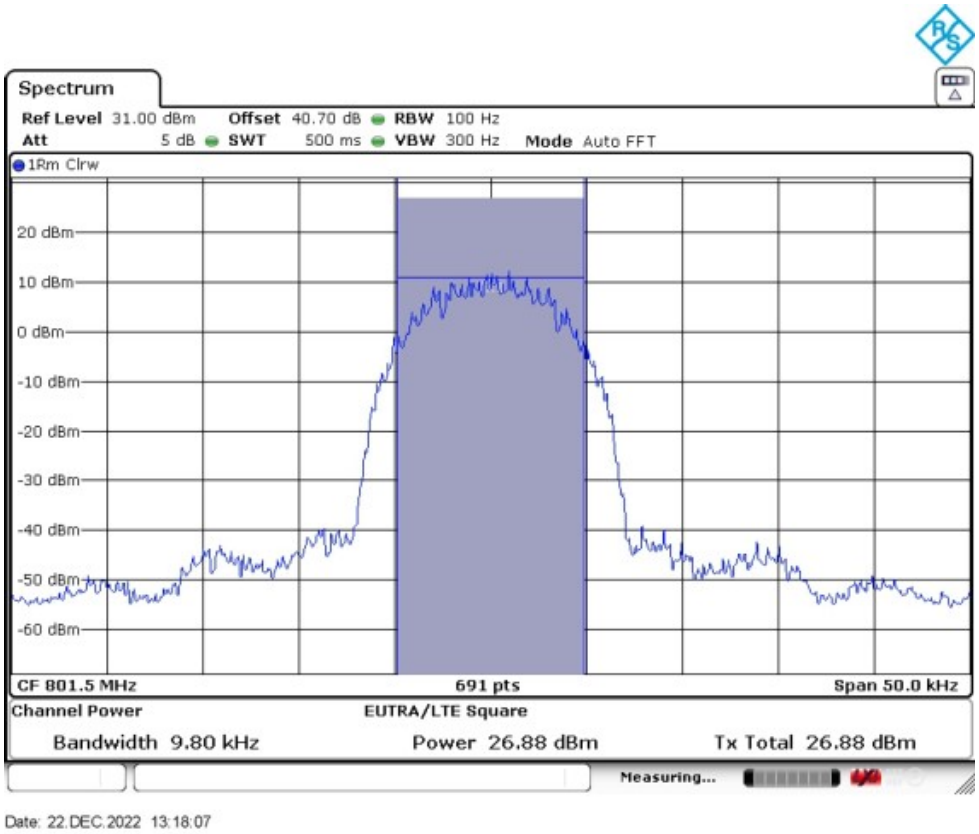
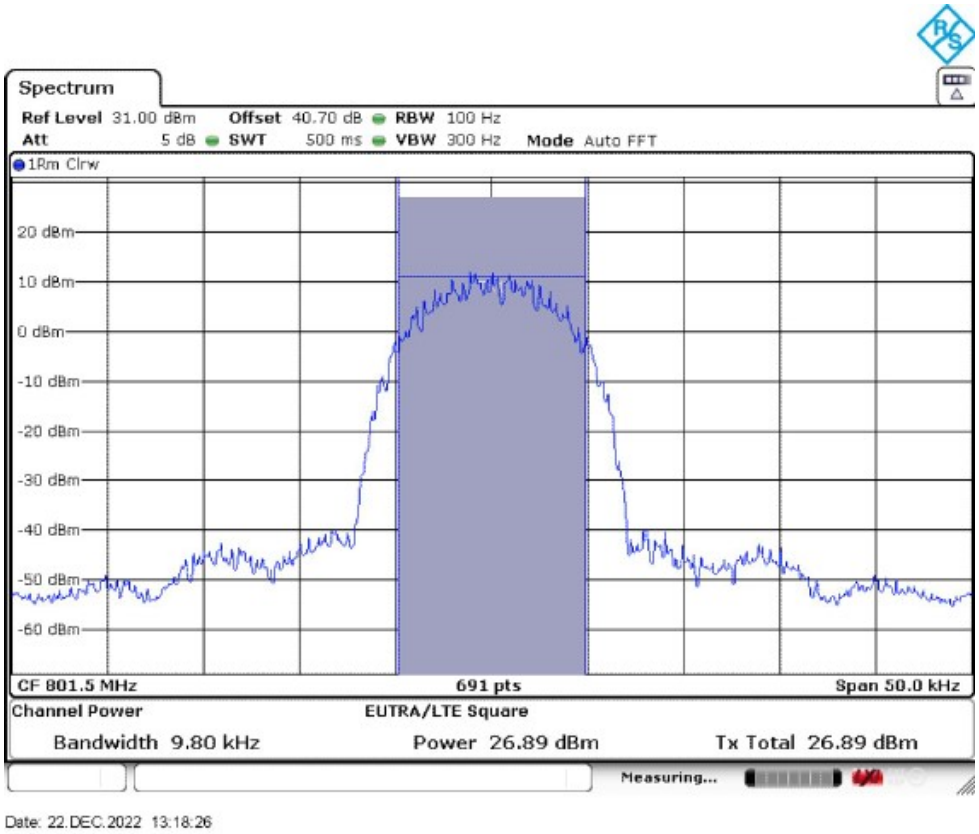


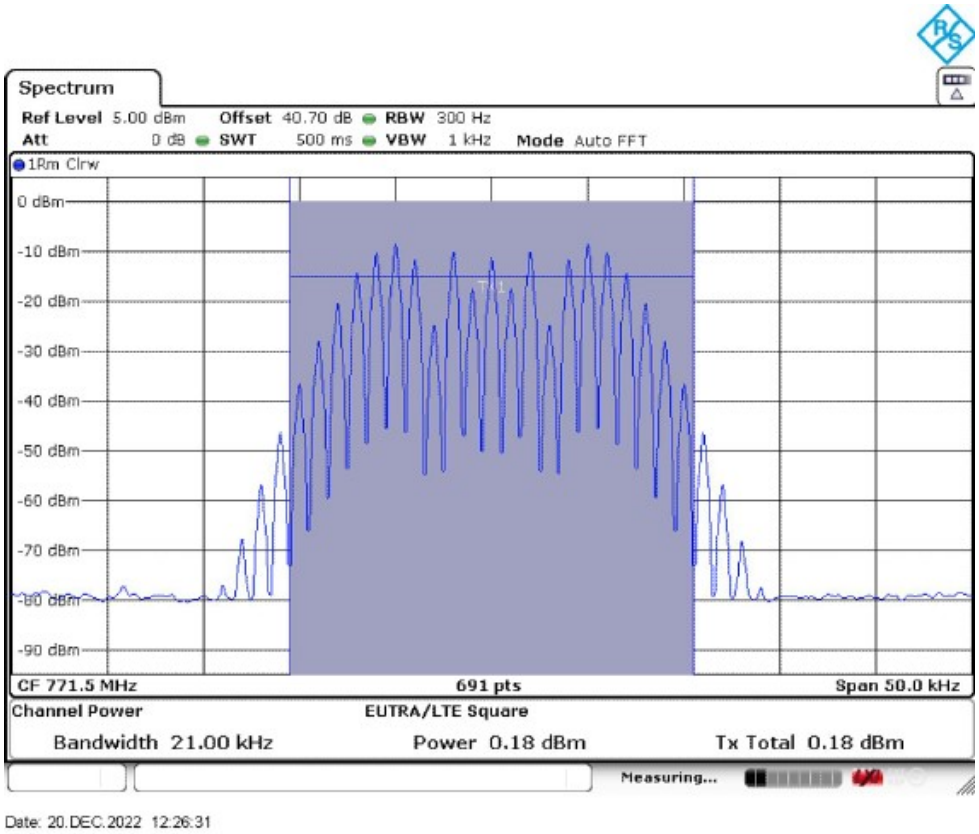
Middle Frequency: 801.5MHz, Output occupied BW(AGC)



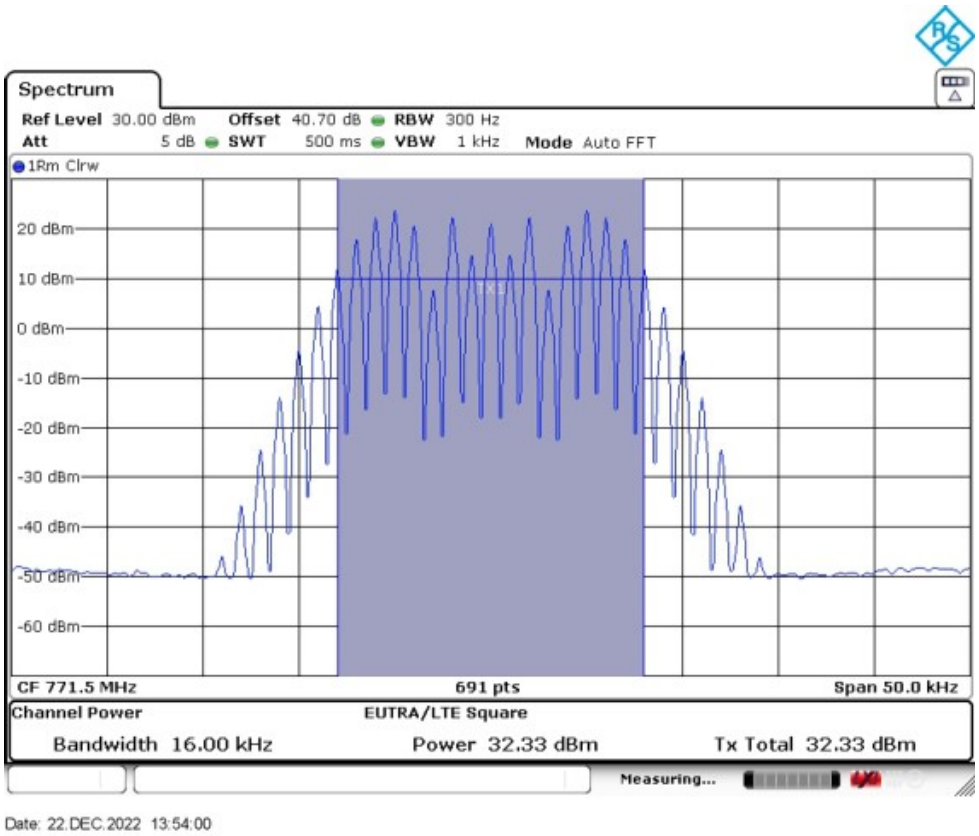
Middle Frequency: 801.5MHz, Output occupied BW (with the input signal amplitude set 3 dB above the AGC threshold)

10.5.5.3.1.5 Analog FM

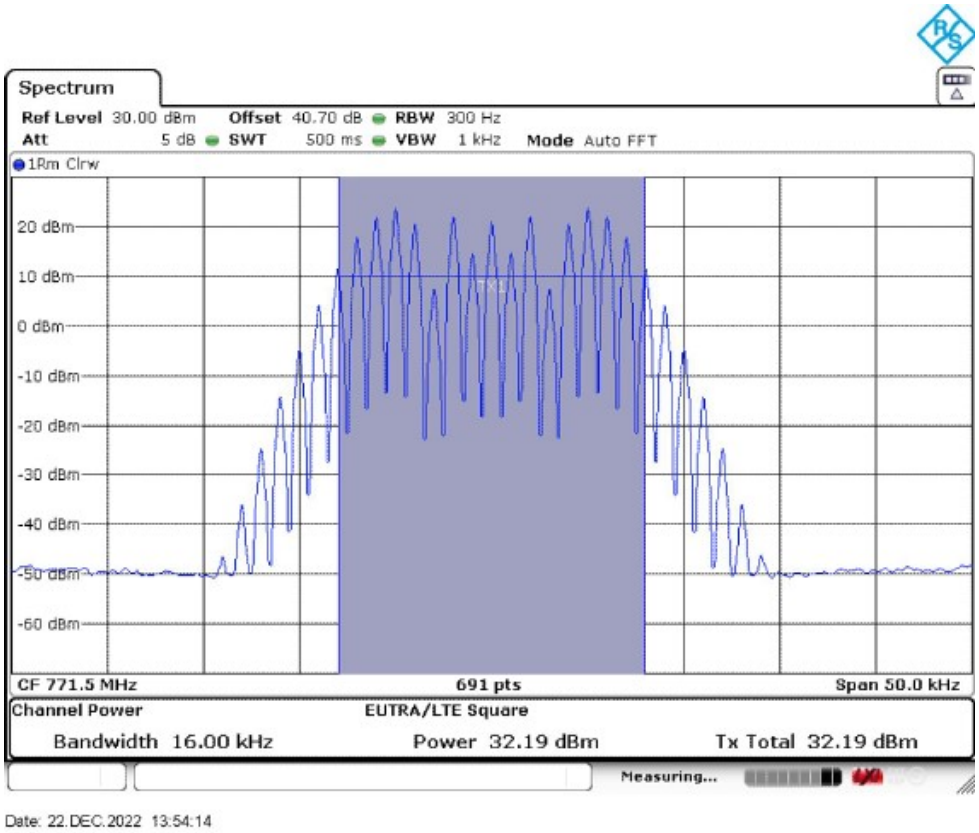
10.5.5.3.1.5.1 Downlink



Middle Frequency: 771.5MHz, Input occupied BW

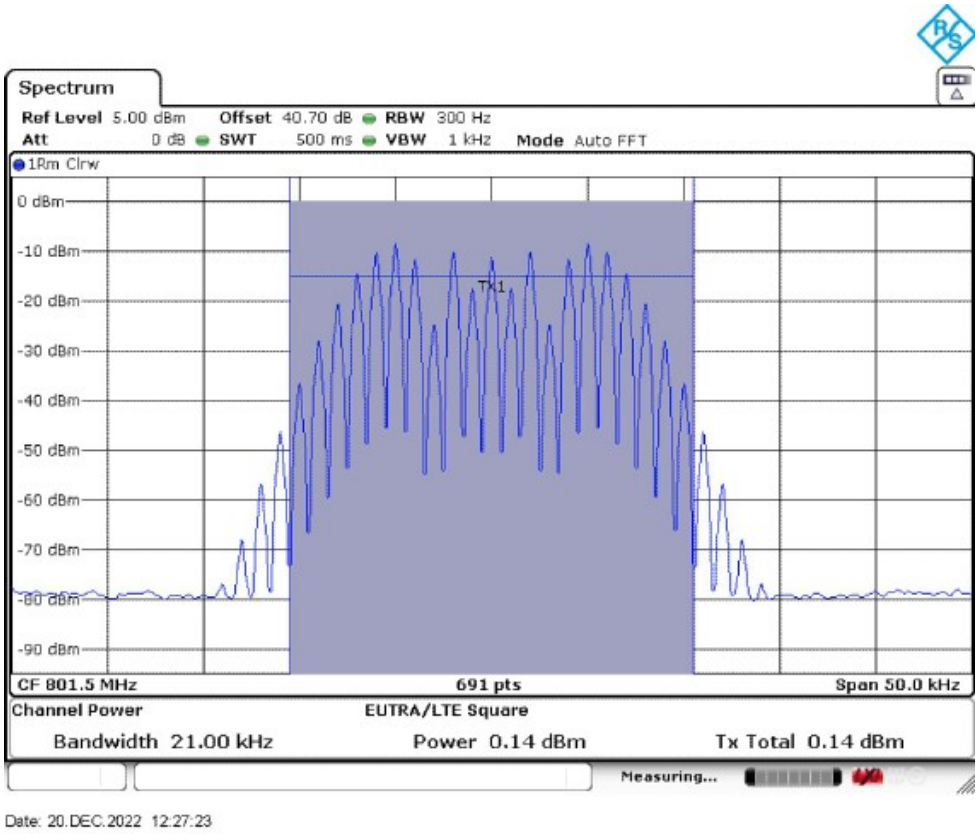


Middle Frequency: 771.5MHz, Output occupied BW(AGC)

