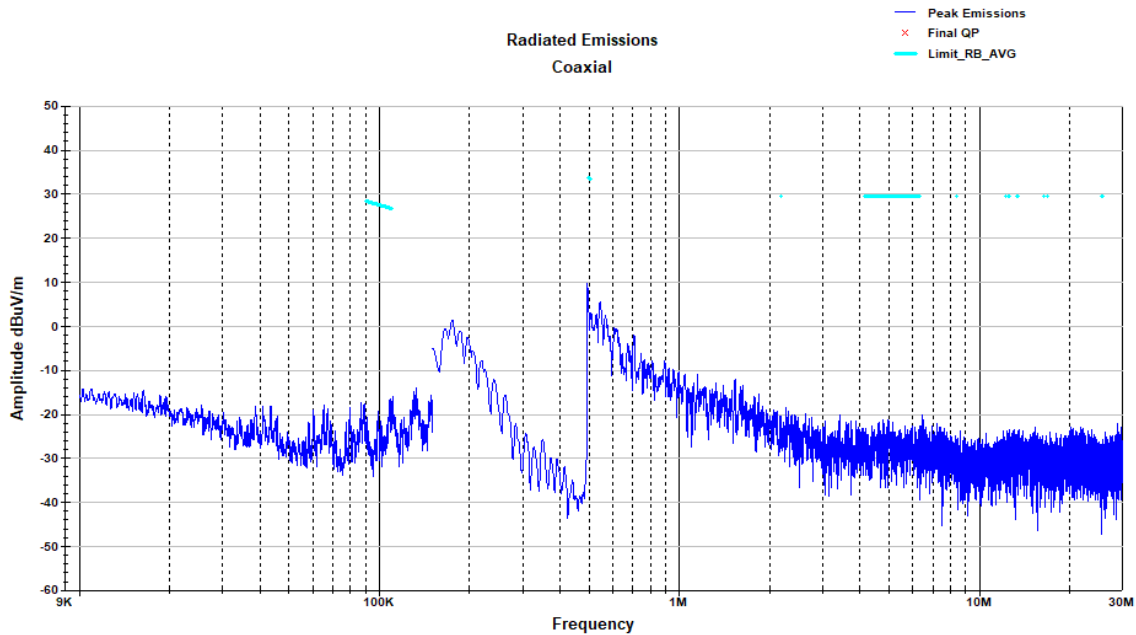


3.7 Test Data – WLAN 802.11n

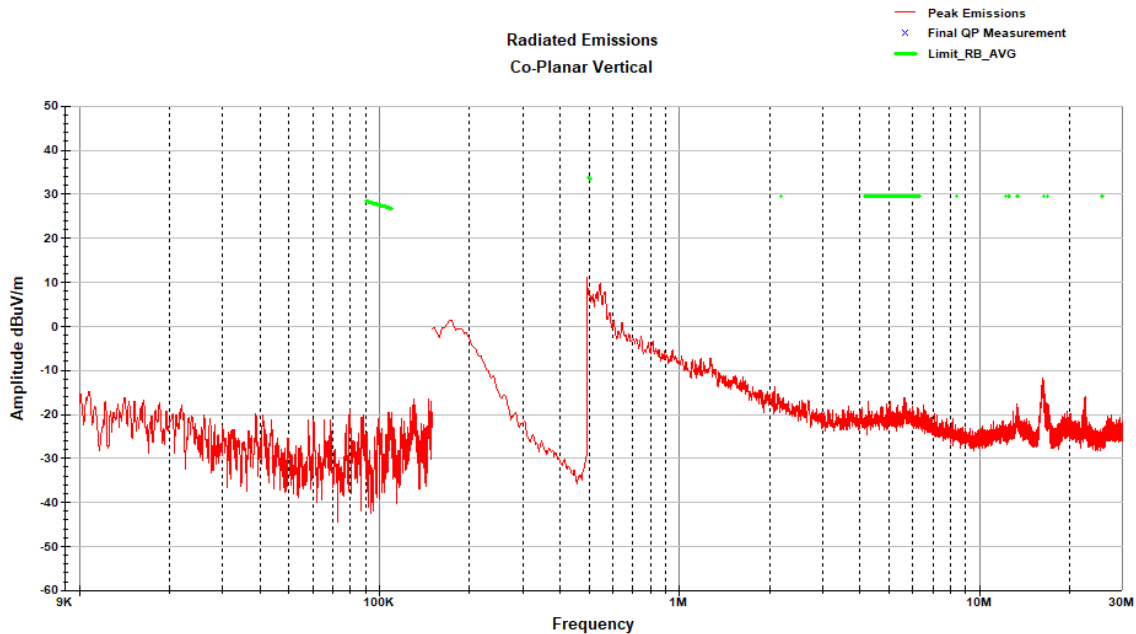
3.7.1 9kHz – 30MHz

All channels had similar plots in the 9kHz to 30MHz frequency range.

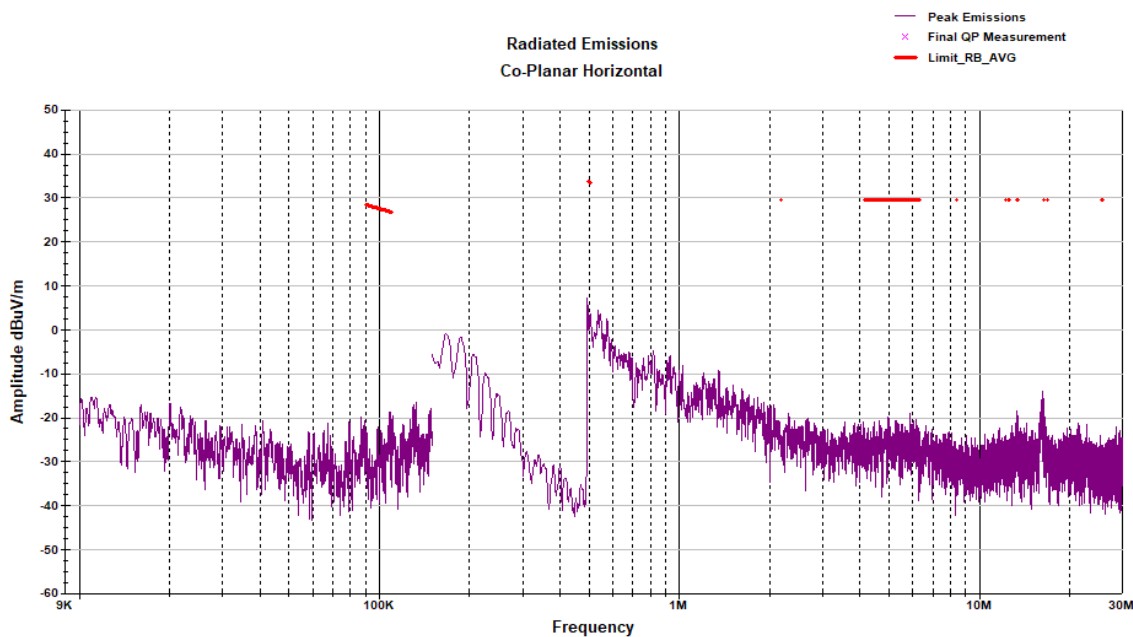
Coaxial Plot – 9 kHz-30MHz – Mid Channel



