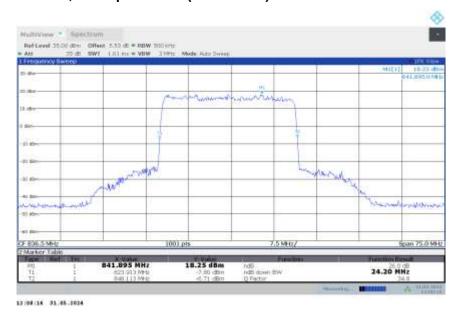




n5 n5,25MHz(-26dBc)

Fragues ov (MI Iz)	Emission Bandwidth (-26dBc) (MHz)	
Frequency (MHz)	DFT-s-pi/2 BPSK	DFT-s-QPSK
836.5	24.201	24.276

#### n5,25MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



#### n5,25MHz Bandwidth,DFT-s-QPSK (-26dBc BW)



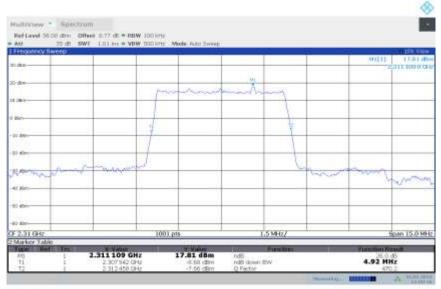




n30 n30,5MHz(-26dBc)

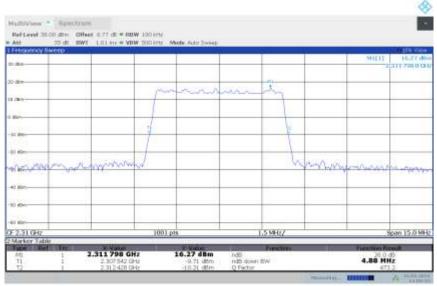
Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
2310	4.915	4.885

#### n30,5MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



12:09:11 31:45.2024

### n30,5MHz Bandwidth,DFT-s-QPSK (-26dBc BW)



13 09 38 31 65 2024

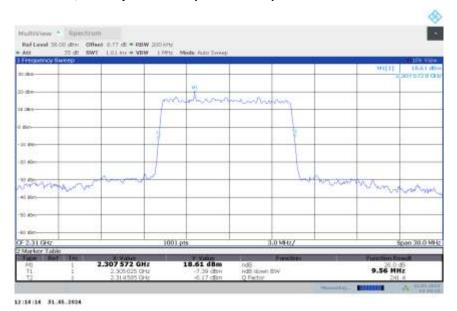




n30 n30,10MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
2310	9.560	9.590

### n30,10MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



#### n30,10MHz Bandwidth,DFT-s-QPSK (-26dBc BW)



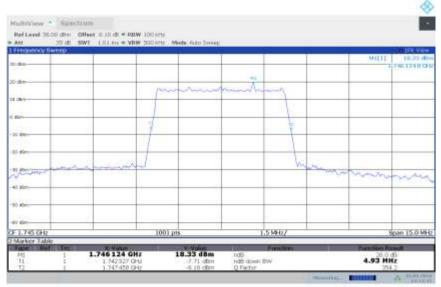




n66 n66,5MHz(-26dBc)

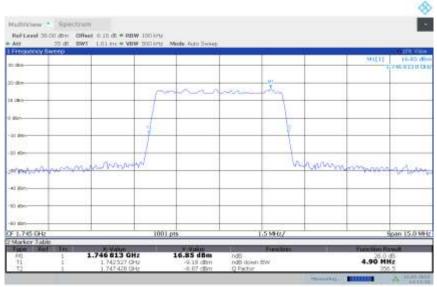
Fragues ov (MI Iz)	Emission Bandwidth (-26dBc) (MHz)	
Frequency (MHz)	DFT-s-pi/2 BPSK	DFT-s-QPSK
1745	4.930	4.900

#### n66,5MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



17:11:17 31:45.2024

#### n66,5MHz Bandwidth,DFT-s-QPSK (-26dBc BW)



13:11:34 31:48.2024

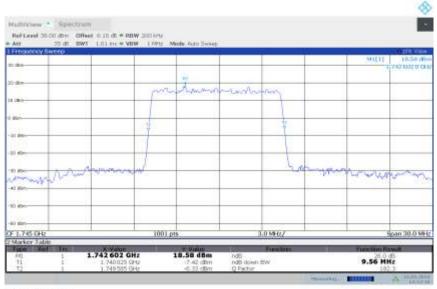




n66 n66,10MHz(-26dBc)

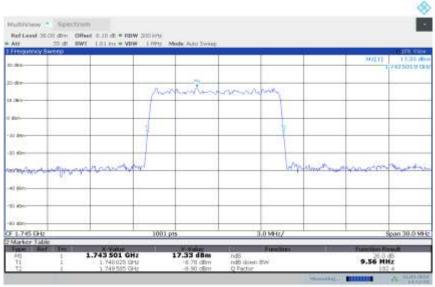
Fragues av (MIIII)	Emission Bandwidth (-26dBc) (MHz)	
Frequency (MHz)	DFT-s-pi/2 BPSK	DFT-s-QPSK
1745	9.560	9.560

#### n66,10MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



13:12:17 31:45.2024

#### n66,10MHz Bandwidth,DFT-s-QPSK (-26dBc BW)



12:12:33 31:45.2024

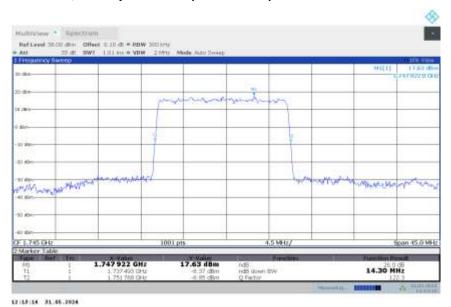


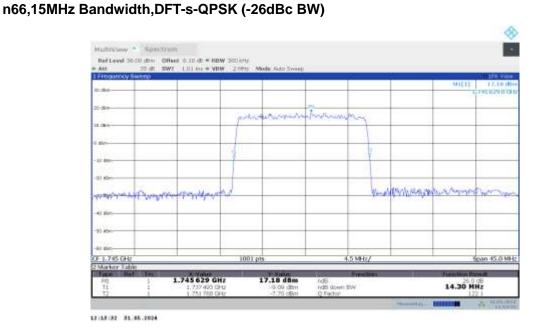


n66 n66,15MHz(-26dBc)

Fraguanay (MHz)	Emission Bandwidth (-26dBc) (MHz)	
Frequency (MHz)	DFT-s-pi/2 BPSK	DFT-s-QPSK
1745	14.296	14.296

#### n66,15MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)





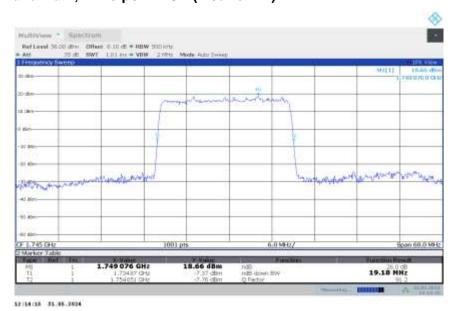




n66 n66,20MHz(-26dBc)

Fragues av (MIII-)	Emission Bandwidth (-26dBc) (MHz)	
Frequency (MHz)	DFT-s-pi/2 BPSK	DFT-s-QPSK
1745	19.181	19.181

### n66,20MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



n66,20MHz Bandwidth,DFT-s-QPSK (-26dBc BW)



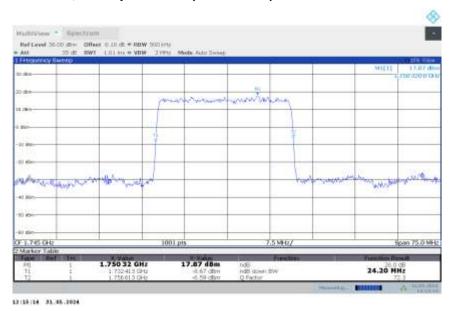




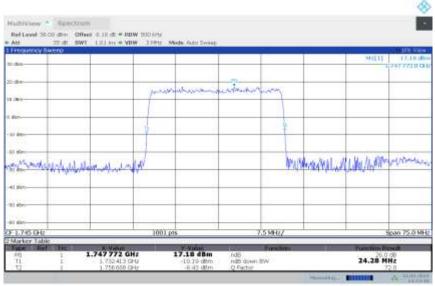
n66 n66,25MHz(-26dBc)

