

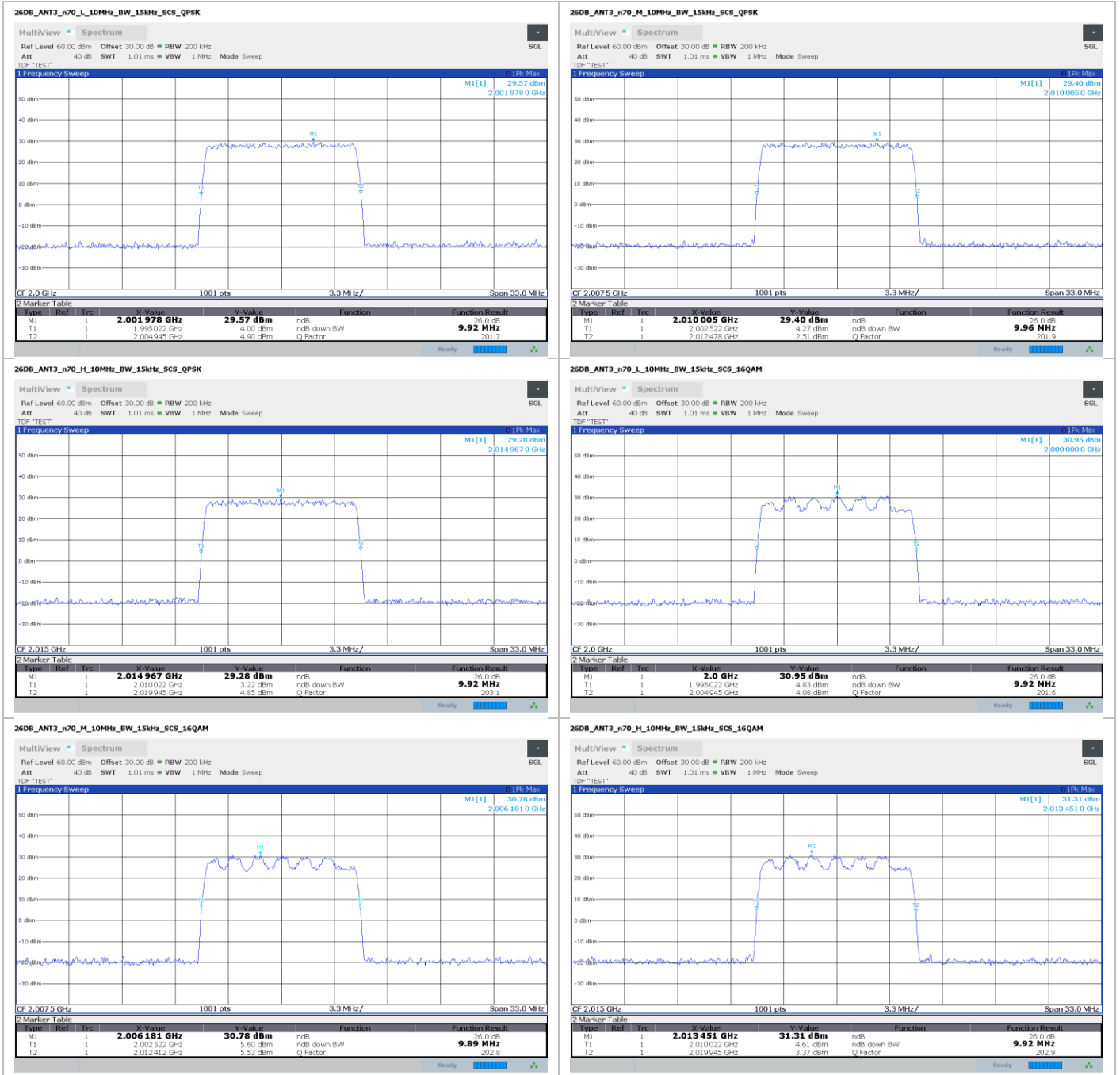
Section 8
Test name
Specification

Testing data
 FCC §27.53 (h)(3) 26 dB Occupied Bandwidth
 FCC Part 27



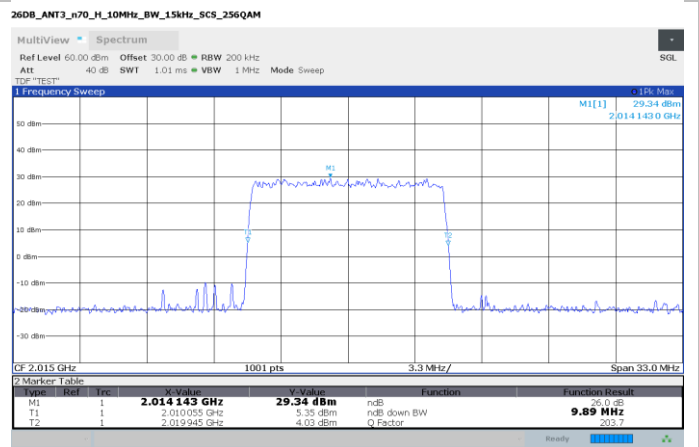
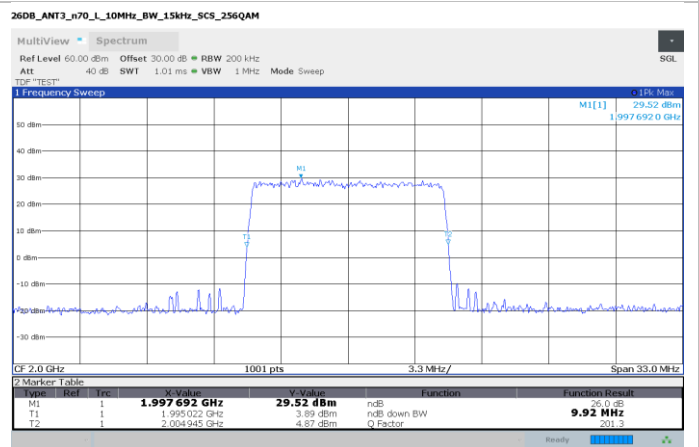
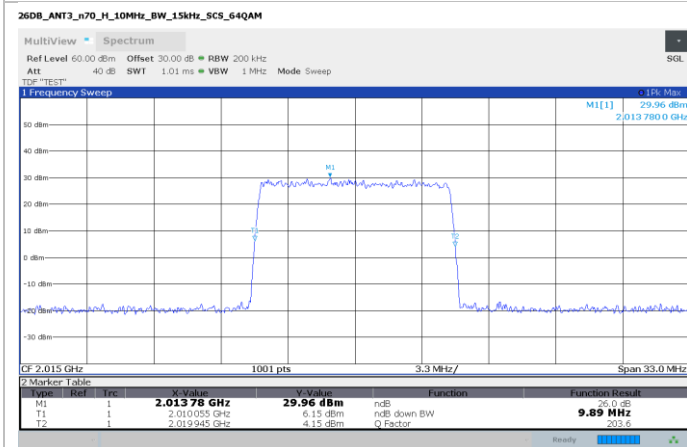
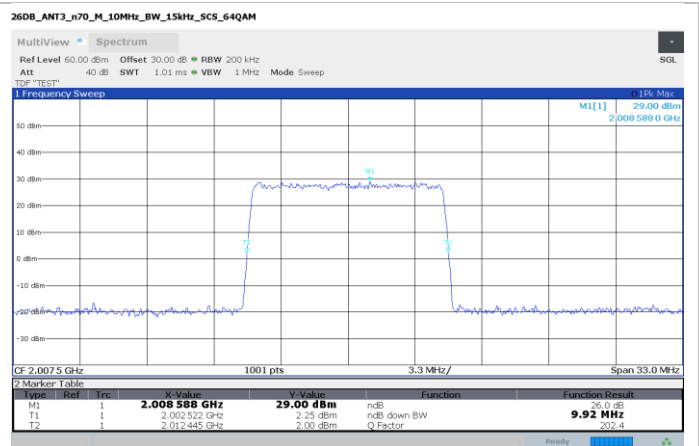
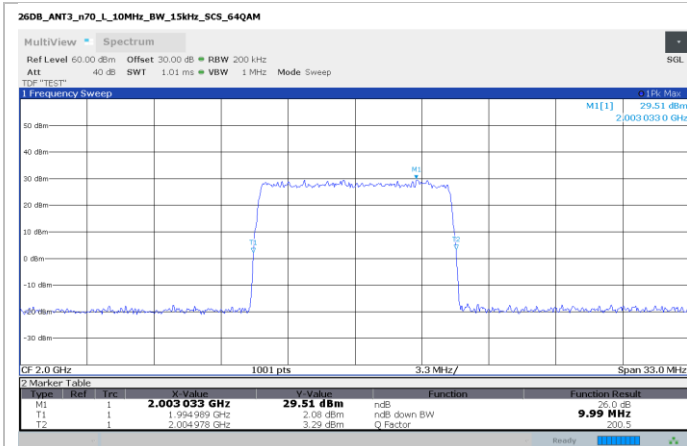
Band n70

10 MHz



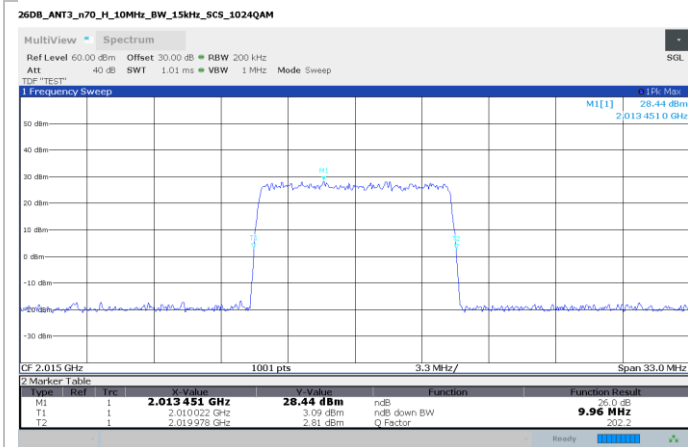
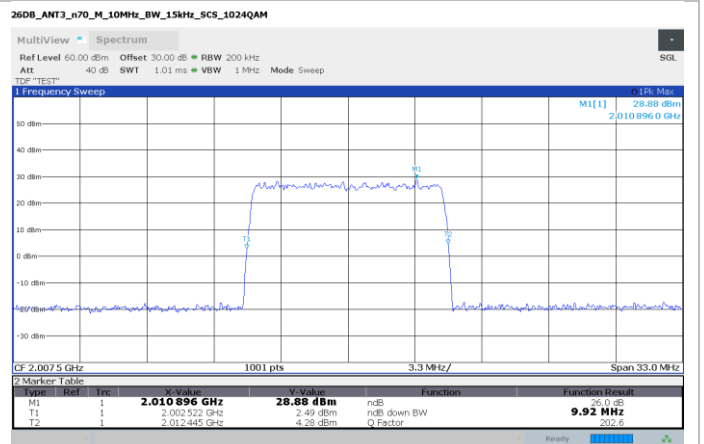
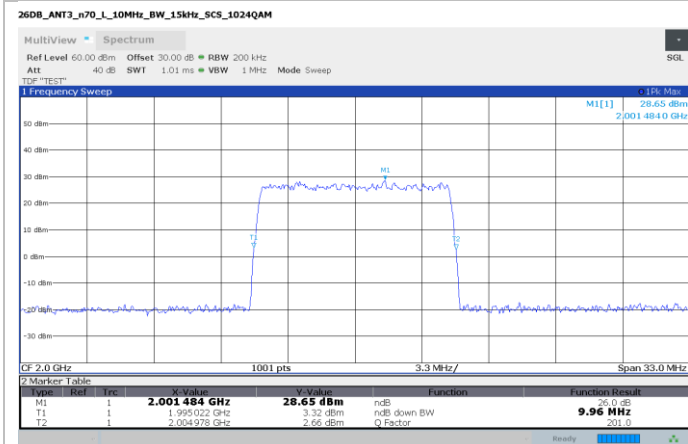
Section 8
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Testing data
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Test name
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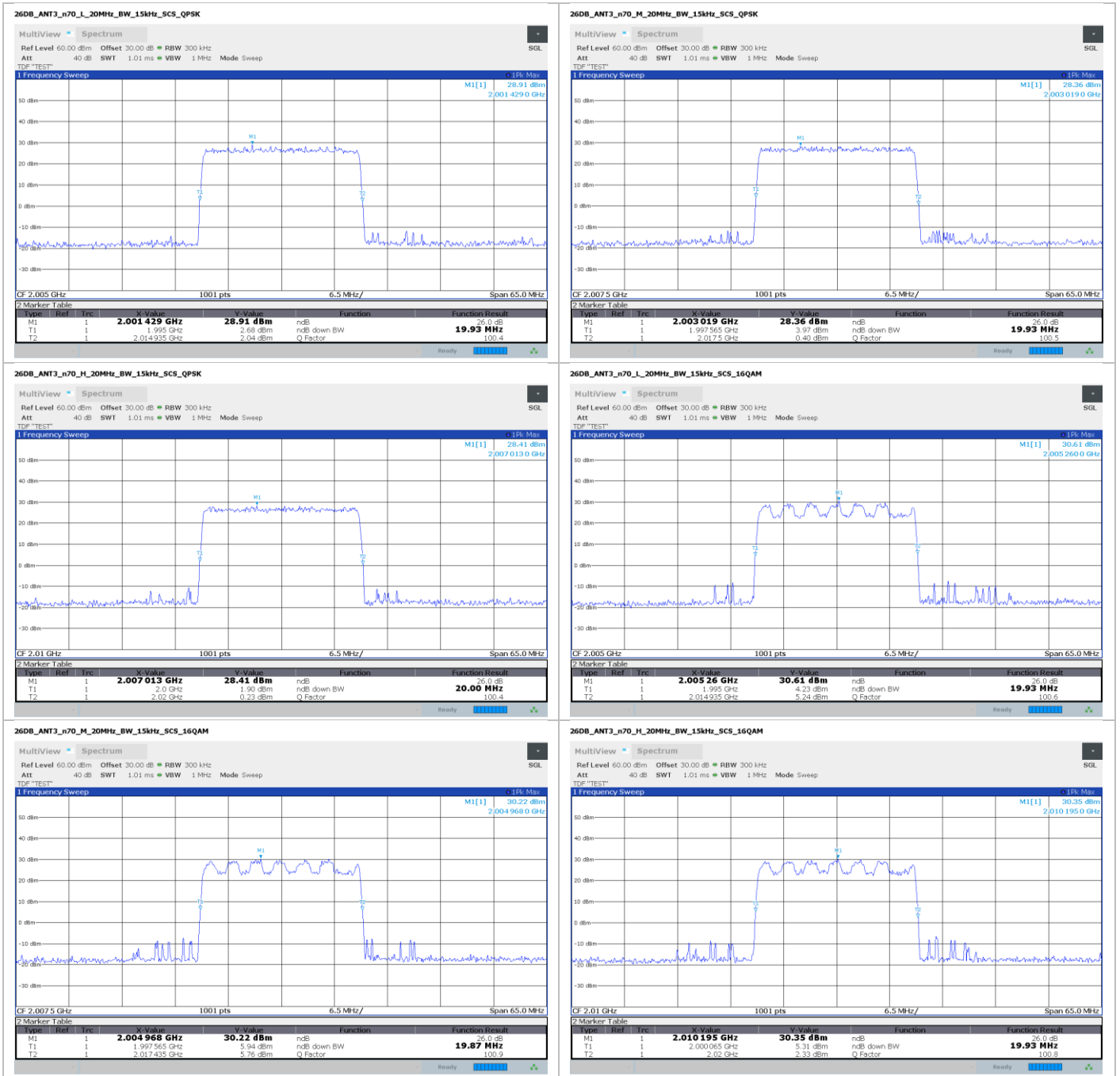
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 FCC §27.53 (h)(3) 26 dB Occupied Bandwidth
 FCC Part 27



