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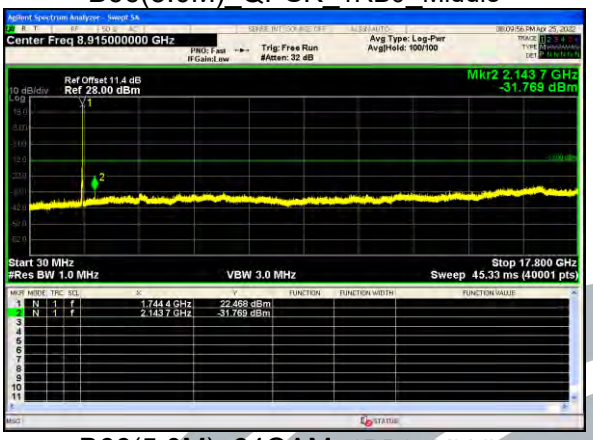

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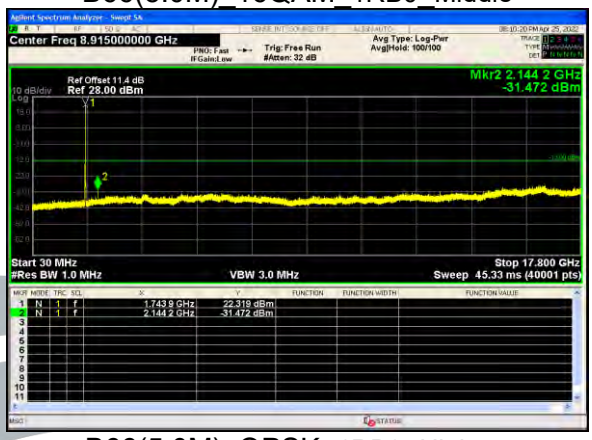
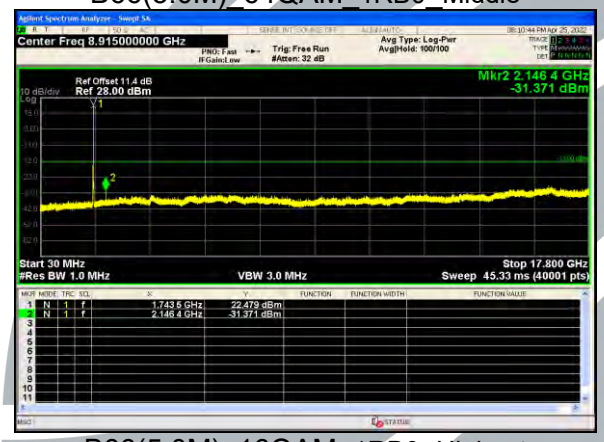


B66(5.0M)_64QAM_1RB0_Middle



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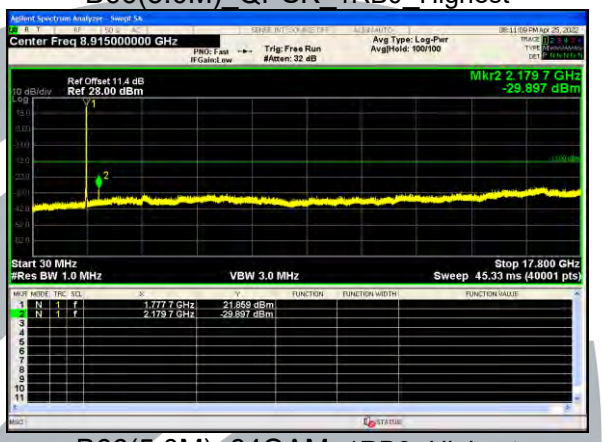

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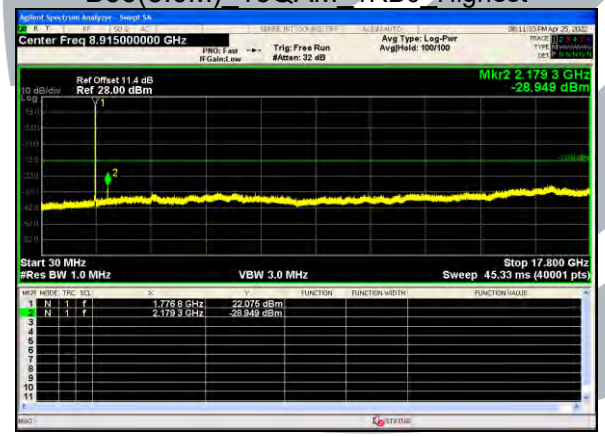

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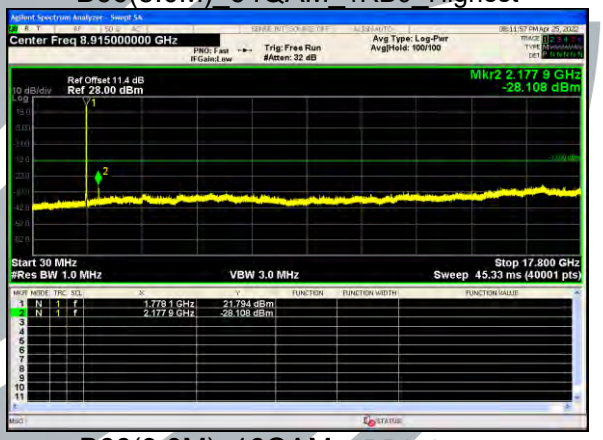
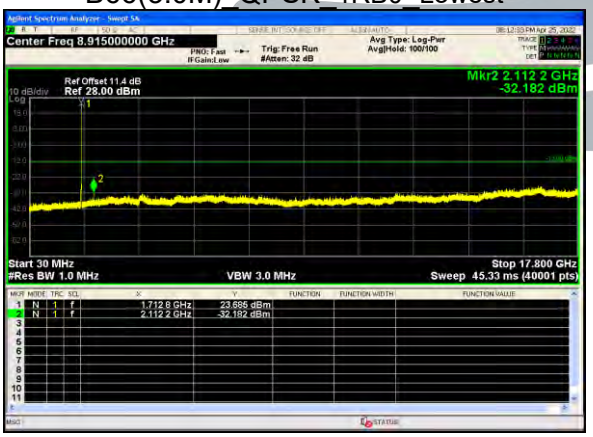


B66(3.0M)_QPSK_1RB0_Lowest



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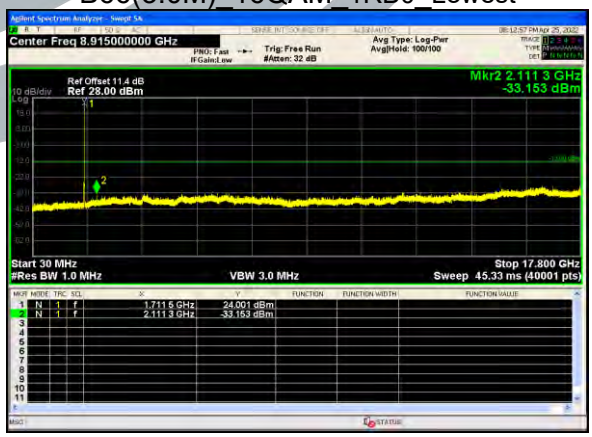

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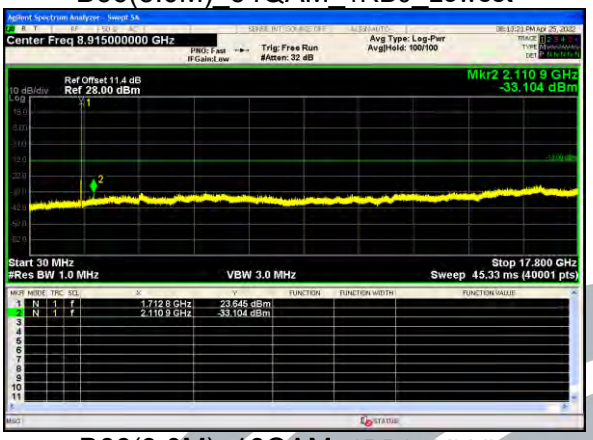

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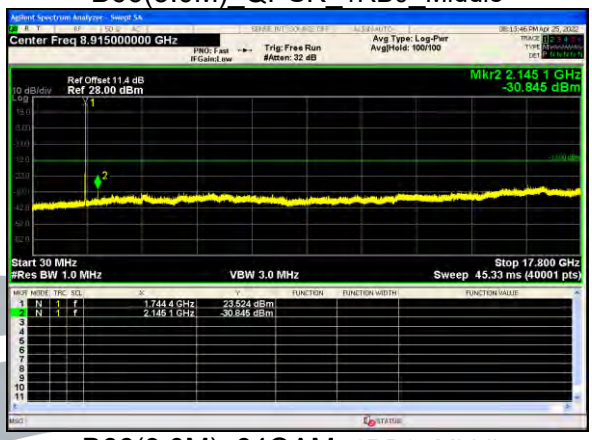

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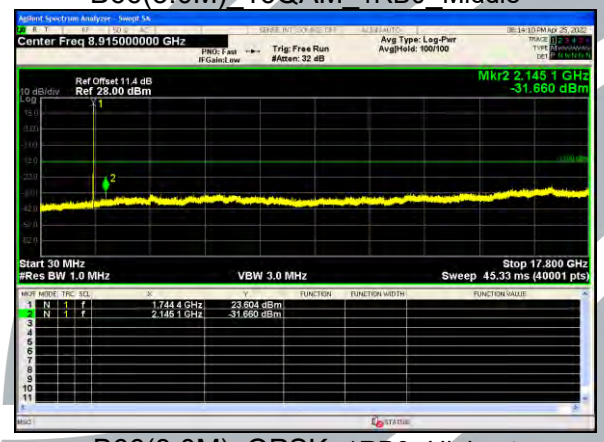

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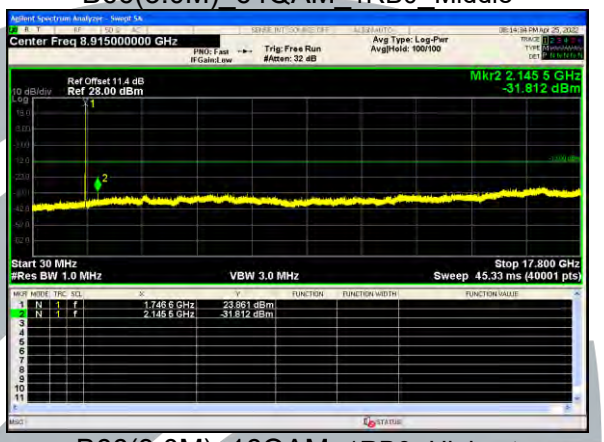
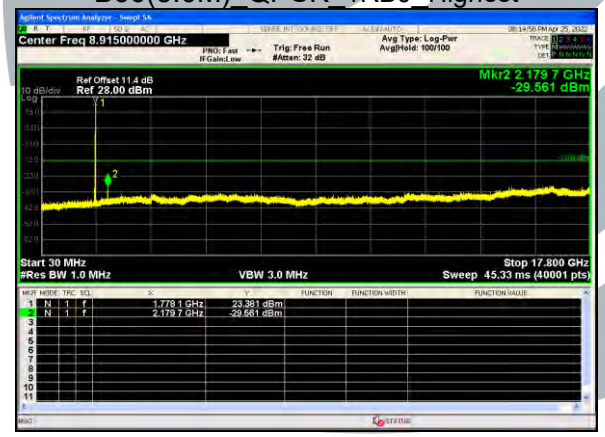


B66(3.0M)_QPSK_1RB0_Highest



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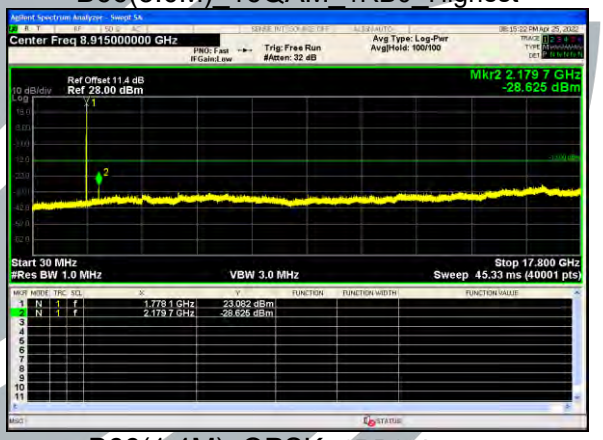

