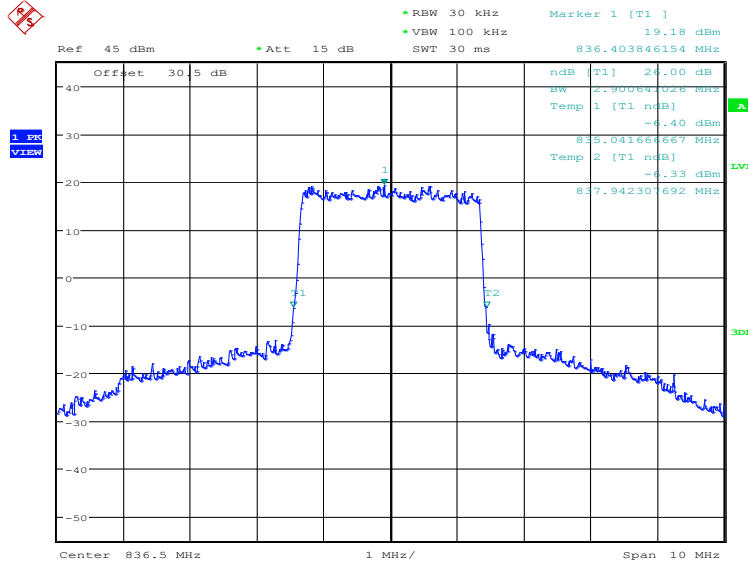


**LTE band 5, 3MHz (-26dBc)**

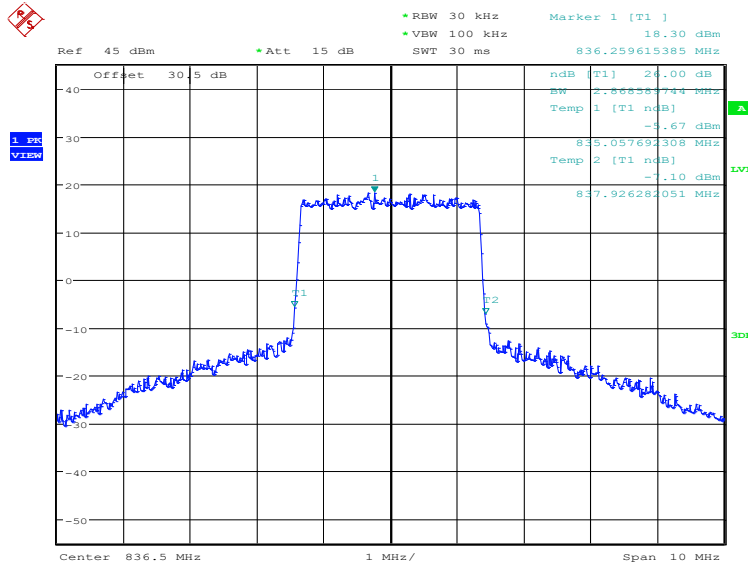
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
836.5	QPSK	16QAM
	2900.64	2868.59

**LTE band 5, 3MHz Bandwidth, QPSK (-26dBc BW)**



Date: 25.APR.2024 14:50:54

**LTE band 5, 3MHz Bandwidth, 16QAM (-26dBc BW)**

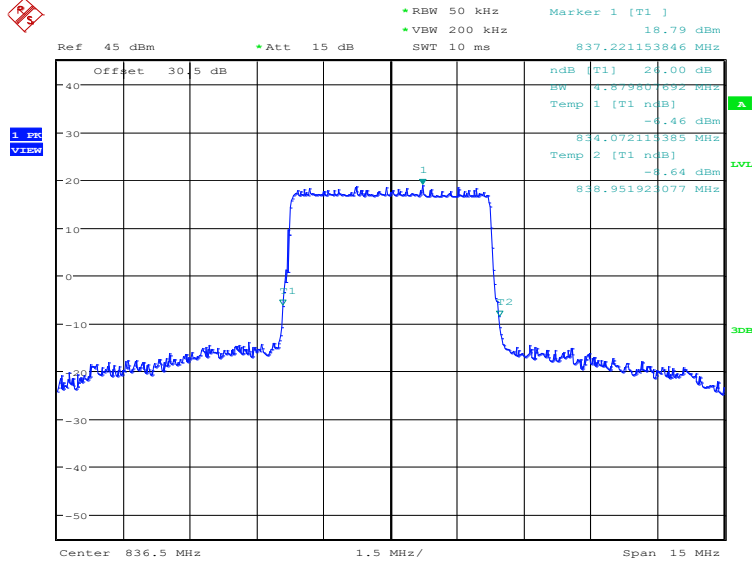


Date: 25.APR.2024 14:51:34

**LTE band 5, 5MHz (-26dBc)**

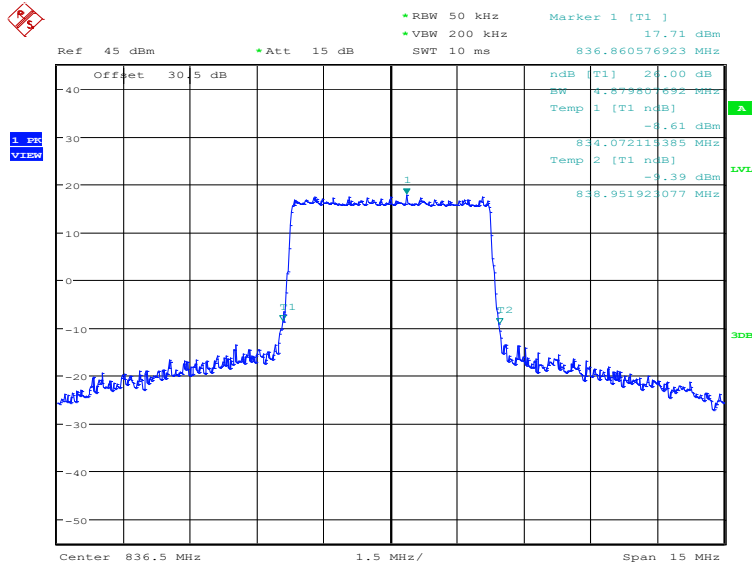
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
836.5	QPSK	16QAM
	4879.81	4879.81

**LTE band 5, 5MHz Bandwidth, QPSK (-26dBc BW)**



Date: 25.APR.2024 14:52:16

**LTE band 5, 5MHz Bandwidth, 16QAM (-26dBc BW)**

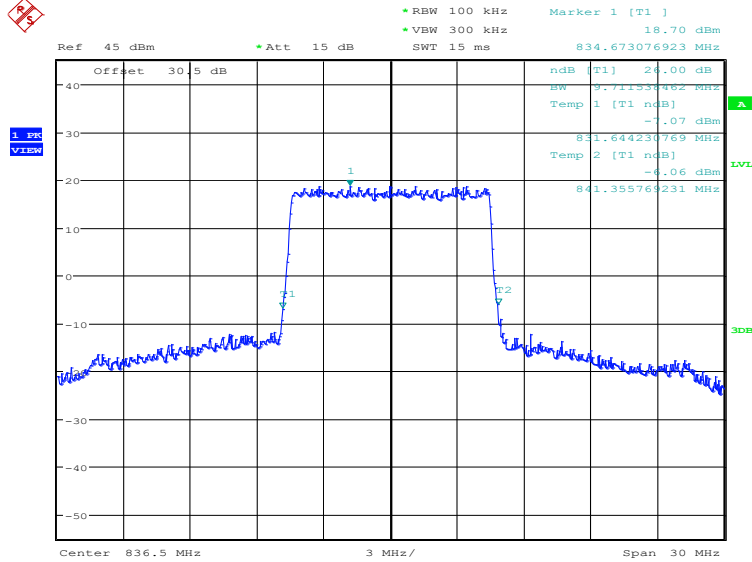


Date: 25.APR.2024 14:52:56

**LTE band 5, 10MHz (-26dBc)**

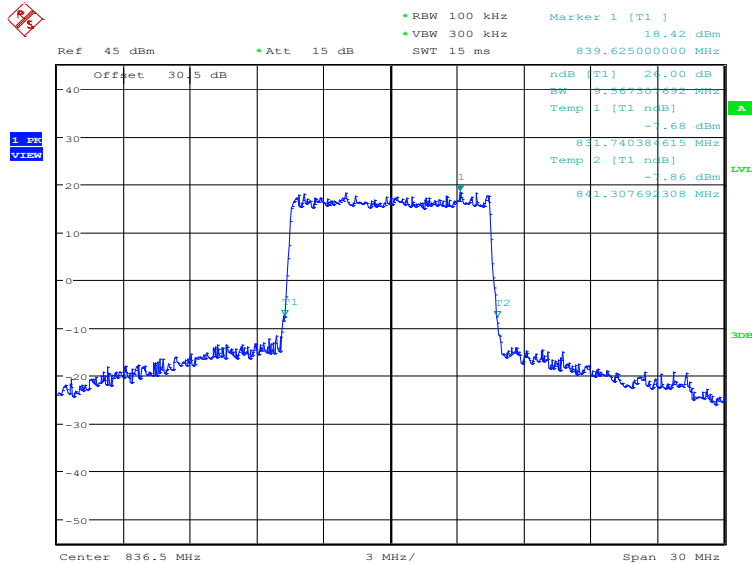
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
836.5	QPSK	16QAM
	9711.54	9567.31

**LTE band 5, 10MHz Bandwidth, QPSK (-26dBc BW)**



Date: 25.APR.2024 14:53:38

**LTE band 5, 10MHz Bandwidth, 16QAM (-26dBc BW)**

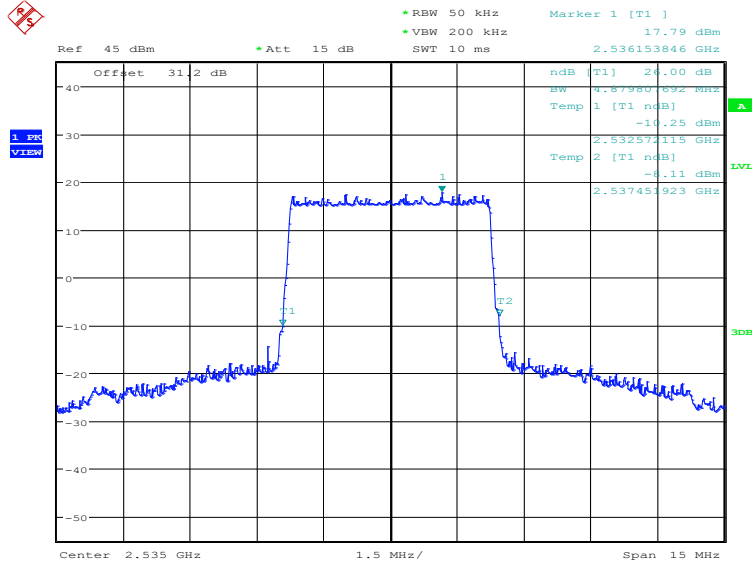


Date: 25.APR.2024 14:54:18

**LTE band 7, 5MHz (-26dBc)**

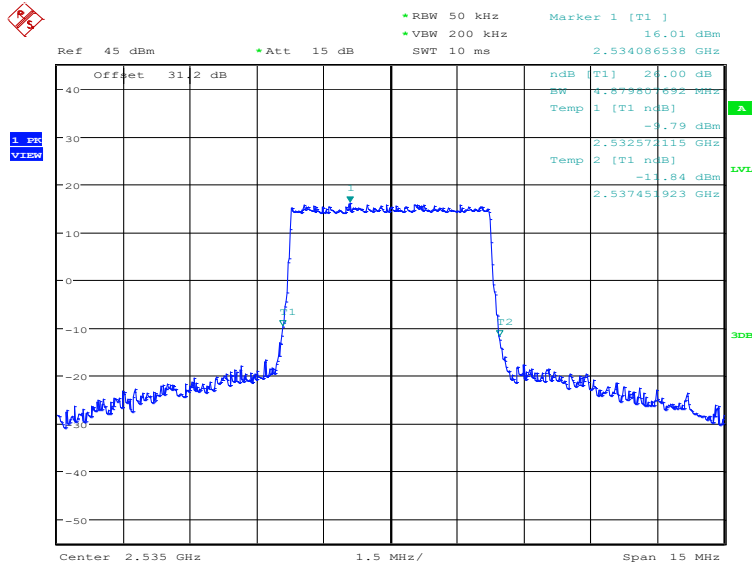
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
2535.0	QPSK	16QAM
	4879.81	4879.81

**LTE band 7, 5MHz Bandwidth, QPSK (-26dBc BW)**



Date: 25.APR.2024 14:55:01

**LTE band 7, 5MHz Bandwidth,16QAM (-26dBc BW)**

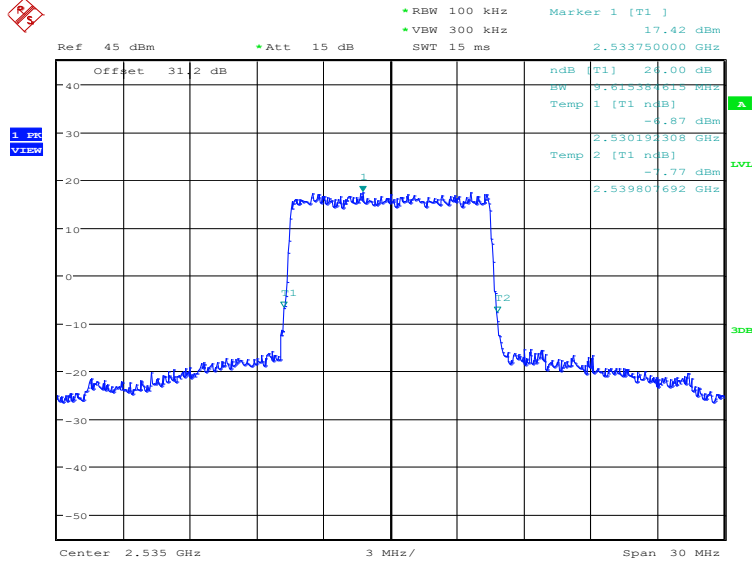


Date: 25.APR.2024 14:55:41

**LTE band 7, 10MHz (-26dBc)**

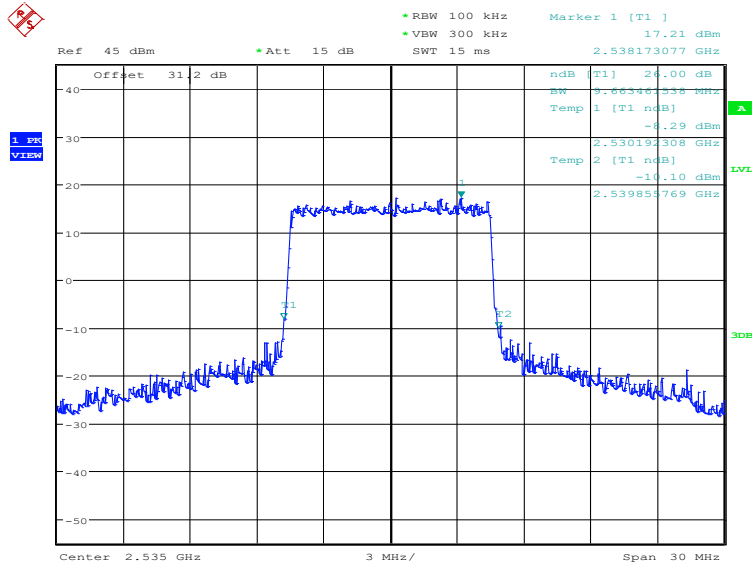
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
2535.0	QPSK	16QAM
	9615.38	9663.46

**LTE band 7, 10MHz Bandwidth, QPSK (-26dBc BW)**



Date: 25.APR.2024 14:56:23

**LTE band 7, 10MHz Bandwidth, 16QAM (-26dBc BW)**

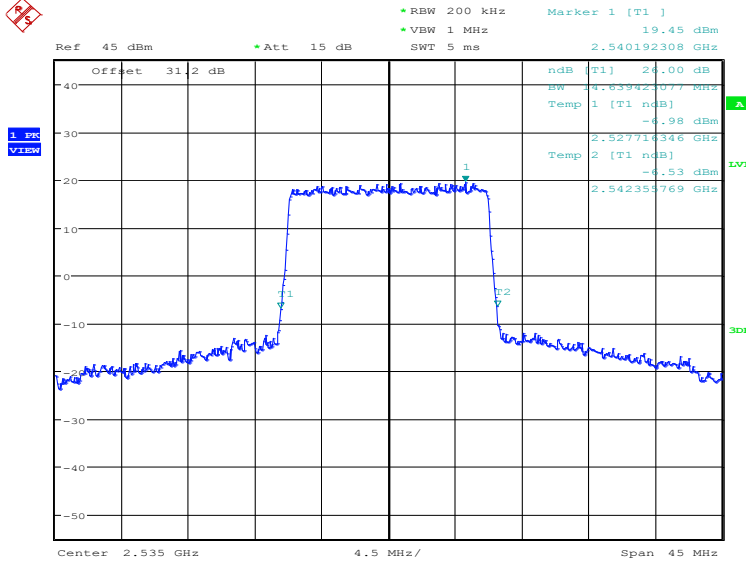


Date: 25.APR.2024 14:57:03

**LTE band 7, 15MHz (-26dBc)**

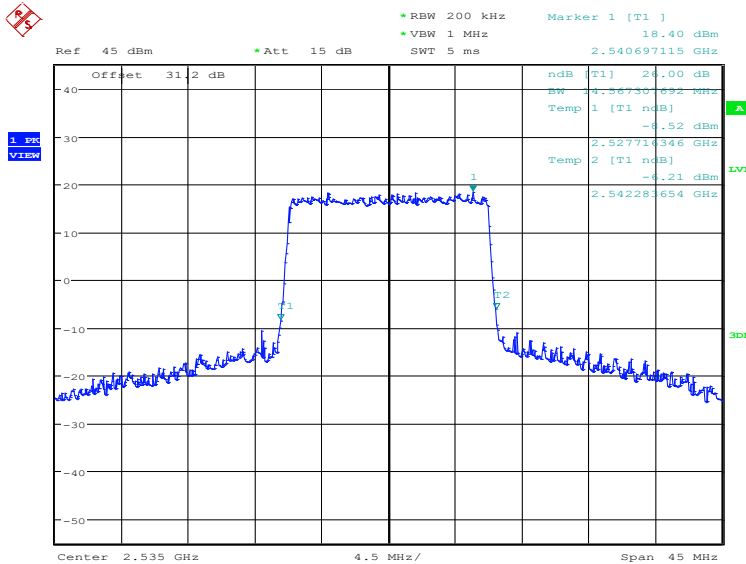
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
2535.0	QPSK	16QAM
	14639.42	14567.31

**LTE band 7, 15MHz Bandwidth, QPSK (-26dBc BW)**



Date: 25.APR.2024 14:57:45

**LTE band 7, 15MHz Bandwidth, 16QAM (-26dBc BW)**

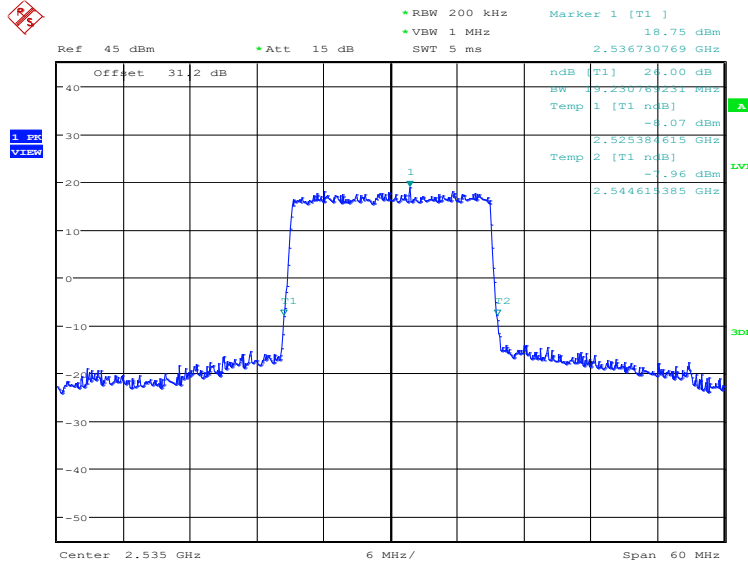


Date: 25.APR.2024 14:58:25

**LTE band 7, 20MHz (-26dBc)**

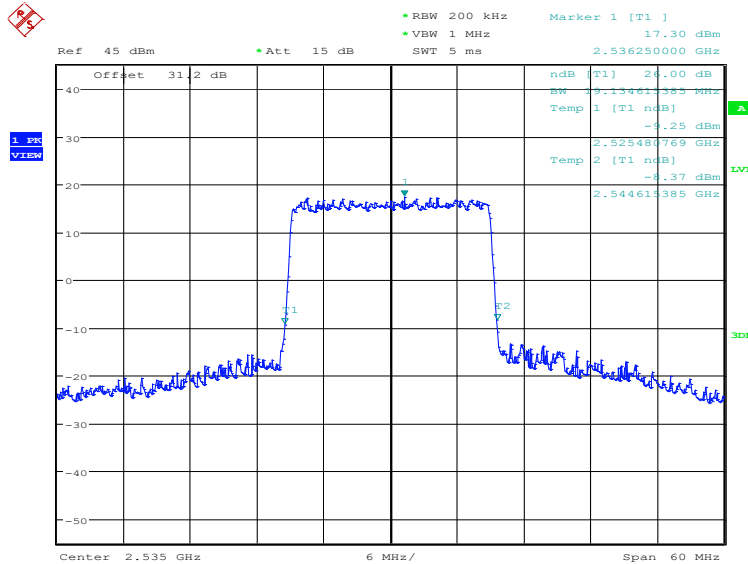
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
2535.0	QPSK	16QAM
	19230.77	19134.62