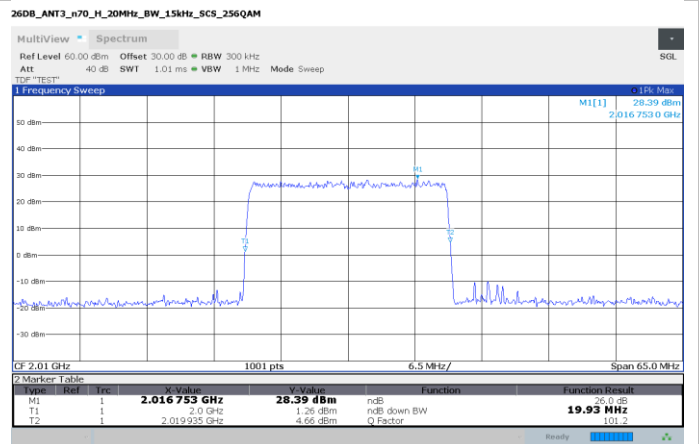
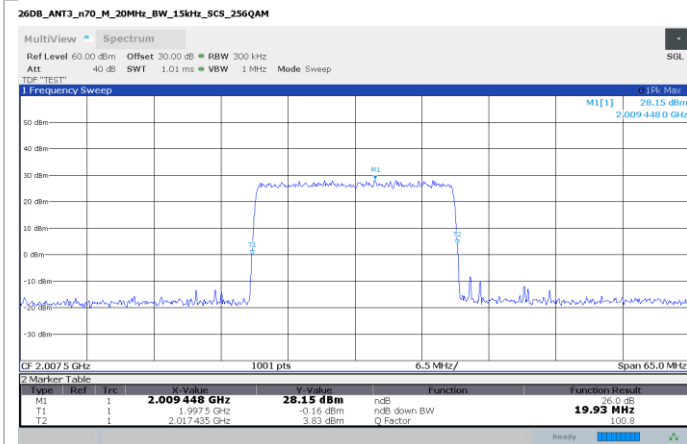
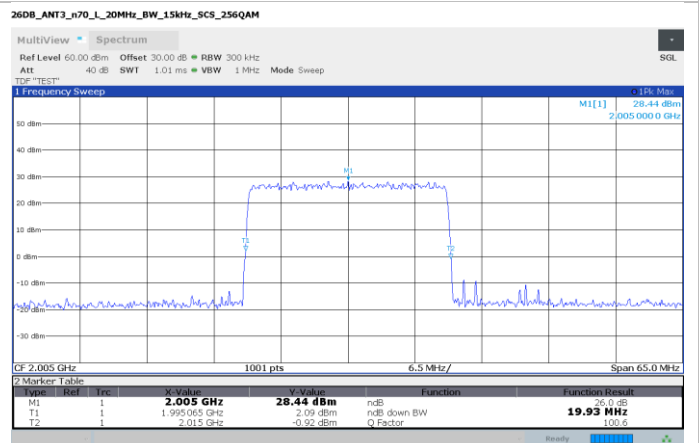
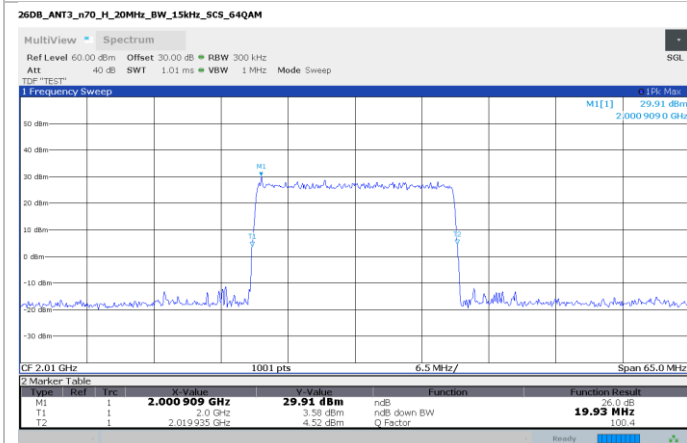
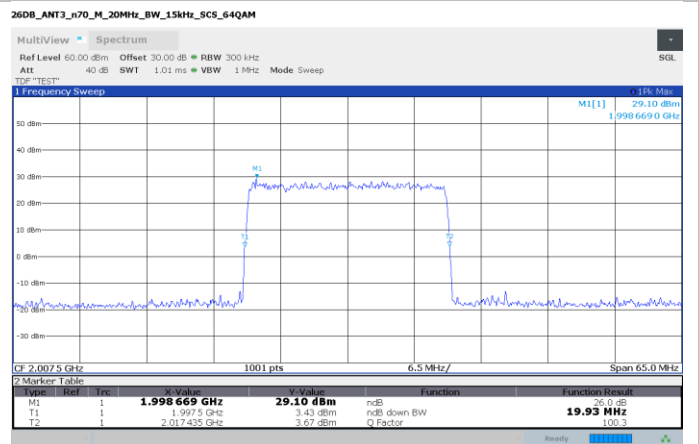
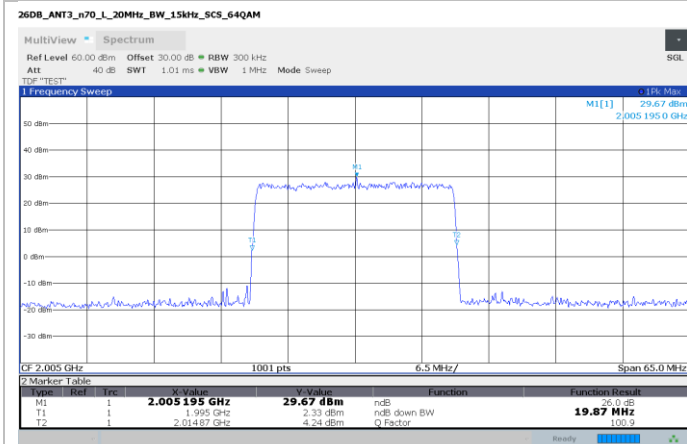
Band n70

20 MHz



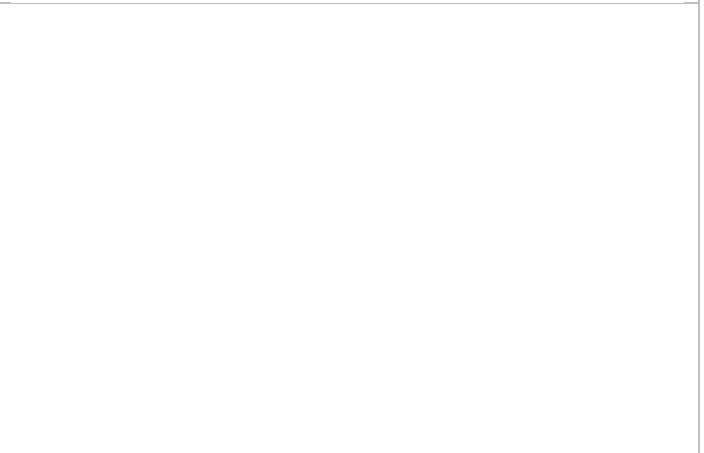
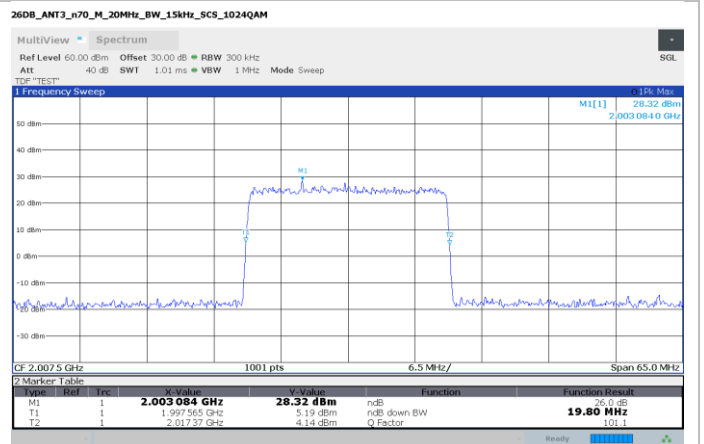
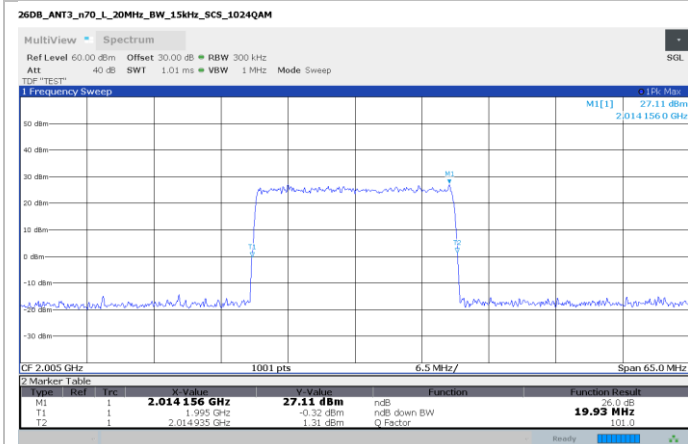
Section 8
Test name
Specification

Testing data
 FCC §27.53 (h)(3) 26 dB Occupied Bandwidth
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Section 8
Test name
Specification