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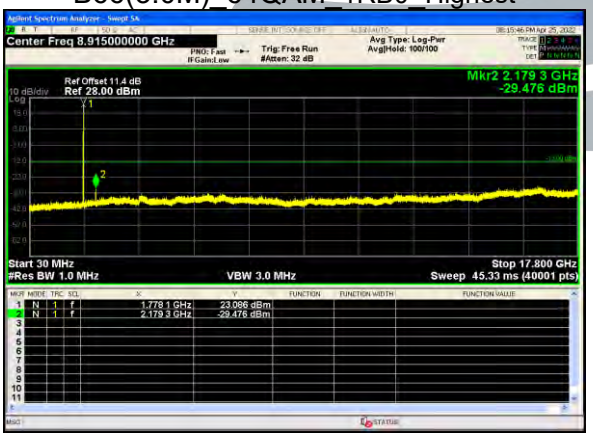
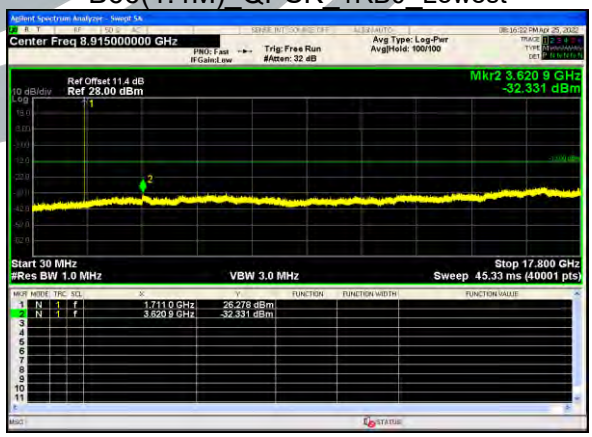


B66(1.4M)_QPSK_1RB0_Lowest



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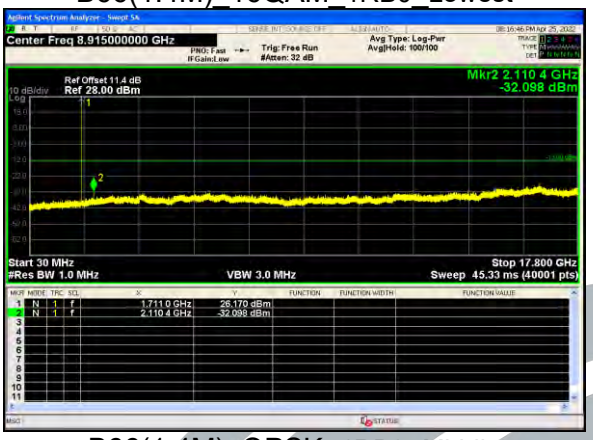

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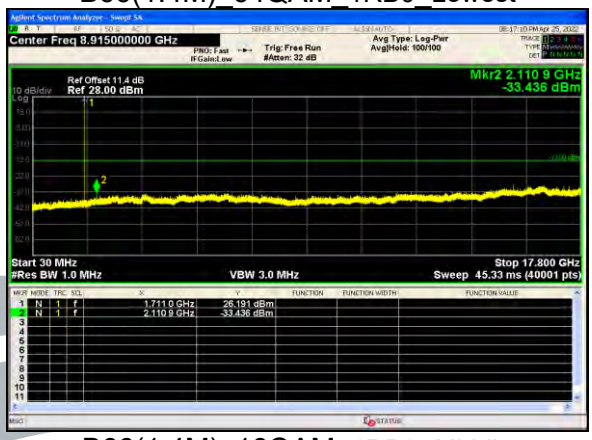

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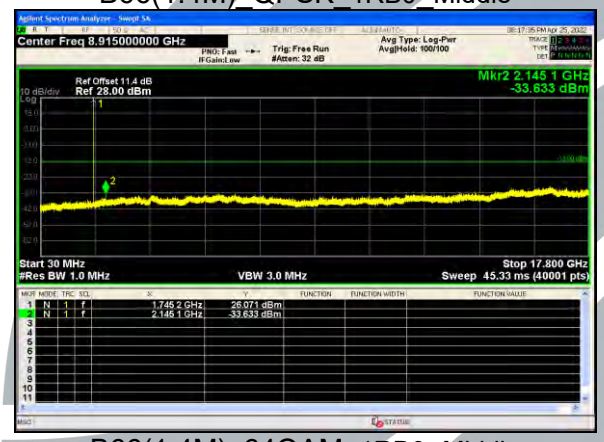

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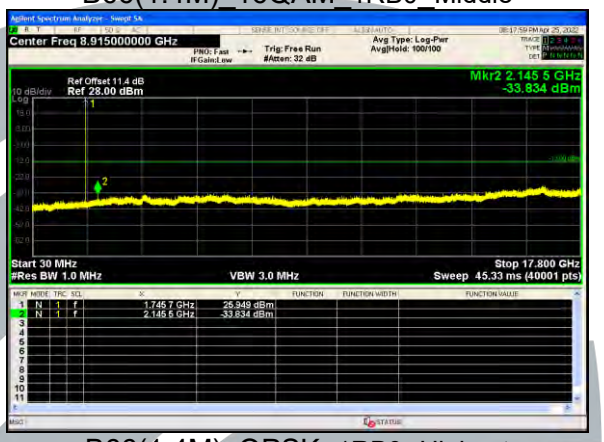

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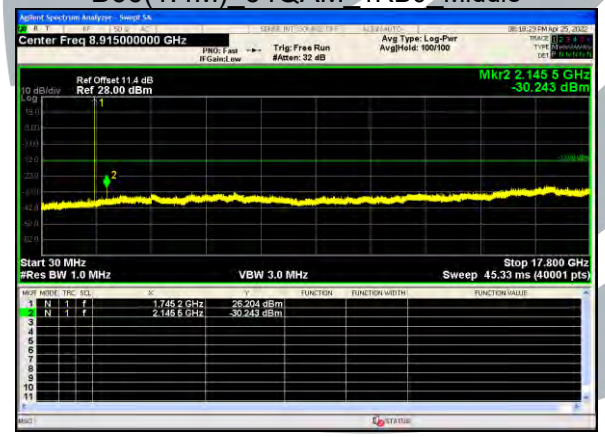

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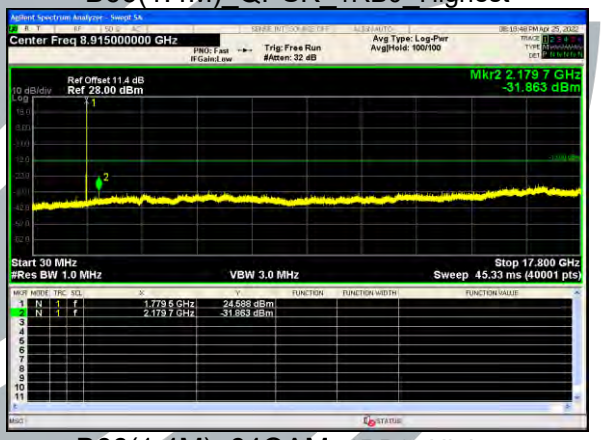

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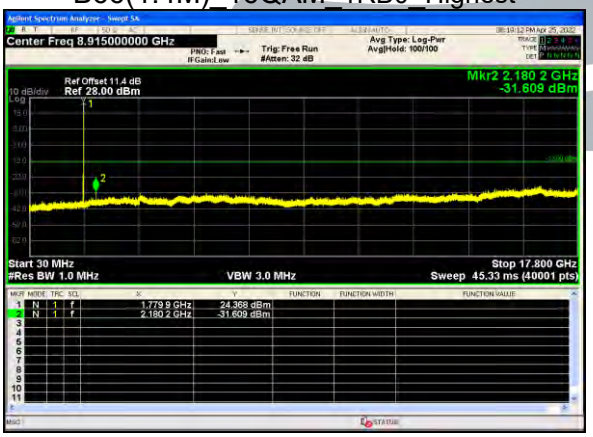

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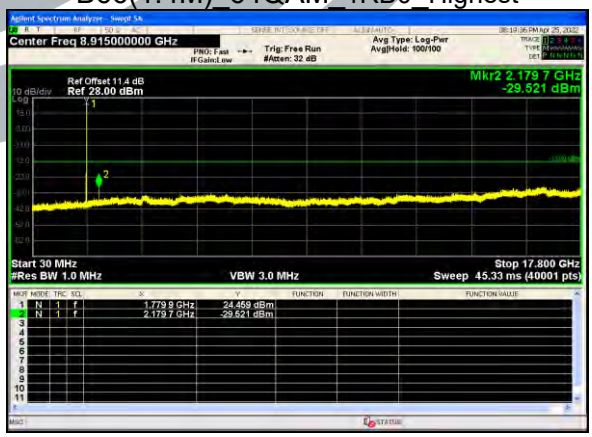
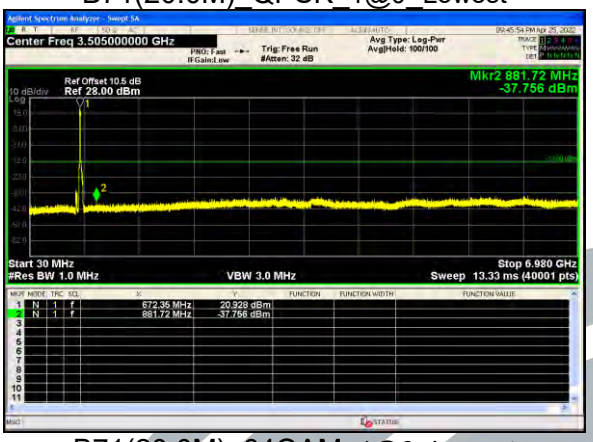


5.7.14 LTE Band 71

B71(20.0M)_QPSK_1@0_Lowest



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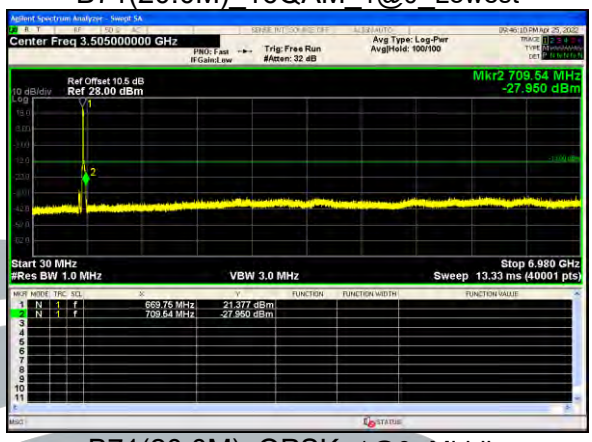

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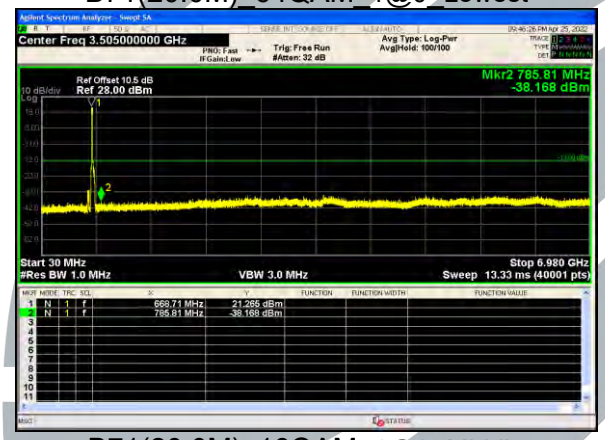

