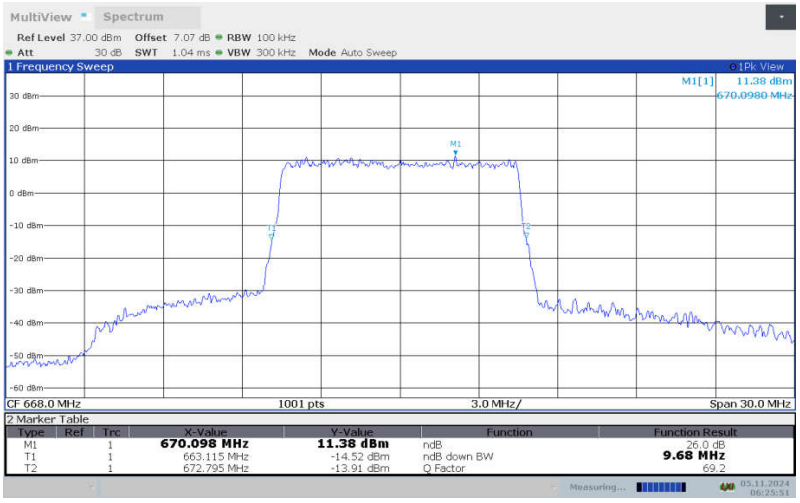
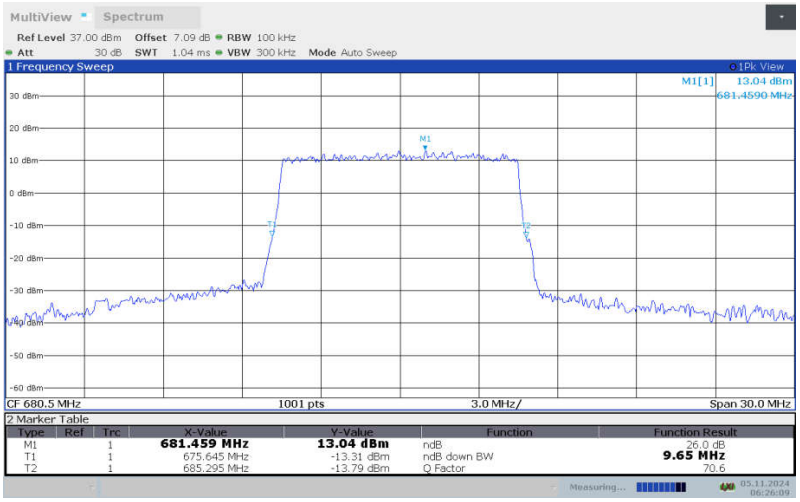


LTE band 71 , 10MHz Bandwidth, MID, QPSK (-26dBc BW)



LTE band 71 , 10MHz Bandwidth, MID, 16QAM (-26dBc BW)

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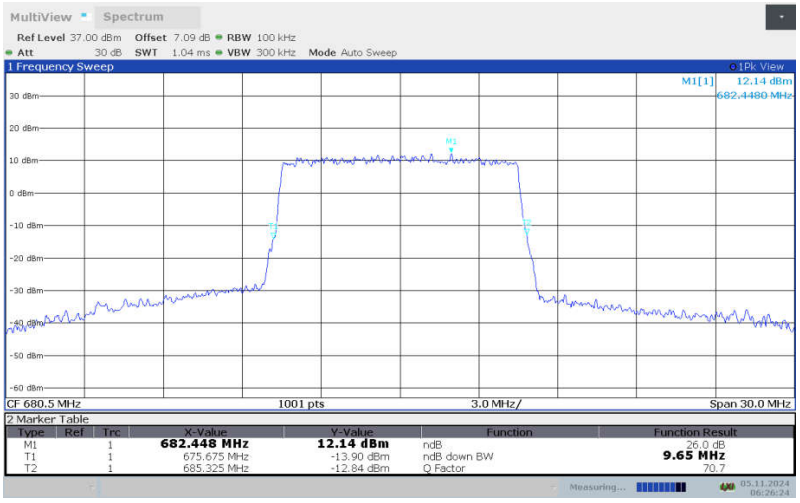
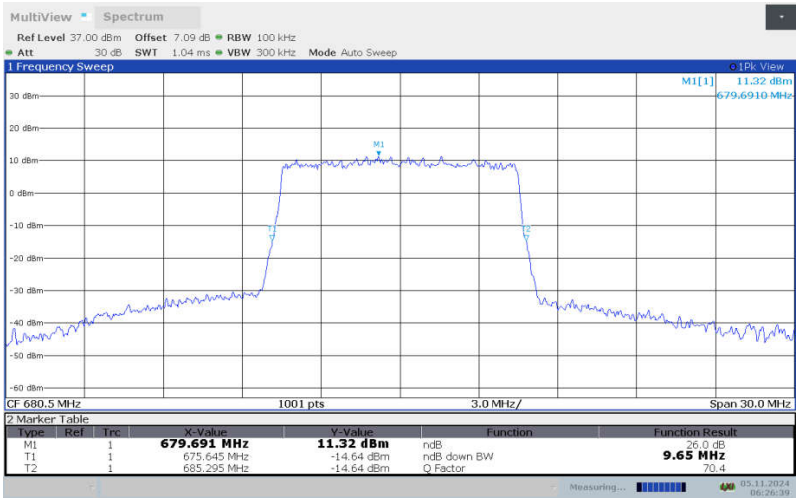


LTE band 71 , 10MHz Bandwidth, MID, 64QAM (-26dBc BW)



LTE band 71 , 10MHz Bandwidth, HIGH, QPSK (-26dBc BW)

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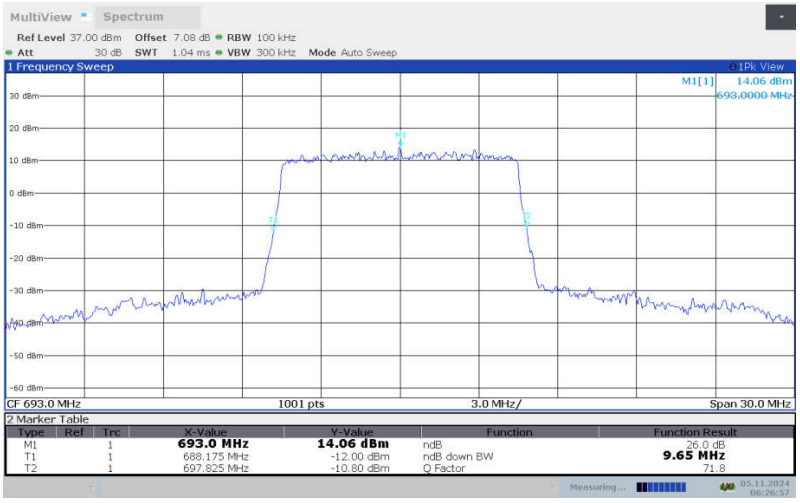
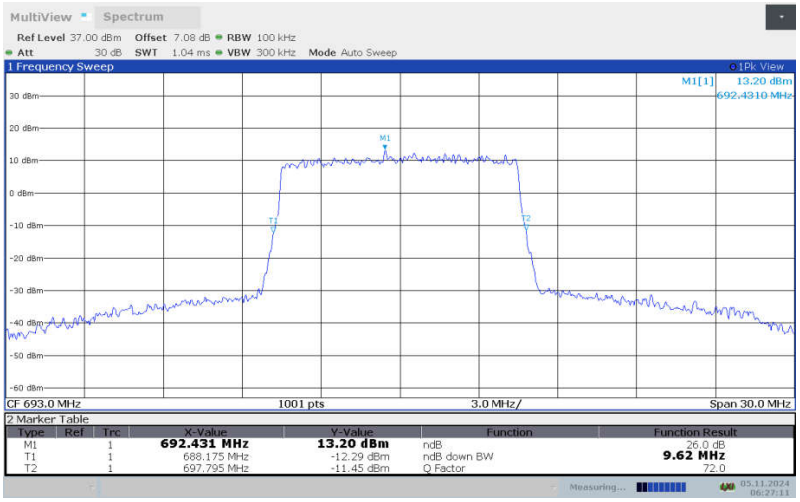


LTE band 71 , 10MHz Bandwidth, HIGH, 16QAM (-26dBc BW)



LTE band 71 , 10MHz Bandwidth, HIGH, 64QAM (-26dBc BW)

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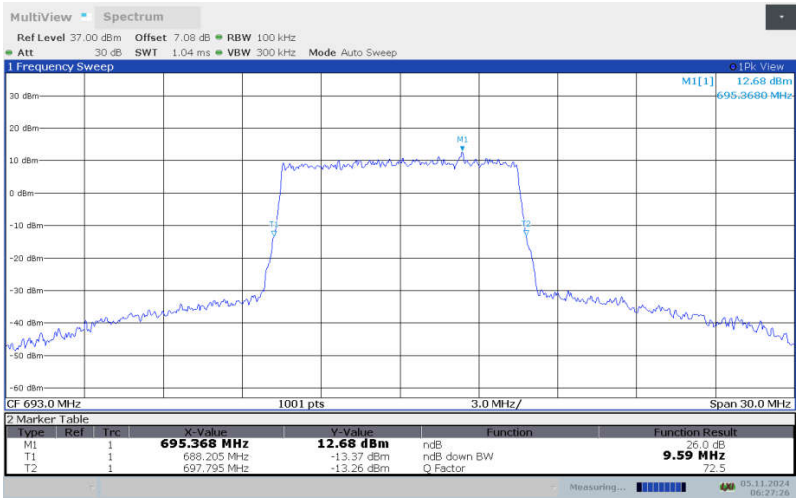

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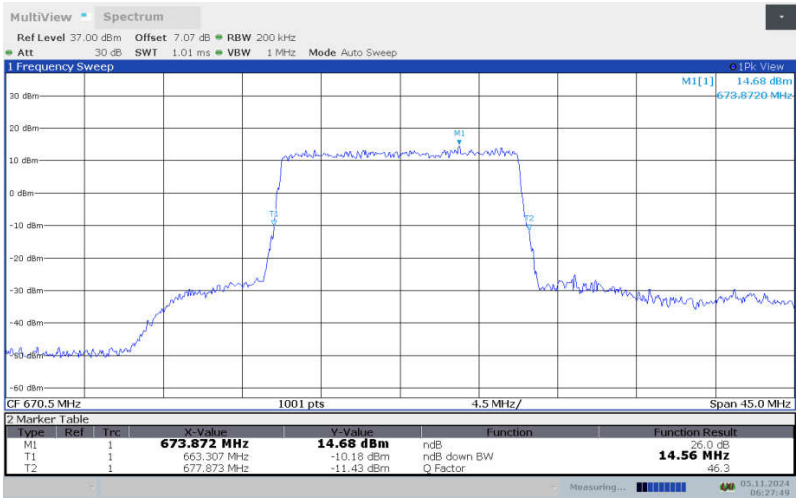
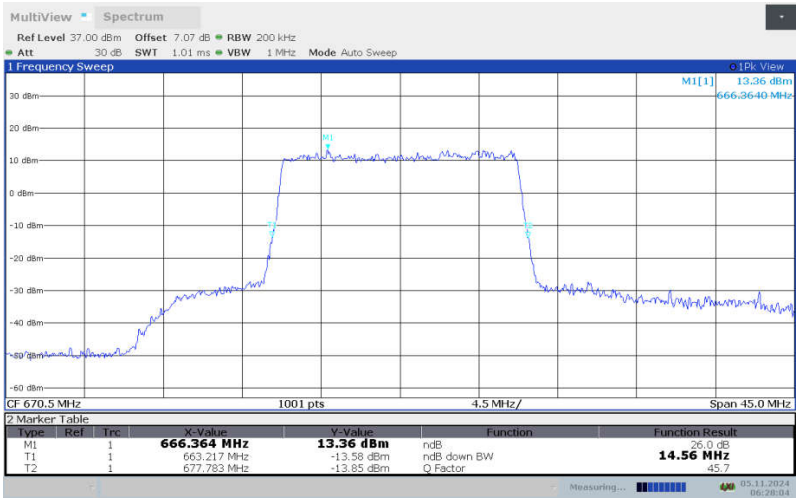
LTE band 71,15MHz(-26dBc OBW)

Frequency(MHz)	Emission Bandwidth (-26dBc OBW)(MHz)		
	QPSK	16QAM	64QAM
670.5	14.565	14.565	14.520
680.5	14.476	14.520	14.431
690.5	14.520	14.431	14.431

LTE band 71 , 15MHz Bandwidth, LOW, QPSK (-26dBc BW)



LTE band 71 , 15MHz Bandwidth, LOW, 16QAM (-26dBc BW)



LTE band 71 , 15MHz Bandwidth, LOW, 64QAM (-26dBc BW)

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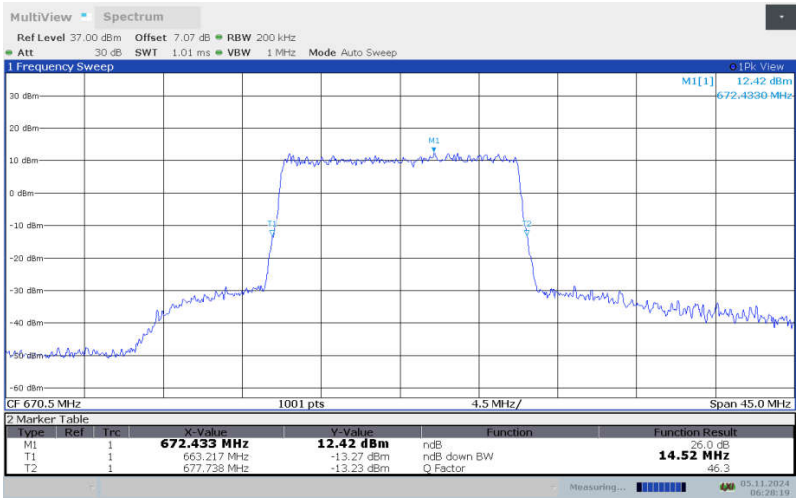
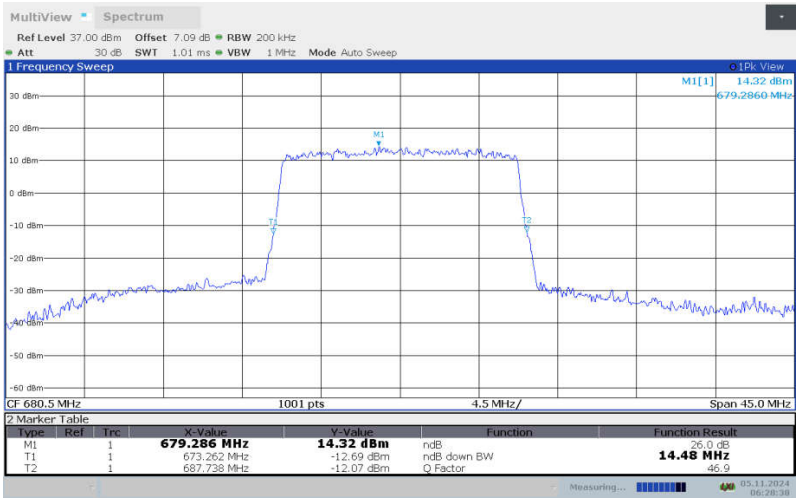


LTE band 71 , 15MHz Bandwidth, MID, QPSK (-26dBc BW)



LTE band 71 , 15MHz Bandwidth, MID, 16QAM (-26dBc BW)

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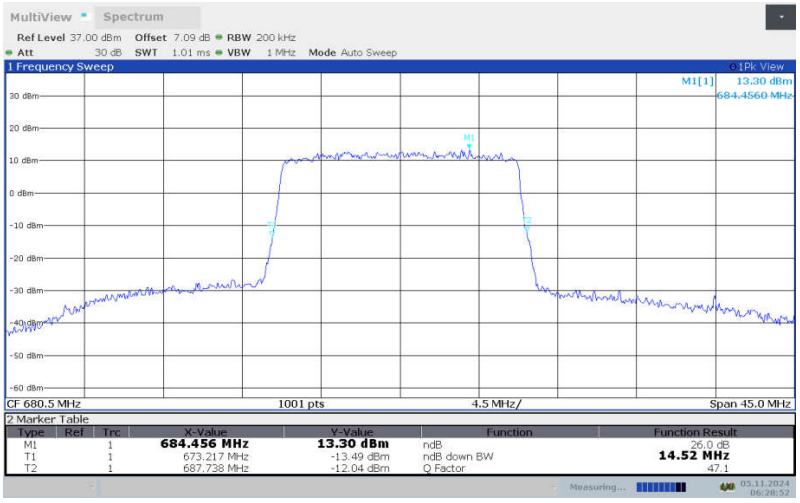
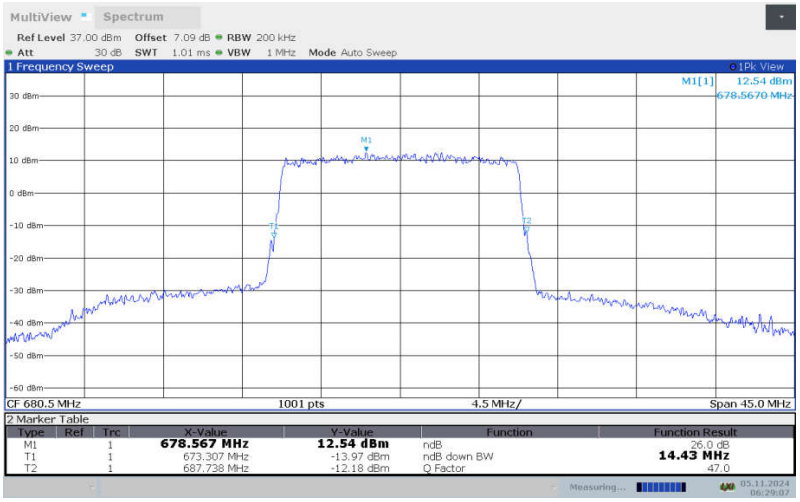


LTE band 71 , 15MHz Bandwidth, MID, 64QAM (-26dBc BW)



LTE band 71 , 15MHz Bandwidth, HIGH, QPSK (-26dBc BW)

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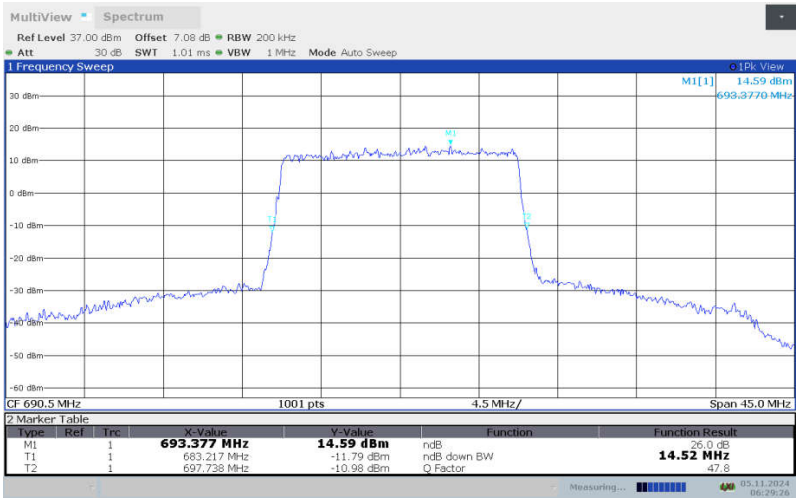
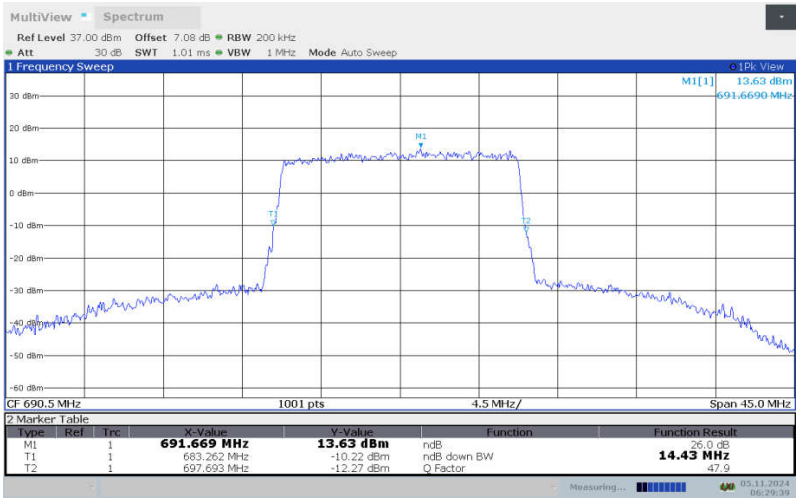


LTE band 71 , 15MHz Bandwidth, HIGH, 16QAM (-26dBc BW)



LTE band 71 , 15MHz Bandwidth, HIGH, 64QAM (-26dBc BW)