Testing data
 FCC §27.53 (h)(3) 26 dB Occupied Bandwidth
 FCC Part 27



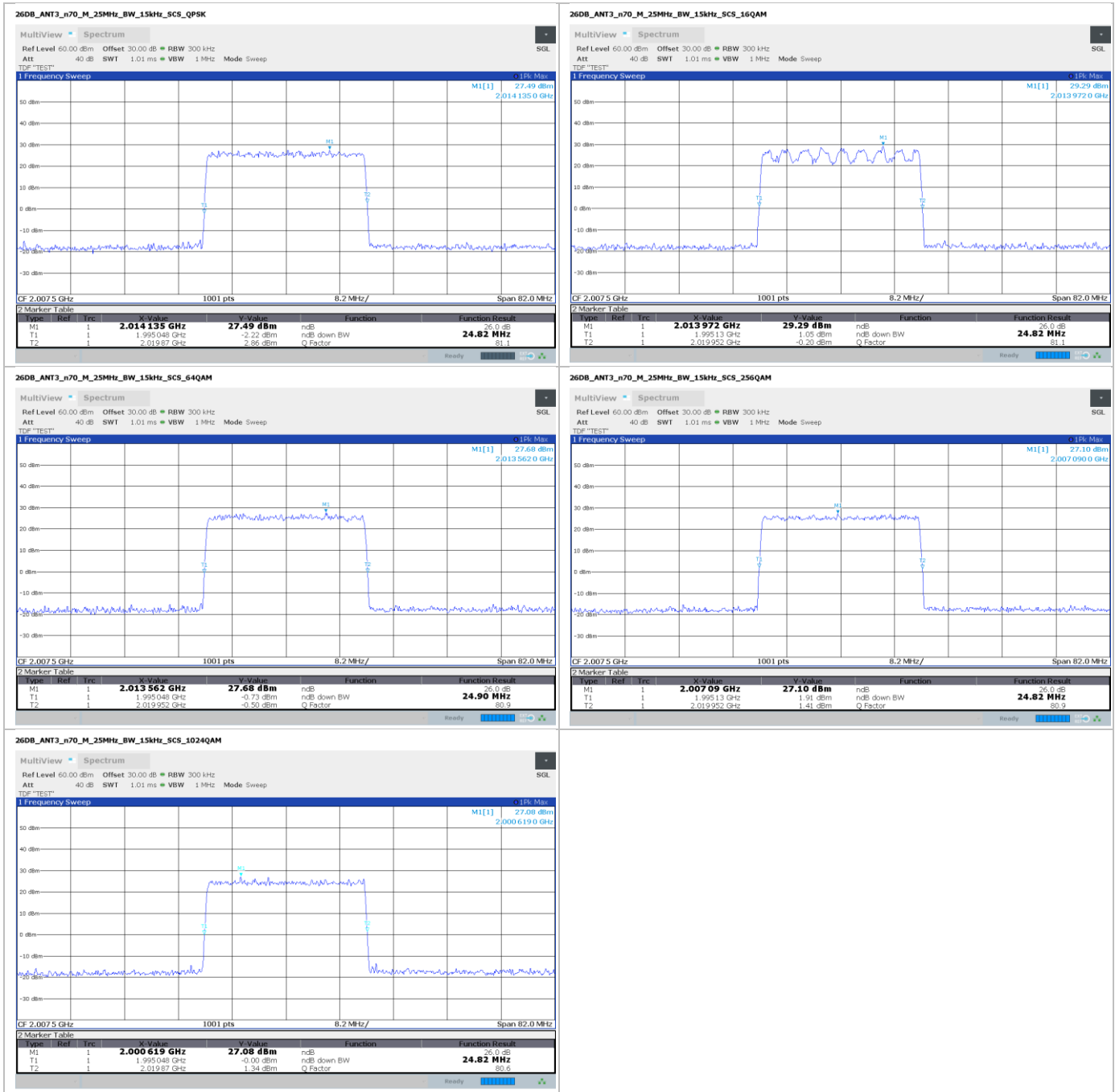
Section 8
Test name
Specification

Testing data
 FCC §27.53 (h)(3) 26 dB Occupied Bandwidth
 FCC Part 27



Band n70

25 MHz



8.4 FCC 27.50(d)(2) Output power

8.4.1 Definitions and limits

- (d) The following power and antenna height requirements apply to stations transmitting in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz and 2180-2200 MHz bands:
- (1) The power of each fixed or base station transmitting in the 1995-2000 MHz, 2110-2155 MHz, 2155-2180 MHz or 2180-2200 MHz band and located in any county with population density of 100 or fewer persons per square mile, based upon the most recently available population statistics from the Bureau of the Census, is limited to:
- (i) An equivalent isotropically radiated power (EIRP) of 3280 watts (65.16 dBm) when transmitting with an emission bandwidth of 1 MHz or less;
 - (ii) An EIRP of 3280 watts/MHz (65.16 dBm/MHz) when transmitting with an emission bandwidth greater than 1 MHz.

8.4.2 Test summary

Test date	July 15, 2022	Temperature	22 °C
Test engineer	Lan Sayasane, EMC Test Engineer	Air pressure	1001 mbar
Verdict	Pass	Relative humidity	62%

8.4.3 Observations, settings and special notes

NOTE: Measurement performed as a conducted peak power density. Final EIRP is dependent on the antenna gain used in the final installation and is not known at the time of this report.

Test method: ANSI C63.26 Section 5.2.4.5

Spectrum analyzer settings:

Resolution bandwidth	1 MHz
Video bandwidth	3 MHz
Frequency span	>= 1.5* OBW
Detector mode	Peak
Trace mode	Max Hold

This test was made across the conducted port and using a sensor power. An offset of 30 dB was added to the measurement to compensate the loss of the external 30 dB attenuator. Interconnecting cable losses were included as a transducer factor in the spectrum analyzer.

The EUT has four ports which can transmit at the same time in a correlated way. This correlation permit to make the measurement in one port getting as a result the total power from the four ports adding a factor calculated from the next equation:

$$\text{Correlation factor} = 10\text{Log}(N)$$

Where N is the number of ports. In this specific case, N = 4,

$$\text{Correlation factor} = 10\text{Log}(4) = 6.02 \text{ dB}$$

To select the measurement port, a quick power test was done. The four ports are similar, however, the port with maximum power was chosen to make all the remaining tests.

Band	Modulation	OBW	Channel	Power Port A	Power Port B	Power Port C	Power Port D
n66	QPSK	20 MHz	2155 MHz	35.57 dBm	36.15 dBm	35.86 dBm	36.8 dBm

Note: Port D was selected in the band, and it will be used to evaluate all the tests of this document.

Band	Modulation	OBW	Channel	Power Port A	Power Port B	Power Port C	Power Port D
n70	QPSK	5 MHz	2007.5 MHz	39.02 dBm	39.35 dBm	40.06 dBm	39.79 dBm

Note: Port C was selected in the band, and it will be used to evaluate all the tests of this document.



8.4.4 Test data

Band n66:

Band	Modulation	OBW (MHz)	Port	Frequency (MHz)	Power Density (dBm/1 MHz)	Correlation factor (dB)	Total power density across all ports (dBm/1MHz)
n66	QPSK	5	D	2112.5	41.20	6.02	47.22
n66	QPSK	5	D	2155	41.28	6.02	47.30
n66	QPSK	5	D	2197.5	41.15	6.02	47.17
n66	16QAM	5	D	2112.5	41.57	6.02	47.59
n66	16QAM	5	D	2155	41.98	6.02	48.00
n66	16QAM	5	D	2197.5	41.85	6.02	47.87
n66	64QAM	5	D	2112.5	41.80	6.02	47.82
n66	64QAM	5	D	2155	41.77	6.02	47.79
n66	64QAM	5	D	2197.5	41.91	6.02	47.93
n66	256QAM	5	D	2112.5	41.18	6.02	47.20
n66	256QAM	5	D	2155	41.17	6.02	47.19
n66	256QAM	5	D	2197.5	41.11	6.02	47.13
n66	1024QAM	5	D	2112.5	40.85	6.02	46.87
n66	1024QAM	5	D	2155	40.93	6.02	46.95
n66	1024QAM	5	D	2197.5	40.83	6.02	46.85
n66	QPSK	10	D	2115	38.67	6.02	44.69
n66	QPSK	10	D	2155	38.36	6.02	44.38
n66	QPSK	10	D	2195	39.13	6.02	45.15
n66	16QAM	10	D	2120	39.98	6.02	46.00
n66	16QAM	10	D	2155	38.75	6.02	44.77
n66	16QAM	10	D	2195	38.93	6.02	44.95
n66	64QAM	10	D	2155	39.24	6.02	45.26
n66	64QAM	10	D	2195	39.03	6.02	45.05
n66	64QAM	10	D	2120	39.10	6.02	45.12
n66	256QAM	10	D	2155	38.71	6.02	44.73
n66	256QAM	10	D	2195	38.47	6.02	44.49
n66	256QAM	10	D	2120	38.52	6.02	44.54
n66	1024QAM	10	D	2155	37.02	6.02	43.04
n66	1024QAM	10	D	2195	37.40	6.02	43.42
n66	1024QAM	10	D	2120	37.04	6.02	43.06
n66	QPSK	15	D	2117.5	37.39	6.02	43.41
n66	QPSK	15	D	2155	37.51	6.02	43.53
n66	QPSK	15	D	2192.5	37.41	6.02	43.43
n66	16QAM	15	D	2117.5	37.72	6.02	43.74
n66	16QAM	15	D	2155	37.93	6.02	43.95
n66	16QAM	15	D	2192.5	37.98	6.02	44.00
n66	64QAM	15	D	2117.5	36.84	6.02	42.86
n66	64QAM	15	D	2155	36.95	6.02	42.97
n66	64QAM	15	D	2192.5	36.89	6.02	42.91
n66	256QAM	15	D	2117.5	37.03	6.02	43.05
n66	256QAM	15	D	2155	36.99	6.02	43.01
n66	256QAM	15	D	2192.5	37.10	6.02	43.12
n66	1024QAM	15	D	2117.5	35.68	6.02	41.70
n66	1024QAM	15	D	2155	35.96	6.02	41.98
n66	1024QAM	15	D	2192.5	35.68	6.02	41.70



Band	Modulation	OBW (MHz)	Port	Frequency (MHz)	Power Density (dBm/1 MHz)	Correlation factor (dB)	Total power density across all ports (dBm/1MHz)
n66	QPSK	20	D	2120	36.31	6.02	42.33
n66	QPSK	20	D	2155	36.57	6.02	42.59
n66	QPSK	20	D	2190	35.84	6.02	41.86
n66	16QAM	20	D	2120	38.12	6.02	44.14
n66	16QAM	20	D	2155	36.76	6.02	42.78
n66	16QAM	20	D	2190	37.33	6.02	43.35
n66	64QAM	20	D	2120	35.74	6.02	41.76
n66	64QAM	20	D	2155	35.87	6.02	41.89
n66	64QAM	20	D	2190	35.65	6.02	41.67
n66	256QAM	20	D	2120	35.75	6.02	41.77
n66	256QAM	20	D	2155	36.10	6.02	42.12
n66	256QAM	20	D	2190	36.13	6.02	42.15
n66	1024QAM	20	D	2120	34.30	6.02	40.32
n66	1024QAM	20	D	2155	34.38	6.02	40.40
n66	1024QAM	20	D	2190	34.23	6.02	40.25

Table 8.4-1: Conducted output power density, band n66

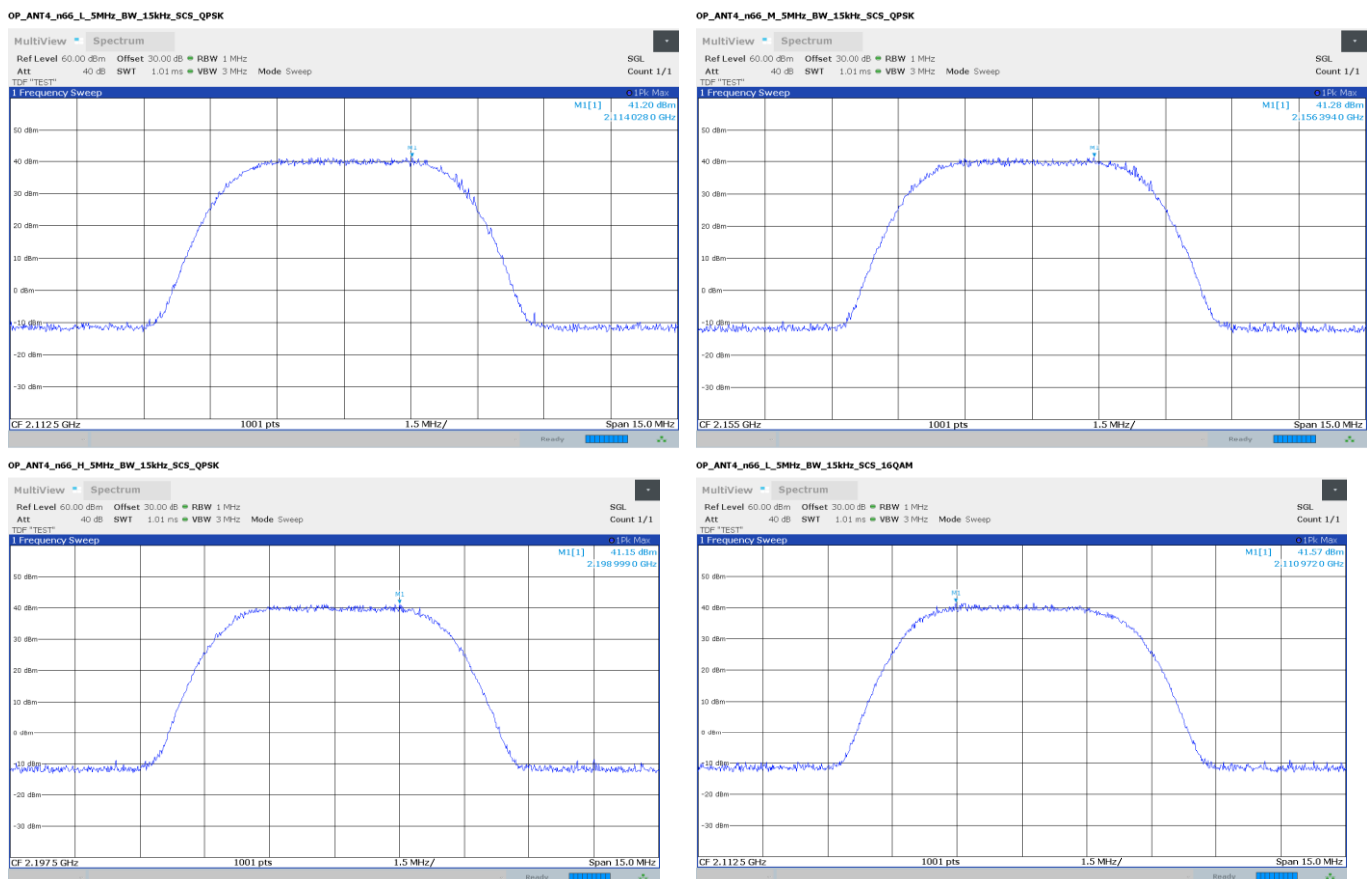


For informational purposes, the table below documents the peak total channel power. Measured data is obtained from the PAPR measurements documented in section 8.5 of this report.

