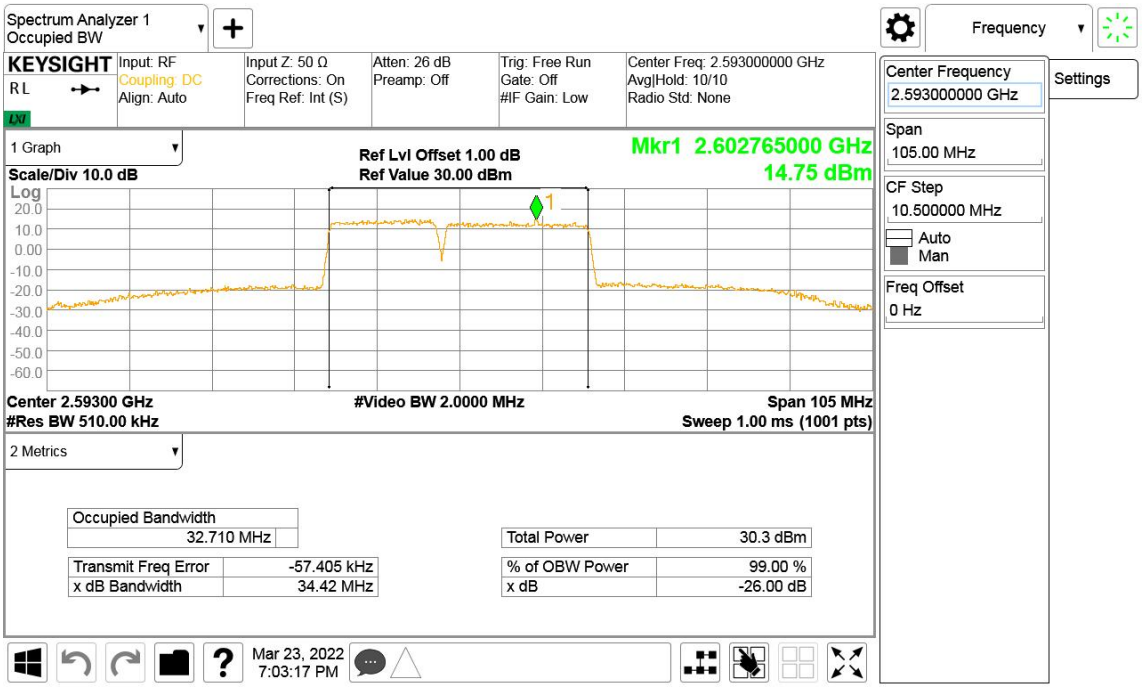
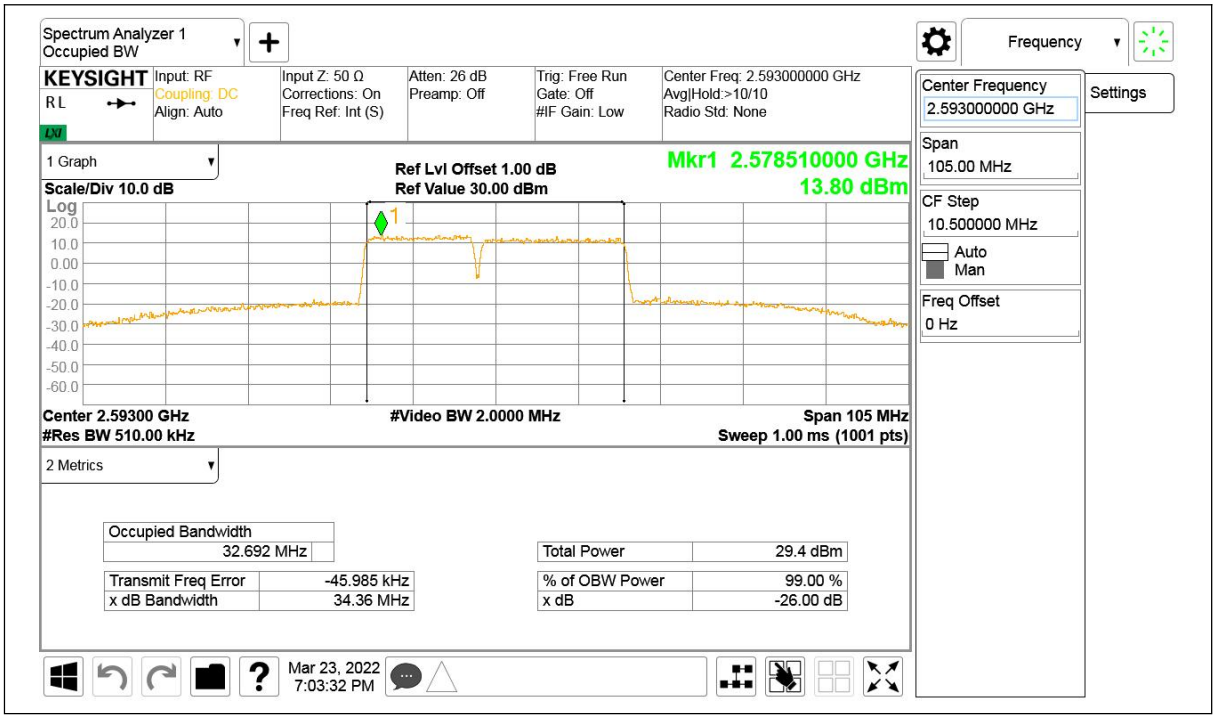
LTE CA band 41,15MHz+20MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	QPSK	16QAM
2583.3	34.420	34.359

LTE CA band 41 , 15MHz+20MHz Bandwidth,QPSK (-26dBc BW)



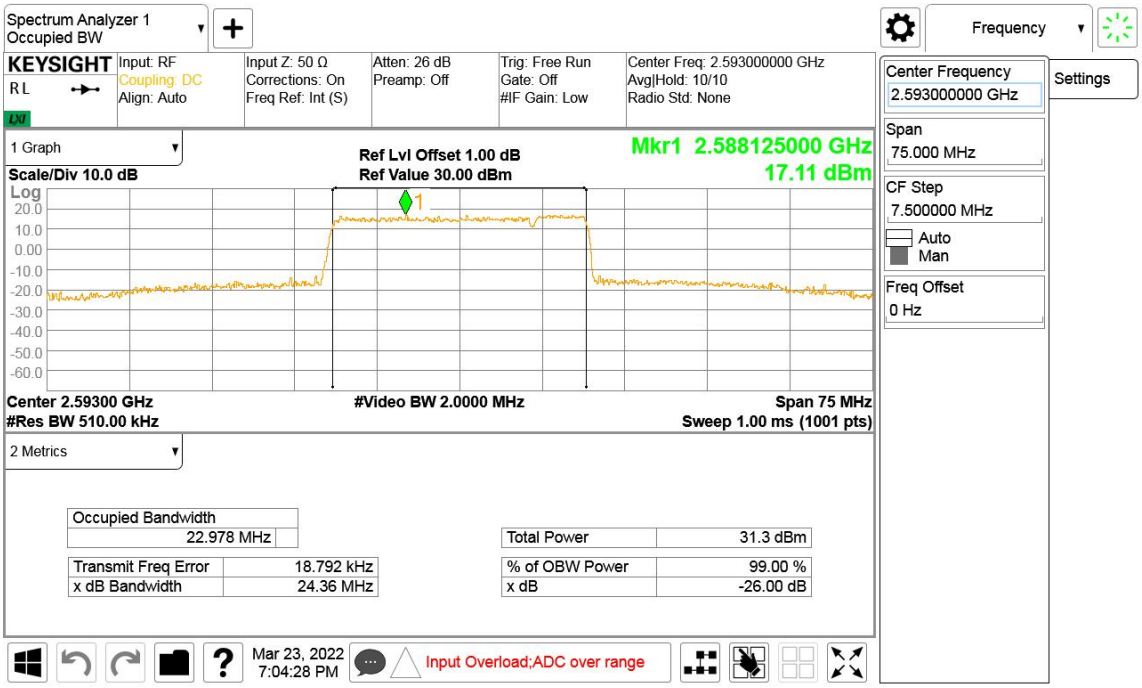
LTE CA band 41 , 15MHz+20MHz Bandwidth,16QAM (-26dBc BW)


Spectrum Analyzer 1
Occupied BW
KEYSIGHT
RL
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corrections: On
Freq Ref: Int (S)
Atten: 26 dB
Preamp: Off
Trig: Free Run
Gate: Off
#IF Gain: Low
Center Freq: 2.593000000 GHz
Avg|Hold:>10/10
Radio Std: None
Frequency
Center Frequency
2.593000000 GHz
Settings
Span
105.00 MHz
CF Step
10.500000 MHz
Auto
Man
Freq Offset
0 Hz
1 Graph
Ref Lvl Offset 1.00 dB
Ref Value 30.00 dBm
Mkr1 2.578510000 GHz
13.80 dBm
Scale/Div 10.0 dB
Log
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
Center 2.59300 GHz
#Res BW 510.00 kHz
#Video BW 2.0000 MHz
Span 105 MHz
Sweep 1.00 ms (1001 pts)
2 Metrics
Occupied Bandwidth
32.692 MHz
Total Power
29.4 dBm
Transmit Freq Error
-45.985 kHz
% of OBW Power
99.00 %
x dB Bandwidth
34.36 MHz
x dB
-26.00 dB
Mar 23, 2022
7:03:32 PM

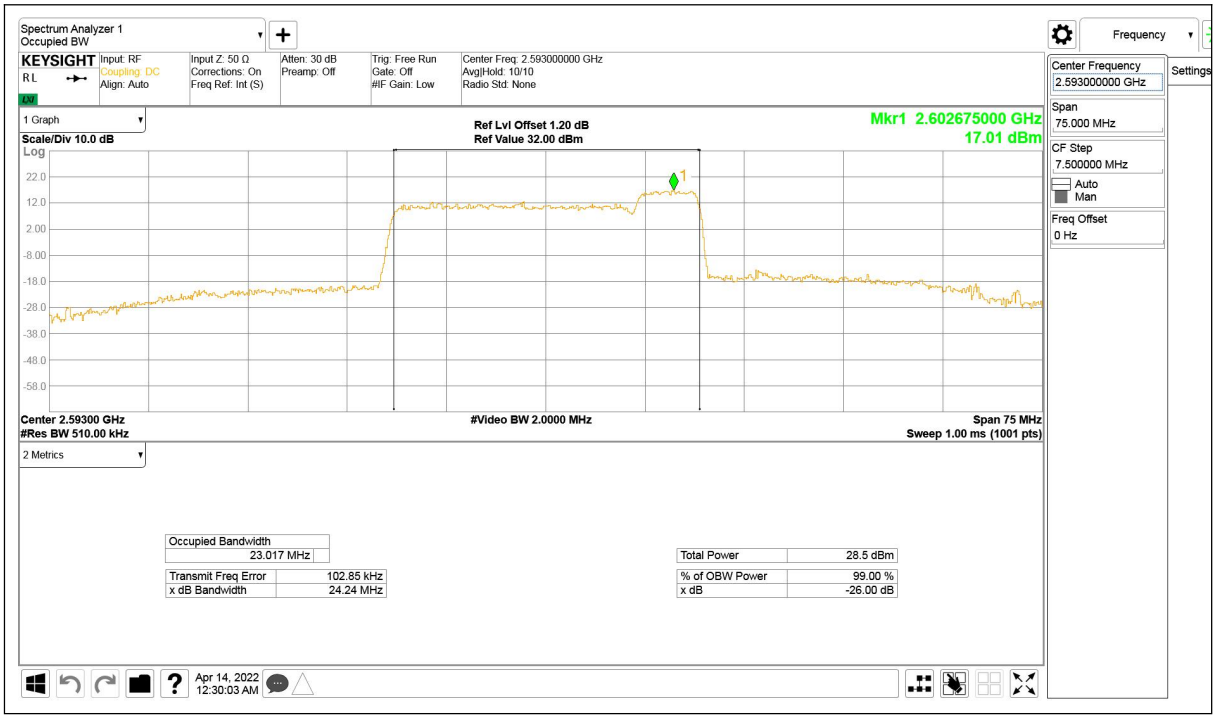
LTE CA band 41,20MHz+5MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	QPSK	16QAM
2590.5	24.363	24.238

LTE CA band 41 , 20MHz+5MHz Bandwidth,QPSK (-26dBc BW)



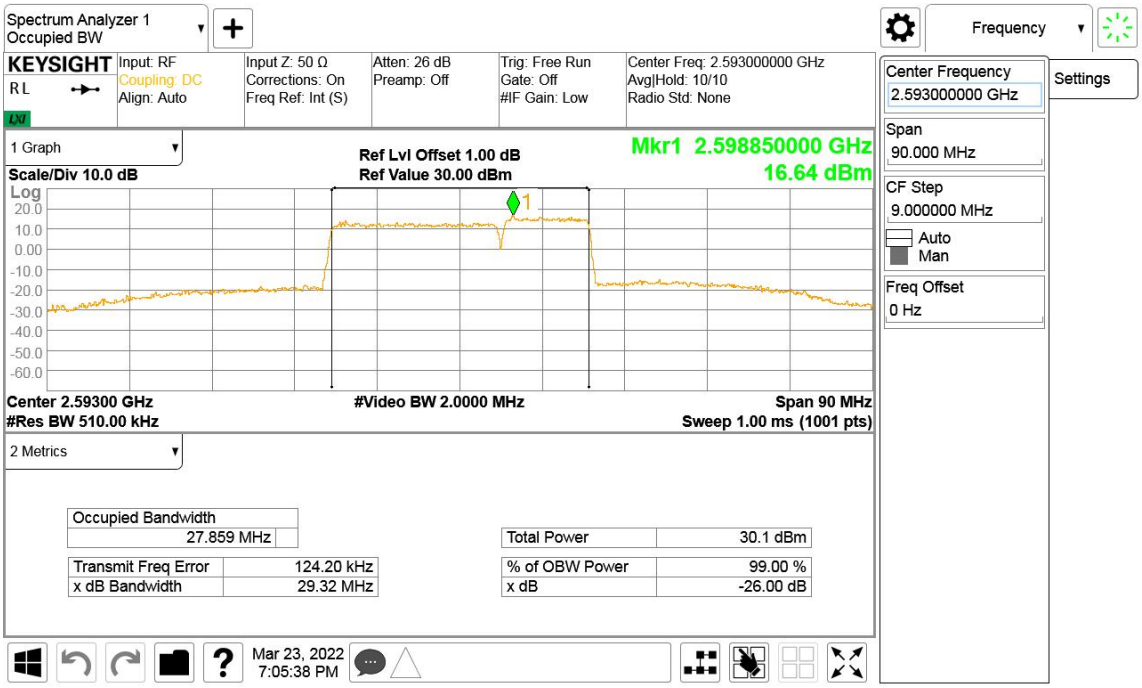
LTE CA band 41 , 20MHz+5MHz Bandwidth,16QAM (-26dBc BW)


Spectrum Analyzer 1
Occupied BW
KEYSIGHT
RL
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corrections: On
Freq Ref: Int (S)
Atten: 30 dB
Preamp: Off
Trig: Free Run
Gate: Off
#IF Gain: Low
Center Freq: 2.593000000 GHz
Avg|Hold: 10/10
Radio Std: None
Frequency
Center Frequency
2.593000000 GHz
Settings
Span
75.000 MHz
CF Step
7.500000 MHz
Auto
Man
Freq Offset
0 Hz
1 Graph
Scale/Div 10.0 dB
Log
Ref Lvl Offset 1.20 dB
Ref Value 32.00 dBm
Mkr1 2.602675000 GHz
17.01 dBm
22.0
12.0
2.00
-8.00
-18.0
-28.0
-38.0
-48.0
-58.0
Center 2.59300 GHz
#Res BW 510.00 kHz
#Video BW 2.0000 MHz
Span 75 MHz
Sweep 1.00 ms (1001 pts)
2 Metrics
Occupied Bandwidth
23.017 MHz
Transmit Freq Error
102.85 kHz
x dB Bandwidth
24.24 MHz
Total Power
28.5 dBm
% of OBW Power
99.00 %
x dB
-26.00 dB
Apr 14, 2022
12:30:03 AM

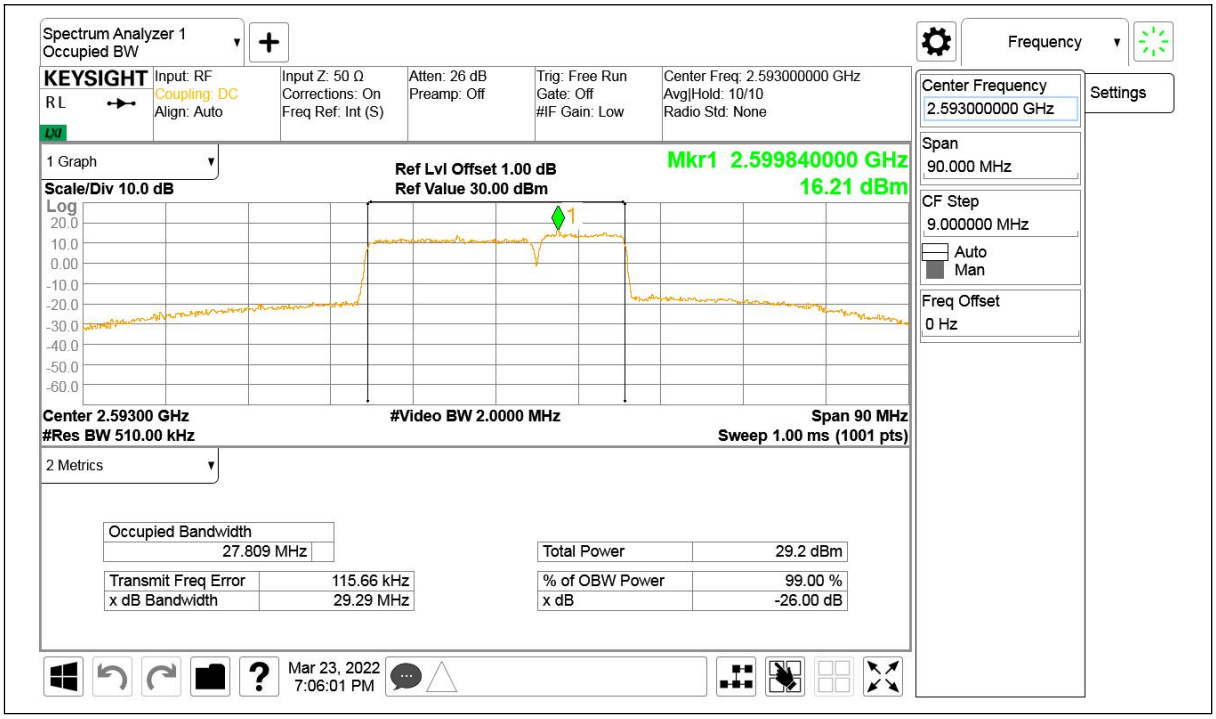
LTE CA band 41,20MHz+10MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	QPSK	16QAM
2588.1	29.324	29.286

LTE CA band 41 , 20MHz+10MHz Bandwidth,QPSK (-26dBc BW)



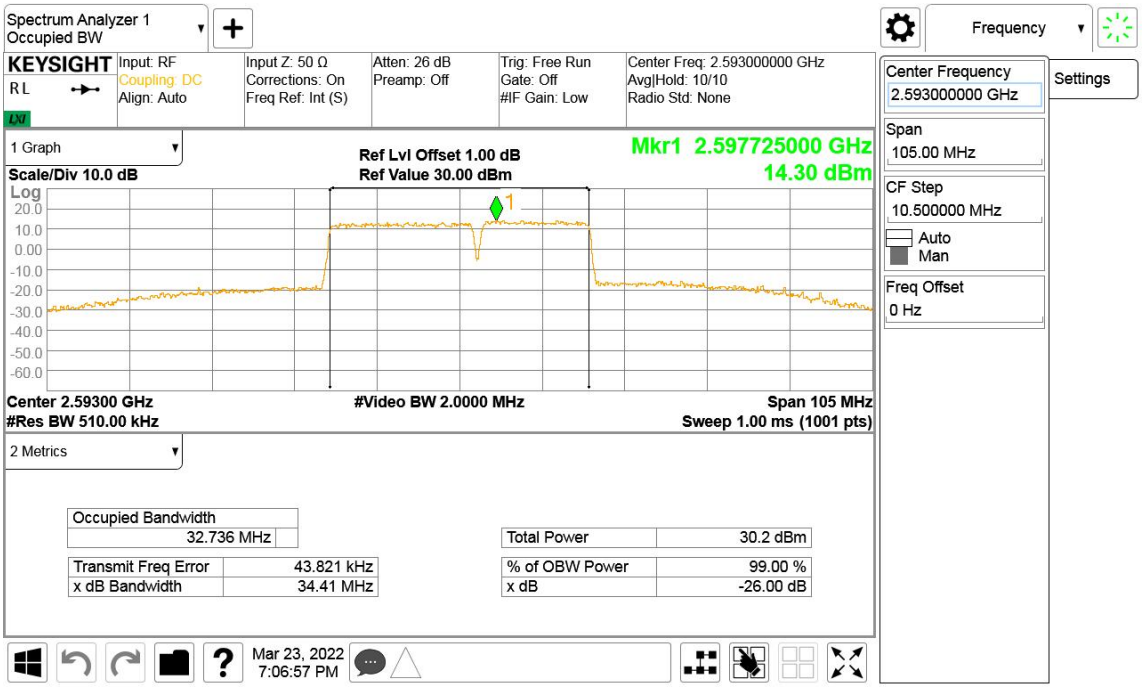
LTE CA band 41 , 20MHz+10MHz Bandwidth,16QAM (-26dBc BW)


Spectrum Analyzer 1
Occupied BW
KEYSIGHT
RL
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corrections: On
Freq Ref: Int (S)
Atten: 26 dB
Preamp: Off
Trig: Free Run
Gate: Off
#IF Gain: Low
Center Freq: 2.593000000 GHz
Avg|Hold: 10/10
Radio Std: None
Frequency
Center Frequency
2.593000000 GHz
Settings
Span
90.000 MHz
CF Step
9.000000 MHz
Auto
Man
Freq Offset
0 Hz
1 Graph
Ref Lvl Offset 1.00 dB
Ref Value 30.00 dBm
Mkr1 2.599840000 GHz
16.21 dBm
Scale/Div 10.0 dB
Log
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
Center 2.59300 GHz
#Res BW 510.00 kHz
#Video BW 2.0000 MHz
Span 90 MHz
Sweep 1.00 ms (1001 pts)
2 Metrics
Occupied Bandwidth
27.809 MHz
Total Power
29.2 dBm
Transmit Freq Error
115.66 kHz
% of OBW Power
99.00 %
x dB Bandwidth
29.29 MHz
x dB
-26.00 dB
Mar 23, 2022
7:06:01 PM

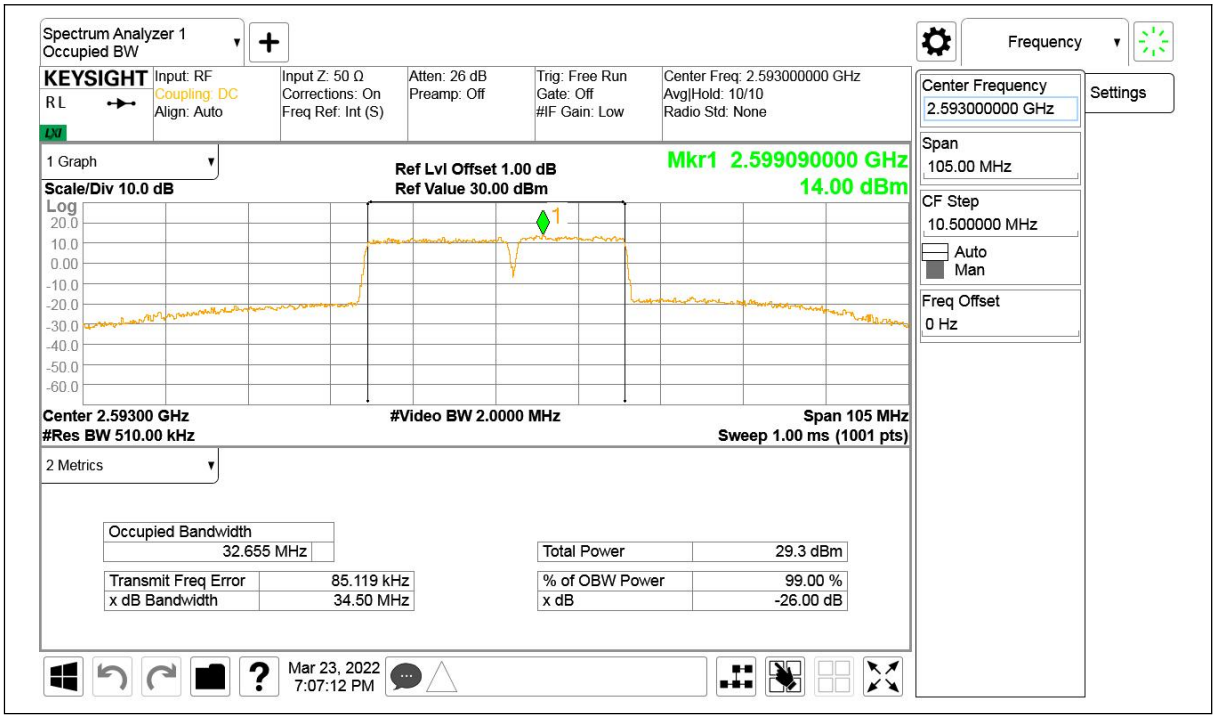
LTE CA band 41,20MHz+15MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	QPSK	16QAM
2585.6	34.407	34.498

LTE CA band 41 , 20MHz+15MHz Bandwidth,QPSK (-26dBc BW)



LTE CA band 41 , 20MHz+15MHz Bandwidth,16QAM (-26dBc BW)

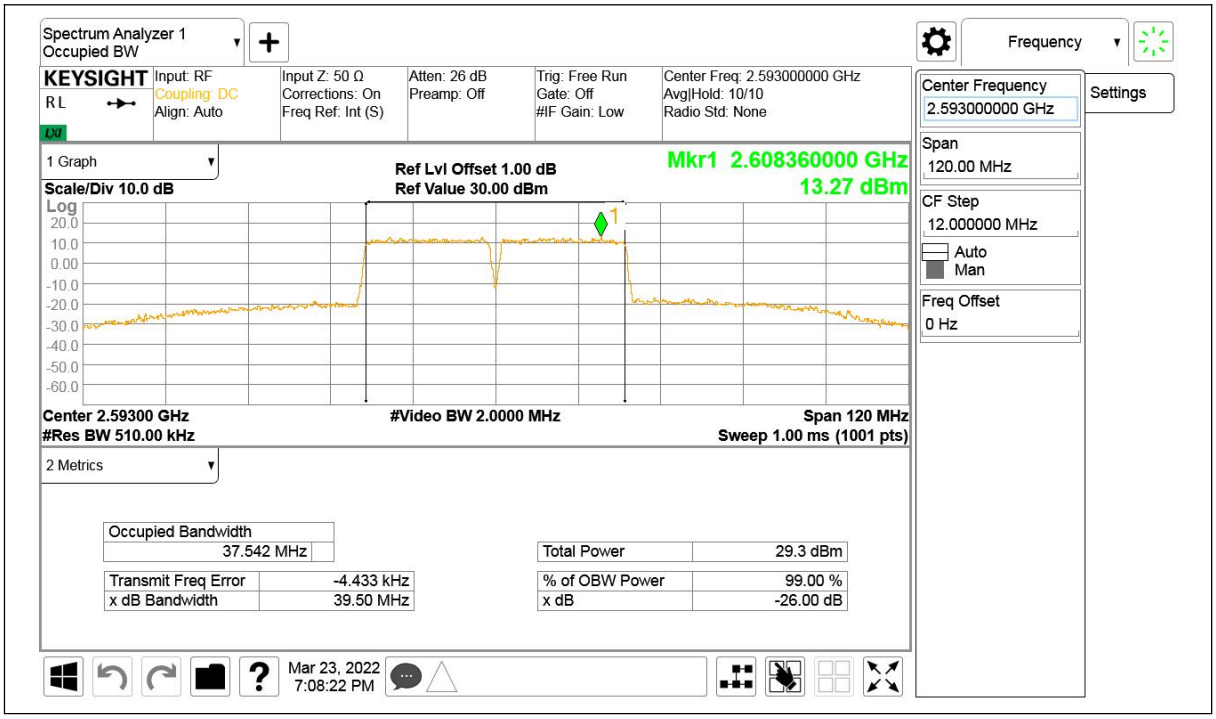

Spectrum Analyzer 1
Occupied BW
KEYSIGHT
RL
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corrections: On
Freq Ref: Int (S)
Atten: 26 dB
Preamp: Off
Trig: Free Run
Gate: Off
#IF Gain: Low
Center Freq: 2.593000000 GHz
Avg|Hold: 10/10
Radio Std: None
Frequency
Center Frequency
2.593000000 GHz
Settings
Span
105.00 MHz
CF Step
10.500000 MHz
Auto
Man
Freq Offset
0 Hz
1 Graph
Ref Lvl Offset 1.00 dB
Ref Value 30.00 dBm
Mkr1 2.599090000 GHz
14.00 dBm
Scale/Div 10.0 dB
Log
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
Center 2.59300 GHz
#Res BW 510.00 kHz
#Video BW 2.0000 MHz
Span 105 MHz
Sweep 1.00 ms (1001 pts)
2 Metrics
Occupied Bandwidth
32.655 MHz
Total Power
29.3 dBm
Transmit Freq Error
85.119 kHz
% of OBW Power
99.00 %
x dB Bandwidth
34.50 MHz
x dB
-26.00 dB
Mar 23, 2022
7:07:12 PM

LTE CA band 41,20MHz+20MHz(-26dBc)

Frequency (MHz)	Emission Bandwidth (-26dBc) (MHz)	
	QPSK	16QAM
2583.1	39.448	39.497

LTE CA band 41 , 20MHz+20MHz Bandwidth,QPSK (-26dBc BW)

LTE CA band 41 , 20MHz+20MHz Bandwidth,16QAM (-26dBc BW)


Spectrum Analyzer 1
Occupied BW
KEYSIGHT
RL
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corrections: On
Freq Ref: Int (S)
Atten: 26 dB
Preamp: Off
Trig: Free Run
Gate: Off
#IF Gain: Low
Center Freq: 2.593000000 GHz
Avg|Hold: 10/10
Radio Std: None
Frequency
Center Frequency
2.593000000 GHz
Settings
Span
120.00 MHz
CF Step
12.000000 MHz
Auto
Man
Freq Offset
0 Hz
1 Graph
Ref Lvl Offset 1.00 dB
Ref Value 30.00 dBm
Mkr1 2.608360000 GHz
13.27 dBm
Scale/Div 10.0 dB
Log
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
Center 2.59300 GHz
#Res BW 510.00 kHz
#Video BW 2.0000 MHz
Span 120 MHz
Sweep 1.00 ms (1001 pts)
2 Metrics
Occupied Bandwidth
37.542 MHz
Total Power
29.3 dBm
Transmit Freq Error
-4.433 kHz
% of OBW Power
99.00 %
x dB Bandwidth
39.50 MHz
x dB
-26.00 dB
Mar 23, 2022
7:08:22 PM

6.5. Conducted spurious emissions

Specifications:	FCCPart2.1051,24.238,2.1053,22.917, 27.53,90.691
DUT Serial Number:	864542050016100/864542050016050
Test conditions:	Ambient Temperature:15℃-35℃ Relative Humidity:30%-60% Air pressure: 86-106kPa
Test Results:	Pass

Limit Level Construction:

According to Part 22.917 (a), i.e., Out of Band emissions. 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.

