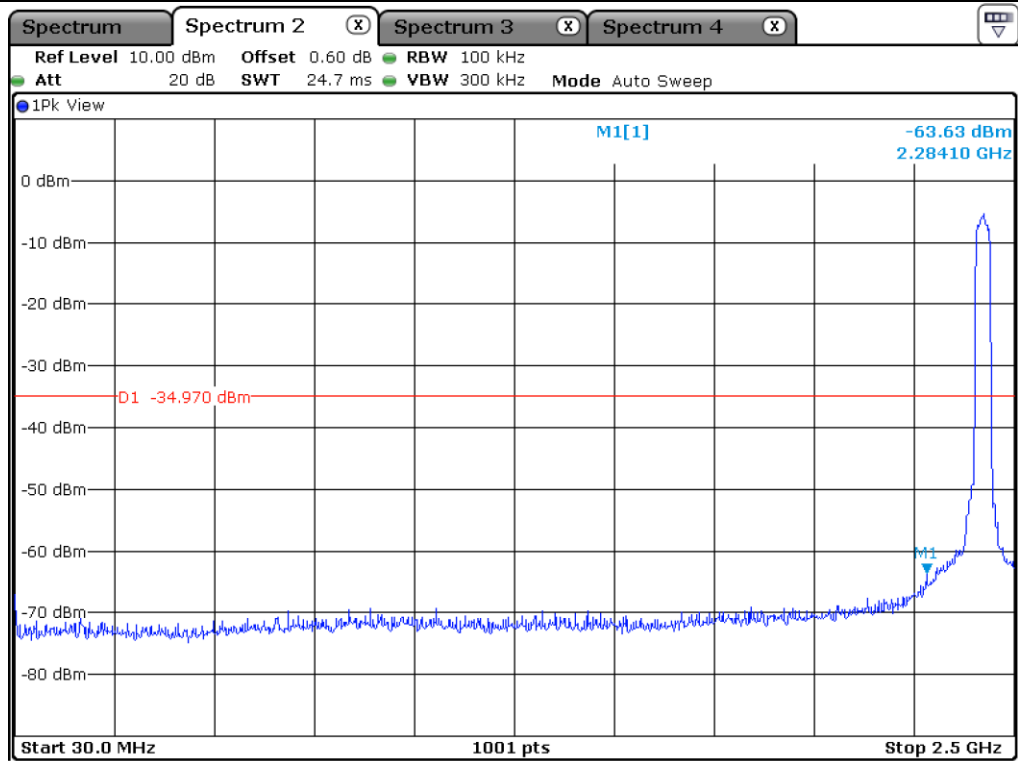
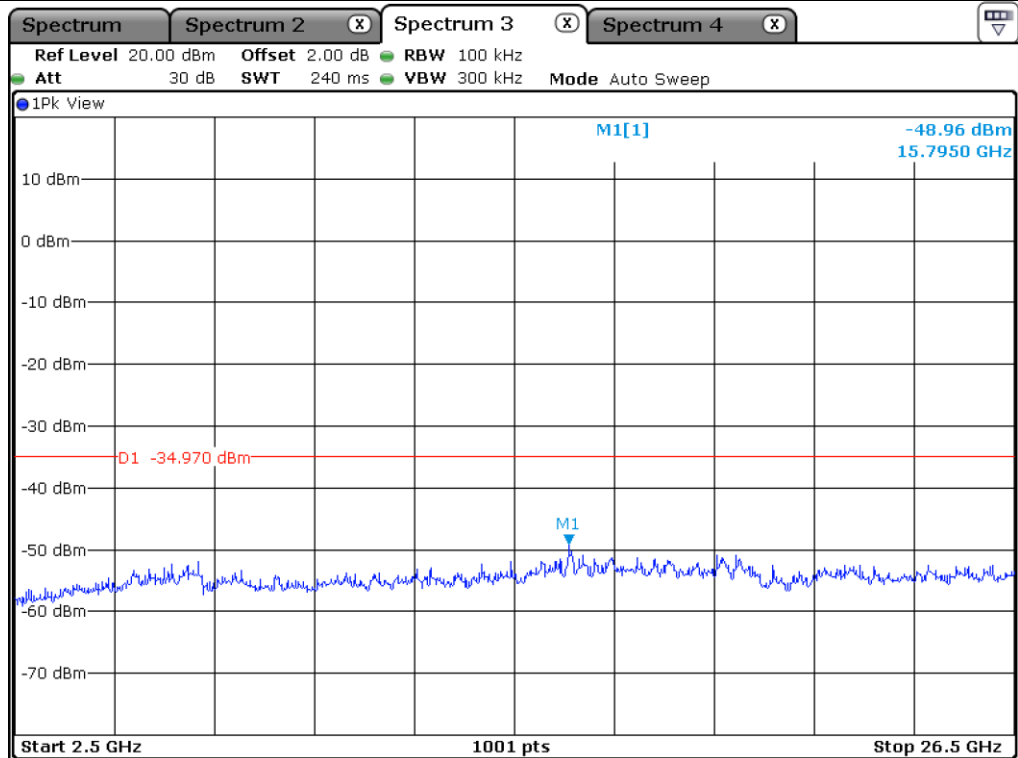




Low Channel



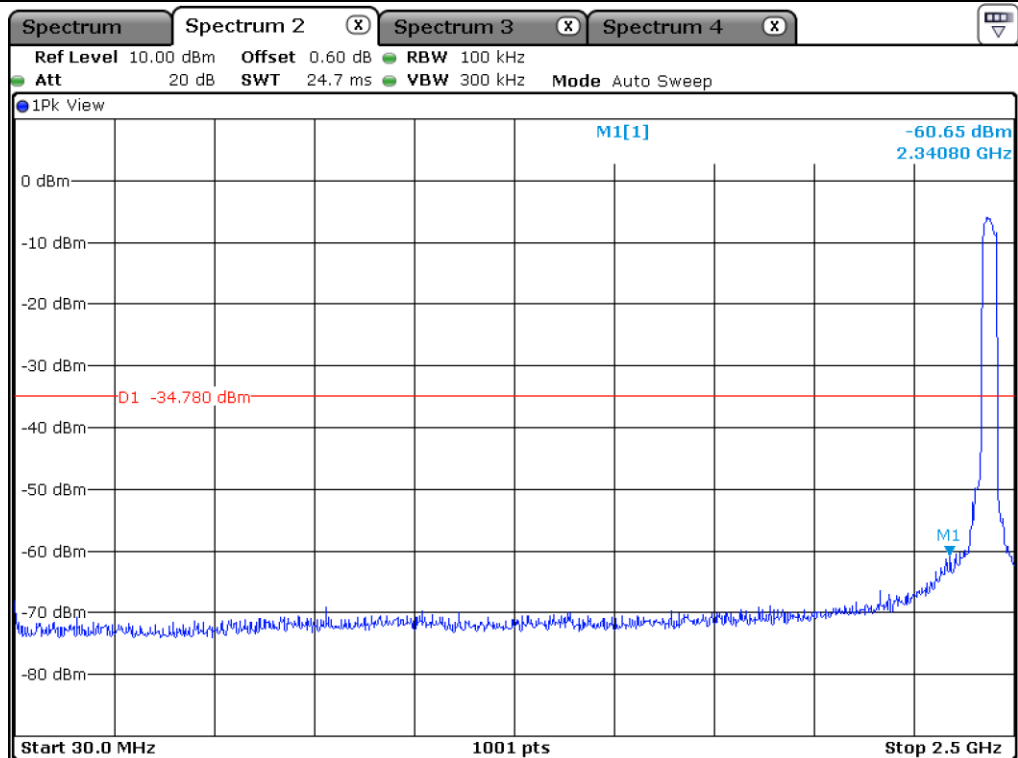
Low Channel

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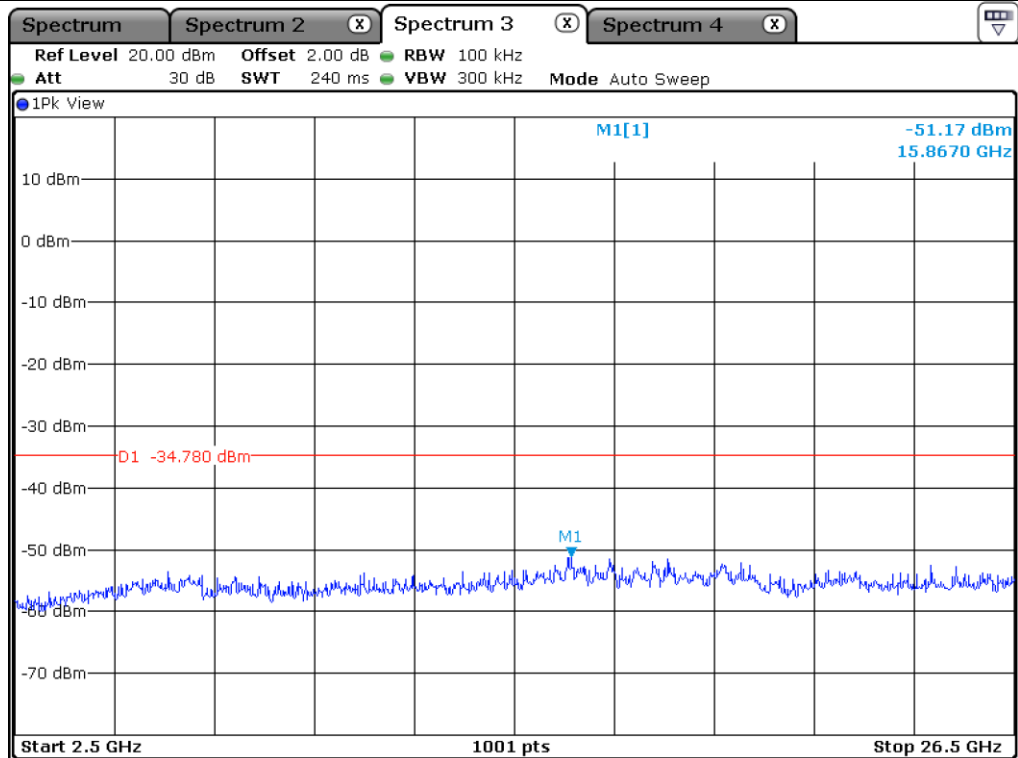
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Middle Channel



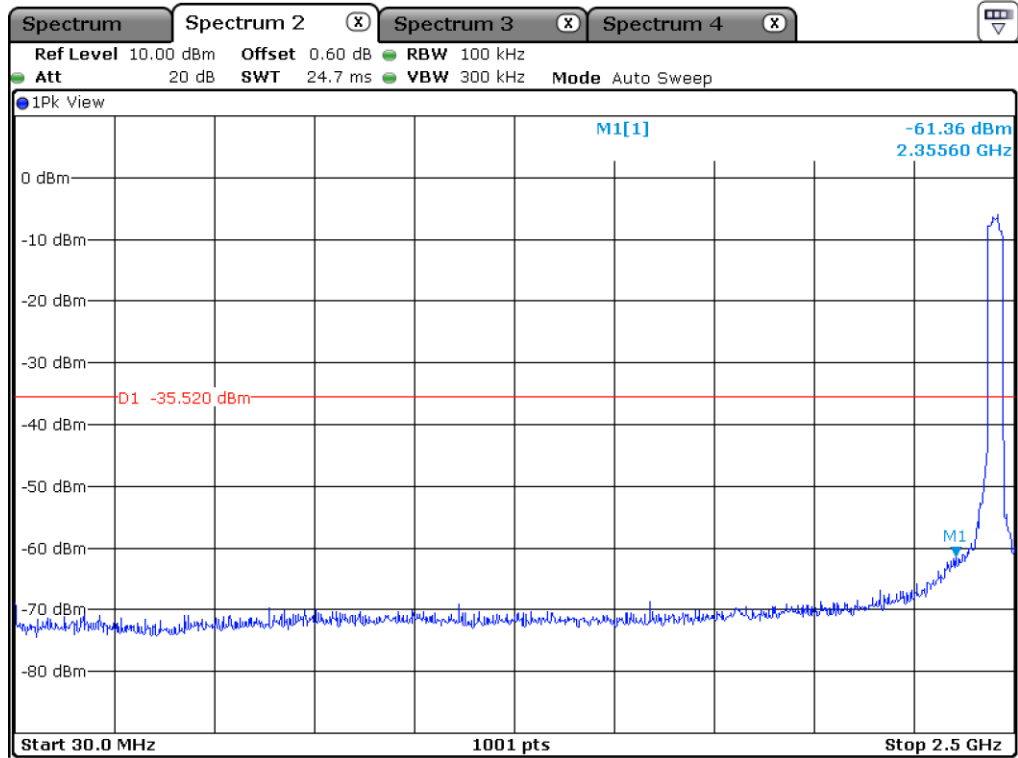
Middle Channel

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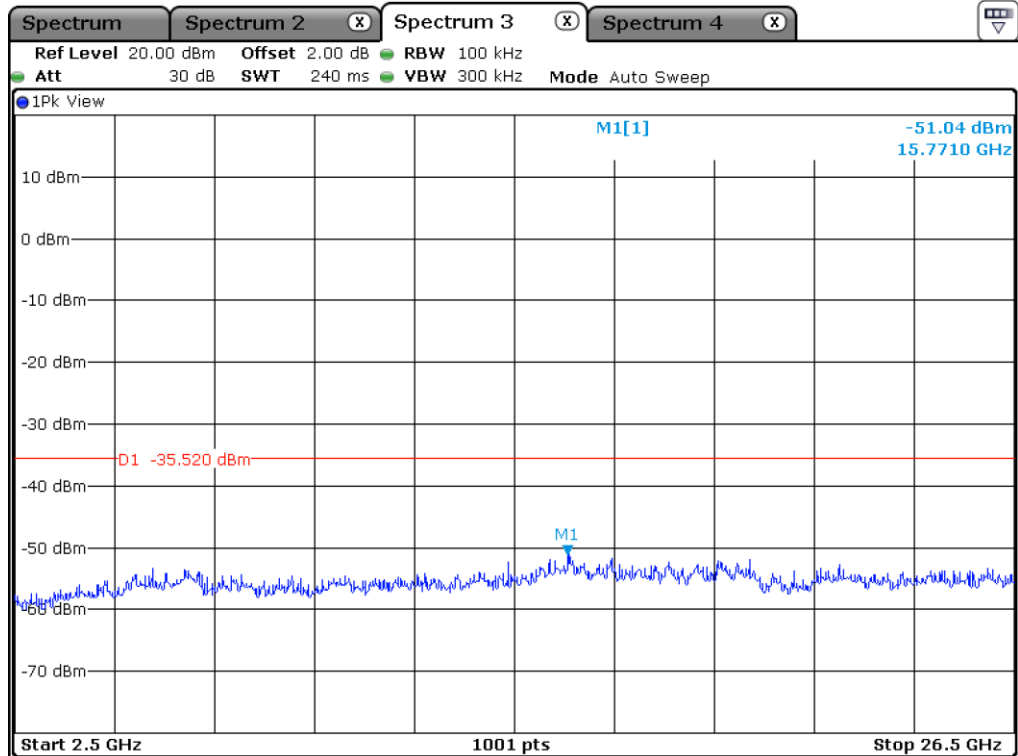
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High Channel 9



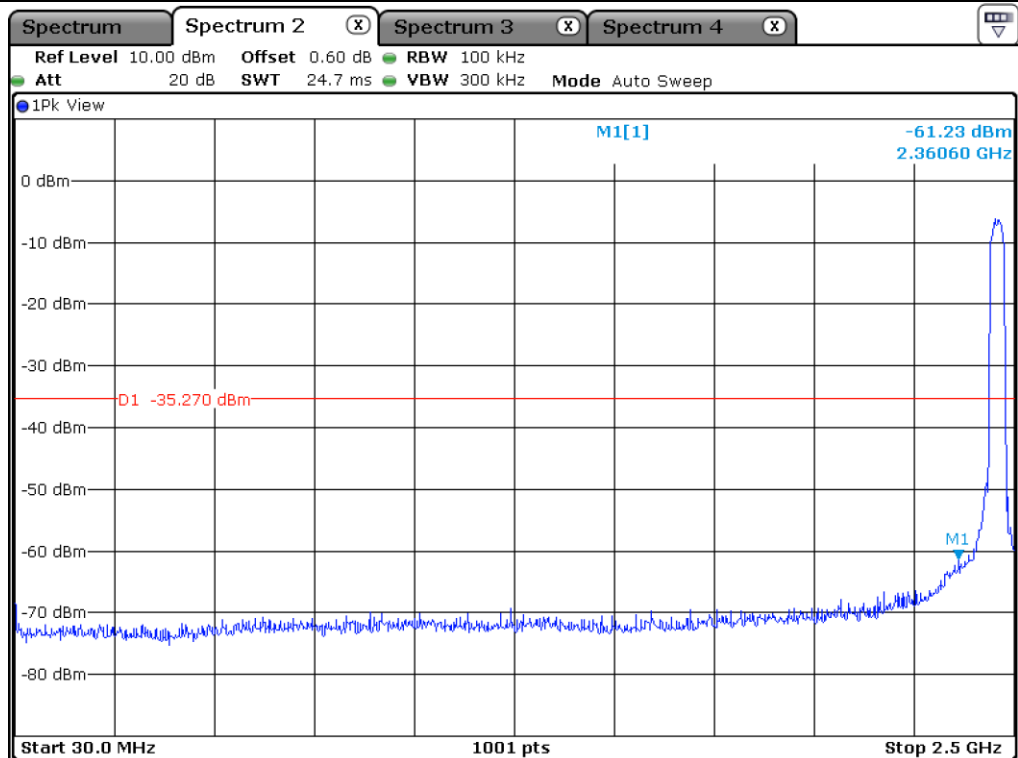
High Channel 9

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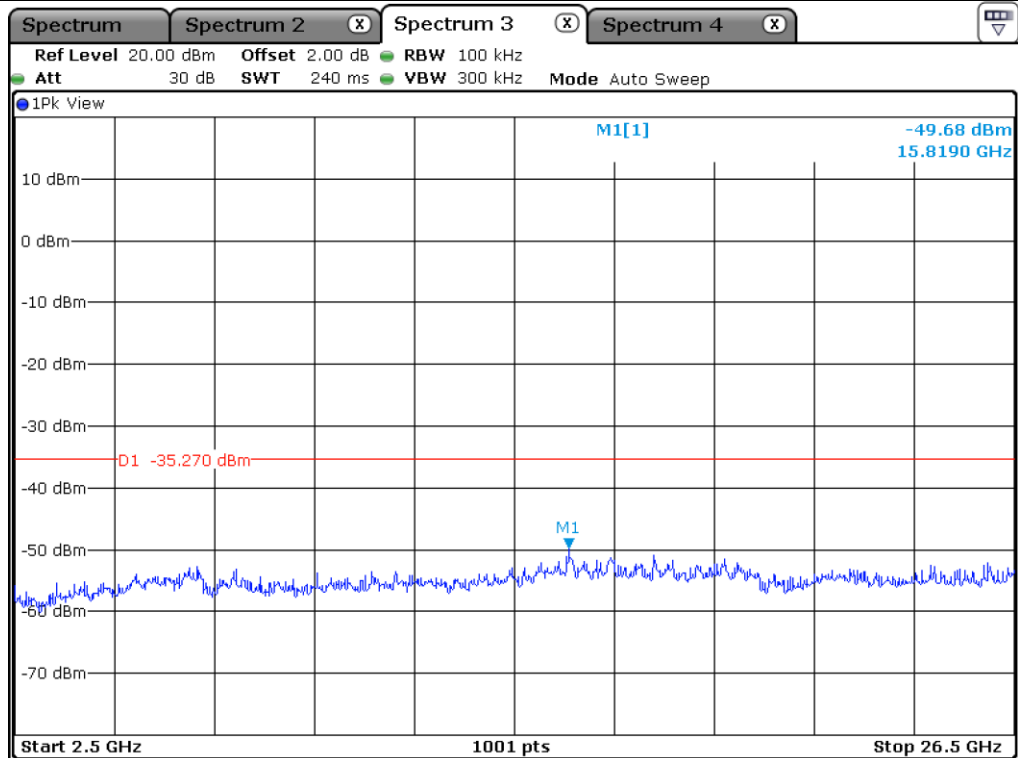
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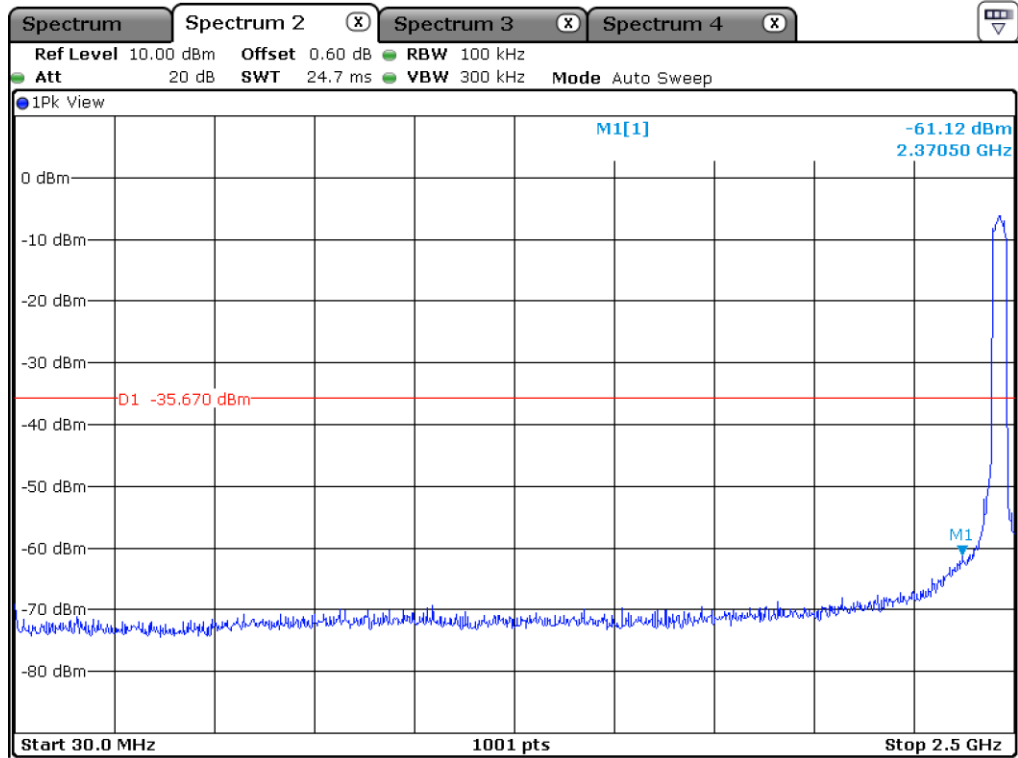
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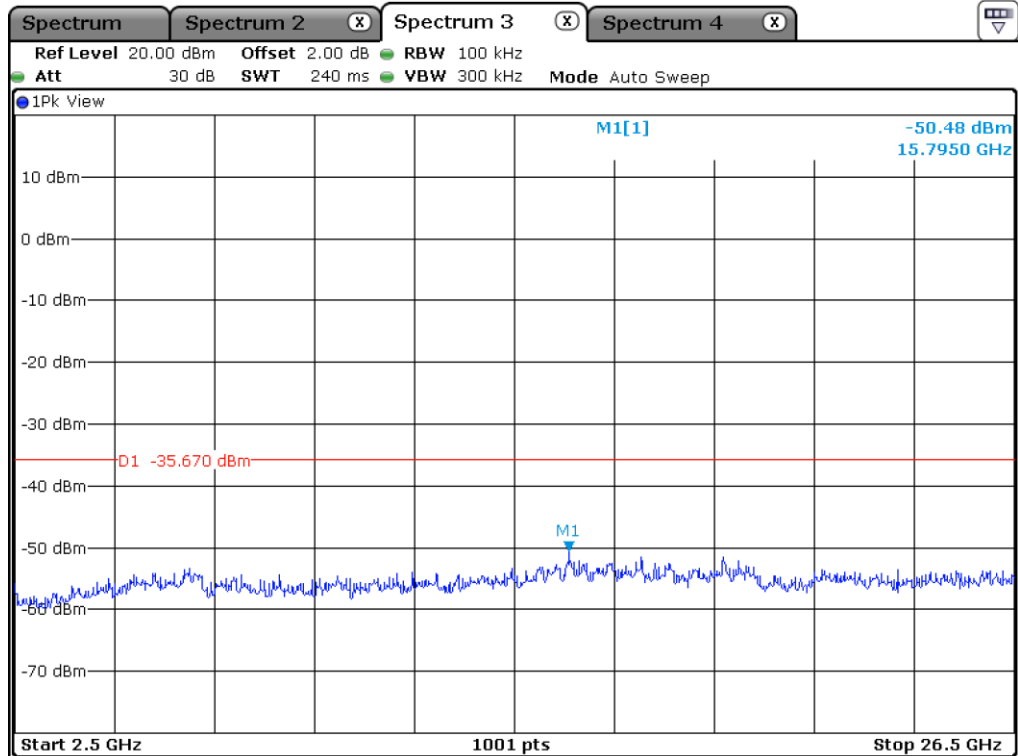
High Channel 10



High Channel 10



High Channel 11



High Channel 11

9.6 Test data for radiated emission

9.6.1 Radiated Emission which fall in the Restricted Band

9.6.1.1 Test data for 802.11b WLAN Mode

9.6.1.1.1 Test data for Antenna 0

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode
1 MHz and RMS Detector for Average Mode
- Video bandwidth : 3 MHz for Peak and Average Mode
- Measurement distance : 3 m
- Duty Cycle : > 98 %
- Result : PASSED