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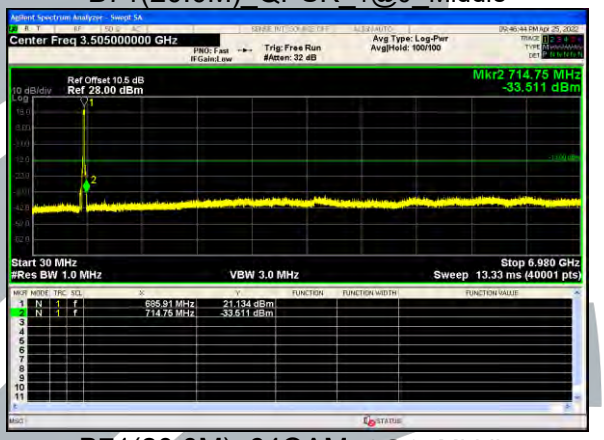

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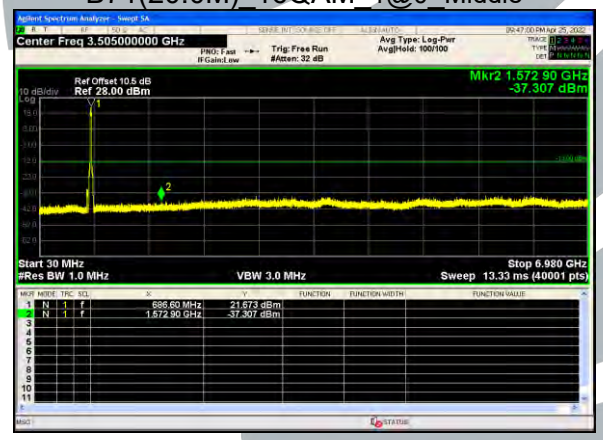

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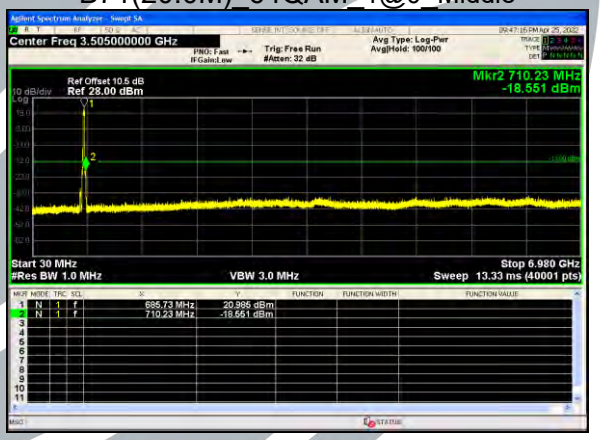
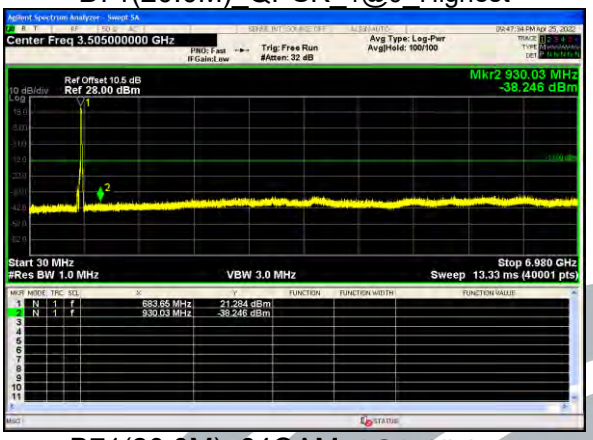
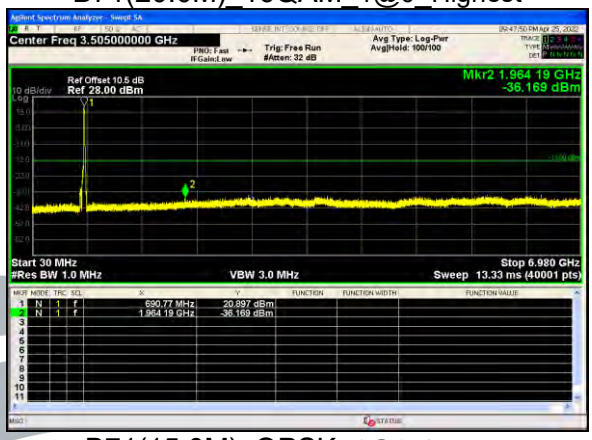


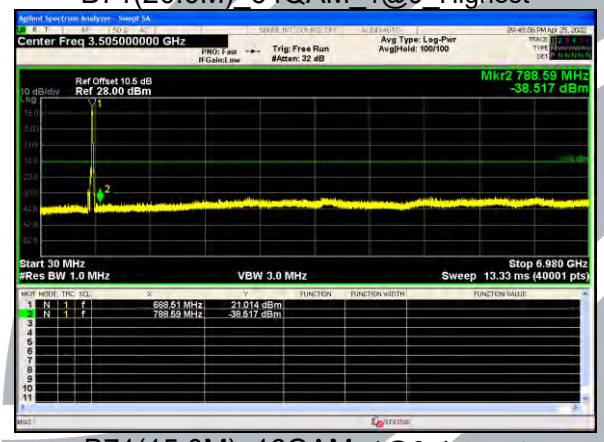
B71(20.0M)_QPSK_1@0_Highest



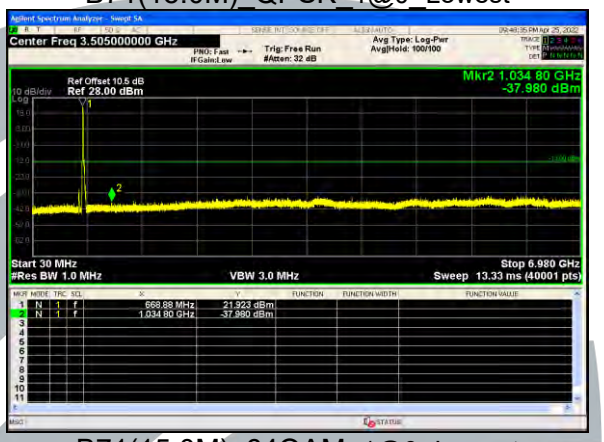
B71(20.0M)_16QAM_1@0_Highest



B71(20.0M)_64QAM_1@0_Highest



B71(15.0M)_QPSK_1@0_Lowest



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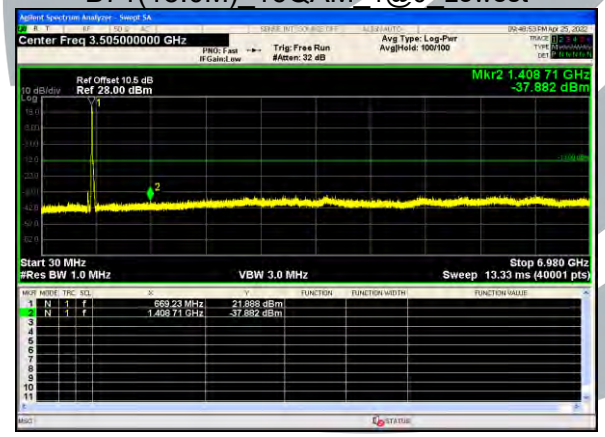
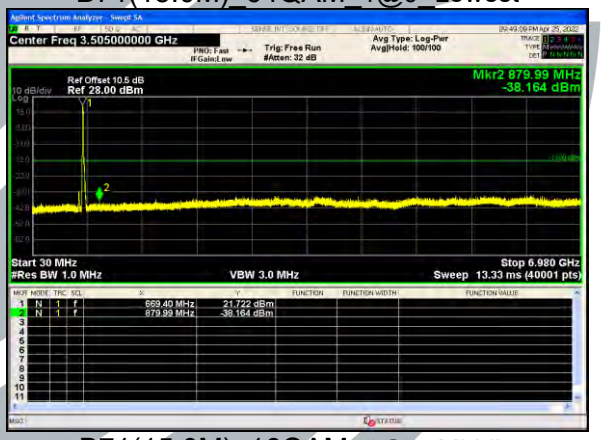
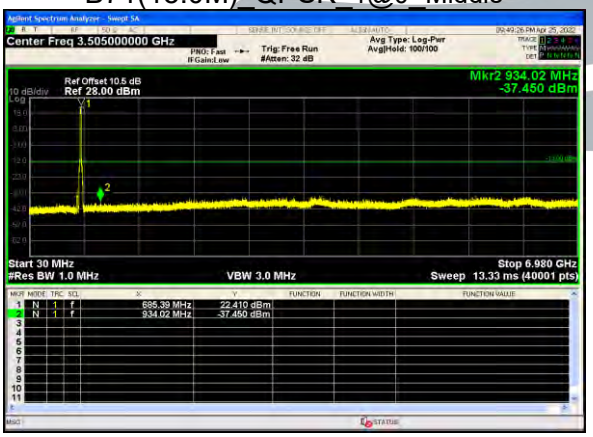


