



Appendix for Test report



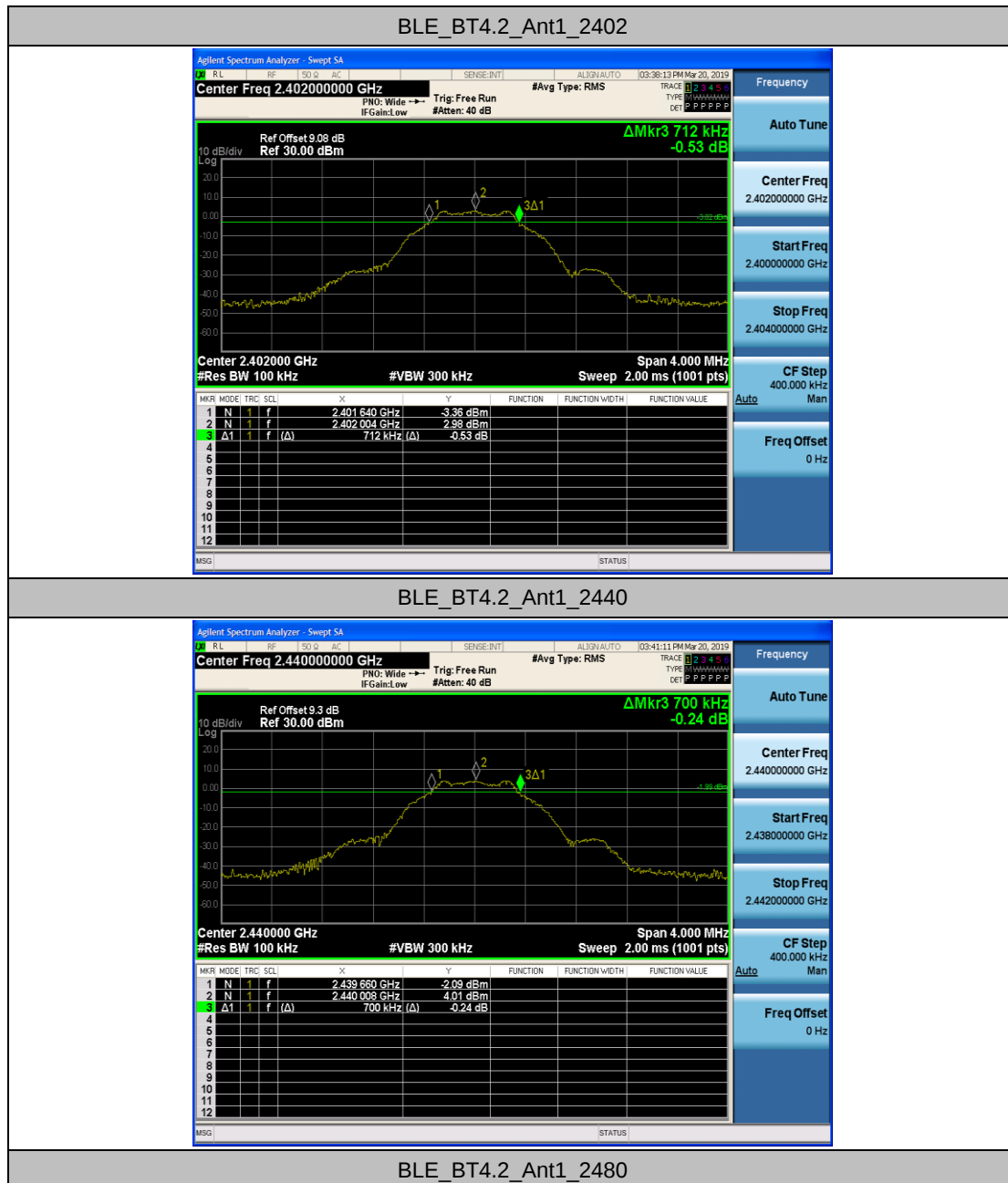
Appendix A: DTS Bandwidth

Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_BT4.2	Ant1	2402	0.712	2401.640	2402.352	---	PASS
		2440	0.700	2439.660	2440.360	---	PASS
		2480	0.712	2479.644	2480.356	---	PASS



Test Graphs







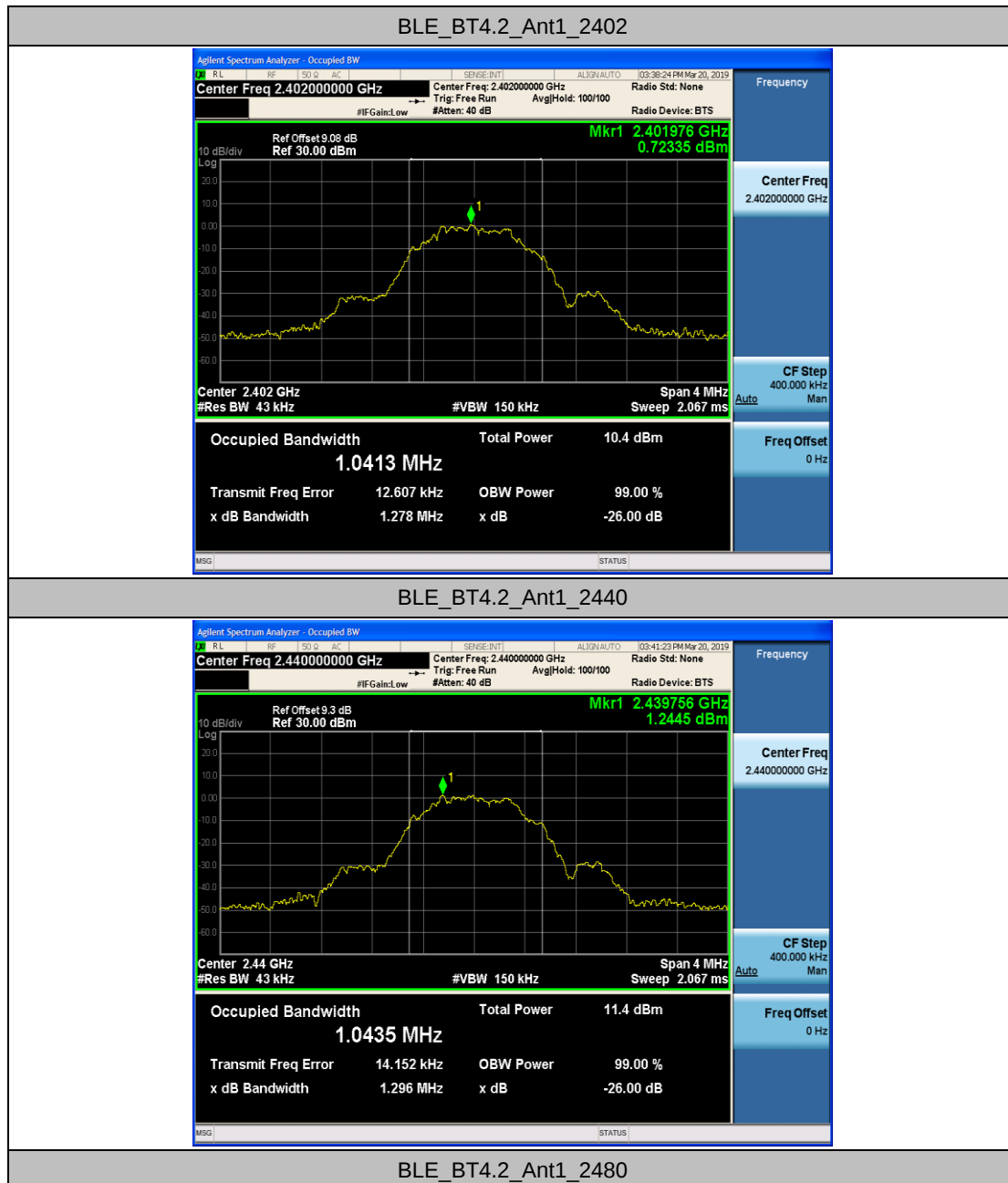
Appendix B: Occupied Channel Bandwidth

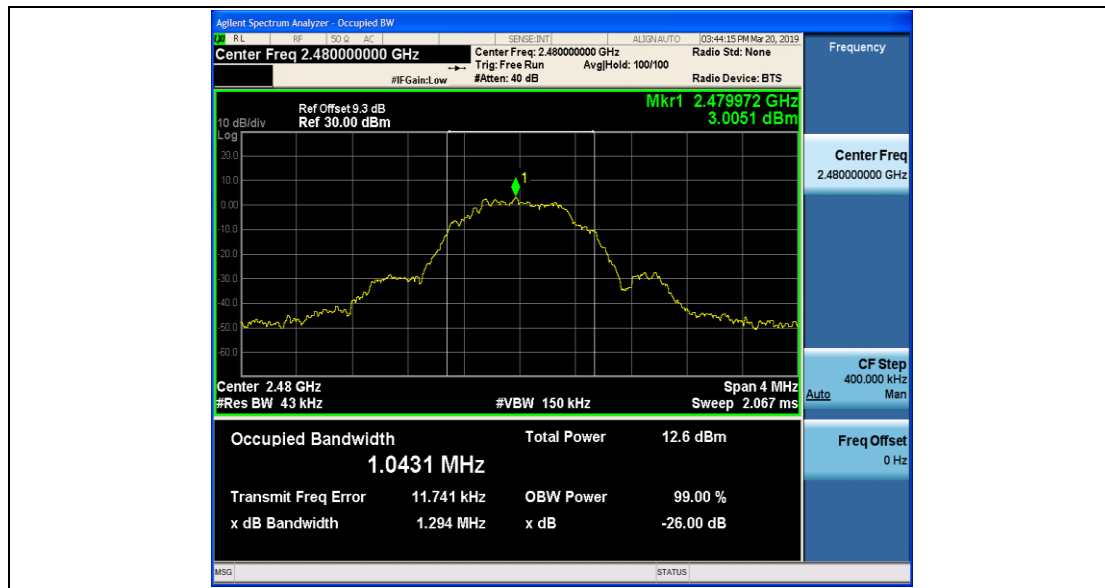
Test Result

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_BT4.2	Ant1	2402	1.0413	2401.492	2402.533	---	PASS
		2440	1.0435	2439.492	2440.536	---	PASS
		2480	1.0431	2479.490	2480.533	---	PASS



