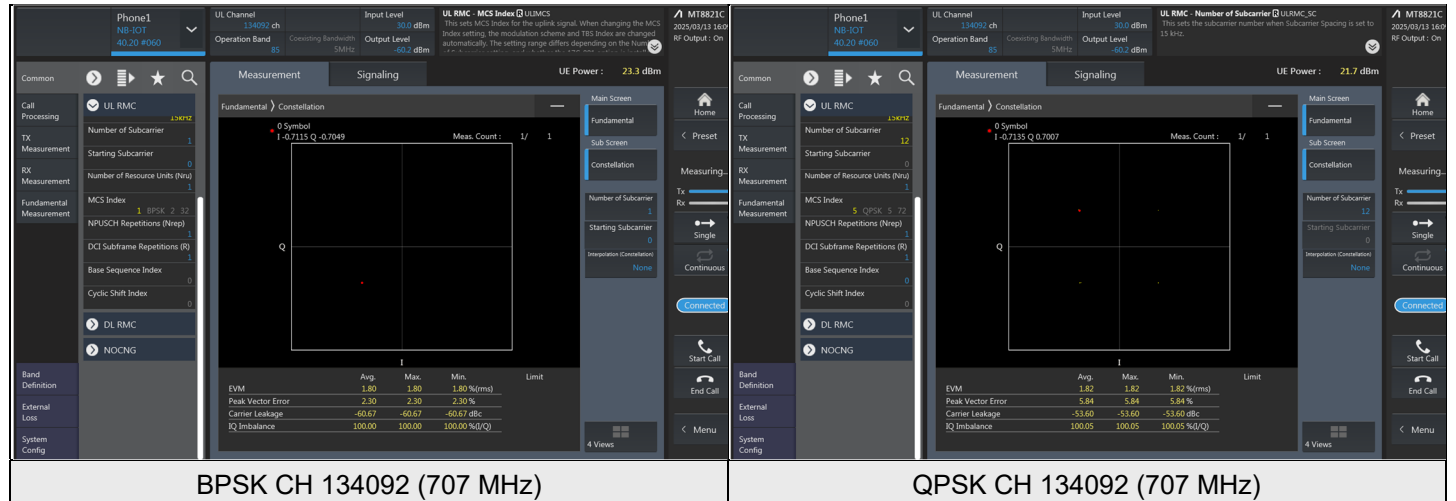


7.2.13 NB-IoT Band 85

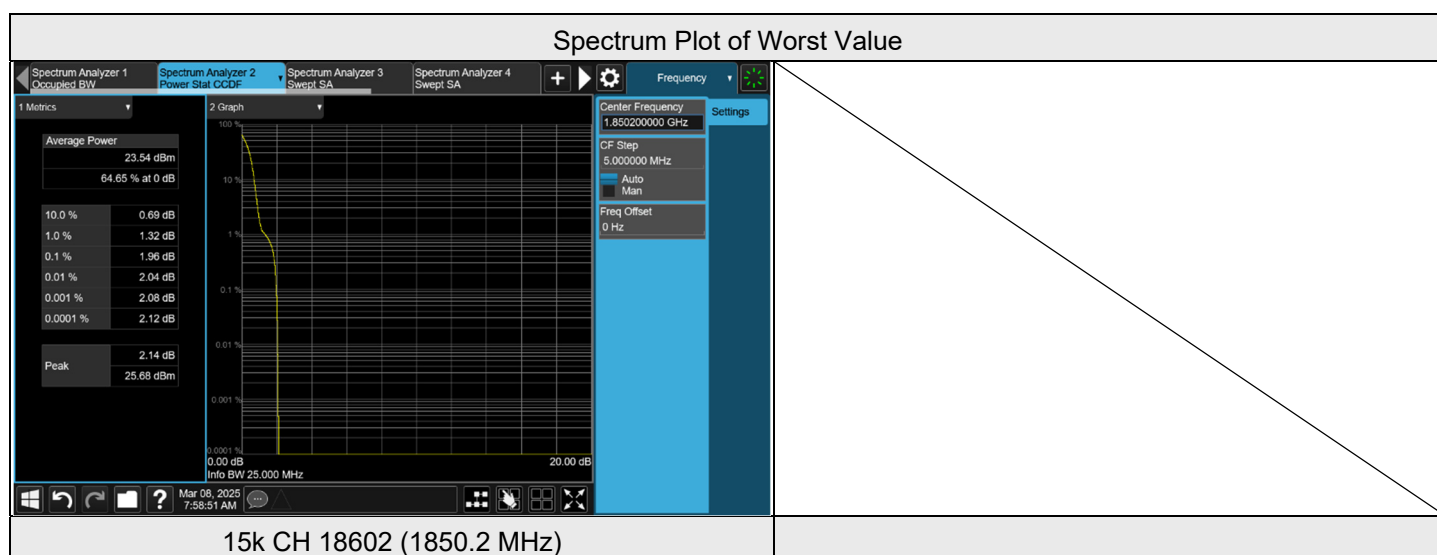


7.3 Peak to Average Ratio

Input Power:	3.8 Vdc	Environmental Conditions:	22°C, 75% RH	Tested By:	Match Tsui
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7.3.1 NB-IoT Band 2

NB-IoT Band 2					
Sub-carrier	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
3.75k	18602	1850.2	1.78	13	PASS
3.75k	18900	1880	1.75	13	PASS
3.75k	19198	1909.8	1.64	13	PASS
15k	18602	1850.2	1.96	13	PASS
15k	18900	1880	1.92	13	PASS
15k	19198	1909.8	1.93	13	PASS

