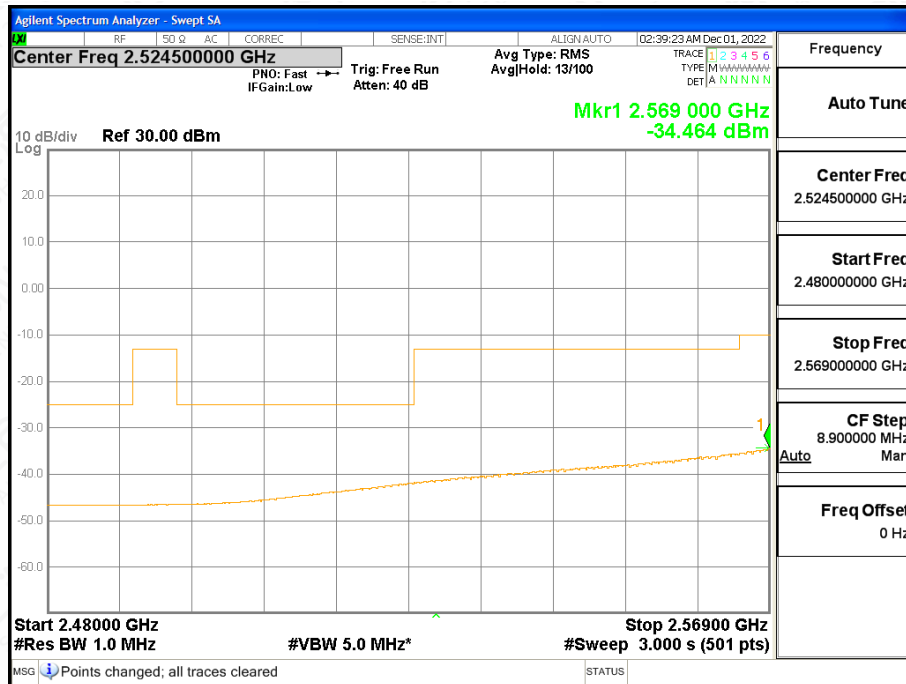


Date: 8.FEB.2023 12:48:07

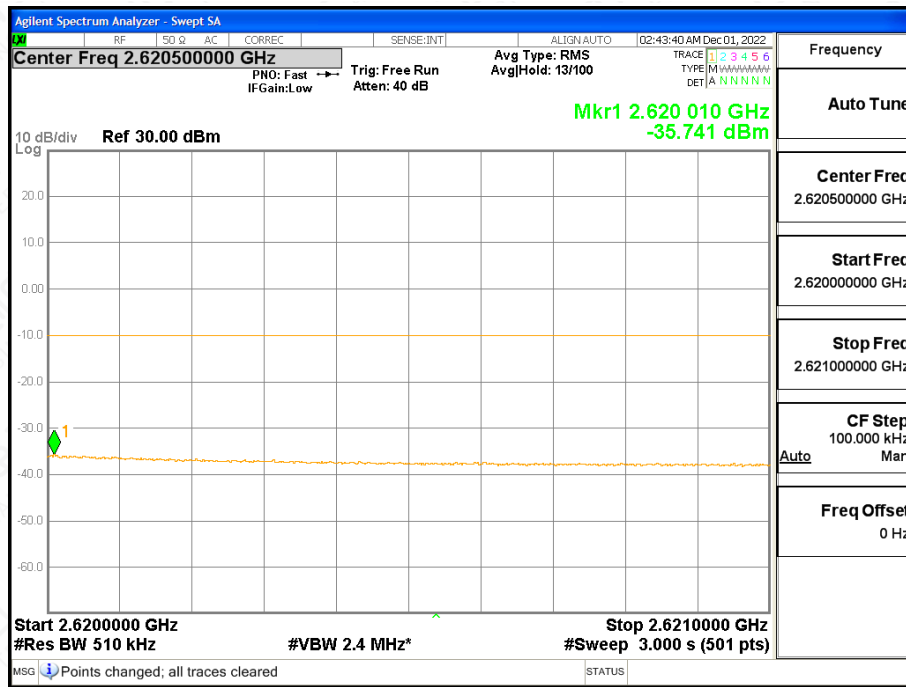
LOW BAND EDGE BLOCK-20MHz+20MHz-100%RB



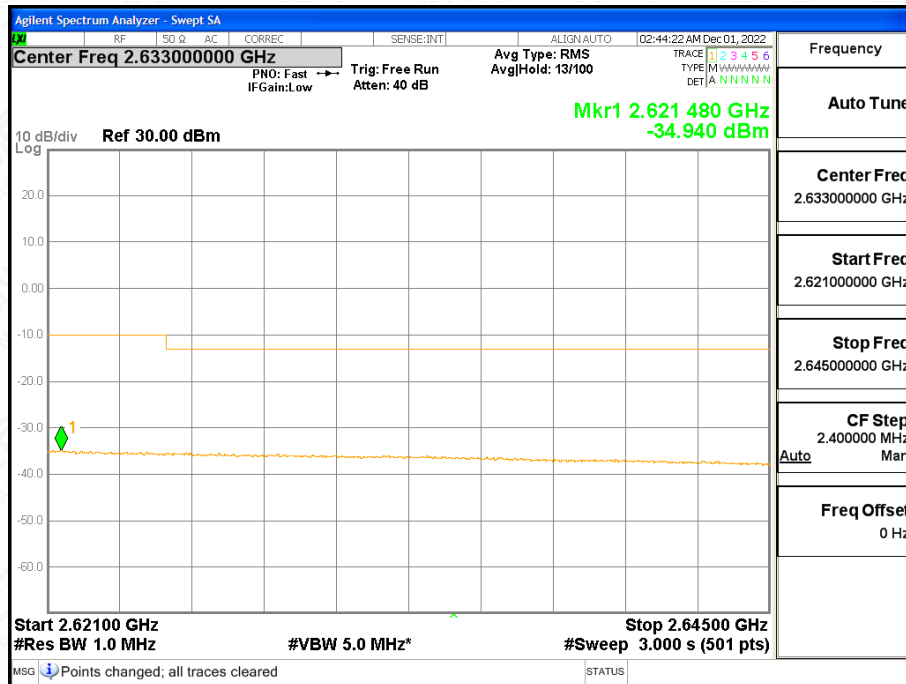
LOW BAND EDGE BLOCK-20MHz+20MHz-100%RB



HIGH BAND EDGE BLOCK-20MHz+20MHz-100%RB



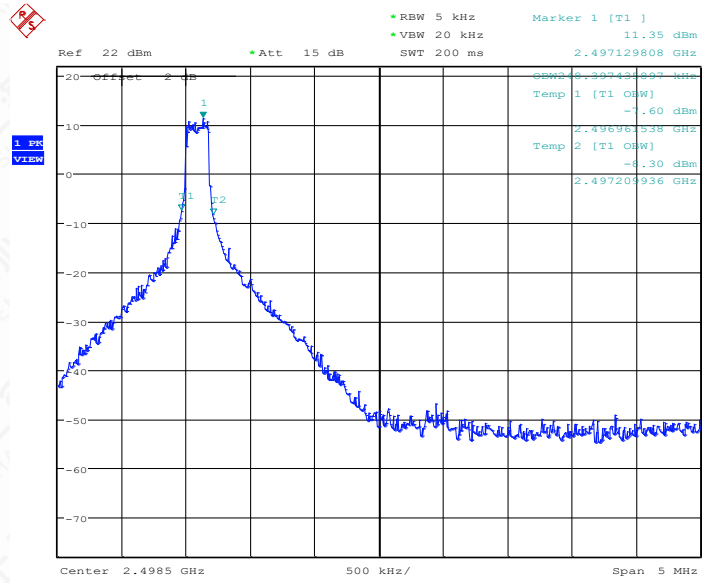
HIGH BAND EDGE BLOCK-20MHz+20MHz-100%RB



LTE CA_band 41

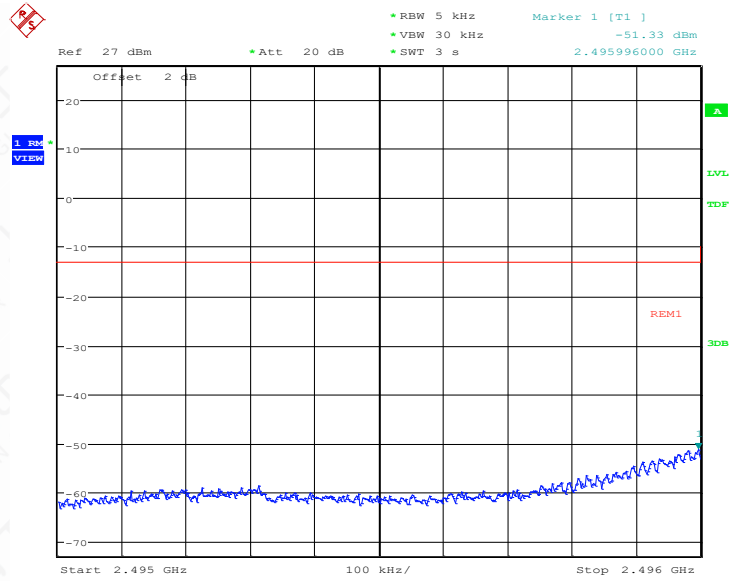
Only the worst case result is given below