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	ATT Factor	AMP Factor	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Test Data for Low Channel										
2 315.529	51.94	Peak	H	27.50	8.20	9.93	45.79	51.78	74.00	22.22
2 378.556	41.90	Average	H	27.50	8.20	9.93	45.79	41.74	54.00	12.26
2 350.325	51.65	Peak	V	27.50	8.20	9.93	45.79	51.49	74.00	22.51
2 386.199	41.44	Average	V	27.50	8.20	9.93	45.79	41.28	54.00	12.72
Test Data for High 11 Channel										
2 487.023	51.03	Peak	H	27.30	8.33	9.95	45.79	50.82	74.00	23.18
2 485.238	41.64	Average	H	27.30	8.33	9.95	45.79	41.43	54.00	12.57
2 490.480	50.73	Peak	V	27.30	8.33	9.95	45.79	50.52	74.00	23.48
2 488.295	41.38	Average	V	27.30	8.33	9.95	45.79	41.17	54.00	12.83
Test Data for High 12 Channel										
2 483.500	54.08	Peak	H	27.30	8.33	9.95	45.79	53.87	74.00	20.13
2 483.500	44.89	Average	H	27.30	8.33	9.95	45.79	44.68	54.00	9.32
2 483.500	53.31	Peak	V	27.30	8.33	9.95	45.79	53.10	74.00	20.90
2 483.500	44.51	Average	V	27.30	8.33	9.95	45.79	44.30	54.00	9.70
Test Data for High 13 Channel										
2 484.339	55.69	Peak	H	27.30	8.33	9.95	45.79	55.48	74.00	18.52
2 487.036	49.80	Average	H	27.30	8.33	9.95	45.79	49.59	54.00	4.41
2 486.917	55.44	Peak	V	27.30	8.33	9.95	45.79	55.23	74.00	18.77
2 487.016	49.48	Average	V	27.30	8.33	9.95	45.79	49.27	54.00	4.73

Tabulated test data for Restricted Band

Remark: "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dBμV/m) - Total Level (dBμV/m)

Total Level = Reading + Antenna Factor + Cable Loss+ATT Factor– AMP Factor

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9.6.1.1.2 Test data for Antenna 1

- . Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode
1 MHz and RMS Detector for Average Mode
- . Video bandwidth : 3 MHz for Peak and Average Mode
- . Measurement distance : 3 m
- . Duty Cycle : > 98 %
- . Result : PASSED

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	ATT Factor	AMP Factor	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Test Data for Low Channel										
2 341.718	52.43	Peak	H	27.50	8.20	9.93	45.79	52.27	74.00	21.73
2 386.763	42.58	Average	H	27.50	8.20	9.93	45.79	42.42	54.00	11.58
2 379.481	52.36	Peak	V	27.50	8.20	9.93	45.79	52.20	74.00	21.80
2 390.000	42.23	Average	V	27.50	8.20	9.93	45.79	42.07	54.00	11.93
Test Data for High 11 Channel										
2 485.485	51.53	Peak	H	27.30	8.33	9.95	45.79	51.32	74.00	22.68
2 483.500	41.60	Average	H	27.30	8.33	9.95	45.79	41.39	54.00	12.61
2 492.677	50.99	Peak	V	27.30	8.33	9.95	45.79	50.78	74.00	23.22
2 492.211	41.38	Average	V	27.30	8.33	9.95	45.79	41.17	54.00	12.83
Test Data for High 12 Channel										
2 483.500	52.73	Peak	H	27.30	8.33	9.95	45.79	52.52	74.00	21.48
2 484.319	43.72	Average	H	27.30	8.33	9.95	45.79	43.51	54.00	10.49
2 483.500	52.16	Peak	V	27.30	8.33	9.95	45.79	51.95	74.00	22.05
2 484.099	43.48	Average	V	27.30	8.33	9.95	45.79	43.27	54.00	10.73
Test Data for High 13 Channel										
2 484.619	55.60	Peak	H	27.30	8.33	9.95	45.79	55.39	74.00	18.61
2 484.819	50.29	Average	H	27.30	8.33	9.95	45.79	50.08	54.00	3.92
2 485.258	54.44	Peak	V	27.30	8.33	9.95	45.79	54.23	74.00	19.77
2 484.899	49.02	Average	V	27.30	8.33	9.95	45.79	48.81	54.00	5.19

Tabulated test data for Restricted Band

Remark: "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dBμV/m) - Total Level (dBμV/m)

Total Level = Reading + Antenna Factor + Cable Loss+ATT Factor– AMP Factor

9.6.1.2 Test data for 802.11g WLAN Mode

9.6.1.2.1 Test data for Multiple Transmit

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode
1 MHz and RMS Detector for Average Mode
- Video bandwidth : 3 MHz for Peak and Average Mode
- Measurement distance : 3 m
- Duty Cycle : > 98 %
- Result : PASSED

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	ATT Factor	AMP Factor	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Test Data for Low Channel										
2 390.000	58.20	Peak	H	27.50	8.20	9.93	45.79	58.04	74.00	15.96
2 390.000	46.53	Average	H	27.50	8.20	9.93	45.79	46.37	54.00	7.63
2 390.000	57.06	Peak	V	27.50	8.20	9.93	45.79	56.90	74.00	17.10
2 390.000	45.45	Average	V	27.50	8.20	9.93	45.79	45.29	54.00	8.71
Test Data for High 11 Channel										
2 484.279	52.41	Peak	H	27.30	8.33	9.95	45.79	52.20	74.00	21.80
2 483.500	42.71	Average	H	27.30	8.33	9.95	45.79	42.50	54.00	11.50
2 484.299	51.68	Peak	V	27.30	8.33	9.95	45.79	51.47	74.00	22.53
2 483.500	42.22	Average	V	27.30	8.33	9.95	45.79	42.01	54.00	11.99
Test Data for High 12 Channel										
2 484.419	58.48	Peak	H	27.30	8.33	9.95	45.79	58.27	74.00	15.73
2 483.500	47.59	Average	H	27.30	8.33	9.95	45.79	47.38	54.00	6.62
2 483.500	57.46	Peak	V	27.30	8.33	9.95	45.79	57.25	74.00	16.75
2 483.500	46.60	Average	V	27.30	8.33	9.95	45.79	46.39	54.00	7.61
Test Data for High 13 Channel										
2 483.500	61.16	Peak	H	27.30	8.33	9.95	45.79	60.95	74.00	13.05
2 483.500	49.88	Average	H	27.30	8.33	9.95	45.79	49.67	54.00	4.33
2 483.500	59.83	Peak	V	27.30	8.33	9.95	45.79	59.62	74.00	14.38
2 483.500	47.97	Average	V	27.30	8.33	9.95	45.79	47.76	54.00	6.24

Tabulated test data for Restricted Band

Remark: "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dBμV/m) - Total Level (dBμV/m)

Total Level = Reading + Antenna Factor + Cable Loss+ATT Factor– AMP Factor

9.6.1.3 Test data for 802.11n_HT20 WLAN Mode

9.6.1.3.1 Test data for Multiple Transmit

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode
1 MHz and RMS Detector for Average Mode
- Video bandwidth : 3 MHz for Peak and Average Mode
- Measurement distance : 3 m
- Duty Cycle : > 98 %
- Result : PASSED

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	ATT Factor	AMP Factor	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Test Data for Low Channel										
2 389.640	61.52	Peak	H	27.50	8.20	9.93	45.79	61.36	74.00	12.64
2 390.000	50.85	Average	H	27.50	8.20	9.93	45.79	50.69	54.00	3.31
2 389.640	60.68	Peak	V	27.50	8.20	9.93	45.79	60.52	74.00	13.48
2 390.000	49.73	Average	V	27.50	8.20	9.93	45.79	49.57	54.00	4.43
Test Data for High 11 Channel										
2 483.820	53.71	Peak	H	27.30	8.33	9.95	45.79	53.50	74.00	20.50
2 483.500	44.58	Average	H	27.30	8.33	9.95	45.79	44.37	54.00	9.63
2 483.800	52.64	Peak	V	27.30	8.33	9.95	45.79	52.43	74.00	21.57
2 483.500	43.51	Average	V	27.30	8.33	9.95	45.79	43.30	54.00	10.70
Test Data for High 12 Channel										
2 483.500	61.10	Peak	H	27.30	8.33	9.95	45.79	60.89	74.00	13.11
2 483.500	49.22	Average	H	27.30	8.33	9.95	45.79	49.01	54.00	4.99
2 483.500	59.27	Peak	V	27.30	8.33	9.95	45.79	59.06	74.00	14.94
2 483.500	48.39	Average	V	27.30	8.33	9.95	45.79	48.18	54.00	5.82
Test Data for High 13 Channel										
2 483.500	61.88	Peak	H	27.30	8.33	9.95	45.79	61.67	74.00	12.33
2 483.500	50.22	Average	H	27.30	8.33	9.95	45.79	50.01	54.00	3.99
2 483.980	60.37	Peak	V	27.30	8.33	9.95	45.79	60.16	74.00	13.84
2 483.500	49.20	Average	V	27.30	8.33	9.95	45.79	48.99	54.00	5.01

Tabulated test data for Restricted Band

Remark: "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dBμV/m) - Total Level (dBμV/m)

Total Level = Reading + Antenna Factor + Cable Loss+ATT Factor– AMP Factor

9.6.1.4 Test data for 802.11n_HT40 WLAN Mode

9.6.1.4.1 Test data for Multiple Transmit

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode
1 MHz and RMS Detector for Average Mode
- Video bandwidth : 3 MHz for Peak and Average Mode
- Measurement distance : 3 m
- Duty Cycle : > 98 %
- Result : PASSED

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	ATT Factor	AMP Factor	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Test Data for Low Channel										
2 389.910	62.02	Peak	H	27.50	8.20	9.93	45.79	61.86	74.00	12.14
2 390.000	49.99	Average	H	27.50	8.20	9.93	45.79	49.83	54.00	4.17
2 389.101	60.32	Peak	V	27.50	8.20	9.93	45.79	60.16	74.00	13.84
2 390.000	48.76	Average	V	27.50	8.20	9.93	45.79	48.60	54.00	5.40
Test Data for High 11 Channel										
2 486.597	54.88	Peak	H	27.30	8.33	9.95	45.79	54.67	74.00	19.33
2 483.500	44.47	Average	H	27.30	8.33	9.95	45.79	44.26	54.00	9.74
2 483.500	53.90	Peak	V	27.30	8.33	9.95	45.79	53.69	74.00	20.31
2 483.500	43.79	Average	V	27.30	8.33	9.95	45.79	43.58	54.00	10.42
Test Data for High 12 Channel										
2 483.500	56.96	Peak	H	27.30	8.33	9.95	45.79	56.75	74.00	17.25
2 484.099	45.75	Average	H	27.30	8.33	9.95	45.79	45.54	54.00	8.46
2 483.500	55.36	Peak	V	27.30	8.33	9.95	45.79	55.15	74.00	18.85
2 483.500	44.79	Average	V	27.30	8.33	9.95	45.79	44.58	54.00	9.42
Test Data for High 13 Channel										
2 483.500	60.11	Peak	H	27.30	8.33	9.95	45.79	59.90	74.00	14.10
2 483.500	48.64	Average	H	27.30	8.33	9.95	45.79	48.43	54.00	5.57
2 483.500	58.76	Peak	V	27.30	8.33	9.95	45.79	58.55	74.00	15.45
2 483.500	47.69	Average	V	27.30	8.33	9.95	45.79	47.48	54.00	6.52

Tabulated test data for Restricted Band

Remark: "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dBμV/m) - Total Level (dBμV/m)

Total Level = Reading + Antenna Factor + Cable Loss+ATT Factor– AMP Factor

9.6.2 Spurious & Harmonic Radiated Emission

9.6.2.1 Test data for 802.11b WLAN Mode

9.6.2.1.1 Test data for Antenna 0

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band
100 kHz for Peak Mode for the emissions outside restricted band
- Video bandwidth : 3 MHz for Peak and Average Mode
- Frequency range : 1 GHz ~ 26.5 GHz
- Measurement distance : 3 m
- Duty Cycle : > 98 %
- Result : PASSED

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Factor	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Test Data for Low Channel									
4 824.00	50.06	Peak	H	31.10	11.21	45.03	47.34	74.00	26.66
4 824.00	43.67	Average	H	31.10	11.21	45.03	40.95	54.00	13.05
4 824.00	49.42	Peak	V	31.10	11.21	45.03	46.70	74.00	27.30
4 824.00	43.26	Average	V	31.10	11.21	45.03	40.54	54.00	13.46
Test Data for Middle Channel									
4 874.00	51.10	Peak	H	31.10	11.23	45.03	48.40	74.00	25.60
4 874.00	44.01	Average	H	31.10	11.23	45.03	41.31	54.00	12.69
4 874.00	49.72	Peak	V	31.10	11.23	45.03	47.02	74.00	26.98
4 874.00	43.11	Average	V	31.10	11.23	45.03	40.41	54.00	13.59

Test Data for High 11 Channel									
4 924.00	49.98	Peak	H	31.10	11.25	45.03	47.30	74.00	26.70
4 924.00	43.44	Average	H	31.10	11.25	45.03	40.76	54.00	13.24
4 924.00	49.55	Peak	V	31.10	11.25	45.03	46.87	74.00	27.13
4 924.00	42.83	Average	V	31.10	11.25	45.03	40.15	54.00	13.85
Test Data for High 12 Channel									
4 934.00	50.34	Peak	H	31.10	11.26	45.03	47.67	74.00	26.33
4 934.00	43.04	Average	H	31.10	11.26	45.03	40.37	54.00	13.63
4 934.00	49.57	Peak	V	31.10	11.26	45.03	46.90	74.00	27.10
4 934.00	42.74	Average	V	31.10	11.26	45.03	40.07	54.00	13.93
Test Data for High 13 Channel									
4 944.00	49.81	Peak	H	31.20	11.31	45.03	47.29	74.00	26.71
4 944.00	43.31	Average	H	31.20	11.31	45.03	40.79	54.00	13.21
4 944.00	49.36	Peak	V	31.20	11.31	45.03	46.84	74.00	27.16
4 944.00	42.91	Average	V	31.20	11.31	45.03	40.39	54.00	13.61

Tabulated test data for Restricted Band

Remark: "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dBμV/m) - Total Level (dBμV/m)

Total Level = Reading + Antenna Factor – AMP Factor + Cable Loss

9.6.2.1.2 Test data for Antenna 1

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band
100 kHz for Peak Mode for the emissions outside restricted band
- Video bandwidth : 3 MHz for Peak and Average Mode
- Frequency range : 1 GHz ~ 26.5 GHz
- Measurement distance : 3 m
- Duty Cycle : > 98 %
- Result : PASSED

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Factor	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Test Data for Low Channel									
4 824.00	49.58	Peak	H	31.10	11.21	45.03	46.86	74.00	27.14
4 824.00	40.15	Average	H	31.10	11.21	45.03	37.43	54.00	16.57
4 824.00	49.40	Peak	V	31.10	11.21	45.03	46.68	74.00	27.32
4 824.00	39.66	Average	V	31.10	11.21	45.03	36.94	54.00	17.06
Test Data for Middle Channel									
4 874.00	49.61	Peak	H	31.10	11.23	45.03	46.91	74.00	27.09
4 874.00	39.90	Average	H	31.10	11.23	45.03	37.20	54.00	16.80
4 874.00	49.60	Peak	V	31.10	11.23	45.03	46.90	74.00	27.10
4 874.00	39.48	Average	V	31.10	11.23	45.03	36.78	54.00	17.22

Test Data for High 11 Channel									
4 924.00	49.62	Peak	H	31.10	11.25	45.03	46.94	74.00	27.06
4 924.00	39.18	Average	H	31.10	11.25	45.03	36.50	54.00	17.50
4 924.00	49.40	Peak	V	31.10	11.25	45.03	46.72	74.00	27.28
4 924.00	39.48	Average	V	31.10	11.25	45.03	36.80	54.00	17.20
Test Data for High 12 Channel									
4 934.00	49.72	Peak	H	31.10	11.26	45.03	47.05	74.00	26.95
4 934.00	39.46	Average	H	31.10	11.26	45.03	36.79	54.00	17.21
4 934.00	49.56	Peak	V	31.10	11.26	45.03	46.89	74.00	27.11
4 934.00	39.62	Average	V	31.10	11.26	45.03	36.95	54.00	17.05
Test Data for High 13 Channel									
4 944.00	49.50	Peak	H	31.20	11.31	45.03	46.98	74.00	27.02
4 944.00	39.60	Average	H	31.20	11.31	45.03	37.08	54.00	16.92
4 944.00	49.59	Peak	V	31.20	11.31	45.03	47.07	74.00	26.93
4 944.00	39.46	Average	V	31.20	11.31	45.03	36.94	54.00	17.06

Tabulated test data for Restricted Band

Remark: "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dBμV/m) - Total Level (dBμV/m)

Total Level = Reading + Antenna Factor – AMP Factor + Cable Loss

9.6.2.2 Test data for 802.11g WLAN Mode

9.6.2.2.1 Test data for Multiple Transmit

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band
100 kHz for Peak Mode for the emissions outside restricted band
- Video bandwidth : 3 MHz for Peak and Average Mode
- Frequency range : 1 GHz ~ 26.5 GHz
- Measurement distance : 3 m
- Duty Cycle : > 98 %
- Result : PASSED

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Factor	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Test Data for Low Channel									
4 824.00	49.62	Peak	H	31.10	11.21	45.03	46.90	74.00	27.10
4 824.00	39.28	Average	H	31.10	11.21	45.03	36.56	54.00	17.44
4 824.00	49.33	Peak	V	31.10	11.21	45.03	46.61	74.00	27.39
4 824.00	39.36	Average	V	31.10	11.21	45.03	36.64	54.00	17.36
Test Data for Middle Channel									
4 874.00	49.55	Peak	H	31.10	11.23	45.03	46.85	74.00	27.15
4 874.00	39.50	Average	H	31.10	11.23	45.03	36.80	54.00	17.20
4 874.00	49.47	Peak	V	31.10	11.23	45.03	46.77	74.00	27.23
4 874.00	39.39	Average	V	31.10	11.23	45.03	36.69	54.00	17.31

Test Data for High 11 Channel									
4 924.00	49.44	Peak	H	31.10	11.25	45.03	46.76	74.00	27.24
4 924.00	39.48	Average	H	31.10	11.25	45.03	36.80	54.00	17.20
4 924.00	49.48	Peak	V	31.10	11.25	45.03	46.80	74.00	27.20
4 924.00	39.36	Average	V	31.10	11.25	45.03	36.68	54.00	17.32
Test Data for High 12 Channel									
4 934.00	49.60	Peak	H	31.10	11.26	45.03	46.93	74.00	27.07
4 934.00	39.33	Average	H	31.10	11.26	45.03	36.66	54.00	17.34
4 934.00	49.32	Peak	V	31.10	11.26	45.03	46.65	74.00	27.35
4 934.00	39.13	Average	V	31.10	11.26	45.03	36.46	54.00	17.54
Test Data for High 13 Channel									
4 944.00	49.40	Peak	H	31.20	11.31	45.03	46.88	74.00	27.12
4 944.00	39.31	Average	H	31.20	11.31	45.03	36.79	54.00	17.21
4 944.00	49.38	Peak	V	31.20	11.31	45.03	46.86	74.00	27.14
4 944.00	39.27	Average	V	31.20	11.31	45.03	36.75	54.00	17.25

Tabulated test data for Restricted Band

Remark: "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dBμV/m) - Total Level (dBμV/m)

Total Level = Reading + Antenna Factor – AMP Factor + Cable Loss

9.6.2.3 Test data for 802.11n_HT20 WLAN Mode

9.6.2.3.1 Test data for Multiple Transmit

- . Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band
100 kHz for Peak Mode for the emissions outside restricted band
- . Video bandwidth : 3 MHz for Peak and Average Mode
- . Frequency range : 1 GHz ~ 26.5 GHz
- . Measurement distance : 3 m
- . Duty Cycle : > 98 %
- . Result : PASSED

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Factor	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Test Data for Low Channel									
4 824.00	49.52	Peak	H	31.10	11.21	45.03	46.80	74.00	27.20
4 824.00	39.20	Average	H	31.10	11.21	45.03	36.48	54.00	17.52
4 824.00	49.44	Peak	V	31.10	11.21	45.03	46.72	74.00	27.28
4 824.00	39.37	Average	V	31.10	11.21	45.03	36.65	54.00	17.35
Test Data for Middle Channel									
4 874.00	49.56	Peak	H	31.10	11.23	45.03	46.86	74.00	27.14
4 874.00	39.39	Average	H	31.10	11.23	45.03	36.69	54.00	17.31
4 874.00	49.49	Peak	V	31.10	11.23	45.03	46.79	74.00	27.21
4 874.00	39.16	Average	V	31.10	11.23	45.03	36.46	54.00	17.54

Test Data for High 11 Channel									
4 924.00	49.41	Peak	H	31.10	11.25	45.03	46.73	74.00	27.27
4 924.00	39.36	Average	H	31.10	11.25	45.03	36.68	54.00	17.32
4 924.00	49.32	Peak	V	31.10	11.25	45.03	46.64	74.00	27.36
4 924.00	39.26	Average	V	31.10	11.25	45.03	36.58	54.00	17.42
Test Data for High 12 Channel									
4 934.00	49.60	Peak	H	31.10	11.26	45.03	46.93	74.00	27.07
4 934.00	39.33	Average	H	31.10	11.26	45.03	36.66	54.00	17.34
4 934.00	49.48	Peak	V	31.10	11.26	45.03	46.81	74.00	27.19
4 934.00	39.10	Average	V	31.10	11.26	45.03	36.43	54.00	17.57
Test Data for High 13 Channel									
4 944.00	49.52	Peak	H	31.20	11.31	45.03	47.00	74.00	27.00
4 944.00	39.20	Average	H	31.20	11.31	45.03	36.68	54.00	17.32
4 944.00	49.30	Peak	V	31.20	11.31	45.03	46.78	74.00	27.22
4 944.00	39.17	Average	V	31.20	11.31	45.03	36.65	54.00	17.35

Tabulated test data for Restricted Band

Remark: "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dBμV/m) - Total Level (dBμV/m)

Total Level = Reading + Antenna Factor -AMP Factor + Cable Loss

9.6.2.4 Test data for 802.11n_HT40 WLAN Mode

9.6.2.4.1 Test data for Multiple Transmit

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band
100 kHz for Peak Mode for the emissions outside restricted band
- Video bandwidth : 3 MHz for Peak and Average Mode
- Frequency range : 1 GHz ~ 26.5 GHz
- Measurement distance : 3 m
- Duty Cycle : > 98 %
- Result : PASSED

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Factor	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Test Data for Low Channel									
4 844.00	49.41	Peak	H	31.10	11.21	45.03	46.69	74.00	27.31
4 844.00	39.43	Average	H	31.10	11.21	45.03	36.71	54.00	17.29
4 844.00	49.51	Peak	V	31.10	11.21	45.03	46.79	74.00	27.21
4 844.00	39.38	Average	V	31.10	11.21	45.03	36.66	54.00	17.34
Test Data for Middle Channel									
4 874.00	49.47	Peak	H	31.10	11.23	45.03	46.77	74.00	27.23
4 874.00	39.38	Average	H	31.10	11.23	45.03	36.68	54.00	17.32
4 874.00	49.50	Peak	V	31.10	11.23	45.03	46.80	74.00	27.20
4 874.00	39.41	Average	V	31.10	11.23	45.03	36.71	54.00	17.29

Test Data for High 9 Channel									
4 904.00	49.42	Peak	H	31.10	11.25	45.03	46.74	74.00	27.26
4 904.00	39.52	Average	H	31.10	11.25	45.03	36.84	54.00	17.16
4 904.00	49.37	Peak	V	31.10	11.25	45.03	46.69	74.00	27.31
4 904.00	39.30	Average	V	31.10	11.25	45.03	36.62	54.00	17.38
Test Data for High 10 Channel									
4 914.00	49.48	Peak	H	31.10	11.26	45.03	46.81	74.00	27.19
4 914.00	39.37	Average	H	31.10	11.26	45.03	36.70	54.00	17.30
4 914.00	49.37	Peak	V	31.10	11.26	45.03	46.70	74.00	27.30
4 914.00	39.27	Average	V	31.10	11.26	45.03	36.60	54.00	17.40
Test Data for High 11 Channel									
4 924.00	49.62	Peak	H	31.20	11.31	45.03	47.10	74.00	26.90
4 924.00	39.36	Average	H	31.20	11.31	45.03	36.84	54.00	17.16
4 924.00	49.44	Peak	V	31.20	11.31	45.03	46.92	74.00	27.08
4 924.00	39.28	Average	V	31.20	11.31	45.03	36.76	54.00	17.24

Tabulated test data for Restricted Band

Remark: "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dBμV/m) - Total Level (dBμV/m)

Total Level = Reading + Antenna Factor -AMP Factor + Cable Loss

10. PEAK POWER SPECTRUL DENSITY

10.1 Operating environment

Temperature : 23 ° C

Relative humidity : 45 % R.H.

10.2 Test set-up

The antenna output of the EUT was connected to the spectrum analyzer.

The resolution bandwidth is set to $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$, the video bandwidth is set to 3 times the resolution bandwidth.