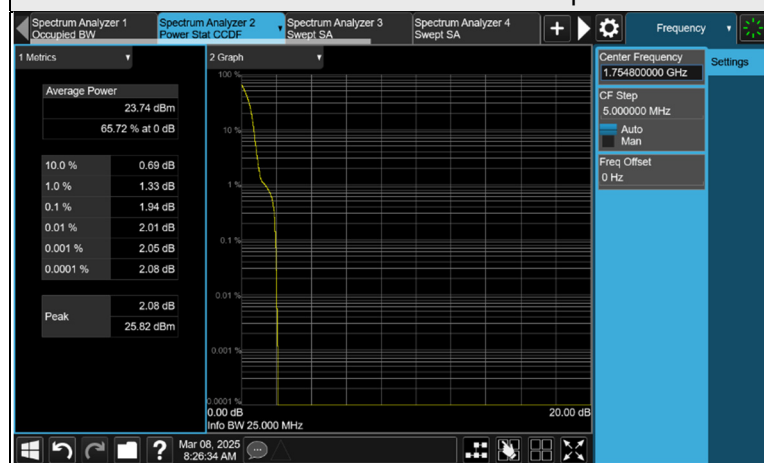


7.3.2 NB-IoT Band 4

NB-IoT Band 4

Sub-carrier	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
3.75k	19952	1710.2	1.75	13	PASS
3.75k	20175	1732.5	1.63	13	PASS
3.75k	20398	1754.8	1.69	13	PASS
15k	19952	1710.2	1.9	13	PASS
15k	20175	1732.5	1.91	13	PASS
15k	20398	1754.8	1.94	13	PASS

Spectrum Plot of Worst Value



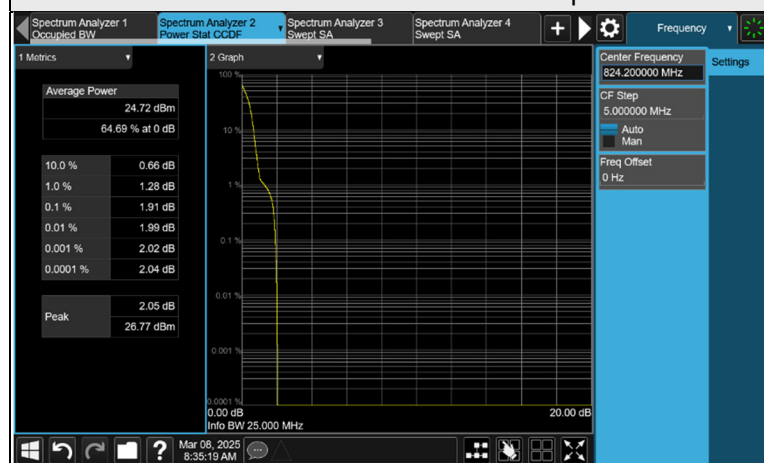
15k CH 20398 (1754.8 MHz)

7.3.3 NB-IoT Band 5

NB-IoT Band 5

Sub-carrier	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
3.75k	20402	824.2	1.61	13	PASS
3.75k	20525	836.5	1.6	13	PASS
3.75k	20648	848.8	1.6	13	PASS
15k	20402	824.2	1.91	13	PASS
15k	20525	836.5	1.89	13	PASS
15k	20648	848.8	1.88	13	PASS

Spectrum Plot of Worst Value



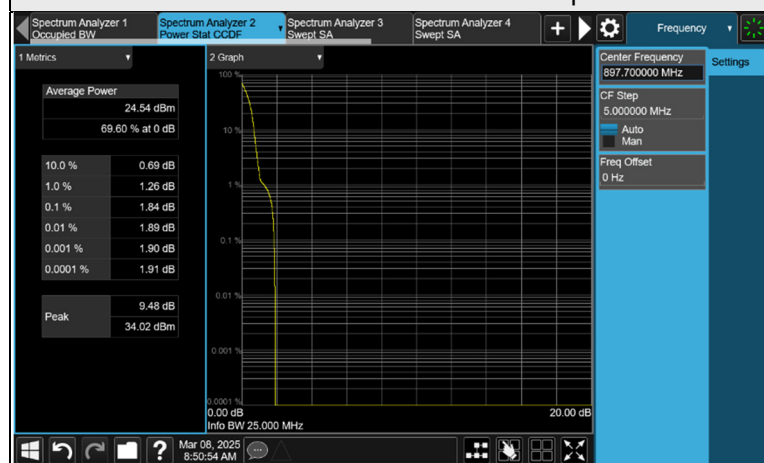
15k CH 20402 (824.2 MHz)

7.3.4 NB-IoT Band 8

NB-IoT Band 8

Sub-carrier	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
3.75k	21627	897.7	1.62	13	PASS
3.75k	21640	899	1.56	13	PASS
3.75k	21653	900.3	1.53	13	PASS
15k	21627	897.7	1.84	13	PASS
15k	21640	899	1.78	13	PASS
15k	21653	900.3	1.76	13	PASS

Spectrum Plot of Worst Value



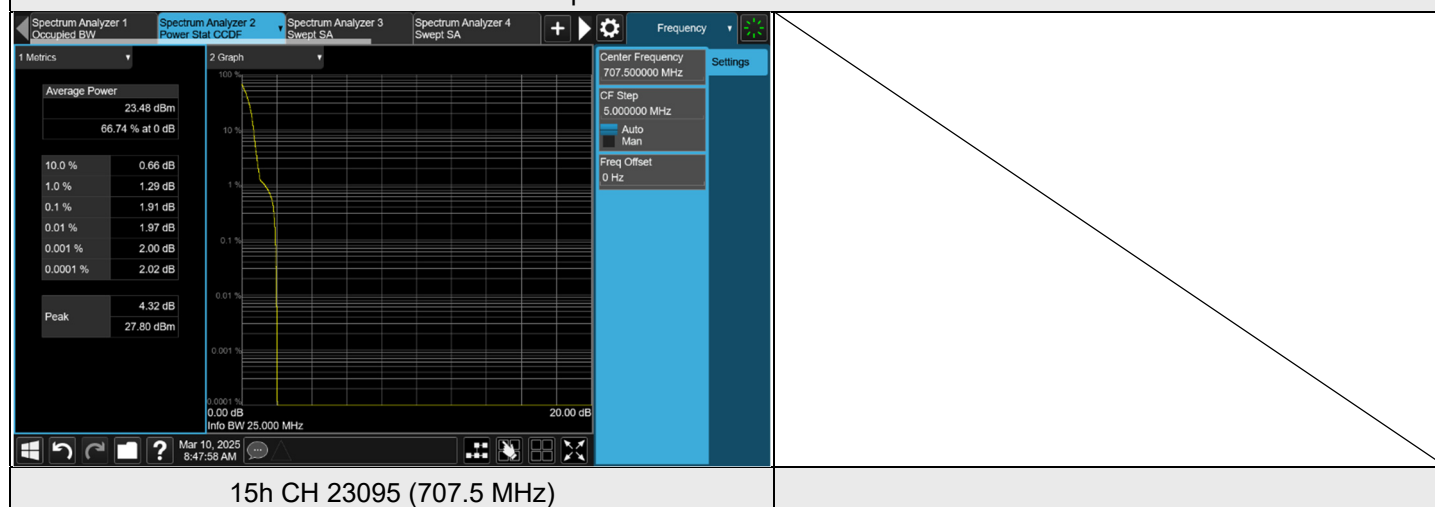
15k CH 21627 (897.7 MHz)