Co-Planar Vertical Plot – 9 kHz-30MHz – Mid Channel



Co-Planar Horizontal Plot – 9 kHz-30MHz – Mid Channel

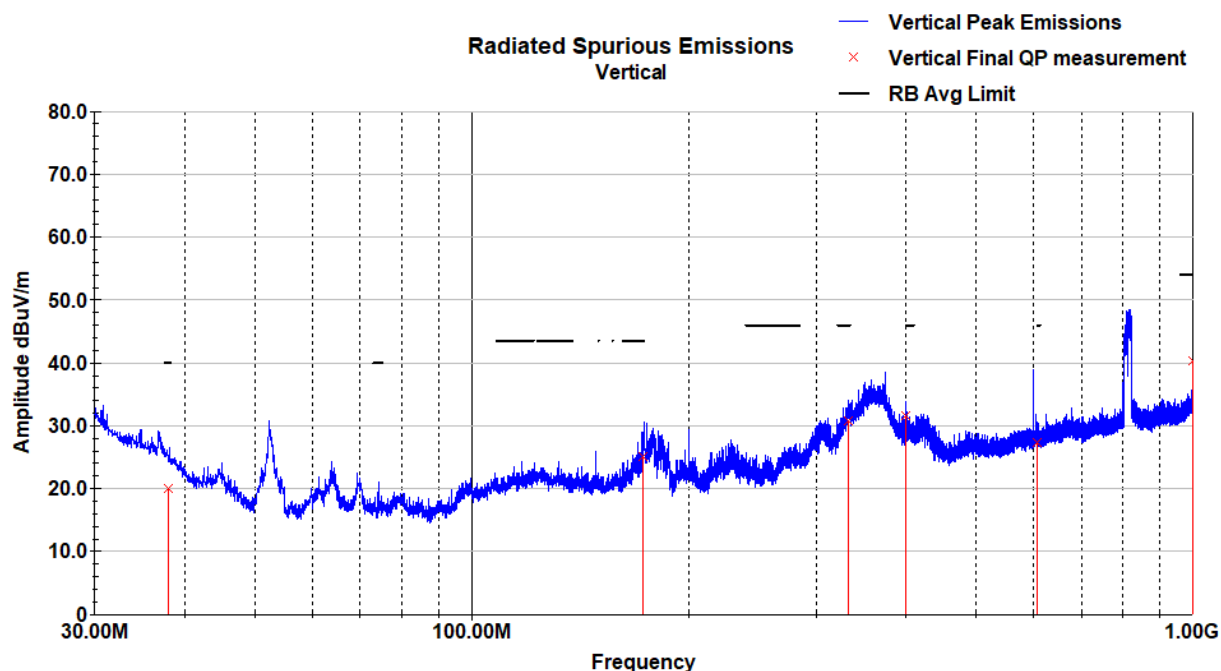


No emissions within 20dB of the limit

3.7.2 30-1000 MHz

All channels were measured and had similar plots – the worst-case plots are shown below.

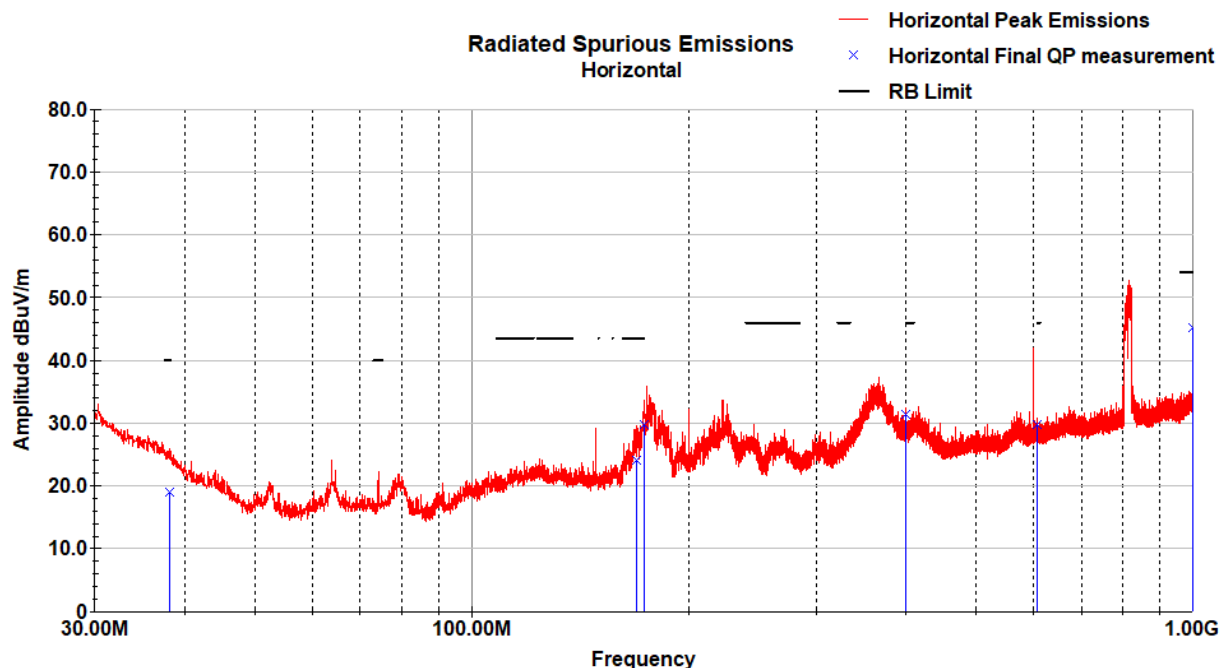
Vertical Plot – 30-1000MHz – Mid Channel



Vertical Data – 30-1000MHz – Mid Channel

Frequency MHz	Raw QP (dBuV)	Polarity (V/H)	Azimuth (degrees)	Height (cm)	AF (dB/m)	Loss (dB)	Amp (dB)	QP Value (dBuV/m)	Limit (dBuV/m)	Margin (dB)
37.98	30.5	V	204.0	100.0	19.9	0.3	30.7	20.1	40.0	-19.9
172.43	38.6	V	171.0	100.0	16.1	0.9	30.4	25.2	43.5	-18.4
333.34	40.5	V	183.0	158.0	18.9	1.5	30.1	30.8	46.0	-15.2
399.99	39.4	V	210.0	138.0	20.4	1.7	30.0	31.6	46.0	-14.4
609.26	31.2	V	22.0	138.0	23.9	1.9	29.7	27.4	46.0	-18.6
1000.00	38.7	V	166.0	158.0	28.1	2.2	28.7	40.3	54.0	-13.7
QP Value = Raw QP + AF + Loss - Amp										
Margin = QP Value - Limit										

Horizontal Plot – 30-1000MHz – Mid Channel

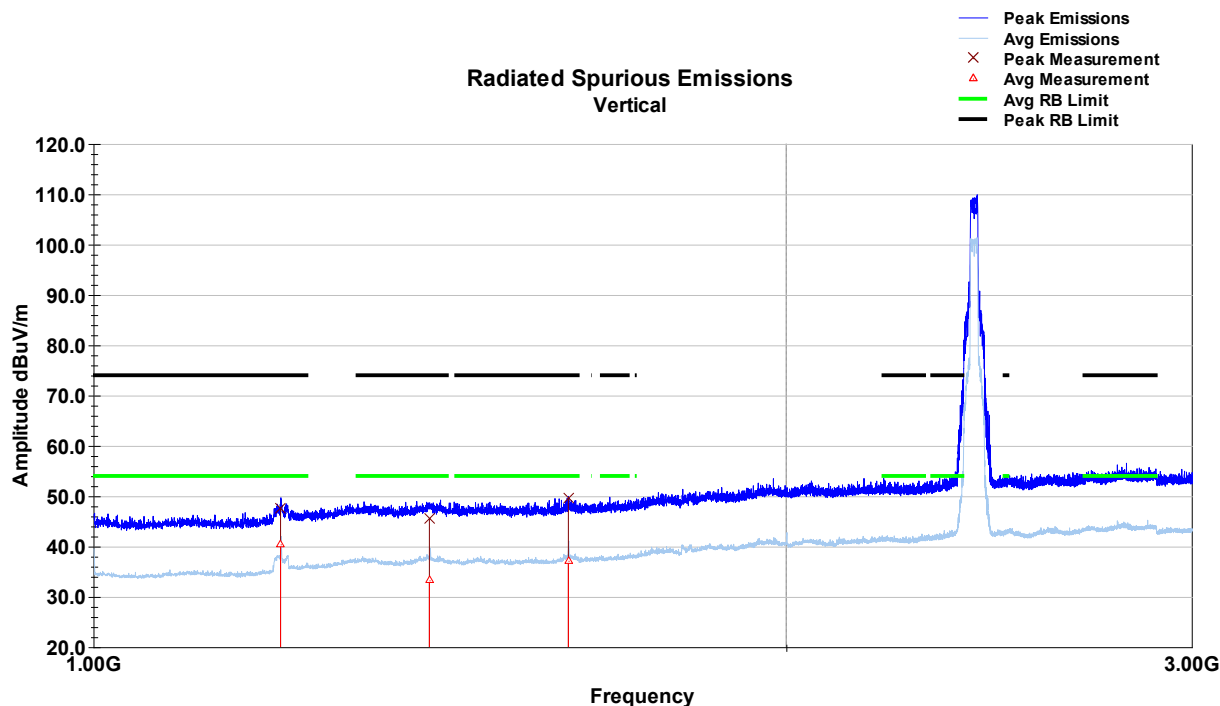


Horizontal Data – 30-1000MHz – Mid Channel

Frequency MHz	Raw QP (dBuV)	Polarity (V/H)	Azimuth (degrees)	Height (cm)	AF (dB/m)	Loss (dB)	Amp (dB)	QP Value (dBuV/m)	Limit (dBuV/m)	Margin (dB)
38.12	29.5	H	123.0	157.0	19.8	0.3	30.7	19.0	40.0	-21.0
169.33	37.1	H	130.0	175.0	16.4	0.8	30.4	24.0	43.5	-19.5
173.15	43.3	H	88.0	138.0	16.0	0.9	30.4	29.8	43.5	-13.7
400.01	39.2	H	360.0	202.0	20.4	1.7	30.0	31.5	46.0	-14.5
609.25	33.7	H	180.0	119.0	23.9	1.9	29.7	29.9	46.0	-16.2
1000.00	43.6	H	144.0	118.0	28.1	2.2	28.7	45.2	54.0	-8.7
QP Value = Raw QP + AF + Loss - Amp										
Margin = QP Value - Limit										

