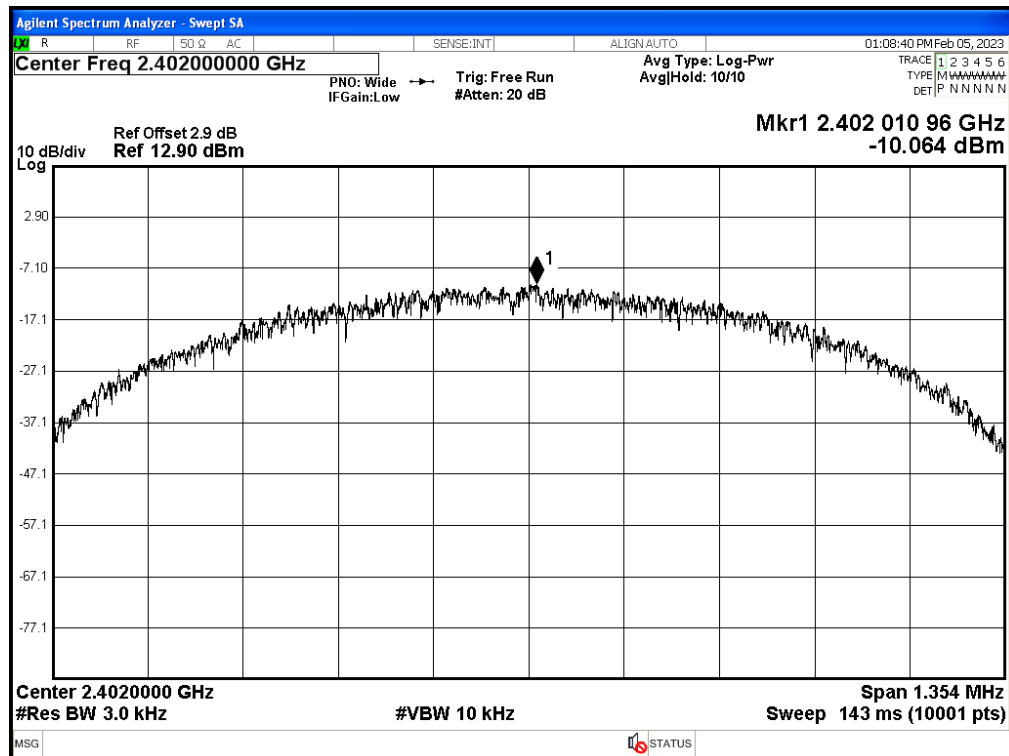


Appendix B: Test Results of BLE

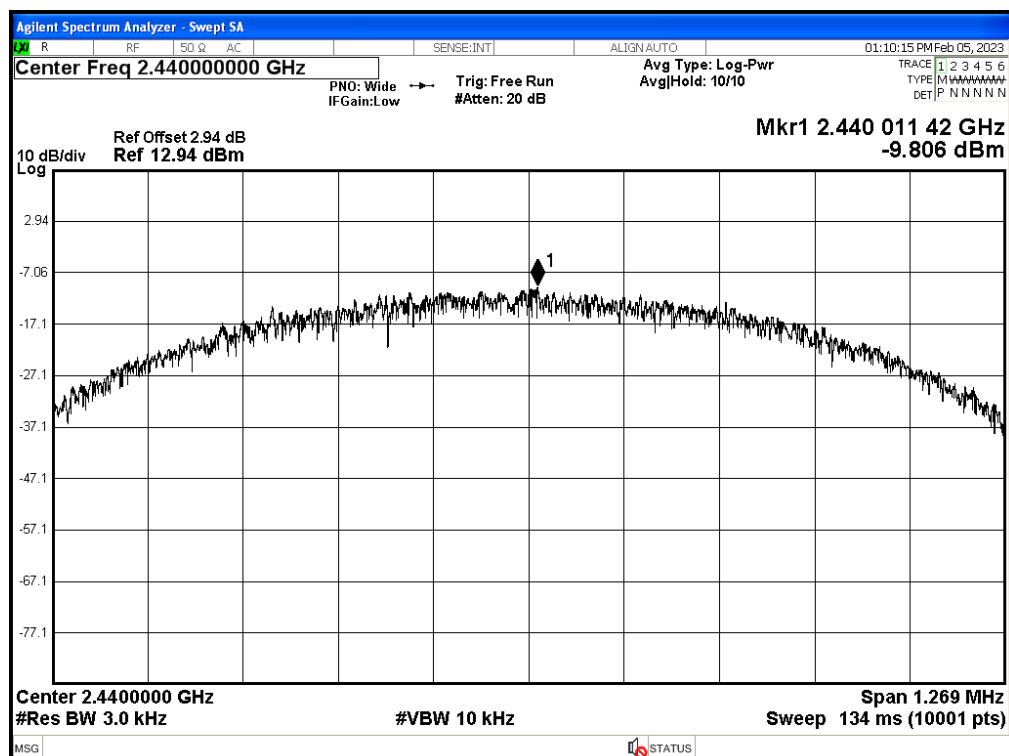
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Appendix B.1: Test Results of Conducted Power Spectral Density