7.3.5 NB-IoT Band 12

NB-IoT Band 12

Sub-carrier	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
3.75k	23012	699.2	1.52	13	PASS
3.75k	23095	707.5	1.64	13	PASS
3.75k	23178	715.8	1.61	13	PASS
15k	23012	699.2	1.89	13	PASS
15k	23095	707.5	1.91	13	PASS
15k	23178	715.8	1.9	13	PASS

Spectrum Plot of Worst Value

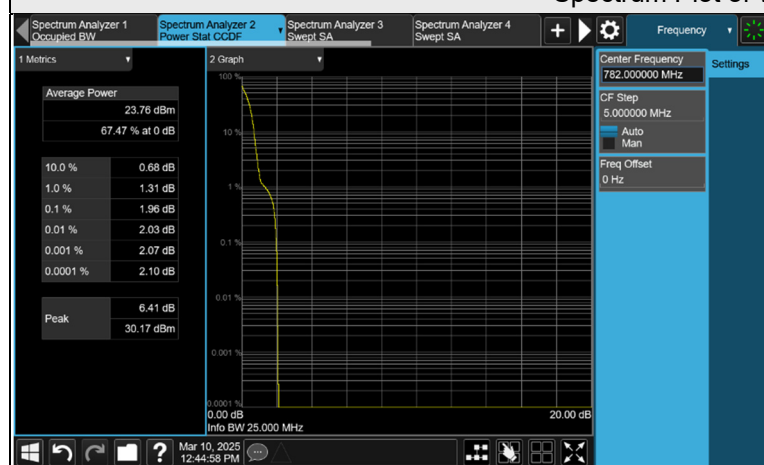


7.3.6 NB-IoT Band 13

NB-IoT Band 13

Sub-carrier	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
3.75k	23182	777.2	1.73	13	PASS
3.75k	23230	782	1.62	13	PASS
3.75k	23278	786.8	1.59	13	PASS
15k	23182	777.2	1.92	13	PASS
15k	23230	782	1.96	13	PASS
15k	23278	786.8	1.96	13	PASS

Spectrum Plot of Worst Value



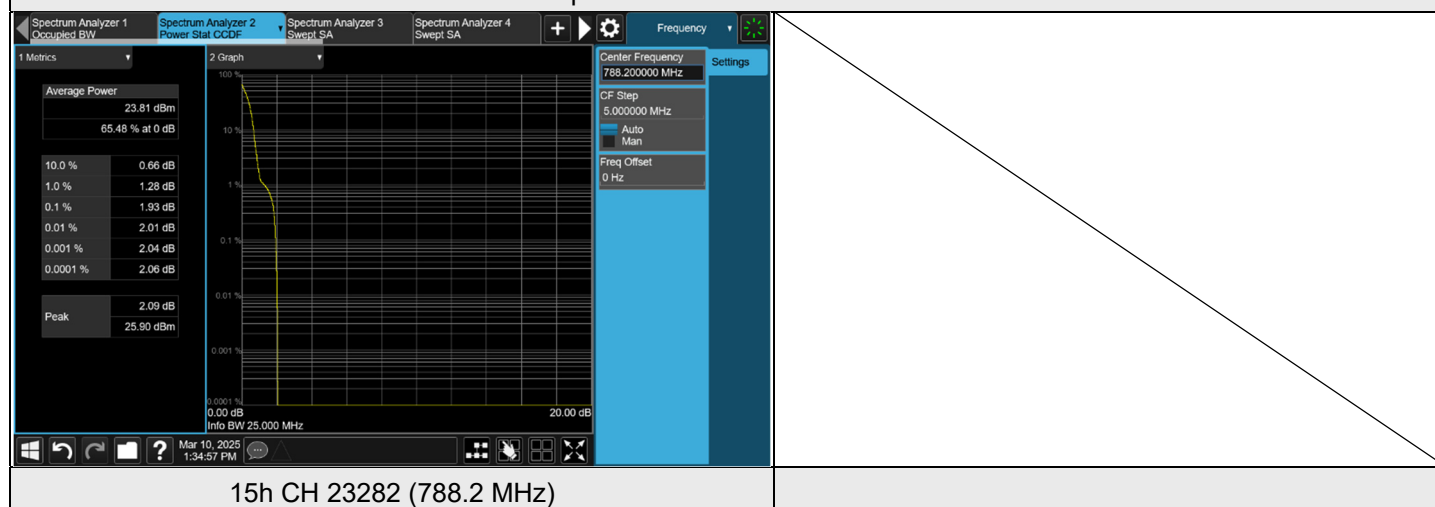
15k CH 23230 (782 MHz)

7.3.7 NB-IoT Band 14

NB-IoT Band 14

Sub-carrier	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
3.75k	23282	788.2	1.59	13	PASS
3.75k	23300	793	1.64	13	PASS
3.75k	23378	797.8	1.6	13	PASS
15k	23282	788.2	1.93	13	PASS
15k	23300	793	1.92	13	PASS
15k	23378	797.8	1.93	13	PASS

