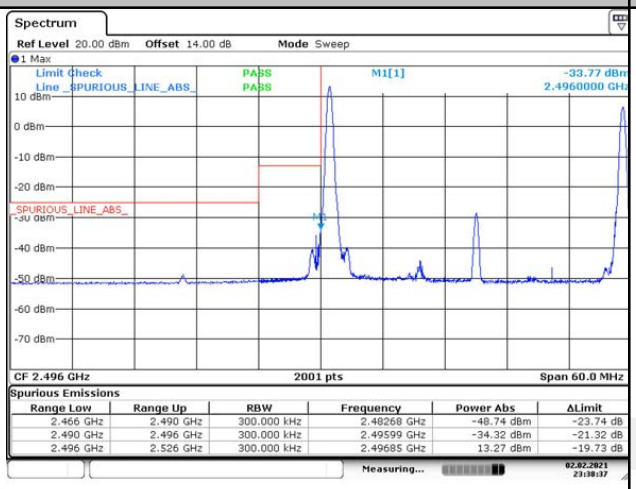
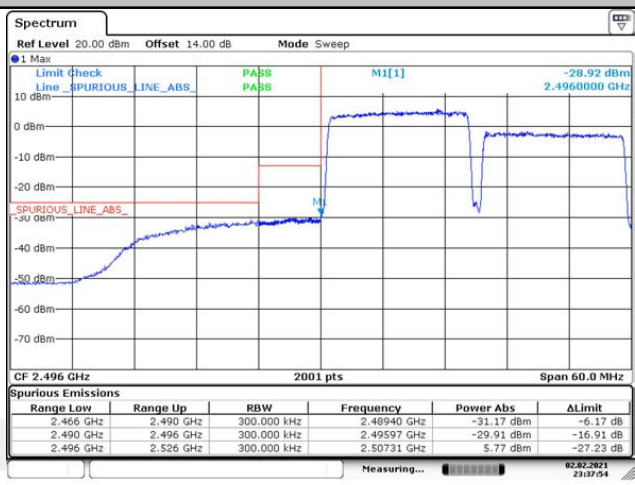
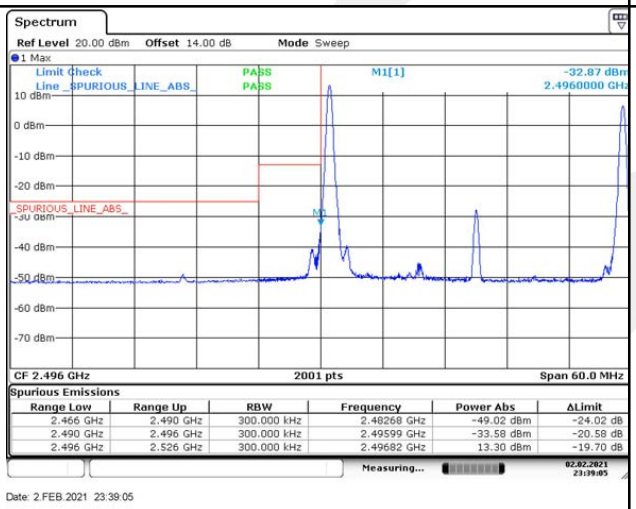
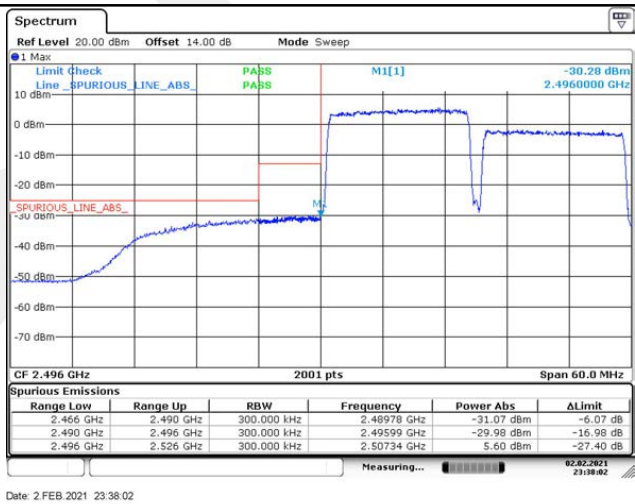
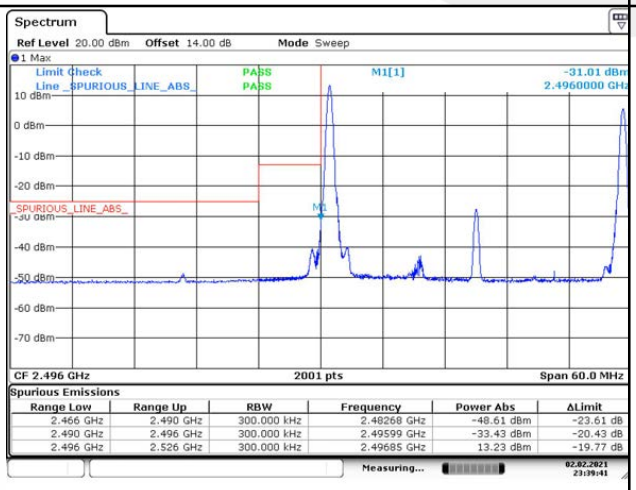
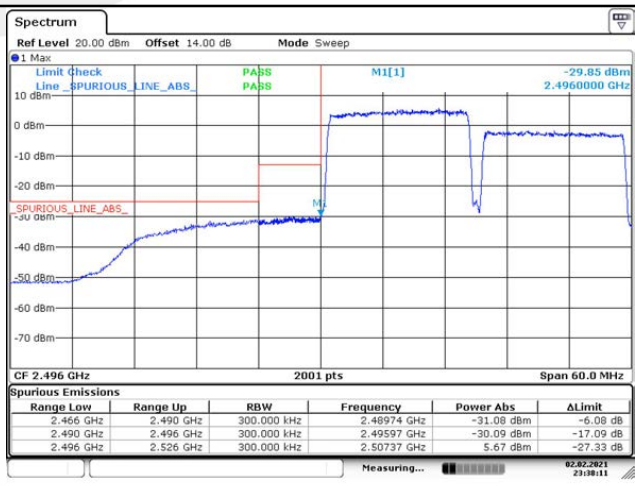
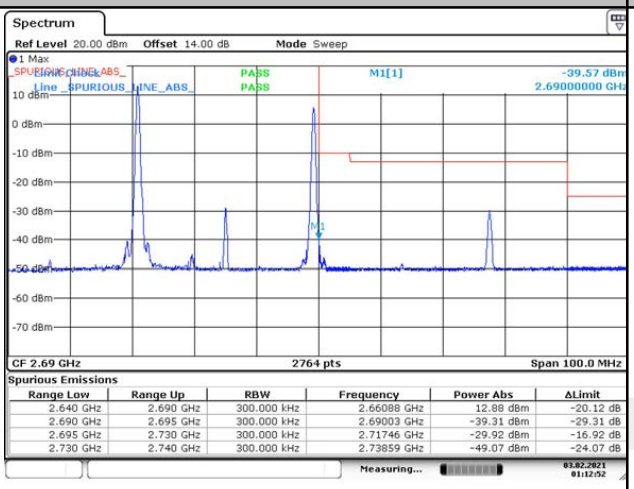
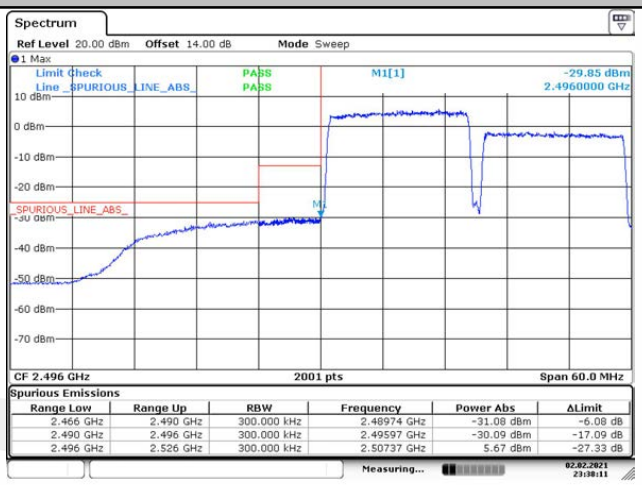
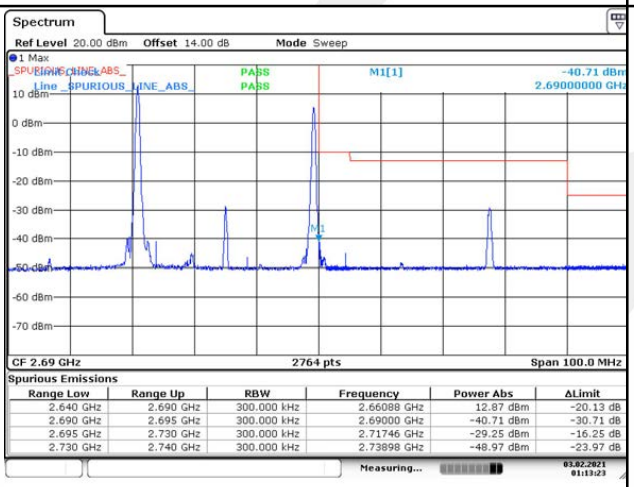
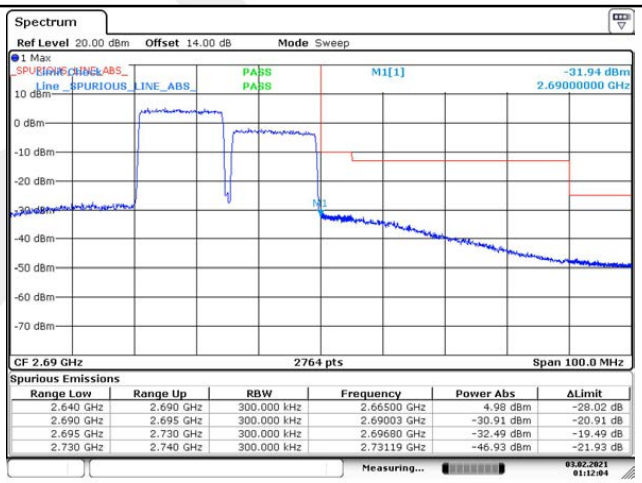
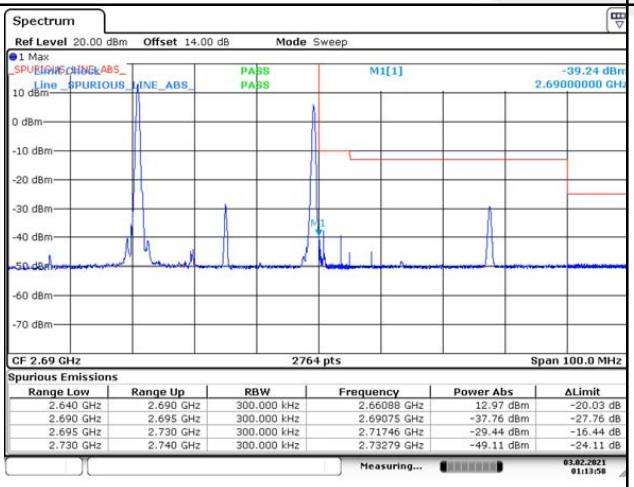
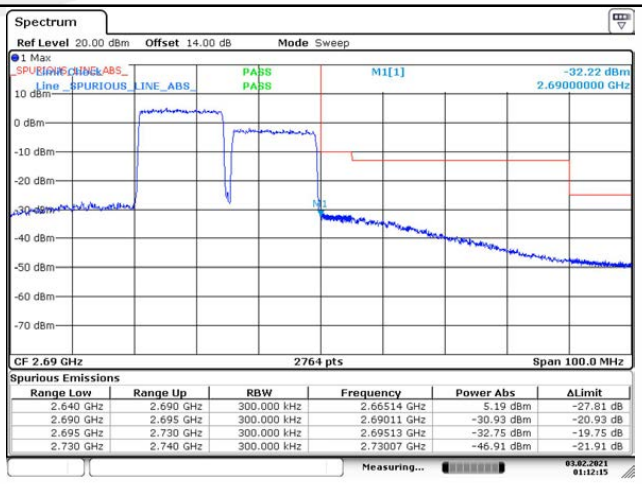
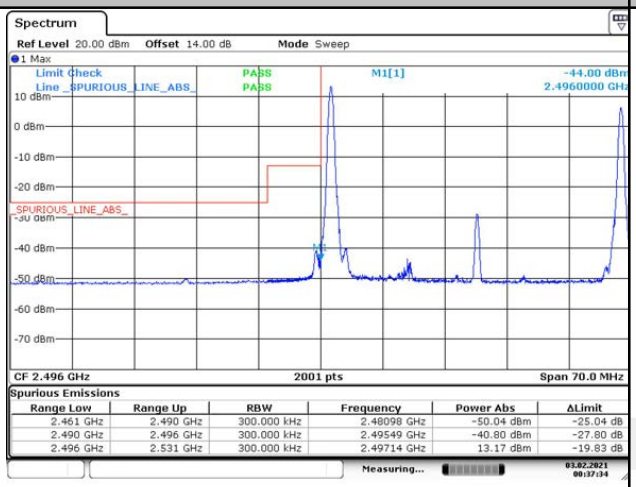
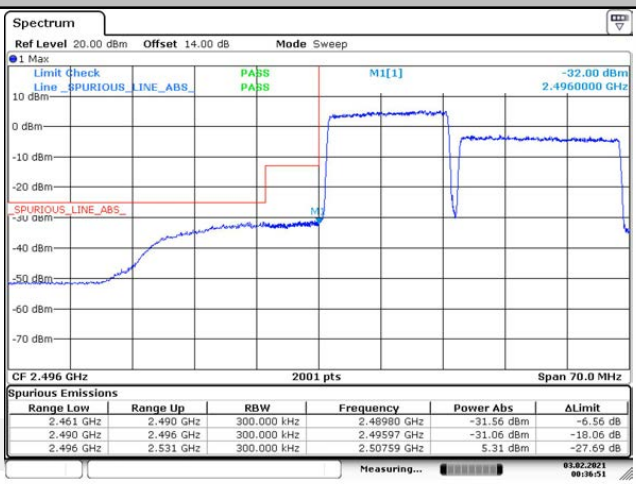
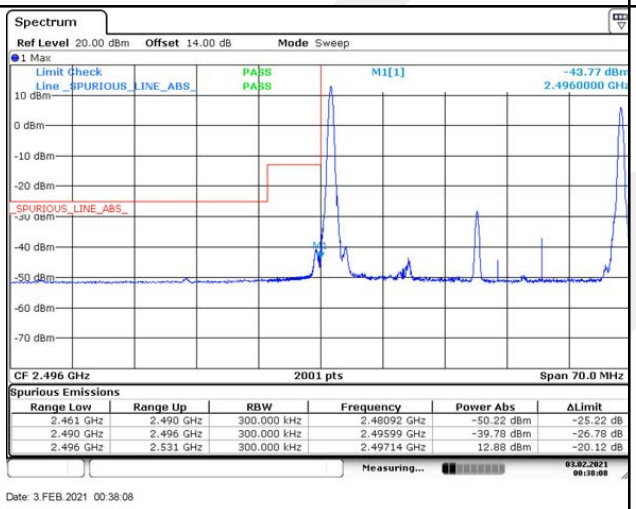
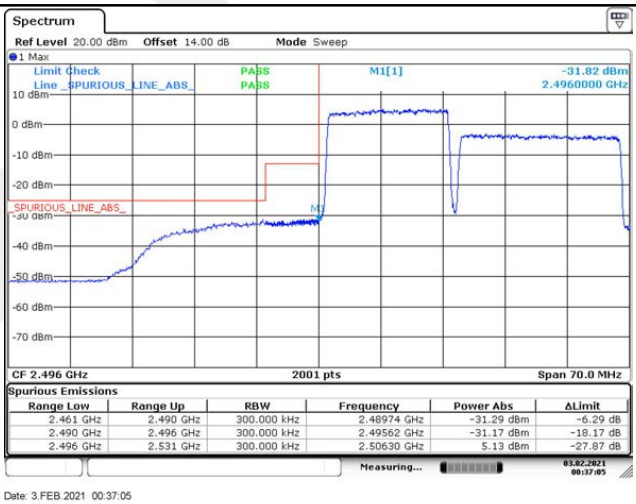
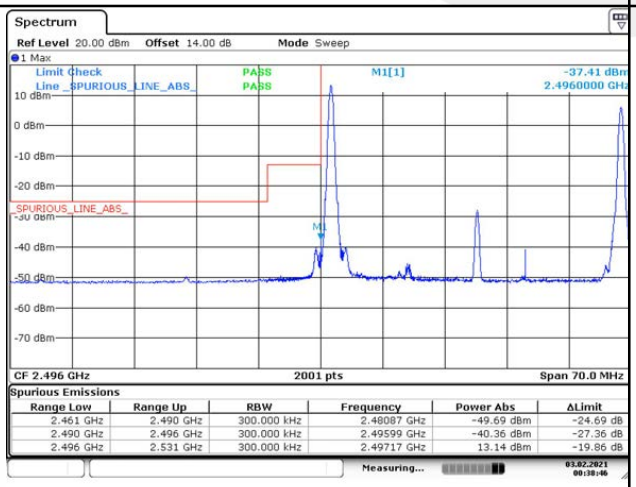
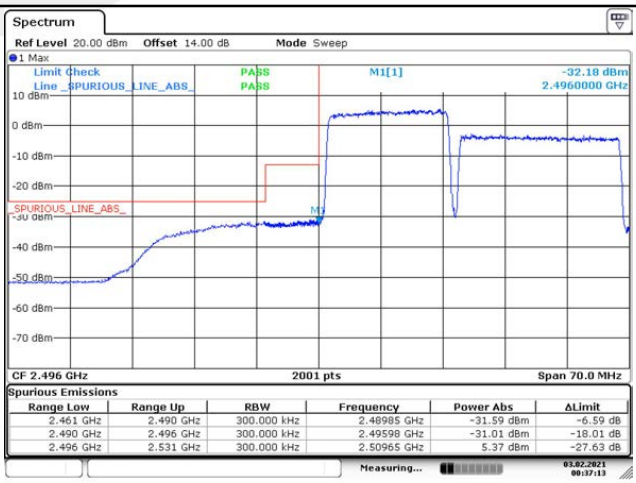
LTE Band 41_CA: BAND EDGE EMISSION BW: 15+15MHz-Low Channel