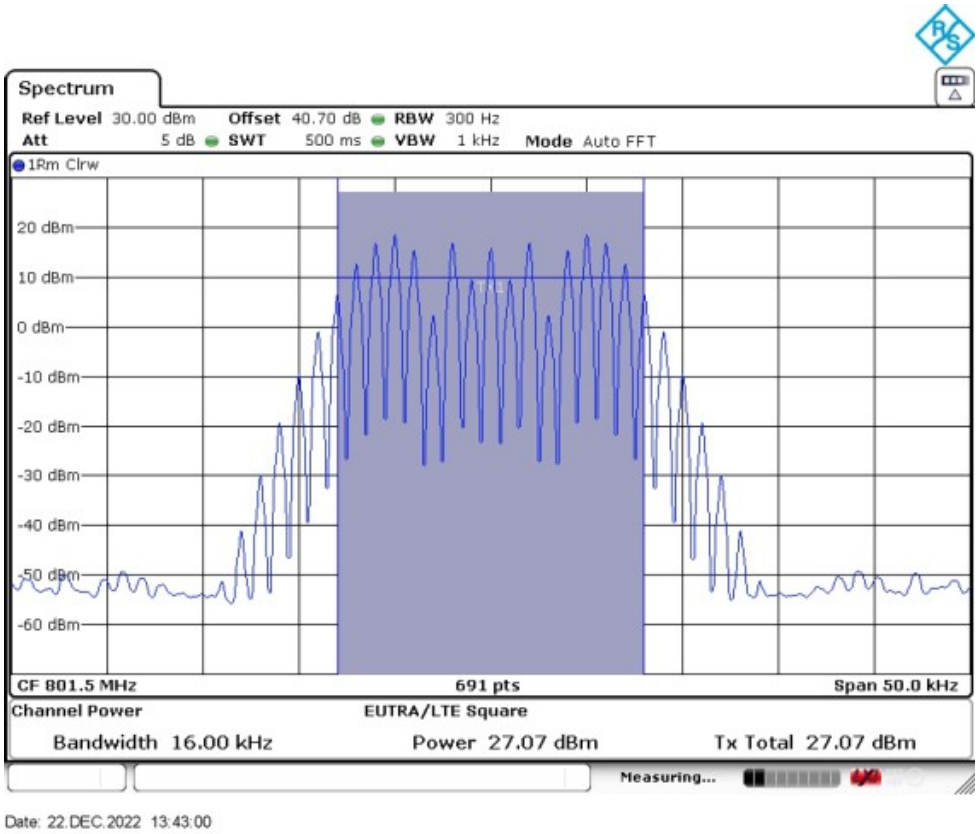


Middle Frequency: 771.5MHz, Output occupied BW (with the input signal amplitude set 3 dB above the AGC threshold)

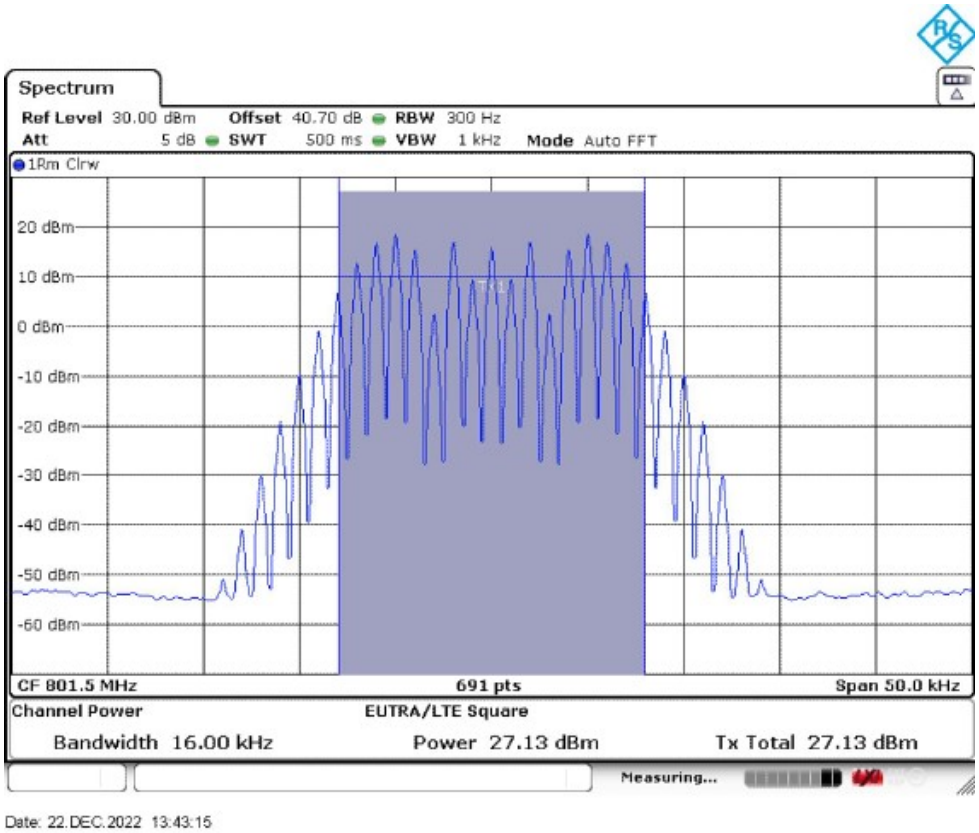
10.5.5.3.1.5.2 Uplink



Middle Frequency: 801.5MHz MHz, Input occupied BW



Middle Frequency: 801.5MHz, Output occupied BW(AGC)

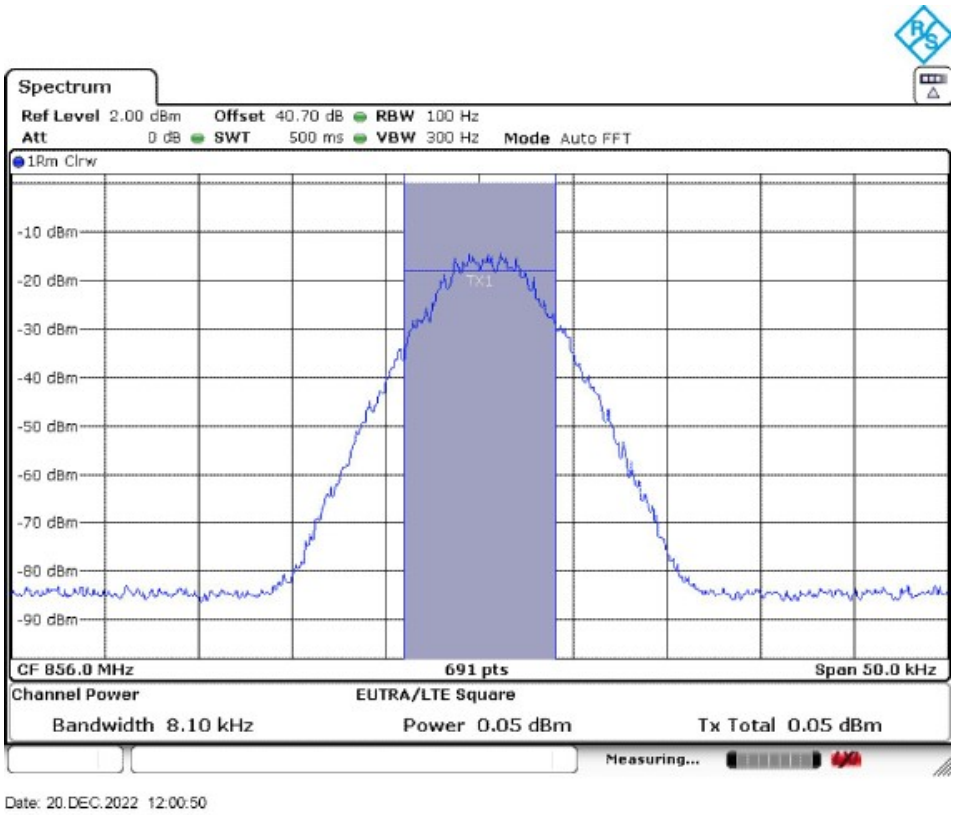


Middle Frequency: 801.5MHz, Output occupied BW (with the input signal amplitude set 3 dB above the AGC threshold)

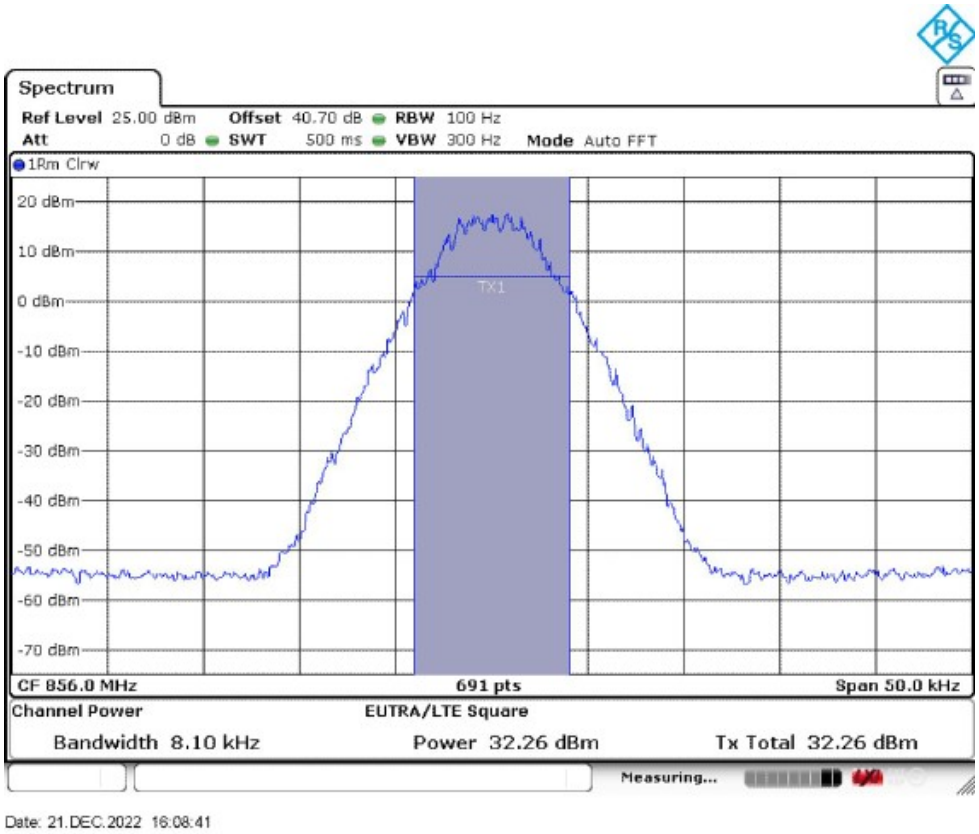
10.5.5.3.2 800MHz Band

10.5.5.3.2.1 P25 Phase I(C4FM)

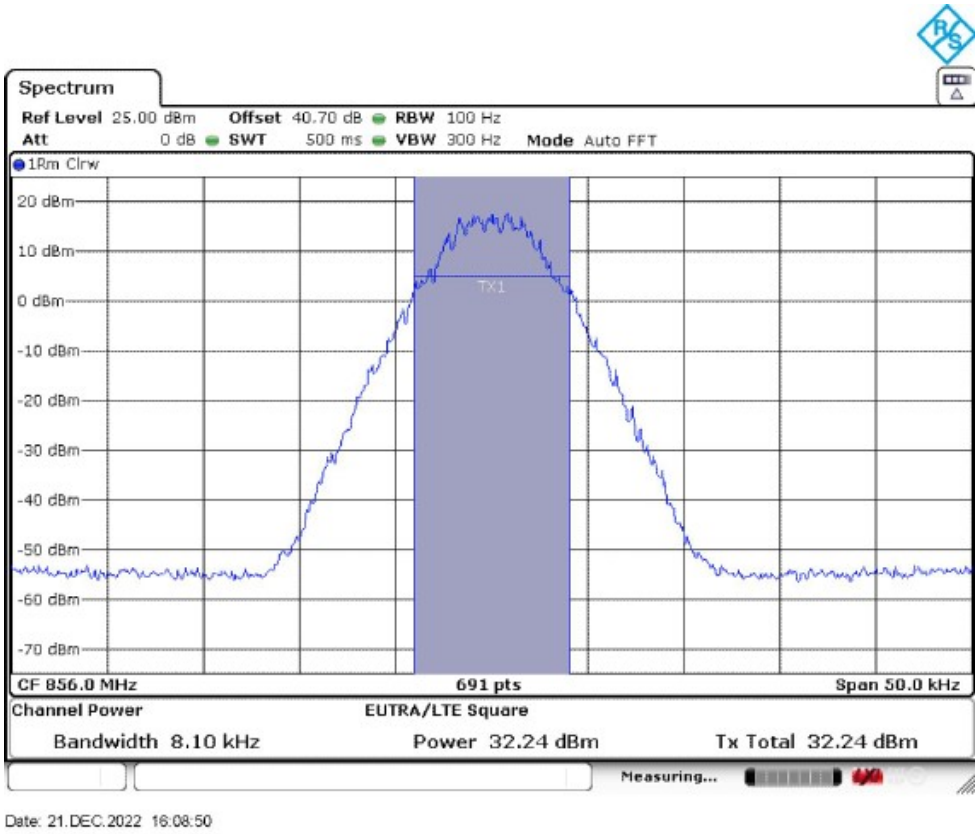
10.5.5.3.2.1.1 Downlink



Middle Frequency: 856.0MHz, Input occupied BW

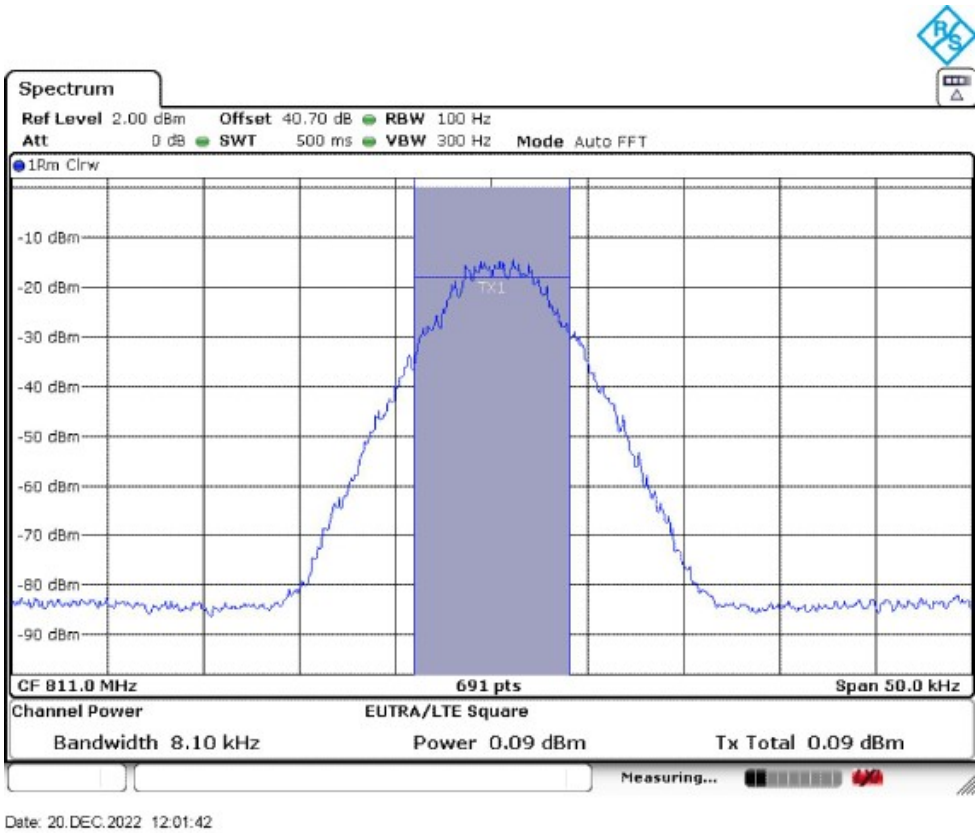


Middle Frequency: 856.0MHz, Output occupied BW(AGC)