3.7.3 1-18 GHz

Vertical Plot – 1-3GHz – Low Channel

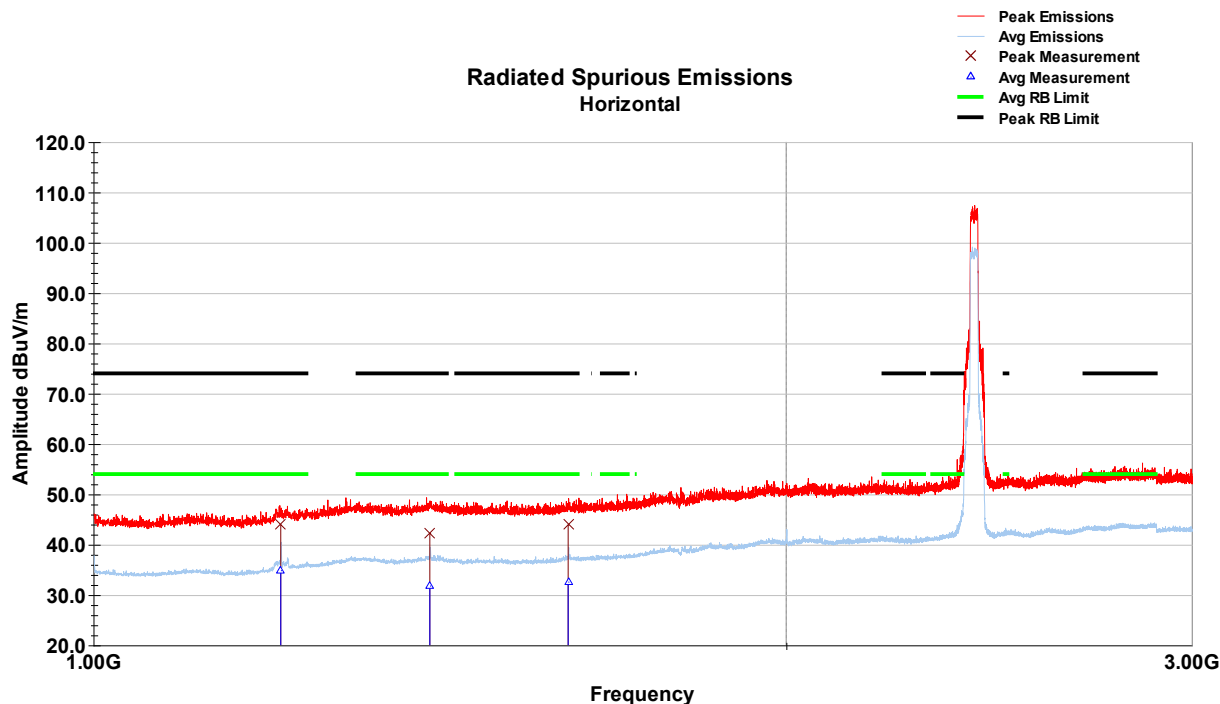


Vertical Plot – 1-3GHz – Low Channel

Frequency MHz	Raw Avg dBuV	Polarity V/H	Azimuth degrees	Height cm	AF dB/m	Loss dB	DCF dB	Amp dB	Final Avg dBuV/m	Limit dBuV/m	Margin dB
1205.96	45.4	V	57.0	188.0	28.1	1.3	0.0	34.4	40.4	54.0	-13.5
1399.56	37.0	V	359.0	215.0	29.0	1.5	0.0	34.2	33.3	54.0	-20.7
1608.40	41.7	V	15.0	232.0	28.4	1.5	0.0	34.4	37.2	54.0	-16.8
Final Avg = Raw Avg + AF + Loss - Amp											
Margin = Final Avg - Limit											

Frequency MHz	Raw Pk dBuV	Polarity (V/H)	Azimuth degrees	Height (cm)	AF (dB/m)	Loss (dB)	DCF dB	Amp (dB)	Final Pk dBuV/m	Limit dBuV/m	Margin dB
1205.96	52.5	V	57.0	188.0	28.1	1.3	0.0	34.4	47.5	74.0	-26.5
1399.56	49.4	V	359.0	215.0	29.0	1.5	0.0	34.2	45.6	74.0	-28.4
1608.40	54.2	V	15.0	232.0	28.4	1.5	0.0	34.4	49.6	74.0	-24.4
Final Pk = Raw Pk + AF + Loss - Amp											
Margin = Final Pk - Limit											

Horizontal Plot – 1-3GHz – Low Channel

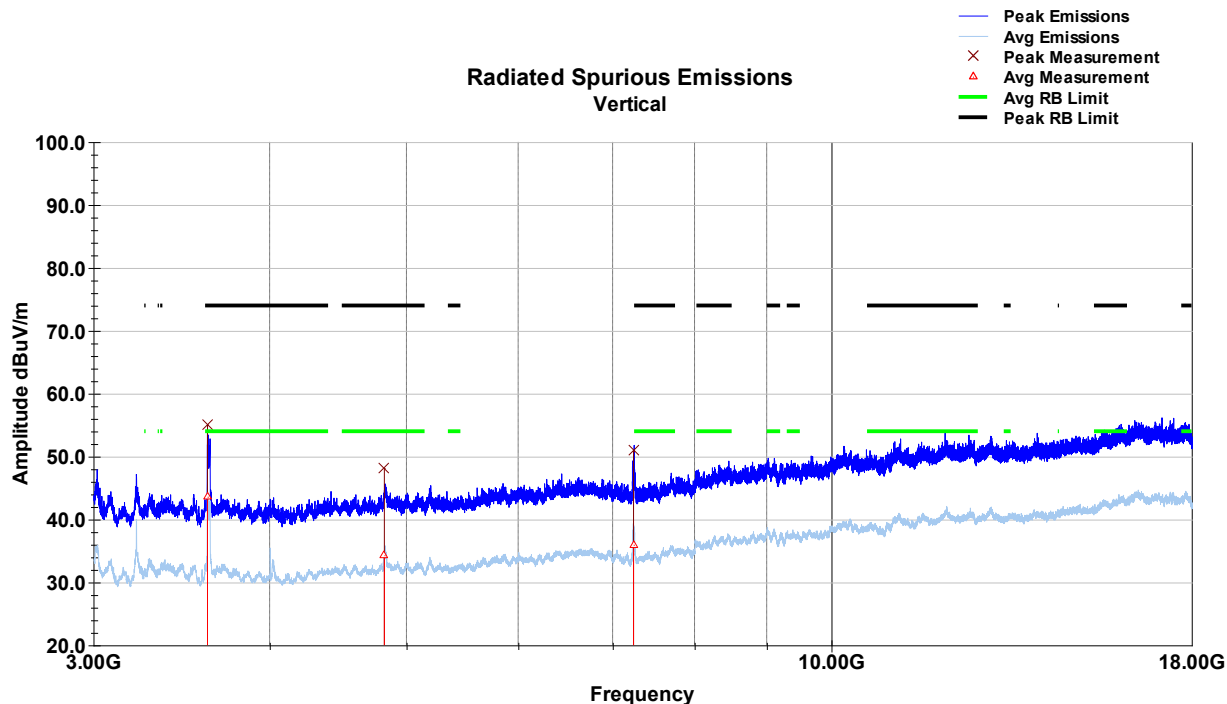


Horizontal Plot – 1-3GHz – Low Channel

Frequency MHz	Raw Avg dBuV	Polarity (V/H)	Azimuth degrees	Height (cm)	AF (dB/m)	Loss (dB)	DCF dB	Amp (dB)	avg Value dBuV/m	Limit dBuV/m	Margin (dB)
1206.24	39.9	H	295.0	195.0	28.1	1.3	0.0	34.4	34.9	54.0	-19.1
1400.20	35.6	H	183.0	164.0	29.0	1.5	0.0	34.2	31.9	54.0	-22.1
1608.12	37.2	H	213.0	187.0	28.4	1.5	0.0	34.4	32.6	54.0	-21.3
Final Avg = Raw Avg + AF + Loss - Amp											
Margin = Final Avg - Limit											