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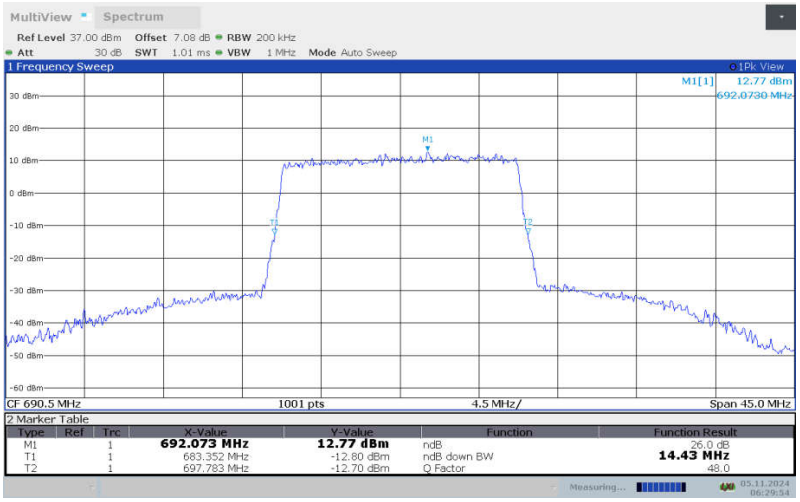

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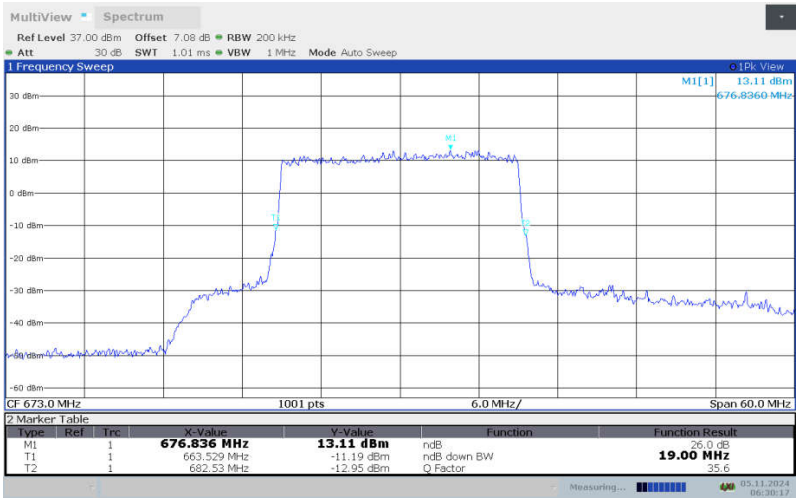
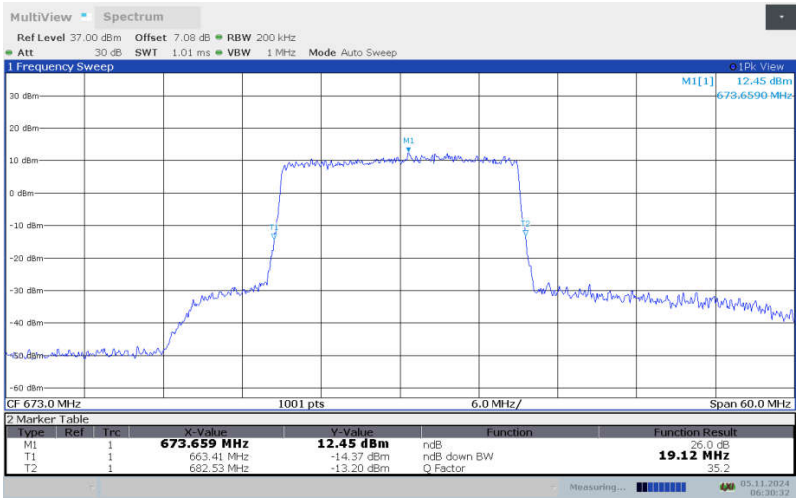
LTE band 71,20MHz(-26dBc OBW)

Frequency(MHz)	Emission Bandwidth (-26dBc OBW)(MHz)		
	QPSK	16QAM	64QAM
673	19.001	19.121	19.061
683	19.121	19.121	19.001
688	19.241	19.001	19.121

LTE band 71 , 20MHz Bandwidth, LOW, QPSK (-26dBc BW)



LTE band 71 , 20MHz Bandwidth, LOW, 16QAM (-26dBc BW)



LTE band 71 , 20MHz Bandwidth, LOW, 64QAM (-26dBc BW)

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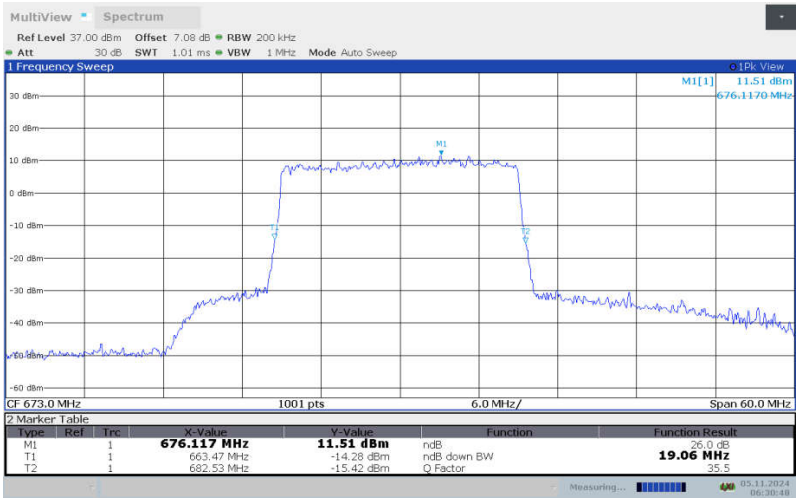
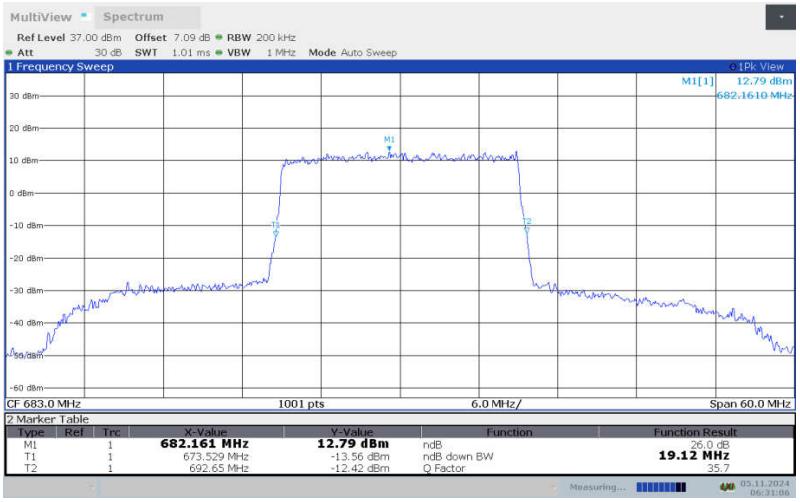


LTE band 71 , 20MHz Bandwidth, MID, QPSK (-26dBc BW)



LTE band 71 , 20MHz Bandwidth, MID, 16QAM (-26dBc BW)

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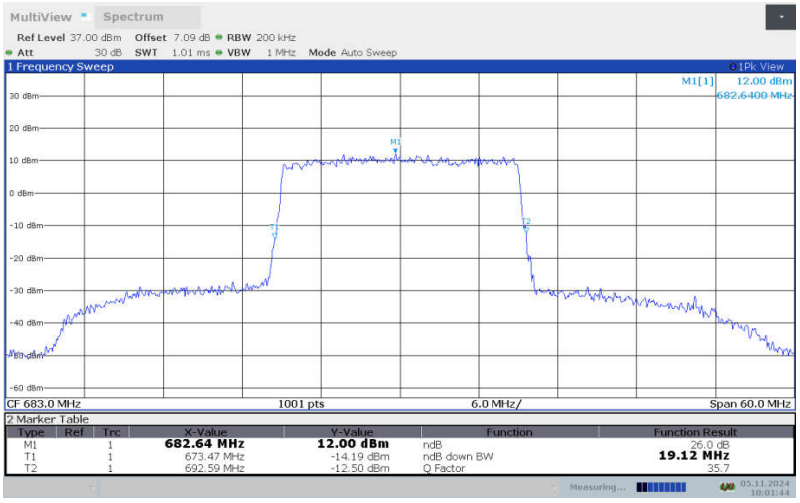
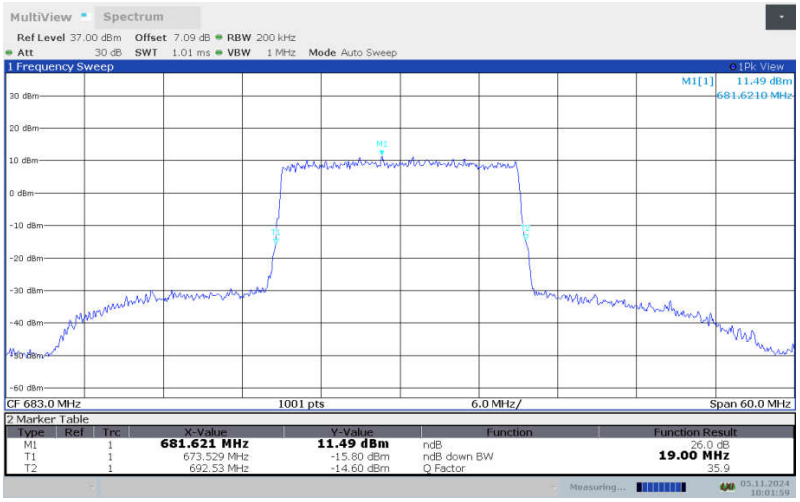


LTE band 71 , 20MHz Bandwidth, MID, 64QAM (-26dBc BW)



LTE band 71 , 20MHz Bandwidth, HIGH, QPSK (-26dBc BW)

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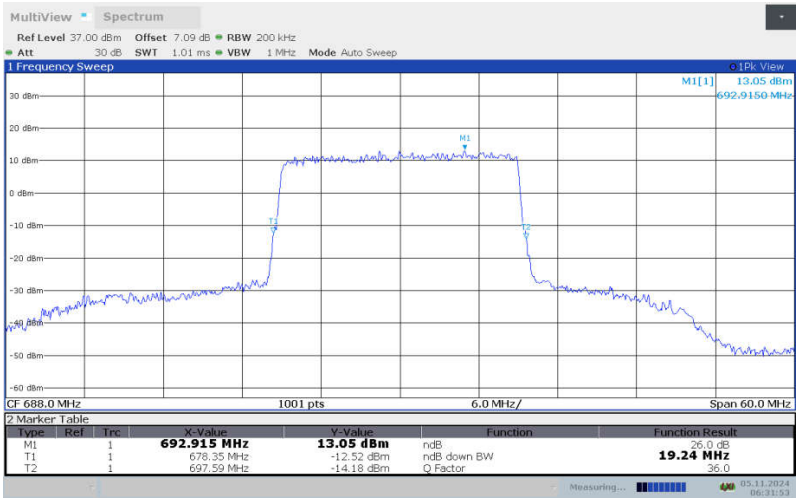
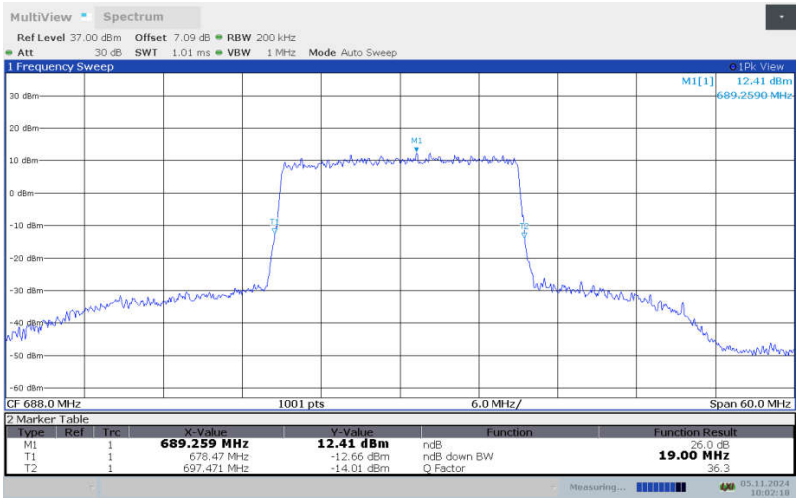


LTE band 71 , 20MHz Bandwidth, HIGH, 16QAM (-26dBc BW)



LTE band 71 , 20MHz Bandwidth, HIGH, 64QAM (-26dBc BW)

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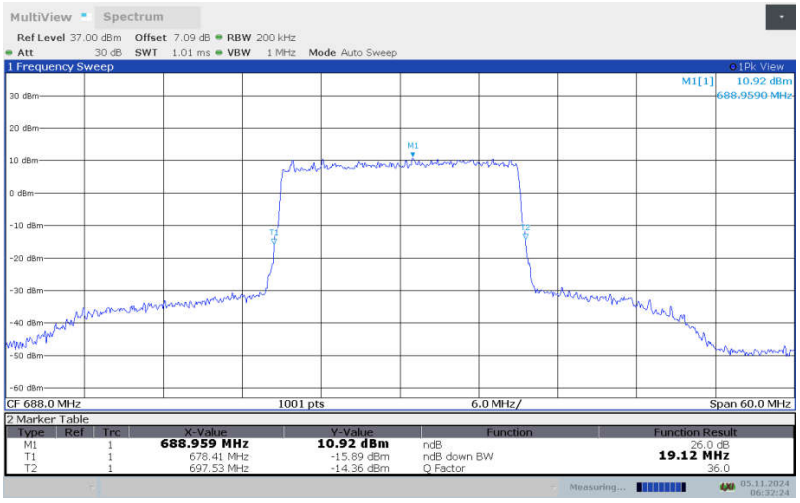

Note: Expanded measurement uncertainty is U = 3428 Hz, k = 2

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A.6 BAND EDGE COMPLIANCE

A.6.1 Measurement limit

For Band2/25:Part 24.238(a) 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.

For Band4/66: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.

For Band5/26(824MHz-849MHz): Part 22.917(a) specify that for operations in the 824–849MHz band, the FCC limit is 43 +10 log (P)dB below the transmitter power(P) in a 100kHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

For Band7/38/41: 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 that 43 + 10log (P) dB on all frequencies between 2490.5 MHz and 2496 MHz and 55 + 10 log (P) dB at or below 2490.5MHz. 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.

For Band12/17/71: Part 27.53(g) specifies 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.

For Band13: Part 27.53(c) specifies 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;(3) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than 76 + 10 log (P) dB in a 6.25 kHz band segment, for base and fixed stations;(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;(5) Compliance with the provisions of paragraphs (c)(1) and (c)(2) 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

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immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 30 kHz may be employed;(6) Compliance with the provisions of paragraphs (c)(3) and (c)(4) 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.

For Band14: Part 90.543(e) specifies 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.

For Band26(814MHz-824MHz): Part 90.691(a) specifies (1) For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 116 Log10(f/6.1) decibels or 50 + 10 Log10(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.(2) For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 43 + 10Log10(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

For Band30: Part 27.53(a)(4) specifies For mobile and portable stations operating in the 2305-2315 MHz and 2350-2360 MHz bands: (i) 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 2337 MHz;(ii) 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 2300 MHz, 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;(iii) 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.

The spectrum analyzer readings are corrected by [10 log (1/duty cycle)] for the non-continuous transmitting scenario.

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A.6.2Measurement Procedure

The testing follows ANSI C63.26

a) The EUT was connected to spectrum analyzer and system simulator via a power divider.

b) The band edges of low and high channels for the highest RF powers were measured.

c) Set RBW >= 1% EBW in the 1MHz band immediately outside and adjacent to the band edge.

d) Set spectrum analyzer with RMS detector.

e) The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

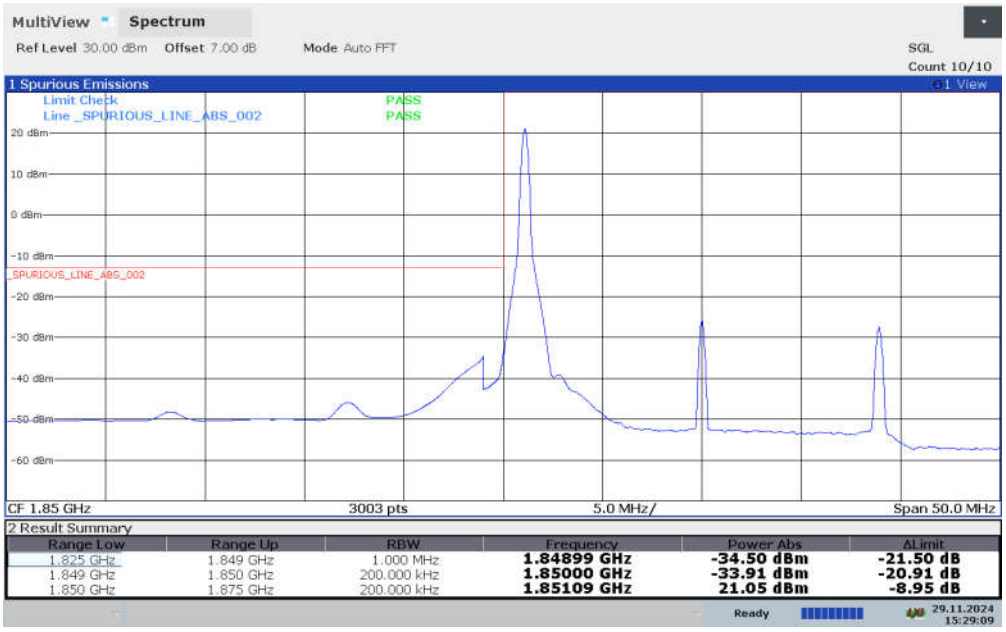
f) Checked that all the results comply with the emission limit line.

A.6.3 Measurement result

Only worst case result is given below

LTE band 2

LOW BAND EDGE BLOCK-1RB-low_offset



HIGH BAND EDGE BLOCK-1RB-high_offset

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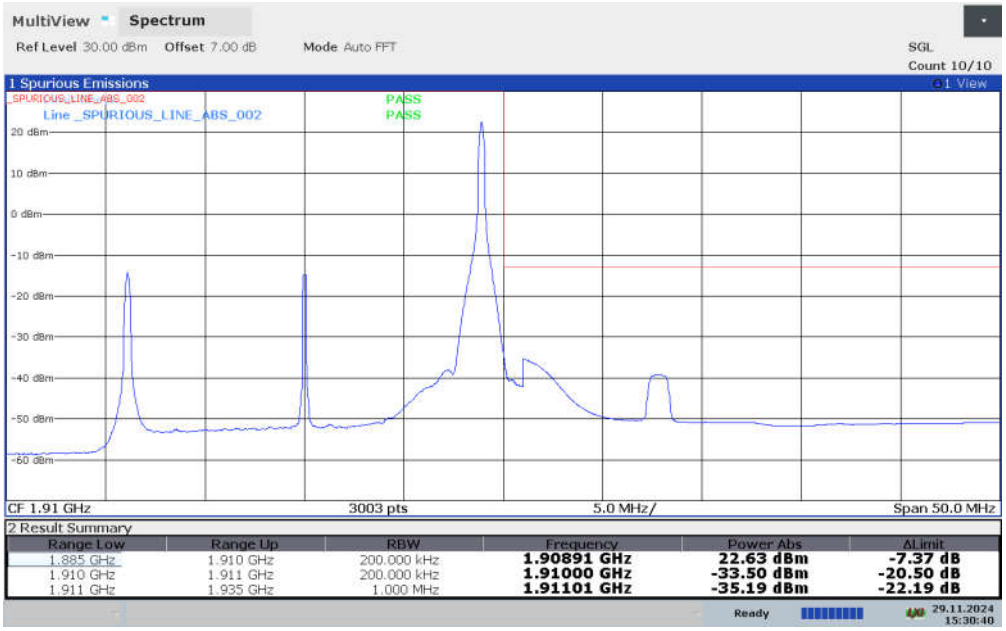
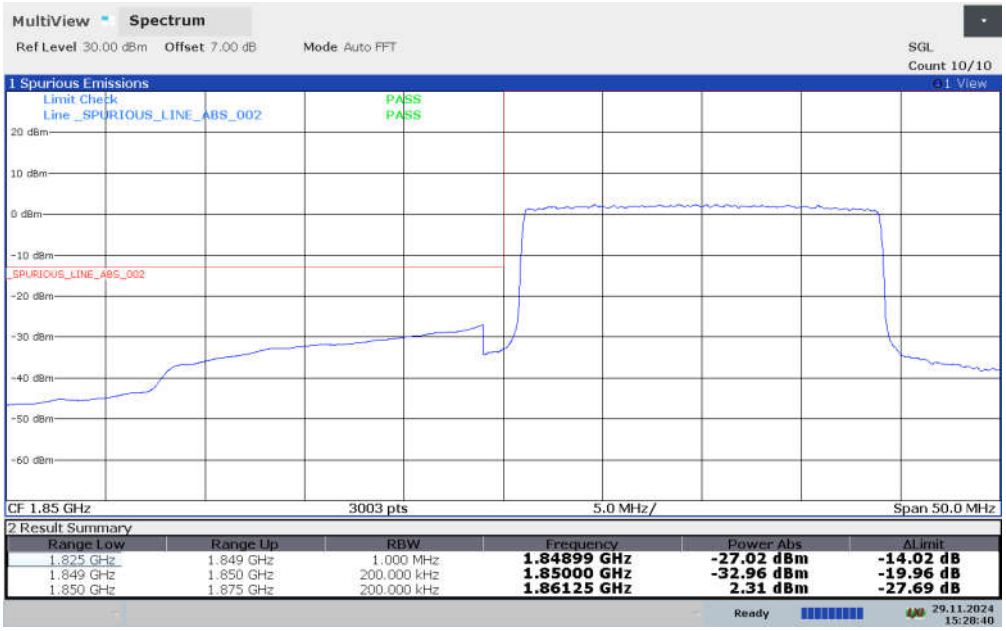