	RB1#0&RB1#74	Full RB
QPSK		
16QAM		
64QAM		

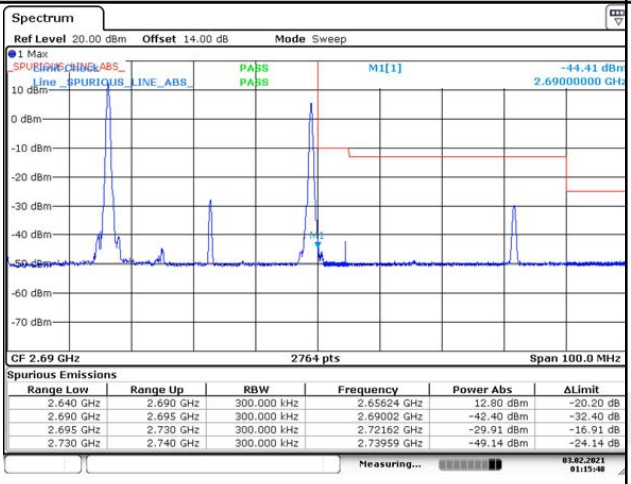
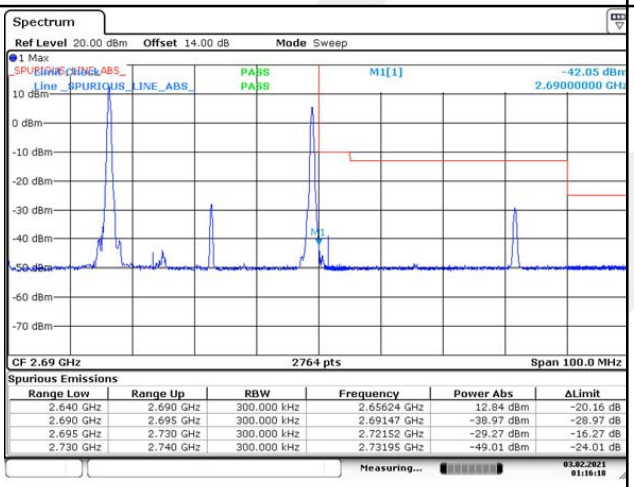
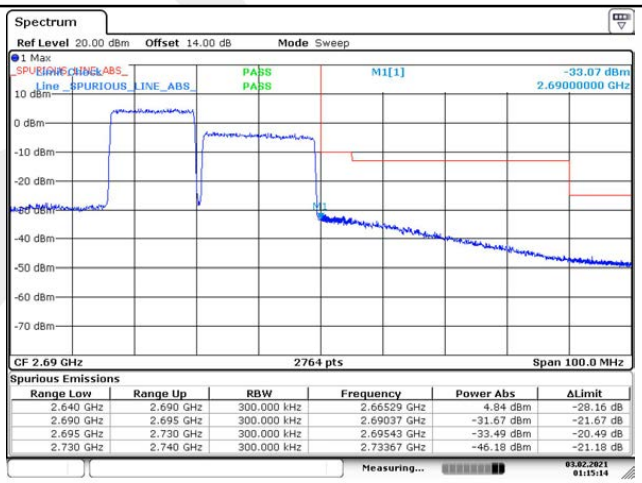
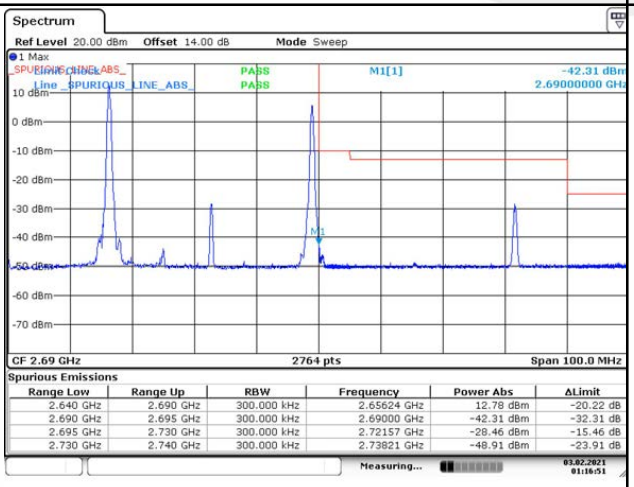
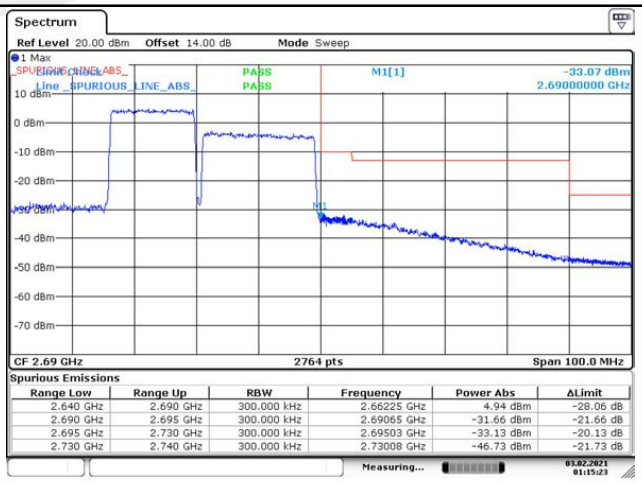
LTE Band 41_CA: BAND EDGE EMISSION BW: 15+15MHz-High Channel

	RB1#0&RB1#74	Full RB
QPSK		
16QAM		
64QAM		

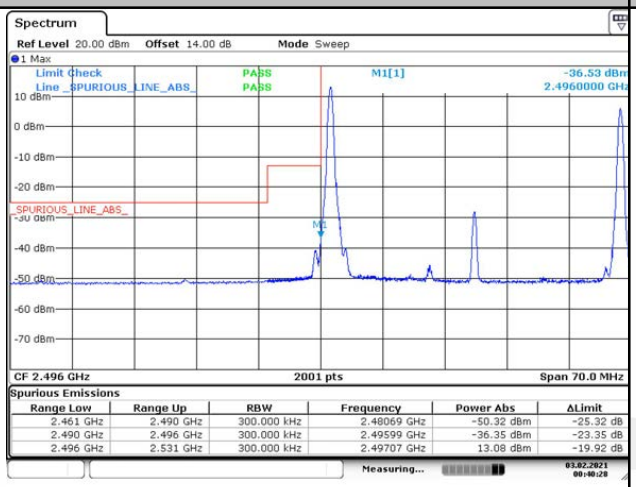
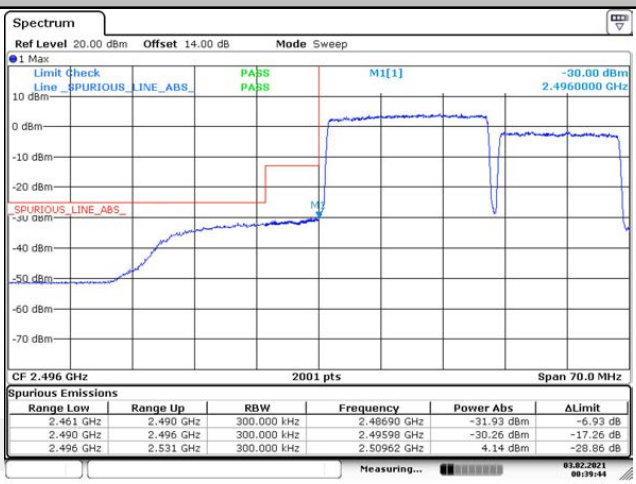
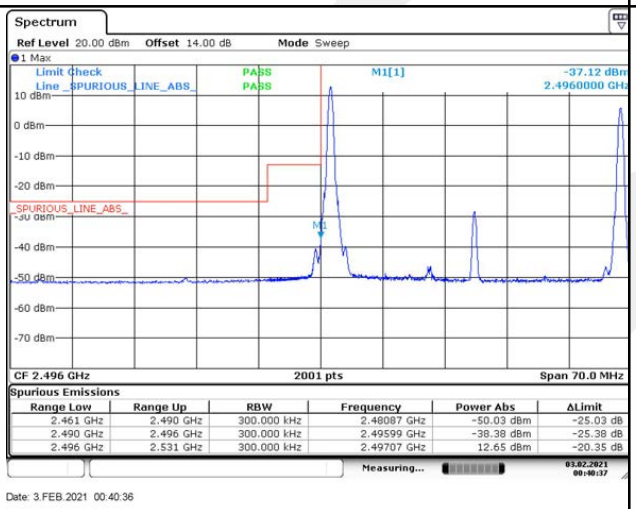
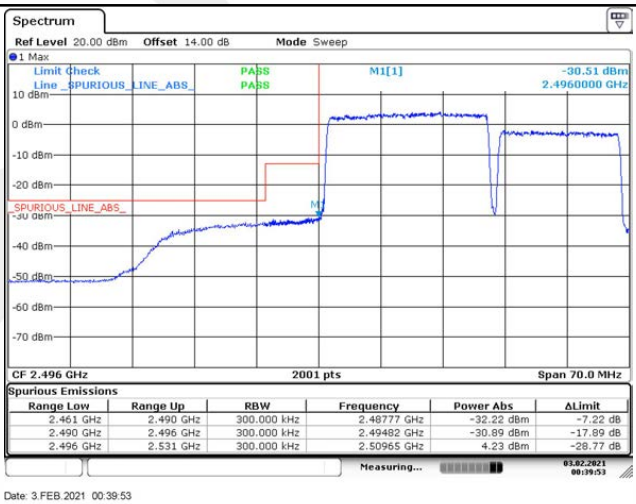
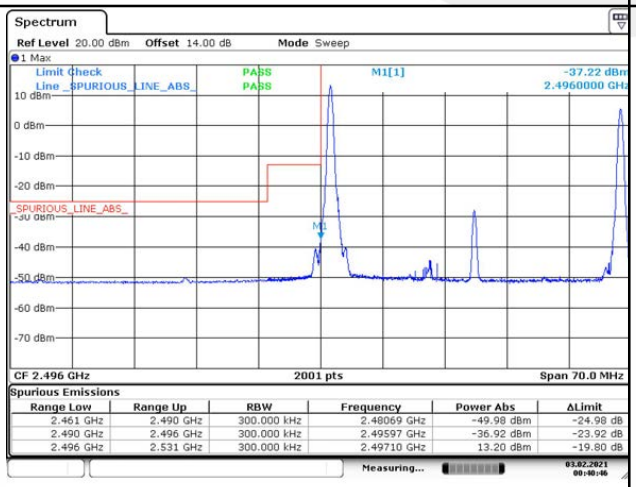
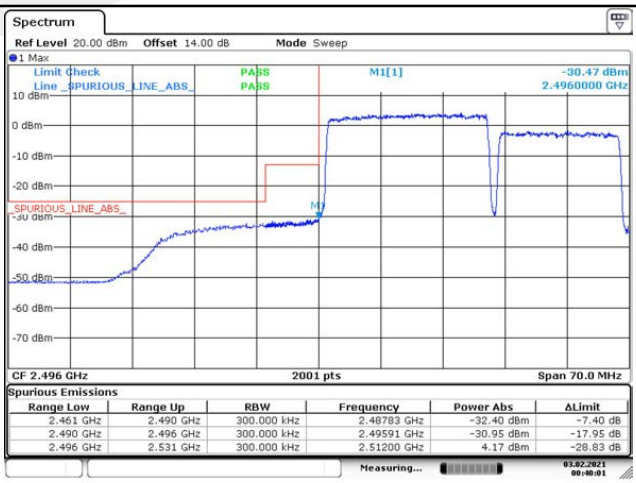
LTE Band 41_CA: BAND EDGE EMISSION BW: 15+20MHz-Low Channel

	RB1#0&RB1#99	Full RB
QPSK		
16QAM		
64QAM		

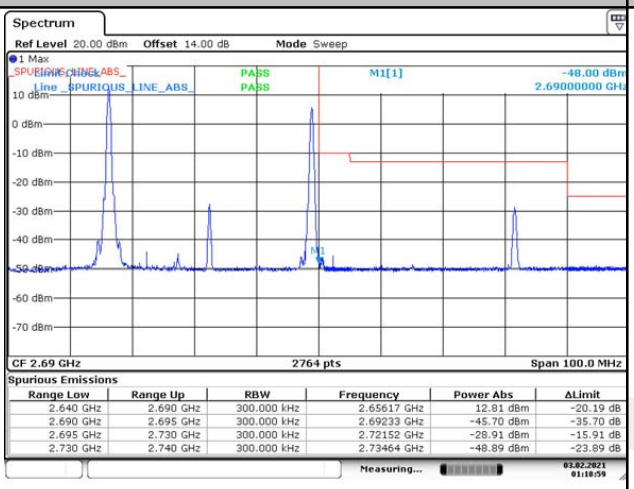
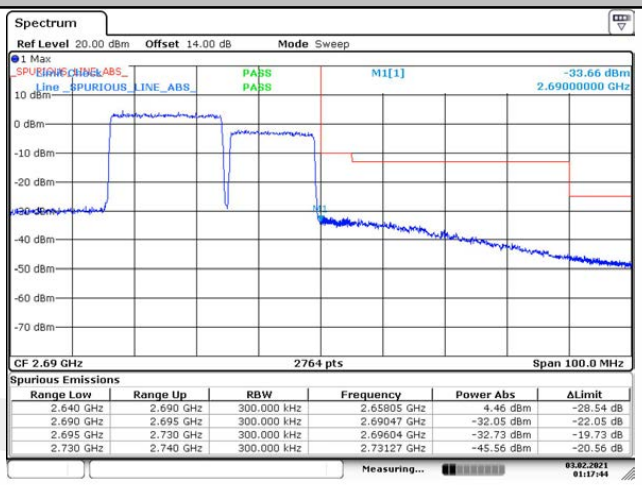
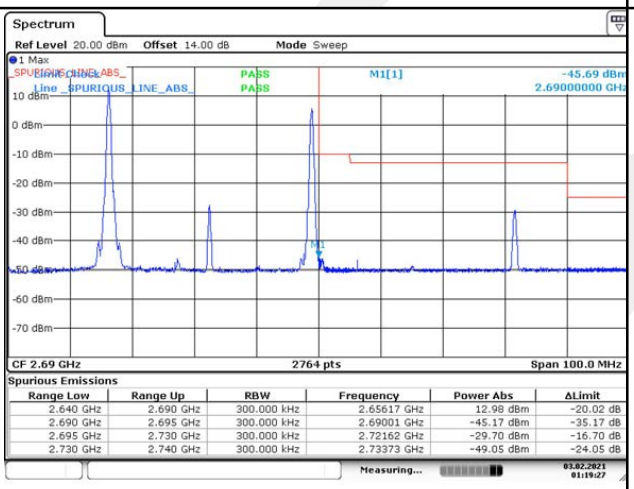
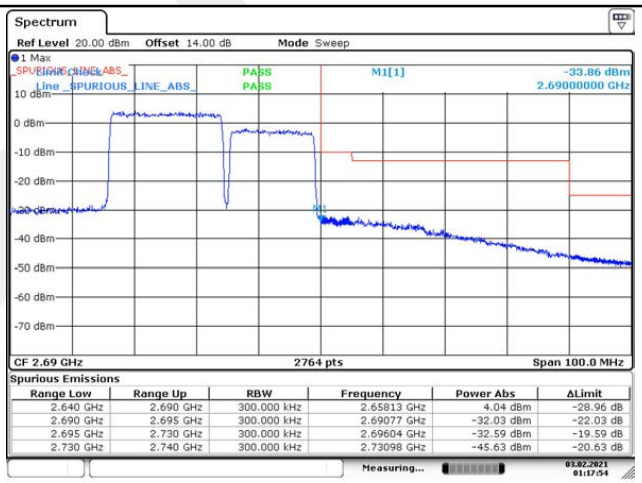
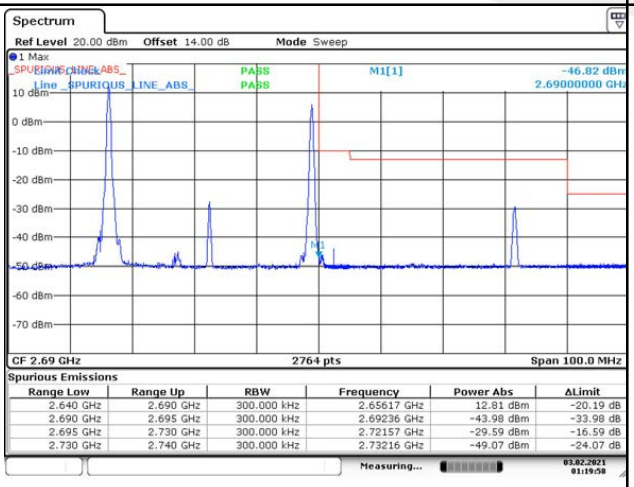
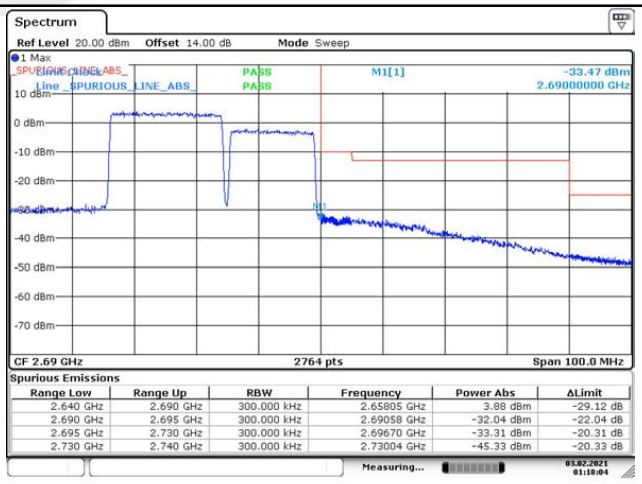
LTE Band 41_CA: BAND EDGE EMISSION BW: 15+20MHz-High Channel