Frequency MHz	Raw Pk dBuV	Polarity (V/H)	Azimuth degrees	Height (cm)	AF (dB/m)	Loss (dB)	DCF dB	Amp (dB)	Final Pk dBuV/m	Limit dBuV/m	Margin (dB)
1206.24	48.9	H	295.0	195.0	28.1	1.3	0.0	34.4	44.0	74.0	-30.0
1400.20	46.0	H	183.0	164.0	29.0	1.5	0.0	34.2	42.3	74.0	-31.7
1608.12	48.5	H	213.0	187.0	28.4	1.5	0.0	34.4	44.0	74.0	-30.0
Final Pk = Raw Pk + AF + Loss - Amp											
Margin = Final Pk - Limit											

Vertical Plot – 3-18GHz – Low Channel

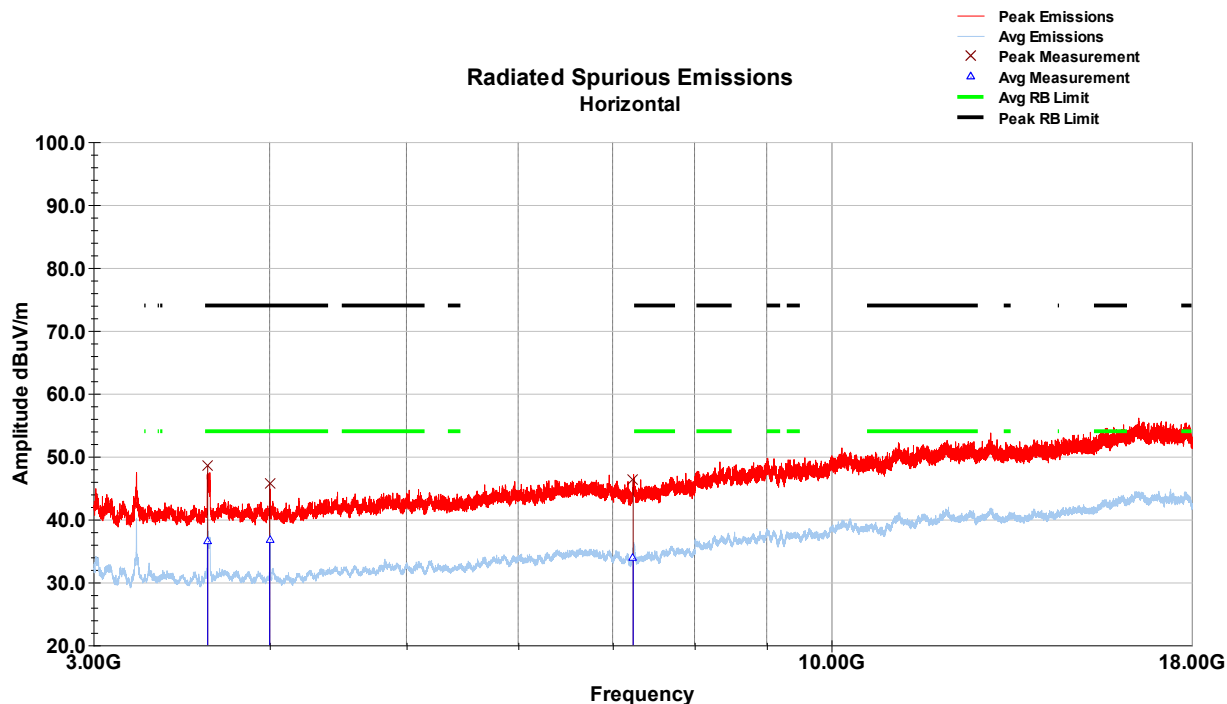


Vertical Data – 3-18GHz – Low Channel

Frequency MHz	Raw Avg dBuV	Polarity V/H	Azimuth degrees	Height cm	AF dB/m	Loss dB	DCF dB	Amp dB	Final Avg dBuV/m	Limit dBuV/m	Margin dB
3614.48	42.7	V	84.0	250.0	33.0	2.4	0.0	34.5	43.6	54.0	-10.4
4822.80	31.7	V	69.0	249.0	34.0	2.8	0.0	34.2	34.3	54.0	-19.7
7243.28	31.1	V	322.0	124.0	35.7	3.7	0.0	34.5	36.0	54.0	-18.0
Final Avg = Raw Avg + AF + Loss - Amp											
Margin = Final Avg - Limit											

Frequency MHz	Raw Pk dBuV	Polarity (V/H)	Azimuth degrees	Height (cm)	AF (dB/m)	Loss (dB)	DCF dB	Amp (dB)	Final Pk dBuV/m	Limit dBuV/m	Margin dB
3614.48	54.2	V	84.0	250.0	33.0	2.4	0.0	34.5	55.1	74.0	-18.9
4822.80	45.6	V	69.0	249.0	34.0	2.8	0.0	34.2	48.2	74.0	-25.8
7243.28	46.0	V	322.0	124.0	35.7	3.7	0.0	34.5	50.9	74.0	-23.1
Final Pk = Raw Pk + AF + Loss - Amp											
Margin = Final Pk - Limit											

Horizontal Plot – 3-18GHz – Low Channel

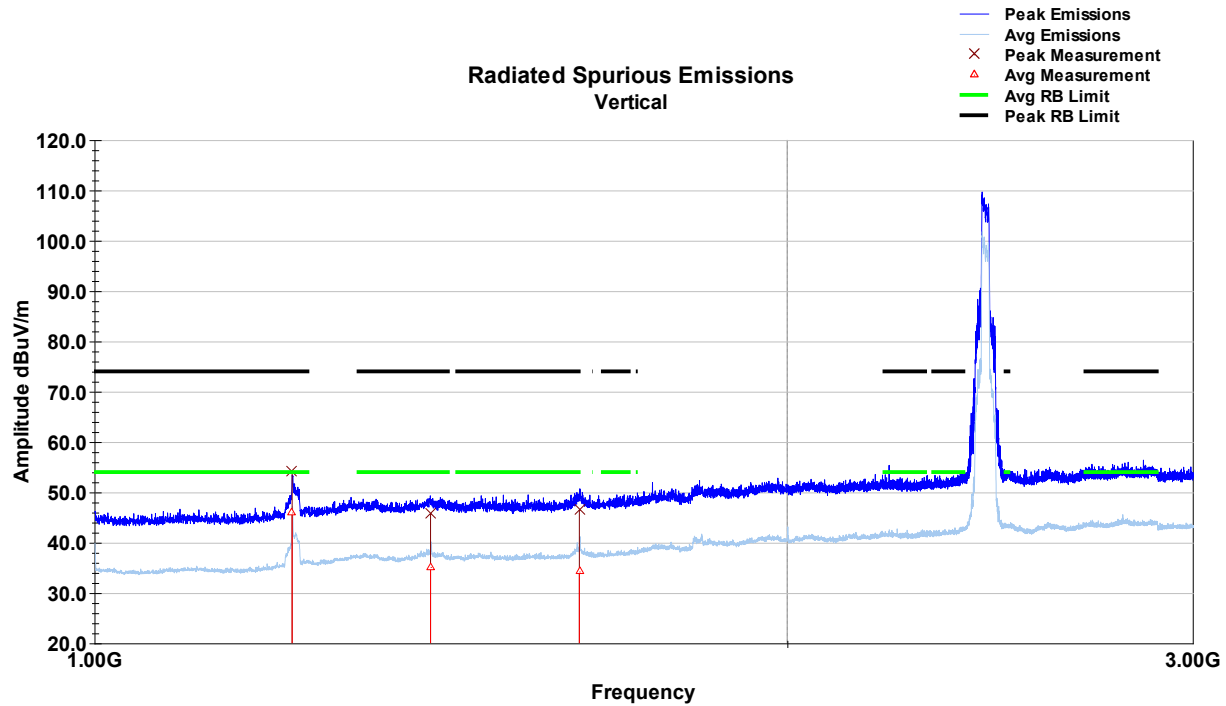


Horizontal Data – 3-18GHz – Low Channel

Frequency MHz	Raw Avg dBuV	Polarity (V/H)	Azimuth degrees	Height (cm)	AF (dB/m)	Loss (dB)	DCF dB	Amp (dB)	avg Value dBuV/m	Limit dBuV/m	Margin (dB)
3615.24	35.6	H	189.0	116.0	33.0	2.4	0.0	34.5	36.5	54.0	-17.4
4000.40	35.5	H	8.0	146.0	33.3	2.5	0.0	34.4	36.9	54.0	-17.1
7238.36	29.0	H	325.0	242.0	35.7	3.7	0.0	34.6	33.9	54.0	-20.1
Final Avg = Raw Avg + AF + Loss - Amp											
Margin = Final Avg - Limit											