Spectrum Plot of Worst Value

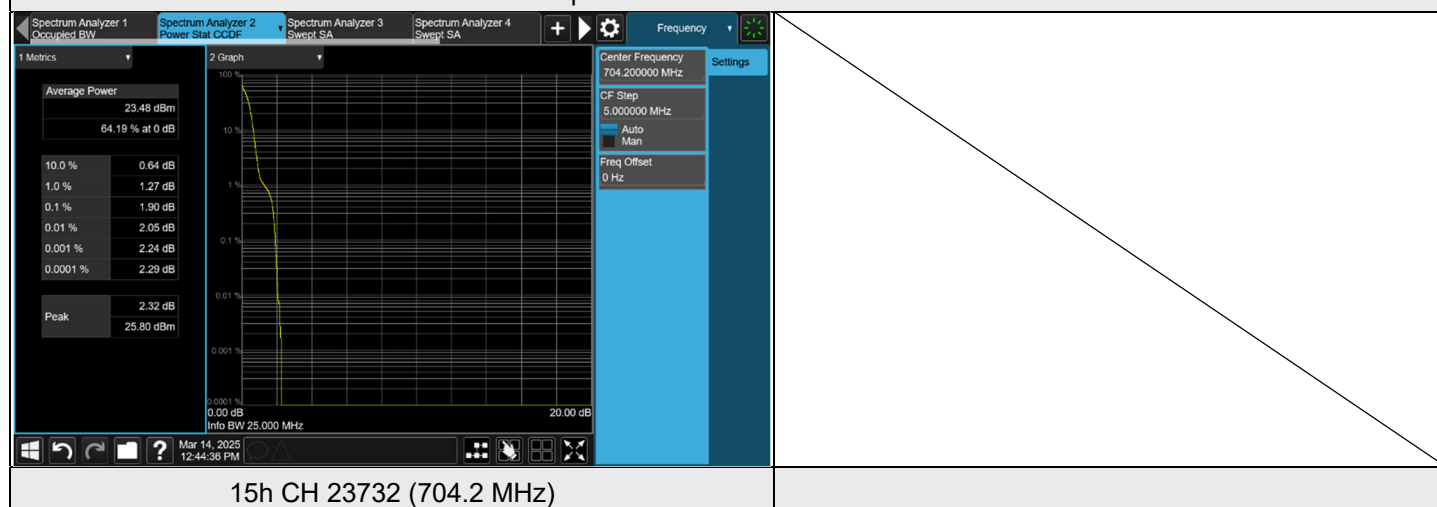


7.3.8 NB-IoT Band 17

NB-IoT Band 17

Sub-carrier	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
3.75k	23732	704.2	1.61	13	PASS
3.75k	23790	710	1.67	13	PASS
3.75k	23848	715.8	1.65	13	PASS
15k	23732	704.2	1.9	13	PASS
15k	23790	710	1.9	13	PASS
15k	23848	715.8	1.89	13	PASS

Spectrum Plot of Worst Value

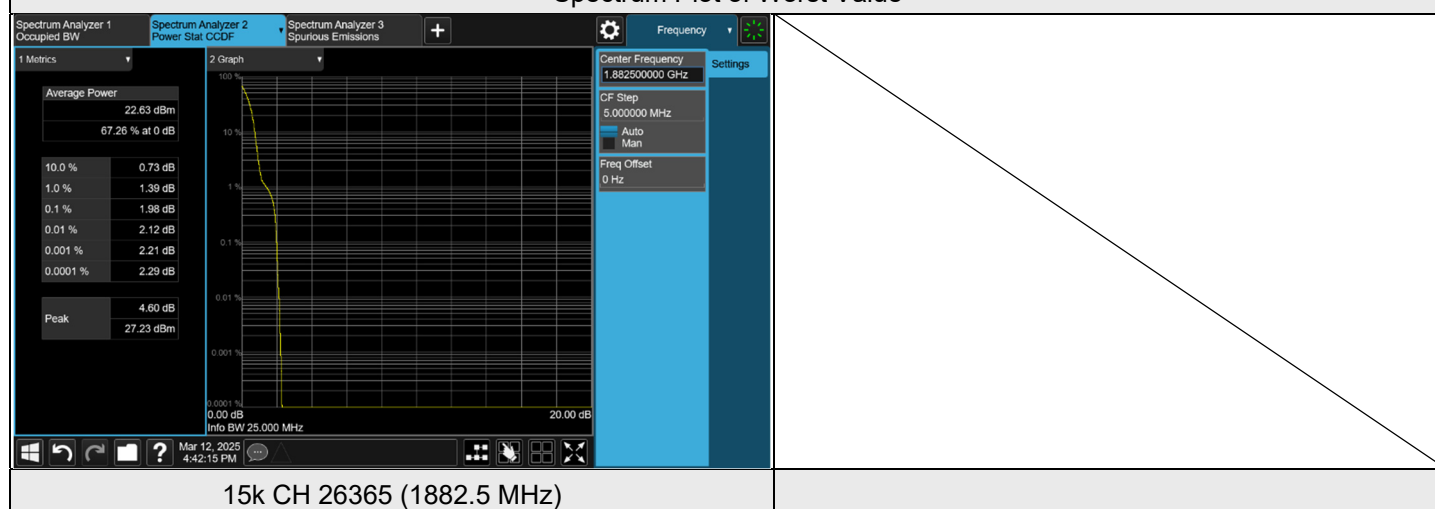


7.3.9 NB-IoT Band 25

NB-IoT Band 25

Sub-carrier	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
3.75k	26042	1850.2	1.64	13	PASS
3.75k	26365	1882.5	1.73	13	PASS
3.75k	26688	1914.8	1.74	13	PASS
15k	26042	1850.2	1.95	13	PASS
15k	26365	1882.5	1.98	13	PASS
15k	26688	1914.8	1.92	13	PASS