Fragues av (MIII-)	Emission Bandwidth (-26dBc) (MHz)	
Frequency (MHz)	DFT-s-pi/2 BPSK	DFT-s-QPSK
1745	24.201	24.276

#### n66,25MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



#### n66,25MHz Bandwidth,DFT-s-QPSK (-26dBc BW)



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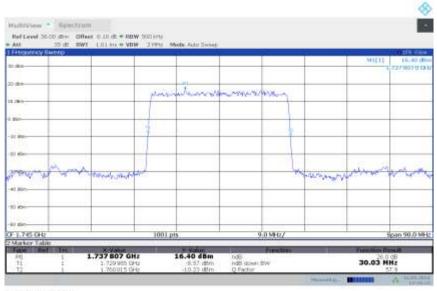




n66 n66,30MHz(-26dBc)

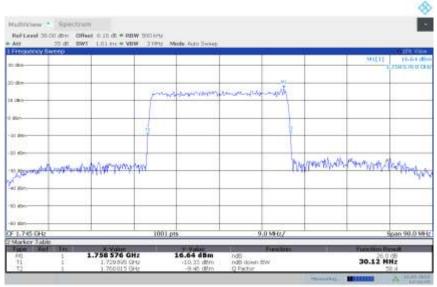
Fragues av (MIII-)	Emission Bandwidth (-26dBc) (MHz)	
Frequency (MHz)	DFT-s-pi/2 BPSK	DFT-s-QPSK
1745	30.030	30.120

#### n66,30MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



12:14:13 31:45.2024

#### n66,30MHz Bandwidth,DFT-s-QPSK (-26dBc BW)



12:16:29 31:45.2024

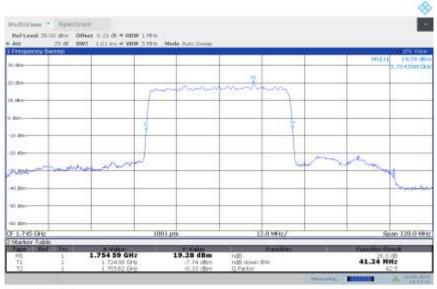




n66 n66,40MHz(-26dBc)

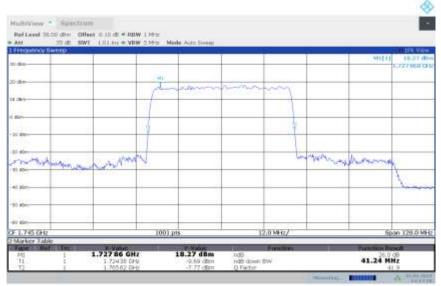
Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
1745	41.240	41.240

#### n66,40MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



17:17:12 31:45:2024

#### n66,40MHz Bandwidth,DFT-s-QPSK (-26dBc BW)



12:17:28 31.46.2024





n66 n66,45MHz(-26dBc)

Fragues av (MIII-)	Emission Bandwidth (-26dBc) (MHz)	
Frequency (MHz)	DFT-s-pi/2 BPSK	DFT-s-QPSK
1745	45.580	45.580

#### n66,45MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



n66,45MHz Bandwidth,DFT-s-QPSK (-26dBc BW)







n77L

#### n77L,10MHz(-26dBc)

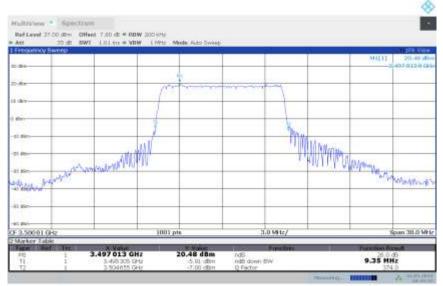
Fragues ov (MIII)	Emission Bandwidth (-26dBc) (MHz)	
Frequency (MHz)	DFT-s-pi/2 BPSK	DFT-s-QPSK
3500.01	9.500	9.351

#### n77L,10MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



10:19:15 31:45.2024

#### n77L,10MHz Bandwidth,DFT-s-QPSK (-26dBc BW)



10:19:82 31:68.2024



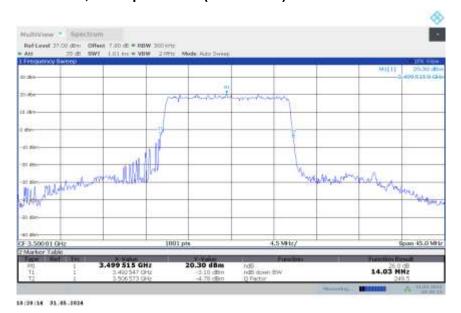


n77L

#### n77L,15MHz(-26dBc)

Fragues ov (MIII)	Emission Bandwidth (-26dBc) (MHz)	
Frequency (MHz)	DFT-s-pi/2 BPSK	DFT-s-QPSK
3500.01	14.026	13.846

#### n77L,15MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



#### n77L,15MHz Bandwidth,DFT-s-QPSK (-26dBc BW)







n77L

#### n77L,20MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
3500.01	19.301	19.181

#### n77L,20MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



#### n77L,20MHz Bandwidth,DFT-s-QPSK (-26dBc BW)





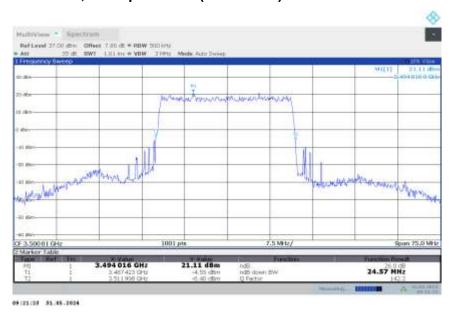


n77L

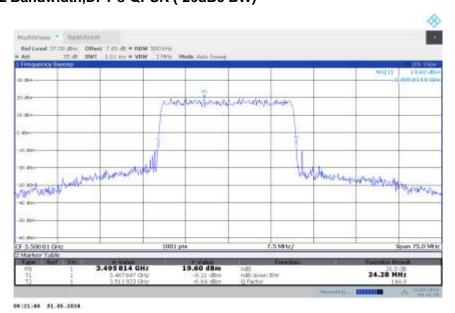
#### n77L,25MHz(-26dBc)

Fragues ov (MIII)	Emission Bandwidth (-26dBc) (MHz)	
Frequency (MHz)	DFT-s-pi/2 BPSK	DFT-s-QPSK
3500.01	24.575	24.276

#### n77L,25MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



#### n77L,25MHz Bandwidth,DFT-s-QPSK (-26dBc BW)





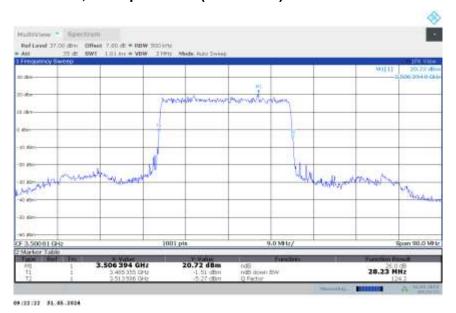


n77L

#### n77L,30MHz(-26dBc)

Fragues av (MIII=)	Emission Bandwidth (-26dBc) (MHz)	
Frequency (MHz)	DFT-s-pi/2 BPSK	DFT-s-QPSK
3500.01	28.232	28.412

#### n77L,30MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



#### n77L,30MHz Bandwidth,DFT-s-QPSK (-26dBc BW)







n77L

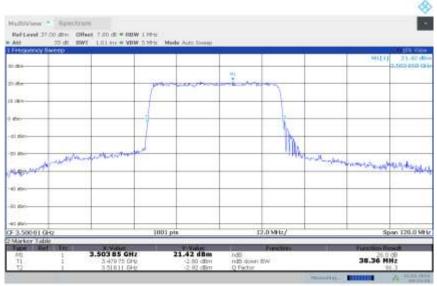
#### n77L,40MHz(-26dBc)

Fragues ov (MLIz)	Emission Bandwidth (-26dBc) (MHz)	
Frequency (MHz)	DFT-s-pi/2 BPSK	DFT-s-QPSK
3500.01	38.600	38.360