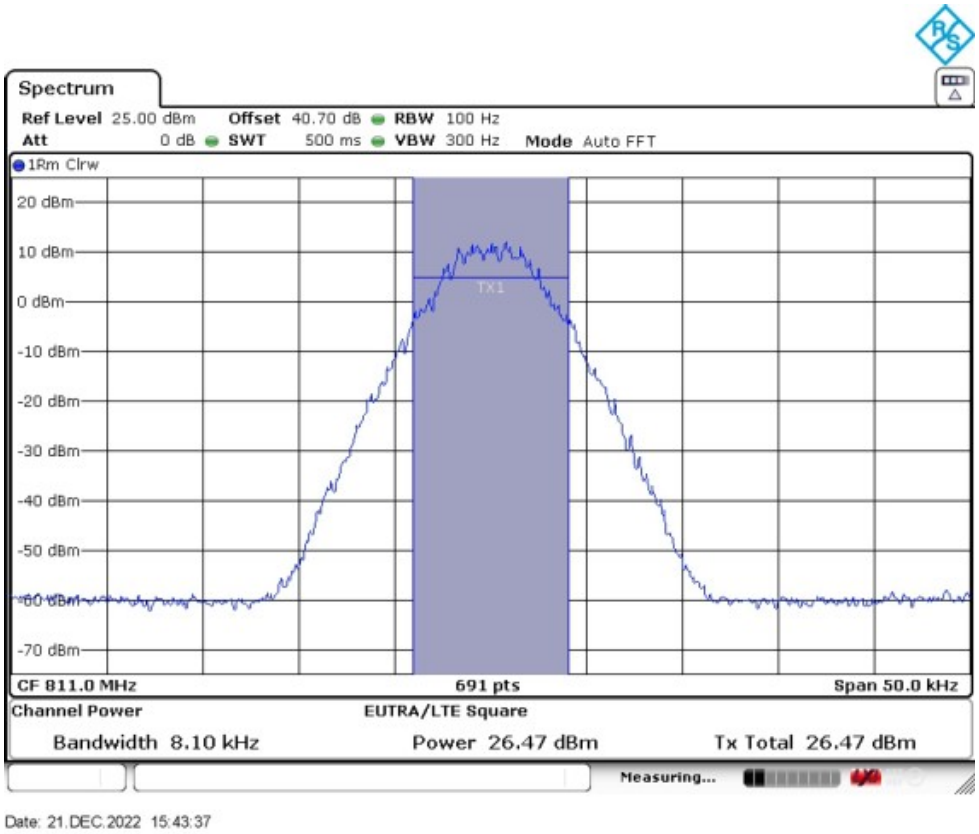


Middle Frequency: 856.0MHz, Output occupied BW (with the input signal amplitude set 3 dB above the AGC threshold)

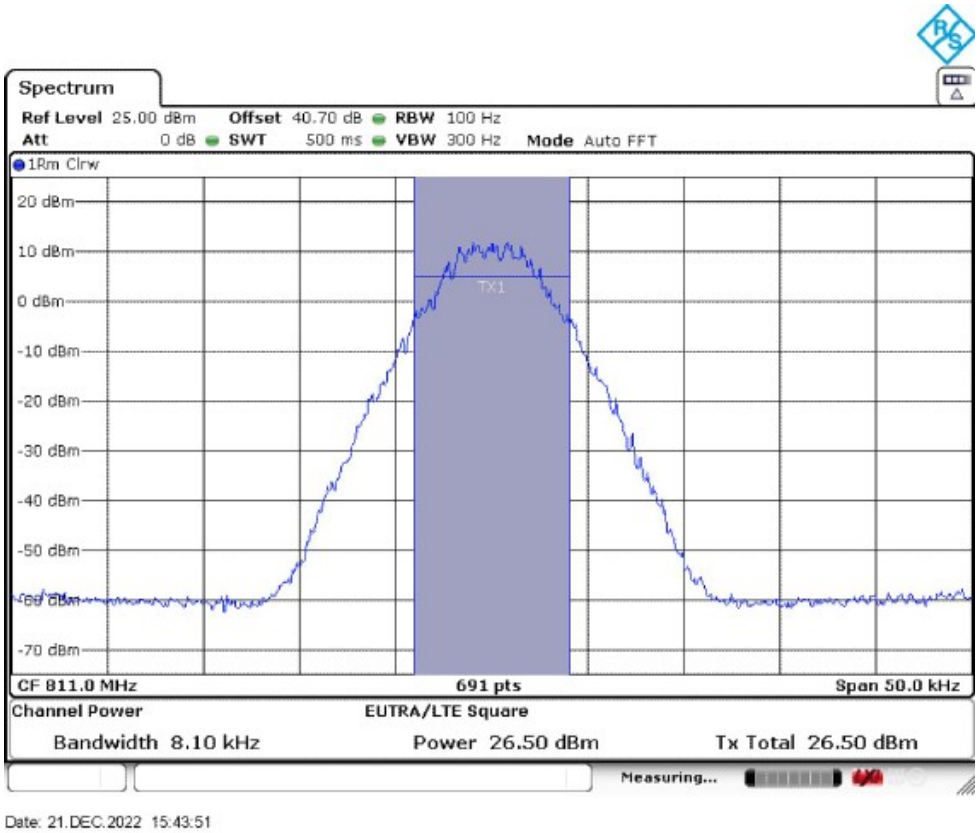
10.5.5.3.2.1.2 Uplink



Middle Frequency: 811.0MHz MHz, Input occupied BW



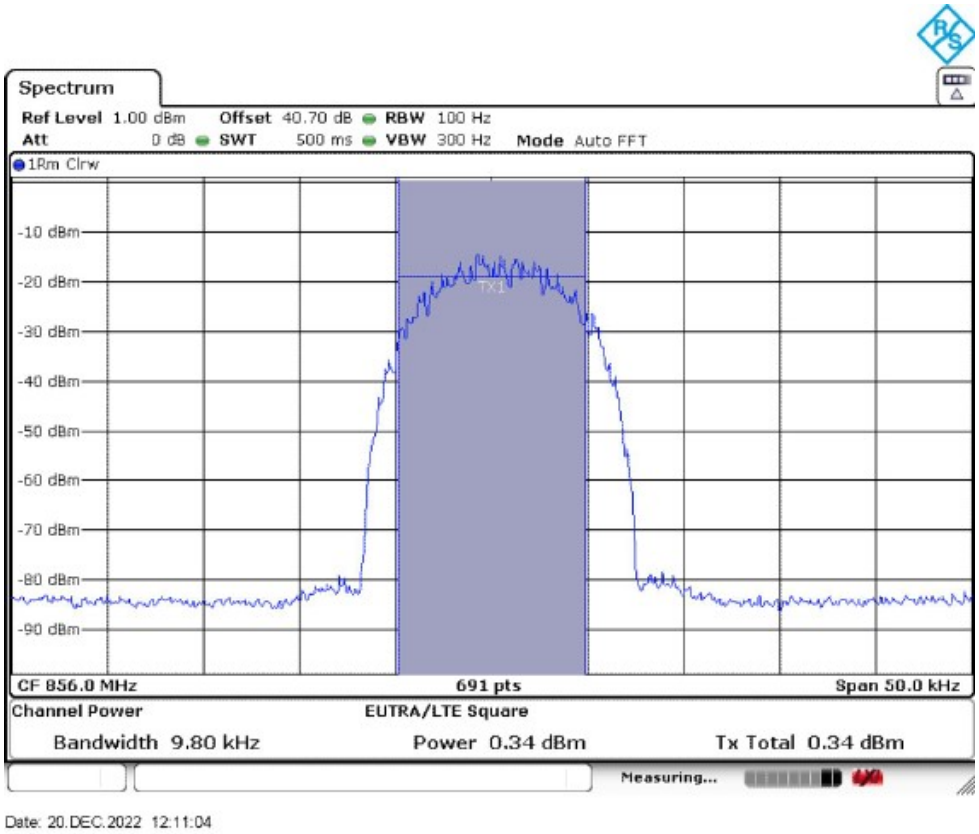
Middle Frequency: 811.0MHz, Output occupied BW(AGC)



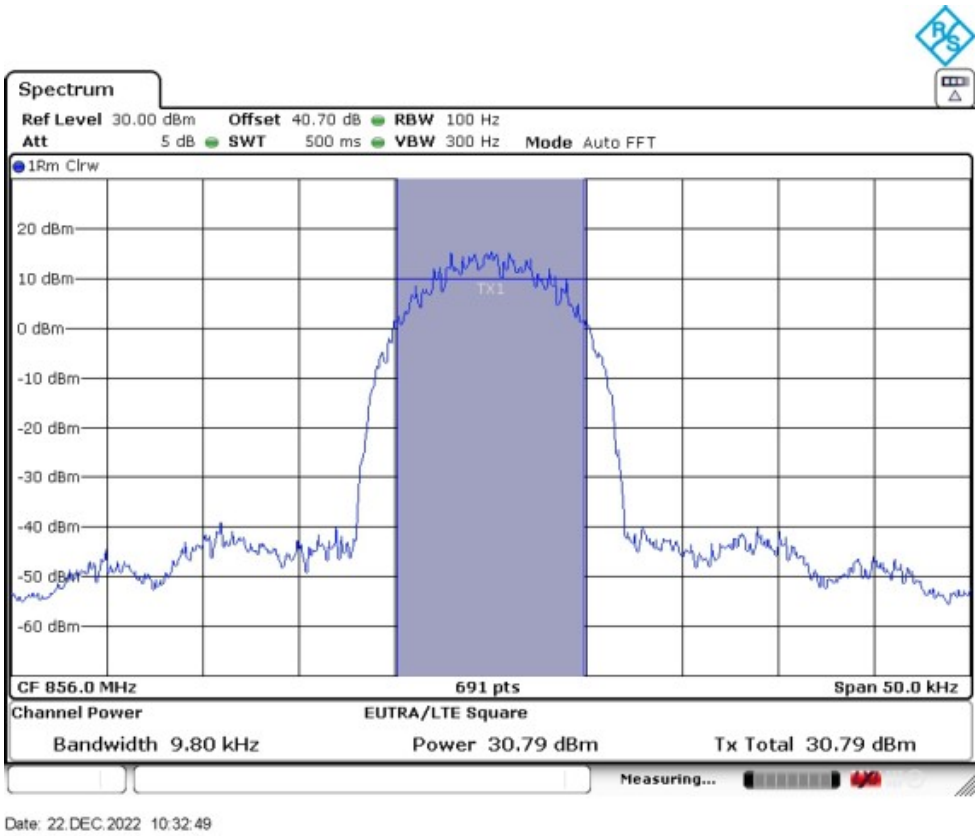
Middle Frequency: 811.0MHz, Output occupied BW (with the input signal amplitude set 3 dB above the AGC threshold)

10.5.5.3.2.2 P25 Phase II(H-DQPSK)

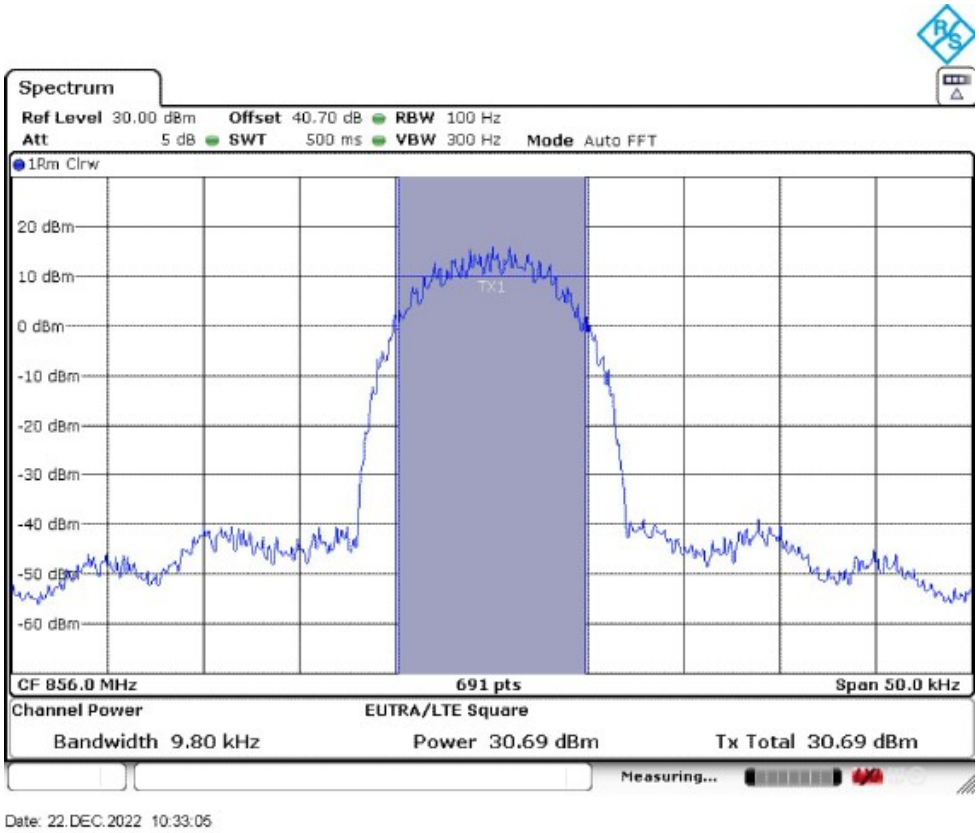
10.5.5.3.2.2.1 Downlink



Middle Frequency: 856.0MHz, Input occupied BW

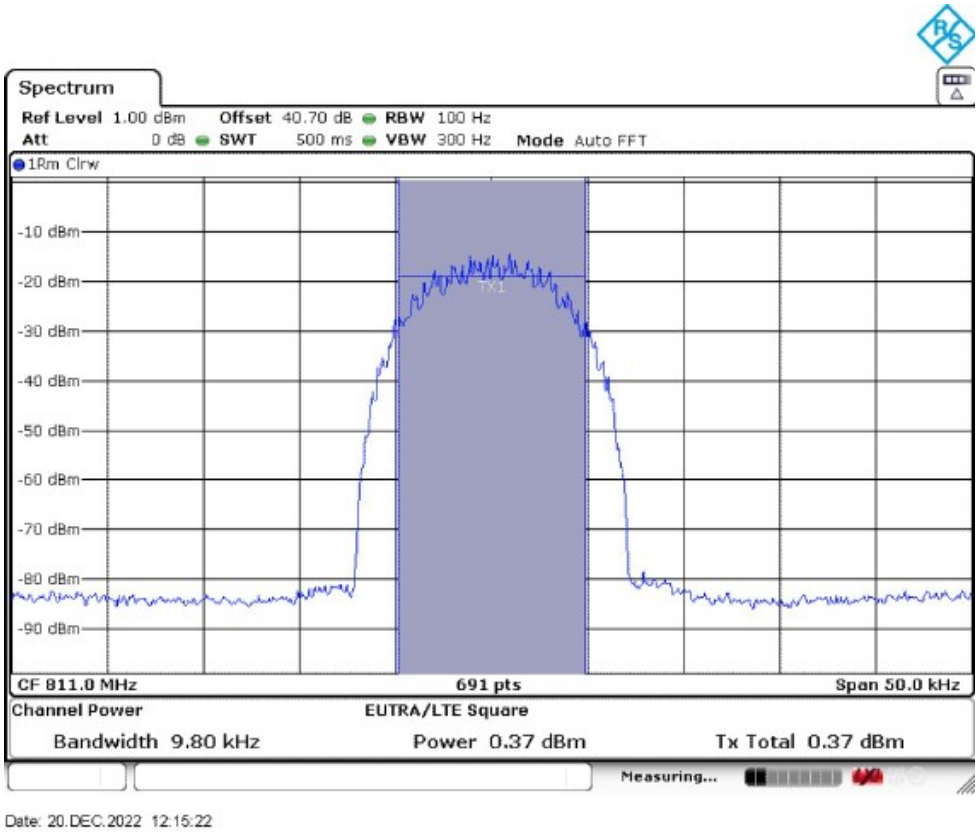


Middle Frequency: 856.0MHz, Output occupied BW(AGC)

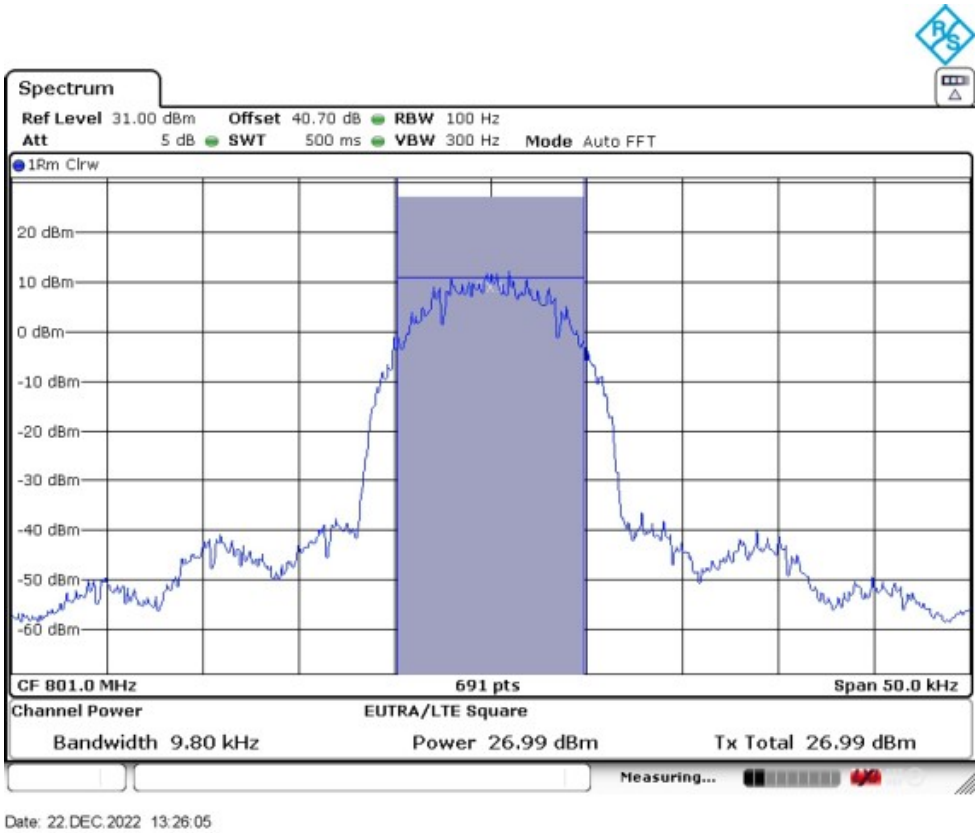


Middle Frequency: 856.0MHz, Output occupied BW (with the input signal amplitude set 3 dB above the AGC threshold)