Spectrum Plot of Worst Value



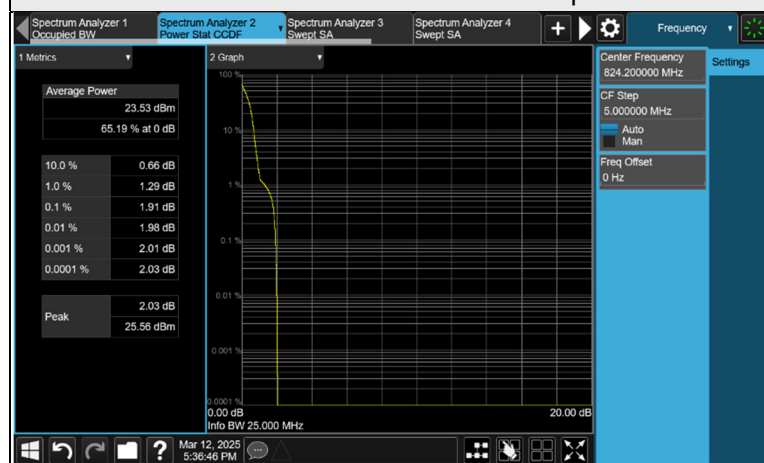
15k CH 26365 (1882.5 MHz)

7.3.10 NB-IoT Band 26 (Part 22)

NB-IoT Band 26

Sub-carrier	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
3.75k	26792	824.2	1.66	13	PASS
3.75k	26915	836.5	1.56	13	PASS
3.75k	27038	848.8	1.61	13	PASS
15k	26792	824.2	1.91	13	PASS
15k	26915	836.5	1.9	13	PASS
15k	27038	848.8	1.88	13	PASS

Spectrum Plot of Worst Value



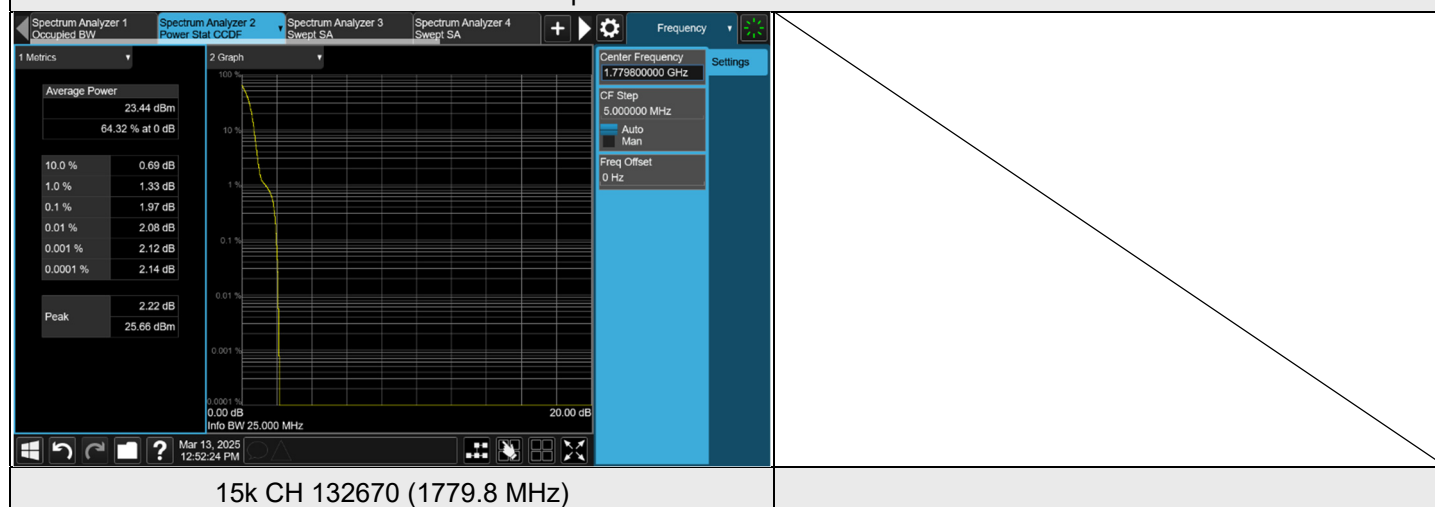
15k CH 26915 (836.5 MHz)

7.3.11 NB-IoT Band 66

NB-IoT Band 66

Sub-carrier	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
3.75k	131974	1710.2	1.7	13	PASS
3.75k	132322	1745	1.7	13	PASS
3.75k	132670	1779.8	1.74	13	PASS
15k	131974	1710.2	1.9	13	PASS
15k	132322	1745	1.93	13	PASS
15k	132670	1779.8	1.97	13	PASS