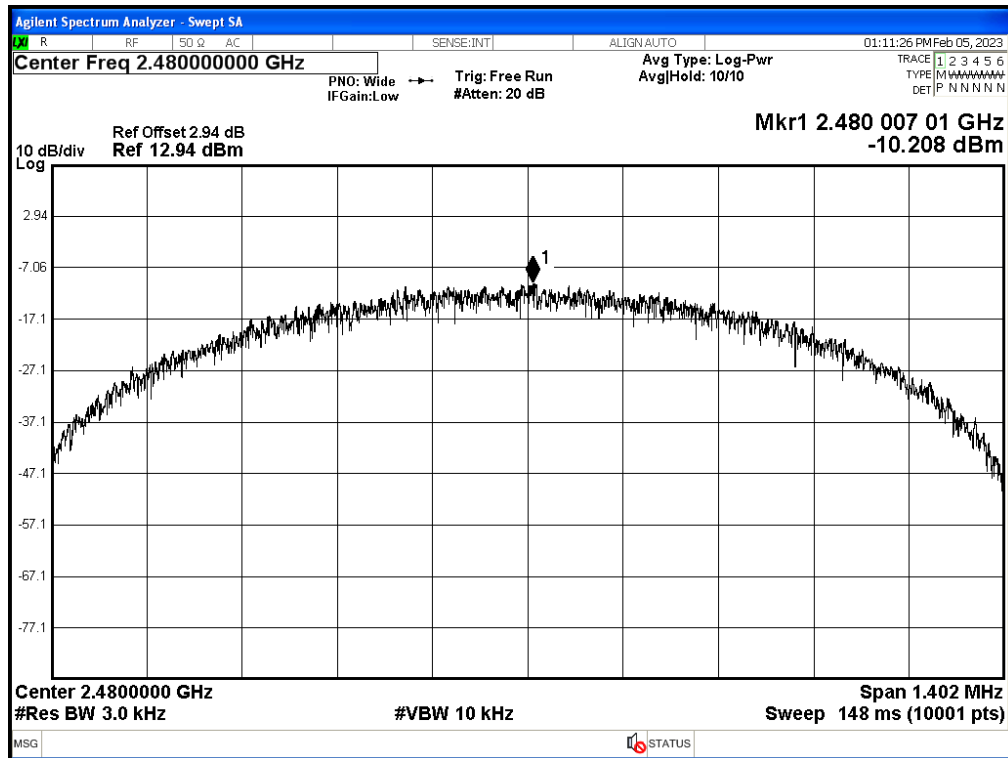
Low Channel



Middle Channel

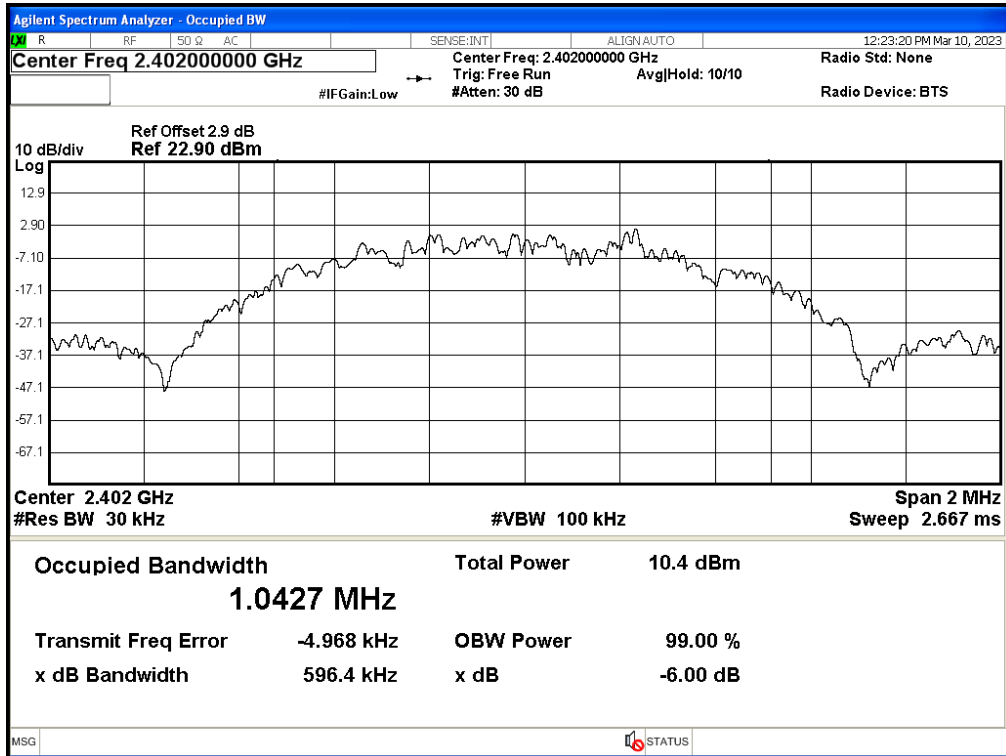


High Channel

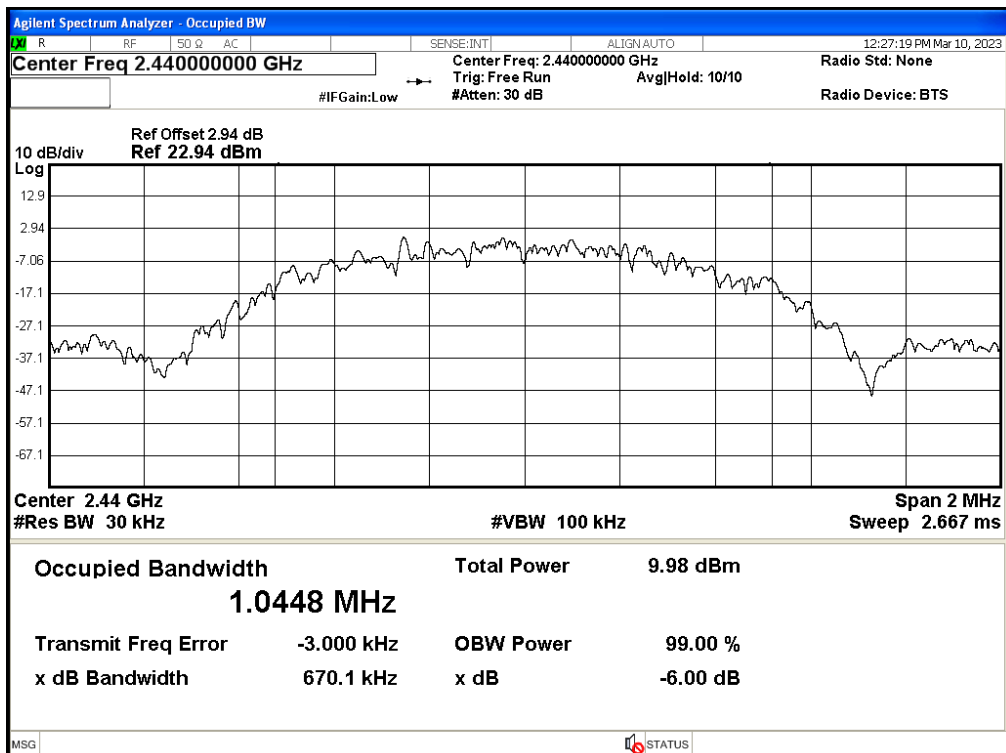


Appendix B.2: Test Results of 6dB Bandwidth and 99% Bandwidth

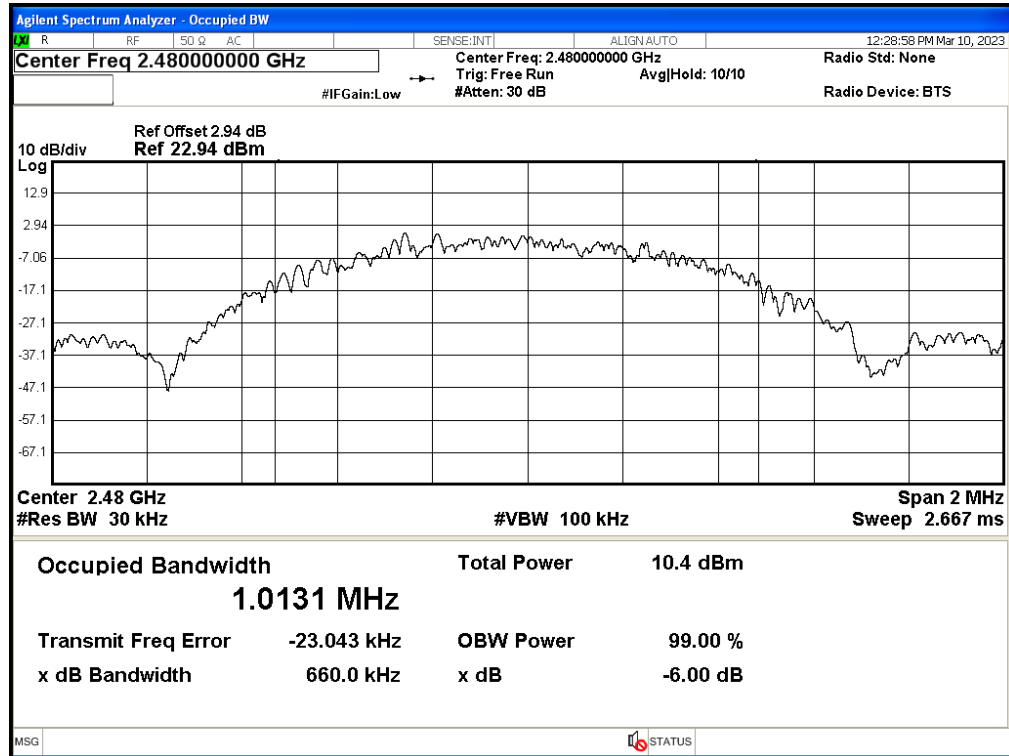
Low Channel



Middle Channel

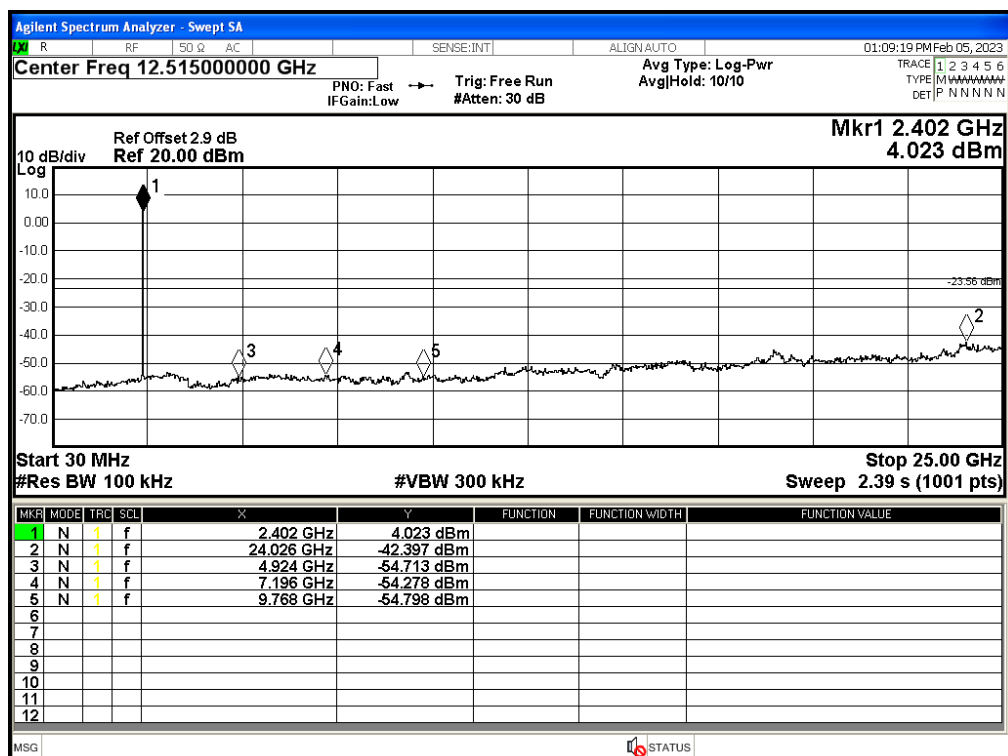
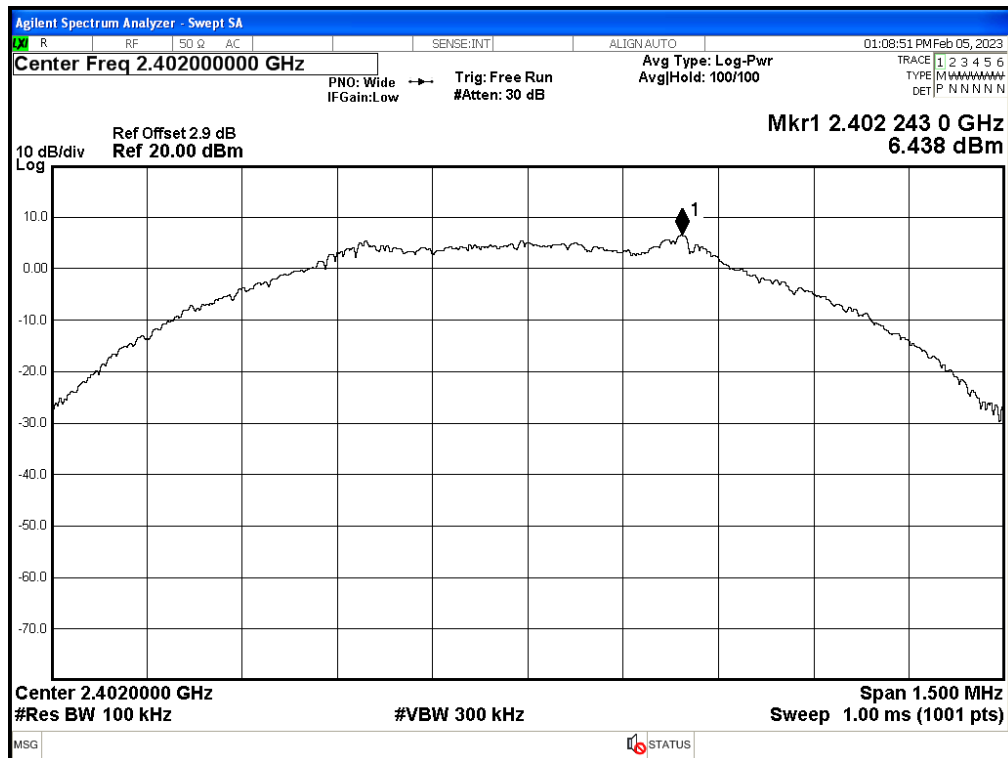