	RB1#0&RB1#99	Full RB
QPSK		
16QAM		
64QAM		

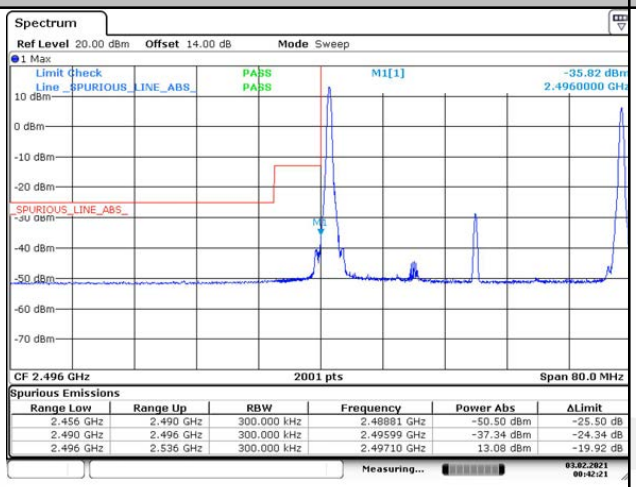
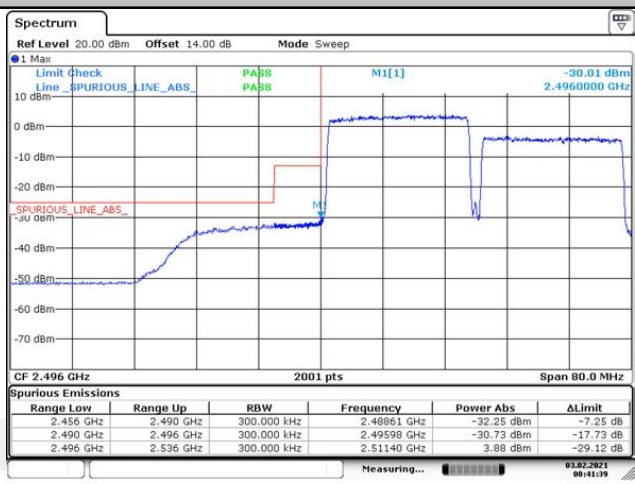
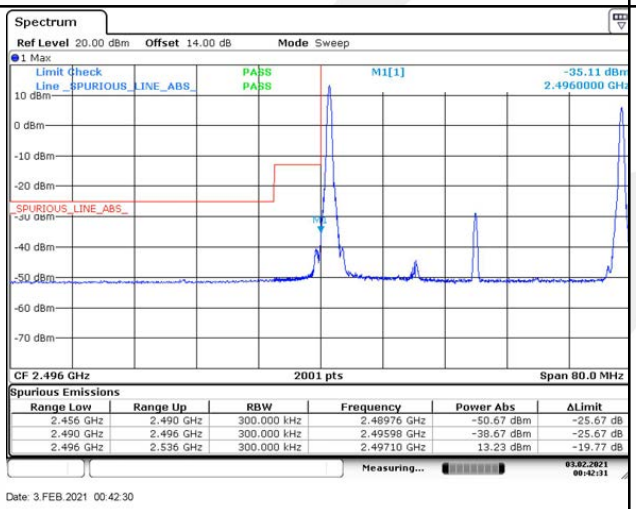
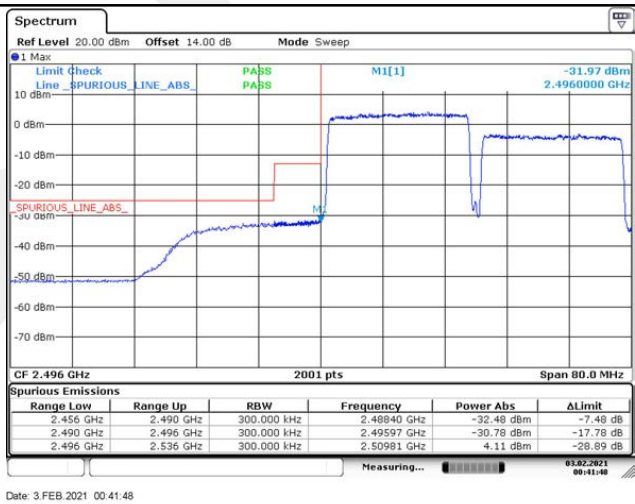
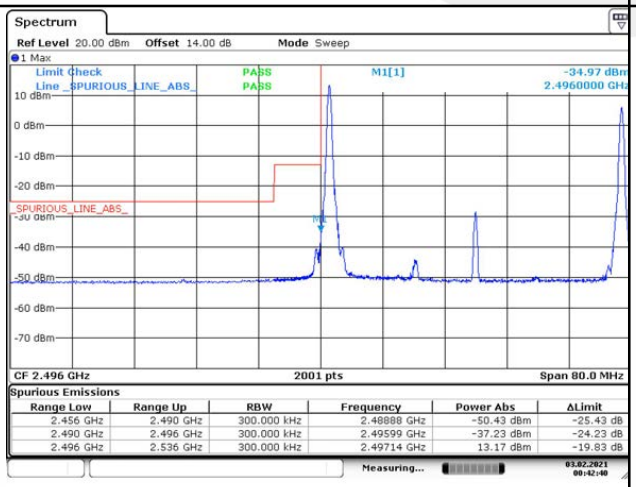
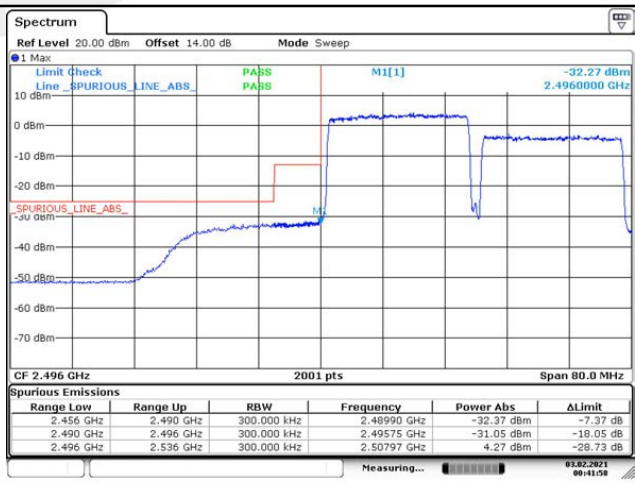
LTE Band 41_CA: BAND EDGE EMISSION BW: 20+15MHz-Low Channel

	RB1#0&RB1#74	Full RB
QPSK		
16QAM		
64QAM		

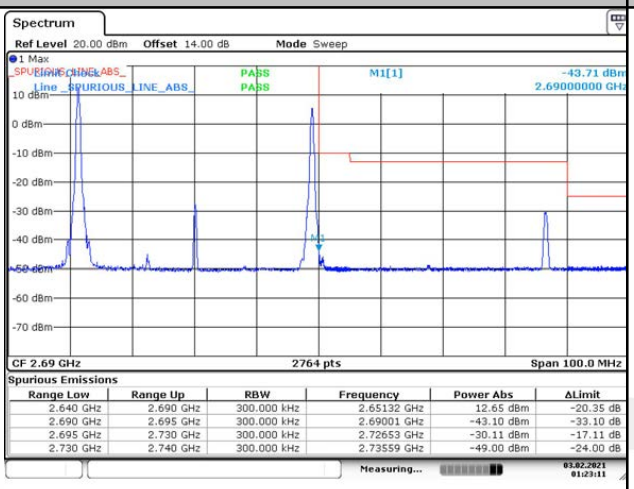
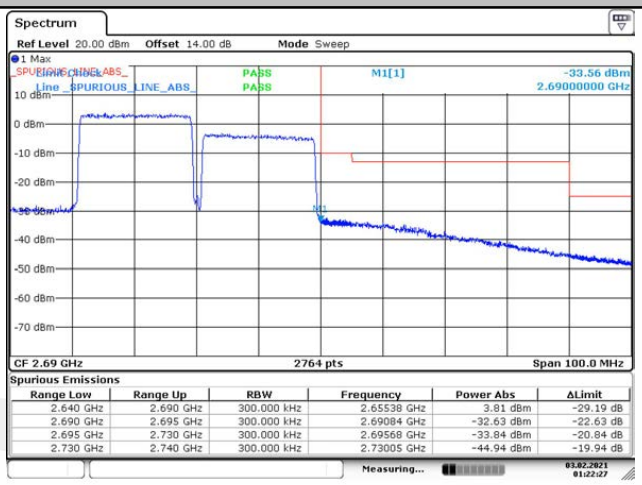
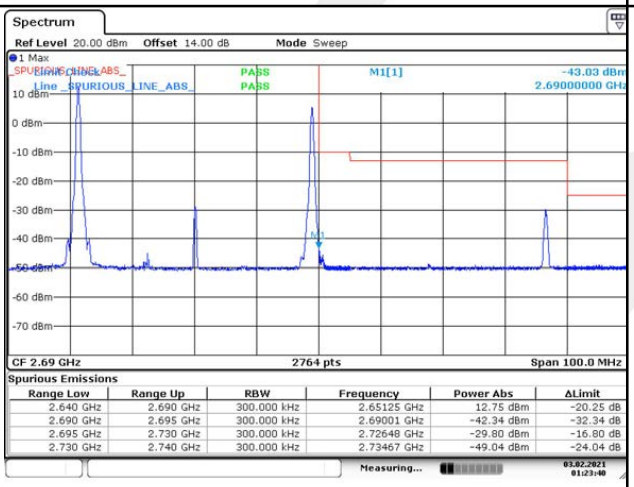
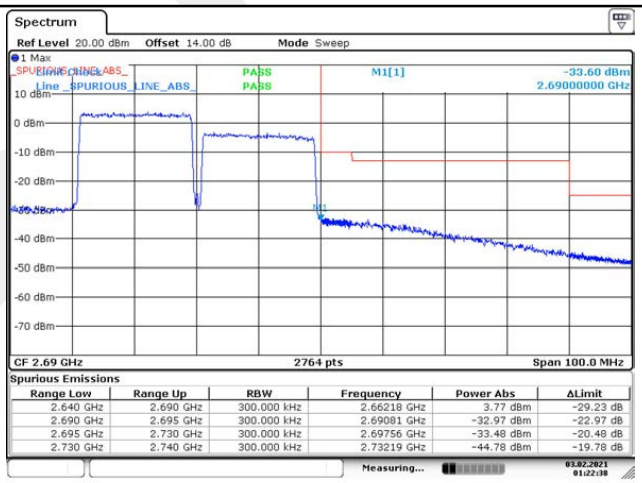
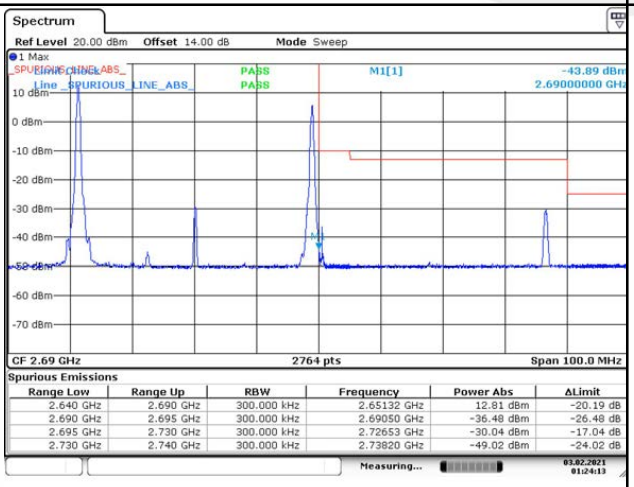
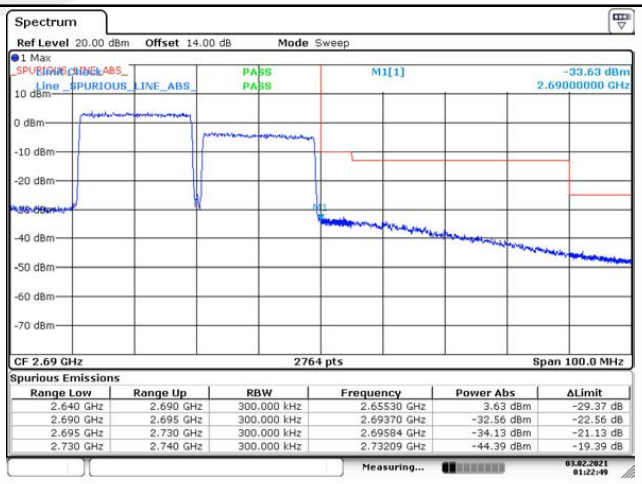
LTE Band 41_CA: BAND EDGE EMISSION BW: 20+15MHz-High Channel

	RB1#0&RB1#74	Full RB
QPSK		
16QAM		
64QAM		

LTE Band 41_CA: BAND EDGE EMISSION BW: 20+20MHz-Low Channel

	RB1#0&RB1#99	Full RB
QPSK		
16QAM		
64QAM		

LTE Band 41_CA: BAND EDGE EMISSION BW: 20+20MHz-High Channel

	RB1#0&RB1#99	Full RB
QPSK		
16QAM		
64QAM		

8.6 OUT OF BAND EMISSIONS AT ANTENNA TERMINALS

8.6.1 Conformance Limit

LTE BAND2	FCC Part 24.238
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.	
LTE BAND4(66)	FCC Part 27.53(h)
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.	
LTE BAND5(26)	FCC Part 22.917
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.	
LTE BAND7 (41)	FCC Part 27.53(m)
For mobile digital stations, the attenuation factor shall be not less than 40 + 10 log (P) dB on all frequencies between the channel edge and 5 megahertz from the channel edge, 43 + 10 log (P) dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that 43 + 10 log (P) dB on all frequencies between 2490.5 MHz and 2496 MHz and 55 + 10 log (P) dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees	
LTE BAND12	FCC Part 27.53(g)
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.	
LTE BAND13	FCC Part 27.53(c)
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.	

The specification that emissions shall be attenuated below the transmitter power (P) by at least 43 + 10 log (P) dB, translates in the relevant power range (1 to 0.001 W) to -13 dBm. At 1 W the specified minimum attenuation becomes 43 dB and relative to a 30 dBm (1 W) carrier becomes a limit of -13 dBm. At 0.001 W (0 dBm) the minimum attenuation is 13 dB, which again yields a limit of -13 dBm. In this way a translation of the specification from relative to absolute terms is carried out.

8.6.2 Test Configuration

Test according to clause 7.1 radio frequency test setup 1

8.6.3 Test Procedure

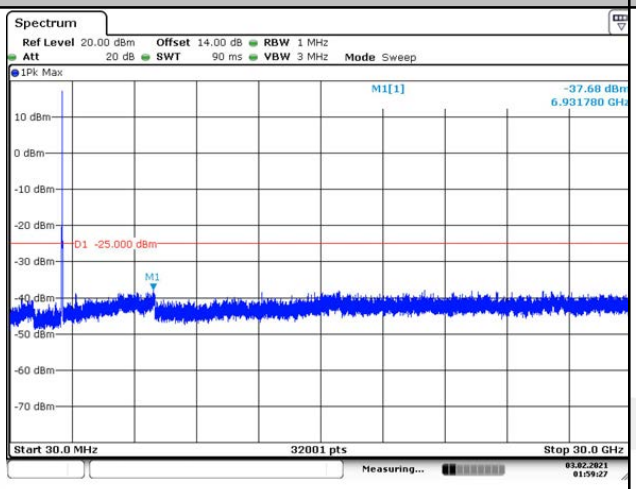
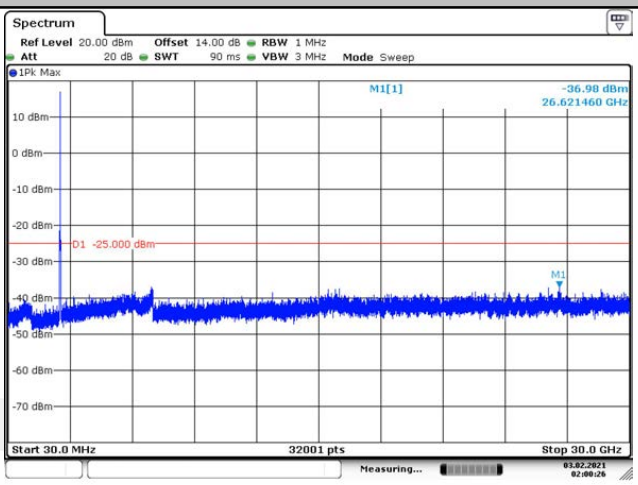
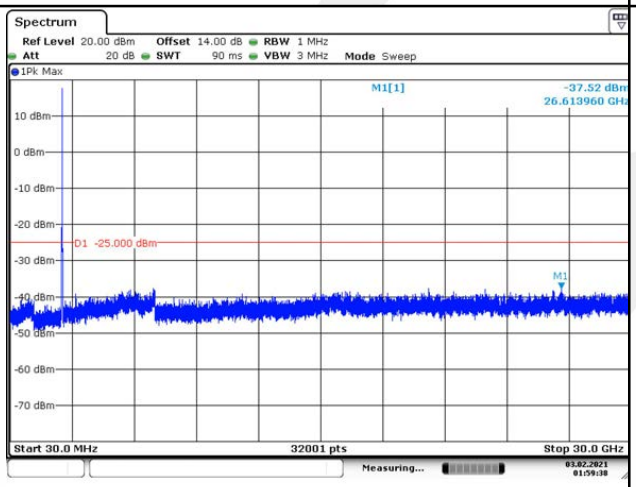
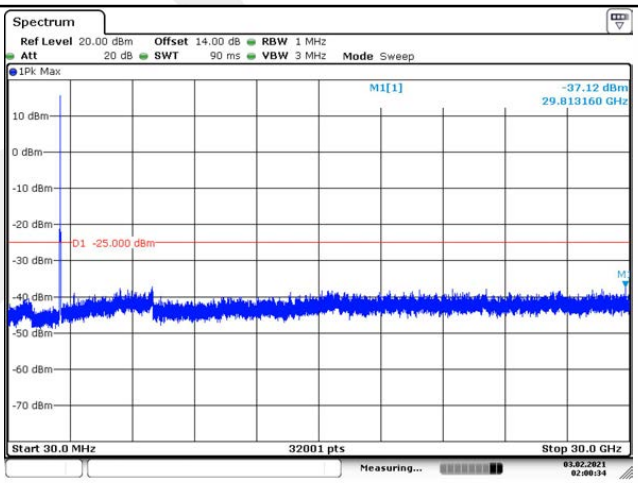
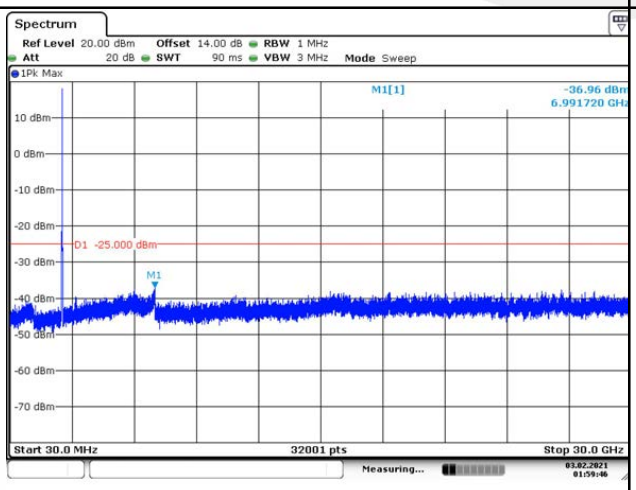
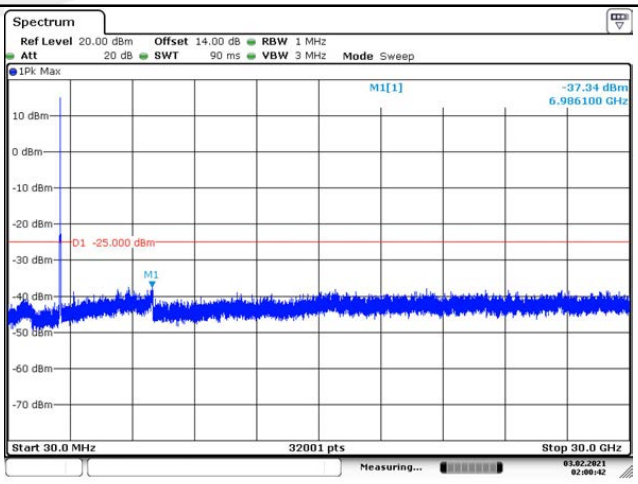
The transmitter output (antenna port) was connected to the spectrum analyzer
Connect the EUT to Universal Radio Communication Tester CMU200 or CMU500 via the antenna connector. A call is set up by the SS according to the generic call set up procedure on a channel with ARFCN in the Mid ARFCN range, power control level set to Max power. MS TXPWR_MAX_CCH is set to the maximum value supported by the Power Class of the Mobile under test,