Test Graphs







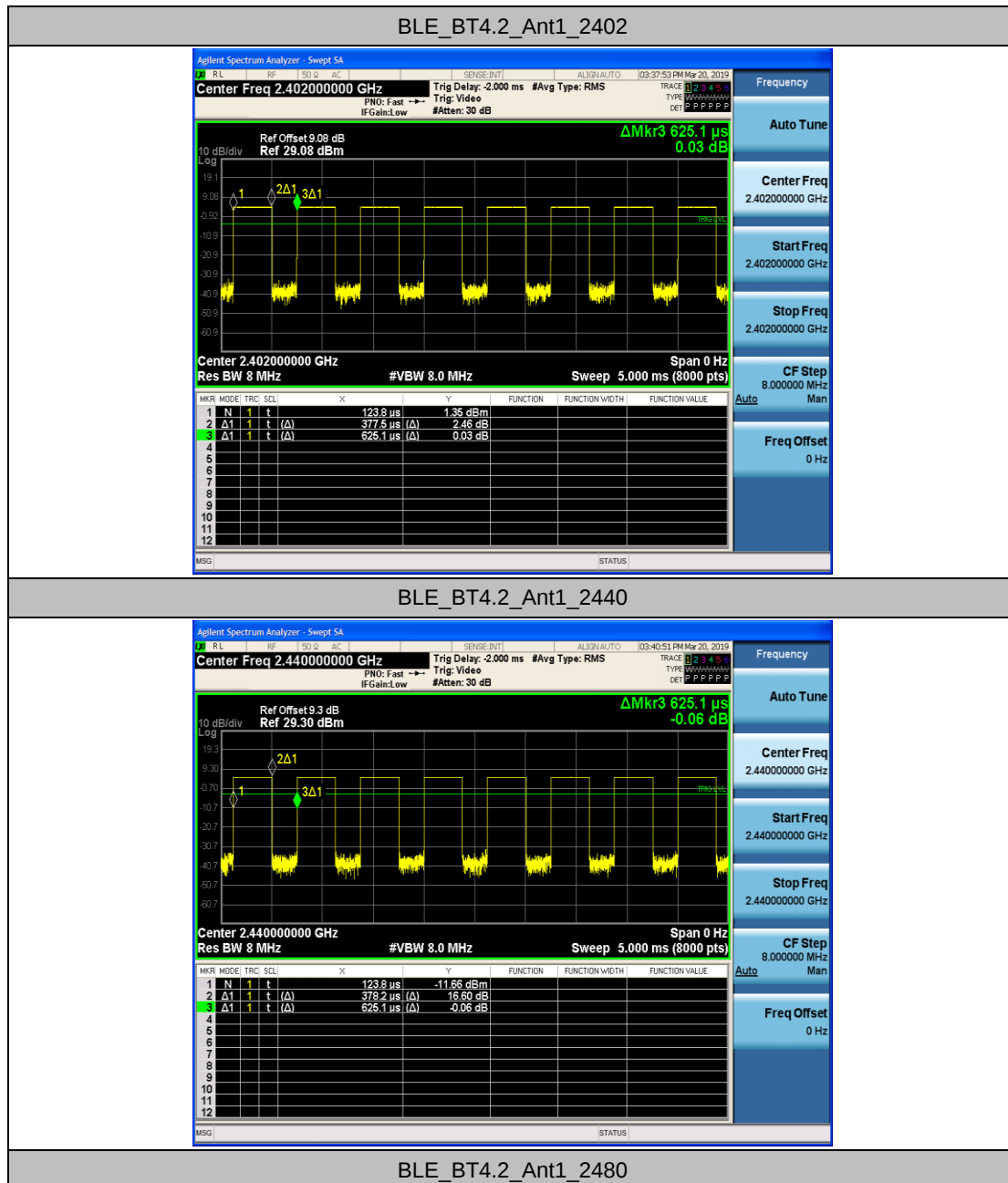
Appendix C: Duty Cycle

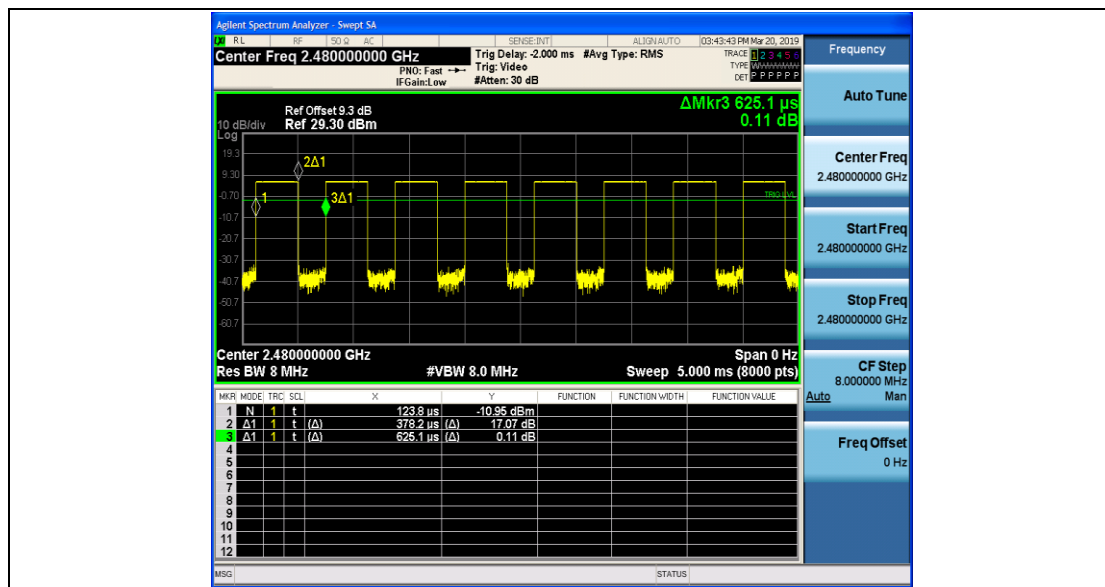
Test Result

TestMode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]
BLE_BT4.2	Ant1	2402	0.38	0.63	60.40
		2440	0.38	0.63	60.50
		2480	0.38	0.63	60.50



Test Graphs







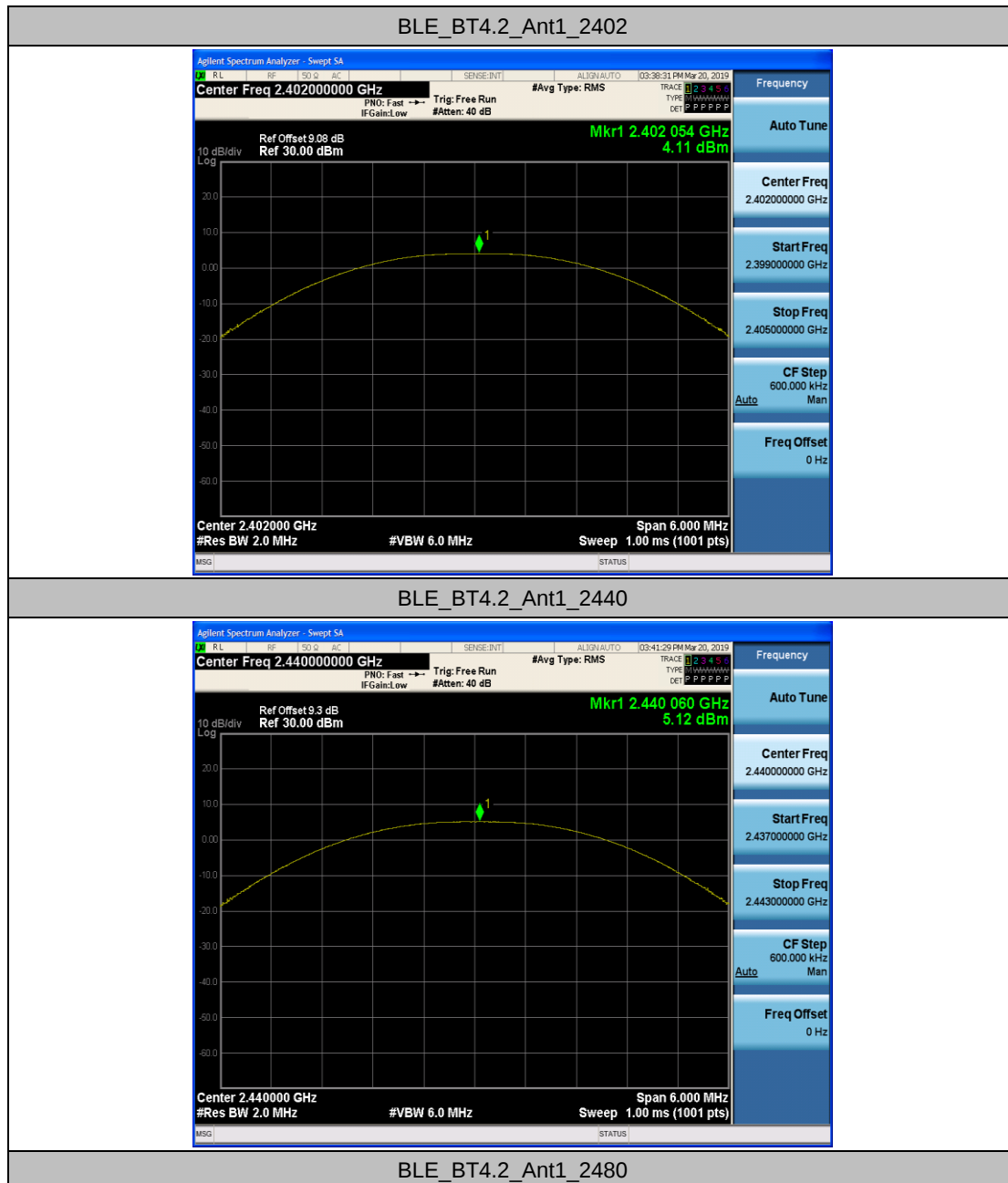
Appendix D: Maximum conducted output power