According to Part 24.238 (a), i.e., Out of Band emissions. 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, so the limit level is: P(dBm)– (43 + 10 log(P)) dB= -13dBm.

According to Part 27.53(h):

Except as otherwise specified below, for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 Bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least 43 + 10 log10(P) dB.

According to Part 27.53(g):

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.

According to Part 90.691:

(a) Out-of-band emission requirement shall apply only to the “outer” channels included in an EA license and to spectrum adjacent to interior channels used by incumbent licensees. The emission limits are as follows:

(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.

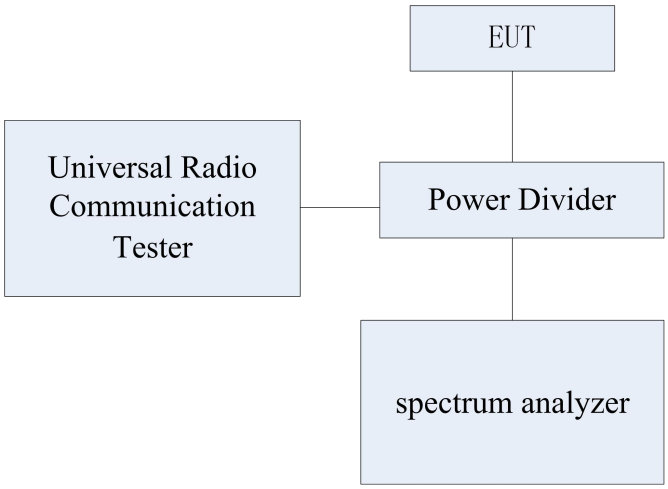
(b) When an emission outside of the authorized bandwidth causes harmful interference, the Commission may, at its discretion, require greater attenuation than specified in this section.

Measurement Uncertainty:

Item	Uncertainty	
Expanded Uncertainty	9kHz < f≤4GHz	0.71 dB (k=2)
	4GHz≤f < 12.75GHz	0.74 dB (k=2)
	12.75GHz≤f < 26GHz	2.70 dB (k=2)

Test Setup:

During the test, the EUT was controlled via the Wireless Communications Test Set to ensure max power transmission and proper modulation and measured by spectrum analyzer.



Test Method:

The measurement was performed accordance with section 2.2.13 of ANSI/TIA-603-D: Land Mobile FM or PM Communications Equipment Measurement and Performance Standards.

The measurement was performed accordance with section 2.2.13 of ANSI/TIA-603-D-2010: Land Mobile FM or PM Communications Equipment Measurement and Performance Standards.

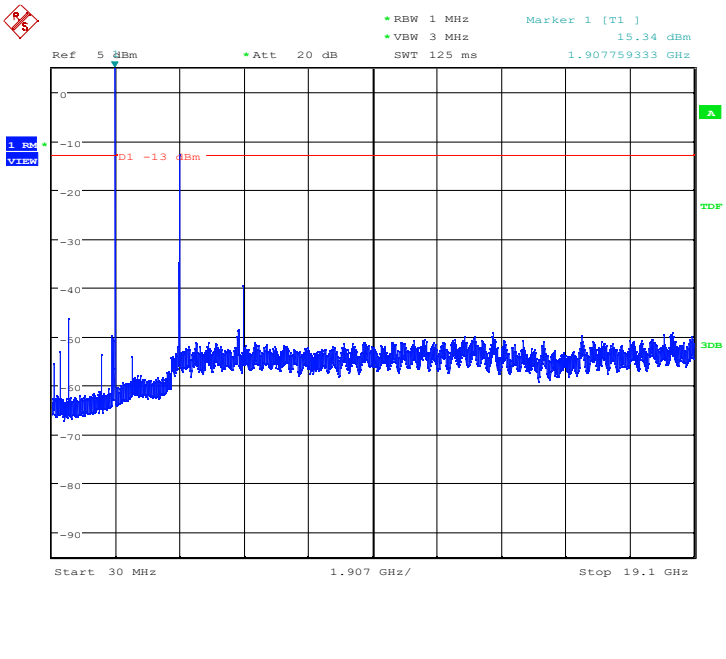
The RF output of the transmitter was connected to a spectrum analyzer through a calibrated coaxial cable. Sufficient scans were taken to show the out-of-Band emissions, if any, up to 10th harmonic. The EUT was scanned for spurious emissions from 30MHz to 20GHz with sufficient Bandwidth and video resolution. The spectrum analyzer was set to Maximum hold mode to ensure that the worst-case emissions were captured.

Note: --

6.5.1 Conducted Spurious Emission Results

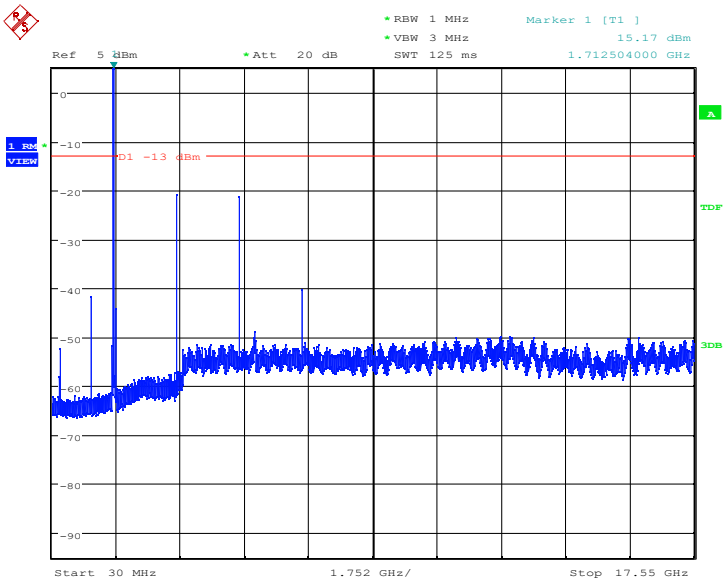
LTE band 2

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



LTE band 4

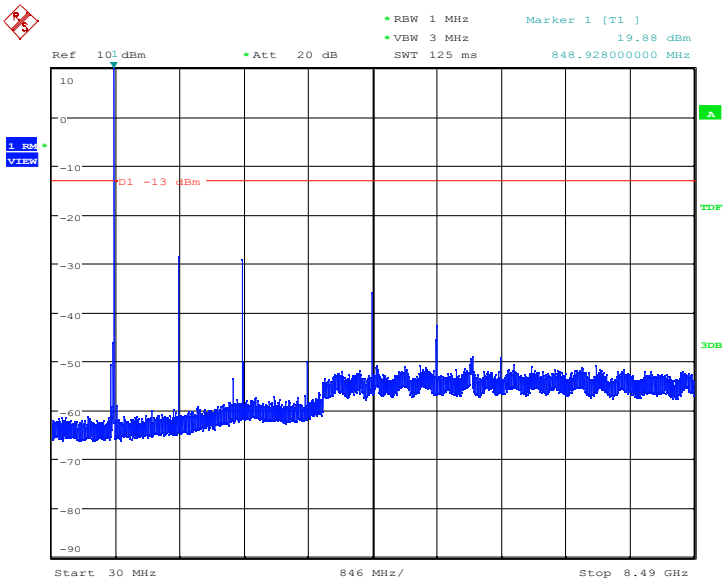
NOTE: peak above the limit line is the carrier frequency.



Date: 7.MAR.2022 20:20:25

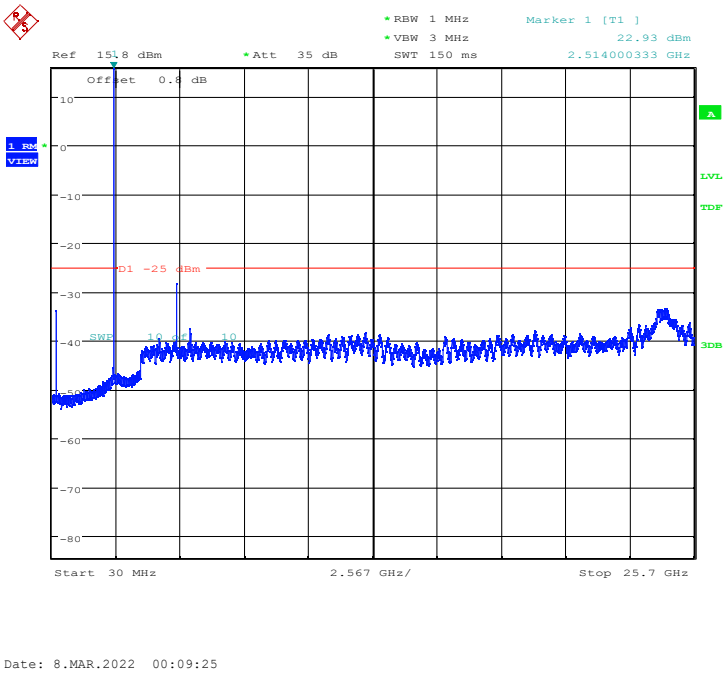
LTE band 5

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



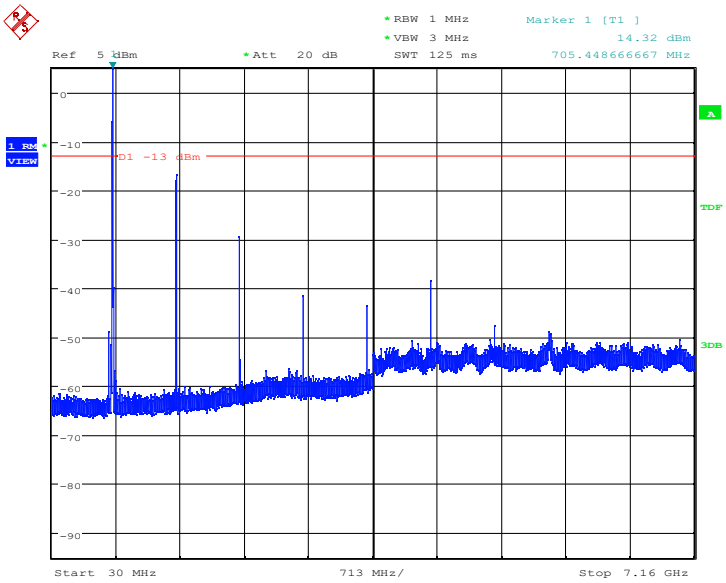
LTE band 7

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



LTE band 12

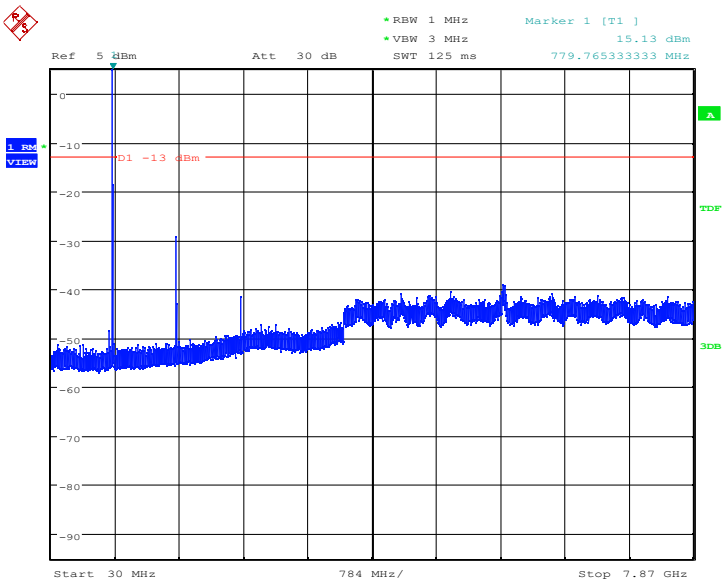
NOTE: peak above the limit line is the carrier frequency.



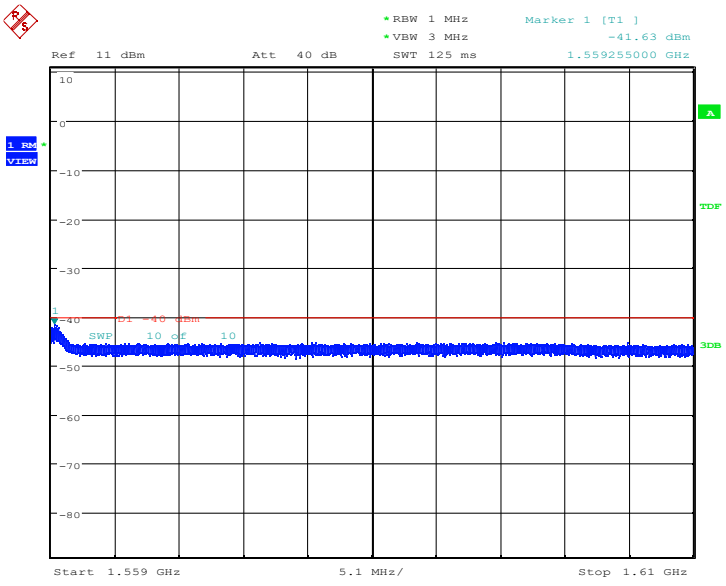
Date: 7.MAR.2022 20:24:05

LTE band 13

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



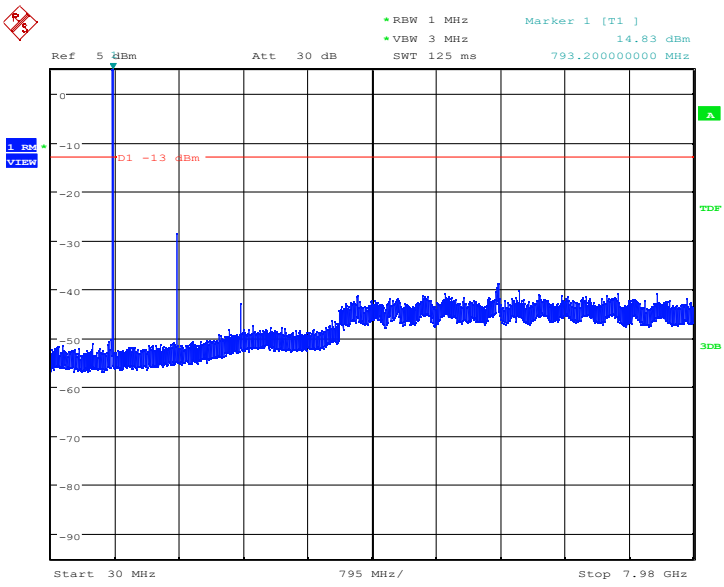
Date: 8.MAR.2022 00:10:33



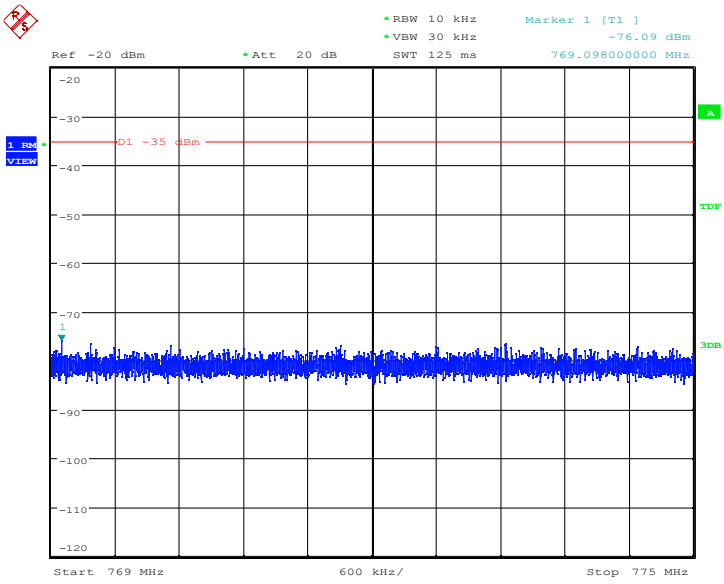
Date: 8.MAR.2022 00:11:17

LTE band 14

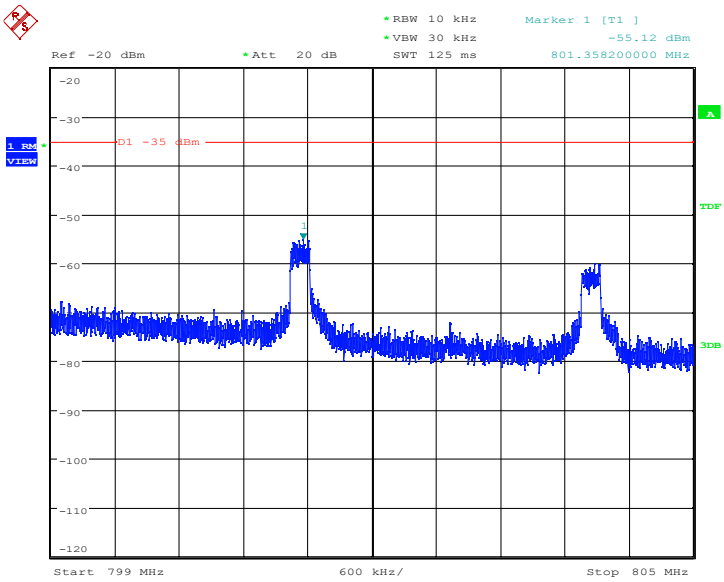
NOTE: peak above the limit line is the carrier frequency.



Date: 8.MAR.2022 00:46:54

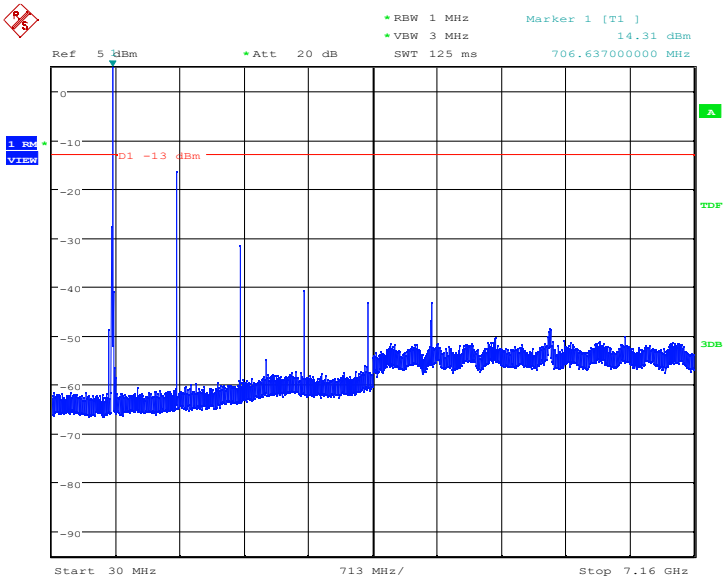


Date: 8.MAR.2022 00:47:26



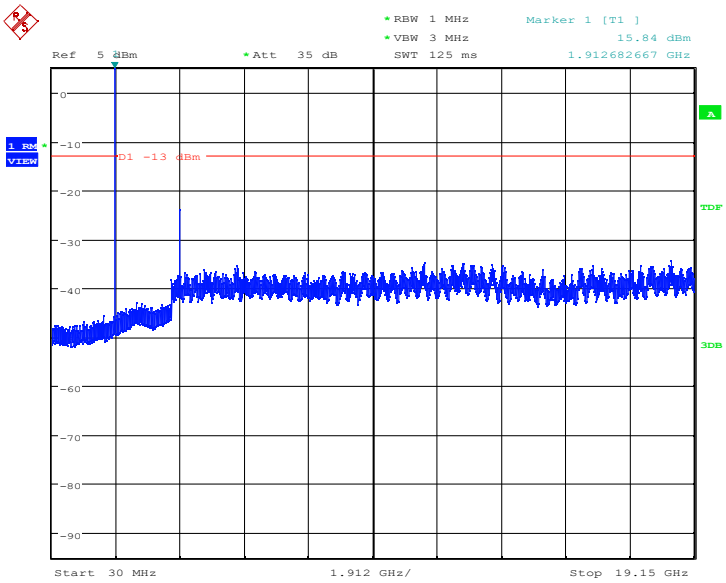
LTE band 17

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



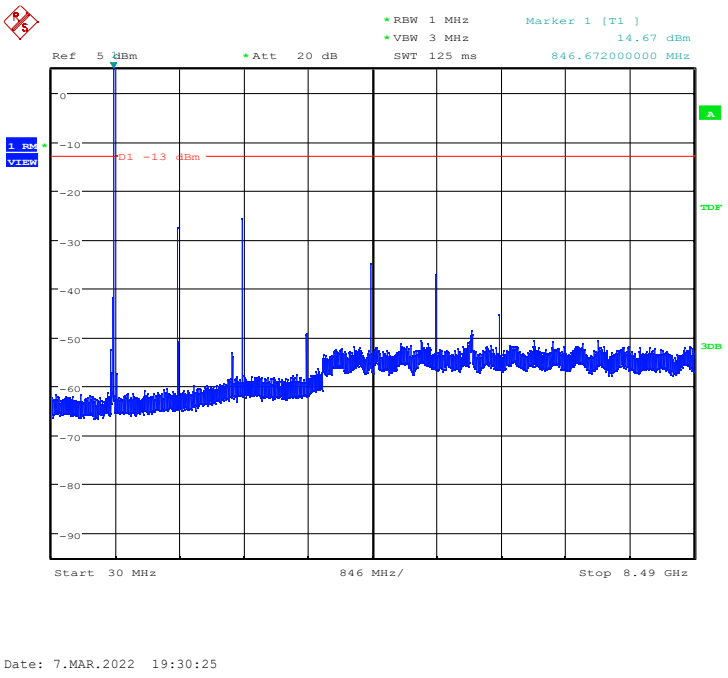
LTE band 25

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



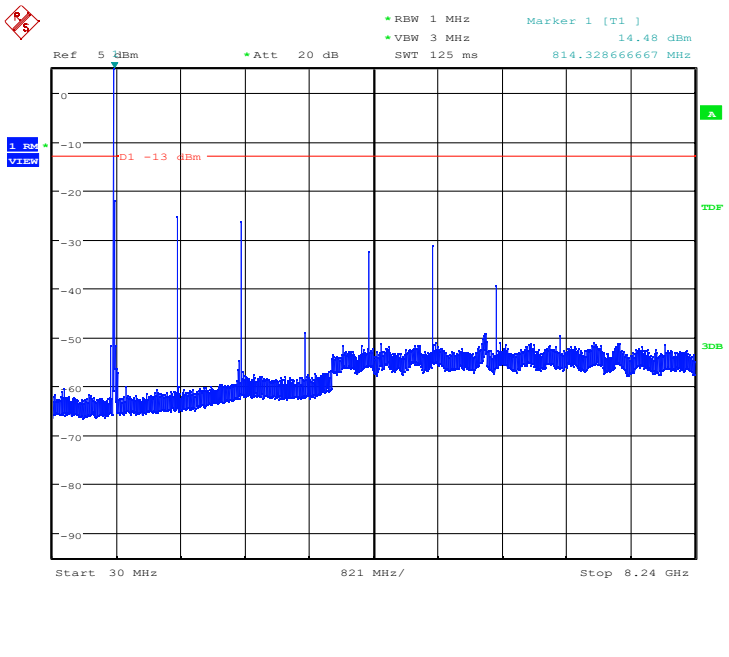
LTE band 26PART22

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



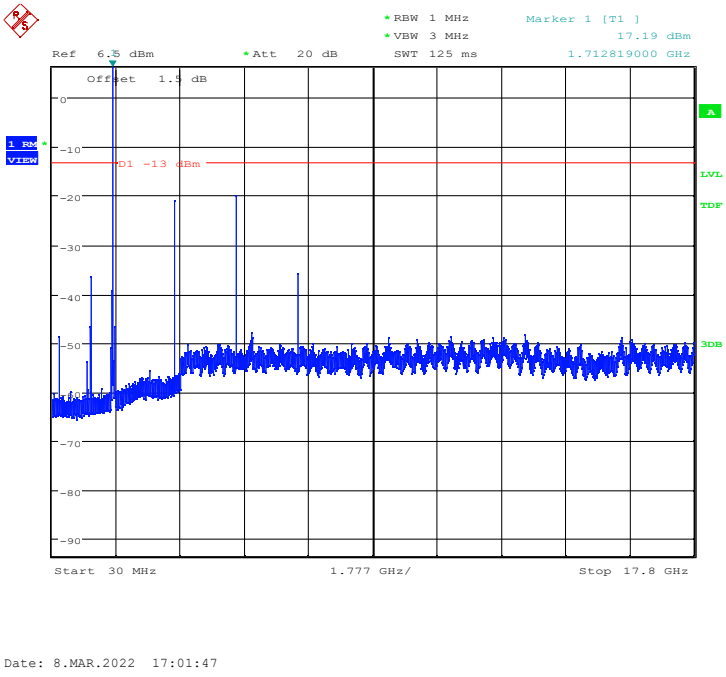
LTE band 26PART90

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



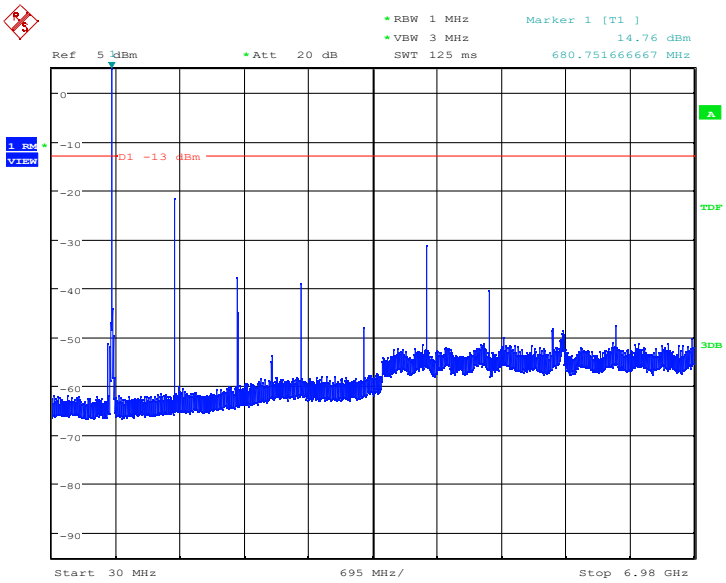
LTE band 66

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



LTE band 71

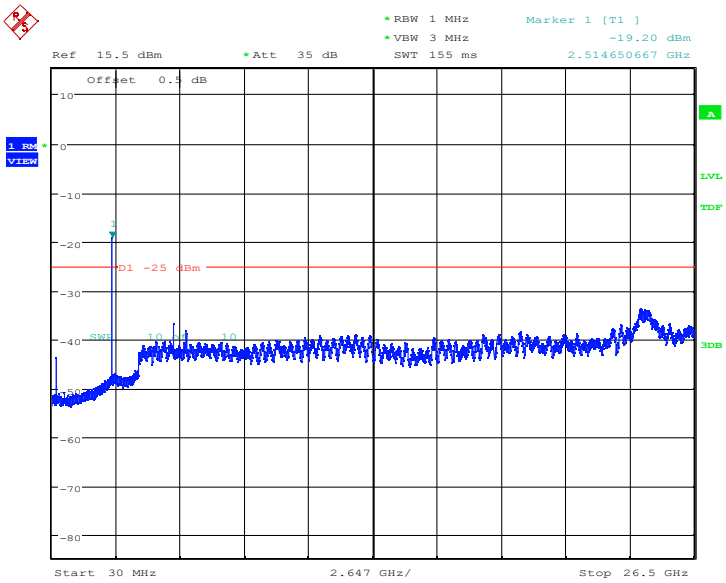
NOTE: peak above the limit line is the carrier frequency.