#### n77L,40MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



#### n77L,40MHz Bandwidth,DFT-s-QPSK (-26dBc BW)



09:24:08 31.48.2024



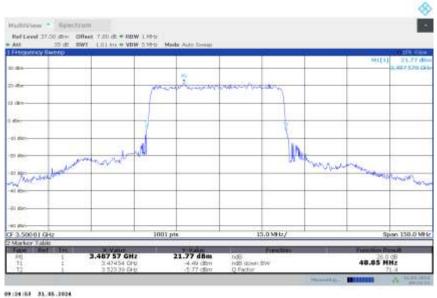


n77L

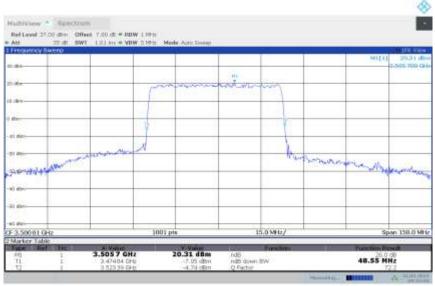
#### n77L,50MHz(-26dBc)

Fragues ov (MIII)	Emission Bandwidth (-26dBc) (MHz)	
Frequency (MHz)	DFT-s-pi/2 BPSK	DFT-s-QPSK
3500.01	48.850	48.550

#### n77L,50MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



#### n77L,50MHz Bandwidth,DFT-s-QPSK (-26dBc BW)



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n77L

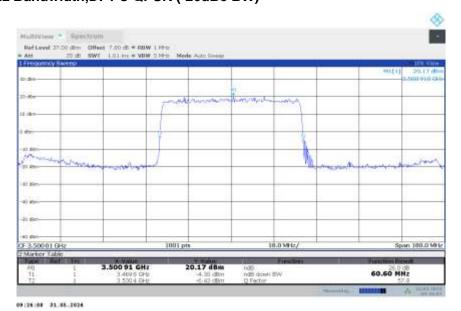
#### n77L,60MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
3500.01	60.600	60.600

#### n77L,60MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



#### n77L,60MHz Bandwidth,DFT-s-QPSK (-26dBc BW)







n77L

#### n77L,70MHz(-26dBc)

Fragues av (MIII=)	Emission Bandwidth (-26dBc) (MHz)	
Frequency (MHz)	DFT-s-pi/2 BPSK	DFT-s-QPSK
3500.01	67.340	67.130

#### n77L,70MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



## n77L,70MHz Bandwidth,DFT-s-QPSK (-26dBc BW)

# 





n77L

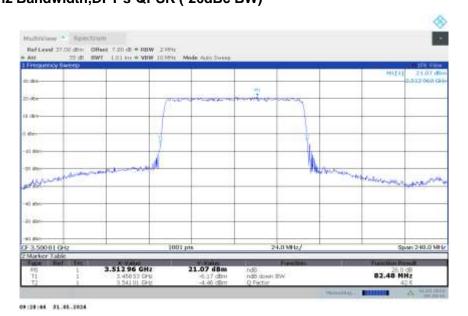
#### n77L,80MHz(-26dBc)

Fragues ov (MIII)	Emission Bandwidth (-26dBc) (MHz)	
Frequency (MHz)	DFT-s-pi/2 BPSK	DFT-s-QPSK
3500.01	82.240	82.480

#### n77L,80MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



## n77L,80MHz Bandwidth,DFT-s-QPSK (-26dBc BW)







n77L n77L,90MHz(-26dBc)

Fragues av (MIII=)	Emission Bandwidth (-26dBc) (MHz)	
Frequency (MHz)	DFT-s-pi/2 BPSK	DFT-s-QPSK
3500.01	92.250	92.520

#### n77L,90MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



#### n77L,90MHz Bandwidth,DFT-s-QPSK (-26dBc BW)







n77L

#### n77L,100MHz(-26dBc)

Fragues av (MIII=)	Emission Bandwidth (-26dBc) (MHz)	
Frequency (MHz)	DFT-s-pi/2 BPSK	DFT-s-QPSK
3500.01	101.900	101.600

### n77L,100MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



#### n77L,100MHz Bandwidth,DFT-s-QPSK (-26dBc BW)







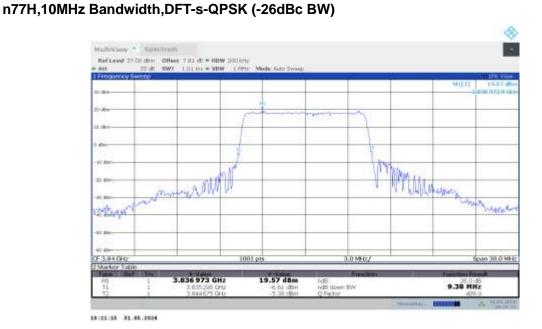
n77H

#### n77H,10MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
3840	9.680	9.381

#### n77H,10MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)





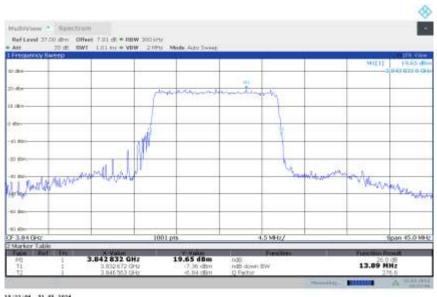




n77H n77H,15MHz(-26dBc)

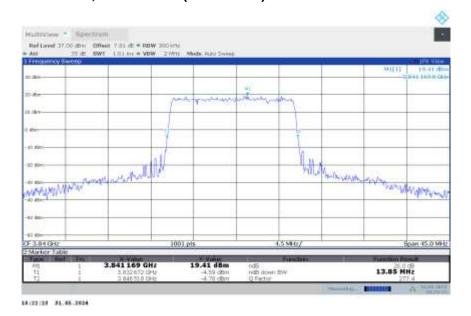
Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
3840	13.891	13.846

#### n77H,15MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



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#### n77H,15MHz Bandwidth,DFT-s-QPSK (-26dBc BW)





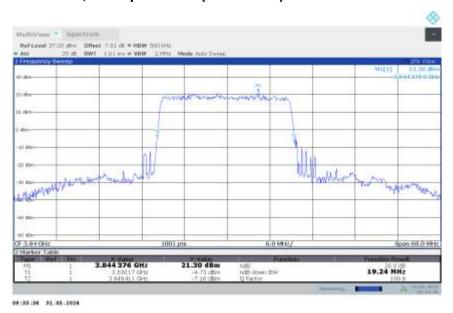


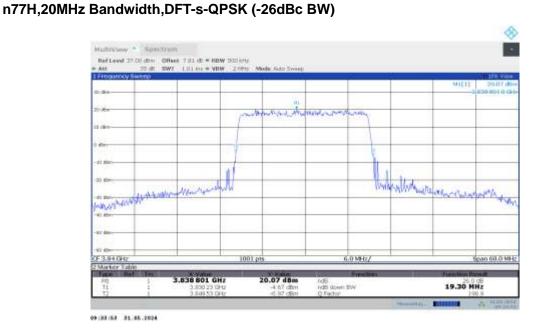
n77H

#### n77H,20MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
3840	19.241	19.301

#### n77H,20MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)





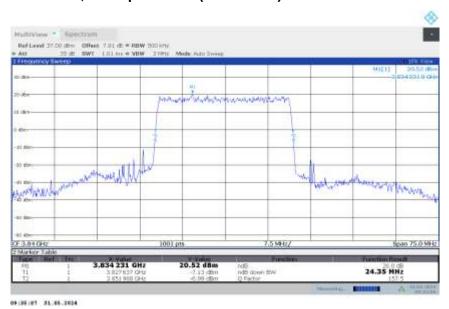




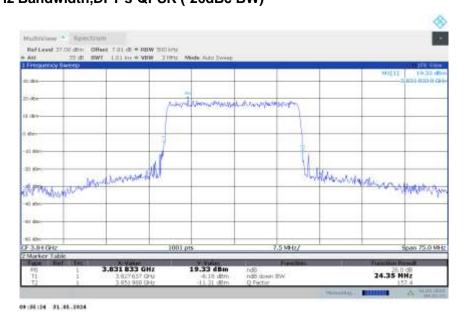
n77H n77H,25MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
3840	24.351	24.351

#### n77H,25MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



n77H,25MHz Bandwidth,DFT-s-QPSK (-26dBc BW)