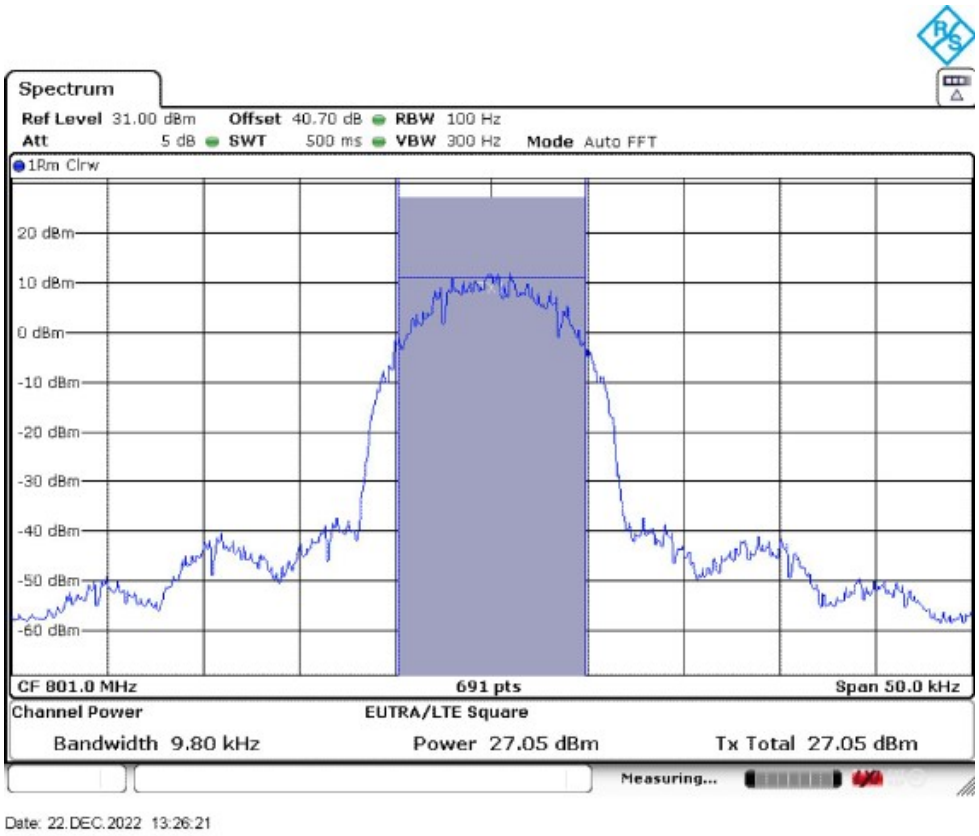
10.5.5.3.2.2.2 Uplink



Middle Frequency: 811.0MHz MHz, Input occupied BW



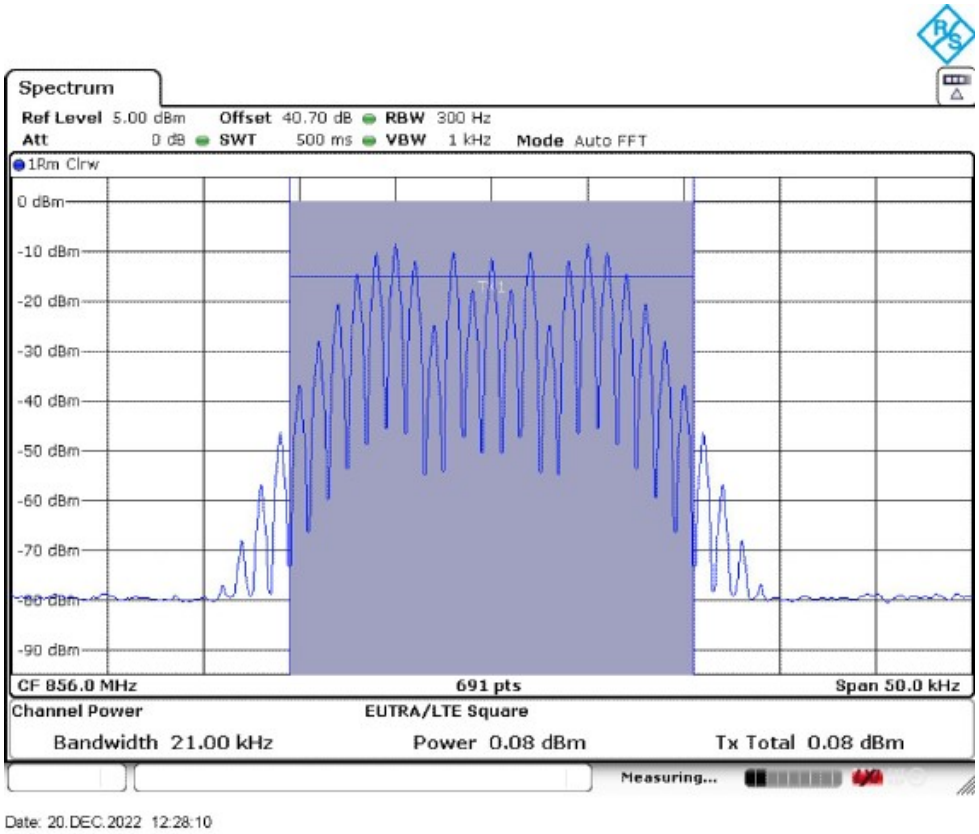
Middle Frequency: 811.0MHz, Output occupied BW(AGC)



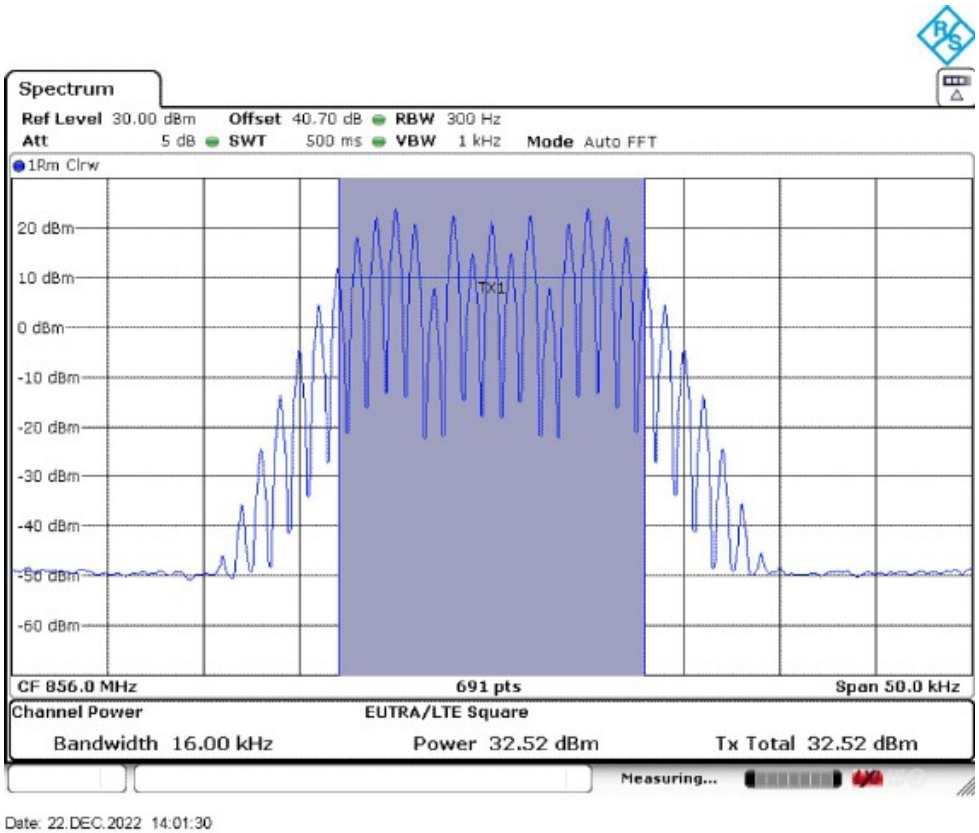
Middle Frequency: 811.0MHz, Output occupied BW (with the input signal amplitude set 3 dB above the AGC threshold)

10.5.5.3.2.3 Analog FM

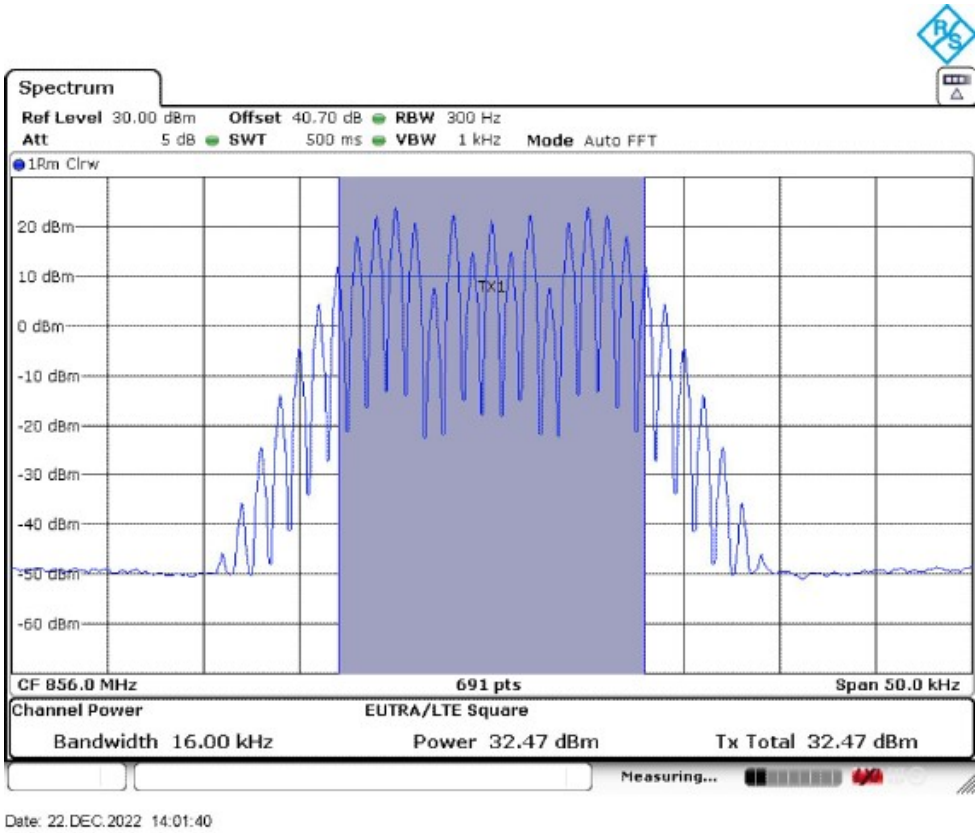
10.5.5.3.2.3.1 Downlink



Middle Frequency: 856.0MHz, Input occupied BW

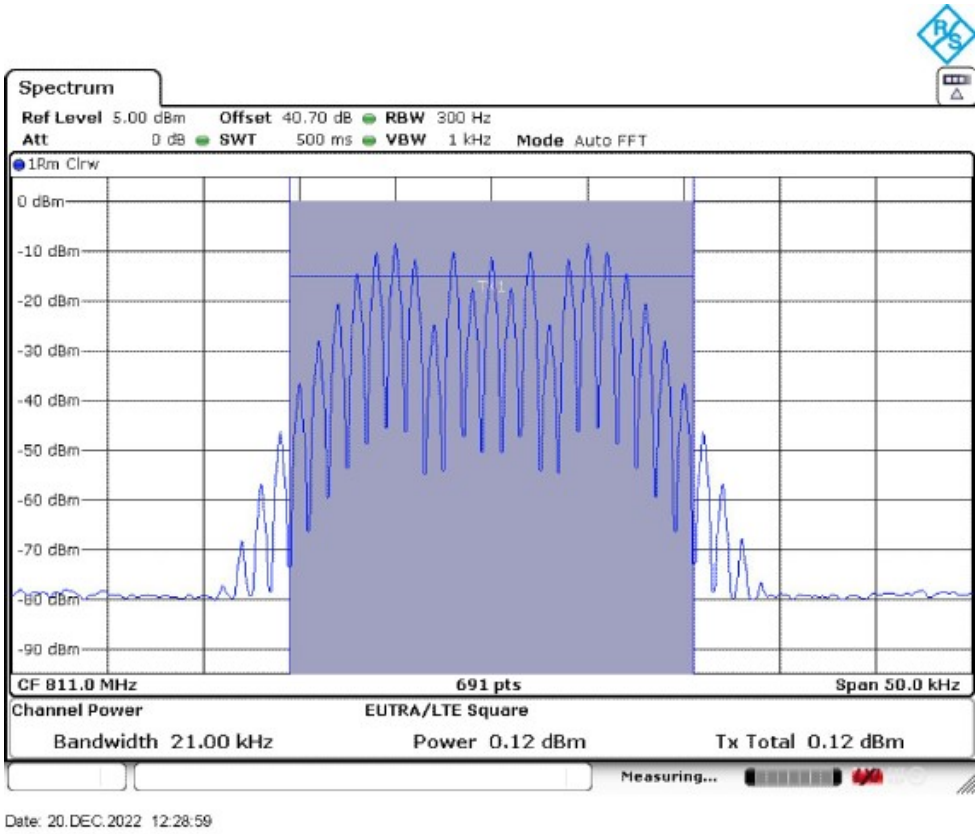


Middle Frequency: 856.0MHz, Output occupied BW(AGC)

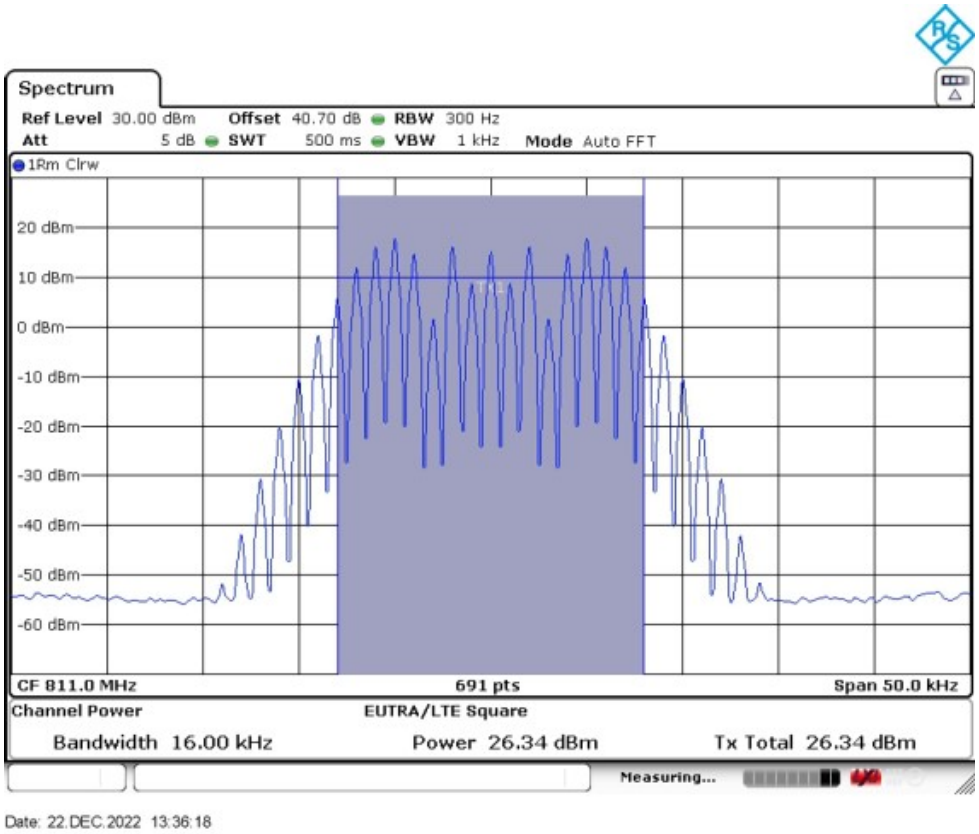


Middle Frequency: 856.0MHz, Output occupied BW (with the input signal amplitude set 3 dB above the AGC threshold)