Date: 8.MAR.2022 17:02:34

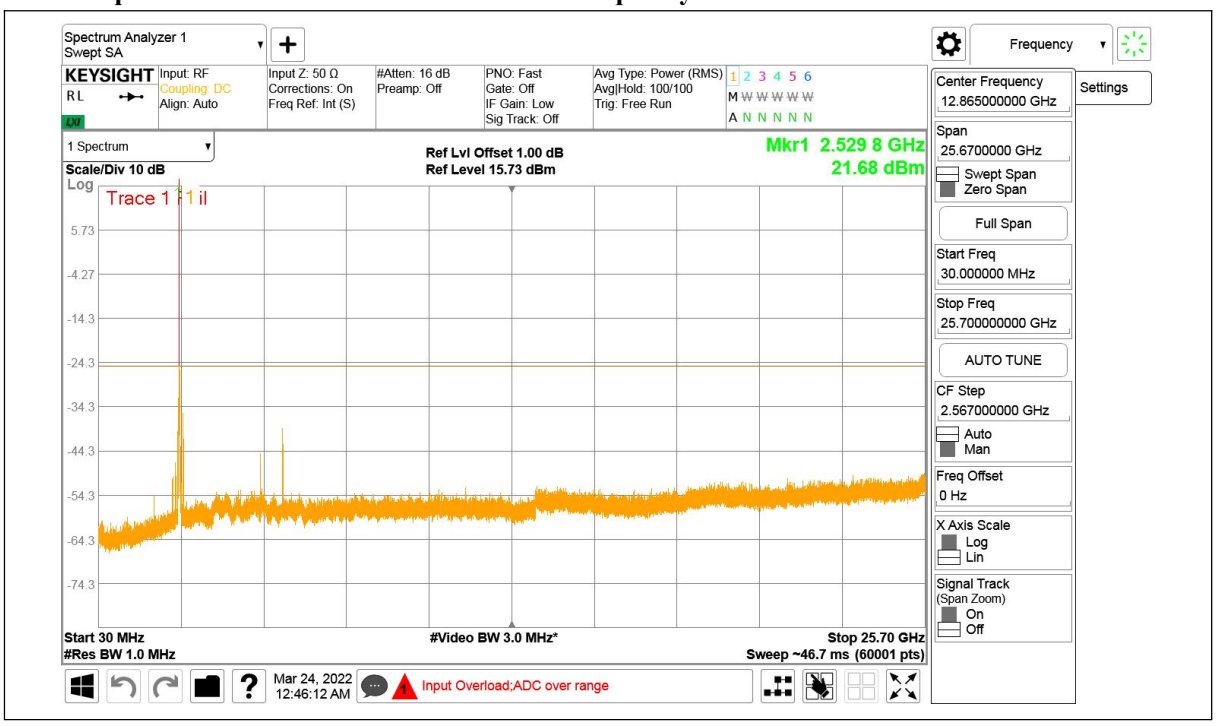
LTE band 41

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



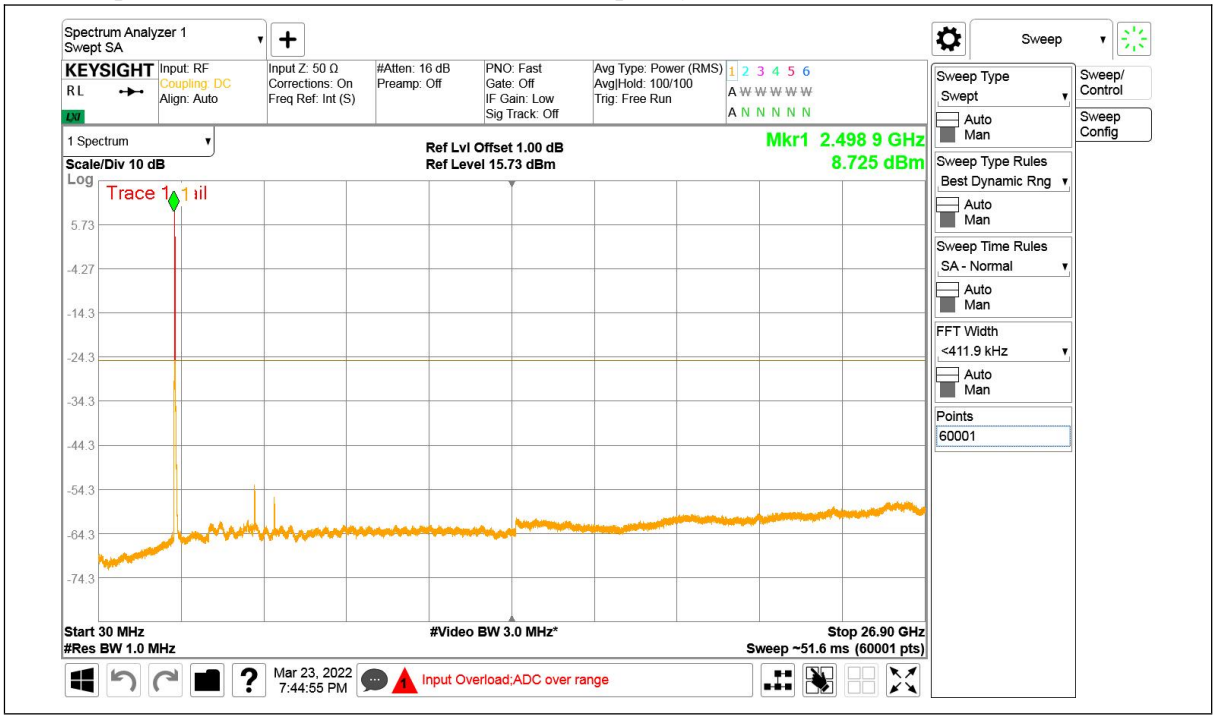
LTE band 7_CA

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



LTE band 41_CA

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



6.6. Radiated Spurious Emission

Specifications:	FCC Part 2.1051, 2.1053, 24.238, 22.917, 27.53
DUT Serial Number:	864788050018584
Test conditions:	Ambient Temperature:23.2℃-25.2℃ Relative Humidity:52.0%-57.0% Air pressure: 97.5kPa-98.1kPa
Test Results:	Pass

Limit Level Construction:

According to Part 22.917 (a), i.e., Out of Band emissions. 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.

According to Part 24.238 (a), i.e., Out of Band emissions. 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, so the limit level is: P(dBm)– (43 + 10 log(P)) dB= -13dBm.

According to Part 27.53(c):

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;

According to Part 27.53(h):

Except as otherwise specified below, for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 Bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least 43 + 10 log10(P) dB.

According to Part 27.53(g):

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.

According to Part 90.691:

(a) Out-of-band emission requirement shall apply only to the “outer” channels included in an EA license and to spectrum adjacent to interior channels used by incumbent licensees. The emission limits are as follows:

(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.

(b) When an emission outside of the authorized bandwidth causes harmful interference, the Commission may, at its discretion, require greater attenuation than specified in this section.

Limits for Radiated spurious emissions(UE)	
Frequency range	**Limit Level /Resolution Bandwidth**
30 MHz to 20000 MHz	-13dBm/1MHz

Measurement Uncertainty:

Item	Uncertainty
Expanded Uncertainty（30MHz-150MHz）	5.15 dB (k=2)
Expanded Uncertainty（150MHz-1GHz）	4.09dB (k=2)
Expanded Uncertainty（1GHz-3GHz）	2.92dB (k=2)
Expanded Uncertainty（3GHz-6GHz）	2.93dB (k=2)
Expanded Uncertainty（3GHz-12.75GHz）	2.69dB (k=2)

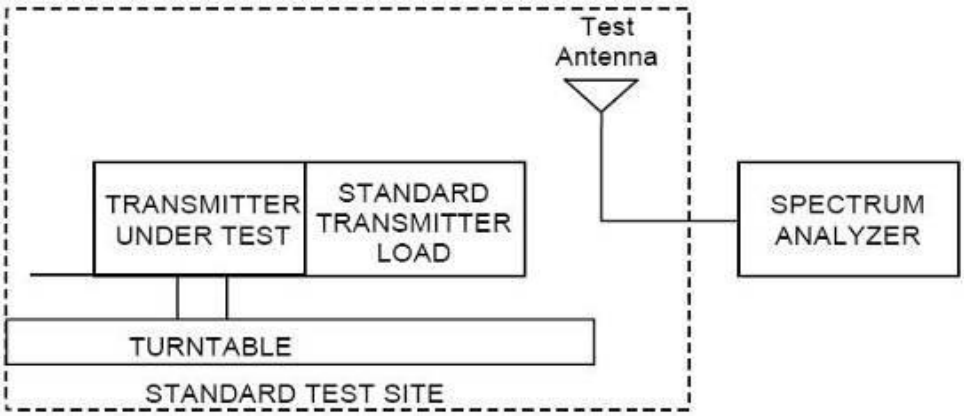
Test Setup:

The EUT was placed in an anechoic chamber. The Wireless Communications Test Set was used to set the TX channel and power level and modulate the TX signal with different bit patterns.

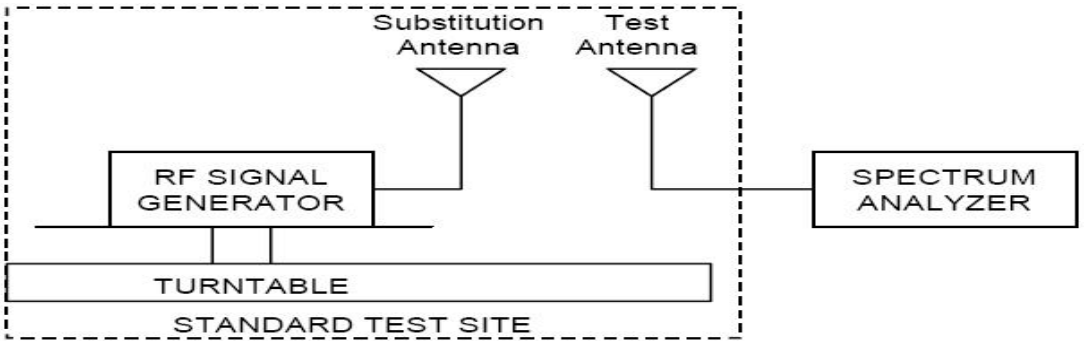
Test Method:

The measurement method is substitution method accordance with section 2.2.12 of ANSI/TIA-603-E: Land Mobile FM or PM Communications Equipment Measurement and Performance Standards.

(a) Connect the equipment as illustrated and measure the spurious emissions as the method as above. The distance from the device to the antenna is 3 m .



(b) Reconnect the equipment as illustrated.



(c) Remove the transmitter and replace it with a substitution antenna. The center of the substitution antenna should be approximately at the same location as the center of the transmitter.

(d) Feed the substitution antenna at the transmitter end with a signal generator connected to the antenna by means of a non-radiating cable. With the antennas at both ends horizontally polarized, and with the signal generator tuned to a particular spurious frequency, raise and lower the test antenna to obtain a maximum reading at the spectrum analyzer. Adjust the level of the signal generator output until the previously recorded maximum reading for this set of conditions is obtained. This should be done carefully repeating the adjustment of the test antenna and generator output.

(e) Repeat step d) with both antennas vertically polarized for each spurious frequency.

(f) Calculate power in dBm into a reference ideal half-wave dipole antenna by reducing the readings obtained in steps d) and e) by the power loss in the cable between the generator and the antenna, and further corrected for the gain of the substitution antenna used relative to an ideal half-wave dipole antenna by the following formula:

P_d(dBm) = P_g(dBm) – cable loss (dB) + antenna gain (dB)

where:

Pd is the dipole equivalent power and Pg is the generator output power into the substitution antenna.

Note: The evaluation of radiated spurious emission under the simultaneous transmission of WWAN & WLAN.

6.6.1 LTE B2 Radiated Spurious Emission Results

Test Data （5MHz bandwidth 18625 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3705.0	-73.5	1.6	9.2	-65.9	V
5557.5	-71.6	2.2	10.5	-63.3	V
7410.0	-71.6	2.5	11.9	-62.2	V
9262.5	-68.1	3.1	11.8	-59.4	V
11115.0	-67.2	3.6	12.2	-58.6	V
12967.5	-64.2	3.7	9.2	-58.7	V

Test Data （5MHz bandwidth 18900 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3760.0	-71.8	1.6	9.2	-64.2	V
5640.0	-70.0	2.3	10.5	-61.8	V
7520.0	-69.7	2.5	11.9	-60.3	V
9400.0	-66.6	3.3	11.8	-58.1	V
11280.0	-67.1	3.3	12.2	-58.2	V
13160.0	-62.7	4.1	9.2	-57.6	V

Test Data （5MHz bandwidth 19174 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3814.8	-65.5	1.6	9.2	-57.9	V
5722.2	-62.6	2.2	10.5	-54.3	V
7629.6	-69.5	2.6	11.9	-60.2	V

9537.0	-68.9	3.2	11.8	-60.3	V
11444.4	-67.8	3.7	12.2	-59.3	V
13351.8	-65.5	4.1	12.4	-57.2	V

LTE B4 Radiated Spurious Emission Results

Test Data （5MHz bandwidth 19975 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3425.0	-74.5	1.5	8.9	-67.1	V
5137.5	-70.1	2.0	9.9	-62.2	V
6850.0	-71.6	2.5	11.9	-62.2	V
8562.5	-67.8	3.0	11.2	-59.6	V
10275.0	-68.1	3.5	12.2	-59.4	V
11987.5	-66.1	3.7	12.2	-57.6	V

Test Data （5MHz bandwidth 20175 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3465.0	-73.7	1.5	8.9	-66.3	V
5197.5	-70.1	2.0	9.9	-62.2	V
6930.0	-70.4	2.6	11.9	-61.1	V
8662.5	-67.9	3.2	11.2	-59.9	V
10395.0	-68.7	3.5	12.2	-60.0	V
12127.5	-66.4	3.6	12.2	-57.8	V

Test Data （5MHz bandwidth 20374 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]

3504.8	-73.2	1.6	8.9	-65.9	V
5257.2	-70.7	2.0	9.9	-62.8	V
7009.6	-70.7	2.5	11.9	-61.3	V
8762.0	-67.1	3.3	11.2	-59.2	V
10514.4	-68.6	3.3	12.2	-59.7	V
12266.8	-66.9	3.5	12.2	-58.2	V

LTE B5 Radiated Spurious Emission Results

Test Data （3MHz bandwidth 20415 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
1651.0	-72.0	1.0	8.0	-65.0	H
2476.5	-64.9	1.3	6.9	-59.3	H
3302.0	-72.8	1.5	8.9	-65.4	V
4127.5	-71.5	1.7	9.2	-64.0	V
4953.0	-70.5	1.9	9.9	-62.5	V
5778.5	-71.4	2.2	10.9	-62.7	V

Test Data （3MHz bandwidth 20525 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
1673.0	-72.4	1.0	8.0	-65.4	H
2509.5	-65.3	1.3	6.9	-59.7	V
3346.0	-73.6	1.5	8.9	-66.2	V
4182.5	-71.4	1.7	9.2	-63.9	V
5019.0	-70.9	2.0	9.9	-63.0	V
5855.5	-70.3	2.2	10.9	-61.6	V

Test Data （3MHz bandwidth 20634 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
1694.8	-72.9	1.0	8.0	-65.9	V
2542.2	-64.8	1.3	6.9	-59.2	V
3389.6	-73.7	1.5	8.9	-66.3	V
4237.0	-71.3	1.8	9.2	-63.9	V
5084.4	-70.4	2.0	9.9	-62.5	V
5931.8	-68.0	2.2	10.9	-59.3	V

LTE B7 Radiated Spurious Emission Results

Test Data （15MHz bandwidth 20825 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
5015.0	-70.4	2.0	9.8	-62.6	V
7522.5	-69.6	2.5	11.7	-60.4	V
10030.0	-68.2	3.1	13.2	-58.1	V
12537.5	-68.8	3.6	14.1	-58.3	V
15045.0	-65.9	4.7	12.4	-58.2	V
17552.5	-64.6	5.0	12.0	-57.6	V

Test Data （15MHz bandwidth 21100 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
5070.0	-70.6	2.0	9.8	-62.8	V
7605.0	-69.6	2.5	11.7	-60.4	V

10140.0	-68.3	3.4	13.2	-58.5	V
12675.0	-68.5	3.8	14.1	-58.2	V
15210.0	-66.4	4.2	12.4	-58.2	V
17745.0	-63.8	5.6	12.0	-57.4	V

Test Data （15MHz bandwidth 21374 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
5124.8	-70.0	2.0	9.8	-62.2	V
7687.2	-69.5	2.6	11.7	-60.4	V
10249.6	-67.6	3.6	13.2	-58.0	V
12812.0	-68.0	4.3	14.1	-58.2	V
15374.4	-65.6	4.8	12.4	-58.0	V
17936.8	-64.4	4.7	12.0	-57.1	V

LTE B12 Radiated Spurious Emission Results

Test Data （5MHz bandwidth 23035 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
1403.0	-75.8	0.9	8.3	-68.4	H
2104.5	-70.4	1.2	8.1	-63.5	V
2806.0	-63.9	1.4	7.5	-57.8	V
3507.5	-74.0	1.6	8.9	-66.7	V
4209.0	-71.6	1.7	9.2	-64.1	V
4910.5	-70.1	1.9	9.9	-62.1	V

Test Data （5MHz bandwidth 23095 QPSK Mode）

Frequency [MHz]	Generator output	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission	Antenna Polarization

	power(Pg) [dBm]			Power (Pd) [dBm]	[H/V]
1415.0	-75.9	0.9	8.3	-68.5	H
2122.5	-68.9	1.2	6.6	-63.5	V
2830.0	-64.4	1.4	8.0	-57.8	V
3537.5	-74.0	1.6	8.9	-66.7	V
4245.0	-71.9	1.7	9.5	-64.1	V
4952.5	-70.0	1.9	9.9	-62.0	V

Test Data （5MHz bandwidth 23154 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
1426.8	-75.5	0.9	8.3	-68.1	V
2140.2	-68.9	1.2	6.6	-63.5	H
2853.6	-63.7	1.4	8.0	-57.1	V
3567.0	-73.5	1.6	8.9	-66.2	V
4280.4	-71.8	1.8	9.5	-64.1	V
4993.8	-69.1	1.9	9.9	-61.1	V

LTE B13 Radiated Spurious Emission Results

Test Data （5MHz bandwidth 23205 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
1559.0	-74.3	1.0	8.5	-66.8	V
2338.5	-65.6	1.2	8.1	-58.7	V
3118.0	-73.8	1.5	8.9	-66.4	V
3897.5	-70.9	1.7	9.2	-63.4	V
4677.0	-70.8	1.9	9.5	-63.2	V

5456.5	-71.8	2.2	10.5	-63.5	V

Test Data （5MHz bandwidth 23230 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
1564.0	-73.6	1.0	8.5	-66.1	V
2346.0	-65.2	1.2	8.1	-58.3	V
3128.0	-73.5	1.5	8.9	-66.1	V
3910.0	-71.0	1.7	9.2	-63.5	V
4692.0	-70.7	1.9	9.5	-63.1	V
5474.0	-70.6	2.3	10.5	-62.4	V

Test Data （5MHz bandwidth 23254 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
1568.8	-74.1	1.0	8.5	-66.6	V
2353.2	-65.6	1.2	8.1	-58.7	V
3137.6	-73.6	1.5	8.9	-66.2	V
3922.0	-70.9	1.7	9.2	-63.4	V
4706.4	-70.8	1.9	9.5	-63.2	V
5490.8	-71.8	2.2	10.5	-63.5	V

LTE B14Radiated Spurious Emission Results

Test Data （5MHz bandwidth 23305 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
1581.0	-74.2	1.0	8.5	-66.7	V
2371.5	-66.7	1.2	8.1	-59.8	V

3162.0	-73.7	1.5	8.9	-66.3	V
3952.5	-71.3	1.7	9.2	-63.8	V
4743.0	-71.3	1.9	9.5	-63.7	V
5533.5	-71.6	2.2	10.5	-63.3	V

Test Data （5MHz bandwidth 23330 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
1586.0	-74.0	1.0	8.5	-66.5	V
2379.0	-66.7	1.2	8.1	-59.8	V
3172.0	-73.7	1.5	8.9	-66.3	V
3965.0	-71.3	1.7	9.2	-63.8	V
4758.0	-71.0	1.9	9.5	-63.4	V
5551.0	-71.5	2.2	10.5	-63.2	V

Test Data （5MHz bandwidth 23355QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
1591.0	-73.7	1.0	8.5	-66.2	V
2386.5	-66.0	1.2	8.1	-59.1	V
3182.0	-73.7	1.5	8.9	-66.3	V
3977.5	-70.7	1.7	9.2	-63.2	V
4773.0	-70.8	1.9	9.5	-63.2	V
5568.5	-71.5	2.2	10.5	-63.3	V

LTE B17 Radiated Spurious Emission Results

Test Data （5MHz bandwidth 23755 QPSK Mode）

Frequency	Generator	Cable loss	Antenna	Spurious	Antenna

[MHz]	output power(Pg) [dBm]	[dB]	Gain [dB]	Emission Power (Pd) [dBm]	Polarization [H/V]
1413.0	-76.0	0.9	8.3	-68.6	V
2119.5	-70.7	1.2	8.1	-63.8	V
2826.0	-63.7	1.4	7.5	-57.6	V
3532.5	-73.2	1.6	8.9	-65.9	V
4239.0	-71.9	1.8	9.2	-64.5	V
4945.5	-71.2	1.9	9.9	-63.2	V

Test Data （5MHz bandwidth 23790 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
1420.0	-75.7	0.9	8.3	-68.2	V
2130.0	-70.3	1.2	8.1	-63.4	V
2840.0	-65.0	1.4	7.5	-57.6	V
3550.0	-73.4	1.6	8.9	-65.9	V
4260.0	-71.8	1.8	9.2	-64.2	V
4970.0	-70.0	1.9	9.9	-61.8	V

Test Data （5MHz bandwidth 23824 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
1426.8	-74.9	0.9	8.3	-67.5	V
2140.2	-69.3	1.2	8.1	-62.4	V
2853.6	-63.5	1.4	7.5	-57.4	V
3567.0	-71.9	1.6	8.9	-64.6	V
4280.4	-70.6	1.8	9.2	-63.2	V
4993.8	-69.4	1.9	9.9	-61.4	V

LTE B25 Radiated Spurious Emission Results

Test Data （5MHz bandwidth 26065 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3705.0	-72.5	1.6	9.0	-65.1	V
5557.5	-70.4	2.2	10.3	-62.3	V
7410.0	-70.5	2.5	11.7	-61.3	V
9262.5	-69.1	3.1	12.4	-59.8	V
11115.0	-68.8	3.6	13.5	-58.9	V
12967.5	-68.3	3.7	14.4	-57.6	V

Test Data （5MHz bandwidth 26365 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3765.0	-72.2	1.6	9.0	-64.8	V
5647.5	-70.1	2.2	10.3	-62.0	V
7530.0	-70.5	2.5	11.7	-61.3	V
9412.5	-68.5	3.1	12.4	-59.2	V
11295.0	-68.3	3.6	13.5	-58.4	V
13177.5	-67.2	3.7	14.4	-56.5	V

Test Data （5MHz bandwidth 26664 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3824.8	-71.5	1.6	9.0	-64.1	V
5737.2	-69.6	2.2	10.3	-61.5	V
7649.6	-70.7	2.5	11.7	-61.5	V

9562.0	-68.3	3.1	12.4	-59.0	V
11474.4	-68.3	3.6	13.5	-58.4	V
13386.8	-67.8	3.7	14.4	-57.1	V

LTE B26 (Part 22) Radiated Spurious Emission Results

Test Data （5MHz bandwidth 26715 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
1633.0	-70.7	1.0	6.7	-65.0	H
2449.5	-63.9	1.3	4.3	-60.9	V
3266.0	-74.4	1.5	9.3	-66.6	V
4082.5	-73.7	1.7	9.3	-66.1	V
4899.0	-72.2	2.0	9.8	-64.4	V
5715.5	-72.9	2.1	10.3	-64.7	V

Test Data （5MHz bandwidth 26740 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
1638.0	-72.4	1.0	6.7	-66.7	H
2457.0	-63.4	1.3	4.3	-60.4	H
3276.0	-74.6	1.5	9.3	-66.8	V
4095.0	-73.8	1.7	9.3	-66.2	V
4914.0	-73.1	2.1	9.8	-65.4	V
5733.0	-73	2.2	10.3	-64.9	V

Test Data （5MHz bandwidth 26765 QPSK Mode）

Frequency [MHz]	Generator output power(Pg)	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd)	Antenna Polarization [H/V]

	[dBm]			[dBm]	
1643.0	-72.6	1.0	6.7	-66.9	V
2464.5	-63.6	1.3	4.3	-60.6	V
3286.0	-75	1.5	9.3	-67.2	V
4107.5	-73.4	1.7	9.3	-65.8	V
4929.0	-71.1	2.1	9.8	-63.4	V
5750.5	-72.8	2.2	10.3	-64.7	V

LTE B26 (Part 90) Radiated Spurious Emission Results

Test Data （5MHz bandwidth 26815 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
1653.0	-72.4	1.1	6.7	-66.8	H
2479.5	-63.4	1.3	4.3	-60.4	V
3306.0	-74.8	1.5	9.3	-67.0	V
4132.5	-73.5	1.7	9.3	-65.9	V
4959.0	-71.6	2.2	9.8	-64.0	V
5785.5	-71.7	2.2	10.3	-63.6	V

Test Data （5MHz bandwidth 26915 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
1673.0	-72	1.1	6.7	-66.4	H
2509.5	-63.5	1.3	4.3	-60.5	V
3346.0	-75	1.5	9.3	-67.2	V
4182.5	-73.5	1.7	9.3	-65.9	V
5019.0	-72.7	2.2	9.8	-65.1	V

5855.5	-72.5	2.2	10.3	-64.4	V

Test Data （5MHz bandwidth 27015 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
1693.0	-71.8	1.2	6.7	-66.3	V
2539.5	-61.8	1.4	4.3	-58.9	V
3386.0	-75.5	1.5	9.3	-67.7	V
4232.5	-73	1.8	9.3	-65.5	V
5079.0	-72.2	2.2	9.8	-64.6	V
5925.5	-71.9	2.3	10.3	-63.9	V

LTE B41 Radiated Spurious Emission Results

Test Data （20MHz bandwidth 39750 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
5012.0	-73.1	1.0	9.8	-64.3	V
7518.0	-71.2	1.3	11.7	-60.8	V
10024.0	-71.9	1.5	13.2	-60.2	V
12530.0	-70.8	1.7	14.1	-58.4	V
15036.0	-67.3	2.0	12.4	-56.9	V
17542.0	-66.5	2.3	12.0	-56.8	V

Test Data （20MHz bandwidth 40620QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
5186.0	-75.3	1.0	9.8	-66.5	V
7779.0	-70.6	1.3	11.7	-60.2	V

10372.0	-71.9	1.5	13.2	-60.2	V
12965.0	-70.8	1.7	14.1	-58.4	V
15558.0	-67.2	2.1	12.4	-56.9	V
18151.0	-66.5	2.3	12.0	-56.8	V

Test Data （20MHz bandwidth 41490 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
5360.0	-72.8	1.0	9.8	-64.0	V
8040.0	-72.4	1.3	11.7	-62.0	V
10720.0	-71.7	1.4	13.2	-59.9	V
13400.0	-71.3	1.7	14.1	-58.9	V
16080.0	-68.1	2.1	12.4	-57.8	V
17760.0	-65.7	2.4	12.0	-56.1	V

LTE B66 Radiated Spurious Emission Results

Test Data （5MHz bandwidth 131997 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3425.0	-75.2	1.5	8.9	-67.8	V
5137.5	-70.1	2.0	9.9	-62.2	V
6850.0	-70.8	2.5	11.9	-61.4	V
8562.5	-67.9	3.0	11.2	-59.7	V
10275.0	-66.8	3.5	12.2	-58.1	V
11987.5	-64.6	3.7	12.2	-56.1	V

Test Data （5MHz bandwidth 132322 QPSK Mode）

Frequency [MHz]	Generator output	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission	Antenna Polarization

	power(Pg) [dBm]			Power (Pd) [dBm]	[H/V]
3490.0	-73.9	1.5	8.9	-66.5	V
5235.0	-70.1	2.0	9.9	-62.2	V
6980.0	-70.8	2.5	11.9	-61.4	V
8725.0	-66.6	3.0	11.2	-58.4	V
10470.0	-66.4	3.5	12.2	-57.7	V
12215.0	-65.5	3.6	12.2	-56.9	V

Test Data （5MHz bandwidth 132646 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3554.8	-74.2	1.5	8.9	-66.8	V
5332.2	-70.2	2.1	9.9	-62.4	V
7109.6	-70.7	2.5	11.9	-61.3	V
8887.0	-67.1	3.0	11.2	-58.9	V
10664.4	-68.3	3.5	12.2	-59.6	V
12441.8	-65.0	3.6	12.2	-56.4	V

LTE B71 Radiated Spurious Emission Results

Test Data （5MHz bandwidth 133122 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
1331.2	-75.1	0.9	8.3	-67.7	H
1996.3	-70.5	1.2	8.1	-63.6	H
2662.0	-62.8	1.3	7.5	-56.6	H
3327.6	-80.2	1.6	8.9	-72.9	H
3992.9	-78.7	1.7	9.2	-71.2	H

4658.7	-78.1	1.9	9.9	-70.1	H

Test Data （5MHz bandwidth 133297 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
1361.0	-72.5	0.9	8.3	-65.1	V
2041.8	-70.6	1.2	8.1	-63.7	V
2722.0	-62.6	1.4	7.5	-56.5	V
3402.6	-80.2	1.5	8.9	-72.8	V
4082.9	-78.8	1.7	9.2	-71.3	V
4763.7	-77.1	1.9	9.9	-69.1	V

Test Data （5MHz bandwidth 133471 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
1390.8	-70.1	0.9	8.3	-62.7	H
2086.6	-69.5	1.3	8.1	-62.7	H
2781.5	-62.0	1.4	7.5	-55.9	H
3477.0	-79.6	1.6	8.9	-72.3	H
4172.4	-77.8	1.7	9.2	-70.3	H
4867.7	-76.9	1.9	9.9	-68.9	H

LTE CA _Band 7

Test Data （10MHz+20MHz bandwidth 20800+20940 QPSK Mode）

Frequency [MHz]	Generator output power(Pg)	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd)	Antenna Polarization [H/V]

	[dBm]			[dBm]	
5011.0	-71.3	2.0	9.8	-63.5	V
7516.5	-71.3	2.5	11.7	-62.1	H
10022.0	-68.2	3.1	13.2	-58.1	V
12527.5	-67.9	3.6	14.1	-57.4	V
15033.0	-64.7	4.7	12.4	-57.0	V
17538.5	-63.6	5.0	12.0	-56.6	V

Test Data （10MHz+20MHz bandwidth 21006+21150 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
5051.2	-70.3	2.0	9.8	-62.5	V
7576.8	-71.3	2.5	11.7	-62.1	V
10102.4	-68.2	3.1	13.2	-58.1	V
12628.0	-69.1	3.6	14.1	-58.6	V
15153.6	-65.0	4.8	12.4	-57.4	V
17679.2	-63.2	5.0	12.0	-56.2	V

Test Data （10MHz+20MHz bandwidth 21206+21350 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
5091.2	-70.5	2	9.8	-62.7	V
7636.8	-71.7	2.5	11.7	-62.5	V
10182.4	-67.2	3.1	13.2	-57.1	V
12728.0	-67.1	3.6	14.1	-56.6	V
15273.6	-64.8	4.8	12.4	-57.2	V
17819.2	-62.9	5.0	12	-55.9	V

LTE CA _Band 41

Test Data （5MHz+20MHz bandwidth 39683+39800 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
4998.6	-74.1	1.9	9.8	-66.2	V
7497.9	-73.6	2.4	11.7	-64.3	V
9997.2	-69.7	3.1	13.2	-59.6	V
12496.5	-70.7	3.5	14.1	-60.1	V
14995.8	-65.4	4.7	12.4	-57.7	V
17495.1	-64.5	4.9	12.0	-57.4	V

Test Data （5MHz+20MHz bandwidth 40528+40645 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
5167.6	-73.3	1.9	9.8	-65.4	V
7751.4	-74.0	2.4	11.7	-64.7	V
10335.2	-70.5	3.1	13.2	-60.4	V
12919.0	-70.7	3.5	14.1	-60.1	V
15502.8	-65.2	4.7	12.4	-57.5	V
17986.6	-64.3	4.9	12.0	-57.2	V

Test Data （5MHz+20MHz bandwidth 41373+41490 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
5336.6	-71.1	1.9	9.8	-63.2	V
8004.9	-71.8	2.4	11.7	-62.5	V
10673.2	-69.7	3.1	13.2	-59.6	V

13341.5	-70.7	3.5	14.1	-60.1	V
16009.8	-65.5	4.7	12.4	-57.8	V
17678.1	-63.6	4.9	12.0	-56.5	V

6.7. Band Edge

Specifications:	FCC Part 2.1051,24.238, 2.1053, 22.917, 27.53,90.691
DUT Serial Number:	864542050016100/864542050016050
Test conditions:	Ambient Temperature:15℃-35℃ Relative Humidity:30%-60% Air pressure: 86-106kPa
Test Results:	Pass

Limit Level Construction:

According to Part 22.917 (a), i.e., Out of Band emissions. 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.