Spectrum Plot of Worst Value

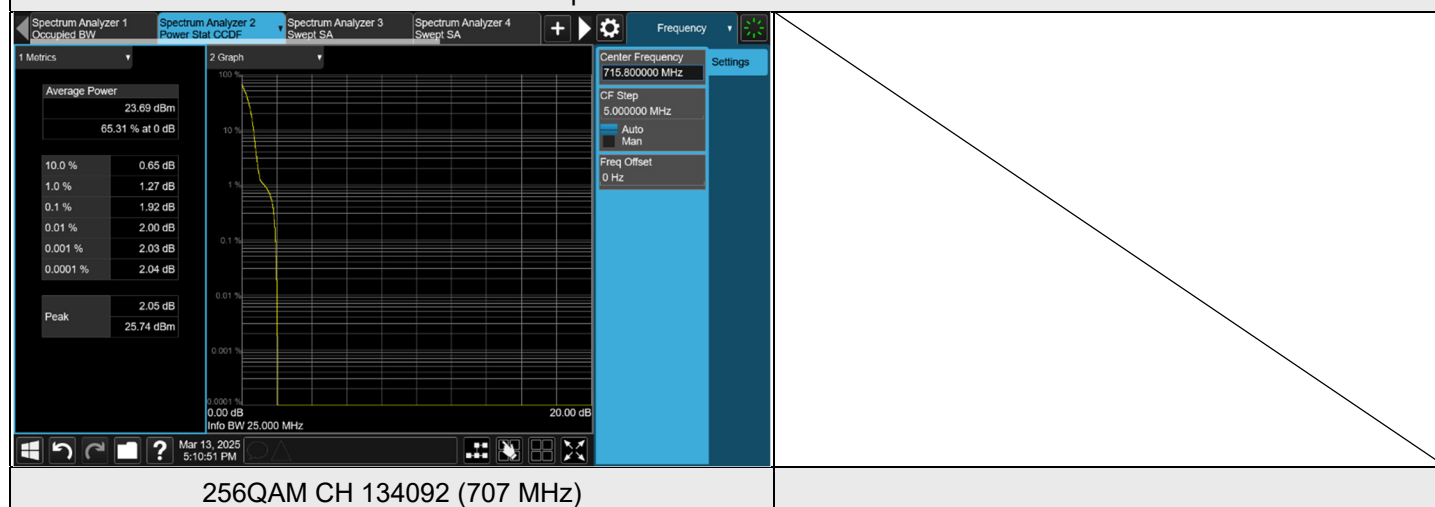


7.3.12 NB-IoT Band 85

NB-IoT Band 85

Sub-carrier	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
3.75k	134004	698.2	1.56	13	PASS
3.75k	134092	707	1.55	13	PASS
3.75k	134180	715.8	1.47	13	PASS
15k	134004	698.2	1.88	13	PASS
15k	134092	707	1.9	13	PASS
15k	134180	715.8	1.92	13	PASS

Spectrum Plot of Worst Value

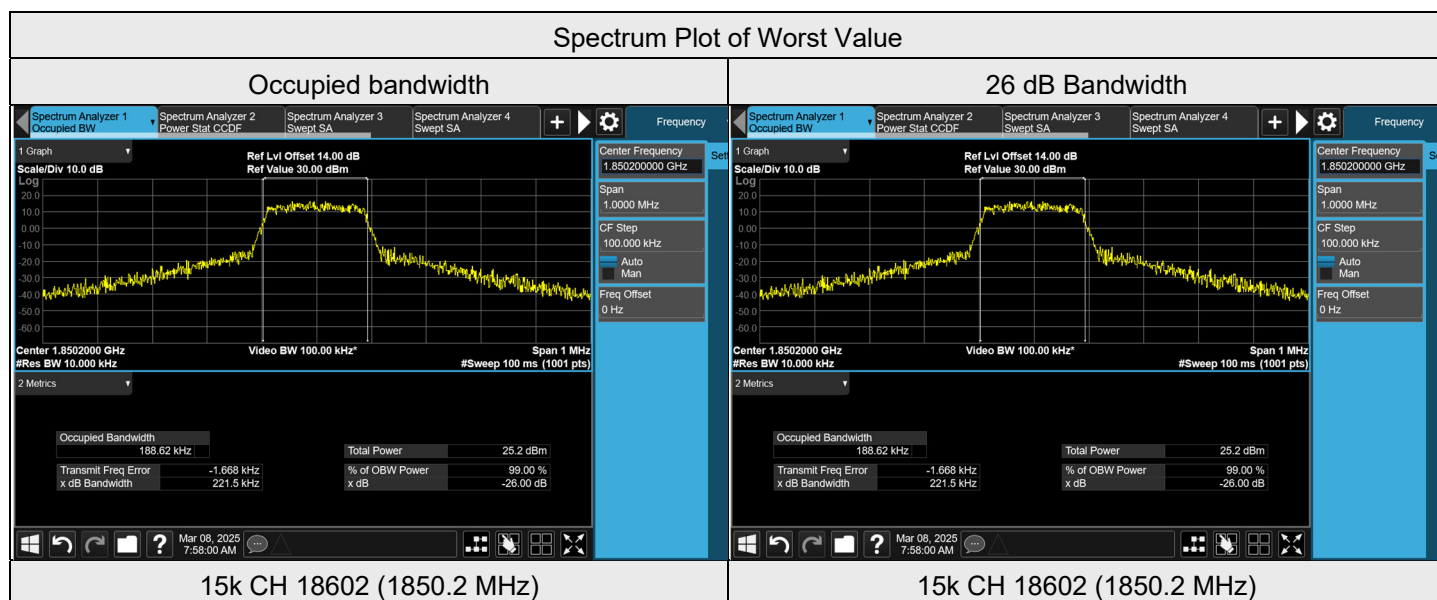


7.4 Bandwidth

Input Power:	3.8 Vdc	Environmental Conditions:	22°C, 75% RH	Tested By:	Match Tsui
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7.4.1 NB-IoT Band 2

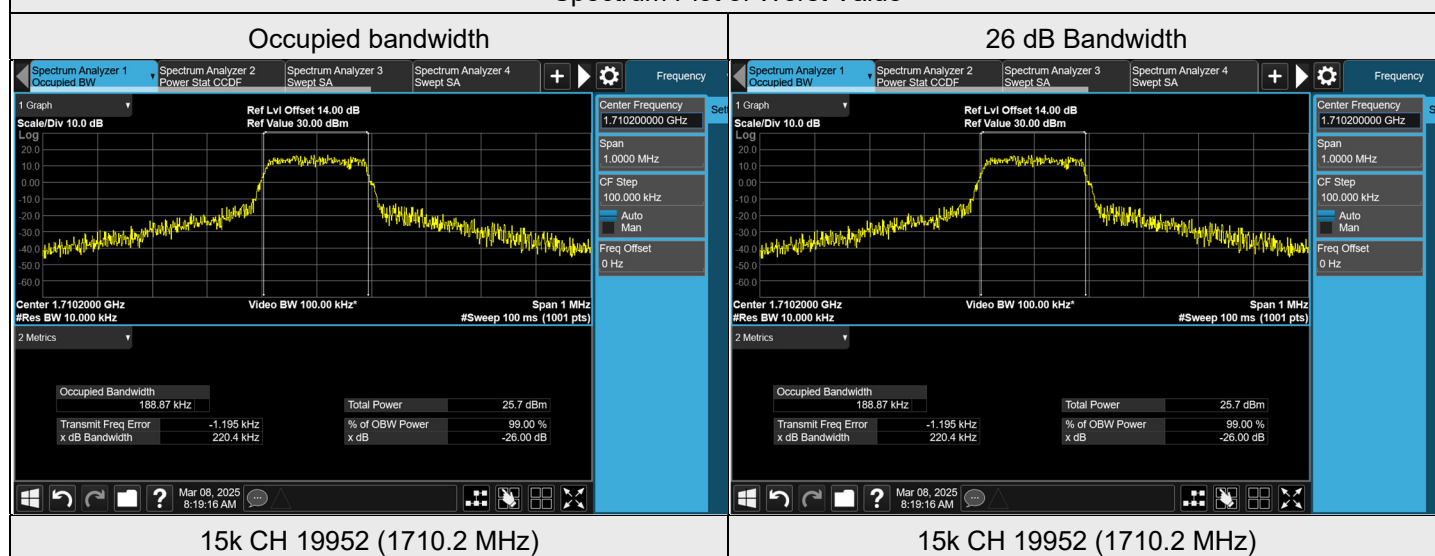
NB-IoT Band 2				
Sub-carrier	Channel	Frequency (MHz)	Occupied Bandwidth (kHz)	26 dB Bandwidth (kHz)
3.75k	18602	1850.2	108.75	84.23
3.75k	18900	1880	108.26	90.36
3.75k	19198	1909.8	107.3	84.64
15k	18602	1850.2	188.62	221.5
15k	18900	1880	188.36	218.4
15k	19198	1909.8	187.44	221.4