10.3 Test Date

October 07, 2021 ~ October 20, 2021

10.4 Test data for 802.11b WLAN Mode

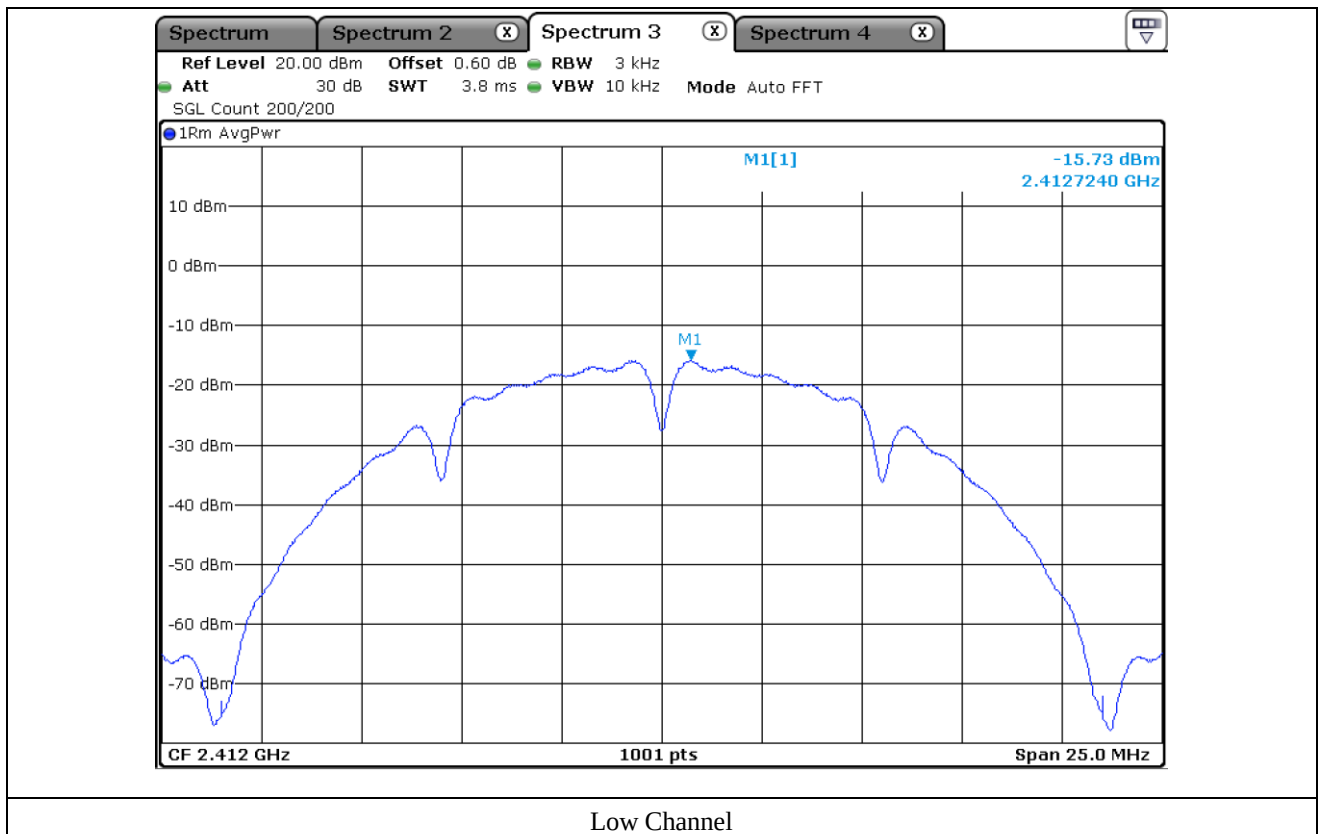
10.4.1 Test data for Antenna 0

-. Test Result : Pass

-. Operating Condition : Continuous transmitting mode

CHANNEL	FREQUENCY(MHz)	MEASURED VLAUE (dBm)	LIMIT (dBm)	MARGIN (dB)
Low	2 412.00	-15.73	8.00	23.73
Middle	2 437.00	-16.15	8.00	24.15
High 11	2 462.00	-16.19	8.00	24.19
High 12	2 467.00	-16.14	8.00	24.14
High 13	2 472.00	-16.16	8.00	24.16

Remark. Margin = Limit – Measured value

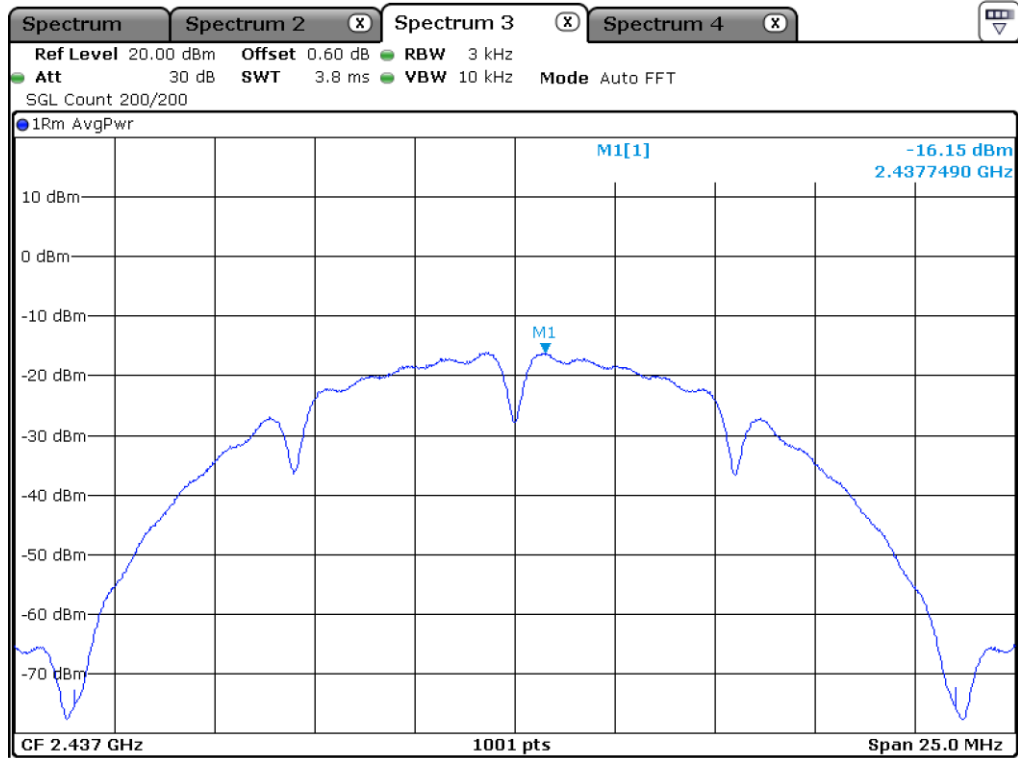


This Report is not correlated with the authentication of KOLAS

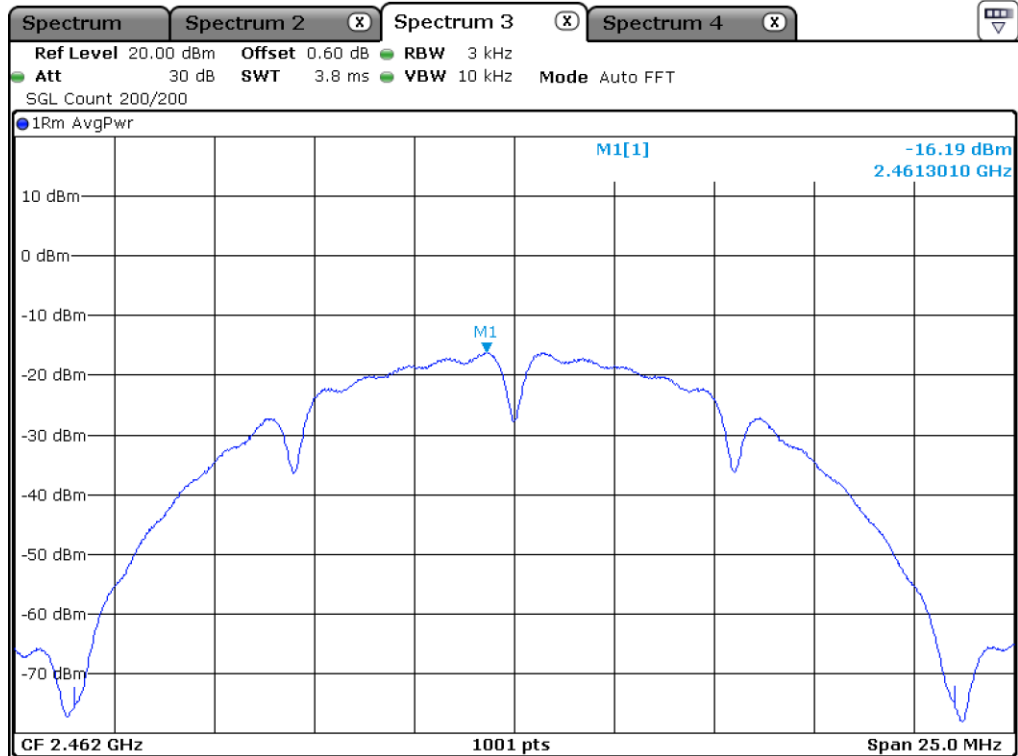
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OTC-TRF-RF-001(0)

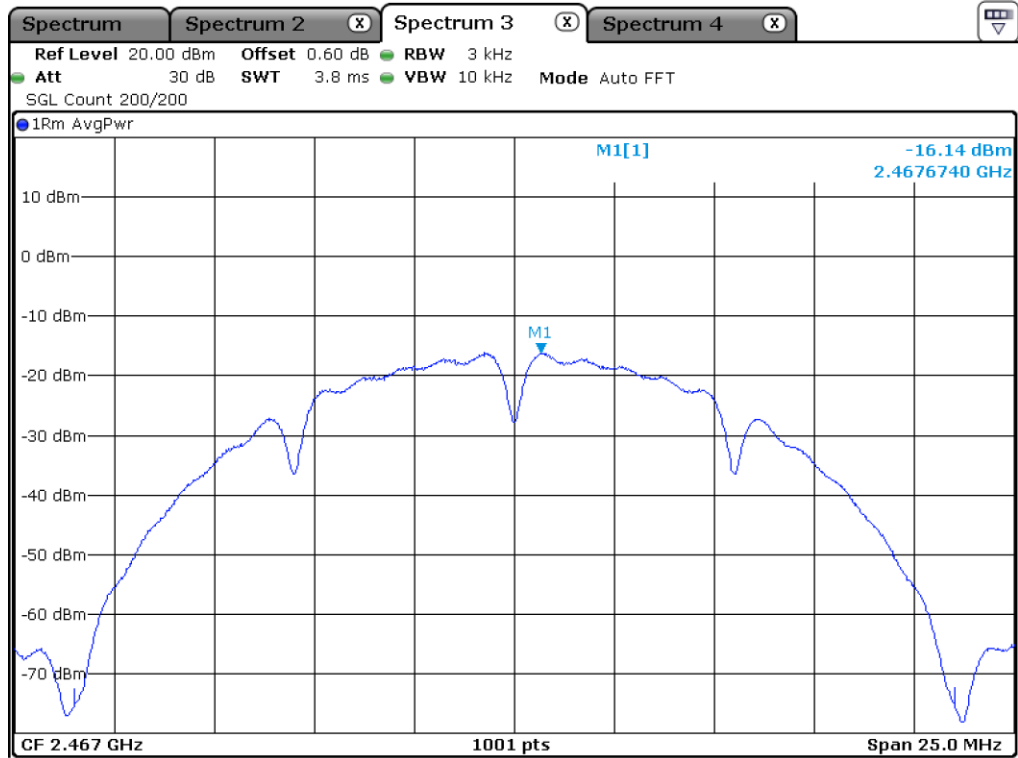
ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)



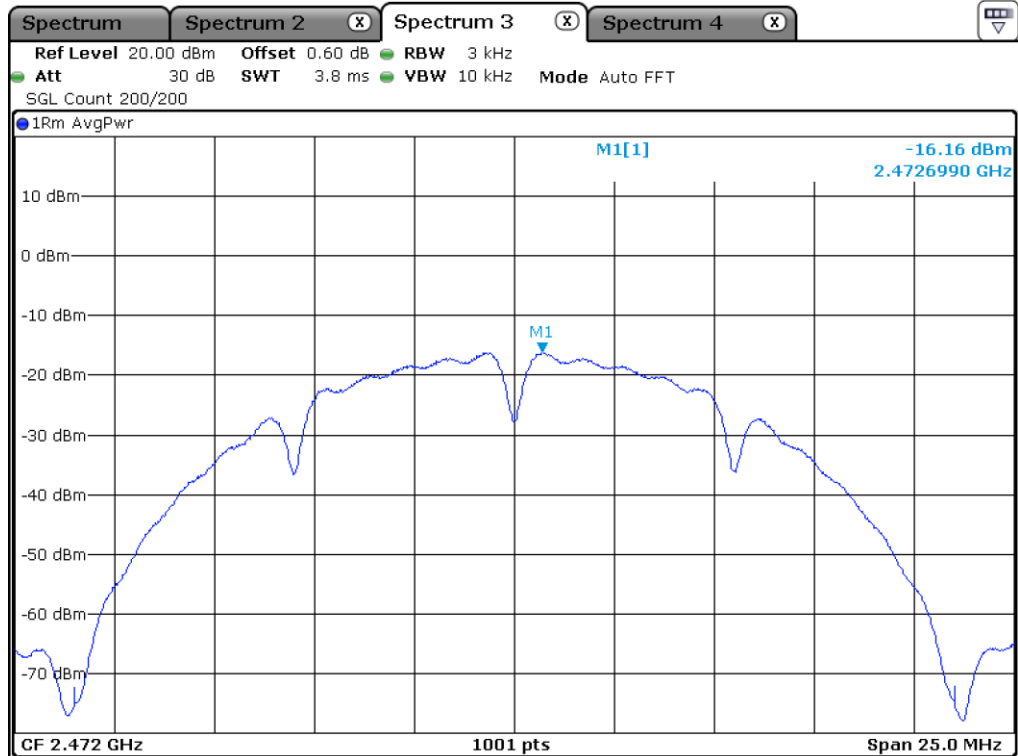
Middle Channel



High Channel 11



High Channel 12



High Channel 13

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ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)

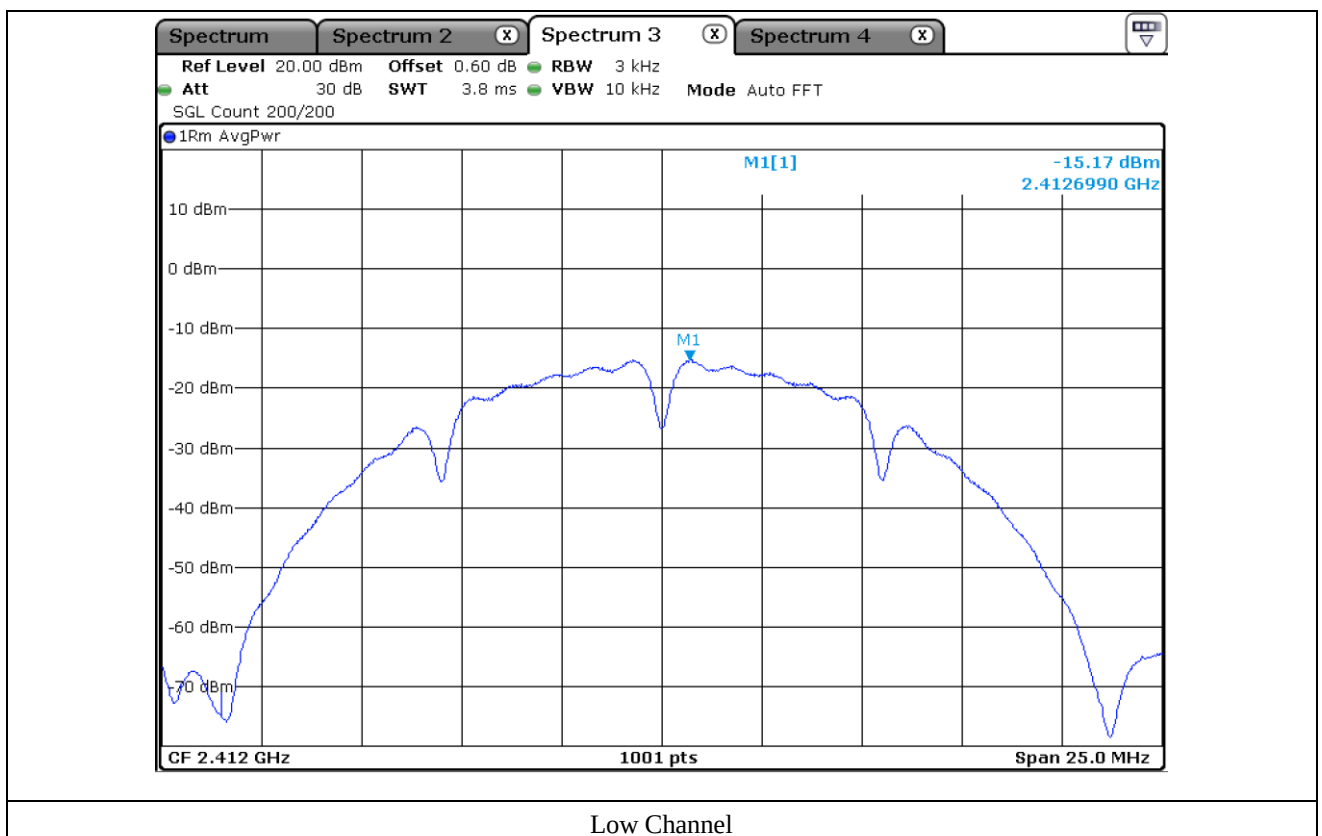
10.4.2 Test data for Antenna 1

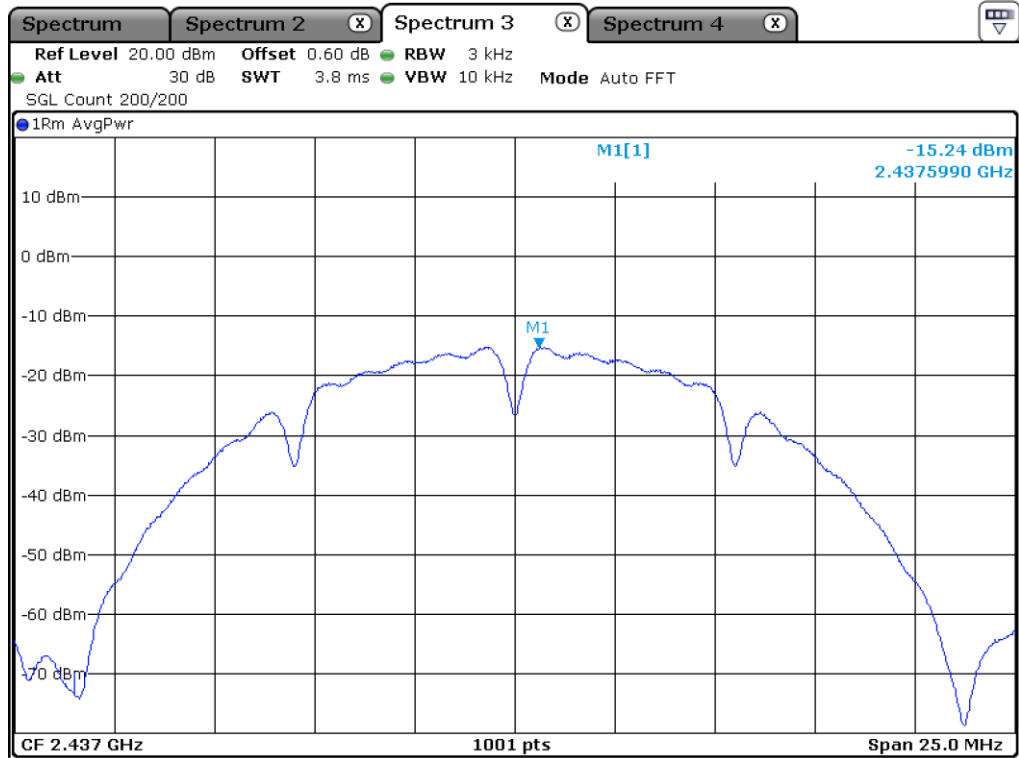
-. Test Result : Pass

-. Operating Condition : Continuous transmitting mode

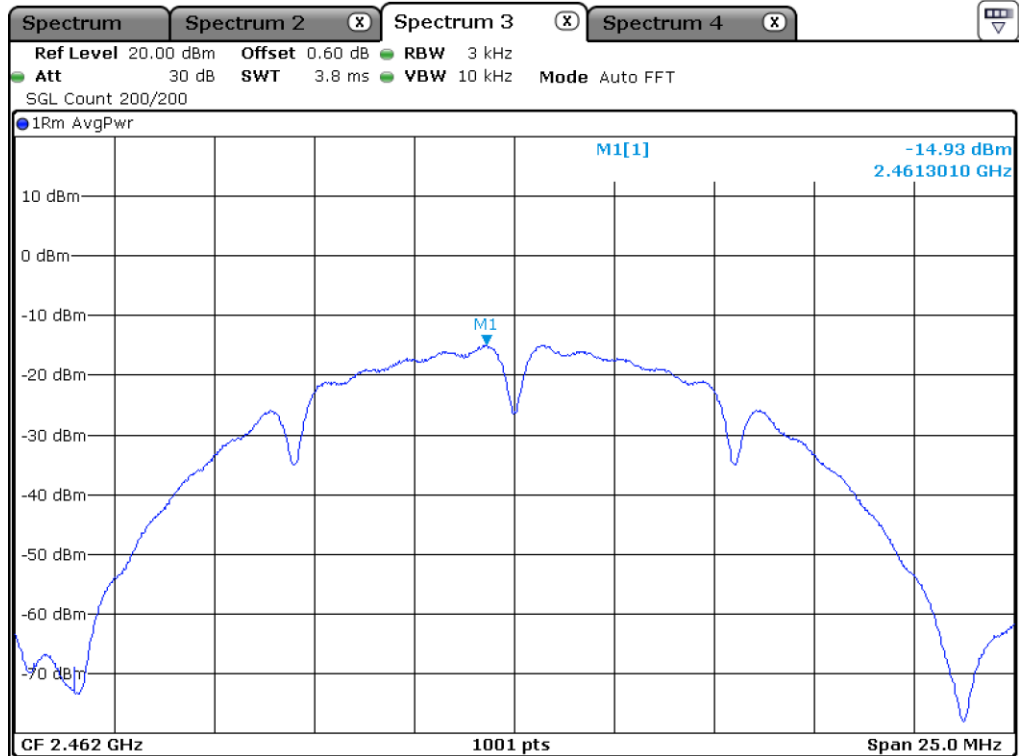
CHANNEL	FREQUENCY(MHz)	MEASURED VLAUE (dBm)	LIMIT (dBm)	MARGIN (dB)
Low	2 412.00	-15.17	8.00	23.17
Middle	2 437.00	-15.24	8.00	23.24
High 11	2 462.00	-14.93	8.00	22.93
High 12	2 467.00	-14.88	8.00	22.88
High 13	2 472.00	-14.81	8.00	22.81