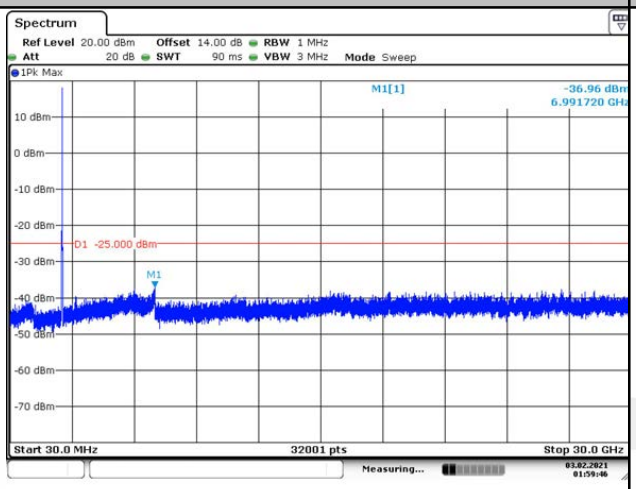
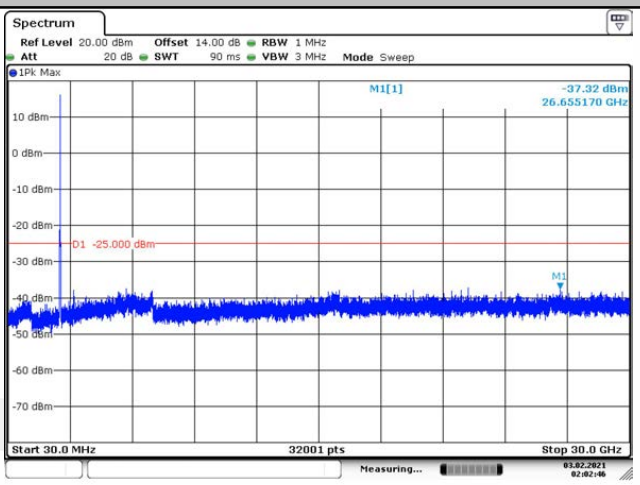
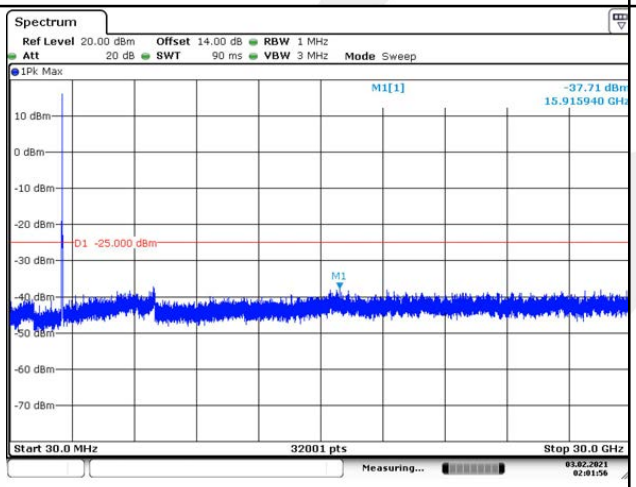
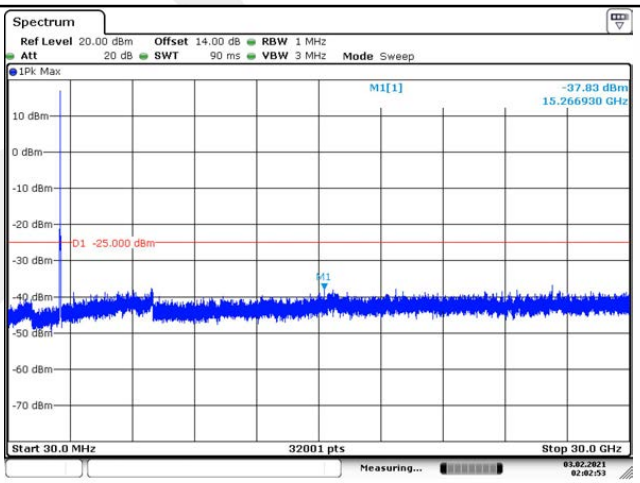
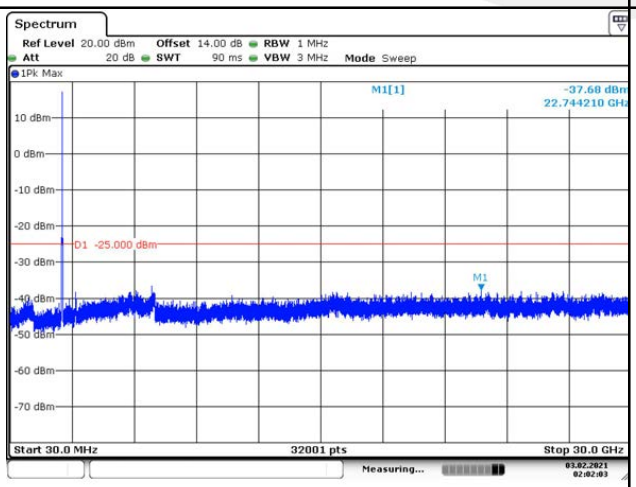
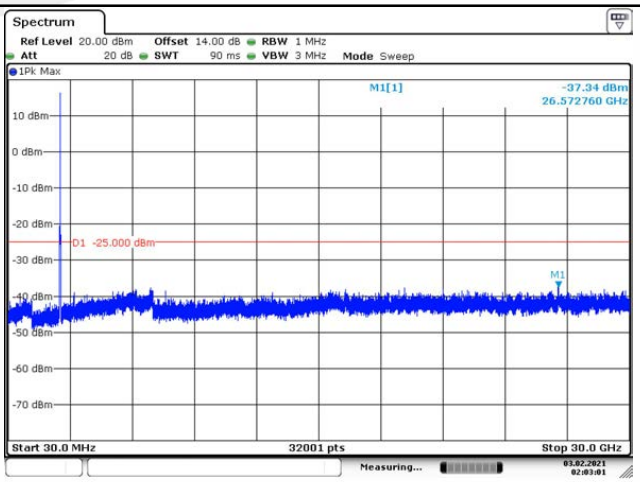
Spectrum Analyzer is set as below:
9kHz~150kHz, RBW = 1KHz, VBW ≥ 3×RBW,
150kHz~30MHz, RBW = 10KHz, VBW ≥ 3×RBW,
30MHz~1GHz, RBW = 100 kHz, VBW = 300 kHz. Above 1GHz, RBW = 1 MHz, VBW = 3 MHz.
Detector: Peak
Trace mode= max hold.

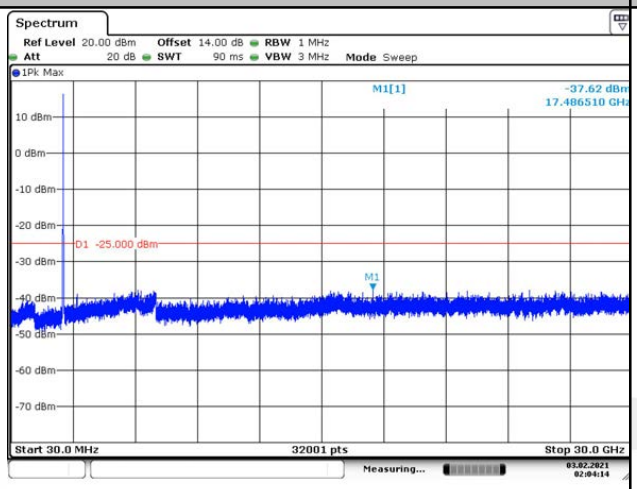
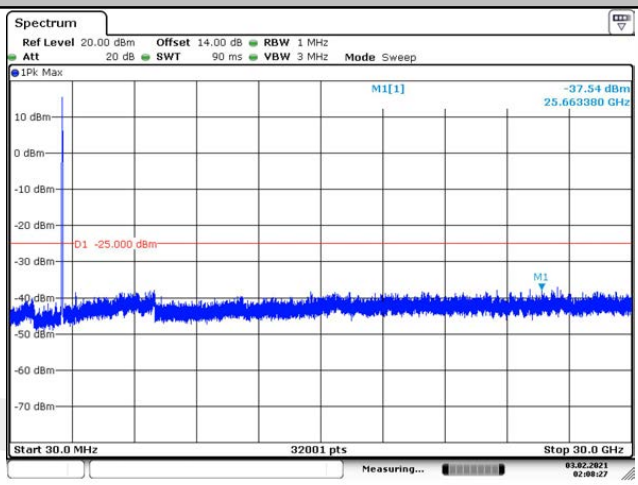
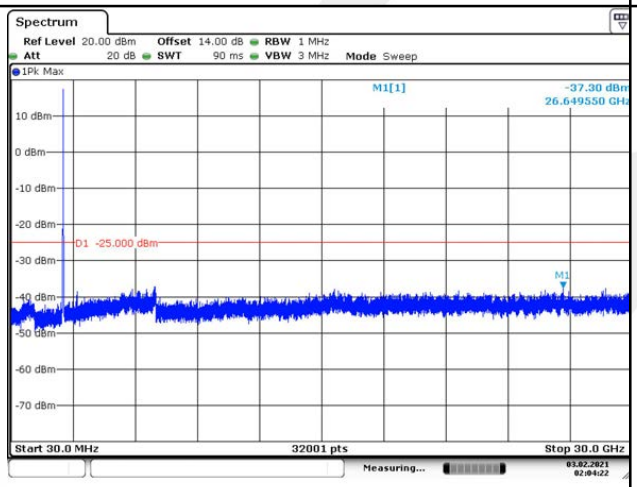
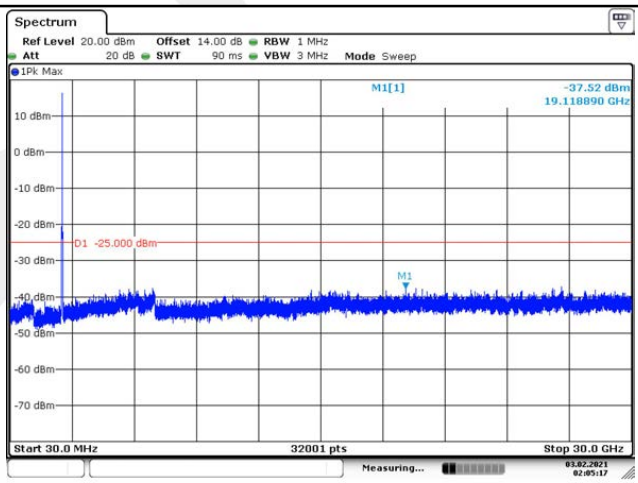
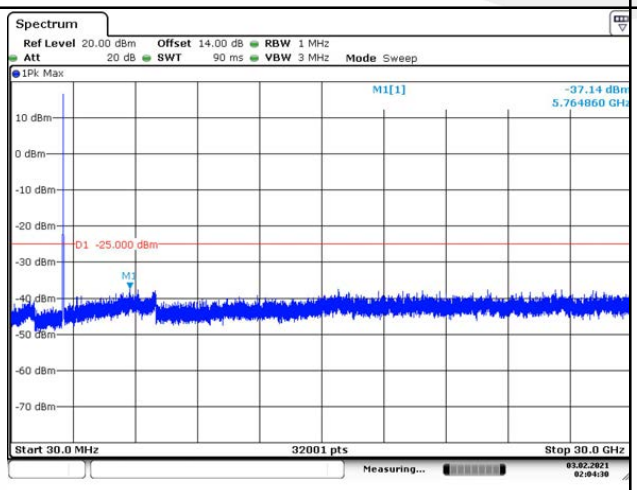
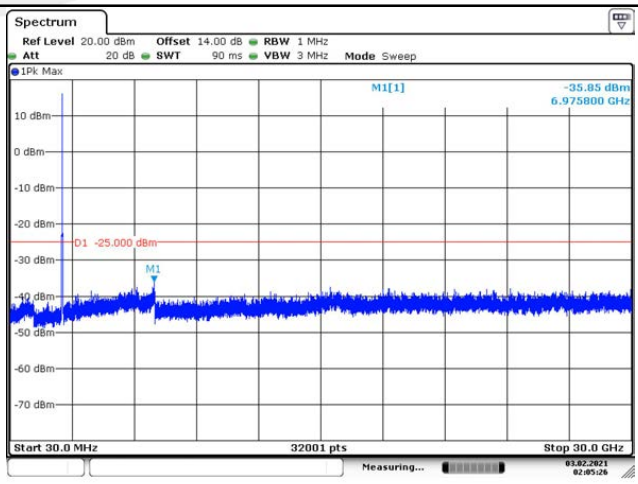
8.6.4 Test Results

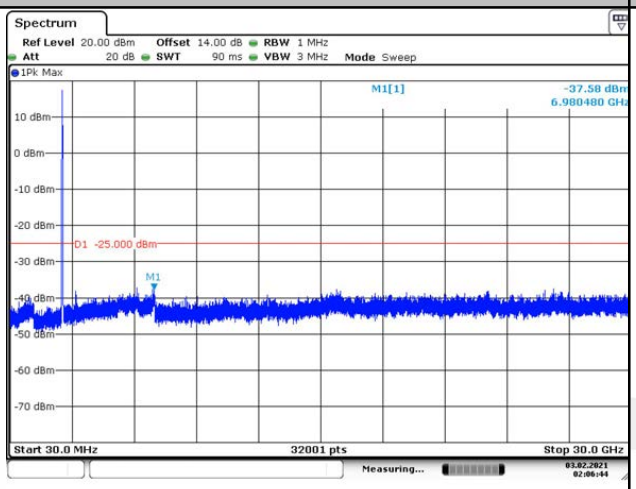
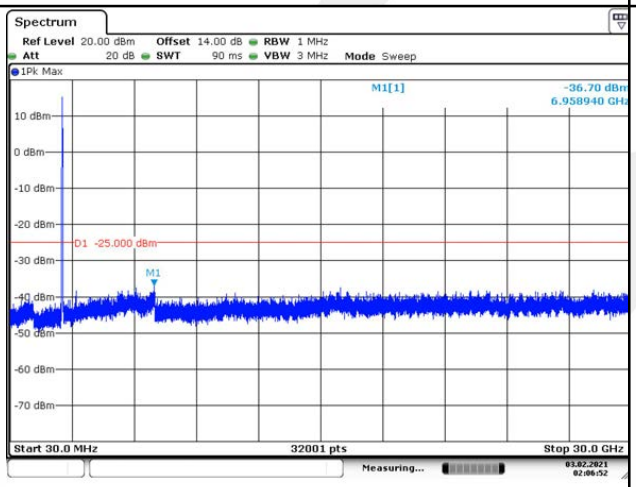
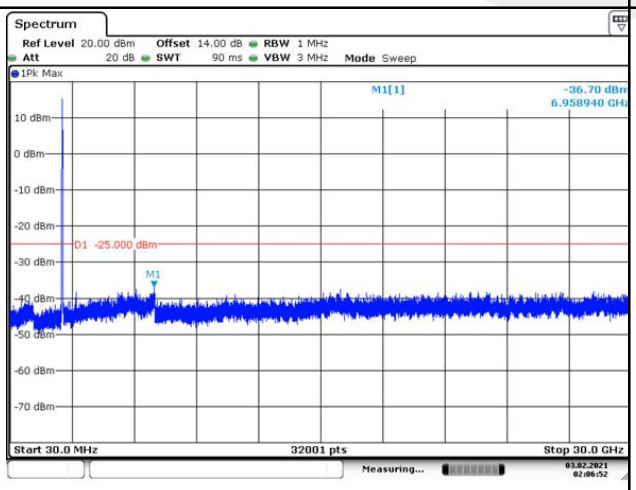
Pass

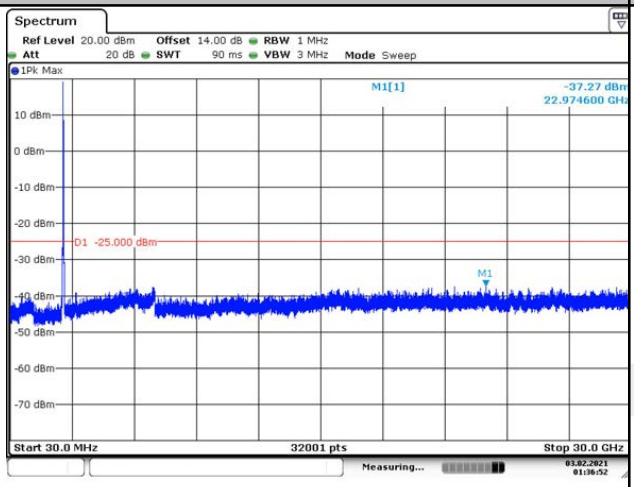
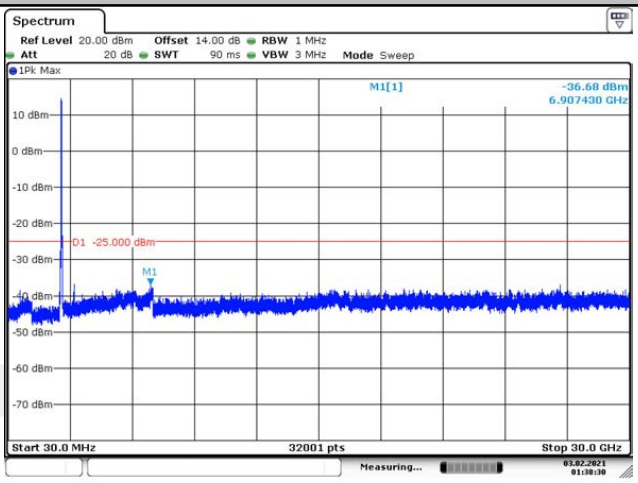
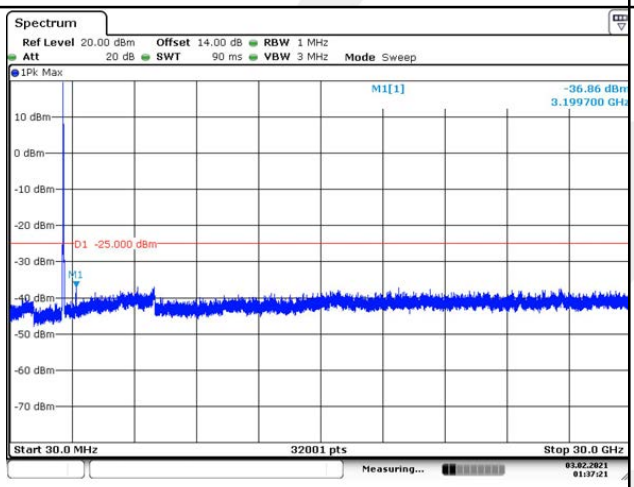
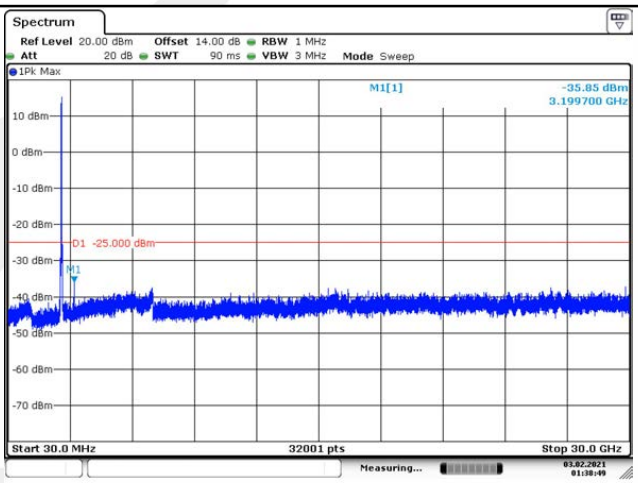
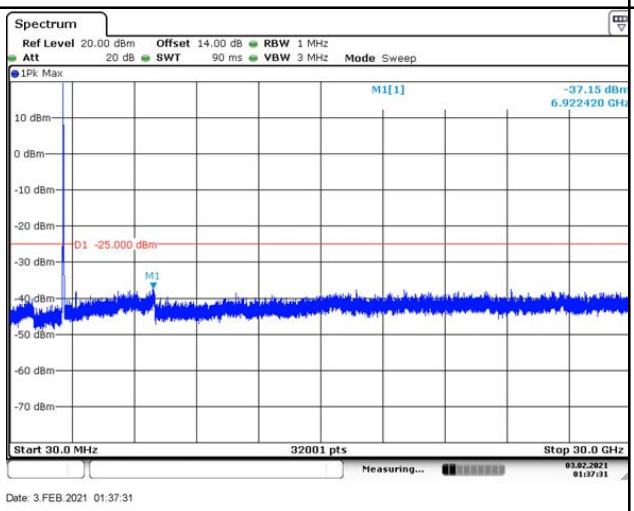
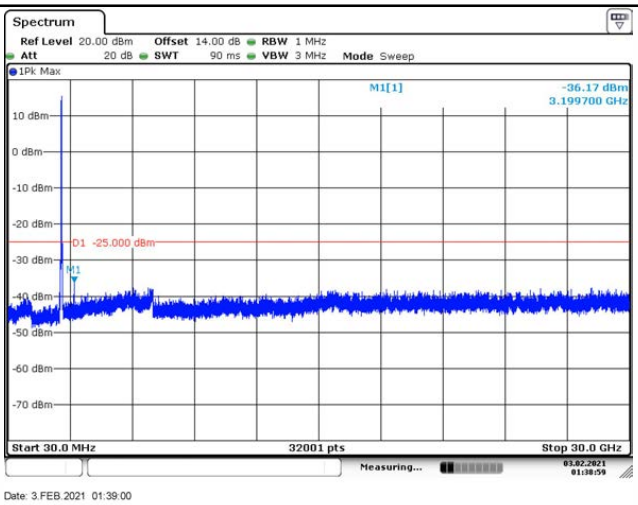
Note:
The data of LTE Band 7_CA and LTE Band 41_CA are recorded as below. And the other data please see Appendix 4G BAND2, BAND4, BAND5, BAND7, BAND12, BAND13, BAND26, BAND66, BAND41.