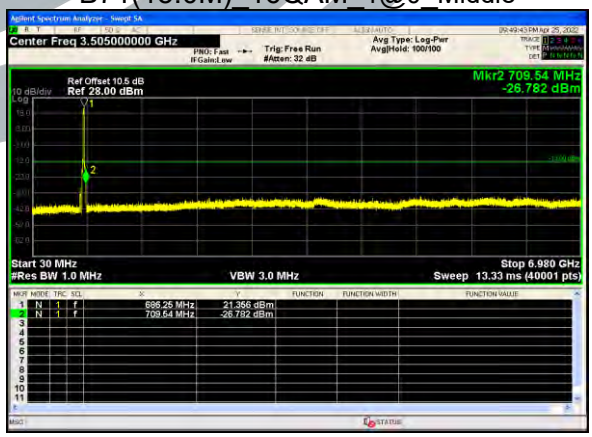
B71(15.0M)_64QAM_1@0_Lowest



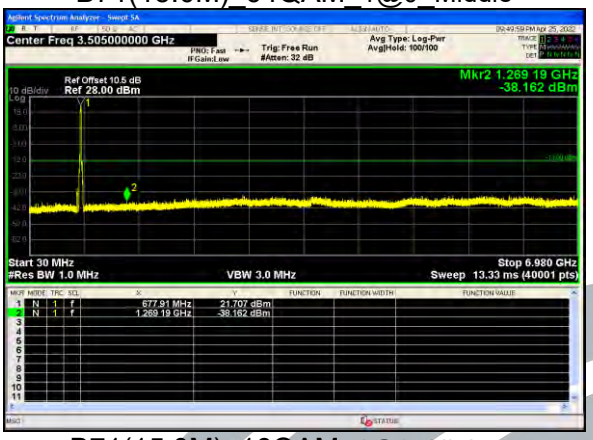
B71(15.0M)_QPSK_1@0_Middle



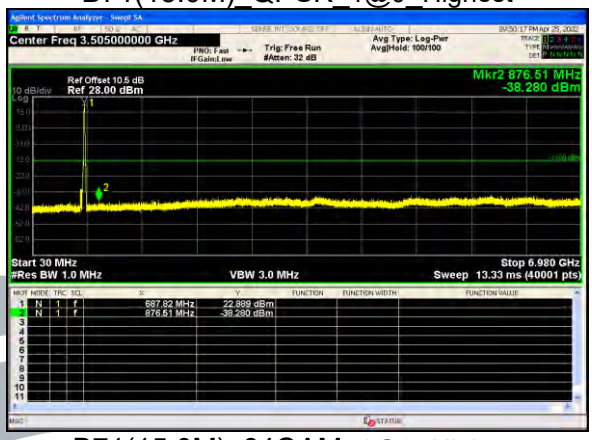
B71(15.0M)_16QAM_1@0_Middle



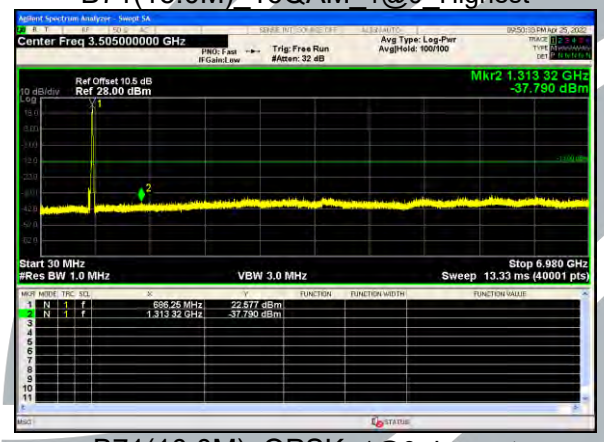
B71(15.0M)_64QAM_1@0_Middle



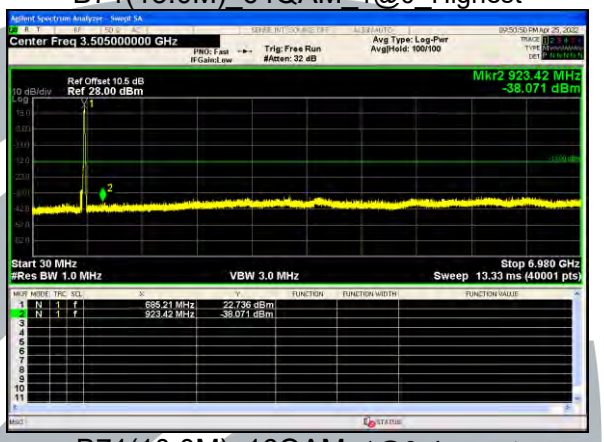
B71(15.0M)_QPSK_1@0_Highest



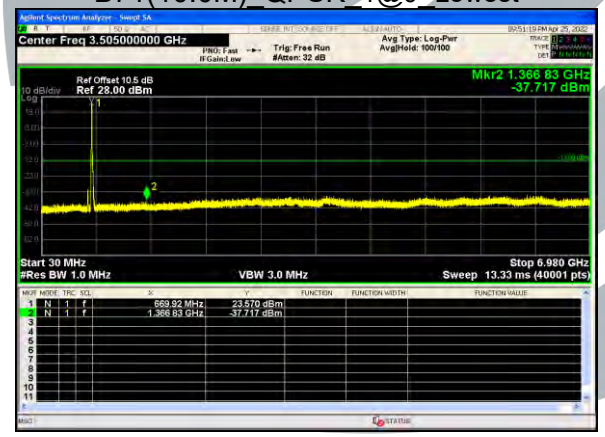
B71(15.0M)_16QAM_1@0_Highest



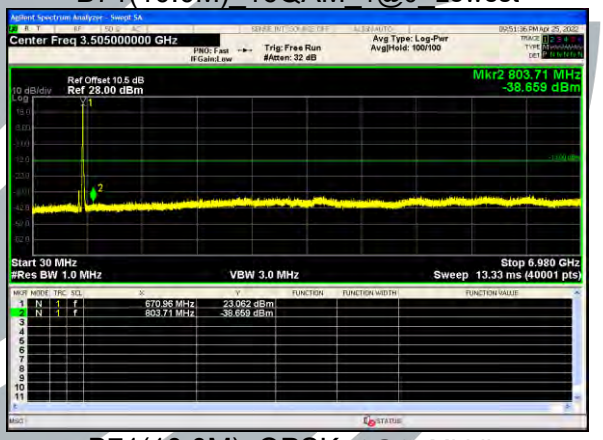
B71(15.0M)_64QAM_1@0_Highest



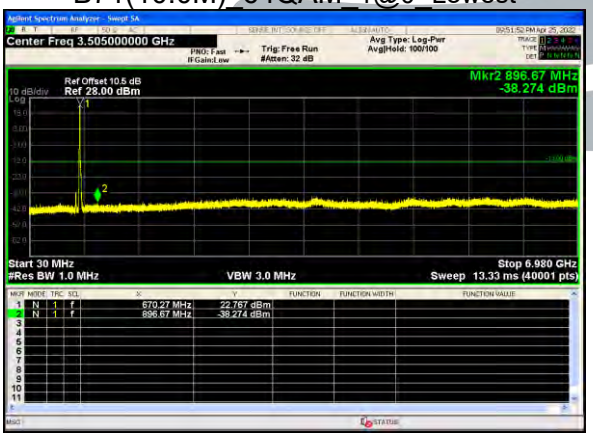
B71(10.0M)_QPSK_1@0_Lowest



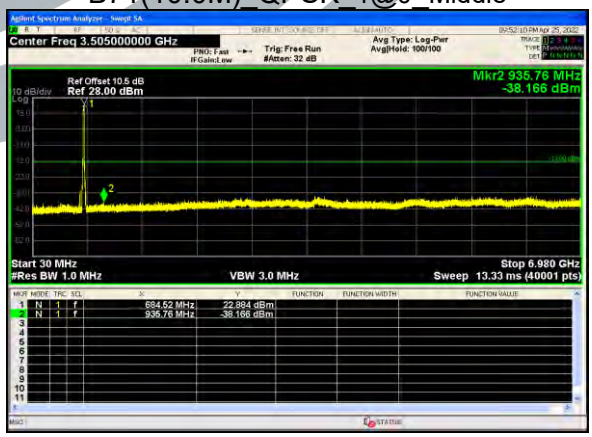
B71(10.0M)_16QAM_1@0_Lowest



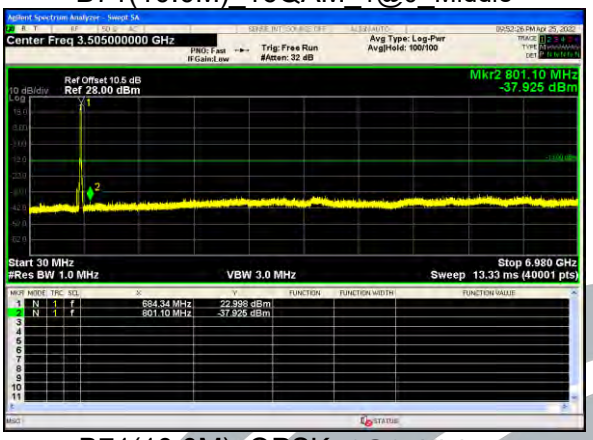
B71(10.0M)_64QAM_1@0_Lowest



B71(10.0M)_QPSK_1@0_Middle



B71(10.0M)_16QAM_1@0_Middle



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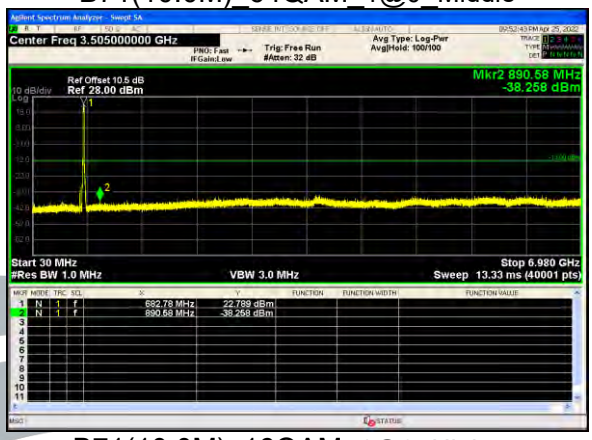
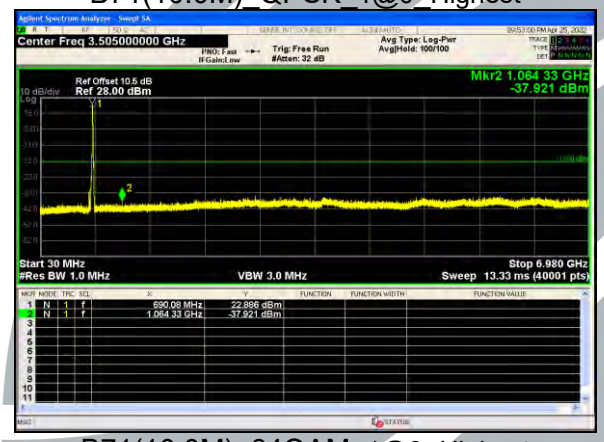


B71(10.0M)_QPSK_1@0_Highest



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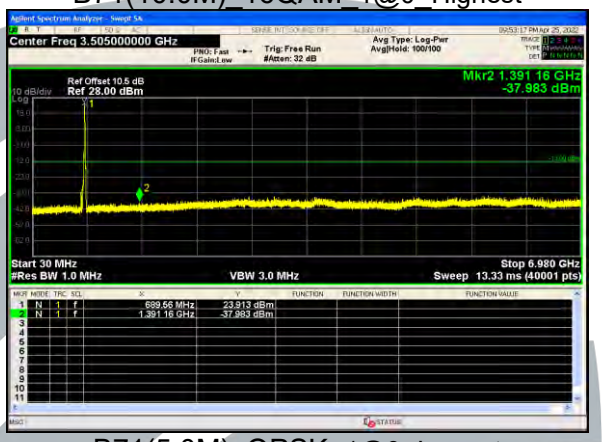
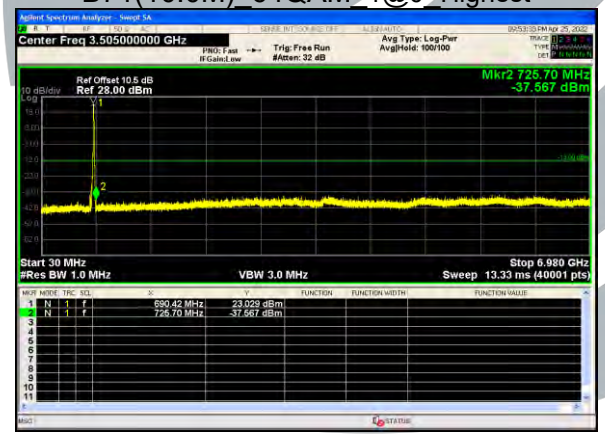
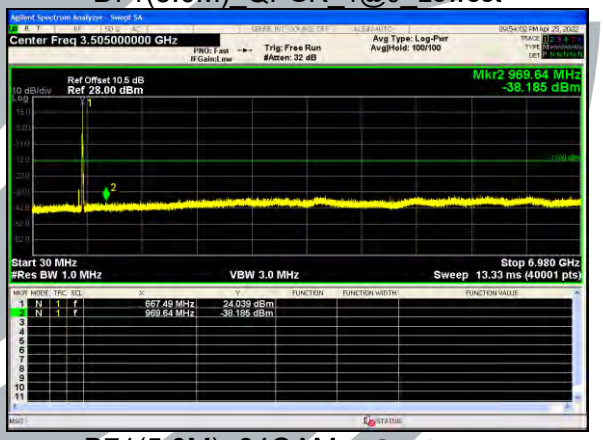


B71(10.0M)_64QAM_1@0_Highest



B71(5.0M)_QPSK_1@0_Lowest



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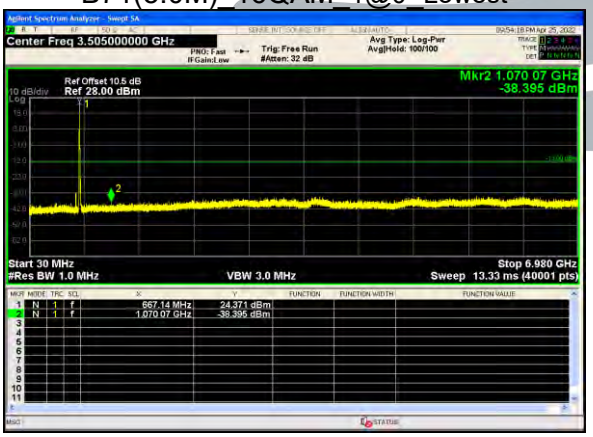

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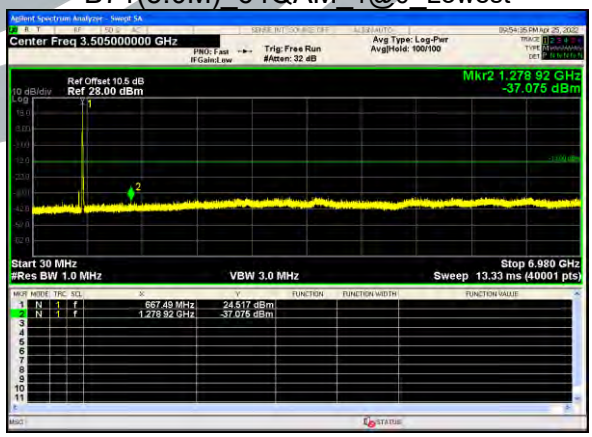
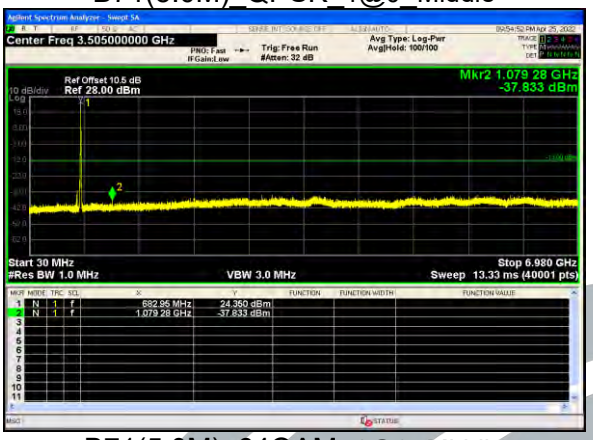