High Channel

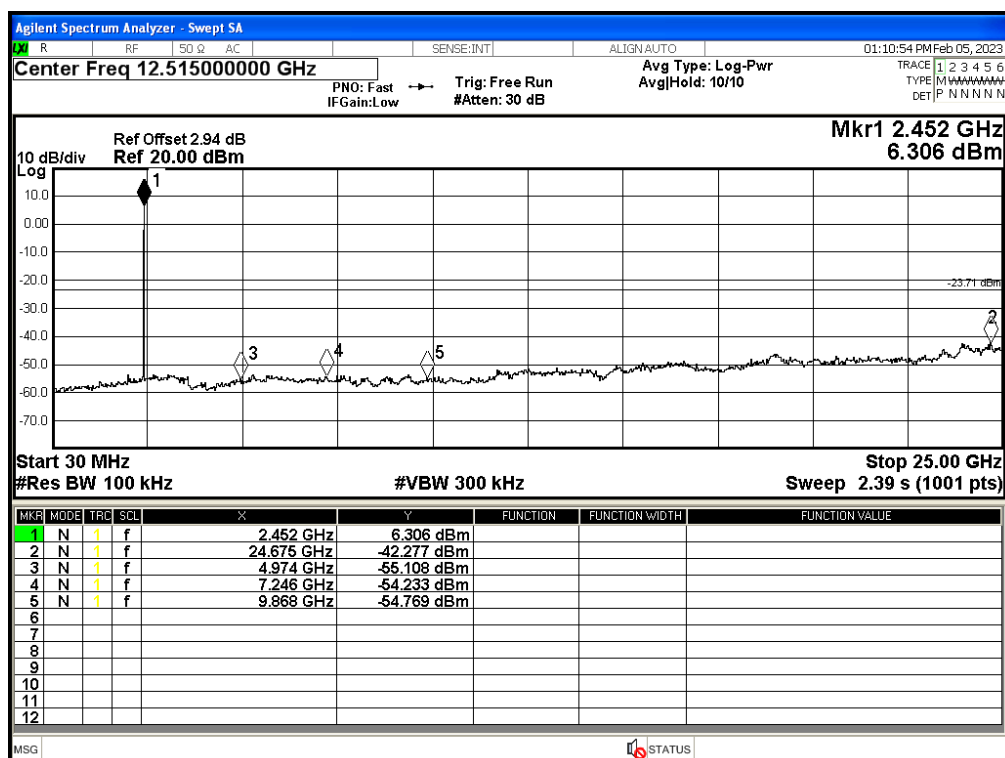
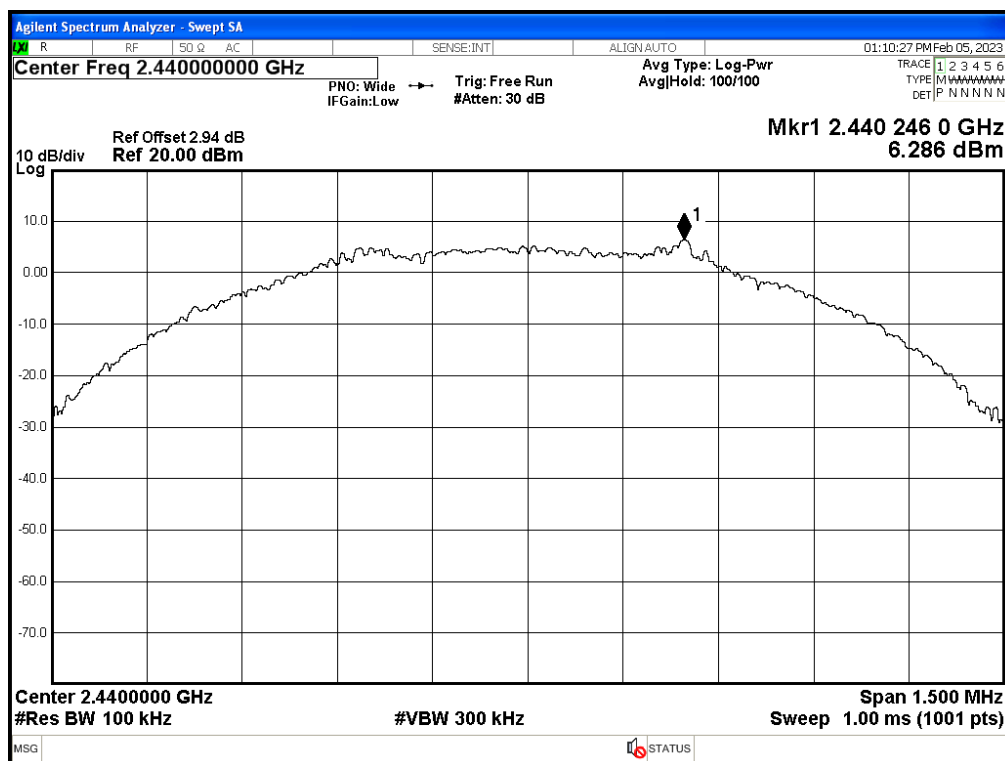


Appendix B.3: Test Results of Conducted Spurious Emissions Measured in 100 kHz Bandwidth

Low Channel



Middle Channel



Agilent Spectrum Analyzer - Swept SA

R RF SD Q AC SENSE:INT ALIGN:AUTO 01:12:06 PM Feb 05, 2023

Center Freq 12.51500000 GHz PNO: Fast IF Gain: Low Trig: Free Run #Atten: 30 dB Avg Type: Log-Pwr Avg/Hold: 10/10

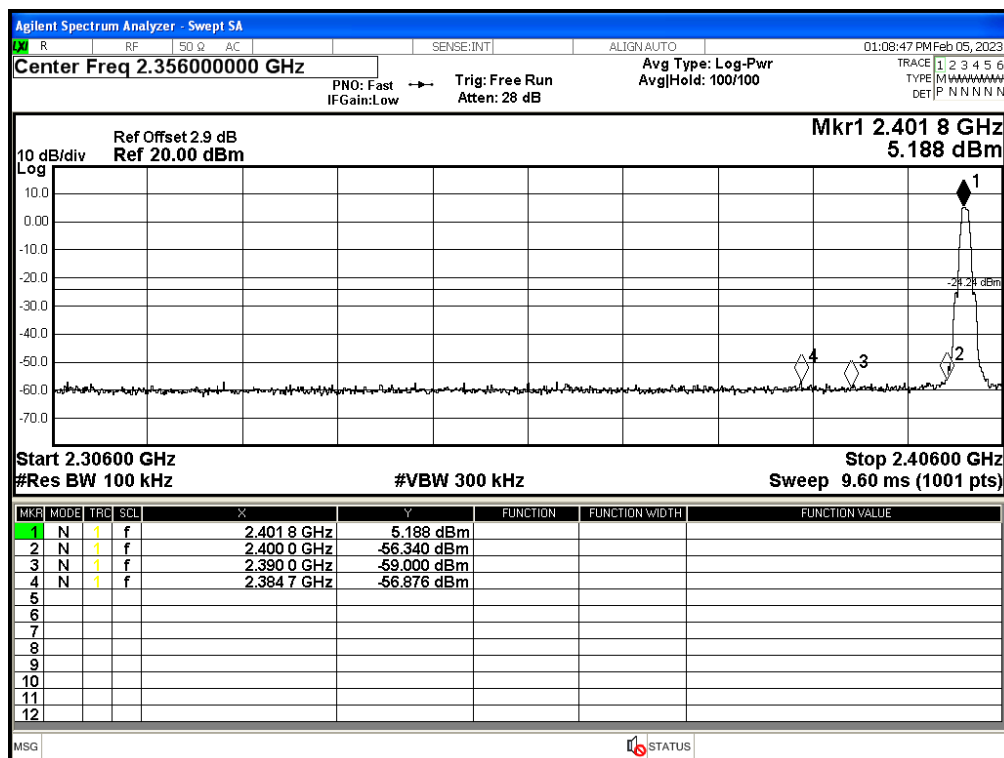
Mkr1 2.477 GHz 4.647 dBm

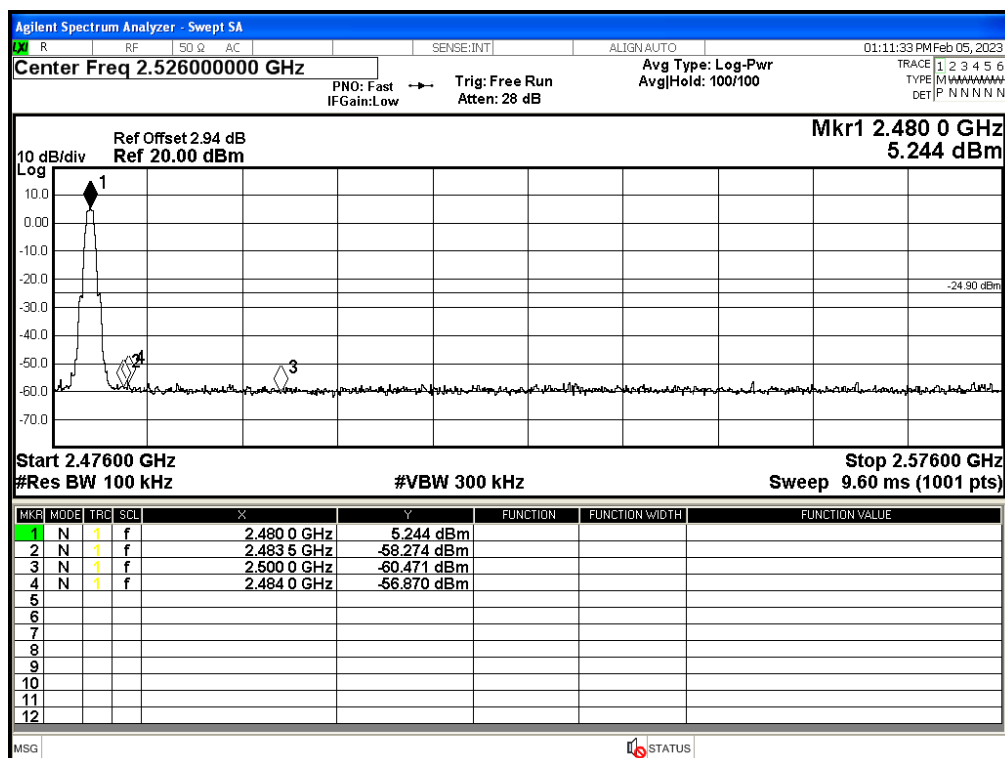
10 dB/div Ref Offset 2.94 dB Ref 20.00 dBm

The spectrum analyzer displays a single prominent peak at 2.477 GHz. The vertical axis represents power in dBm, ranging from 10.0 to -70.0. The horizontal axis represents frequency in GHz, ranging from 10.0 to 1.0. A reference level is set at 20.00 dBm. The signal is measured with a resolution bandwidth of 100 kHz and a video bandwidth of 300 kHz. The sweep rate is 2.39 s per 1001 pts.