According to Part 24.238 (a), i.e., Out of Band emissions. 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, so the limit level is: P(dBm)– (43 + 10 log(P)) dB= -13dBm.

According to Part 27.53(h):

Except as otherwise specified below, for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 Bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least 43 + 10 log10(P) dB.

According to Part 27.53(g):

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.

According to Part 90.691:

(a) Out-of-band emission requirement shall apply only to the “outer” channels included in an EA license and to spectrum adjacent to interior channels used by incumbent licensees. The emission limits are as follows:

(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.

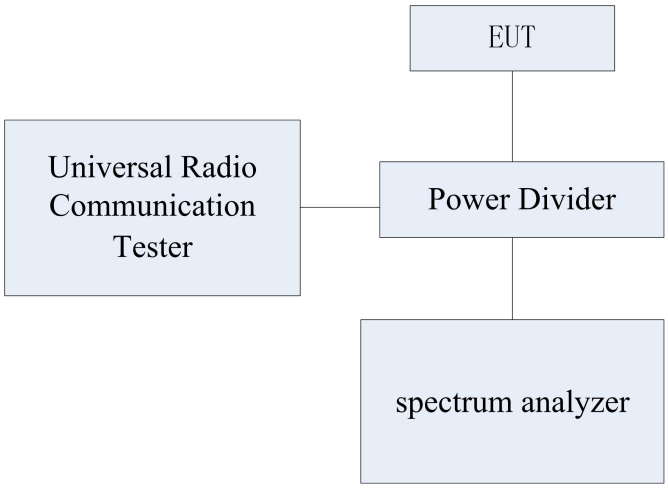
(b) When an emission outside of the authorized bandwidth causes harmful interference, the Commission may, at its discretion, require greater attenuation than specified in this section.

Measurement Uncertainty:

Item	Uncertainty	
Expanded Uncertainty	9kHz < f≤4GHz	0.71 dB (k=2)
	4GHz≤f < 12.75GHz	0.74 dB (k=2)
	12.75GHz≤f < 26GHz	2.70 dB (k=2)

Test Setup:

During the test, the EUT was controlled via the Wireless Communications Test Set to ensure max power transmission and proper modulation and measured by spectrum analyzer.



Test Method:

1) The EUT was coupled to the EMI test receiver analyzer mode and the base station simulator through a power divider. The lost of the cables the test system is calibrated to correct the readings.

2) The spectrum analyzer was set to Average Detector function and Maximum hold mode.

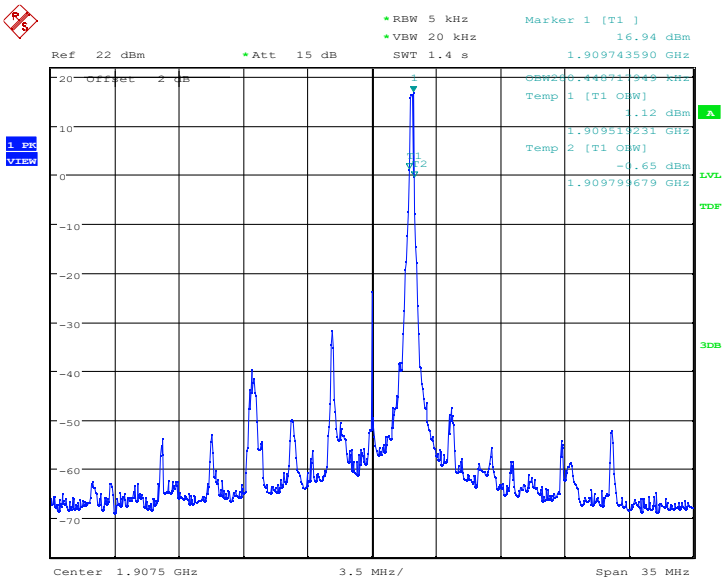
3) The resolution Bandwidth of the spectrum analyzer was a little greater than 1% of the 26dB emission Bandwidth.

Note: In the graphical result description (X, Y), X represents the number of RB, Y represents the RB offset.

6.7.1 Band Edge Results

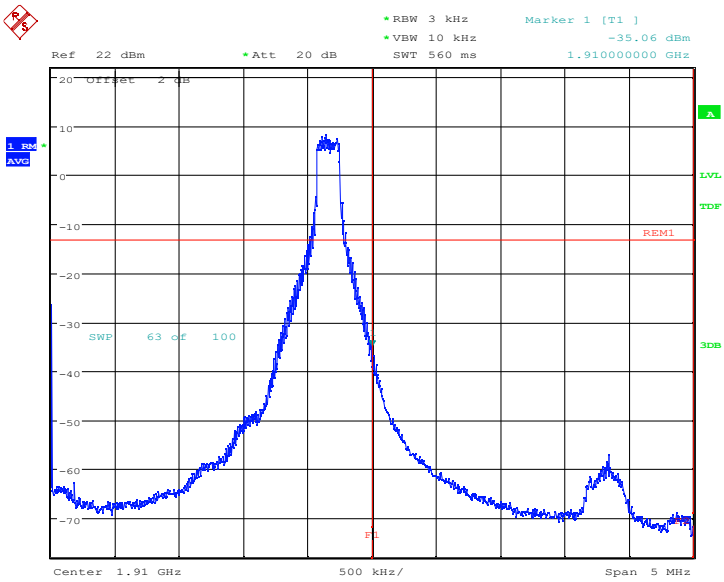
LTE band 2

OBW: 1RB-HIGH_offset



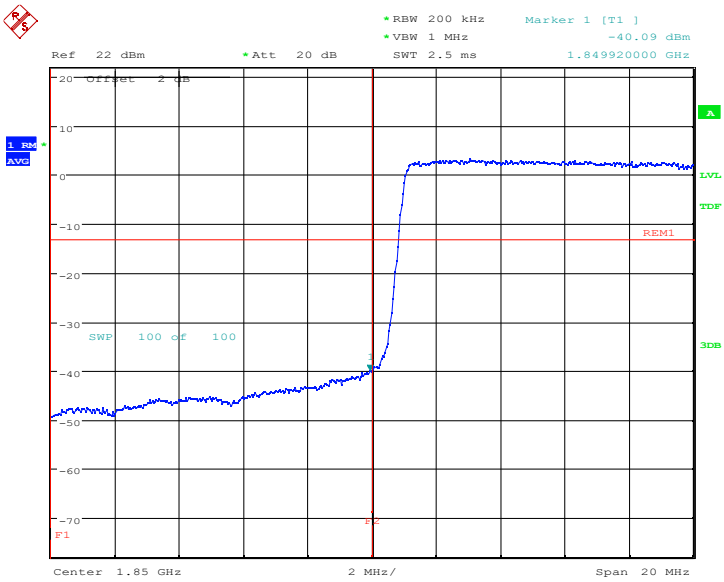
Date: 7.MAR.2022 21:55:06

HIGH BAND EDGE BLOCK-1RB-5M_offset



Date: 7.MAR.2022 21:56:43

LOW BAND EDGE BLOCK-1RB-20M_offset



Date: 3.MAR.2022 06:23:31

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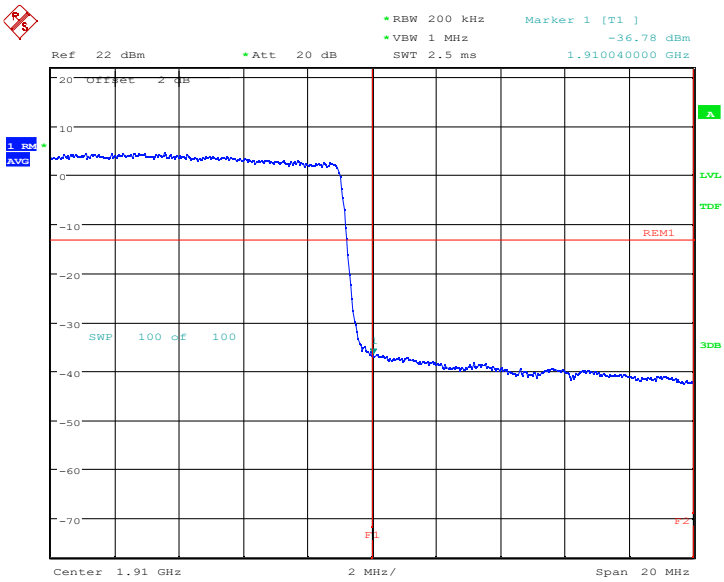
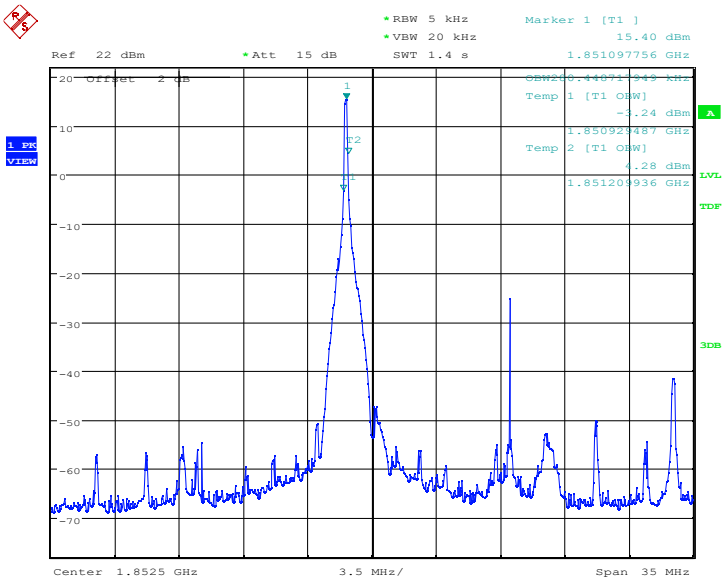
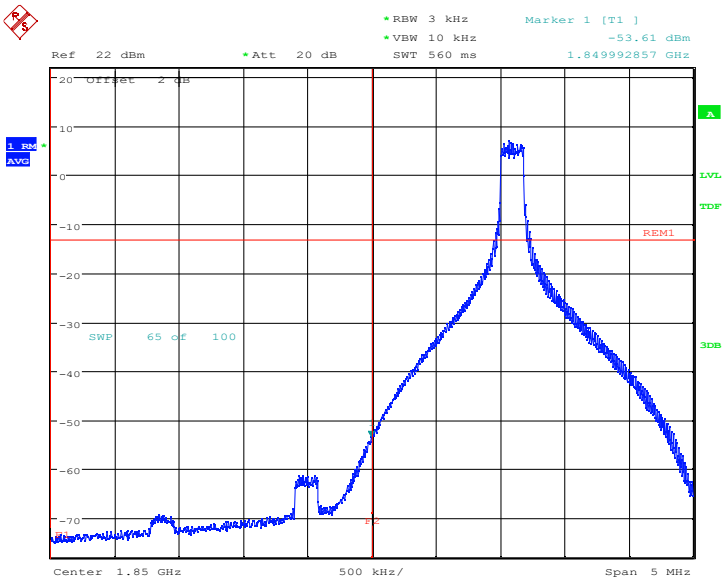


OBW: 1RB-LOW_offset

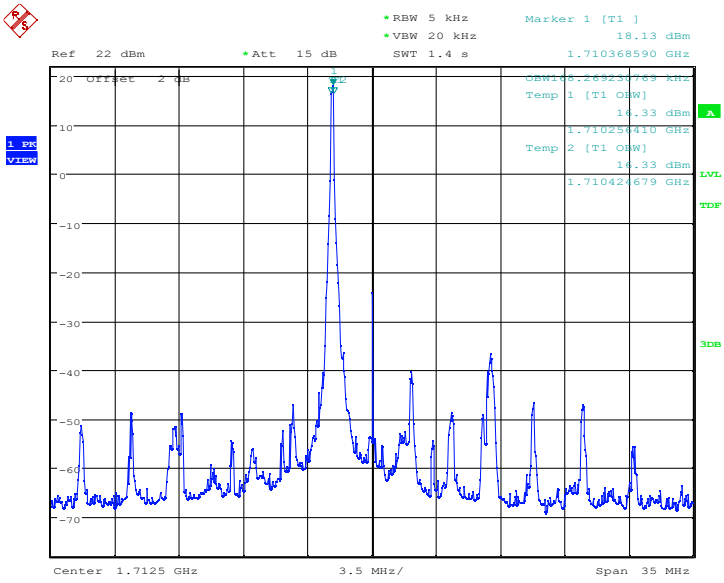


LOW BAND EDGE BLOCK-1RB-20M_offset


RBW 3 kHz
VBW 10 kHz
SWT 560 ms
Marker 1 [T1]
-53.61 dBm
1.849992857 GHz
Ref 22 dBm
Att 20 dB
Offset 2 dB
1 RM
AVG
A
LVL
TDF
REM1
3DB
SWP 65 of 100
Center 1.85 GHz
500 kHz/
Span 5 MHz
Date: 7.MAR.2022 21:54:34