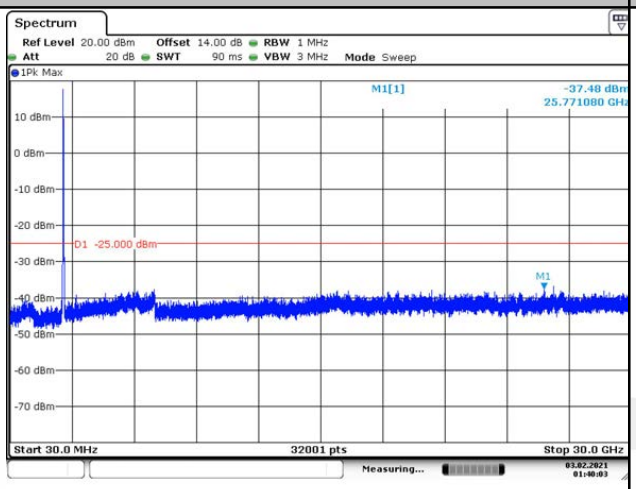
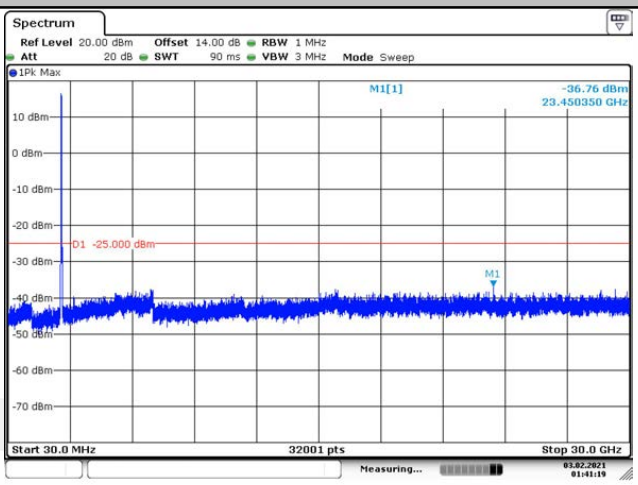
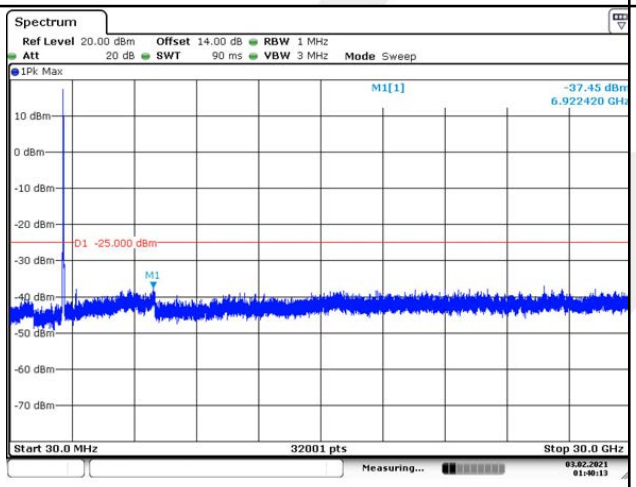
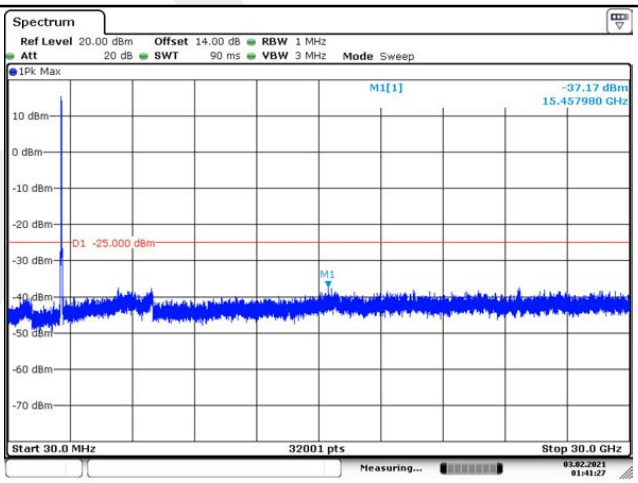
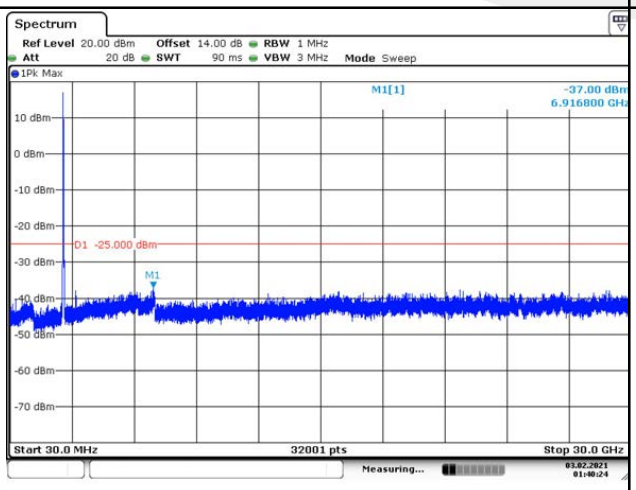
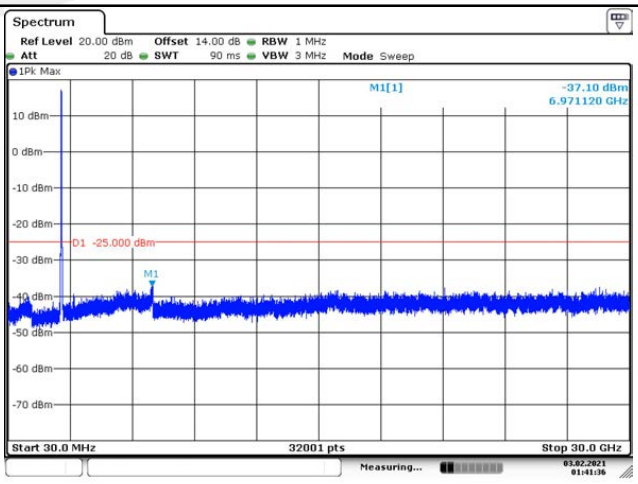
LTE Band 7_CA: OUT OF BAND EMISSIONS AT ANTENNA TERMINALS - Middle Channel		
	10+20MHz – Middle Channel - RB1#0 & RB1#99	20+10MHz – Middle Channel - RB1#0 & RB1#49
QPSK		
16QAM		
64QAM		

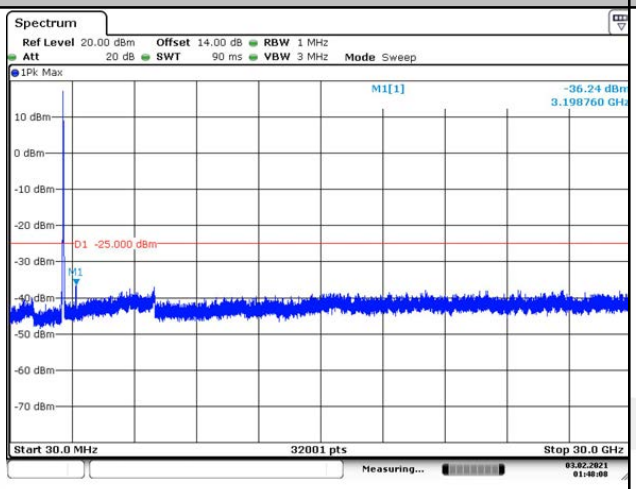
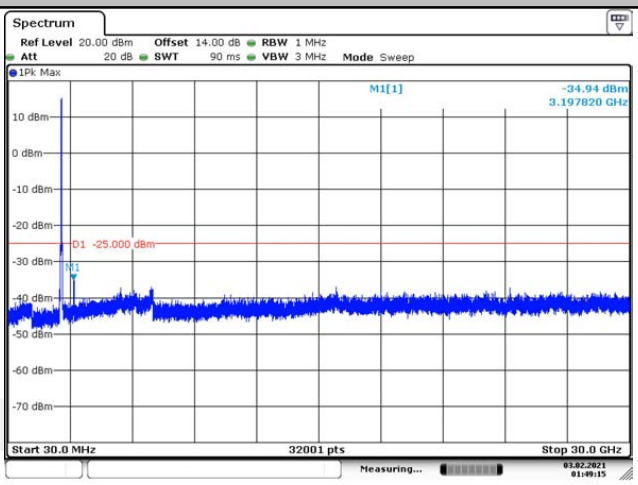
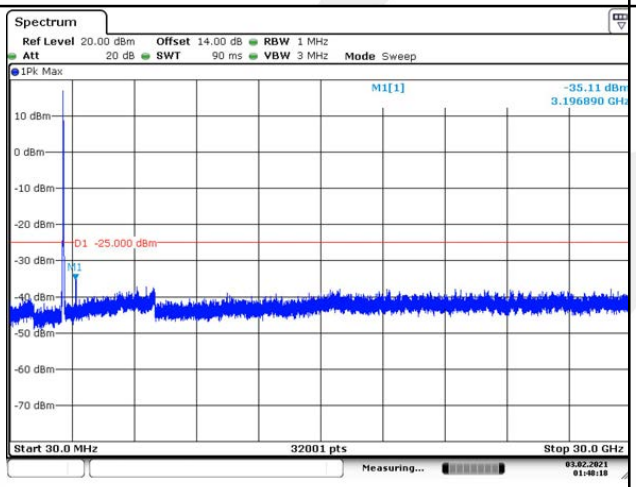
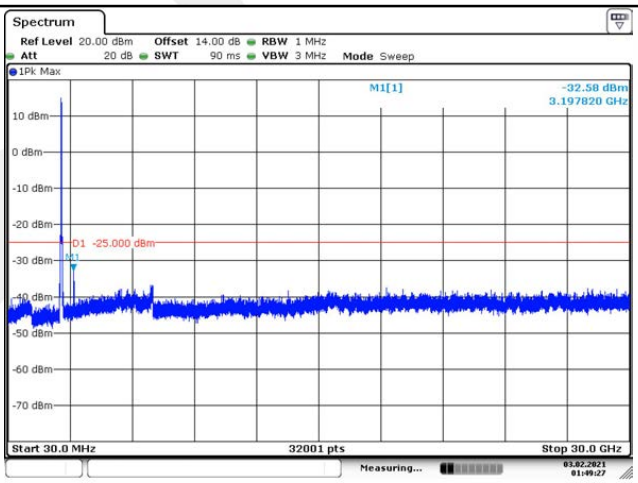
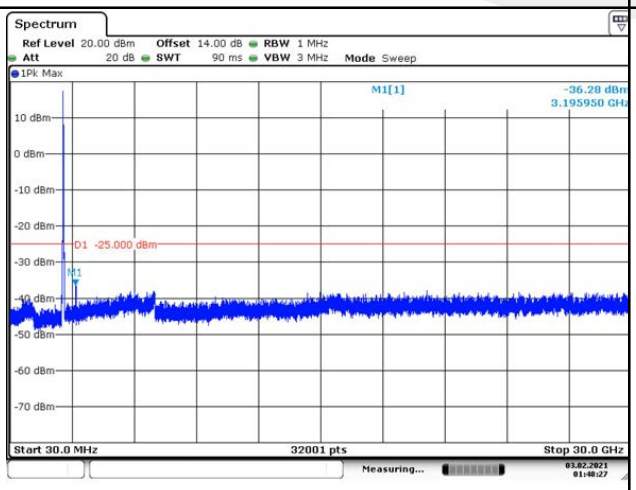
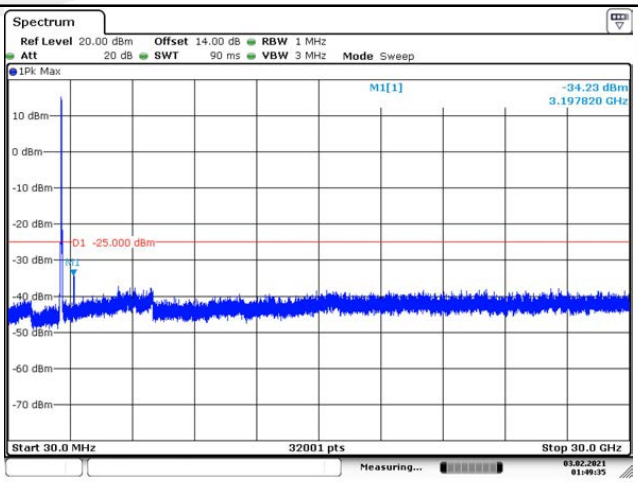
LTE Band 7_CA: OUT OF BAND EMISSIONS AT ANTENNA TERMINALS - Middle Channel		
	15+10MHz – Middle Channel - RB1#0 & RB1#49	15+15MHz – Middle Channel - RB1#0 & RB1#74
QPSK		
16QAM		
64QAM		

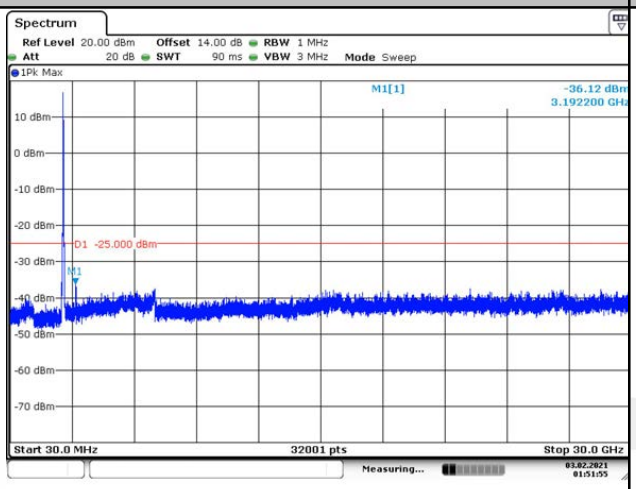
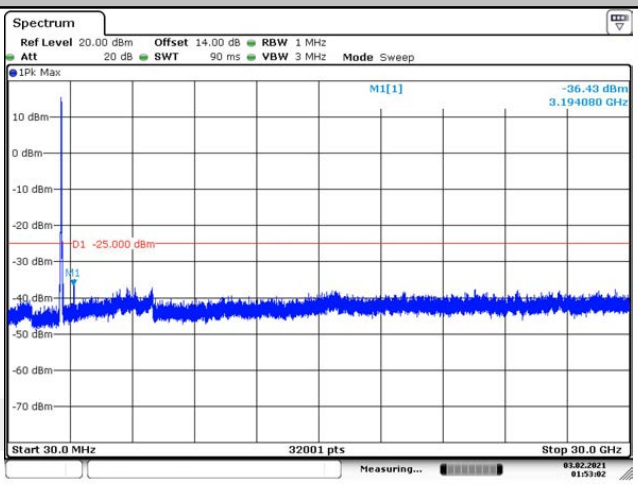
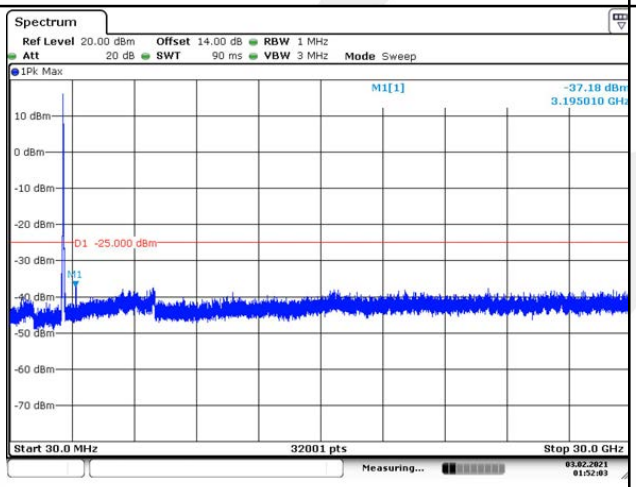
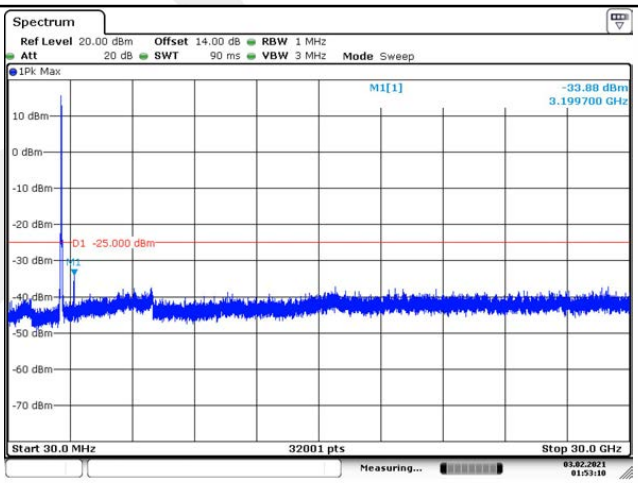
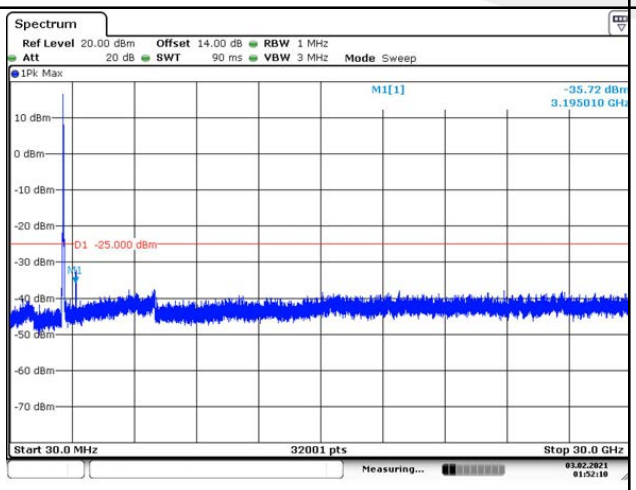
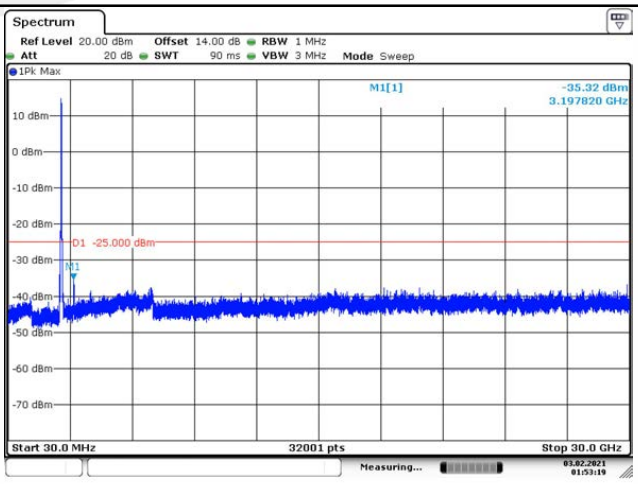
LTE Band 7_CA: OUT OF BAND EMISSIONS AT ANTENNA TERMINALS - Middle Channel		
	15+20MHz – Middle Channel - RB1#0 & RB1#99	20+15MHz – Middle Channel - RB1#0 & RB1#74
QPSK		
16QAM		
64QAM		