Mkrf	Mode	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	f	f	2.477 GHz	4.647 dBm			
2	N	f	f	24.526 GHz	-42.621 dBm			
3	N	f	f	4.999 GHz	-55.141 dBm			
4	N	f	f	7.621 GHz	-52.974 dBm			
5	N	f	f	9.918 GHz	-54.400 dBm			

Start 30 MHz Stop 25.00 GHz
#Res BW 100 kHz #VBW 300 kHz Sweep 2.39 s (1001 pts)

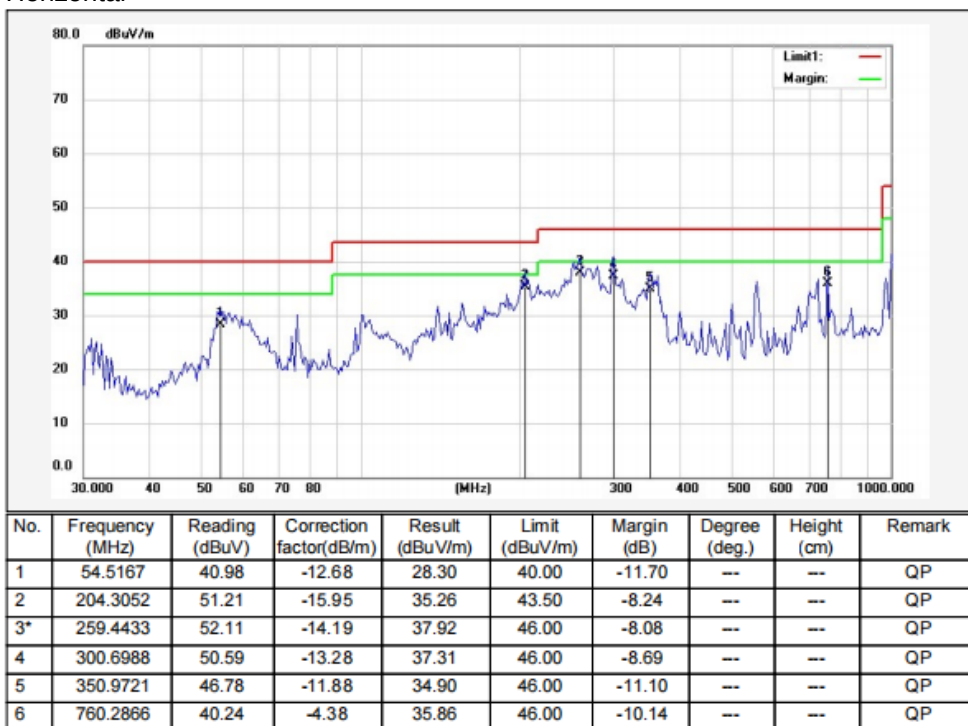




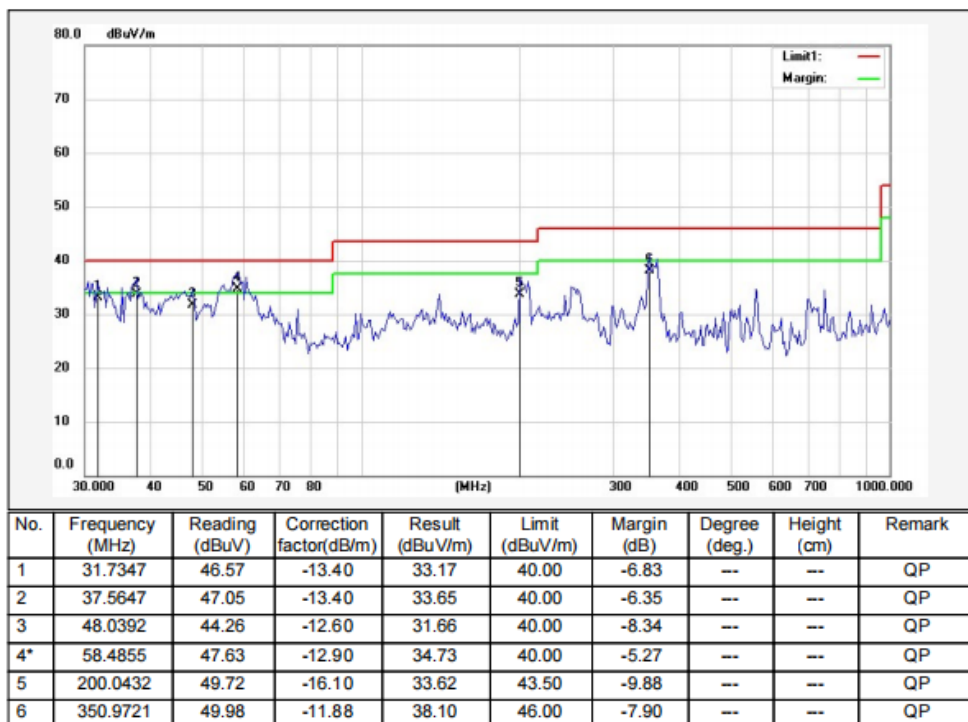
Note: Testing was carried out within frequency range 9kHz to the tenth harmonics. The measurement results below 30MHz and 18GHz - 26.5GHz were greater than 20dB below the limit, so only the radiated spurious emissions from 30MHz to 18GHz were reported.

Appendix B.4: Test Results of Radiated Spurious Emissions 30MHz - 1GHz (Worst case)