Frequency MHz	Raw Pk dBuV	Polarity (V/H)	Azimuth degrees	Height (cm)	AF (dB/m)	Loss (dB)	DCF dB	Amp (dB)	Final Pk dBuV/m	Limit dBuV/m	Margin (dB)
3615.24	47.6	H	189.0	116.0	33.0	2.4	0.0	34.5	48.6	74.0	-25.4
4000.40	44.4	H	8.0	146.0	33.3	2.5	0.0	34.4	45.8	74.0	-28.2
7238.36	41.5	H	325.0	242.0	35.7	3.7	0.0	34.6	46.3	74.0	-27.7
Final Pk = Raw Pk + AF + Loss - Amp											
Margin = Final Pk - Limit											

Vertical Plot – 1-3GHz – Mid Channel

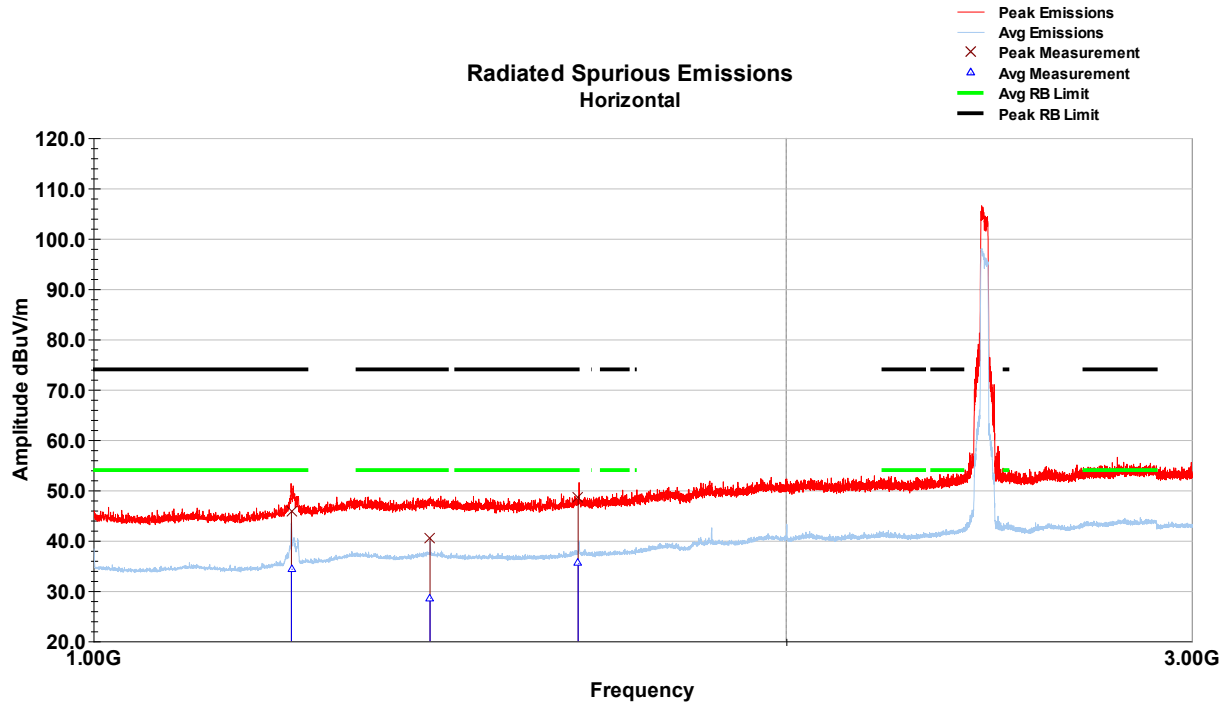


Vertical Data – 1-3GHz – Mid Channel

Frequency MHz	Raw Avg dBuV	Polarity V/H	Azimuth degrees	Height cm	AF dB/m	Loss dB	DCF dB	Amp dB	Final Avg dBuV/m	Limit dBuV/m	Margin dB
1218.84	50.8	V	45.0	186.0	28.5	1.3	0.0	34.6	46.0	54.0	-8.0
1399.80	38.9	V	152.0	189.0	29.0	1.5	0.0	34.2	35.2	54.0	-18.8
1624.52	38.7	V	32.0	130.0	28.5	1.5	0.0	34.4	34.3	54.0	-19.7
Final Avg = Raw Avg + AF + Loss - Amp											
Margin = Final Avg - Limit											

Frequency MHz	Raw Pk dBuV	Polarity (V/H)	Azimuth degrees	Height (cm)	AF (dB/m)	Loss (dB)	DCF dB	Amp (dB)	Final Pk dBuV/m	Limit dBuV/m	Margin dB
1218.84	58.9	V	45.0	186.0	28.5	1.3	0.0	34.6	54.1	74.0	-19.9
1399.80	49.5	V	152.0	189.0	29.0	1.5	0.0	34.2	45.8	74.0	-28.2
1624.52	50.9	V	32.0	130.0	28.5	1.5	0.0	34.4	46.5	74.0	-27.5
Final Pk = Raw Pk + AF + Loss - Amp											
Margin = Final Pk - Limit											

Horizontal Plot – 1-3GHz – Mid Channel

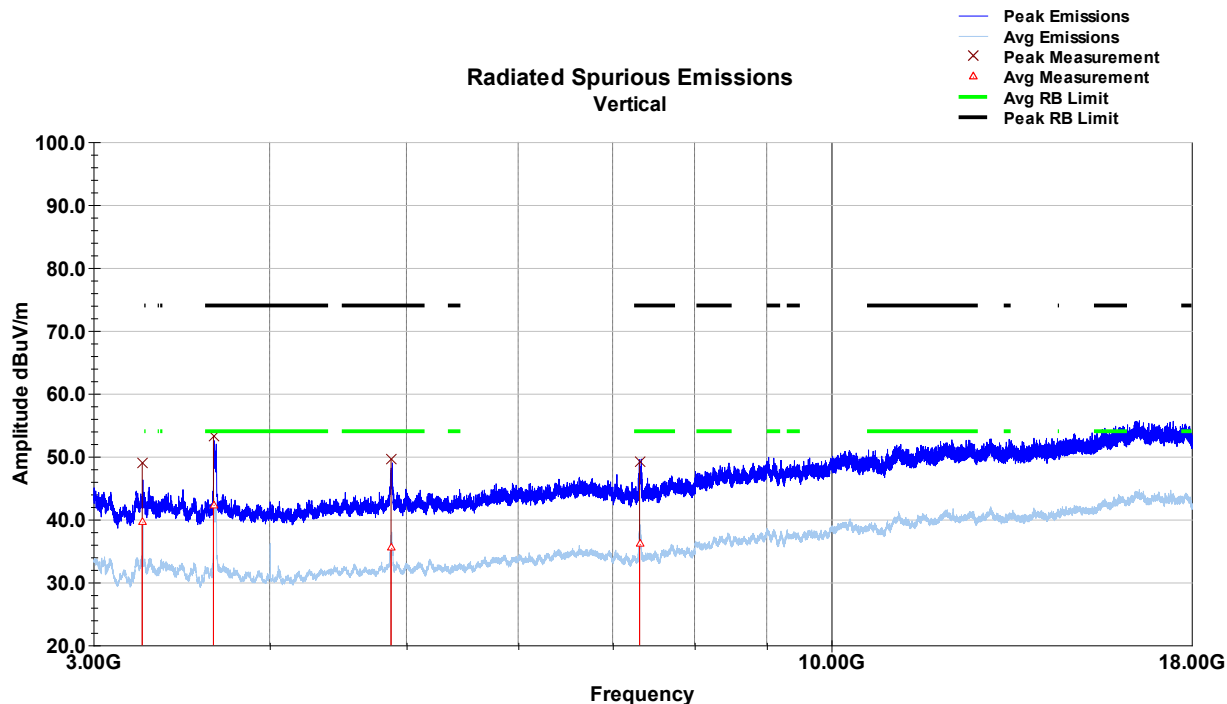


Horizontal Data – 1-3GHz – Mid Channel

Frequency MHz	Raw Avg dBuV	Polarity (V/H)	Azimuth degrees	Height (cm)	AF (dB/m)	Loss (dB)	DCF dB	Amp (dB)	avg Value dBuV/m	Limit dBuV/m	Margin (dB)
1219.16	39.2	H	71.0	120.0	28.5	1.3	0.0	34.6	34.4	54.0	-19.6
1400.56	32.4	H	272.0	129.0	29.0	1.5	0.0	34.2	28.7	54.0	-25.3
1624.20	40.0	H	118.0	100.0	28.5	1.5	0.0	34.4	35.5	54.0	-18.5
Final Avg = Raw Avg + AF + Loss - Amp											
Margin = Final Avg - Limit											