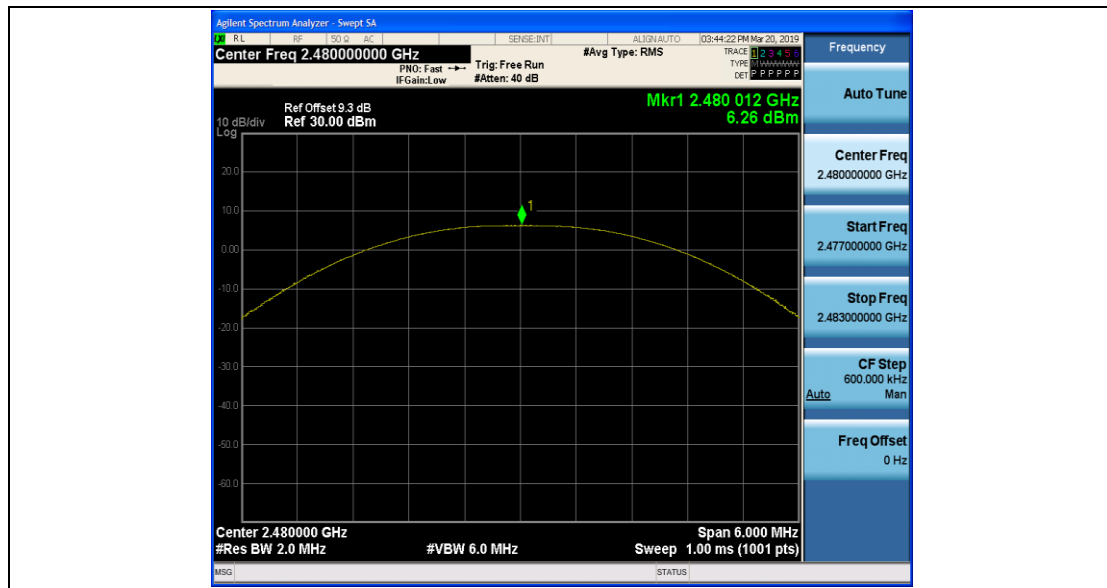
Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_BT4.2	Ant1	2402	4.11	30	PASS
		2440	5.12	30	PASS
		2480	6.26	30	PASS



Test Graphs







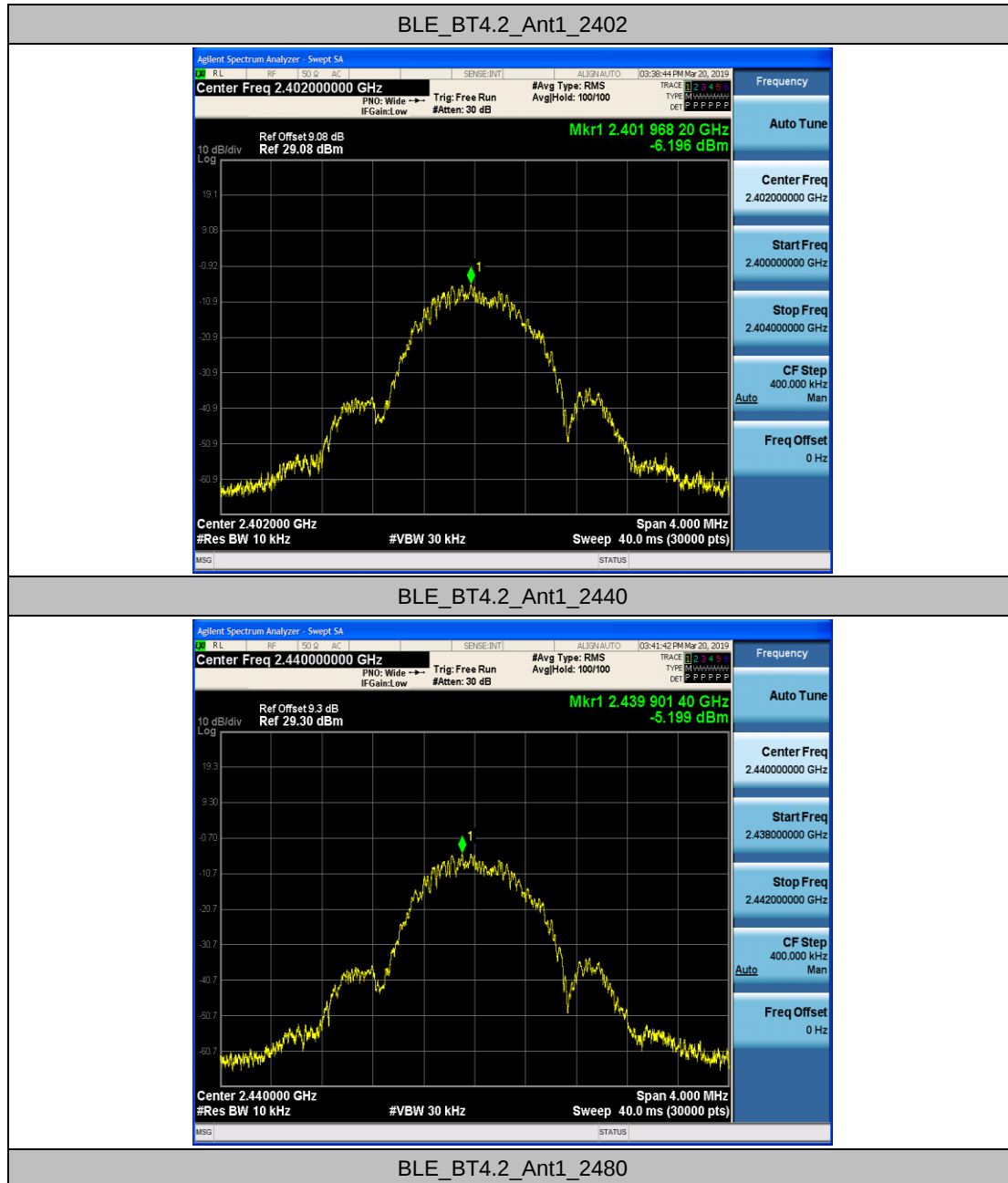
Appendix E: Maximum power spectral density

Test Result

TestMode	Antenna	Channel	Result[dBm/10kHz]	Limit[dBm/3kHz]	Verdict
BLE_BT4.2	Ant1	2402	-6.2	8	PASS
		2440	-5.2	8	PASS
		2480	-4.07	8	PASS