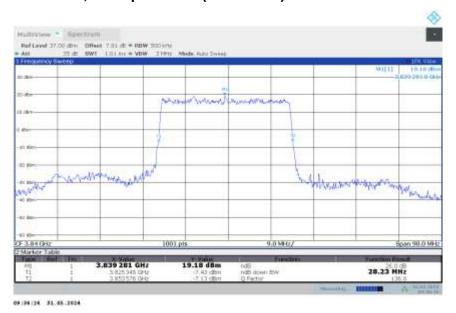




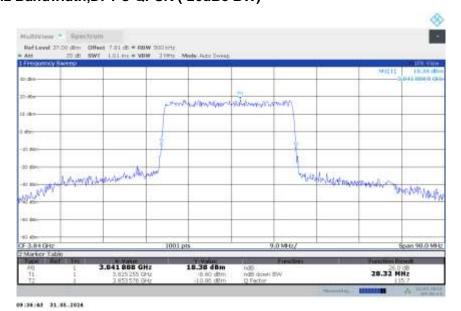
n77H n77H,30MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
3840	28.232	28.322

#### n77H,30MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



#### n77H,30MHz Bandwidth,DFT-s-QPSK (-26dBc BW)







n77H n77H,40MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
3840	38.480	38.600

#### n77H,40MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



#### n77H,40MHz Bandwidth,DFT-s-QPSK (-26dBc BW)



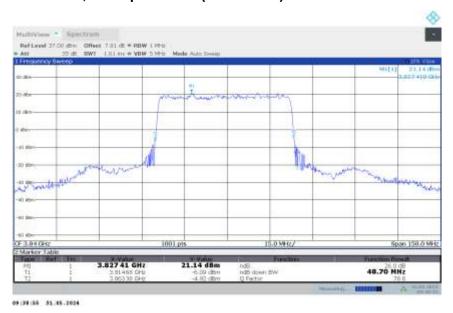




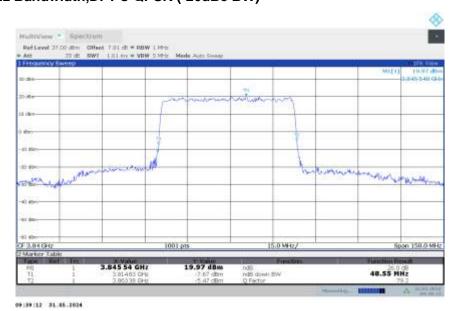
n77H n77H,50MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
3840	48.700	48.550

#### n77H,50MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



#### n77H,50MHz Bandwidth,DFT-s-QPSK (-26dBc BW)





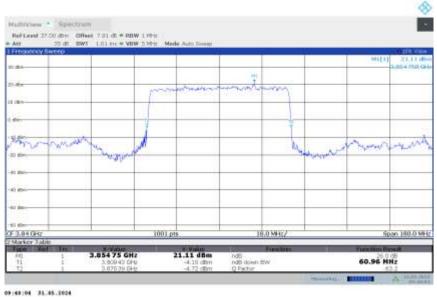


n77H

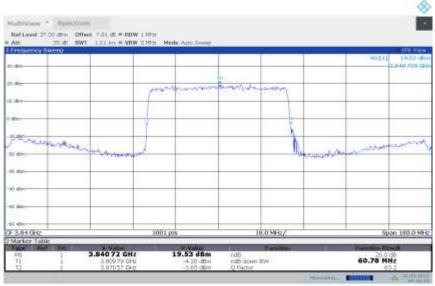
#### n77H,60MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
3840	60.960	60.780

### n77H,60MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



#### n77H,60MHz Bandwidth,DFT-s-QPSK (-26dBc BW)



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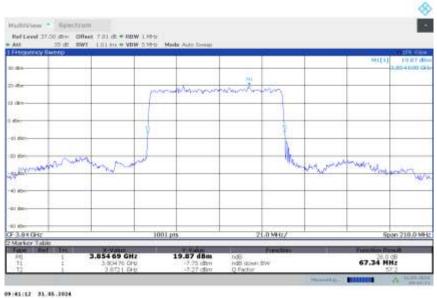




n77H n77H,70MHz(-26dBc)

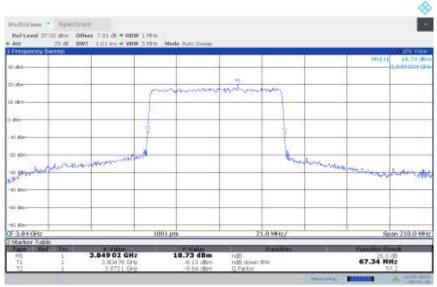
Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
3840	67.340	67.340

#### n77H,70MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



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#### n77H,70MHz Bandwidth,DFT-s-QPSK (-26dBc BW)



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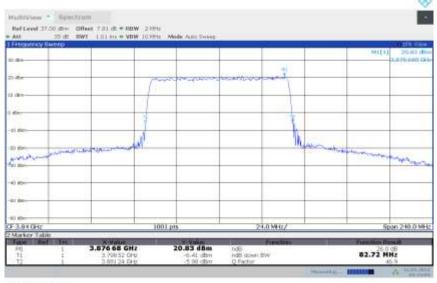
n77H n77H,80MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
3840	82.480	82.720

#### n77H,80MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



#### n77H,80MHz Bandwidth,DFT-s-QPSK (-26dBc BW)



09:43:18 31:48.2024





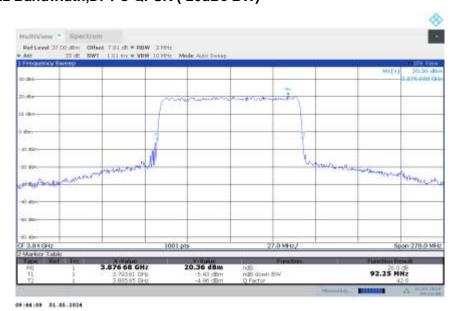
n77H n77H,90MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
3840	92.250	92.250

#### n77H,90MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



n77H,90MHz Bandwidth,DFT-s-QPSK (-26dBc BW)







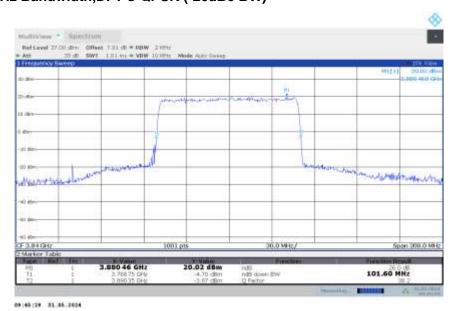
n77H n77H,100MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	DFT-s-pi/2 BPSK	DFT-s-QPSK
3840	101.900	101.600

#### n77H,100MHz Bandwidth,DFT-s-pi/2 BPSK (-26dBc BW)



n77H,100MHz Bandwidth,DFT-s-QPSK (-26dBc BW)



Note: The maximum value of expanded measurement uncertainty for this test item is U = 0.626 kHz, 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(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 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 27.53(n) states for mobile operations in the 3450-3550 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed –13 dBm/MHz. Compliance with this paragraph (n)(2) is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 megahertz 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, but limited to a maximum of 200 kHz. In the bands between 1 and 5 MHz removed from the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be 500 kHz. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

Part 27.53(I) states for mobile operations in the 3700-3980 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 dBm/MHz.