OBW: 1RB-LOW_offset



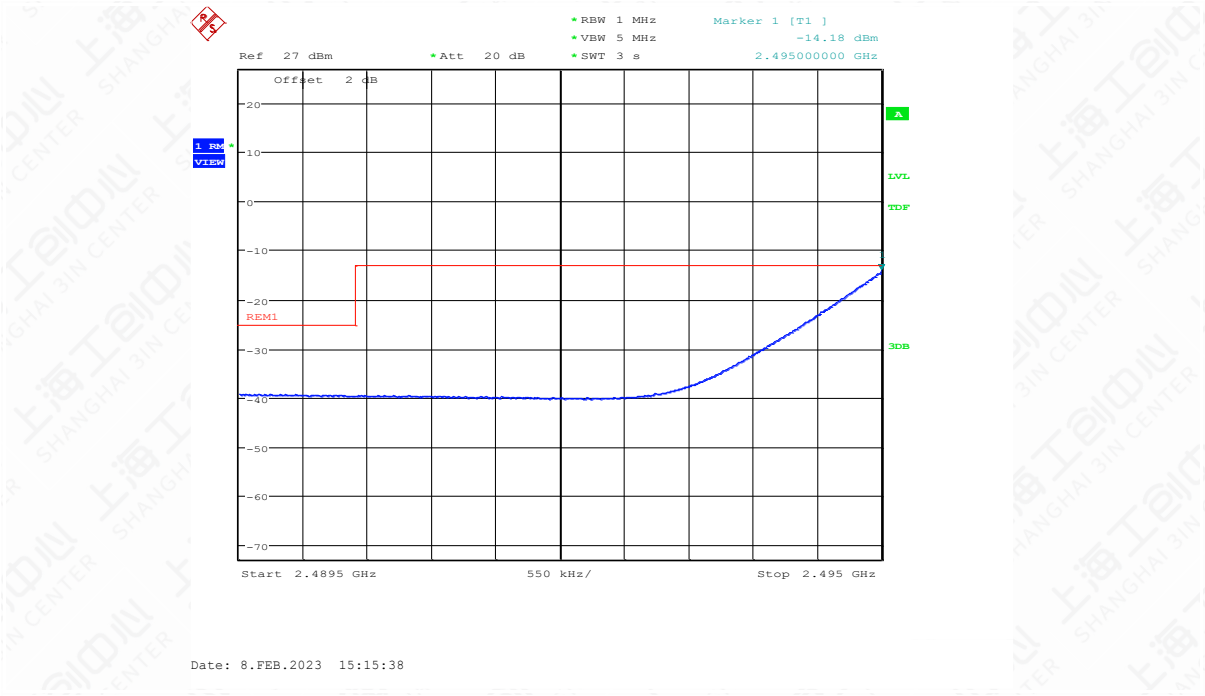
Date: 8.FEB.2023 15:14:12

LOW BAND EDGE BLOCK-1RB-20MHz+20M_offset

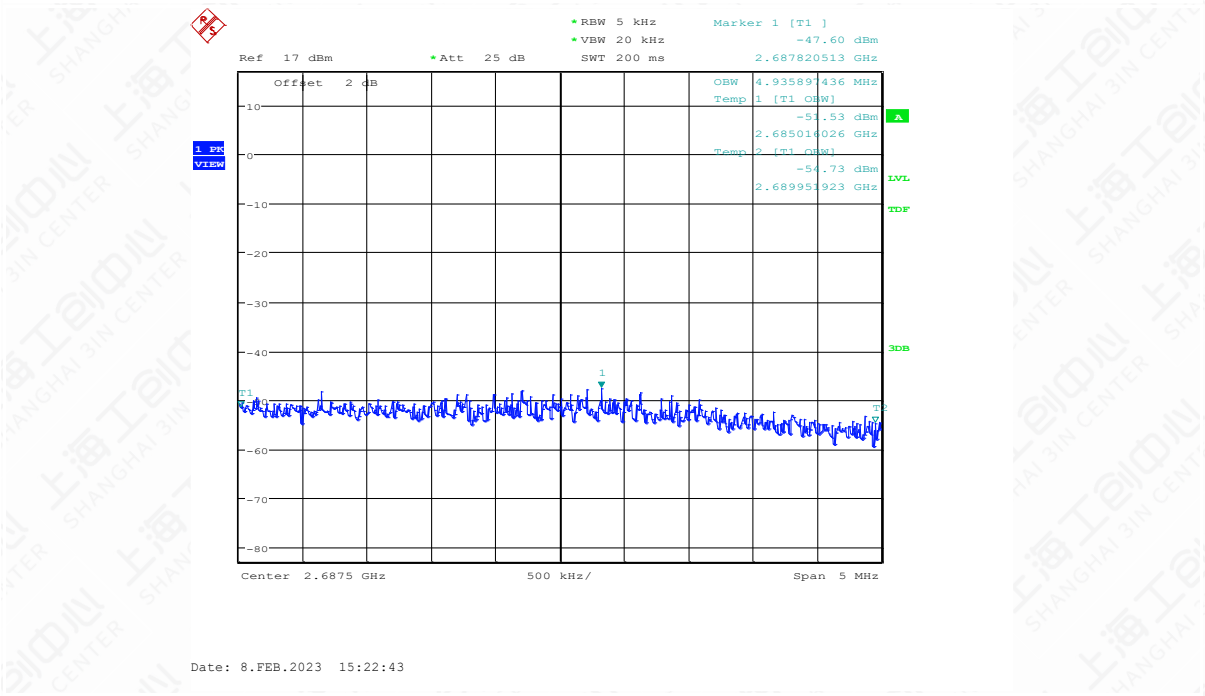


Date: 8.FEB.2023 15:14:56

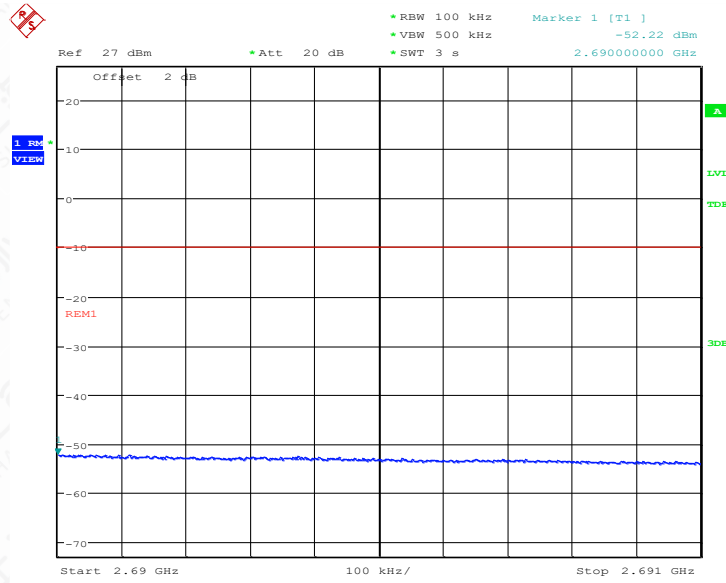
LOW BAND EDGE BLOCK-1RB-20MHz+20M_offset



OBW: 1RB-HIGH_offset

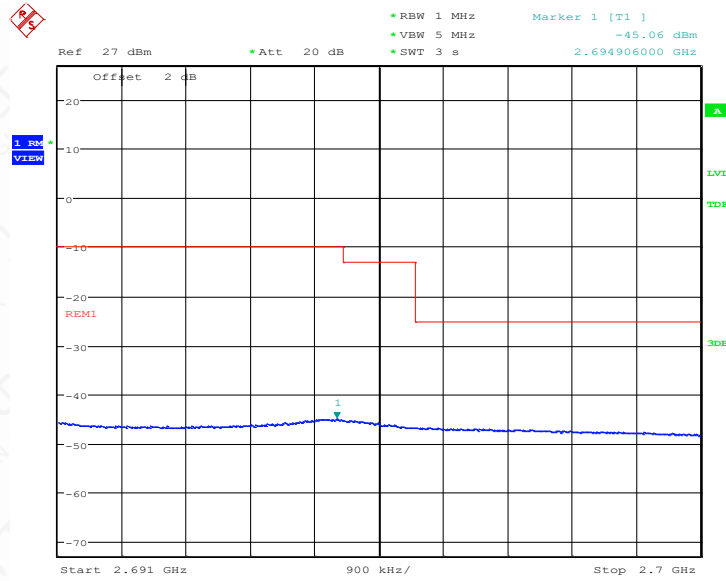


HIGH BAND EDGE BLOCK-1RB-20MHz+20M_offset



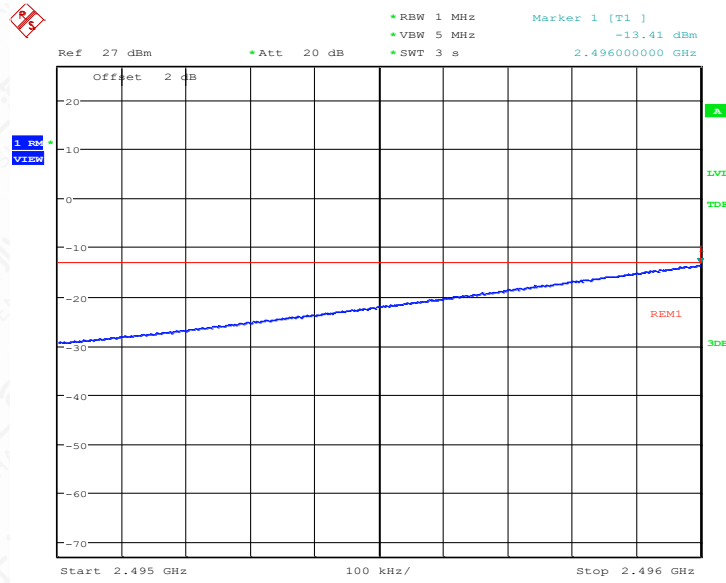
Date: 8.FEB.2023 15:23:25

HIGH BAND EDGE BLOCK-1RB-20MHz+20M_offset



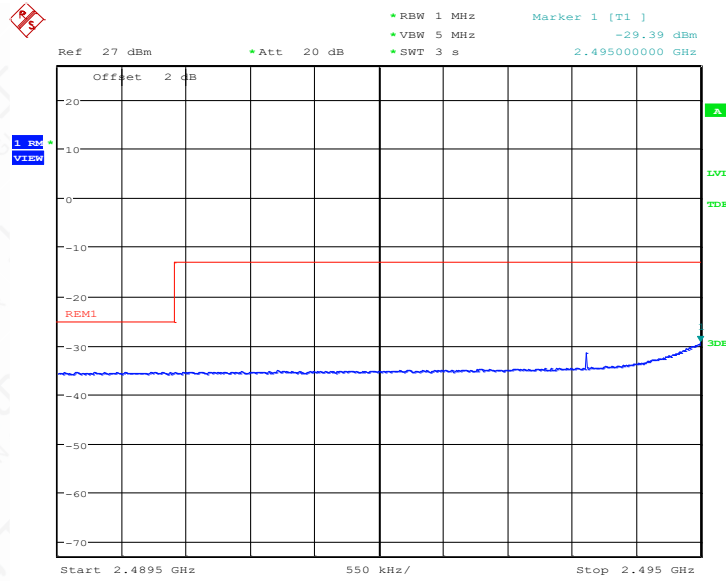
Date: 8.FEB.2023 15:24:09

LOW BAND EDGE BLOCK-20MHz+20MHz-100%RB



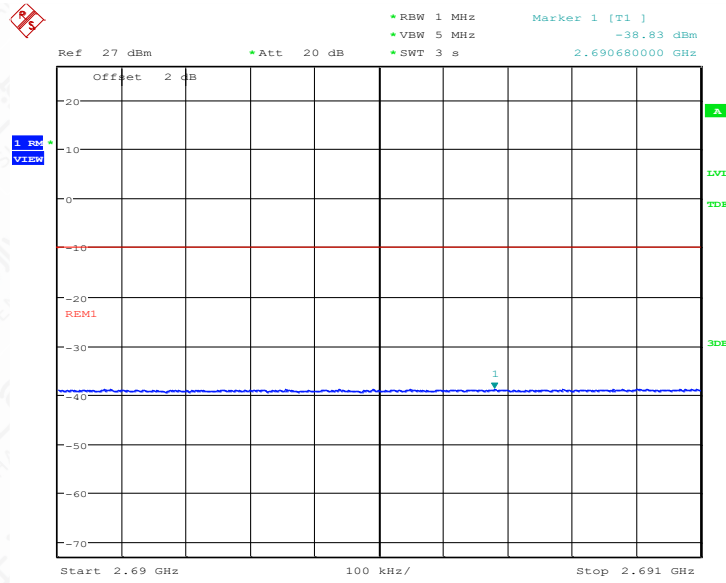
Date: 8.FEB.2023 15:11:36

LOW BAND EDGE BLOCK-20MHz+20MHz-100%RB



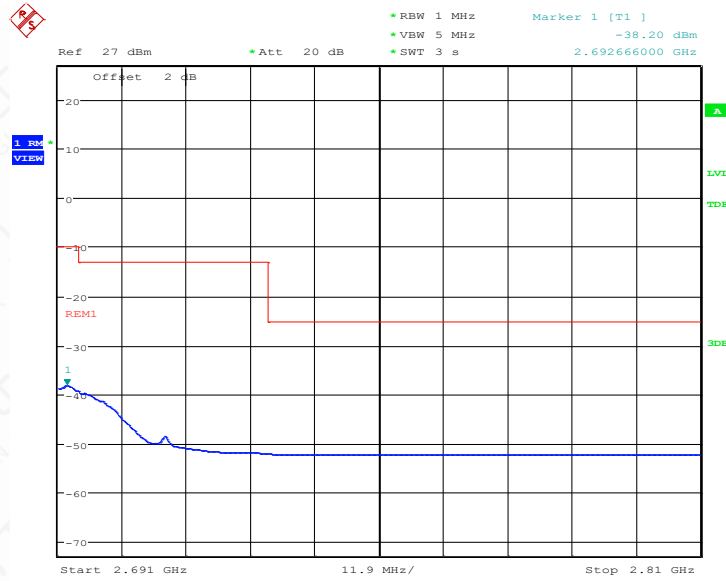
Date: 8.FEB.2023 15:12:20

HIGH BAND EDGE BLOCK-20MHz+20MHz-100%RB



Date: 8.FEB.2023 15:21:01

HIGH BAND EDGE BLOCK-20MHz+20MHz-100%RB

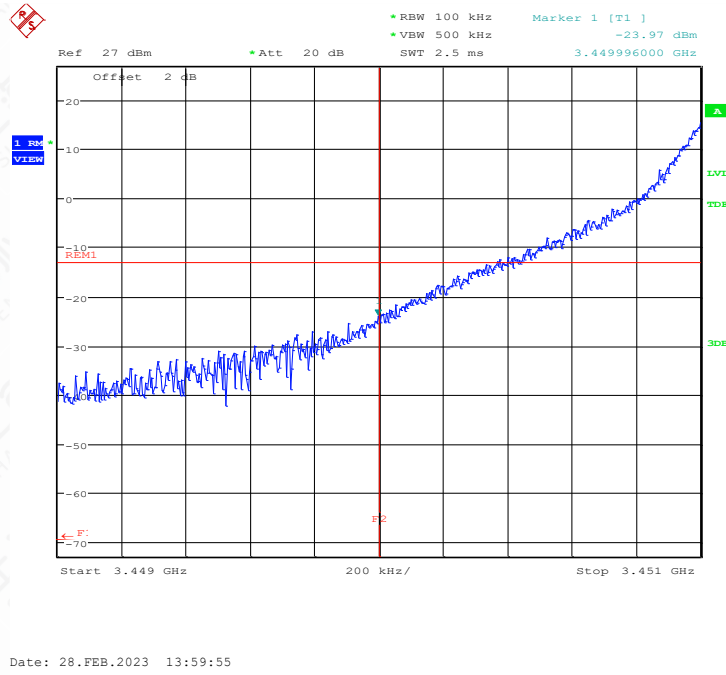


Date: 8.FEB.2023 15:21:43

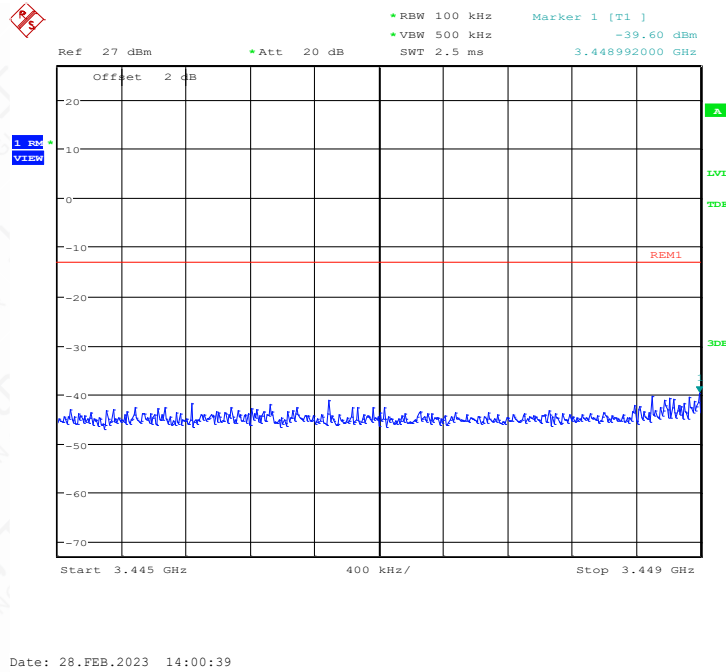
LTE CA_band 42(part 27)

Only the worst case result is given below

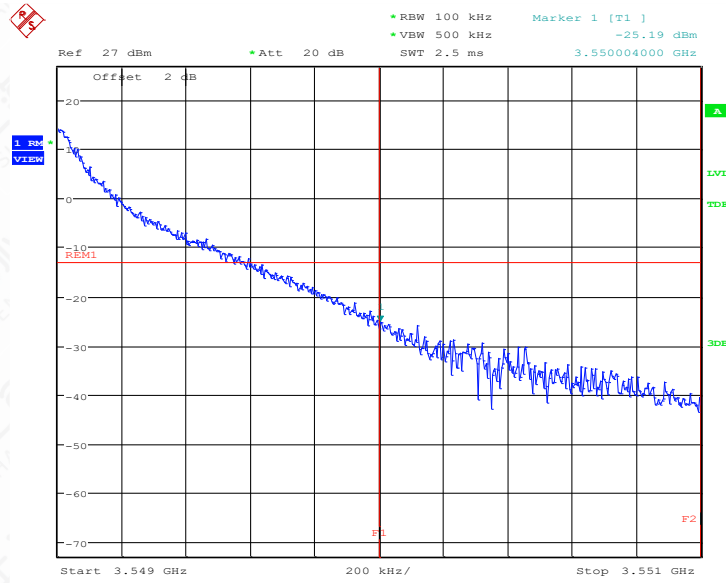
LOW BAND EDGE BLOCK-1RB-20MHz+20M_offset