**LTE band 7, 20MHz Bandwidth, QPSK (-26dBc BW)**



Date: 25.APR.2024 14:59:07

**LTE band 7, 20MHz Bandwidth, 16QAM (-26dBc BW)**

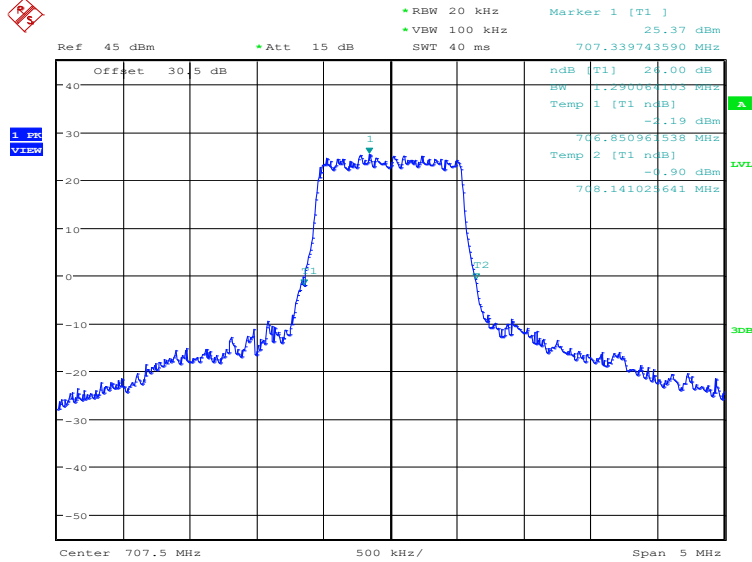


Date: 25.APR.2024 14:59:47

**LTE band 12, 1.4MHz (-26dBc)**

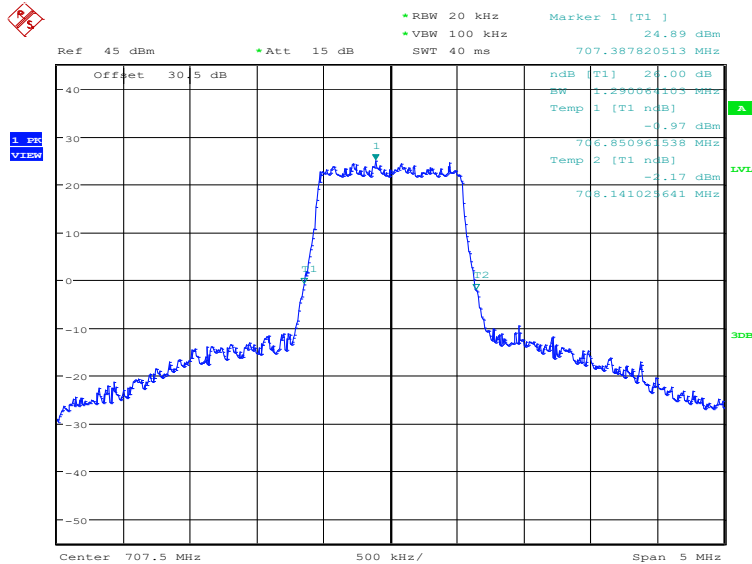
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
707.5	QPSK	16QAM
	1290.06	1290.06

**LTE band 12, 1.4MHz Bandwidth, QPSK (-26dBc BW)**



Date: 25.APR.2024 15:01:28

**LTE band 12, 1.4MHz Bandwidth, 16QAM (-26dBc BW)**



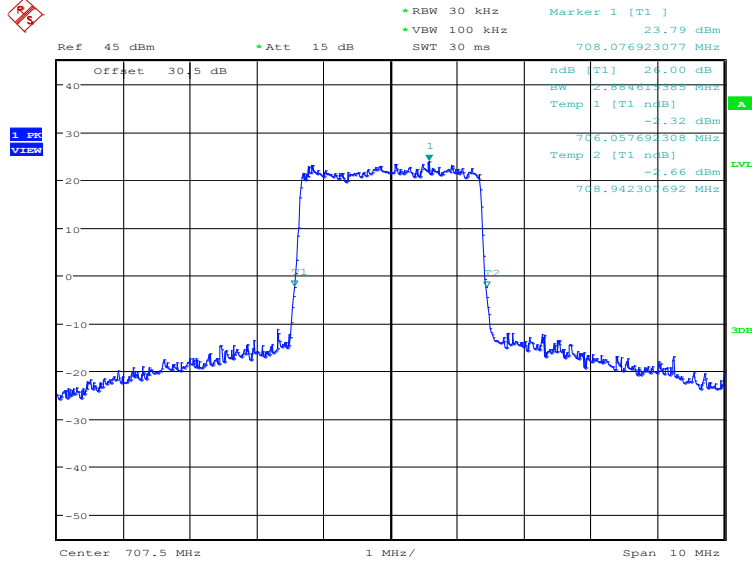
Date: 25.APR.2024 15:02:08



**LTE band 12, 3MHz (-26dBc)**

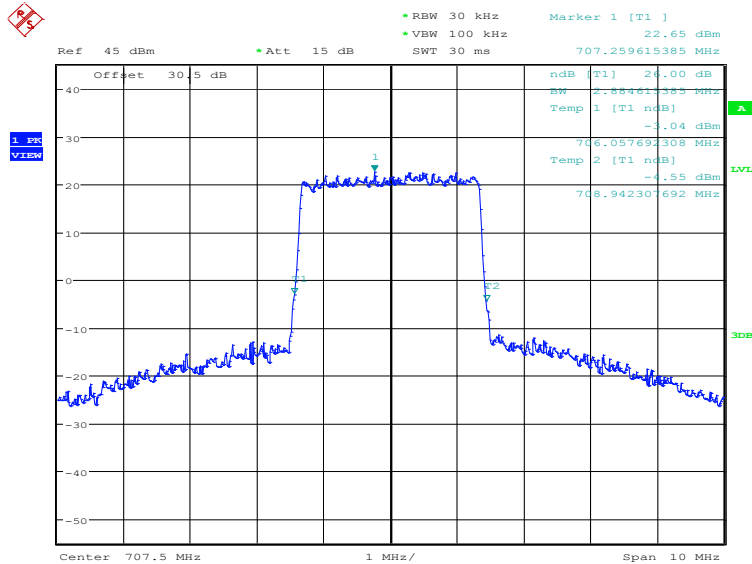
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
707.5	QPSK	16QAM
	2884.62	2884.62

**LTE band 12, 3MHz Bandwidth, QPSK (-26dBc BW)**



Date: 25.APR.2024 15:02:50

**LTE band 12, 3MHz Bandwidth, 16QAM (-26dBc BW)**

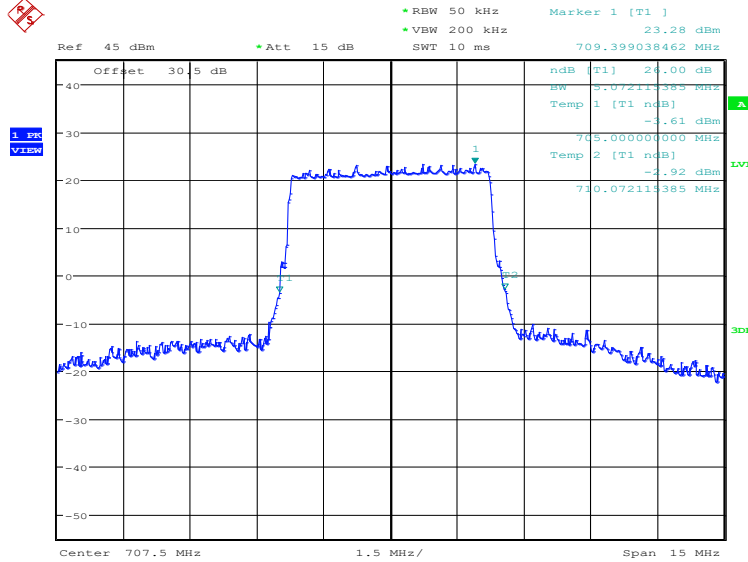


Date: 25.APR.2024 15:03:30

**LTE band 12, 5MHz (-26dBc)**

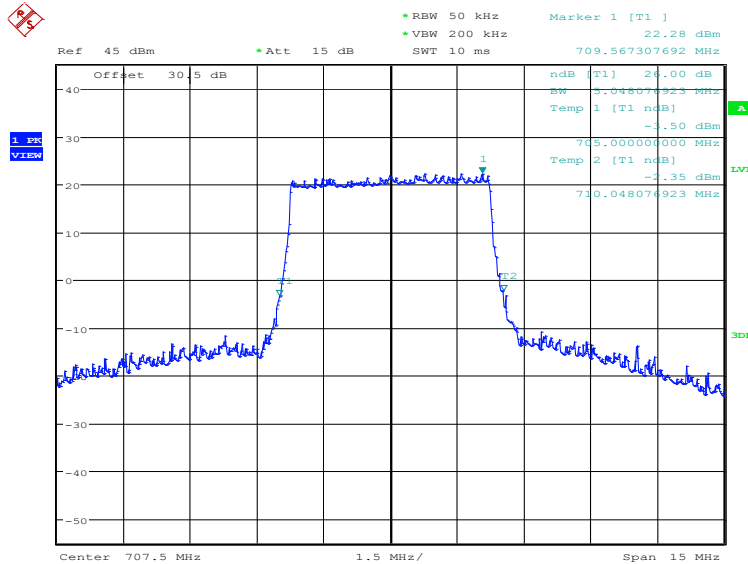
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
707.5	QPSK	16QAM
	5072.12	5048.08

**LTE band 12, 5MHz Bandwidth, QPSK (-26dBc BW)**



Date: 25.APR.2024 15:04:12

**LTE band 12, 5MHz Bandwidth, 16QAM (-26dBc BW)**

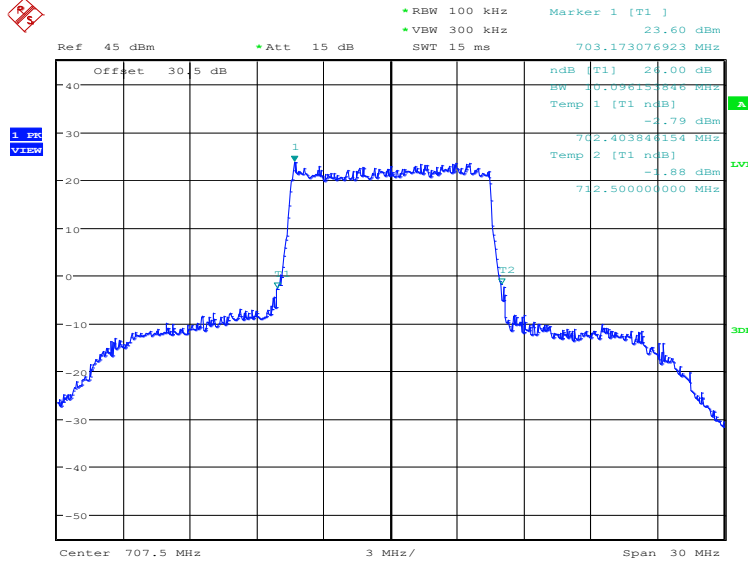


Date: 25.APR.2024 15:04:52

**LTE band 12, 10MHz (-26dBc)**

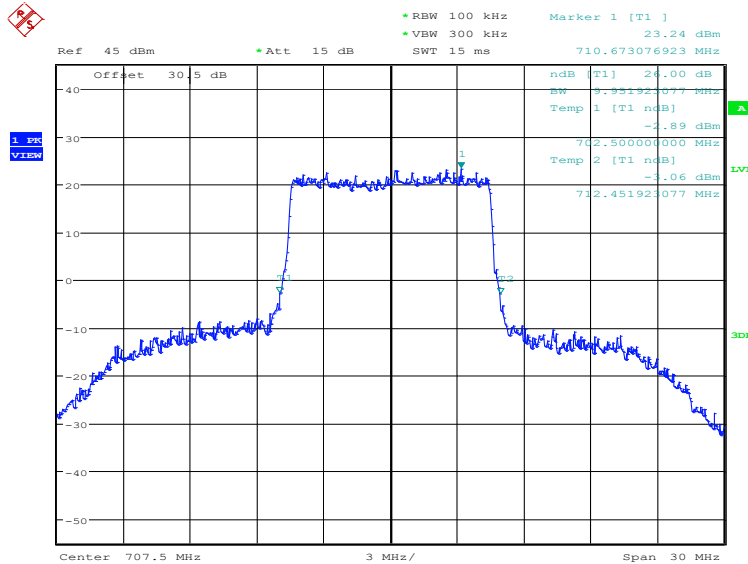
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
707.5	QPSK	16QAM
	10096.15	9951.92

**LTE band 12, 10MHz Bandwidth, QPSK (-26dBc BW)**



Date: 25.APR.2024 15:05:33

**LTE band 12, 10MHz Bandwidth, 16QAM (-26dBc BW)**

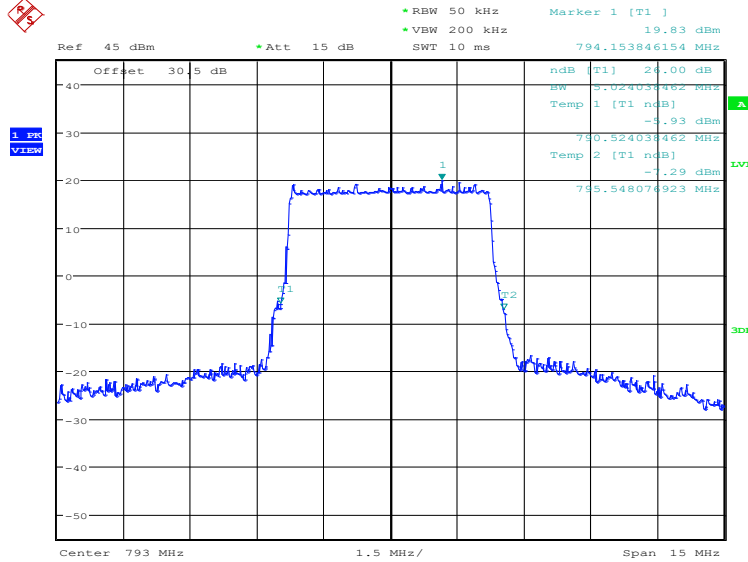


Date: 25.APR.2024 15:06:14

**LTE band 14, 5MHz (-26dBc)**

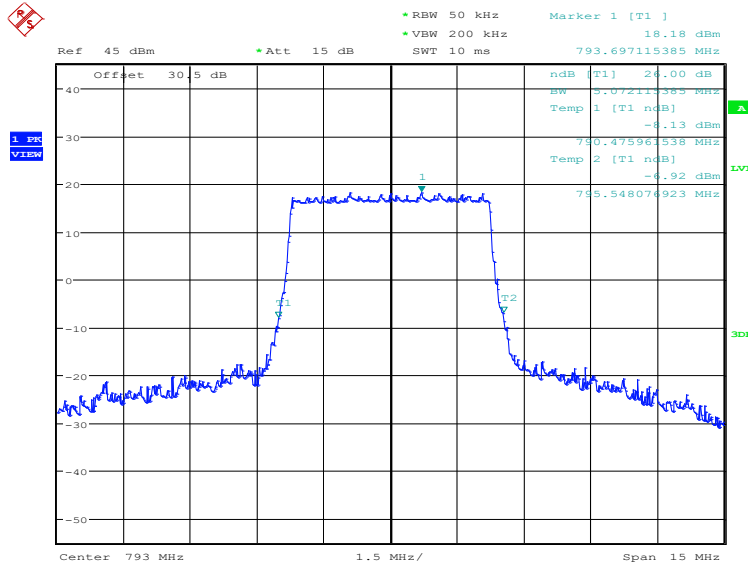
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
793.0	QPSK	16QAM
	5024.04	5072.12

**LTE band 14, 5MHz Bandwidth, QPSK (-26dBc BW)**



Date: 25.APR.2024 15:06:57

**LTE band 14, 5MHz Bandwidth, 16QAM (-26dBc BW)**

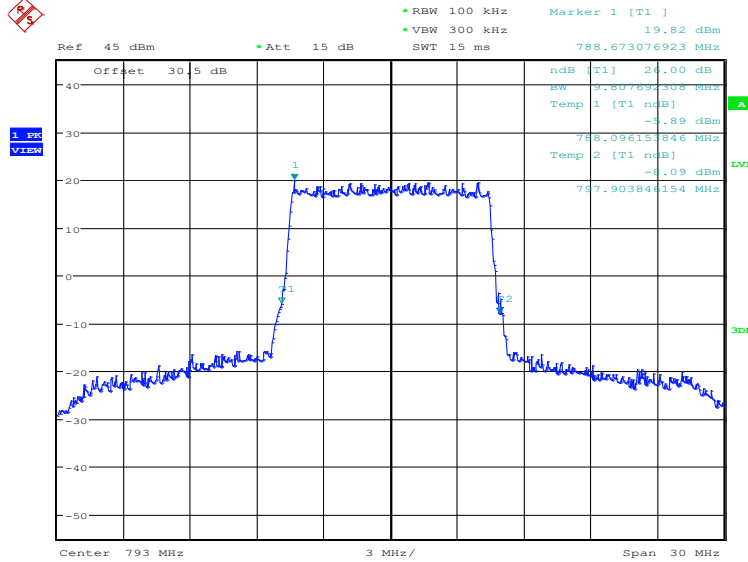


Date: 25.APR.2024 15:07:37

**LTE band 14, 10MHz (-26dBc)**

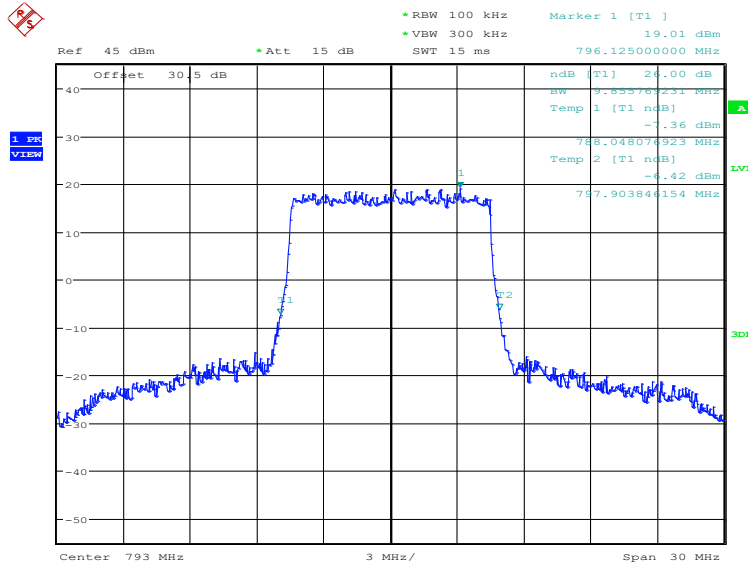
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
793.0	QPSK	16QAM
	9807.69	9855.77

**LTE band 14, 10MHz Bandwidth, QPSK (-26dBc BW)**



Date: 25.APR.2024 15:08:19

**LTE band 14, 10MHz Bandwidth,16QAM (-26dBc BW)**

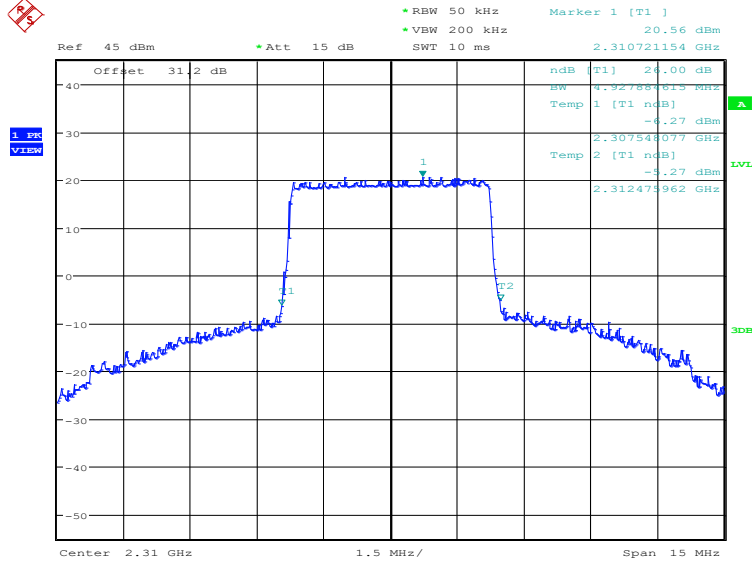


Date: 25.APR.2024 15:08:59

**LTE band 30, 5MHz (-26dBc)**

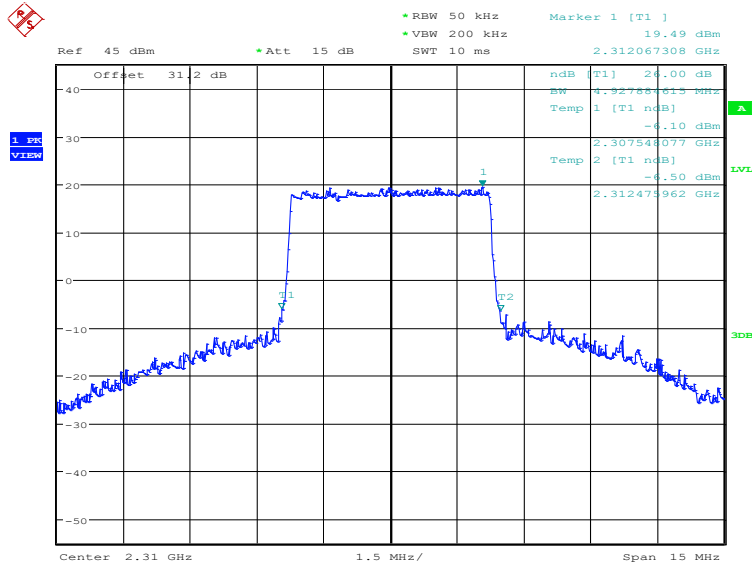
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
2310.0	QPSK	16QAM
	4927.88	4927.88