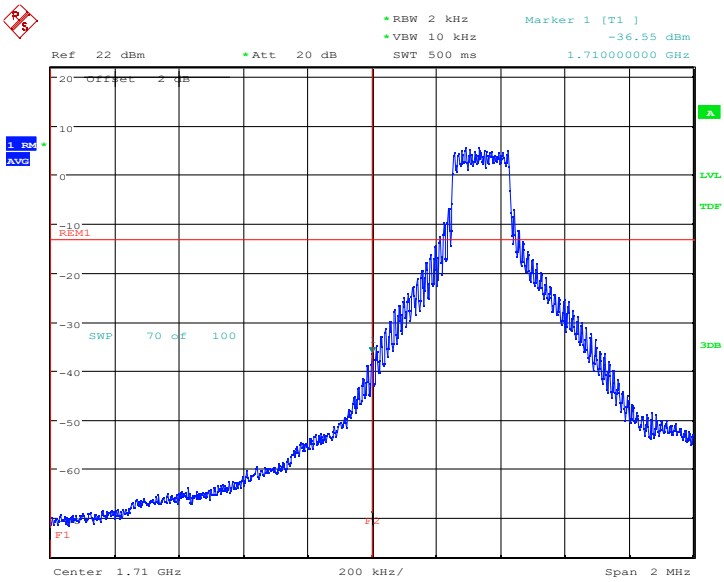
LTE band 4

OBW: 1RB-LOW_offset



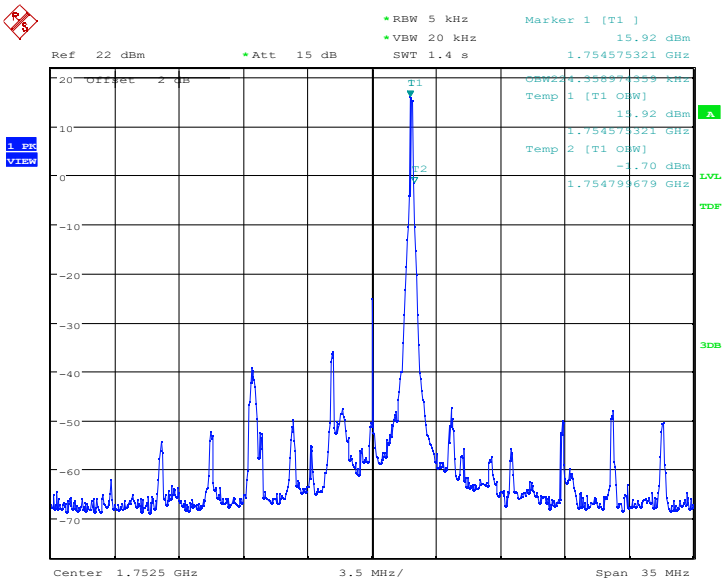
Date: 7.MAR.2022 21:57:11

LOW BAND EDGE BLOCK-1RB-5M_offset



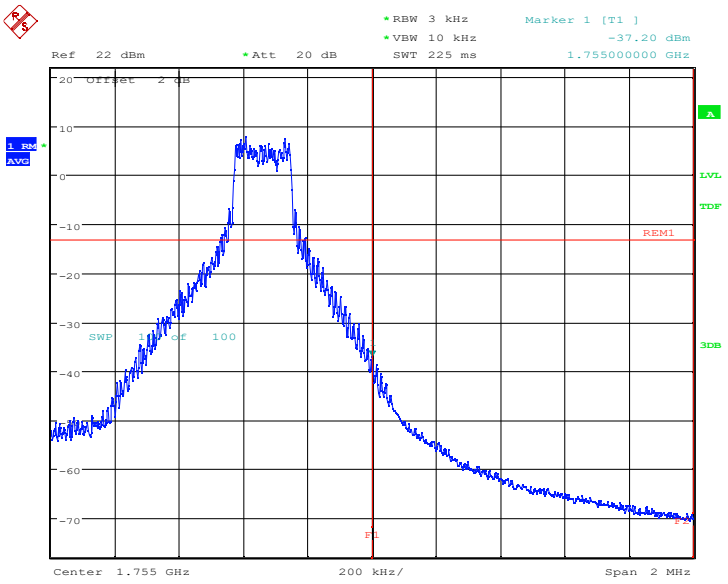
Date: 7.MAR.2022 21:58:43

OBW: 1RB-HIGH_offset



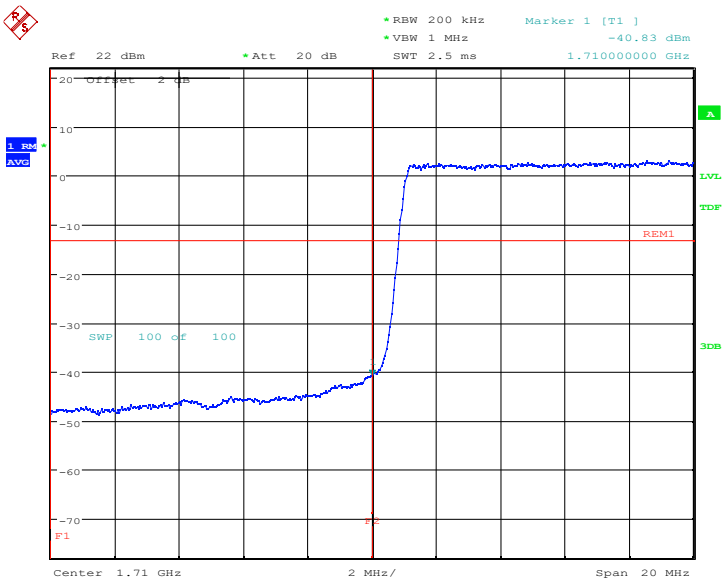
Date: 7.MAR.2022 21:59:10

HIGH BAND EDGE BLOCK-1RB-5M_offset



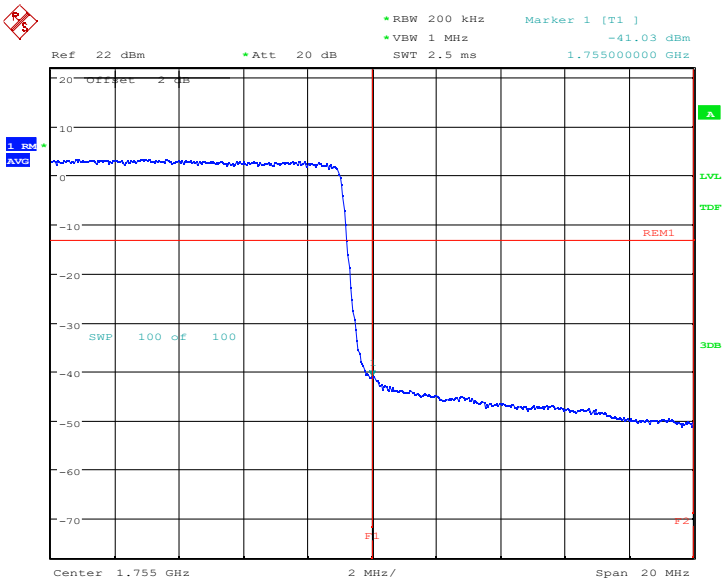
Date: 7.MAR.2022 22:00:12

LOW BAND EDGE BLOCK-1RB-20M_offset



Date: 3.MAR.2022 06:25:13

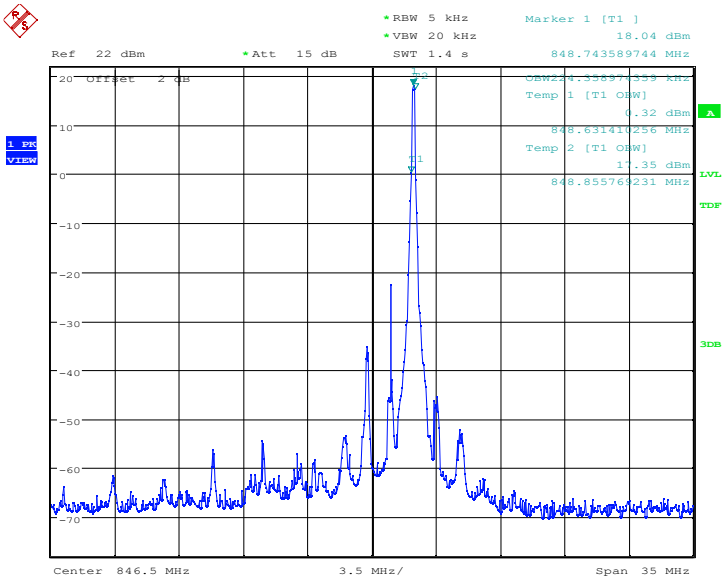
HIGH BAND EDGE BLOCK-1RB-20M_offset



Date: 3.MAR.2022 06:26:02

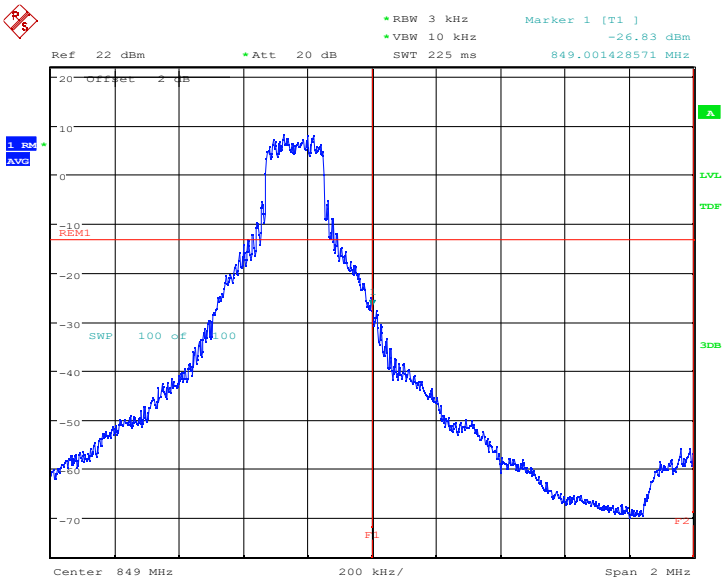
LTE band 5

OBW: 1RB-HIGH_offset



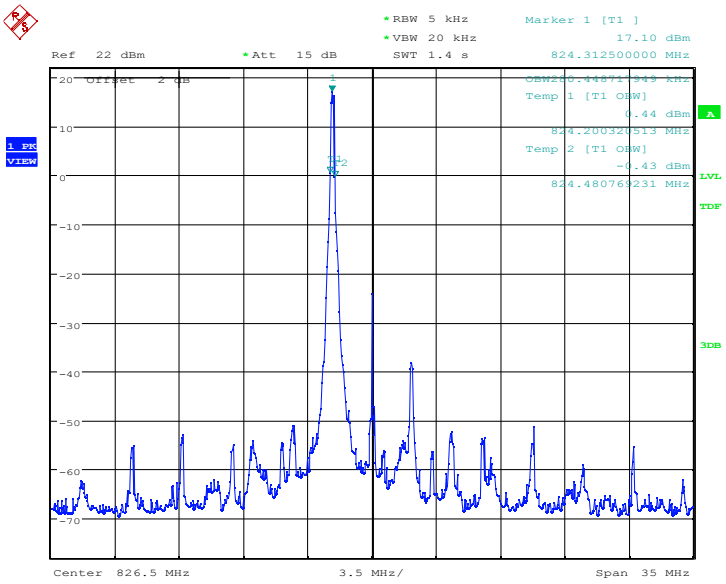
Date: 7.MAR.2022 22:02:17

HIGH BAND EDGE BLOCK-1RB-3M_offset



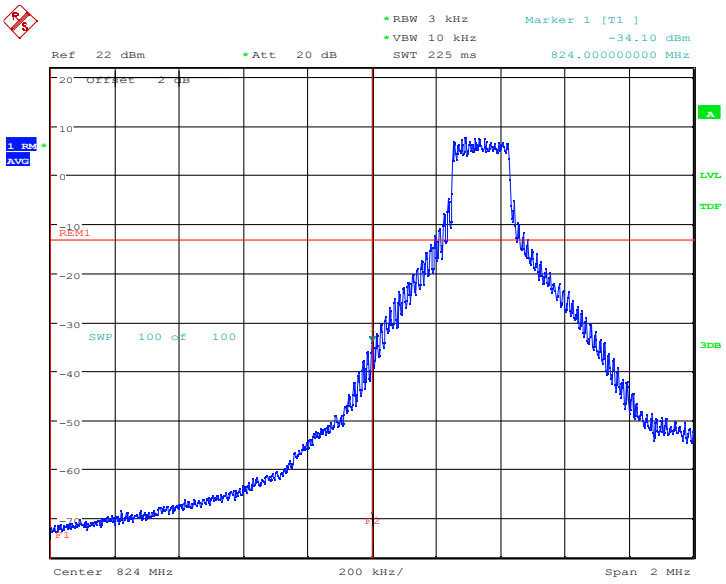
Date: 7.MAR.2022 22:03:19

OBW: 1RB-LOW_offset



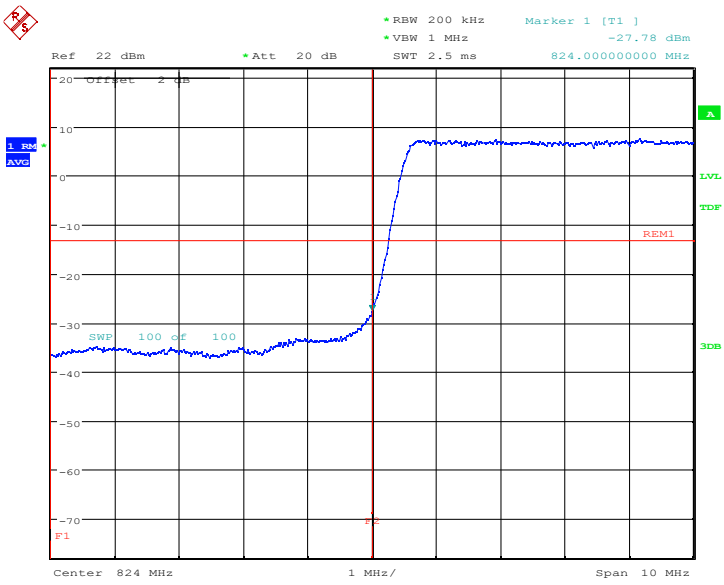
Date: 7.MAR.2022 22:00:42

LOW BAND EDGE BLOCK-1RB-5M_offset



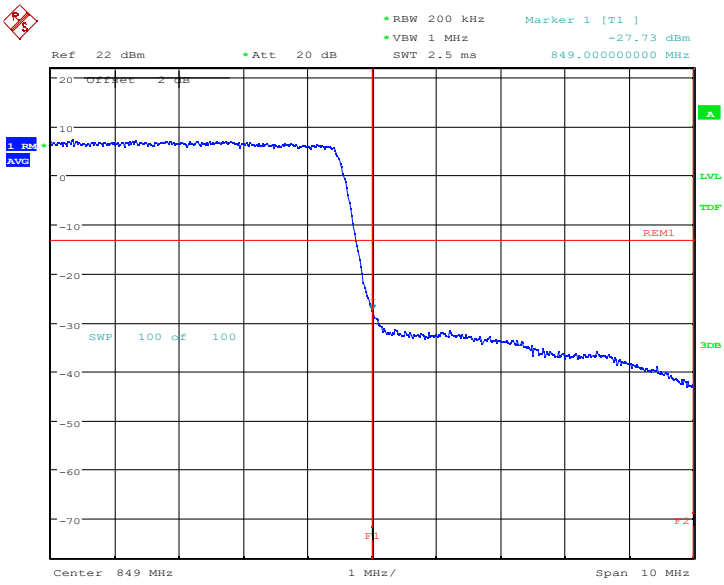
Date: 7.MAR.2022 22:01:44

LOW BAND EDGE BLOCK-1RB-10M_offset



Date: 3.MAR.2022 06:27:26

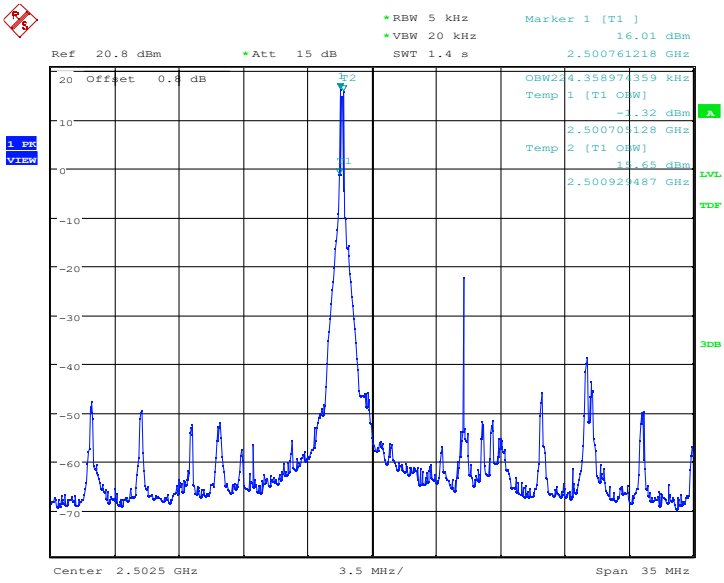
HIGH BAND EDGE BLOCK-1RB-10M_offset



Date: 3.MAR.2022 06:28:15

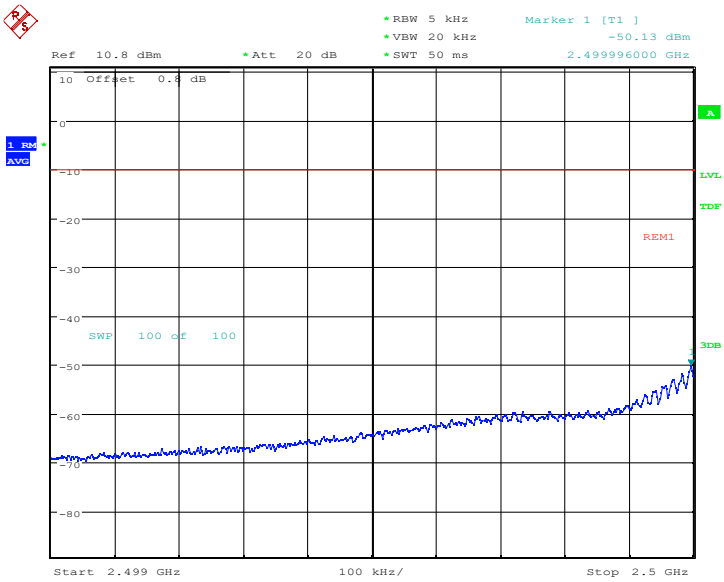
LTE band 7

OBW: 1RB-LOW_offset



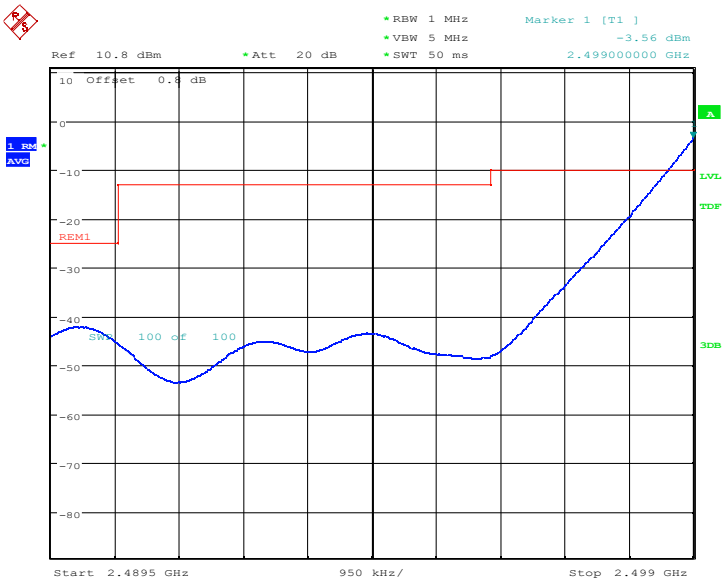
Date: 7.MAR.2022 22:04:29

LOW BAND EDGE BLOCK-1RB-15M_offset



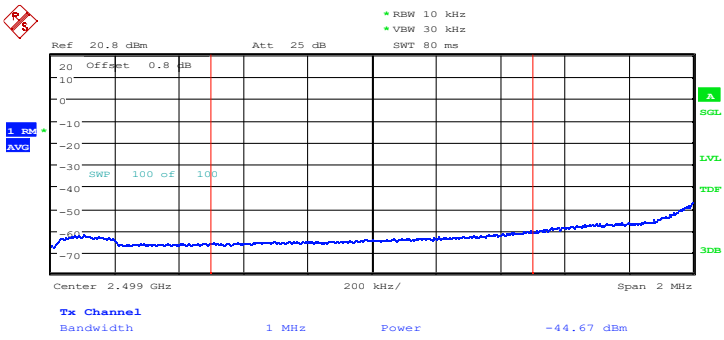
Date: 7.MAR.2022 22:05:17

LOW BAND EDGE BLOCK-1RB-15M_offset



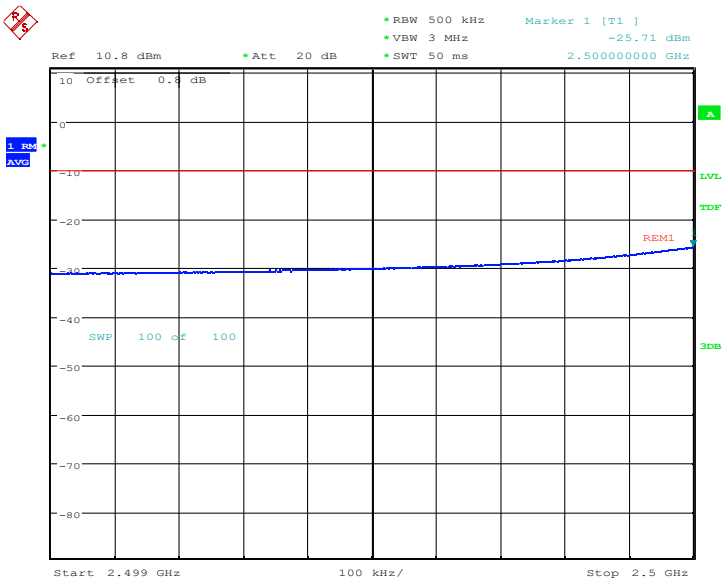
Date: 7.MAR.2022 22:06:05

Channal Power



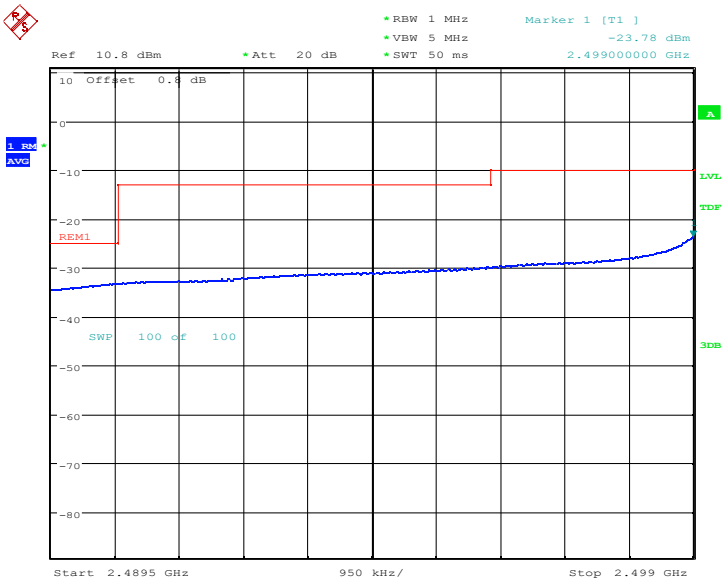
Date: 7.MAR.2022 22:06:37

LOW BAND EDGE BLOCK-1RB-20M_offset



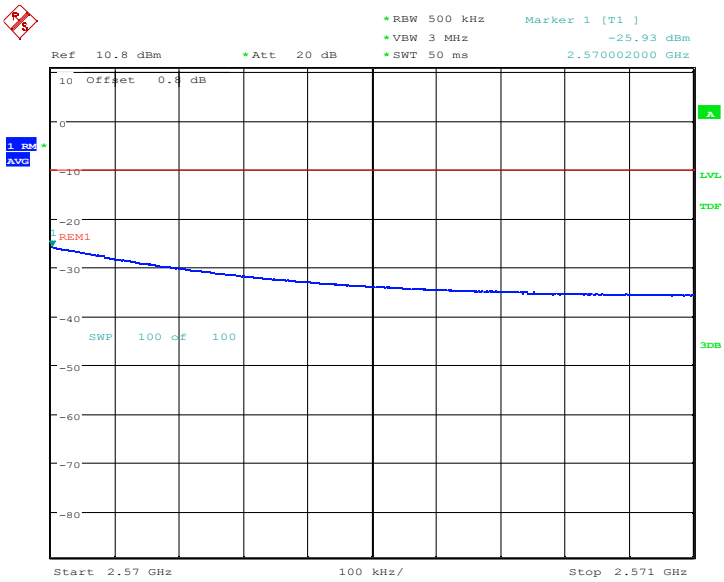
Date: 4.MAR.2022 05:31:22

LOW BAND EDGE BLOCK-1RB-20M_offset



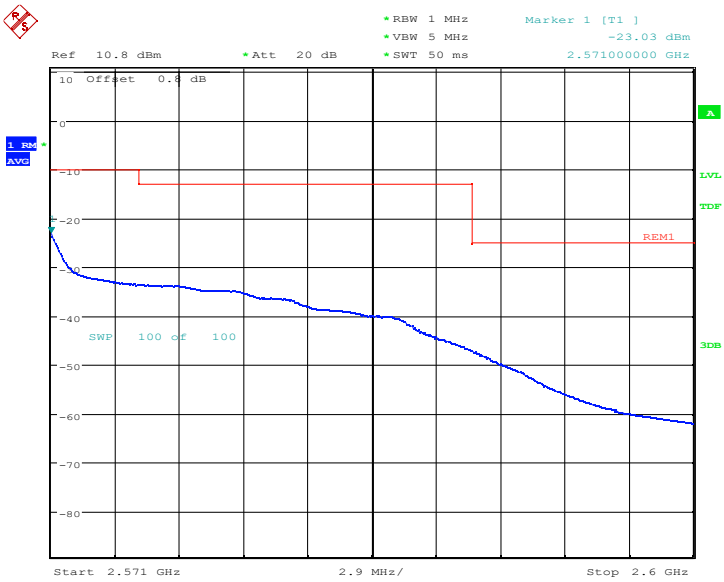
Date: 4.MAR.2022 05:32:10

HIGH BAND EDGE BLOCK-1RB-20M_offset



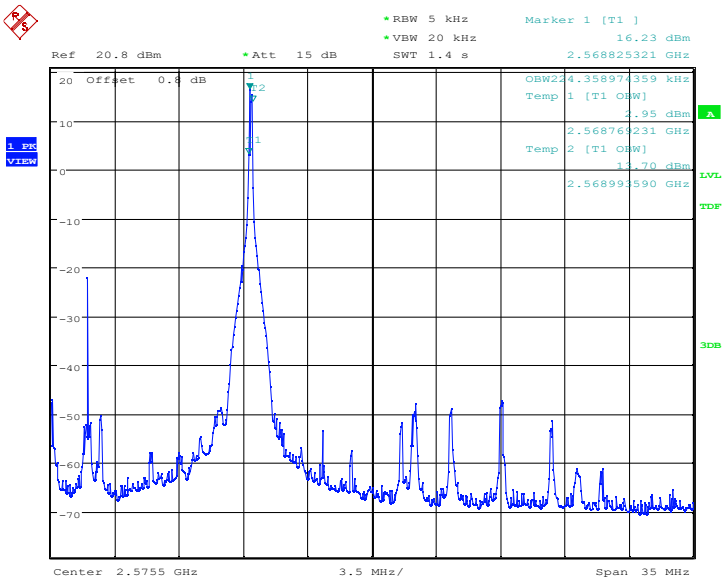
Date: 4.MAR.2022 05:33:07

HIGH BAND EDGE BLOCK-1RB-20M_offset



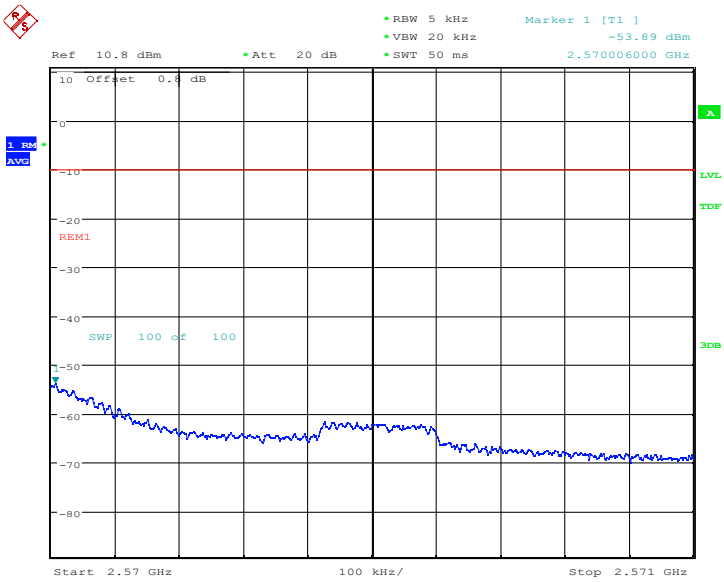
Date: 4.MAR.2022 05:33:55

OBW: 1RB-HIGH_offset



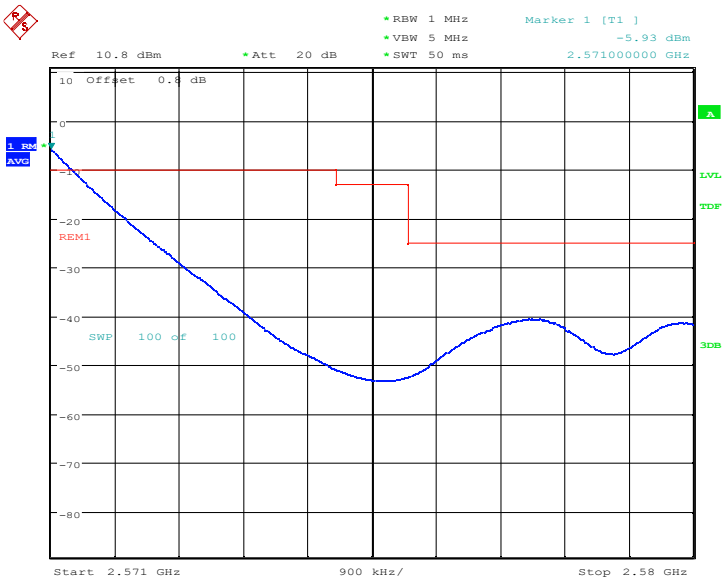
Date: 7.MAR.2022 22:07:35

HIGH BAND EDGE BLOCK-1RB-20M_offset



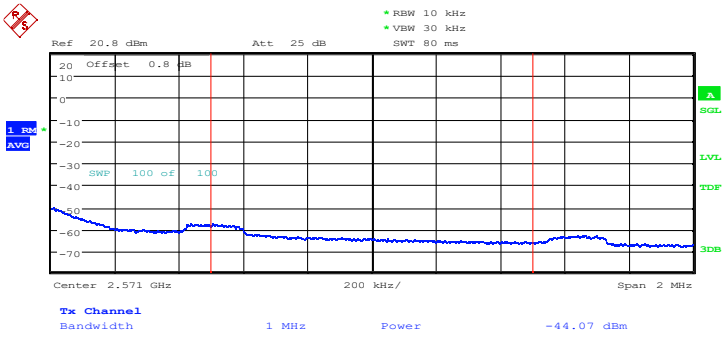
Date: 7.MAR.2022 22:08:23

HIGH BAND EDGE BLOCK-1RB-20M_offset



Date: 7.MAR.2022 22:09:11

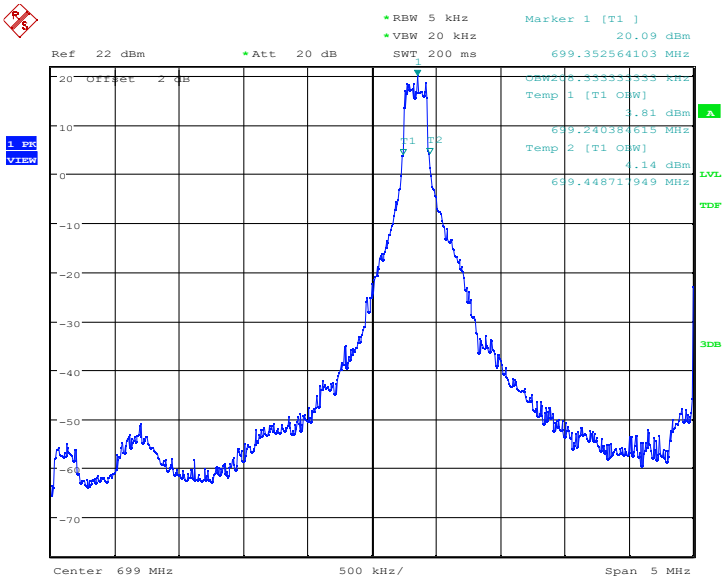
Channal Power



Date: 7.MAR.2022 22:09:43

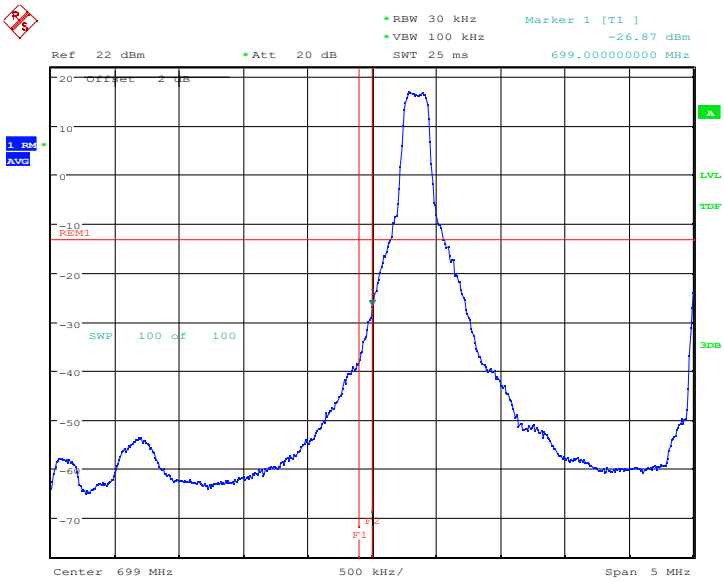