LOW BAND EDGE BLOCK-1RB-20MHz+20M_offset

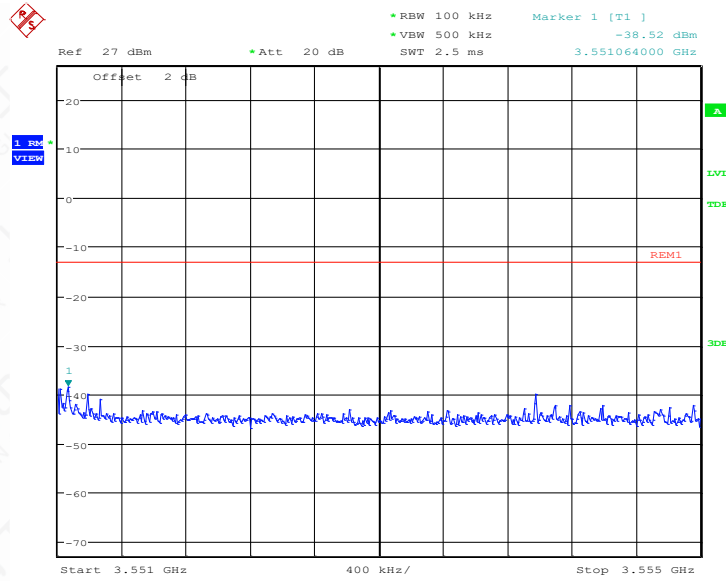


HIGH BAND EDGE BLOCK-1RB-20MHz+20M_offset



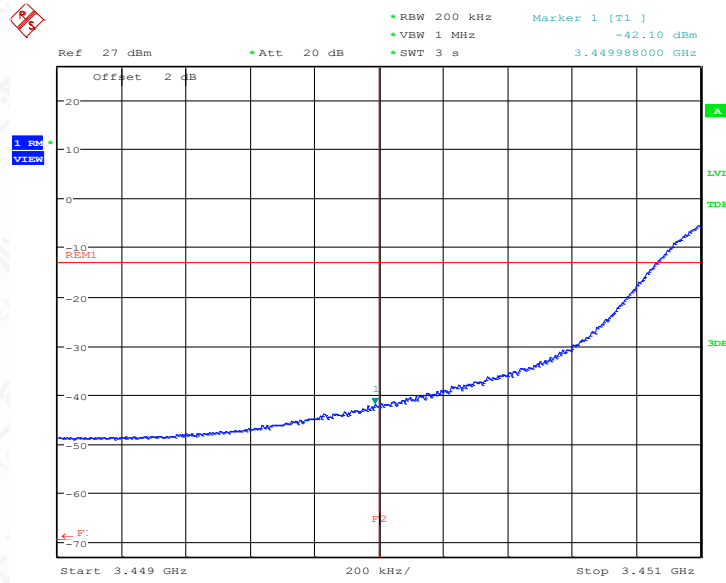
Date: 28.FEB.2023 14:47:54

HIGH BAND EDGE BLOCK-1RB-20MHz+20M_offset



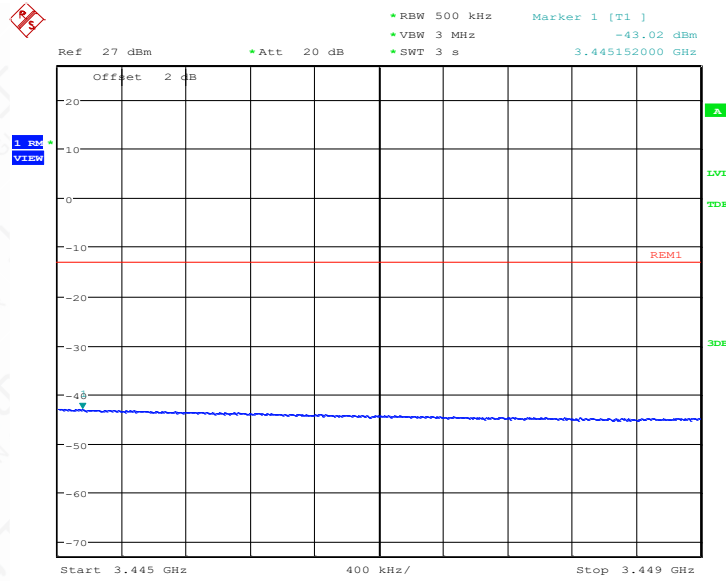
Date: 28.FEB.2023 14:48:38

LOW BAND EDGE BLOCK-20MHz+20MHz-100%RB



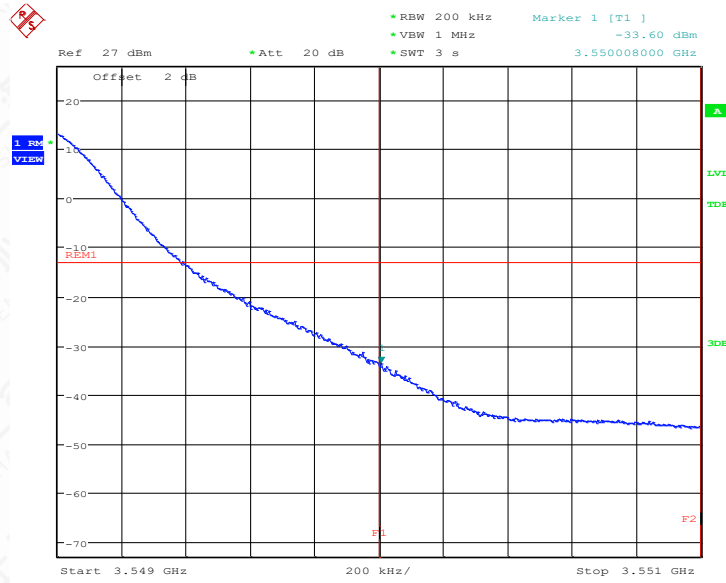
Date: 28.FEB.2023 13:56:10

LOW BAND EDGE BLOCK-20MHz+20MHz-100%RB



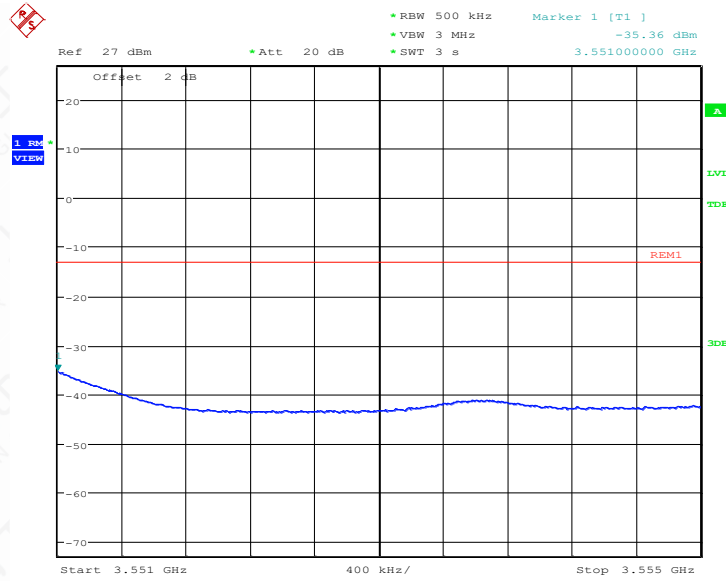
Date: 28.FEB.2023 13:56:54

HIGH BAND EDGE BLOCK-20MHz+20MHz-100%RB



Date: 28.FEB.2023 14:44:09

HIGH BAND EDGE BLOCK-20MHz+20MHz-100%RB

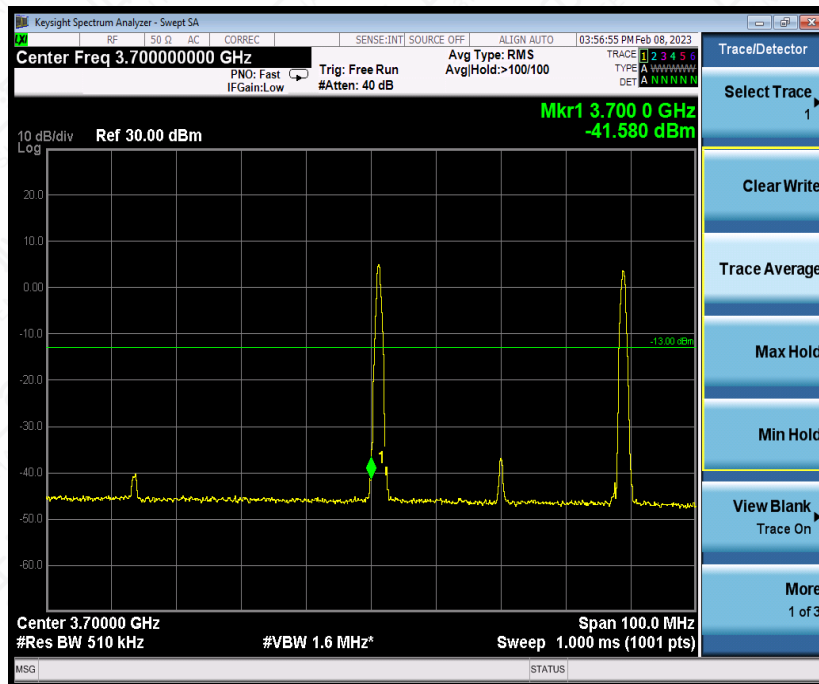


Date: 28.FEB.2023 14:44:53

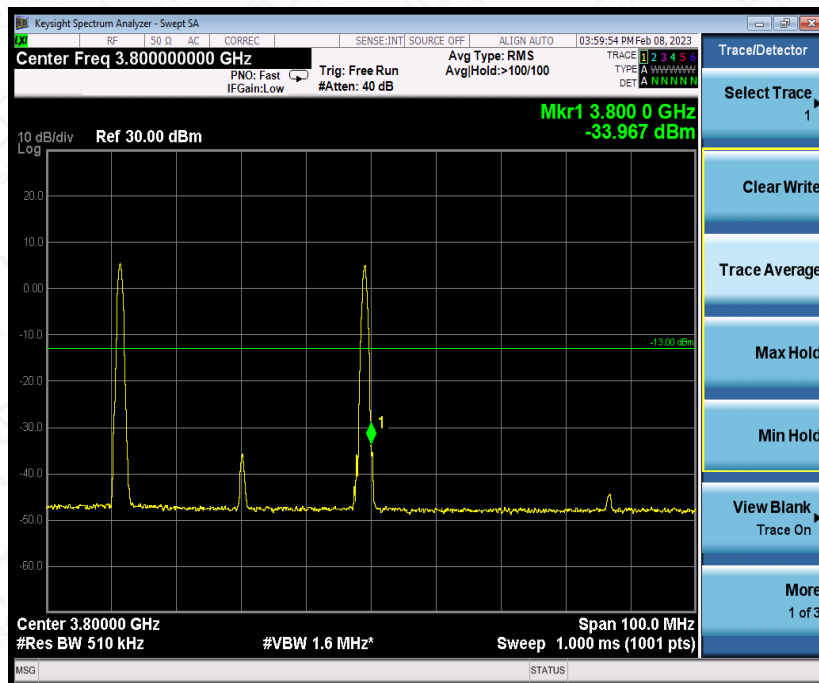
LTE CA_band 43(part 27)*

Only the worst case result is given below

LOW BAND EDGE BLOCK-1RB-20MHz+20M_offset



HIGH BAND EDGE BLOCK-1RB-20MHz+20M_offset



LOW BAND EDGE BLOCK-20MHz+20MHz-100%RB



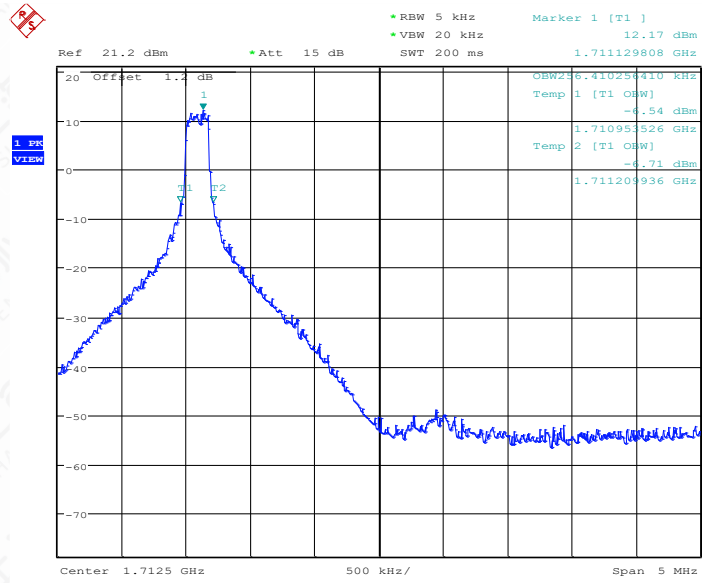
HIGH BAND EDGE BLOCK-20MHz+20MHz-100%RB



LTE CA_band 66

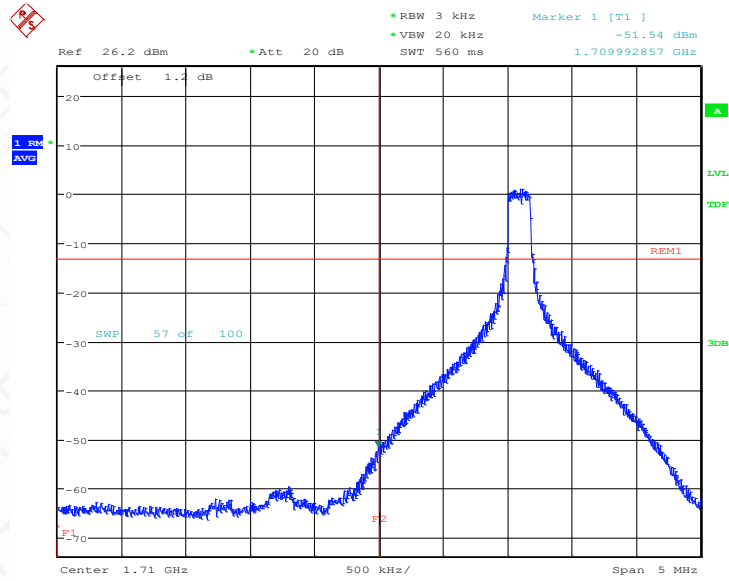
Only the worst case result is given below