Remark. Margin = Limit – Measured value

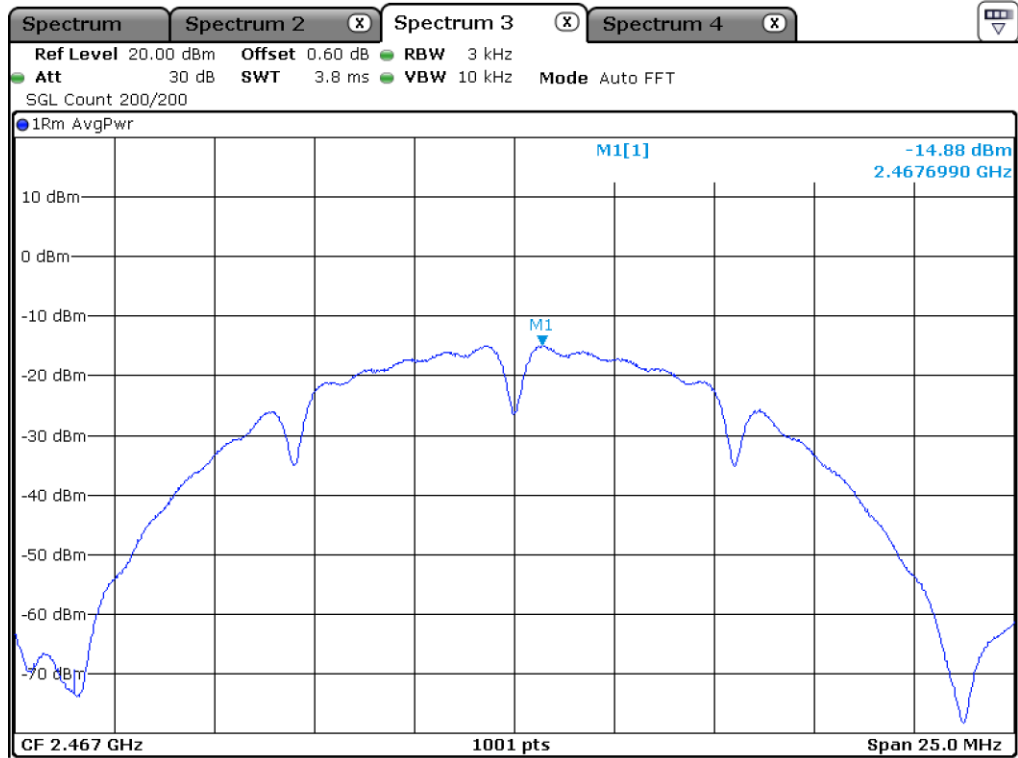




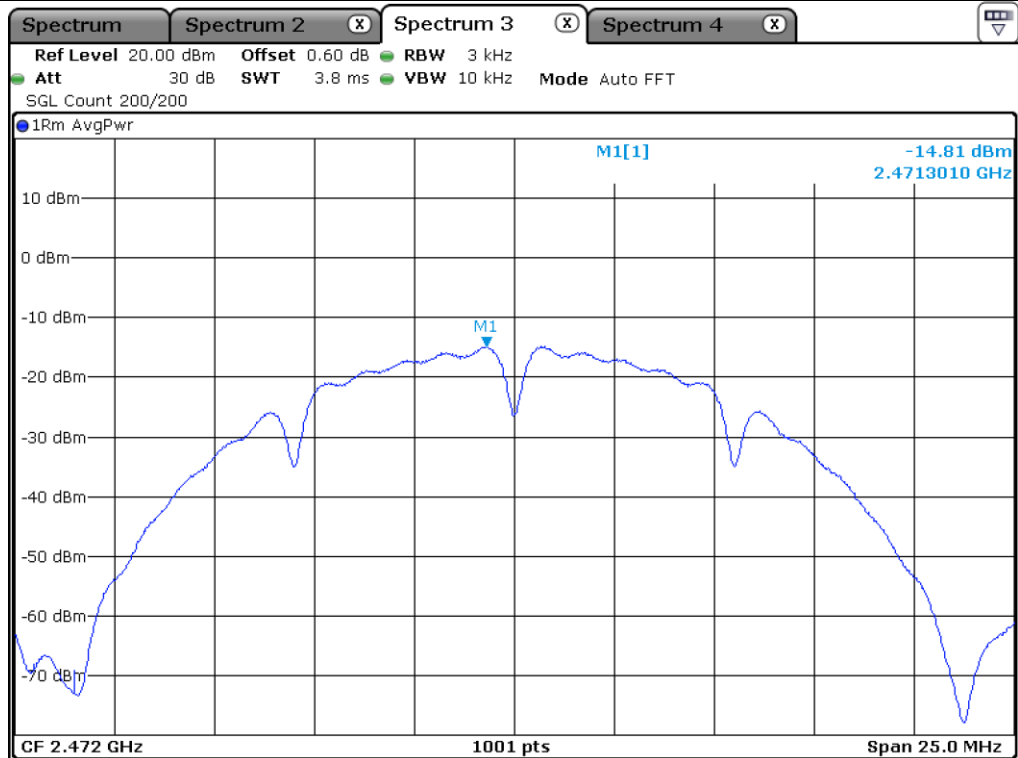
Middle Channel



High Channel 11



High Channel 12



High Channel 13

10.5 Test data for 802.11g WLAN Mode

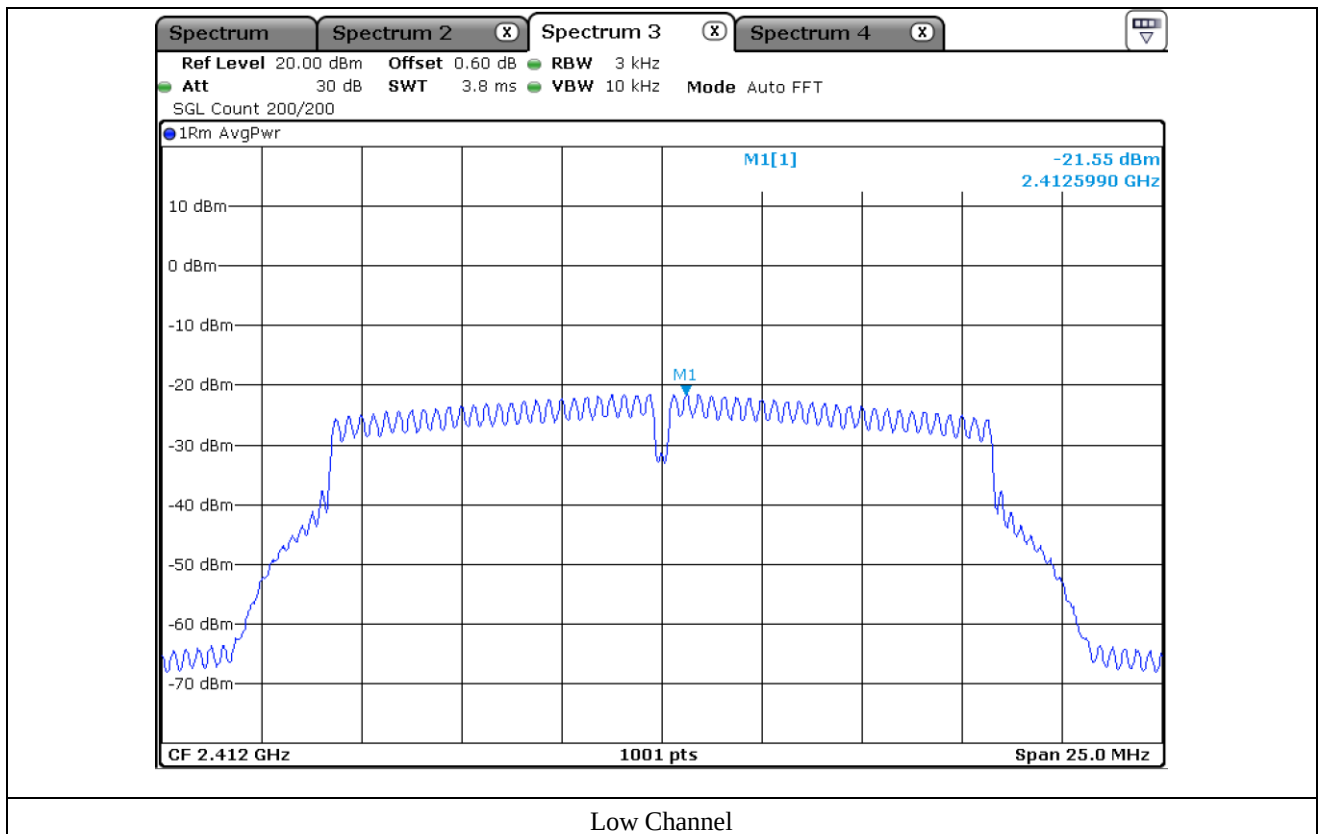
10.5.1 Test data for Antenna 0

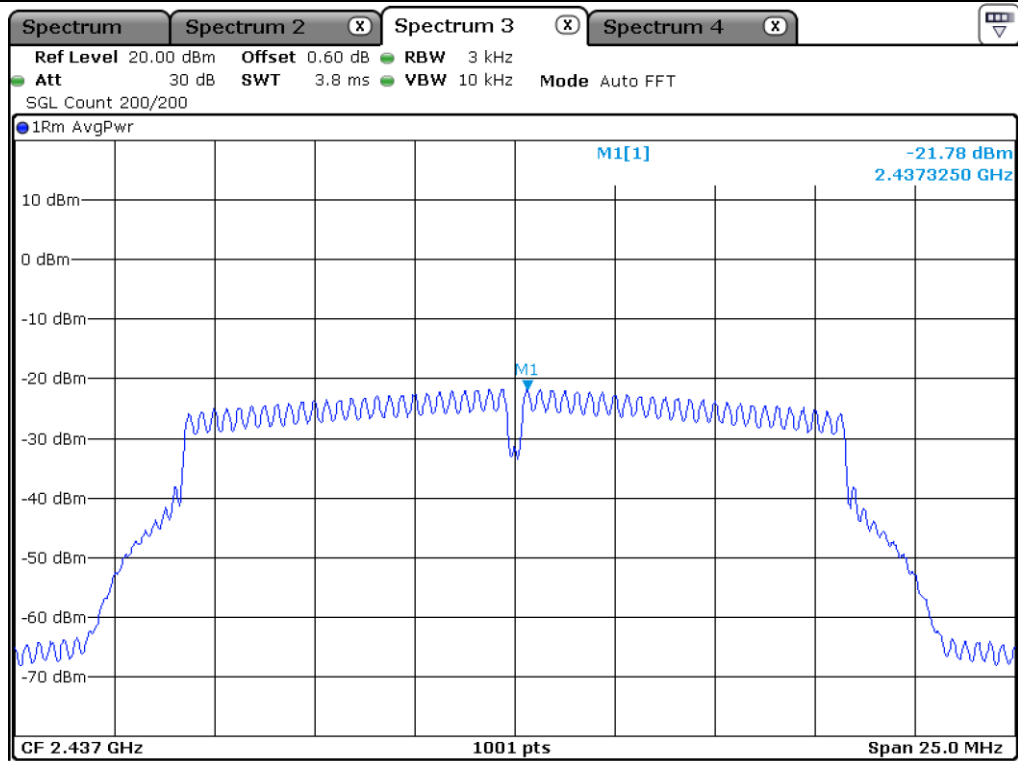
-. Test Result : Pass

-. Operating Condition : Continuous transmitting mode

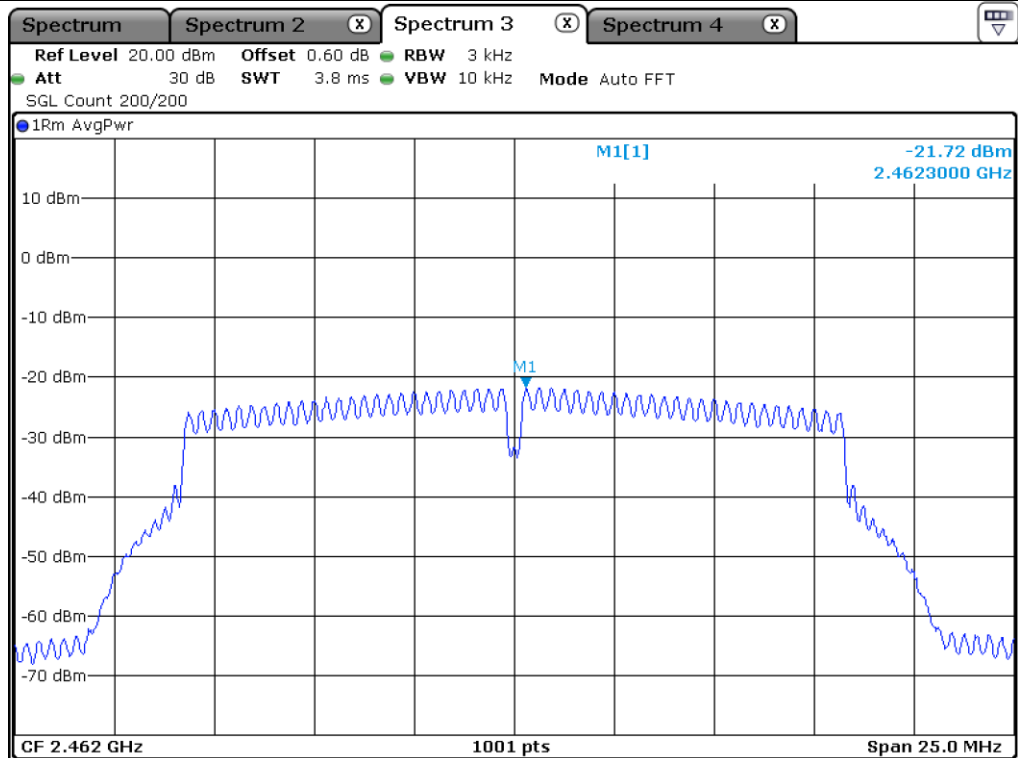
CHANNEL	FREQUENCY(MHz)	MEASURED VLAUE (dBm)	LIMIT (dBm)	MARGIN (dB)
Low	2 412.00	-21.55	8.00	29.55
Middle	2 437.00	-21.78	8.00	29.78
High 11	2 462.00	-21.72	8.00	29.72
High 12	2 467.00	-21.75	8.00	29.75
High 13	2 472.00	-22.66	8.00	30.66

Remark. Margin = Limit – Measured value

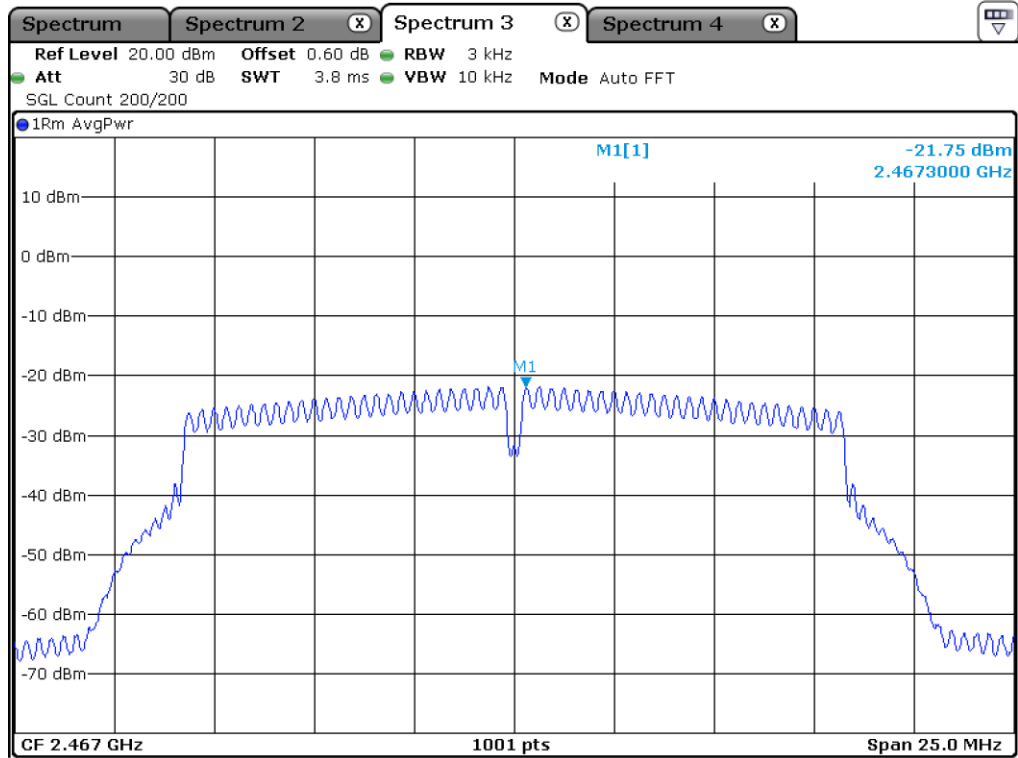




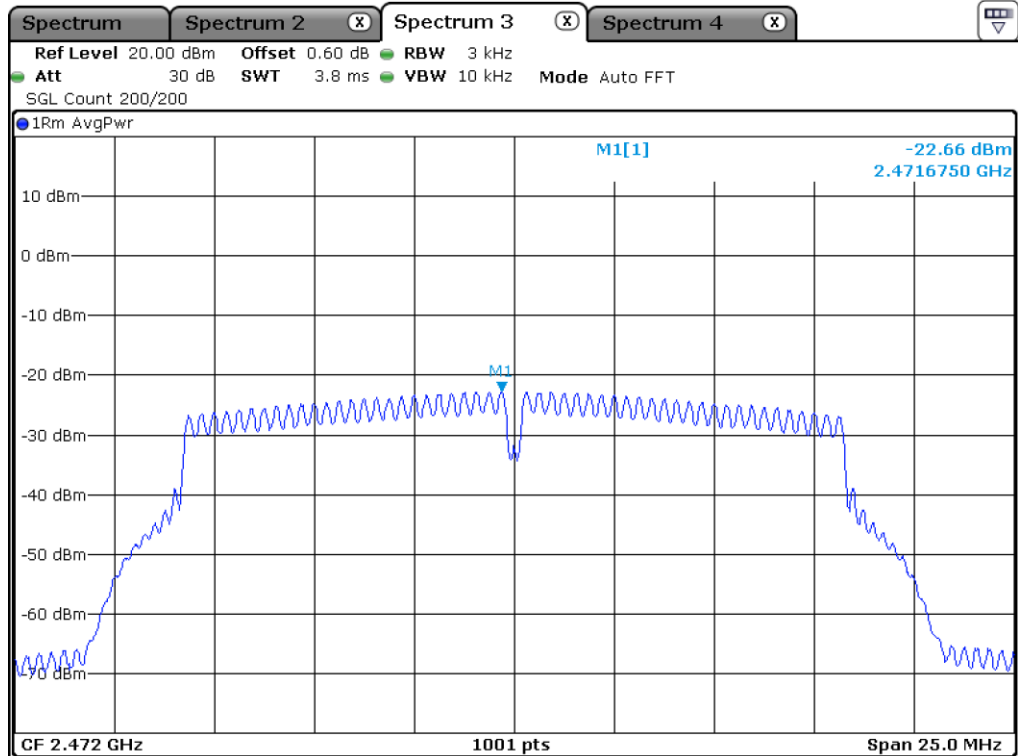
Middle Channel



High Channel 11



High Channel 12



High Channel 13

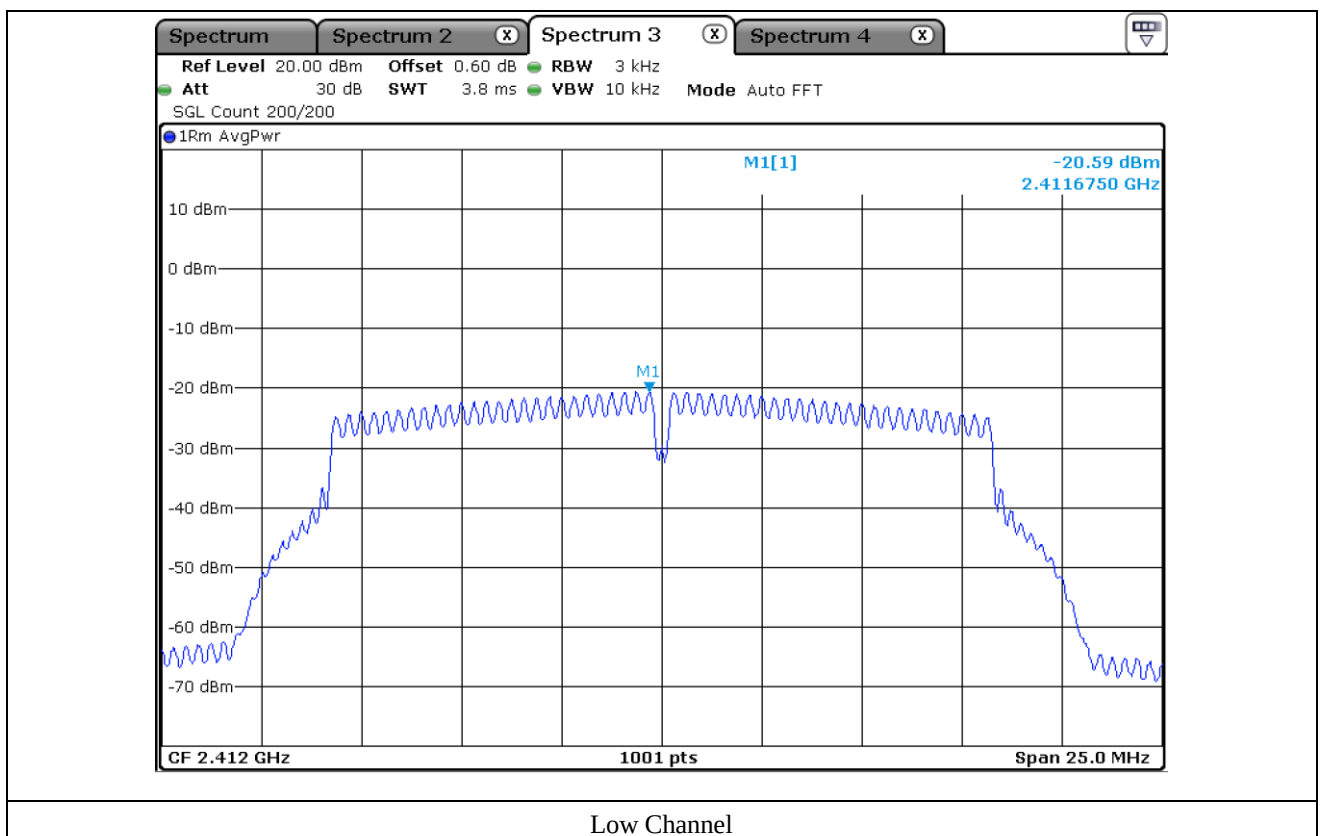
10.5.2 Test data for Antenna 1

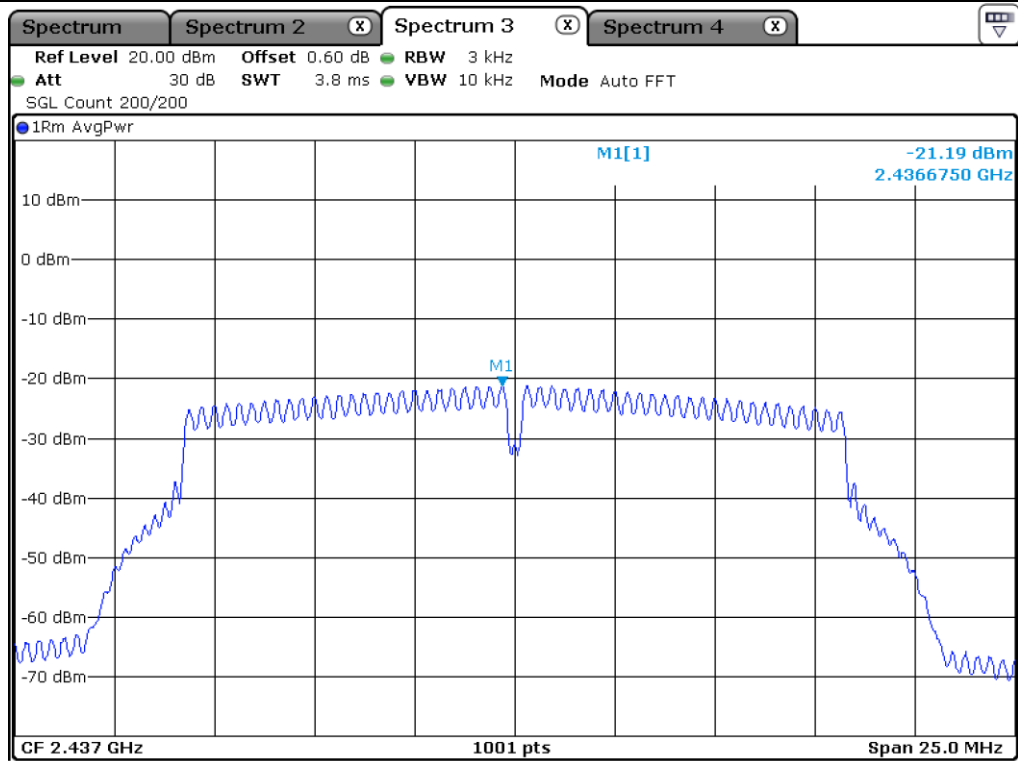
-. Test Result : Pass

-. Operating Condition : Continuous transmitting mode

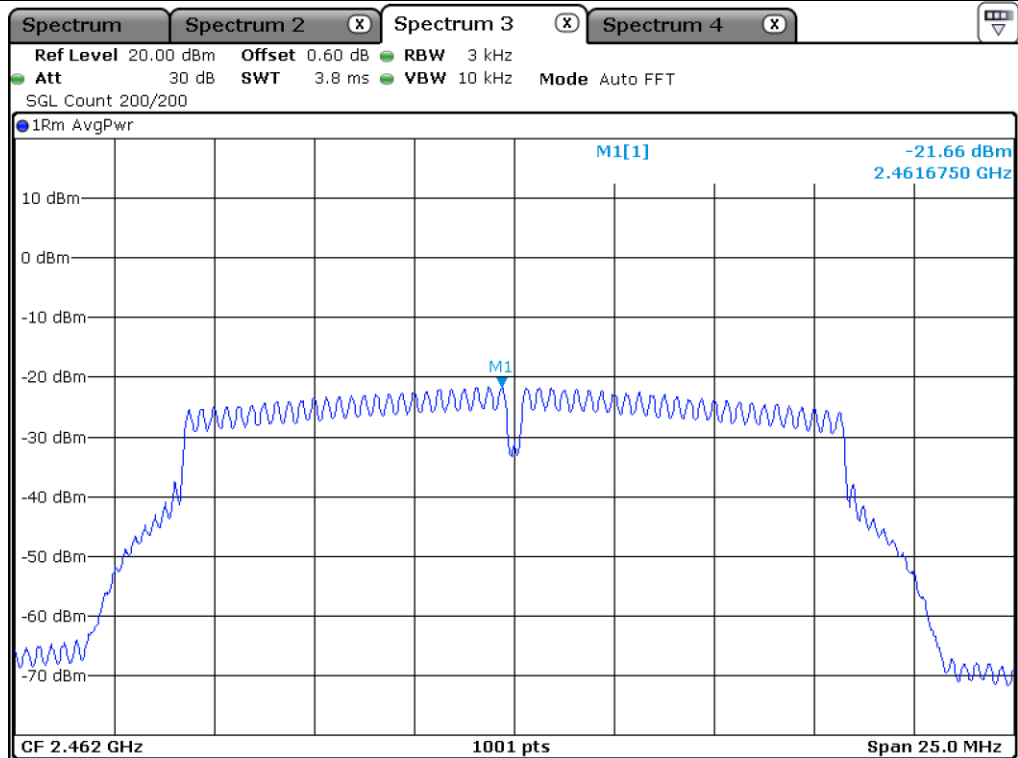
CHANNEL	FREQUENCY(MHz)	MEASURED VLAUE (dBm)	LIMIT (dBm)	MARGIN (dB)
Low	2 412.00	-20.59	8.00	28.59
Middle	2 437.00	-21.19	8.00	29.19
High 11	2 462.00	-21.66	8.00	29.66
High 12	2 467.00	-21.67	8.00	29.67
High 13	2 472.00	-22.90	8.00	30.90