Frequency MHz	Raw Pk dBuV	Polarity (V/H)	Azimuth degrees	Height (cm)	AF (dB/m)	Loss (dB)	DCF dB	Amp (dB)	Final Pk dBuV/m	Limit dBuV/m	Margin (dB)
1219.16	50.5	H	71.0	120.0	28.5	1.3	0.0	34.6	45.8	74.0	-28.2
1400.56	44.2	H	272.0	129.0	29.0	1.5	0.0	34.2	40.4	74.0	-33.6
1624.20	53.1	H	118.0	100.0	28.5	1.5	0.0	34.4	48.7	74.0	-25.3
Final Pk = Raw Pk + AF + Loss - Amp											
Margin = Final Pk - Limit											

Vertical Plot – 3-18GHz – Mid Channel

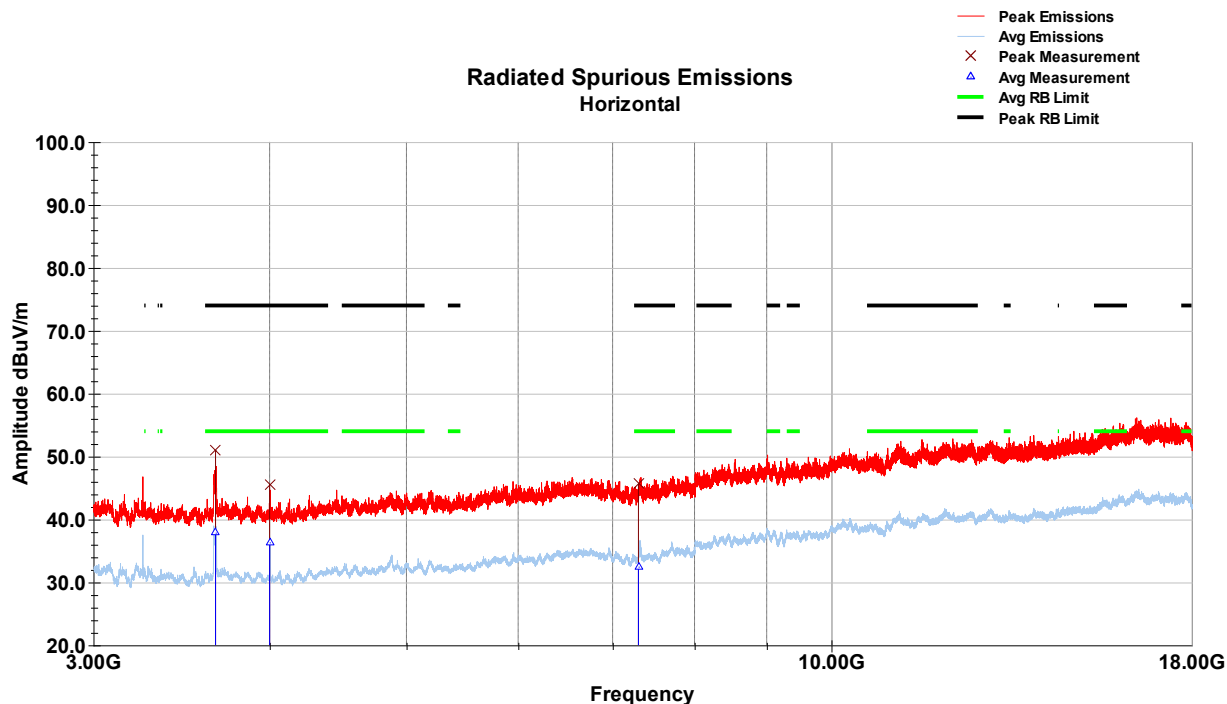


Vertical Data – 3-18GHz – Mid Channel

Frequency MHz	Raw Avg dBuV	Polarity V/H	Azimuth degrees	Height cm	AF dB/m	Loss dB	DCF dB	Amp dB	Final Avg dBuV/m	Limit dBuV/m	Margin dB
3249.44	38.6	V	50.0	223.0	32.8	2.3	0.0	34.0	39.6	54.0	-14.3
3649.44	41.6	V	83.0	249.0	33.1	2.4	0.0	34.7	42.3	54.0	-11.7
4876.20	32.7	V	60.0	250.0	34.1	2.8	0.0	34.2	35.5	54.0	-18.5
7315.00	31.7	V	78.0	137.0	35.7	3.5	0.0	34.8	36.1	54.0	-17.9
Final Avg = Raw Avg + AF + Loss - Amp											
Margin = Final Avg - Limit											

Frequency MHz	Raw Pk dBuV	Polarity (V/H)	Azimuth degrees	Height (cm)	AF (dB/m)	Loss (dB)	DCF dB	Amp (dB)	Final Pk dBuV/m	Limit dBuV/m	Margin dB
3249.44	48.0	V	50.0	223.0	32.8	2.3	0.0	34.0	49.0	74.0	-25.0
3649.44	52.5	V	83.0	249.0	33.1	2.4	0.0	34.7	53.2	74.0	-20.8
4876.20	46.8	V	60.0	250.0	34.1	2.8	0.0	34.2	49.6	74.0	-24.4
7315.00	44.8	V	78.0	137.0	35.7	3.5	0.0	34.8	49.2	74.0	-24.8
Final Pk = Raw Pk + AF + Loss - Amp											
Margin = Final Pk - Limit											

Horizontal Plot – 3-18GHz – Mid Channel

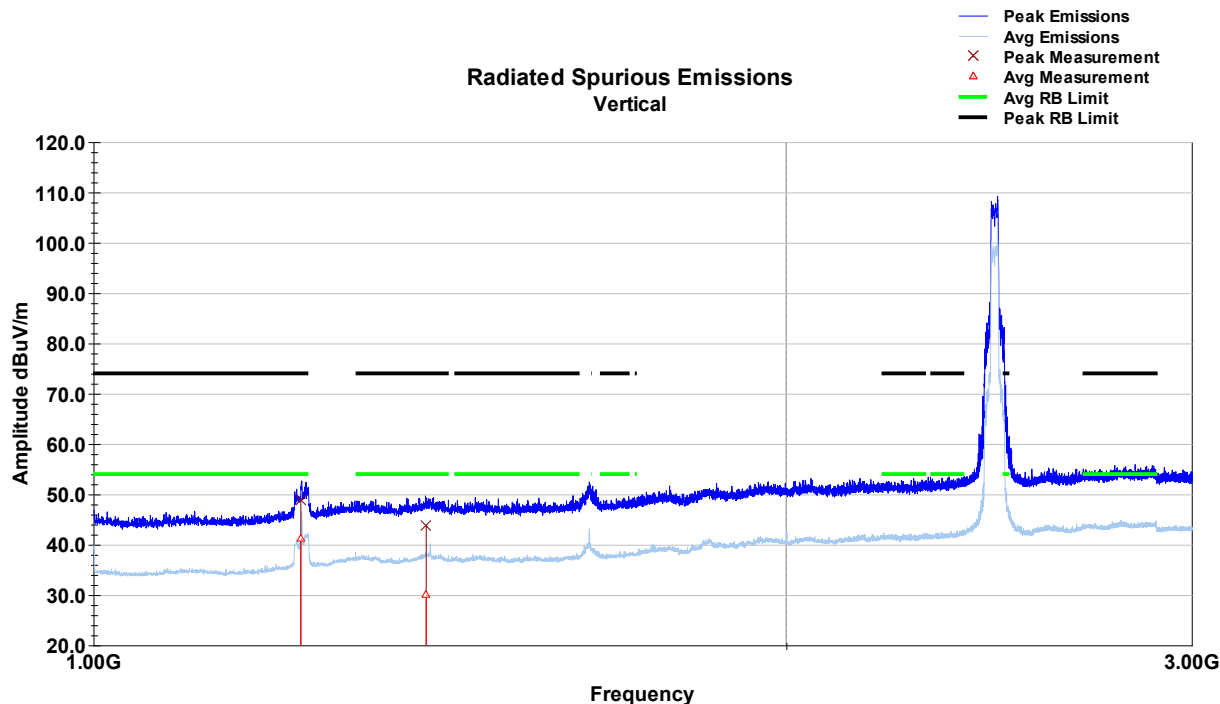


Horizontal Data – 3-18GHz – Mid Channel

Frequency MHz	Raw Avg dBuV	Polarity (V/H)	Azimuth degrees	Height (cm)	AF (dB/m)	Loss (dB)	DCF dB	Amp (dB)	avg Value dBuV/m	Limit dBuV/m	Margin (dB)
3662.20	37.1	H	71.0	249.0	33.1	2.4	0.0	34.6	37.9	54.0	-16.1
3999.80	35.1	H	359.0	100.0	33.3	2.5	0.0	34.4	36.4	54.0	-17.6
7300.40	28.2	H	242.0	229.0	35.7	3.5	0.0	34.9	32.5	54.0	-21.5
Final Avg = Raw Avg + AF + Loss - Amp											
Margin = Final Avg - Limit											