**LTE band 30, 5MHz Bandwidth, QPSK (-26dBc BW)**



Date: 25.APR.2024 15:09:42

**LTE band 30, 5MHz Bandwidth, 16QAM (-26dBc BW)**

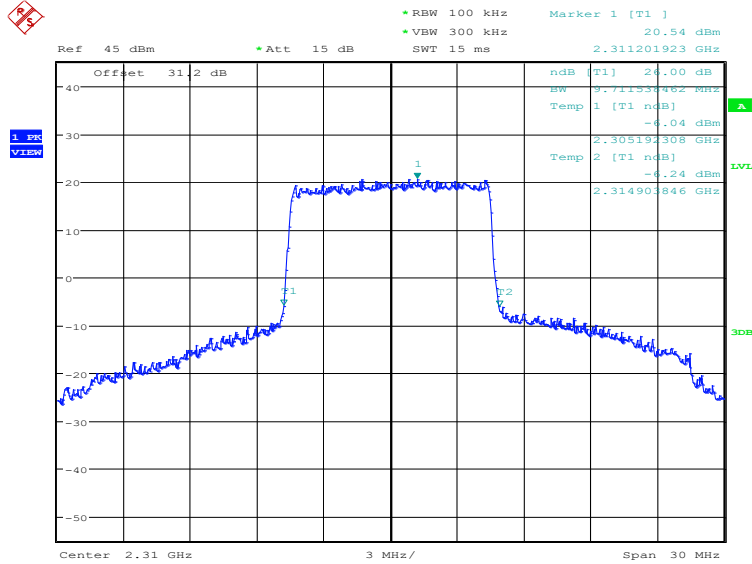


Date: 25.APR.2024 15:10:22

**LTE band 30, 10MHz (-26dBc)**

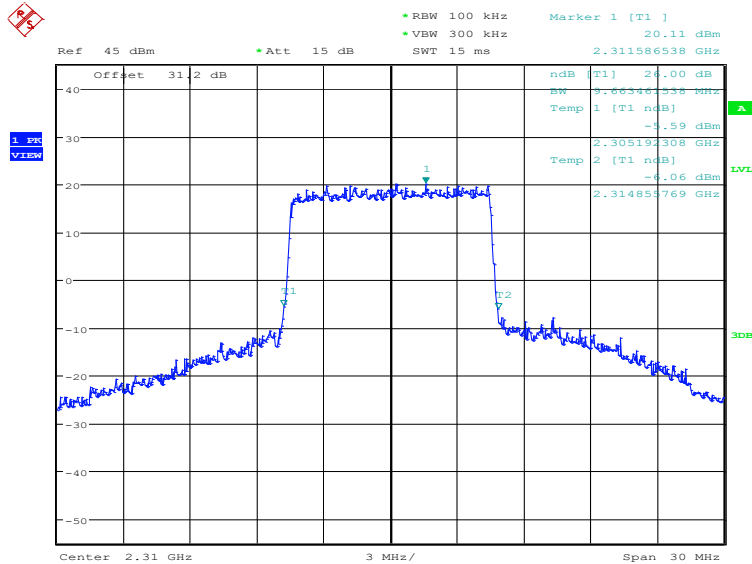
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
2310.0	QPSK	16QAM
	9711.54	9663.46

**LTE band 30, 10MHz Bandwidth, QPSK (-26dBc BW)**



Date: 25.APR.2024 15:11:04

**LTE band 30, 10MHz Bandwidth,16QAM (-26dBc BW)**

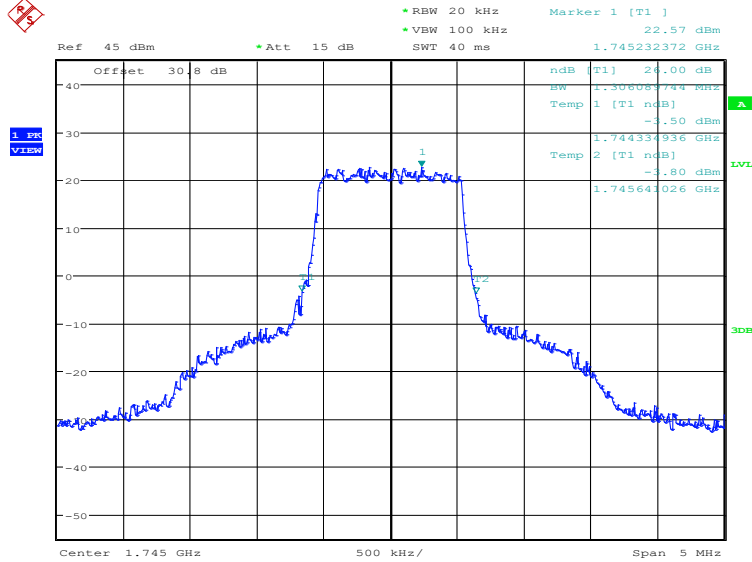


Date: 25.APR.2024 15:11:44

**LTE band 66, 1.4MHz (-26dBc)**

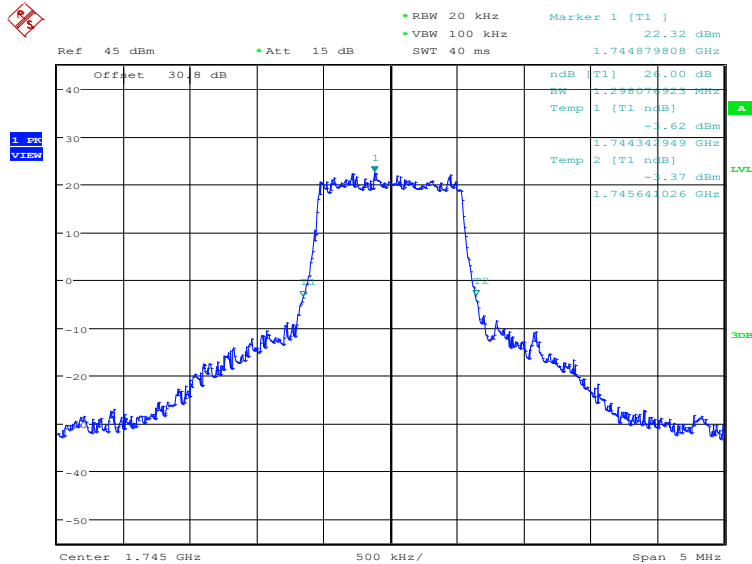
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
1745.0	QPSK	16QAM
	1306.09	1298.08

**LTE band 66, 1.4MHz Bandwidth, QPSK (-26dBc BW)**



Date: 25.APR.2024 15:12:27

**LTE band 66, 1.4MHz Bandwidth, 16QAM (-26dBc BW)**



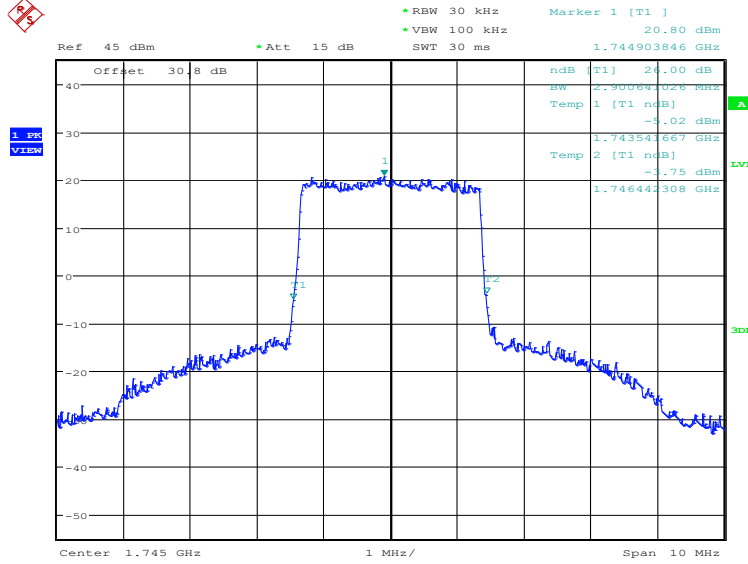
Date: 25.APR.2024 15:13:07



**LTE band 66, 3MHz (-26dBc)**

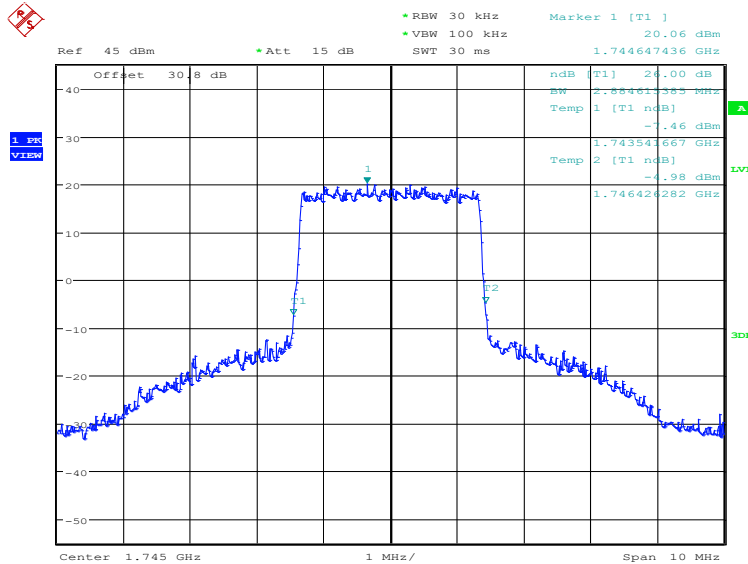
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
1745.0	QPSK	16QAM
	2900.64	2884.62

**LTE band 66, 3MHz Bandwidth, QPSK (-26dBc BW)**



Date: 25.APR.2024 15:13:49

**LTE band 66, 3MHz Bandwidth, 16QAM (-26dBc BW)**

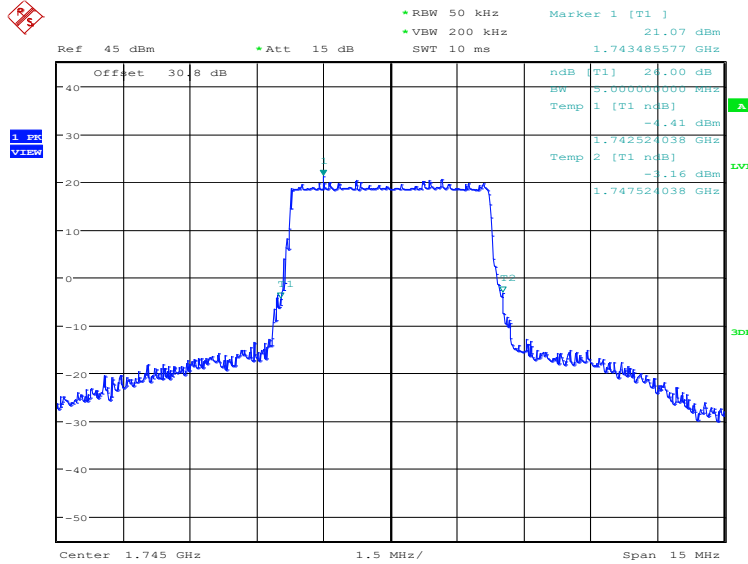


Date: 25.APR.2024 15:14:29

**LTE band 66, 5MHz (-26dBc)**

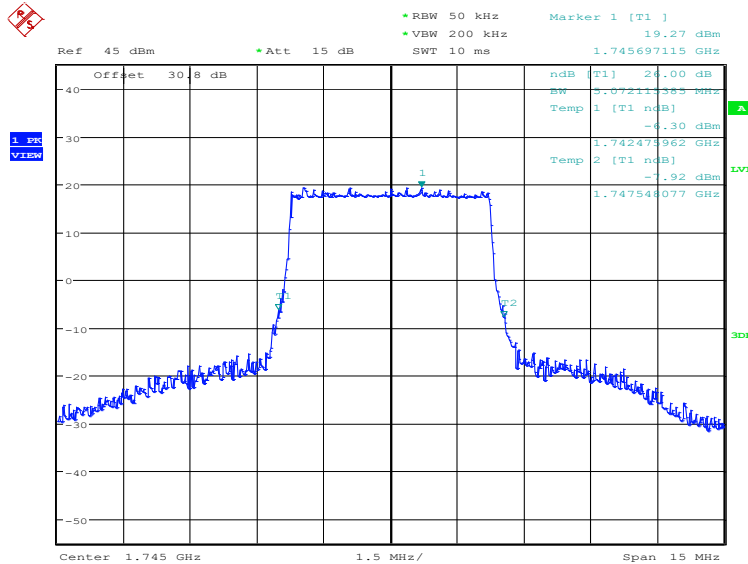
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
1745.0	QPSK	16QAM
	5000.00	5072.12

**LTE band 66, 5MHz Bandwidth, QPSK (-26dBc BW)**



Date: 25.APR.2024 15:15:11

**LTE band 66, 5MHz Bandwidth, 16QAM (-26dBc BW)**

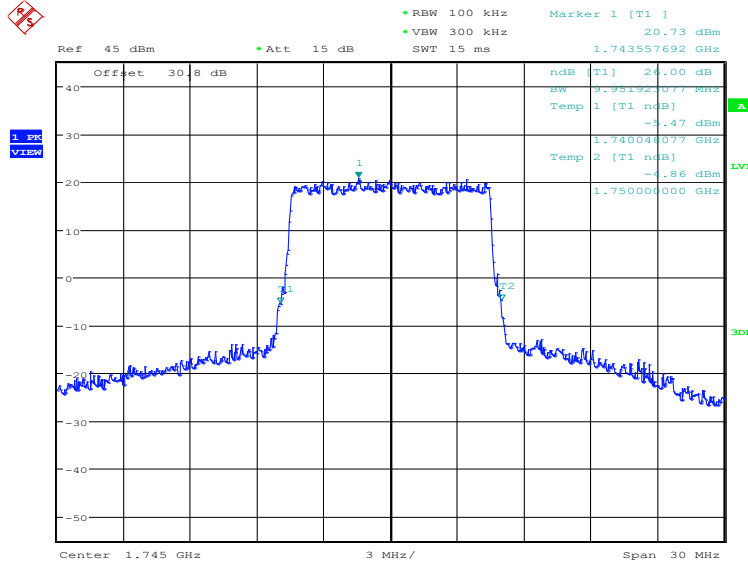


Date: 25.APR.2024 15:15:51

**LTE band 66, 10MHz (-26dBc)**

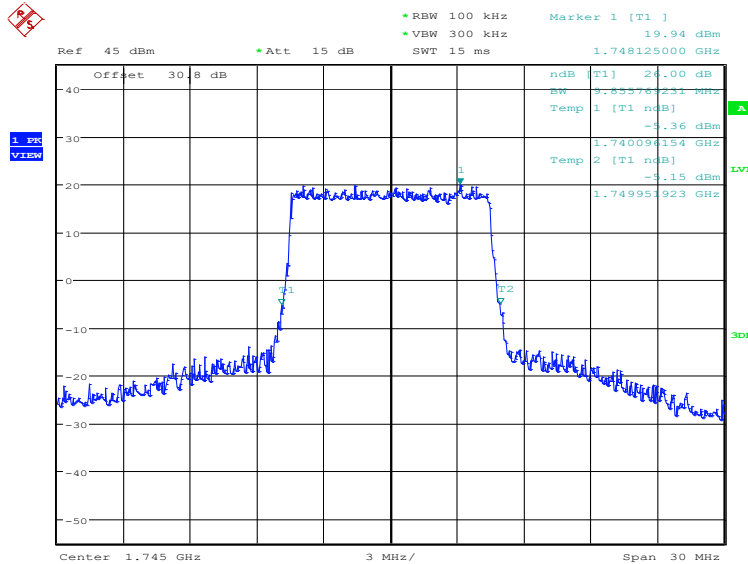
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
1745.0	QPSK	16QAM
	9951.92	9855.77

**LTE band 66, 10MHz Bandwidth, QPSK (-26dBc BW)**



Date: 25.APR.2024 15:16:33

**LTE band 66, 10MHz Bandwidth, 16QAM (-26dBc BW)**

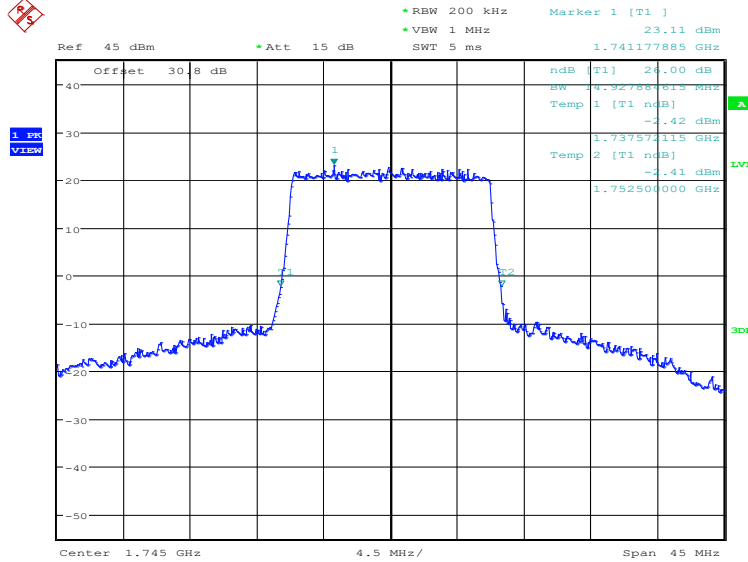


Date: 25.APR.2024 15:17:14

**LTE band 66, 15MHz (-26dBc)**

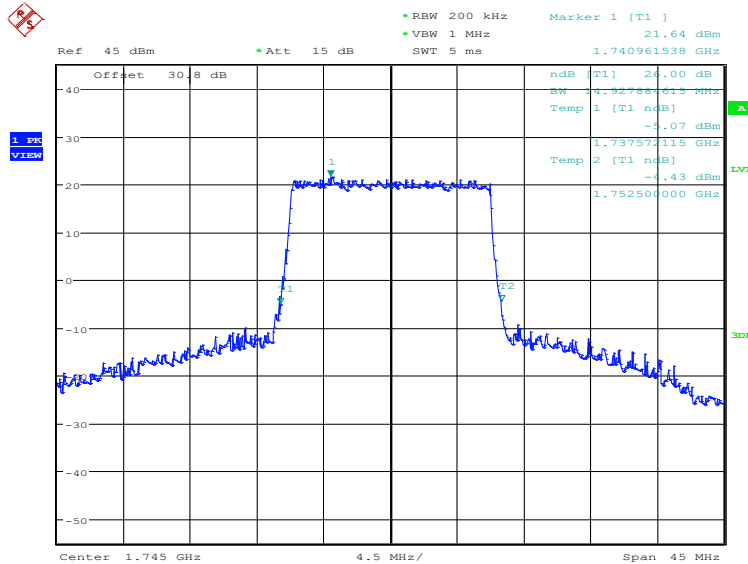
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
1745.0	QPSK	16QAM
	14927.88	14927.88

**LTE band 66, 15MHz Bandwidth, QPSK (-26dBc BW)**



Date: 25.APR.2024 15:17:55

**LTE band 66, 15MHz Bandwidth, 16QAM (-26dBc BW)**

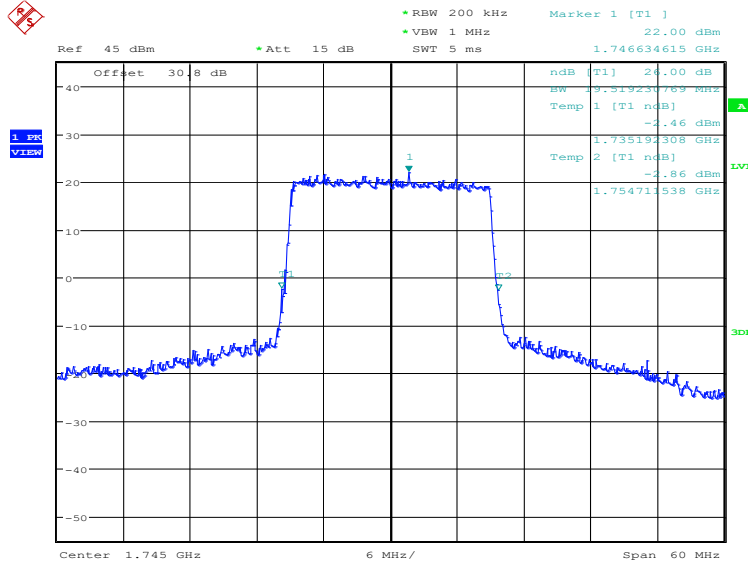


Date: 25.APR.2024 15:18:36

**LTE band 66, 20MHz (-26dBc)**

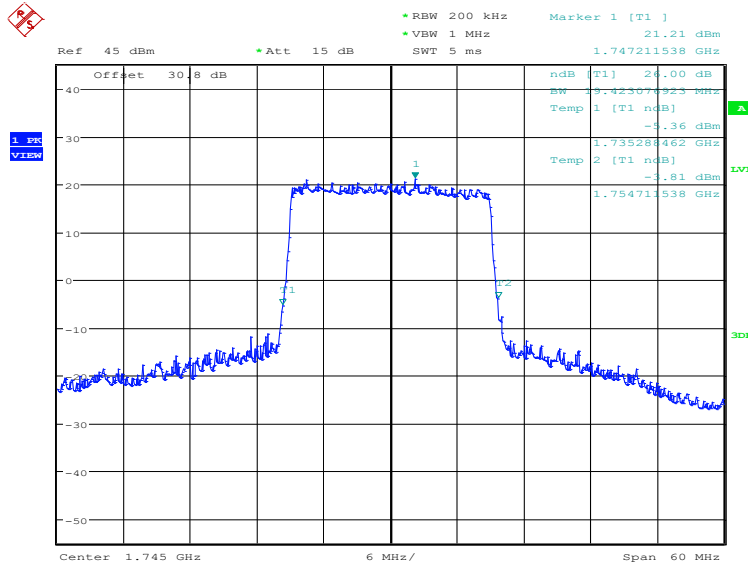
Frequency(MHz)	Emission Bandwidth (-26dBc)(kHz)	
1745.0	QPSK	16QAM
	19519.23	19423.08

**LTE band 66, 20MHz Bandwidth, QPSK (-26dBc BW)**



Date: 25.APR.2024 15:19:18

**LTE band 66, 20MHz Bandwidth, 16QAM (-26dBc BW)**



Date: 25.APR.2024 15:19:58

Note: Expanded measurement uncertainty is  $U = 3428 \text{ Hz}$ ,  $k = 2$ .