B71(5.0M)_QPSK_1@0_Middle



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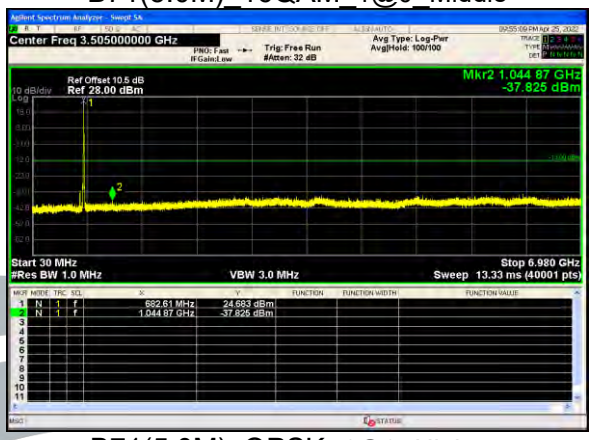

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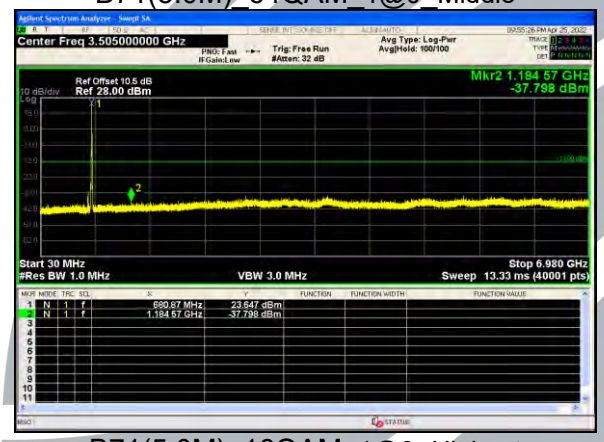
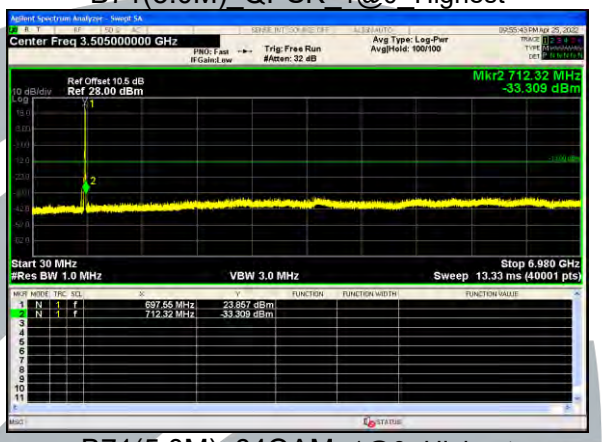


B71(5.0M)_QPSK_1@0_Highest



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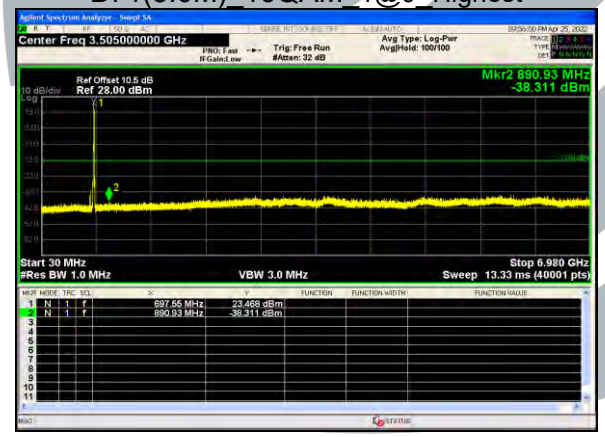
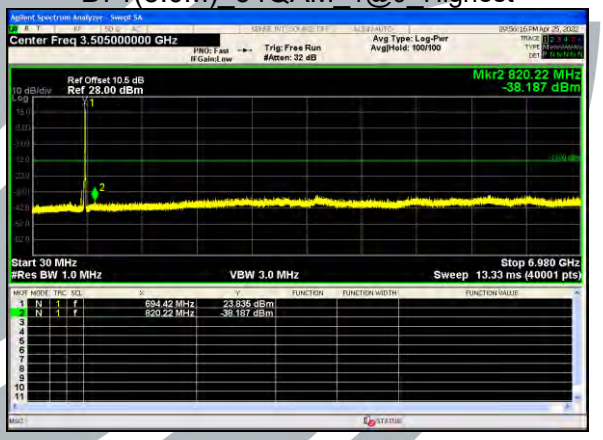


B71(5.0M)_64QAM_1@0_Highest



5.8 FIELD STRENGTH OF SPURIOUS RADIATION

Test Requirement: **LTE Band 2 & LTE Band 25:** FCC 47 CFR Part 24.238(a)
LTE Band 4 & LTE Band 66: FCC 47 CFR Part 27.53(h)
LTE Band 5 & LTE Band 26: FCC 47 CFR Part 22.917(a)
LTE Band 7 & Band 41: FCC 47 CFR Part 27.53(m)(4)
LTE Band 12 & Band 17 & Band 71: FCC 47 CFR Part 27.53(g)
LTE Band 13: FCC 47 CFR Part 27.53
LTE Band 26: FCC 47 CFR Part 90.691
LTE Band 30: FCC 47 CFR Part 27.53(a)(4)

Test Method: ANSI C63.26-2015 & KDB 971168 D01v03r01

Receiver Setup:

Frequency	Detector	RBW	VBW	Remark
0.009 MHz-30 MHz	Peak	10 kHz	30 KHz	Peak
30 MHz-1 GHz	Quasi-peak	100 kHz	300 KHz	Peak
Above 1 GHz	Peak	1 MHz	3 MHz	Peak

Limits:

FCC 47 CFR Part 24.238(a), 27.53(h)(1), 22.917(a), 27.53(g), 27.53(c)(2), 90.691:
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 emission limit equal to -13 dBm.

FCC 47 CFR Part 27.53(a)(4): For mobile and portable stations operating in the 2305-2315 MHz and 2350-2360 MHz bands:
(i) By a factor of not less than: 43 + 10 log (P) dB on all frequencies between 2305 and 2320 MHz and on all frequencies between 2345 and 2360 MHz that are outside the licensed band(s) of operation, not less than 55 + 10 log (P) dB on all frequencies between 2320 and 2324 MHz and on all frequencies between 2341 and 2345 MHz, not less than 61 + 10 log (P) dB on all frequencies between 2324 and 2328 MHz and on all frequencies between 2337 and 2341 MHz, and not less than 67 + 10 log (P) dB on all frequencies between 2328 and 2337 MHz;
(ii) By a factor of not less than 43 + 10 log (P) dB on all frequencies between 2300 and 2305 MHz, 55 + 10 log (P) dB on all frequencies between 2296 and 2300 MHz, 61 + 10 log (P) dB on all frequencies between 2292 and 2296 MHz, 67 + 10 log (P) dB on all frequencies between 2288 and 2292 MHz, and 70 + 10 log (P) dB below 2288 MHz;
(iii) By a factor of not less than 43 + 10 log (P) dB on all frequencies between 2360 and 2365 MHz, and not less than 70 + 10 log (P) dB above 2365 MHz.

FCC 47 CFR Part 27.53(m)(4):
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 55 + 10 log(P) dB. The emission limit equal to -25 dBm.

FCC 47 CFR Part 27.53:
(c) 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.
(f) Emissions in the band 1559-1610 MHz shall be limited to −70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals. (-70 dBW/MHz = -40dBm/MHz).

Test Setup: Refer to section 4.2.1 for details.

Test Procedures: KDB 971168 D01v03r01 Section 7

Equipment Used: Refer to section 3 for details.

Test Result: Pass

The measurement data as follows:

5.8.1 LTE Band 2

LTE Band 2_ 20 MHz_ QPSK							
No.	Frequency (MHz)	SA Reading (dBm)	Correction factor (dB/m)	EIRP Result (dBm)	Limit (dBm)	Margin (dB)	Ant. Pol.
Lowest Channel							
1	899.958	-82.3	13.9	-68.4	-13.0	-55.4	Horizontal
2	3720	-65.8	7.7	-58.2	-13.0	-45.2	Horizontal
3	5580	-68.0	11.7	-56.3	-13.0	-43.3	Horizontal
4	952	-82.6	14.3	-68.4	-13.0	-55.4	Vertical
5	3720	-65.4	7.7	-57.7	-13.0	-44.7	Vertical
6	5580	-69.4	11.7	-57.7	-13.0	-44.7	Vertical
Middle Channel							
1	862.802	-81.4	13.1	-68.3	-13.0	-55.3	Horizontal
2	3760	-64.3	7.8	-56.5	-13.0	-43.5	Horizontal
3	5640	-67.2	11.6	-55.6	-13.0	-42.6	Horizontal
4	952	-82.1	14.3	-67.8	-13.0	-54.8	Vertical
5	3760	-65.6	7.8	-57.8	-13.0	-44.8	Vertical
6	5640	-67.0	11.6	-55.4	-13.0	-42.4	Vertical
Highest Channel							
1	906.304	-82.1	13.9	-68.2	-13.0	-55.2	Horizontal
2	3800	-64.2	7.9	-56.2	-13.0	-43.2	Horizontal
3	5700	-67.2	11.4	-55.7	-13.0	-42.7	Horizontal
4	986.044	-81.3	14.6	-66.7	-13.0	-53.7	Vertical
5	3800	-64.3	7.9	-56.4	-13.0	-43.4	Vertical
6	5700	-67.1	11.4	-55.7	-13.0	-42.7	Vertical

5.8.2 LTE Band 4

LTE Band 4_ 20 MHz_ QPSK							
No.	Frequency (MHz)	SA Reading (dBm)	Correction factor (dB/m)	EIRP Result (dBm)	Limit (dBm)	Margin (dB)	Ant. Pol.
Lowest Channel							
1	850.76	-81.4	13.0	-68.5	-13.0	-55.5	Horizontal
2	3440	-65.6	6.5	-59.1	-13.0	-46.1	Horizontal
3	5160	-65.1	10.1	-55.0	-13.0	-42.0	Horizontal
4	965.474	-82.4	14.3	-68.1	-13.0	-55.1	Vertical
5	3440	-65.7	6.5	-59.2	-13.0	-46.2	Vertical
6	5160	-65.3	10.1	-55.2	-13.0	-42.2	Vertical
Middle Channel							
1	899.958	-82.5	13.9	-68.7	-13.0	-55.7	Horizontal
2	3465	-65.0	6.6	-58.4	-13.0	-45.4	Horizontal
3	5197.5	-65.6	10.3	-55.4	-13.0	-42.4	Horizontal
4	958.714	-82.6	14.3	-68.4	-13.0	-55.4	Vertical
5	3465	-64.0	6.6	-57.3	-13.0	-44.3	Vertical
6	5197.5	-65.6	10.3	-55.4	-13.0	-42.4	Vertical
Highest Channel							
1	919.132	-82.3	14.0	-68.3	-13.0	-55.3	Horizontal
2	3490	-66.0	6.7	-59.3	-13.0	-46.3	Horizontal
3	5235	-66.4	10.4	-56.0	-13.0	-43.0	Horizontal
4	881.184	-82.1	13.6	-68.5	-13.0	-55.5	Vertical
5	3490	-66.2	6.7	-59.5	-13.0	-46.5	Vertical
6	5235	-67.0	10.4	-56.5	-13.0	-43.5	Vertical