Frequency MHz	Raw Pk dBuV	Polarity (V/H)	Azimuth degrees	Height (cm)	AF (dB/m)	Loss (dB)	DCF dB	Amp (dB)	Final Pk dBuV/m	Limit dBuV/m	Margin (dB)
3662.20	50.1	H	71.0	249.0	33.1	2.4	0.0	34.6	51.0	74.0	-23.0
3999.80	44.3	H	359.0	100.0	33.3	2.5	0.0	34.4	45.6	74.0	-28.4
7300.40	41.3	H	242.0	229.0	35.7	3.5	0.0	34.9	45.7	74.0	-28.3
Final Pk = Raw Pk + AF + Loss - Amp											
Margin = Final Pk - Limit											

Vertical Plot – 1-3GHz – High Channel

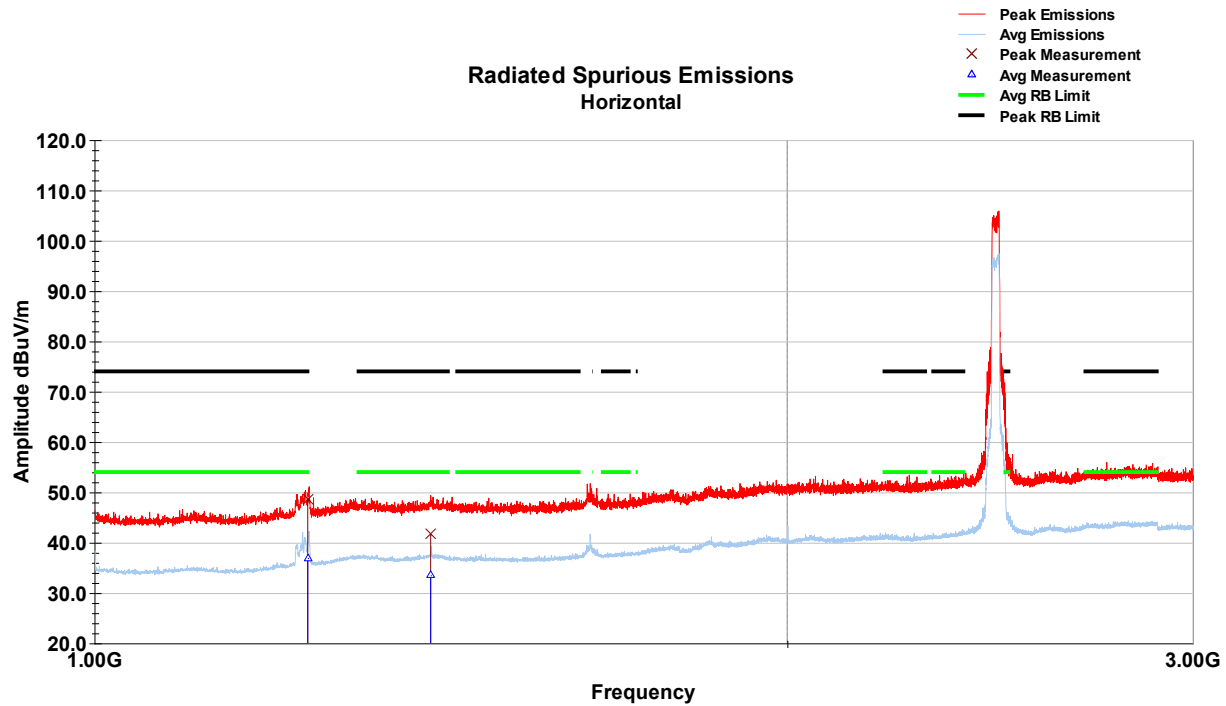


Vertical Data – 1-3GHz – High Channel

Frequency MHz	Raw Avg dBuV	Polarity V/H	Azimuth degrees	Height cm	AF dB/m	Loss dB	DCF dB	Amp dB	Final Avg dBuV/m	Limit dBuV/m	Margin dB
1230.68	45.9	V	40.0	123.0	28.7	1.4	0.0	34.7	41.2	54.0	-12.8
1395.16	33.8	V	356.0	116.0	29.0	1.5	0.0	34.3	30.0	54.0	-24.0
Final Avg = Raw Avg + AF + Loss - Amp											
Margin = Final Avg - Limit											

Frequency MHz	Raw Pk dBuV	Polarity (V/H)	Azimuth degrees	Height (cm)	AF (dB/m)	Loss (dB)	DCF dB	Amp (dB)	Final Pk dBuV/m	Limit dBuV/m	Margin dB
1230.68	53.6	V	40.0	123.0	28.7	1.4	0.0	34.7	48.9	74.0	-25.1
1395.16	47.6	V	356.0	116.0	29.0	1.5	0.0	34.3	43.8	74.0	-30.2
Final Pk = Raw Pk + AF + Loss - Amp											
Margin = Final Pk - Limit											

Horizontal Plot – 1-3GHz – High Channel

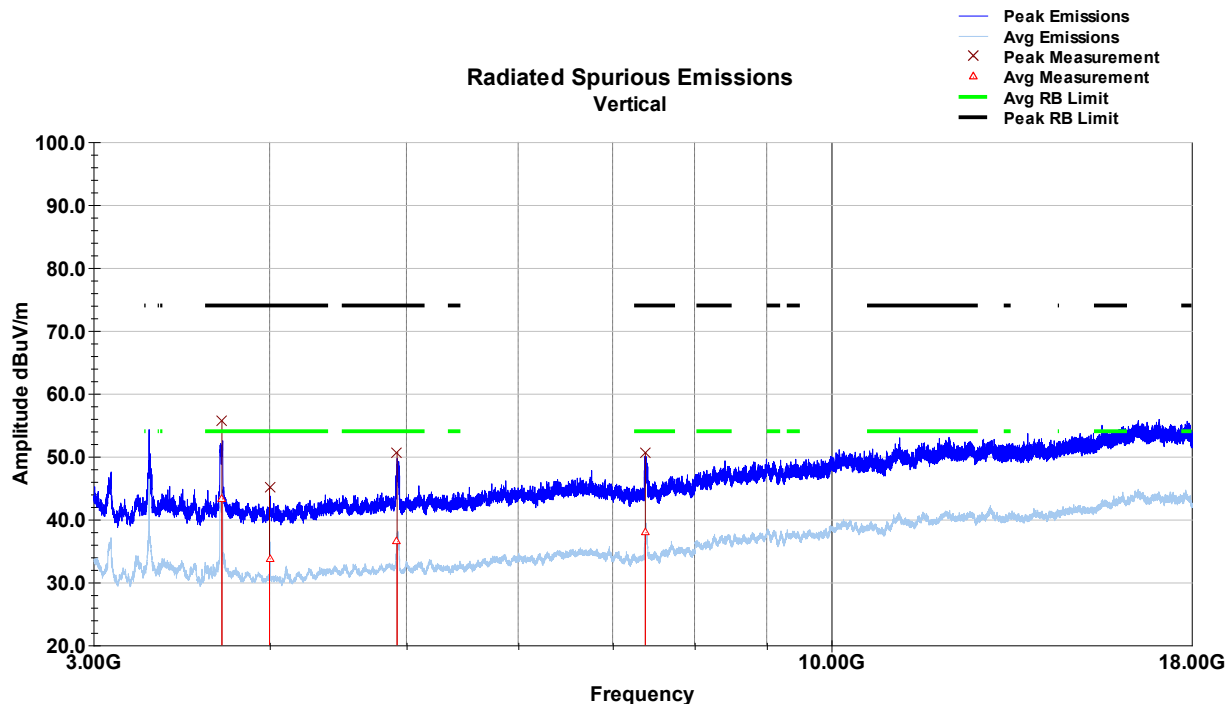


Horizontal Data – 1-3GHz – High Channel

Frequency MHz	Raw Avg dBuV	Polarity (V/H)	Azimuth degrees	Height (cm)	AF (dB/m)	Loss (dB)	DCF dB	Amp (dB)	avg Value dBuV/m	Limit dBuV/m	Margin (dB)
1238.00	41.7	H	69.0	129.0	28.7	1.4	0.0	34.8	36.9	54.0	-17.0
1399.92	37.3	H	257.0	178.0	29.0	1.5	0.0	34.2	33.5	54.0	-20.5
Final Avg = Raw Avg + AF + Loss - Amp											
Margin = Final Avg - Limit											