Remark. Margin = Limit – Measured value

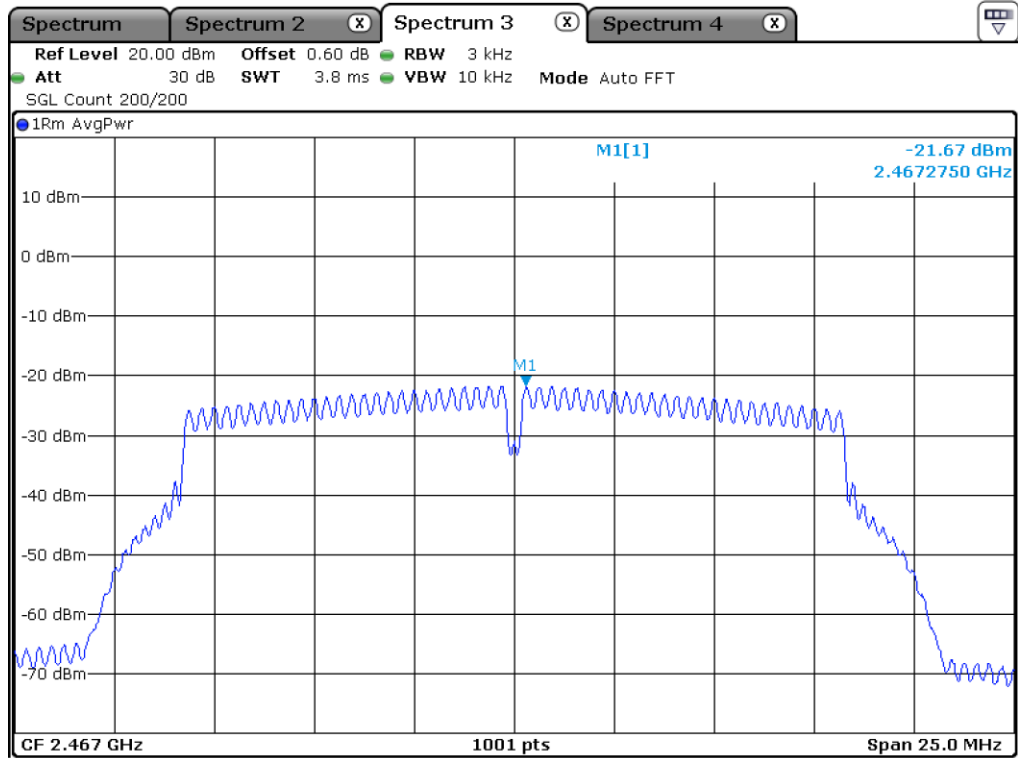




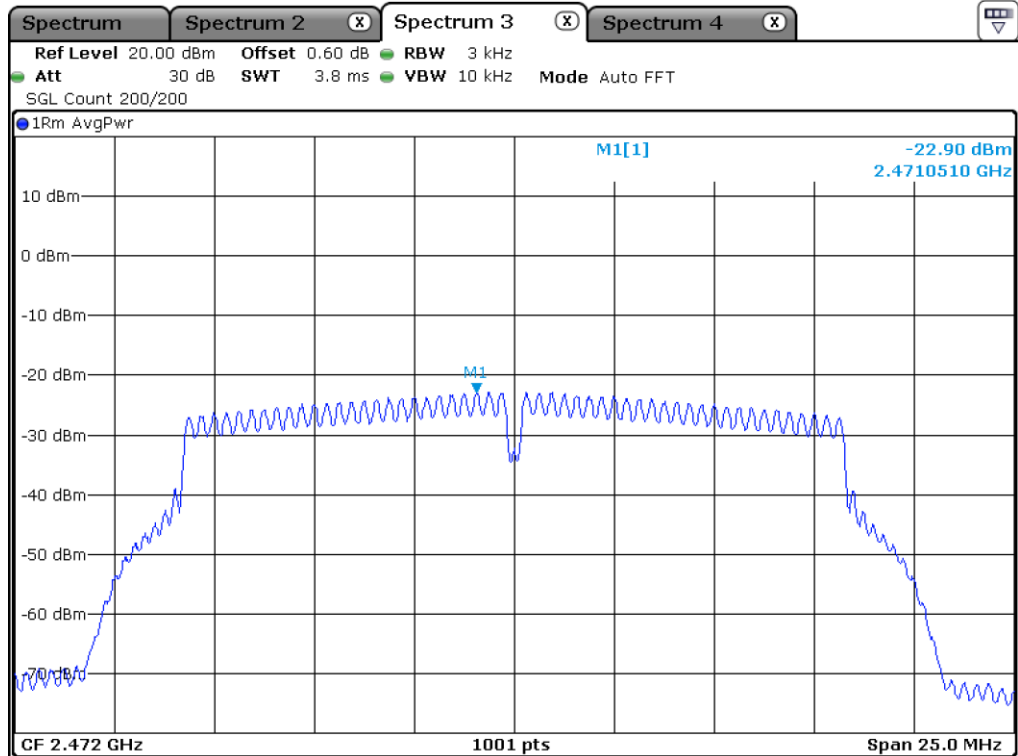
Middle Channel



High Channel 11



High Channel 12



High Channel 13

10.5.3 Test data for Multiple Transmit

-. Test Result : Pass

-. Operating Condition : Continuous transmitting mode

CHANNEL	FREQUENCY(MHz)	MEASURED VLAUE (dBm)	LIMIT (dBm)	MARGIN (dB)
Low	2 412.00	-18.03	8.00	26.03
Middle	2 437.00	-18.46	8.00	26.46
High 11	2 462.00	-18.68	8.00	26.68
High 12	2 467.00	-18.70	8.00	26.70
High 13	2 472.00	-19.77	8.00	27.77

Remark 1 : Margin = Limit – Measured value

Remark 2 : Calculated Power Density = $10\log(10^{(\text{Antenna 0 Power Density}/10)} + 10^{(\text{Antenna 1 Power Density}/10)})$

Remark 3 : Directional gain = $10*\log[(10^{G0/20} + 10^{G1/20})^2/N]$ dBi

10.6 Test data for 802.11n_HT20 WLAN Mode

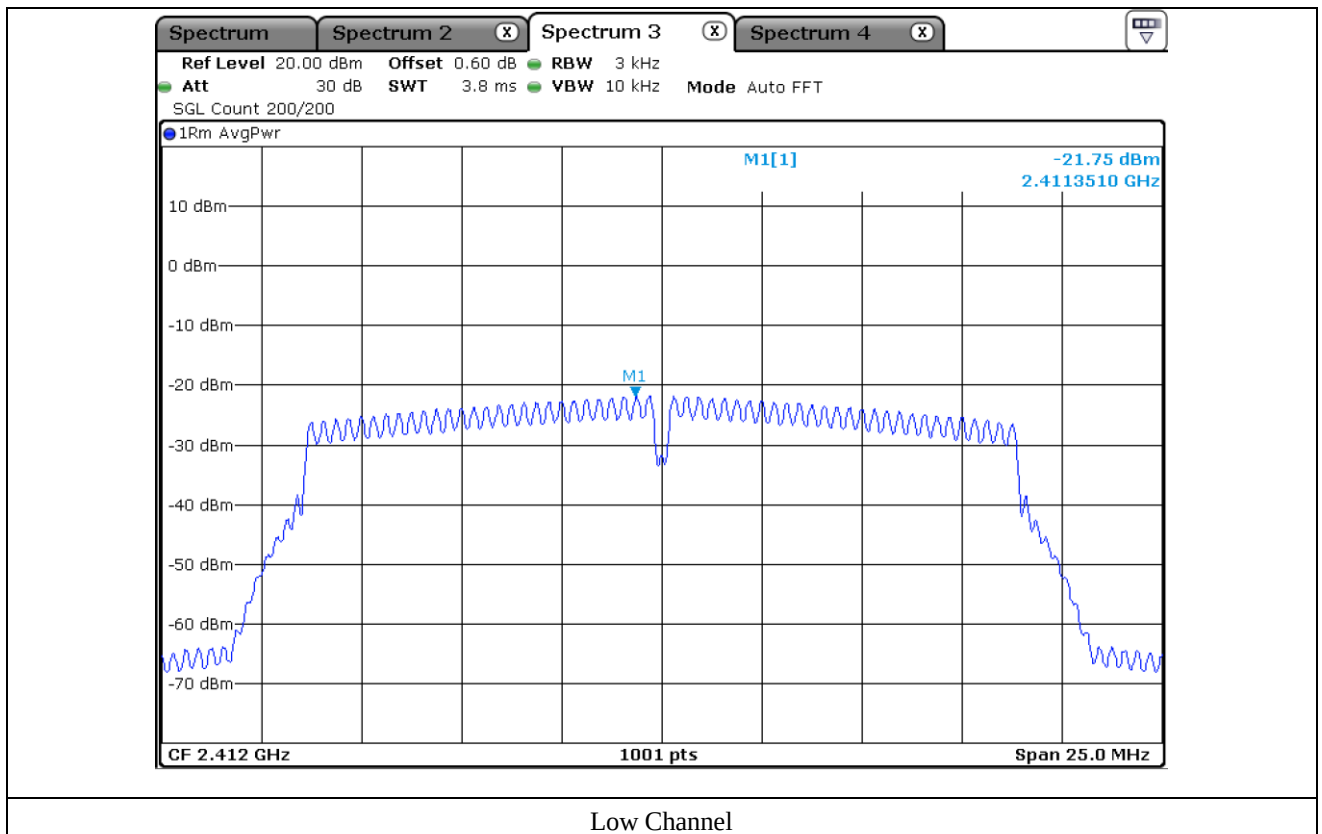
10.6.1 Test data for Antenna 0

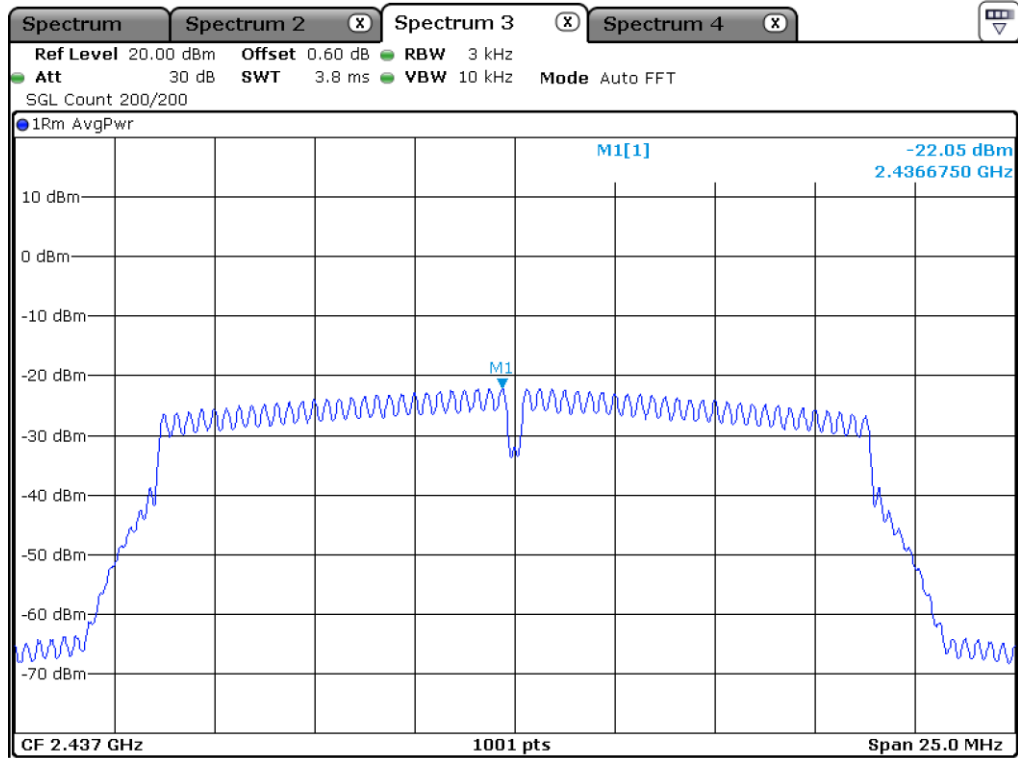
-. Test Result : Pass

-. Operating Condition : Continuous transmitting mode

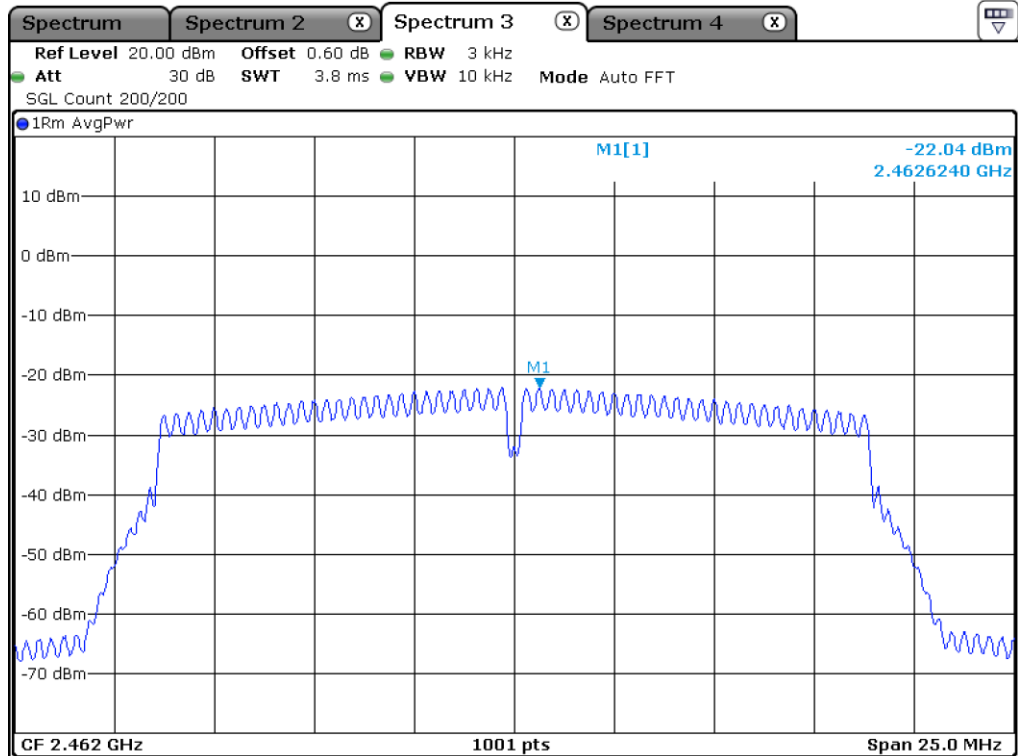
CHANNEL	FREQUENCY(MHz)	MEASURED VLAUE (dBm)	LIMIT (dBm)	MARGIN (dB)
Low	2 412.00	-21.75	8.00	29.75
Middle	2 437.00	-22.05	8.00	30.05
High 11	2 462.00	-22.04	8.00	30.04
High 12	2 467.00	-22.12	8.00	30.12
High 13	2 472.00	-22.89	8.00	30.89

Remark. Margin = Limit – Measured value

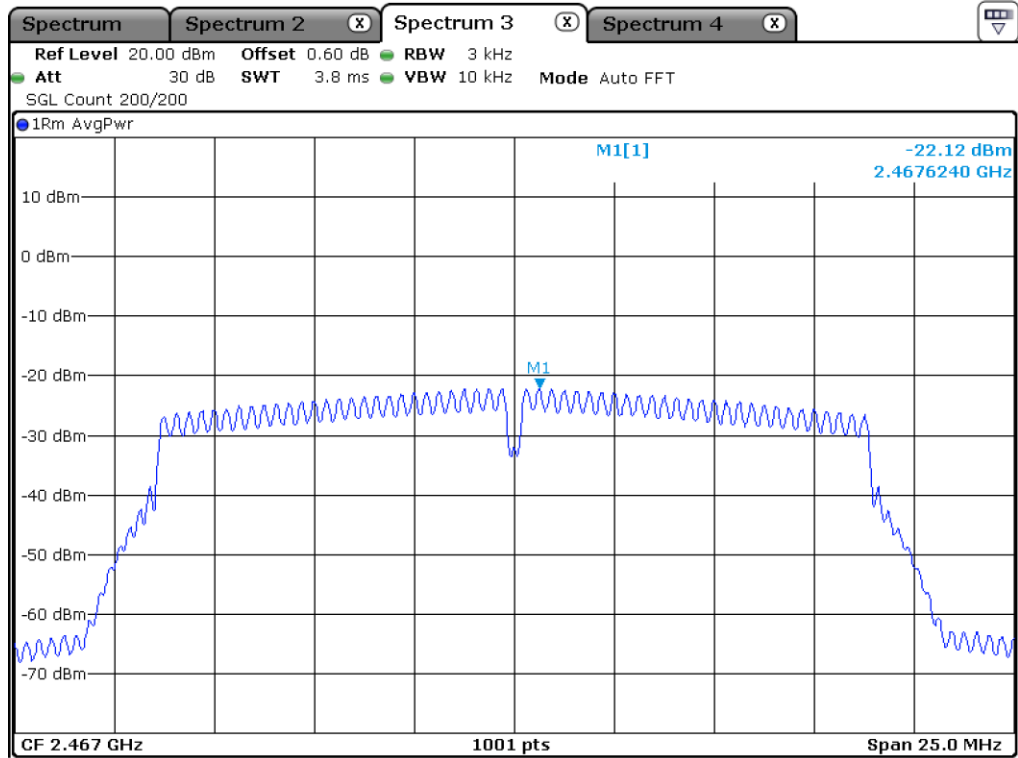




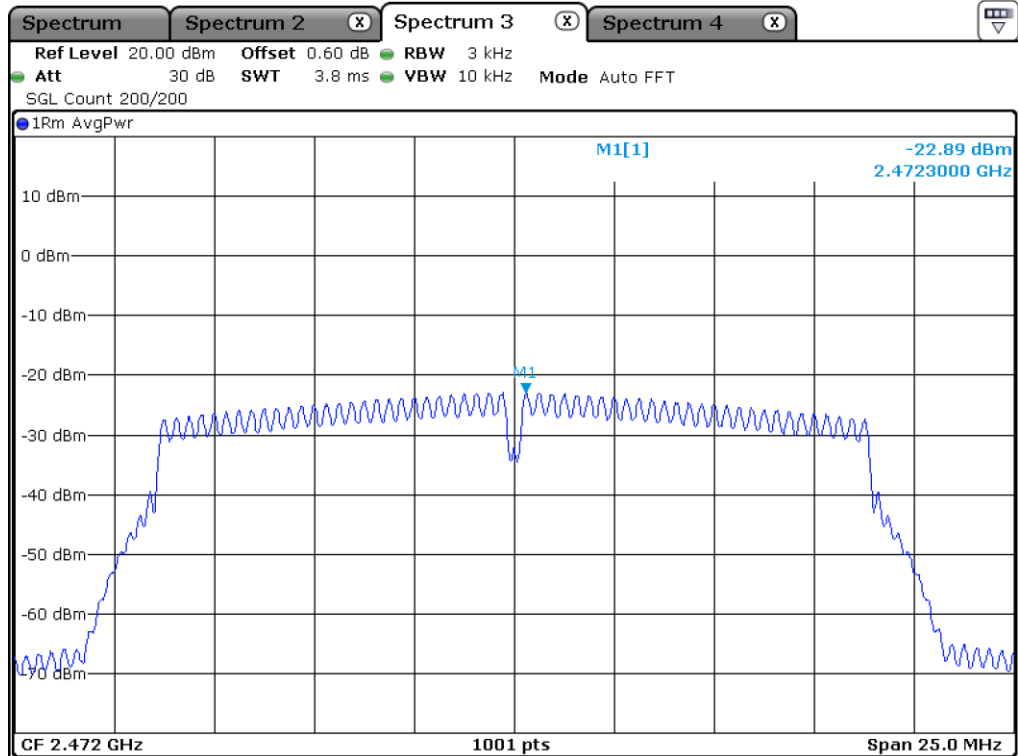
Middle Channel



High Channel 11



High Channel 12



High Channel 13

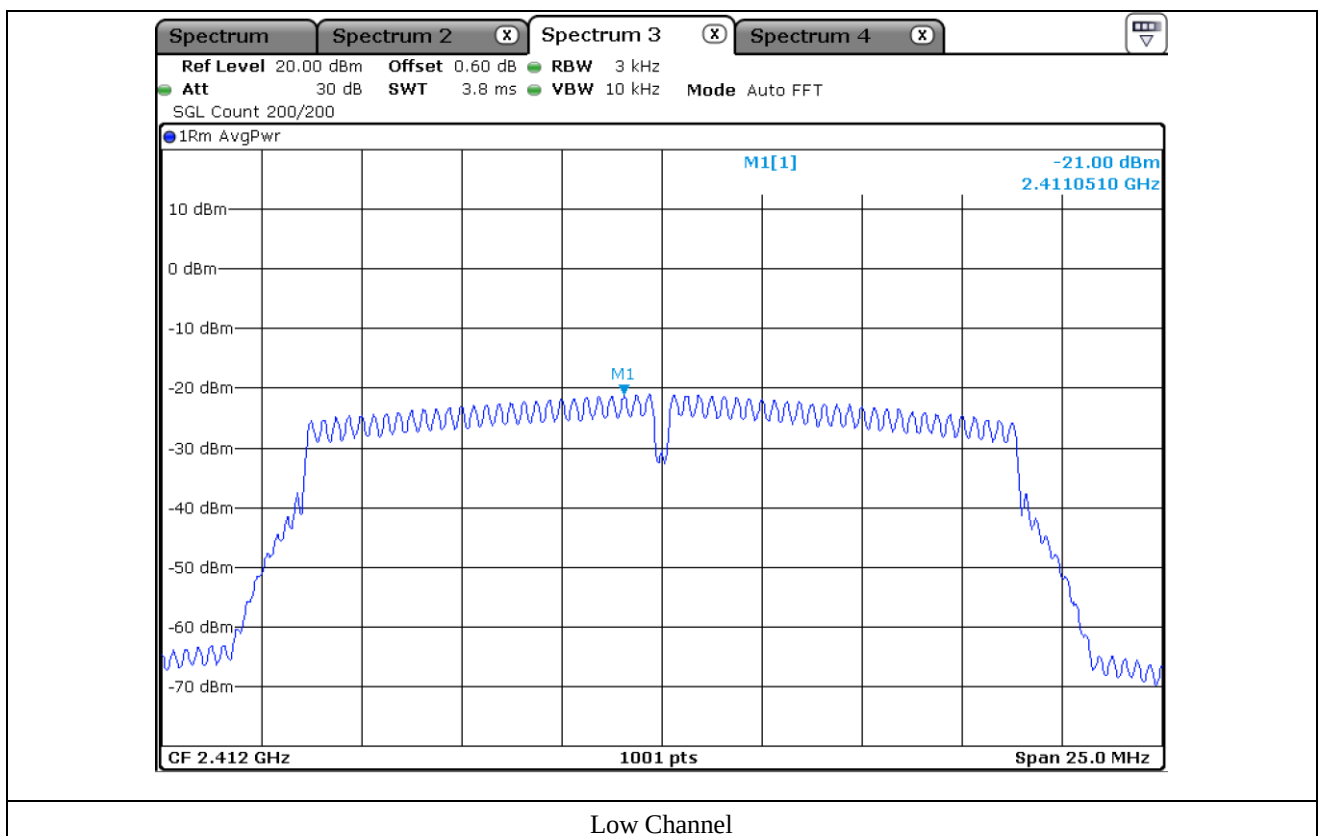
10.6.2 Test data for Antenna 1

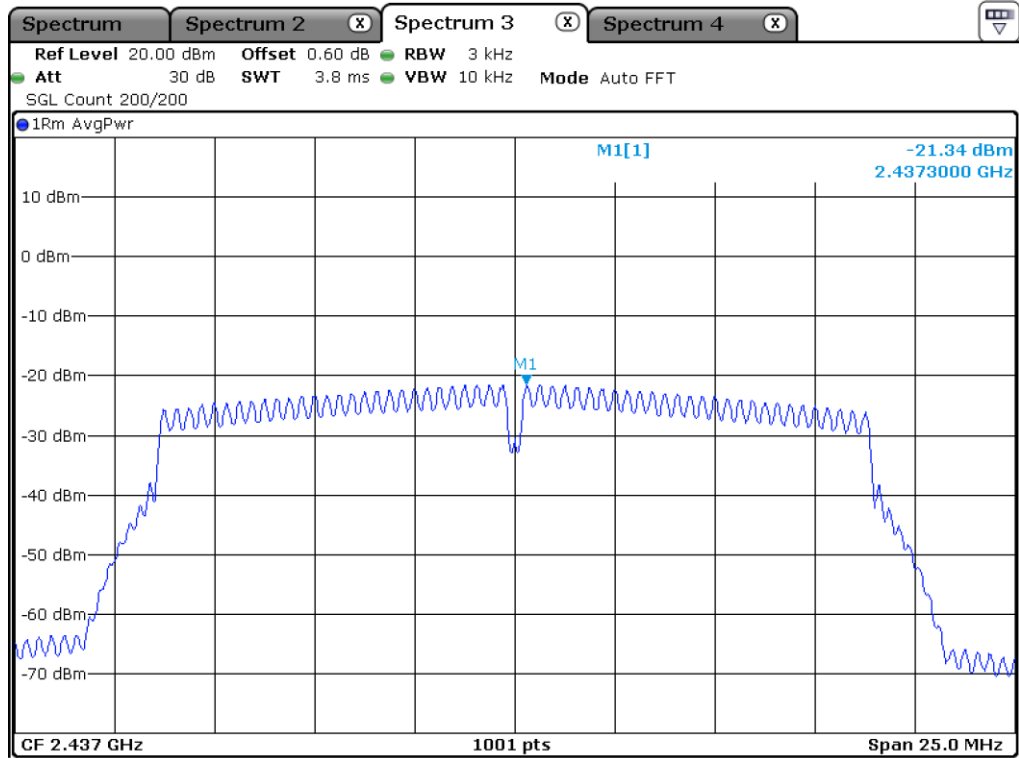
-. Test Result : Pass

-. Operating Condition : Continuous transmitting mode

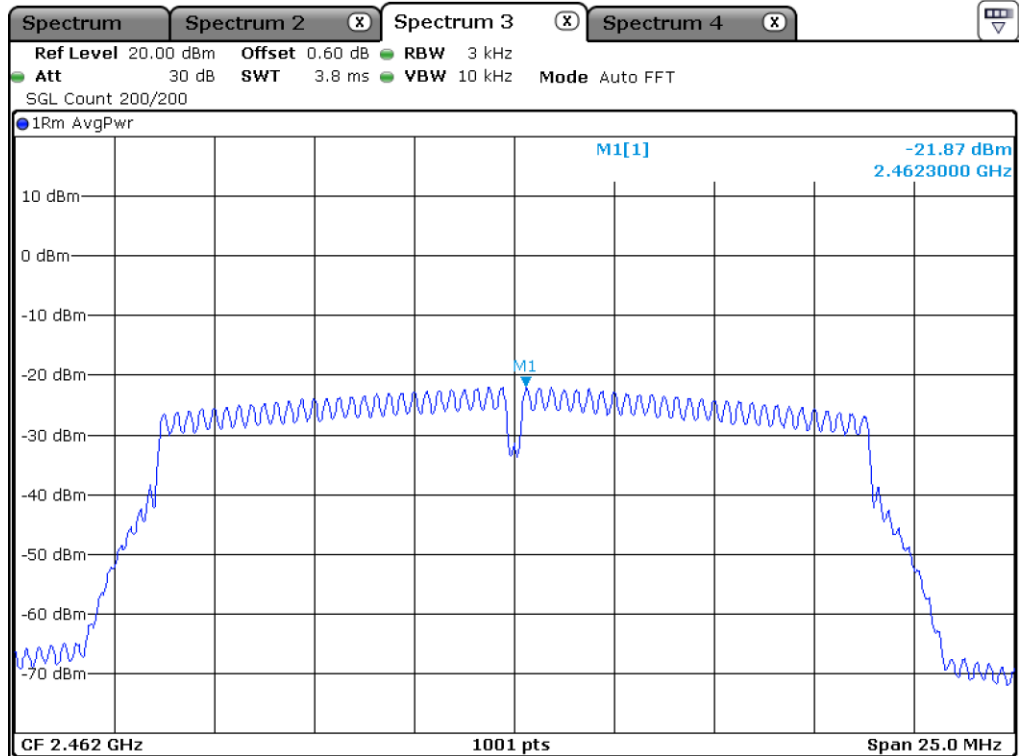
CHANNEL	FREQUENCY(MHz)	MEASURED VLAUE (dBm)	LIMIT (dBm)	MARGIN (dB)
Low	2 412.00	-21.00	8.00	29.00
Middle	2 437.00	-21.34	8.00	29.34
High 11	2 462.00	-21.87	8.00	29.87
High 12	2 467.00	-22.00	8.00	30.00
High 13	2 472.00	-22.99	8.00	30.99