Compliance with this paragraph (I)(2) is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be either one percent of the emission bandwidth of the fundamental emission of the transmitter or 350 kHz. In the bands between 1 and 5 MHz removed from the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be 500 kHz. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

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

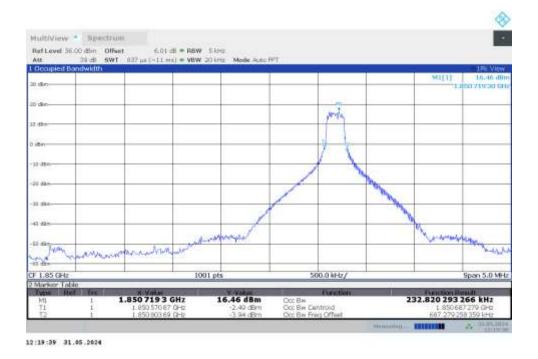




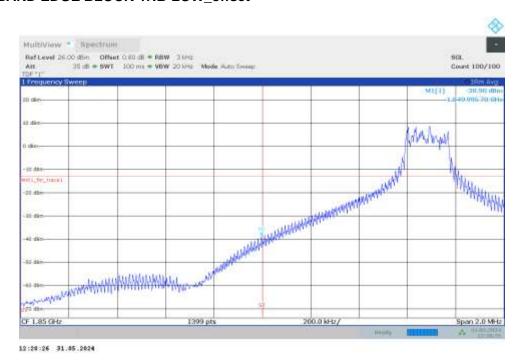
## A.6.2 Measurement result

NR n2

OBW: 1RB-LOW\_offset



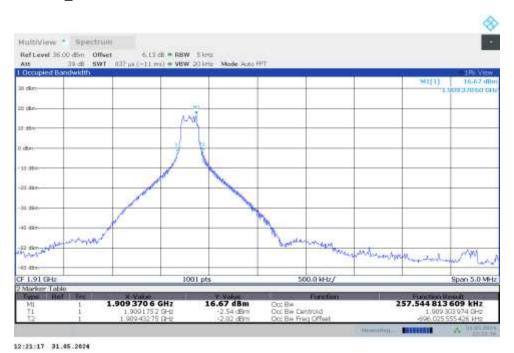
## LOW BAND EDGE BLOCK-1RB-LOW\_offset



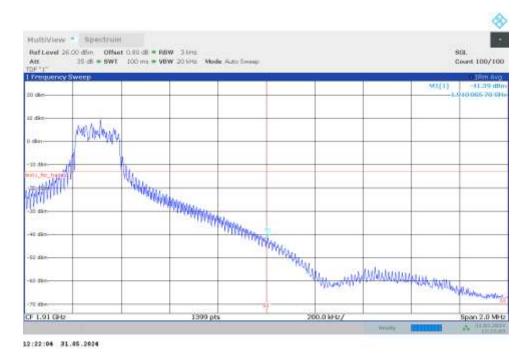




## **OBW: 1RB-HIGH\_offset**



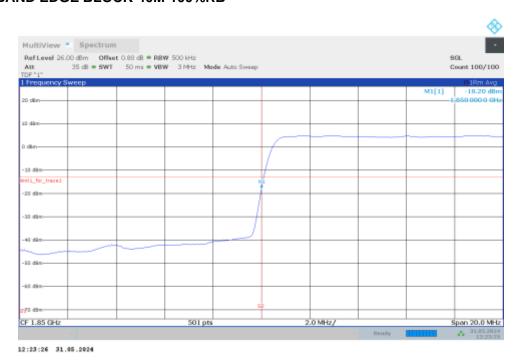
## HIGH BAND EDGE BLOCK-1RB-HIGH\_offset