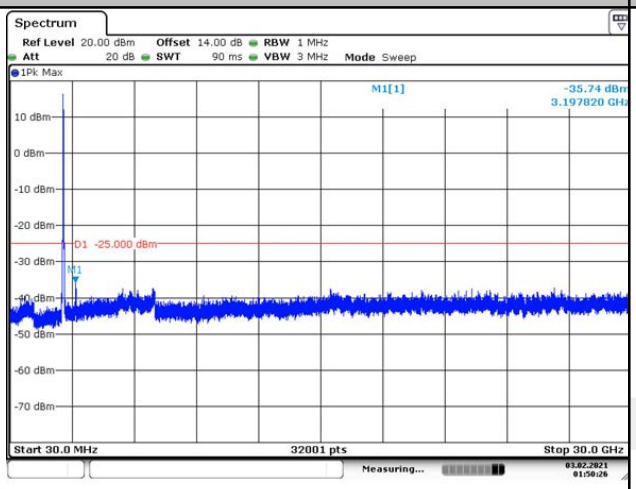
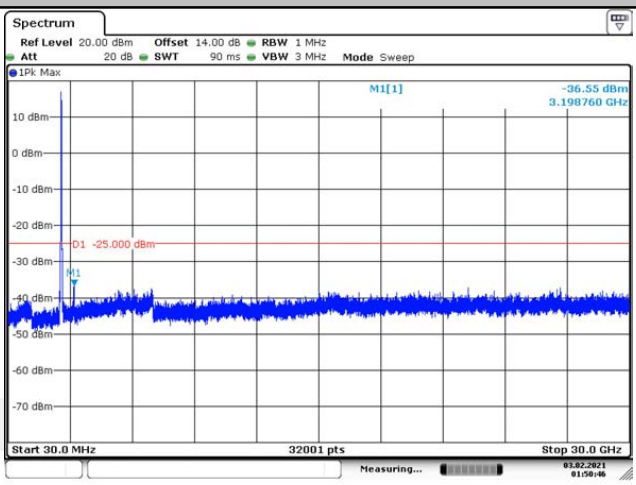
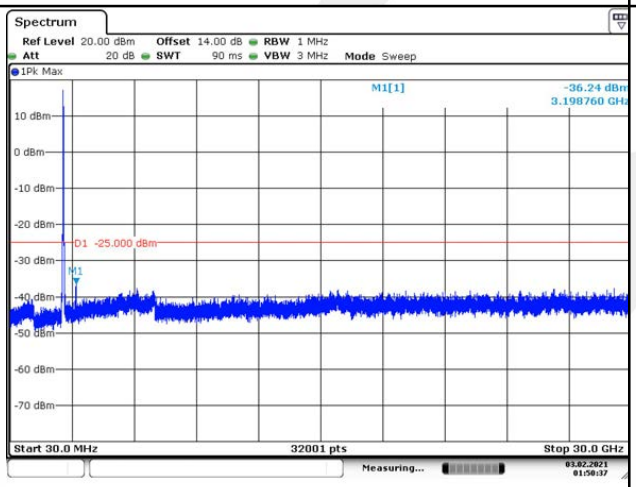
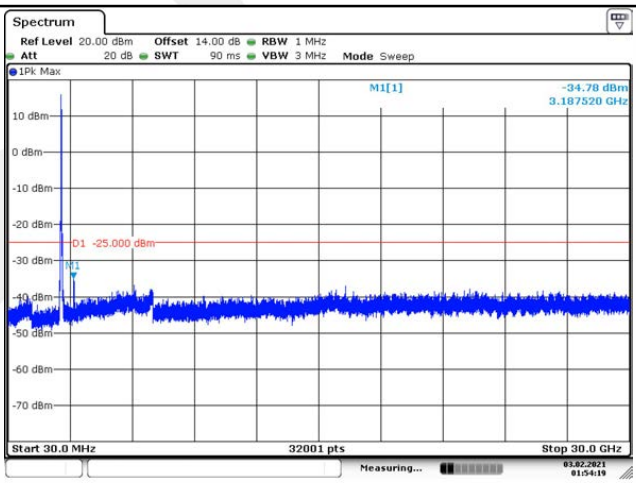
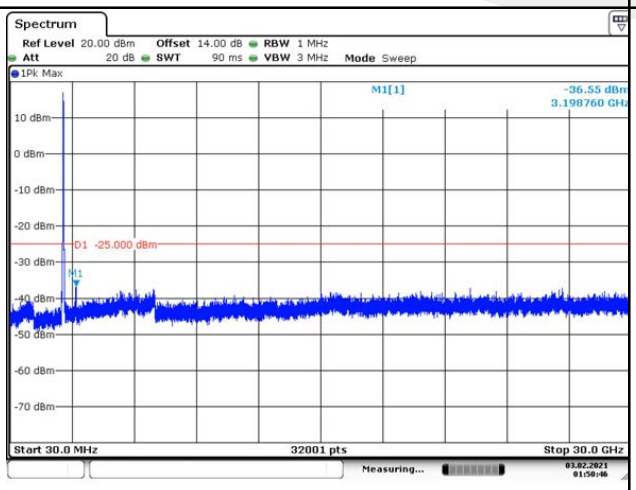
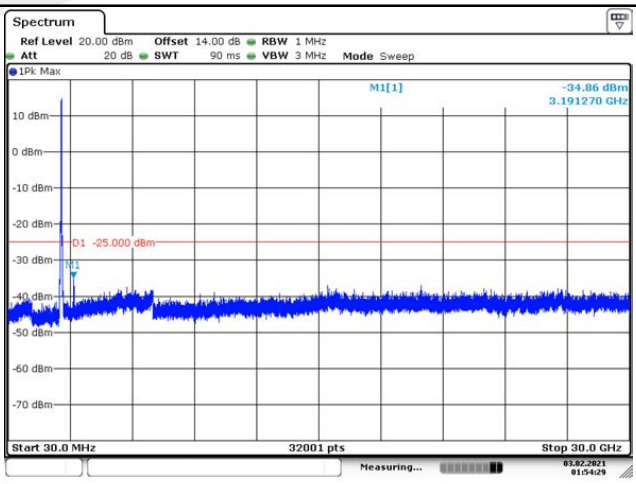
LTE Band 7_CA: OUT OF BAND EMISSIONS AT ANTENNA TERMINALS - Middle Channel		
	20+20MHz – Middle Channel - RB1#0 & RB1#99	N/A
QPSK		
16QAM		
64QAM		

LTE Band 41_CA: OUT OF BAND EMISSIONS AT ANTENNA TERMINALS - Middle Channel		
	5+20MHz – Middle Channel - RB1#0 & RB1#99	20+5MHz – Middle Channel - RB1#0 & RB1#24
QPSK		
16QAM		
64QAM		

LTE Band 41_CA: OUT OF BAND EMISSIONS AT ANTENNA TERMINALS - Middle Channel		
	10+15MHz – Middle Channel - RB1#0 & RB1#74	15+10MHz – Middle Channel - RB1#0 & RB1#49
QPSK		
16QAM		
64QAM		

LTE Band 41_CA: OUT OF BAND EMISSIONS AT ANTENNA TERMINALS - Middle Channel		
	10+20MHz – Middle Channel - RB1#0 & RB1#99	20+10MHz – Middle Channel - RB1#0 & RB1#49
QPSK		
16QAM		
64QAM		

LTE Band 41_CA: OUT OF BAND EMISSIONS AT ANTENNA TERMINALS - Middle Channel		
	15+20MHz – Middle Channel - RB1#0 & RB1#99	20+15MHz – Middle Channel - RB1#0 & RB1#74
QPSK		
16QAM		
64QAM		

LTE Band 41_CA: OUT OF BAND EMISSIONS AT ANTENNA TERMINALS - Middle Channel		
	15+15MHz – Middle Channel - RB1#0 & RB1#74	20+20MHz – Middle Channel - RB1#0 & RB1#99
QPSK		
16QAM		
64QAM		

8.7 FIELD STRENGTH OF SPURIOUS RADIATION

8.7.1 Conformance Limit

LTE BAND2	FCC Part 24.238
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.	
LTE BAND4(66)	FCC Part 27.53(h)
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.	
LTE BAND5(26)	FCC Part 22.917
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.	
LTE BAND7 (41)	FCC Part 27.53(m)
For mobile digital stations, the attenuation factor shall be not less than 40 + 10 log (P) dB on all frequencies between the channel edge and 5 megahertz from the channel edge, 43 + 10 log (P) dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that 43 + 10 log (P) dB on all frequencies between 2490.5 MHz and 2496 MHz and 55 + 10 log (P) dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees	
LTE BAND12	FCC Part 27.53(g)
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.	
LTE BAND13	FCC Part 27.53(c)
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.	

The specification that emissions shall be attenuated below the transmitter power (P) by at least 43 + 10 log (P) dB, translates in the relevant power range (1 to 0.001 W) to -13 dBm. At 1 W the specified minimum attenuation becomes 43 dB and relative to a 30 dBm (1 W) carrier becomes a limit of -13 dBm. At 0.001 W (0 dBm) the minimum attenuation is 13 dB, which again yields a limit of -13 dBm. In this way a translation of the specification from relative to absolute terms is carried out.

8.7.2 Test Configuration

Test according to clause 7.3 radio frequency test setup 3

8.7.3 Test Procedure

Connect the EUT to Universal Radio Communication Tester CMU200 or CMU500 via the antenna connector. A call is set up by the SS according to the generic call set up procedure on a channel with ARFCN in the Mid ARFCN range, power control level set to Max power. MS TXPWR_MAX_CCH is set to the maximum value supported by the Power Class of the Mobile under test.
Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 100 kHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.
then the following procedure can be used to determine spurious emission

a) RBW = 1 MHz for f ≥ 1 GHz(1GHz to 25GHz), 100 kHz for f < 1 GHz(30MHz to 1GHz), 200Hz for f<150KHz(9KHz to 150KHz), 9KHz for f<30MHz(150KHz to 30KHz)
b) Set VBW ≥ 3 × RBW.
c) Set span wide enough to fully capture the emission being measured
d) Sweep time = auto couple.
e) Detector = peak.
f) Ensure that the number of measurement points ≥ span/RBW.
g) Trace mode = max hold.
h) Allow trace to fully stabilize.
i) Use the peak marker function to determine the peak amplitude level.

Step1. The EUT was placed on a rotatable wooden table with 0.8 meter above ground.
Step2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
Step3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
Step4. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations.
Step5. Make the measurement with the spectrum analyzer's RBW , VBW , taking the record of maximum spurious emission.
Step6. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
Step7. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
Step8. Taking the record of output power at antenna port.
Step9. Repeat step 7 to step 8 for another polarization.
Step10. Emission level (dBm) = output power + substitution Gain.Test Results

8.7.4 Test Results

Pass

All modes have been tested, and the worst result recorded was report as below:

For LTE BAND2 link

■ Spurious Emission below 30MHz (9KHz to 30MHz)

Temperature:	24℃	Test By:	XW
Humidity:	54 %	Test Mode:	QPSK/ Middle Channel
Test Band:	LTE BAND2		

Freq. (MHz)	H/V	Bandwidth (MHz)	Test RB	Emission Level(dBm)	Limit (dBm)	Margin (dBm)	Verdict
--	--	--	--	--	--	--	--

Note: the amplitude of spurious emission that is attenuated by more than 20dB below the permissible limit has no need to be reported.

■ Spurious Emission Above 30MHz (30MHz to 10th harmonics)

Temperature:	24℃	Test By:	XW
Humidity:	54 %	Test Mode:	QPSK/ Middle Channel
Test Band:	LTE BAND2		

Freq. (MHz)	H/V	Bandwidth (MHz)	Test RB	Emission Level(dBm)	Limit (dBm)	Margin (dBm)	Verdict
3760.00	H	1.4 MHz	RB1#0	-42.00	-13	-29.00	Pass
14737.93	H	1.4 MHz	RB1#0	-37.71	-13	-24.71	Pass
--	--	--	--	--	--	--	--
3760.00	V	1.4 MHz	RB1#0	-40.73	-13	-27.73	Pass
15561.18	V	1.4 MHz	RB1#0	-38.28	-13	-25.28	Pass
--	--	--	--	--	--	--	--

Temperature:	24℃	Test By:	XW
Humidity:	54 %	Test Mode:	QPSK/ Middle Channel
Test Band:	LTE BAND2		

Freq. (MHz)	H/V	Bandwidth (MHz)	Test RB	Emission Level(dBm)	Limit (dBm)	Margin (dBm)	Verdict
3760.00	H	3 MHz	RB1#0	-40.61	-13	-27.61	Pass
15237.07	H	3 MHz	RB1#0	-38.62	-13	-25.62	Pass
--	--	--	--	--	--	--	--
3760.00	V	3 MHz	RB1#0	-42.00	-13	-29.00	Pass
14720.33	V	3 MHz	RB1#0	-38.67	-13	-25.67	Pass
--	--	--	--	--	--	--	--

Temperature:	24℃	Test By:	XW
Humidity:	54 %	Test Mode:	QPSK/ Middle Channel
Test Band:	LTE BAND2		

Freq. (MHz)	H/V	Bandwidth (MHz)	Test RB	Emission Level(dBm)	Limit (dBm)	Margin (dBm)	Verdict
3760.00	H	5 MHz	RB1#0	-40.59	-13	-27.59	Pass
15387.15	H	5 MHz	RB1#0	-39.41	-13	-26.41	Pass
--	--	--	--	--	--	--	--
3760.00	V	5 MHz	RB1#0	-40.95	-13	-27.95	Pass
15388.04	V	5 MHz	RB1#0	-38.48	-13	-25.48	Pass
--	--	--	--	--	--	--	--

Temperature:	24℃	Test By:	XW
Humidity:	54 %	Test Mode:	QPSK/ Middle Channel
Test Band:	LTE BAND2		

Freq. (MHz)	H/V	Bandwidth (MHz)	Test RB	Emission Level(dBm)	Limit (dBm)	Margin (dBm)	Verdict
3760.00	H	10 MHz	RB1#0	-42.37	-13	-29.37	Pass
14777.57	H	10 MHz	RB1#0	-39.43	-13	-26.43	Pass
--	--	--	--	--	--	--	--
3760.00	V	10 MHz	RB1#0	-41.95	-13	-28.95	Pass
15505.02	V	10 MHz	RB1#0	-39.51	-13	-26.51	Pass
--	--	--	--	--	--	--	--

Temperature:	24℃	Test By:	XW
Humidity:	54 %	Test Mode:	QPSK/ Middle Channel
Test Band:	LTE BAND2		

Freq. (MHz)	H/V	Bandwidth (MHz)	Test RB	Emission Level(dBm)	Limit (dBm)	Margin (dBm)	Verdict
3760.00	H	15 MHz	RB1#0	-40.33	-13	-27.33	Pass
15539.18	H	15 MHz	RB1#0	-37.84	-13	-24.84	Pass
--	--	--	--	--	--	--	--
3760.00	V	15 MHz	RB1#0	-41.48	-13	-28.48	Pass
14605.17	V	15 MHz	RB1#0	-38.89	-13	-25.89	Pass
--	--	--	--	--	--	--	--

Temperature:	24℃	Test By:	XW
Humidity:	54 %	Test Mode:	QPSK/ Middle Channel
Test Band:	LTE BAND2		

Freq. (MHz)	H/V	Bandwidth (MHz)	Test RB	Emission Level(dBm)	Limit (dBm)	Margin (dBm)	Verdict
3760.00	H	20 MHz	RB1#0	-41.11	-13	-28.11	Pass
15543.19	H	20 MHz	RB1#0	-39.27	-13	-26.27	Pass
--	--	--	--	--	--	--	--
3760.00	V	20 MHz	RB1#0	-40.57	-13	-27.57	Pass
14618.07	V	20 MHz	RB1#0	-37.93	-13	-24.93	Pass
--	--	--	--	--	--	--	--

Note: (1) Emission Level= Reading Level+ Correct Factor +Cable Loss.
(2) Correct Factor= Ant_F + Cab_L - Preamp
(3) Data of measurement within this frequency range shown " -- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

For LTE BAND4 link

■ Spurious Emission below 30MHz (9KHz to 30MHz)

Temperature:	24℃	Test By:	XW
Humidity:	53 %	Test Mode:	QPSK/ Middle Channel
Test Band:	LTE BAND4		

Freq. (MHz)	H/V	Bandwidth (MHz)	Test RB	Emission Level(dBm)	Limit (dBm)	Margin (dBm)	Verdict
--	--	--	--	--	--	--	--

Note: the amplitude of spurious emission that is attenuated by more than 20dB below the permissible limit has no need to be reported.