OBW: 1RB-LOW_offset



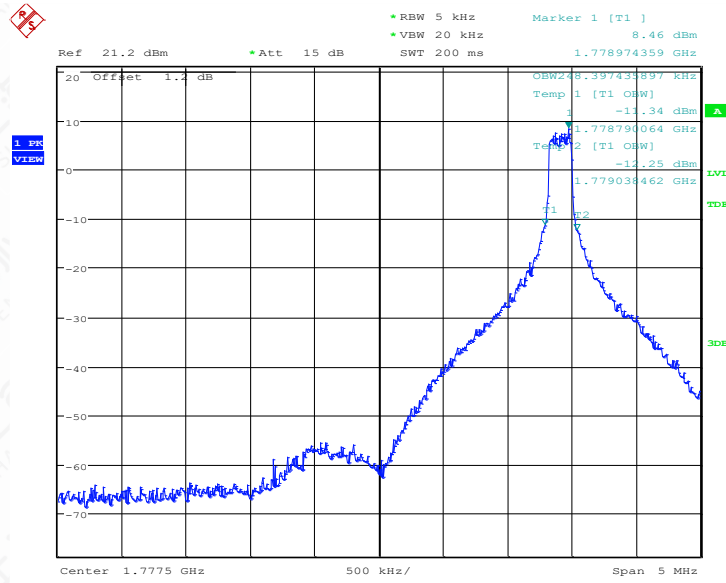
Date: 13.FEB.2023 20:45:48

LOW BAND EDGE BLOCK-1RB-20MHz+20M_offset



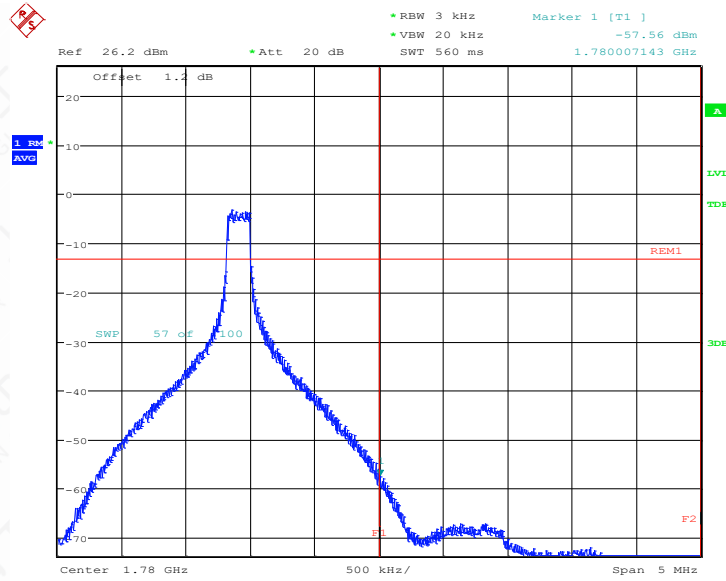
Date: 13.FEB.2023 20:47:34

OBW: 1RB-HIGH_offset



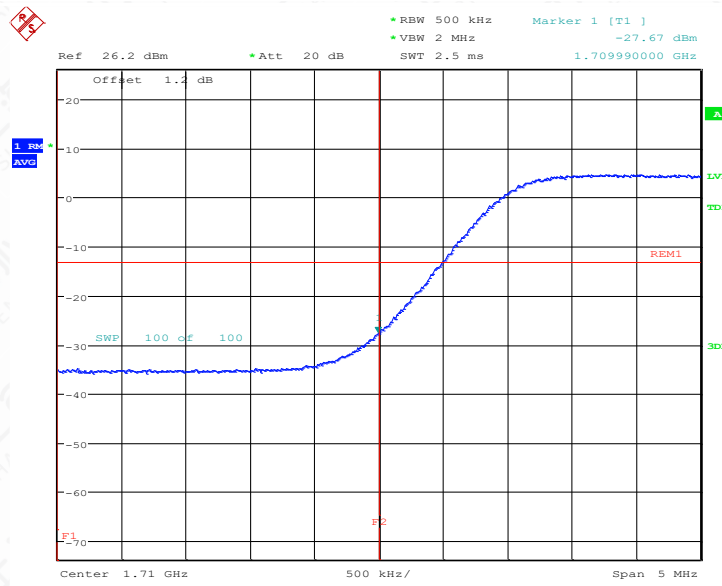
Date: 13.FEB.2023 20:53:52

HIGH BAND EDGE BLOCK-1RB-20MHz+20M_offset



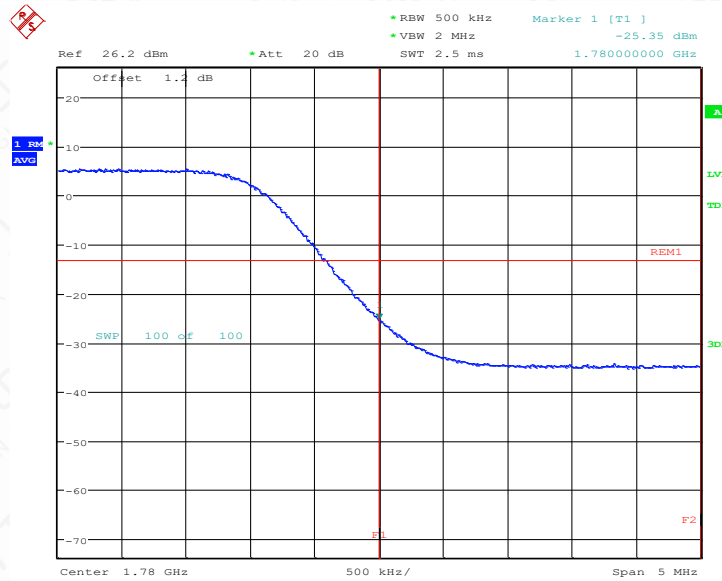
Date: 13.FEB.2023 20:55:38

LOW BAND EDGE BLOCK-20MHz+20MHz-100%RB



Date: 13.FEB.2023 20:44:42

HIGH BAND EDGE BLOCK-20MHz+20MHz-100%RB

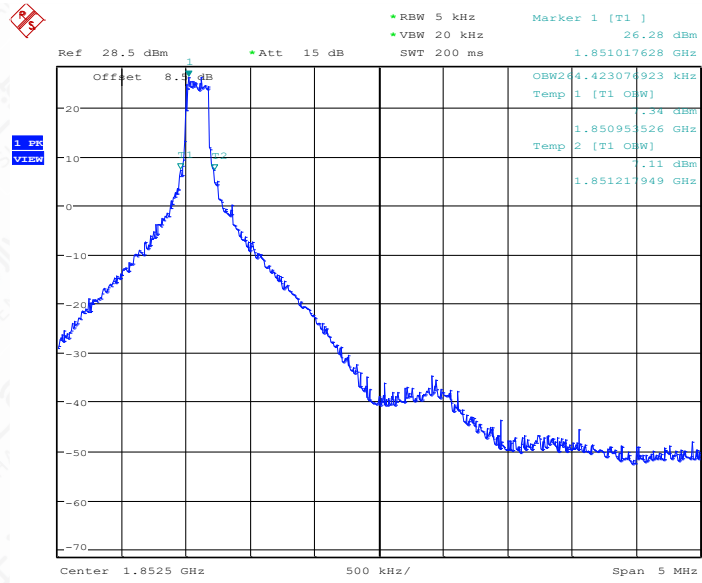


Date: 13.FEB.2023 20:51:04

LTE band 2@CA_2A-66A

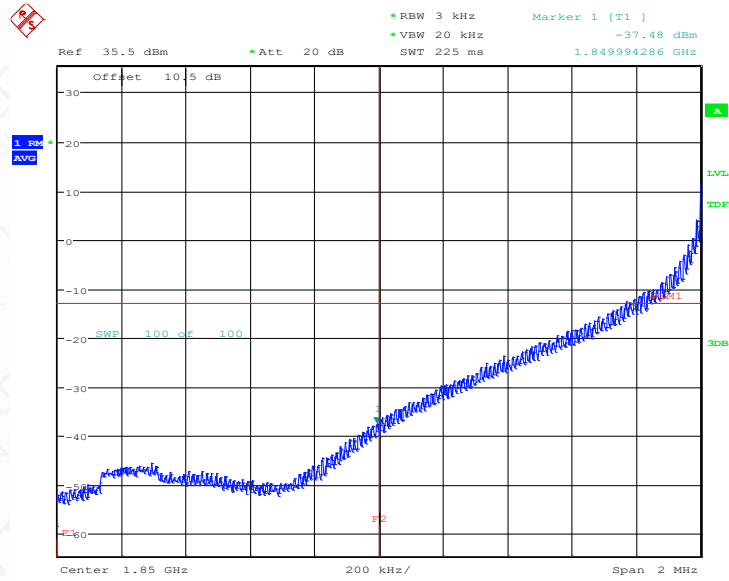
Only the worst case result is given below