LOW BAND EDGE BLOCK-20MHz-100%RB



HIGH BAND EDGE BLOCK-20MHz-100%RB

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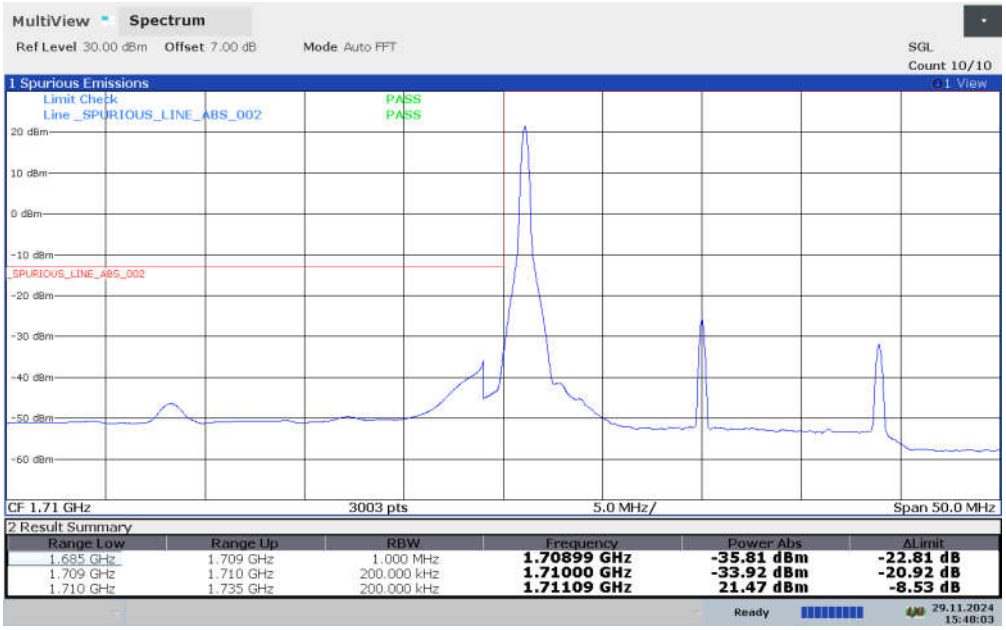
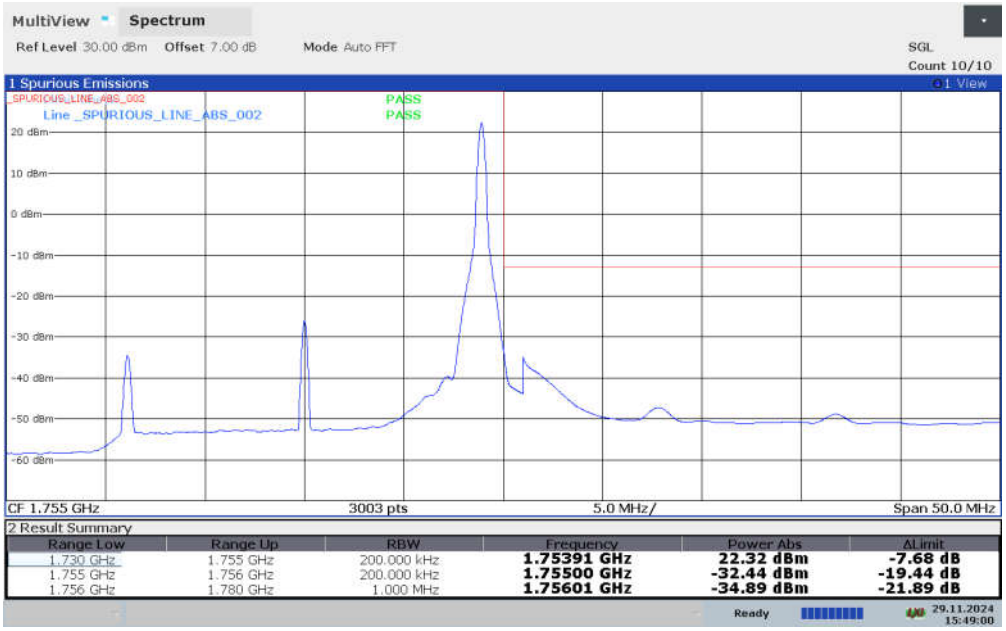
LTE band 4

LOW BAND EDGE BLOCK-1RB-low_offset



HIGH BAND EDGE BLOCK-1RB-high_offset



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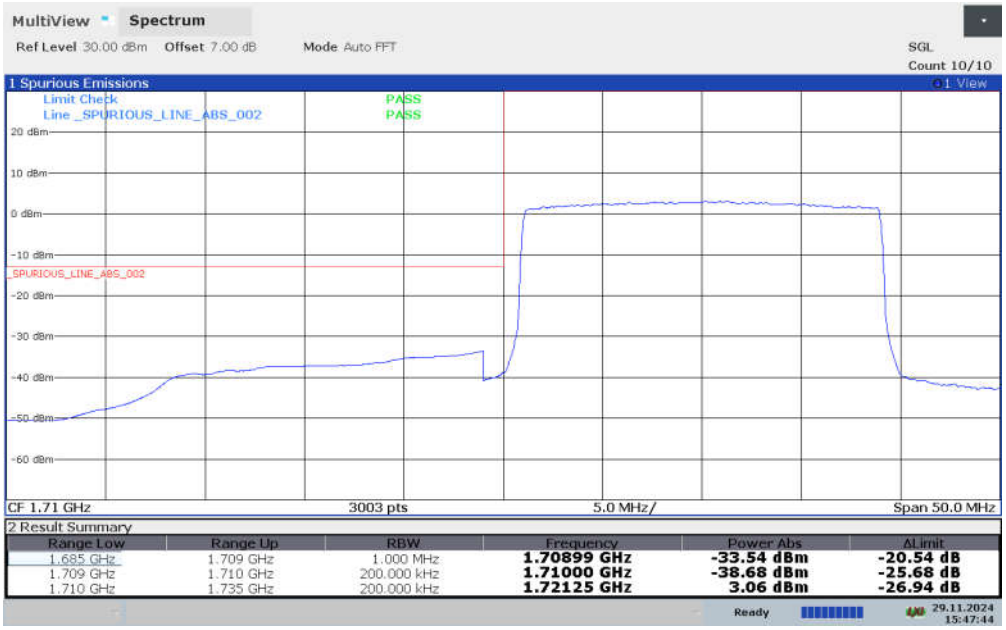
LOW BAND EDGE BLOCK-20MHz-100%RB



HIGH BAND EDGE BLOCK-20MHz-100%RB

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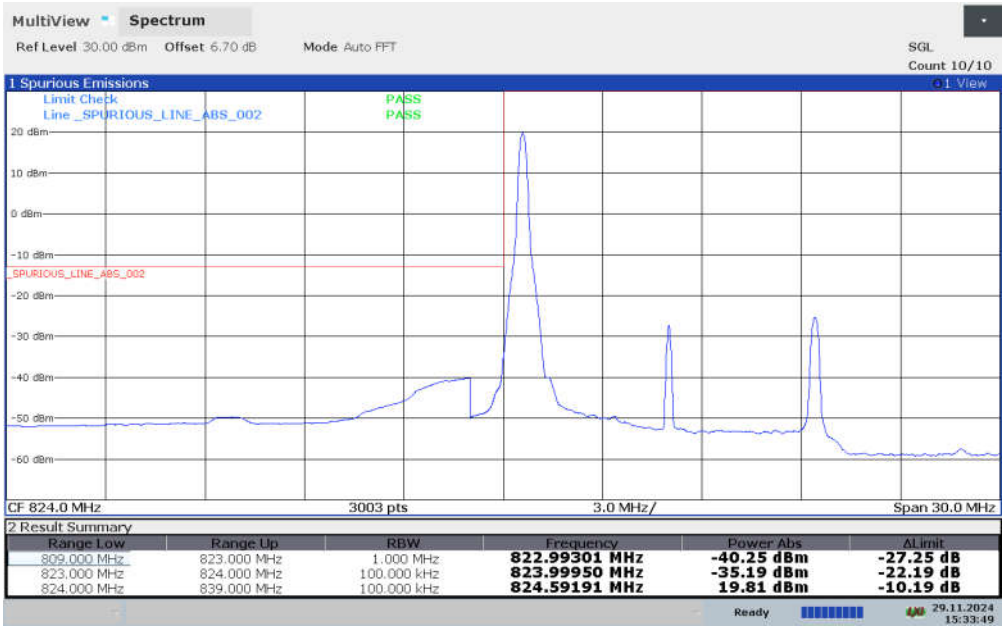
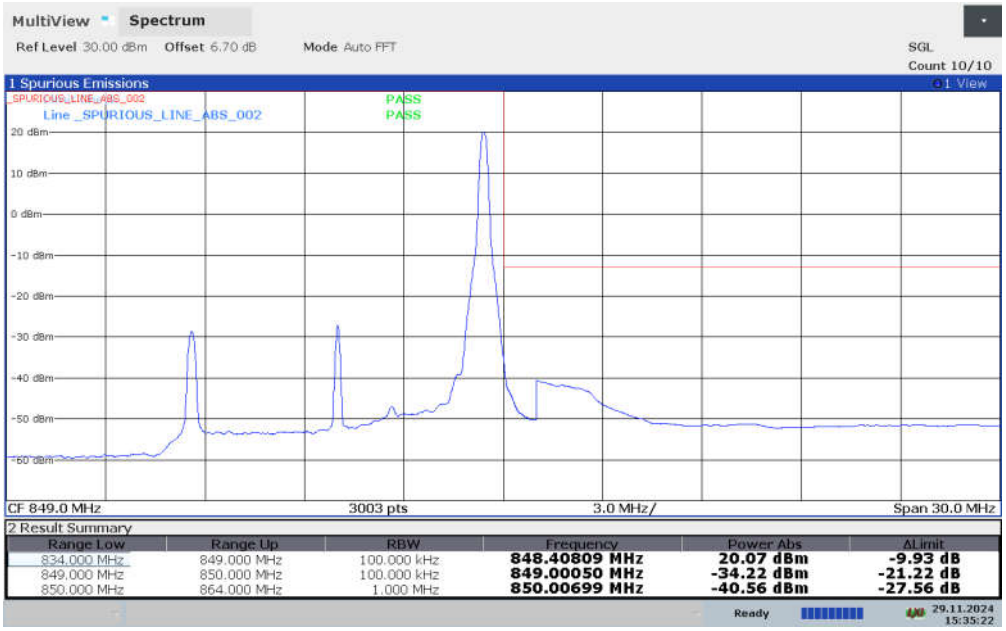
LTE band 5

LOW BAND EDGE BLOCK-1RB-low_offset



HIGH BAND EDGE BLOCK-1RB-high_offset



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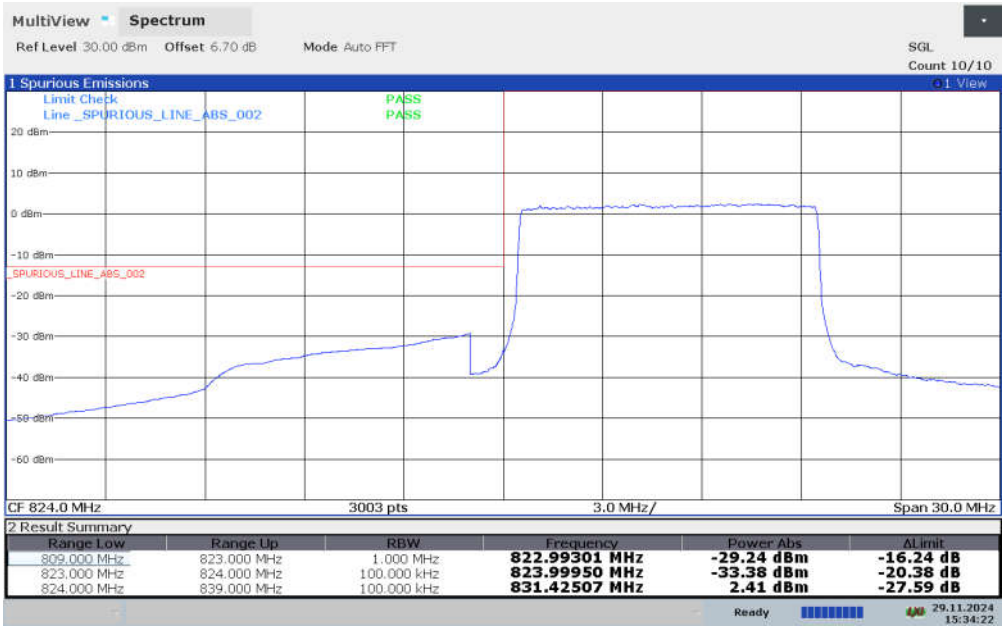
LOW BAND EDGE BLOCK-10MHz-100%RB



HIGH BAND EDGE BLOCK-10MHz-100%RB

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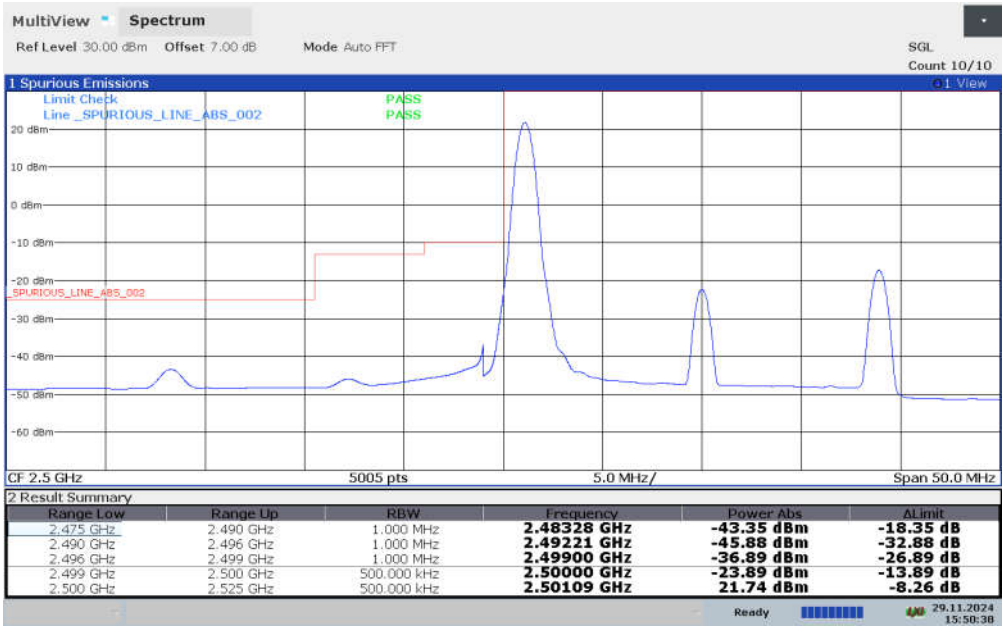
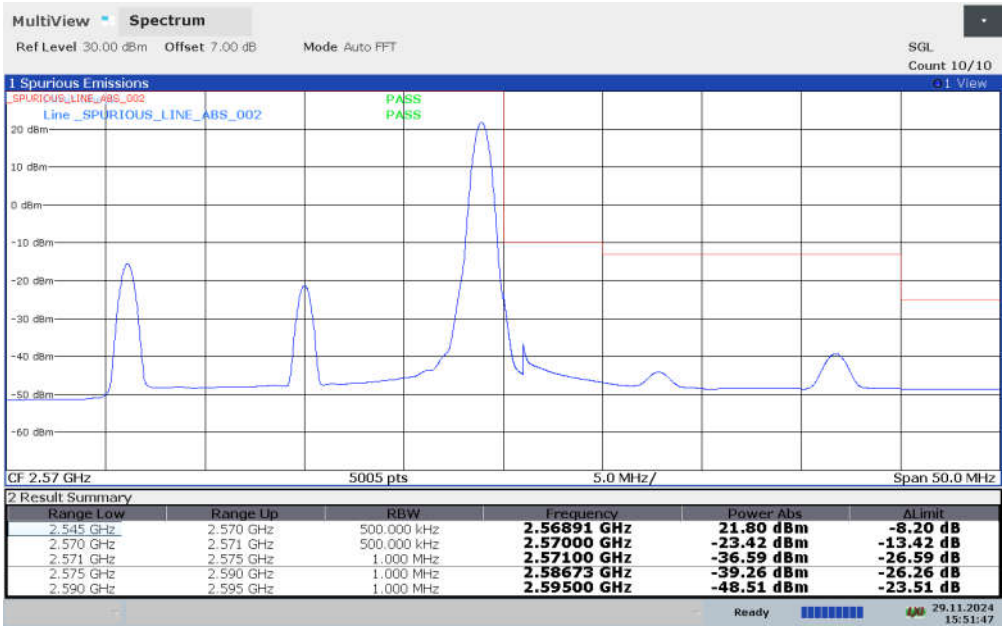
LTE band 7

LOW BAND EDGE BLOCK-1RB-low_offset



HIGH BAND EDGE BLOCK-1RB-high_offset



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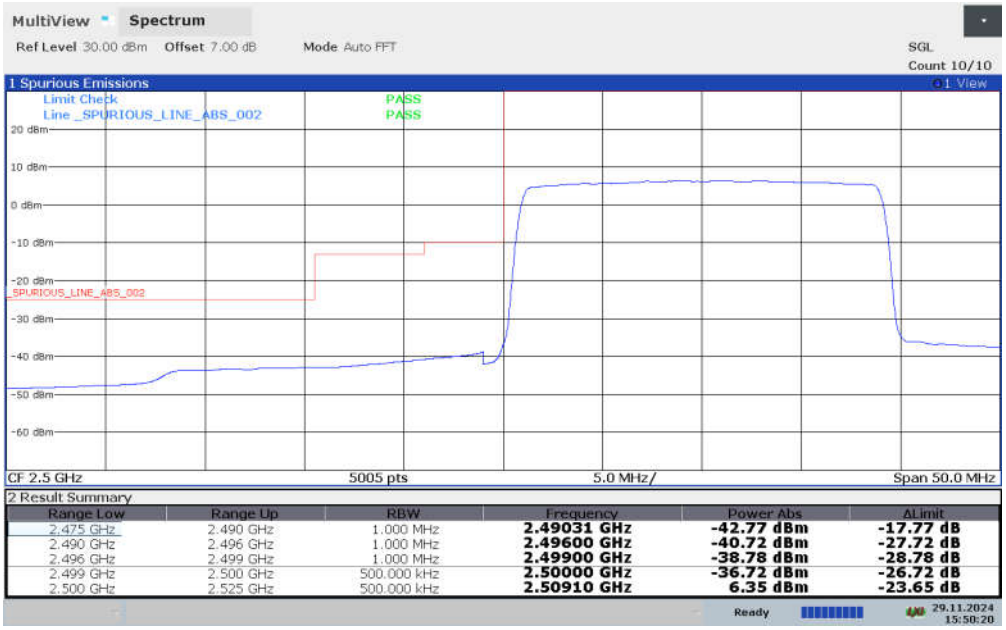
LOW BAND EDGE BLOCK-20MHz-100%RB



Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.475 GHz	2.490 GHz	1.000 MHz	**2.49031 GHz**	**-42.77 dBm**	**-17.77 dB**
2.490 GHz	2.496 GHz	1.000 MHz	**2.49600 GHz**	**-40.72 dBm**	**-27.72 dB**
2.496 GHz	2.499 GHz	1.000 MHz	**2.49900 GHz**	**-38.78 dBm**	**-28.78 dB**
2.499 GHz	2.500 GHz	500.000 kHz	**2.50000 GHz**	**-36.72 dBm**	**-26.72 dB**
2.500 GHz	2.525 GHz	500.000 kHz	**2.50910 GHz**	**6.35 dBm**	**-23.65 dB**

HIGH BAND EDGE BLOCK-20MHz-100%RB

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.545 GHz	2.570 GHz	500.000 kHz	**2.56095 GHz**	**6.44 dBm**	**-23.56 dB**
2.570 GHz	2.571 GHz	500.000 kHz	**2.57000 GHz**	**-33.17 dBm**	**-23.17 dB**
2.571 GHz	2.575 GHz	1.000 MHz	**2.57100 GHz**	**-32.08 dBm**	**-22.08 dB**
2.575 GHz	2.590 GHz	1.000 MHz	**2.57501 GHz**	**-34.40 dBm**	**-21.40 dB**
2.590 GHz	2.595 GHz	1.000 MHz	**2.59000 GHz**	**-46.52 dBm**	**-21.52 dB**