■ Spurious Emission Above 30MHz (30MHz to 10th harmonics)

Temperature:	24℃	Test By:	XW
Humidity:	53 %	Test Mode:	QPSK/ Middle Channel
Test Band:	LTE BAND4		

Freq. (MHz)	H/V	Bandwidth (MHz)	Test RB	Emission Level(dBm)	Limit (dBm)	Margin (dBm)	Verdict
5197.5	H	1.4 MHz	RB1#0	-36.98	-13	-23.98	Pass
15860.84	H	1.4 MHz	RB1#0	-36.52	-13	-23.52	Pass
--	--	--	--	--	--	--	--
5197.5	V	1.4 MHz	RB1#0	-38.12	-13	-25.12	Pass
15019.78	V	1.4 MHz	RB1#0	-35.86	-13	-22.86	Pass
--	--	--	--	--	--	--	--

Temperature:	24℃	Test By:	XW
Humidity:	53 %	Test Mode:	QPSK/ Middle Channel
Test Band:	LTE BAND4		

Freq. (MHz)	H/V	Bandwidth (MHz)	Test RB	Emission Level(dBm)	Limit (dBm)	Margin (dBm)	Verdict
5197.5	H	3 MHz	RB1#0	-37.53	-13	-24.53	Pass
15745.77	H	3 MHz	RB1#0	-37.93	-13	-24.93	Pass
--	--	--	--	--	--	--	--
5197.5	V	3 MHz	RB1#0	-38.44	-13	-25.44	Pass
14673.09	V	3 MHz	RB1#0	-34.34	-13	-21.34	Pass
--	--	--	--	--	--	--	--

Temperature:	24℃	Test By:	XW
Humidity:	53 %	Test Mode:	QPSK/ Middle Channel
Test Band:	LTE BAND4		

Freq. (MHz)	H/V	Bandwidth (MHz)	Test RB	Emission Level(dBm)	Limit (dBm)	Margin (dBm)	Verdict
5197.5	H	5 MHz	RB1#0	-36.18	-13	-23.18	Pass
15883.35	H	5 MHz	RB1#0	-36.23	-13	-23.23	Pass
--	--	--	--	--	--	--	--
5197.5	V	5 MHz	RB1#0	-37.67	-13	-24.67	Pass
15904.16	V	5 MHz	RB1#0	-34.74	-13	-21.74	Pass
--	--	--	--	--	--	--	--

Temperature:	24℃	Test By:	XW
Humidity:	53 %	Test Mode:	QPSK/ Middle Channel
Test Band:	LTE BAND4		

Freq. (MHz)	H/V	Bandwidth (MHz)	Test RB	Emission Level(dBm)	Limit (dBm)	Margin (dBm)	Verdict
5197.5	H	10 MHz	RB1#0	-36.77	-13	-23.77	Pass
14562.47	H	10 MHz	RB1#0	-35.59	-13	-22.59	Pass
--	--	--	--	--	--	--	--
5197.5	V	10 MHz	RB1#0	-38.11	-13	-25.11	Pass
15685.17	V	10 MHz	RB1#0	-35.38	-13	-22.38	Pass
--	--	--	--	--	--	--	--

Temperature:	24℃	Test By:	XW
Humidity:	53 %	Test Mode:	QPSK/ Middle Channel
Test Band:	LTE BAND4		

Freq. (MHz)	H/V	Bandwidth (MHz)	Test RB	Emission Level(dBm)	Limit (dBm)	Margin (dBm)	Verdict
5197.5	H	15 MHz	RB1#0	-37.17	-13	-24.17	Pass
15331.46	H	15 MHz	RB1#0	-35.53	-13	-22.53	Pass
--	--	--	--	--	--	--	--
5197.5	V	15 MHz	RB1#0	-38.88	-13	-25.88	Pass
15680.79	V	15 MHz	RB1#0	-36.17	-13	-23.17	Pass
--	--	--	--	--	--	--	--

Temperature:	24℃	Test By:	XW
Humidity:	53 %	Test Mode:	QPSK/ Middle Channel
Test Band:	LTE BAND4		

Freq. (MHz)	H/V	Bandwidth (MHz)	Test RB	Emission Level(dBm)	Limit (dBm)	Margin (dBm)	Verdict
5197.5	H	20 MHz	RB1#0	-37.63	-13	-24.63	Pass
14053.27	H	20 MHz	RB1#0	-35.16	-13	-22.16	Pass
--	--	--	--	--	--	--	--
5197.5	V	20 MHz	RB1#0	-38.61	-13	-25.61	Pass
15938.16	V	20 MHz	RB1#0	-35.48	-13	-22.48	Pass
--	--	--	--	--	--	--	--

Note: (1) Emission Level= Reading Level+ Correct Factor +Cable Loss.
(2) Correct Factor= Ant_F + Cab_L - Preamp
(3) Data of measurement within this frequency range shown " -- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

For LTE BAND5 link

■ Spurious Emission below 30MHz (9KHz to 30MHz)

Temperature:	24℃	Test By:	XW
Humidity:	54 %	Test Mode:	QPSK/ Middle Channel
Test Band:	LTE BAND5		

Freq. (MHz)	H/V	Bandwidth (MHz)	Test RB	Emission Level(dBm)	Limit (dBm)	Margin (dBm)	Verdict
--	--	--	--	--	--	--	--

Note: the amplitude of spurious emission that is attenuated by more than 20dB below the permissible limit has no need to be reported.

■ Spurious Emission Above 30MHz (30MHz to 10th harmonics)

Temperature:	24℃	Test By:	XW
Humidity:	54 %	Test Mode:	QPSK/ Middle Channel
Test Band:	LTE BAND5		

Freq. (MHz)	H/V	Bandwidth (MHz)	Test RB	Emission Level(dBm)	Limit (dBm)	Margin (dBm)	Verdict
2509.5	H	5 MHz	RB1#0	-40.33	-13	-27.33	Pass
14843.92	H	5 MHz	RB1#0	-39.89	-13	-26.89	Pass
--	--	--	--	--	--	--	--
2509.5	V	5 MHz	RB1#0	-41.61	-13	-28.61	Pass
14667.66	V	5 MHz	RB1#0	-37.89	-13	-24.89	Pass
--	--	--	--	--	--	--	--

Temperature:	24℃	Test By:	XW
Humidity:	54 %	Test Mode:	QPSK/ Middle Channel
Test Band:	LTE BAND5		

Freq. (MHz)	H/V	Bandwidth (MHz)	Test RB	Emission Level(dBm)	Limit (dBm)	Margin (dBm)	Verdict
2509.5	H	10 MHz	RB1#0	-41.71	-13	-28.71	Pass
15021.60	H	10 MHz	RB1#0	-38.13	-13	-25.13	Pass
--	--	--	--	--	--	--	--
2509.5	V	10 MHz	RB1#0	-40.11	-13	-27.11	Pass
14703.48	V	10 MHz	RB1#0	-37.77	-13	-24.77	Pass
--	--	--	--	--	--	--	--

Note: (1) Emission Level= Reading Level+ Correct Factor +Cable Loss.
(2) Correct Factor= Ant_F + Cab_L - Preamp
(3) Data of measurement within this frequency range shown " -- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

Temperature:	24℃	Test By:	XW
Humidity:	54 %	Test Mode:	QPSK/ Middle Channel
Test Band:	LTE BAND5		

Freq. (MHz)	H/V	Bandwidth (MHz)	Test RB	Emission Level(dBm)	Limit (dBm)	Margin (dBm)	Verdict
2509.5	H	15 MHz	RB1#0	-41.70	-13	-28.70	Pass
14784.75	H	15 MHz	RB1#0	-38.20	-13	-25.20	Pass
--	--	--	--	--	--	--	--
2509.5	V	15 MHz	RB1#0	-40.51	-13	-27.51	Pass
14958.04	V	15 MHz	RB1#0	-40.26	-13	-27.26	Pass
--	--	--	--	--	--	--	--

Temperature:	24℃	Test By:	XW
Humidity:	54 %	Test Mode:	QPSK/ Middle Channel
Test Band:	LTE BAND5		

Freq. (MHz)	H/V	Bandwidth (MHz)	Test RB	Emission Level(dBm)	Limit (dBm)	Margin (dBm)	Verdict
2509.5	H	20 MHz	RB1#0	-40.26	-13	-27.26	Pass
15520.37	H	20 MHz	RB1#0	-38.81	-13	-25.81	Pass
--	--	--	--	--	--	--	--
2509.5	V	20 MHz	RB1#0	-40.56	-13	-27.56	Pass
14616.70	V	20 MHz	RB1#0	-37.89	-13	-24.89	Pass
--	--	--	--	--	--	--	--

Note: (1) Emission Level= Reading Level+ Correct Factor +Cable Loss.
(2) Correct Factor= Ant_F + Cab_L - Preamp
(3) Data of measurement within this frequency range shown " -- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

For LTE BAND7 link

■ Spurious Emission below 30MHz (9KHz to 30MHz)

Temperature:	24℃	Test By:	XW
Humidity:	54 %	Test Mode:	QPSK/ Middle Channel
Test Band:	LTE BAND7		

Freq. (MHz)	H/V	Bandwidth (MHz)	Test RB	Emission Level(dBm)	Limit (dBm)	Margin (dBm)	Verdict
--	--	--	--	--	--	--	--

Note: the amplitude of spurious emission that is attenuated by more than 20dB below the permissible limit has no need to be reported.

■ Spurious Emission Above 30MHz (30MHz to 10th harmonics)

Temperature:	24℃	Test By:	XW
Humidity:	54 %	Test Mode:	QPSK/ Middle Channel
Test Band:	LTE BAND7		

Freq. (MHz)	H/V	Bandwidth (MHz)	Test RB	Emission Level(dBm)	Limit (dBm)	Margin (dBm)	Verdict
5070.00	H	5 MHz	RB1#0	-40.31	-13	-27.31	Pass
14844.71	H	5 MHz	RB1#0	-40.04	-13	-27.04	Pass
--	--	--	--	--	--	--	--
5070.00	V	5 MHz	RB1#0	-41.31	-13	-28.31	Pass
14667.60	V	5 MHz	RB1#0	-37.95	-13	-24.95	Pass
--	--	--	--	--	--	--	--

Temperature:	24℃	Test By:	XW
Humidity:	54 %	Test Mode:	QPSK/ Middle Channel
Test Band:	LTE BAND7		

Freq. (MHz)	H/V	Bandwidth (MHz)	Test RB	Emission Level(dBm)	Limit (dBm)	Margin (dBm)	Verdict
5070.00	H	10 MHz	RB1#0	-42.08	-13	-29.08	Pass
15021.62	H	10 MHz	RB1#0	-38.73	-13	-25.73	Pass
--	--	--	--	--	--	--	--
5070.00	V	10 MHz	RB1#0	-40.21	-13	-27.21	Pass
14702.84	V	10 MHz	RB1#0	-38.56	-13	-25.56	Pass
--	--	--	--	--	--	--	--

Note: (1) Emission Level= Reading Level+ Correct Factor +Cable Loss.
(2) Correct Factor= Ant_F + Cab_L - Preamp
(3) Data of measurement within this frequency range shown " -- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

Temperature:	24℃	Test By:	XW
Humidity:	54 %	Test Mode:	QPSK/ Middle Channel
Test Band:	LTE BAND7		

Freq. (MHz)	H/V	Bandwidth (MHz)	Test RB	Emission Level(dBm)	Limit (dBm)	Margin (dBm)	Verdict
5070.00	H	15 MHz	RB1#0	-42.12	-13	-29.12	Pass
14784.27	H	15 MHz	RB1#0	-38.05	-13	-25.05	Pass
--	--	--	--	--	--	--	--
5070.00	V	15 MHz	RB1#0	-40.97	-13	-27.97	Pass
14957.24	V	15 MHz	RB1#0	-40.12	-13	-27.12	Pass
--	--	--	--	--	--	--	--

Temperature:	24℃	Test By:	XW
Humidity:	54 %	Test Mode:	QPSK/ Middle Channel
Test Band:	LTE BAND7		

Freq. (MHz)	H/V	Bandwidth (MHz)	Test RB	Emission Level(dBm)	Limit (dBm)	Margin (dBm)	Verdict
5070.00	H	20 MHz	RB1#0	-40.38	-13	-27.38	Pass
15520.39	H	20 MHz	RB1#0	-38.78	-13	-25.78	Pass
--	--	--	--	--	--	--	--
5070.00	V	20 MHz	RB1#0	-40.19	-13	-27.19	Pass
14616.32	V	20 MHz	RB1#0	-38.58	-13	-25.58	Pass
--	--	--	--	--	--	--	--

Note: (1) Emission Level= Reading Level+ Correct Factor +Cable Loss.
(2) Correct Factor= Ant_F + Cab_L - Preamp
(3) Data of measurement within this frequency range shown " -- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

For LTE BAND12 link

■ Spurious Emission below 30MHz (9KHz to 30MHz)

Temperature:	24℃	Test By:	XW
Humidity:	54 %		
Test Band:	LTE BAND12		

Freq. (MHz)	H/V	Bandwidth (MHz)	Test RB	Emission Level(dBm)	Limit (dBm)	Margin (dBm)	Verdict
--	--	--	--	--	--	--	--

Note: the amplitude of spurious emission that is attenuated by more than 20dB below the permissible limit has no need to be reported.

■ Spurious Emission Above 30MHz (30MHz to 10th harmonics)

Temperature:	24℃	Test By:	XW
Humidity:	54 %	Test Mode:	QPSK/ Middle Channel
Test Band:	LTE BAND12		

Freq. (MHz)	H/V	Bandwidth (MHz)	Test RB	Emission Level(dBm)	Limit (dBm)	Margin (dBm)	Verdict
2122.50	H	1.4 MHz	RB1#0	-52.00	-13	-39.00	Pass
5950.06	H	1.4 MHz	RB1#0	-40.45	-13	-27.45	Pass
--	--	--	--	--	--	--	--
2122.50	V	1.4 MHz	RB1#0	-50.09	-13	-37.09	Pass
5468.67	V	1.4 MHz	RB1#0	-38.80	-13	-25.80	Pass
--	--	--	--	--	--	--	--

Temperature:	24℃	Test By:	XW
Humidity:	54 %	Test Mode:	QPSK/ Middle Channel
Test Band:	LTE BAND12		

Freq. (MHz)	H/V	Bandwidth (MHz)	Test RB	Emission Level(dBm)	Limit (dBm)	Margin (dBm)	Verdict
2122.50	H	3 MHz	RB1#0	-49.94	-13	-36.94	Pass
6152.40	H	3 MHz	RB1#0	-38.36	-13	-25.36	Pass
--	--	--	--	--	--	--	--
2122.50	V	3 MHz	RB1#0	-49.45	-13	-36.45	Pass
5689.31	V	3 MHz	RB1#0	-39.48	-13	-26.48	Pass
--	--	--	--	--	--	--	--

Note: (1) Emission Level= Reading Level+ Correct Factor +Cable Loss.
(2) Correct Factor= Ant_F + Cab_L - Preamp
(3) Data of measurement within this frequency range shown " -- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

Temperature:	24℃	Test By:	XW
Humidity:	54 %	Test Mode:	QPSK/ Middle Channel
Test Band:	LTE BAND12		

Freq. (MHz)	H/V	Bandwidth (MHz)	Test RB	Emission Level(dBm)	Limit (dBm)	Margin (dBm)	Verdict
2122.50	H	5 MHz	RB1#0	-51.09	-13	-38.09	Pass
6036.59	H	5 MHz	RB1#0	-37.65	-13	-24.65	Pass
--	--	--	--	--	--	--	--
2122.50	V	5 MHz	RB1#0	-49.81	-13	-36.81	Pass
5585.84	V	5 MHz	RB1#0	-38.41	-13	-25.41	Pass
--	--	--	--	--	--	--	--

Temperature:	24℃	Test By:	XW
Humidity:	54 %	Test Mode:	QPSK/ Middle Channel
Test Band:	LTE BAND12		

Freq. (MHz)	H/V	Bandwidth (MHz)	Test RB	Emission Level(dBm)	Limit (dBm)	Margin (dBm)	Verdict
2122.50	H	10 MHz	RB1#0	-50.51	-13	-37.51	Pass
5486.86	H	10 MHz	RB1#0	-39.82	-13	-26.82	Pass
--	--	--	--	--	--	--	--
2122.50	V	10 MHz	RB1#0	-50.78	-13	-37.78	Pass
5827.24	V	10 MHz	RB1#0	-38.46	-13	-25.46	Pass
--	--	--	--	--	--	--	--

Note: (1) Emission Level= Reading Level+ Correct Factor +Cable Loss.
(2) Correct Factor= Ant_F + Cab_L - Preamp
(3) Data of measurement within this frequency range shown " -- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

For LTE BAND13 link

■ Spurious Emission below 30MHz (9KHz to 30MHz)

Temperature:	24℃	Test By:	XW
Humidity:	54 %	Test Mode:	QPSK/ Middle Channel
Test Band:	LTE BAND13		

Freq. (MHz)	H/V	Bandwidth (MHz)	Test RB	Emission Level(dBm)	Limit (dBm)	Margin (dBm)	Verdict
--	--	--	--	--	--	--	--

Note: the amplitude of spurious emission that is attenuated by more than 20dB below the permissible limit has no need to be reported.

■ Spurious Emission Above 30MHz (30MHz to 10th harmonics)

Temperature:	24℃	Test By:	XW
Humidity:	54 %	Test Mode:	QPSK/ Middle Channel
Test Band:	LTE BAND13		

Freq. (MHz)	H/V	Bandwidth (MHz)	Test RB	Emission Level(dBm)	Limit (dBm)	Margin (dBm)	Verdict
2346.00	H	5 MHz	RB1#0	-50.63	-13	-37.63	Pass
6151.92	H	5 MHz	RB1#0	-37.30	-13	-24.30	Pass
--	--	--	--	--	--	--	--
2346.00	V	5 MHz	RB1#0	-50.86	-13	-37.86	Pass
6290.63	V	5 MHz	RB1#0	-38.35	-13	-25.35	Pass
--	--	--	--	--	--	--	--

Temperature:	24℃	Test By:	XW
Humidity:	54 %	Test Mode:	QPSK/ Middle Channel
Test Band:	LTE BAND13		

Freq. (MHz)	H/V	Bandwidth (MHz)	Test RB	Emission Level(dBm)	Limit (dBm)	Margin (dBm)	Verdict
2346.00	H	10 MHz	RB1#0	-50.44	-13	-37.44	Pass
5485.05	H	10 MHz	RB1#0	-38.08	-13	-25.08	Pass
--	--	--	--	--	--	--	--
2346.00	V	10 MHz	RB1#0	-50.19	-13	-37.19	Pass
5314.56	V	10 MHz	RB1#0	-37.14	-13	-24.14	Pass
--	--	--	--	--	--	--	--

Note: (1) Emission Level= Reading Level+ Correct Factor +Cable Loss.
(2) Correct Factor= Ant_F + Cab_L - Preamp
(3) Data of measurement within this frequency range shown " -- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

For LTE BAND26 link

■ Spurious Emission below 30MHz (9KHz to 30MHz)

Temperature:	24℃	Test By:	XW
Humidity:	54 %	Test Mode:	QPSK/ Middle Channel
Test Band:	LTE BAND26		

Freq. (MHz)	H/V	Bandwidth (MHz)	Test RB	Emission Level(dBm)	Limit (dBm)	Margin (dBm)	Verdict
--	--	--	--	--	--	--	--

Note: the amplitude of spurious emission that is attenuated by more than 20dB below the permissible limit has no need to be reported.