## **A.6 Band Edge Compliance**

### **A.6.1 Measurement limit**

Part 22.917, Part 24.238 and Part 27.53(h) 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.

Part 27.53(m) 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.

Part 27.53(c) states for operations in the 746-758 MHz band and the 776-788 MHz band, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:(1) On any frequency outside the 746-758 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least  $43 + 10 \log(P)$  dB;(2) On any frequency outside the 776-788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least  $43 + 10 \log(P)$  dB;(4) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than  $65 + 10 \log(P)$  dB in a 6.25 kHz band segment, for mobile and portable stations.

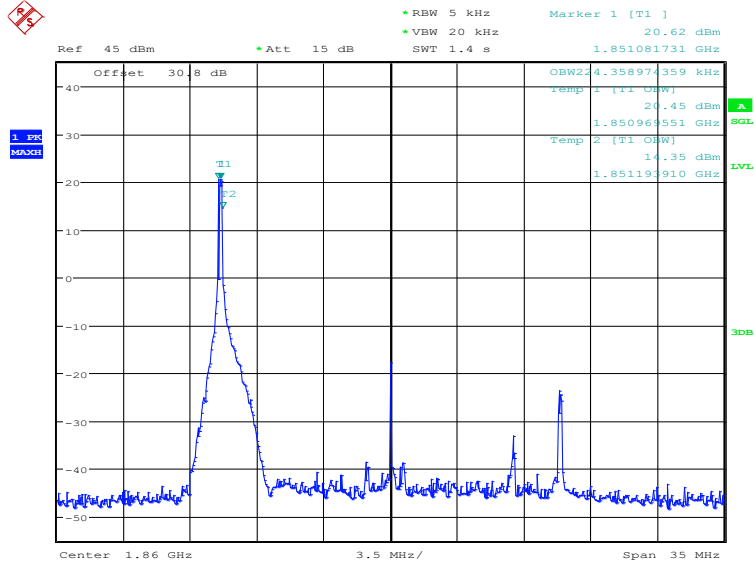
Part 27.53(g) states for operations in the 600 MHz band and the 698–746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least  $43 + 10 \log(P)$  dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

Part 27.53(a) states for mobile and portable stations operating in the 2305–2315 MHz and 2350–2360 MHz bands: By a factor of not less than:  $43 + 10 \log(P)$  dB on all frequencies between 2305 and 2320 MHz and on all frequencies between 2345 and 2360 MHz that are outside the licensed band(s) of operation, not less than  $55 + 10 \log(P)$  dB on all frequencies between 2320 and 2324 MHz and on all frequencies between 2341 and 2345 MHz, not less than  $61 + 10 \log(P)$  dB on all frequencies between 2324 and 2328 MHz and on all frequencies between 2337 and 2341 MHz, and not less than  $67 + 10 \log(P)$  dB on all frequencies between 2328 and 2337MHz; By a factor of not less than  $43 + 10 \log(P)$  dB on all frequencies between 2300 and 2305 MHz,  $55 + 10 \log(P)$  dB on all frequencies between 2296 and 2300MHz,  $61 + 10 \log(P)$  dB on all frequencies between 2292 and 2296 MHz,  $67 + 10 \log(P)$  dB on all frequencies between 2288 and 2292 MHz, and  $70 +$

10 log (P) dB below 2288 MHz; By a factor of not less than  $43 + 10 \log (P)$  dB on all frequencies between 2360 and 2365 MHz, and not less than  $70 + 10 \log (P)$  dB above 2365 MHz.

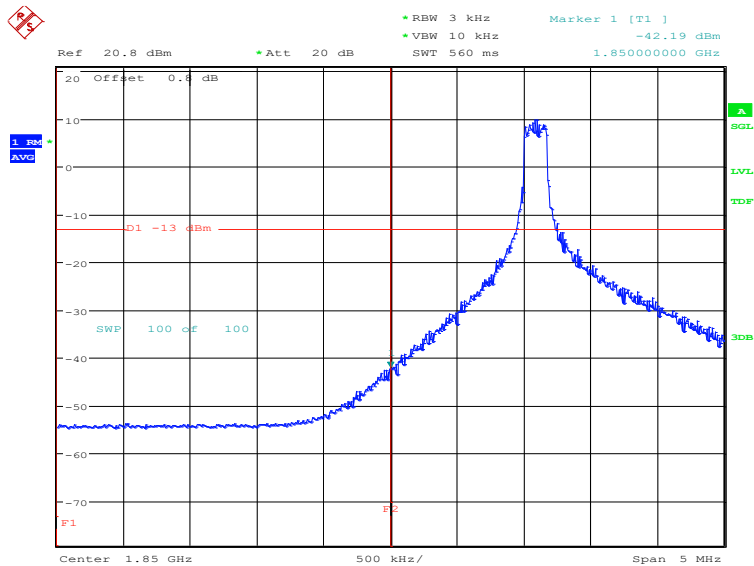
Part 90.543 states that for operations in the 758–768 MHz and the 788–798 MHz bands, the power of any emission outside the licensee’s frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following: (1) On all frequencies between 769–775 MHz and 799–805 MHz, by a factor not less than  $76 + 10 \log (P)$  dB in a 6.25 kHz band segment, for base and fixed stations. (2) On all frequencies between 769–775 MHz and 799–805 MHz, by a factor not less than  $65 + 10 \log (P)$  dB in a 6.25 kHz band segment, for mobile and portable stations. (3) On any frequency between 775–788 MHz, above 805 MHz, and below 758 MHz, by at least  $43 + 10 \log (P)$  dB. (4) Compliance with the provisions of paragraphs (e)(1) and (2) of this section is based on the use of measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted to indicate spectral energy in a 6.25 kHz segment. (5) Compliance with the provisions of paragraph (e)(3) of this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of 30 kHz may be employed.