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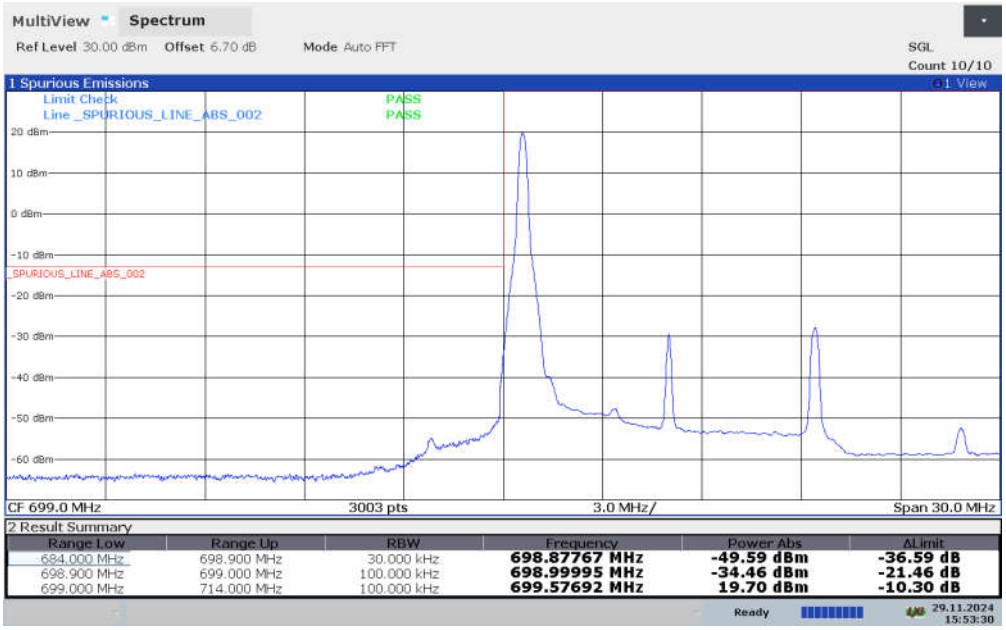
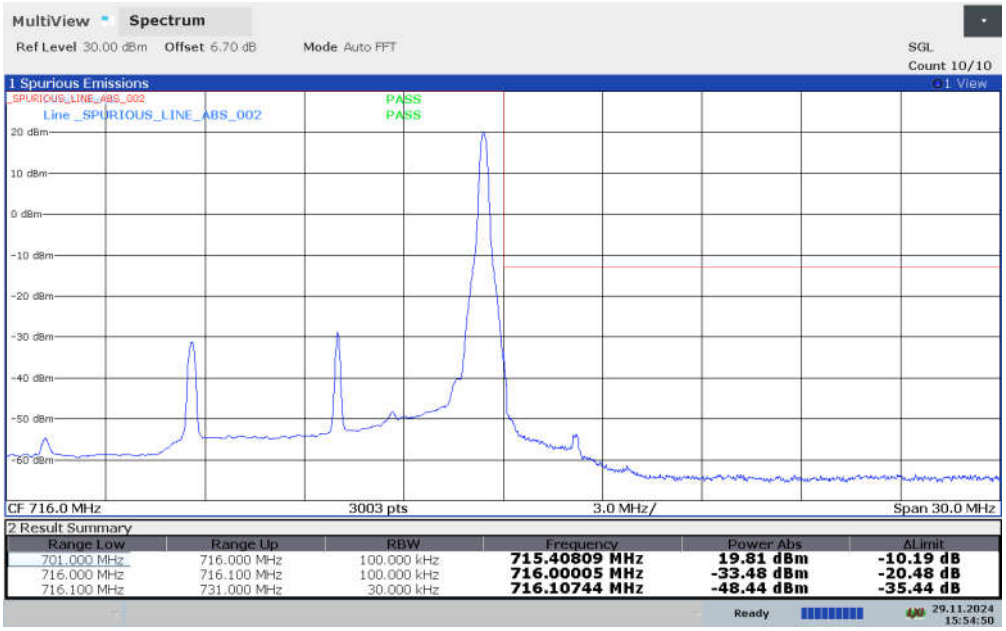
LTE band 12

LOW BAND EDGE BLOCK-1RB-low_offset



HIGH BAND EDGE BLOCK-1RB-high_offset



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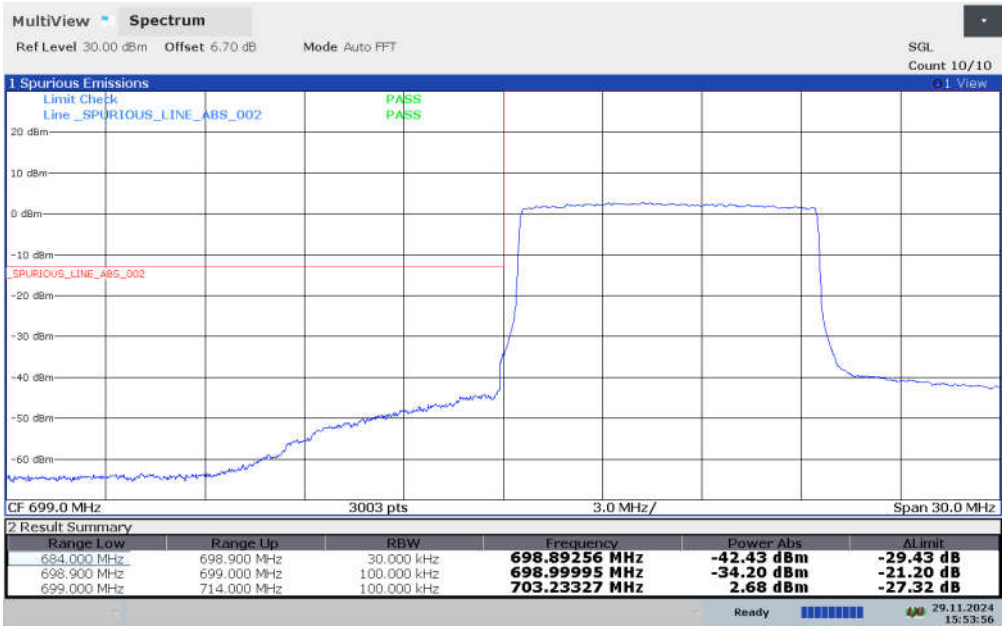
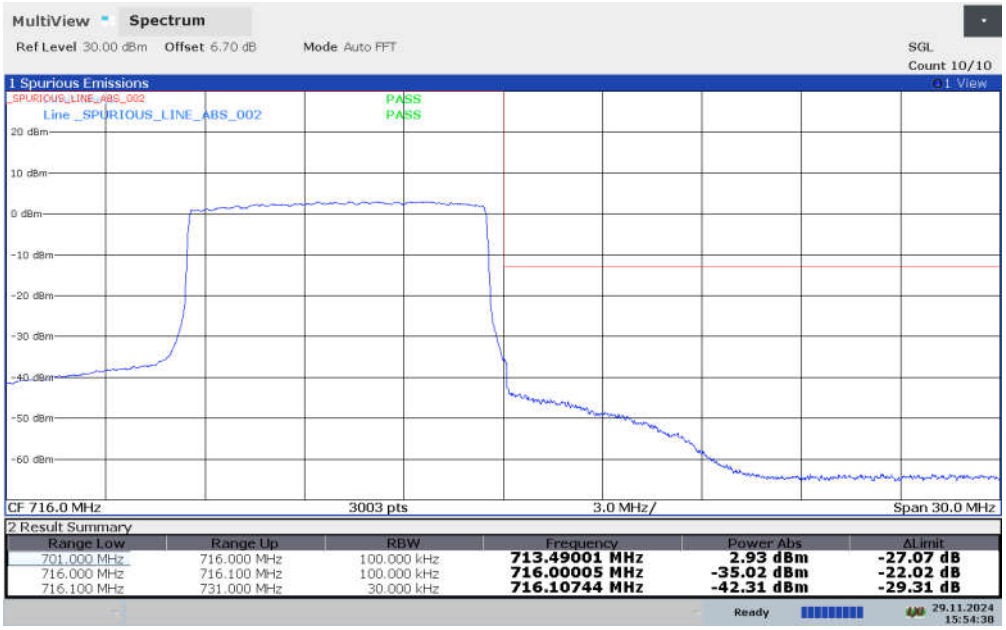
LOW BAND EDGE BLOCK-10MHz-100%RB



HIGH BAND EDGE BLOCK-10MHz-100%RB



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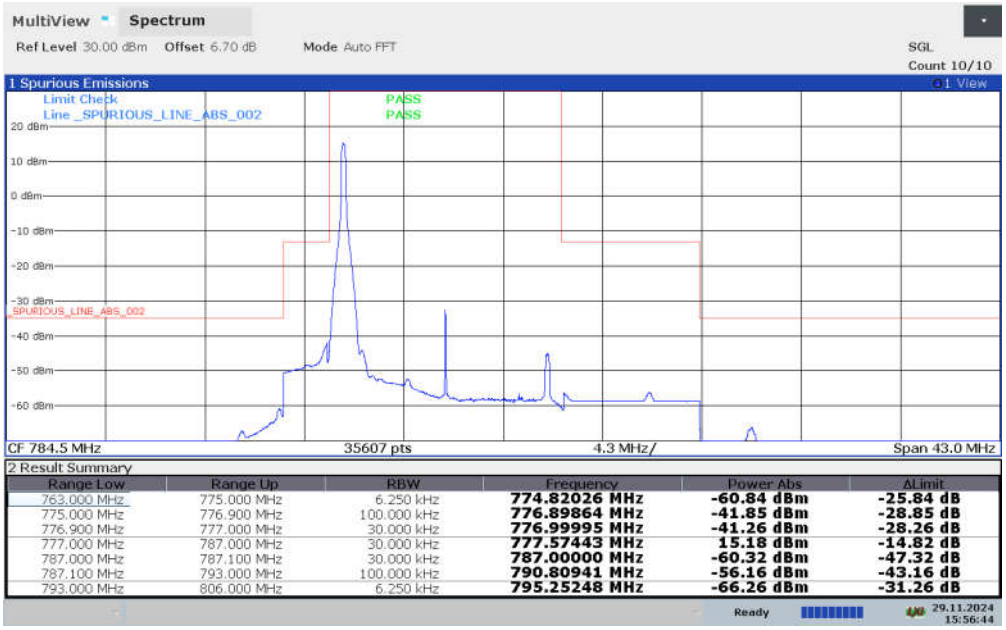
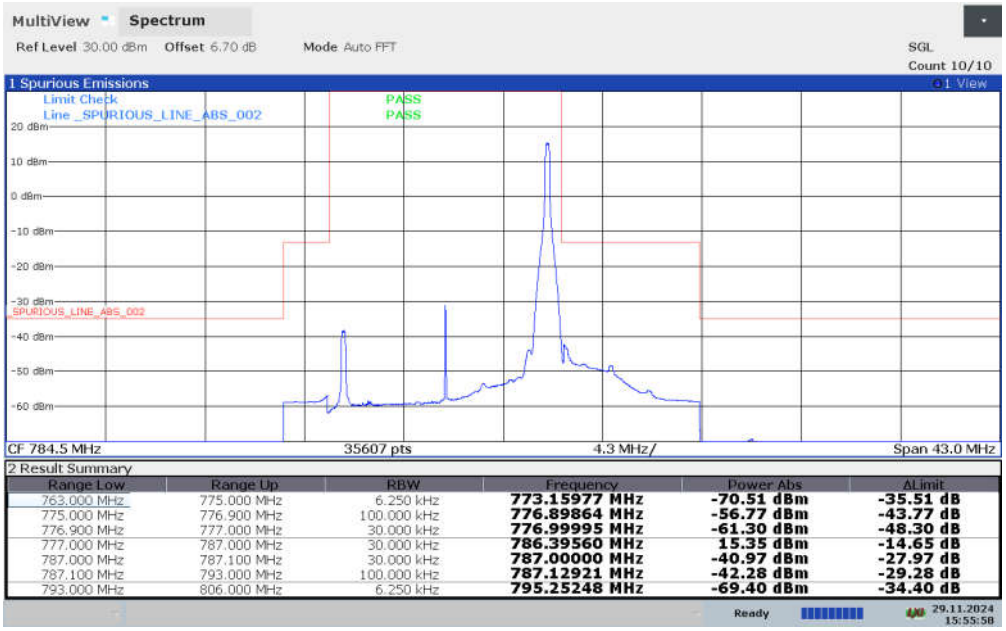
LTE band 13

LOW BAND EDGE BLOCK-1RB-low_offset



Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	**774.82026 MHz**	**-60.84 dBm**	**-25.84 dB**
775.000 MHz	776.900 MHz	100.000 kHz	**776.89864 MHz**	**-41.85 dBm**	**-28.85 dB**
776.900 MHz	777.000 MHz	30.000 kHz	**776.99995 MHz**	**-41.26 dBm**	**-28.26 dB**
777.000 MHz	787.000 MHz	30.000 kHz	**777.57443 MHz**	**15.18 dBm**	**-14.82 dB**
787.000 MHz	787.100 MHz	30.000 kHz	**787.00000 MHz**	**-60.32 dBm**	**-47.32 dB**
787.100 MHz	793.000 MHz	100.000 kHz	**790.80941 MHz**	**-56.16 dBm**	**-43.16 dB**
793.000 MHz	806.000 MHz	6.250 kHz	**795.25248 MHz**	**-66.26 dBm**	**-31.26 dB**

HIGH BAND EDGE BLOCK-1RB-high_offset



Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	**773.15977 MHz**	**-70.51 dBm**	**-35.51 dB**
775.000 MHz	776.900 MHz	100.000 kHz	**776.89864 MHz**	**-56.77 dBm**	**-43.77 dB**
776.900 MHz	777.000 MHz	30.000 kHz	**776.99995 MHz**	**-61.30 dBm**	**-48.30 dB**
777.000 MHz	787.000 MHz	30.000 kHz	**786.39560 MHz**	**15.35 dBm**	**-14.65 dB**
787.000 MHz	787.100 MHz	30.000 kHz	**787.00000 MHz**	**-40.97 dBm**	**-27.97 dB**
787.100 MHz	793.000 MHz	100.000 kHz	**787.12921 MHz**	**-42.28 dBm**	**-29.28 dB**
793.000 MHz	806.000 MHz	6.250 kHz	**795.25248 MHz**	**-69.40 dBm**	**-34.40 dB**

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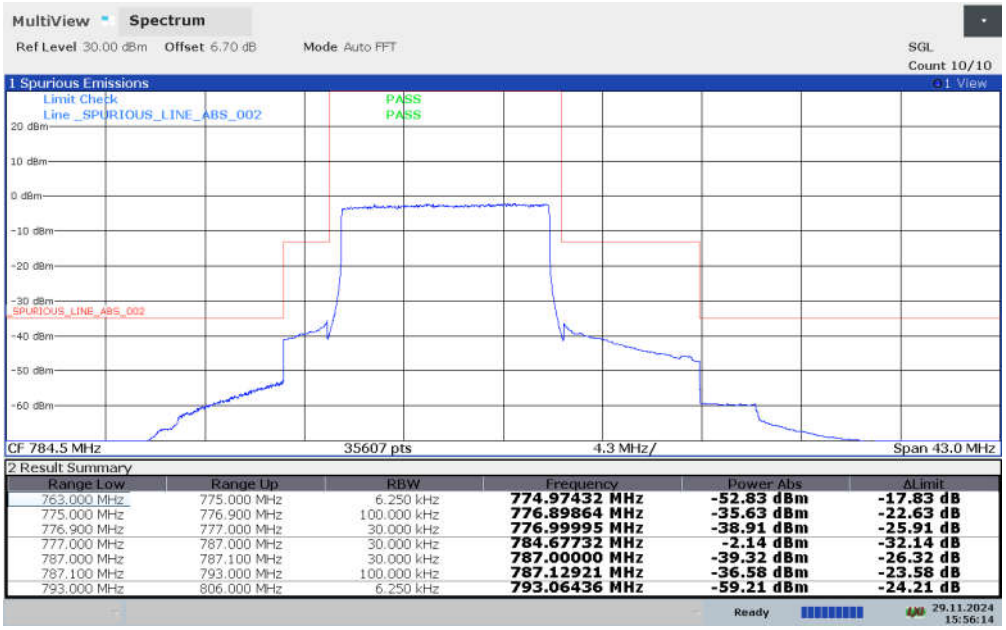
EDGE BLOCK-10MHz-100%RB



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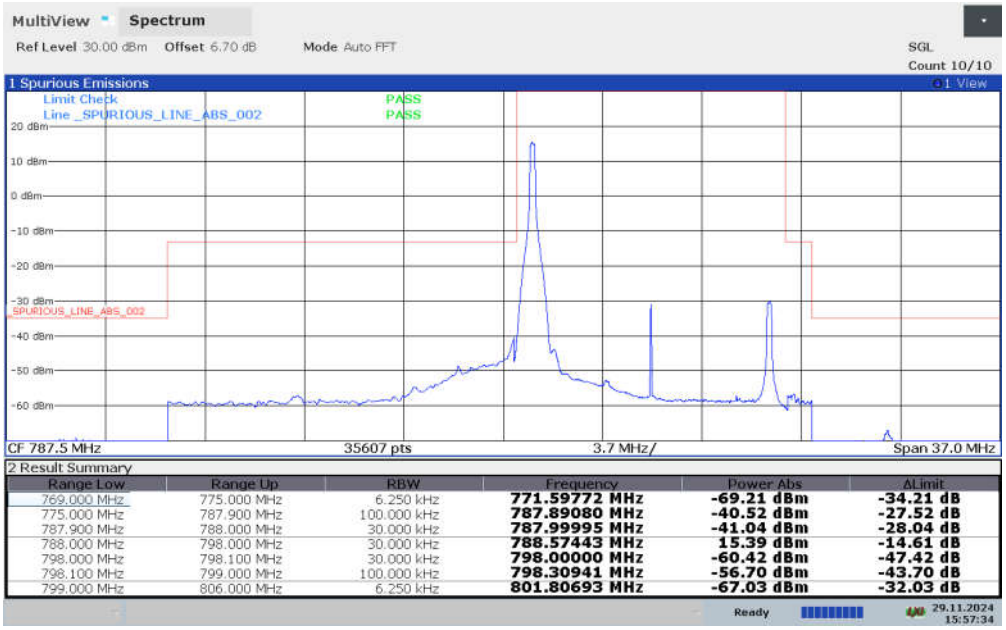
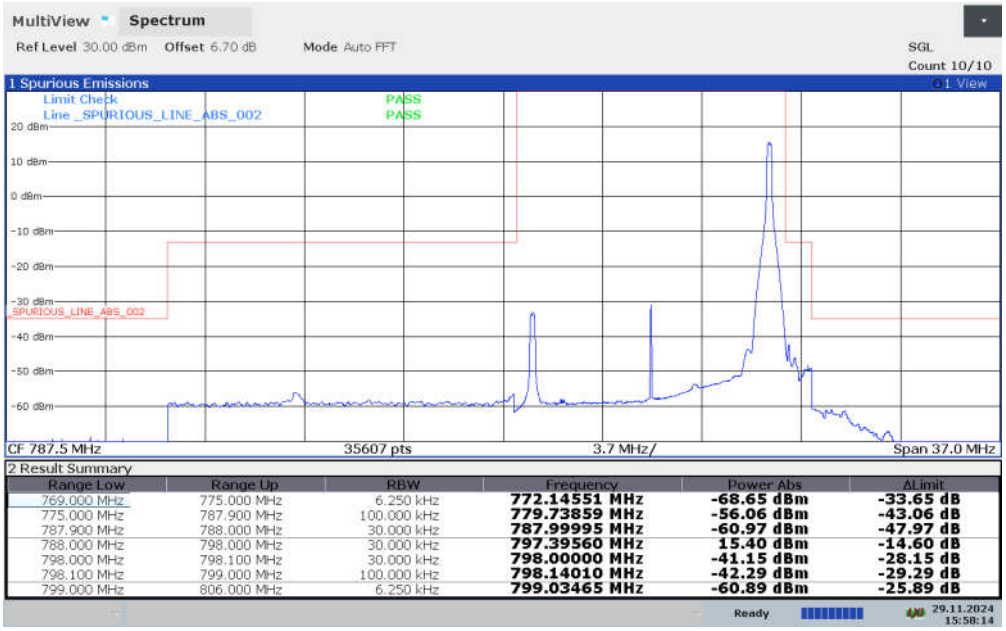
LTE band 14

LOW BAND EDGE BLOCK-1RB-low_offset



Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
769.000 MHz	775.000 MHz	6.250 kHz	771.59772 MHz	-69.21 dBm	-34.21 dB
775.000 MHz	787.900 MHz	100.000 kHz	787.89080 MHz	-40.52 dBm	-27.52 dB
787.900 MHz	788.000 MHz	30.000 kHz	787.99995 MHz	-41.04 dBm	-28.04 dB
788.000 MHz	798.000 MHz	30.000 kHz	788.57443 MHz	15.39 dBm	-14.61 dB
798.000 MHz	798.100 MHz	30.000 kHz	798.00000 MHz	-60.42 dBm	-47.42 dB
798.100 MHz	799.000 MHz	100.000 kHz	798.30941 MHz	-56.70 dBm	-43.70 dB
799.000 MHz	806.000 MHz	6.250 kHz	801.80693 MHz	-67.03 dBm	-32.03 dB

HIGH BAND EDGE BLOCK-1RB-high_offset



Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
769.000 MHz	775.000 MHz	6.250 kHz	772.14551 MHz	-68.65 dBm	-33.65 dB
775.000 MHz	787.900 MHz	100.000 kHz	779.73859 MHz	-56.06 dBm	-43.06 dB
787.900 MHz	788.000 MHz	30.000 kHz	787.99995 MHz	-60.97 dBm	-47.97 dB
788.000 MHz	798.000 MHz	30.000 kHz	797.39560 MHz	15.40 dBm	-14.60 dB
798.000 MHz	798.100 MHz	30.000 kHz	798.00000 MHz	-41.15 dBm	-28.15 dB
798.100 MHz	799.000 MHz	100.000 kHz	798.14010 MHz	-42.29 dBm	-29.29 dB
799.000 MHz	806.000 MHz	6.250 kHz	799.03465 MHz	-60.89 dBm	-25.89 dB