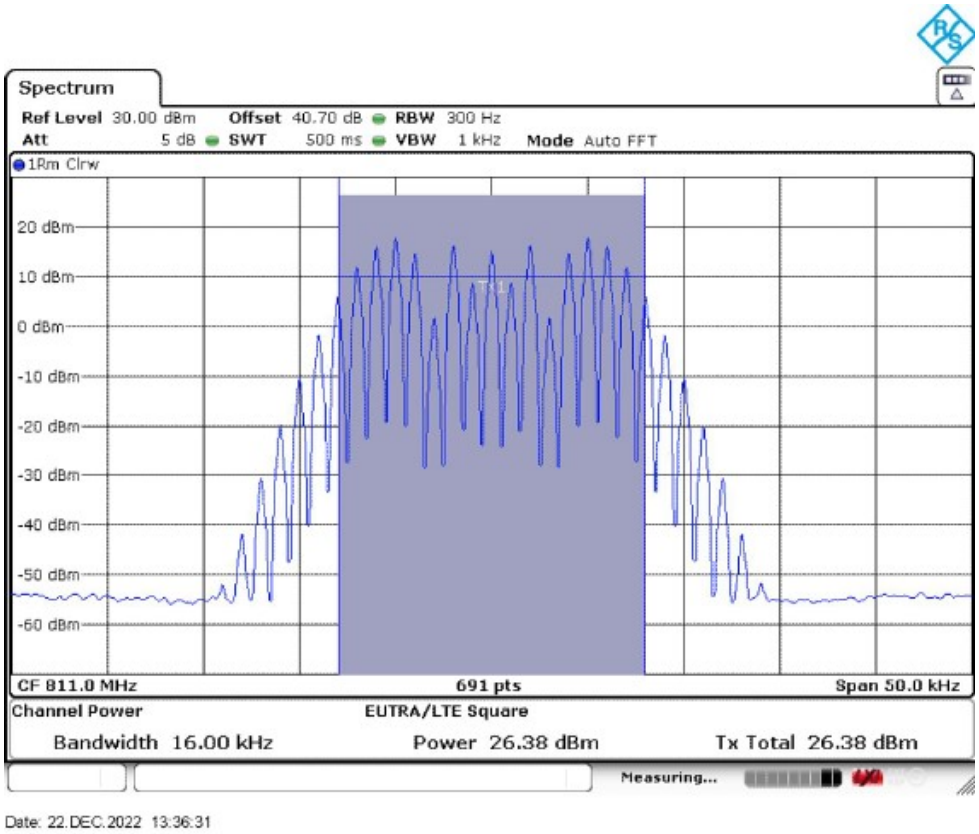
10.5.5.3.2.3.2 Uplink



Middle Frequency: 811.0MHz MHz, Input occupied BW



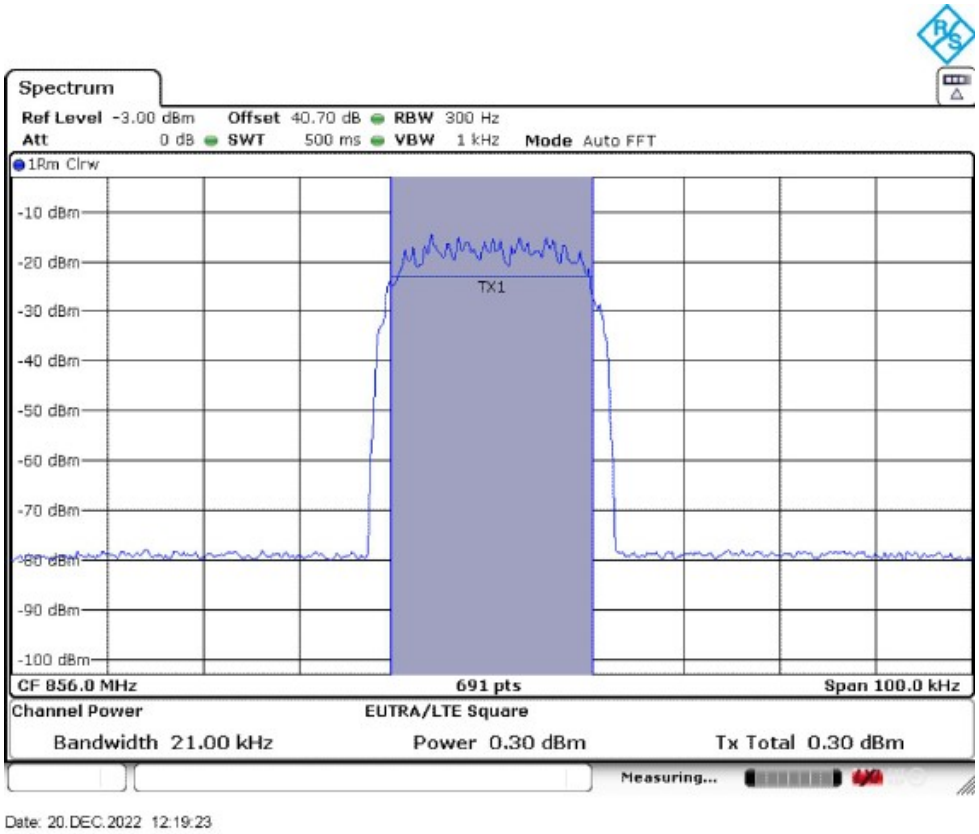
Middle Frequency: 811.0MHz, Output occupied BW(AGC)



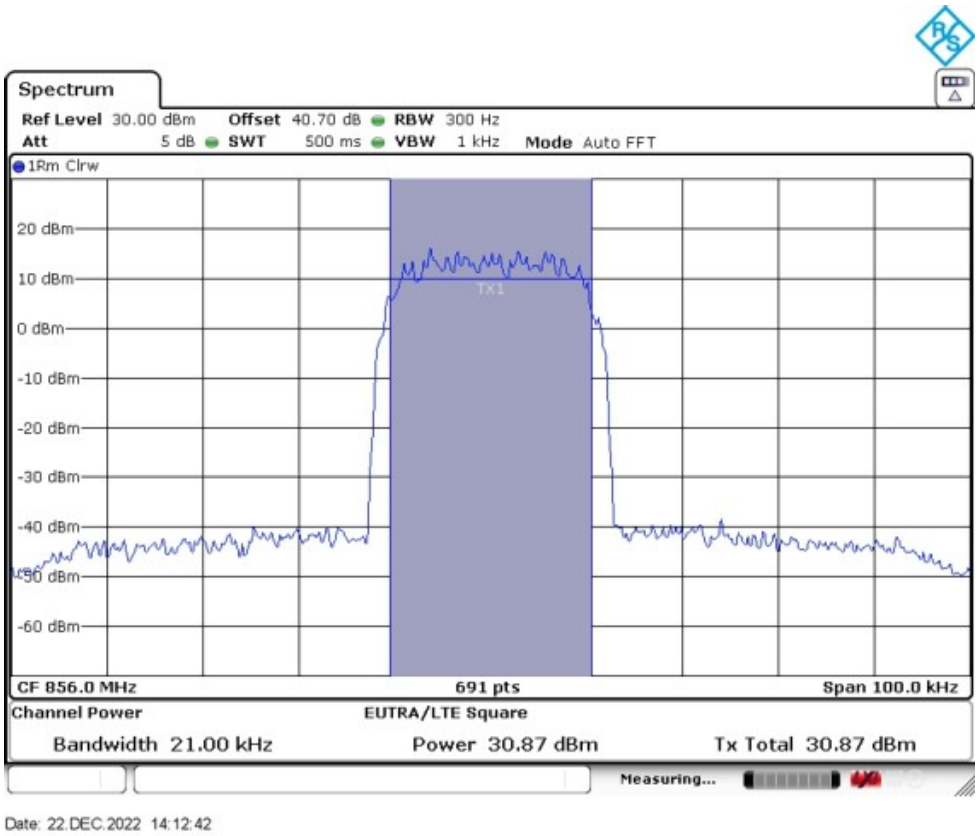
Middle Frequency: 811.0MHz, Output occupied BW (with the input signal amplitude set 3 dB above the AGC threshold)

10.5.5.3.2.4 Tetra

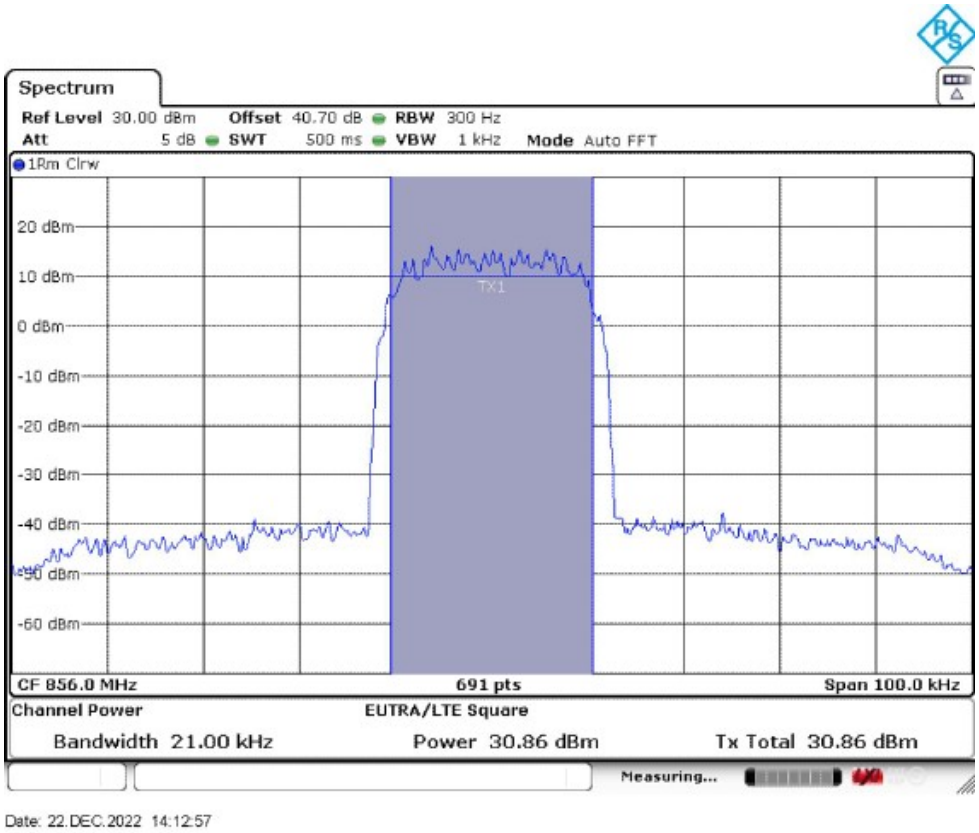
10.5.5.3.2.4.1 Downlink



Middle Frequency: 856.0MHz, Input occupied BW

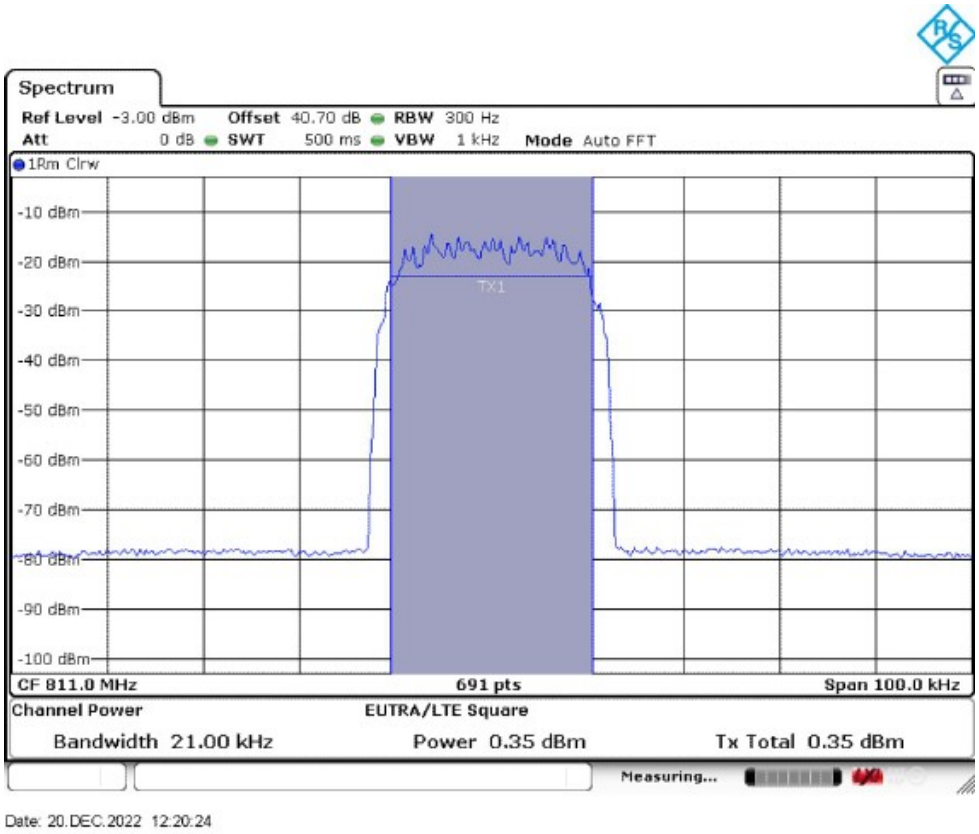


Middle Frequency: 856.0MHz, Output occupied BW(AGC)

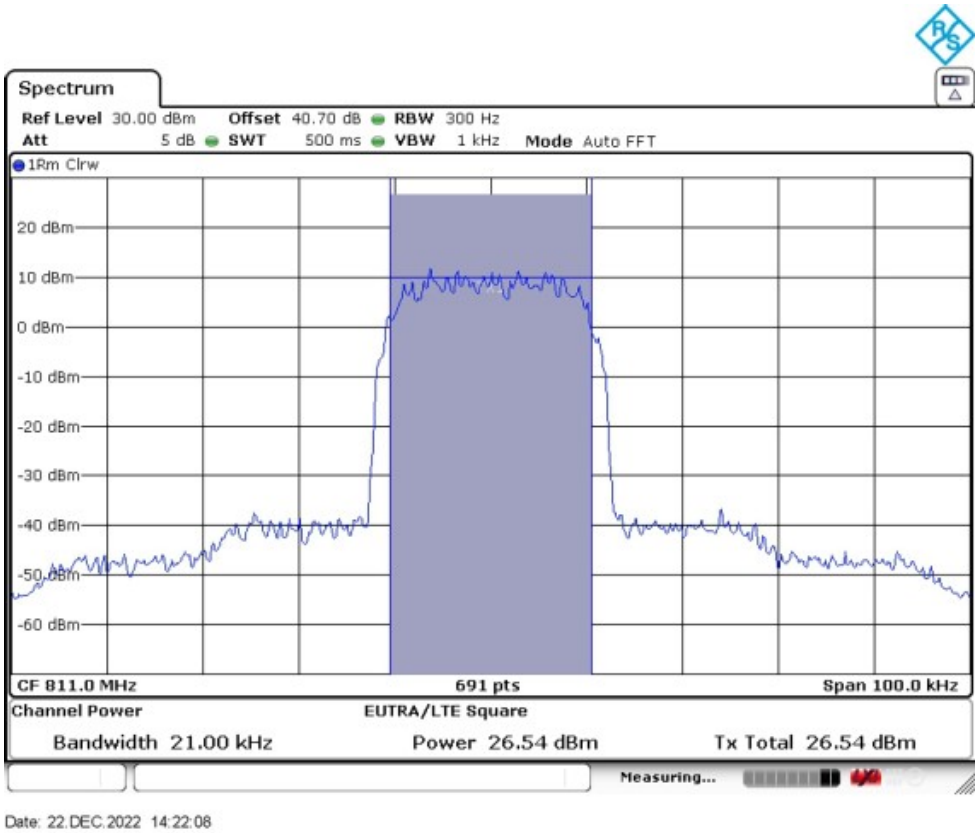


Middle Frequency: 856.0MHz, Output occupied BW (with the input signal amplitude set 3 dB above the AGC threshold)