**A.6.2 Measurement result**  
**Only the worst case result is given below**  
**LTE band 2**  
**OBW: 1RB-low\_offset**



Date: 10.MAY.2024 09:35:58

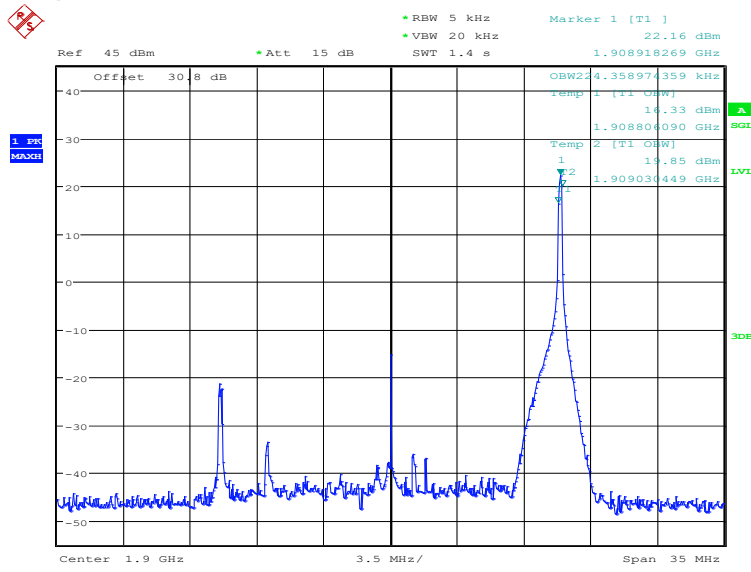
**LOW BAND EDGE BLOCK-1RB-low\_offset**



Date: 10.MAY.2024 09:37:12

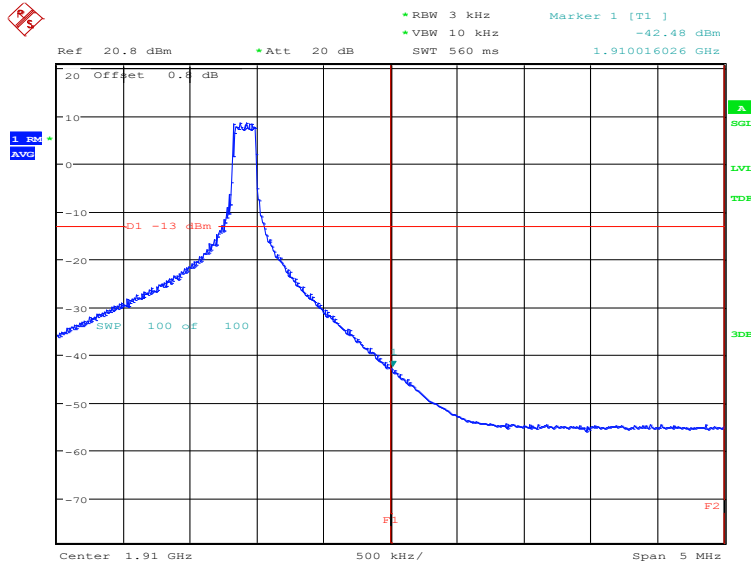


### OBW: 1RB-high\_offset



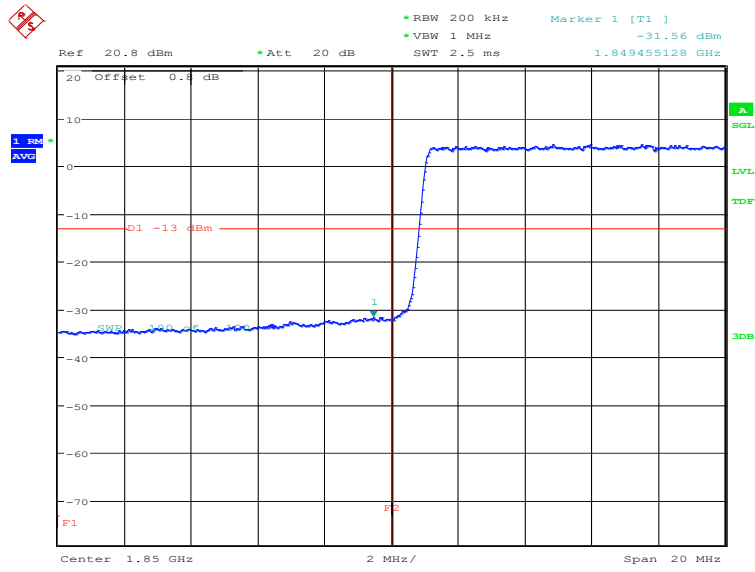
Date: 10.MAY.2024 09:37:49

### HIGH BAND EDGE BLOCK-1RB-high\_offset



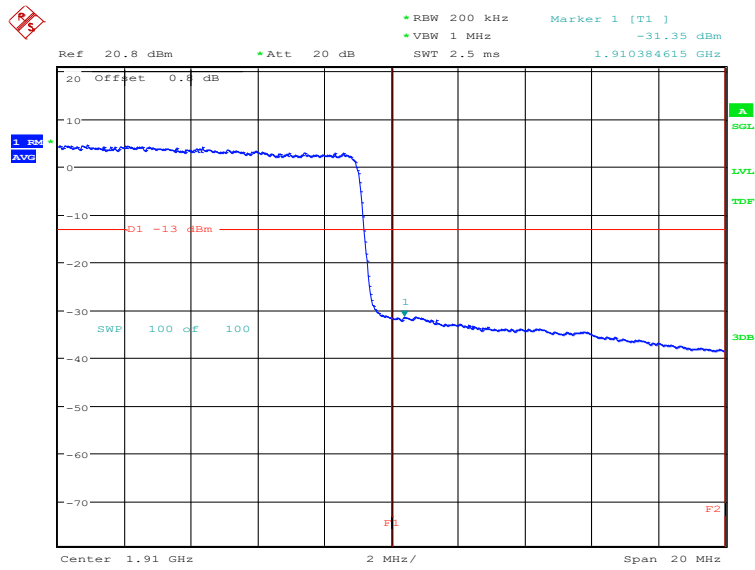
Date: 10.MAY.2024 09:39:03

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



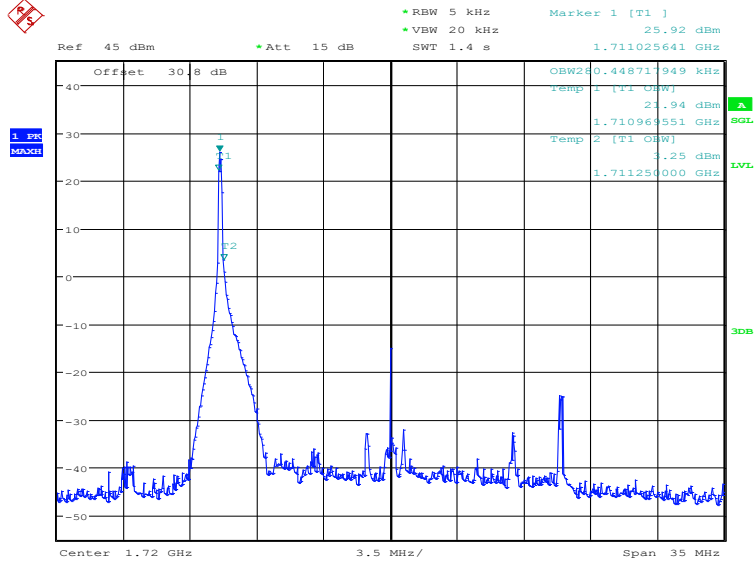
Date: 25.APR.2024 15:22:08

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



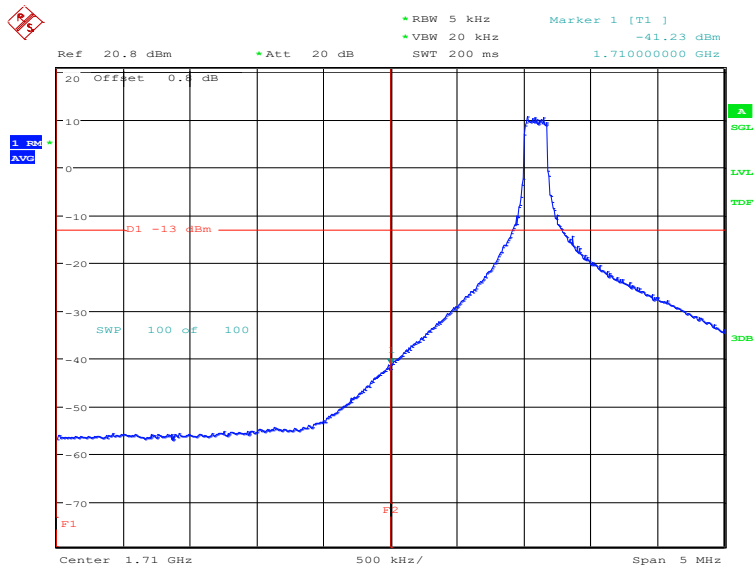
Date: 25.APR.2024 15:23:41

**LTE band 4**  
**OBW: 1RB-low\_offset**



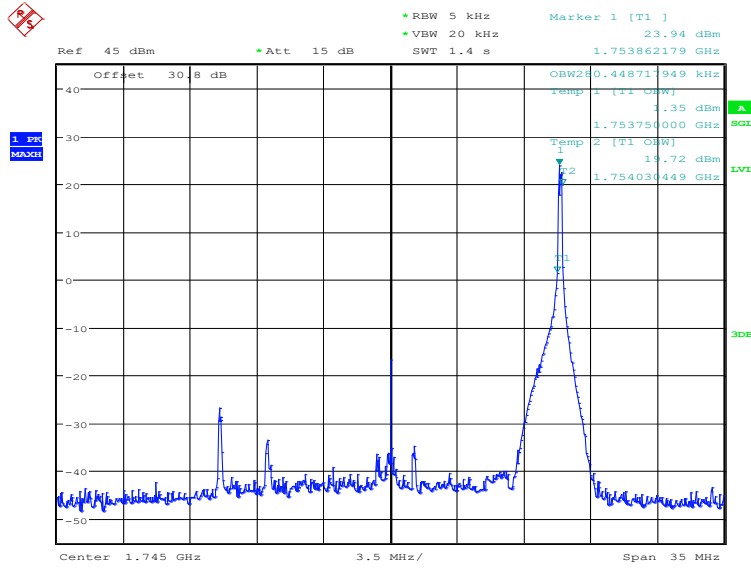
Date: 10.MAY.2024 09:39:41

**LOW BAND EDGE BLOCK-1RB-low\_offset**



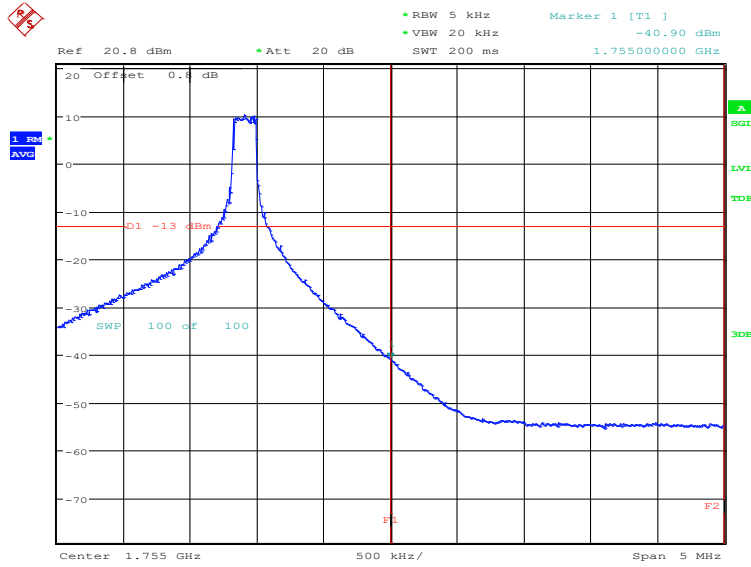
Date: 10.MAY.2024 09:40:55

### OBW: 1RB-high\_offset



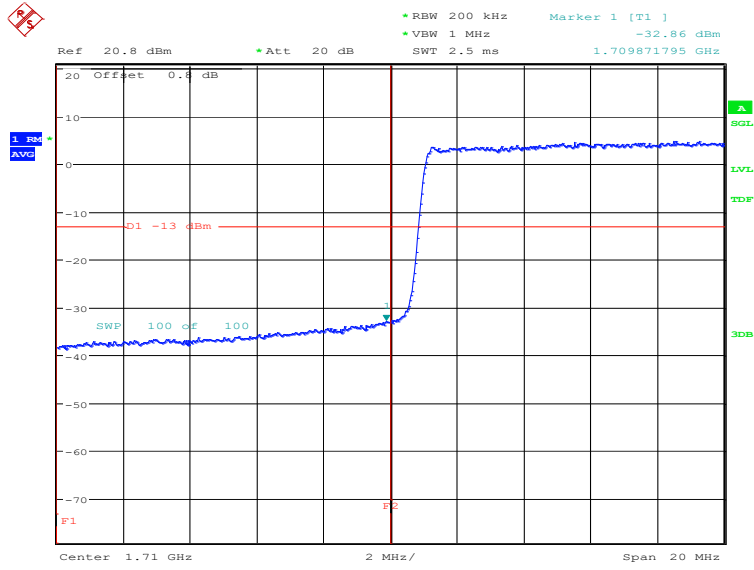
Date: 10.MAY.2024 09:43:03

### HIGH BAND EDGE BLOCK-1RB-high\_offset



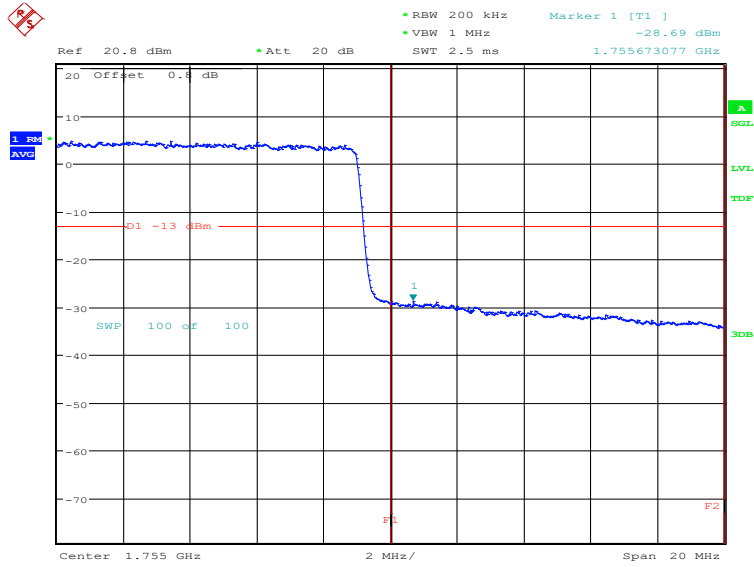
Date: 10.MAY.2024 09:44:17

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



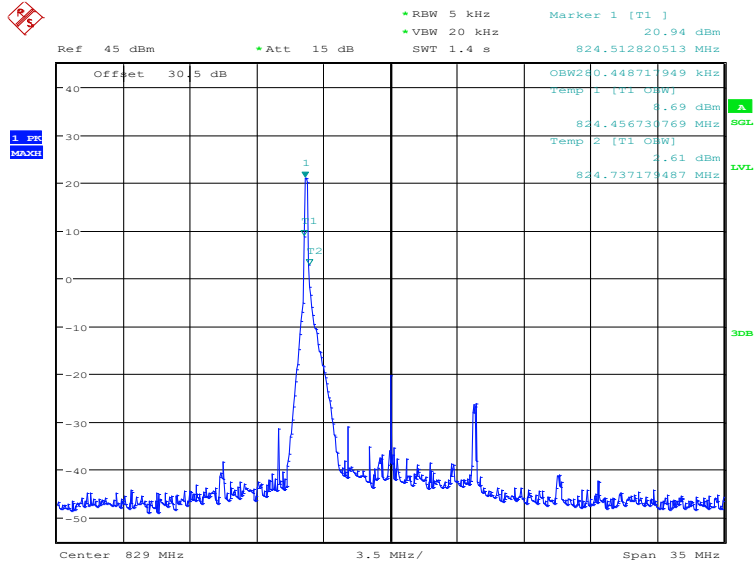
Date: 10.MAY.2024 09:41:29

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



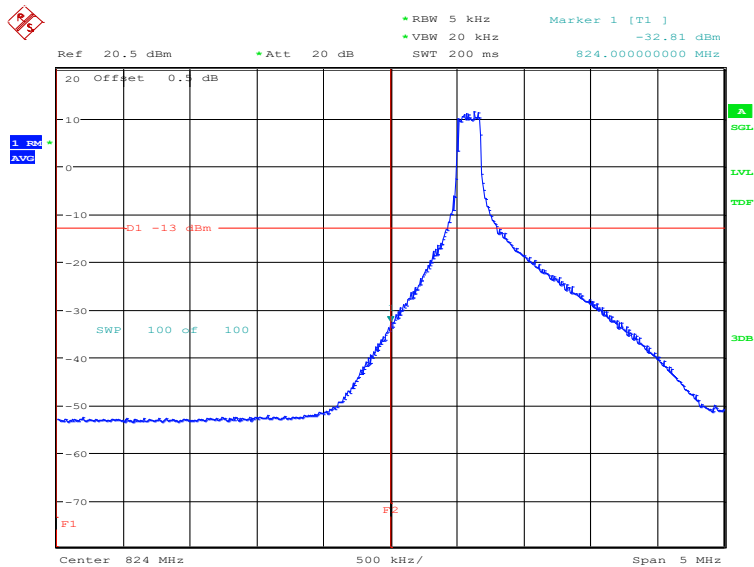
Date: 10.MAY.2024 09:44:52

**LTE band 5**  
**OBW: 1RB-low\_offset**



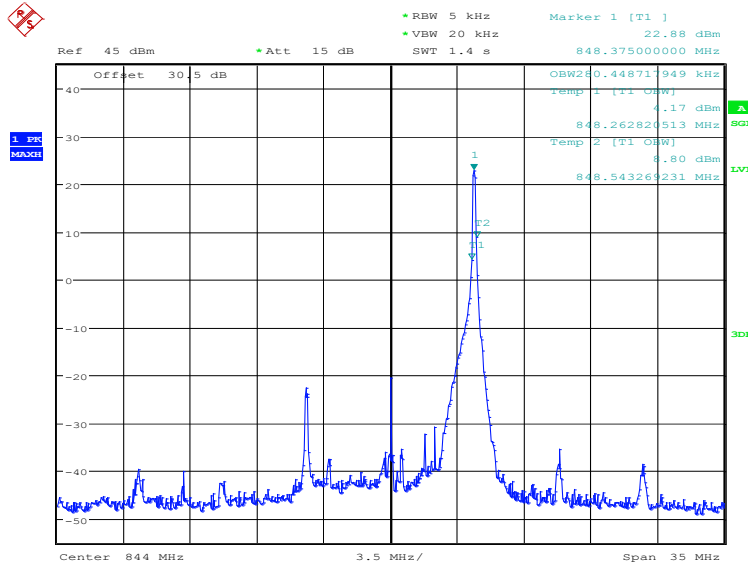
Date: 10.MAY.2024 09:47:08

**LOW BAND EDGE BLOCK-1RB-low\_offset**



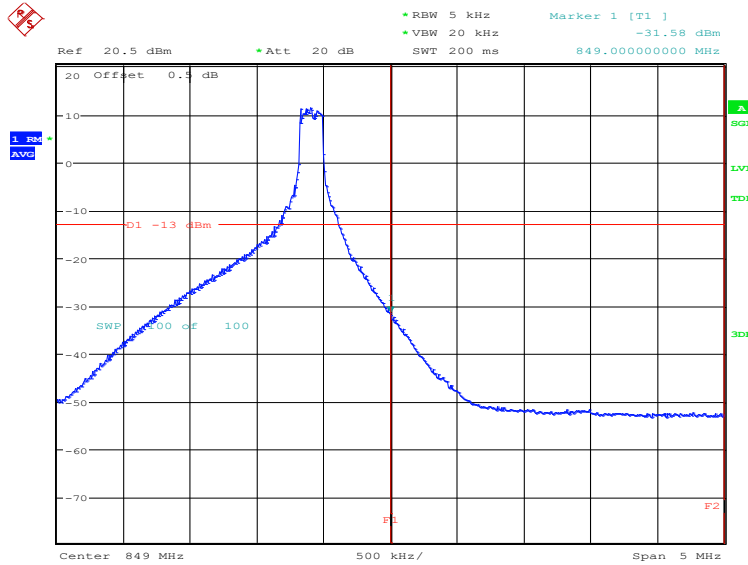
Date: 10.MAY.2024 09:48:23

### OBW: 1RB-high\_offset



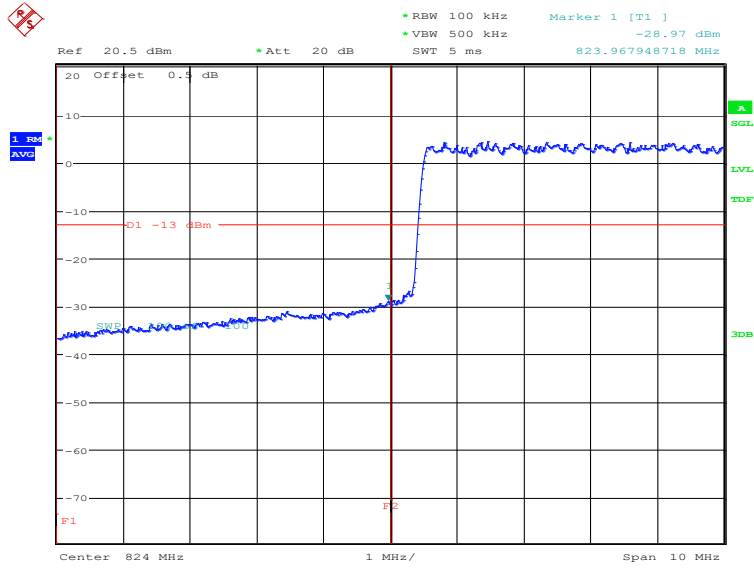
Date: 10.MAY.2024 09:48:59

### HIGH BAND EDGE BLOCK-1RB-high\_offset



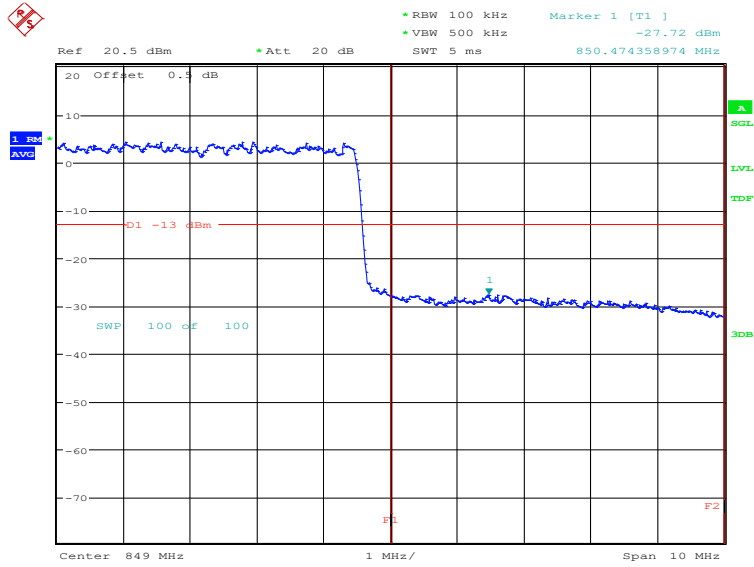
Date: 10.MAY.2024 09:50:14

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



Date: 25.APR.2024 15:25:56

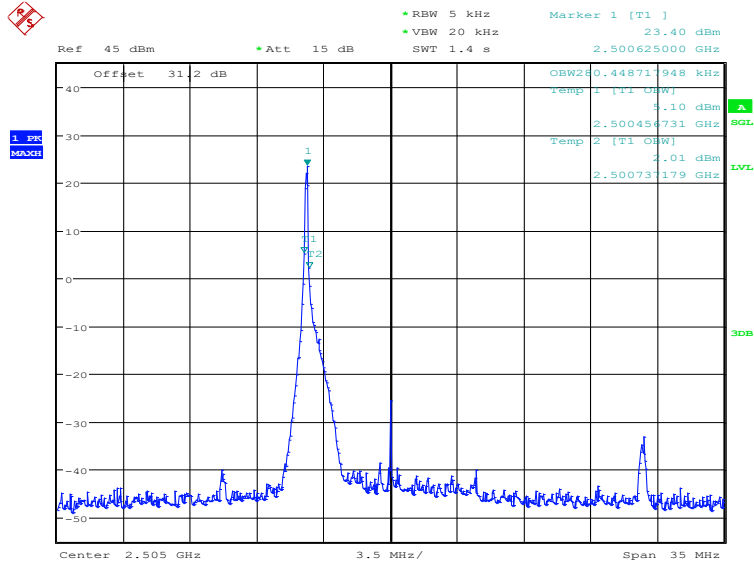
### HIGH BAND EDGE BLOCK-10MHz-100%RB



Date: 25.APR.2024 15:27:29

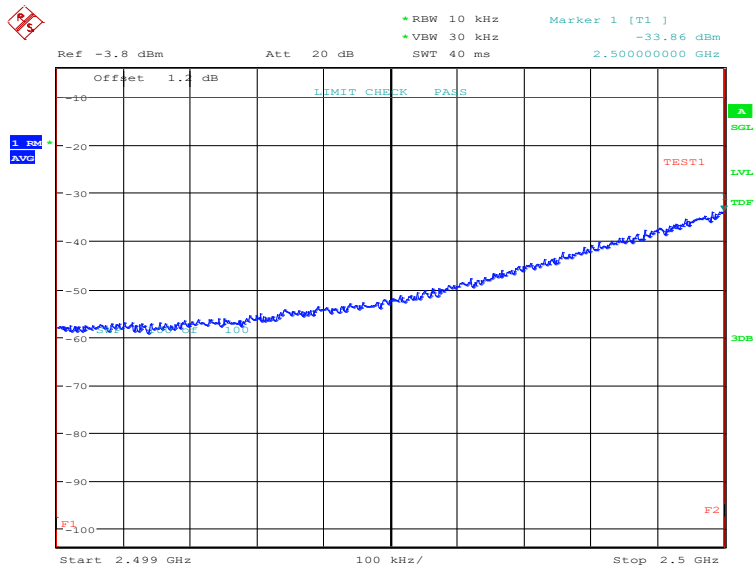


**LTE band 7**  
**OBW: 1RB-low\_offset**

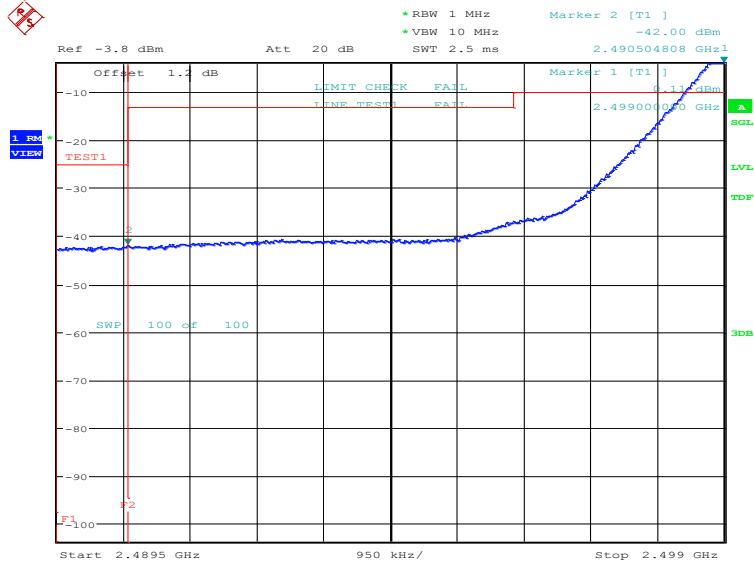


Date: 10.MAY.2024 09:50:51

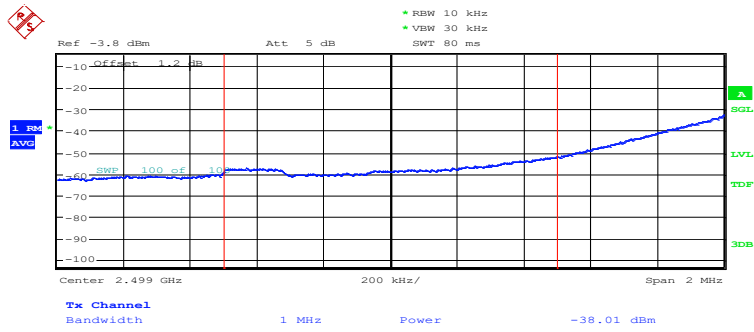
**LOW BAND EDGE BLOCK-1RB-low\_offset**



Date: 10.MAY.2024 09:52:13

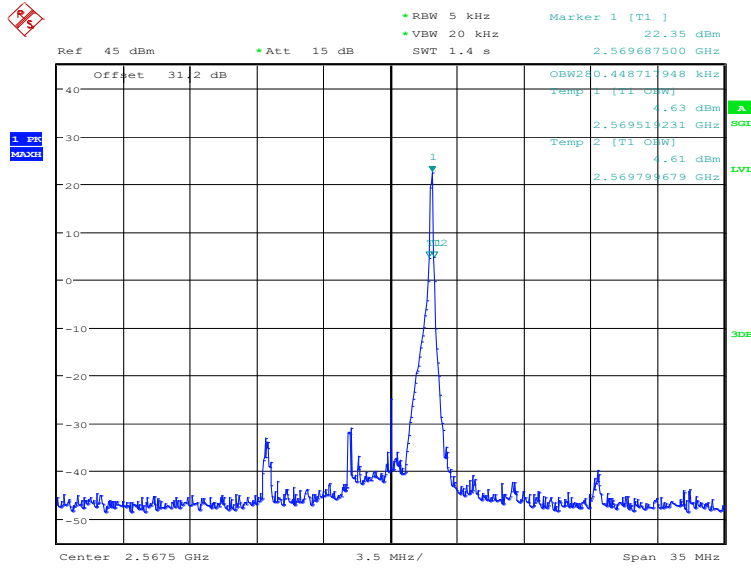


Date: 10.MAY.2024 09:54:02



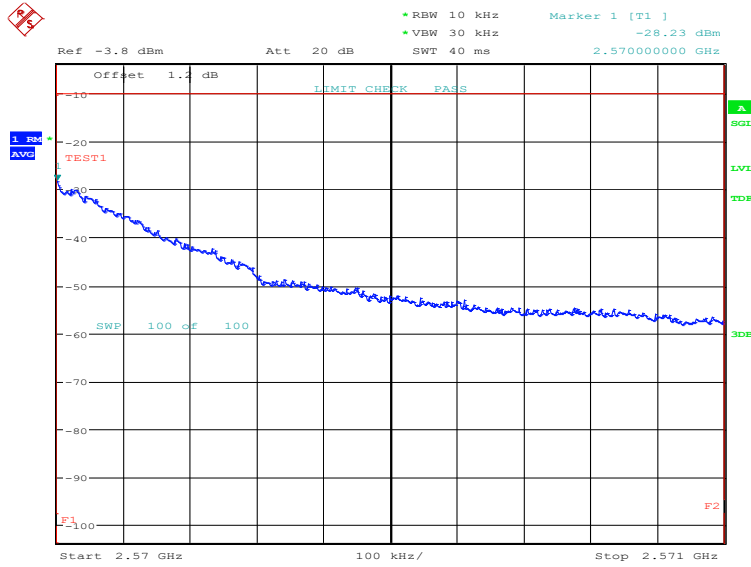
Date: 10.MAY.2024 09:54:30

**OBW: 1RB-high\_offset**

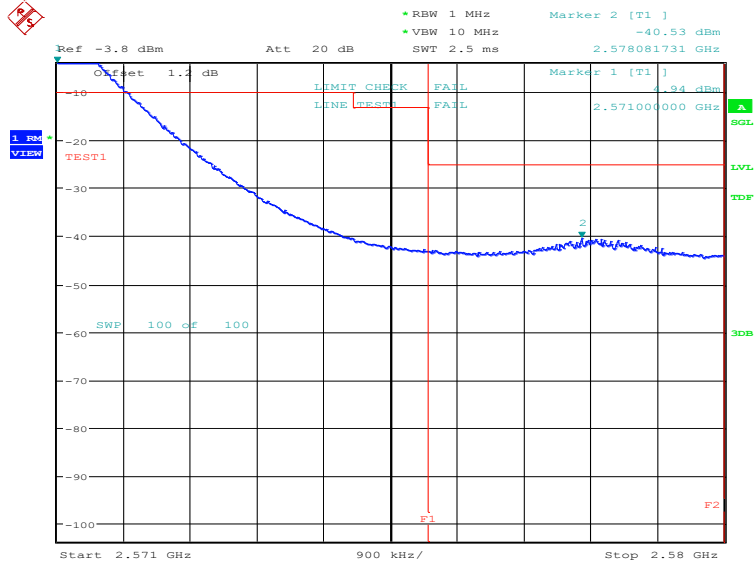


Date: 10.MAY.2024 09:55:48

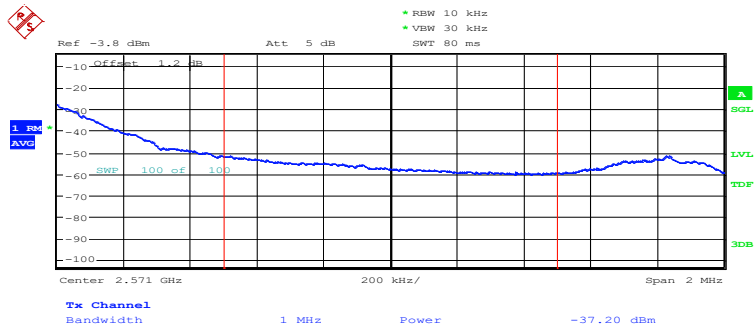
**HIGH BAND EDGE BLOCK-1RB-high\_offset**