Test Graphs







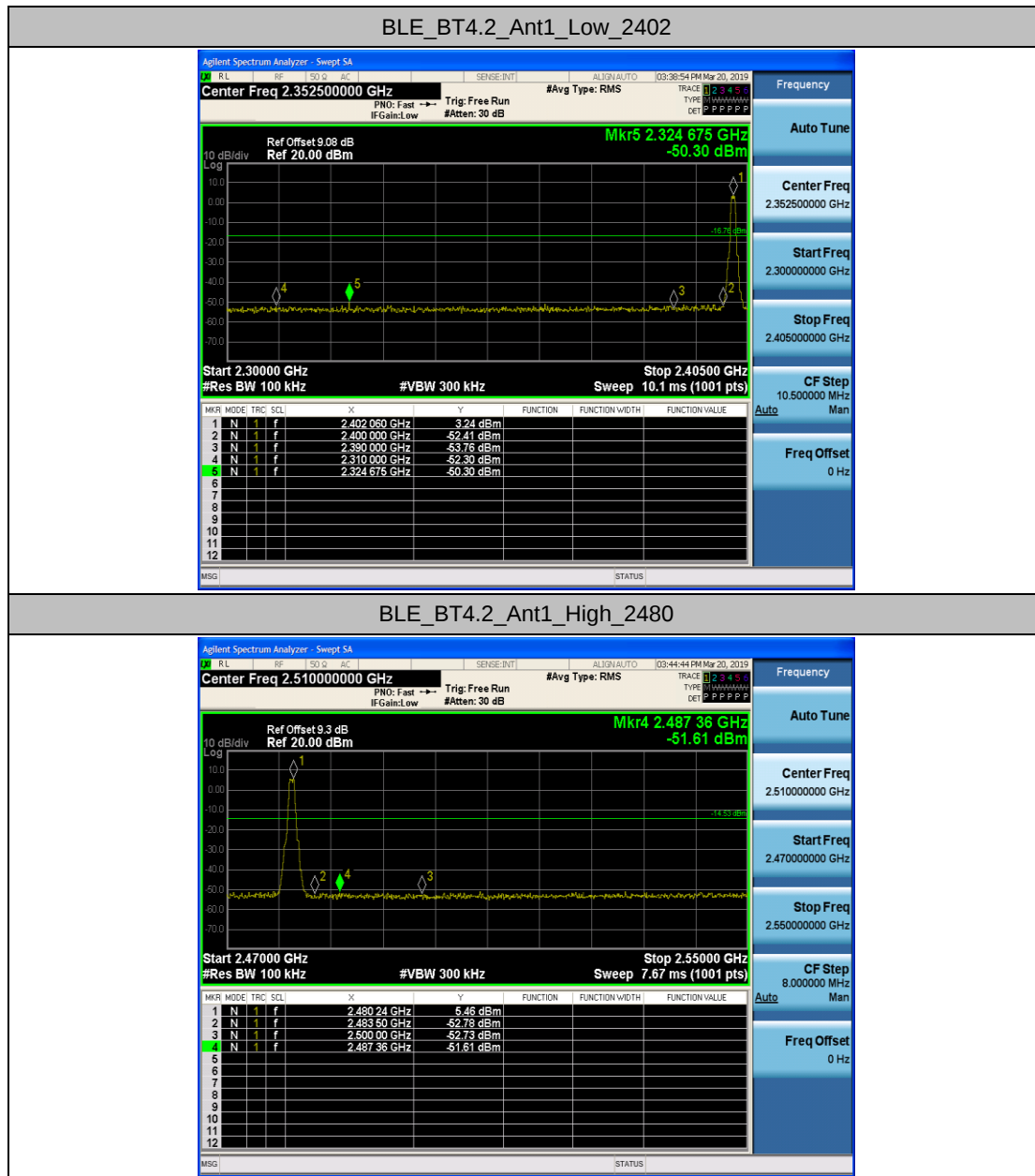
Appendix F: Band edge measurements

Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_BT4.2	Ant1	Low	2402	3.24	-50.3	-16.76	PASS
		High	2480	5.47	-51.61	-14.53	PASS



Test Graphs



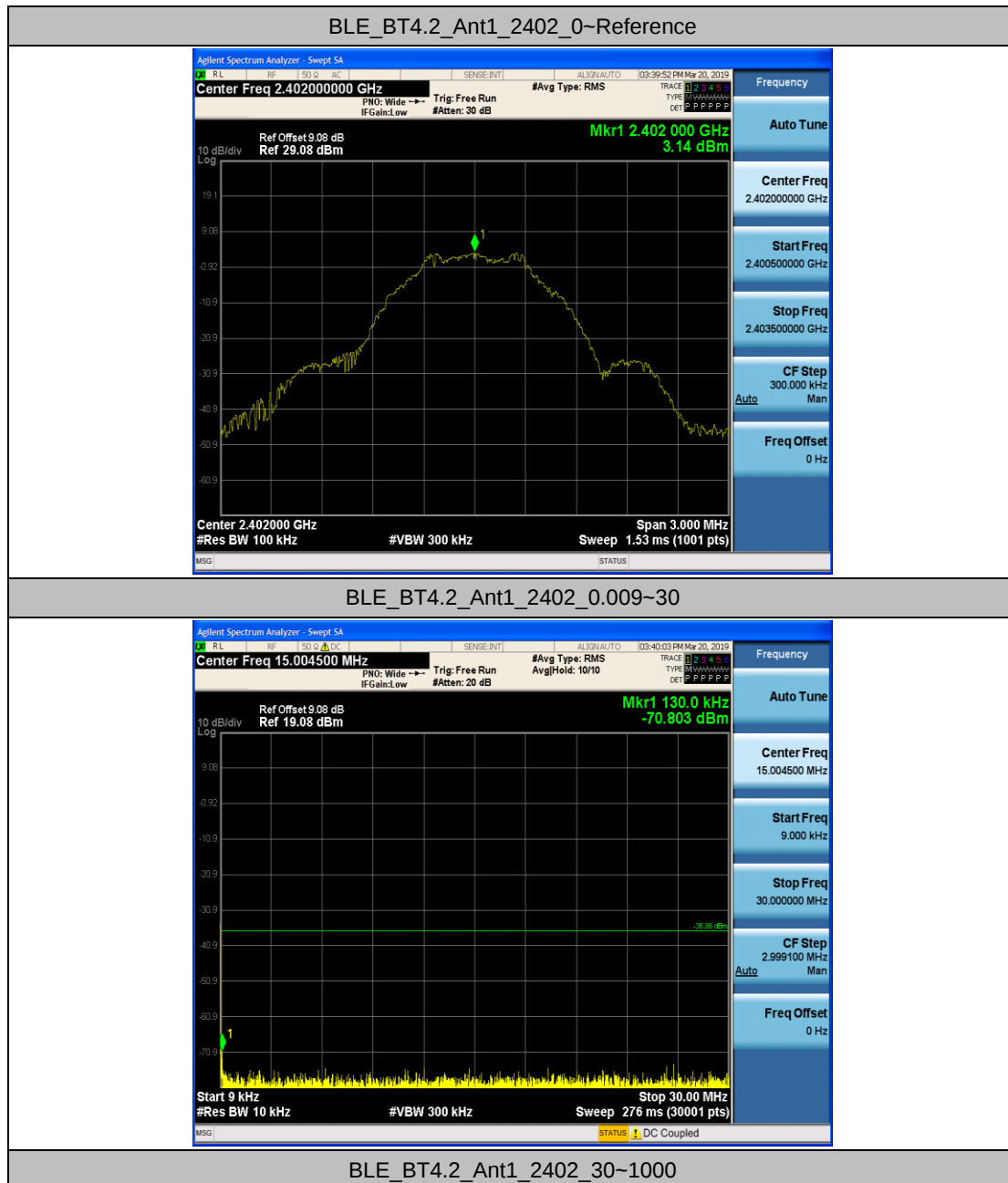
Appendix G: Conducted Spurious Emission

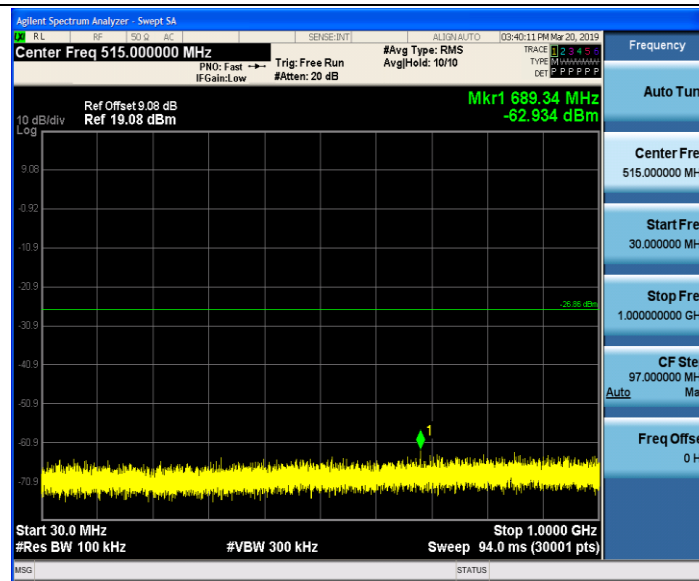
Test Result

TestMode	Antenna	Channel	FreqRange	RefLevel	Result [dBm]	Limit [dBm]	Verdict
BLE_BT4.2	Ant1	2402	Reference	3.14	3.14	---	PASS
			0.009~30	0.009~30	-70.8	-36.86	PASS
			30~1000	30~1000	-62.93	-26.86	PASS
			1000~26500	1000~26500	-37.26	-26.86	PASS
		2440	Reference	4.08	4.08	---	PASS
			0.009~30	0.009~30	-67.79	-35.92	PASS
			30~1000	30~1000	-62.89	-25.92	PASS
			1000~26500	1000~26500	-36.86	-25.92	PASS
		2480	Reference	5.26	5.26	---	PASS
			0.009~30	0.009~30	-70.52	-34.74	PASS
			30~1000	30~1000	-62.11	-24.74	PASS
			1000~26500	1000~26500	-35.83	-24.74	PASS