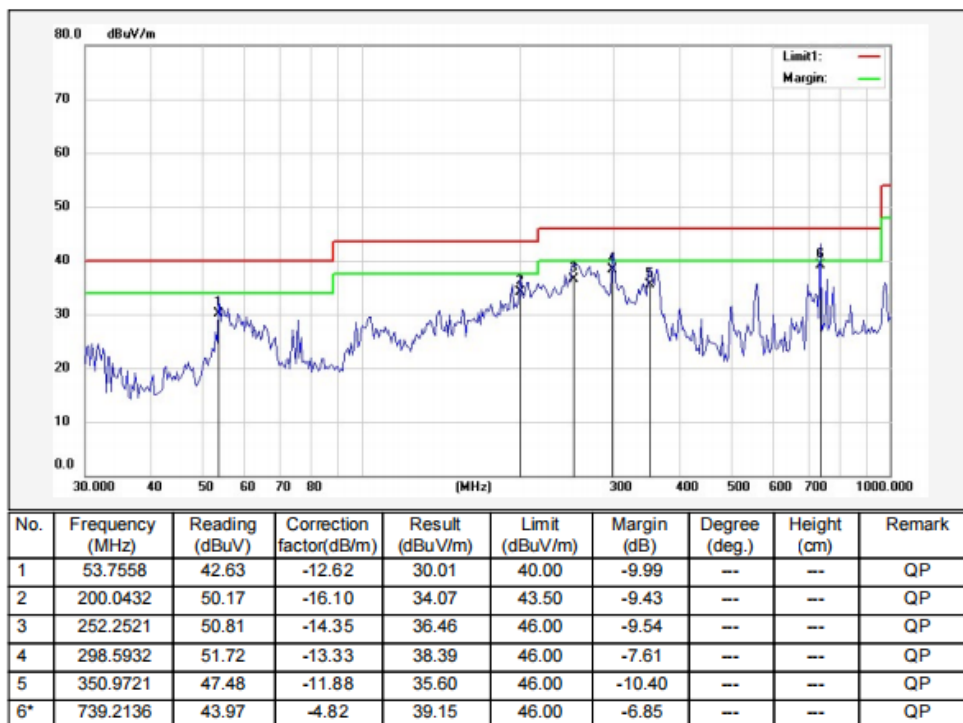
Low Channel Horizontal



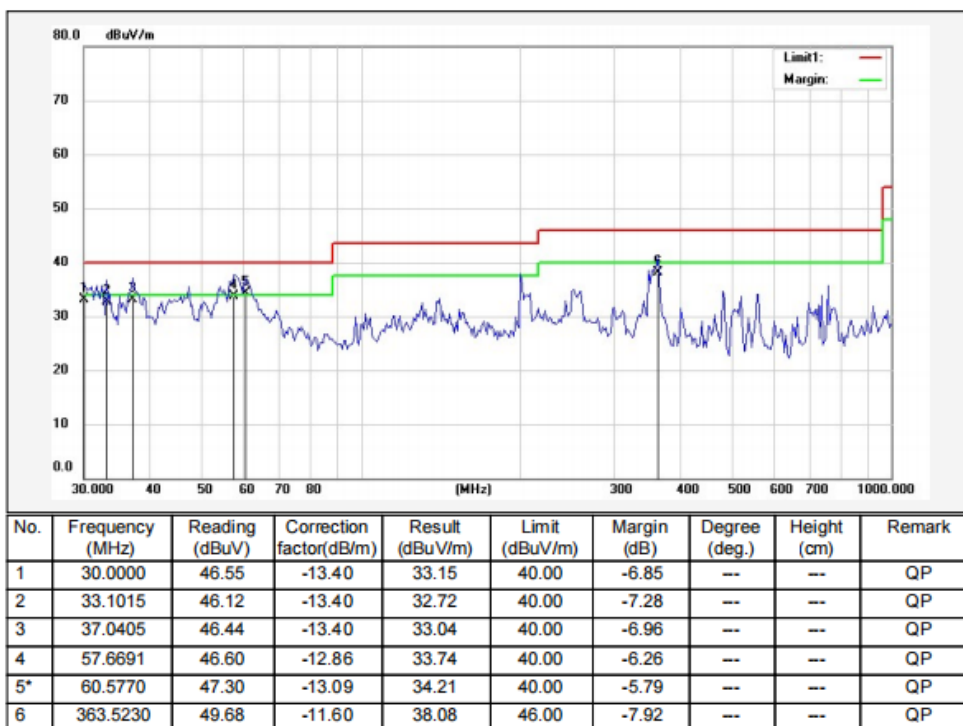
Low Channel Vertical



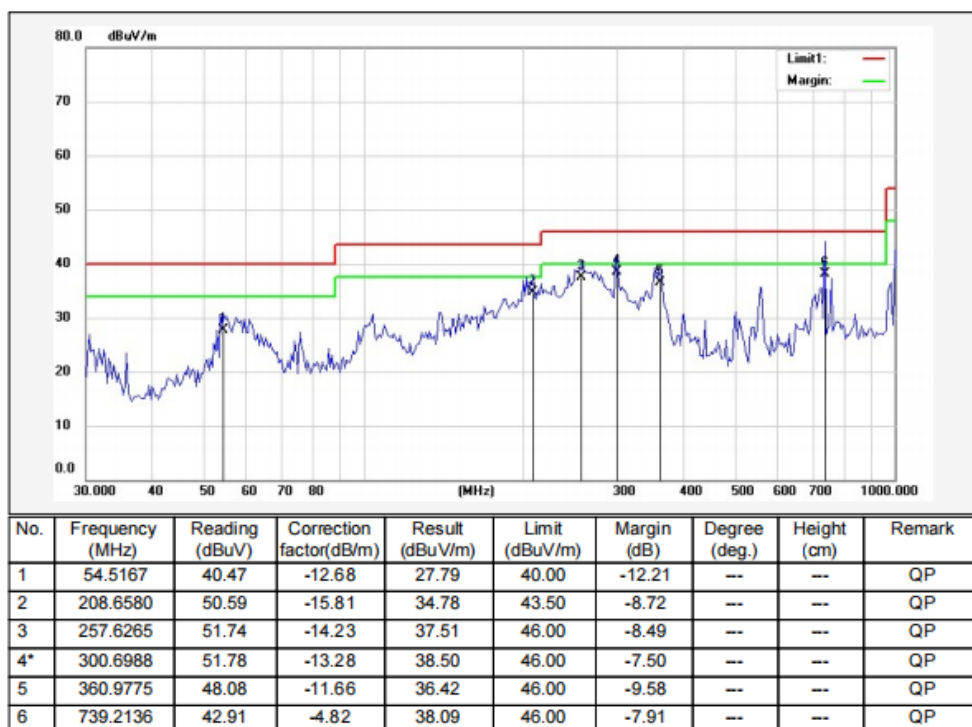
Middle Channel Horizontal



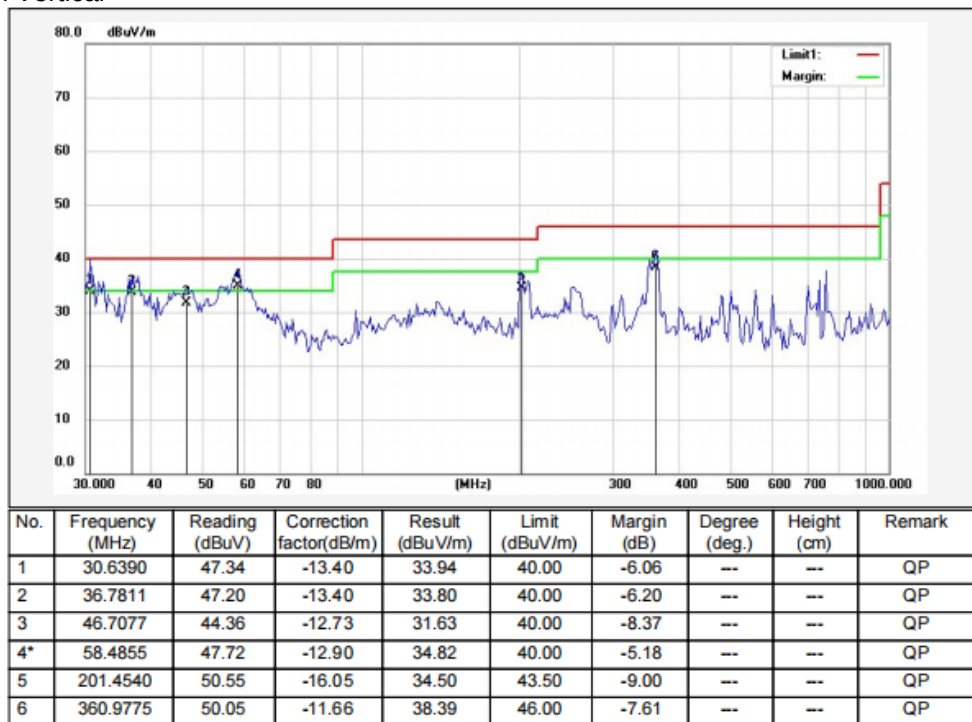
Middle Channel Vertical



High Channel Horizontal



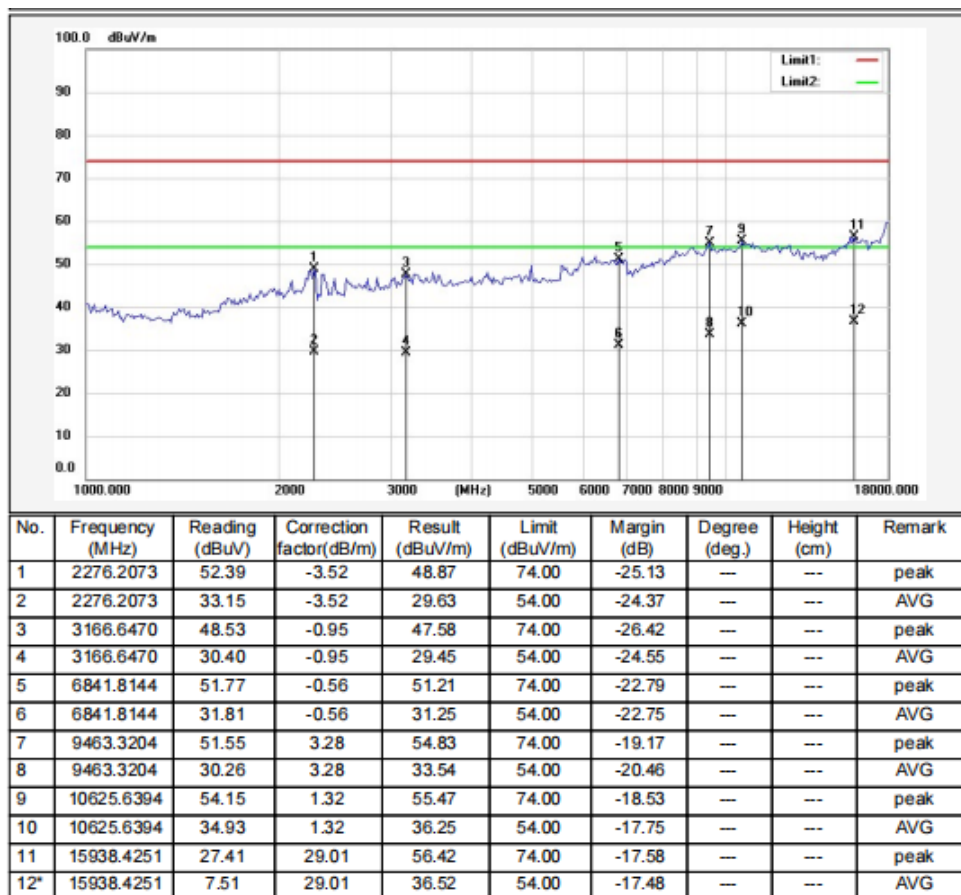
High Channel Vertical



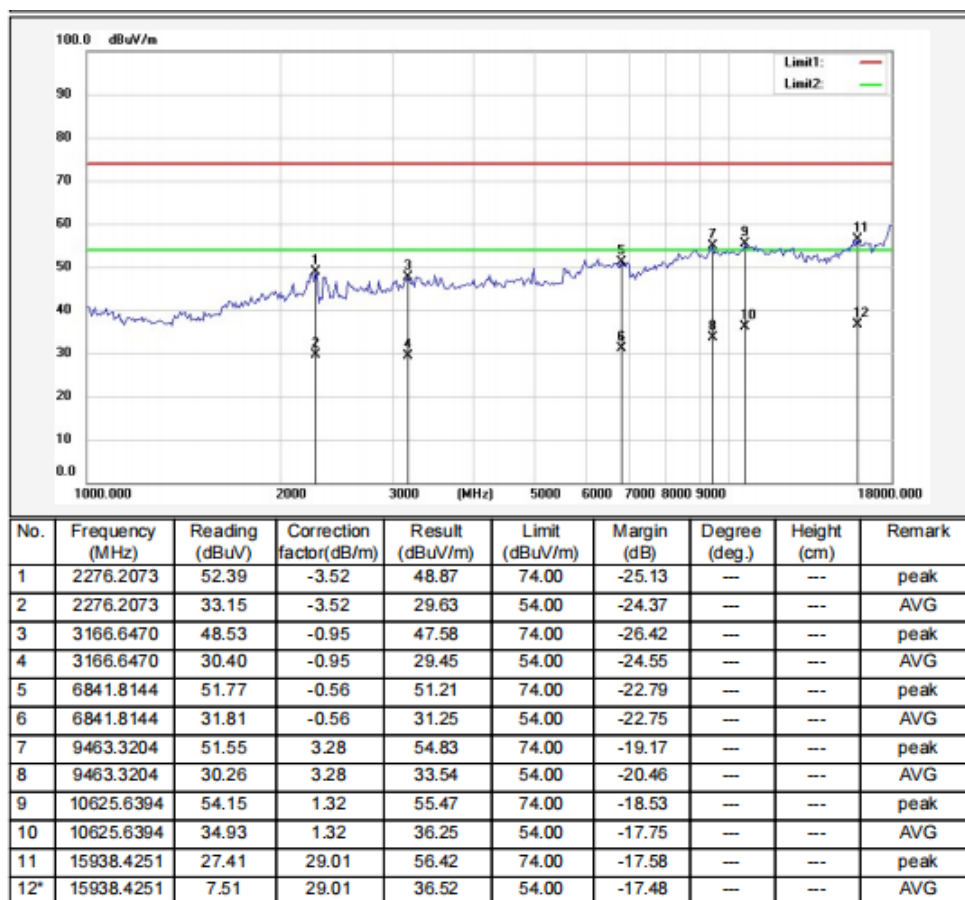
1GHz - 18GHz (Worst case)

Note: The highest waveform in the figure is BLE Fundamental.