Remark. Margin = Limit – Measured value

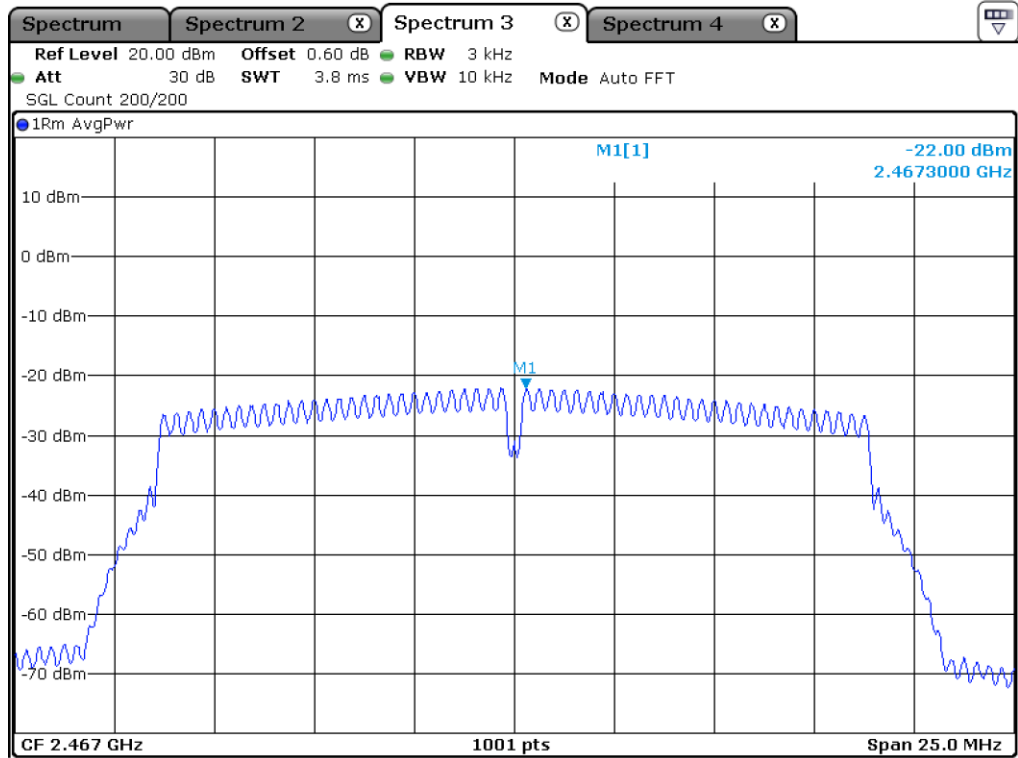




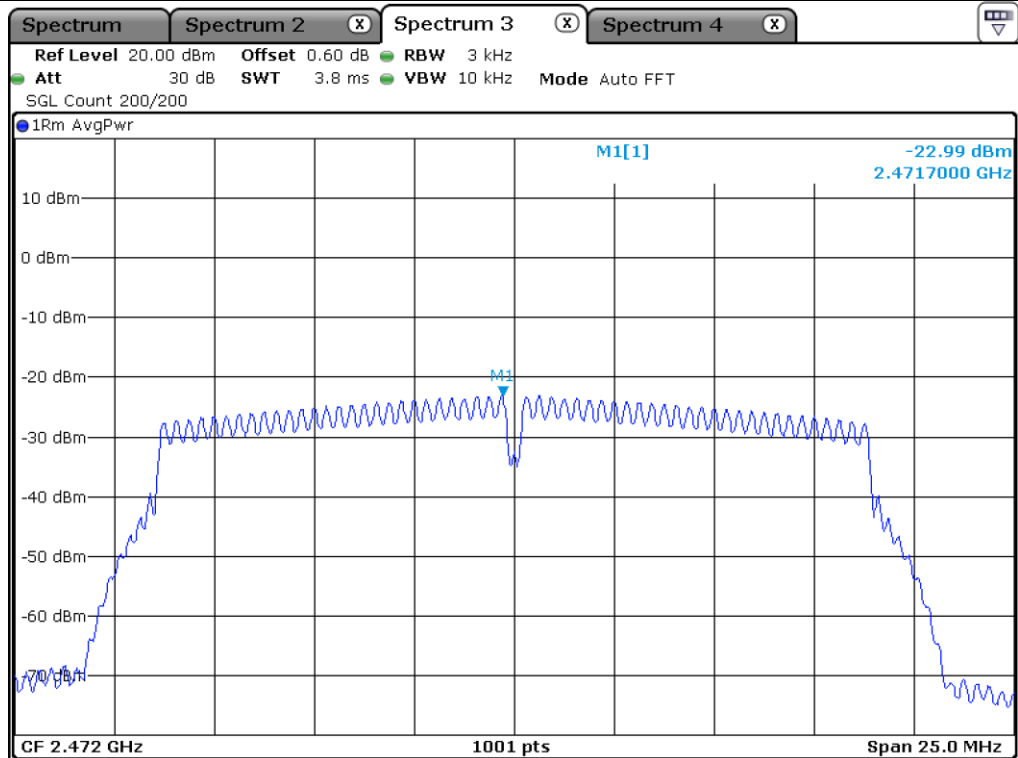
Middle Channel



High Channel 11



High Channel 12



High Channel 13

10.6.3 Test data for Multiple Transmit

-. Test Result : Pass

-. Operating Condition : Continuous transmitting mode

CHANNEL	FREQUENCY(MHz)	MEASURED VLAUE (dBm)	LIMIT (dBm)	MARGIN (dB)
Low	2 412.00	-18.35	8.00	26.35
Middle	2 437.00	-18.67	8.00	26.67
High 11	2 462.00	-18.94	8.00	26.94
High 12	2 467.00	-19.05	8.00	27.05
High 13	2 472.00	-19.93	8.00	27.93

Remark 1 : Margin = Limit – Measured value

Remark 2 : Calculated Power Density = $10\log(10^{(\text{Antenna 0 Power Density}/10)} + 10^{(\text{Antenna 1 Power Density}/10)})$

Remark 3 : Directional gain = $10*\log[(10^{G0/20} + 10^{G1/20})^2/N]$ dBi

10.7 Test data for 802.11n_HT40 WLAN Mode

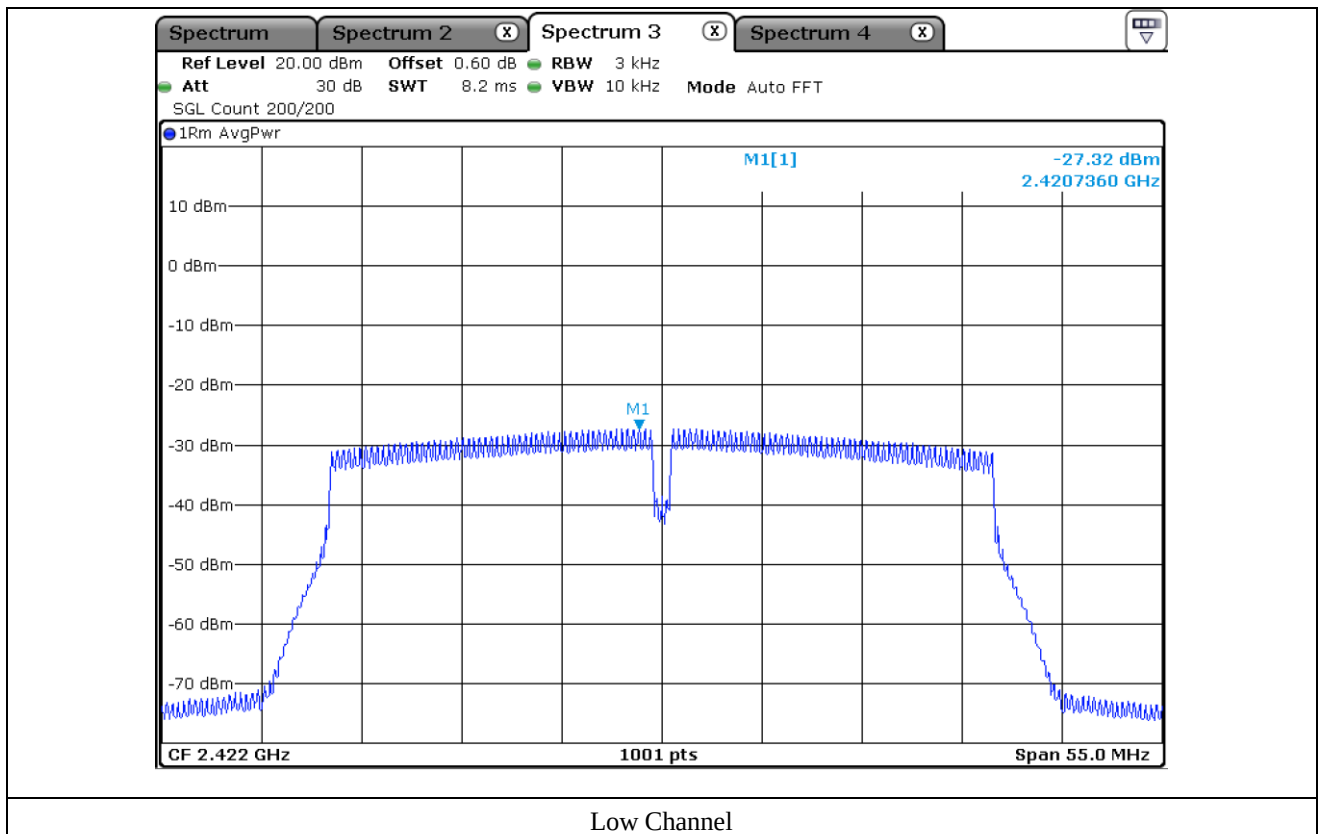
10.7.1 Test data for Antenna 0

-. Test Result : Pass

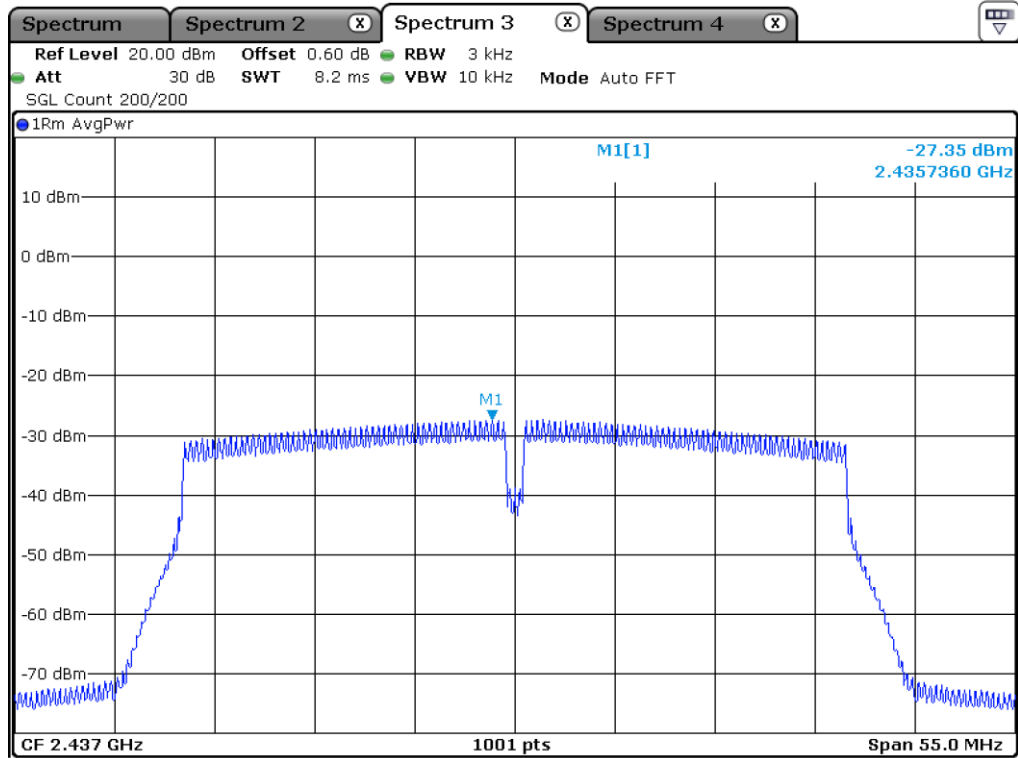
-. Operating Condition : Continuous transmitting mode

CHANNEL	FREQUENCY(MHz)	MEASURED VLAUE (dBm)	LIMIT (dBm)	MARGIN (dB)
Low	2 422.00	-27.32	8.00	35.32
Middle	2 437.00	-27.35	8.00	35.35
High 9	2 452.00	-27.50	8.00	35.50
High 10	2 457.00	-27.49	8.00	35.49
High 11	2 462.00	-27.49	8.00	35.49

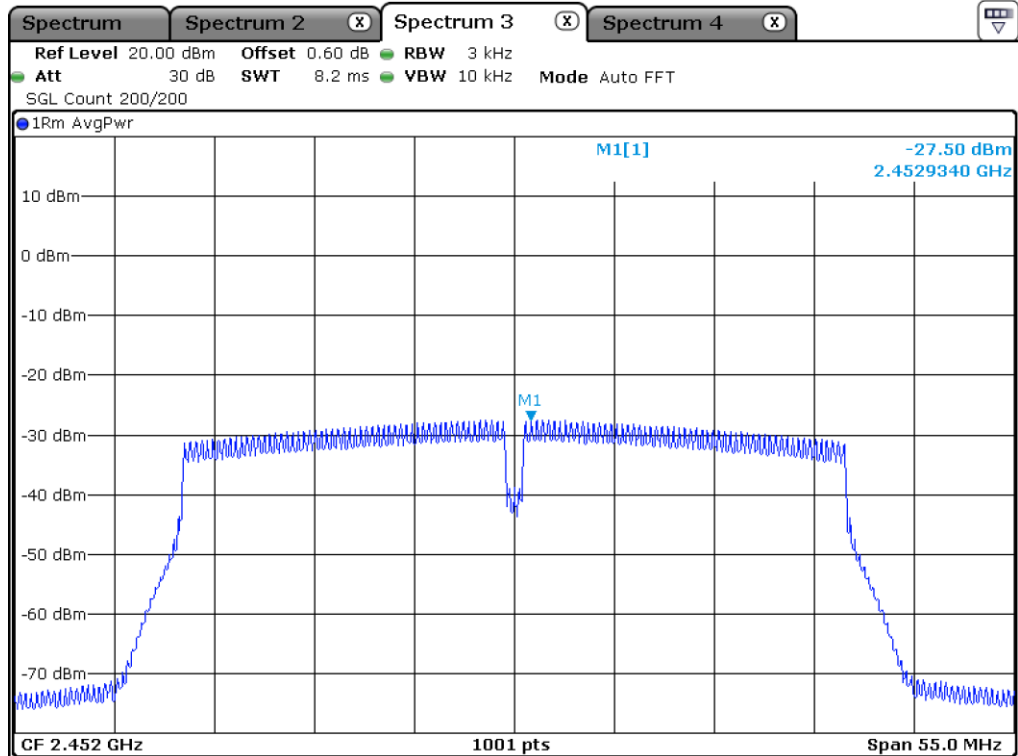
Remark. Margin = Limit – Measured value



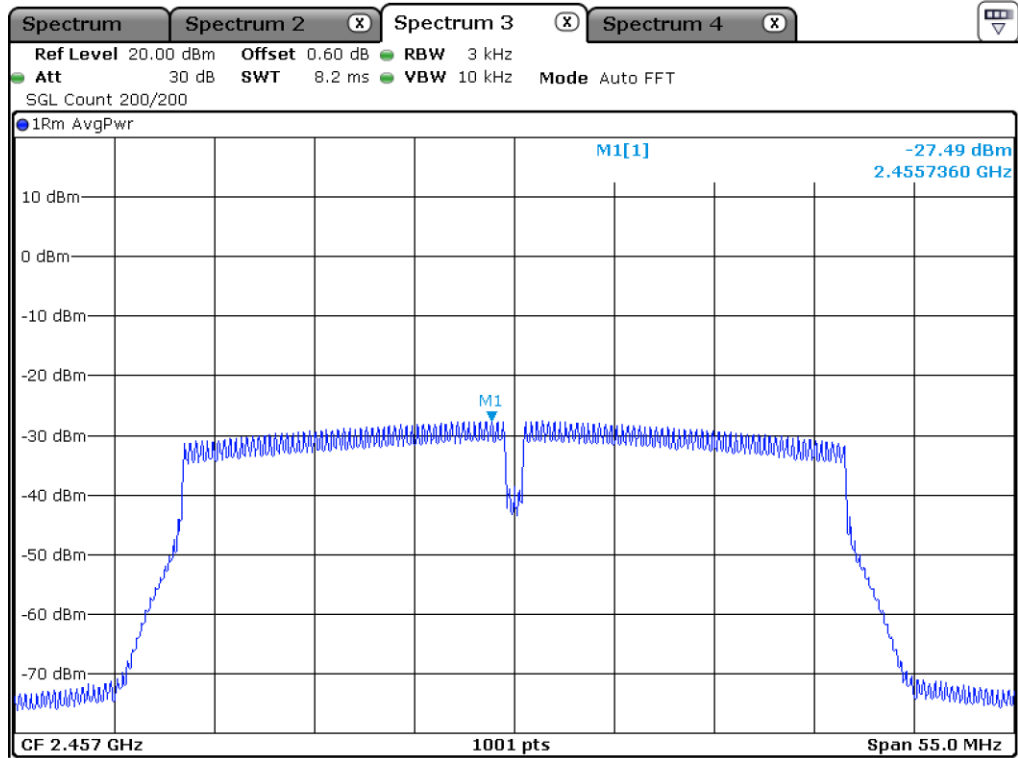
Low Channel



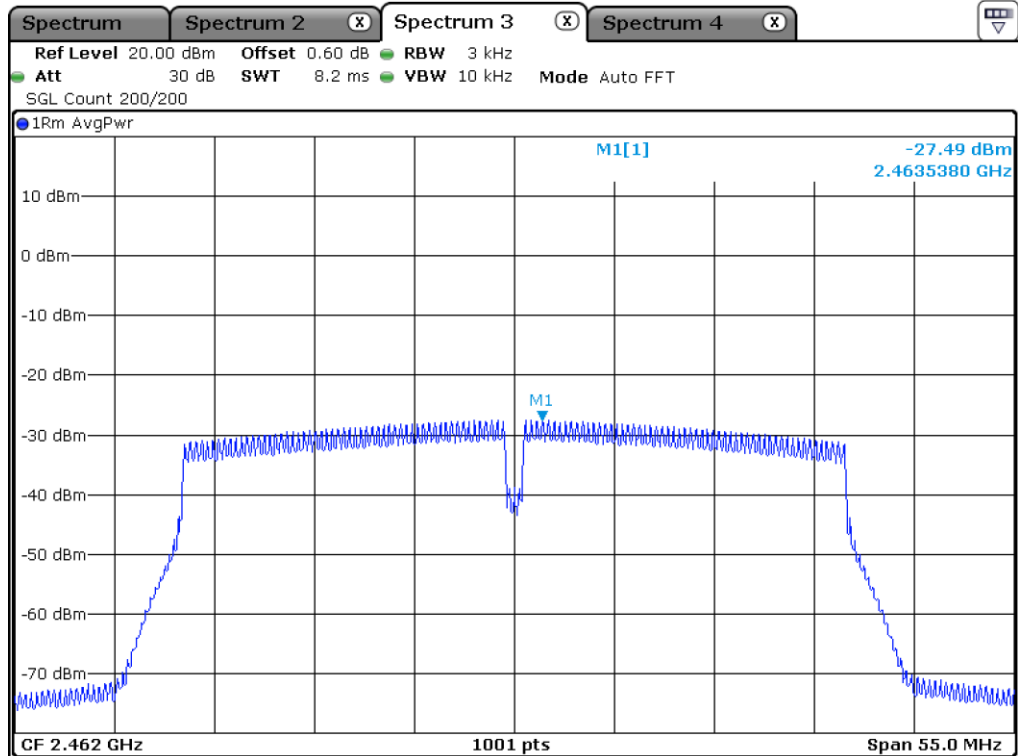
Middle Channel



High Channel 9



High Channel 10



High Channel 11

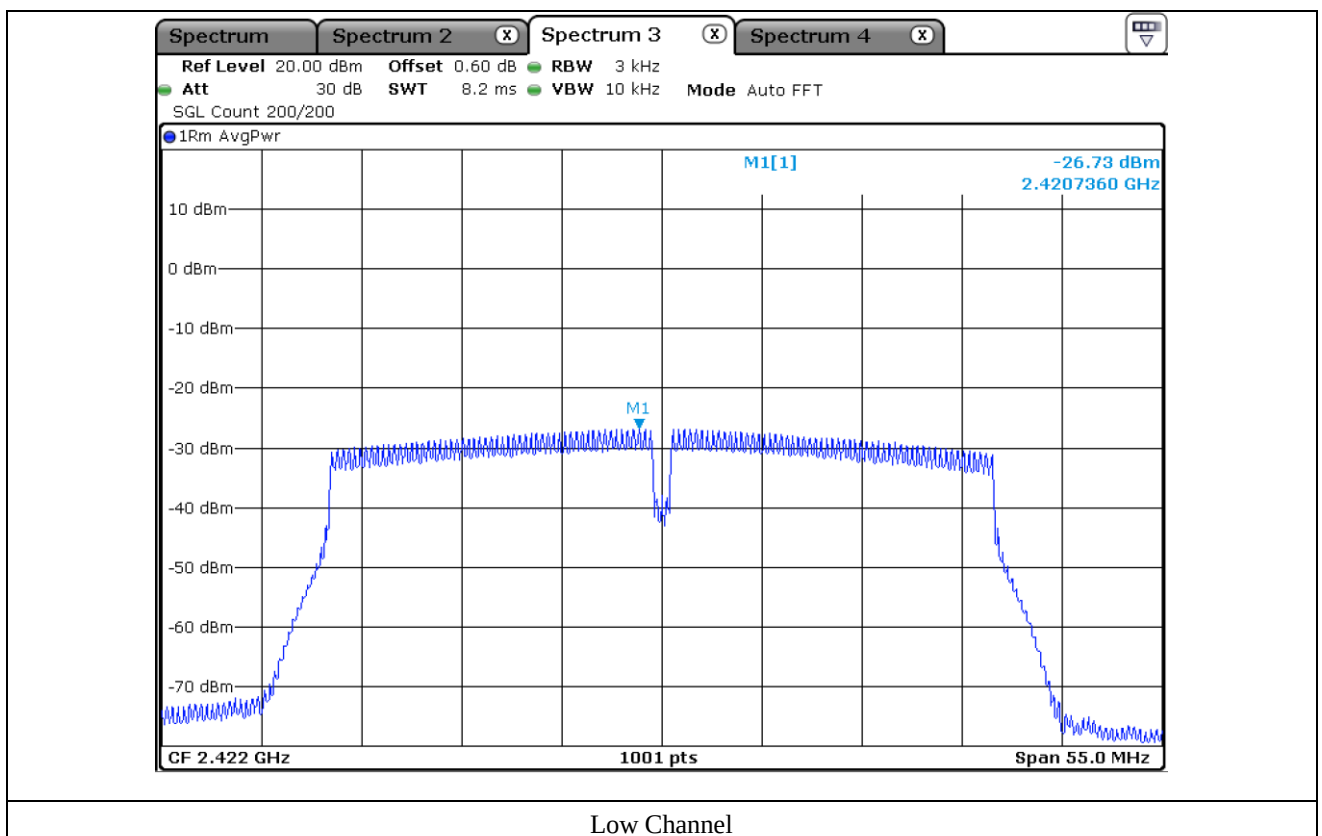
10.7.2 Test data for Antenna 1

-. Test Result : Pass

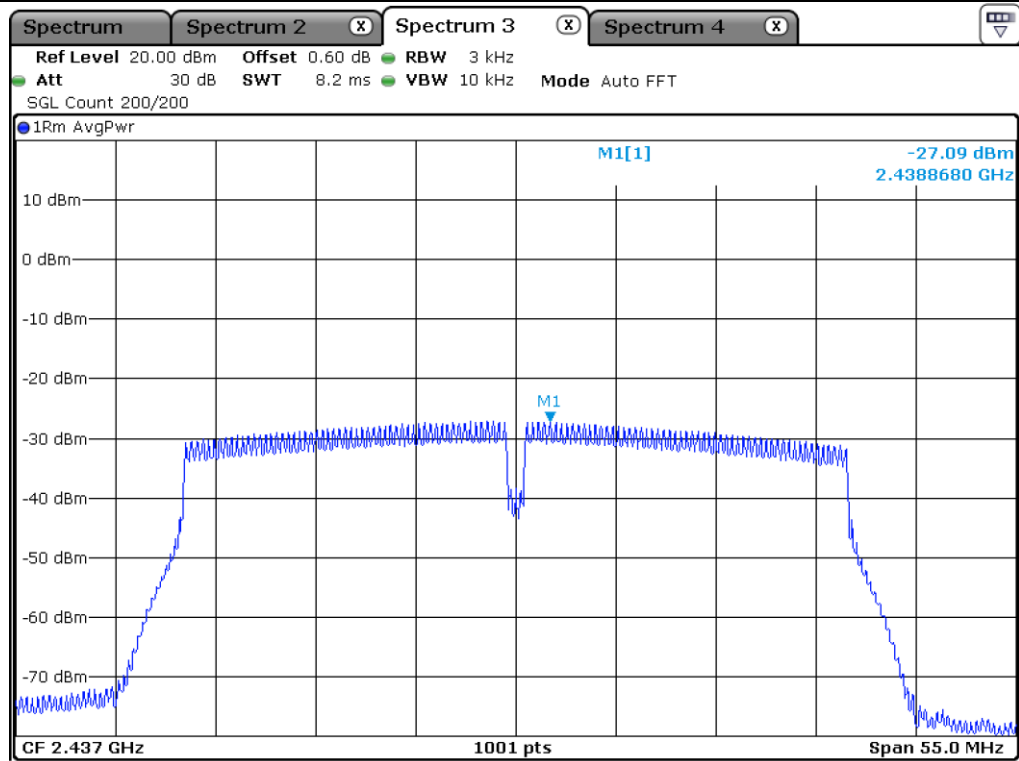
-. Operating Condition : Continuous transmitting mode