OBW: 1RB-LOW_offset



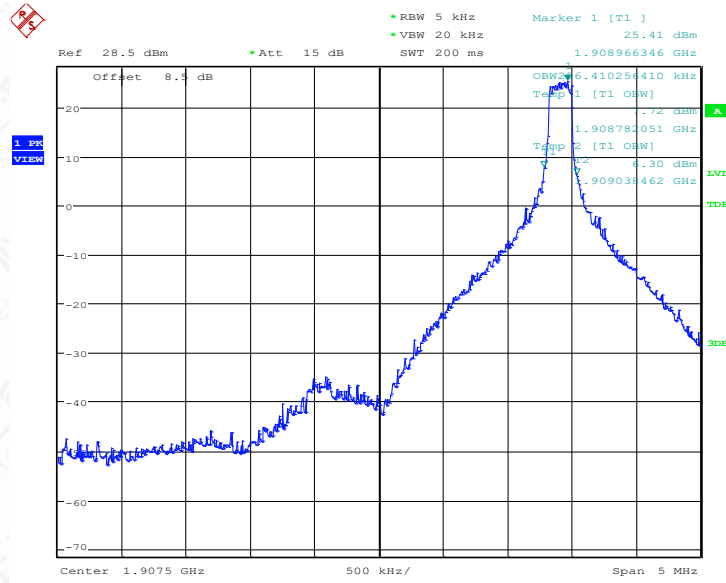
Date: 14.FEB.2023 16:31:42

LOW BAND EDGE BLOCK-1RB-LOW_offset



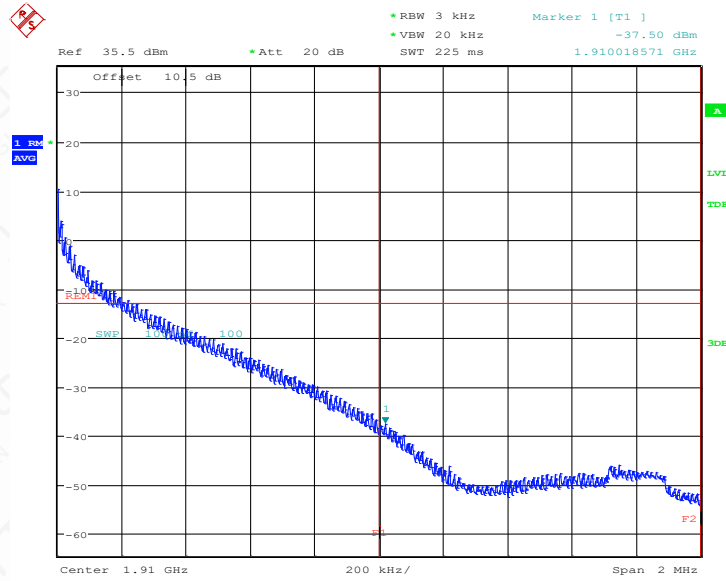
Date: 14.FEB.2023 16:32:49

OBW: 1RB-HIGH_offset



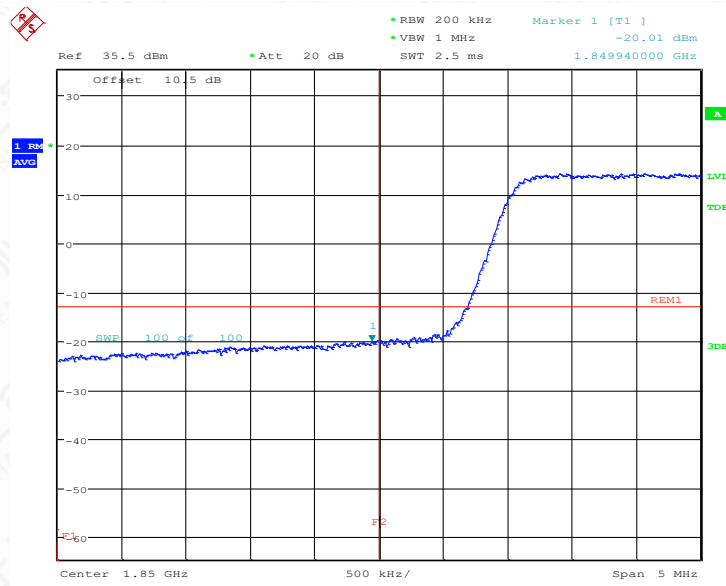
Date: 14.FEB.2023 16:45:33

HIGH BAND EDGE BLOCK-1RB-HIGH_offset



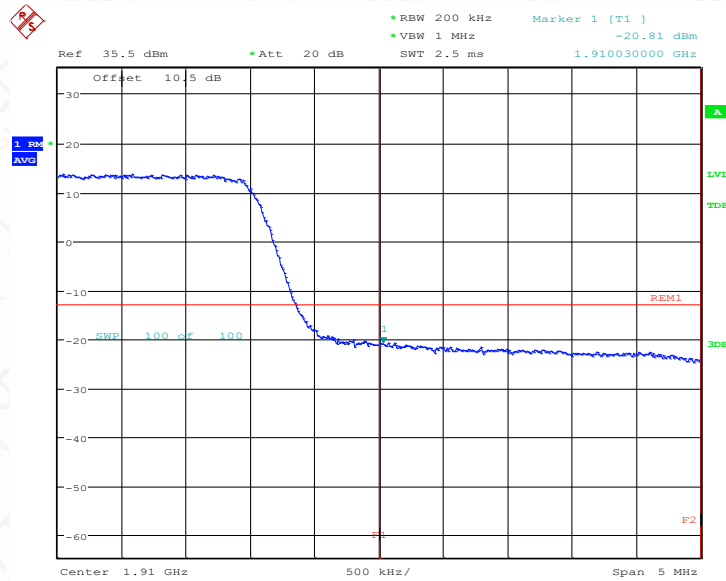
Date: 14.FEB.2023 16:46:39

LOW BAND EDGE BLOCK-20MHz+20MHz-100%RB



Date: 14.FEB.2023 16:20:00

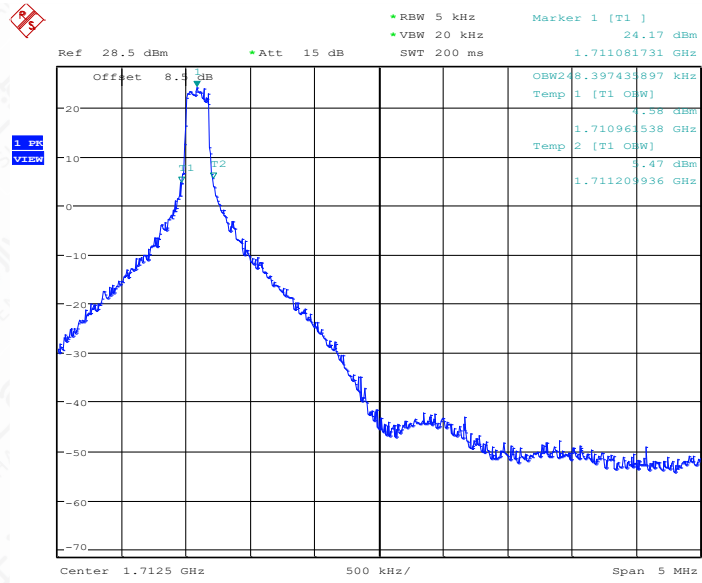
HIGH BAND EDGE BLOCK-20MHz+20MHz-100%RB



Date: 14.FEB.2023 16:41:29

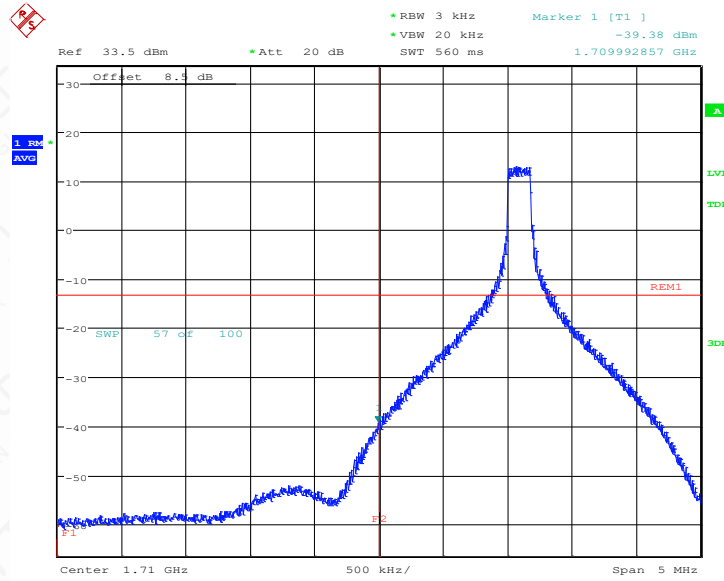
LTE band 66@CA_2A-66A

OBW: 1RB-LOW_offset



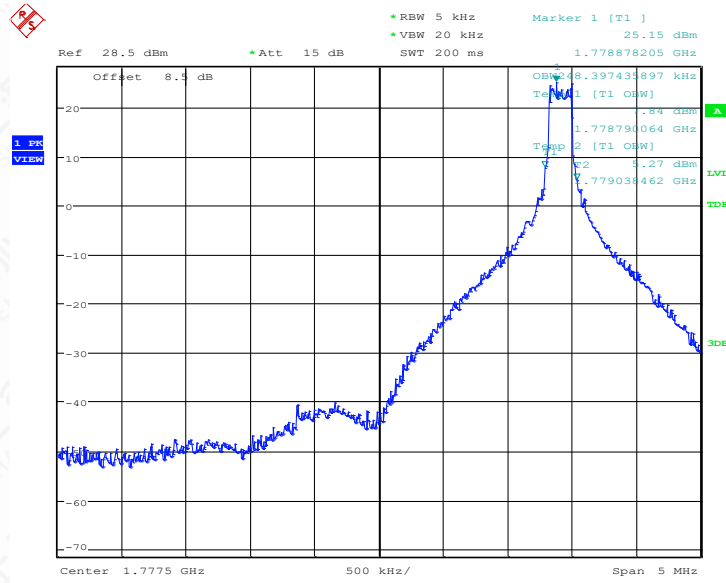
Date: 14.FEB.2023 16:38:20

LOW BAND EDGE BLOCK-1RB-LOW_offset



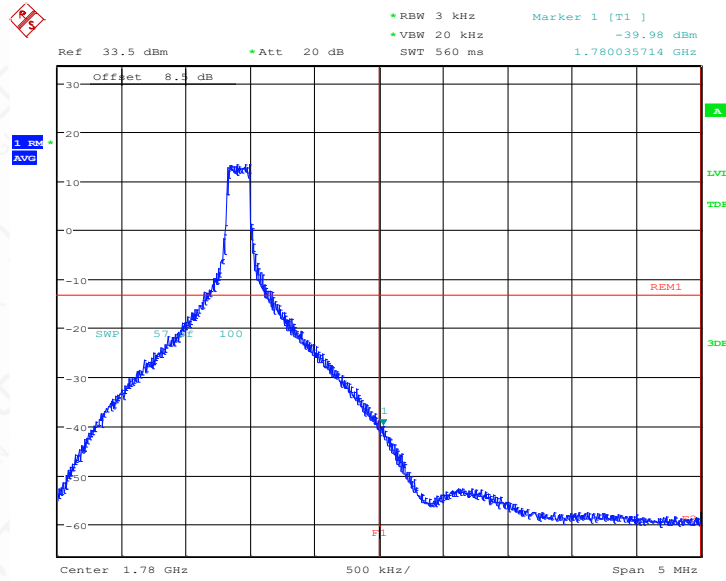
Date: 14.FEB.2023 16:40:06

OBW: 1RB-HIGH_offset



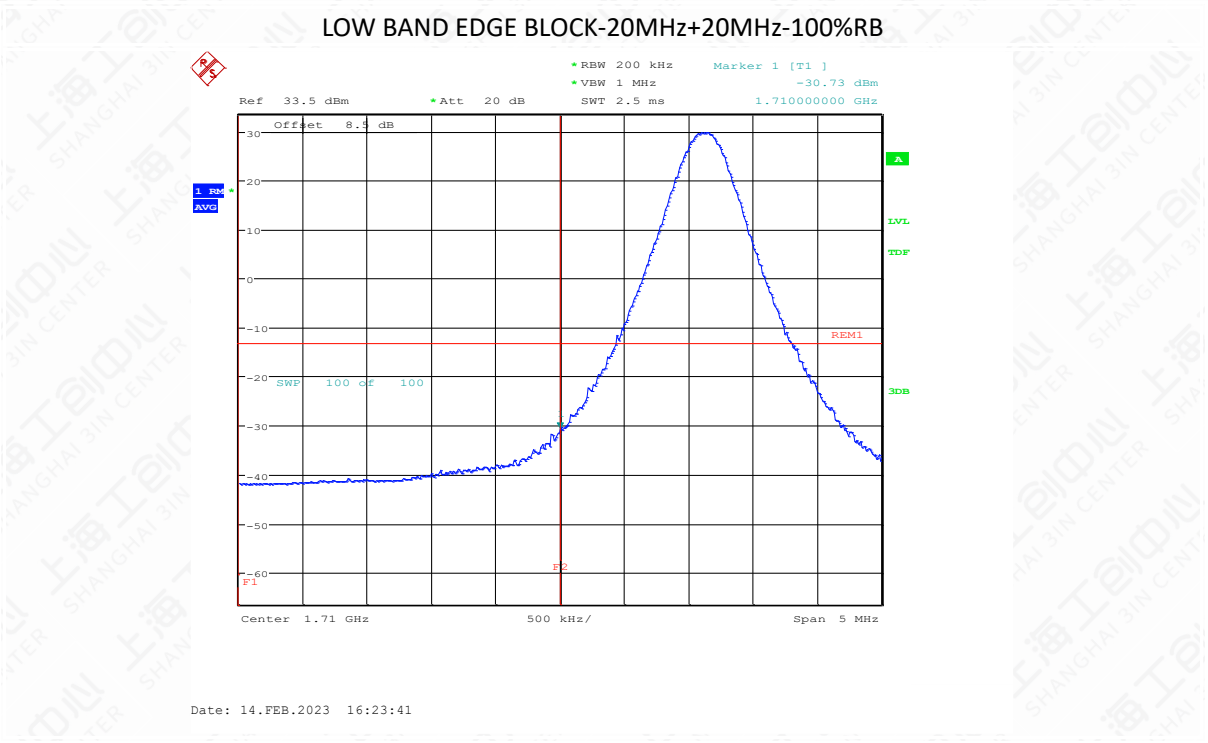
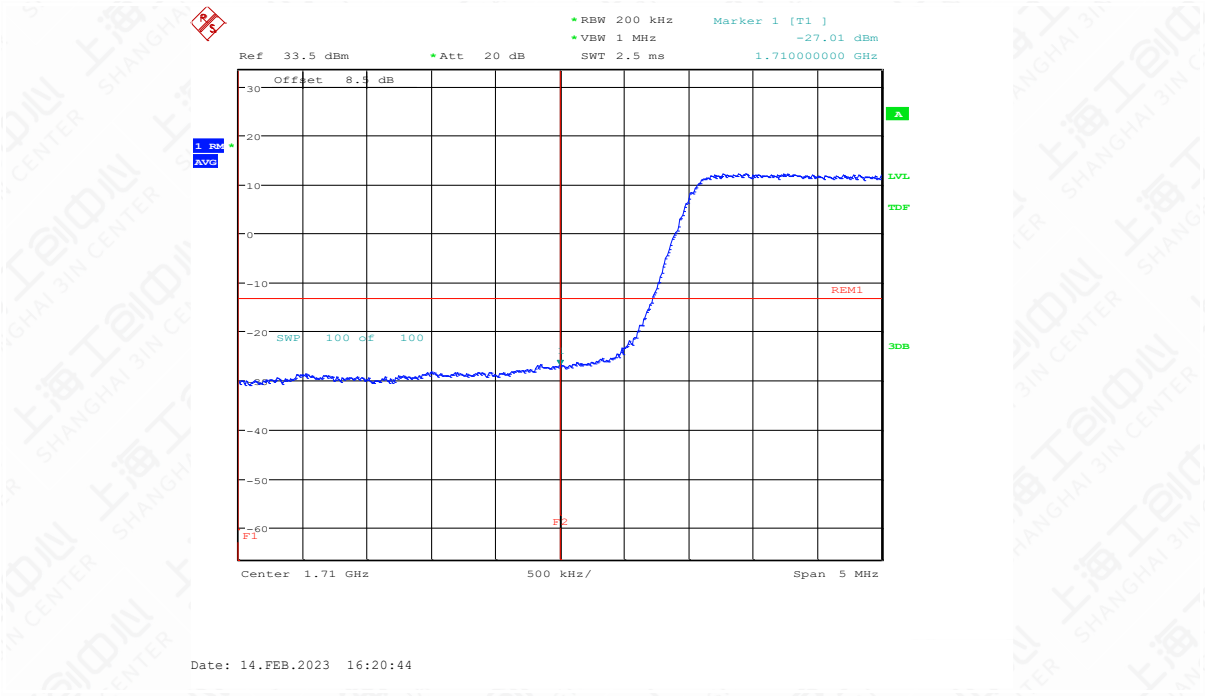
Date: 14.FEB.2023 16:49:35

HIGH BAND EDGE BLOCK-1RB-HIGH_offset



Date: 14.FEB.2023 16:51:20

LOW BAND EDGE BLOCK-20MHz+20MHz-100%RB



Note: Use cases with * are subcontracted tests.

6.7 Conducted Spurious Emission

6.7.1 Measurement Method

The following steps outline the procedure used to measure the conducted emissions from the EUT.