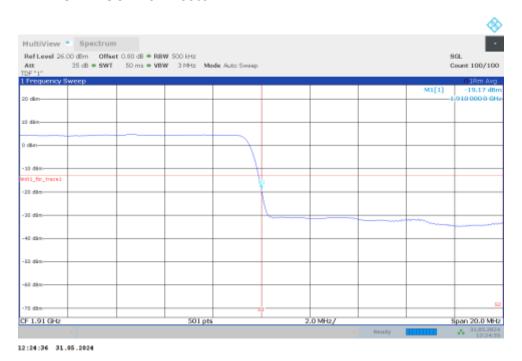




#### LOW BAND EDGE BLOCK-40M-100%RB



## HIGH BAND EDGE BLOCK-40M-100%RB

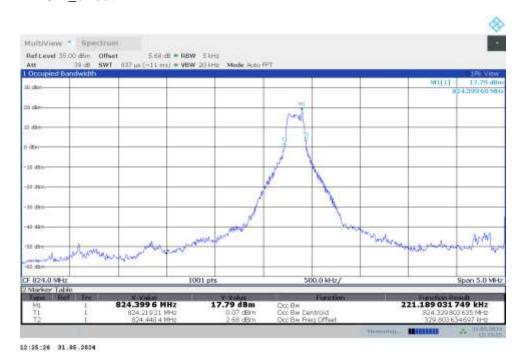




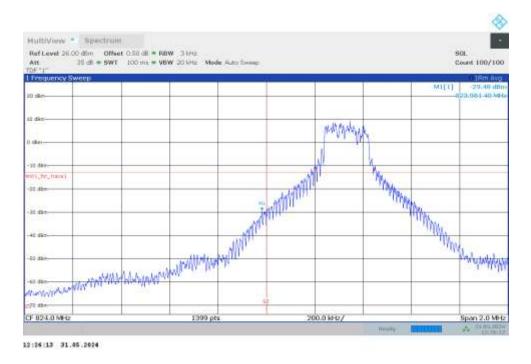


NR n5

## OBW: 1RB-LOW\_offset



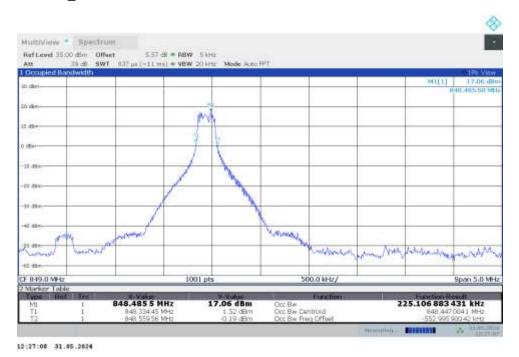
## LOW BAND EDGE BLOCK-1RB-LOW\_offset



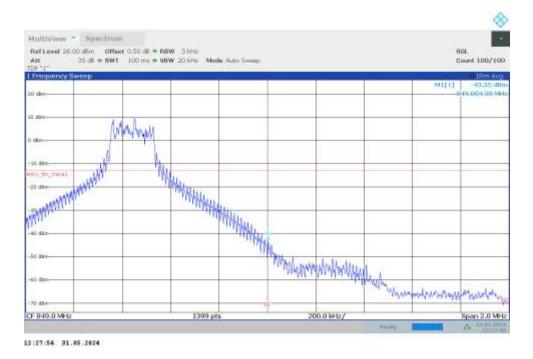




## **OBW: 1RB-HIGH\_offset**



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



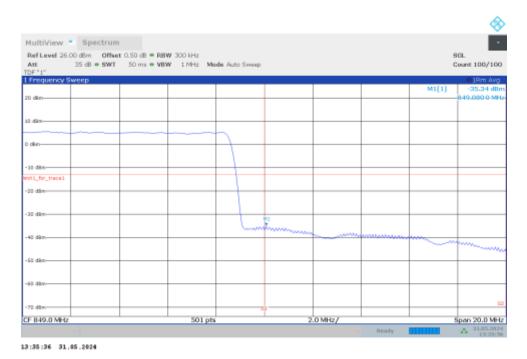




#### **LOW BAND EDGE BLOCK-25M-100%RB**



## HIGH BAND EDGE BLOCK-25M-100%RB





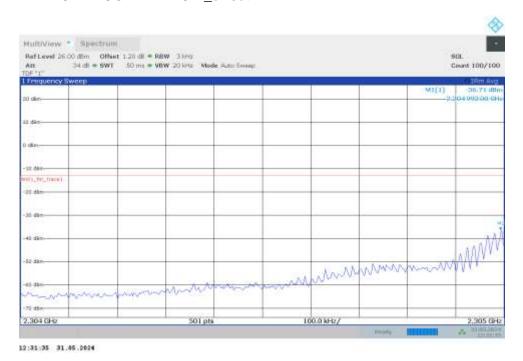


#### NR n30

## OBW: 1RB-LOW\_offset



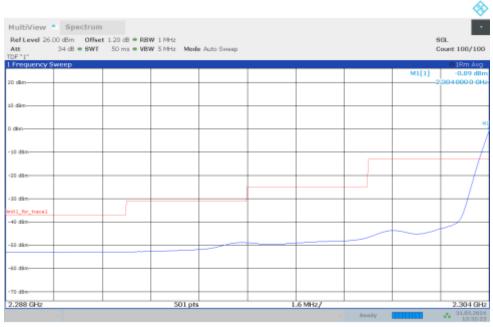
## LOW BAND EDGE BLOCK-1RB-LOW\_offset





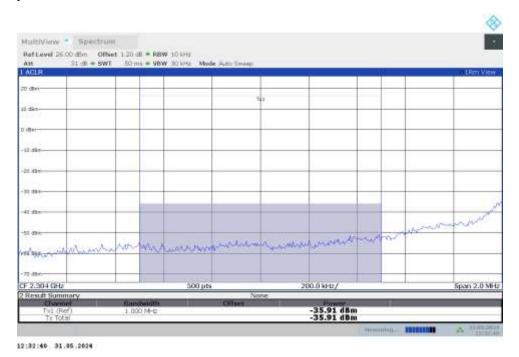


## LOW BAND EDGE BLOCK-1RB-LOW\_offset



12:32:23 31.05.2024

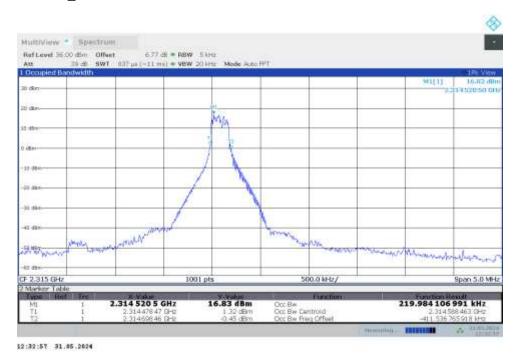
## **Channel power**



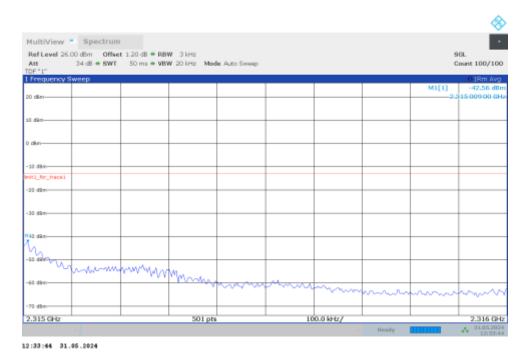




## **OBW: 1RB-HIGH\_offset**



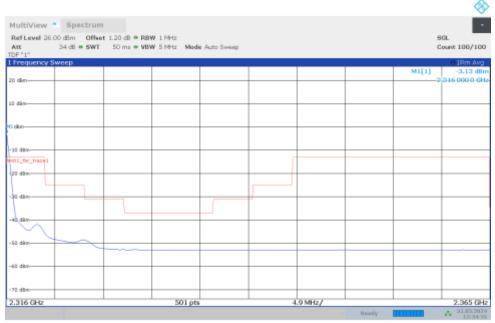
## HIGH BAND EDGE BLOCK-1RB-HIGH\_offset