7.4.2 NB-IoT Band 4

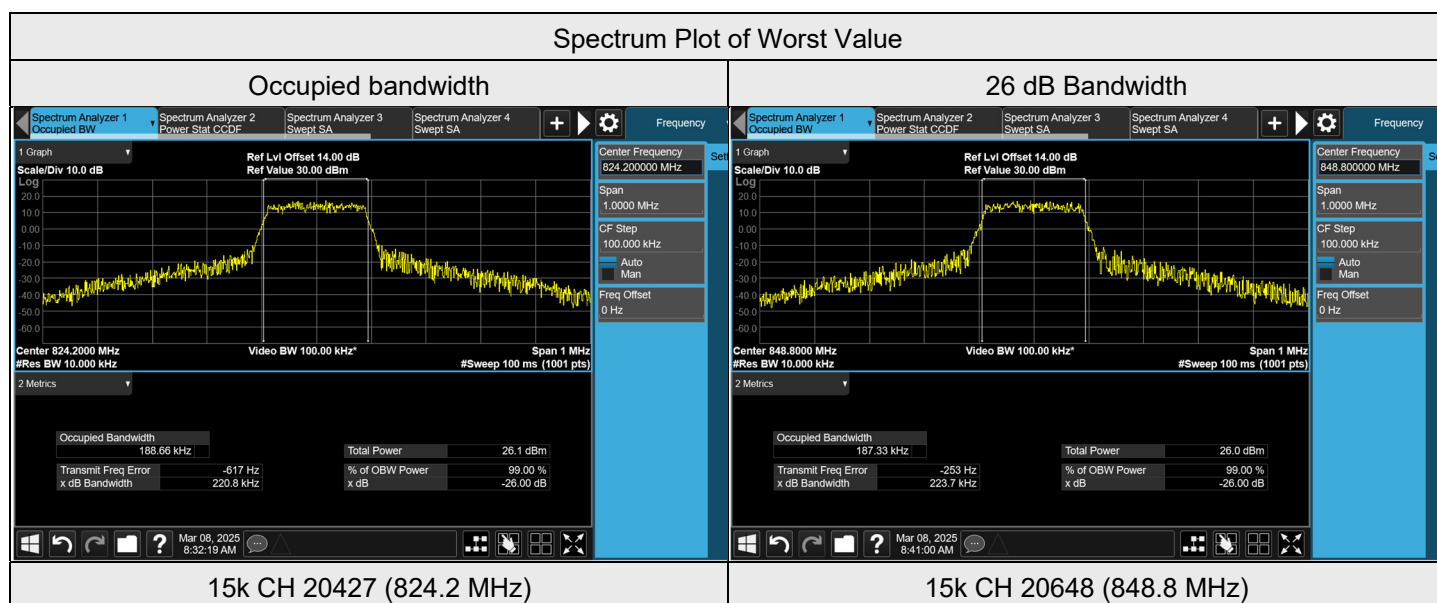
NB-IoT Band 4				
Sub-carrier	Channel	Frequency (MHz)	Occupied Bandwidth (kHz)	26 dB Bandwidth (kHz)
3.75k	19952	1710.2	106.61	88.93
3.75k	20175	1732.5	106.57	85.17
3.75k	20398	1754.8	106.28	87.17
15k	19952	1710.2	188.87	220.4
15k	20175	1732.5	188.56	218.8
15k	20398	1754.8	187.89	219.4