Band	Modulation	OBW (MHz)	Port	Frequency (MHz)	Total channel power (dBm)	Correlation factor (dB)	Total channel power across all ports (dBm)
n66	QPSK	5	D	2112.5	45.05	6.02	51.07
n66	QPSK	5	D	2155	45.09	6.02	51.11
n66	QPSK	5	D	2197.5	44.97	6.02	50.99
n66	16QAM	5	D	2112.5	44.97	6.02	50.99
n66	16QAM	5	D	2155	45.01	6.02	51.03
n66	16QAM	5	D	2197.5	44.94	6.02	50.96
n66	64QAM	5	D	2112.5	45.00	6.02	51.02
n66	64QAM	5	D	2155	45.06	6.02	51.08
n66	64QAM	5	D	2197.5	44.96	6.02	50.98
n66	256QAM	5	D	2112.5	44.93	6.02	50.95
n66	256QAM	5	D	2155	44.99	6.02	51.01
n66	256QAM	5	D	2197.5	44.91	6.02	50.93
n66	1024QAM	5	D	2112.5	44.98	6.02	51.00
n66	1024QAM	5	D	2155	45.03	6.02	51.05
n66	1024QAM	5	D	2197.5	44.99	6.02	51.01
n66	QPSK	10	D	2115	45.13	6.02	51.15
n66	QPSK	10	D	2155	45.09	6.02	51.11
n66	QPSK	10	D	2195	45.09	6.02	51.11
n66	16QAM	10	D	2120	45.10	6.02	51.12
n66	16QAM	10	D	2155	45.02	6.02	51.04
n66	16QAM	10	D	2195	45.09	6.02	51.11
n66	64QAM	10	D	2155	45.13	6.02	51.15
n66	64QAM	10	D	2195	45.02	6.02	51.04
n66	64QAM	10	D	2120	45.04	6.02	51.06
n66	256QAM	10	D	2155	45.07	6.02	51.09
n66	256QAM	10	D	2195	44.99	6.02	51.01
n66	256QAM	10	D	2120	45.03	6.02	51.05
n66	1024QAM	10	D	2155	45.09	6.02	51.11
n66	1024QAM	10	D	2195	45.05	6.02	51.07
n66	1024QAM	10	D	2120	45.09	6.02	51.11
n66	QPSK	15	D	2117.5	45.26	6.02	51.28
n66	QPSK	15	D	2155	45.20	6.02	51.22
n66	QPSK	15	D	2192.5	45.26	6.02	51.28
n66	16QAM	15	D	2117.5	45.30	6.02	51.32
n66	16QAM	15	D	2155	45.02	6.02	51.04
n66	16QAM	15	D	2192.5	45.19	6.02	51.21
n66	64QAM	15	D	2117.5	45.48	6.02	51.50
n66	64QAM	15	D	2155	45.30	6.02	51.32
n66	64QAM	15	D	2192.5	45.27	6.02	51.29
n66	256QAM	15	D	2117.5	45.19	6.02	51.21
n66	256QAM	15	D	2155	45.01	6.02	51.03
n66	256QAM	15	D	2192.5	45.17	6.02	51.19
n66	1024QAM	15	D	2117.5	45.23	6.02	51.25
n66	1024QAM	15	D	2155	45.07	6.02	51.09
n66	1024QAM	15	D	2192.5	45.20	6.02	51.22

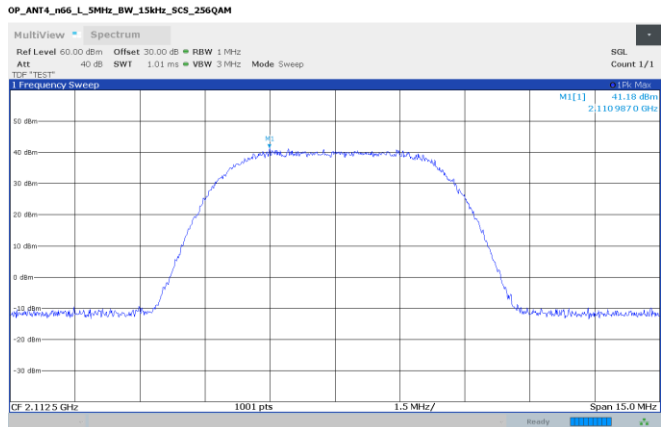
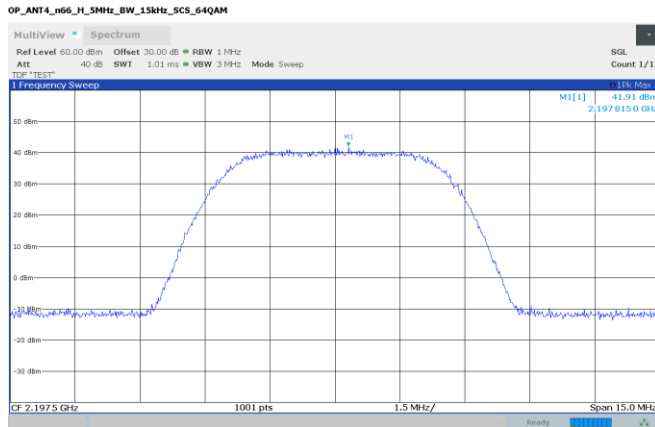
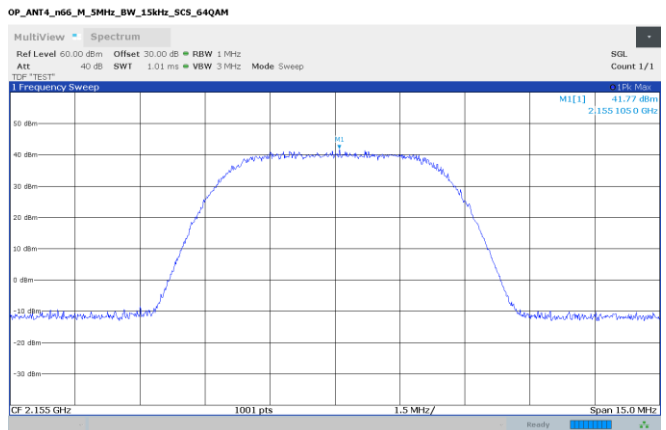
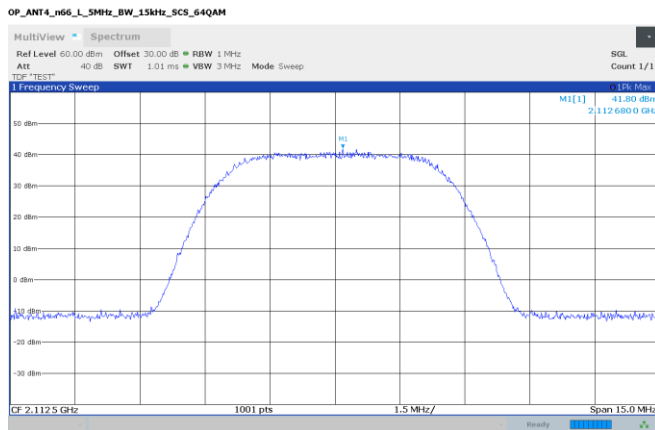
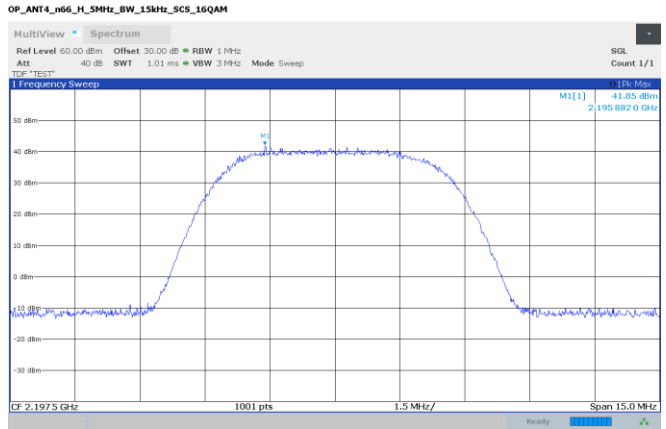
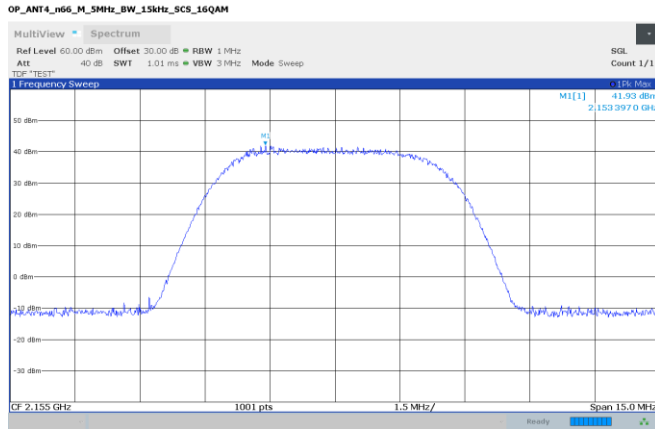
Band	Modulation	OBW (MHz)	Port	Frequency (MHz)	Total channel power (dBm)	Correlation factor (dB)	Total channel power across all ports (dBm)
n66	QPSK	20	D	2120	45.45	6.02	51.47
n66	QPSK	20	D	2155	45.09	6.02	51.11
n66	QPSK	20	D	2190	45.32	6.02	51.34
n66	16QAM	20	D	2120	45.40	6.02	51.42
n66	16QAM	20	D	2155	45.05	6.02	51.07
n66	16QAM	20	D	2190	45.33	6.02	51.35
n66	64QAM	20	D	2120	45.64	6.02	51.66
n66	64QAM	20	D	2155	45.26	6.02	51.28
n66	64QAM	20	D	2190	45.56	6.02	51.58
n66	256QAM	20	D	2120	45.86	6.02	51.88
n66	256QAM	20	D	2155	45.55	6.02	51.57
n66	256QAM	20	D	2190	45.74	6.02	51.76
n66	1024QAM	20	D	2120	45.30	6.02	51.32
n66	1024QAM	20	D	2155	45.07	6.02	51.09
n66	1024QAM	20	D	2190	45.25	6.02	51.27

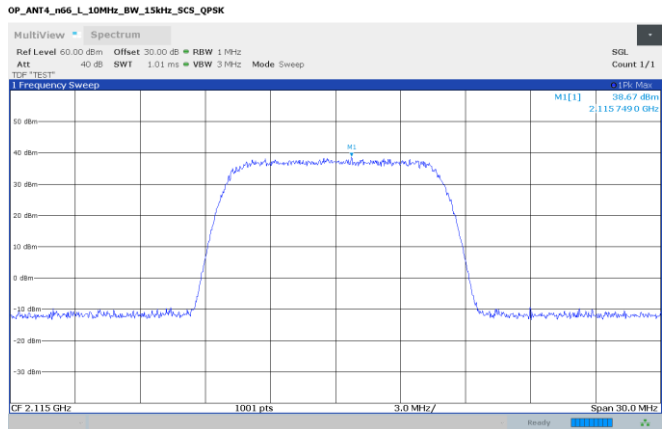
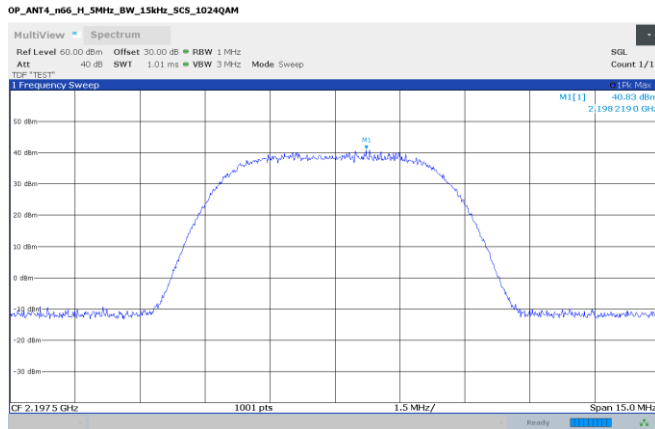
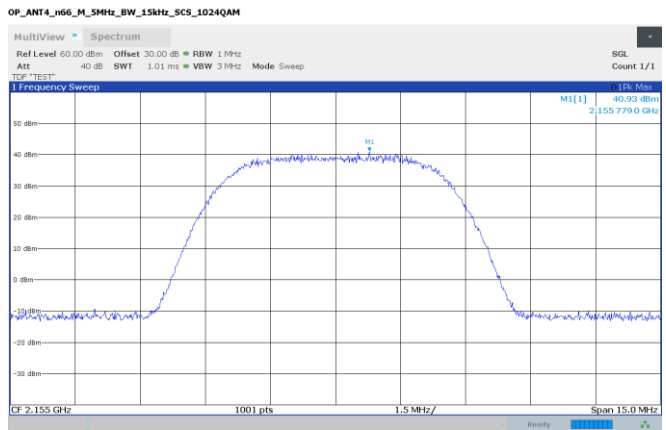
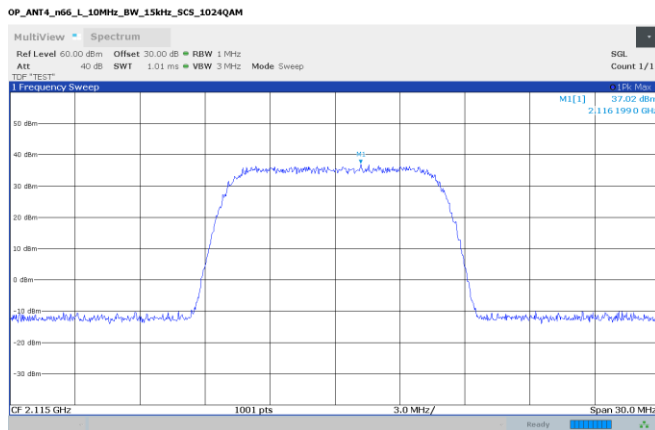
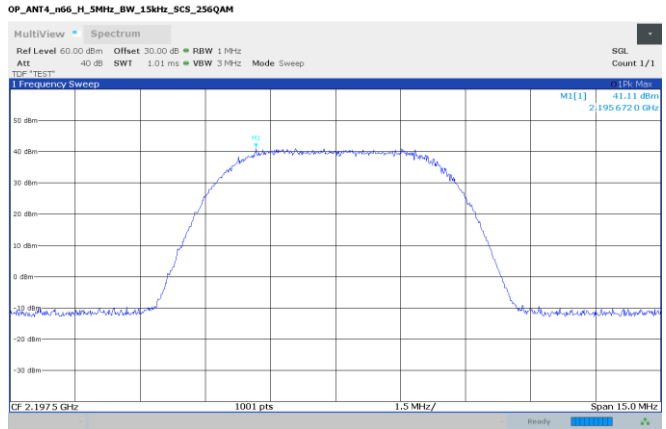
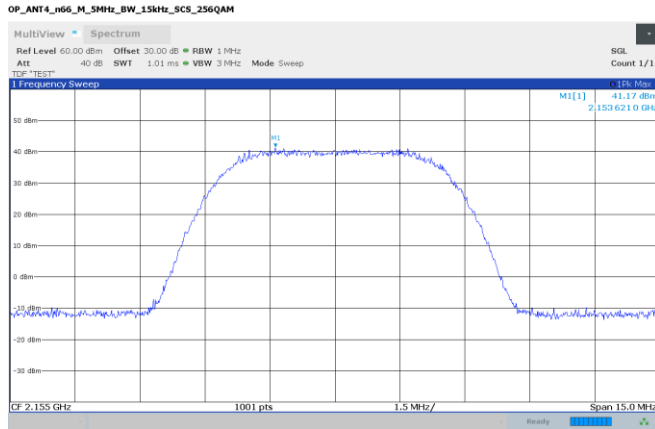
Table 8.4-2: Conducted total channel power, band n66