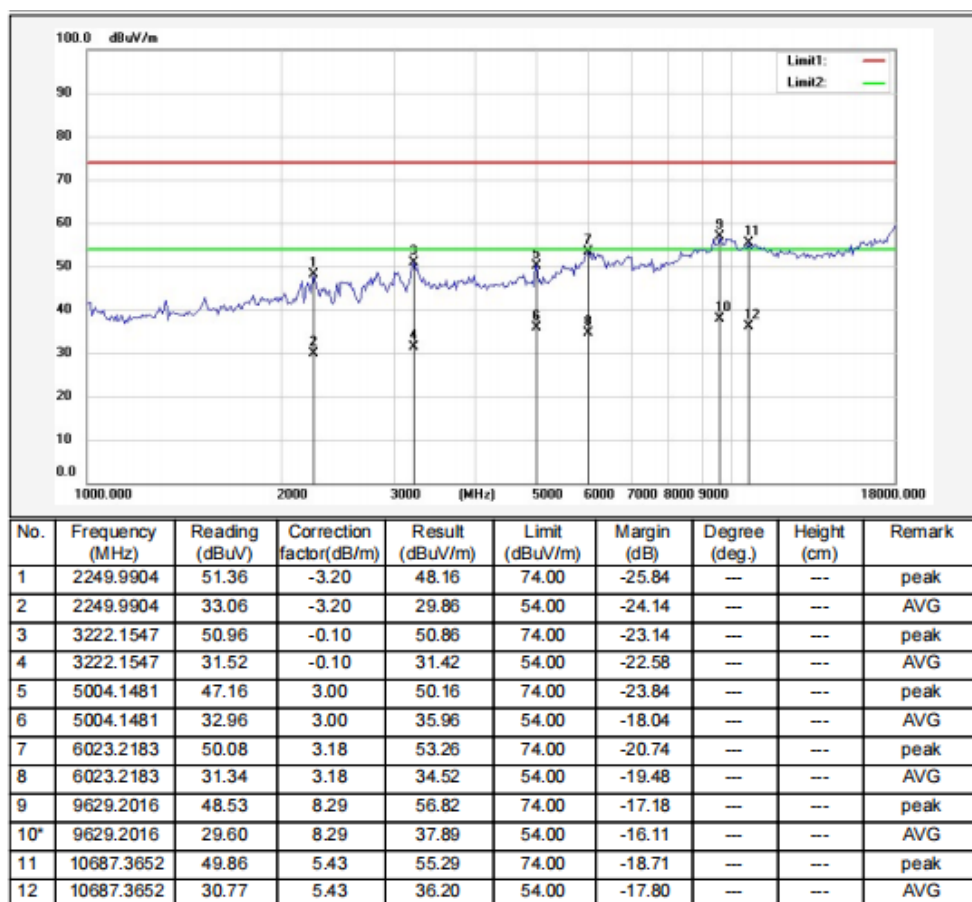
Low Channel Horizontal



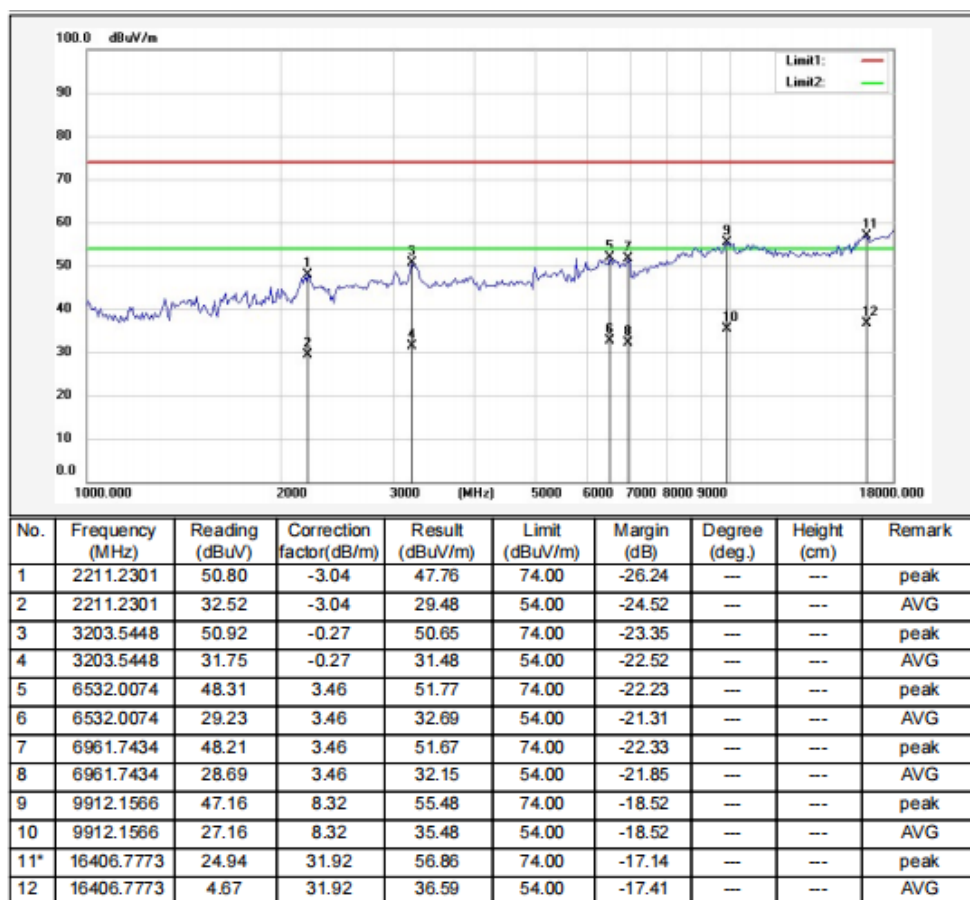
Low Channel Vertical



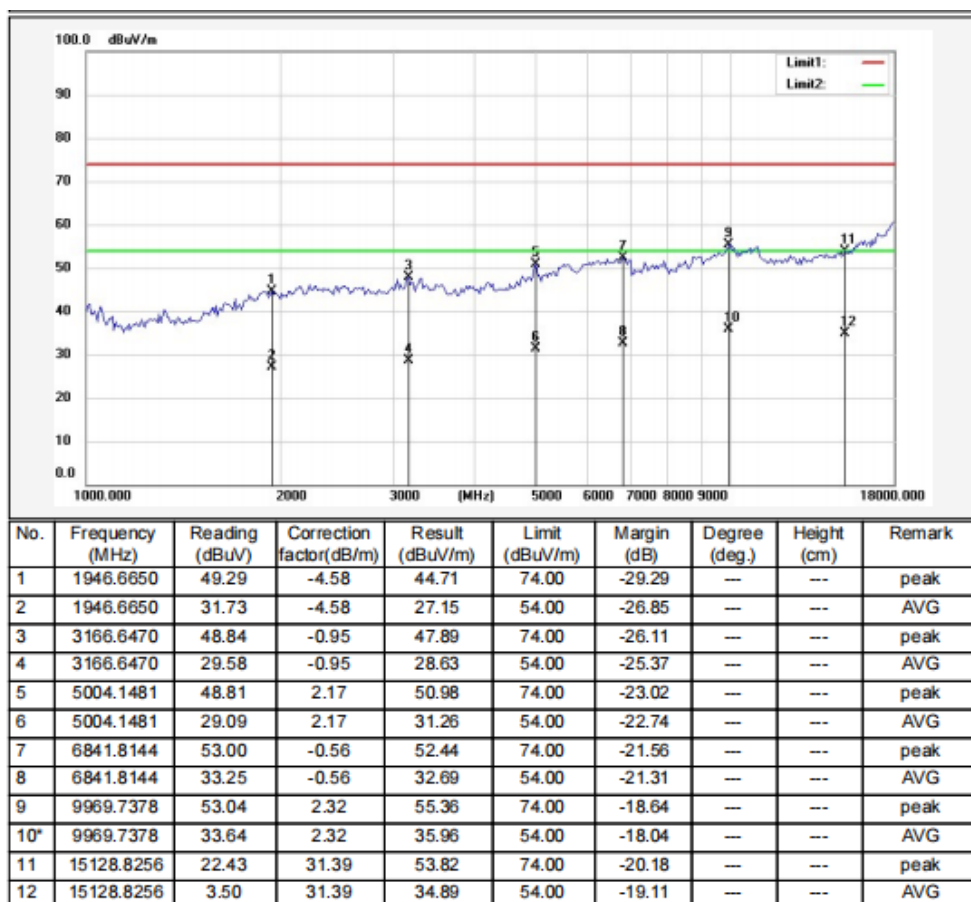
Middle Channel Horizontal



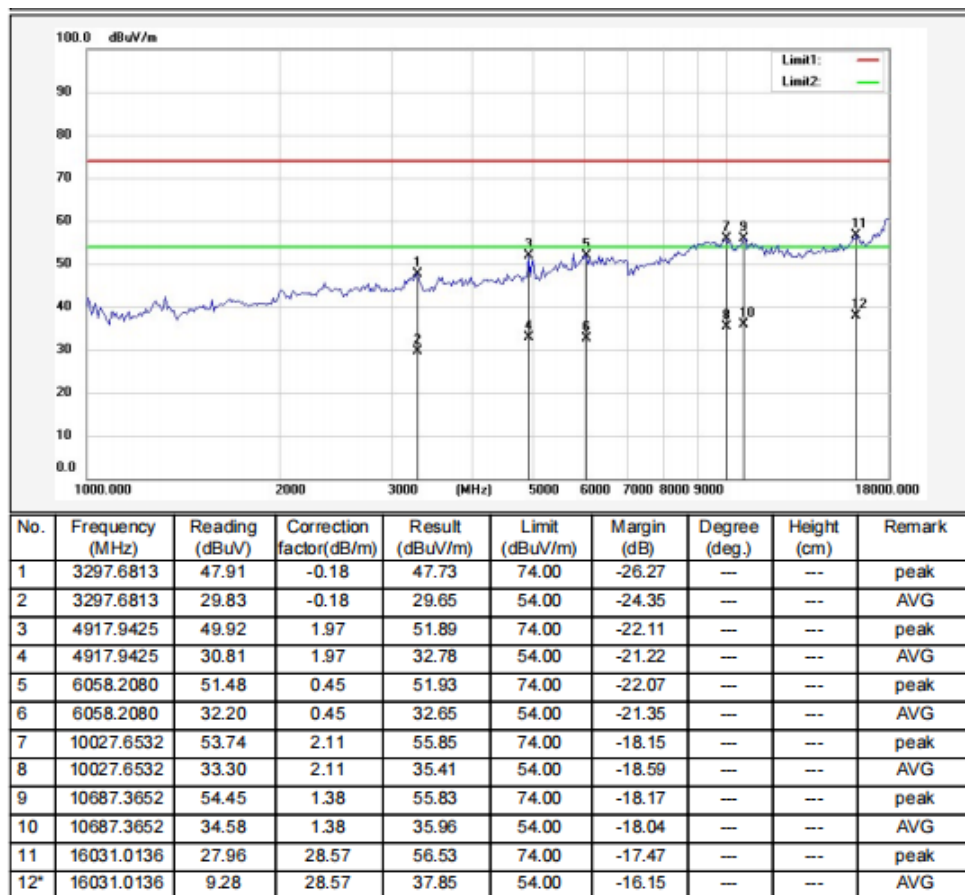
Middle Channel Vertical



High Channel Horizontal

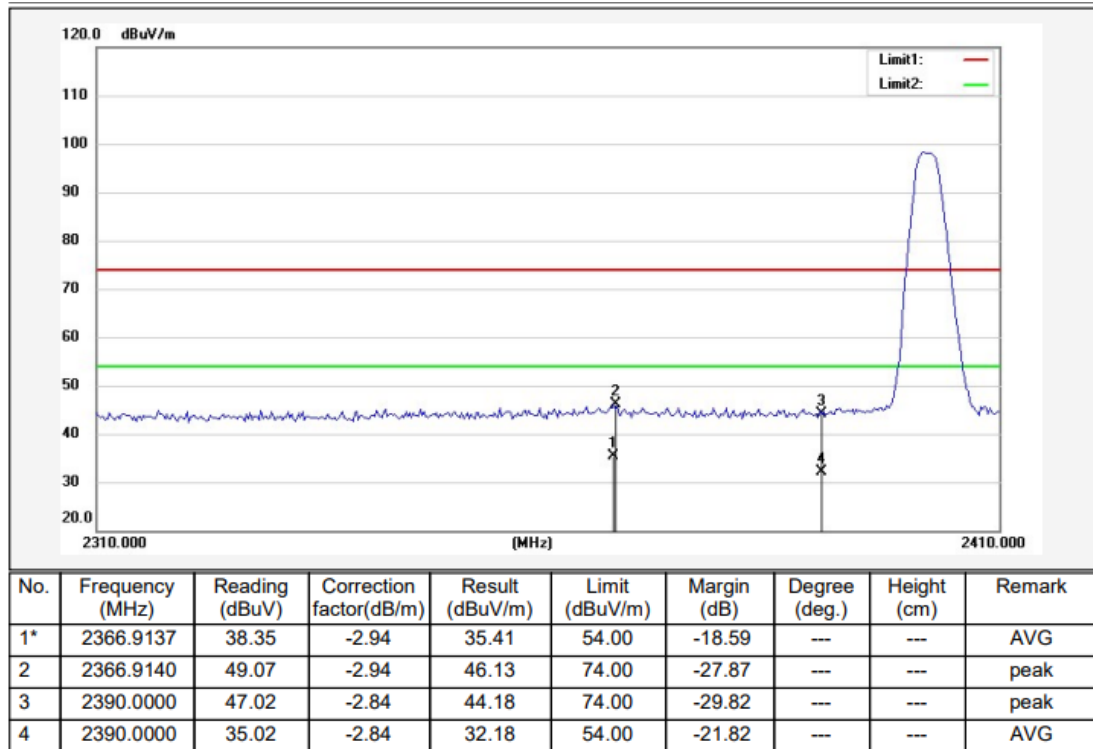


High Channel Vertical

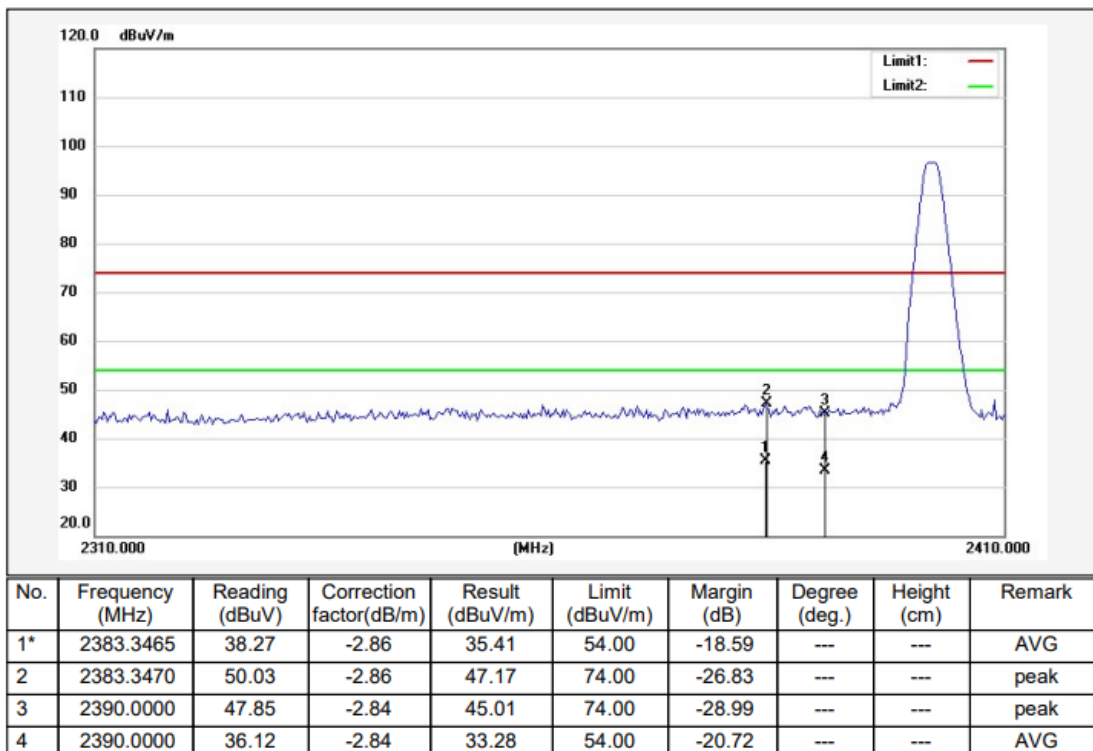


Appendix B.5: Test Results of Radiated Emissions in Restricted Bands

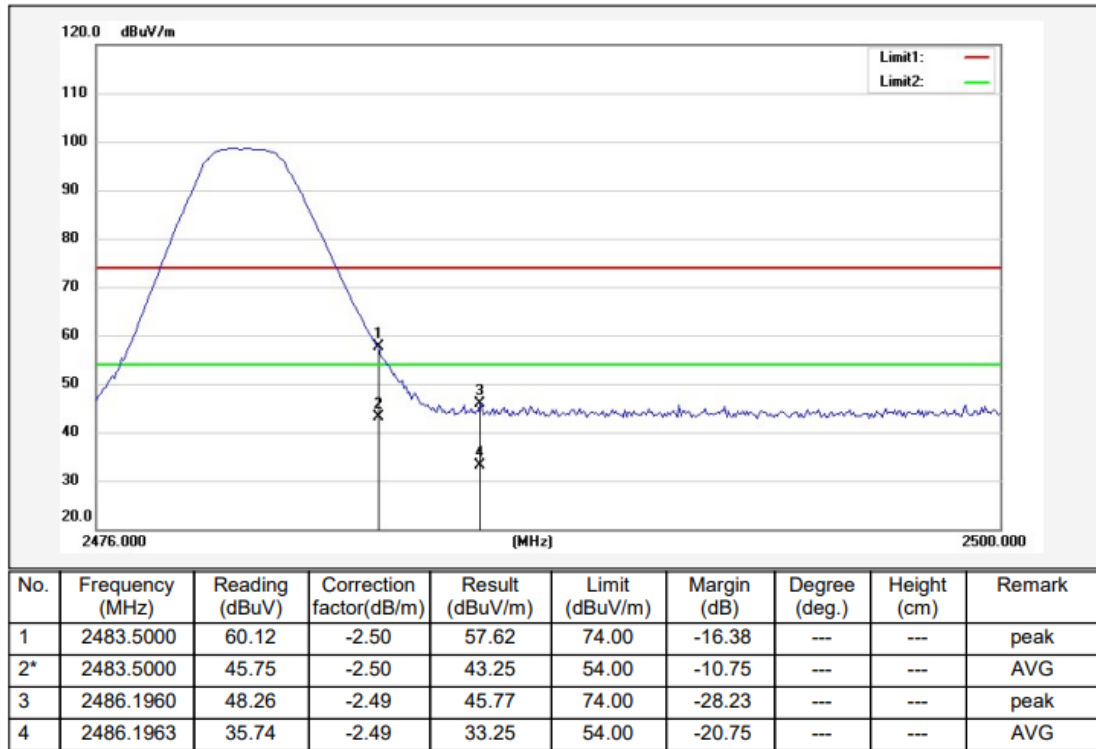
Low Channel Horizontal



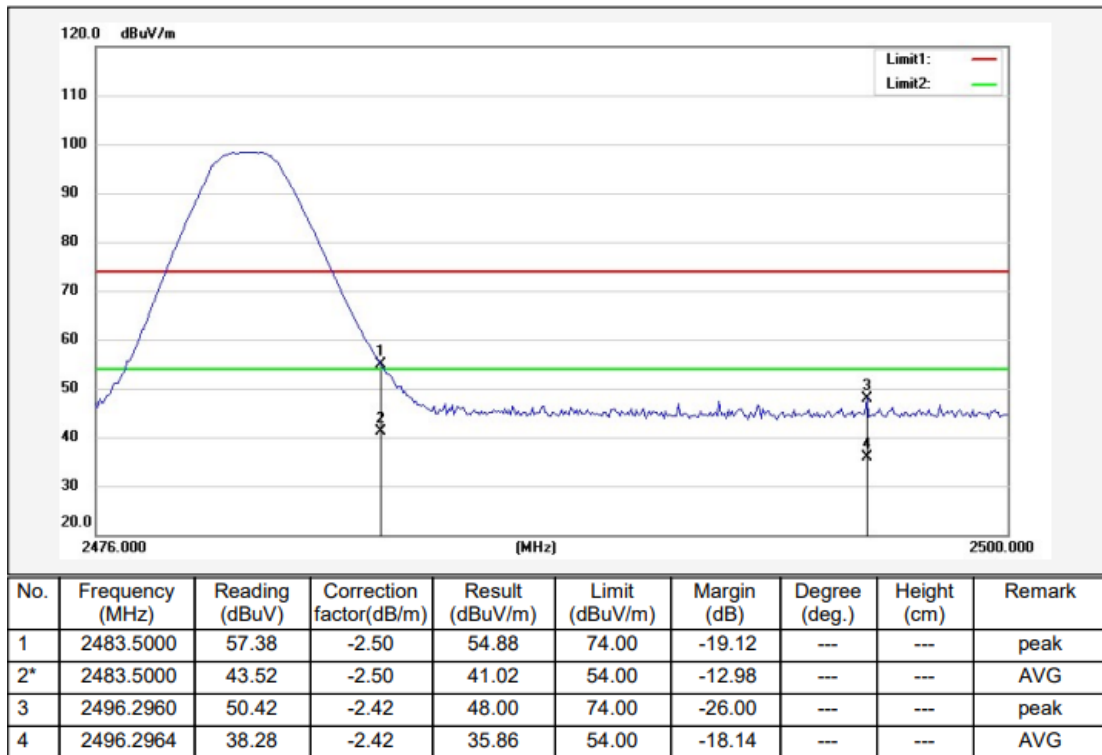
Low Channel Vertical



High Channel Horizontal

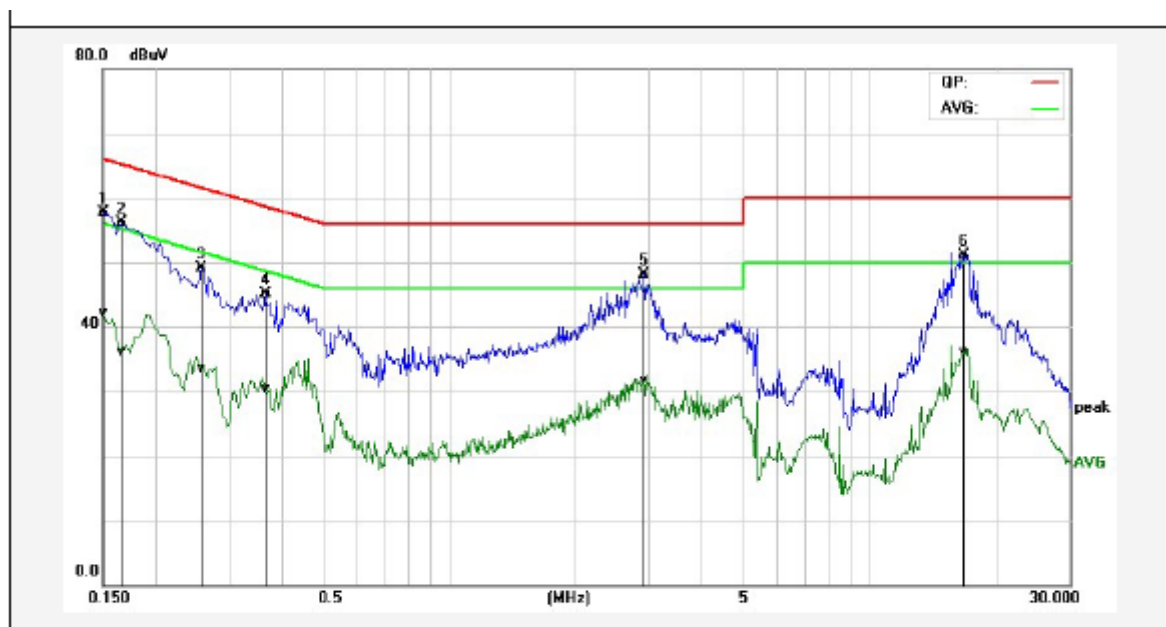


High Channel Vertical