LTE band 12

OBW: 1RB-LOW_offset



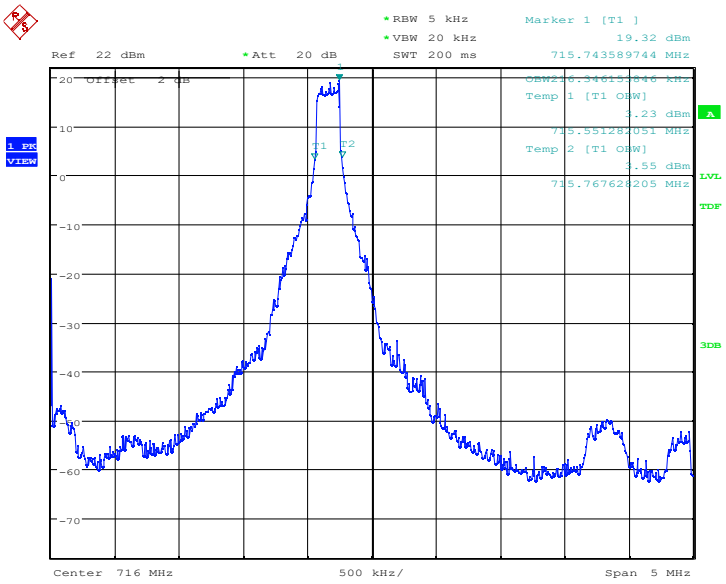
Date: 7.MAR.2022 22:10:53

LOW BAND EDGE BLOCK-1RB-5M_offset

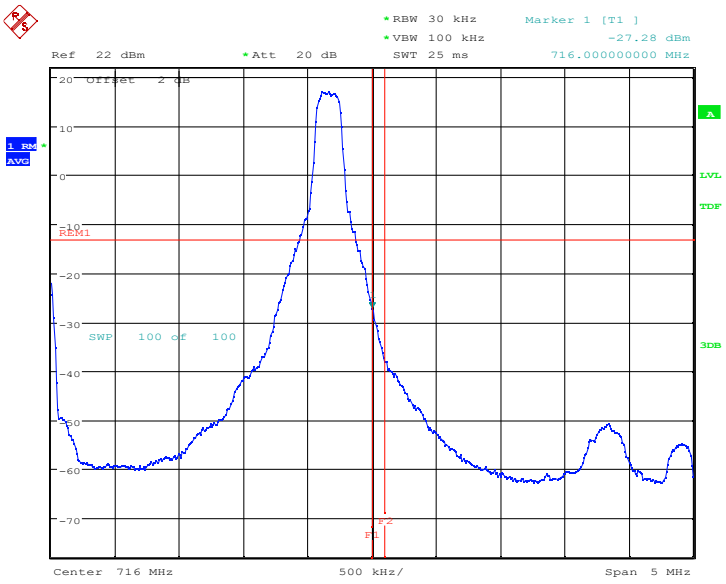


Date: 7.MAR.2022 22:11:37

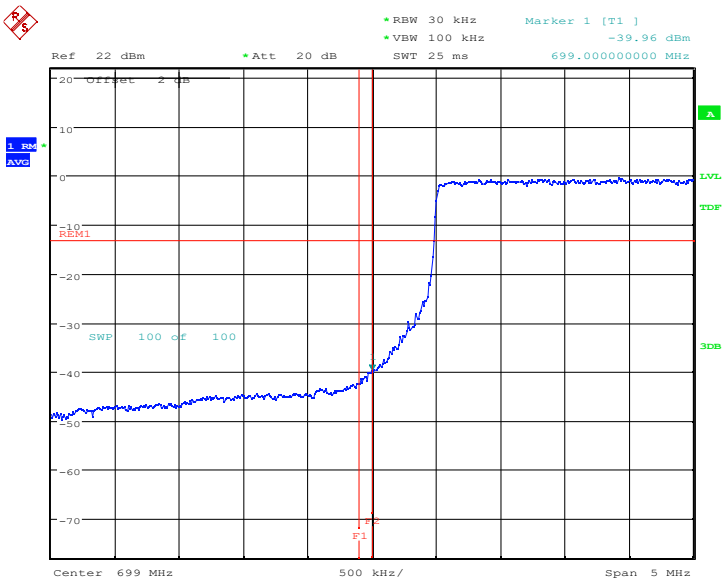
OBW: 1RB-HIGH_offset



HIGH BAND EDGE BLOCK-1RB-5M_offset

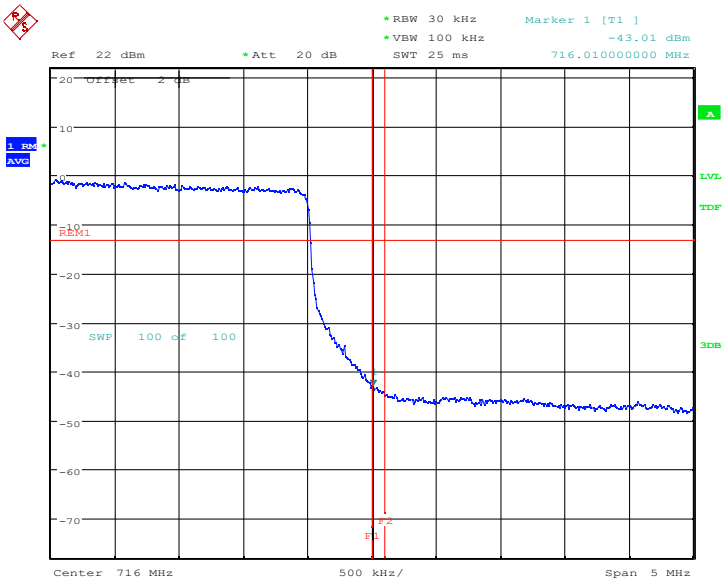


LOW BAND EDGE BLOCK-1RB-10M_offset



Date: 4.MAR.2022 05:35:19

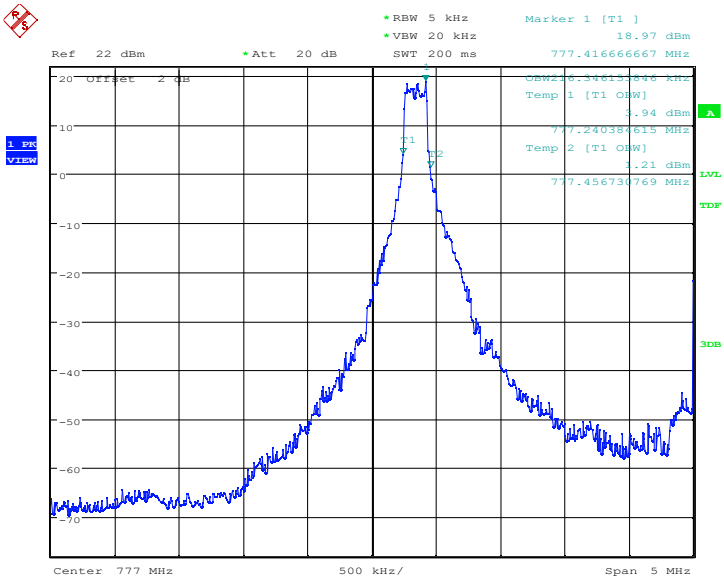
HIGH BAND EDGE BLOCK-1RB-10M_offset



Date: 4.MAR.2022 05:36:10

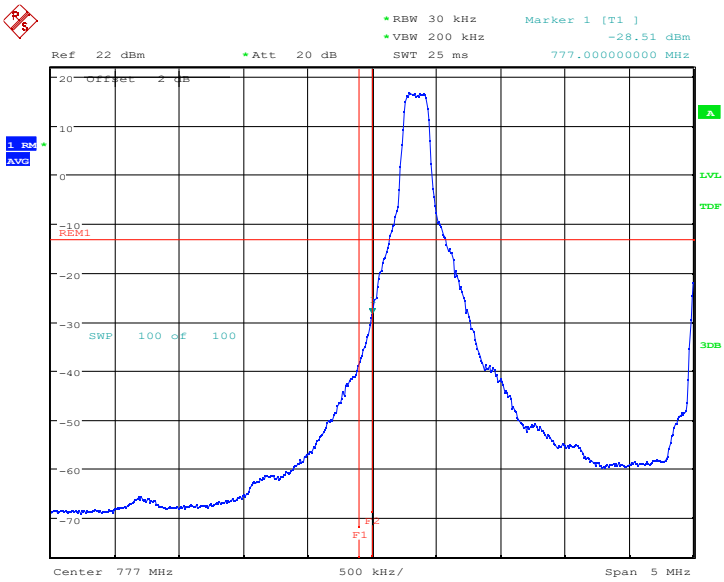
LTE band 13

OBW: 1RB-LOW_offset



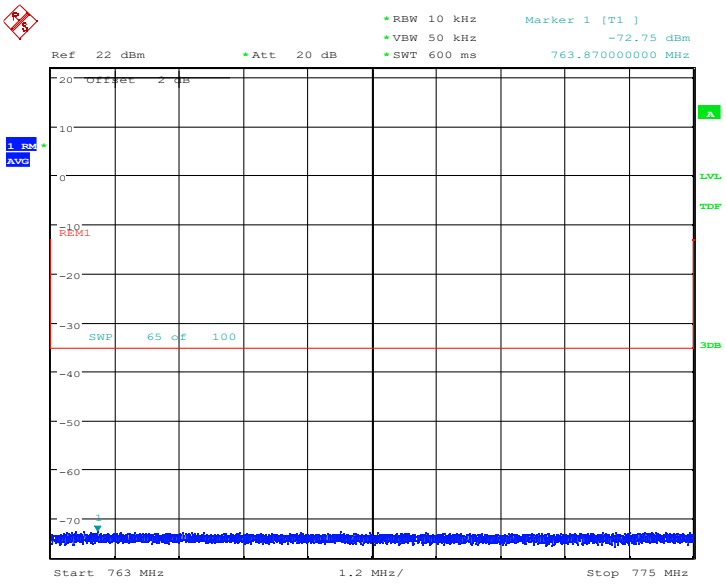
Date: 7.MAR.2022 22:48:53

LOW BAND EDGE BLOCK-1RB-5M_offset



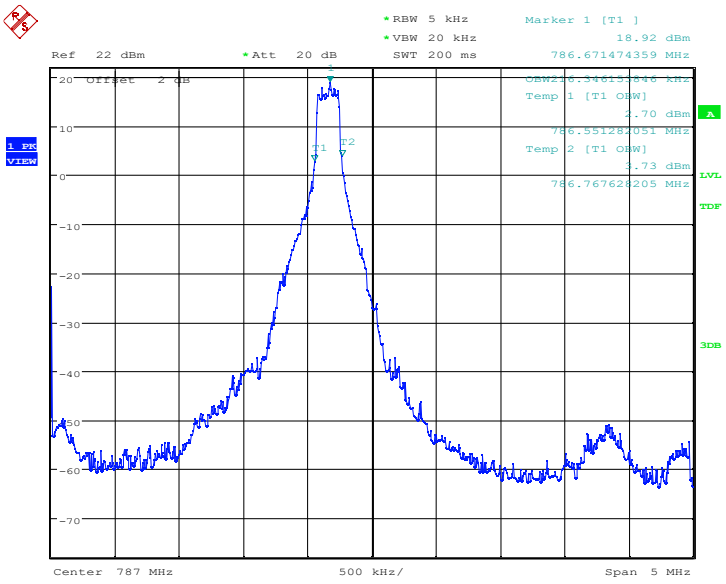
Date: 7.MAR.2022 22:50:11

LOW BAND EDGE BLOCK-1RB-5M_offset



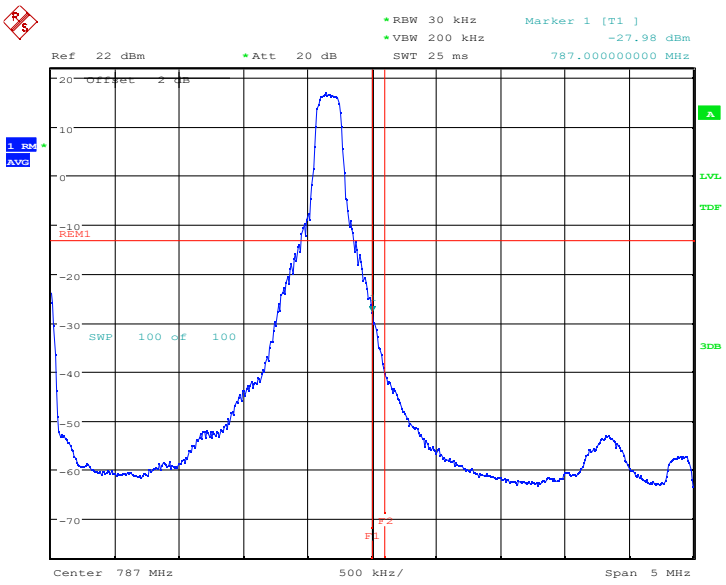
Date: 7.MAR.2022 22:51:56

OBW: 1RB-HIGH_offset



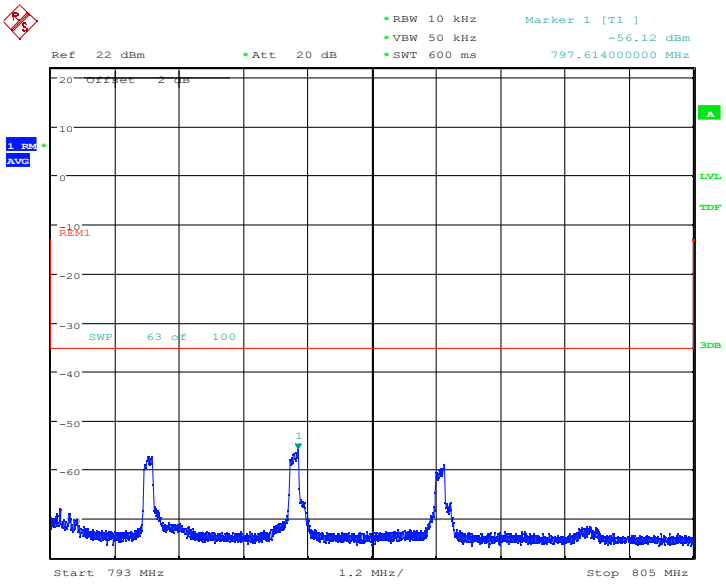
Date: 7.MAR.2022 22:52:25

HIGH BAND EDGE BLOCK-1RB-5M_offset



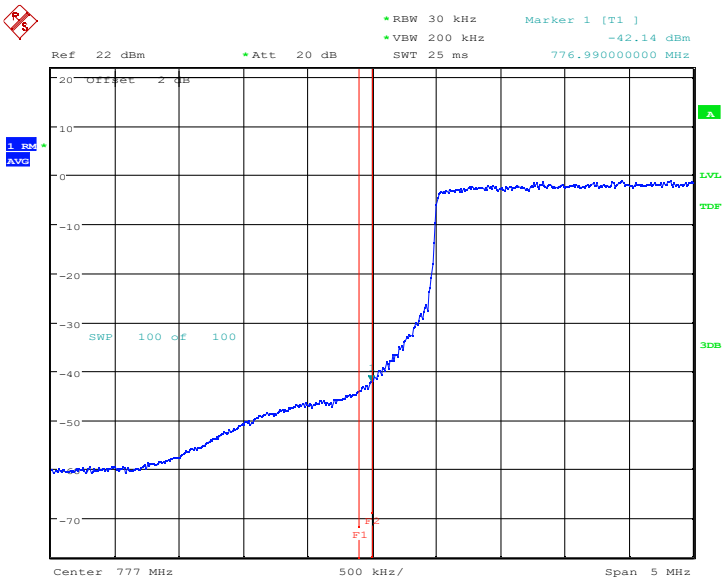
Date: 7.MAR.2022 22:53:44

HIGH BAND EDGE BLOCK-1RB-5M_offset



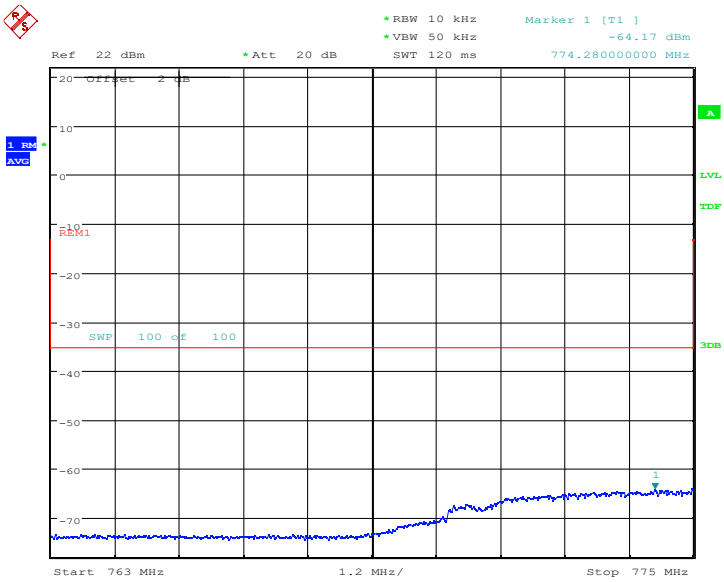
Date: 7.MAR.2022 22:55:31

LOW BAND EDGE BLOCK-1RB-10M_offset



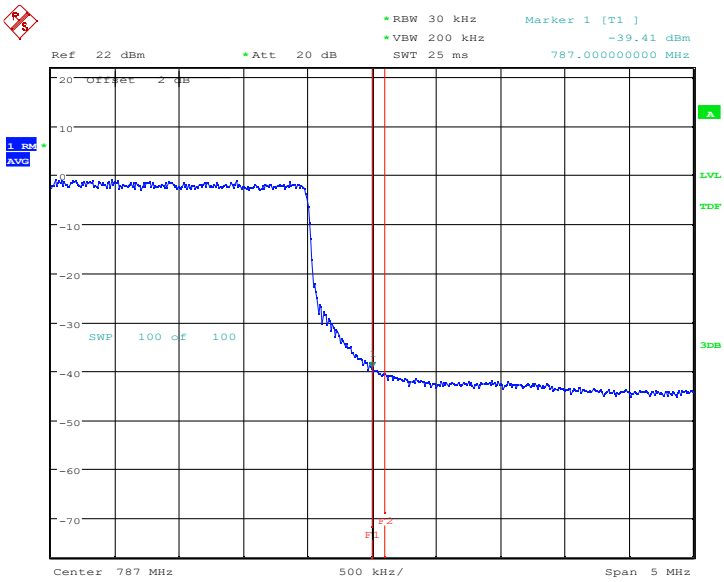
Date: 7.MAR.2022 22:57:27

LOW BAND EDGE BLOCK-1RB-10M_offset



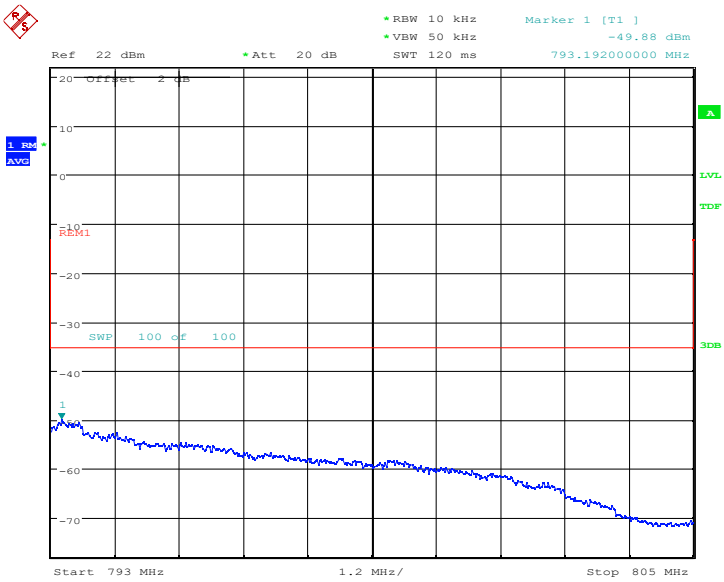
Date: 7.MAR.2022 22:58:23

HIGH BAND EDGE BLOCK-1RB-10M_offset



Date: 7.MAR.2022 22:59:44

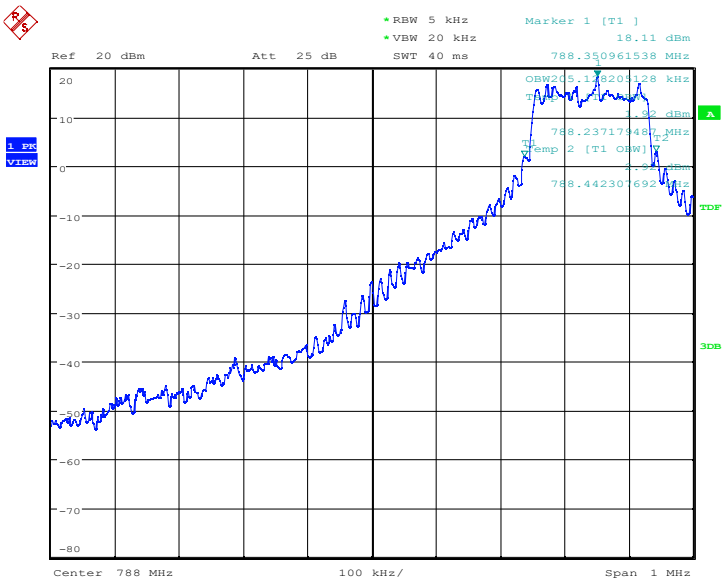
HIGH BAND EDGE BLOCK-1RB-10M_offset



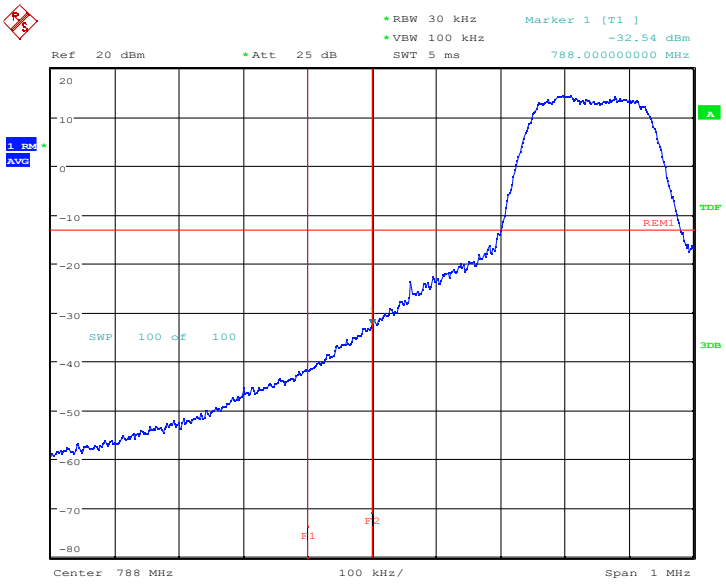
Date: 7.MAR.2022 23:00:41

LTE band 14

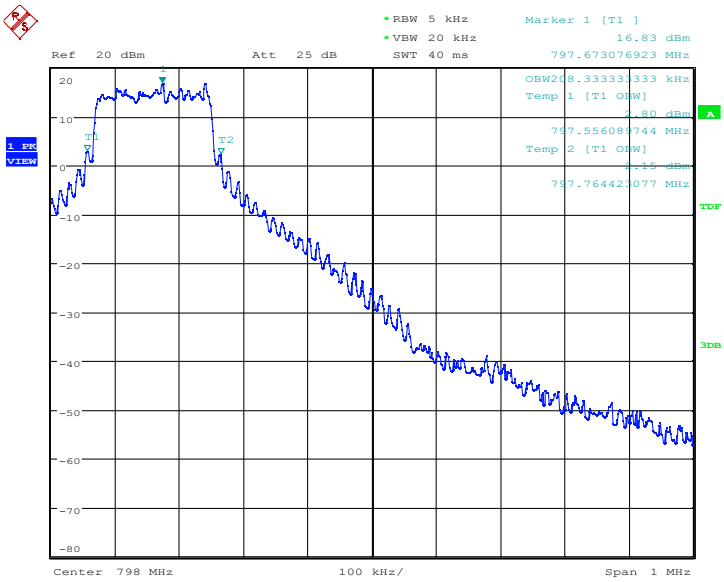
OBW: 1RB-LOW_offset



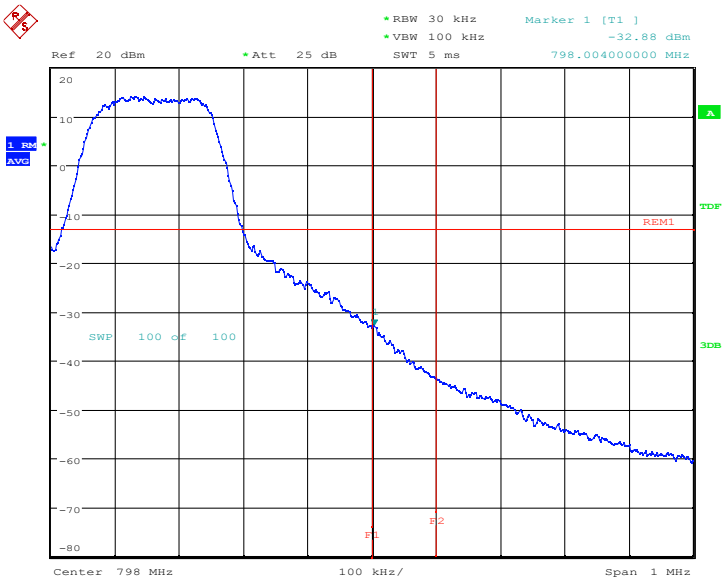
LOW BAND EDGE BLOCK-1RB-5M_offset



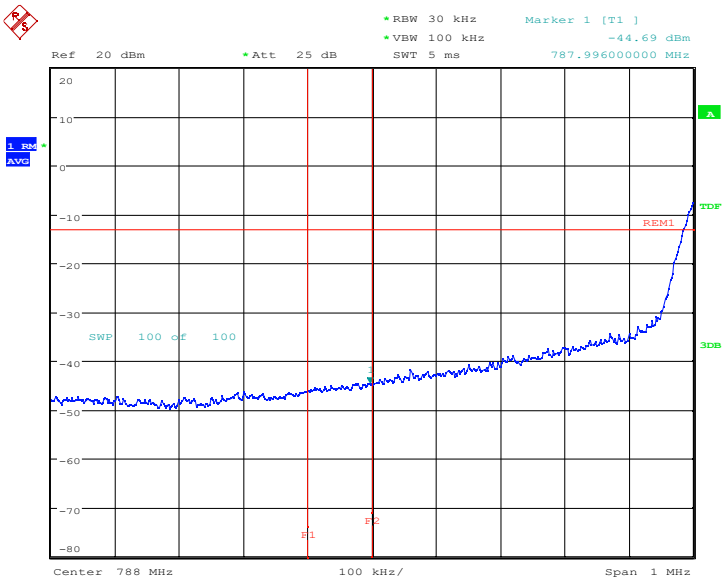
OBW: 1RB-HIGH_offset



HIGH BAND EDGE BLOCK-1RB-5M_offset

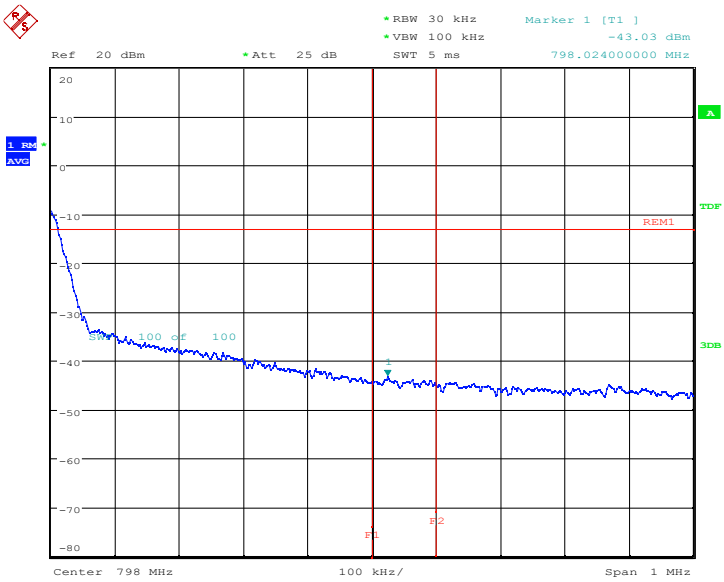


LOW BAND EDGE BLOCK-1RB-10M_offset



Date: 8.MAR.2022 05:34:23

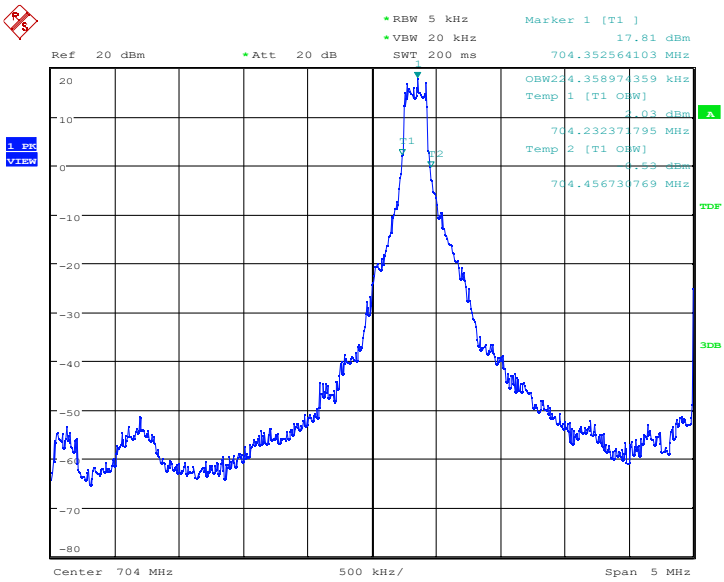
HIGH BAND EDGE BLOCK-1RB-10M_offset



Date: 8.MAR.2022 05:35:07

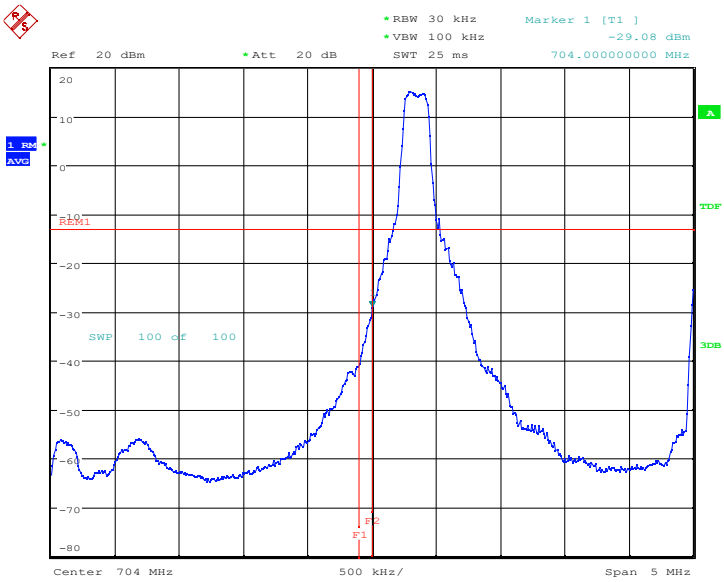
LTE band 17

OBW: 1RB-LOW_offset



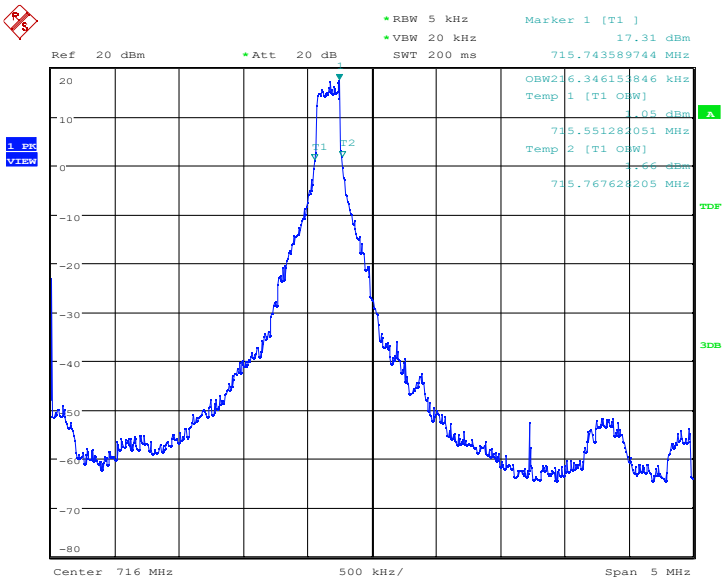
Date: 7.MAR.2022 22:32:06

LOW BAND EDGE BLOCK-1RB-5M_offset



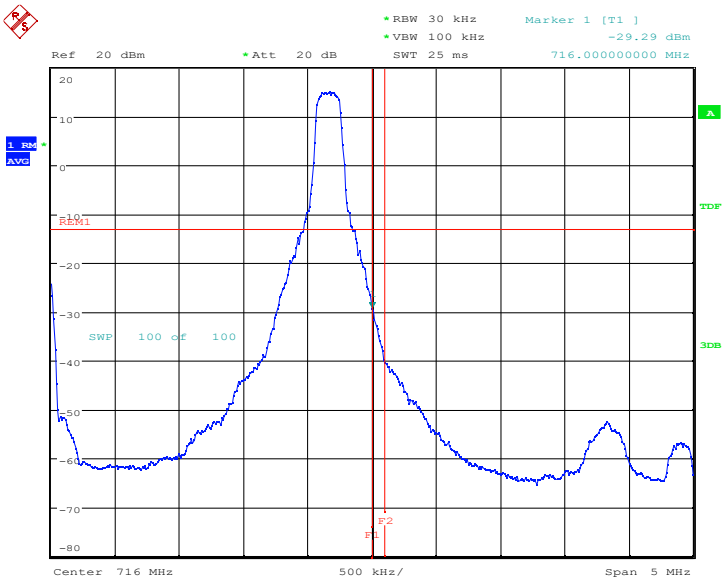
Date: 7.MAR.2022 22:33:26

OBW: 1RB-HIGH_offset



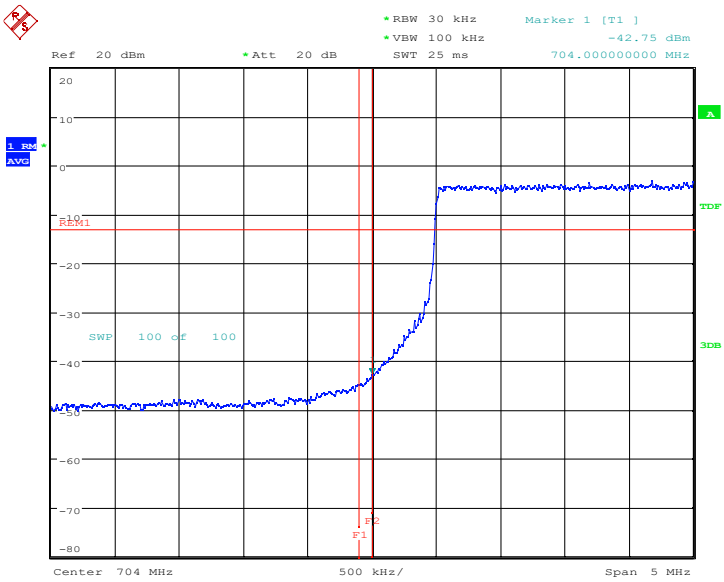
Date: 7.MAR.2022 22:33:53

HIGH BAND EDGE BLOCK-1RB-5M_offset

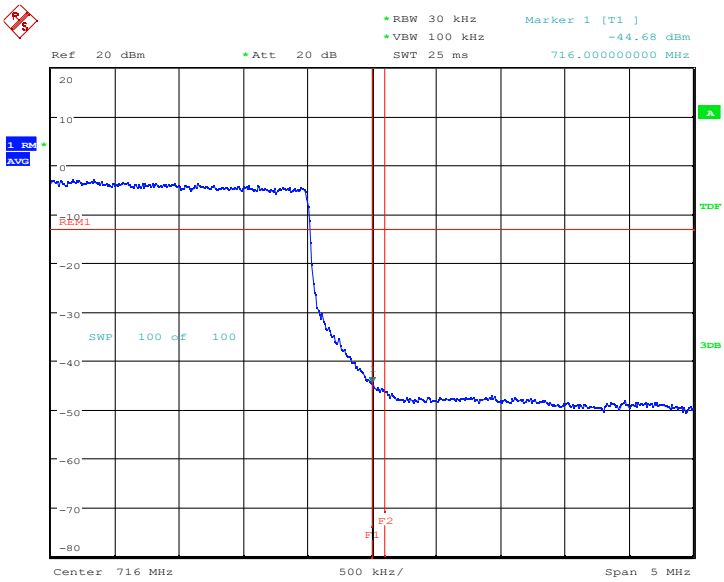