5.8.3 LTE Band 5

LTE Band 5_ 10 MHz_ QPSK							
No.	Frequency (MHz)	SA Reading (dBm)	Correction factor (dB/m)	EIRP Result (dBm)	Limit (dBm)	Margin (dB)	Ant. Pol.
Lowest Channel							
1	952	-86.9	43.0	-44.0	-13.0	-31.0	Horizontal
2	1658	-64.2	0.3	-63.9	-13.0	-50.9	Horizontal
3	2487	-67.2	3.6	-63.5	-13.0	-50.5	Horizontal
4	979.139	-87.1	43.1	-44.0	-13.0	-31.0	Vertical
5	1658	-64.8	0.3	-64.5	-13.0	-51.5	Vertical
6	2487	-65.9	3.6	-62.2	-13.0	-49.2	Vertical
Middle Channel							
1	952	-87.4	43.0	-44.4	-13.0	-31.4	Horizontal
2	1673	-64.7	0.4	-64.3	-13.0	-51.3	Horizontal
3	2509.5	-65.8	3.7	-62.1	-13.0	-49.1	Horizontal
4	912.695	-88.3	42.8	-45.5	-13.0	-32.5	Vertical
5	1673	-65.2	0.4	-64.8	-13.0	-51.8	Vertical
6	2509.5	-66.5	3.7	-62.7	-13.0	-49.7	Vertical
Highest Channel							
1	979.139	-87.6	43.1	-44.5	-13.0	-31.5	Horizontal
2	1688	-64.8	0.5	-64.3	-13.0	-51.3	Horizontal
3	2532	-65.6	3.8	-61.9	-13.0	-48.9	Horizontal
4	986.044	-87.2	43.3	-43.9	-13.0	-30.9	Vertical
5	1688	-64.0	0.5	-63.6	-13.0	-50.6	Vertical
6	2532	-66.3	3.8	-62.6	-13.0	-49.6	Vertical

5.8.4 LTE Band 7

LTE Band 7_ 20 MHz_ QPSK							
No.	Frequency (MHz)	SA Reading (dBm)	Correction factor (dB/m)	EIRP Result (dBm)	Limit (dBm)	Margin (dB)	Ant. Pol.
Lowest Channel							
1	932.141	-82.7	14.1	-68.6	-25.0	-43.6	Horizontal
2	5020	-63.8	9.6	-54.2	-25.0	-29.2	Horizontal
3	7530	-65.1	13.7	-51.5	-25.0	-26.5	Horizontal
4	899.958	-82.5	13.9	-68.6	-25.0	-43.6	Vertical
5	5020	-65.3	9.6	-55.8	-25.0	-30.8	Vertical
6	7530	-65.5	13.7	-51.8	-25.0	-26.8	Vertical
Middle Channel							
1	986.044	-82.8	14.6	-68.1	-25.0	-43.1	Horizontal
2	5070	-66.4	9.8	-56.7	-25.0	-31.7	Horizontal
3	7605	-66.4	13.8	-52.6	-25.0	-27.6	Horizontal
4	986.044	-82.3	14.6	-67.7	-25.0	-42.7	Vertical
5	5070	-66.4	9.8	-56.6	-25.0	-31.6	Vertical
6	7605	-66.4	13.8	-52.6	-25.0	-27.6	Vertical
Highest Channel							
1	965.474	-82.4	14.3	-68.1	-25.0	-43.1	Horizontal
2	5120	-66.1	10.0	-56.2	-25.0	-31.2	Horizontal
3	7680	-65.9	13.9	-52.1	-25.0	-27.1	Horizontal
4	932.141	-82.0	14.1	-67.9	-25.0	-42.9	Vertical
5	5120	-65.4	10.0	-55.4	-25.0	-30.4	Vertical
6	7680	-65.5	13.9	-51.7	-25.0	-26.7	Vertical

5.8.5 LTE Band 12

LTE Band 12_ 10 MHz_ QPSK							
No.	Frequency (MHz)	SA Reading (dBm)	Correction factor (dB/m)	EIRP Result (dBm)	Limit (dBm)	Margin (dB)	Ant. Pol.
Lowest Channel							
1	938.714	-87.9	42.9	-45.0	-13.0	-32.0	Horizontal
2	1408	-64.6	-0.9	-65.5	-13.0	-52.5	Horizontal
3	2112	-65.6	2.4	-63.2	-13.0	-50.2	Horizontal
4	986.044	-87.7	43.3	-44.5	-13.0	-31.5	Vertical
5	1408	-64.8	-0.9	-65.7	-13.0	-52.7	Vertical
6	2112	-66.3	2.4	-63.9	-13.0	-50.9	Vertical
Middle Channel							
1	979.139	-87.9	43.1	-44.7	-13.0	-31.7	Horizontal
2	1415	-62.4	-0.9	-63.3	-13.0	-50.3	Horizontal
3	2122.5	-63.5	2.5	-61.1	-13.0	-48.1	Horizontal
4	899.958	-88.5	42.8	-45.8	-13.0	-32.8	Vertical
5	1415	-64.5	-0.9	-65.4	-13.0	-52.4	Vertical
6	2122.5	-65.7	2.5	-63.2	-13.0	-50.2	Vertical
Highest Channel							
1	992.997	-88.1	43.4	-44.7	-13.0	-31.7	Horizontal
2	1422	-64.6	-0.8	-65.4	-13.0	-52.4	Horizontal
3	2133	-66.3	2.5	-63.9	-13.0	-50.9	Horizontal
4	952	-87.9	43.0	-44.9	-13.0	-31.9	Vertical
5	1422	-62.7	-0.8	-63.5	-13.0	-50.5	Vertical
6	2133	-65.1	2.5	-62.6	-13.0	-49.6	Vertical

5.8.6 LTE Band 13

LTE Band 13_ 5 MHz_ QPSK							
No.	Frequency (MHz)	SA Reading (dBm)	Correction factor (dB/m)	EIRP Result (dBm)	Limit (dBm)	Margin (dB)	Ant. Pol.
Lowest Channel							
1	965.474	-88.2	43.1	-45.2	-13.0	-32.2	Horizontal
2	1559	-62.2	-0.3	-62.5	-13.0	-49.5	Horizontal
3	2338.5	-66.3	3.1	-63.2	-13.0	-50.2	Horizontal
4	862.802	-85.9	42.1	-43.9	-13.0	-30.9	Vertical
5	1559	-65.6	-0.3	-65.9	-13.0	-52.9	Vertical
6	2338.5	-66.0	3.1	-62.9	-13.0	-49.9	Vertical
Highest Channel							
1	992.997	-87.4	43.4	-44.0	-13.0	-31.0	Horizontal
2	1569	-64.1	-0.3	-64.3	-13.0	-51.3	Horizontal
3	2353.5	-65.0	3.2	-61.8	-13.0	-48.8	Horizontal
4	899.958	-88.4	42.8	-45.6	-13.0	-32.6	Vertical
5	1569	-65.2	-0.3	-65.5	-13.0	-52.5	Vertical
6	2353.5	-65.1	3.2	-61.9	-13.0	-48.9	Vertical

LTE Band 13_ 10 MHz_ QPSK							
No.	Frequency (MHz)	SA Reading (dBm)	Correction factor (dB/m)	EIRP Result (dBm)	Limit (dBm)	Margin (dB)	Ant. Pol.
Middle Channel							
1	919.132	-88.4	42.9	-45.6	-13.0	-32.6	Horizontal
2	1564	-64.4	-0.3	-64.7	-13.0	-51.7	Horizontal
3	2346	-66.2	3.1	-63.1	-13.0	-50.1	Horizontal
4	986.044	-87.7	43.3	-44.4	-13.0	-31.4	Vertical
5	1564	-64.0	-0.3	-64.3	-13.0	-51.3	Vertical
6	2346	-66.5	3.1	-63.4	-13.0	-50.4	Vertical

5.8.7 LTE Band 17

LTE Band 17_ 10 MHz_ QPSK							
No.	Frequency (MHz)	SA Reading (dBm)	Correction factor (dB/m)	EIRP Result (dBm)	Limit (dBm)	Margin (dB)	Ant. Pol.
Lowest Channel							
1	945.334	-86.7	43.0	-43.8	-13.0	-30.8	Horizontal
2	1418	-64.1	-0.8	-64.9	-13.0	-51.9	Horizontal
3	2127	-64.4	2.5	-62.0	-13.0	-49.0	Horizontal
4	958.714	-87.5	43.0	-44.5	-13.0	-31.5	Vertical
5	1418	-63.8	-0.8	-64.6	-13.0	-51.6	Vertical
6	2127	-63.7	2.5	-61.3	-13.0	-48.3	Vertical
Middle Channel							
1	827.179	-88.3	41.6	-46.7	-13.0	-33.7	Horizontal
2	1420	-62.7	-0.8	-63.5	-13.0	-50.5	Horizontal
3	2130	-65.5	2.5	-63.1	-13.0	-50.1	Horizontal
4	992.997	-87.7	43.4	-44.3	-13.0	-31.3	Vertical
5	1420	-62.6	-0.8	-63.5	-13.0	-50.5	Vertical
6	2130	-64.2	2.5	-61.7	-13.0	-48.7	Vertical
Highest Channel							
1	958.714	-87.7	43.0	-44.6	-13.0	-31.6	Horizontal
2	1422	-64.9	-0.8	-65.8	-13.0	-52.8	Horizontal
3	2133	-65.3	2.5	-62.8	-13.0	-49.8	Horizontal
4	992.997	-87.7	43.4	-44.3	-13.0	-31.3	Vertical
5	1422	-64.5	-0.8	-65.4	-13.0	-52.4	Vertical
6	2133	-66.8	2.5	-64.3	-13.0	-51.3	Vertical

5.8.8 LTE Band 25

LTE Band 25_ 20 MHz_ QPSK							
No.	Frequency (MHz)	SA Reading (dBm)	Correction factor (dB/m)	EIRP Result (dBm)	Limit (dBm)	Margin (dB)	Ant. Pol.
Lowest Channel							
1	945.334	-82.7	14.2	-68.5	-13.0	-55.5	Horizontal
2	3720	-64.8	7.7	-57.1	-13.0	-44.1	Horizontal
3	5580	-67.5	11.7	-55.8	-13.0	-42.8	Horizontal
4	979.139	-82.5	14.4	-68.0	-13.0	-55.0	Vertical
5	3720	-64.6	7.7	-56.9	-13.0	-43.9	Vertical
6	5580	-66.0	11.7	-54.3	-13.0	-41.3	Vertical
Middle Channel							
1	992.997	-82.8	14.8	-68.0	-13.0	-55.0	Horizontal
2	3760	-63.6	7.8	-55.8	-13.0	-42.8	Horizontal
3	5640	-64.9	11.6	-53.4	-13.0	-40.4	Horizontal
4	887.398	-81.8	13.7	-68.1	-13.0	-55.1	Vertical
5	3760	-64.3	7.8	-56.5	-13.0	-43.5	Vertical
6	5640	-66.1	11.6	-54.5	-13.0	-41.5	Vertical
Highest Channel							
1	925.613	-82.3	14.1	-68.2	-13.0	-55.2	Horizontal
2	3810	-66.3	8.0	-58.3	-13.0	-45.3	Horizontal
3	5715	-69.0	11.4	-57.6	-13.0	-44.6	Horizontal
4	868.886	-81.2	13.2	-68.0	-13.0	-55.0	Vertical
5	3810	-65.9	8.0	-57.9	-13.0	-44.9	Vertical
6	5715	-67.4	11.4	-56.0	-13.0	-43.0	Vertical