Spectrum Plot of Worst Value



7.4.3 NB-IoT Band 5

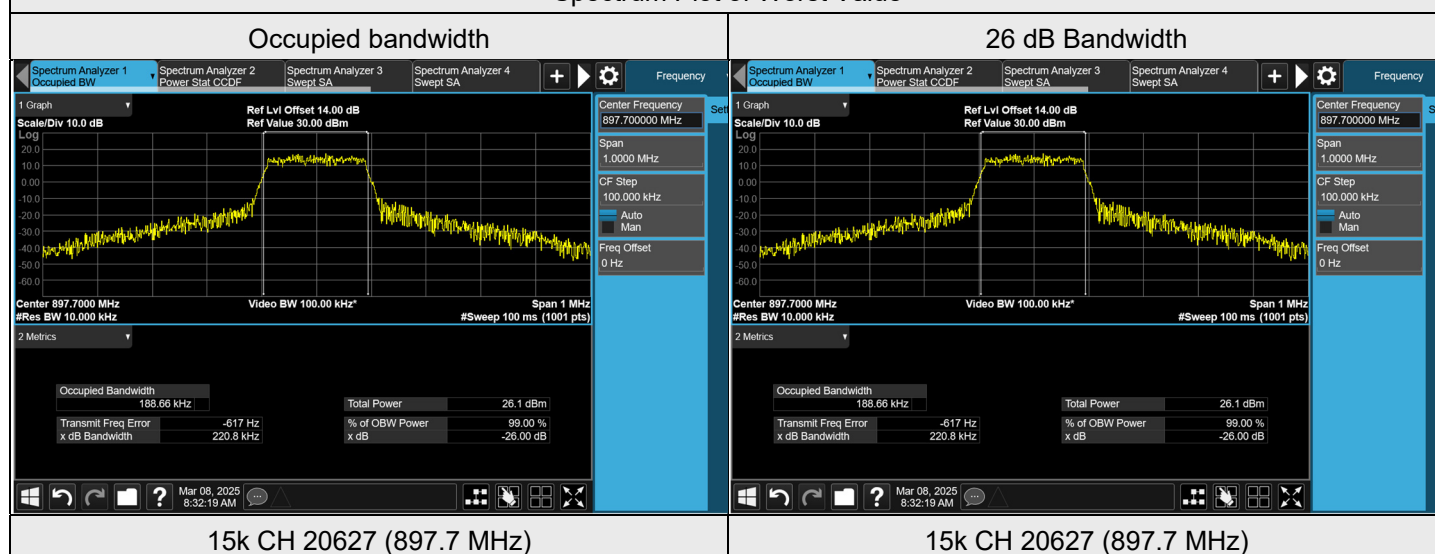
NB-IoT Band 5				
Sub-carrier	Channel	Frequency (MHz)	Occupied Bandwidth (kHz)	26 dB Bandwidth (kHz)
3.75k	20402	824.2	104.14	86.16
3.75k	20525	836.5	102.92	86.04
3.75k	20648	848.8	104.83	84.75
15k	20402	824.2	188.66	220.8
15k	20525	836.5	187.35	221.1
15k	20648	848.8	187.33	223.7



7.4.4 NB-IoT Band 8

NB-IoT Band 8				
Sub-carrier	Channel	Frequency (MHz)	Occupied Bandwidth (kHz)	26 dB Bandwidth (kHz)
3.75k	21627	897.7	105.98	83.84
3.75k	21640	899	105.11	86.89
3.75k	21653	900.3	105.03	86.96
15k	21627	897.7	188.66	220.8
15k	21640	899	187.66	220.1
15k	21653	900.3	187.07	219.4

Spectrum Plot of Worst Value

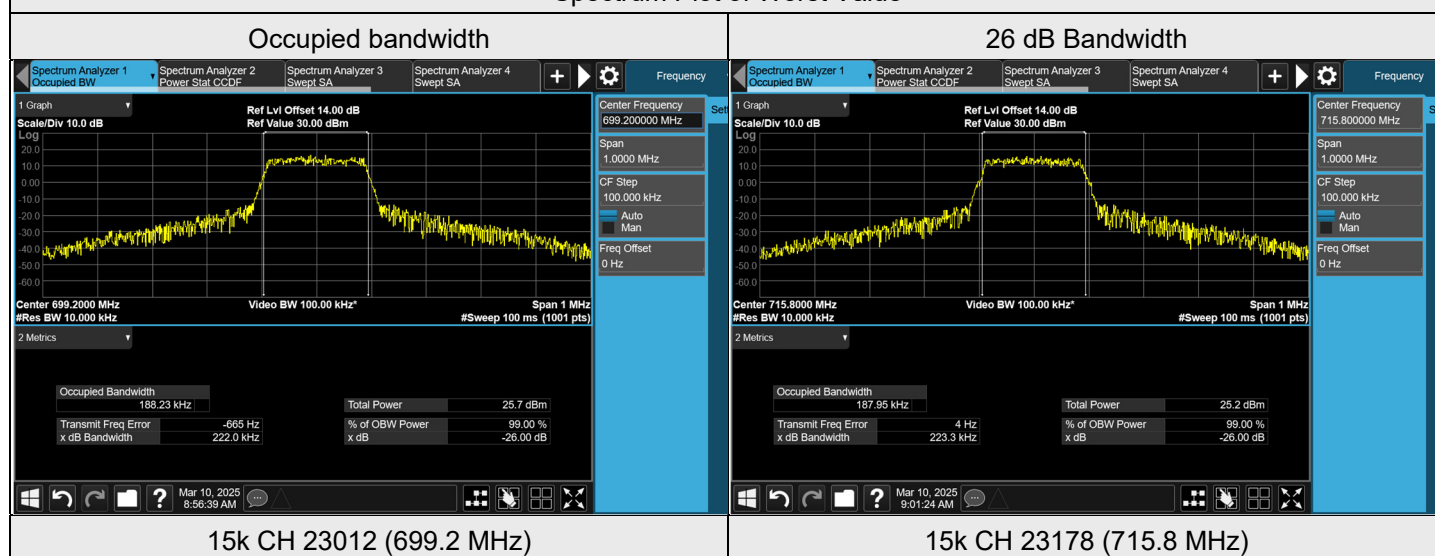


7.4.5 NB-IoT Band 12

NB-IoT Band 12

Sub-carrier	Channel	Frequency (MHz)	Occupied Bandwidth (kHz)	26 dB Bandwidth (kHz)
3.75k	23012	699.2	104.51	84.81
3.75k	23095	707.5	105.01	89.5
3.75k	23178	715.8	105.42	86.34
15k	23012	699.2	188.23	222
15k	23095	707.5	187.68	220.2
15k	23178	715.8	187.95	223.3

Spectrum Plot of Worst Value



7.4.6 NB-IoT Band 13

NB-IoT Band 13

Sub-carrier	Channel	Frequency (MHz)	Occupied Bandwidth (kHz)	26 dB Bandwidth (kHz)
3.75k	23182	777.2	106	84.48
3.75k	23230	782	104.86	84.82
3.75k	23278	786.8	104.89	85.26
15k	23182	777.2	187.1	220.8
15k	23230	782	187.63	219.3
15k	23278	786.8	187.58	218.4

Spectrum Plot of Worst Value