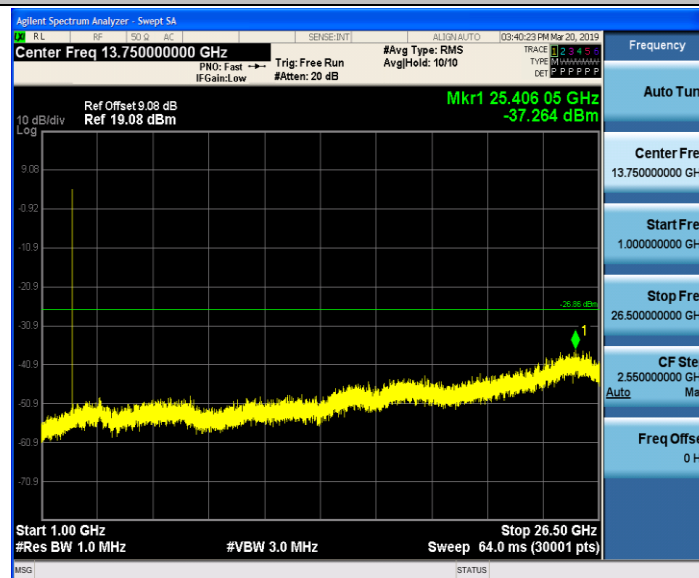


Test Graphs

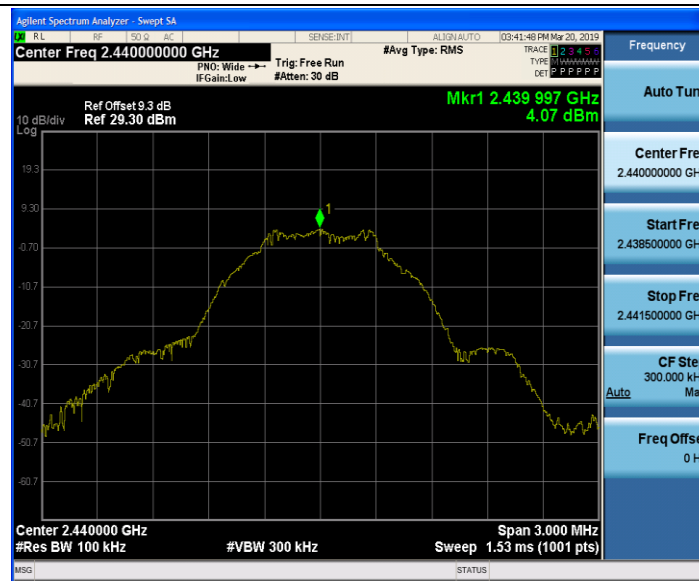




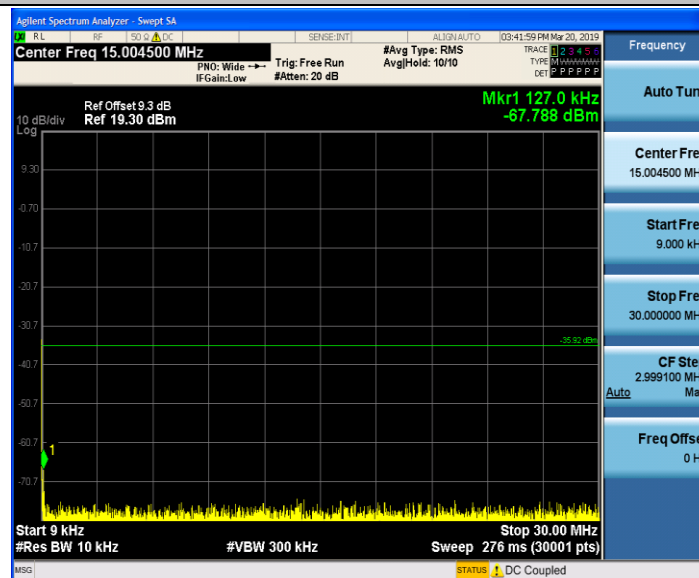
BLE_BT4.2_Ant1_2402_1000~26500



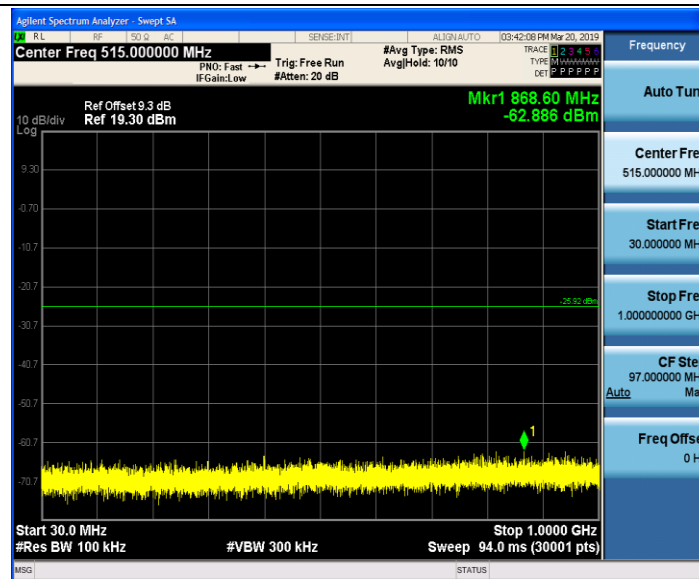
BLE_BT4.2_Ant1_2440_0~Reference



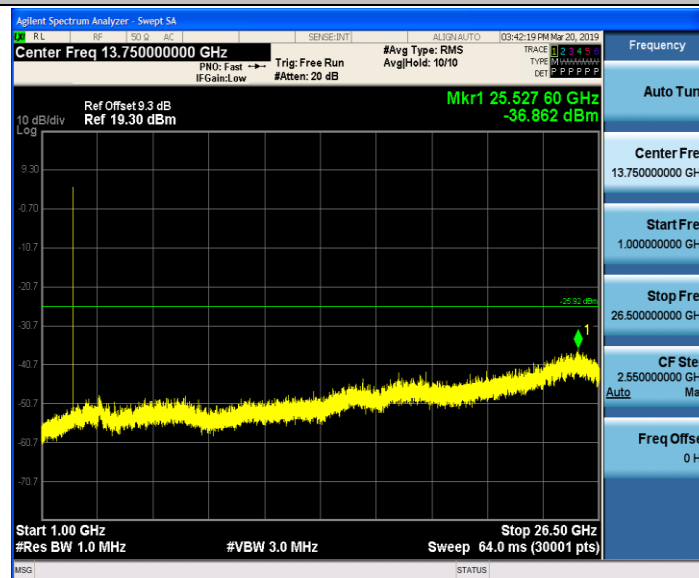
BLE_BT4.2_Ant1_2440_0.009~30



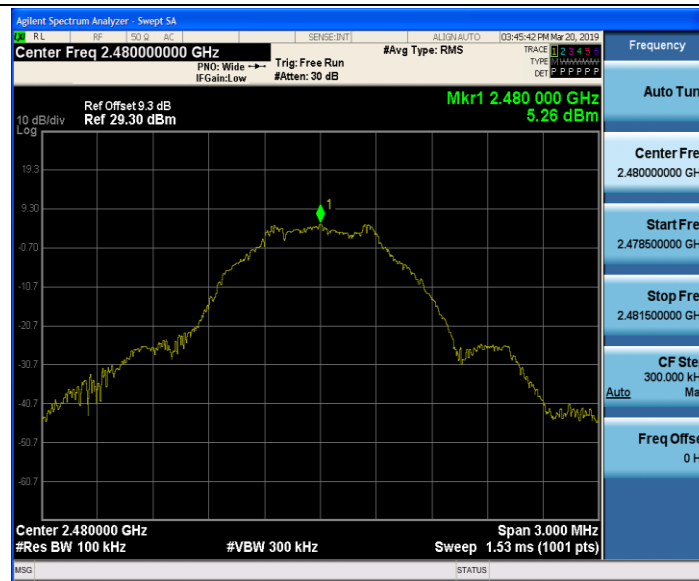
BLE_BT4.2_Ant1_2440_30~1000



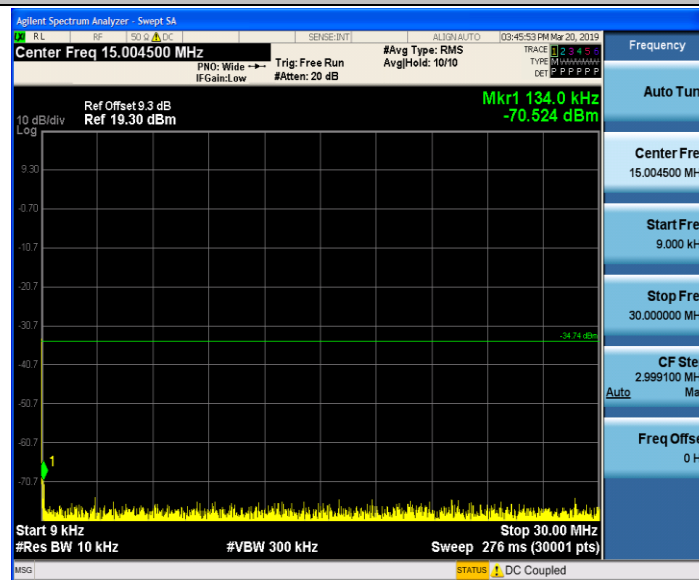
BLE_BT4.2_Ant1_2440_1000~26500



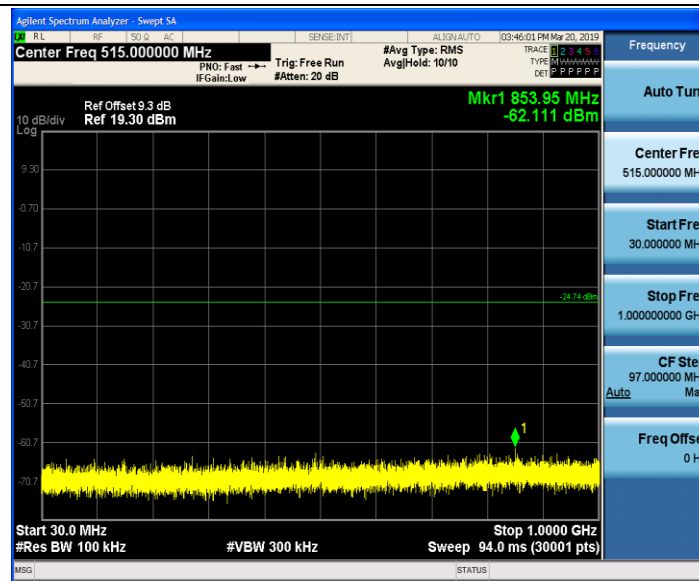
BLE_BT4.2_Ant1_2480_0~Reference



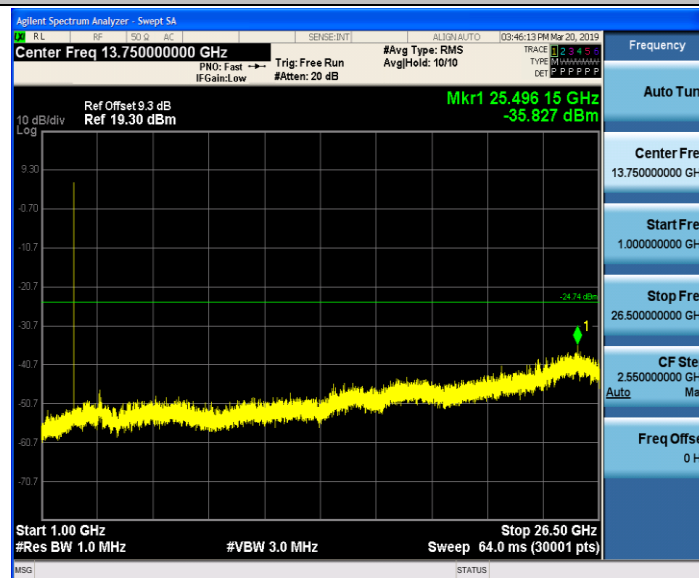
BLE_BT4.2_Ant1_2480_0.009~30



BLE_BT4.2_Ant1_2480_30~1000



BLE_BT4.2_Ant1_2480_1000~26500





Appendix H: Radiated Spurious Emission & Spurious in Restricted Band

Note: We tested all modes, but the data presented below is the worst case.