Date: 7.MAR.2022 22:35:11

LOW BAND EDGE BLOCK-1RB-10M_offset

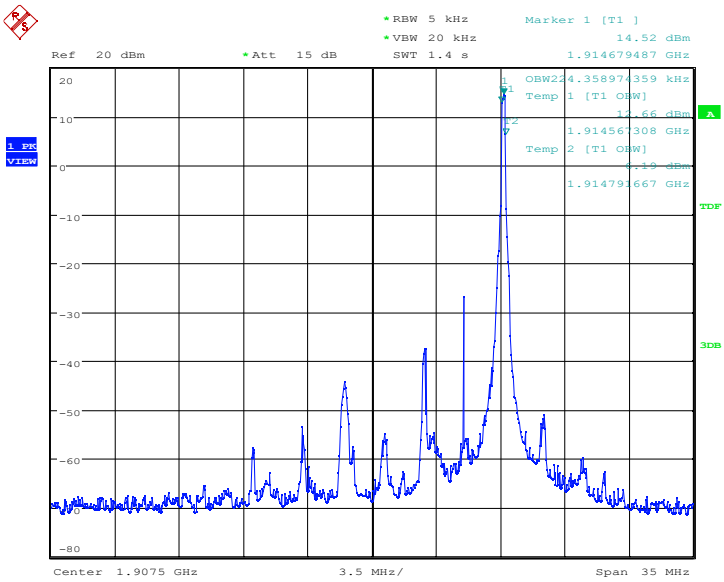


HIGH BAND EDGE BLOCK-1RB-10M_offset

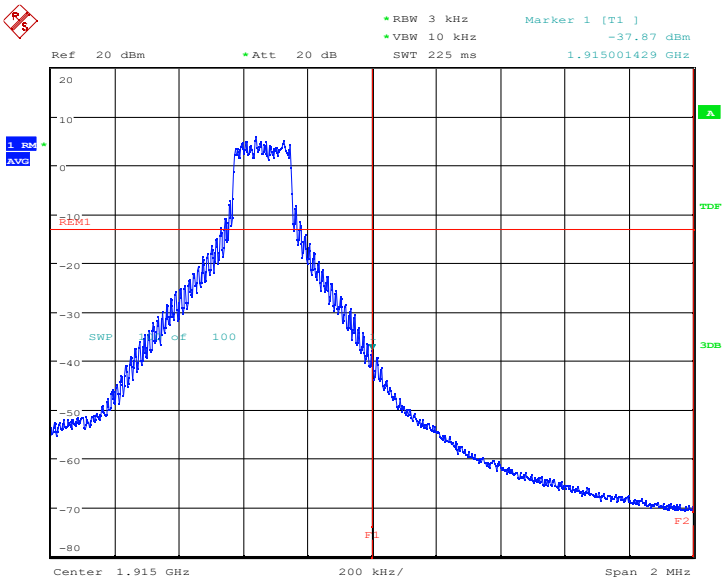


LTE band 25

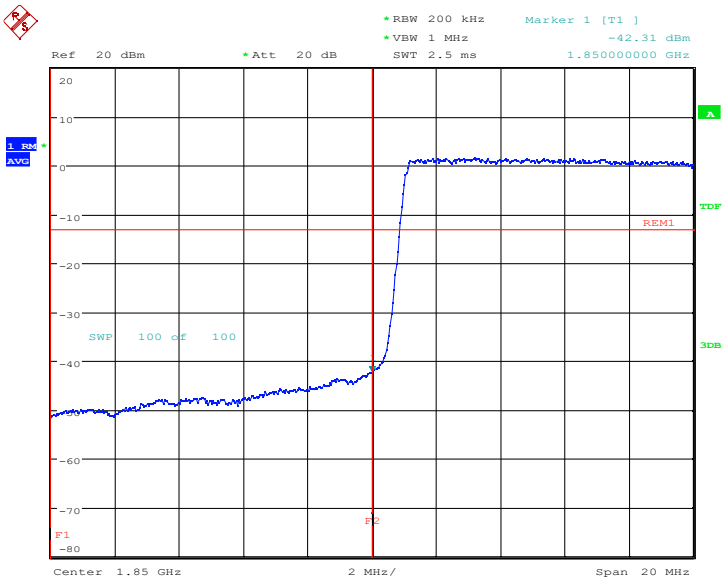
OBW: 1RB-HIGH_offset



HIGH BAND EDGE BLOCK-1RB-5M_offset

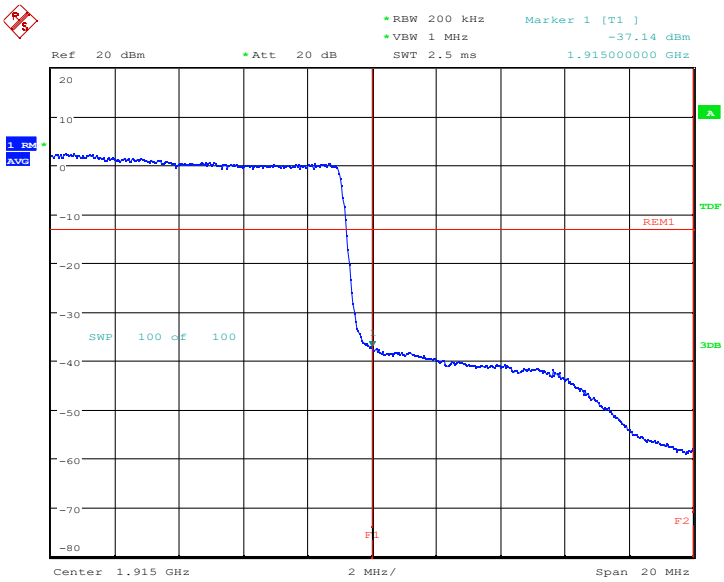


LOW BAND EDGE BLOCK-1RB-20M_offset



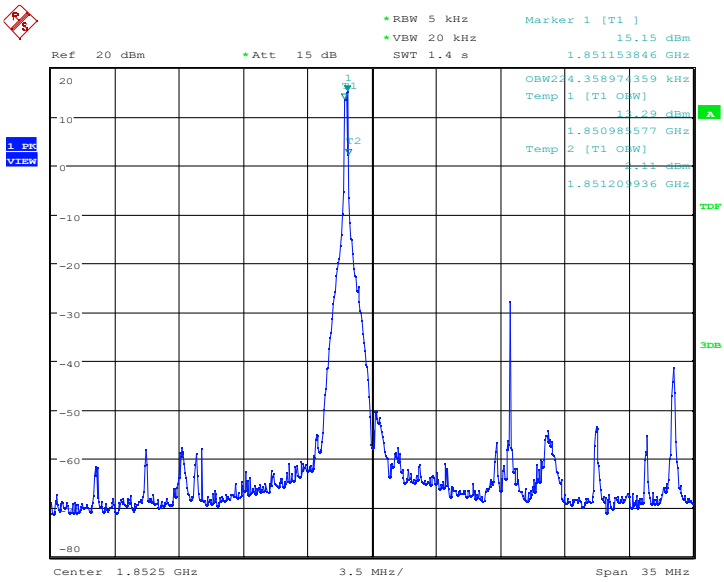
Date: 7.MAR.2022 19:11:28

HIGH BAND EDGE BLOCK-1RB-20M_offset



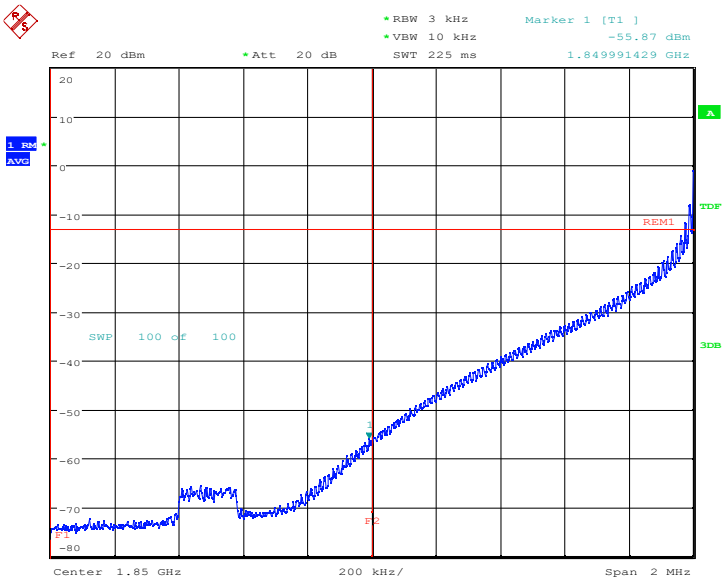
Date: 7.MAR.2022 19:12:17

OBW: 1RB-LOW_offset



Date: 7.MAR.2022 19:07:12

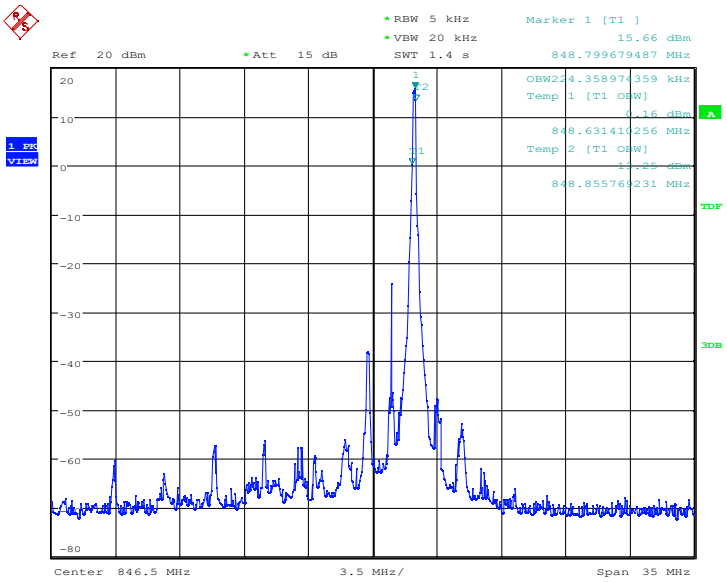
LOW BAND EDGE BLOCK-1RB-20M_offset



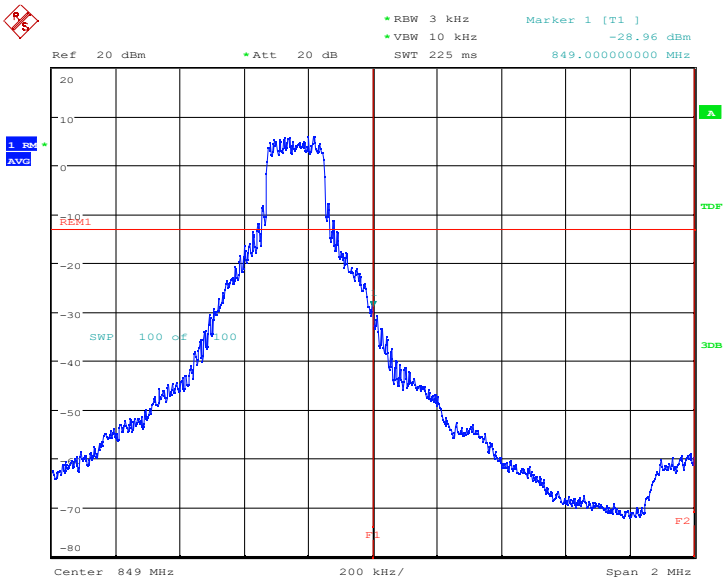
Date: 7.MAR.2022 19:08:14

LTE band 26 Part22

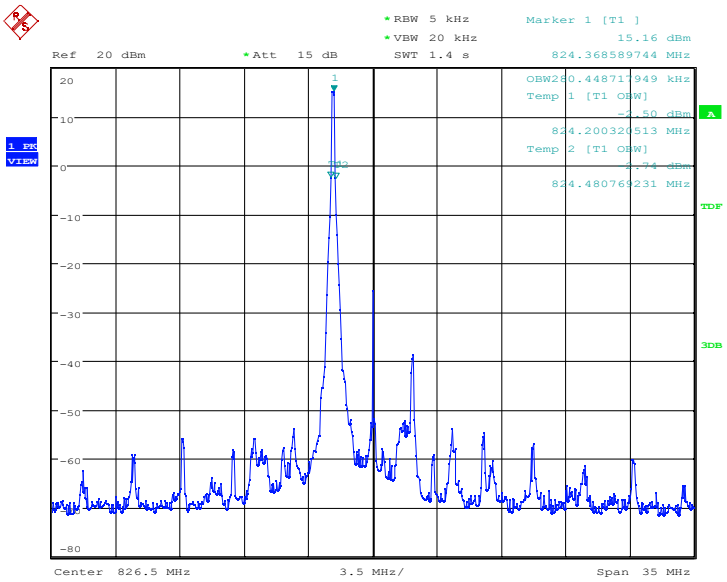
OBW: 1RB-HIGH_offset



HIGH BAND EDGE BLOCK-1RB-3M_offset

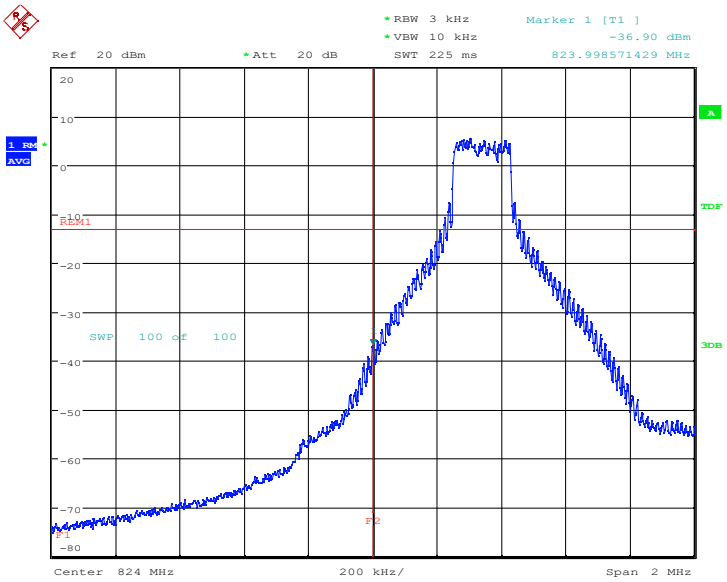


OBW: 1RB-LOW_offset



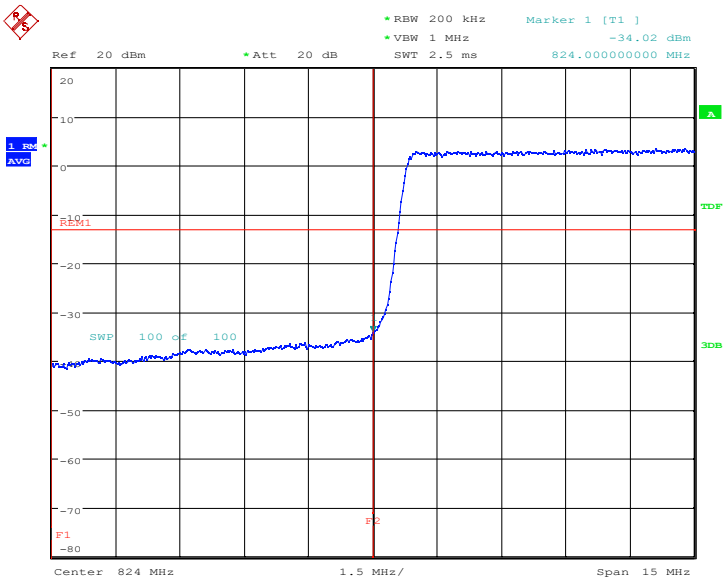
Date: 7.MAR.2022 19:13:17

LOW BAND EDGE BLOCK-1RB-5M_offset



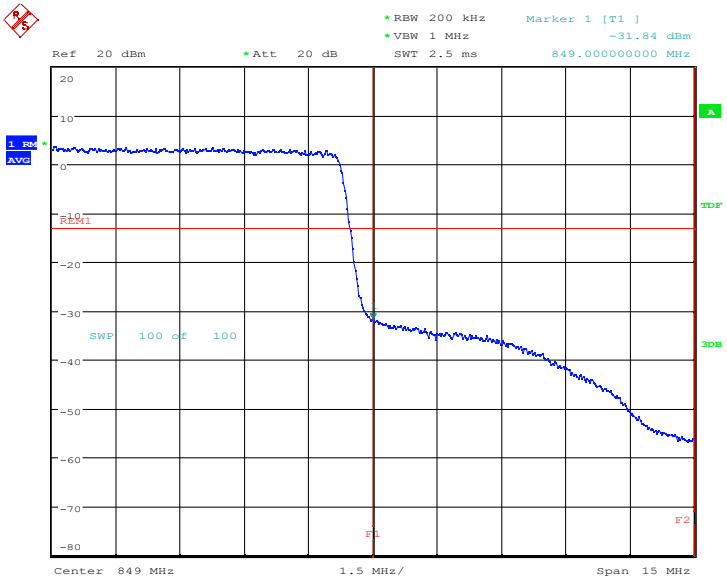
Date: 7.MAR.2022 19:14:19

LOW BAND EDGE BLOCK-1RB-15M_offset



Date: 7.MAR.2022 19:17:13

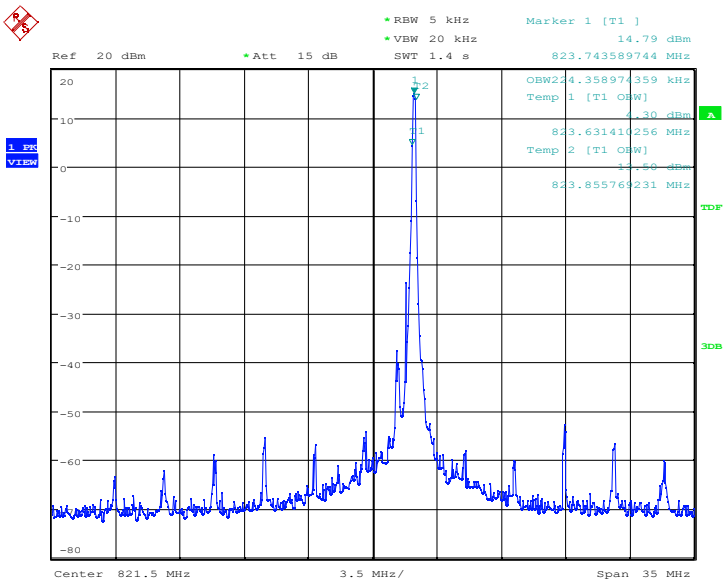
HIGH BAND EDGE BLOCK-1RB-15M_offset



Date: 7.MAR.2022 19:18:02

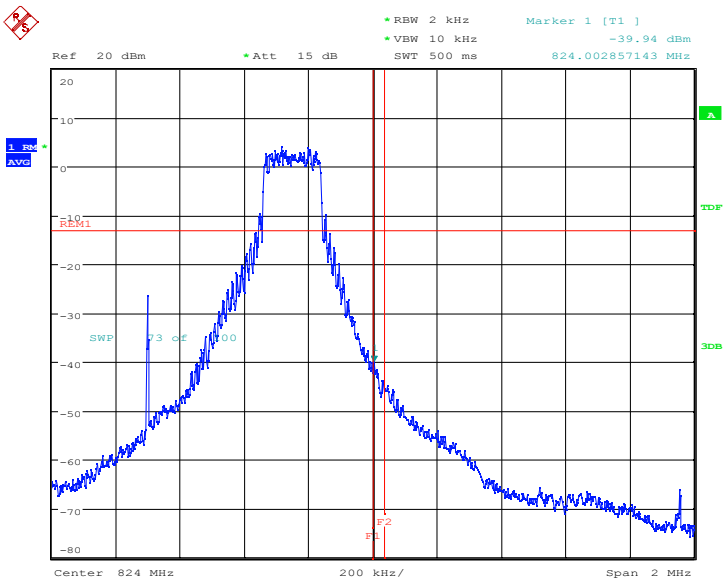
LTE band 26 Part90

OBW: 1RB-HIGH_offset



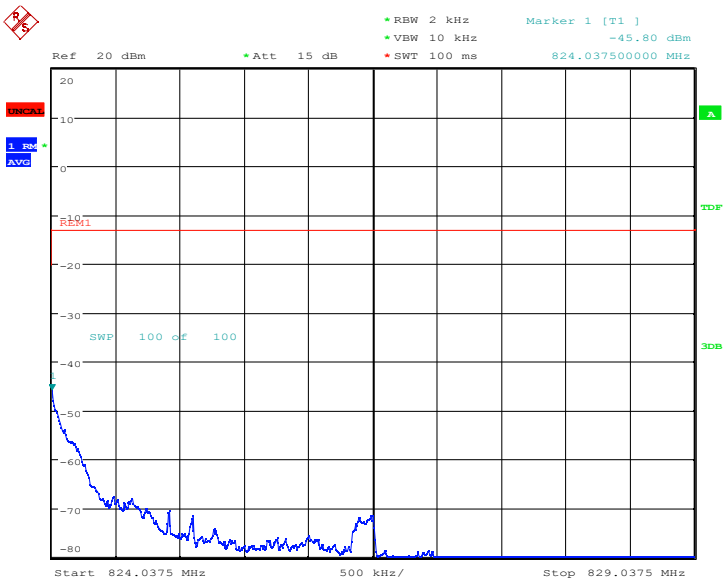
Date: 8.MAR.2022 05:38:11

HIGH BAND EDGE BLOCK-1RB-1.4M_offset



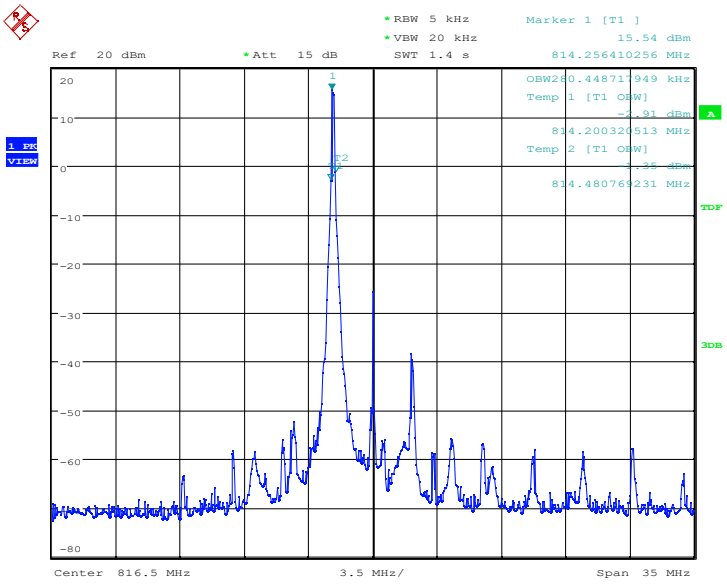
Date: 8.MAR.2022 05:39:42

HIGH BAND EDGE BLOCK-1RB-1.4M_offset



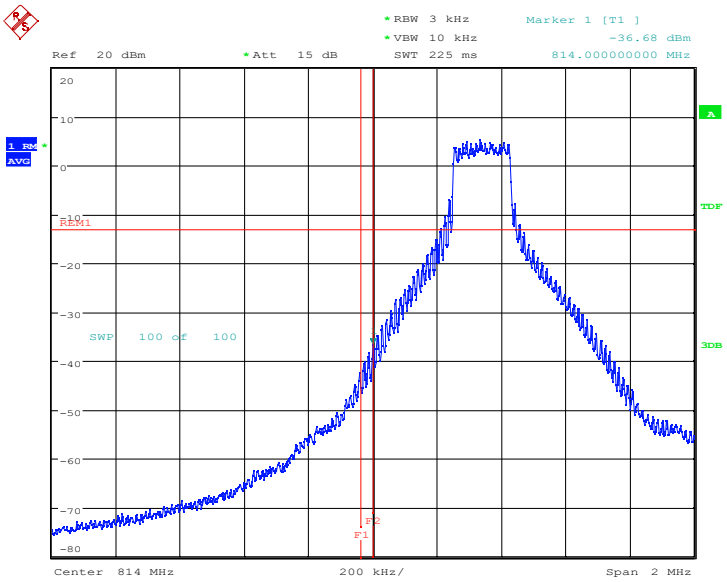
Date: 8.MAR.2022 05:40:34

OBW: 1RB-LOW_offset



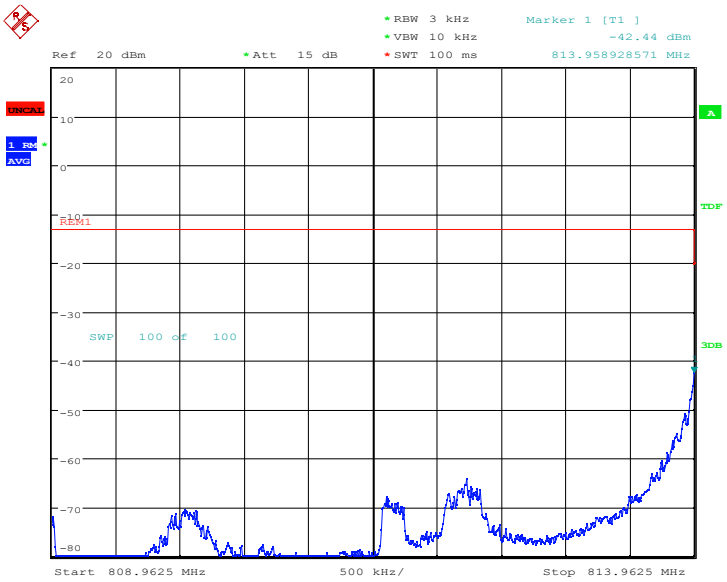
Date: 8.MAR.2022 05:35:43

LOW BAND EDGE BLOCK-1RB-5M_offset



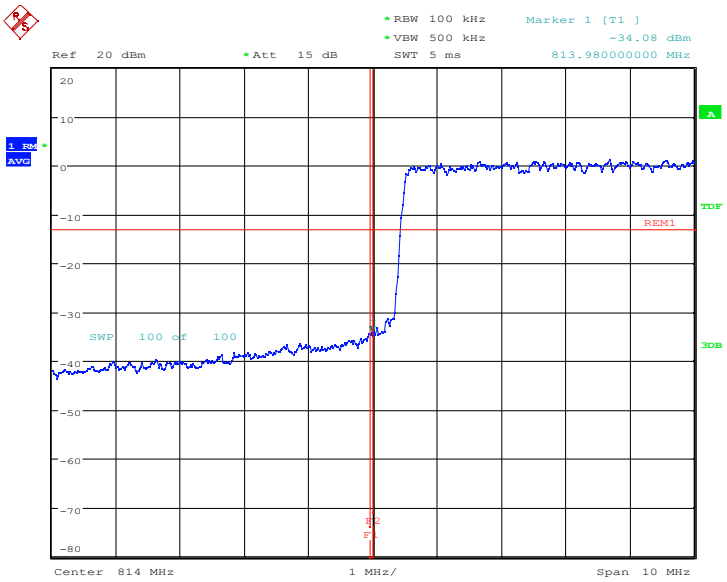
Date: 8.MAR.2022 05:36:45

LOW BAND EDGE BLOCK-1RB-5M_offset



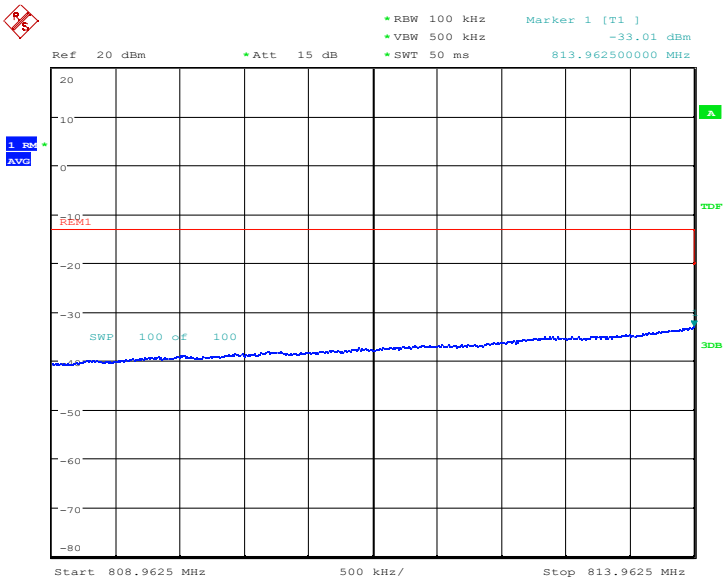
Date: 8.MAR.2022 05:37:37

LOW BAND EDGE BLOCK-1RB-10M_offset



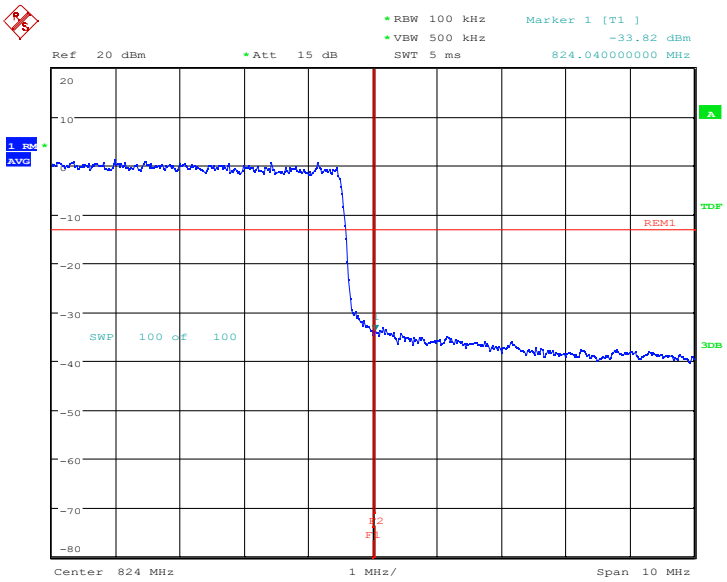
Date: 8.MAR.2022 05:41:27

LOW BAND EDGE BLOCK-1RB-10M_offset



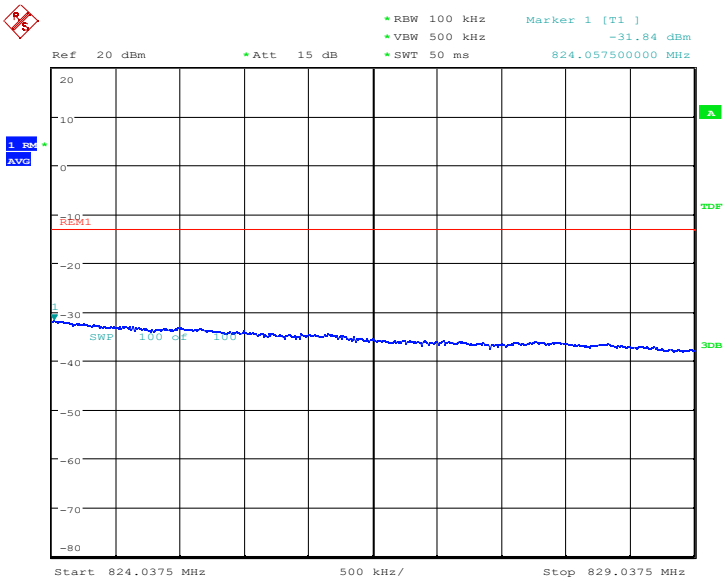
Date: 8.MAR.2022 05:42:14

HIGH BAND EDGE BLOCK-1RB-10M_offset



Date: 8.MAR.2022 05:42:57

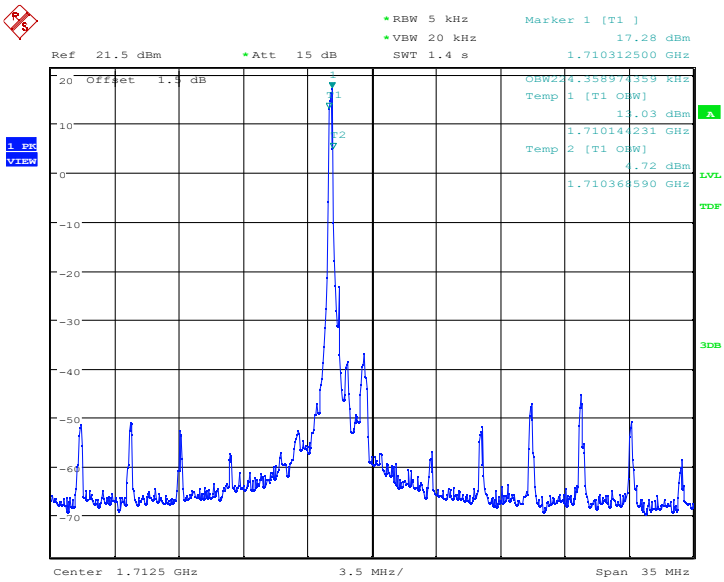
HIGH BAND EDGE BLOCK-1RB-10M_offset



Date: 8.MAR.2022 05:43:43

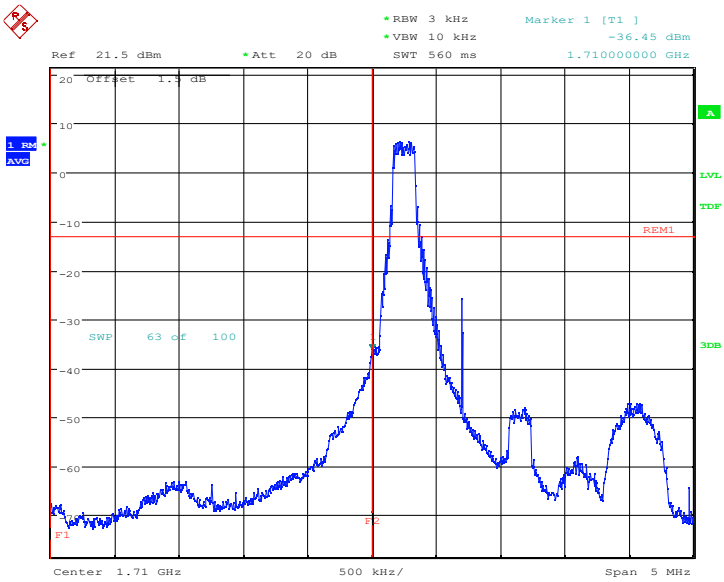
LTE band 66

OBW: 1RB-LOW_offset



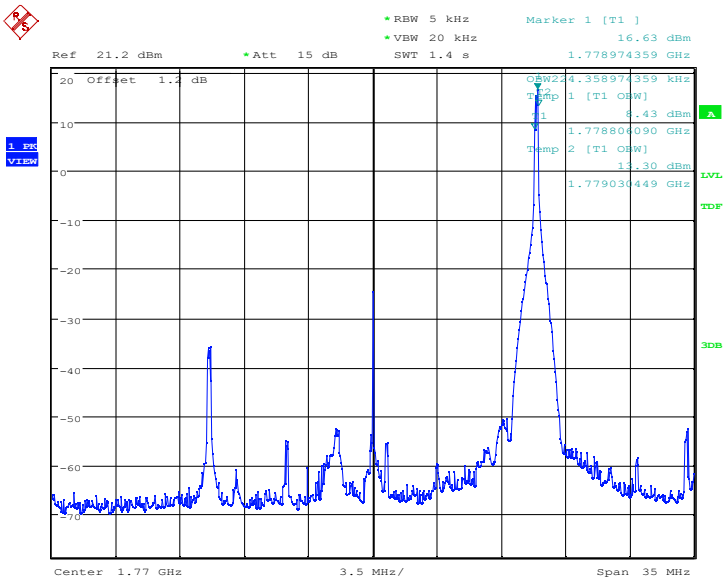
Date: 8.MAR.2022 05:44:20