1. Determine frequency range for measurements: From CFR 2.1057 the spectrum should be investigated from the lowest radio frequency generated in the equipment up to at least the 10th harmonic of the carrier frequency. For the mobile station equipment tested, this equates to a frequency range of 13 MHz to 9 GHz, data taken from 10 MHz to 25 GHz.
2. Determine EUT transmit frequencies: below outlines the band edge frequencies pertinent to conducted emissions testing.
3. The number of sweep points of spectrum analyzer is set to 30001 which is greater than span/RBW.

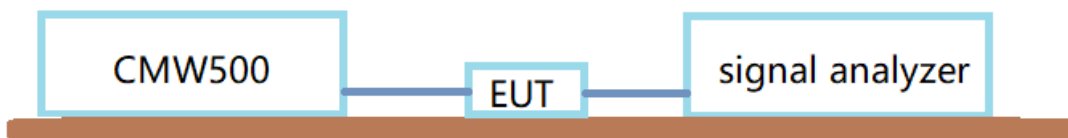
6.7.2 Measurement Limit

Part 27.53(g), 27.53(h), 27.53(m) specify that the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.

The specification that emissions shall be attenuated below the transmitter power (P) by at least $43 + 10 \log(P)$ dB, translates in the relevant power range (1 to 0.001 W) to -13 dBm. At 1 W the specified minimum attenuation becomes 43 dB and relative to a 30 dBm (1 W) carrier becomes a limit of -13 dBm. At 0.001 W (0 dBm) the minimum attenuation is 13 dB, which again yields a limit of -13 dBm. In this way a translation of the specification from relative to absolute terms is carried out.

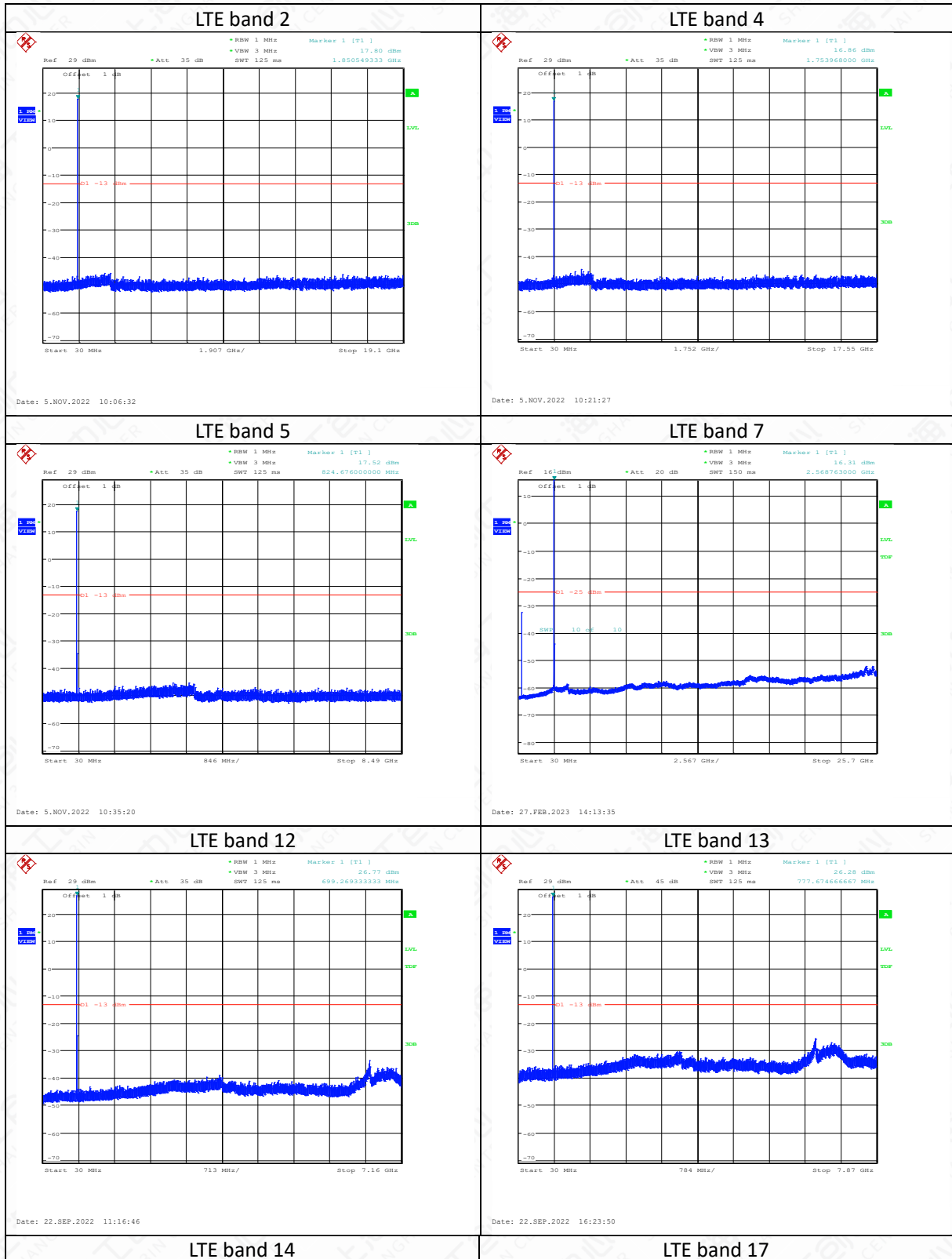
Part 27.53(m)(4) specifies for mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log(P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log(P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log(P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than $43 + 10 \log(P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log(P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

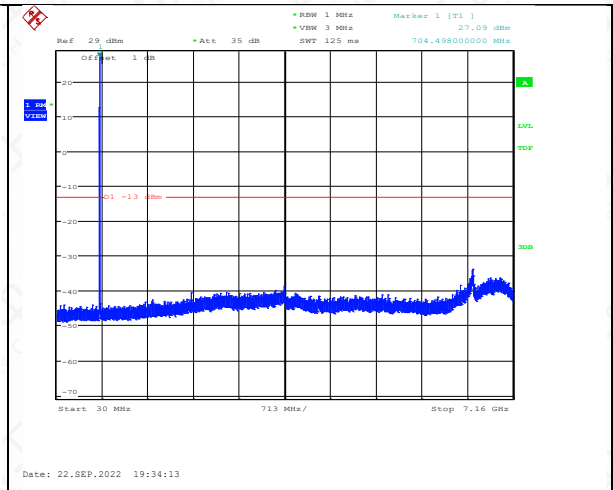
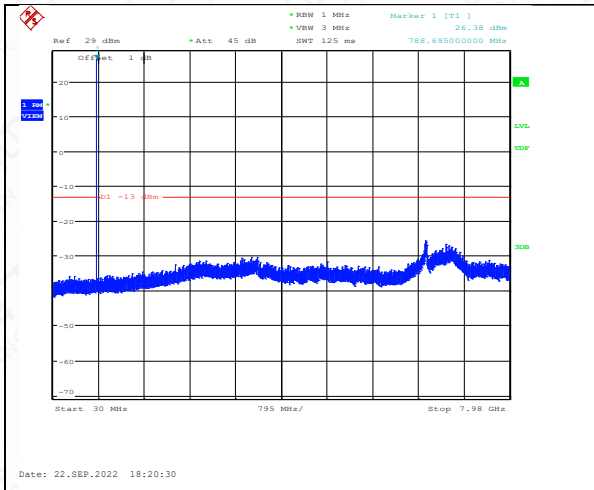
6.7.3 Test Setup



6.7.4 Measurement result

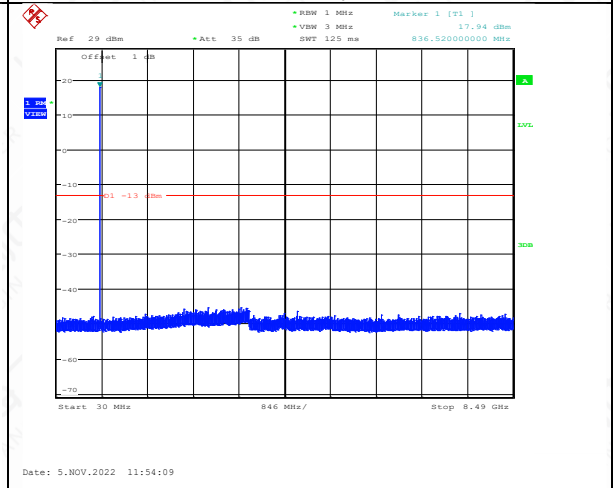
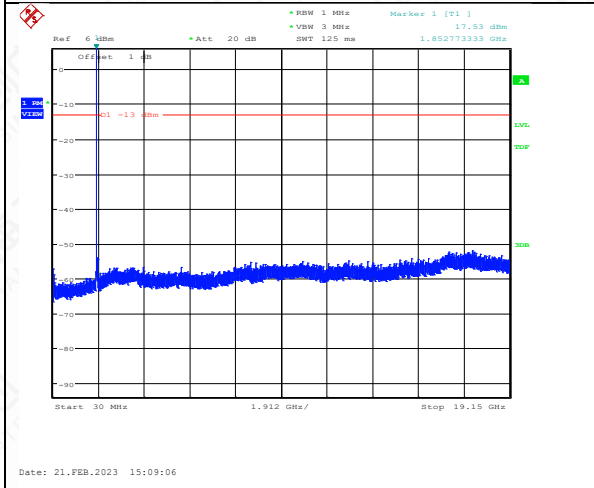
Only worst case result is given below





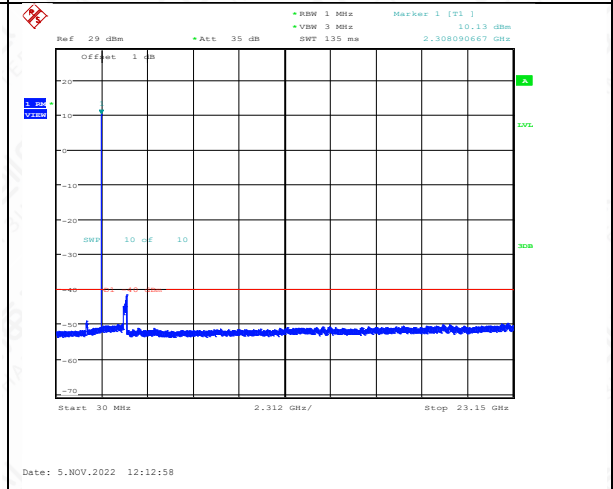
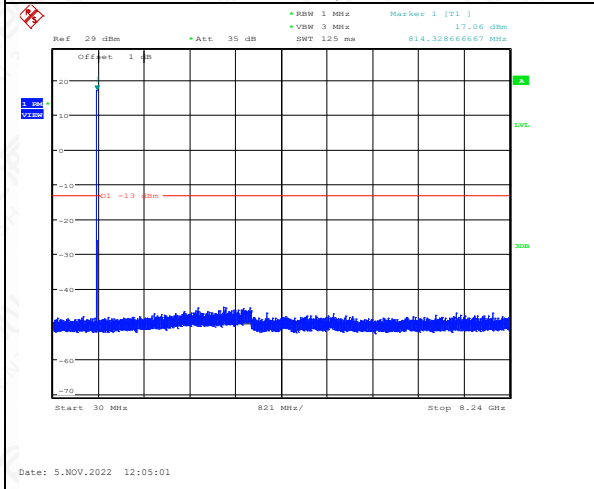
LTE band 25

LTE band 26(part22)



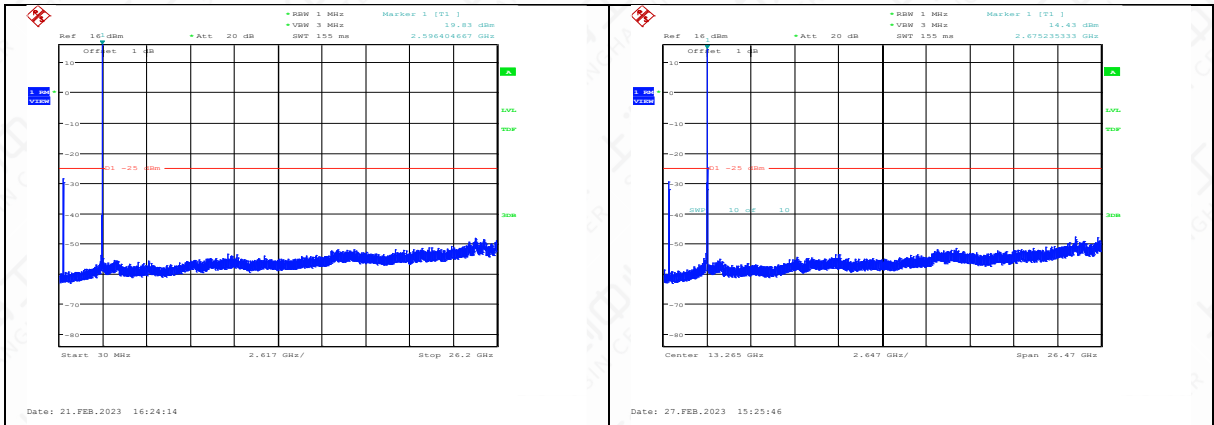
LTE band 26(part 90)