Section 8
Test name
Specification

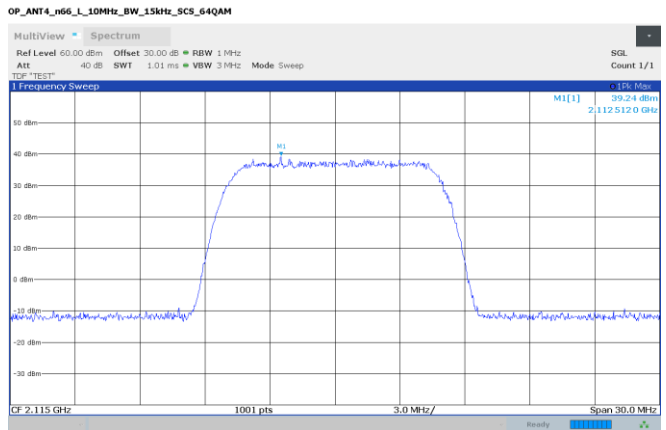
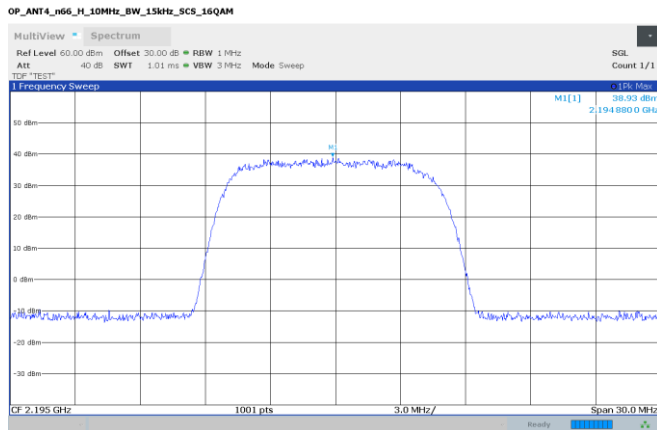
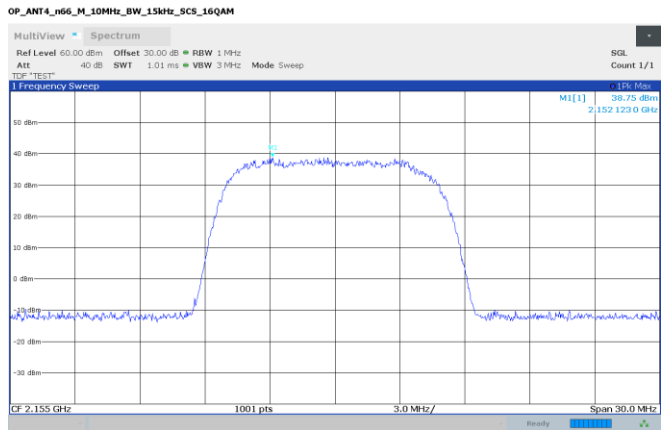
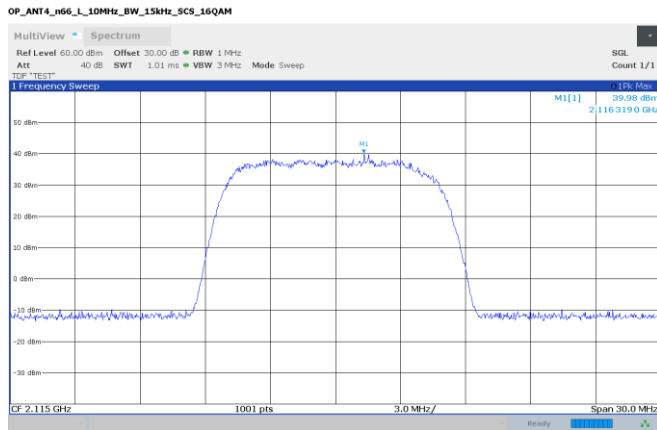
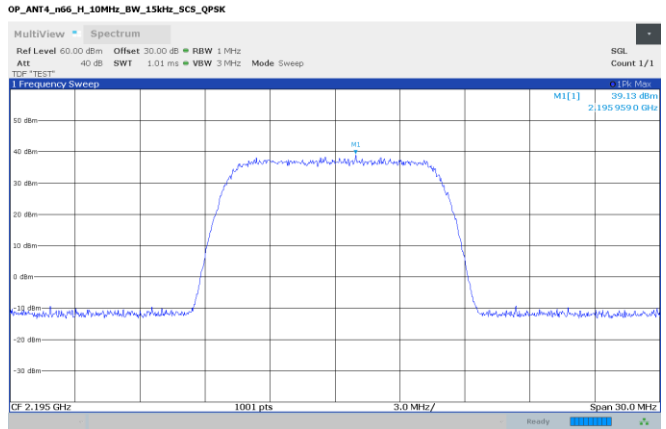
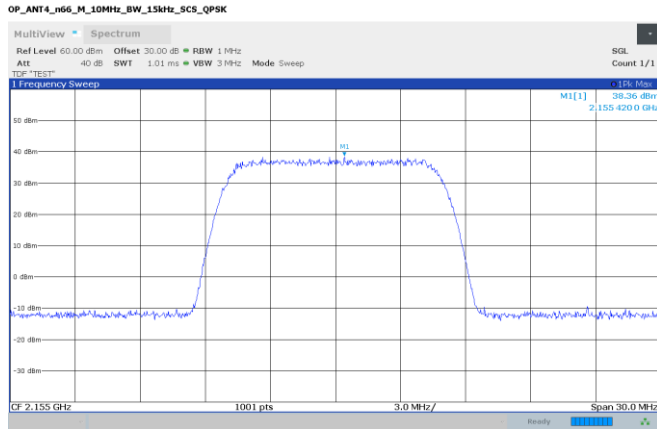
Testing
 FCC 27.50(d)(2)(ii) Output power
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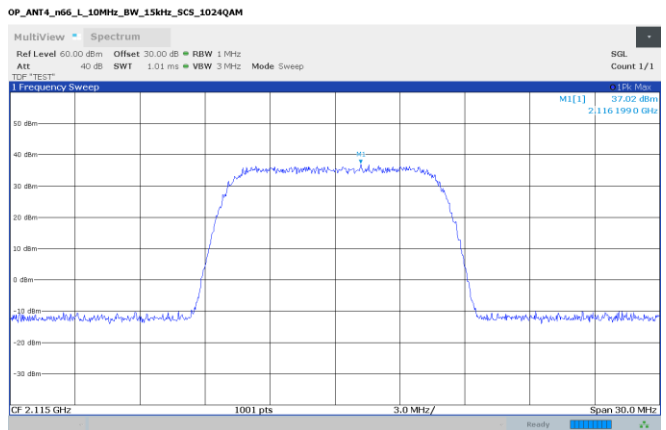
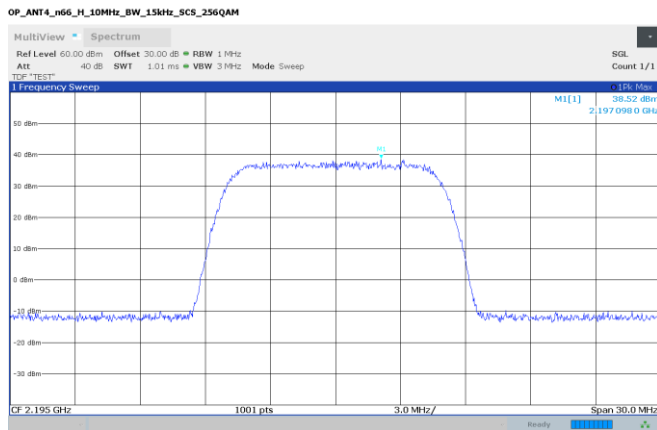
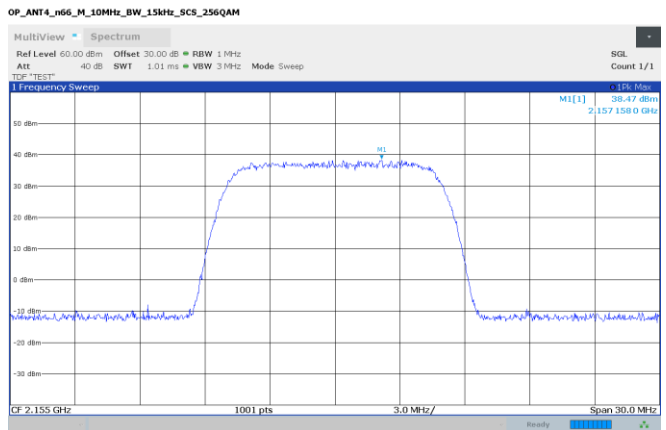
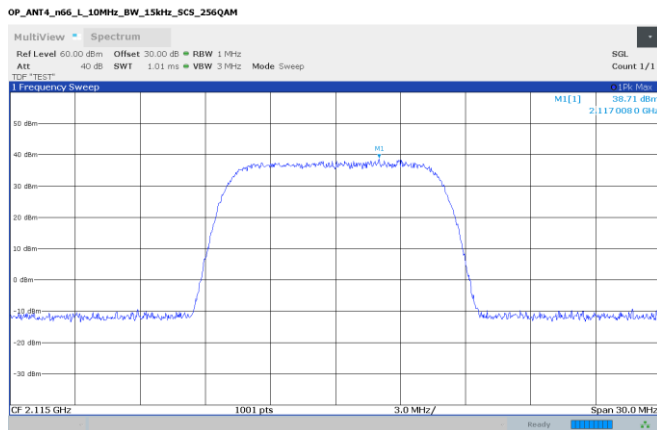
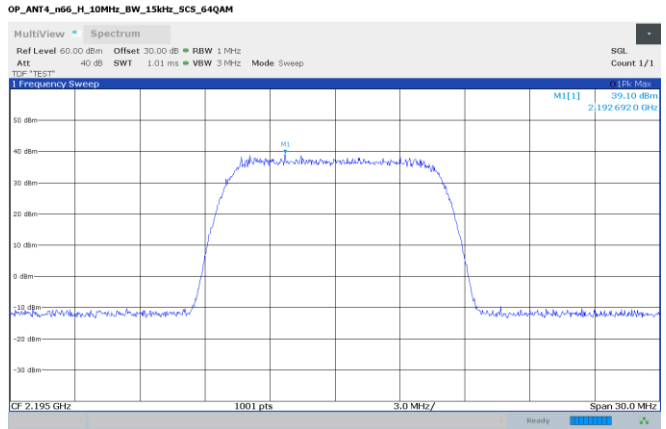
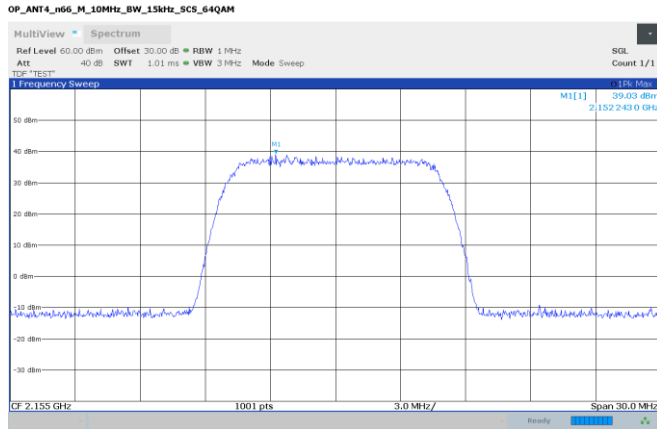
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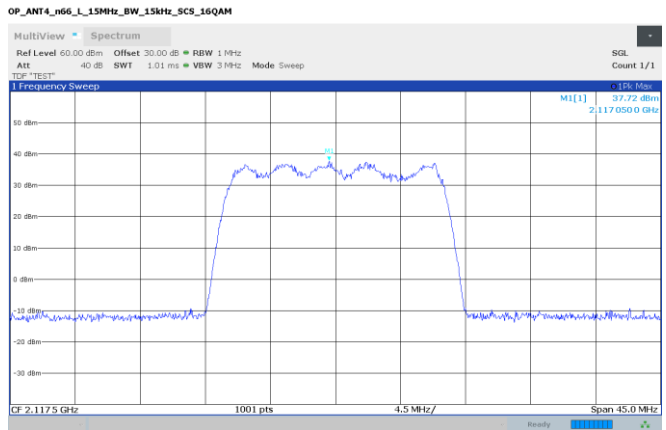
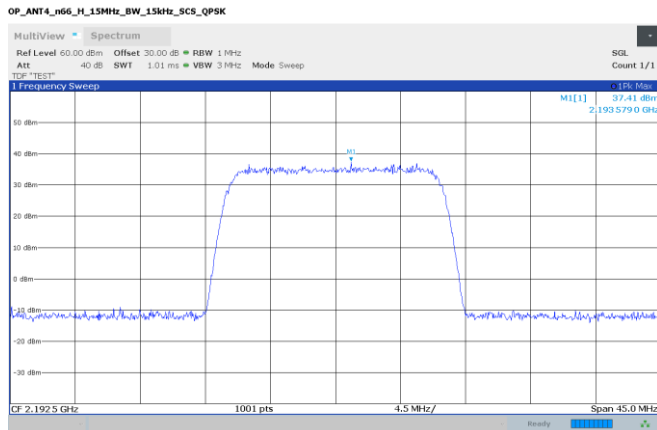
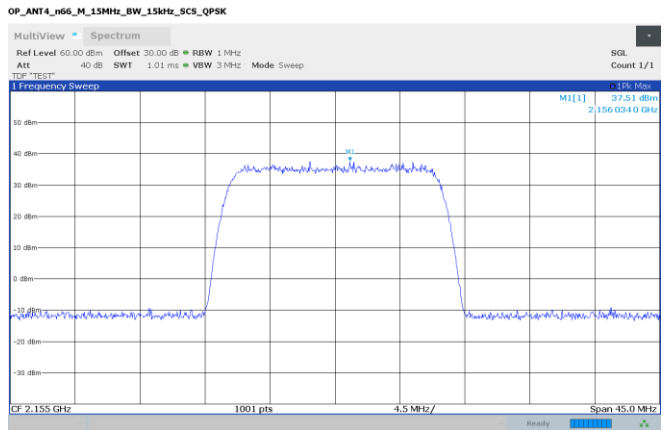
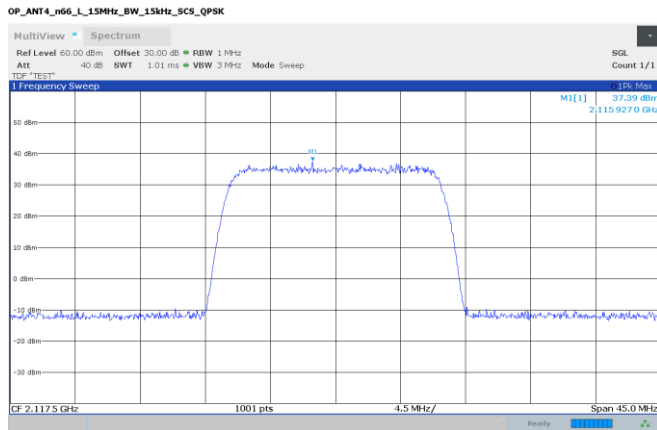
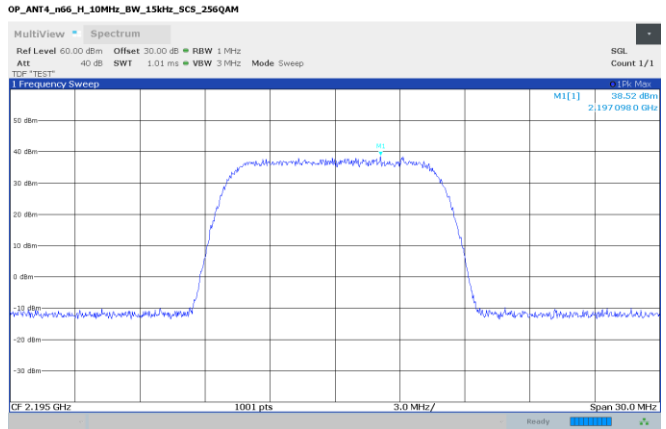
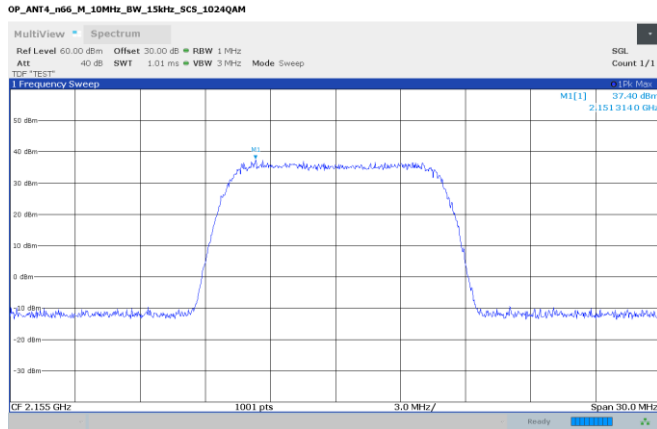
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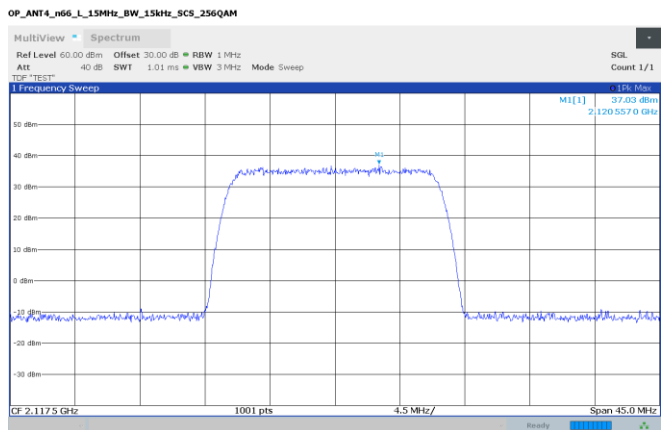
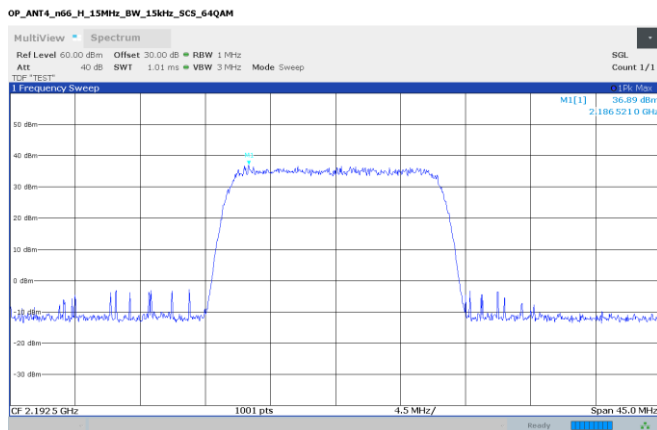
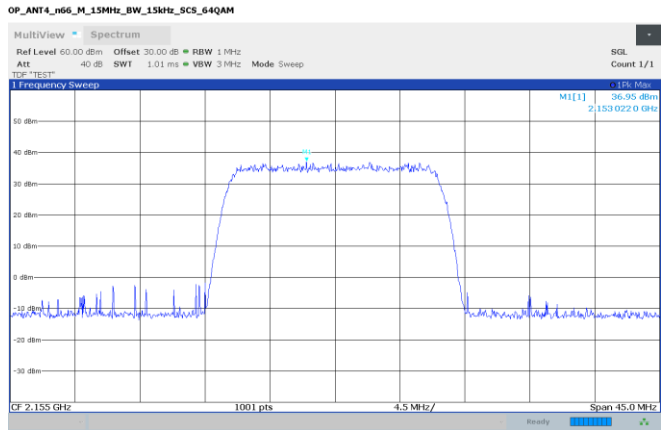
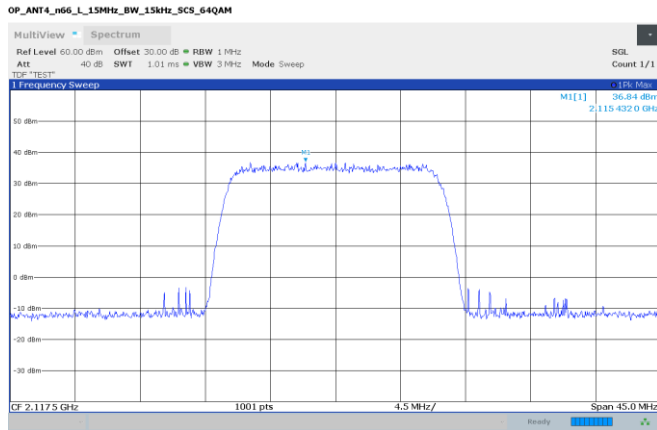