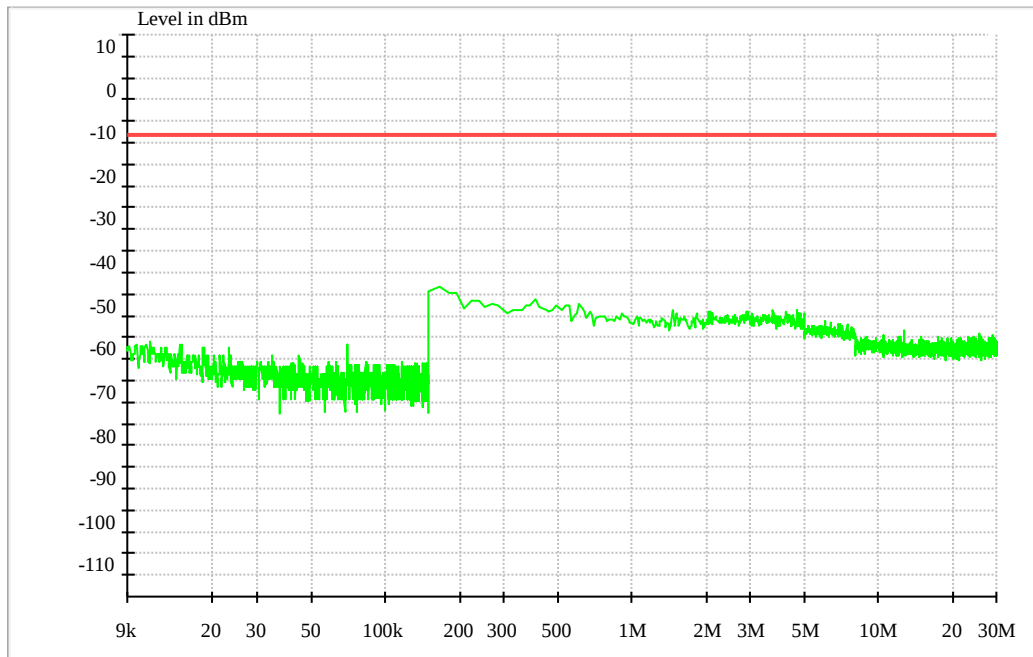
Below 1GHz, RBW = 100 kHz, VBW = 300 kHz.

Above 1GHz, RBW = 1 MHz, VBW = 3 MHz.

The simultaneous transmission has been considered

1.1 Part 1: Testing Range of “9 kHz to 30MHz”

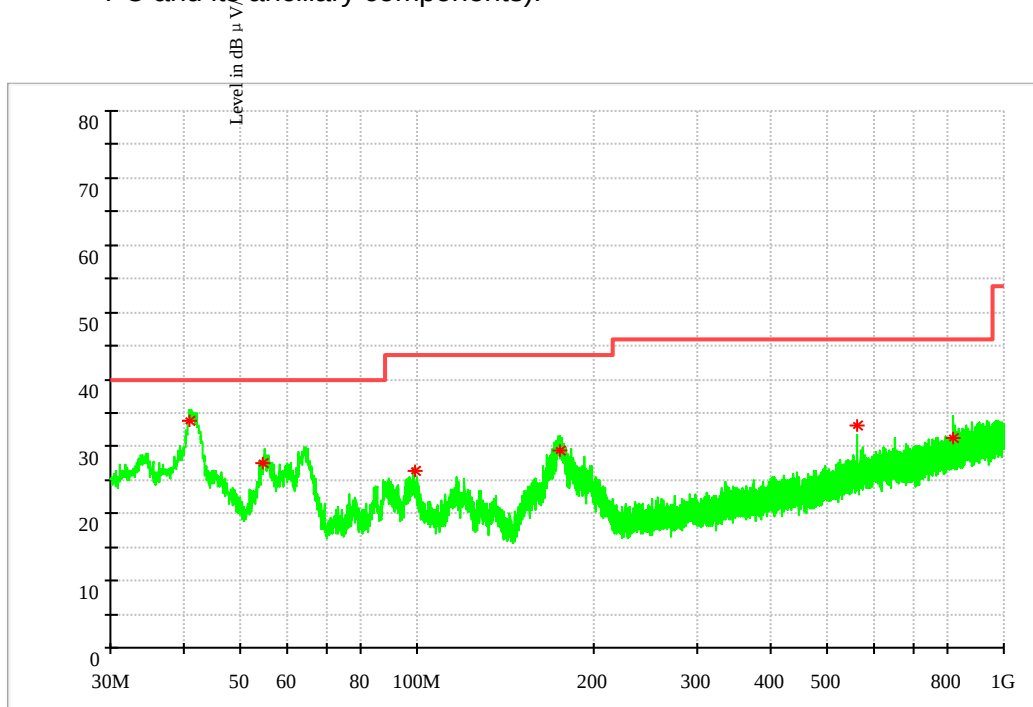
Note 1: The test results and plot for testing range of “9 kHz to 30 MHz” showed as below is the WORST case for all Test Modes and Channels. This range will not be presented for each Test Mode and each Channel.



1.2 Part 2: Testing Range of “30 MHz to 1 GHz”

Note 1: The test results and plot for testing range of “30 MHz to 1 GHz” showed as below is the WORST case for all Test Modes and Channels. This range will not be presented for each Test Mode and each Channel.

Note 2: The emissions in this range are mainly from the Platform Device (Notepad PC and its ancillary components).



Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Transd. (dB)
40.888220	33.87	40.00	6.13	100.0	V	124.0	14.5
54.464980	27.48	40.00	12.52	100.0	V	55.0	13.5
98.909760	26.28	43.50	17.22	101.0	V	145.0	14.0
175.634340	29.42	43.50	14.08	100.0	V	51.0	10.5
561.597220	33.16	46.00	12.84	101.0	V	149.0	19.7
819.336840	31.36	46.00	14.64	121.0	V	1.0	22.8

Note:

1, Level =Reading level by receiver + Transd (Antenna factor + cable loss – preamplifier gain)

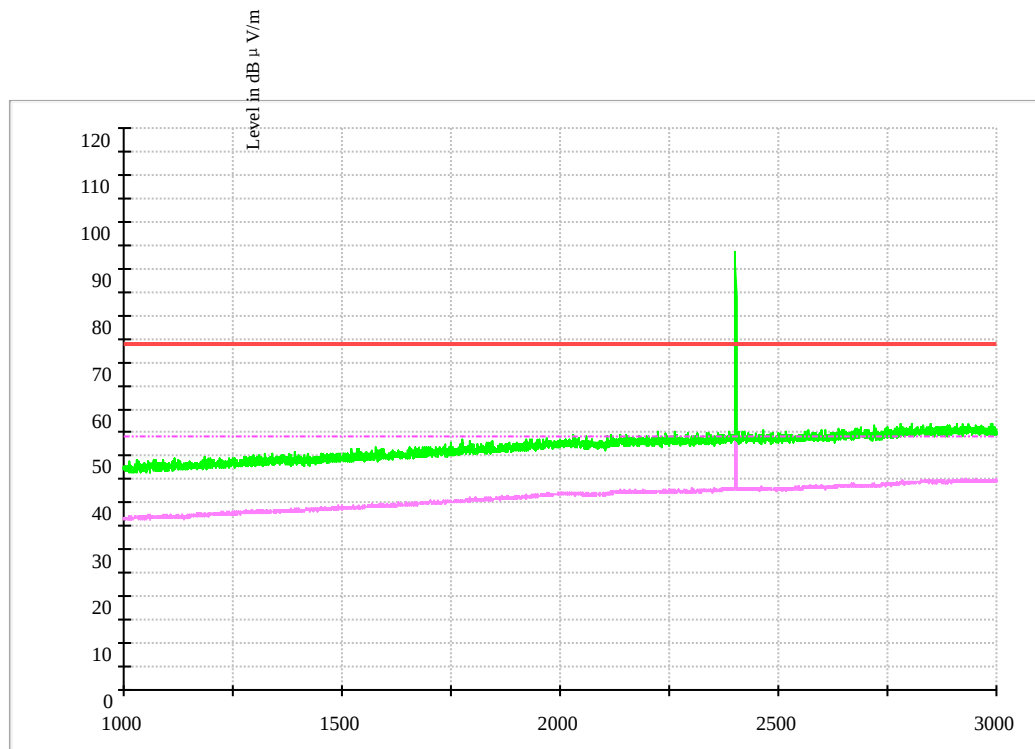
The reading level is calculated by software which is not shown in the sheet.

2, Margin=Limit - Level

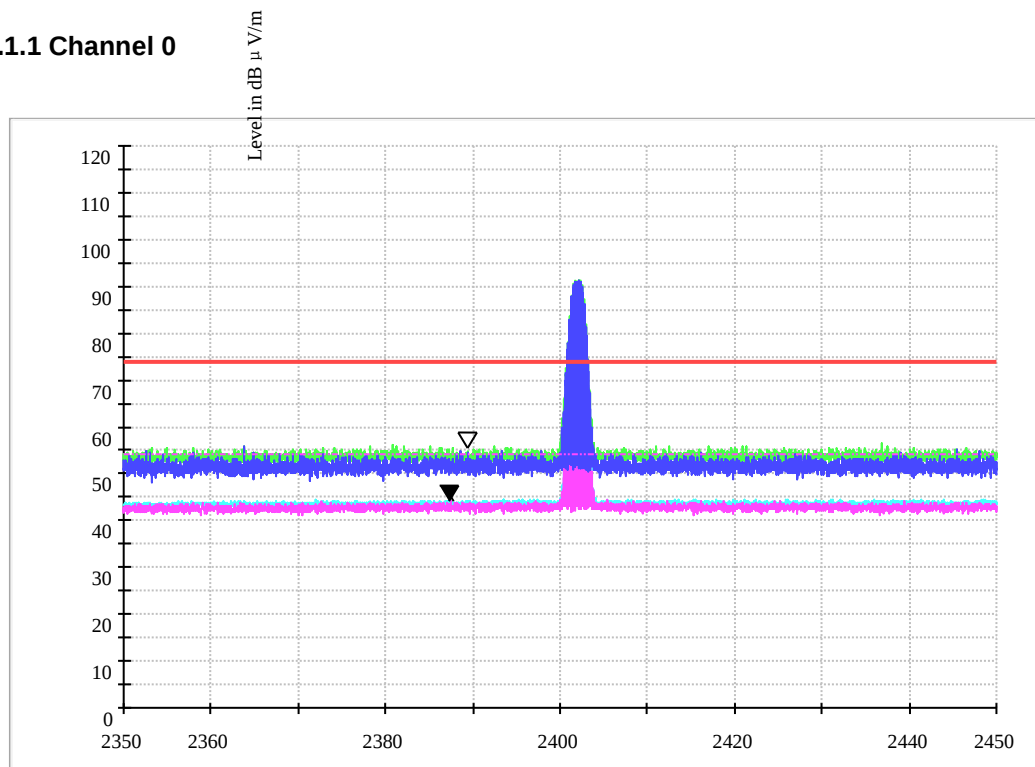
1.3 Part 3: Testing Range of “1GHz to 3GHz”

- Note 1: The testing range of “1GHz to 3 GHz” is for checking radiated emissions located in restricted bands near the EUT operating bands.
- Note 2: Two limits are required in the testing range above 1 GHz, that is Peak limit (74 dB μ V/m) and Average Limit (54 dB μ V/m).
- Note 3: The peak spike exceeds the limit line is EUT's operating frequency.

1.3.1 Test Mode: BT4.2



1.3.1.1 Channel 0



MEASUREMENT RESULT: PK Detector

Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth h (deg)	Transd. (dB)
2389.2	56.20	74.00	17.80	150.0	V	226.0	-9.3

MEASUREMENT RESULT: AV Detector

Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth h	Transd. (dB)
2387.6	44.40	54.00	9.60	150.0	V	127.0	-9.3

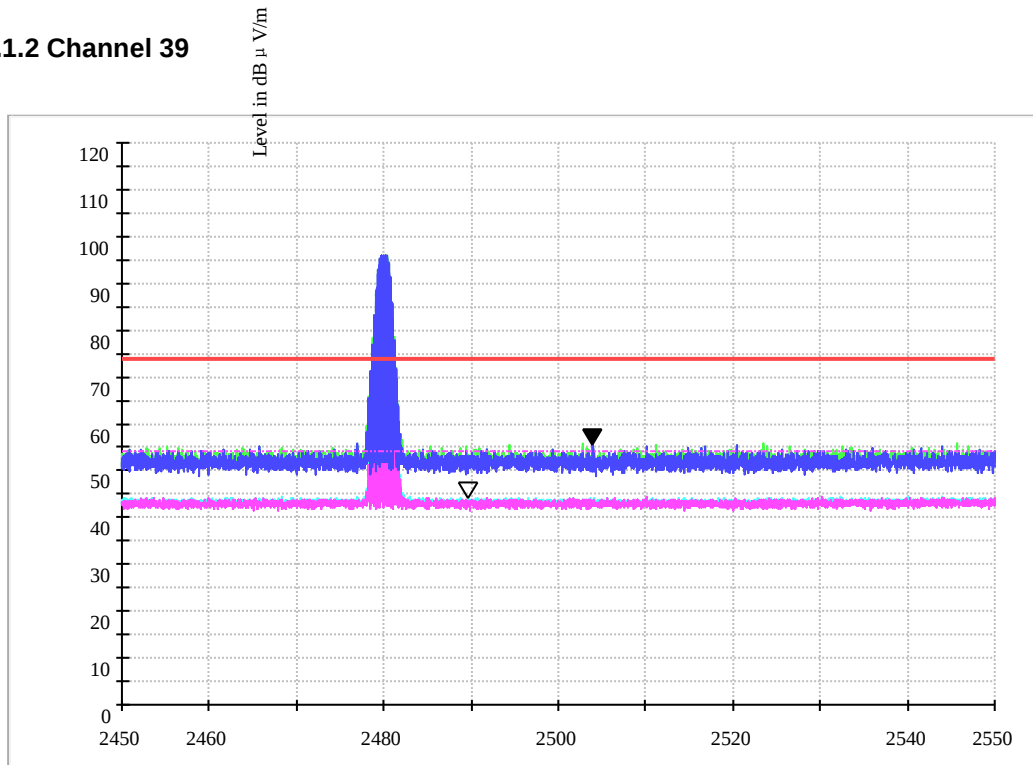
Note:

1, Level = Reading level by receiver + Transd (Antenna factor + cable loss – preamplifier gain)

The reading level is calculated by software which is not shown in the sheet.