CHANNEL	FREQUENCY(MHz)	MEASURED VLAUE (dBm)	LIMIT (dBm)	MARGIN (dB)
Low	2 422.00	-26.73	8.00	34.73
Middle	2 437.00	-27.09	8.00	35.09
High 9	2 452.00	-27.43	8.00	35.43
High 10	2 457.00	-27.76	8.00	35.76
High 11	2 462.00	-27.69	8.00	35.69

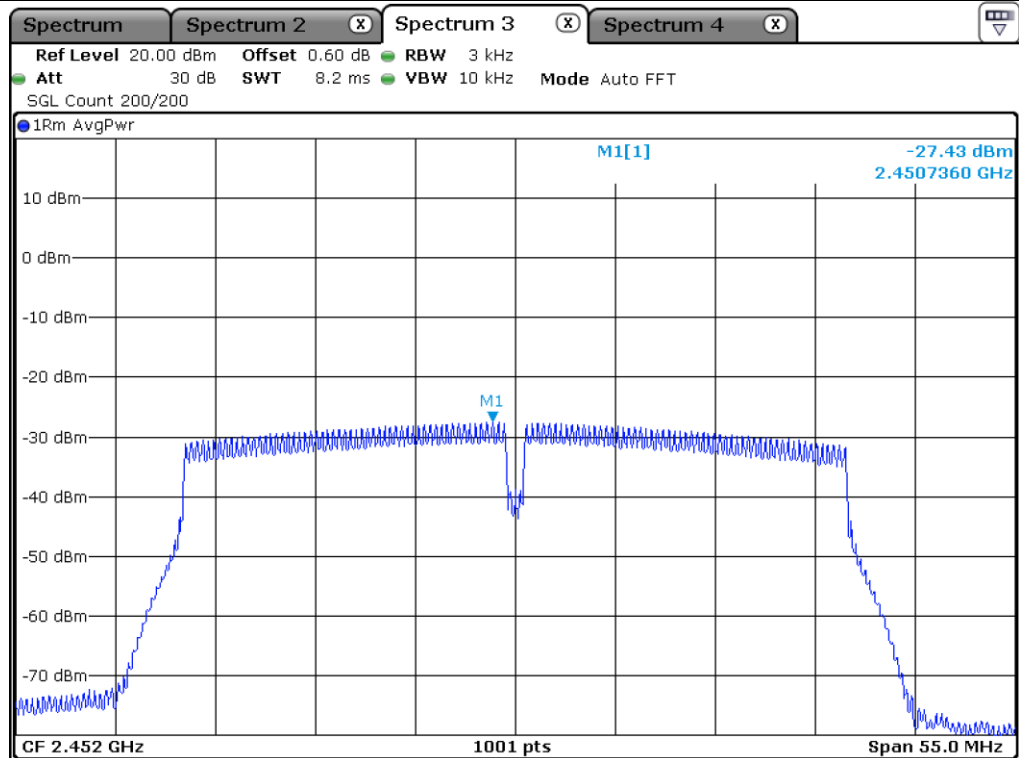
Remark. Margin = Limit – Measured value



Low Channel



Middle Channel



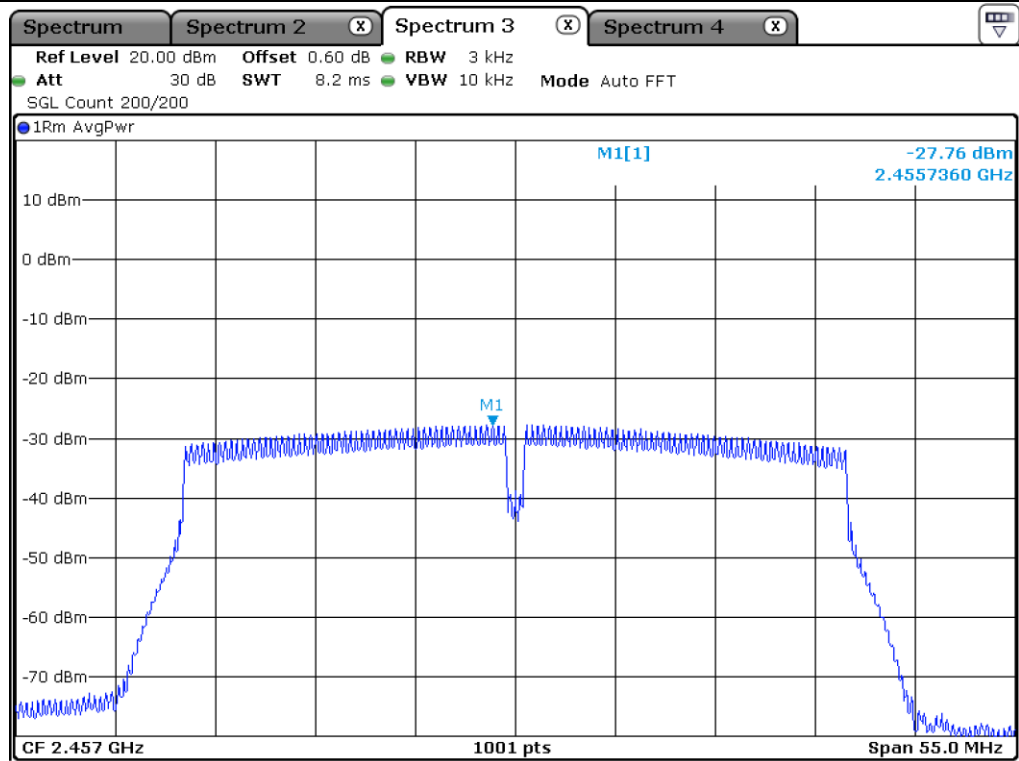
High Channel 9

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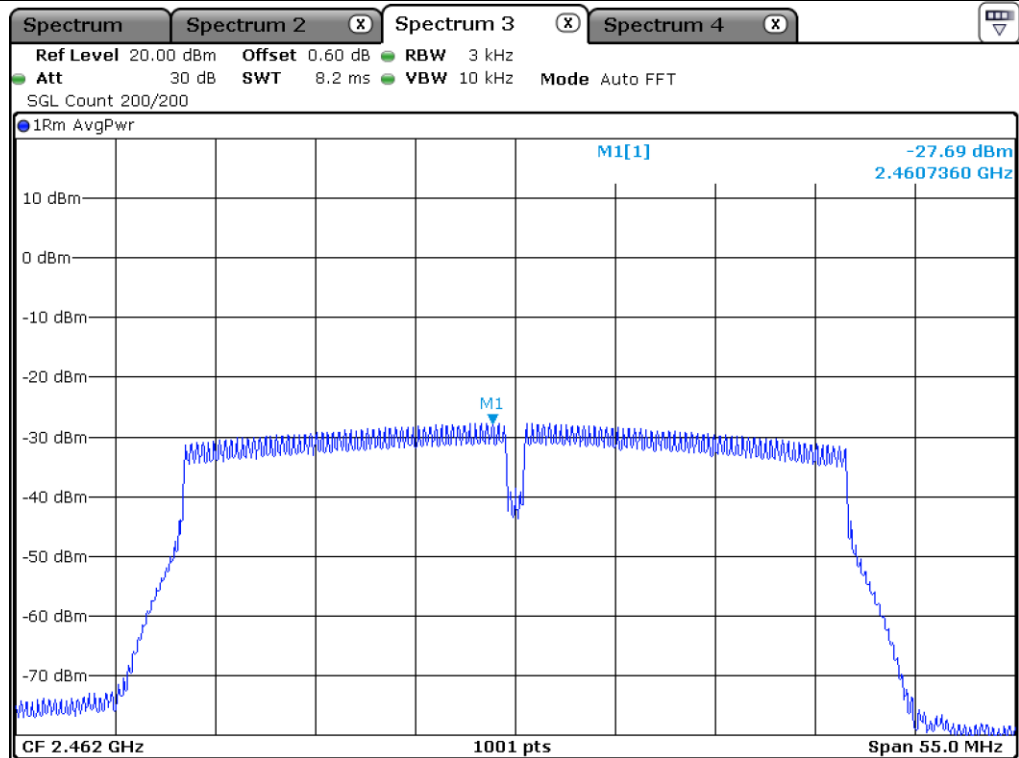
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ONETECH Corp.: 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599)



High Channel 10



High Channel 11

10.7.3 Test data for Multiple Transmit

-. Test Result : Pass

-. Operating Condition : Continuous transmitting mode

CHANNEL	FREQUENCY(MHz)	MEASURED VLAUE (dBm)	LIMIT (dBm)	MARGIN (dB)
Low	2 422.00	-24.00	8.00	32.00
Middle	2 437.00	-24.21	8.00	32.21
High 9	2 452.00	-24.45	8.00	32.45
High 10	2 457.00	-24.61	8.00	32.61
High 11	2 462.00	-24.58	8.00	32.58

Remark 1 : Margin = Limit – Measured value

Remark 2 : Calculated Power Density = $10\log(10^{(\text{Antenna 0 Power Density}/10)} + 10^{(\text{Antenna 1 Power Density}/10)})$

Remark 3 : Directional gain = $10*\log[(10^{G0/20} + 10^{G1/20})^2/N]$ dBi

11. RADIATED EMISSION TEST

11.1 Operating environment

Temperature : 23 °C
Relative humidity : 45 % R.H.

11.2 Test set-up

The radiated emissions measurements were on the 3 m semi anechoic chamber. The EUT and other support equipment were placed on turntable above the ground plane. The interconnecting cables from outside test site were inserted into ferrite clamps at the point where the cables reach the turntable.

The frequency spectrum from 30 MHz to 26.5 GHz was scanned and emission levels maximized at each frequency recorded. The system was rotated 360°, and the antenna was varied in height between 1.0 m and 4.0 m in order to determine the maximum emission levels. This procedure was performed for both horizontal and vertical polarization of the receiving antenna.

11.3 Test Date

October 07, 2021 ~ October 20, 2021

11.4 Test data for 30 MHz ~ 1 000 MHz

11.4.1 Test data for WLAN 2.4 GHz

Humidity Level : 45 % R.H.

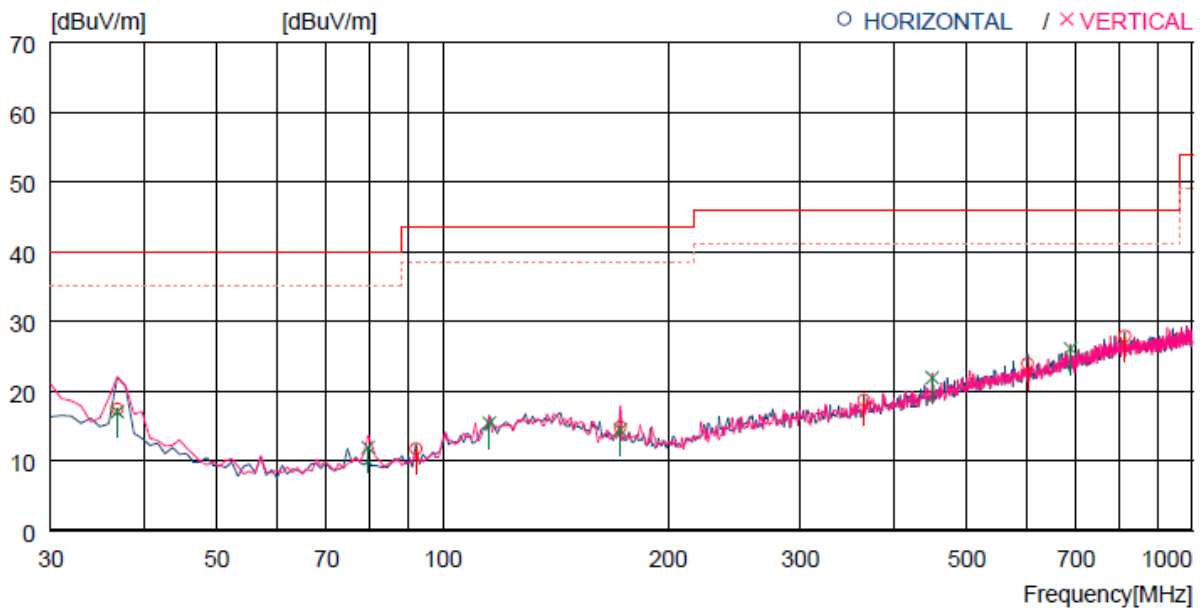
Temperature: 23 ° C

Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.247

Result : PASSED

EUT : Wi-Fi/BT Transceiver

Detector : CISPR Quasi-Peak (6 dB Bandwidth: 120 kHz)



No.	FREQ	READING	ANT	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
	[MHz]	[dBuV]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[cm]	[DEG]
---- Horizontal ----										
1	36.790	29.6	18.5	1.3	32.0	17.4	40.0	22.6	100	1
2	92.080	28.0	13.9	1.8	32.0	11.7	43.5	31.8	100	182
3	172.590	27.4	17.1	2.3	32.0	14.8	43.5	28.7	100	1
4	364.650	27.3	20.2	3.3	32.1	18.7	46.0	27.3	100	1
5	603.268	27.9	24.2	4.2	32.4	23.9	46.0	22.1	100	156
6	812.782	27.7	27.2	5.0	32.0	27.9	46.0	18.1	100	44
---- Vertical ----										
7	36.790	29.2	18.5	1.3	32.0	17.0	40.0	23.0	100	215
8	79.470	29.3	12.9	1.7	32.0	11.9	40.0	28.1	100	115
9	115.360	27.7	17.8	1.9	32.0	15.4	43.5	28.1	100	215
10	172.590	27.0	17.1	2.3	32.0	14.4	43.5	29.1	100	73
11	450.011	28.5	21.9	3.7	32.2	21.9	46.0	24.1	100	73
12	687.655	28.4	25.4	4.6	32.3	26.1	46.0	19.9	100	124

-. Antenna 0, Antenna 1 and Multiple transmit tested, but the worst data were recorded.

11.4.2 Test data for Intermodulation Mode(Bluetooth LE + WLAN 2.4 GHz + WLAN 5 GHz)

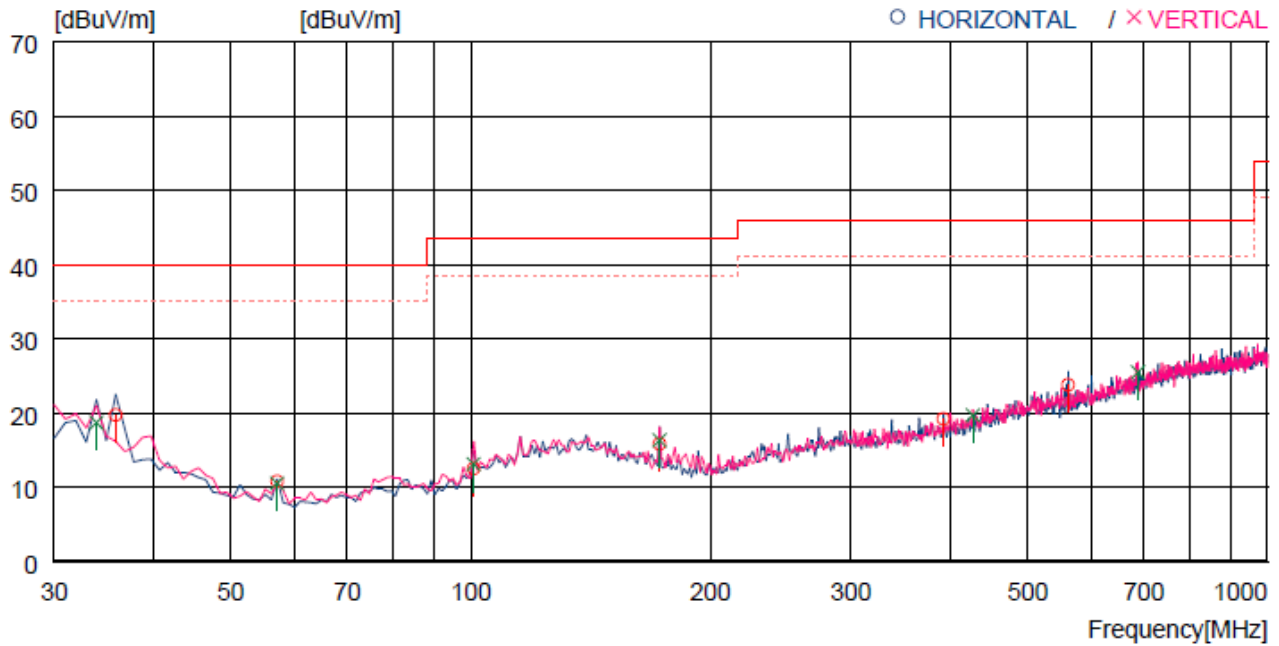
Humidity Level : 45 % R.H. Temperature: 23 ° C

Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.247

Result : PASSED

EUT : Wi-Fi/BT Transceiver

Detector : CISPR Quasi-Peak (6 dB Bandwidth: 120 kHz)



No.	FREQ	READING	ANT	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
	[MHz]	[dBuV]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[cm]	[DEG]
---- Horizontal ----										
1	35.820	31.6	18.8	1.3	32.0	19.7	40.0	20.3	100	246
2	57.160	29.0	12.4	1.5	32.1	10.8	40.0	29.2	100	220
3	100.810	27.3	15.4	1.8	32.0	12.5	43.5	31.0	100	220
4	172.590	28.4	17.1	2.3	32.0	15.8	43.5	27.7	100	311
5	391.810	27.3	20.6	3.4	32.1	19.2	46.0	26.8	100	343
6	562.529	28.3	23.8	4.1	32.4	23.8	46.0	22.2	100	253
---- Vertical ----										
7	33.880	30.0	19.5	1.2	32.0	18.7	40.0	21.3	100	77
8	57.160	28.7	12.4	1.5	32.1	10.5	40.0	29.5	100	8
9	100.810	27.9	15.4	1.8	32.0	13.1	43.5	30.4	100	45
10	172.590	28.9	17.1	2.3	32.0	16.3	43.5	27.2	100	68
11	426.731	27.0	21.3	3.6	32.2	19.7	46.0	26.3	100	8
12	687.655	27.8	25.4	4.6	32.3	25.5	46.0	20.5	100	8

-. Antenna 0, Antenna 1 and Multiple transmit tested, but the worst data were recorded.

11.4.3 Test data for Intermodulation Mode(Bluetooth + WLAN 2.4 GHz + WLAN 5 GHz)

Humidity Level : 45 % R.H.

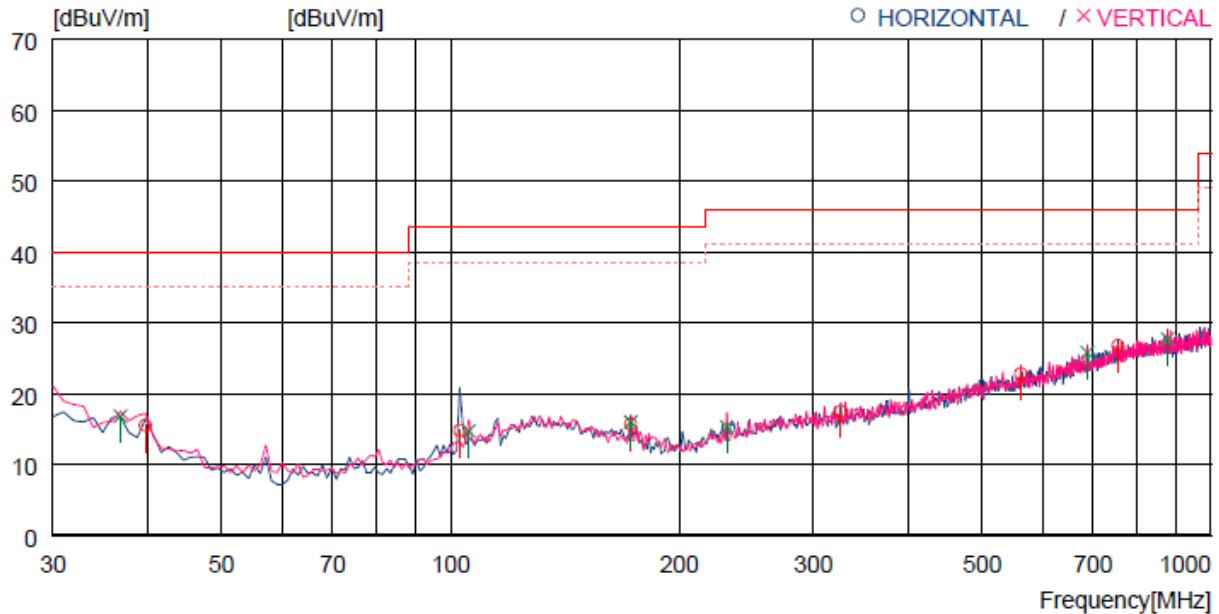
Temperature: 23 ° C

Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.247

Result : PASSED

EUT : Wi-Fi/BT Transceiver

Detector : CISPR Quasi-Peak (6 dB Bandwidth: 120 kHz)



No.	FREQ	READING	ANT	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
	[MHz]	[dBuV]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[cm]	[DEG]
---- Horizontal ----										
1	39.700	28.8	17.4	1.3	32.0	15.5	40.0	24.5	100	185
2	102.750	29.2	15.8	1.8	32.0	14.8	43.5	28.7	100	204
3	172.590	28.3	17.1	2.3	32.0	15.7	43.5	27.8	100	185
4	325.850	26.8	19.6	3.1	32.0	17.5	46.0	28.5	100	185
5	562.529	27.3	23.8	4.1	32.4	22.8	46.0	23.2	100	331
6	754.583	27.7	26.4	4.8	32.1	26.8	46.0	19.2	100	354
---- Vertical ----										
7	36.790	29.0	18.5	1.3	32.0	16.8	40.0	23.2	100	180
8	105.660	28.6	16.2	1.9	32.0	14.7	43.5	28.8	100	289
9	172.590	28.6	17.1	2.3	32.0	16.0	43.5	27.5	100	359
10	230.790	27.7	17.0	2.6	32.0	15.3	46.0	30.7	100	359
11	687.655	28.1	25.4	4.6	32.3	25.8	46.0	20.2	100	180
12	876.800	26.9	27.4	5.2	31.8	27.7	46.0	18.3	100	206

-. Antenna 0, Antenna 1 and Multiple transmit tested, but the worst data were recorded.

11.5 Test data for Below 30 MHz

- . Resolution bandwidth : 200 Hz (from 9 kHz to 0.15 MHz), 9 kHz (from 0.15 MHz to 30 MHz)
- . Frequency range : 9 kHz ~ 30 MHz
- . Measurement distance : 3 m
- . Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBμV)	Ant. Pol. (H/V)	Ant. Height (m)	Angle (°)	Ant. Factor (dB/m)	Cable Loss	Emission Level(dBμV/m)	Limits (dBμV/m)	Margin (dB)
Emission from the EUT more than 20 dB below the limit in each frequency range.									

11.6 Test data for above 1 GHz

- . Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode
1 MHz and RMS Detector for Average Mode
- . Video bandwidth : 3 MHz for Peak and Average Mode
- . Frequency range : 1 GHz ~ 26.5 GHz
- . Measurement distance : 3 m
- . Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBμV)	Ant. Pol. (H/V)	Ant. Height (m)	Angle (°)	Ant. Factor (dB/m)	Cable Loss	Emission Level(dBμV/m)	Limits (dBμV/m)	Margin (dB)
Emission from the EUT more than 20 dB below the limit in each frequency range.									

12. CONDUCTED EMISSION TEST

12.1 Operating environment

Temperature : 23 ° C

Relative humidity : 45 % R.H.

12.2 Test set-up

The EUT was placed on a wooden table, 0.8 m height above the floor. Power was fed to the EUT through a 50 Ω / 50 μ H + 5 Ω Artificial Mains Network (AMN). The ground plane was electrically bonded to the reference ground system and all power lines were filtered from ambient.