LTE band 30

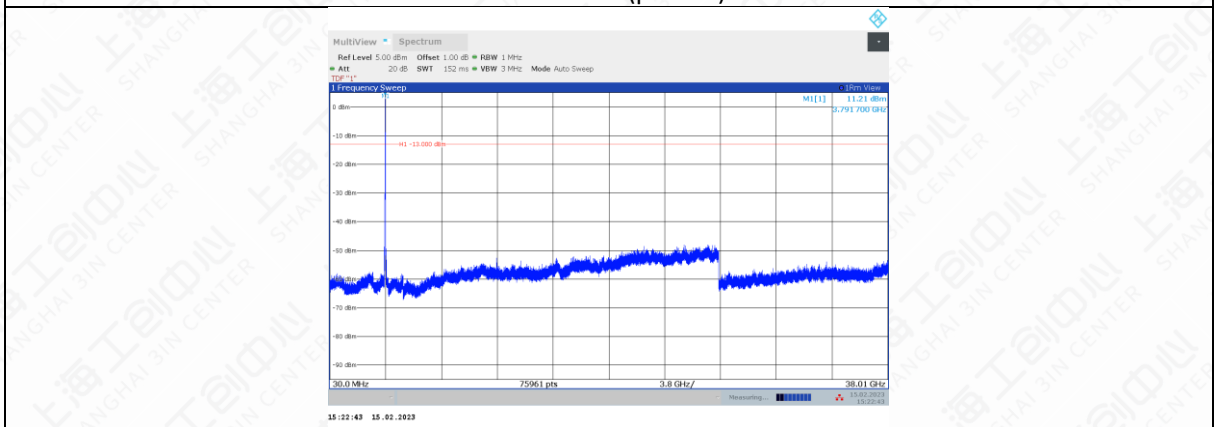


LTE band 38

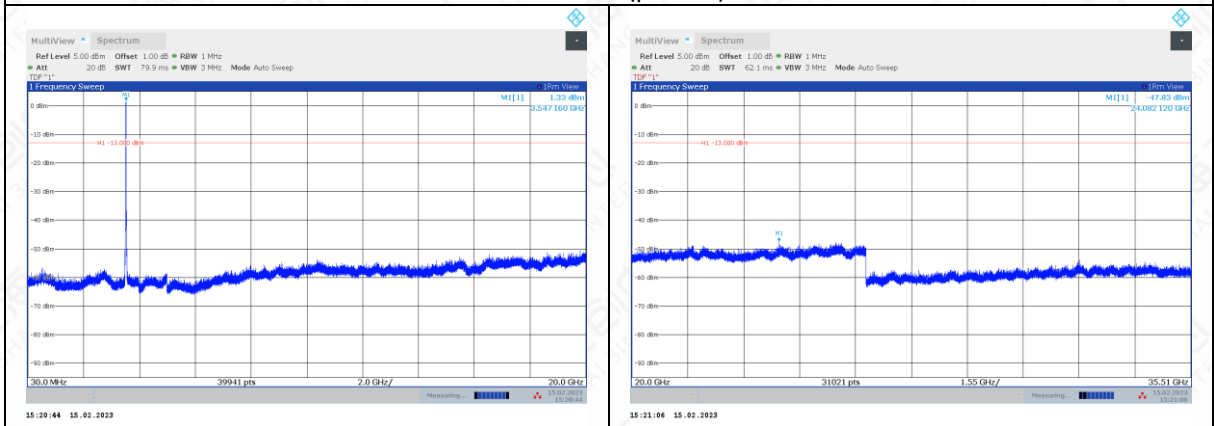
LTE band 41



LTE band 43(part 27)

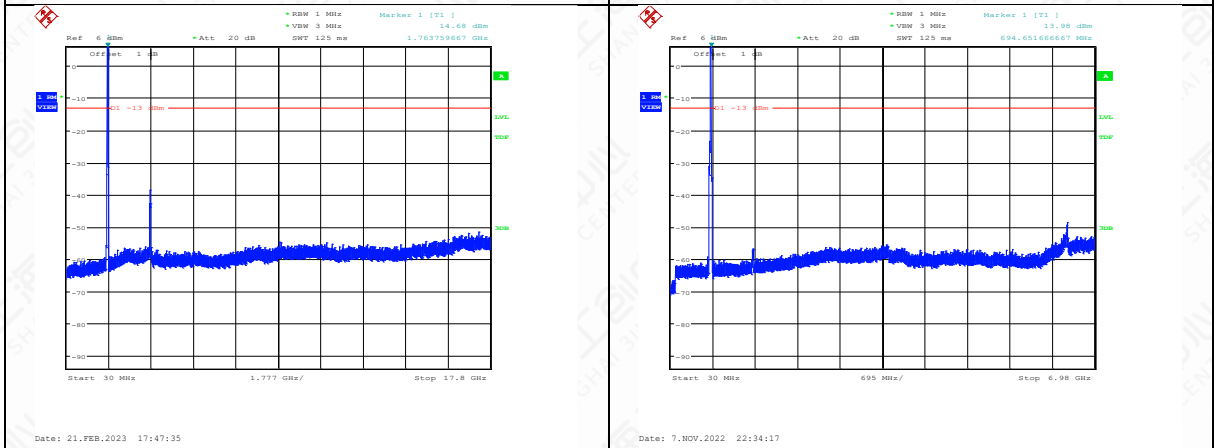


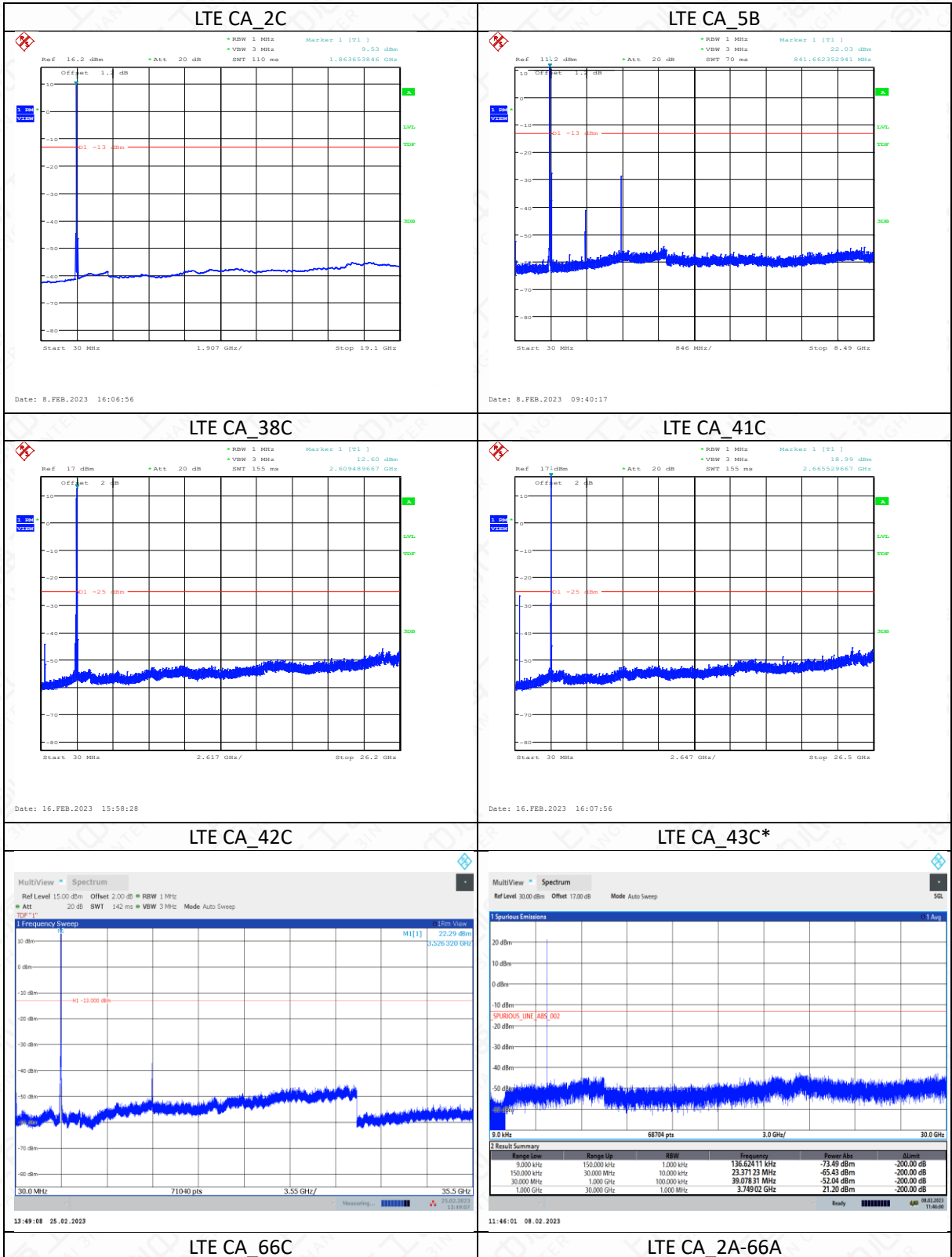
LTE band 42(part 27)

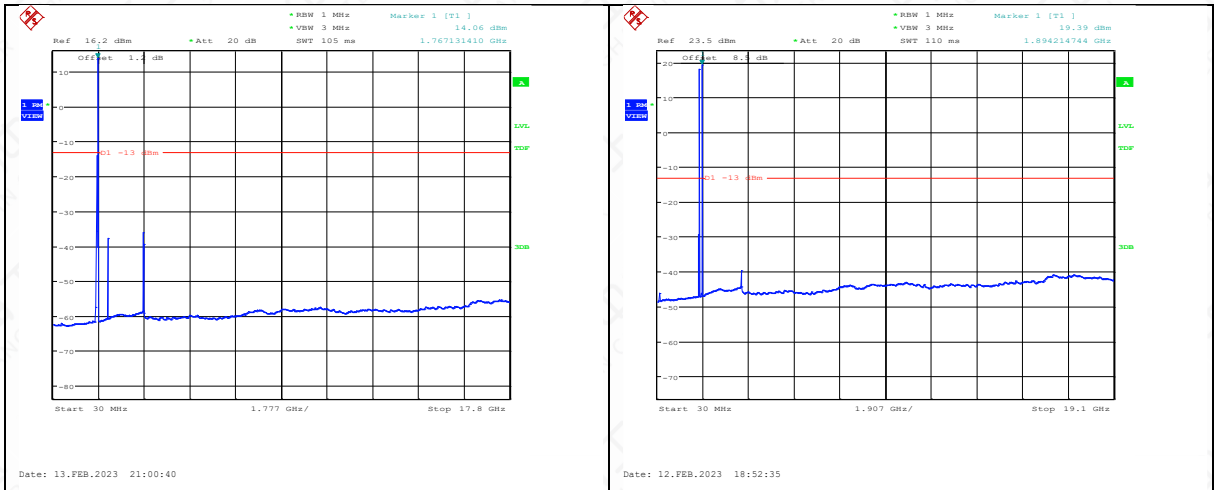


LTE band 66

LTE band 71







Note: Use cases with * are subcontracted tests.

6.8 Peak-To-Average Power Ratio

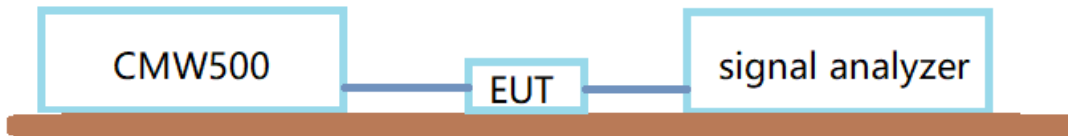
Reference

CFR Part2.1049,24.238, 24.232 (d), 27.50(a)

According to KDB 971168 5.7:

- a) Refer to instrument's analyzer instruction manual for details on how to use the power statistics/CCDF function;
- b) Set resolution/measurement bandwidth \geq signal's occupied bandwidth;
- c) Set the number of counts to a value that stabilizes the measured CCDF curve;
- d) Set the measurement interval to 1 ms
- e) Record the maximum PAPR level associated with a probability of 0.1%

6.8.1 Test Setup



6.8.2 Measurement results

LTE Band 2, 20MHz

Frequency (MHz)	RB	PAPR (dB)		
		QPSK	16QAM	64QAM
1880	100%,0	4.94	6.35	6.63

LTE band 4, 20MHz

Frequency (MHz)	RB	PAPR (dB)		
		QPSK	16QAM	64QAM
1732.5	100%,0	5.03	6.38	6.70

LTE band 5, 10MHz

Frequency (MHz)	RB	PAPR (dB)		
		QPSK	16QAM	64QAM
836.5	100%,0	5.51	6.38	6.73

LTE band 7, 20MHz

Frequency (MHz)	RB	PAPR (dB)		
		QPSK	16QAM	64QAM
2535	100%,0	4.90	6.25	6.51

LTE band 12,10MHz

Frequency (MHz)	RB	PAPR (dB)		
		QPSK	16QAM	64QAM
707.5	100%,0	5.35	6.22	6.51

LTE band 13,10MHz

Frequency (MHz)	RB	PAPR (dB)		
		QPSK	16QAM	64QAM
782	100%,0	5.61	6.38	6.86

LTE band 14,10MHz

Frequency (MHz)	RB	PAPR (dB)		
		QPSK	16QAM	64QAM

793	100%,0	5.61	6.38	6.76
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LTE band 17,10MHz

Frequency (MHz)	RB	PAPR (dB)		
		QPSK	16QAM	64QAM
710	100%,0	5.32	6.22	6.63

LTE band 25,20MHz

Frequency (MHz)	RB	PAPR (dB)		
		QPSK	16QAM	64QAM
1882.5	100%,0	5.06	6.38	6.63

LTE band 26(part 22),15MHz

Frequency (MHz)	RB	PAPR (dB)		
		QPSK	16QAM	64QAM
836.5	100%,0	4.49	5.77	6.38

LTE band 25(part 90),10MHz

Frequency (MHz)	RB	PAPR (dB)		
		QPSK	16QAM	64QAM
819	100%,0	5.38	6.22	6.79

LTE band 30,10MHz

Frequency (MHz)	RB	PAPR (dB)		
		QPSK	16QAM	64QAM
2310	100%,0	5.58	6.38	6.54

LTE band 38, 20MHz

Frequency (MHz)	RB	PAPR (dB)		
		QPSK	16QAM	64QAM
2595	100%,0	7.69	8.97	9.20

LTE band 41, 20MHz

Frequency (MHz)	RB	PAPR (dB)		
		QPSK	16QAM	64QAM
2593	100%,0	7.63	9.07	9.33

LTE band 42, 20MHz(part 27)