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



12:34:31 31.05.2024

## **Channel power**

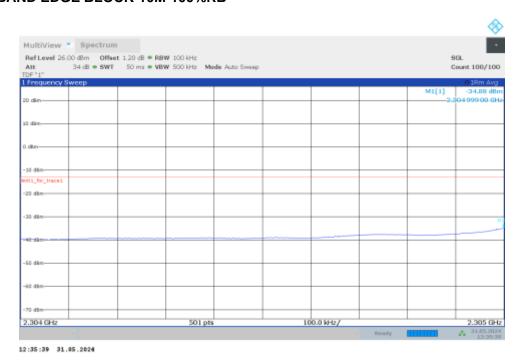


12:34:48 31.05.2024





#### **LOW BAND EDGE BLOCK-10M-100%RB**



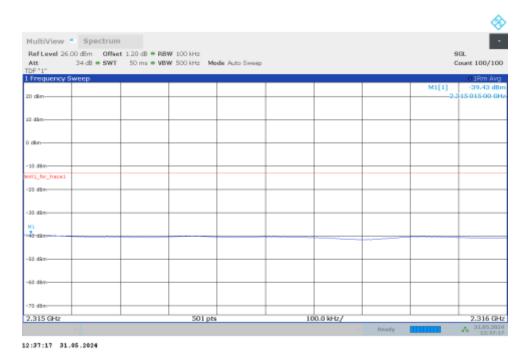
## **LOW BAND EDGE BLOCK-10M-100%RB**







## **HIGH BAND EDGE BLOCK-10M-100%RB**



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

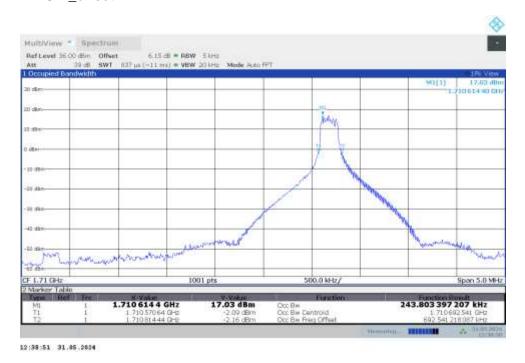




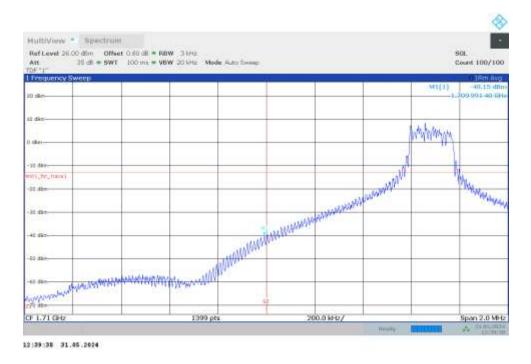


#### **NR** n66

## OBW: 1RB-LOW\_offset



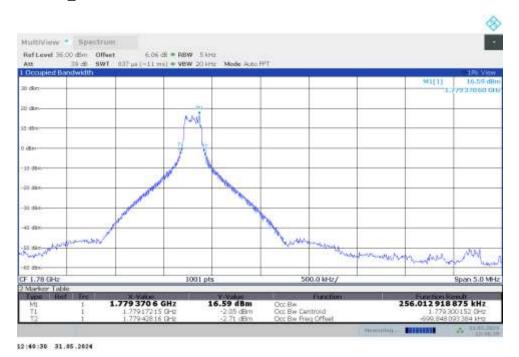
## LOW BAND EDGE BLOCK-1RB-LOW\_offset



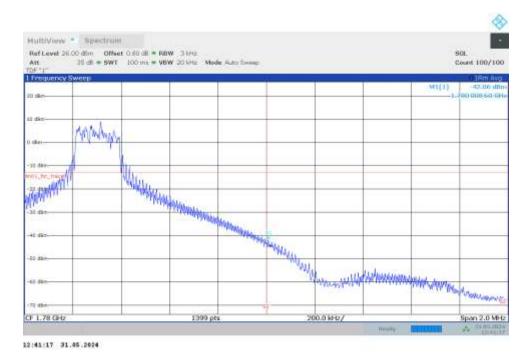




## **OBW: 1RB-HIGH\_offset**



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



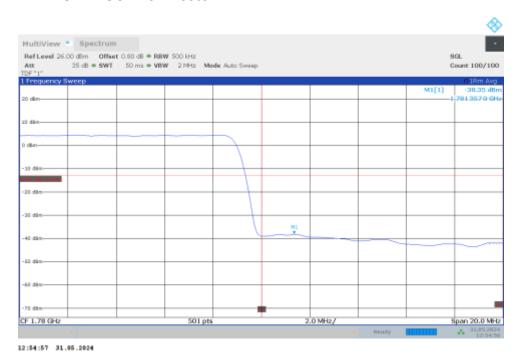




#### **LOW BAND EDGE BLOCK-45M-100%RB**



## HIGH BAND EDGE BLOCK-45M-100%RB

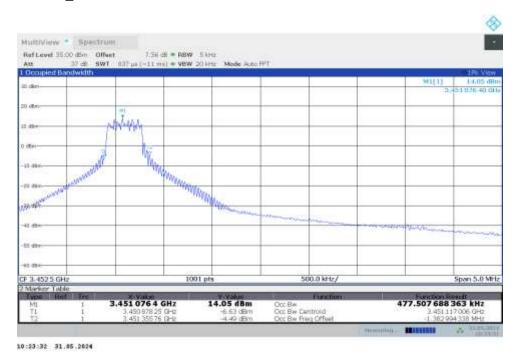




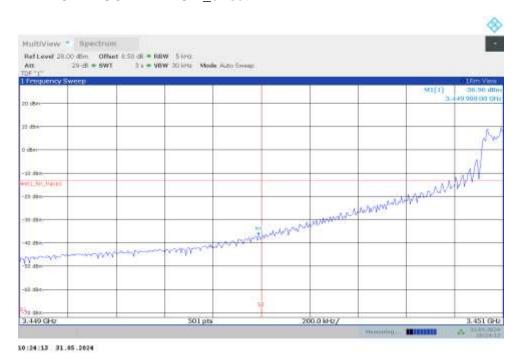


#### NR n77L

## OBW: 1RB-LOW\_offset



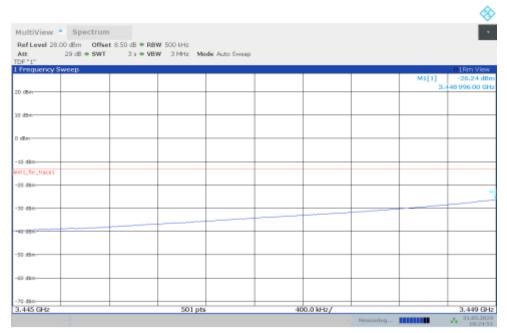
## LOW BAND EDGE BLOCK-1RB-LOW\_offset







## LOW BAND EDGE BLOCK-1RB-LOW\_offset



10:24:52 31.05.2024

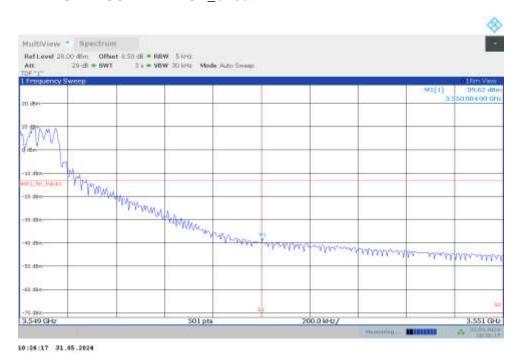




## **OBW: 1RB-HIGH\_offset**



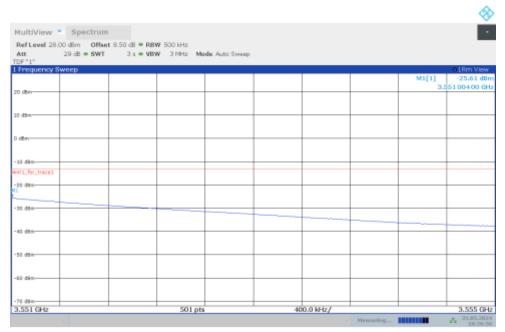
## HIGH BAND EDGE BLOCK-1RB-HIGH\_offset







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



10:26:57 31.05.2024

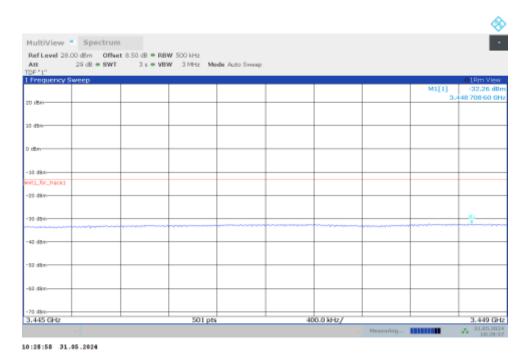




#### LOW BAND EDGE BLOCK-100M-100%RB



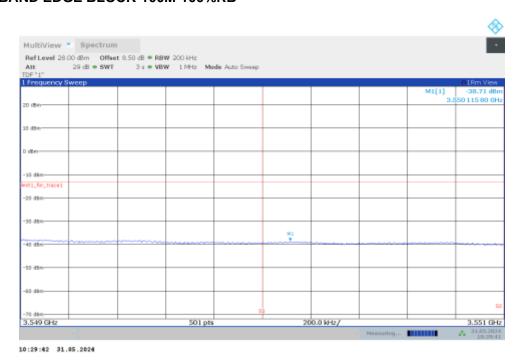
## LOW BAND EDGE BLOCK-100M-100%RB



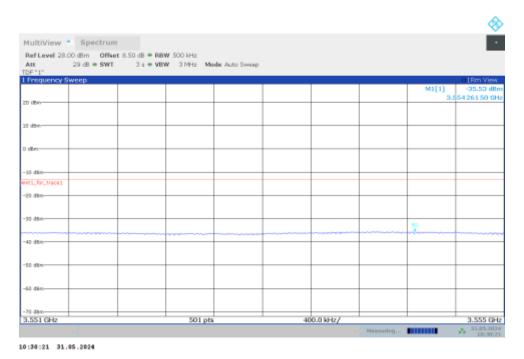




## HIGH BAND EDGE BLOCK-100M-100%RB



## HIGH BAND EDGE BLOCK-100M-100%RB

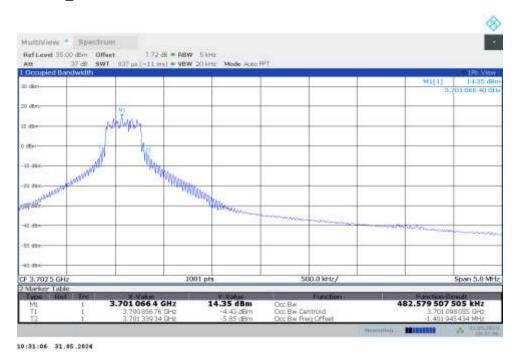




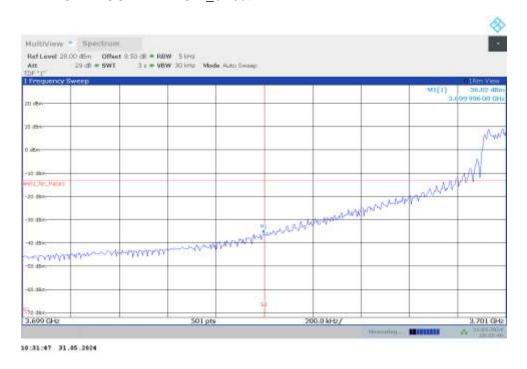


#### NR n77H

## OBW: 1RB-LOW\_offset



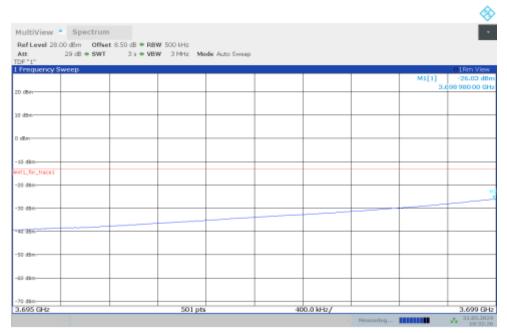
## LOW BAND EDGE BLOCK-1RB-LOW\_offset







## LOW BAND EDGE BLOCK-1RB-LOW\_offset



10:32:26 31.05.2024

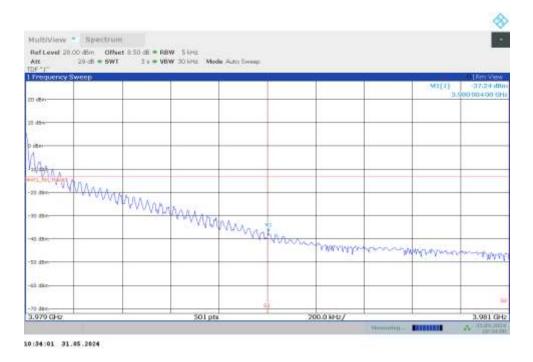




## **OBW: 1RB-HIGH\_offset**



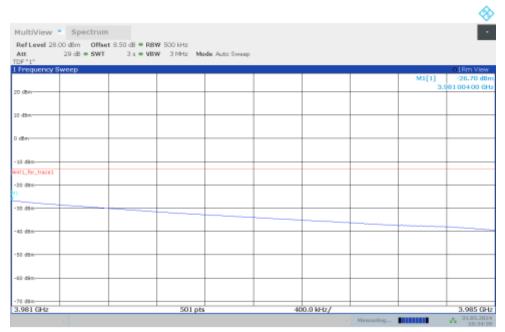
## HIGH BAND EDGE BLOCK-1RB-HIGH\_offset







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

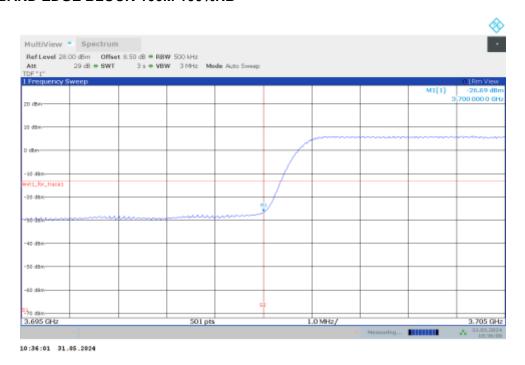


10:34:40 31.05.2024

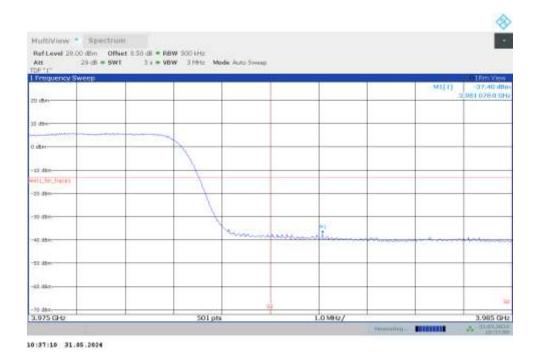




#### LOW BAND EDGE BLOCK-100M-100%RB



## HIGH BAND EDGE BLOCK-100M-100%RB



Note: The maximum value of expanded measurement uncertainty for this test item is U = 0.626 kHz, 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(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 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 27.53(n) states for mobile operations in the 3450-3550 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed –13 dBm/MHz. Compliance with this paragraph (n)(2) is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 megahertz 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, but limited to a maximum of 200 kHz. In the bands between 1 and 5 MHz removed from the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be 500 kHz. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all





emissions are attenuated at least 26 dB below the transmitter power.