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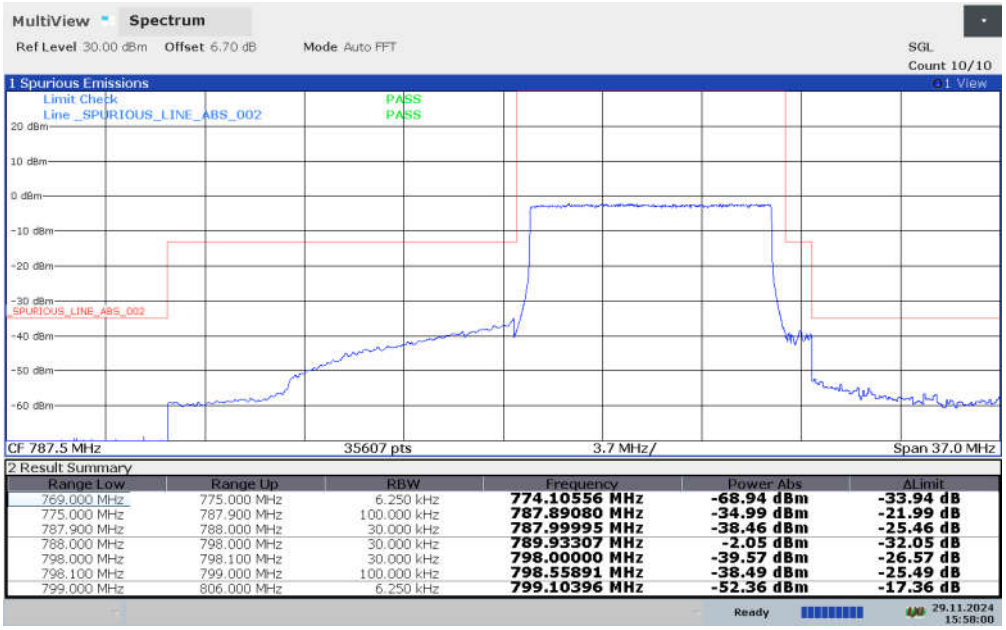
EDGE BLOCK-10MHz-100%RB



Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
769.000 MHz	775.000 MHz	6.250 kHz	**774.10556 MHz**	**-68.94 dBm**	**-33.94 dB**
775.000 MHz	787.900 MHz	100.000 kHz	**787.89080 MHz**	**-34.99 dBm**	**-21.99 dB**
787.900 MHz	788.000 MHz	30.000 kHz	**787.99995 MHz**	**-38.46 dBm**	**-25.46 dB**
788.000 MHz	798.000 MHz	30.000 kHz	**789.93307 MHz**	**-2.05 dBm**	**-32.05 dB**
798.000 MHz	798.100 MHz	30.000 kHz	**798.00000 MHz**	**-39.57 dBm**	**-26.57 dB**
798.100 MHz	799.000 MHz	100.000 kHz	**798.55891 MHz**	**-38.49 dBm**	**-25.49 dB**
799.000 MHz	806.000 MHz	6.250 kHz	**799.10396 MHz**	**-52.36 dBm**	**-17.36 dB**

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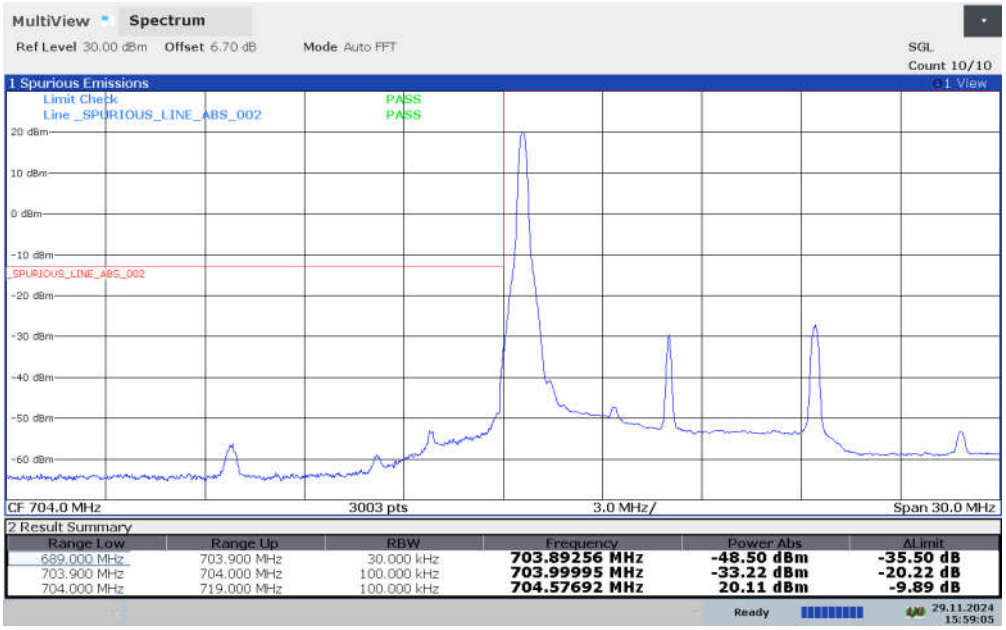
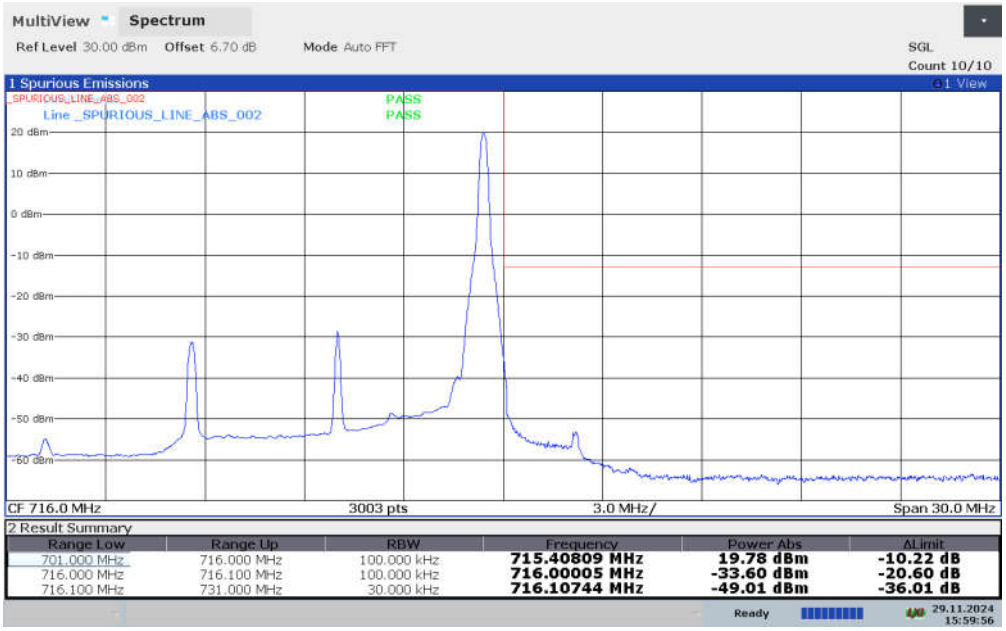
LTE band 17

LOW BAND EDGE BLOCK-1RB-low_offset



HIGH BAND EDGE BLOCK-1RB-high_offset



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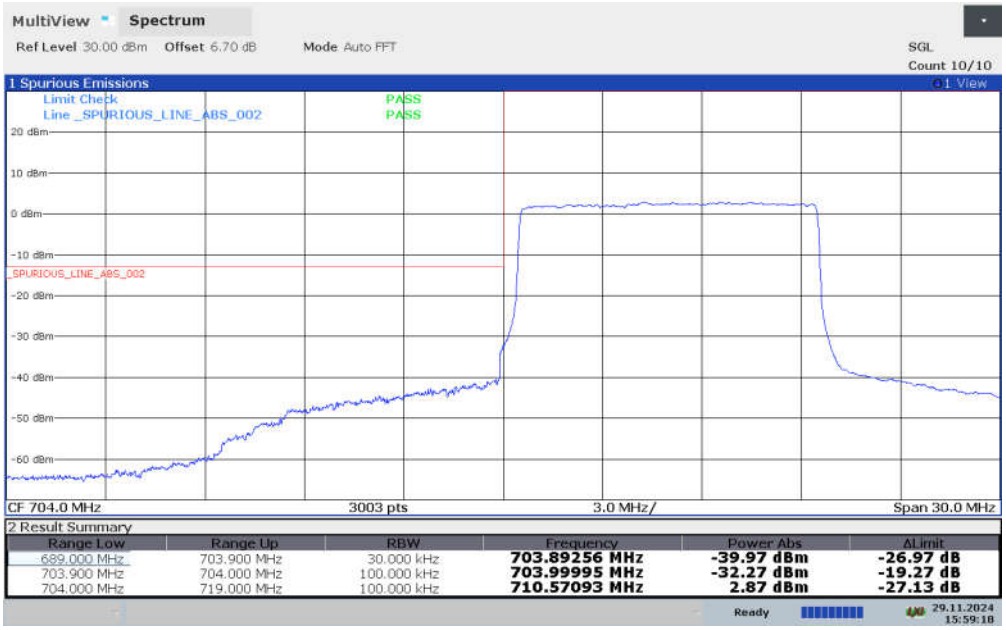
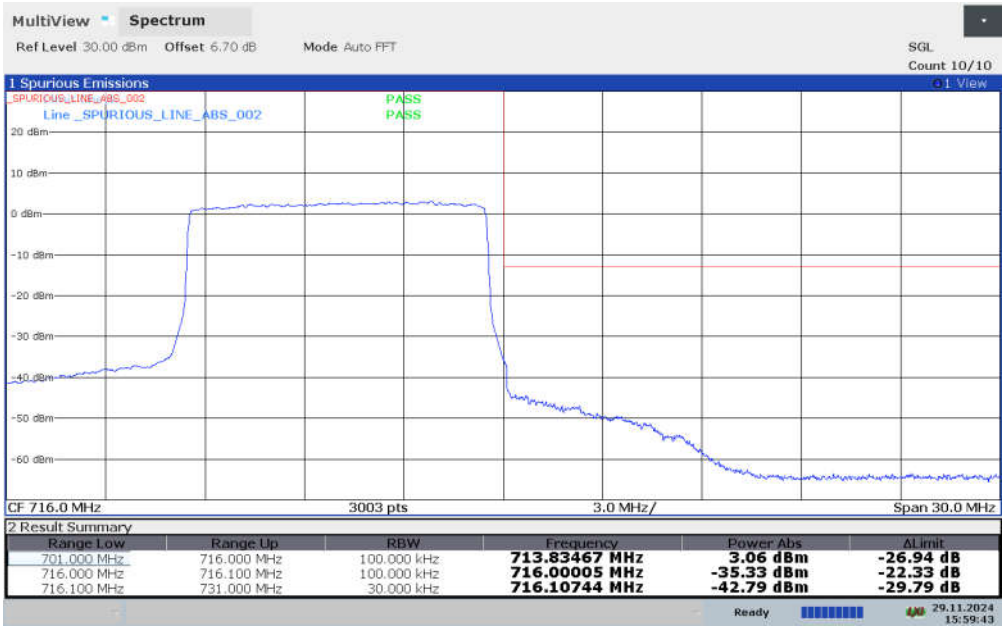
LOW BAND EDGE BLOCK-20MHz-100%RB



HIGH BAND EDGE BLOCK-20MHz-100%RB



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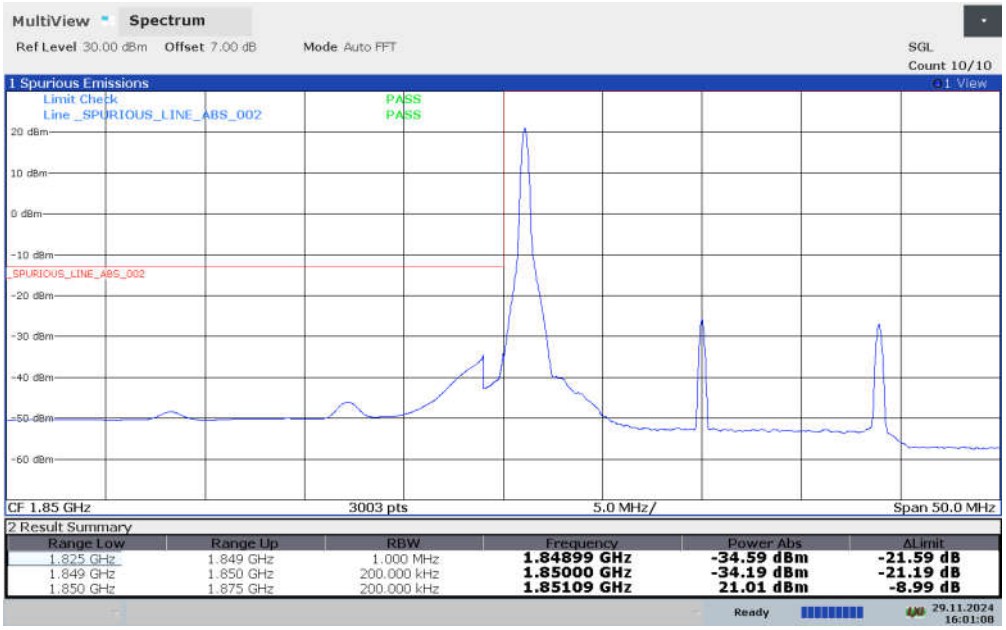
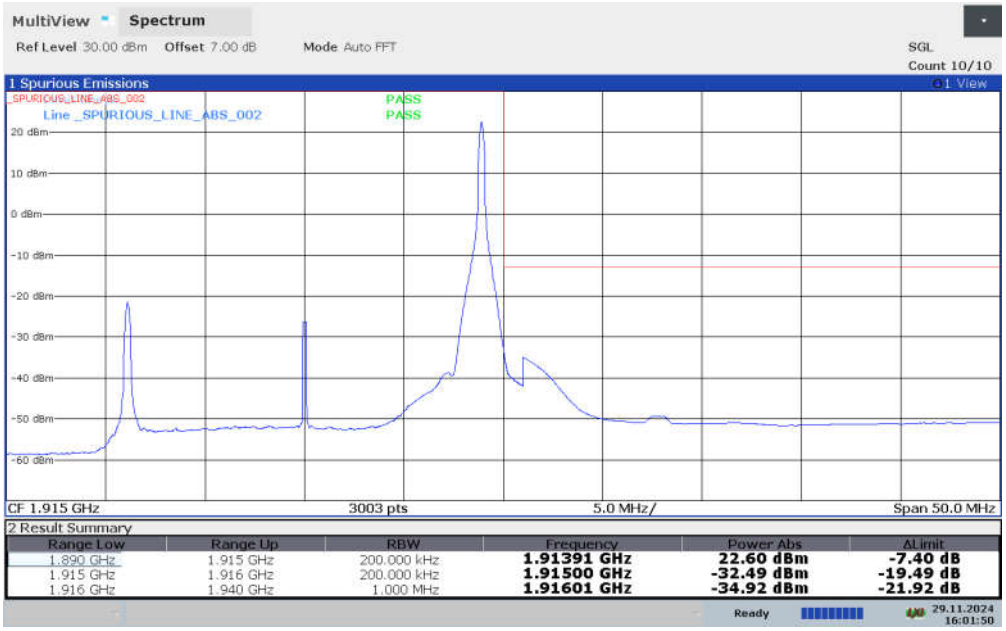
LTE band 25

LOW BAND EDGE BLOCK-1RB-low_offset



HIGH BAND EDGE BLOCK-1RB-high_offset



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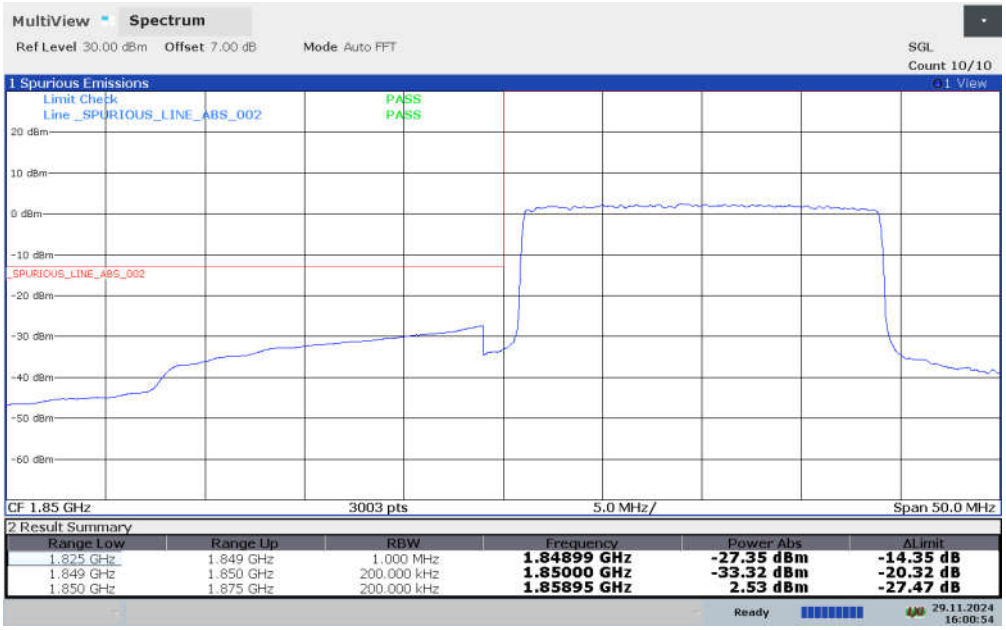
LOW BAND EDGE BLOCK-20MHz-100%RB



HIGH BAND EDGE BLOCK-20MHz-100%RB

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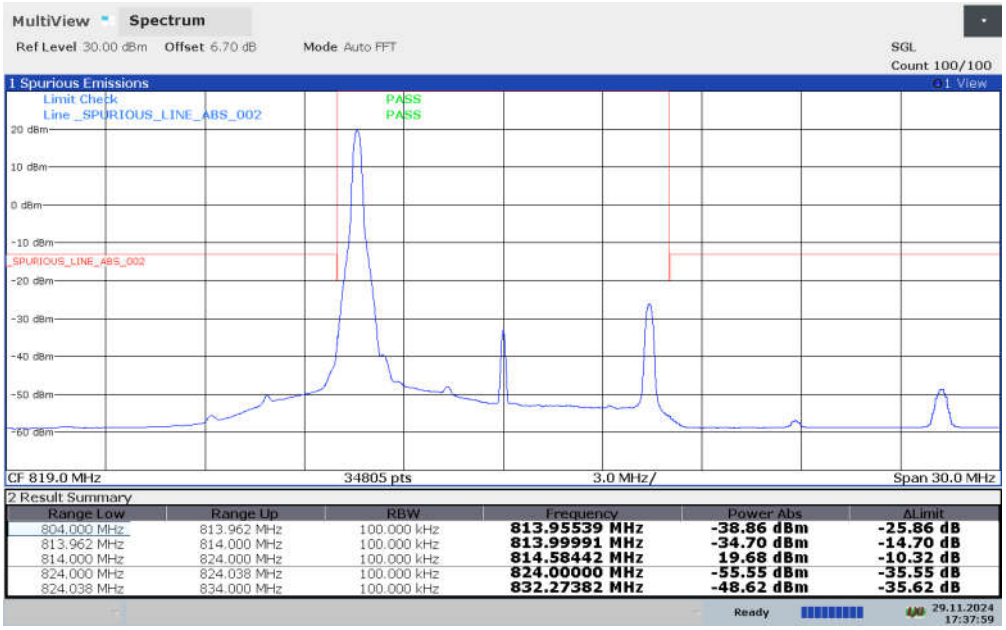
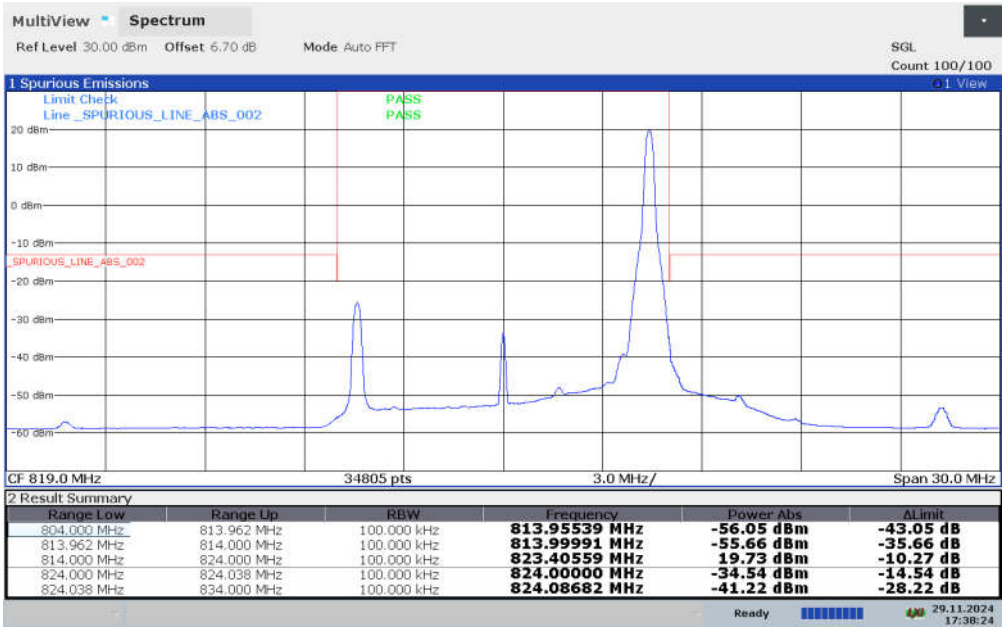
LTE band 26(814MHz-824MHz)