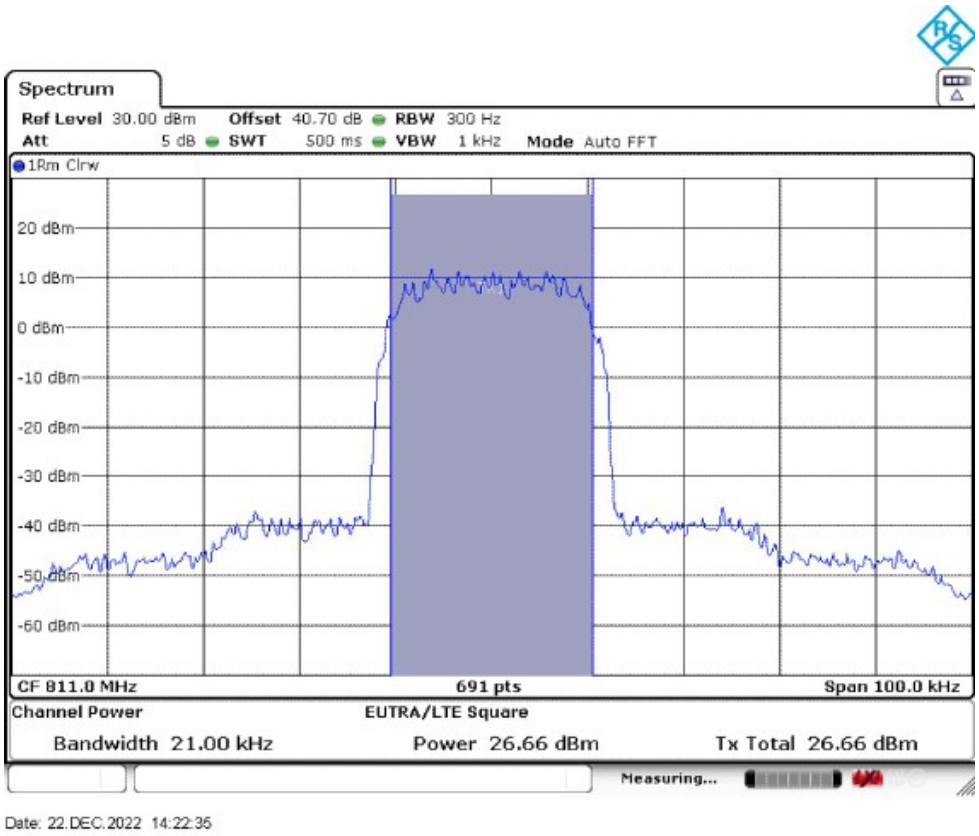
10.5.5.3.2.4.2 Uplink



Middle Frequency: 811.0MHz MHz, Input occupied BW



Middle Frequency: 811.0MHz, Output occupied BW(AGC)



Middle Frequency: 811.0MHz, Output occupied BW (with the input signal amplitude set 3 dB above the AGC threshold)

10.6 Mean power and amplifier/booster gain

Test requirement:	KDB 935210 D05 clause 4.5 FCC PART 90.219 (e)(1)
Test Method:	KDB 935210 D05 clause 4.5

10.6.1 Requirements

According to KDB 935210 D05 clause 4.5, the mean input and output power and the amplifier gain was measured by adjusting the internal gain control of the EUT to the maximum gain for which equipment certification is sought. Any EUT attenuation settings were set to their minimum value.

Input power levels (Downlink and Uplink) were set to maximum input ratings while confirming that the device is not capable of operating in saturation (Non-linear mode) at the rated input levels, including during the performance of the input/output power measurements.

For FCC PART 90.219 (e)(1) requirement:

(e) *Device Specifications.* In addition to the general rules for equipment certification in §90.203(a)(2) and part 2, subpart J of this chapter, a signal booster must also meet the rules in this paragraph.

(1) The output power capability of a signal booster must be designed for deployments providing a radiated power not exceeding 5 Watts ERP for each retransmitted channel.

10.6.2 Test configuration

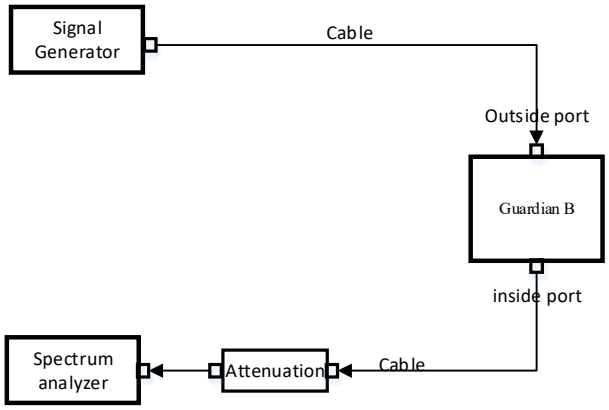


Figure 10.6-1 Downlink connection diagram

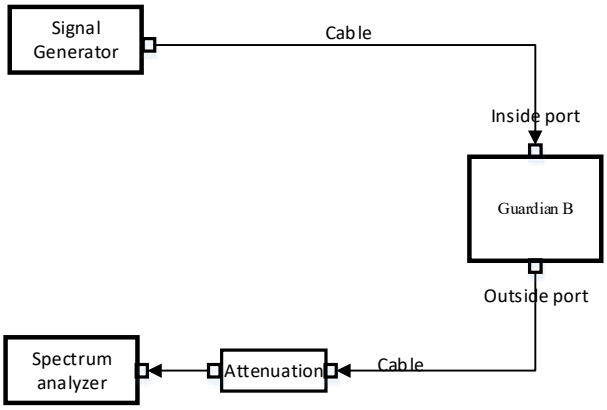


Figure 10.6-2 Uplink connection diagram

---------- **The following blanks** ----------

10.6.3 Test procedures

a) Connect a signal generator to the input of the EUT.
b) Configure to generate the AWGN (broadband) test signal.
c) The frequency of the signal generator shall be set to the frequency f_0 as determined from 3.3.
d) Connect a spectrum analyzer or power meter to the output of the EUT using appropriate attenuation as necessary.
e) Set the signal generator output power to a level that produces an EUT output level that is just below the AGC threshold (see 3.2), but not more than 0.5 dB below.
f) Measure and record the output power of the EUT; use 3.5.3 or 3.5.4 for power measurement.
g) Remove the EUT from the measurement setup. Using the same signal generator settings, repeat the power measurement at the signal generator port, which was used as the input signal to the EUT, and record as the input power. EUT gain may be calculated as described in 3.5.5.
h) Repeat steps f) and g) with input signal amplitude set to 3 dB above the AGC threshold level.
i) Repeat steps e) to h) with the narrowband test signal.
j) Repeat steps e) to i) for all frequency bands authorized for use by the EUT.

---------- The following blanks ----------

10.6.4 Test results

Test Date (yy-mm-dd): 2022-12-22

Normal condition: Temp: 24.3℃, Humid: 18%, Atmospheric Pressure:101kpa

Supply Voltage: AC 110V, 50Hz

10.6.4.1 2W level test data

10.6.4.1.1 Mean power and gain

10.6.4.1.1.1 700MHz Band

10.6.4.1.1.1.1 Downlink

Test link	Frequency (MHz)	Sig output power (dBm)	Input Cable Loss (dB)	Peak power (dBm)	Output Atten +Output Cable Loss(dB)	Output power (dBm)	Output power (W)	Gain (dB)
1. LTE 5MHz								
Down(1)	760.5	-46.0	0.9	-9.3	40.7	32.1	1.6	79.0
Down(2)	760.5	-43.0	0.9	-9.4	40.7	32.1	1.6	76.0
Down(1)	763.0	-46.0	0.9	-8.6	40.7	32.6	1.8	79.5
Down(2)	763.0	-43.0	0.9	-8.7	40.7	32.6	1.8	76.5
Down(1)	765.5	-45.0	0.9	-8.9	40.7	32.7	1.9	78.6
Down(2)	765.5	-42.0	0.9	-8.9	40.7	32.7	1.9	75.6
2. LTE 10MHz								
Down(1)	763.0	-44.8	0.9	-8.5	40.7	32.5	1.8	78.2
Down(2)	763.0	-41.8	0.9	-8.6	40.7	32.5	1.8	75.2
3. P25 Phase I(C4FM)								
Down(1)	768.00625	-45.0	0.9	-7.5	40.7	33.2	2.1	79.1
Down(2)	768.00625	-42.0	0.9	-7.5	40.7	33.2	2.1	76.1
Down(1)	771.5	-44.5	0.9	-8.4	40.7	32.5	1.8	77.9
Down(2)	771.5	-41.5	0.9	-8.5	40.7	32.5	1.8	74.9
Down(1)	774.99375	-40.9	0.9	-8.6	40.7	32.1	1.6	73.9
Down(2)	774.99375	-37.9	0.9	-8.7	40.7	32.0	1.6	70.8
4. P25 Phase II(H-DQPSK)								
Down(1)	768.00625	-46.0	0.9	-9.1	40.7	32.6	1.8	79.5
Down(2)	768.00625	-43.0	0.9	-9.3	40.7	32.4	1.7	76.3
Down(1)	771.5	-45.0	0.9	-9.3	40.7	32.4	1.7	78.3
Down(2)	771.5	-42.0	0.9	-9.4	40.7	32.3	1.7	75.2
Down(1)	774.99375	-42.0	0.9	-9.6	40.7	32.1	1.6	75.0

Down(2)	774.99375	-39.0	0.9	-9.7	40.7	32.0	1.6	71.9
5. Analog FM								
Down(1)	768.0125	-45.0	0.9	-8.2	40.7	32.5	1.8	78.4
Down(2)	768.0125	-42.0	0.9	-8.4	40.7	32.3	1.7	75.2
Down(1)	771.5	-44.5	0.9	-8.4	40.7	32.3	1.7	77.7
Down(2)	771.5	-41.5	0.9	-8.5	40.7	32.2	1.7	74.6
Down(1)	774.9875	-41.0	0.9	-8.7	40.7	32.0	1.6	73.9
Down(2)	774.9875	-38.0	0.9	-8.7	40.7	32.0	1.6	70.9

NOTE: (1) Level is 0.5 dB below AGC threshold; (2) Level is 3dB above AGC threshold.

10.6.4.1.1.1.2 Uplink

Test link	Frequency (MHz)	Sig output power (dBm)	Input Cable Loss (dB)	Peak power (dBm)	Output Atten +Output Cable Loss(dB)	Output power (dBm)	Output power (W)	Gain (dB)
1. LTE 5MHz								
Up(1)	790.5	-49.0	0.9	-14.4	40.7	26.3	0.4	76.2
Up(2)	790.5	-46.0	0.9	-14.5	40.7	26.2	0.4	73.1
Up(1)	793.0	-50.9	0.9	-14.7	40.7	26.0	0.4	77.8
Up(2)	793.0	-47.9	0.9	-14.7	40.7	26.0	0.4	74.8
Up(1)	795.5	-50.8	0.9	-14.0	40.7	26.7	0.5	78.4
Up(2)	795.5	-47.8	0.9	-14.0	40.7	26.7	0.5	75.4
2. LTE 10MHz								
Up(1)	793.0	-50.5	0.9	-14.1	40.7	26.6	0.5	78.0
Up(2)	793.0	-47.5	0.9	-14.1	40.7	26.6	0.5	75.0
3. P25 Phase I(C4FM)								
Up(1)	798.00625	-51.0	0.9	-14.4	40.7	26.3	0.4	78.2
Up(2)	798.00625	-48.0	0.9	-14.5	40.7	26.2	0.4	75.1
Up(1)	801.5	-51.0	0.9	-13.7	40.7	27.0	0.5	78.9
Up(2)	801.5	-48.0	0.9	-13.7	40.7	27.0	0.5	75.9
Up(1)	804.99375	-52.0	0.9	-13.8	40.7	26.9	0.5	79.8
Up(2)	804.99375	-49.0	0.9	-13.8	40.7	26.9	0.5	76.8
4. P25 Phase II(H-DQPSK)								
Up(1)	798.00625	-51.0	0.9	-14.1	40.7	26.6	0.5	78.5
Up(2)	798.00625	-48.0	0.9	-14.2	40.7	26.5	0.4	75.4

Up(1)	801.5	-51.0	0.9	-13.8	40.7	26.9	0.5	78.8
Up(2)	801.5	-48.0	0.9	-13.8	40.7	26.9	0.5	75.8
Up(1)	804.99375	-52.0	0.9	-13.8	40.7	26.9	0.5	79.8
Up(2)	804.99375	-49.0	0.9	-13.8	40.7	26.9	0.5	76.8
5. Analog FM								
Up(1)	798.0125	-51.0	0.9	-13.8	40.7	26.9	0.5	78.8
Up(2)	798.0125	-48.0	0.9	-13.9	40.7	26.8	0.5	75.7
Up(1)	801.5	-51.0	0.9	-13.6	40.7	27.1	0.5	79.0
Up(2)	801.5	-48.0	0.9	-13.6	40.7	27.1	0.5	76.0
Up(1)	804.9875	-52.0	0.9	-13.6	40.7	27.1	0.5	80.0
Up(2)	804.9875	-49.0	0.9	-13.6	40.7	27.1	0.5	77.0

NOTE: (1) Level is 0.5 dB below AGC threshold; (2) Level is 3dB above AGC threshold.

---------- The following blanks ----------

10.6.4.1.1.2 800MHz Band

10.6.4.1.1.2.1 Downlink

Test link	Frequency (MHz)	Sig output power (dBm)	Input Cable Loss (dB)	Peak power (dBm)	Output Atten +Output Cable Loss(dB)	Output power (dBm)	Output power (W)	Gain (dB)
1. P25 Phase I(C4FM)								
Down(1)	851.00625	-45.0	0.9	-8.8	40.7	31.9	1.5	77.8
Down(2)	851.00625	-42.0	0.9	-8.8	40.7	31.9	1.5	74.8
Down(1)	856.0	-46.0	0.9	-8.4	40.7	32.2	1.7	79.1
Down(2)	856.0	-43.0	0.9	-8.5	40.7	32.2	1.7	76.1
Down(1)	860.99375	-44.0	0.9	-8.7	40.7	32.0	1.6	76.9
Down(2)	860.99375	-41.0	0.9	-8.7	40.7	32.0	1.6	73.9
2. P25 Phase II(H-DQPSK)								
Down(1)	851.00625	-46.0	0.9	-9.8	40.7	31.9	1.5	78.8
Down(2)	851.00625	-43.0	0.9	-9.7	40.7	32.0	1.6	75.9
Down(1)	856.0	-46.5	0.9	-9.9	40.7	32.0	1.6	79.4
Down(2)	856.0	-43.5	0.9	-9.9	40.7	32.0	1.6	76.4
Down(1)	860.99375	-45.0	0.9	-9.4	40.7	32.3	1.7	78.2
Down(2)	860.99375	-42.0	0.9	-9.5	40.7	32.2	1.7	75.1
3. Analog FM								
Down(1)	851.0125	-44.0	0.9	-8.0	40.7	32.7	1.9	77.6
Down(2)	851.0125	-41.0	0.9	-8.0	40.7	32.7	1.9	74.6
Down(1)	856.0	-45.5	0.9	-8.2	40.7	32.5	1.8	78.9
Down(2)	856.0	-42.5	0.9	-8.2	40.7	32.5	1.8	75.9
Down(1)	860.9875	-44.0	0.9	-8.7	40.7	32.0	1.6	76.9
Down(2)	860.9875	-41.0	0.9	-8.7	40.7	32.0	1.6	73.9
4. Tetra								
Down(1)	851.0125	-46.0	0.9	-9.7	40.7	31.8	1.5	78.7
Down(2)	851.0125	-43.0	0.9	-9.7	40.7	31.8	1.5	75.7
Down(1)	856.0	-46.5	0.9	-9.8	40.7	32.1	1.6	79.5
Down(2)	856.0	-43.5	0.9	-9.8	40.7	32.1	1.6	76.5
Down(1)	860.9875	-45.0	0.9	-9.3	40.7	32.4	1.7	78.3
Down(2)	860.9875	-42.0	0.9	-9.3	40.7	32.4	1.7	75.3

NOTE: (1) Level is 0.5 dB below AGC threshold; (2) Level is 3dB above AGC threshold.