5.8.9 LTE Band 26

LTE Band 26_ 15 MHz_ QPSK							
No.	Frequency (MHz)	SA Reading (dBm)	Correction factor (dB/m)	EIRP Result (dBm)	Limit (dBm)	Margin (dB)	Ant. Pol.
Lowest Channel							
1	952	-87.7	43.0	-44.7	-13.0	-31.7	Horizontal
2	1663	-66.1	0.3	-65.8	-13.0	-52.8	Horizontal
3	2494.5	-68.5	3.7	-64.8	-13.0	-51.8	Horizontal
4	899.958	-86.9	42.8	-44.1	-13.0	-31.1	Vertical
5	1663	-66.2	0.3	-65.9	-13.0	-52.9	Vertical
6	2494.5	-68.1	3.7	-64.4	-13.0	-51.4	Vertical
Middle Channel							
1	979.139	-88.1	43.1	-45.0	-13.0	-32.0	Horizontal
2	1653	-64.5	0.2	-64.3	-13.0	-51.3	Horizontal
3	2479.5	-68.4	3.6	-64.7	-13.0	-51.7	Horizontal
4	952	-87.9	43.0	-44.9	-13.0	-31.9	Vertical
5	1653	-65.5	0.2	-65.3	-13.0	-52.3	Vertical
6	2479.5	-67.4	3.6	-63.8	-13.0	-50.8	Vertical
Highest Channel							
1	965.474	-87.6	43.1	-44.5	-13.0	-31.5	Horizontal
2	1683	-65.2	0.4	-64.8	-13.0	-51.8	Horizontal
3	2524.5	-65.8	3.7	-62.0	-13.0	-49.0	Horizontal
4	919.132	-87.5	42.9	-44.6	-13.0	-31.6	Vertical
5	1683	-66.4	0.4	-66.0	-13.0	-53.0	Vertical
6	2524.5	-69.9	3.7	-66.2	-13.0	-53.2	Vertical

5.8.10 LTE Band 26 (Part 90S)

LTE Band 26_ 5 MHz_ QPSK							
No.	Frequency (MHz)	SA Reading (dBm)	Correction factor (dB/m)	EIRP Result (dBm)	Limit (dBm)	Margin (dB)	Ant. Pol.
Highest Channel							
1	952	-88.2	43.0	-45.2	-13.0	-32.2	Horizontal
2	1643	-65.4	0.2	-65.2	-13.0	-52.2	Horizontal
3	2464.5	-67.7	3.6	-64.2	-13.0	-51.2	Horizontal
4	972.283	-88.2	43.1	-45.1	-13.0	-32.1	Vertical
5	1643	-65.1	0.2	-64.9	-13.0	-51.9	Vertical
6	2464.5	-67.7	3.6	-64.2	-13.0	-51.2	Vertical

LTE Band 26_ 10 MHz_ QPSK							
No.	Frequency (MHz)	SA Reading (dBm)	Correction factor (dB/m)	EIRP Result (dBm)	Limit (dBm)	Margin (dB)	Ant. Pol.
Middle Channel							
1	925.613	-87.7	42.9	-44.8	-13.0	-31.8	Horizontal
2	1638	-65.4	0.1	-65.3	-13.0	-52.3	Horizontal
3	2457	-66.8	3.5	-63.3	-13.0	-50.3	Horizontal
4	965.474	-87.9	43.1	-44.8	-13.0	-31.8	Vertical
5	1638	-65.7	0.1	-65.5	-13.0	-52.5	Vertical
6	2457	-67.5	3.5	-64.0	-13.0	-51.0	Vertical

LTE Band 26_ 15 MHz_ QPSK							
No.	Frequency (MHz)	SA Reading (dBm)	Correction factor (dB/m)	EIRP Result (dBm)	Limit (dBm)	Margin (dB)	Ant. Pol.
Lowest Channel							
1	932.141	-88.0	42.9	-45.1	-13.0	-32.1	Horizontal
2	1633	-64.4	0.1	-64.3	-13.0	-51.3	Horizontal
3	2449.5	-66.8	3.5	-63.3	-13.0	-50.3	Horizontal
4	965.474	-87.3	43.1	-44.2	-13.0	-31.2	Vertical
5	1633	-66.1	0.1	-66.0	-13.0	-53.0	Vertical
6	2449.5	-68.7	3.5	-65.2	-13.0	-52.2	Vertical

5.8.11 LTE Band 30

LTE Band 30_ 5 MHz_ QPSK							
No.	Frequency (MHz)	SA Reading (dBm)	Correction factor (dB/m)	EIRP Result (dBm)	Limit (dBm)	Margin (dB)	Ant. Pol.
Lowest Channel							
1	899.958	-82.6	13.9	-68.7	-40.0	-28.7	Horizontal
2	4615	-64.9	9.3	-55.6	-40.0	-15.6	Horizontal
3	6922.5	-66.4	12.8	-53.6	-40.0	-13.6	Horizontal
4	992.997	-82.7	14.8	-67.9	-40.0	-27.9	Vertical
5	4615	-64.5	9.3	-55.2	-40.0	-15.2	Vertical
6	6922.5	-65.8	12.8	-53.0	-40.0	-13.0	Vertical
Middle Channel							
1	912.695	-82.5	14.0	-68.5	-40.0	-28.5	Horizontal
2	4620	-64.9	9.3	-55.6	-40.0	-15.6	Horizontal
3	6930	-64.8	12.8	-52.1	-40.0	-12.1	Horizontal
4	899.958	-82.1	13.9	-68.2	-40.0	-28.2	Vertical
5	4620	-63.6	9.3	-54.4	-40.0	-14.4	Vertical
6	6930	-68.4	12.8	-55.6	-40.0	-15.6	Vertical
Highest Channel							
1	972.283	-81.9	14.4	-67.5	-40.0	-27.5	Horizontal
2	4625	-64.2	9.3	-54.9	-40.0	-14.9	Horizontal
3	6937.5	-66.3	12.8	-53.5	-40.0	-13.5	Horizontal
4	868.886	-80.4	13.2	-67.2	-40.0	-27.2	Vertical
5	4625	-64.6	9.3	-55.4	-40.0	-15.4	Vertical
6	6937.5	-65.4	12.8	-52.7	-40.0	-12.7	Vertical

LTE Band 30_ 10 MHz_ QPSK							
No.	Frequency (MHz)	SA Reading (dBm)	Correction factor (dB/m)	EIRP Result (dBm)	Limit (dBm)	Margin (dB)	Ant. Pol.
Middle Channel							
1	875.013	-81.9	13.5	-68.4	-40.0	-28.4	Horizontal
2	4620	-65.1	9.3	-55.8	-40.0	-15.8	Horizontal
3	6930	-65.7	12.8	-52.9	-40.0	-12.9	Horizontal
4	979.139	-82.5	14.4	-68.1	-40.0	-28.1	Vertical
5	4620	-65.0	9.3	-55.7	-40.0	-15.7	Vertical
6	6930	-66.0	12.8	-53.2	-40.0	-13.2	Vertical

5.8.12 LTE Band 41

LTE Band 41_ 20 MHz_ QPSK							
No.	Frequency (MHz)	SA Reading (dBm)	Correction factor (dB/m)	EIRP Result (dBm)	Limit (dBm)	Margin (dB)	Ant. Pol.
Lowest Channel							
1	881.184	-81.4	13.6	-67.8	-13.0	-54.8	Horizontal
2	5012	-65.1	9.6	-55.6	-25.0	-30.6	Horizontal
3	7518	-65.8	13.7	-52.2	-25.0	-27.2	Horizontal
4	945.334	-81.1	14.2	-66.9	-13.0	-53.9	Vertical
5	5012	-65.3	9.6	-55.8	-25.0	-30.8	Vertical
6	7518	-66.1	13.7	-52.5	-25.0	-27.5	Vertical
Middle Channel							
1	887.398	-81.9	13.7	-68.2	-13.0	-55.2	Horizontal
2	5186	-64.6	10.2	-54.4	-25.0	-29.4	Horizontal
3	7779	-66.1	14.0	-52.2	-25.0	-27.2	Horizontal
4	868.886	-81.8	13.2	-68.6	-13.0	-55.6	Vertical
5	5186	-64.5	10.2	-54.3	-25.0	-29.3	Vertical
6	7779	-67.2	14.0	-53.2	-25.0	-28.2	Vertical
Highest Channel							
1	938.714	-82.0	14.2	-67.8	-13.0	-54.8	Horizontal
2	5360	-65.2	11.1	-54.1	-25.0	-29.1	Horizontal
3	8040	-68.9	14.3	-54.6	-25.0	-29.6	Horizontal
4	912.695	-81.8	14.0	-67.8	-13.0	-54.8	Vertical
5	5360	-65.7	11.1	-54.6	-25.0	-29.6	Vertical
6	8040	-69.7	14.3	-55.4	-25.0	-30.4	Vertical

5.8.13 LTE Band 66

LTE Band 66_ 20 MHz_ QPSK							
No.	Frequency (MHz)	SA Reading (dBm)	Correction factor (dB/m)	EIRP Result (dBm)	Limit (dBm)	Margin (dB)	Ant. Pol.
Lowest Channel							
1	992.997	-82.0	14.8	-67.2	-13.0	-54.2	Horizontal
2	3440	-65.2	6.5	-58.7	-13.0	-45.7	Horizontal
3	5160	-65.4	10.1	-55.3	-13.0	-42.3	Horizontal
4	875.013	-82.3	13.5	-68.8	-13.0	-55.8	Vertical
5	3440	-65.2	6.5	-58.6	-13.0	-45.6	Vertical
6	5160	-65.8	10.1	-55.7	-13.0	-42.7	Vertical
Middle Channel							
1	938.714	-82.8	14.2	-68.6	-13.0	-55.6	Horizontal
2	3490	-64.4	6.7	-57.7	-13.0	-44.7	Horizontal
3	5235	-63.4	10.4	-52.9	-13.0	-39.9	Horizontal
4	938.714	-82.0	14.2	-67.8	-13.0	-54.8	Vertical
5	3490	-64.2	6.7	-57.4	-13.0	-44.4	Vertical
6	5235	-64.9	10.4	-54.5	-13.0	-41.5	Vertical
Highest Channel							
1	912.695	-82.2	14.0	-68.2	-13.0	-55.2	Horizontal
2	3540	-64.3	6.9	-57.4	-13.0	-44.4	Horizontal
3	5310	-65.6	10.9	-54.8	-13.0	-41.8	Horizontal
4	912.695	-82.4	14.0	-68.4	-13.0	-55.4	Vertical
5	3540	-64.4	6.9	-57.4	-13.0	-44.4	Vertical
6	5310	-65.9	10.9	-55.0	-13.0	-42.0	Vertical

5.8.14 LTE Band 71

LTE Band 71_ 20 MHz_ QPSK							
No.	Frequency (MHz)	SA Reading (dBm)	Correction factor (dB/m)	EIRP Result (dBm)	Limit (dBm)	Margin (dB)	Ant. Pol.
Lowest Channel							
1	938.714	-87.8	42.9	-44.9	-13.0	-31.9	Horizontal
2	1346	-63.1	-1.1	-64.2	-13.0	-51.2	Horizontal
3	2019	-67.0	2.2	-64.8	-13.0	-51.8	Horizontal
4	945.334	-87.9	43.0	-44.9	-13.0	-31.9	Vertical
5	1346	-63.0	-1.1	-64.0	-13.0	-51.0	Vertical
6	2019	-66.2	2.2	-64.0	-13.0	-51.0	Vertical
Middle Channel							
1	992.997	-86.5	43.4	-43.1	-13.0	-30.1	Horizontal
2	1361	-63.7	-1.0	-64.7	-13.0	-51.7	Horizontal
3	2041.5	-65.8	2.3	-63.5	-13.0	-50.5	Horizontal
4	965.474	-87.1	43.1	-44.0	-13.0	-31.0	Vertical
5	1361	-63.9	-1.0	-64.9	-13.0	-51.9	Vertical
6	2041.5	-65.9	2.3	-63.6	-13.0	-50.6	Vertical
Highest Channel							
1	952	-87.9	43.0	-44.9	-13.0	-31.9	Horizontal
2	1381	-64.8	-1.0	-65.7	-13.0	-52.7	Horizontal
3	2071.5	-66.2	2.3	-63.9	-13.0	-50.9	Horizontal
4	932.141	-87.7	42.9	-44.8	-13.0	-31.8	Vertical
5	1381	-63.6	-1.0	-64.6	-13.0	-51.6	Vertical
6	2071.5	-65.4	2.3	-63.1	-13.0	-50.1	Vertical

Remark:

1. Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain, the value was added to Original Receiver Reading by the software automatically.
2. Result = Reading + Correct Factor.
3. Margin = Result – Limit

5.9 FREQUENCY STABILITY

Test Requirement: FCC 47 CFR Part 2.1055 & FCC 47 CFR Part 22.355 & FCC 47 CFR Part 24.235 & FCC 47 CFR Part 27.54

Test Method: ANSI C63.26-2015 & KDB 971168 D01v03r01

Limits:

FCC 47 CFR Part 22.355, FCC 47 CFR Par 90.213

The carrier frequency shall not depart from the reference frequency in excess of ±2.5 ppm for mobile stations.