LOW BAND EDGE BLOCK-1RB-low_offset



HIGH BAND EDGE BLOCK-1RB-high_offset



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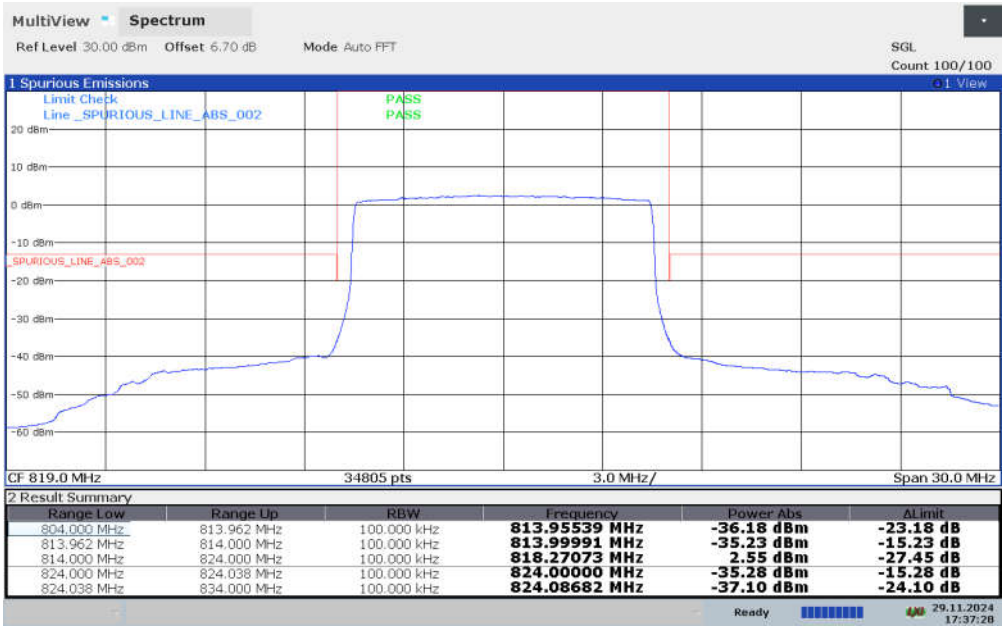
BAND EDGE BLOCK-10MHz-100%RB



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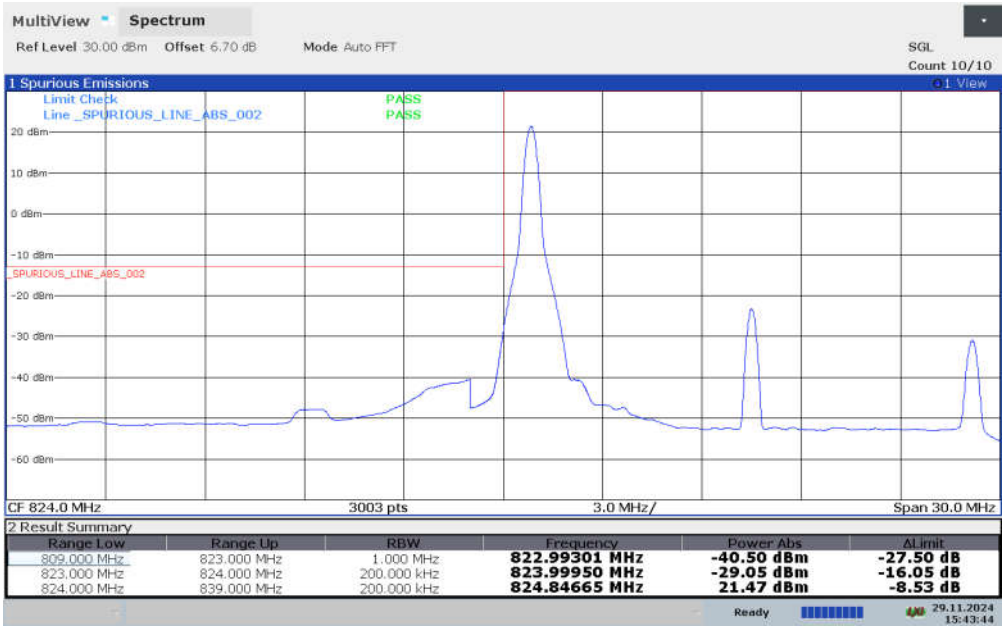
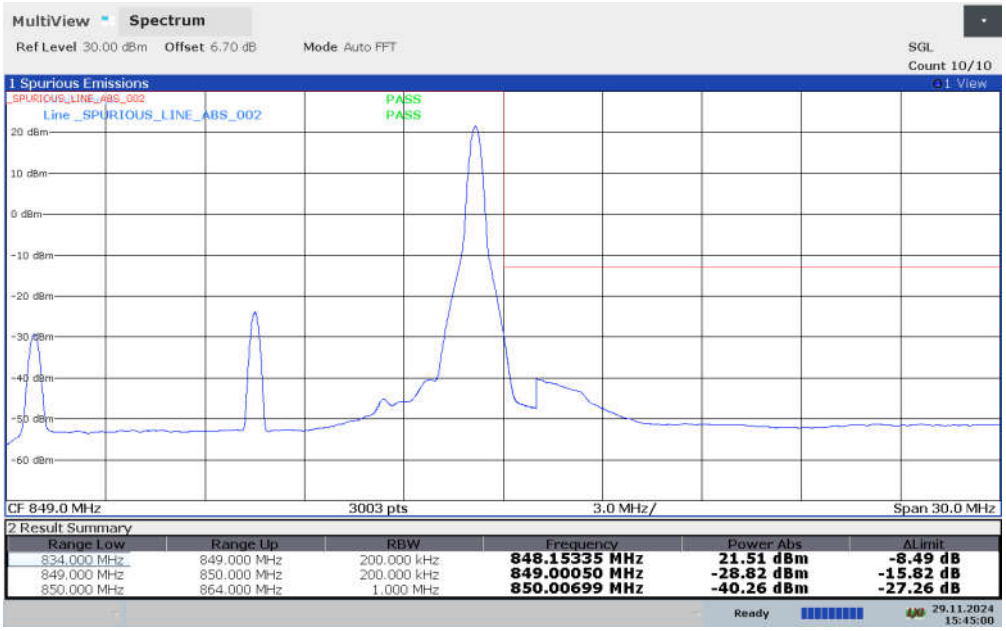
LTE band 26(824MHz-849MHz)

LOW BAND EDGE BLOCK-1RB-low_offset



HIGH BAND EDGE BLOCK-1RB-high_offset



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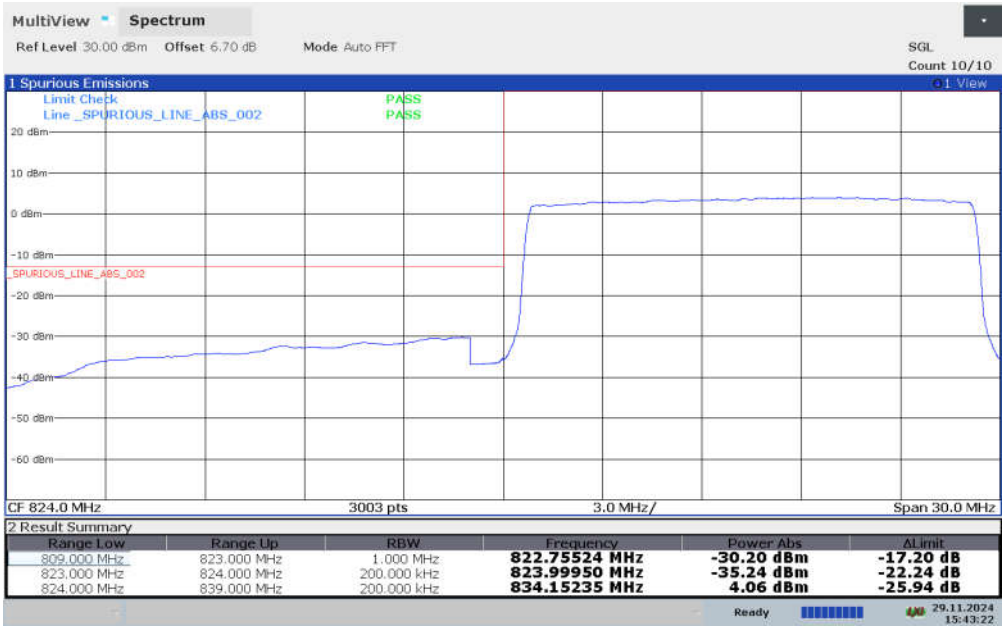
LOW BAND EDGE BLOCK-15MHz-100%RB



HIGH BAND EDGE BLOCK-15MHz-100%RB

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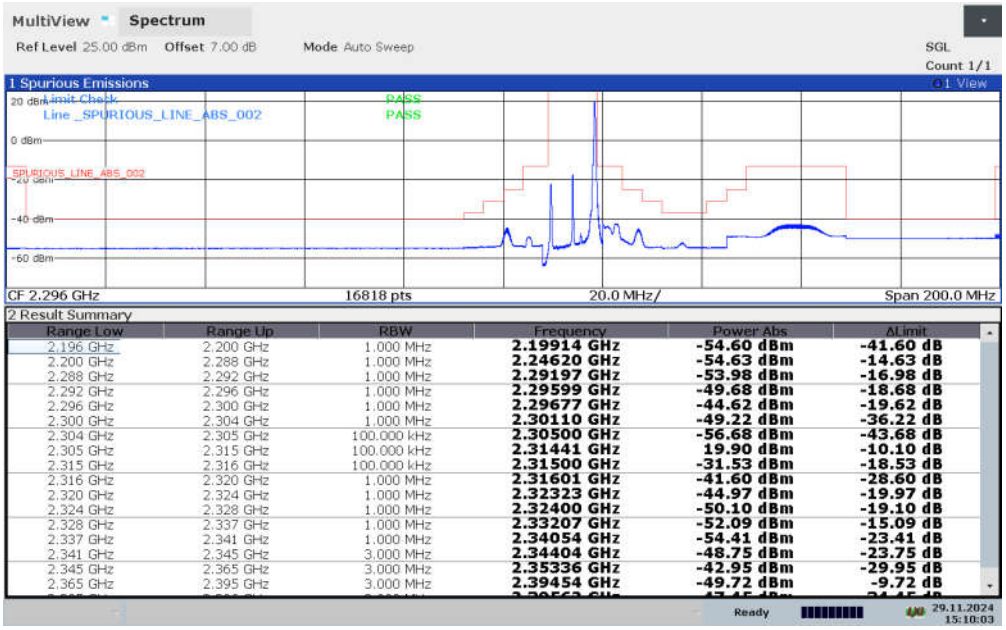
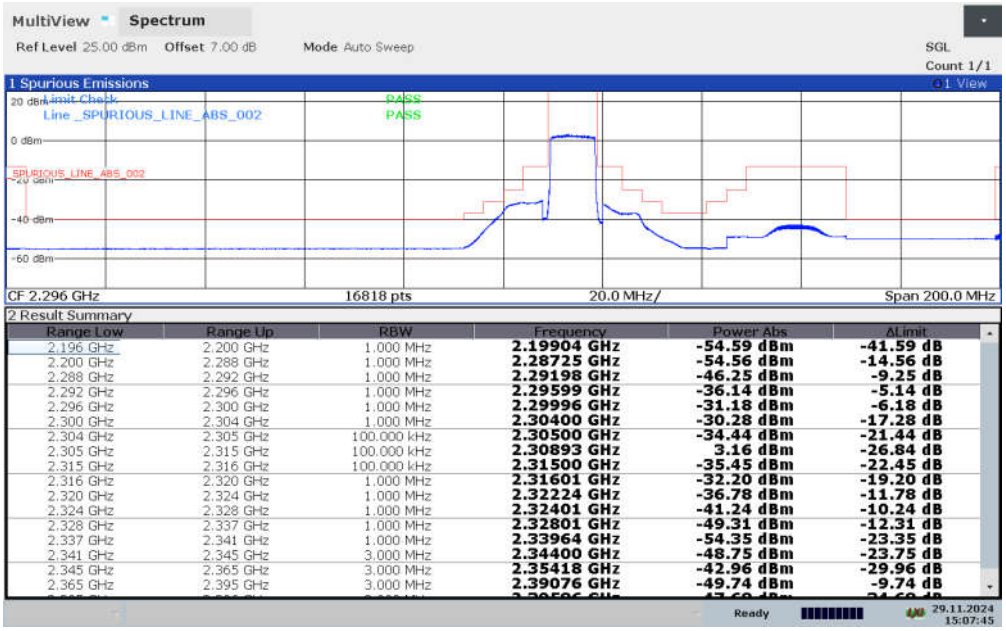
LTE band 30

LOW BAND EDGE BLOCK-1RB-low_offset



Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.196 GHz	2.200 GHz	1.000 MHz	2.19914 GHz	-54.60 dBm	-41.60 dB
2.200 GHz	2.288 GHz	1.000 MHz	2.24620 GHz	-54.63 dBm	-14.63 dB
2.288 GHz	2.292 GHz	1.000 MHz	2.29197 GHz	-53.98 dBm	-16.98 dB
2.292 GHz	2.296 GHz	1.000 MHz	2.29599 GHz	-49.68 dBm	-18.68 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29677 GHz	-44.62 dBm	-19.62 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30110 GHz	-49.22 dBm	-36.22 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30500 GHz	-56.68 dBm	-43.68 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.31441 GHz	19.90 dBm	-10.10 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31500 GHz	-31.53 dBm	-18.53 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31601 GHz	-41.60 dBm	-28.60 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32323 GHz	-44.97 dBm	-19.97 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32400 GHz	-50.10 dBm	-19.10 dB
2.328 GHz	2.337 GHz	1.000 MHz	2.33207 GHz	-52.09 dBm	-15.09 dB
2.337 GHz	2.341 GHz	1.000 MHz	2.34054 GHz	-54.41 dBm	-23.41 dB
2.341 GHz	2.345 GHz	3.000 MHz	2.34404 GHz	-48.75 dBm	-23.75 dB
2.345 GHz	2.365 GHz	3.000 MHz	2.35336 GHz	-42.95 dBm	-29.95 dB
2.365 GHz	2.395 GHz	3.000 MHz	2.39454 GHz	-49.72 dBm	-9.72 dB

HIGH BAND EDGE BLOCK-1RB-high_offset



Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.196 GHz	2.200 GHz	1.000 MHz	2.19904 GHz	-54.59 dBm	-41.59 dB
2.200 GHz	2.288 GHz	1.000 MHz	2.28725 GHz	-54.56 dBm	-14.56 dB
2.288 GHz	2.292 GHz	1.000 MHz	2.29198 GHz	-46.25 dBm	-9.25 dB
2.292 GHz	2.296 GHz	1.000 MHz	2.29599 GHz	-36.14 dBm	-5.14 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29996 GHz	-31.18 dBm	-6.18 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30400 GHz	-30.28 dBm	-17.28 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30500 GHz	-34.44 dBm	-21.44 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.30893 GHz	3.16 dBm	-26.84 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31500 GHz	-35.45 dBm	-22.45 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31601 GHz	-32.20 dBm	-19.20 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32224 GHz	-36.78 dBm	-11.78 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32401 GHz	-41.24 dBm	-10.24 dB
2.328 GHz	2.337 GHz	1.000 MHz	2.32801 GHz	-49.31 dBm	-12.31 dB
2.337 GHz	2.341 GHz	1.000 MHz	2.33964 GHz	-54.35 dBm	-23.35 dB
2.341 GHz	2.345 GHz	3.000 MHz	2.34400 GHz	-48.75 dBm	-23.75 dB
2.345 GHz	2.365 GHz	3.000 MHz	2.35418 GHz	-42.96 dBm	-29.96 dB
2.365 GHz	2.395 GHz	3.000 MHz	2.39076 GHz	-49.74 dBm	-9.74 dB

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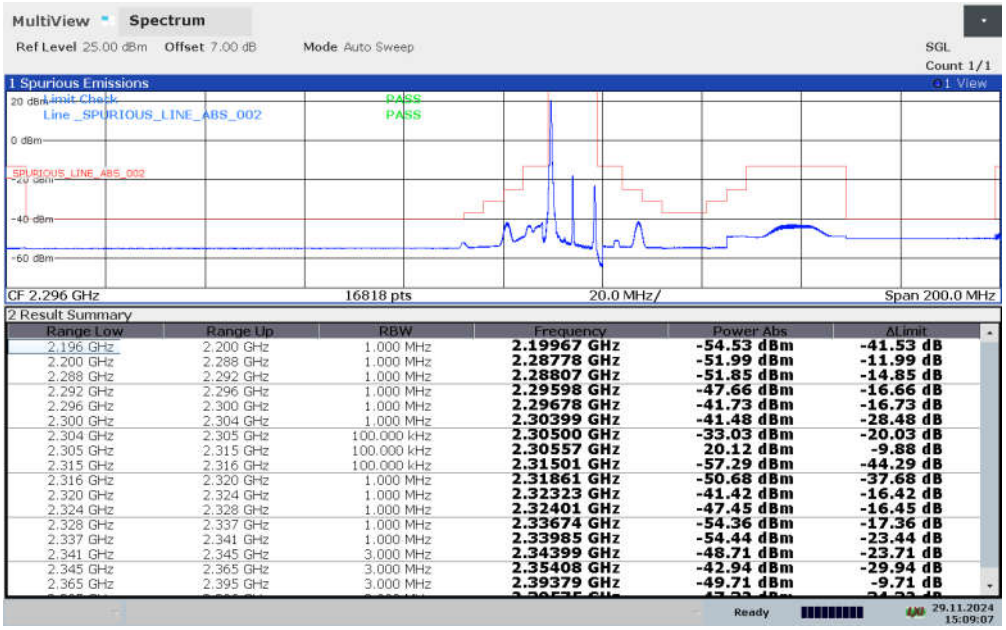
EDGE BLOCK-10MHz-100%RB



Range Low	Range Up	RBW	Frequency	Power Abs	ALimit
2.196 GHz	2.200 GHz	1.000 MHz	2.19967 GHz	-54.53 dBm	-41.53 dB
2.200 GHz	2.288 GHz	1.000 MHz	2.28778 GHz	-51.99 dBm	-11.99 dB
2.288 GHz	2.292 GHz	1.000 MHz	2.28807 GHz	-51.85 dBm	-14.85 dB
2.292 GHz	2.296 GHz	1.000 MHz	2.29598 GHz	-47.66 dBm	-16.66 dB
2.296 GHz	2.300 GHz	1.000 MHz	2.29678 GHz	-41.73 dBm	-16.73 dB
2.300 GHz	2.304 GHz	1.000 MHz	2.30399 GHz	-41.48 dBm	-28.48 dB
2.304 GHz	2.305 GHz	100.000 kHz	2.30500 GHz	-33.03 dBm	-20.03 dB
2.305 GHz	2.315 GHz	100.000 kHz	2.30557 GHz	20.12 dBm	-9.88 dB
2.315 GHz	2.316 GHz	100.000 kHz	2.31501 GHz	-57.29 dBm	-44.29 dB
2.316 GHz	2.320 GHz	1.000 MHz	2.31861 GHz	-50.68 dBm	-37.68 dB
2.320 GHz	2.324 GHz	1.000 MHz	2.32323 GHz	-41.42 dBm	-16.42 dB
2.324 GHz	2.328 GHz	1.000 MHz	2.32401 GHz	-47.45 dBm	-16.45 dB
2.328 GHz	2.337 GHz	1.000 MHz	2.33674 GHz	-54.36 dBm	-17.36 dB
2.337 GHz	2.341 GHz	1.000 MHz	2.33985 GHz	-54.44 dBm	-23.44 dB
2.341 GHz	2.345 GHz	3.000 MHz	2.34399 GHz	-48.71 dBm	-23.71 dB
2.345 GHz	2.365 GHz	3.000 MHz	2.35408 GHz	-42.94 dBm	-29.94 dB
2.365 GHz	2.395 GHz	3.000 MHz	2.39379 GHz	-49.71 dBm	-9.71 dB