Date: 10.MAY.2024 09:57:09

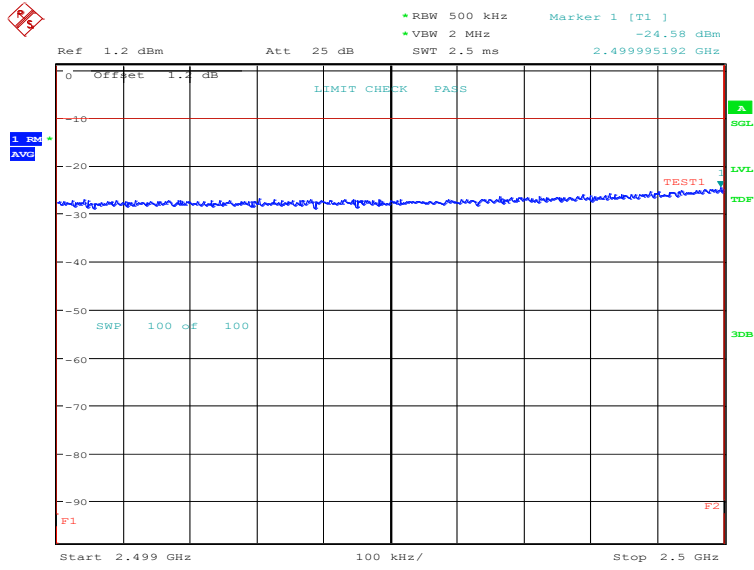


Date: 10.MAY.2024 09:58:59

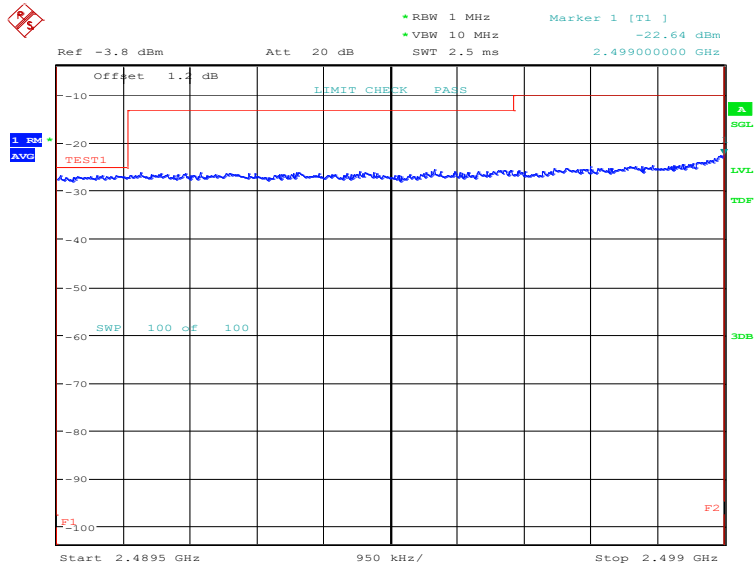


Date: 10.MAY.2024 09:59:27

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

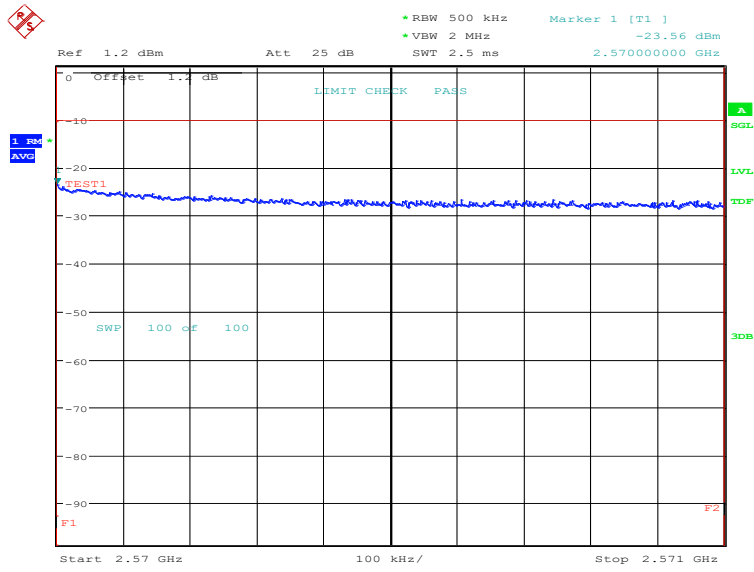


Date: 25.APR.2024 15:30:29

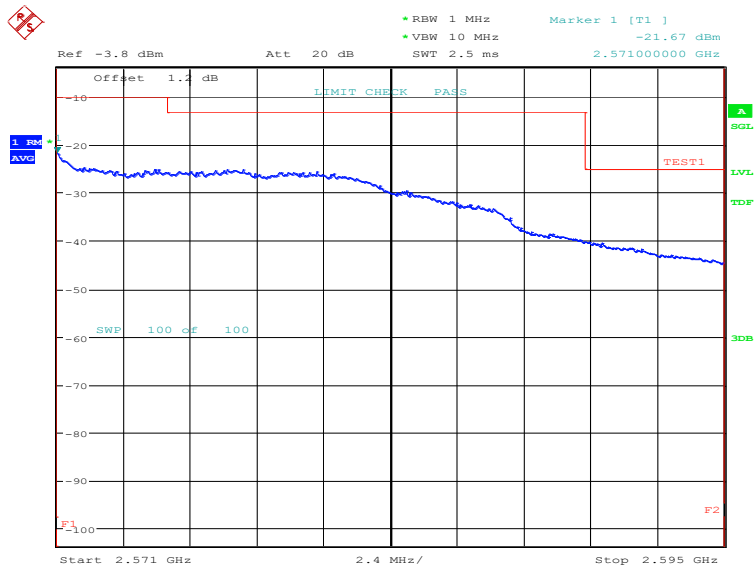


Date: 25.APR.2024 15:32:10

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

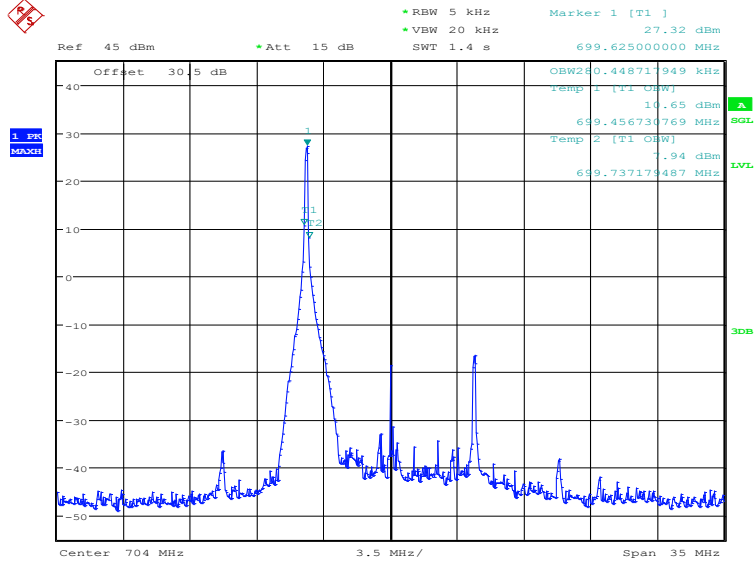


Date: 25.APR.2024 15:35:09



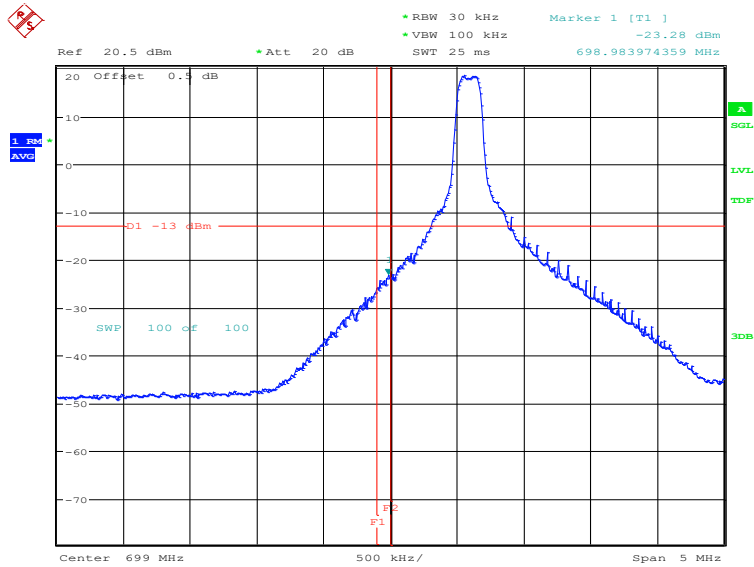
Date: 25.APR.2024 15:36:50

**LTE band 12**  
**OBW: 1RB-low\_offset**



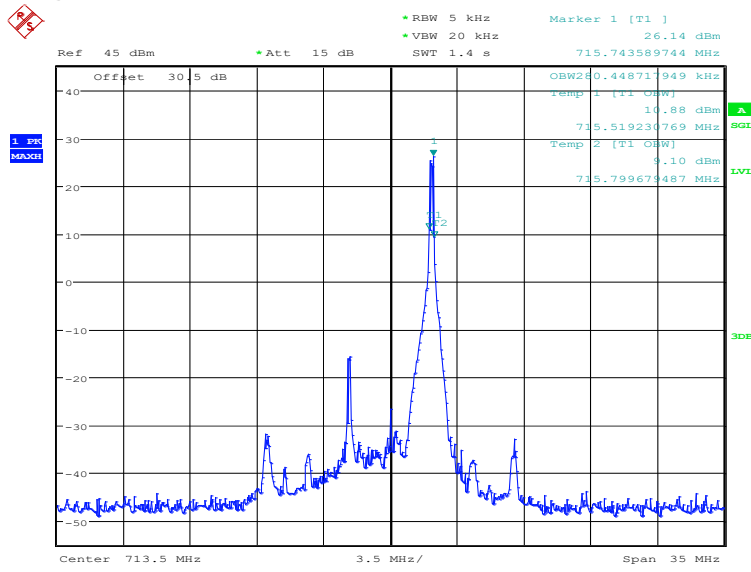
Date: 10.MAY.2024 10:00:46

**LOW BAND EDGE BLOCK-1RB-low\_offset**



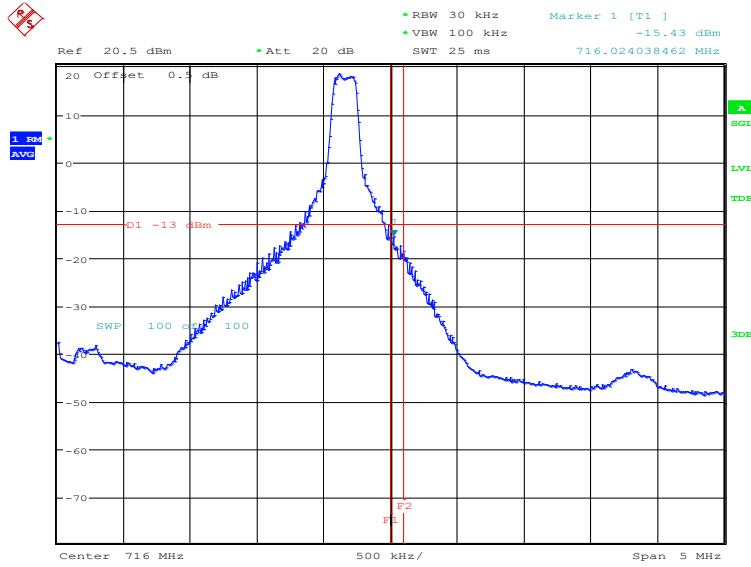
Date: 10.MAY.2024 10:01:06

### OBW: 1RB-high\_offset



Date: 10.MAY.2024 10:02:24

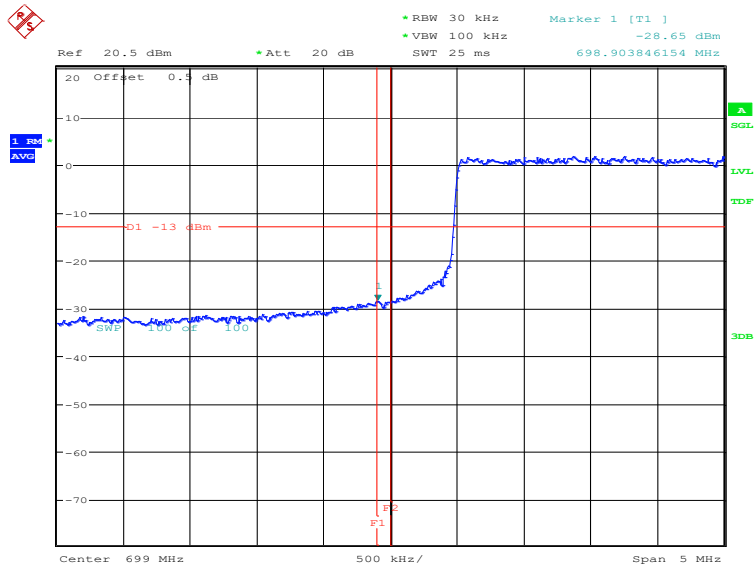
### HIGH BAND EDGE BLOCK-1RB-high\_offset