10.6.4.1.1.2.2 Uplink

Test link	Frequency (MHz)	Sig output power (dBm)	Input Cable Loss (dB)	Peak power (dBm)	Output Atten +Output Cable Loss(dB)	Output power (dBm)	Output power (W)	Gain (dB)
1. P25 Phase I(C4FM)								
Up(1)	806.00625	-52.0	0.9	-13.7	40.7	27.0	0.5	79.9
Up(2)	806.00625	-49.0	0.9	-13.7	40.7	27.0	0.5	76.9
Up(1)	811.0	-50.0	0.9	-14.2	40.7	26.5	0.4	77.4
Up(2)	811.0	-47.0	0.9	-14.2	40.7	26.5	0.4	74.4
Up(1)	815.99375	-49.0	0.9	-14.7	40.7	26.0	0.4	75.9
Up(2)	815.99375	-46.0	0.9	-14.7	40.7	26.0	0.4	72.9
2. P25 Phase II(H-DQPSK)								
Up(1)	806.00625	-52.0	0.9	-13.8	40.7	26.9	0.5	79.8
Up(2)	806.00625	-49.0	0.9	-13.8	40.7	26.9	0.5	76.8
Up(1)	811.0	-50.5	0.9	-13.7	40.7	27.0	0.5	78.4
Up(2)	811.0	-47.5	0.9	-13.7	40.7	27.0	0.5	75.4
Up(1)	815.99375	-49.0	0.9	-14.7	40.7	26.0	0.4	75.9
Up(2)	815.99375	-46.0	0.9	-14.7	40.7	26.0	0.4	72.9
3. Analog FM								
Up(1)	806.0125	-52.0	0.9	-13.9	40.7	26.8	0.5	79.7
Up(2)	806.0125	-49.0	0.9	-13.9	40.7	26.8	0.5	76.7
Up(1)	811.0	-50.0	0.9	-14.4	40.7	26.3	0.4	77.2
Up(2)	811.0	-47.0	0.9	-14.3	40.7	26.4	0.4	74.3
Up(1)	815.9875	-49.0	0.9	-14.7	40.7	26.0	0.4	75.9
Up(2)	815.9875	-46.0	0.9	-14.7	40.7	26.0	0.4	72.9
4. Tetra								
Up(1)	806.0125	-52.0	0.9	-13.7	40.7	27.0	0.5	79.9
Up(2)	806.0125	-49.0	0.9	-13.7	40.7	27.0	0.5	76.9
Up(1)	811.0	-50.0	0.9	-14.1	40.7	26.6	0.5	77.5
Up(2)	811.0	-47.0	0.9	-14.0	40.7	26.7	0.5	74.6
Up(1)	815.9875	-49.0	0.9	-14.5	40.7	26.2	0.4	76.1
Up(2)	815.9875	-46.0	0.9	-14.4	40.7	26.3	0.4	73.2

NOTE: (1) Level is 0.5 dB below AGC threshold; (2) Level is 3dB above AGC threshold.

10.6.4.1.2 ERP Calculations

10.6.4.1.2.1 700MHz Band

10.6.4.1.2.1.1 Downlink

Test link	Frequency (MHz)	EUT Max. output power (dBm)	Max. Ant Gain(dBi)	ERP (W)	ERP Limit (W)	AGC Mode
1. LTE 5MHz						
Down	760.5	32.1	3.0	3.2	5.0	-0.5dB Below
Down	760.5	32.1	3.0	3.2	5.0	+3.0dB above
Down	763.0	32.6	3.0	3.6	5.0	-0.5dB Below
Down	763.0	32.6	3.0	3.6	5.0	+3.0dB above
Down	765.5	32.7	3.0	3.7	5.0	-0.5dB Below
Down	765.5	32.7	3.0	3.7	5.0	+3.0dB above
2. LTE 10MHz						
Down	763.0	32.5	3.0	3.5	5.0	-0.5dB Below
Down	763.0	32.5	3.0	3.5	5.0	+3.0dB above
3. P25 Phase I(C4FM)						
Down	768.00625	33.2	3.0	4.2	5.0	-0.5dB Below
Down	768.00625	33.2	3.0	4.2	5.0	+3.0dB above
Down	771.5	32.5	3.0	3.5	5.0	-0.5dB Below
Down	771.5	32.5	3.0	3.5	5.0	+3.0dB above
Down	774.99375	32.1	3.0	3.2	5.0	-0.5dB Below
Down	774.99375	32.0	3.0	3.2	5.0	+3.0dB above
4. P25 Phase II(H-DQPSK)						
Down	768.00625	32.6	3.0	3.6	5.0	-0.5dB Below
Down	768.00625	32.4	3.0	3.5	5.0	+3.0dB above
Down	771.5	32.4	3.0	3.5	5.0	-0.5dB Below
Down	771.5	32.3	3.0	3.4	5.0	+3.0dB above
Down	774.99375	32.1	3.0	3.2	5.0	-0.5dB Below
Down	774.99375	32.0	3.0	3.2	5.0	+3.0dB above
5. Analog FM						
Down	768.0125	32.5	3.0	3.5	5.0	-0.5dB Below
Down	768.0125	32.3	3.0	3.4	5.0	+3.0dB above
Down	771.5	32.3	3.0	3.4	5.0	-0.5dB Below

Down	771.5	32.2	3.0	3.3	5.0	+3.0dB above
Down	774.9875	32.0	3.0	3.2	5.0	-0.5dB Below
Down	774.9875	32.0	3.0	3.2	5.0	+3.0dB above

10.6.4.1.2.1.2 Uplink

Test link	Frequency (MHz)	EUT Max. output power (dBm)	Max. Ant Gain(dBi)	ERP (W)	ERP Limit (W)	AGC Mode
1. LTE 5MHz						
Up	790.5	26.3	9.0	3.4	5.0	-0.5dB Below
Up	790.5	26.2	9.0	3.3	5.0	+3.0dB above
Up	793.0	26.0	9.0	3.2	5.0	-0.5dB Below
Up	793.0	26.0	9.0	3.2	5.0	+3.0dB above
Up	795.5	26.7	9.0	3.7	5.0	-0.5dB Below
Up	795.5	26.7	9.0	3.7	5.0	+3.0dB above
2. LTE 10MHz						
Up	793.0	26.6	9.0	3.6	5.0	-0.5dB Below
Up	793.0	26.6	9.0	3.6	5.0	+3.0dB above
3. P25 Phase I(C4FM)						
Up	798.00625	26.2	9.0	3.4	5.0	-0.5dB Below
Up	798.00625	26.2	9.0	3.3	5.0	+3.0dB above
Up	801.5	27.0	9.0	3.2	5.0	-0.5dB Below
Up	801.5	27.0	9.0	3.2	5.0	+3.0dB above
Up	804.99375	26.9	9.0	3.7	5.0	-0.5dB Below
Up	804.99375	26.9	9.0	3.7	5.0	+3.0dB above
4. P25 Phase II(H-DQPSK)						
Up	798.00625	26.6	9.0	3.3	5.0	-0.5dB Below
Up	798.00625	26.5	9.0	3.3	5.0	+3.0dB above
Up	801.5	26.9	9.0	4.0	5.0	-0.5dB Below
Up	801.5	26.9	9.0	4.0	5.0	+3.0dB above
Up	804.99375	26.9	9.0	3.9	5.0	-0.5dB Below
Up	804.99375	26.9	9.0	3.9	5.0	+3.0dB above
5. Analog FM						
Up	798.0125	26.9	9.0	3.6	5.0	-0.5dB Below

Up	798.0125	26.8	9.0	3.5	5.0	+3.0dB above
Up	801.5	27.1	9.0	3.9	5.0	-0.5dB Below
Up	801.5	27.1	9.0	3.9	5.0	+3.0dB above
Up	804.9875	27.1	9.0	3.9	5.0	-0.5dB Below
Up	804.9875	27.1	9.0	3.9	5.0	+3.0dB above
6. Tetra						
Up	798.0125	26.6	9.0	3.9	5.0	-0.5dB Below
Up	798.0125	26.5	9.0	3.8	5.0	+3.0dB above
Up	801.5	26.9	9.0	4.1	5.0	-0.5dB Below
Up	801.5	26.9	9.0	4.1	5.0	+3.0dB above
Up	804.9875	26.9	9.0	4.1	5.0	-0.5dB Below
Up	804.9875	26.9	9.0	4.1	5.0	+3.0dB above

---------- The following blanks ----------

10.6.4.1.2.2 800MHz Band

10.6.4.1.2.2.1 Downlink

Test link	Frequency (MHz)	EUT Max. output power (dBm)	Max. Ant Gain(dBi)	ERP (W)	ERP Limit (W)	AGC Mode
1. P25 Phase I(C4FM)						
Down	851.00625	31.9	3.0	3.1	5.0	-0.5dB Below
Down	851.00625	31.9	3.0	3.1	5.0	+3.0dB above
Down	856.0	32.2	3.0	3.3	5.0	-0.5dB Below
Down	856.0	32.2	3.0	3.3	5.0	+3.0dB above
Down	860.99375	32.0	3.0	3.2	5.0	-0.5dB Below
Down	860.99375	32.0	3.0	3.2	5.0	+3.0dB above
2. P25 Phase II(H-DQPSK)						
Down	851.00625	31.9	3.0	3.1	5.0	-0.5dB Below
Down	851.00625	32.0	3.0	3.2	5.0	+3.0dB above
Down	856.0	32.0	3.0	3.2	5.0	-0.5dB Below
Down	856.0	32.0	3.0	3.2	5.0	+3.0dB above
Down	860.99375	32.3	3.0	3.4	5.0	-0.5dB Below
Down	860.99375	32.2	3.0	3.3	5.0	+3.0dB above
3. Analog FM						
Down	851.0125	32.7	3.0	3.7	5.0	-0.5dB Below
Down	851.0125	32.7	3.0	3.7	5.0	+3.0dB above
Down	856.0	32.5	3.0	3.5	5.0	-0.5dB Below
Down	856.0	32.5	3.0	3.5	5.0	+3.0dB above
Down	860.9875	32.0	3.0	3.2	5.0	-0.5dB Below
Down	860.9875	32.0	3.0	3.2	5.0	+3.0dB above
4. Tetra						
Down	851.0125	31.8	3.0	3.0	5.0	-0.5dB Below
Down	851.0125	31.8	3.0	3.0	5.0	+3.0dB above
Down	856.0	32.1	3.0	3.2	5.0	-0.5dB Below
Down	856.0	32.1	3.0	3.2	5.0	+3.0dB above
Down	860.9875	32.4	3.0	3.5	5.0	-0.5dB Below
Down	860.9875	32.4	3.0	3.5	5.0	+3.0dB above

10.6.4.1.2.2.2 Uplink

Test link	Frequency (MHz)	EUT Max. output power (dBm)	Max. Ant Gain(dBi)	ERP (W)	ERP Limit (W)	AGC Mode
1. P25 Phase I(C4FM)						
Up	806.00625	27.0	9.0	4.0	5.0	-0.5dB Below
Up	806.00625	27.0	9.0	4.0	5.0	+3.0dB above
Up	811.0	26.5	9.0	3.5	5.0	-0.5dB Below
Up	811.0	26.5	9.0	3.5	5.0	+3.0dB above
Up	815.99375	26.0	9.0	3.2	5.0	-0.5dB Below
Up	815.99375	26.0	9.0	3.2	5.0	+3.0dB above
2. P25 Phase II(H-DQPSK)						
Up	806.00625	26.9	9.0	3.9	5.0	-0.5dB Below
Up	806.00625	26.9	9.0	3.9	5.0	+3.0dB above
Up	811.0	27.0	9.0	4.0	5.0	-0.5dB Below
Up	811.0	27.0	9.0	4.0	5.0	+3.0dB above
Up	815.99375	26.0	9.0	3.2	5.0	-0.5dB Below
Up	815.99375	26.0	9.0	3.2	5.0	+3.0dB above
3. Analog FM						
Up	806.0125	26.8	9.0	3.8	5.0	-0.5dB Below
Up	806.0125	26.8	9.0	3.8	5.0	+3.0dB above
Up	811.0	26.3	9.0	3.4	5.0	-0.5dB Below
Up	811.0	26.4	9.0	3.5	5.0	+3.0dB above
Up	815.9875	26.0	9.0	3.2	5.0	-0.5dB Below
Up	815.9875	26.0	9.0	3.2	5.0	+3.0dB above
4. Tetra						
Up	806.0125	27.0	9.0	4.0	5.0	-0.5dB Below
Up	806.0125	27.0	9.0	4.0	5.0	+3.0dB above
Up	811.0	26.6	9.0	3.6	5.0	-0.5dB Below
Up	811.0	26.7	9.0	3.7	5.0	+3.0dB above
Up	815.9875	26.2	9.0	3.3	5.0	-0.5dB Below
Up	815.9875	26.3	9.0	3.4	5.0	+3.0dB above

10.6.4.2 0.5W level test data

10.6.4.2.1 Mean power and gain

10.6.4.2.1.1 700MHz Band

10.6.4.2.1.1.1 Downlink

Test link	Frequency (MHz)	Sig output power (dBm)	Input Cable Loss (dB)	Peak power (dBm)	Output Atten +Output Cable Loss(dB)	Output power (dBm)	Output power (W)	Gain (dB)
1. LTE 5MHz								
Down(1)	760.5	-52.0	0.9	-14.2	40.7	26.5	0.4	79.4
Down(2)	760.5	-49.0	0.9	-14.2	40.7	26.5	0.4	76.4
Down(1)	763.0	-51.7	0.9	-14.2	40.7	26.5	0.4	79.1
Down(2)	763.0	-48.7	0.9	-14.2	40.7	26.5	0.4	76.1
Down(1)	765.5	-50.7	0.9	-13.7	40.7	27.0	0.5	78.6
Down(2)	765.5	-47.7	0.9	-13.7	40.7	27.0	0.5	75.6
2. LTE 10MHz								
Down(1)	763.0	-51.6	0.9	-14.2	40.7	26.5	0.4	79.0
Down(2)	763.0	-48.6	0.9	-14.2	40.7	26.5	0.4	76.0
3. P25 Phase I(C4FM)								
Down(1)	768.00625	-51.0	0.9	-13.5	40.7	27.2	0.5	79.1
Down(2)	768.00625	-48.0	0.9	-13.6	40.7	27.1	0.5	76.0
Down(1)	771.5	-50.9	0.9	-14.2	40.7	26.5	0.4	78.3
Down(2)	771.5	-47.9	0.9	-14.2	40.7	26.5	0.4	75.3
Down(1)	774.99375	-47.9	0.9	-14.2	40.7	26.5	0.4	75.3
Down(2)	774.99375	-44.9	0.9	-14.3	40.7	26.4	0.4	72.2
4. P25 Phase II(H-DQPSK)								
Down(1)	768.00625	-52.0	0.9	-14.5	40.7	26.2	0.4	79.1
Down(2)	768.00625	-49.0	0.9	-14.5	40.7	26.2	0.4	76.1
Down(1)	771.5	-52.0	0.9	-14.7	40.7	26.0	0.4	78.9
Down(2)	771.5	-49.0	0.9	-14.8	40.7	25.9	0.4	75.8
Down(1)	774.99375	-48.0	0.9	-15.0	40.7	25.7	0.4	74.6
Down(2)	774.99375	-45.0	0.9	-15.0	40.7	25.7	0.4	71.6
5. Analog FM								
Down(1)	768.0125	-50.6	0.9	-13.7	40.7	27.0	0.5	78.5
Down(2)	768.0125	-47.6	0.9	-13.8	40.7	26.9	0.5	75.4

Down(1)	771.5	-51.2	0.9	-14.1	40.7	26.6	0.5	78.7
Down(2)	771.5	-48.2	0.9	-14.3	40.7	26.4	0.4	75.5
Down(1)	774.9875	-47.2	0.9	-14.5	40.7	26.2	0.4	74.3
Down(2)	774.9875	-44.2	0.9	-14.5	40.7	26.2	0.4	71.3

NOTE: (1) Level is 0.5 dB below AGC threshold; (2) Level is 3dB above AGC threshold.