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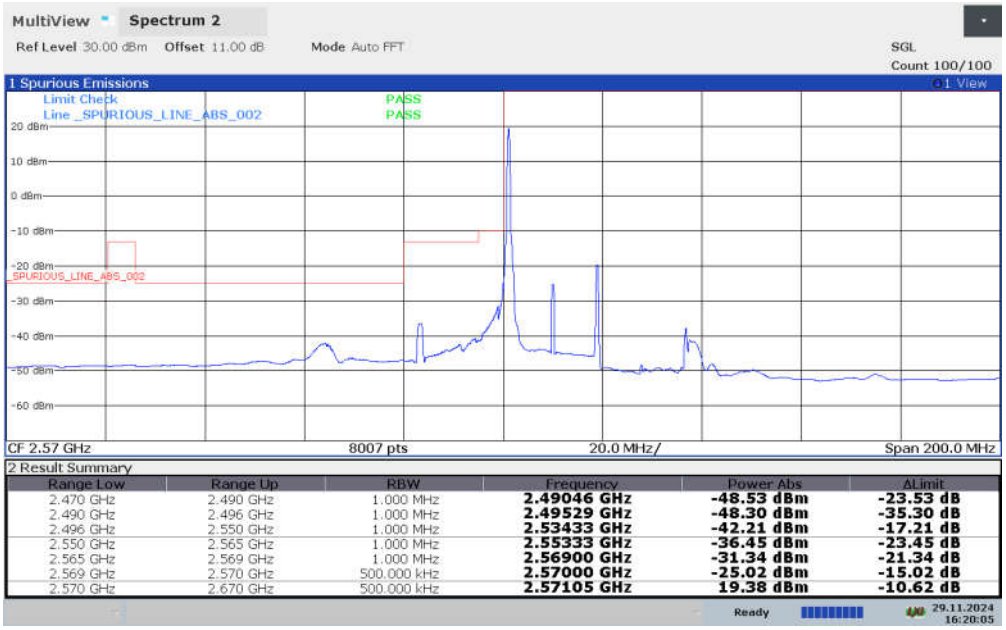
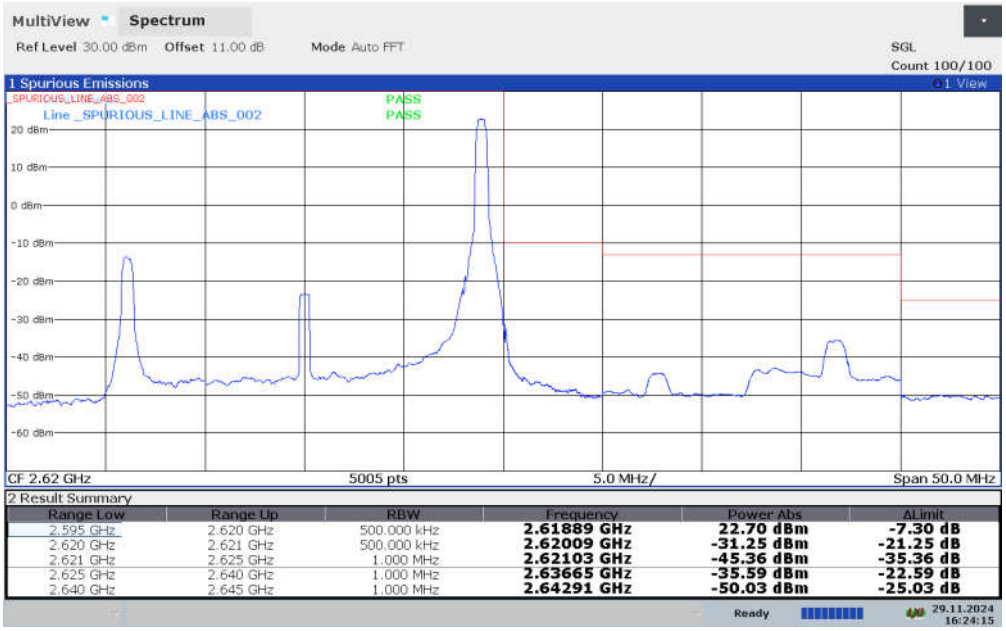
LTE band 38

LOW BAND EDGE BLOCK-1RB-low_offset



Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.470 GHz	2.490 GHz	1.000 MHz	2.49046 GHz	-48.53 dBm	-23.53 dB
2.490 GHz	2.496 GHz	1.000 MHz	2.49529 GHz	-48.30 dBm	-35.30 dB
2.496 GHz	2.550 GHz	1.000 MHz	2.53433 GHz	-42.21 dBm	-17.21 dB
2.550 GHz	2.565 GHz	1.000 MHz	2.55333 GHz	-36.45 dBm	-23.45 dB
2.565 GHz	2.569 GHz	1.000 MHz	2.56900 GHz	-31.34 dBm	-21.34 dB
2.569 GHz	2.570 GHz	500.000 kHz	2.57000 GHz	-25.02 dBm	-15.02 dB
2.570 GHz	2.670 GHz	500.000 kHz	2.57105 GHz	19.38 dBm	-10.62 dB

HIGH BAND EDGE BLOCK-1RB-high_offset



Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.595 GHz	2.620 GHz	500.000 kHz	2.61889 GHz	22.70 dBm	-7.30 dB
2.620 GHz	2.621 GHz	500.000 kHz	2.62009 GHz	-31.25 dBm	-21.25 dB
2.621 GHz	2.625 GHz	1.000 MHz	2.62103 GHz	-45.36 dBm	-35.36 dB
2.625 GHz	2.640 GHz	1.000 MHz	2.63665 GHz	-35.59 dBm	-22.59 dB
2.640 GHz	2.645 GHz	1.000 MHz	2.64291 GHz	-50.03 dBm	-25.03 dB

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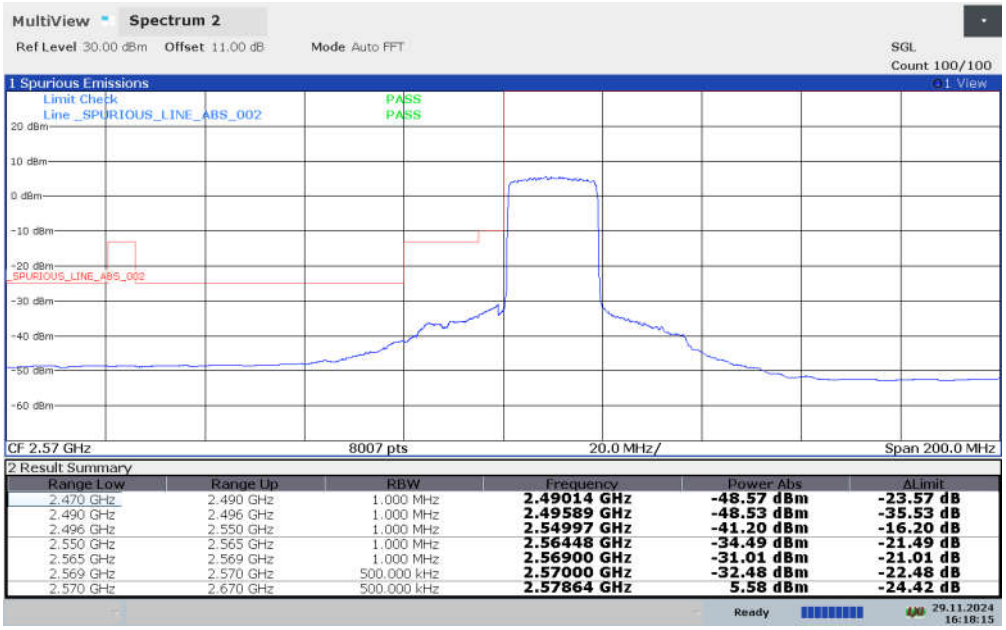
LOW BAND EDGE BLOCK-20MHz-100%RB



Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.470 GHz	2.490 GHz	1.000 MHz	**2.49014 GHz**	**-48.57 dBm**	**-23.57 dB**
2.490 GHz	2.496 GHz	1.000 MHz	**2.49589 GHz**	**-48.53 dBm**	**-35.53 dB**
2.496 GHz	2.550 GHz	1.000 MHz	**2.54997 GHz**	**-41.20 dBm**	**-16.20 dB**
2.550 GHz	2.565 GHz	1.000 MHz	**2.56448 GHz**	**-34.49 dBm**	**-21.49 dB**
2.565 GHz	2.569 GHz	1.000 MHz	**2.56900 GHz**	**-31.01 dBm**	**-21.01 dB**
2.569 GHz	2.570 GHz	500.000 kHz	**2.57000 GHz**	**-32.48 dBm**	**-22.48 dB**
2.570 GHz	2.670 GHz	500.000 kHz	**2.57864 GHz**	**5.58 dBm**	**-24.42 dB**

HIGH BAND EDGE BLOCK-20MHz-100%RB

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.595 GHz	2.620 GHz	500.000 kHz	**2.60680 GHz**	**7.14 dBm**	**-22.86 dB**
2.620 GHz	2.621 GHz	500.000 kHz	**2.62000 GHz**	**-31.07 dBm**	**-21.07 dB**
2.621 GHz	2.625 GHz	1.000 MHz	**2.62120 GHz**	**-31.33 dBm**	**-21.33 dB**
2.625 GHz	2.640 GHz	1.000 MHz	**2.62664 GHz**	**-32.32 dBm**	**-19.32 dB**
2.640 GHz	2.645 GHz	1.000 MHz	**2.64171 GHz**	**-41.58 dBm**	**-16.58 dB**

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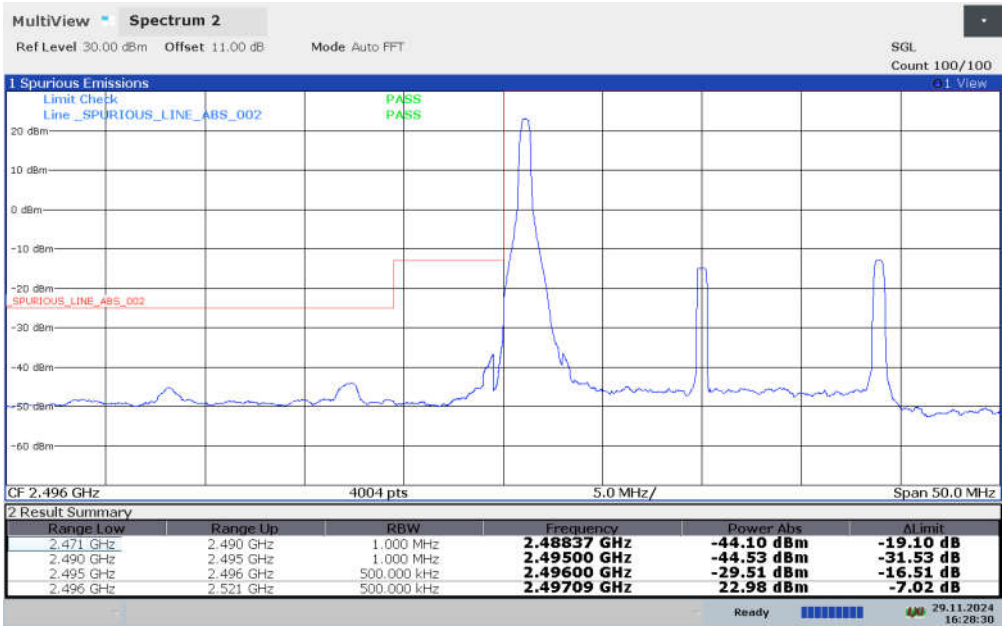
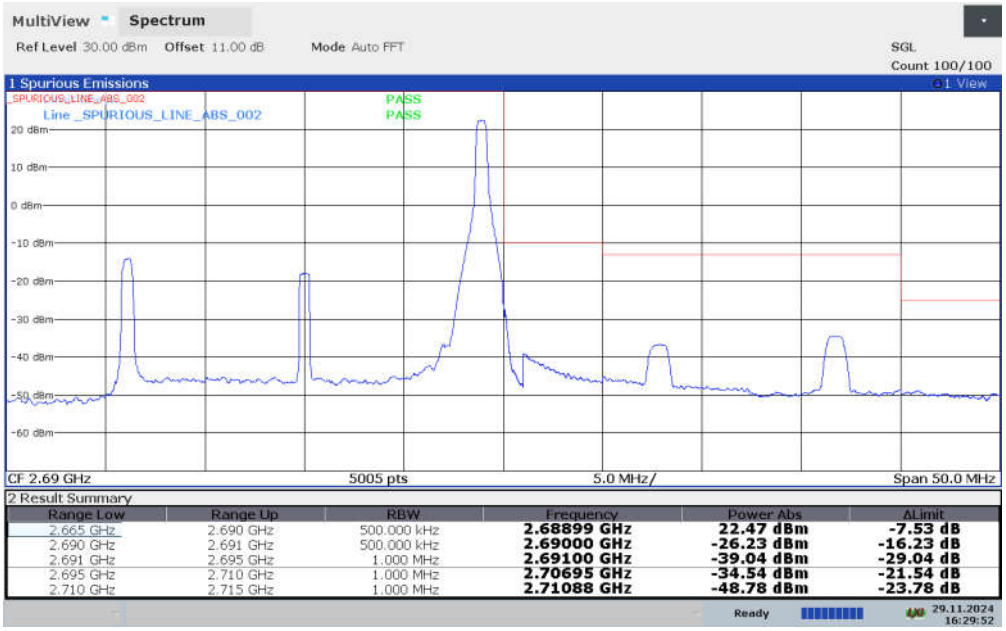
LTE band 41

LOW BAND EDGE BLOCK-1RB-low_offset



HIGH BAND EDGE BLOCK-1RB-high_offset



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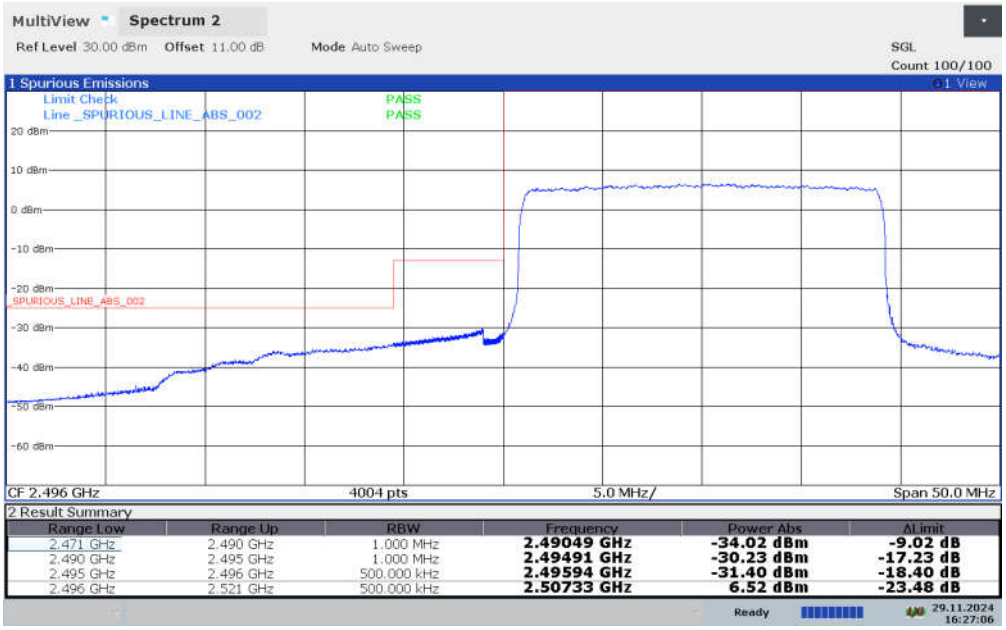
LOW BAND EDGE BLOCK-20MHz-100%RB



HIGH BAND EDGE BLOCK-20MHz-100%RB

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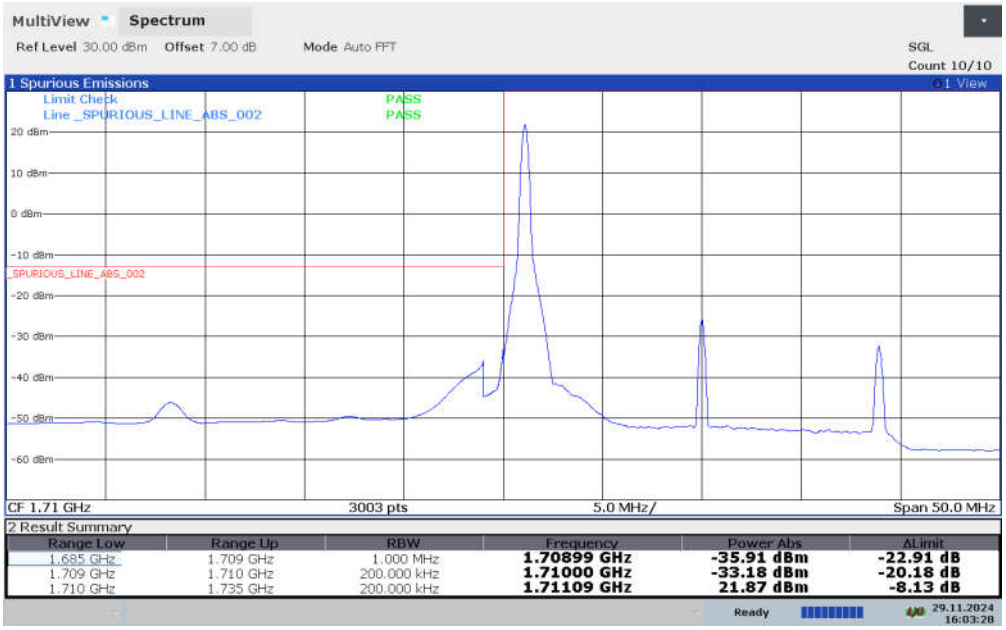
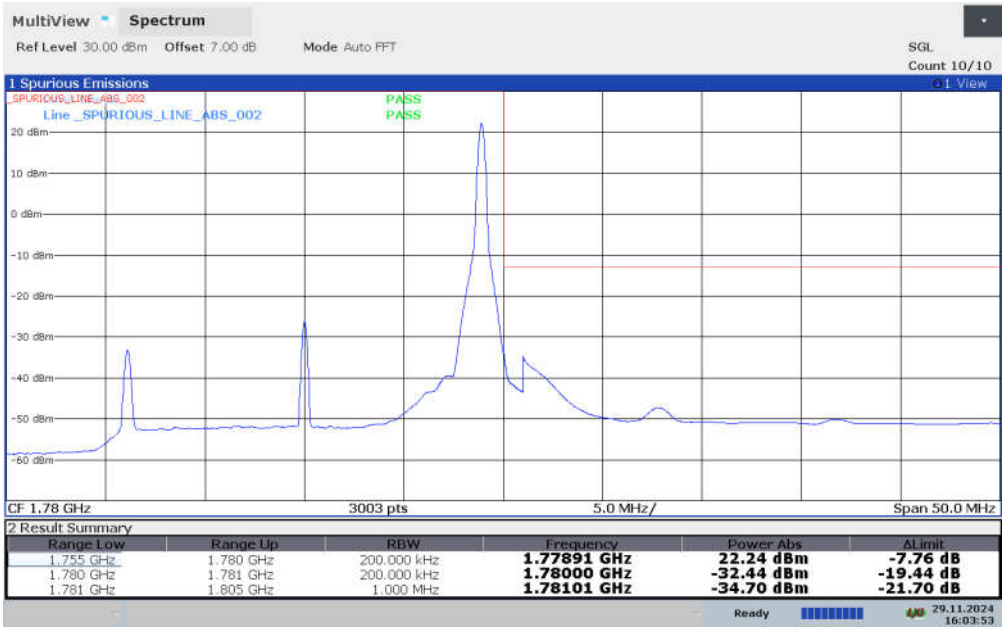
LTE band 66

LOW BAND EDGE BLOCK-1RB-low_offset



HIGH BAND EDGE BLOCK-1RB-high_offset



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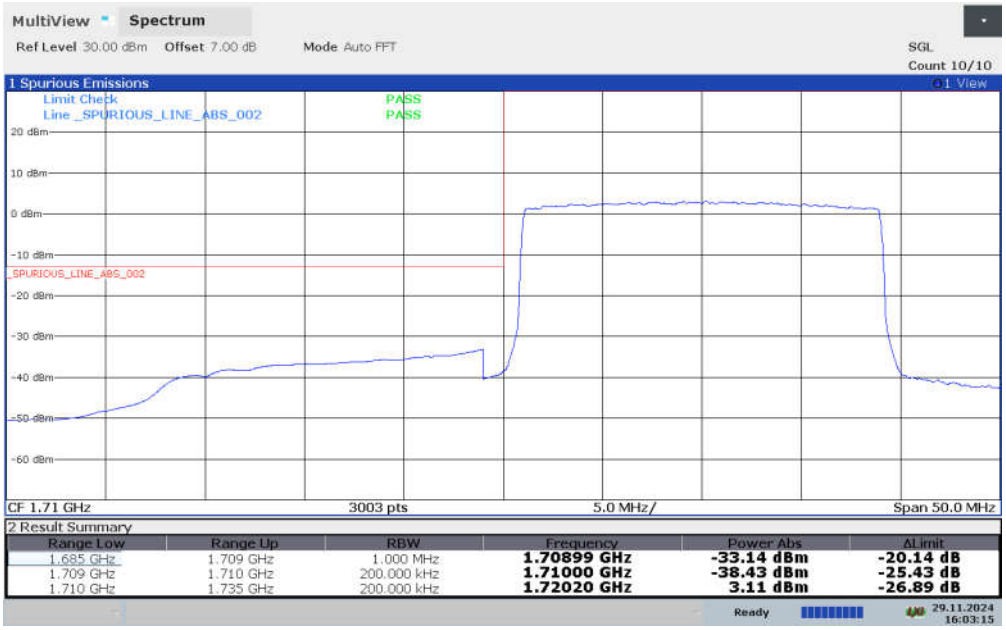
LOW BAND EDGE BLOCK-20MHz-100%RB