Date: 10.MAY.2024 10:02:43

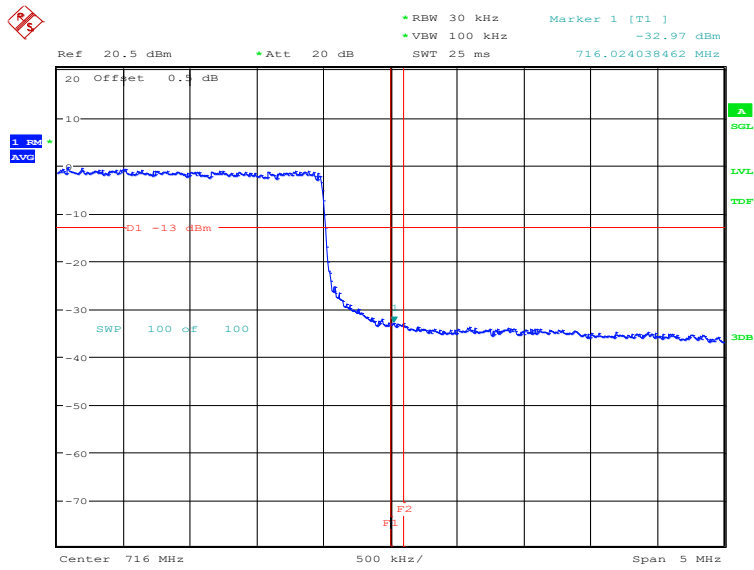


### LOW BAND EDGE BLOCK-10MHz-100%RB



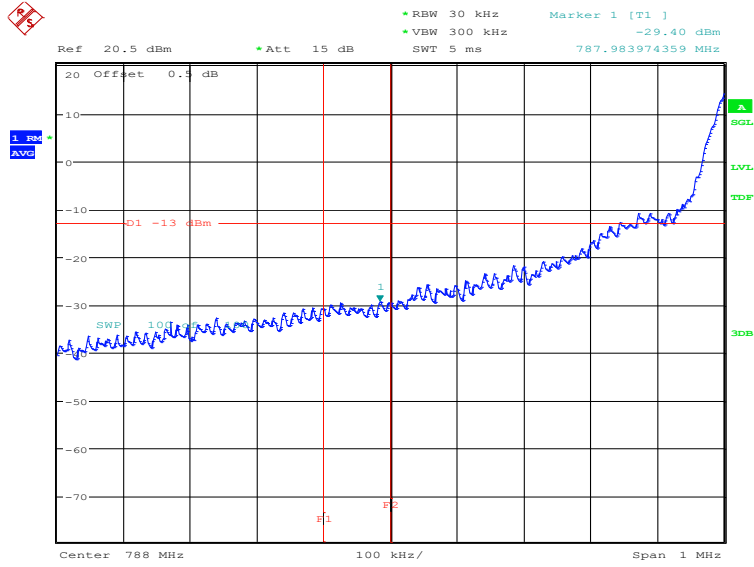
Date: 25.APR.2024 15:39:22

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



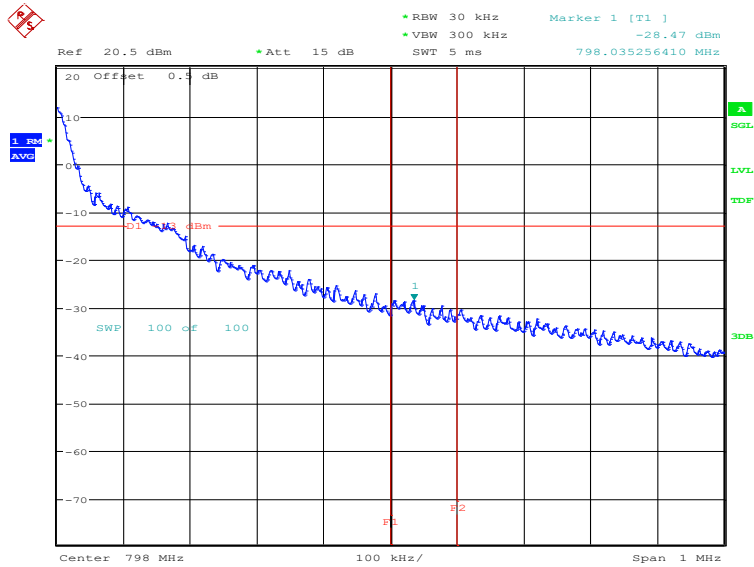
Date: 25.APR.2024 15:40:55

**LTE band 14**  
**LOW BAND EDGE BLOCK-1RB-low\_offset**



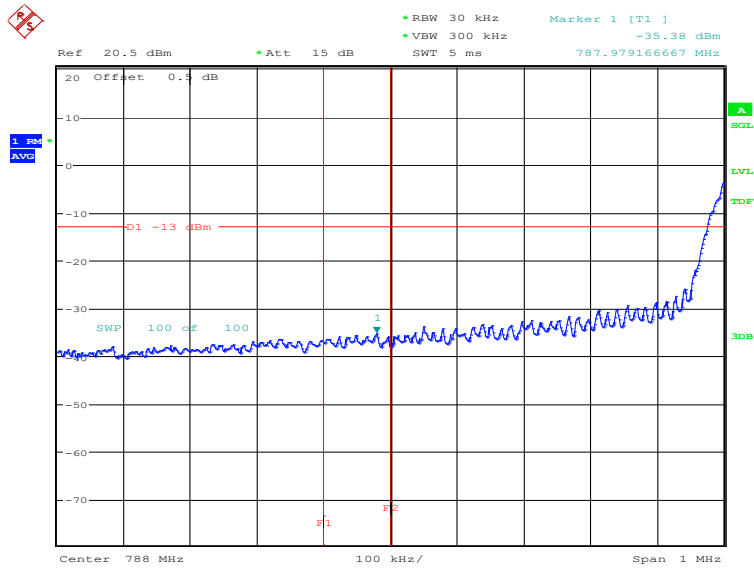
Date: 10.MAY.2024 10:26:11

**HIGH BAND EDGE BLOCK-1RB-high\_offset**



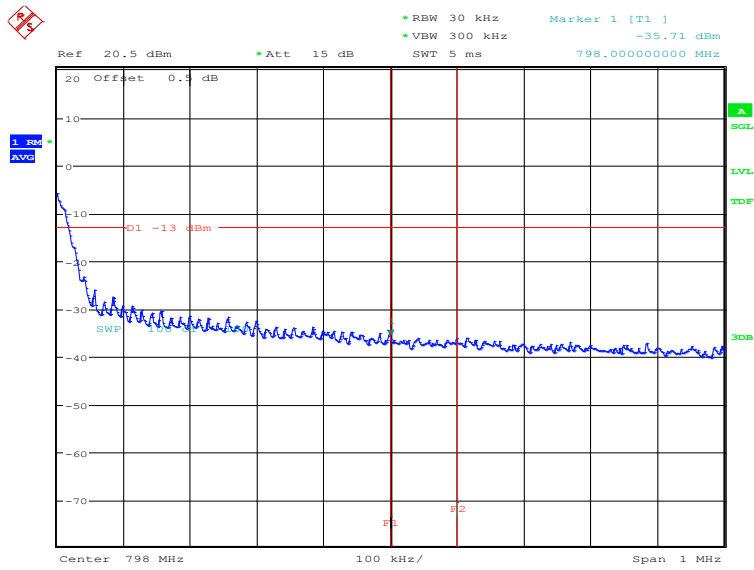
Date: 10.MAY.2024 10:26:49

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



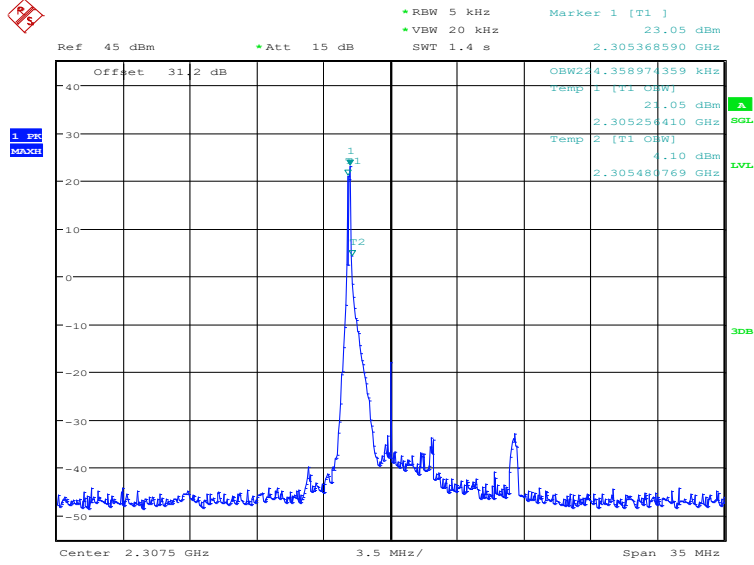
Date: 25.APR.2024 16:44:53

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



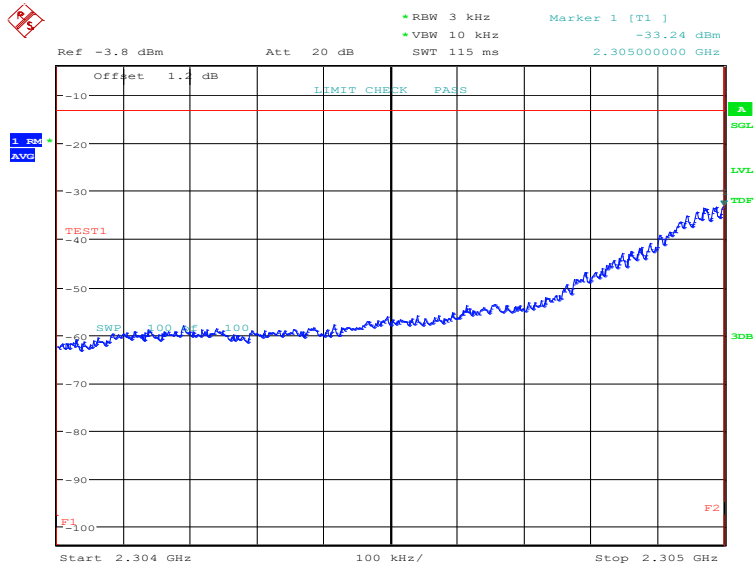
Date: 25.APR.2024 16:46:29

**LTE band 30**  
**OBW: 1RB-low\_offset**

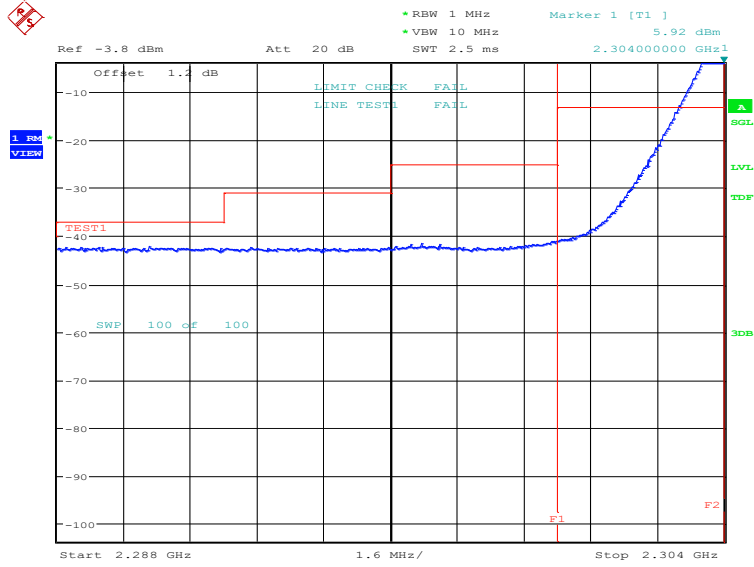


Date: 10.MAY.2024 10:03:21

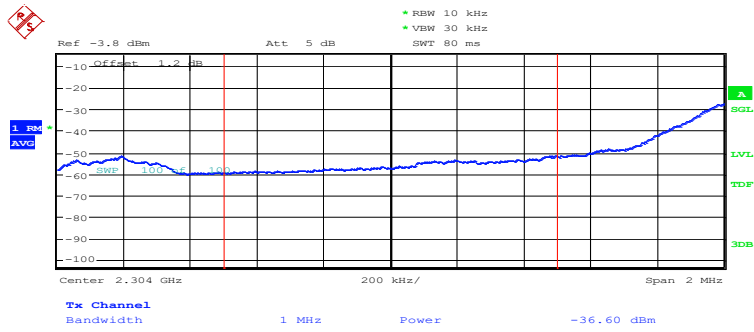
**LOW BAND EDGE BLOCK-1RB-low\_offset**



Date: 10.MAY.2024 10:04:50

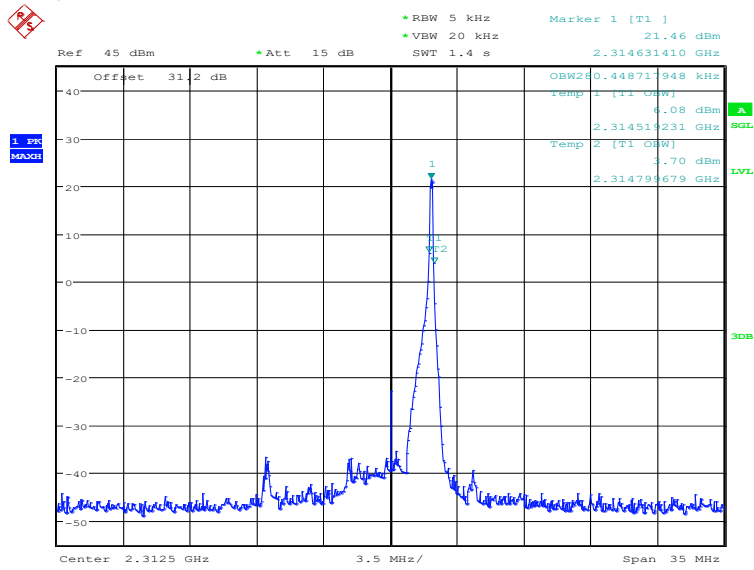


Date: 10.MAY.2024 10:06:42



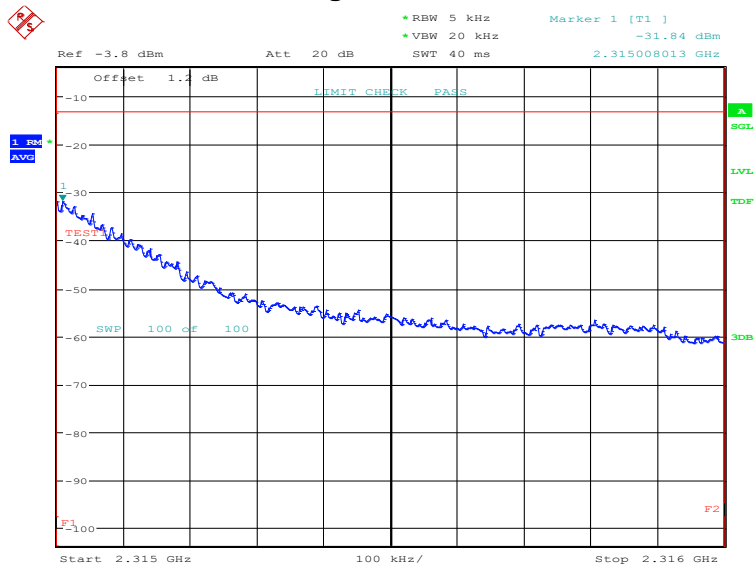
Date: 10.MAY.2024 10:07:10

### OBW: 1RB-high\_offset

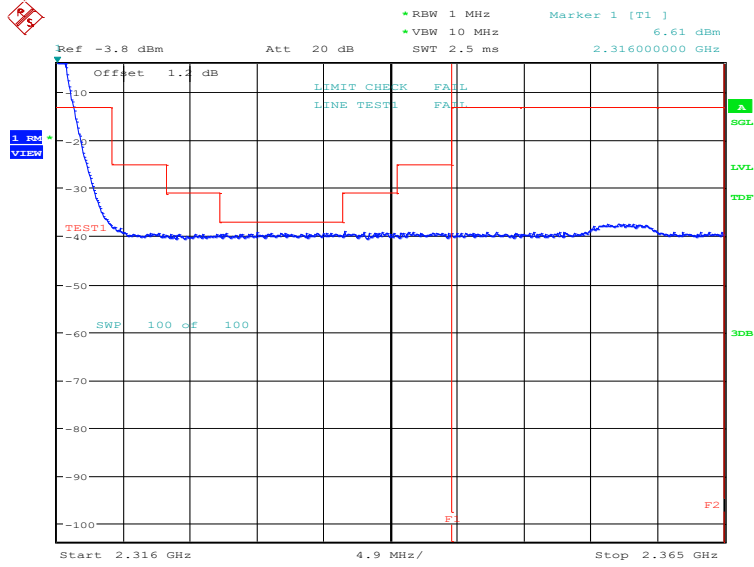


Date: 10.MAY.2024 10:07:46

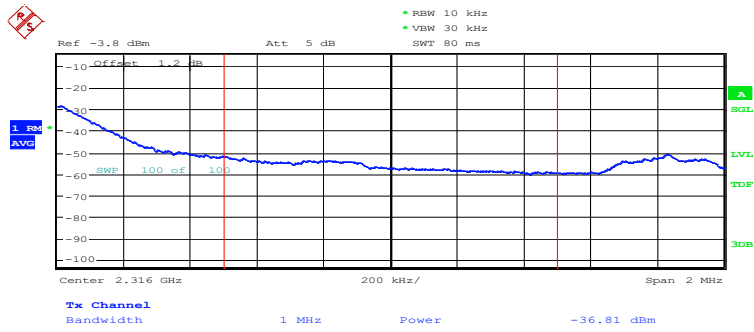
### HIGH BAND EDGE BLOCK-1RB-high\_offset



Date: 10.MAY.2024 10:09:09

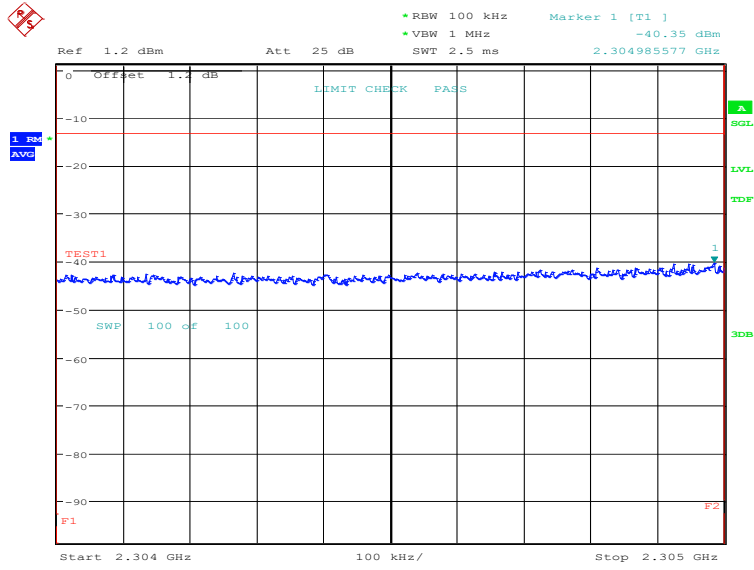


Date: 10.MAY.2024 10:11:09

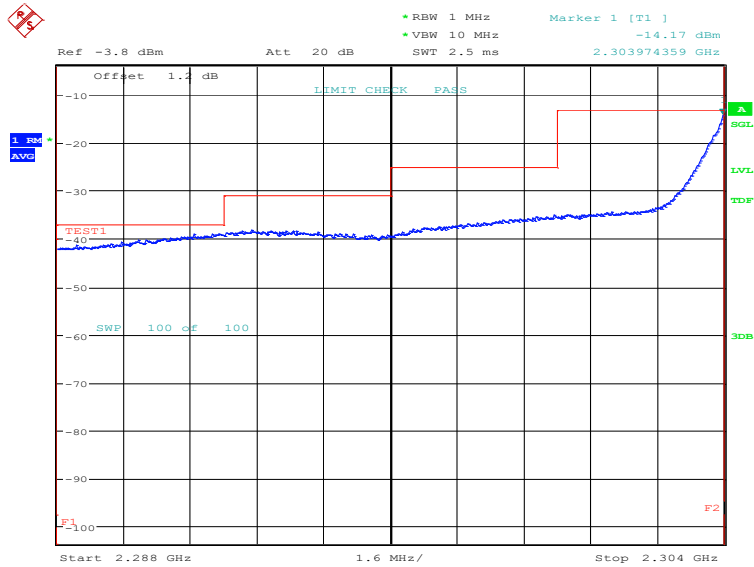


Date: 10.MAY.2024 10:11:37

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



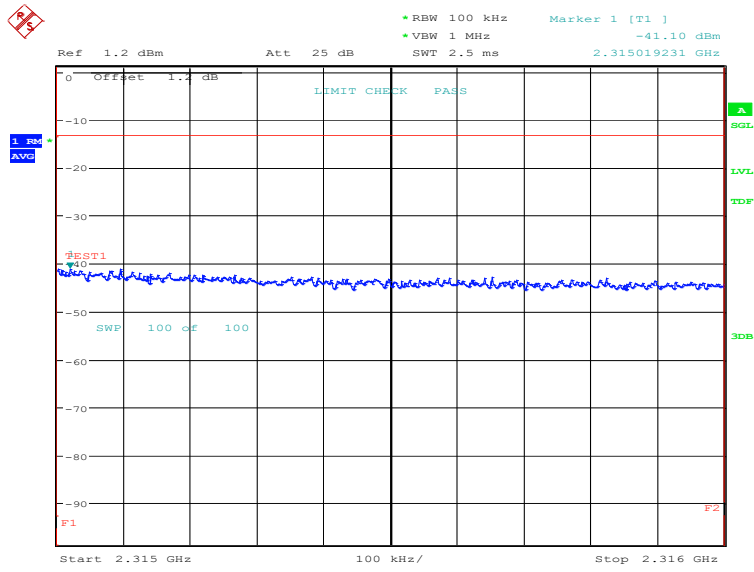
Date: 30.APR.2024 08:43:50



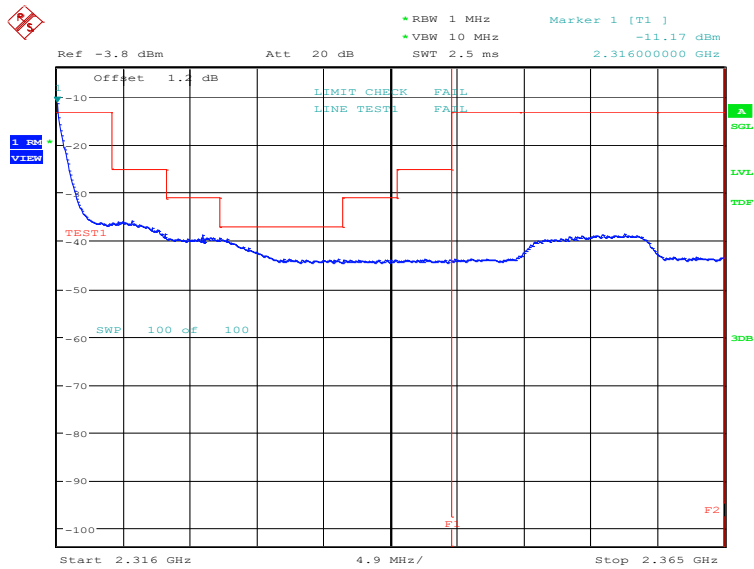
Date: 30.APR.2024 08:45:31



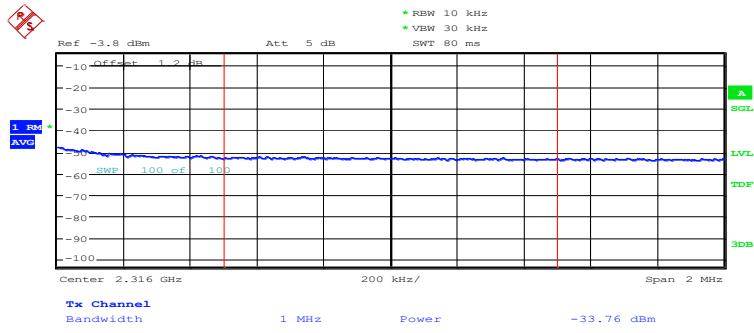
### HIGH BAND EDGE BLOCK-10MHz-100%RB



Date: 30.APR.2024 08:48:30

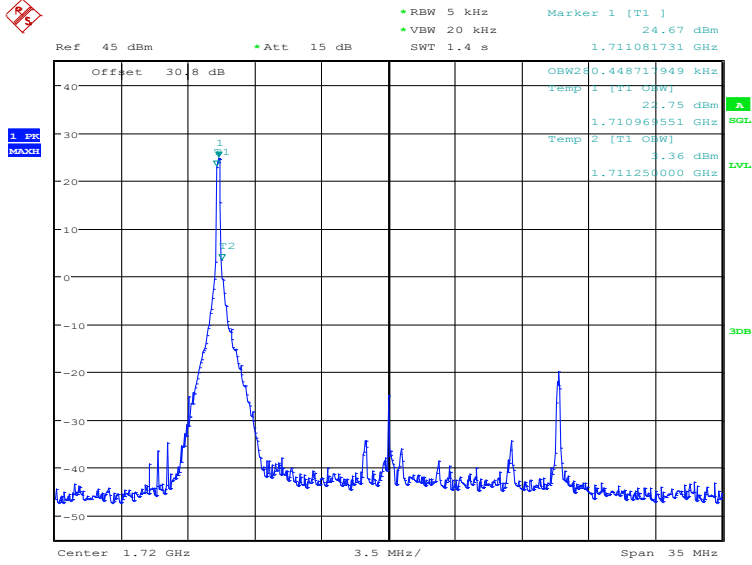


Date: 30.APR.2024 08:50:29



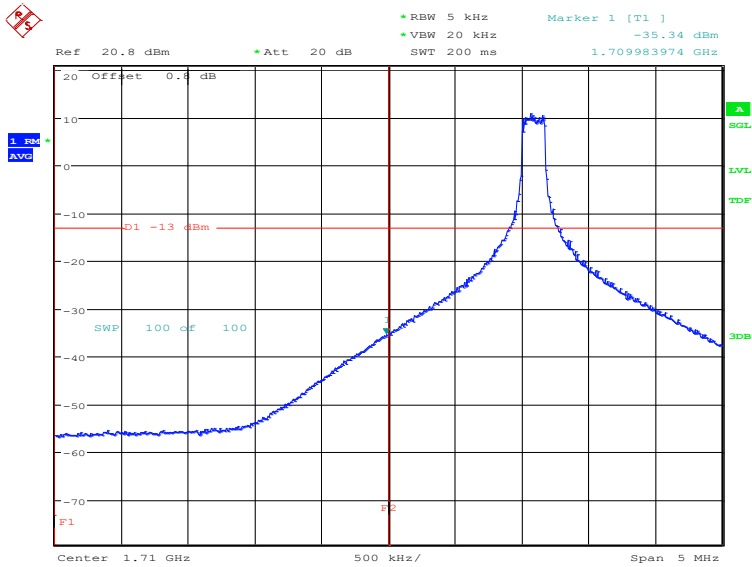
Date: 30.APR.2024 08:50:57

**LTE band 66**  
**OBW: 1RB-low\_offset**



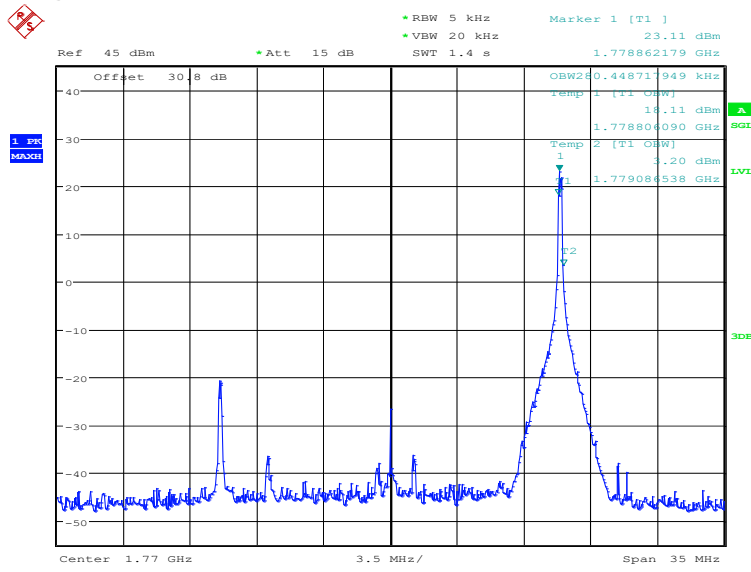
Date: 10.MAY.2024 10:12:15

**LOW BAND EDGE BLOCK-1RB-low\_offset**



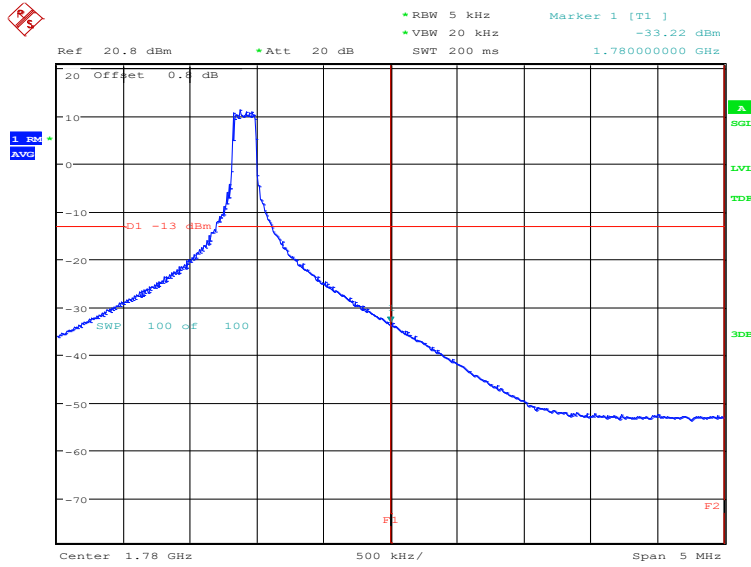
Date: 10.MAY.2024 10:13:30

### OBW: 1RB-high\_offset



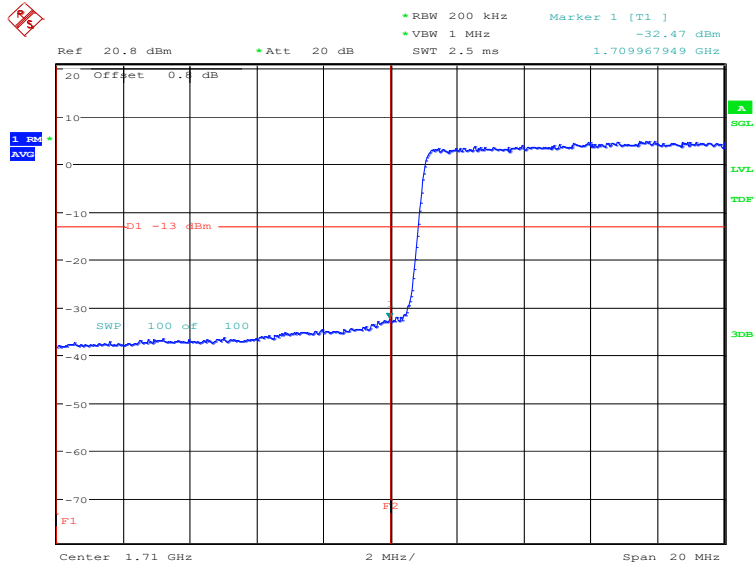
Date: 10.MAY.2024 10:14:06

### HIGH BAND EDGE BLOCK-1RB-high\_offset



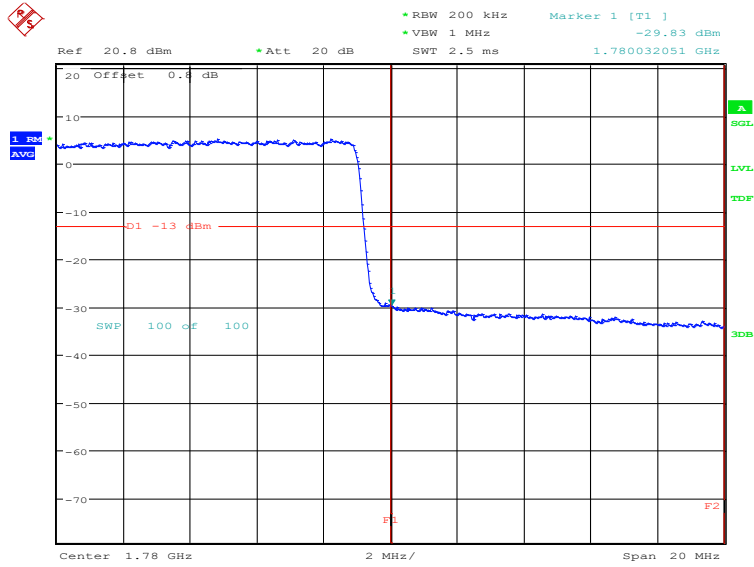
Date: 10.MAY.2024 10:15:20

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



Date: 25.APR.2024 15:55:50

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



Date: 25.APR.2024 15:57:22

Note: Expanded measurement uncertainty is  $U = 0.622$  dB,  $k = 2$ .