LOW BAND EDGE BLOCK-1RB-1.4M_offset

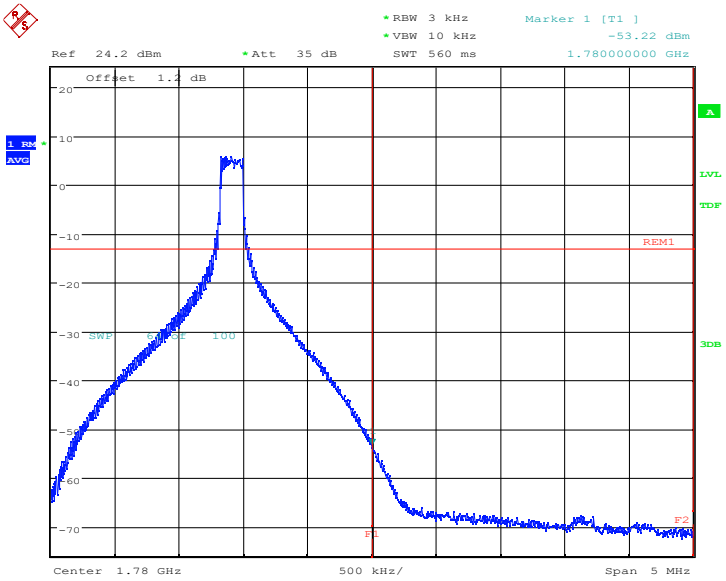


Date: 8.MAR.2022 05:45:58

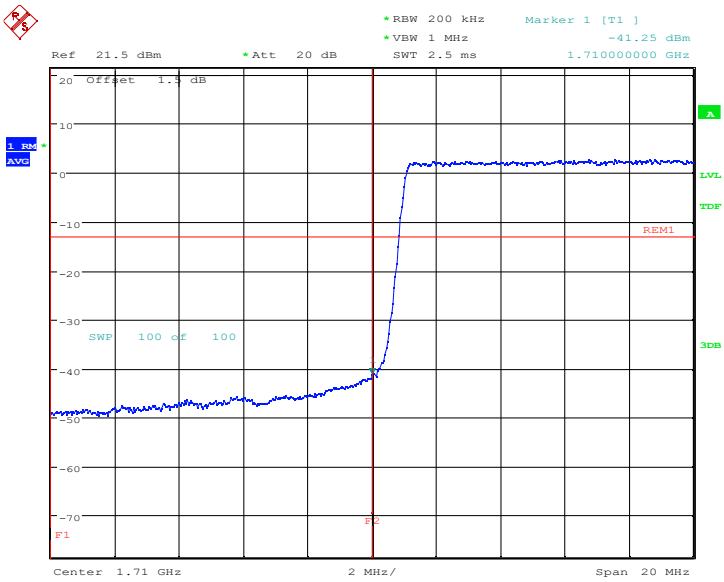
OBW: 1RB-HIGH_offset



HIGH BAND EDGE BLOCK-1RB-20M_offset

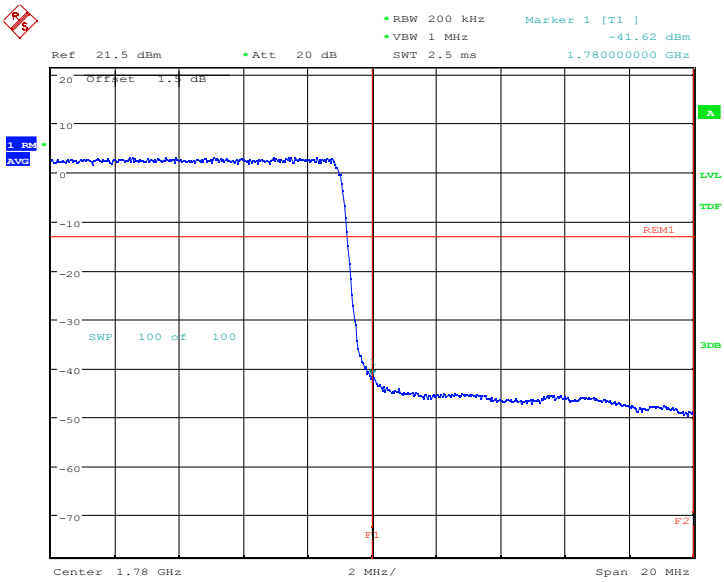


LOW BAND EDGE BLOCK-1RB-20M_offset



Date: 8.MAR.2022 05:47:20

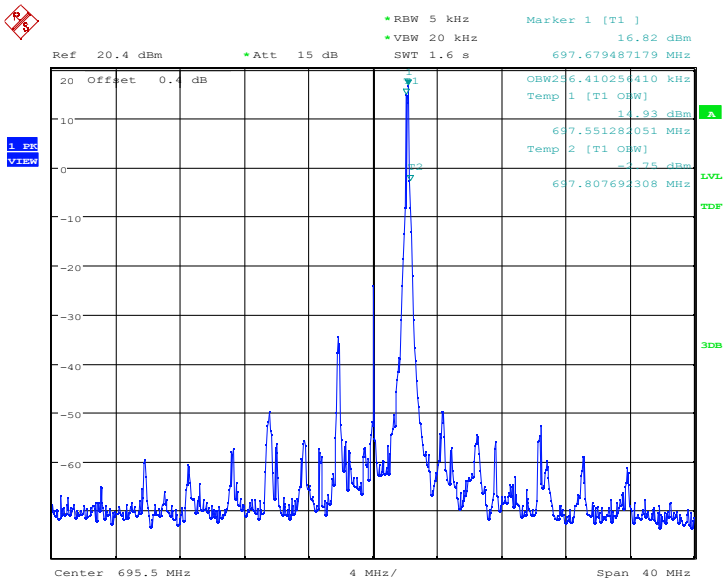
HIGH BAND EDGE BLOCK-1RB-20M_offset



Date: 8.MAR.2022 05:48:10

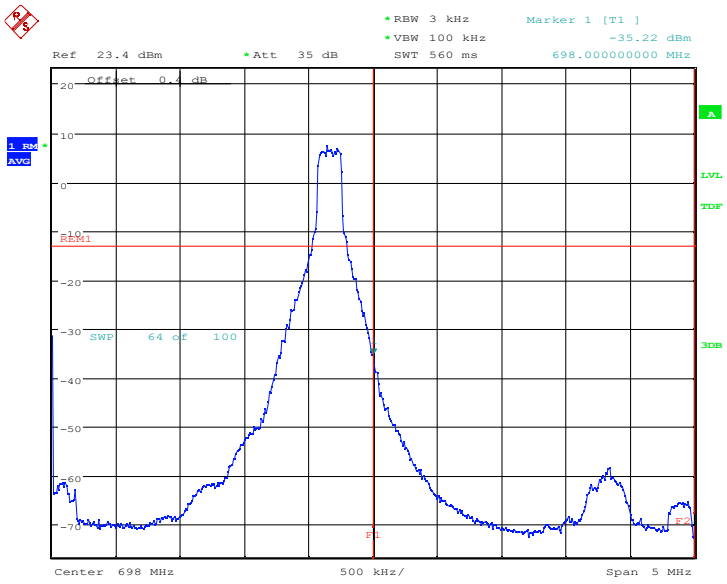
LTE band 71

OBW: 1RB-HIGH_offset



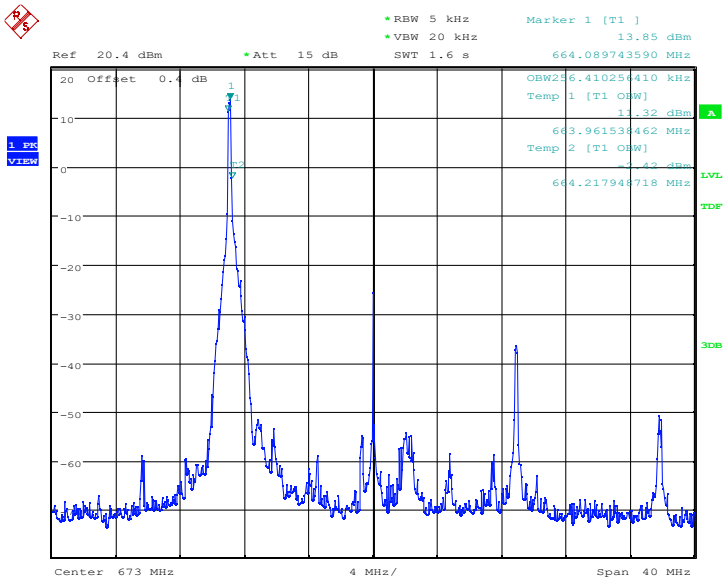
Date: 16.APR.2022 03:35:34

HIGH BAND EDGE BLOCK-1RB-5M_offset



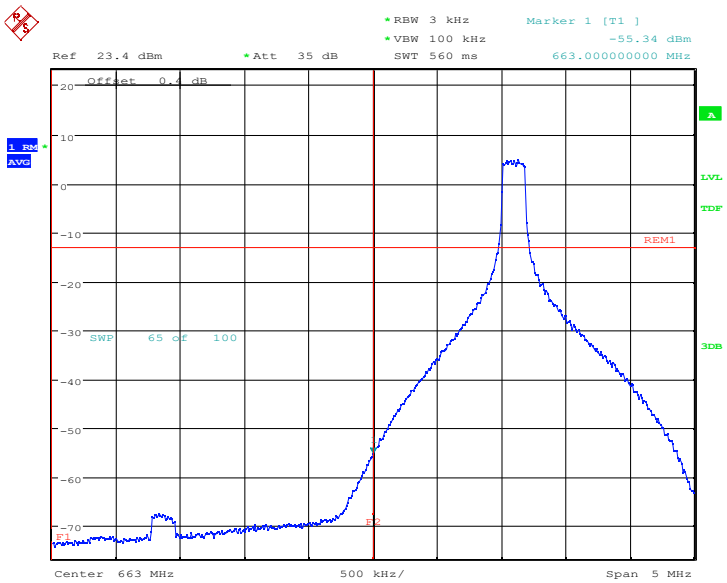
Date: 16.APR.2022 03:37:11

OBW: 1RB-LOW_offset



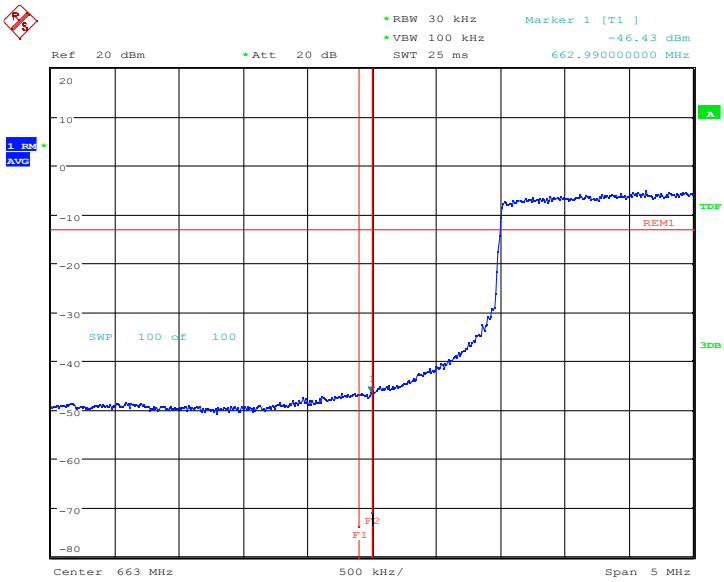
Date: 16.APR.2022 03:38:08

LOW BAND EDGE BLOCK-1RB-20M_offset

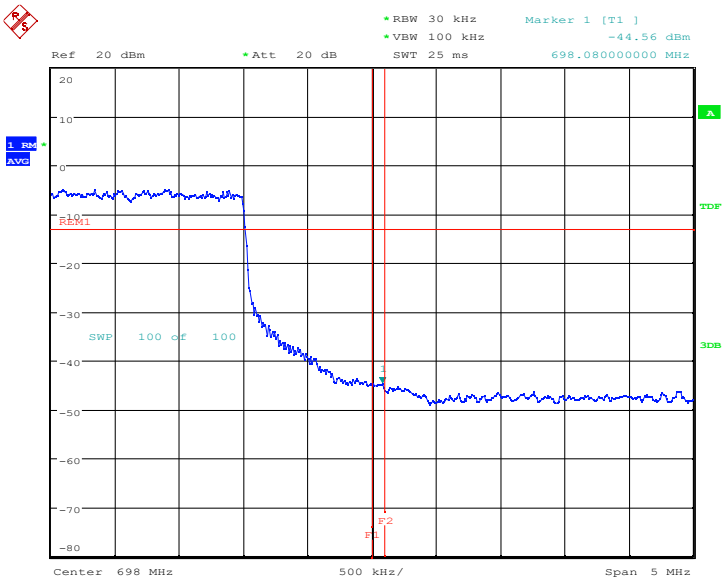


Date: 16.APR.2022 03:39:43

LOW BAND EDGE BLOCK-1RB-20M_offset

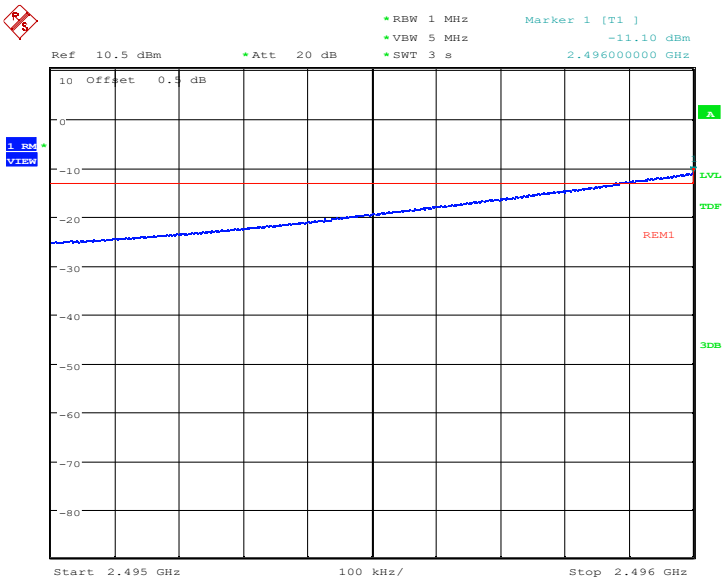


HIGH BAND EDGE BLOCK-1RB-20M_offset



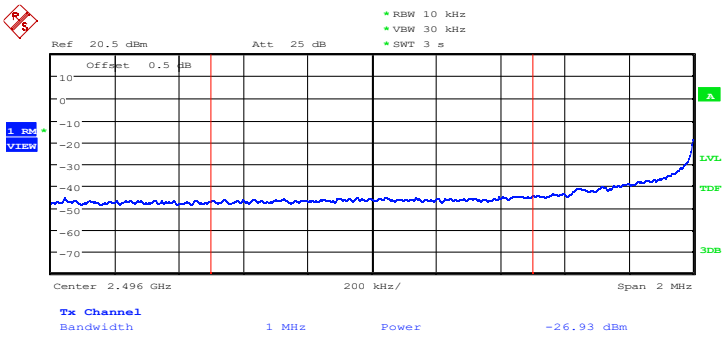
LTE band 41

LOW BAND EDGE BLOCK-1RB-20M_offset



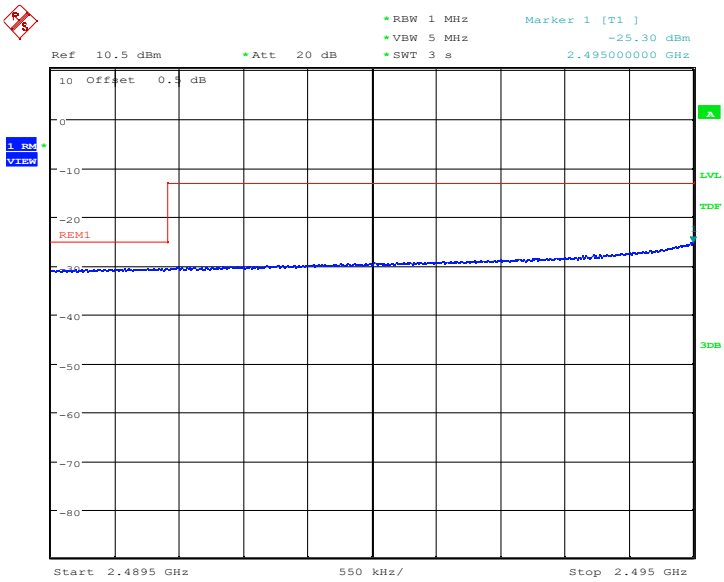
Date: 9.MAR.2022 00:53:52

Channal Power



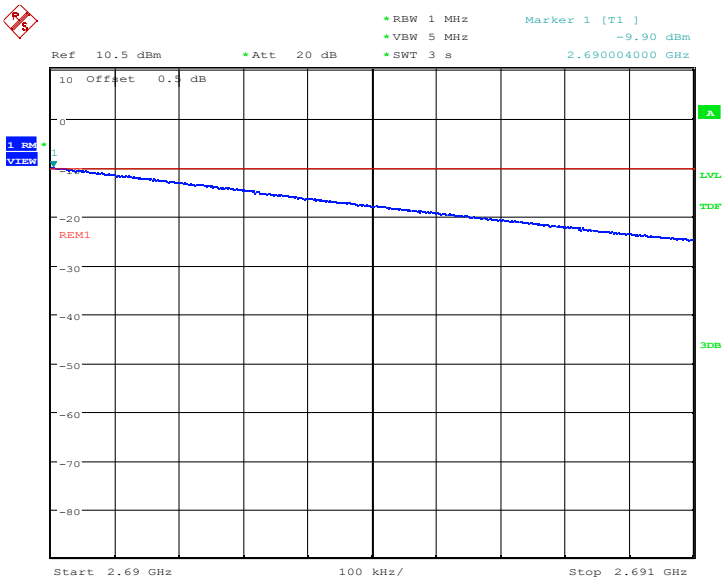
Date: 9.MAR.2022 00:54:17

LOW BAND EDGE BLOCK-1RB-20M_offset



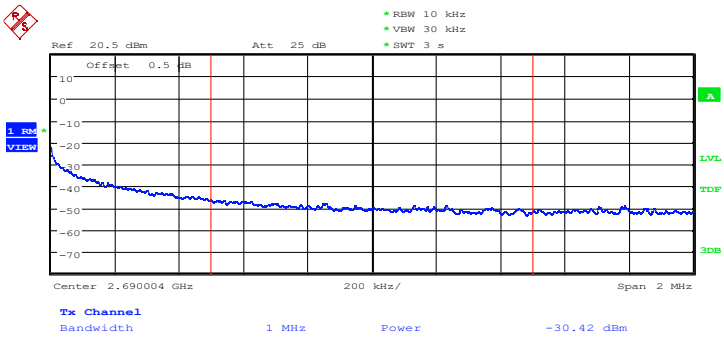
Date: 9.MAR.2022 00:55:01

HIGH BAND EDGE BLOCK-1RB-20M_offset



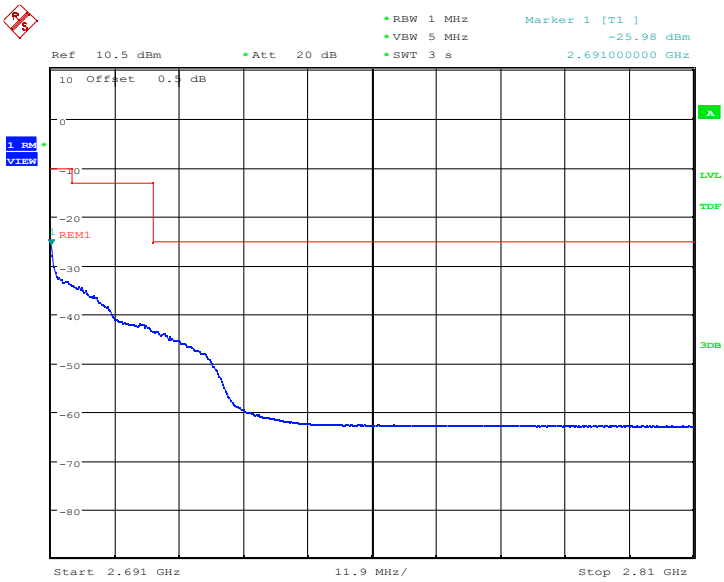
Date: 9.MAR.2022 00:55:51

Channal Power



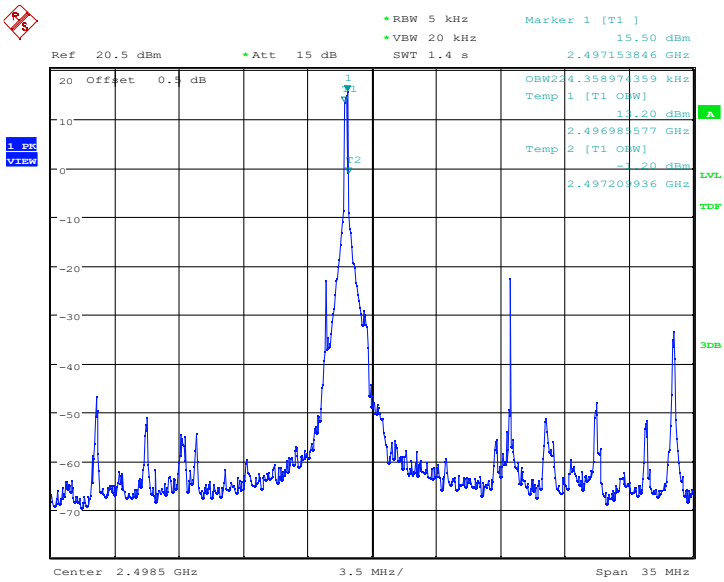
Date: 9.MAR.2022 00:56:16

HIGH BAND EDGE BLOCK-1RB-20M_offset



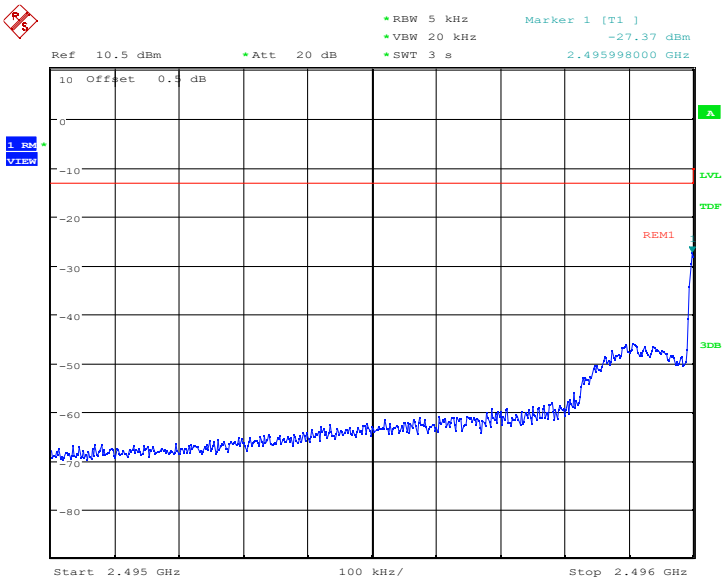
Date: 9.MAR.2022 00:57:00

OBW: 1RB-LOW_offset



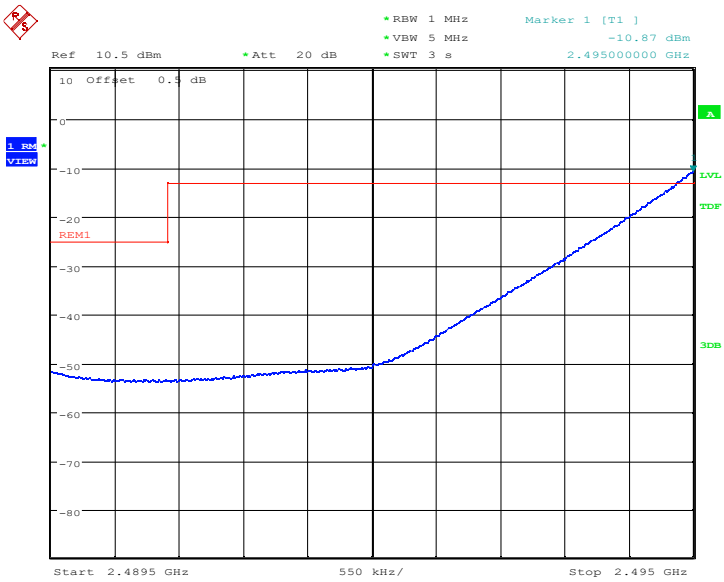
Date: 9.MAR.2022 00:48:54

LOW BAND EDGE BLOCK-1RB-20M_offset



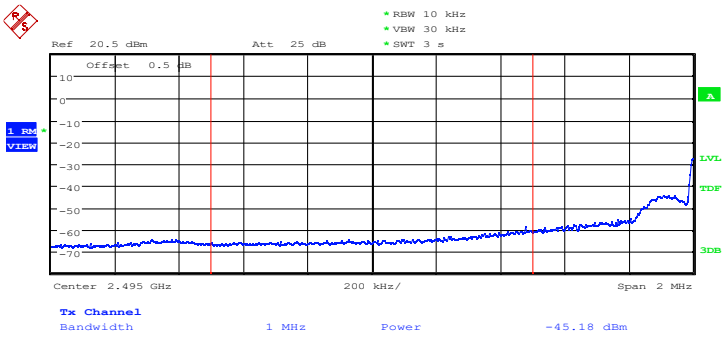
Date: 9.MAR.2022 00:49:36

LOW BAND EDGE BLOCK-1RB-20M_offset



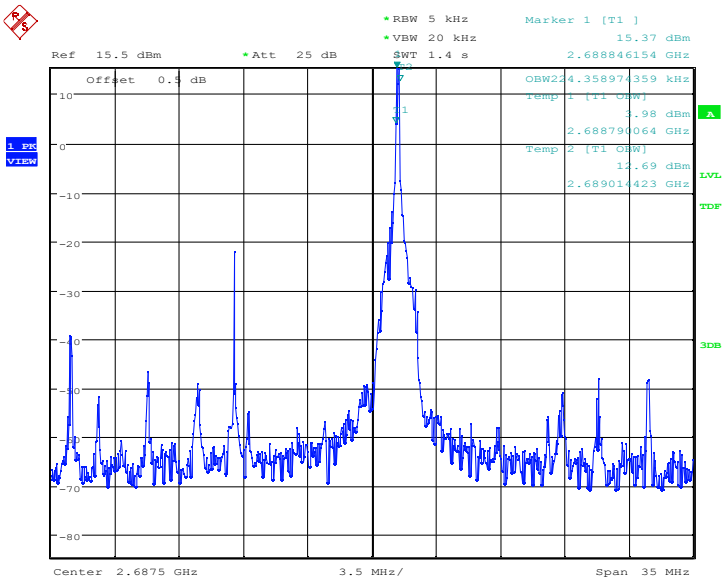
Date: 9.MAR.2022 00:50:18

Channal Power



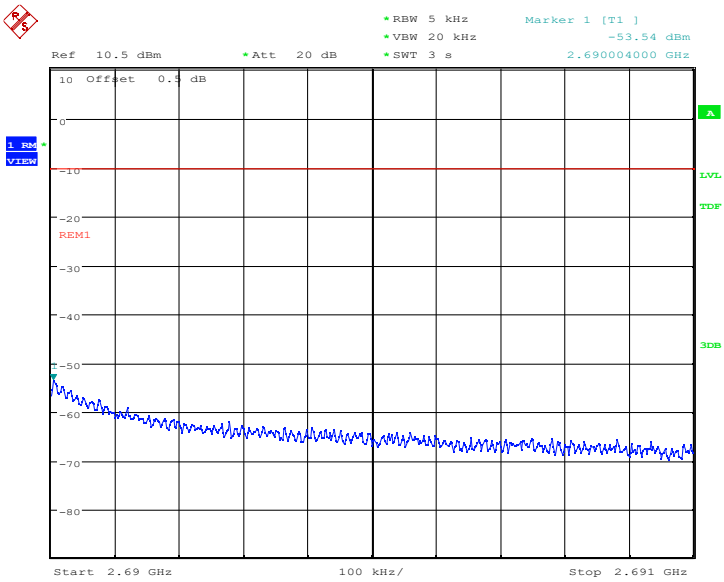
Date: 9.MAR.2022 00:50:43

OBW: 1RB-HIGH_offset



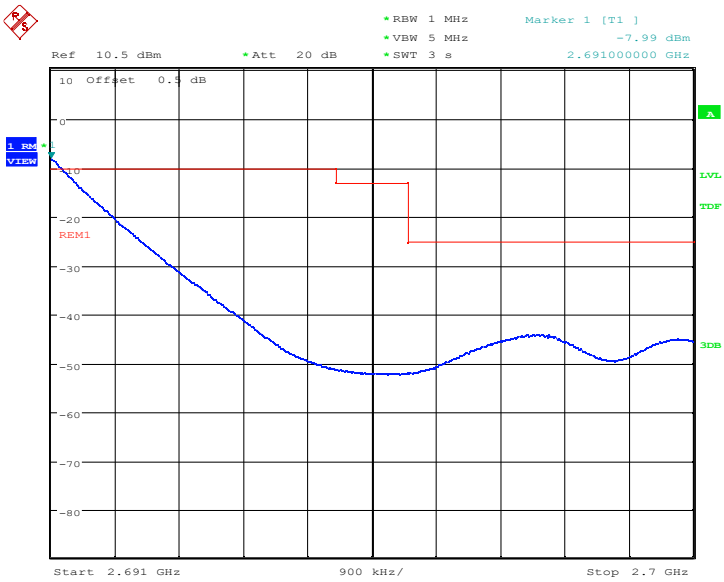
Date: 9.MAR.2022 00:51:11

HIGH BAND EDGE BLOCK-1RB-20M_offset



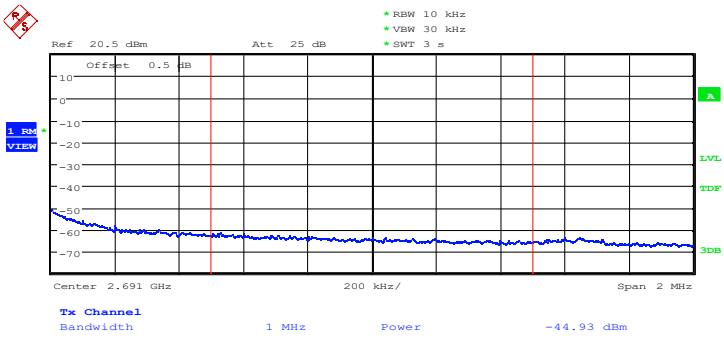
Date: 9.MAR.2022 00:51:56

HIGH BAND EDGE BLOCK-1RB-20M_offset



Date: 9.MAR.2022 00:52:38

Channal Power

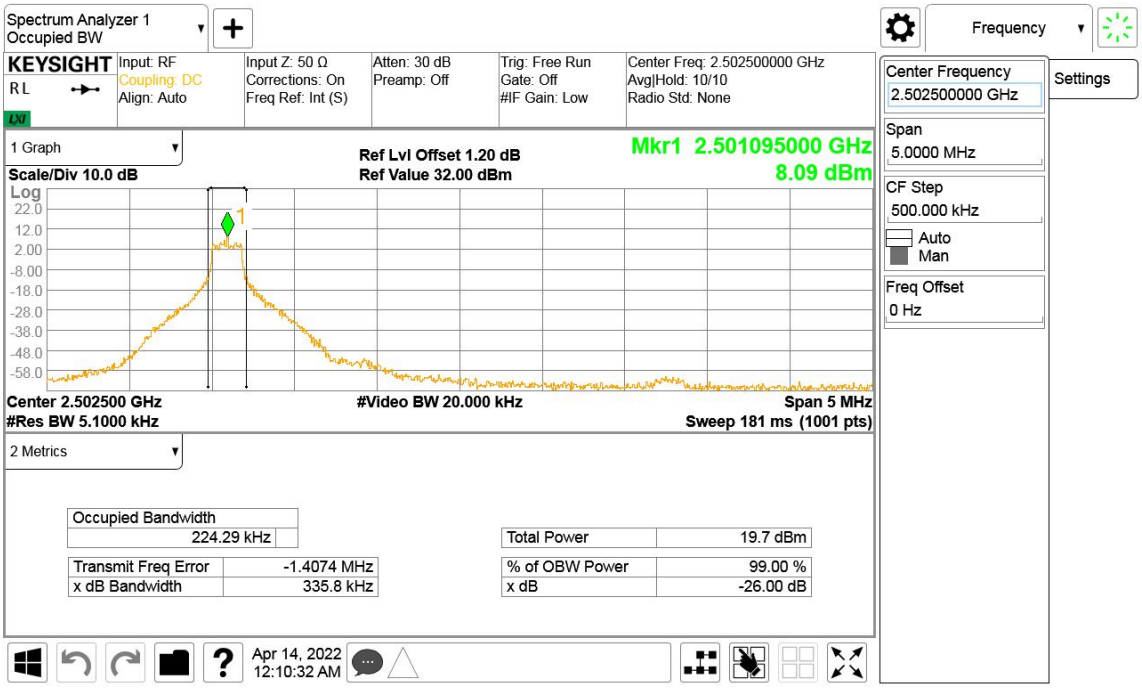


Date: 9.MAR.2022 00:53:03

LTE CA_band 7C

Only the worst case result is given below

OBW: 1RB-LOW_offset



LOW BAND EDGE BLOCK-1RB-10MHz+20M1RB_offset