2, Margin = Limit - Level

1.3.1.2 Channel 39



MEASUREMENT RESULT: PK Detector

Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Transd. (dB)
2503.9	55.91	74.00	18.09	150.0	V	225.0	-9.6

MEASUREMENT RESULT: AV Detector

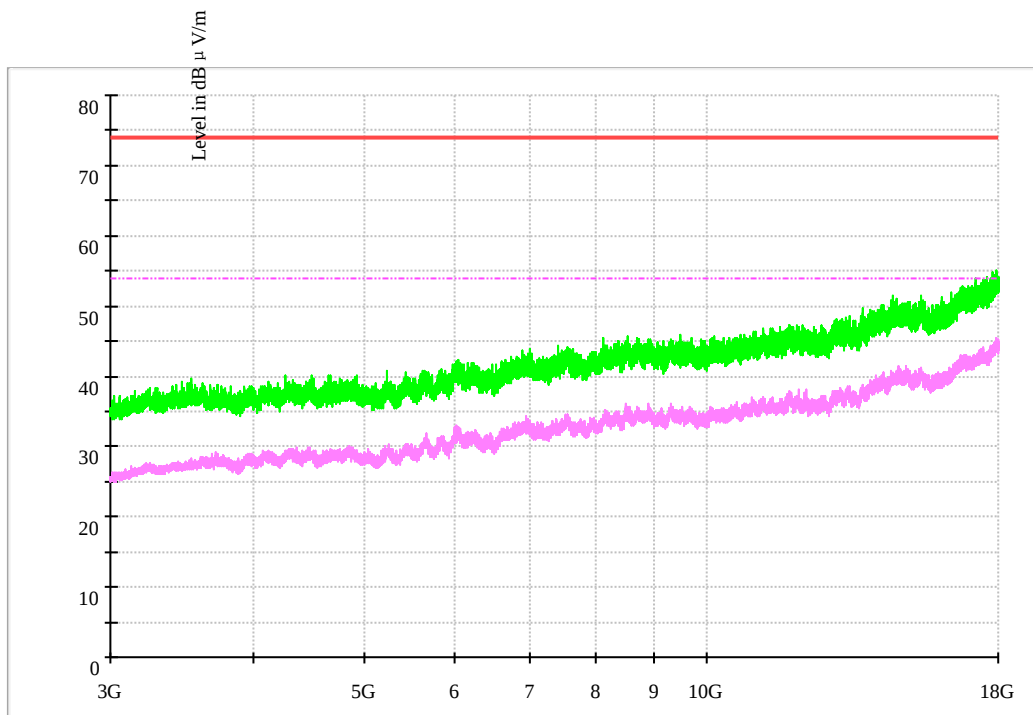
Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Transd. (dB)
24879.7	44.35	54.00	9.65	150.0	V	131.0	-9.6

Note:

- 1, Level =Reading level by receiver + Transd (Antenna factor + cable loss – preamplifier gain)
The reading level is calculated by software which is not shown in the sheet.
- 2, Margin=Limit - Level

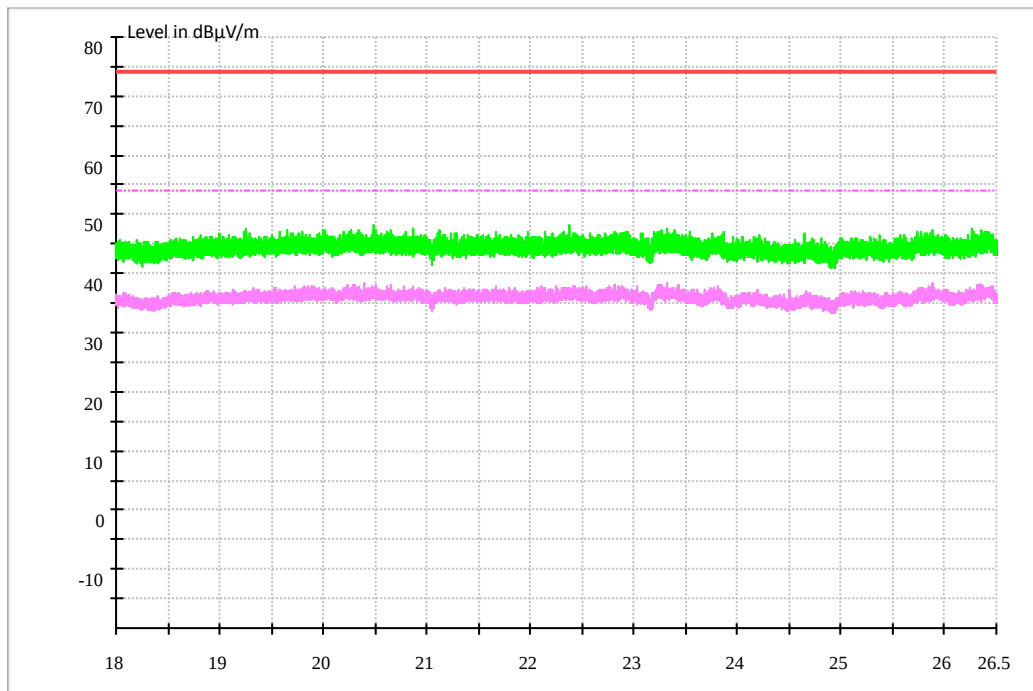
1.4 Part 4: Testing Range of “3 GHz to 18 GHz”

- Note 1: The test results and plot for testing range of “3 GHz to 18 GHz” showed as below is the WORST case for all Test Modes and Channels. This range will not be presented for each Test Mode and each Channel.
- Note 2: The testing range of “3 GHz to 18 GHz” is for checking radiated emissions located in restricted bands faraway from the EUT operating bands.
- Note 3: Two limits are required in the testing range above 1 GHz, that is Peak limit (74 dB μ V/m) and Average Limit (54 dB μ V/m).



1.5 Part 5: Testing Range of “18 GHz to 26.5 GHz”

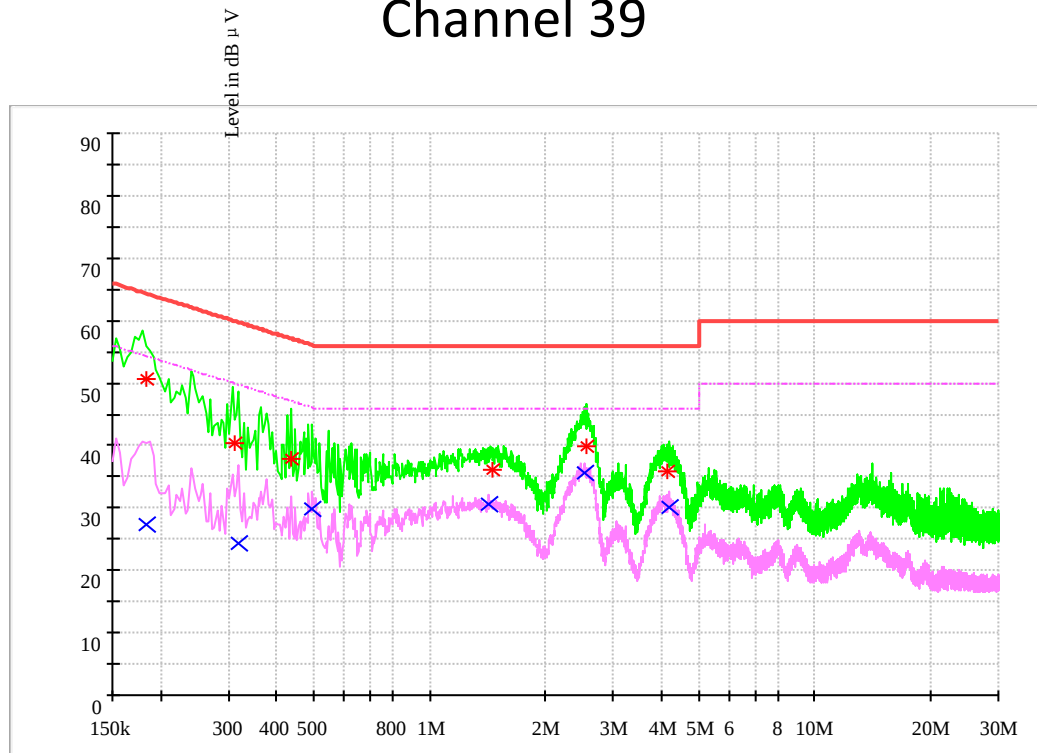
- Note 1: The test results and plot for testing range of “18 GHz to 26.5 GHz” showed as below is the WORST case for all Test Modes and Channels. This range will not be presented for each Test Mode and each Channel.
- Note 2: The testing range of “18 GHz to 26.5 GHz” is for checking radiated emissions located in restricted bands faraway from the EUT operating bands.
- Note 3: Two limits are required in the testing range above 1 GHz, that is Peak limit (74 dB μ V/m) and Average Limit (54 dB μ V/m).



Appendix I: Conducted Emission at Power Port

Note: RBW =9 kHz, VBW = 30 kHz

Channel 39



MEASUREMENT RESULT: PK Detector

Frequency (MHz)	Level (dB μ V)	Limit (dB μ V)	Transd. (dB)	Margin (dB)	Line	PE
0.183188	50.53	64.34	9.7	13.81	L1	FLO
0.310995	40.31	59.94	9.7	19.63	L1	FLO
0.438618	37.96	57.08	9.7	19.12	L1	FLO
1.447844	36.16	56	9.7	19.84	L1	FLO
2.552406	39.97	56	9.8	16.03	L1	FLO
4.130269	35.85	56	9.8	20.15	L1	FLO

**MEASUREMENT RESULT: AV Detector**

Frequency (MHz)	Level (dB μ V)	Limit (dB μ V)	Transd. (dB)	Margin (dB)	Line	PE
0.18321	27.25	54.34	9.7	27.09	L1	FLO
0.317188	24.28	49.78	9.7	25.5	L1	FLO
0.492798	29.79	46.12	9.7	16.33	L1	FLO
1.424543	30.55	46	9.7	15.45	L1	FLO
2.516979	35.59	46	9.8	10.41	L1	FLO
4.202546	30.04	46	9.8	15.96	L1	FLO

Note:

1, Level =Reading level by receiver + Transd (Antenna factor + cable loss – preamplifier gain)

The reading level is calculated by software which is not shown in the sheet.

2, Margin=Limit - Level

END