Part 27.53(I) states for mobile operations in the 3700-3980 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed –13 dBm/MHz. Compliance with this paragraph (I)(2) is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be either one percent of the emission bandwidth of the fundamental emission of the transmitter or 350 kHz. In the bands between 1 and 5 MHz removed from the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be 500 kHz. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

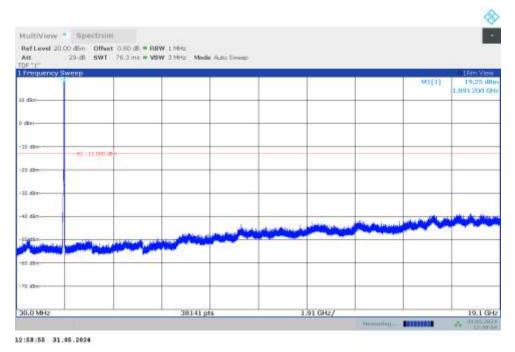




#### A. 7.3 Measurement result

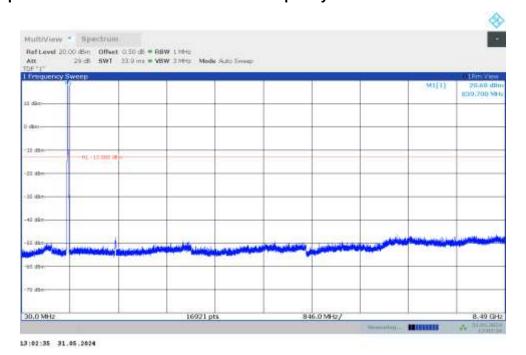
#### n2

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



## n5

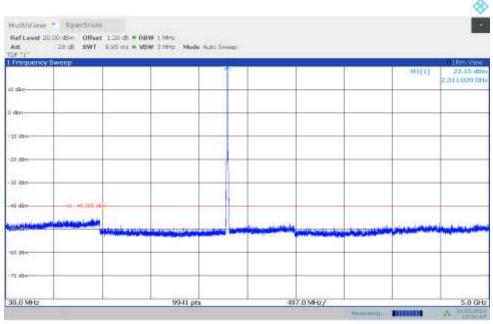
NOTE: peak above the limit line is the carrier frequency.



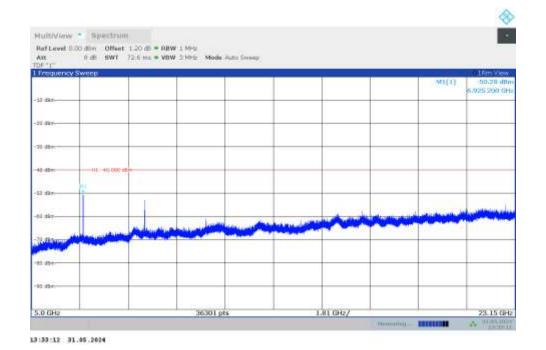




n30 NOTE: peak above the limit line is the carrier frequency.



13:32:48 31.05.2024

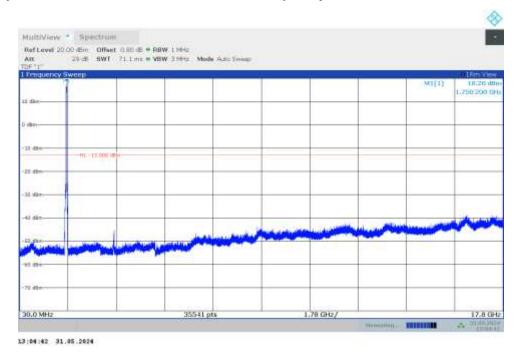






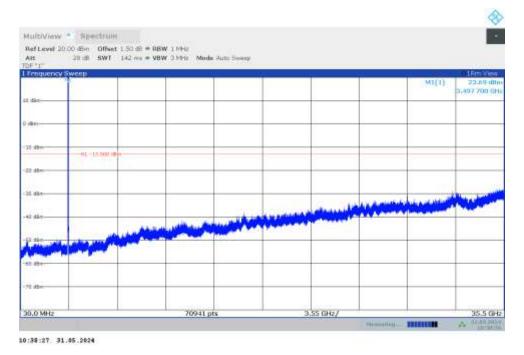
n66

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



#### n77L

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

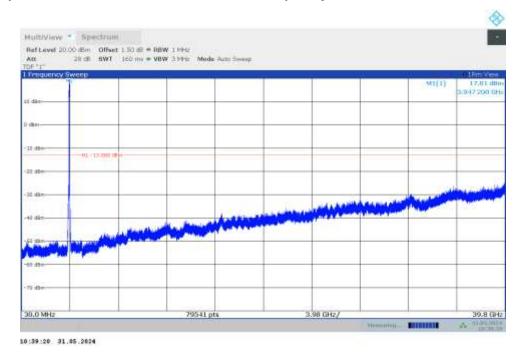






n77H

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



Note: The maximum value of expanded measurement uncertainty for this test item is U = 0.372 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 ≥ 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%.

#### **Measurement results**

## n2,40MHz

	Frequency (MHz)	PAPR (dB)									
	Frequency (MHZ)	DFT-s-pi/2 BPSK	DFT-s-QPSK	DFT-s-16QAM	DFT-s-64QAM	DFT-s-256QAM	CP-QPSK		CP-256QAM		
	1880	5.05	5.62	6.24	6.48	6.43	7.98	7.99	8.12	8.39	

## n30,10MHz

Eroguepov (MHz)				PA	PR (dB)						
Frequency (MHz)	DFT-s-pi/2 BPSK	DFT-s-QPSK	DFT-s-16QAM	DFT-s-64QAM	DFT-s-256QAM	CP-QPSK	CP-16QAM	CP-64QAM	CP-256QAM		
2310	4.71	5.69	6.38	6.79	6.65	8.05	8.08	8.33	8.38		

#### n66,45MHz

	Fraguency (MHz)	PAPR (dB)									
	Frequency (MHz)	DFT-s-pi/2 BPSK	DFT-s-QPSK	DFT-s-16QAM	DFT-s-64QAM	DFT-s-256QAM	CP-QPSK		CP-256QAM		
	1745	4.56	5.62	6.29	6.45	6.48	8.15	8.11	8.09	8.27	

## n77L,100MHz

Fraguency (MHz)	PAPR (dB)									
Frequency (MHz)	DFT-s-pi/2 BPSK	DFT-s-QPSK	DFT-s-16QAM	DFT-s-64QAM	DFT-s-256QAM	CP-QPSK		CP-256QAM		
3500.01	5.00	5.56	6.22	6.46	6.53	8.22	8.30	8.24	8.40	

## n77H,100MHz

Francisco (MIII-)				PA	PR (dB)								
Frequency (MHz)	DFT-s-pi/2 BPSK	DFT-s-QPSK	DFT-s-16QAM	DFT-s-64QAM	DFT-s-256QAM	CP-QPSK	CP-16QAM	CP-64QAM	CP-256QAM				
3840	3.91	4.73	6.29	6.54	6.51	8.27	8.27	8.36	8.25				

Note: The maximum value of expanded measurement uncertainty for this test item is U = 0.356 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 26th day of June 2023.

Mr. Trace McInturff, 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\*\*\*