■ Spurious Emission Above 30MHz (30MHz to 10th harmonics)

Temperature:	24℃	Test By:	XW
Humidity:	54 %	Test Mode:	QPSK/ Middle Channel
Test Band:	LTE BAND26		

Freq. (MHz)	H/V	Bandwidth (MHz)	Test RB	Emission Level(dBm)	Limit (dBm)	Margin (dBm)	Verdict
2494.50	H	1.4 MHz	RB1#0	-45.93	-13	-32.93	Pass
6173.67	H	1.4 MHz	RB1#0	-38.67	-13	-25.67	Pass
--	--	--	--	--	--	--	--
2494.50	V	1.4 MHz	RB1#0	-46.85	-13	-33.85	Pass
6897.19	V	1.4 MHz	RB1#0	-38.37	-13	-25.37	Pass
--	--	--	--	--	--	--	--

Temperature:	24℃	Test By:	XW
Humidity:	54 %	Test Mode:	QPSK/ Middle Channel
Test Band:	LTE BAND26		

Freq. (MHz)	H/V	Bandwidth (MHz)	Test RB	Emission Level(dBm)	Limit (dBm)	Margin (dBm)	Verdict
2494.50	H	3 MHz	RB1#0	-47.39	-13	-34.39	Pass
6620.19	H	3 MHz	RB1#0	-37.53	-13	-24.53	Pass
--	--	--	--	--	--	--	--
2494.50	V	3 MHz	RB1#0	-47.63	-13	-34.63	Pass
6357.55	V	3 MHz	RB1#0	-39.24	-13	-26.24	Pass
--	--	--	--	--	--	--	--

Note: (1) Emission Level= Reading Level+ Correct Factor +Cable Loss.
(2) Correct Factor= Ant_F + Cab_L - Preamp
(3) Data of measurement within this frequency range shown " -- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

Temperature:	24℃	Test By:	XW
Humidity:	54 %	Test Mode:	QPSK/ Middle Channel
Test Band:	LTE BAND26		

Freq. (MHz)	H/V	Bandwidth (MHz)	Test RB	Emission Level(dBm)	Limit (dBm)	Margin (dBm)	Verdict
2494.50	H	5 MHz	RB1#0	-46.46	-13	-33.46	Pass
6046.47	H	5 MHz	RB1#0	-38.04	-13	-25.04	Pass
--	--	--	--	--	--	--	--
2494.50	V	5 MHz	RB1#0	-46.66	-13	-33.66	Pass
6942.04	V	5 MHz	RB1#0	-37.80	-13	-24.80	Pass
--	--	--	--	--	--	--	--

Temperature:	24℃	Test By:	XW
Humidity:	54 %	Test Mode:	QPSK/ Middle Channel
Test Band:	LTE BAND26		

Freq. (MHz)	H/V	Bandwidth (MHz)	Test RB	Emission Level(dBm)	Limit (dBm)	Margin (dBm)	Verdict
2494.50	H	10 MHz	RB1#0	-45.47	-13	-32.47	Pass
6995.14	H	10 MHz	RB1#0	-37.21	-13	-24.21	Pass
--	--	--	--	--	--	--	--
2494.50	V	10 MHz	RB1#0	-45.82	-13	-32.82	Pass
6770.72	V	10 MHz	RB1#0	-39.52	-13	-26.52	Pass
--	--	--	--	--	--	--	--

Temperature:	24℃	Test By:	XW
Humidity:	54 %	Test Mode:	QPSK/ Middle Channel
Test Band:	LTE BAND26		

Freq. (MHz)	H/V	Bandwidth (MHz)	Test RB	Emission Level(dBm)	Limit (dBm)	Margin (dBm)	Verdict
2494.50	H	15 MHz	RB1#0	-47.37	-13	-34.37	Pass
6280.18	H	15 MHz	RB1#0	-39.86	-13	-26.86	Pass
--	--	--	--	--	--	--	--
2494.50	V	15 MHz	RB1#0	-48.32	-13	-35.32	Pass
6344.61	V	15 MHz	RB1#0	-38.05	-13	-25.05	Pass
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Note: (1) Emission Level= Reading Level+ Correct Factor +Cable Loss.
(2) Correct Factor= Ant_F + Cab_L - Preamp
(3) Data of measurement within this frequency range shown " -- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

For LTE BAND41 link

■ Spurious Emission below 30MHz (9KHz to 30MHz)

Temperature:	24℃	Test By:	XW
Humidity:	54 %	Test Mode:	QPSK/ Middle Channel
Test Band:	LTE BAND41		

Freq. (MHz)	H/V	Bandwidth (MHz)	Test RB	Emission Level(dBm)	Limit (dBm)	Margin (dBm)	Verdict
--	--	--	--	--	--	--	--

Note: the amplitude of spurious emission that is attenuated by more than 20dB below the permissible limit has no need to be reported.

■ Spurious Emission Above 30MHz (30MHz to 10th harmonics)

Temperature:	24℃	Test By:	XW
Humidity:	54 %	Test Mode:	QPSK/ Middle Channel
Test Band:	LTE BAND41		

Freq. (MHz)	H/V	Bandwidth (MHz)	Test RB	Emission Level(dBm)	Limit (dBm)	Margin (dBm)	Verdict
5186.00	H	5 MHz	RB1#0	-45.93	-13	-32.93	Pass
14178.85	H	5 MHz	RB1#0	-38.87	-13	-25.87	Pass
--	--	--	--	--	--	--	--
5186.00	V	5 MHz	RB1#0	-44.10	-13	-31.10	Pass
14303.32	V	5 MHz	RB1#0	-39.44	-13	-26.44	Pass
--	--	--	--	--	--	--	--

Temperature:	24℃	Test By:	XW
Humidity:	54 %	Test Mode:	QPSK/ Middle Channel
Test Band:	LTE BAND41		

Freq. (MHz)	H/V	Bandwidth (MHz)	Test RB	Emission Level(dBm)	Limit (dBm)	Margin (dBm)	Verdict
5186.00	H	10 MHz	RB1#0	-44.83	-13	-31.83	Pass
14101.23	H	10 MHz	RB1#0	-40.05	-13	-27.05	Pass
--	--	--	--	--	--	--	--
5186.00	V	10 MHz	RB1#0	-44.06	-13	-31.06	Pass
14298.96	V	10 MHz	RB1#0	-38.25	-13	-25.25	Pass
--	--	--	--	--	--	--	--

Note: (1) Emission Level= Reading Level+ Correct Factor +Cable Loss.
(2) Correct Factor= Ant_F + Cab_L - Preamp
(3) Data of measurement within this frequency range shown " -- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

Temperature:	24℃	Test By:	XW
Humidity:	54 %	Test Mode:	QPSK/ Middle Channel
Test Band:	LTE BAND41		

Freq. (MHz)	H/V	Bandwidth (MHz)	Test RB	Emission Level(dBm)	Limit (dBm)	Margin (dBm)	Verdict
5186.00	H	15 MHz	RB1#0	-45.03	-13	-32.03	Pass
14352.65	H	15 MHz	RB1#0	-38.01	-13	-25.01	Pass
--	--	--	--	--	--	--	--
5186.00	V	15 MHz	RB1#0	-44.95	-13	-31.95	Pass
13421.53	V	15 MHz	RB1#0	-39.75	-13	-26.75	Pass
--	--	--	--	--	--	--	--

Temperature:	24℃	Test By:	XW
Humidity:	54 %	Test Mode:	QPSK/ Middle Channel
Test Band:	LTE BAND41		

Freq. (MHz)	H/V	Bandwidth (MHz)	Test RB	Emission Level(dBm)	Limit (dBm)	Margin (dBm)	Verdict
5186.00	H	20 MHz	RB1#0	-44.86	-13	-31.86	Pass
13613.13	H	20 MHz	RB1#0	-38.99	-13	-25.99	Pass
--	--	--	--	--	--	--	--
5186.00	V	20 MHz	RB1#0	-43.77	-13	-30.77	Pass
14209.57	V	20 MHz	RB1#0	-37.47	-13	-24.47	Pass
--	--	--	--	--	--	--	--

Note: (1) Emission Level= Reading Level+ Correct Factor +Cable Loss.
(2) Correct Factor= Ant_F + Cab_L - Preamp
(3) Data of measurement within this frequency range shown " -- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

For LTE BAND66 link

■ Spurious Emission below 30MHz (9KHz to 30MHz)

Temperature:	24℃	Test By:	XW
Humidity:	54 %	Test Mode:	QPSK/ Middle Channel
Test Band:	LTE BAND66		

Freq. (MHz)	H/V	Bandwidth (MHz)	Test RB	Emission Level(dBm)	Limit (dBm)	Margin (dBm)	Verdict
--	--	--	--	--	--	--	--

Note: the amplitude of spurious emission that is attenuated by more than 20dB below the permissible limit has no need to be reported.

■ Spurious Emission Above 30MHz (30MHz to 10th harmonics)

Temperature:	24℃	Test By:	XW
Humidity:	54 %	Test Mode:	QPSK/ Middle Channel
Test Band:	LTE BAND66		

Freq. (MHz)	H/V	Bandwidth (MHz)	Test RB	Emission Level(dBm)	Limit (dBm)	Margin (dBm)	Verdict
5235.00	H	1.4 MHz	RB1#0	-41.72	-13	-28.72	Pass
14037.57	H	1.4 MHz	RB1#0	-40.22	-13	-27.22	Pass
--	--	--	--	--	--	--	--
5235.00	V	1.4 MHz	RB1#0	-43.37	-13	-30.37	Pass
14196.15	V	1.4 MHz	RB1#0	-38.59	-13	-25.59	Pass
--	--	--	--	--	--	--	--

Temperature:	24℃	Test By:	XW
Humidity:	54 %	Test Mode:	QPSK/ Middle Channel
Test Band:	LTE BAND66		

Freq. (MHz)	H/V	Bandwidth (MHz)	Test RB	Emission Level(dBm)	Limit (dBm)	Margin (dBm)	Verdict
5235.00	H	3 MHz	RB1#0	-41.54	-13	-28.54	Pass
14146.03	H	3 MHz	RB1#0	-38.35	-13	-25.35	Pass
--	--	--	--	--	--	--	--
5235.00	V	3 MHz	RB1#0	-42.85	-13	-29.85	Pass
13814.55	V	3 MHz	RB1#0	-37.12	-13	-24.12	Pass
--	--	--	--	--	--	--	--

Temperature:	24℃	Test By:	XW
Humidity:	54 %	Test Mode:	QPSK/ Middle Channel
Test Band:	LTE BAND66		

Freq. (MHz)	H/V	Bandwidth (MHz)	Test RB	Emission Level(dBm)	Limit (dBm)	Margin (dBm)	Verdict
5235.00	H	5 MHz	RB1#0	-41.75	-13	-28.75	Pass
13833.85	H	5 MHz	RB1#0	-38.49	-13	-25.49	Pass
--	--	--	--	--	--	--	--
5235.00	V	5 MHz	RB1#0	-41.52	-13	-28.52	Pass
13729.67	V	5 MHz	RB1#0	-37.79	-13	-24.79	Pass
--	--	--	--	--	--	--	--

Temperature:	24℃	Test By:	XW
Humidity:	54 %	Test Mode:	QPSK/ Middle Channel
Test Band:	LTE BAND66		

Freq. (MHz)	H/V	Bandwidth (MHz)	Test RB	Emission Level(dBm)	Limit (dBm)	Margin (dBm)	Verdict
5235.00	H	10 MHz	RB1#0	-42.71	-13	-29.71	Pass
14255.36	H	10 MHz	RB1#0	-39.00	-13	-26.00	Pass
--	--	--	--	--	--	--	--
5235.00	V	10 MHz	RB1#0	-41.10	-13	-28.10	Pass
14349.82	V	10 MHz	RB1#0	-40.47	-13	-27.47	Pass
--	--	--	--	--	--	--	--

Temperature:	24℃	Test By:	XW
Humidity:	54 %	Test Mode:	QPSK/ Middle Channel
Test Band:	LTE BAND66		

Freq. (MHz)	H/V	Bandwidth (MHz)	Test RB	Emission Level(dBm)	Limit (dBm)	Margin (dBm)	Verdict
5235.00	H	15 MHz	RB1#0	-41.91	-13	-28.91	Pass
14365.60	H	15 MHz	RB1#0	-37.37	-13	-24.37	Pass
--	--	--	--	--	--	--	--
5235.00	V	15 MHz	RB1#0	-42.42	-13	-29.42	Pass
13872.81	V	15 MHz	RB1#0	-38.62	-13	-25.62	Pass
--	--	--	--	--	--	--	--

Temperature:	24℃	Test By:	XW
Humidity:	54 %	Test Mode:	QPSK/ Middle Channel
Test Band:	LTE BAND66		

Freq. (MHz)	H/V	Bandwidth (MHz)	Test RB	Emission Level(dBm)	Limit (dBm)	Margin (dBm)	Verdict
5235.00	H	20 MHz	RB1#0	-40.14	-13	-27.14	Pass
13831.04	H	20 MHz	RB1#0	-38.36	-13	-25.36	Pass
--	--	--	--	--	--	--	--
5235.00	V	20 MHz	RB1#0	-41.98	-13	-28.98	Pass
13659.12	V	20 MHz	RB1#0	-37.56	-13	-24.56	Pass
--	--	--	--	--	--	--	--

Note: (1) Emission Level= Reading Level+ Correct Factor +Cable Loss.
(2) Correct Factor= Ant_F + Cab_L - Preamp
(3) Data of measurement within this frequency range shown " -- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

8.8 FREQUENCY STABILITY

8.8.1 Conformance Limit

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within ±0.00025% (±2.5ppm) of the center frequency.

8.8.2 Test Configuration

Test according to clause 7.2 conducted emission test setup2.

8.8.3 Test Procedure

Connect the EUT to Universal Radio Communication Tester CMU200 or CMU500 via the antenna connector. A call is set up by the SS according to the generic call set up procedure on a channel with ARFCN in the ARFCN range, power control level set to Max power. MS TXPWR_MAX_CCH is set to the maximum value supported by the Power Class of the Mobile under test.
EUT was placed at temperature chamber and connected to an external power supply.
Temperature and voltage condition shall be tested to confirm frequency stability.
(a) Frequency measurements shall be made at the extremes of the specified temperature range and at intervals of not more than 10° centigrade through the range. A period of time sufficient to stabilize all of the components of the oscillator circuit at each temperature level shall be allowed prior to frequency measurement. The short-term transient effects on the frequency of the transmitter due to keying (except for broadcast transmitters) and any heating element cycling normally occurring at each ambient temperature level also shall be shown. Only the portion or portions of the transmitter containing the frequency determining and stabilizing circuitry need be subjected to the temperature variation test.
(b) The frequency stability shall be measured with variation of primary supply voltage as follows:
(1) Vary primary supply voltage from 95 to 105 percent of the nominal value for other than hand carried battery equipment.
(2) For hand carried, battery powered equipment, reduce primary supply voltage to the battery operating end point, which shall be specified by the manufacturer.

8.8.4 Test Results

Pass

Note:
The data please see Appendix 4G BAND2, BAND4, BAND5, BAND7, BAND12, BAND13, BAND26, BAND66, BAND41.

8.9 PEAK TO AVERAGE RATIO

8.9.1 Conformance Limit

LTE BAND2 (25) FCC Part 24.232
Power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with paragraph (e) of this section. In both instances, equipment employed must be authorized in accordance with the provisions of §24.51. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.
LTE BAND4(7)(30)(41) FCC Part 27.50
Equipment employed must be authorized in accordance with the provisions of §24.51. Power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with paragraph (d)(6) of this section. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

8.9.2 Test Configuration

Test according to clause 7.1 conducted emission test setup1.

8.9.3 Test Procedure

The EUT was connected to Spectrum Analyzer and Base Station via power divider.
The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
Set the number of counts to a value that stabilizes the measured CCDF curve.
Set the measurement interval to 1 ms.
Record the maximum PAPR level associated with a probability of 0.1%.
a) Refer to instrument's analyzer instruction manual for details on how to use the power statistics/CCDF function;
b) Set resolution/measurement bandwidth ≥ signal's occupied bandwidth;
c) Set the number of counts to a value that stabilizes the measured CCDF curve;
d) Set the measurement interval as follows:
1) for continuous transmissions, set to 1 ms,
2) for burst transmissions, employ an external trigger that is synchronized with the EUT burst timing sequence, or use the internal burst trigger with a trigger level that allows the burst to stabilize and set the measurement interval to a time that is less than or equal to the burst duration.
e) Record the maximum PAPR level associated with a probability of 0.1%.

8.9.4 Test Results

Pass

Note:
The data please see Appendix 4G BAND2, BAND4, BAND5, BAND7, BAND12, BAND13, BAND26, BAND66, BAND41.

Detail of factor for radiated emission

Frequency(MHz)	Ant_F(dB)	Cab_L(dB)	Preamp(dB)	Correct Factor(dB)
0.009	20.6	0.03	\	20.63
0.15	20.7	0.1	\	20.8
1	20.9	0.15	\	21.05
10	20.1	0.28	\	20.38
30	18.8	0.45	\	19.25
30	11.7	0.62	27.9	-15.58
100	12.5	1.02	27.8	-14.28
300	12.9	1.91	27.5	-12.69
600	19.2	2.92	27	-4.88
800	21.1	3.54	26.6	-1.96
1000	22.3	4.17	26.2	0.27
1000	25.6	1.76	41.4	-14.04
3000	28.9	3.27	43.2	-11.03
5000	31.1	4.2	44.6	-9.3
8000	36.2	5.95	44.7	-2.55
10000	38.4	6.3	43.9	0.8
12000	38.5	7.14	42.3	3.34
15000	40.2	8.15	41.4	6.95
18000	45.4	9.02	41.3	13.12
18000	37.9	1.81	47.9	-8.19
21000	37.9	1.95	48.7	-8.85
25000	39.3	2.01	42.8	-1.49
28000	39.6	2.16	46.0	-4.24
31000	41.2	2.24	44.5	-1.06
34000	41.5	2.29	46.6	-2.81
37000	43.8	2.30	46.4	-0.3
40000	43.2	2.50	42.2	3.5

--- End of Report ---