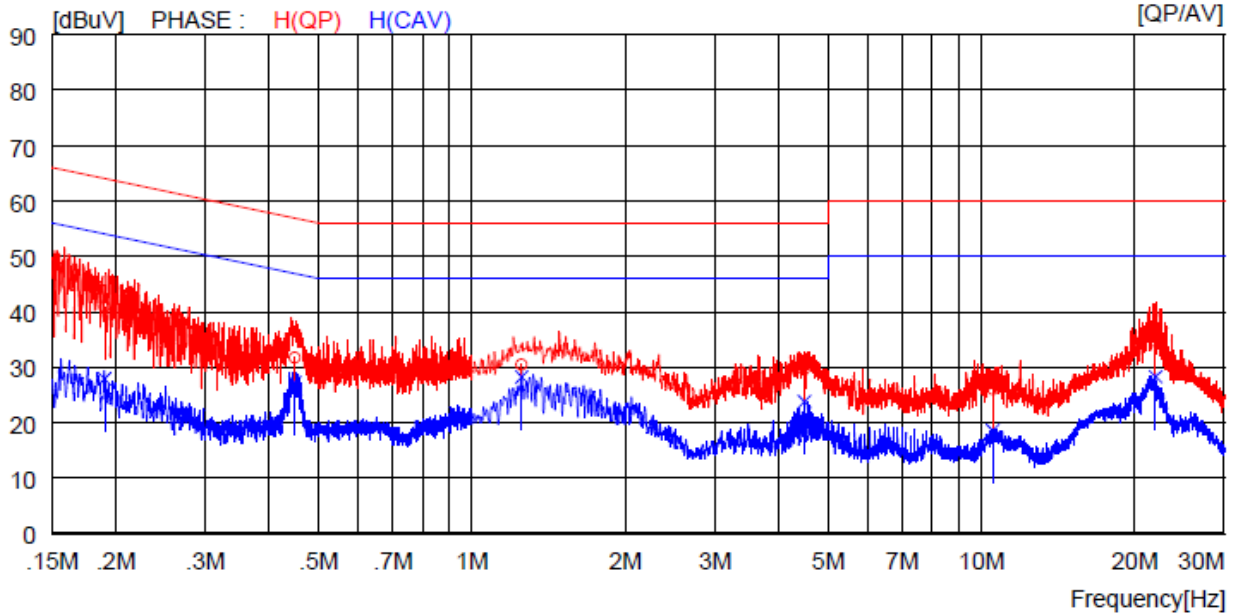
12.3 Test Date

October 07, 2021 ~ October 20, 2021

12.4 Test data

12.4.1 Test data for WLAN 2.4 GHz

- Resolution bandwidth : 9 kHz
- Frequency range : 0.15 MHz ~ 30 MHz
- Tested Line : LIVE LINE

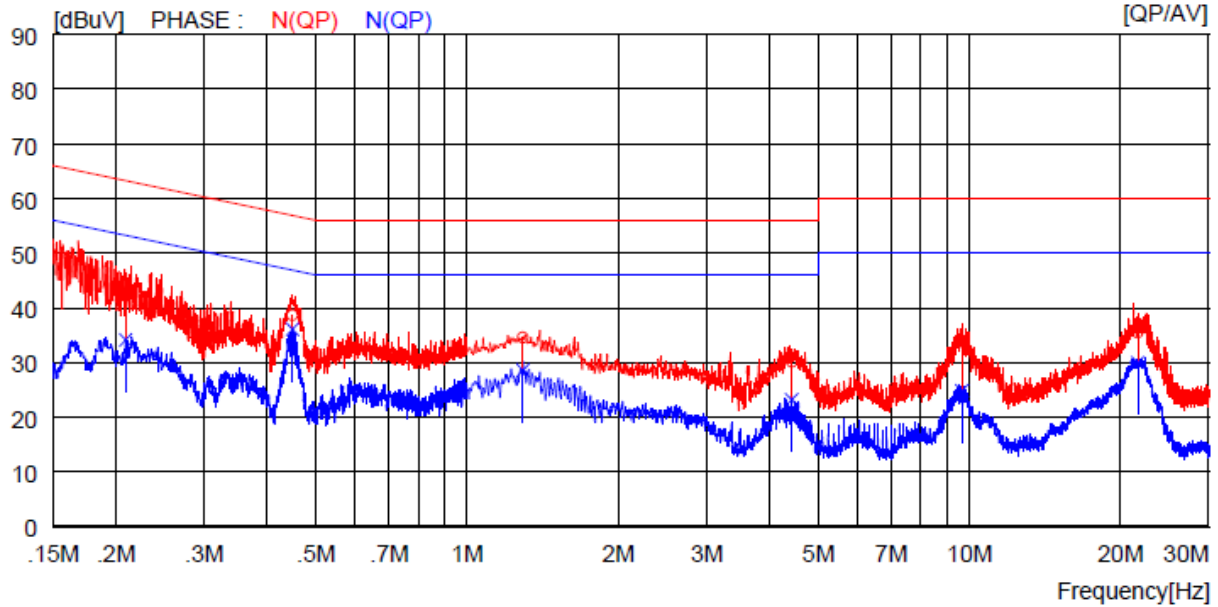


NO	FREQ [MHz]	READING		C.FACTOR [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	
1	0.19000	30.9	----	10.0	40.9	----	64.0	----	23.1	----	H (QP)
2	0.44900	21.7	----	10.0	31.7	----	56.9	----	25.2	----	H (QP)
3	1.25200	20.3	----	10.1	30.4	----	56.0	----	25.6	----	H (QP)
4	4.49200	19.5	----	10.1	29.6	----	56.0	----	26.4	----	H (QP)
5	10.54000	15.8	----	10.2	26.0	----	60.0	----	34.0	----	H (QP)
6	22.00000	24.3	----	10.4	34.7	----	60.0	----	25.3	----	H (QP)
7	0.19000	----	17.9	10.0	----	27.9	----	54.0	----	26.1	H (CAV)
8	0.44900	----	17.2	10.0	----	27.2	----	46.9	----	19.7	H (CAV)
9	1.25200	----	18.1	10.1	----	28.2	----	46.0	----	17.8	H (CAV)
10	4.49200	----	13.7	10.1	----	23.8	----	46.0	----	22.2	H (CAV)
11	10.54000	----	8.4	10.2	----	18.6	----	50.0	----	31.4	H (CAV)
12	22.00000	----	17.9	10.4	----	28.3	----	50.0	----	21.7	H (CAV)

- Antenna 0, Antenna 1 and Multiple transmit tested, but the worst data were recorded.

-. Tested Line : NEUTRAL LINE

LIMIT : EN.KN.FCC.VCCI_CISPR Pub.22 Class B, Quasi-Peak Limits (Mains Ports)
EN.KN.FCC.VCCI_CISPR Pub.22 Class B, Average Limits (Mains Ports)



NO	FREQ [MHz]	READING		C.FACTOR [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	
1	0.20900	33.0	----	10.0	43.0	----	63.2	----	20.2	----	N (QP)
2	0.44900	28.7	----	10.0	38.7	----	56.9	----	18.2	----	N (QP)
3	1.29200	24.5	----	10.1	34.6	----	56.0	----	21.4	----	N (QP)
4	4.43600	20.0	----	10.1	30.1	----	56.0	----	25.9	----	N (QP)
5	9.67500	23.5	----	10.2	33.7	----	60.0	----	26.3	----	N (QP)
6	21.66000	25.0	----	10.4	35.4	----	60.0	----	24.6	----	N (QP)
7	0.20900	----	24.2	10.0	----	34.2	----	53.2	----	19.0	N (CAV)
8	0.44900	----	26.1	10.0	----	36.1	----	46.9	----	10.8	N (CAV)
9	1.29200	----	18.5	10.1	----	28.6	----	46.0	----	17.4	N (CAV)
10	4.43600	----	13.1	10.1	----	23.2	----	46.0	----	22.8	N (CAV)
11	9.67500	----	14.6	10.2	----	24.8	----	50.0	----	25.2	N (CAV)
12	21.66000	----	19.6	10.4	----	30.0	----	50.0	----	20.0	N (CAV)

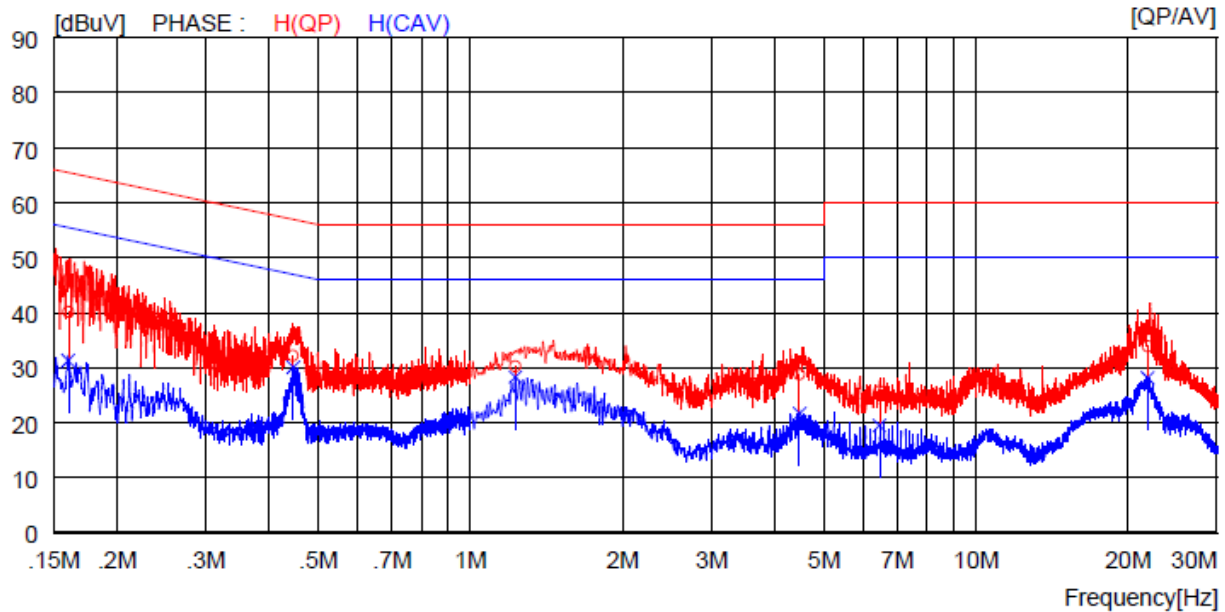
Remark: Margin (dB) = Limit – Level (Result)

The emission level in above table is included the transducer factor that means insertion loss (LISN), cable loss and attenuator.

12.4.2 Test data for Intermodulation Mode(Bluetooth LE + WLAN 2.4 GHz + WLAN 5 GHz)

- Resolution bandwidth : 9 kHz
- Frequency range : 0.15 MHz ~ 30 MHz
- Tested Line : LIVE LINE

LIMIT : EN.KN.FCC.VCCI_CISPR Pub.22 Class B, Quasi-Peak Limits (Mains Ports)
EN.KN.FCC.VCCI_CISPR Pub.22 Class B, Average Limits (Mains Ports)



NO	FREQ [MHz]	READING		C.FACTOR [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	
1	0.16000	30.1	----	10.0	40.1	----	65.5	----	25.4	----	H (QP)
2	0.44600	22.2	----	10.0	32.2	----	56.9	----	24.7	----	H (QP)
3	1.22800	20.1	----	10.1	30.2	----	56.0	----	25.8	----	H (QP)
4	4.48000	18.7	----	10.1	28.8	----	56.0	----	27.2	----	H (QP)
5	6.45000	15.5	----	10.2	25.7	----	60.0	----	34.3	----	H (QP)
6	21.89000	23.5	----	10.4	33.9	----	60.0	----	26.2	----	H (QP)
7	0.16000	----	21.3	10.0	----	31.3	----	55.5	----	24.2	H (CAV)
8	0.44600	----	20.1	10.0	----	30.1	----	46.9	----	16.8	H (CAV)
9	1.22800	----	18.2	10.1	----	28.3	----	46.0	----	17.7	H (CAV)
10	4.48000	----	11.6	10.1	----	21.7	----	46.0	----	24.3	H (CAV)
11	6.45000	----	9.3	10.2	----	19.5	----	50.0	----	30.5	H (CAV)
12	21.89000	----	17.7	10.4	----	28.1	----	50.0	----	21.9	H (CAV)

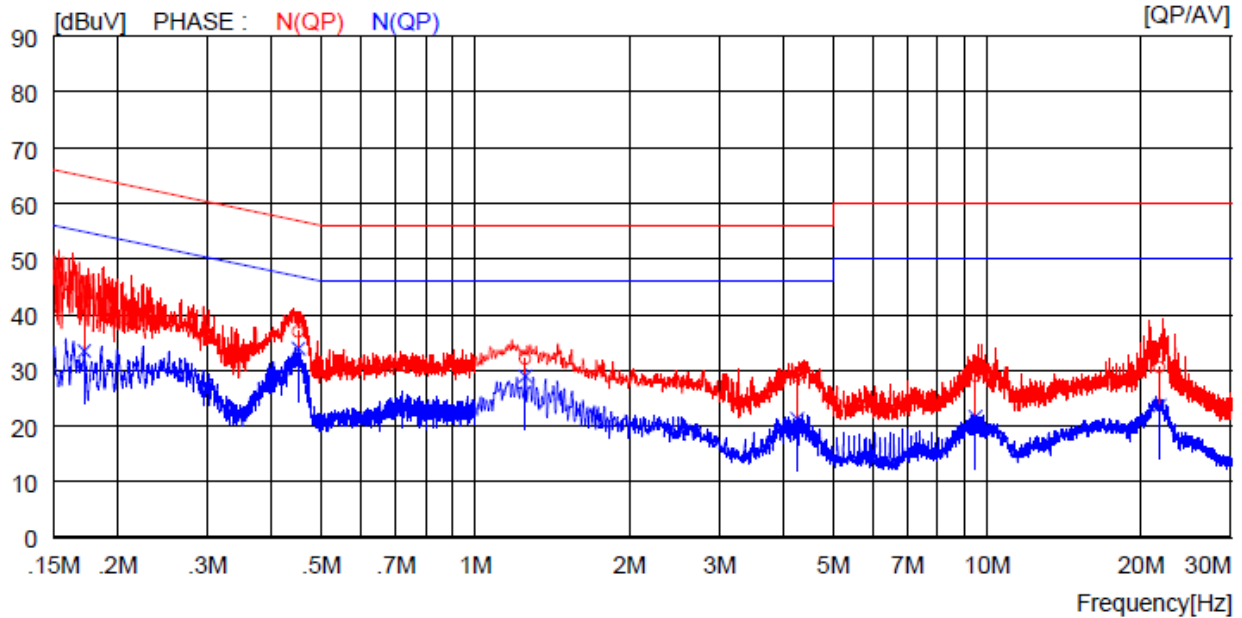
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-. Tested Line : NEUTRAL LINE

LIMIT : EN.KN.FCC.VCCI_CISPR Pub.22 Class B, Quasi-Peak Limits (Mains Ports)
EN.KN.FCC.VCCI_CISPR Pub.22 Class B, Average Limits (Mains Ports)



NO	FREQ [MHz]	READING		C.FACTOR [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	
1	0.17200	32.2	----	10.0	42.2	----	64.9	----	22.7	----	N (QP)
2	0.45100	26.9	----	10.0	36.9	----	56.9	----	20.0	----	N (QP)
3	1.25200	22.0	----	10.1	32.1	----	56.0	----	23.9	----	N (QP)
4	4.26000	18.9	----	10.1	29.0	----	56.0	----	27.0	----	N (QP)
5	9.49000	18.8	----	10.2	29.0	----	60.0	----	31.0	----	N (QP)
6	21.73000	20.2	----	10.4	30.6	----	60.0	----	29.4	----	N (QP)
7	0.17200	----	23.5	10.0	----	33.5	----	54.9	----	21.4	N (CAV)
8	0.45100	----	23.9	10.0	----	33.9	----	46.9	----	13.0	N (CAV)
9	1.25200	----	18.9	10.1	----	29.0	----	46.0	----	17.0	N (CAV)
10	4.26000	----	11.2	10.1	----	21.3	----	46.0	----	24.7	N (CAV)
11	9.49000	----	11.5	10.2	----	21.7	----	50.0	----	28.3	N (CAV)
12	21.73000	----	13.3	10.4	----	23.7	----	50.0	----	26.3	N (CAV)

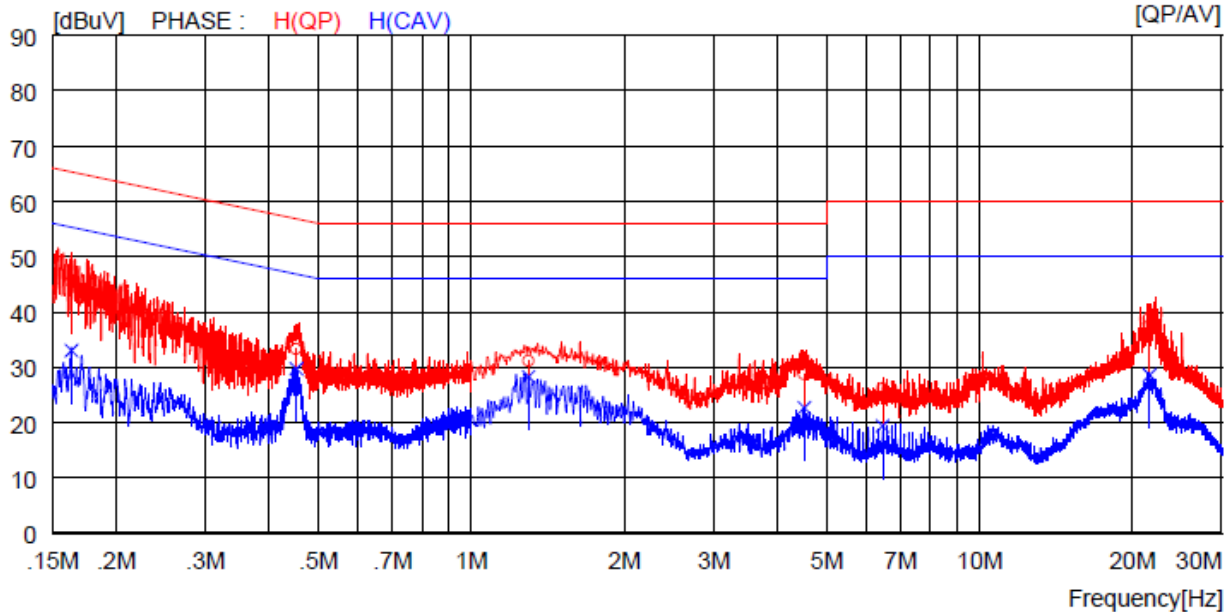
Remark: Margin (dB) = Limit – Level (Result)

The emission level in above table is included the transducer factor that means insertion loss (LISN), cable loss and attenuator.

12.4.3 Test data for Intermodulation Mode(Bluetooth + WLAN 2.4 GHz + WLAN 5 GHz)

- Resolution bandwidth : 9 kHz
- Frequency range : 0.15 MHz ~ 30 MHz
- Tested Line : LIVE LINE

LIMIT : EN.KN.FCC.VCCI_CISPR Pub.22 Class B, Quasi-Peak Limits (Mains Ports)
EN.KN.FCC.VCCI_CISPR Pub.22 Class B, Average Limits (Mains Ports)



NO	FREQ [MHz]	READING		C.FACTOR [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	
1	0.16300	35.5	----	10.0	45.5	----	65.3	----	19.8	----	H(QP)
2	0.45200	23.3	----	10.0	33.3	----	56.8	----	23.5	----	H(QP)
3	1.29600	21.1	----	10.1	31.2	----	56.0	----	24.8	----	H(QP)
4	4.51600	18.5	----	10.2	28.7	----	56.0	----	27.3	----	H(QP)
5	6.45000	15.9	----	10.2	26.1	----	60.0	----	33.9	----	H(QP)
6	21.62000	28.5	----	10.4	38.9	----	60.0	----	21.1	----	H(QP)
7	0.16300	----	23.0	10.0	----	33.0	----	55.3	----	22.3	H(CAV)
8	0.45200	----	19.7	10.0	----	29.7	----	46.8	----	17.1	H(CAV)
9	1.29600	----	18.2	10.1	----	28.3	----	46.0	----	17.7	H(CAV)
10	4.51600	----	12.5	10.2	----	22.7	----	46.0	----	23.3	H(CAV)
11	6.45000	----	9.2	10.2	----	19.4	----	50.0	----	30.6	H(CAV)
12	21.62000	----	18.2	10.4	----	28.6	----	50.0	----	21.4	H(CAV)

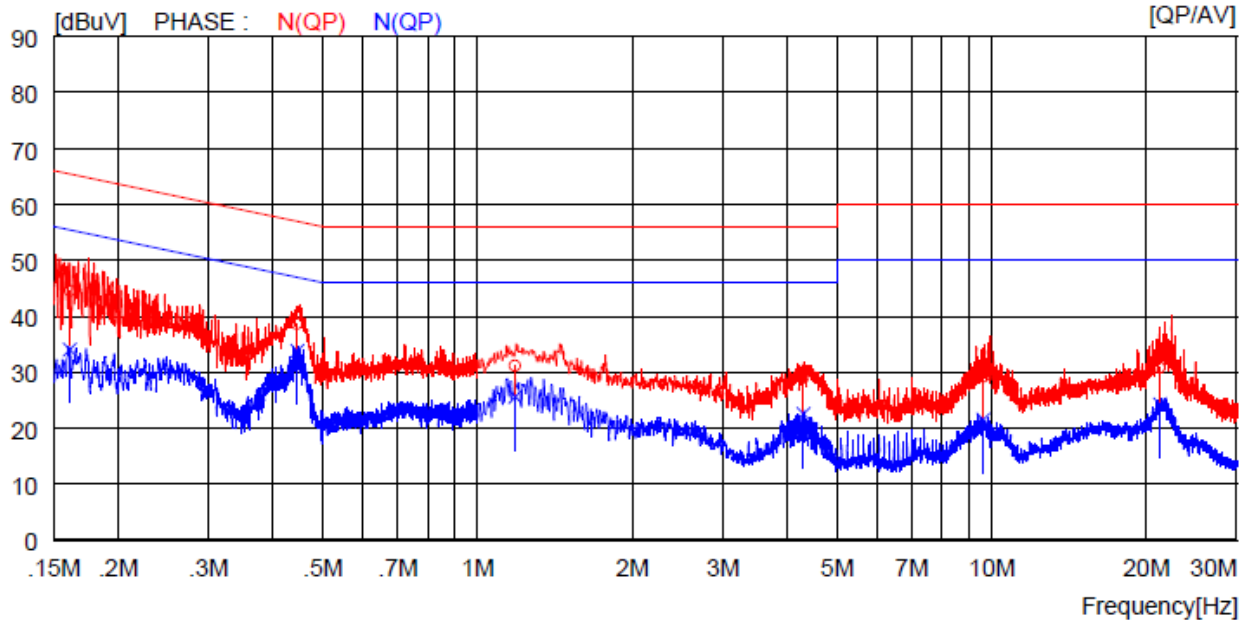
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OTC-TRF-RF-001(0)

-. Tested Line : NEUTRAL LINE

LIMIT : EN.KN.FCC.VCCI_CISPR Pub.22 Class B, Quasi-Peak Limits (Mains Ports)
EN.KN.FCC.VCCI_CISPR Pub.22 Class B, Average Limits (Mains Ports)



NO	FREQ [MHz]	READING		C.FACTOR [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	
1	0.16100	34.5	----	10.0	44.5	----	65.4	----	20.9	----	N (QP)
2	0.44600	28.7	----	10.0	38.7	----	56.9	----	18.2	----	N (QP)
3	1.18400	21.0	----	10.1	31.1	----	56.0	----	24.9	----	N (QP)
4	4.30400	18.9	----	10.1	29.0	----	56.0	----	27.0	----	N (QP)
5	9.64500	19.0	----	10.2	29.2	----	60.0	----	30.8	----	N (QP)
6	21.25000	20.4	----	10.4	30.8	----	60.0	----	29.2	----	N (QP)
7	0.16100	----	24.0	10.0	----	34.0	----	55.4	----	21.4	N (CAV)
8	0.44600	----	23.8	10.0	----	33.8	----	46.9	----	13.1	N (CAV)
9	1.18400	----	15.5	10.1	----	25.6	----	46.0	----	20.4	N (CAV)
10	4.30400	----	12.5	10.1	----	22.6	----	46.0	----	23.4	N (CAV)
11	9.64500	----	11.3	10.2	----	21.5	----	50.0	----	28.5	N (CAV)
12	21.25000	----	13.9	10.4	----	24.3	----	50.0	----	25.7	N (CAV)

Remark: Margin (dB) = Limit – Level (Result)

The emission level in above table is included the transducer factor that means insertion loss (LISN),
cable loss and attenuator.

13. LIST OF TEST EQUIPMENT

Model Number	Manufacturer	Description	Serial Number	Last Cal.(Interval)
FSV40-N	Rohde & Schwarz	Signal Analyzer	102177	Apr. 16, 2021 (1Y)
ESW 44	Rohde & Schwarz	EMI Test Receiver	101851	Mar. 23, 2021 (1Y)
310N	Sonoma Instrument	Pre-Amplifier	392756	Oct. 14, 2021 (1Y)
SCU18	Rohde & Schwarz	Pre-Amplifier	102266	Jul. 14, 2021 (1Y)
PAM-840A	Com-Power	Pre-Amplifier	461339	Oct. 12, 2021 (1Y)
DT3000-3t	Innco System	Turn Table	DT3000/093	N/A
MA-4000XPET	Innco System	Antenna Master	MA4000/509	N/A
FMZB 1513	Schwarzbeck	Loop Antenna	1513-235	Mar. 24, 2020 (2Y)
HLP-2008	TDK	Hybrid Antenna	131316	Feb. 27, 2020 (2Y)
BBHA9120D	Schwarzbeck	Horn Antenna	9120D-1366	Jul. 20, 2021 (1Y)
BBHA9170	Schwarzbeck	Horn Antenna	BBHA9170178	Jan. 07, 2021(1Y)
10 dB Attenuator	Rohde & Schwarz	10 dB Attenuator	14100882-3	Jul. 14, 2021 (1Y)
NRP-Z81	Rohde & Schwarz	Wide band Sensor	101975	Feb. 09, 2021 (1Y)
HPF 3GHz	Rohde & Schwarz	High Pass Filter	N/A	Feb. 08, 2021 (1Y)
ESCI	Rohde & Schwarz	EMI TEST RECEIVER	101012	Oct. 20, 2021 (1Y)
NSLK8126	Schwarzbeck	AMN	8126-404	Mar. 16, 2021 (1Y)
ESH3-Z2	Rohde & Schwarz	PULSE LIMITER	100655	Mar. 15, 2021 (1Y)