10.6.4.2.1.1.2 Uplink

Test link	Frequency (MHz)	Sig output power (dBm)	Input Cable Loss (dB)	Peak power (dBm)	Output Atten +Output Cable Loss(dB)	Output power (dBm)	Output power (W)	Gain (dB)
1. LTE 5MHz								
Up(1)	790.5	-49.0	0.9	-14.4	40.7	26.3	0.4	76.2
Up(2)	790.5	-46.0	0.9	-14.5	40.7	26.2	0.4	73.1
Up(1)	793.0	-50.9	0.9	-14.7	40.7	26.0	0.4	77.8
Up(2)	793.0	-47.9	0.9	-14.7	40.7	26.0	0.4	74.8
Up(1)	795.5	-50.8	0.9	-14.0	40.7	26.7	0.5	78.4
Up(2)	795.5	-47.8	0.9	-14.0	40.7	26.7	0.5	75.4
2. LTE 10MHz								
Up(1)	793.0	-50.5	0.9	-14.1	40.7	26.6	0.5	78.0
Up(2)	793.0	-47.5	0.9	-14.1	40.7	26.6	0.5	75.0
3. P25 Phase I(C4FM)								
Up(1)	798.00625	-51.0	0.9	-14.4	40.7	26.3	0.4	78.2
Up(2)	798.00625	-48.0	0.9	-14.5	40.7	26.2	0.4	75.1
Up(1)	801.5	-51.0	0.9	-13.7	40.7	27.0	0.5	78.9
Up(2)	801.5	-48.0	0.9	-13.7	40.7	27.0	0.5	75.9
Up(1)	804.99375	-52.0	0.9	-13.8	40.7	26.9	0.5	79.8
Up(2)	804.99375	-49.0	0.9	-13.8	40.7	26.9	0.5	76.8
4. P25 Phase II(H-DQPSK)								
Up(1)	798.00625	-51.0	0.9	-14.1	40.7	26.6	0.5	78.5
Up(2)	798.00625	-48.0	0.9	-14.2	40.7	26.5	0.4	75.4
Up(1)	801.5	-51.0	0.9	-13.8	40.7	26.9	0.5	78.8
Up(2)	801.5	-48.0	0.9	-13.8	40.7	26.9	0.5	75.8
Up(1)	804.99375	-52.0	0.9	-13.8	40.7	26.9	0.5	79.8
Up(2)	804.99375	-49.0	0.9	-13.8	40.7	26.9	0.5	76.8

5. Analog FM								
Up(1)	798.0125	-51.0	0.9	-13.8	40.7	26.9	0.5	78.8
Up(2)	798.0125	-48.0	0.9	-13.9	40.7	26.8	0.5	75.7
Up(1)	801.5	-51.0	0.9	-13.6	40.7	27.1	0.5	79.0
Up(2)	801.5	-48.0	0.9	-13.6	40.7	27.1	0.5	76.0
Up(1)	804.9875	-52.0	0.9	-13.6	40.7	27.1	0.5	80.0
Up(2)	804.9875	-49.0	0.9	-13.6	40.7	27.1	0.5	77.0

NOTE: (1) Level is 0.5 dB below AGC threshold; (2) Level is 3dB above AGC threshold.

---------- The following blanks ----------

10.6.4.2.1.2 800MHz Band

10.6.4.2.1.2.1 Downlink

Test link	Frequency (MHz)	Sig output power (dBm)	Input Cable Loss (dB)	Peak power (dBm)	Output Atten +Output Cable Loss(dB)	Output power (dBm)	Output power (W)	Gain (dB)
1. P25 Phase I(C4FM)								
Down(1)	851.00625	-51.0	0.9	-13.2	40.7	27.5	0.6	79.4
Down(2)	851.00625	-48.0	0.9	-13.2	40.7	27.5	0.6	76.4
Down(1)	856.0	-50.0	0.9	-13.0	40.7	27.7	0.6	78.6
Down(2)	856.0	-47.0	0.9	-13.0	40.7	27.7	0.6	75.6
Down(1)	860.99375	-50.0	0.9	-13.3	40.7	27.4	0.5	78.3
Down(2)	860.99375	-47.0	0.9	-13.3	40.7	27.4	0.5	75.3
2. P25 Phase II(H-DQPSK)								
Down(1)	851.00625	-52.0	0.9	-14.2	40.7	26.5	0.4	79.4
Down(2)	851.00625	-49.0	0.9	-14.2	40.7	26.5	0.4	76.4
Down(1)	856.0	-50.0	0.9	-13.9	40.7	26.8	0.5	77.7
Down(2)	856.0	-47.0	0.9	-13.9	40.7	26.8	0.5	74.7
Down(1)	860.99375	-51.0	0.9	-14.2	40.7	26.5	0.4	78.4
Down(2)	860.99375	-48.0	0.9	-14.2	40.7	26.5	0.4	75.4
3. Analog FM								
Down(1)	851.0125	-51.2	0.9	-14.0	40.7	26.7	0.5	78.8
Down(2)	851.0125	-48.2	0.9	-14.1	40.7	26.6	0.5	75.7
Down(1)	856.0	-51.2	0.9	-13.8	40.7	26.9	0.5	79.0
Down(2)	856.0	-48.2	0.9	-13.8	40.7	26.9	0.5	76.0
Down(1)	860.9875	-50.2	0.9	-13.2	40.7	27.5	0.6	78.6
Down(2)	860.9875	-47.2	0.9	-13.2	40.7	27.5	0.6	75.6
4. Tetra								
Down(1)	851.0125	-51.7	0.9	-14.2	40.7	26.5	0.4	79.1
Down(2)	851.0125	-48.7	0.9	-14.2	40.7	26.5	0.4	76.1
Down(1)	856.0	-52.3	0.9	-14.6	40.7	26.1	0.4	79.3
Down(2)	856.0	-49.3	0.9	-14.6	40.7	26.1	0.4	76.3
Down(1)	860.9875	-50.6	0.9	-14.2	40.7	26.5	0.4	78.0
Down(2)	860.9875	-47.6	0.9	-14.2	40.7	26.5	0.4	75.0

NOTE: (1) Level is 0.5 dB below AGC threshold; (2) Level is 3dB above AGC threshold.

10.6.4.2.1.2.2 Uplink

Test link	Frequency (MHz)	Sig output power (dBm)	Input Cable Loss (dB)	Peak power (dBm)	Output Atten +Output Cable Loss(dB)	Output power (dBm)	Output power (W)	Gain (dB)
1. P25 Phase I(C4FM)								
Up(1)	806.00625	-52.0	0.9	-13.7	40.7	27.0	0.5	79.9
Up(2)	806.00625	-49.0	0.9	-13.7	40.7	27.0	0.5	76.9
Up(1)	811.0	-50.0	0.9	-14.2	40.7	26.5	0.4	77.4
Up(2)	811.0	-47.0	0.9	-14.2	40.7	26.5	0.4	74.4
Up(1)	815.99375	-49.0	0.9	-14.7	40.7	26.0	0.4	75.9
Up(2)	815.99375	-46.0	0.9	-14.7	40.7	26.0	0.4	72.9
2. P25 Phase II(H-DQPSK)								
Up(1)	806.00625	-52.0	0.9	-13.8	40.7	26.9	0.5	79.8
Up(2)	806.00625	-49.0	0.9	-13.8	40.7	26.9	0.5	76.8
Up(1)	811.0	-50.5	0.9	-13.7	40.7	27.0	0.5	78.4
Up(2)	811.0	-47.5	0.9	-13.7	40.7	27.0	0.5	75.4
Up(1)	815.99375	-49.0	0.9	-14.7	40.7	26.0	0.4	75.9
Up(2)	815.99375	-46.0	0.9	-14.7	40.7	26.0	0.4	72.9
3. Analog FM								
Up(1)	806.0125	-52.0	0.9	-13.9	40.7	26.8	0.5	79.7
Up(2)	806.0125	-49.0	0.9	-13.9	40.7	26.8	0.5	76.7
Up(1)	811.0	-50.0	0.9	-14.4	40.7	26.3	0.4	77.2
Up(2)	811.0	-47.0	0.9	-14.3	40.7	26.4	0.4	74.3
Up(1)	815.9875	-49.0	0.9	-14.7	40.7	26.0	0.4	75.9
Up(2)	815.9875	-46.0	0.9	-14.7	40.7	26.0	0.4	72.9
4. Tetra								
Up(1)	806.0125	-52.0	0.9	-13.7	40.7	27.0	0.5	79.9
Up(2)	806.0125	-49.0	0.9	-13.7	40.7	27.0	0.5	76.9
Up(1)	811.0	-50.0	0.9	-14.1	40.7	26.6	0.5	77.5
Up(2)	811.0	-47.0	0.9	-14.0	40.7	26.7	0.5	74.6
Up(1)	815.9875	-49.0	0.9	-14.5	40.7	26.2	0.4	76.1
Up(2)	815.9875	-46.0	0.9	-14.4	40.7	26.3	0.4	73.2

NOTE: (1) Level is 0.5 dB below AGC threshold; (2) Level is 3dB above AGC threshold.

10.6.4.2.2 ERP Calculations

10.6.4.2.2.1 700MHz Band

10.6.4.2.2.1.1 Downlink

Test link	Frequency (MHz)	EUT Max. output power (dBm)	Max. Ant Gain(dBi)	ERP (W)	ERP Limit (W)	AGC Mode
1. LTE 5MHz						
Down	760.5	26.5	3.0	0.9	5.0	-0.5dB Below
Down	760.5	26.5	3.0	0.9	5.0	+3.0dB above
Down	763.0	26.5	3.0	0.9	5.0	-0.5dB Below
Down	763.0	26.5	3.0	0.9	5.0	+3.0dB above
Down	765.5	27.0	3.0	1.0	5.0	-0.5dB Below
Down	765.5	27.0	3.0	1.0	5.0	+3.0dB above
2. LTE 10MHz						
Down	763.0	26.5	3.0	0.9	5.0	-0.5dB Below
Down	763.0	26.5	3.0	0.9	5.0	+3.0dB above
3. P25 Phase I(C4FM)						
Down	768.00625	27.2	3.0	1.0	5.0	-0.5dB Below
Down	768.00625	27.1	3.0	1.0	5.0	+3.0dB above
Down	771.5	26.5	3.0	0.9	5.0	-0.5dB Below
Down	771.5	26.5	3.0	0.9	5.0	+3.0dB above
Down	774.99375	26.5	3.0	0.9	5.0	-0.5dB Below
Down	774.99375	26.4	3.0	0.9	5.0	+3.0dB above
4. P25 Phase II(H-DQPSK)						
Down	768.00625	26.2	3.0	0.8	5.0	-0.5dB Below
Down	768.00625	26.2	3.0	0.8	5.0	+3.0dB above
Down	771.5	26.0	3.0	0.8	5.0	-0.5dB Below
Down	771.5	25.9	3.0	0.8	5.0	+3.0dB above
Down	774.99375	25.7	3.0	0.7	5.0	-0.5dB Below
Down	774.99375	25.7	3.0	0.7	5.0	+3.0dB above
5. Analog FM						
Down	768.0125	27.0	3.0	1.0	5.0	-0.5dB Below
Down	768.0125	26.9	3.0	1.0	5.0	+3.0dB above
Down	771.5	26.6	3.0	0.9	5.0	-0.5dB Below

Down	771.5	26.4	3.0	0.9	5.0	+3.0dB above
Down	774.9875	26.2	3.0	0.8	5.0	-0.5dB Below
Down	774.9875	26.2	3.0	0.8	5.0	+3.0dB above

10.6.4.2.2.1.2 Uplink

Test link	Frequency (MHz)	EUT Max. output power (dBm)	Max. Ant Gain(dBi)	ERP (W)	ERP Limit (W)	AGC Mode
1. LTE 5MHz						
Up	790.5	26.3	9.0	3.4	5.0	-0.5dB Below
Up	790.5	26.2	9.0	3.3	5.0	+3.0dB above
Up	793.0	26.0	9.0	3.2	5.0	-0.5dB Below
Up	793.0	26.0	9.0	3.2	5.0	+3.0dB above
Up	795.5	26.7	9.0	3.7	5.0	-0.5dB Below
Up	795.5	26.7	9.0	3.7	5.0	+3.0dB above
2. LTE 10MHz						
Up	793.0	26.6	9.0	3.6	5.0	-0.5dB Below
Up	793.0	26.6	9.0	3.6	5.0	+3.0dB above
3. P25 Phase I(C4FM)						
Up	798.00625	26.2	9.0	3.4	5.0	-0.5dB Below
Up	798.00625	26.2	9.0	3.3	5.0	+3.0dB above
Up	801.5	27.0	9.0	3.2	5.0	-0.5dB Below
Up	801.5	27.0	9.0	3.2	5.0	+3.0dB above
Up	804.99375	26.9	9.0	3.7	5.0	-0.5dB Below
Up	804.99375	26.9	9.0	3.7	5.0	+3.0dB above
4. P25 Phase II(H-DQPSK)						
Up	798.00625	26.6	9.0	3.3	5.0	-0.5dB Below
Up	798.00625	26.5	9.0	3.3	5.0	+3.0dB above
Up	801.5	26.9	9.0	4.0	5.0	-0.5dB Below
Up	801.5	26.9	9.0	4.0	5.0	+3.0dB above
Up	804.99375	26.9	9.0	3.9	5.0	-0.5dB Below
Up	804.99375	26.9	9.0	3.9	5.0	+3.0dB above
5. Analog FM						
Up	798.0125	26.9	9.0	3.6	5.0	-0.5dB Below

Up	798.0125	26.8	9.0	3.5	5.0	+3.0dB above
Up	801.5	27.1	9.0	3.9	5.0	-0.5dB Below
Up	801.5	27.1	9.0	3.9	5.0	+3.0dB above
Up	804.9875	27.1	9.0	3.9	5.0	-0.5dB Below
Up	804.9875	27.1	9.0	3.9	5.0	+3.0dB above
6. Tetra						
Up	798.0125	26.6	9.0	3.9	5.0	-0.5dB Below
Up	798.0125	26.5	9.0	3.8	5.0	+3.0dB above
Up	801.5	26.9	9.0	4.1	5.0	-0.5dB Below
Up	801.5	26.9	9.0	4.1	5.0	+3.0dB above
Up	804.9875	26.9	9.0	4.1	5.0	-0.5dB Below
Up	804.9875	26.9	9.0	4.1	5.0	+3.0dB above

---------- The following blanks ----------

10.6.4.2.2.2 800MHz Band

10.6.4.2.2.2.1 Downlink

Test link	Frequency (MHz)	EUT Max. output power (dBm)	Max. Ant Gain(dBi)	ERP (W)	ERP Limit (W)	AGC Mode
1. P25 Phase I(C4FM)						
Down	851.00625	27.5	3.0	1.1	5.0	-0.5dB Below
Down	851.00625	27.5	3.0	1.1	5.0	+3.0dB above
Down	856.0	27.7	3.0	1.2	5.0	-0.5dB Below
Down	856.0	27.7	3.0	1.2	5.0	+3.0dB above
Down	860.99375	27.4	3.0	1.1	5.0	-0.5dB Below
Down	860.99375	27.4	3.0	1.1	5.0	+3.0dB above
2. P25 Phase II(H-DQPSK)						
Down	851.00625	26.5	3.0	0.9	5.0	-0.5dB Below
Down	851.00625	26.5	3.0	0.9	5.0	+3.0dB above
Down	856.0	26.8	3.0	1.0	5.0	-0.5dB Below
Down	856.0	26.8	3.0	1.0	5.0	+3.0dB above
Down	860.99375	26.5	3.0	0.9	5.0	-0.5dB Below
Down	860.99375	26.5	3.0	0.9	5.0	+3.0dB above
3. Analog FM						
Down	851.0125	26.7	3.0	0.9	5.0	-0.5dB Below
Down	851.0125	26.6	3.0	0.9	5.0	+3.0dB above
Down	856.0	26.9	3.0	1.0	5.0	-0.5dB Below
Down	856.0	26.9	3.0	1.0	5.0	+3.0dB above
Down	860.9875	27.5	3.0	1.1	5.0	-0.5dB Below
Down	860.9875	27.5	3.0	1.1	5.0	+3.0dB above
4. Tetra						
Down	851.0125	26.5	3.0	0.9	5.0	-0.5dB Below
Down	851.0125	26.5	3.0	0.9	5.0	+3.0dB above
Down	856.0	26.1	3.0	0.8	5.0	-0.5dB Below
Down	856.0	26.1	3.0	0.8	5.0	+3.0dB above
Down	860.9875	26.5	3.0	0.9	5.0	-0.5dB Below
Down	860.9875	26.5	3.0	0.9	5.0	+3.0dB above