HIGH BAND EDGE BLOCK-20MHz-100%RB

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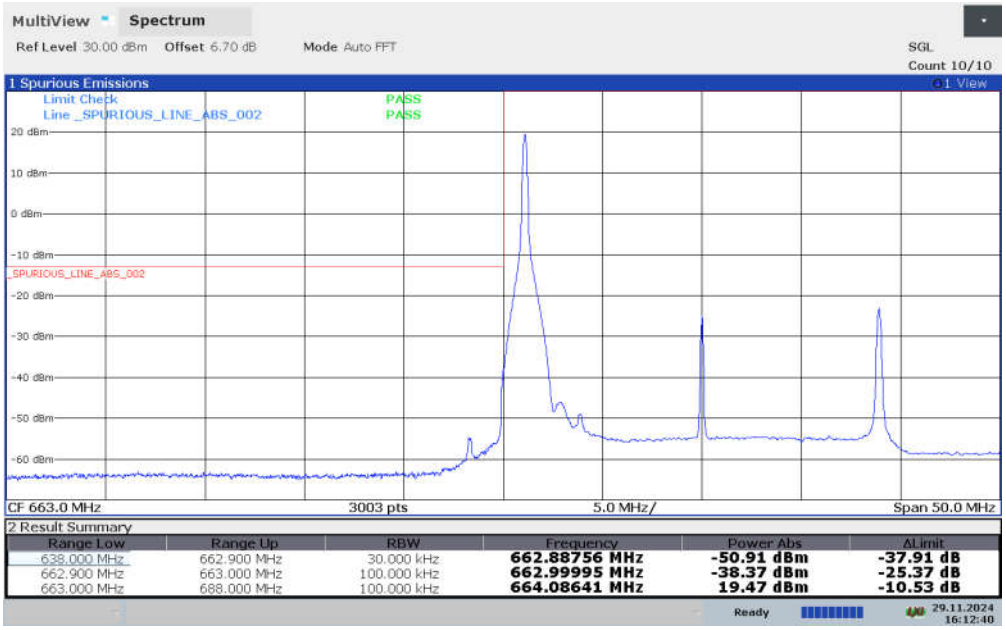
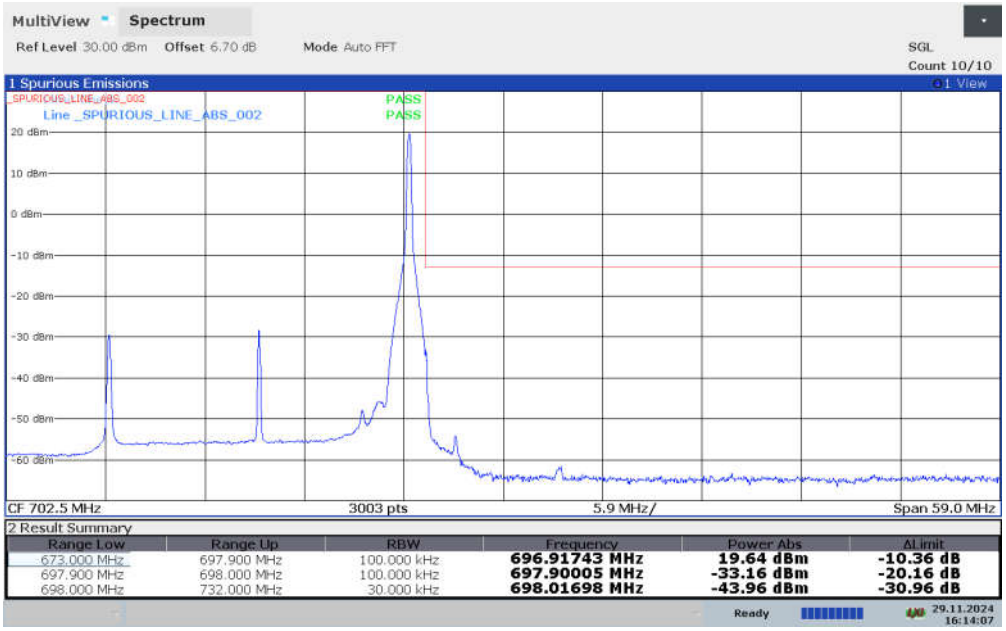
LTE band 71

LOW BAND EDGE BLOCK-1RB-low_offset



HIGH BAND EDGE BLOCK-1RB-high_offset



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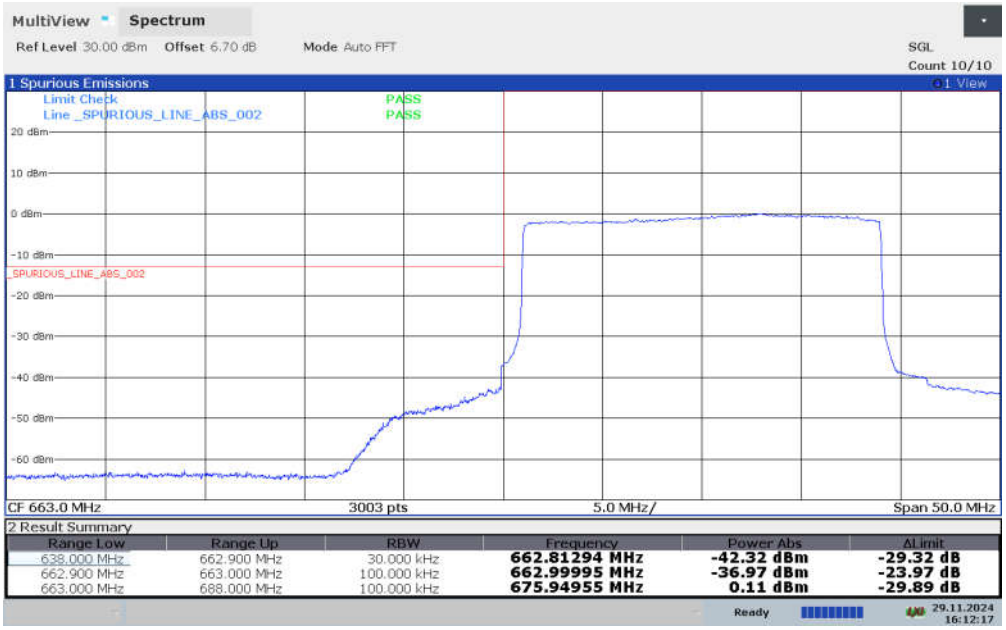
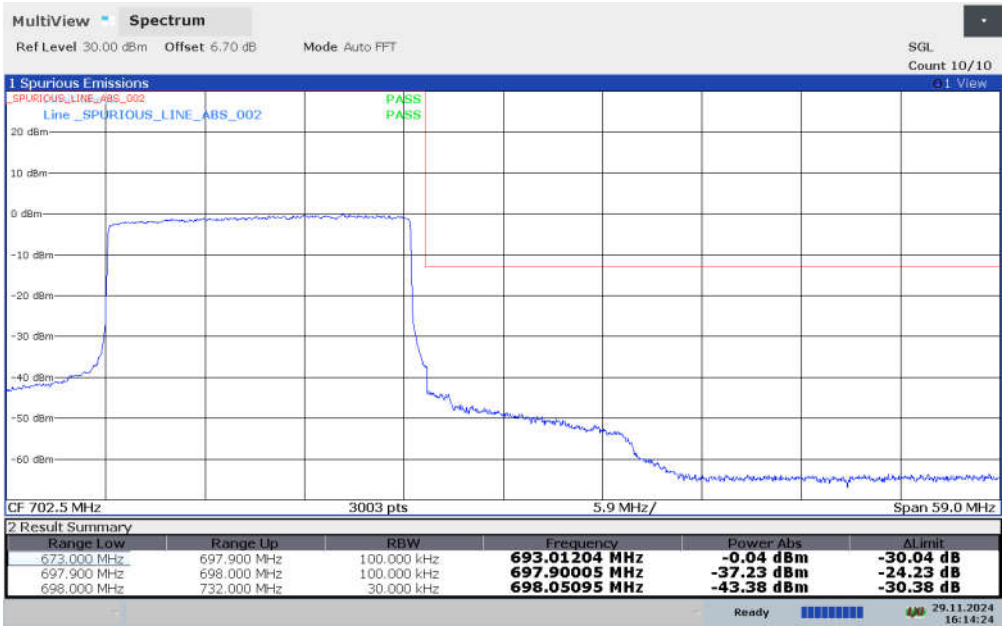
LOW BAND EDGE BLOCK-20MHz-100%RB



HIGH BAND EDGE BLOCK-20MHz-100%RB



Note: Expanded measurement uncertainty is U = 0.49dB(100KHz-2GHz)/1.21dB(2GHz-26.5GHz), k = 1.96

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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×span/RBW

A. 7.2 Measurement Limit

For Band2/25:Part 24.238(a) 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.

For Band4/66: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.

For Band5/26(824MHz-849MHz): Part 22.917(a) specify that for operations in the 824–849MHz band, the FCC limit is 43 +10 log (P)dB below the transmitter power(P) in a 100kHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

For Band7/38/41: 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 that 43 + 10log (P) dB on all frequencies between 2490.5 MHz and 2496 MHz and 55 + 10 log (P) dB at or below 2490.5MHz. 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.

For Band12/17/71: Part 27.53(g) specifies 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.

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For Band13: Part 27.53(c) specifies 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;(3) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than 76 + 10 log (P) dB in a 6.25 kHz band segment, for base and fixed stations;(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;(5) Compliance with the provisions of paragraphs (c)(1) and (c)(2) 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 at least 30 kHz may be employed;(6) Compliance with the provisions of paragraphs (c)(3) and (c)(4) 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.
For Band14: Part 90.543(e) specifies 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.
For Band26(814MHz-824MHz): Part 90.691(a) specifies (1) For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 116 Log10(f/6.1) decibels or 50 + 10 Log10(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.(2) For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 43 + 10Log10(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.
For Band30: Part 27.53(a)(4) specifies For mobile and portable stations operating in the 2305-2315 MHz and 2350-2360 MHz bands: (i) By a factor of not less than: 43 + 10 log (P) dB on

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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 2337 MHz;(ii) 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 2300 MHz, 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;(iii) 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.

The spectrum analyzer readings are corrected by [10 log (1/duty cycle)] for the non-continuous transmitting scenario.

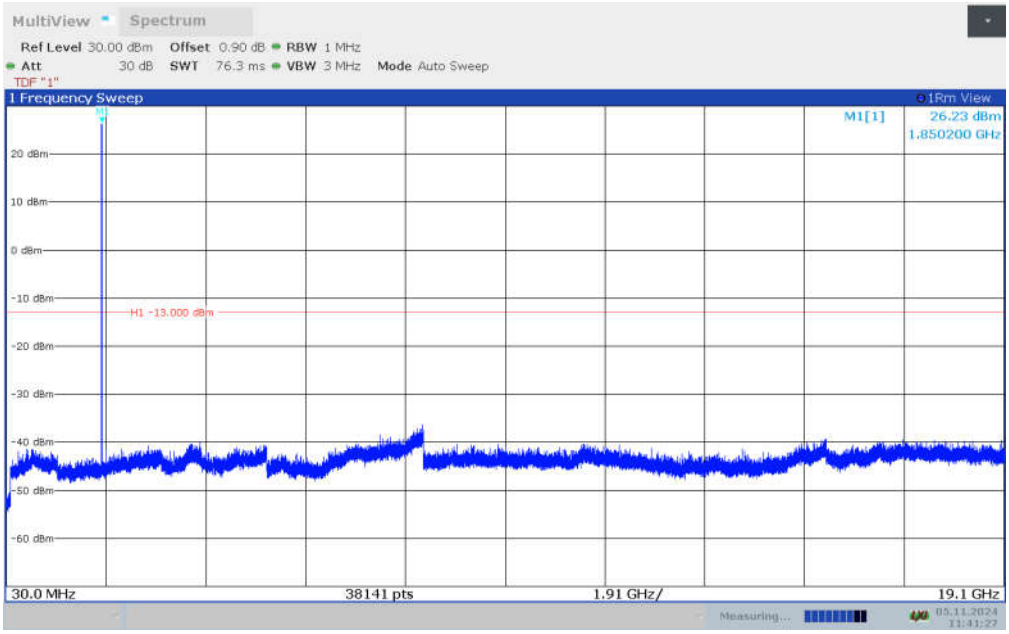
A. 7.3 Measurement result

Only worst case result is given below

LTE band 2 : 30MHz – 19.1GHz

Spurious emission limit –13dBm.

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



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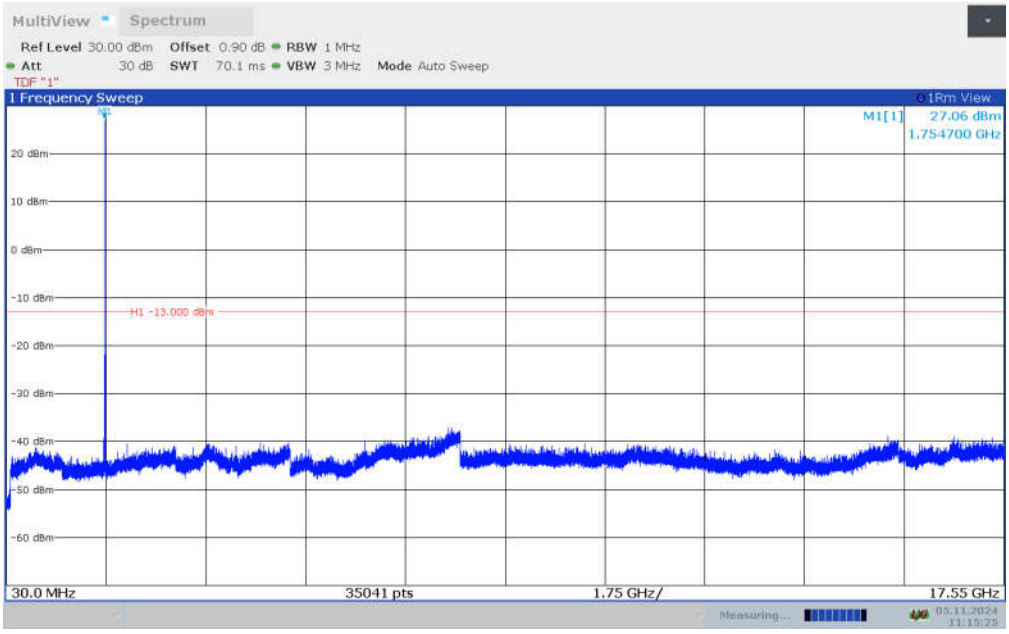
LTE band 4 : 30MHz – 17.55GHz

Spurious emission limit –13dBm.

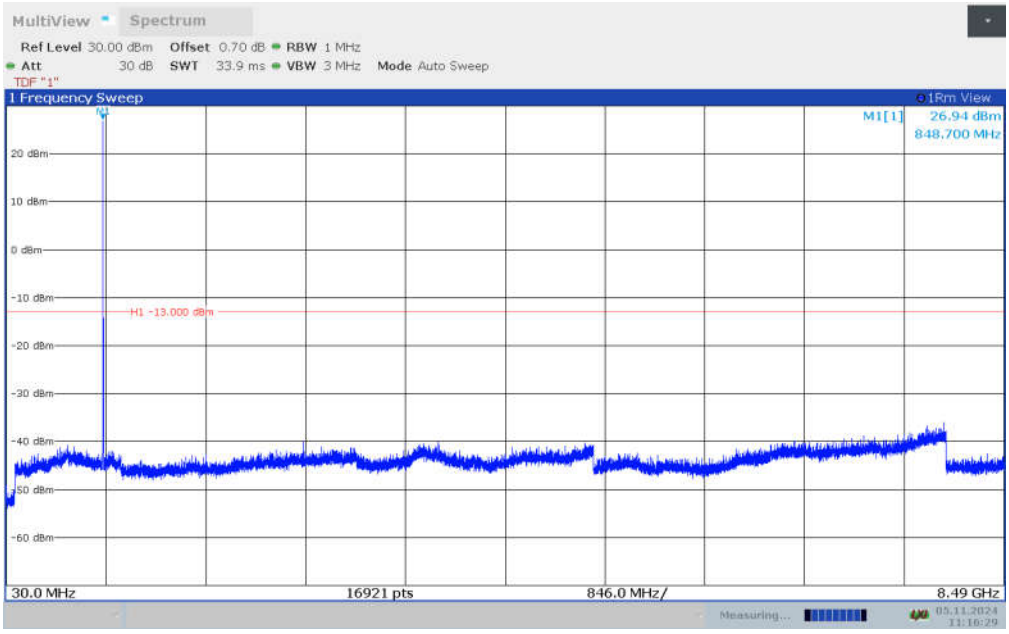
NOTE: peak above the limit line is the carrier frequency.



LTE band 5 20MHz QPSK: 30MHz – 8.49GHz

Spurious emission limit –25dBm.

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



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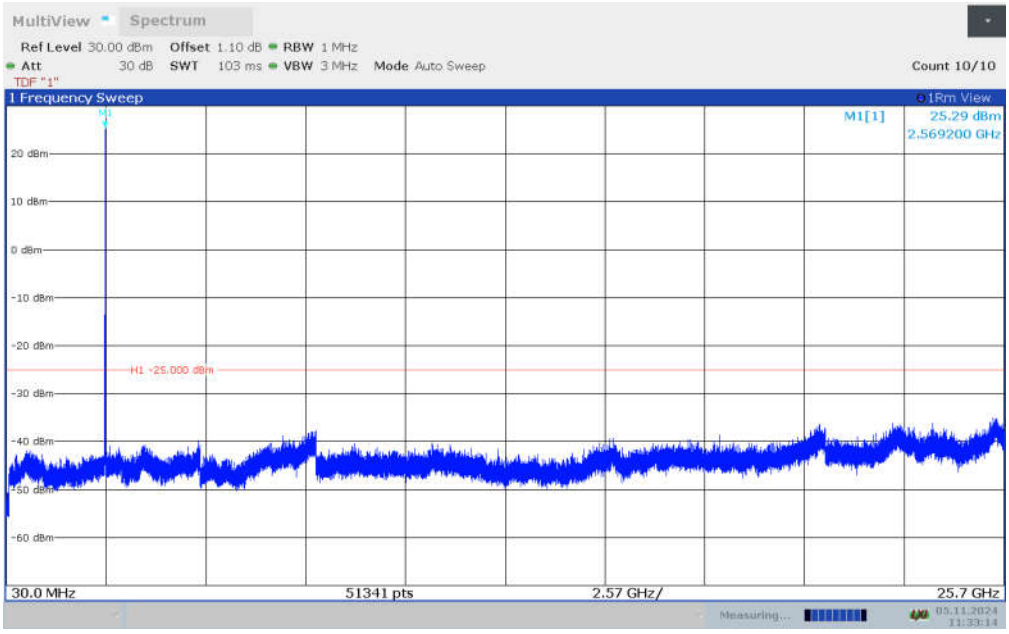
LTE band 7 20MHz QPSK: 30MHz – 25.7GHz

Spurious emission limit –25dBm.

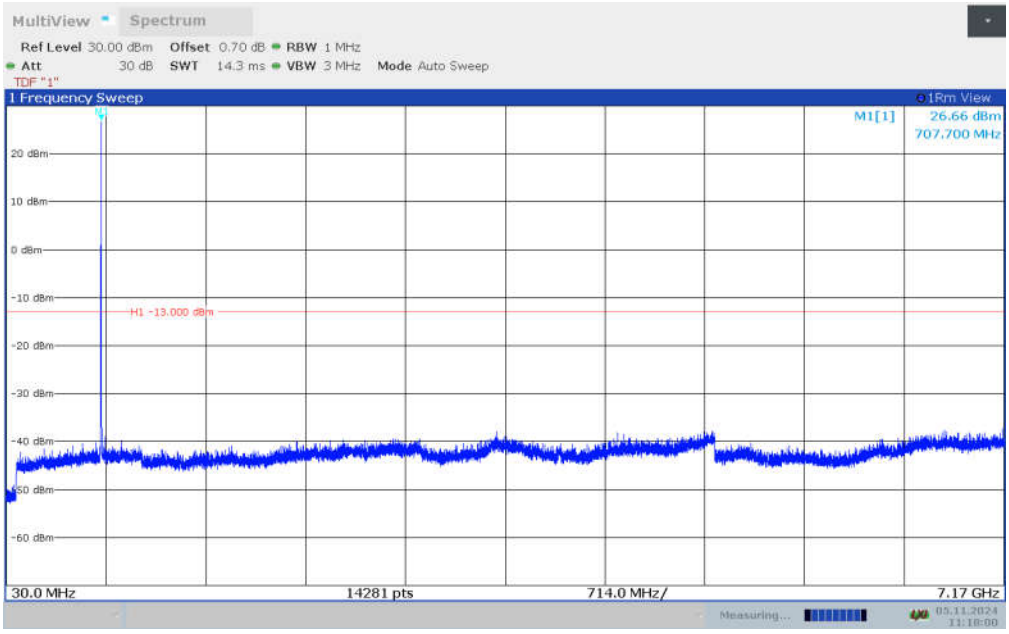
NOTE: peak above the limit line is the carrier frequency.



LTE band 12: 30MHz – 7.16GHz

Spurious emission limit –13dBm.

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



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