## **A.7 Conducted Spurious Emission**

### **A.7.1 Measurement Method**

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

1. In measuring unwanted emissions, the spectrum shall be investigated from 30 MHz or the lowest radio frequency signal generated in the equipment, whichever is lower, without going below 9 kHz, up to at least the frequency given below:
  - (a) If the equipment operates below 10 GHz: to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.
  - (b) If the equipment operates at or above 10 GHz: to the fifth harmonic of the highest fundamental frequency or to 100 GHz, whichever is lower.
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 greater than  $2 \times \text{span/RBW}$ .

### **A. 7.2 Measurement Limit**

Part 22.917, Part 24.238 and Part 27.53(h) 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.

Part 27.53(m) 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.

Part 27.53(c) states for operations in the 746-758 MHz band and the 776-788 MHz band, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:(1) On any frequency outside the 746-758 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least  $43 + 10 \log(P)$  dB;(2) On any frequency outside the 776-788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least  $43 + 10 \log(P)$  dB;(4) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than  $65 + 10 \log(P)$  dB in a 6.25 kHz band segment, for mobile and portable stations.

Part 27.53(f) states for operations in the 746–758 MHz, 775–788 MHz, and 805–806 MHz bands, emissions in the band 1559–1610 MHz shall be limited to -70dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals.

Part 27.53(g) states for operations in the 600 MHz band and the 698–746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the

transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least  $43 + 10 \log (P)$  dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

Part 27.53(a) states for mobile and portable stations operating in the 2305–2315 MHz and 2350–2360 MHz bands: By a factor of not less than:  $43 + 10 \log (P)$  dB on all frequencies between 2305 and 2320 MHz and on all frequencies between 2345 and 2360 MHz that are outside the licensed band(s) of operation, not less than  $55 + 10 \log (P)$  dB on all frequencies between 2320 and 2324 MHz and on all frequencies between 2341 and 2345 MHz, not less than  $61 + 10 \log (P)$  dB on all frequencies between 2324 and 2328 MHz and on all frequencies between 2337 and 2341 MHz, and not less than  $67 + 10 \log (P)$  dB on all frequencies between 2328 and 2337MHz; By a factor of not less than  $43 + 10 \log (P)$  dB on all frequencies between 2300 and 2305 MHz,  $55 + 10 \log (P)$  dB on all frequencies between 2296 and 2300MHz,  $61 + 10 \log (P)$  dB on all frequencies between 2292 and 2296 MHz,  $67 + 10 \log (P)$  dB on all frequencies between 2288 and 2292 MHz, and  $70 + 10 \log (P)$  dB below 2288 MHz; By a factor of not less than  $43 + 10 \log (P)$  dB on all frequencies between 2360 and 2365 MHz, and not less than  $70 + 10 \log (P)$  dB above 2365 MHz.

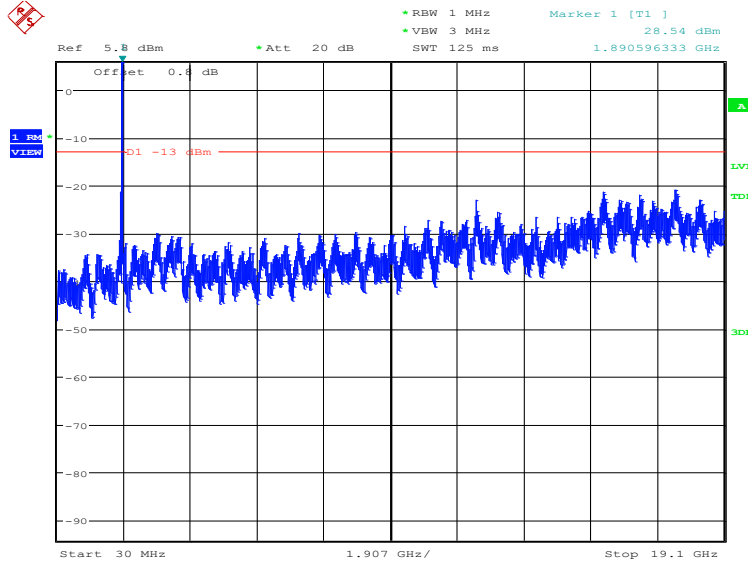
Part 90.543 states that for operations in the 758–768 MHz and the 788–798 MHz bands, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following: (1) On all frequencies between 769–775 MHz and 799–805 MHz, by a factor not less than  $76 + 10 \log (P)$  dB in a 6.25 kHz band segment, for base and fixed stations. (2) On all frequencies between 769–775 MHz and 799–805 MHz, by a factor not less than  $65 + 10 \log (P)$  dB in a 6.25 kHz band segment, for mobile and portable stations. (3) On any frequency between 775–788 MHz, above 805 MHz, and below 758 MHz, by at least  $43 + 10 \log (P)$  dB. (4) Compliance with the provisions of paragraphs (e)(1) and (2) of this section is based on the use of measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted to indicate spectral energy in a 6.25 kHz segment. (5) Compliance with the provisions of paragraph (e)(3) of this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of 30 kHz may be employed.

### A. 7.3 Measurement result

Only the worst case result is given below

#### LTE band 2: 30MHz – 19.1GHz

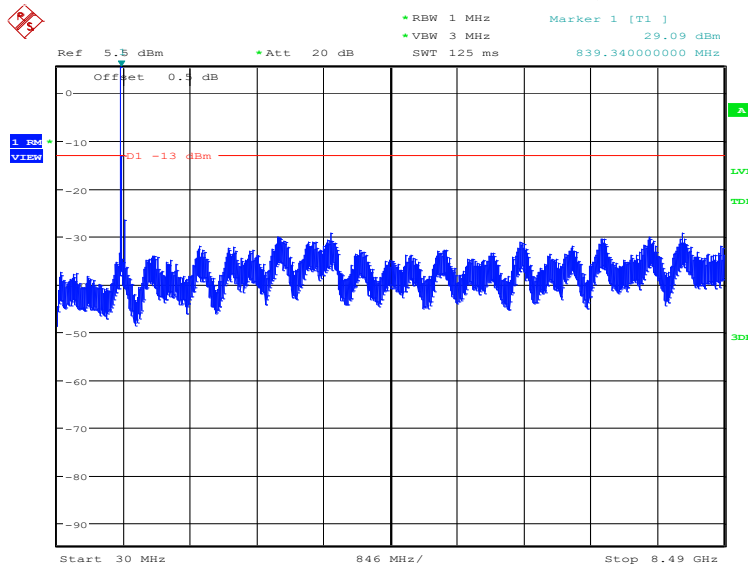
NOTE: peak above the limit line is the carrier frequency.



Date: 10.MAY.2024 10:16:54

#### LTE band 5: 30MHz – 8.49GHz

NOTE: peak above the limit line is the carrier frequency.

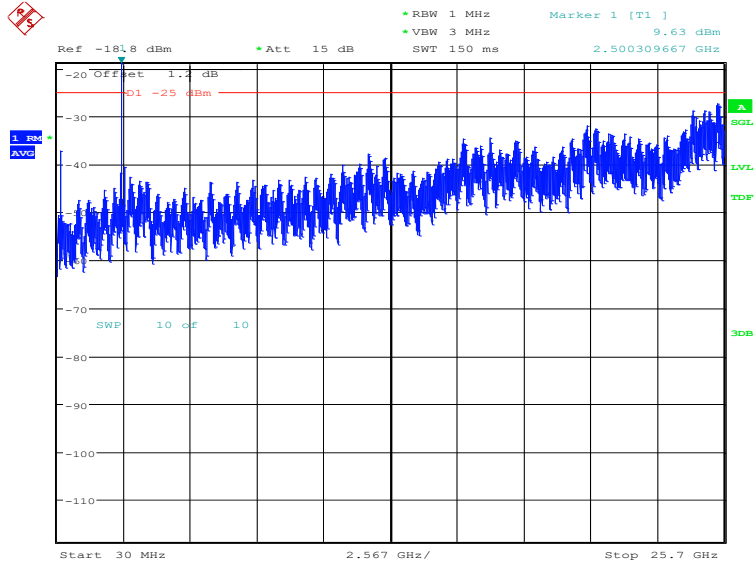


Date: 10.MAY.2024 10:18:19



### LTE band 7: 30MHz – 25.7GHz

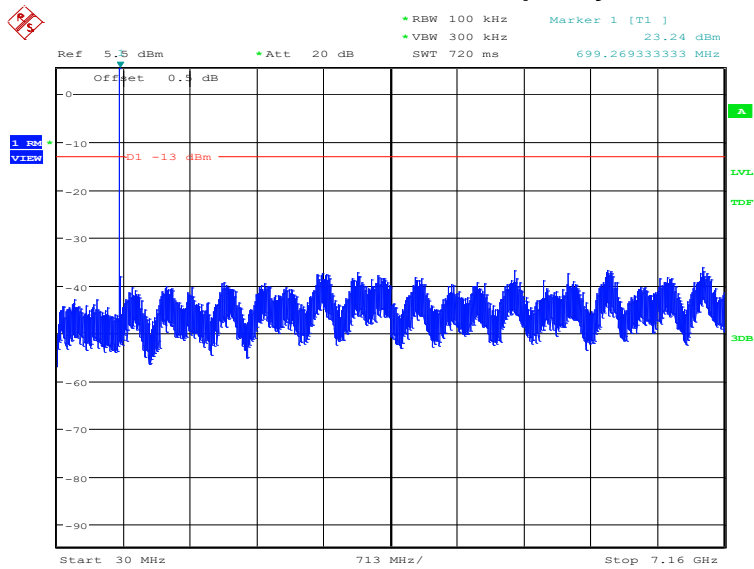
NOTE: peak above the limit line is the carrier frequency.



Date: 10.MAY.2024 10:18:47

### LTE band 12: 30MHz – 7.16GHz

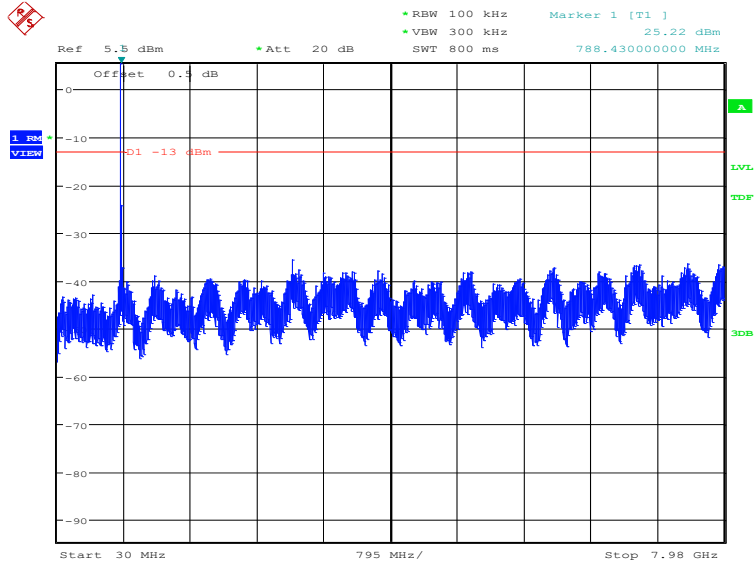
NOTE: peak above the limit line is the carrier frequency.



Date: 10.MAY.2024 10:20:14

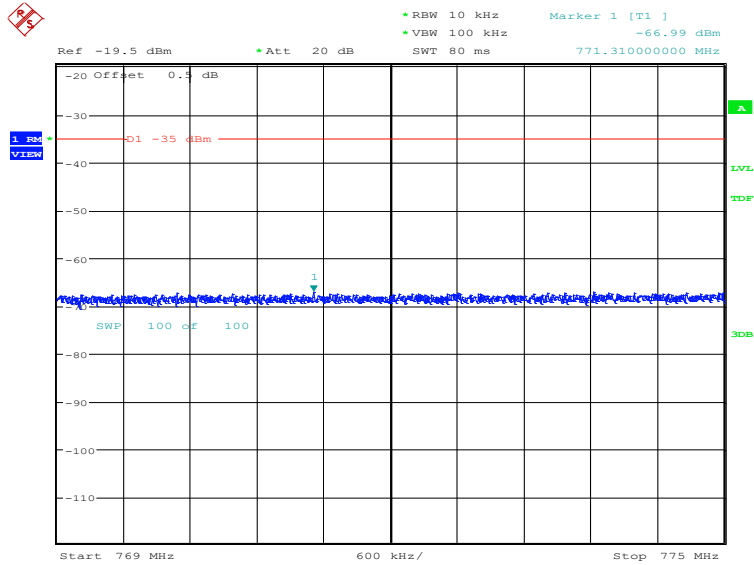
**LTE band 14: 30MHz – 7.98GHz**

**NOTE: peak above the limit line is the carrier frequency.**



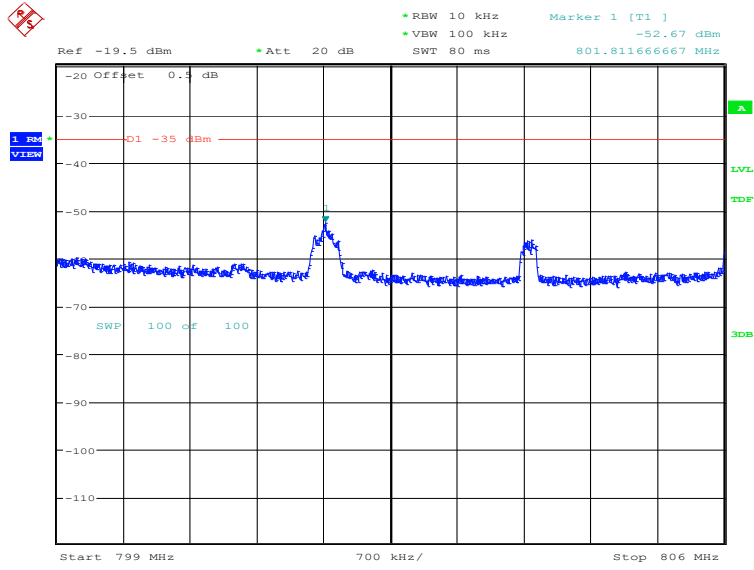
Date: 10.MAY.2024 10:20:58

**LTE band 14: 769MHz~775MHz**



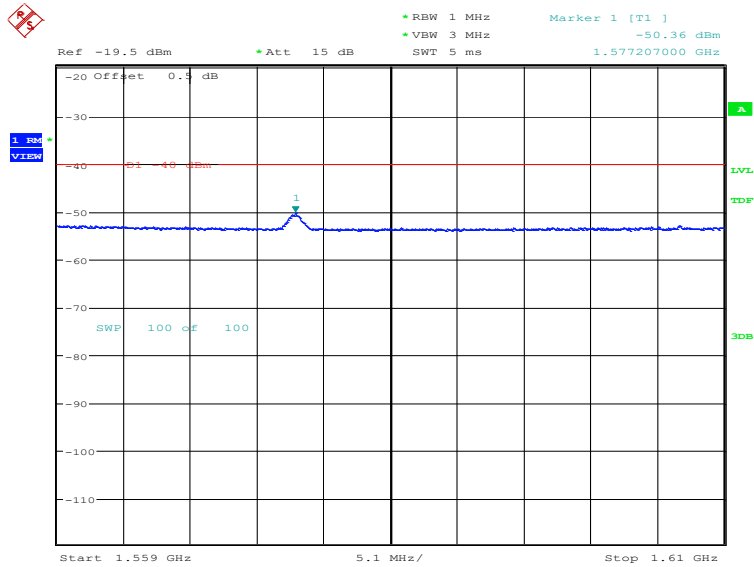
Date: 10.MAY.2024 10:21:24

### LTE band 14: 799MHz~806MHz



Date: 10.MAY.2024 10:21:49

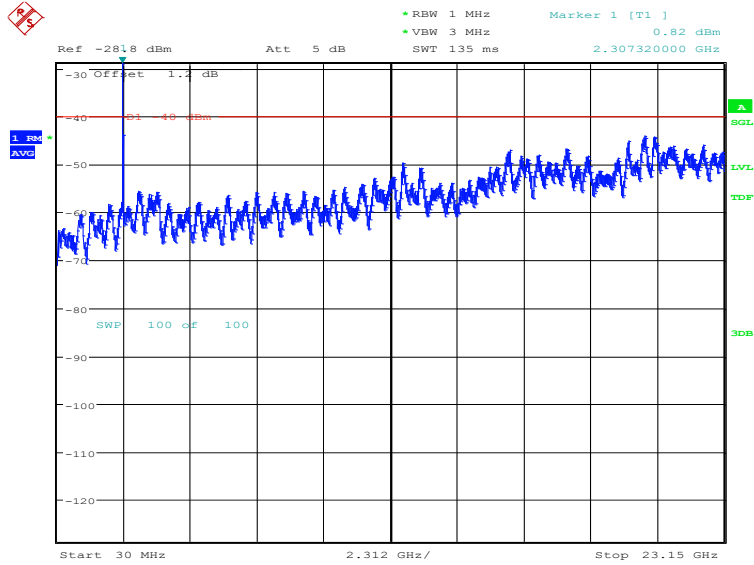
### LTE band 14: 1559MHz~1610MHz



Date: 10.MAY.2024 10:22:14

**LTE band 30: 30MHz – 23.15GHz**

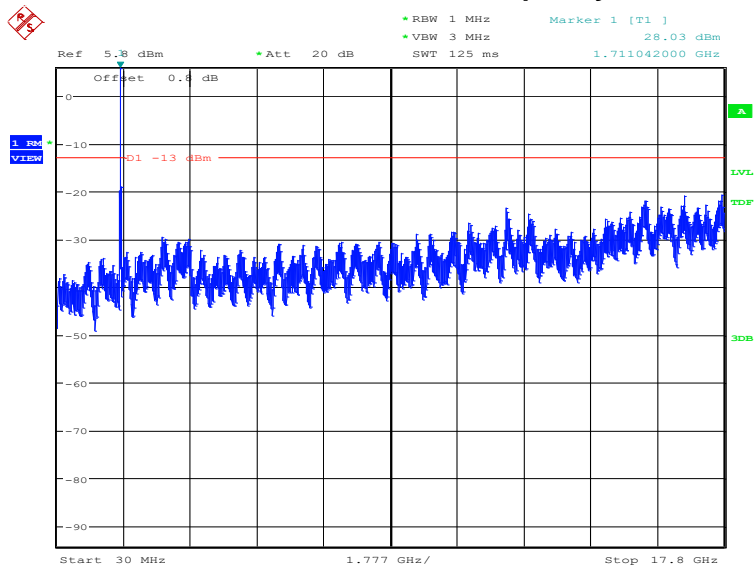
**NOTE: peak above the limit line is the carrier frequency.**



Date: 10.MAY.2024 10:24:12

**LTE band 66: 30MHz – 17.8GHz**

**NOTE: peak above the limit line is the carrier frequency.**



Date: 10.MAY.2024 10:24:57

Note: Expanded measurement uncertainty is  $U = 0.622$  dB,  $k = 2$ .

### **A.8 Peak-to-Average Power Ratio**

The peak-to-average ratio (PAR) of the transmission may not exceed 13 dB

- 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) Record the maximum PAPR level associated with a probability of 0.1%.

#### **LTE band 2, 20MHz**

Frequency(MHz)	PAPR(dB)		
1880.0	QPSK	16QAM	64QAM
	6.70	7.37	7.40

#### **LTE band 7, 20MHz**

Frequency(MHz)	PAPR(dB)		
2535.0	QPSK	16QAM	64QAM
	6.86	7.40	7.53

#### **LTE band 12, 10MHz**

Frequency(MHz)	PAPR(dB)		
707.5	QPSK	16QAM	64QAM
	5.26	6.15	6.25

#### **LTE band 30, 10MHz**

Frequency(MHz)	PAPR(dB)		
2310.0	QPSK	16QAM	64QAM
	5.32	6.03	6.38

#### **LTE band 66, 20MHz**

Frequency(MHz)	PAPR(dB)		
1745.0	QPSK	16QAM	64QAM
	6.57	7.21	7.24

Note: Expanded measurement uncertainty is  $U = 0.578$  dB,  $k = 2$ .

## Annex B: Accreditation Certificate



### Accredited Laboratory

A2LA has accredited

### TELECOMMUNICATION TECHNOLOGY LABS, CAICT

Beijing, 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 26<sup>th</sup> day of June 2023.



Mr. Trace McInturf, Vice President, Accreditation Services  
For the Accreditation Council  
Certificate Number 7049.01  
Valid to July 31, 2024

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

\*\*\*END OF REPORT\*\*\*