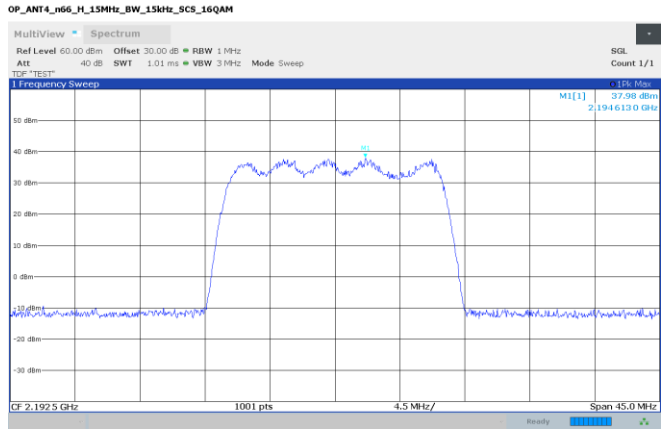
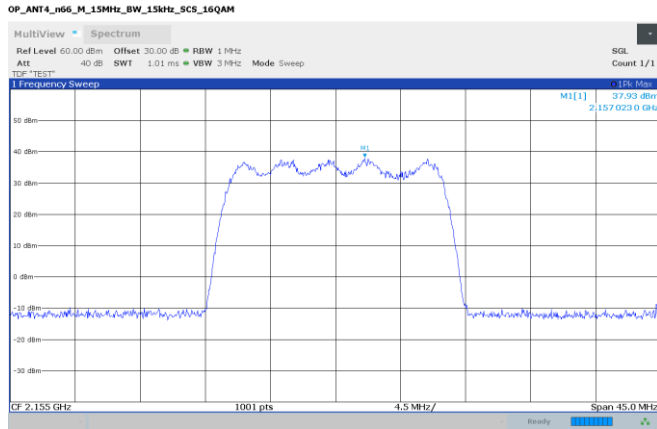
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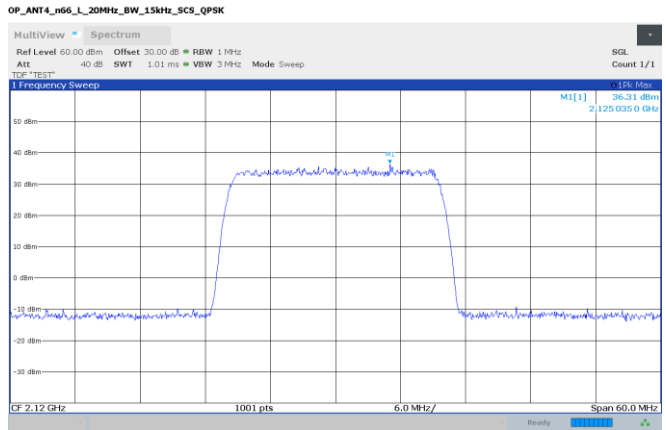
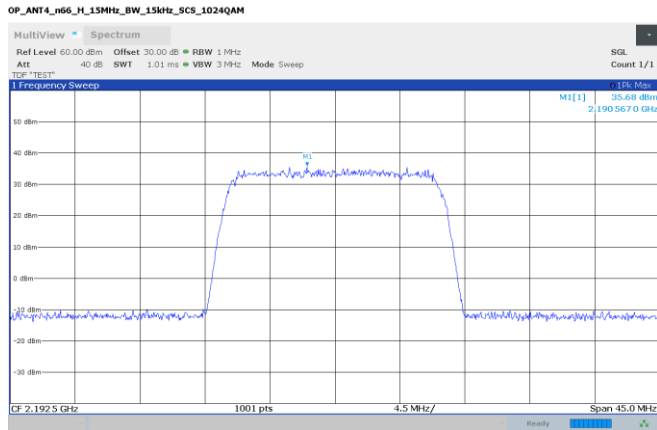
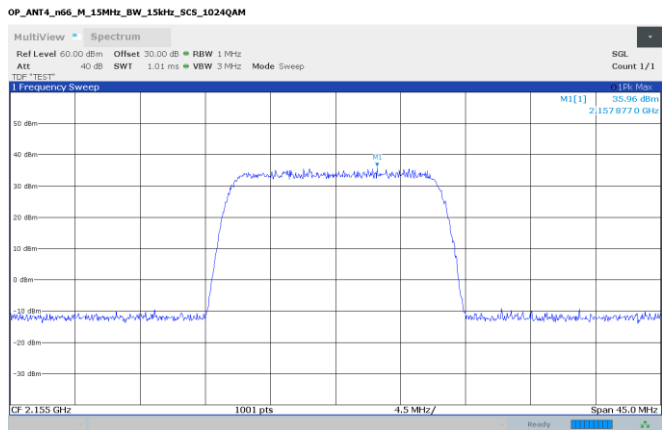
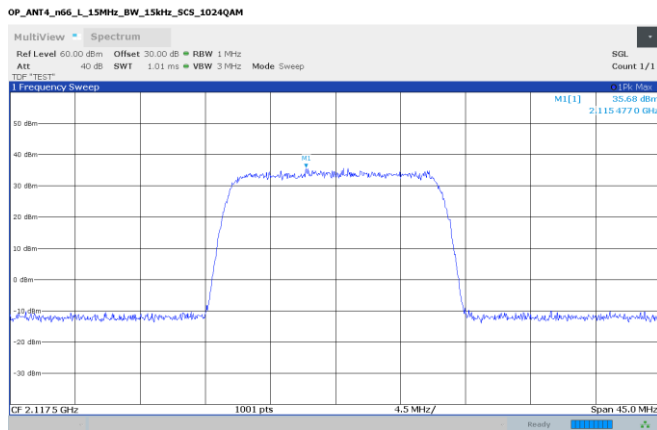
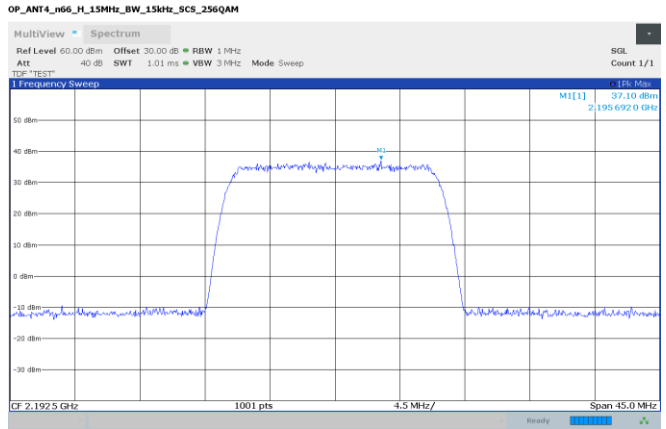
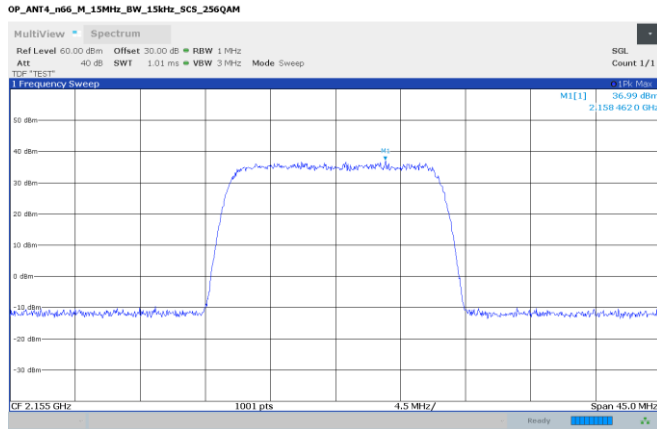
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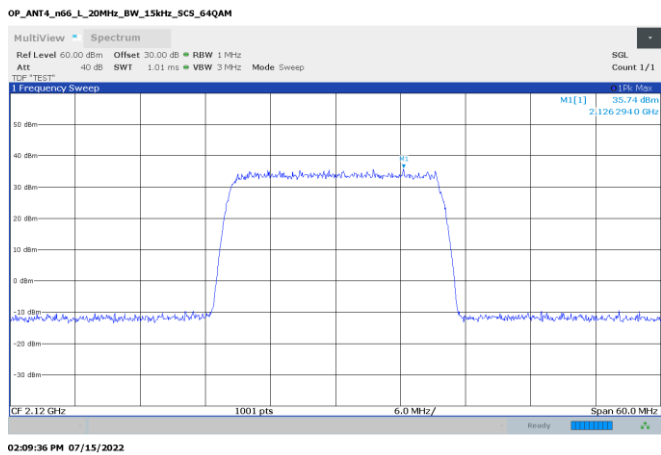
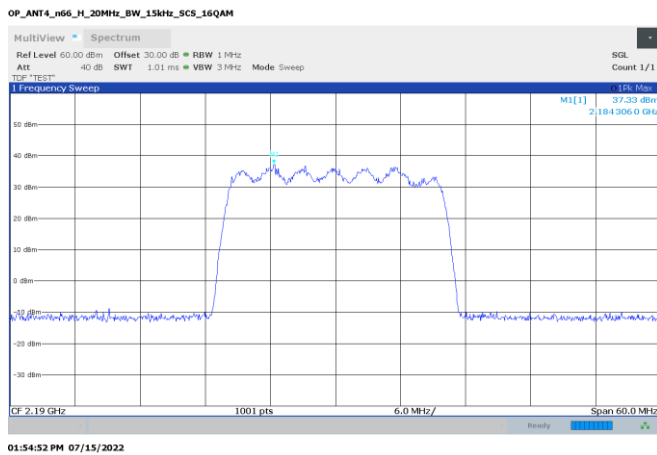
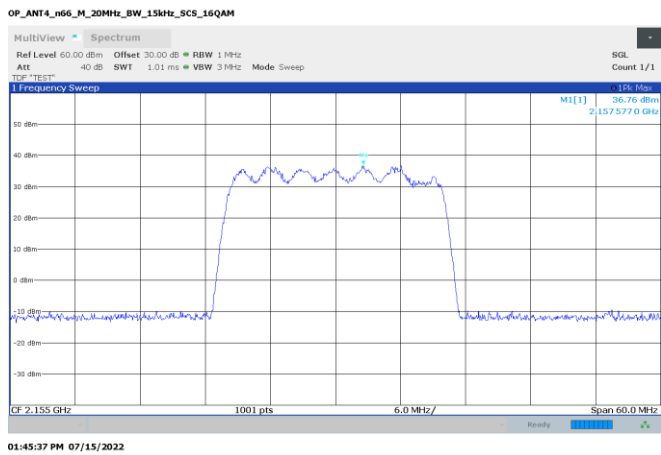
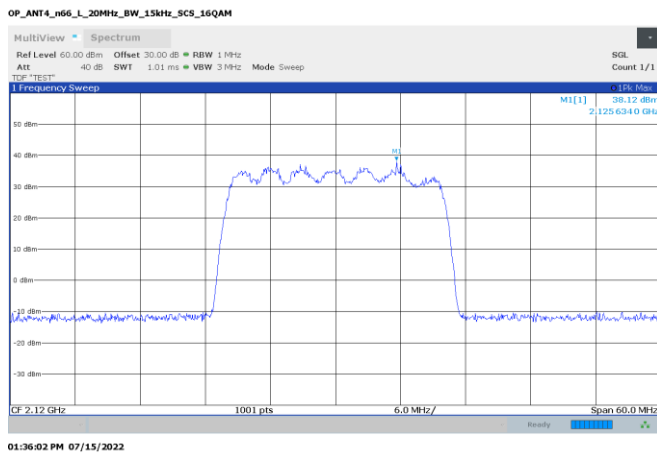
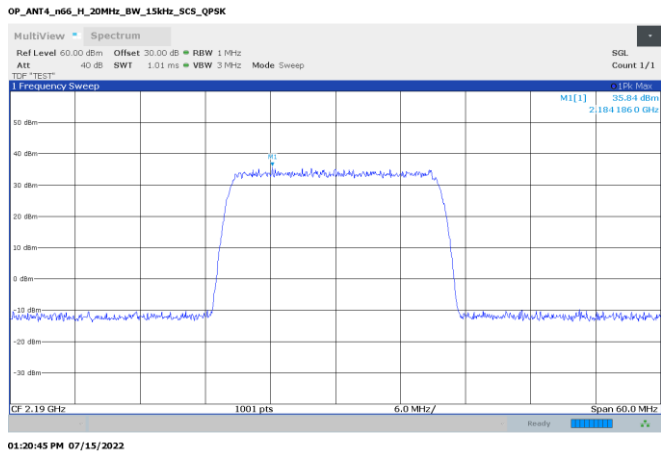
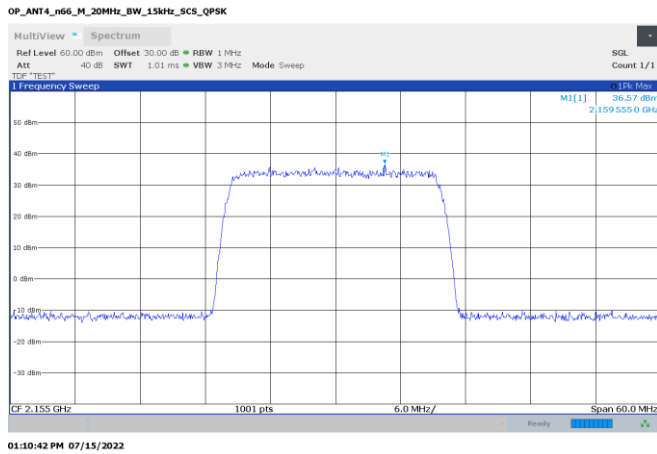
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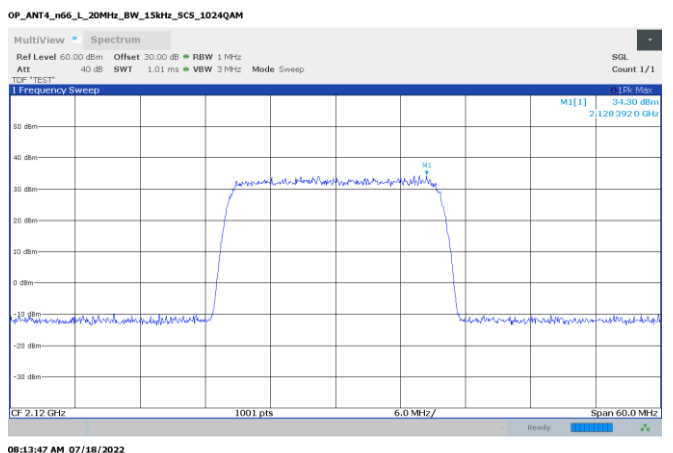
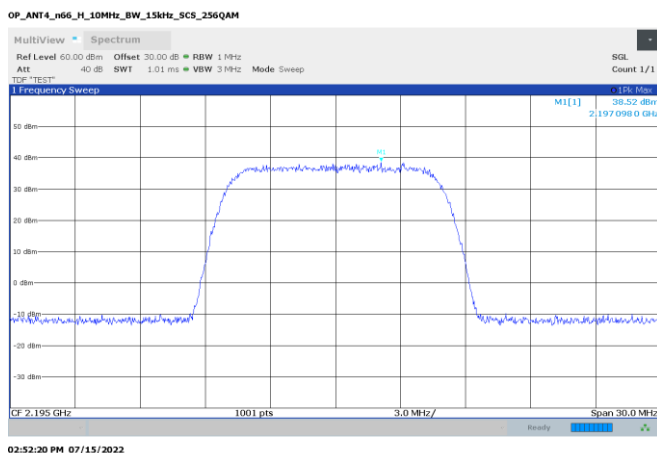
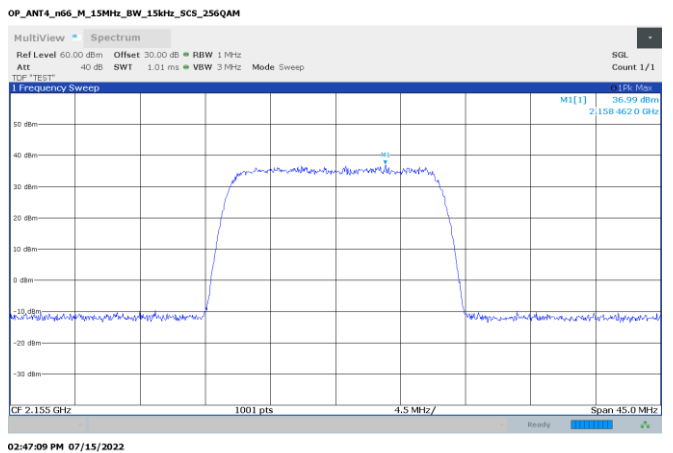
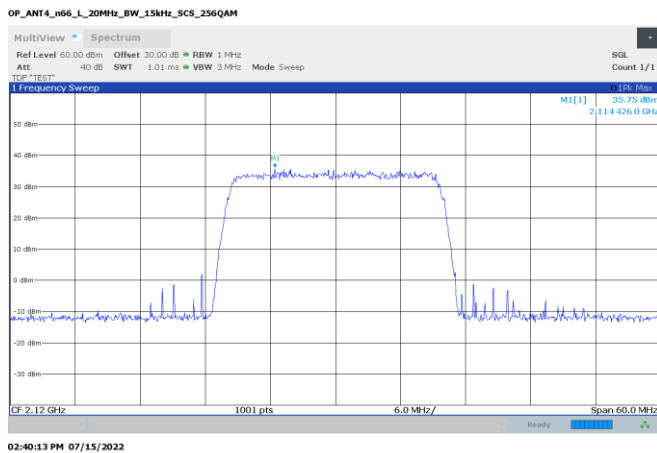
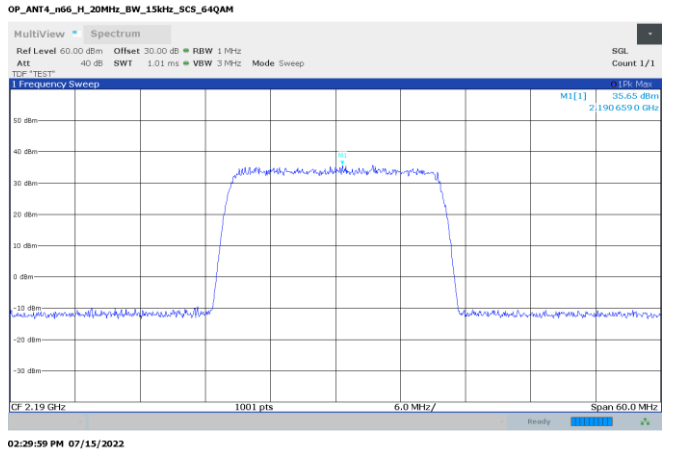
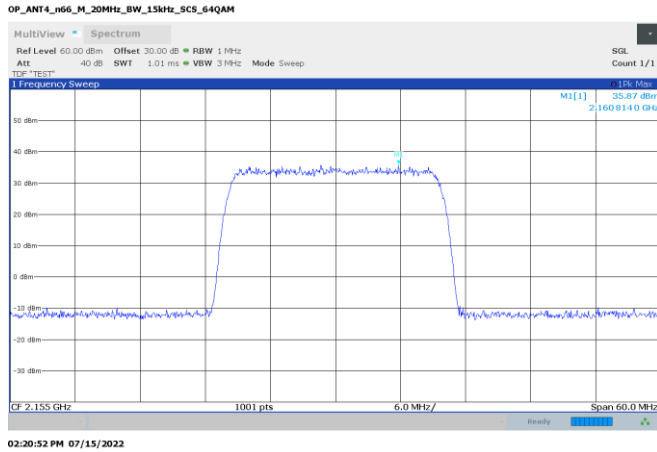
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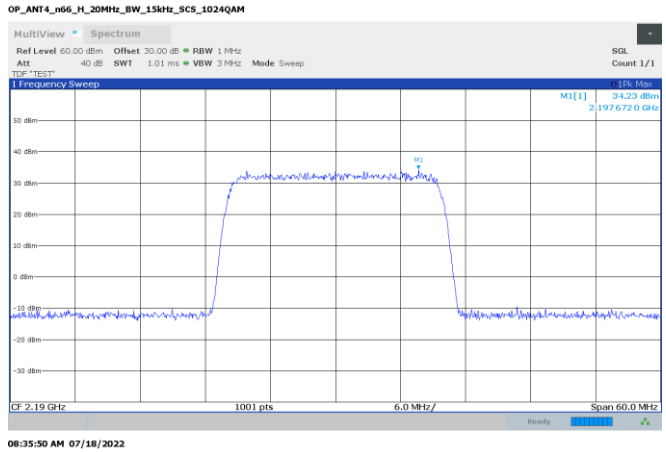
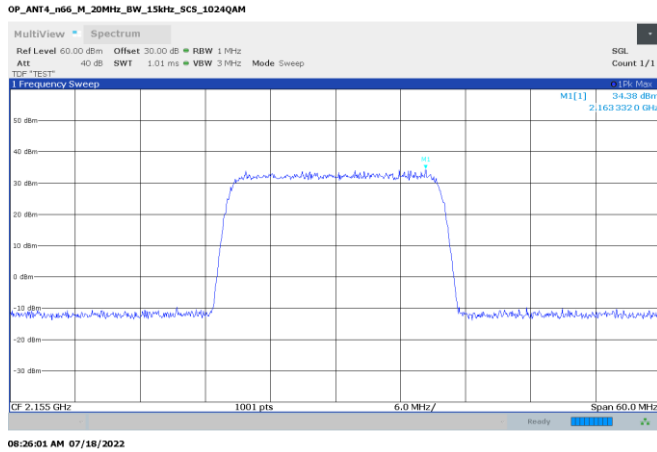
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Band n70:

Band	Modulation	OBW (MHz)	Port	Frequency (MHz)	Power Density (dBm/1 MHz)	Correlation factor (dB)	Total power density across all ports (dBm/1MHz)
n70	QPSK	5	C	1997.5	40.03	6.02	46.05
n70	QPSK	5	C	2007.5	40.01	6.02	46.03
n70	QPSK	5	C	2017.5	39.65	6.02	45.67
n70	16QAM	5	C	1997.5	40.02	6.02	46.04
n70	16QAM	5	C	2007.5	39.90	6.02	45.92
n70	16QAM	5	C	2017.5	39.99	6.02	46.01
n70	64QAM	5	C	1997.5	39.89	6.02	45.91
n70	64QAM	5	C	2007.5	40.00	6.02	46.02
n70	64QAM	5	C	2017.5	39.58	6.02	45.60
n70	256QAM	5	C	1997.5	39.74	6.02	45.76
n70	256QAM	5	C	2007.5	39.65	6.02	45.67
n70	256QAM	5	C	2017.5	40.25	6.02	46.27
n70	1024QAM	5	C	1997.5	38.64	6.02	44.66
n70	1024QAM	5	C	2007.5	39.12	6.02	45.14
n70	1024QAM	5	C	2017.5	38.94	6.02	44.96
n70	QPSK	10	C	2000	37.63	6.02	43.65
n70	QPSK	10	C	2007.5	37.10	6.02	43.12
n70	QPSK	10	C	2015	37.68	6.02	43.70
n70	16QAM	10	C	2000	37.72	6.02	43.74
n70	16QAM	10	C	2007.5	37.19	6.02	43.21
n70	16QAM	10	C	2015	37.17	6.02	43.19
n70	64QAM	10	C	2000	37.37	6.02	43.39
n70	64QAM	10	C	2007.5	37.53	6.02	43.55
n70	64QAM	10	C	2015	36.90	6.02	42.92
n70	256QAM	10	C	2000	37.03	6.02	43.05
n70	256QAM	10	C	2007.5	36.44	6.02	42.46
n70	256QAM	10	C	2015	36.91	6.02	42.93
n70	1024QAM	10	C	2000	35.31	6.02	41.33
n70	1024QAM	10	C	2007.5	35.80	6.02	41.82
n70	1024QAM	10	C	2015	35.53	6.02	41.55