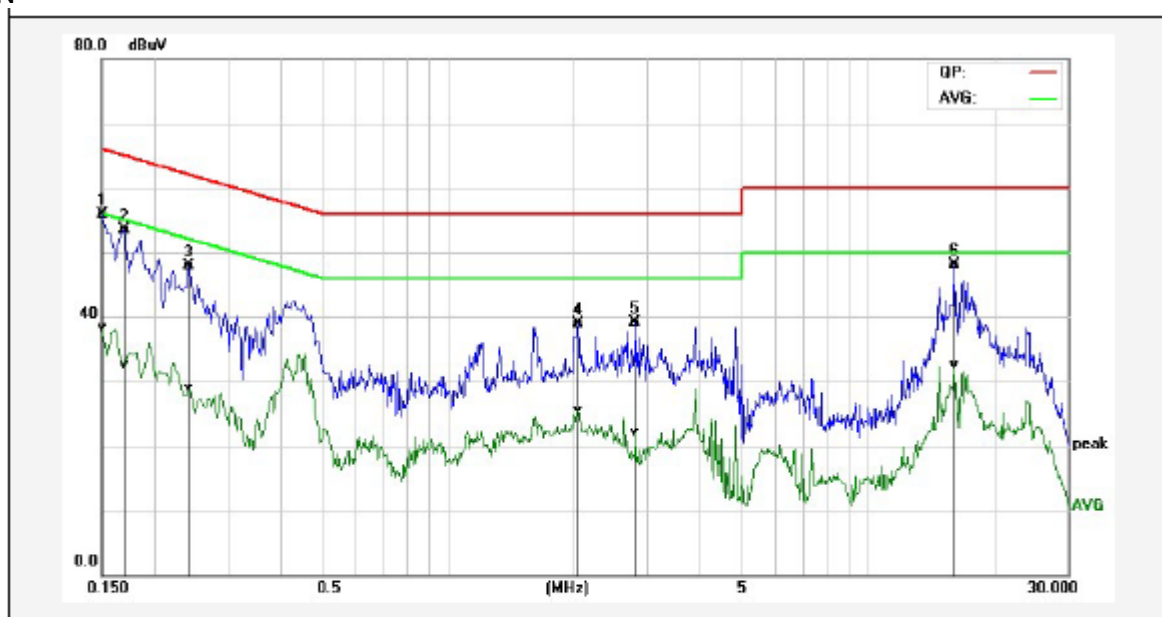
Appendix B.6: Test Results of Conducted Emission on AC Mains

L



No.	Frequency (MHz)	QuasiPeak reading (dBuV)	Average reading (dBuV)	Correction factor (dB)	QuasiPeak result (dBuV)	Average result (dBuV)	QuasiPeak limit (dBuV)	Average limit (dBuV)	QuasiPeak margin (dB)	Average margin (dB)	Remark
1P	0.1516	47.72	32.18	9.89	57.61	42.07	65.91	55.91	-8.30	-13.84	Pass
2P	0.1660	46.34	26.23	9.80	56.14	36.03	65.15	55.16	-9.01	-19.13	Pass
3P	0.2580	39.44	23.85	9.59	49.03	33.44	61.49	51.50	-12.46	-18.06	Pass
4P	0.3660	35.56	20.77	9.55	45.11	30.32	58.59	48.59	-13.48	-18.27	Pass
5*	2.9460	38.55	22.12	9.63	48.18	31.75	56.00	46.00	-7.82	-14.25	Pass
6P	16.7939	41.11	26.01	10.04	51.15	36.05	60.00	50.00	-8.85	-13.95	Pass

N



No.	Frequency (MHz)	QuasiPeak reading (dBuV)	Average reading (dBuV)	Correction factor (dB)	QuasiPeak result (dBuV)	Average result (dBuV)	QuasiPeak limit (dBuV)	Average limit (dBuV)	QuasiPeak margin (dB)	Average margin (dB)	Remark
1*	0.1500	46.35	28.78	9.60	55.95	38.38	65.99	56.00	-10.04	-17.62	Pass
2P	0.1700	43.96	22.94	9.60	53.56	32.54	64.96	54.96	-11.40	-22.42	Pass
3P	0.2420	38.32	19.36	9.59	47.91	28.95	62.02	52.03	-14.11	-23.08	Pass
4P	2.0579	29.20	15.92	9.62	38.82	25.54	56.00	46.00	-17.18	-20.46	Pass
5P	2.8140	29.39	12.49	9.68	39.07	22.17	56.00	46.00	-16.93	-23.83	Pass
6P	16.0820	38.15	22.41	10.01	48.16	32.42	60.00	50.00	-11.84	-17.58	Pass