FCC 47 CFR Part 24.235, FCC 47 CFR Part 27.54

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

Test Setup: Refer to section 4.2.2 for details.

Test Procedures:

1) Use CMW 500 with Frequency Error measurement capability.
   a) Temp. = −30° to + 50°Ca
   b) Voltage =low voltage, 3.4 Vdc, Normal, 3.85 Vdc and High voltage, 4.4 Vdc.
2) Frequency Stability vs Temperature:

The EUT is place inside a temperature chamber. The temperature is set to 20ºC and allowed to stabilize. After sufficient soak time, the transmitting frequency error is measured. The temperature is increased by 10 degrees, allowed to stabilize and soak, and then the measurement is repeated. This is repeated until +50ºC is reached.

3) Frequency Stability vs Voltage:

The peak frequency error is recorded (worst-case).

Equipment Used: Refer to section 3 for details.

Test Result: Pass

Modulation	Channel/ Frequency (MHz)	Voltage (Vdc)	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Pass/ Fail
LTE Band 2 / 20MHz / Full RB							
QPSK	18900 / 1880.0	VL	TN	-3	-0.0016	N/A	Pass
		VN		-4	-0.0021		Pass
		VH		-3	-0.0016		Pass
		VN	50	-4	-0.0021		Pass
			40	-2	-0.0011		Pass
			30	-4	-0.0021		Pass
			20	-6	-0.0032		Pass
			10	-7	-0.0037		Pass
			0	-4	-0.0021		Pass
			-10	-5	-0.0027		Pass
			-20	-2	-0.0011		Pass
			-30	-4	-0.0021		Pass

Modulation	Channel/ Frequency (MHz)	Voltage (Vdc)	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Pass/ Fail
LTE Band 4 / 20MHz / Full RB							
QPSK	20175 / 1732.5	VL	TN	-5	-0.0029	N/A	Pass
		VN		-5	-0.0029		Pass
		VH		-4	-0.0023		Pass
		VN	50	-4	-0.0023		Pass
			40	-5	-0.0029		Pass
			30	-5	-0.0029		Pass
			20	-6	-0.0035		Pass
			10	-3	-0.0017		Pass
			0	-8	-0.0046		Pass
			-10	-6	-0.0035		Pass
			-20	-8	-0.0046		Pass
			-30	-6	-0.0035		Pass

Modulation	Channel/ Frequency (MHz)	Voltage (Vdc)	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Pass/ Fail
LTE Band 5 / 10MHz / Full RB							
QPSK	20525 / 836.5	VL	TN	-7	-0.0084	± 2.5	Pass
		VN		-6	-0.0072	± 2.5	Pass
		VH		-7	-0.0084	± 2.5	Pass
		VN	50	-8	-0.0096	± 2.5	Pass
			40	-9	-0.0108	± 2.5	Pass
			30	-8	-0.0096	± 2.5	Pass
			20	-4	-0.0048	± 2.5	Pass
			10	-5	-0.0060	± 2.5	Pass
			0	-9	-0.0108	± 2.5	Pass
			-10	-8	-0.0096	± 2.5	Pass
			-20	-7	-0.0084	± 2.5	Pass
			-30	-7	-0.0084	± 2.5	Pass

Modulation	Channel/ Frequency (MHz)	Voltage (Vdc)	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Pass/ Fail
LTE Band 7 / 20MHz / Full RB							
QPSK	21100 / 2535	VL	TN	-19	-0.0075	N/A	Pass
		VN		-17	-0.0067		Pass
		VH		-16	-0.0063		Pass
		VN	50	-18	-0.0071		Pass
			40	-15	-0.0059		Pass
			30	-20	-0.0079		Pass
			20	-20	-0.0079		Pass
			10	-19	-0.0075		Pass
			0	-22	-0.0087		Pass
			-10	-17	-0.0067		Pass
			-20	-22	-0.0087		Pass
			-30	-19	-0.0075		Pass

Modulation	Channel/ Frequency (MHz)	Voltage (Vdc)	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Pass/ Fail
LTE Band 12 / 10MHz / Full RB							
QPSK	23095 / 707.5	VL	TN	-5	-0.0071	N/A	Pass
		VN		-7	-0.0099		Pass
		VH		-6	-0.0085		Pass
		VN	50	-7	-0.0099		Pass
			40	-7	-0.0099		Pass
			30	-7	-0.0099		Pass
			20	-6	-0.0085		Pass
			10	-5	-0.0071		Pass
			0	-7	-0.0099		Pass
			-10	-6	-0.0085		Pass
			-20	-6	-0.0085		Pass
			-30	-6	-0.0085		Pass

Modulation	Channel/ Frequency (MHz)	Voltage (Vdc)	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Pass/ Fail
LTE Band 13 / 10MHz / Full RB							
QPSK	23230 / 782	VL	TN	-12	-0.0153	N/A	Pass
		VN		-13	-0.0166		Pass
		VH		-15	-0.0192		Pass
		VN	50	-11	-0.0141		Pass
			40	-13	-0.0166		Pass
			30	-11	-0.0141		Pass
			20	-12	-0.0153		Pass
			10	-10	-0.0128		Pass
			0	-11	-0.0141		Pass
			-10	-9	-0.0115		Pass
			-20	-12	-0.0153		Pass
			-30	-14	-0.0179		Pass

Modulation	Channel/ Frequency (MHz)	Voltage (Vdc)	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Pass/ Fail
LTE Band 17 / 10MHz / Full RB							
QPSK	23790 / 710	VL	TN	-8	-0.0113	N/A	Pass
		VN		-9	-0.0127		Pass
		VH		-7	-0.0099		Pass
		VN	50	-8	-0.0113		Pass
			40	-9	-0.0127		Pass
			30	-9	-0.0127		Pass
			20	-7	-0.0099		Pass
			10	-7	-0.0099		Pass
			0	-8	-0.0113		Pass
			-10	-7	-0.0099		Pass
			-20	-9	-0.0127		Pass
			-30	-8	-0.0113		Pass

Modulation	Channel/ Frequency (MHz)	Voltage (Vdc)	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Pass/ Fail
LTE Band 25 / 20MHz / Full RB							
QPSK	26340 / 1880.0	VL	TN	-13	-0.0069	N/A	Pass
		VN		-13	-0.0069		Pass
		VH		-14	-0.0074		Pass
		VN	50	-17	-0.0090		Pass
			40	-11	-0.0059		Pass
			30	-11	-0.0059		Pass
			20	-14	-0.0074		Pass
			10	-12	-0.0064		Pass
			0	-17	-0.0090		Pass
			-10	-13	-0.0069		Pass
			-20	-11	-0.0059		Pass
			-30	-12	-0.0064		Pass

Modulation	Channel/ Frequency (MHz)	Voltage (Vdc)	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Pass/ Fail
LTE Band 26 / 15MHz / Full RB							
QPSK	26915 / 836.5	VL	TN	-5	-0.0060	± 2.5	Pass
		VN		-5	-0.0060	± 2.5	Pass
		VH		-7	-0.0084	± 2.5	Pass
		VN	50	-6	-0.0072	± 2.5	Pass
			40	-6	-0.0072	± 2.5	Pass
			30	-7	-0.0084	± 2.5	Pass
			20	-8	-0.0096	± 2.5	Pass
			10	-5	-0.0060	± 2.5	Pass
			0	-6	-0.0072	± 2.5	Pass
			-10	-4	-0.0048	± 2.5	Pass
			-20	-7	-0.0084	± 2.5	Pass
			-30	-3	-0.0036	± 2.5	Pass

Modulation	Channel/ Frequency (MHz)	Voltage (Vdc)	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Pass/ Fail
LTE Band 26 / 10MHz / Full RB (Part 90S)							
QPSK	26740 / 819	VL	TN	-6	-0.0073	± 2.5	Pass
		VN		-7	-0.0085	± 2.5	Pass
		VH		-8	-0.0098	± 2.5	Pass
		VN	50	-5	-0.0061	± 2.5	Pass
			40	-7	-0.0085	± 2.5	Pass
			30	-9	-0.0110	± 2.5	Pass
			20	-5	-0.0061	± 2.5	Pass
			10	-10	-0.0122	± 2.5	Pass
			0	-8	-0.0098	± 2.5	Pass
			-10	-7	-0.0085	± 2.5	Pass
			-20	-5	-0.0061	± 2.5	Pass
			-30	-7	-0.0085	± 2.5	Pass

Modulation	Channel/ Frequency (MHz)	Voltage (Vdc)	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Pass/ Fail
LTE Band 30 / 10MHz / Full RB							
QPSK	27710 /2310	VL	TN	-28	-0.0121	N/A	Pass
		VN		-25	-0.0108		Pass
		VH		-28	-0.0121		Pass
		VN	50	-23	-0.0100		Pass
			40	-29	-0.0126		Pass
			30	-27	-0.0117		Pass
			20	-25	-0.0108		Pass
			10	-26	-0.0113		Pass
			0	-24	-0.0104		Pass
			-10	-30	-0.0130		Pass
			-20	-29	-0.0126		Pass
			-30	-29	-0.0126		Pass

Modulation	Channel/ Frequency (MHz)	Voltage (Vdc)	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Pass/ Fail
LTE Band 41 / 20MHz / Full RB							
QPSK	40620 / 2593	VL	TN	-10	-0.0039	N/A	Pass
		VN		-13	-0.0050		Pass
		VH		-11	-0.0042		Pass
		VN	50	-13	-0.0050		Pass
			40	-11	-0.0042		Pass
			30	-12	-0.0046		Pass
			20	-9	-0.0035		Pass
			10	-12	-0.0046		Pass
			0	-13	-0.0050		Pass
			-10	-12	-0.0046		Pass
			-20	-12	-0.0046		Pass
			-30	-11	-0.0042		Pass

Modulation	Channel/ Frequency (MHz)	Voltage (Vdc)	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Pass/ Fail
LTE Band 66 / 20MHz / Full RB							
QPSK	132322 /1745	VL	TN	-9	-0.0052	N/A	Pass
		VN		-10	-0.0057		Pass
		VH		-10	-0.0057		Pass
		VN	50	-8	-0.0046		Pass
			40	-9	-0.0052		Pass
			30	-8	-0.0046		Pass
			20	-7	-0.0040		Pass
			10	-9	-0.0052		Pass
			0	-7	-0.0040		Pass
			-10	-12	-0.0069		Pass
			-20	-10	-0.0057		Pass
			-30	-11	-0.0063		Pass

Modulation	Channel/ Frequency (MHz)	Voltage (Vdc)	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Pass/ Fail
LTE Band 71 / 20MHz / Full RB							
QPSK	133322 / 683.0	VL	TN	-10	-0.0146	N/A	Pass
		VN		-11	-0.0161		Pass
		VH		-9	-0.0132		Pass
		VN	50	-13	-0.0190		Pass
			40	-12	-0.0176		Pass
			30	-9	-0.0132		Pass
			20	-11	-0.0161		Pass
			10	-13	-0.0190		Pass
			0	-10	-0.0146		Pass
			-10	-10	-0.0146		Pass
			-20	-10	-0.0146		Pass
			-30	-11	-0.0161		Pass

APPENDIX 1 PHOTOS OF TEST SETUP

See test photos attached in Appendix 1 for the actual connections between Product and support equipment.

APPENDIX 2 PHOTOS OF EUT CONSTRUCTIONAL DETAILS

Refer to Appendix 2 for EUT external and internal photos.

*** End of Report ***

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