Band	Modulation	OBW (MHz)	Port	Frequency (MHz)	Power Density (dBm/1 MHz)	Correlation factor (dB)	Total power density across all ports (dBm/1MHz)
n70	QPSK	20	C	2005	34.54	6.02	40.56
n70	QPSK	20	C	2007.5	35.15	6.02	41.17
n70	QPSK	20	C	2010	34.67	6.02	40.69
n70	16QAM	20	C	2005	35.57	6.02	41.59
n70	16QAM	20	C	2007.5	35.23	6.02	41.25
n70	16QAM	20	C	2010	35.34	6.02	41.36
n70	64QAM	20	C	2005	33.89	6.02	39.91
n70	64QAM	20	C	2007.5	34.15	6.02	40.17
n70	64QAM	20	C	2010	34.06	6.02	40.08
n70	256QAM	20	C	2005	34.04	6.02	40.06
n70	256QAM	20	C	2007.5	34.18	6.02	40.20
n70	256QAM	20	C	2010	34.32	6.02	40.34
n70	1024QAM	20	C	2005	32.76	6.02	38.78
n70	1024QAM	20	C	2007.5	32.47	6.02	38.49
n70	1024QAM	20	C	2010	32.80	6.02	38.82
n70	QPSK	25	C	2007.5	33.58	6.02	39.60
n70	16QAM	25	C	2007.5	34.10	6.02	40.12
n70	64QAM	25	C	2007.5	32.90	6.02	38.92
n70	256QAM	25	C	2007.5	32.70	6.02	38.72
n70	1024QAM	25	C	2007.5	31.89	6.02	37.91

Table 8.4-3: Conducted output power density, band n70

For informational purposes, the table below documents the peak total channel power. Measured data is obtained from the PAPR measurements documented in section 8.5 of this report.

Band	Modulation	OBW (MHz)	Port	Frequency (MHz)	Total channel power (dBm)	Correlation factor (dB)	Total channel power across all ports (dBm)
n70	QPSK	5	C	1997.5	43.12	6.02	49.14
n70	QPSK	5	C	2007.5	43.13	6.02	49.15
n70	QPSK	5	C	2017.5	43.09	6.02	49.11
n70	16QAM	5	C	1997.5	43.13	6.02	49.15
n70	16QAM	5	C	2007.5	43.22	6.02	49.24
n70	16QAM	5	C	2017.5	43.14	6.02	49.16
n70	64QAM	5	C	1997.5	43.45	6.02	49.47
n70	64QAM	5	C	2007.5	43.44	6.02	49.46
n70	64QAM	5	C	2017.5	43.29	6.02	49.31
n70	256QAM	5	C	1997.5	43.17	6.02	49.19
n70	256QAM	5	C	2007.5	43.27	6.02	49.29
n70	256QAM	5	C	2017.5	43.20	6.02	49.22
n70	1024QAM	5	C	1997.5	43.11	6.02	49.13
n70	1024QAM	5	C	2007.5	43.15	6.02	49.17
n70	1024QAM	5	C	2017.5	43.13	6.02	49.15
n70	QPSK	10	C	2000	43.41	6.02	49.43
n70	QPSK	10	C	2007.5	43.41	6.02	49.43
n70	QPSK	10	C	2015	43.36	6.02	49.38
n70	16QAM	10	C	2000	43.38	6.02	49.40
n70	16QAM	10	C	2007.5	43.39	6.02	49.41
n70	16QAM	10	C	2015	43.48	6.02	49.50
n70	64QAM	10	C	2000	43.49	6.02	49.51
n70	64QAM	10	C	2007.5	43.46	6.02	49.48
n70	64QAM	10	C	2015	43.37	6.02	49.39
n70	256QAM	10	C	2000	43.81	6.02	49.83
n70	256QAM	10	C	2007.5	43.76	6.02	49.78
n70	256QAM	10	C	2015	43.59	6.02	49.61
n70	1024QAM	10	C	2000	43.36	6.02	49.38
n70	1024QAM	10	C	2007.5	43.32	6.02	49.34
n70	1024QAM	10	C	2015	43.36	6.02	49.38



Band	Modulation	OBW (MHz)	Port	Frequency (MHz)	Total channel power (dBm)	Correlation factor (dB)	Total channel power across all ports (dBm)
n70	QPSK	20	C	2005	43.88	6.02	49.90
n70	QPSK	20	C	2007.5	43.99	6.02	50.01
n70	QPSK	20	C	2010	44.14	6.02	50.16
n70	16QAM	20	C	2005	44.27	6.02	50.29
n70	16QAM	20	C	2007.5	44.30	6.02	50.32
n70	16QAM	20	C	2010	44.28	6.02	50.30
n70	64QAM	20	C	2005	44.01	6.02	50.03
n70	64QAM	20	C	2007.5	44.00	6.02	50.02
n70	64QAM	20	C	2010	44.00	6.02	50.02
n70	256QAM	20	C	2005	43.88	6.02	49.90
n70	256QAM	20	C	2007.5	43.93	6.02	49.95
n70	256QAM	20	C	2010	43.94	6.02	49.96
n70	1024QAM	20	C	2005	43.48	6.02	49.50
n70	1024QAM	20	C	2007.5	43.34	6.02	49.36
n70	1024QAM	20	C	2010	43.41	6.02	49.43
n70	QPSK	25	C	2007.5	43.90	6.02	49.92
n70	16QAM	25	C	2007.5	43.56	6.02	49.58
n70	64QAM	25	C	2007.5	43.51	6.02	49.53
n70	256QAM	25	C	2007.5	43.48	6.02	49.50
n70	1024QAM	25	C	2007.5	44.04	6.02	50.06

Table 8.4-4: Conducted total channel power, band n70