Frequency (MHz)	RB	PAPR (dB)		
		QPSK	16QAM	64QAM
3500	100%,0	10.82	11.04	11.12

LTE band 43, 20MHz(part 27)

Frequency (MHz)	RB	PAPR (dB)		
		QPSK	16QAM	64QAM
3750	100%,0	10.80	11.02	11.14

LTE band 66, 20MHz

Frequency (MHz)	RB	PAPR (dB)		
		QPSK	16QAM	64QAM
1745	100%,0	5.00	6.41	6.73

LTE band 71, 20MHz

Frequency (MHz)	RB	PAPR (dB)		
		QPSK	16QAM	64QAM
683	100%,0	5.00	6.35	6.54

LTE 2C, 20MHz+20MHz

Frequency (MHz)	PAPR (dB)		
	QPSK	16QAM	64QAM

1880	8.08	8.30	8.30
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LTE 5B, 10MHz+10MHz

Frequency (MHz)	PAPR (dB)		
	QPSK	16QAM	64QAM
836.5	6.40	6.99	7.10

LTE 38C, 20MHz+20MHz

Frequency (MHz)	PAPR (dB)		
	QPSK	16QAM	64QAM
2595	10.58	10.87	10.74

LTE 41C, 20MHz+20MHz

Frequency (MHz)	PAPR (dB)		
	QPSK	16QAM	64QAM
2593	10.58	10.80	10.80

LTE 42C, 20MHz+20MHz

Frequency (MHz)	PAPR (dB)		
	QPSK	16QAM	64QAM
3500	10.61	10.80	10.83

LTE 43C, 20MHz+20MHz*

Frequency (MHz)	PAPR (dB)		
	QPSK	16QAM	64QAM
3750	14.86	13.14	12.98

LTE 66C, 20MHz+20MHz

Frequency (MHz)	PAPR (dB)		
	QPSK	16QAM	64QAM
1755	8.11	8.33	8.27

LTE band 2@CA_2+66, 20MHz

Frequency (MHz)	PAPR (dB)		
	QPSK	16QAM	64QAM
1880	5.64	6.28	6.63

LTE band 66@CA_2+66, 20MHz

Frequency (MHz)	PAPR (dB)		
	QPSK	16QAM	64QAM
1745	4.90	6.28	6.60

Note: Use cases with * are subcontracted tests.

6.9 Power Spectral Density

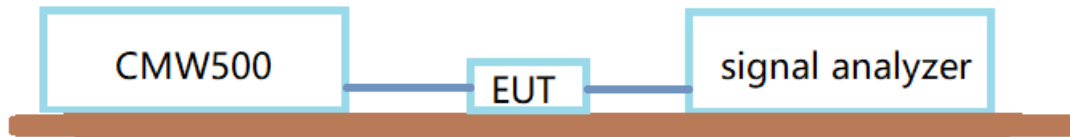
Reference

CFR 27.50(a)(3)

For mobile and portable stations transmitting in the 2305-2315 MHz band or the 2350-2360 MHz band, the average EIRP must not exceed 50 milliwatts within any 1 megahertz of authorized bandwidth, except that for mobile and portable stations compliant with 3GPP LTE standards or another advanced mobile broadband protocol that avoids concentrating energy at the edge of the operating band the average EIRP must not exceed 250 milliwatts within any 5 megahertz of authorized bandwidth but may exceed 50 milliwatts within any 1 megahertz of authorized bandwidth. For mobile and portable stations using time division duplexing (TDD) technology, the duty cycle must not exceed 38 percent in

the 2305-2315 MHz and 2350-2360 MHz bands. Mobile and portable stations using FDD technology are restricted to transmitting in the 2305-2315 MHz band. Power averaging shall not include intervals in which the transmitter is off.

6.9.1 Test Setup



6.9.2 Measurement results

LTE Band 30

Bandwidth	RB size/offset	Frequency (MHz)	Modulation	Avg Power (dBm/5MHz)	EIRP (dBm/5MHz)	Limit (dBm/5MHz)
5MHz	1 RB low	2307.5	QPSK	21.425	22.675	24
5MHz	1 RB mid	2307.5	QPSK	21.451	22.701	24
5MHz	1 RB high	2307.5	QPSK	21.331	22.581	24
5MHz	50%,low	2307.5	QPSK	20.148	21.398	24
5MHz	50% RB mid	2307.5	QPSK	20.144	21.394	24
5MHz	50%,high	2307.5	QPSK	20.116	21.366	24
5MHz	100% RB	2307.5	QPSK	19.384	20.634	24
5MHz	1 RB low	2307.5	16QAM	20.491	21.741	24
5MHz	1 RB mid	2307.5	16QAM	20.557	21.807	24
5MHz	1 RB high	2307.5	16QAM	20.430	21.68	24
5MHz	50%,low	2307.5	16QAM	19.174	20.424	24
5MHz	50% RB mid	2307.5	16QAM	19.159	20.409	24
5MHz	50%,high	2307.5	16QAM	19.089	20.339	24
5MHz	100% RB	2307.5	16QAM	18.392	19.642	24
5MHz	1 RB low	2307.5	64QAM	20.466	21.716	24
5MHz	1 RB mid	2307.5	64QAM	20.514	21.764	24
5MHz	1 RB high	2307.5	64QAM	20.364	21.614	24
5MHz	50%,low	2307.5	64QAM	19.160	20.41	24
5MHz	50% RB mid	2307.5	64QAM	19.197	20.447	24
5MHz	50%,high	2307.5	64QAM	19.150	20.4	24
5MHz	100% RB	2307.5	64QAM	18.353	19.603	24
5MHz	1 RB low	2310	QPSK	21.289	22.539	24
5MHz	1 RB mid	2310	QPSK	21.348	22.598	24
5MHz	1 RB high	2310	QPSK	21.216	22.466	24
5MHz	50%,low	2310	QPSK	19.942	21.192	24
5MHz	50% RB mid	2310	QPSK	20.034	21.284	24
5MHz	50%,high	2310	QPSK	19.996	21.246	24
5MHz	100% RB	2310	QPSK	19.231	20.481	24
5MHz	1 RB low	2310	16QAM	20.405	21.655	24
5MHz	1 RB mid	2310	16QAM	20.432	21.682	24
5MHz	1 RB high	2310	16QAM	20.371	21.621	24
5MHz	50%,low	2310	16QAM	18.987	20.237	24
5MHz	50% RB mid	2310	16QAM	19.115	20.365	24
5MHz	50%,high	2310	16QAM	19.052	20.302	24

Bandwidth	RB size/offset	Frequency (MHz)	Modulation	Avg Power (dBm/5MHz)	EIRP (dBm/5MHz)	Limit (dBm/5MHz)
5MHz	100% RB	2310	16QAM	18.241	19.491	24
5MHz	1 RB low	2310	64QAM	20.438	21.688	24
5MHz	1 RB mid	2310	64QAM	20.462	21.712	24
5MHz	1 RB high	2310	64QAM	20.342	21.592	24
5MHz	50%,low	2310	64QAM	18.992	20.242	24
5MHz	50% RB mid	2310	64QAM	19.046	20.296	24
5MHz	50%,high	2310	64QAM	19.016	20.266	24
5MHz	100% RB	2310	64QAM	18.224	19.474	24
5MHz	1 RB low	2312.5	QPSK	21.252	22.502	24
5MHz	1 RB mid	2312.5	QPSK	21.300	22.55	24
5MHz	1 RB high	2312.5	QPSK	21.260	22.51	24
5MHz	50%,low	2312.5	QPSK	19.980	21.23	24
5MHz	50% RB mid	2312.5	QPSK	19.982	21.232	24
5MHz	50%,high	2312.5	QPSK	19.974	21.224	24
5MHz	100% RB	2312.5	QPSK	19.207	20.457	24
5MHz	1 RB low	2312.5	16QAM	20.433	21.683	24
5MHz	1 RB mid	2312.5	16QAM	20.482	21.732	24
5MHz	1 RB high	2312.5	16QAM	20.387	21.637	24
5MHz	50%,low	2312.5	16QAM	18.997	20.247	24
5MHz	50% RB mid	2312.5	16QAM	19.031	20.281	24
5MHz	50%,high	2312.5	16QAM	19.025	20.275	24
5MHz	100% RB	2312.5	16QAM	18.245	19.495	24
5MHz	1 RB low	2312.5	64QAM	20.380	21.63	24
5MHz	1 RB mid	2312.5	64QAM	20.473	21.723	24
5MHz	1 RB high	2312.5	64QAM	20.373	21.623	24
5MHz	50%,low	2312.5	64QAM	18.964	20.214	24
5MHz	50% RB mid	2312.5	64QAM	19.053	20.303	24
5MHz	50%,high	2312.5	64QAM	19.018	20.268	24
5MHz	100% RB	2312.5	64QAM	18.260	19.51	24
10MHz	1 RB low	2310	QPSK	21.269	22.519	24
10MHz	1 RB mid	2310	QPSK	21.241	22.491	24
10MHz	1 RB high	2310	QPSK	21.189	22.439	24
10MHz	50%,low	2310	QPSK	19.268	20.518	24
10MHz	50% RB mid	2310	QPSK	19.235	20.485	24
10MHz	50%,high	2310	QPSK	19.261	20.511	24
10MHz	100% RB	2310	QPSK	17.375	18.625	24
10MHz	1 RB low	2310	16QAM	20.430	21.68	24
10MHz	1 RB mid	2310	16QAM	20.411	21.661	24
10MHz	1 RB high	2310	16QAM	20.356	21.606	24
10MHz	50%,low	2310	16QAM	18.262	19.512	24
10MHz	50% RB mid	2310	16QAM	18.251	19.501	24
10MHz	50%,high	2310	16QAM	18.229	19.479	24
10MHz	100% RB	2310	16QAM	16.292	17.542	24
10MHz	1 RB low	2310	64QAM	20.475	21.725	24
10MHz	1 RB mid	2310	64QAM	20.416	21.666	24
10MHz	1 RB high	2310	64QAM	20.368	21.618	24
10MHz	50%,low	2310	64QAM	18.240	19.49	24
10MHz	50% RB mid	2310	64QAM	18.234	19.484	24
10MHz	50%,high	2310	64QAM	18.237	19.487	24

Bandwidth	RB size/offset	Frequency (MHz)	Modulation	Avg Power (dBm/5MHz)	EIRP (dBm/5MHz)	Limit (dBm/5MHz)
10MHz	100% RB	2310	64QAM	16.297	17.547	24
10MHz	1 RB low	2310	QPSK	21.237	22.487	24
10MHz	1 RB mid	2310	QPSK	21.220	22.47	24
10MHz	1 RB high	2310	QPSK	21.173	22.423	24
10MHz	50%,low	2310	QPSK	19.240	20.49	24
10MHz	50% RB mid	2310	QPSK	19.189	20.439	24
10MHz	50%,high	2310	QPSK	19.223	20.473	24
10MHz	100% RB	2310	QPSK	17.304	18.554	24
10MHz	1 RB low	2310	16QAM	20.398	21.648	24
10MHz	1 RB mid	2310	16QAM	20.379	21.629	24
10MHz	1 RB high	2310	16QAM	20.355	21.605	24
10MHz	50%,low	2310	16QAM	18.245	19.495	24
10MHz	50% RB mid	2310	16QAM	18.209	19.459	24
10MHz	50%,high	2310	16QAM	18.261	19.511	24
10MHz	100% RB	2310	16QAM	16.305	17.555	24
10MHz	1 RB low	2310	64QAM	20.432	21.682	24
10MHz	1 RB mid	2310	64QAM	20.387	21.637	24
10MHz	1 RB high	2310	64QAM	20.353	21.603	24
10MHz	50%,low	2310	64QAM	18.236	19.486	24
10MHz	50% RB mid	2310	64QAM	18.223	19.473	24
10MHz	50%,high	2310	64QAM	18.270	19.52	24
10MHz	100% RB	2310	64QAM	16.290	17.54	24
10MHz	1 RB low	2310	QPSK	21.250	22.5	24
10MHz	1 RB mid	2310	QPSK	21.205	22.455	24
10MHz	1 RB high	2310	QPSK	21.175	22.425	24
10MHz	50%,low	2310	QPSK	19.207	20.457	24
10MHz	50% RB mid	2310	QPSK	19.192	20.442	24
10MHz	50%,high	2310	QPSK	19.218	20.468	24
10MHz	100% RB	2310	QPSK	17.287	18.537	24
10MHz	1 RB low	2310	16QAM	20.396	21.646	24
10MHz	1 RB mid	2310	16QAM	20.366	21.616	24
10MHz	1 RB high	2310	16QAM	20.325	21.575	24
10MHz	50%,low	2310	16QAM	18.234	19.484	24
10MHz	50% RB mid	2310	16QAM	18.217	19.467	24
10MHz	50%,high	2310	16QAM	18.245	19.495	24
10MHz	100% RB	2310	16QAM	16.237	17.487	24
10MHz	1 RB low	2310	64QAM	20.432	21.682	24
10MHz	1 RB mid	2310	64QAM	20.342	21.592	24
10MHz	1 RB high	2310	64QAM	20.347	21.597	24
10MHz	50%,low	2310	64QAM	18.202	19.452	24
10MHz	50% RB mid	2310	64QAM	18.203	19.453	24
10MHz	50%,high	2310	64QAM	18.247	19.497	24
10MHz	100% RB	2310	64QAM	16.279	17.529	24

Annex A: Revised History

Version	Revised Content
V00	Initial

Annex B: Accreditation Certificate



Accredited Laboratory

A2LA has accredited

**INDUSTRIAL INTERNET INNOVATION CENTER
(SHANGHAI) CO., LTD.**
Shanghai, People's Republic of China

for technical competence in the field of
Electrical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *General requirements for the competence of testing and calibration laboratories*. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).



Presented this 12th day of April 2021.



Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 3682.01
Valid to February 28, 2023

For the tests to which this accreditation applies, please refer to the laboratory's Electrical Scope of Accreditation.

END OF REPORT