Frequency MHz	Raw Pk dBuV	Polarity (V/H)	Azimuth degrees	Height (cm)	AF (dB/m)	Loss (dB)	DCF dB	Amp (dB)	Final Pk dBuV/m	Limit dBuV/m	Margin (dB)
1238.00	53.3	H	69.0	129.0	28.7	1.4	0.0	34.8	48.6	74.0	-25.4
1399.92	45.4	H	257.0	178.0	29.0	1.5	0.0	34.2	41.6	74.0	-32.4
Final Pk = Raw Pk + AF + Loss - Amp											
Margin = Final Pk - Limit											

Vertical Plot – 3-18GHz – High Channel

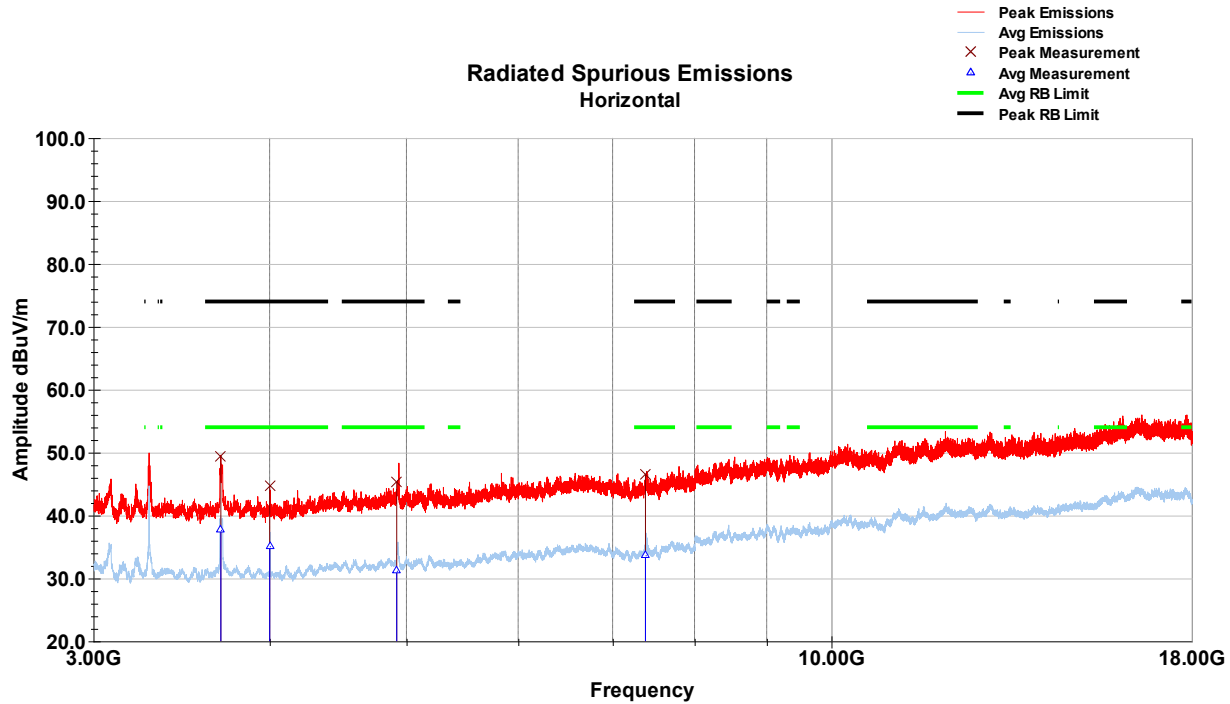


Vertical Data – 3-18GHz – High Channel

Frequency MHz	Raw Avg dBuV	Polarity V/H	Azimuth degrees	Height cm	AF dB/m	Loss dB	DCF dB	Amp dB	Final Avg dBuV/m	Limit dBuV/m	Margin dB
3700.04	42.3	V	106.0	178.0	33.1	2.4	0.0	34.4	43.3	54.0	-10.6
3999.44	32.5	V	29.0	214.0	33.3	2.5	0.0	34.4	33.8	54.0	-20.2
4924.84	33.8	V	55.0	250.0	34.1	2.9	0.0	34.2	36.5	54.0	-17.4
7384.12	33.4	V	62.0	166.0	35.7	3.6	0.0	34.6	38.0	54.0	-16.0
Final Avg = Raw Avg + AF + Loss - Amp											
Margin = Final Avg - Limit											

Frequency MHz	Raw Pk dBuV	Polarity (V/H)	Azimuth degrees	Height (cm)	AF (dB/m)	Loss (dB)	DCF dB	Amp (dB)	Final Pk dBuV/m	Limit dBuV/m	Margin dB
3700.04	54.6	V	106.0	178.0	33.1	2.4	0.0	34.4	55.7	74.0	-18.3
3999.44	43.7	V	29.0	214.0	33.3	2.5	0.0	34.4	45.0	74.0	-29.0
4924.84	47.9	V	55.0	250.0	34.1	2.9	0.0	34.2	50.7	74.0	-23.3
7384.12	46.0	V	62.0	166.0	35.7	3.6	0.0	34.6	50.7	74.0	-23.3
Final Pk = Raw Pk + AF + Loss - Amp											
Margin = Final Pk - Limit											

Horizontal Plot – 3-18GHz – High Channel



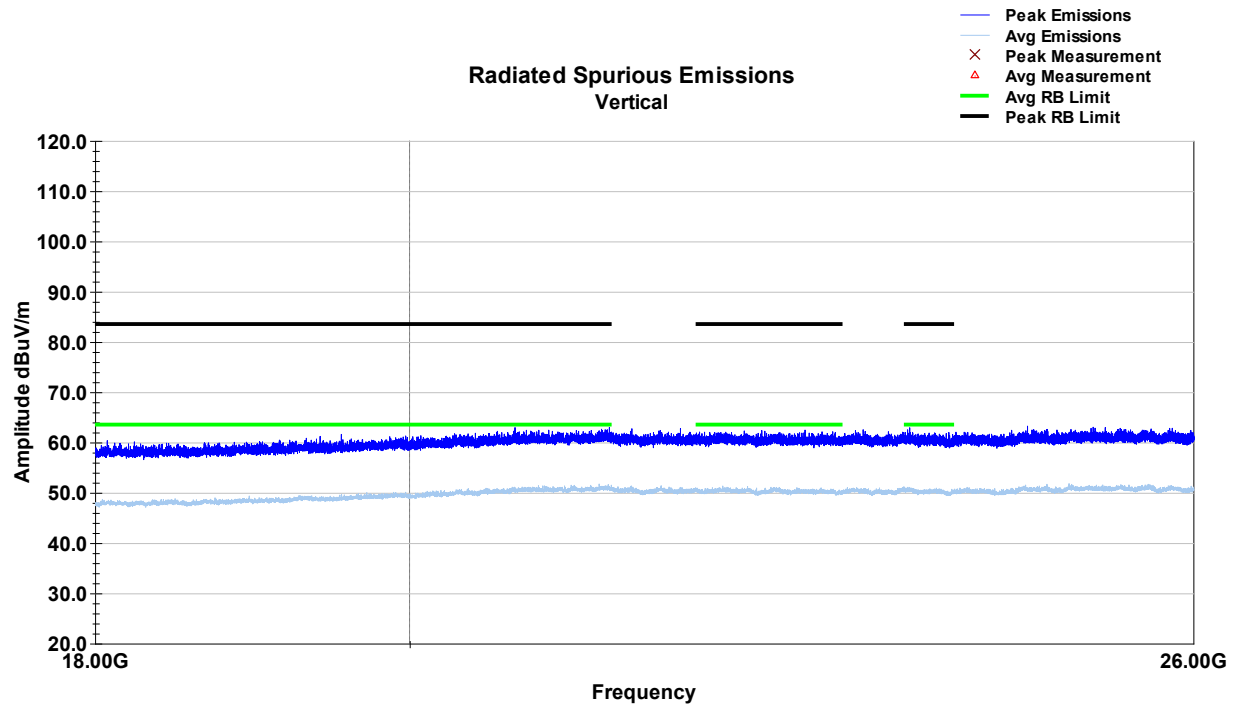
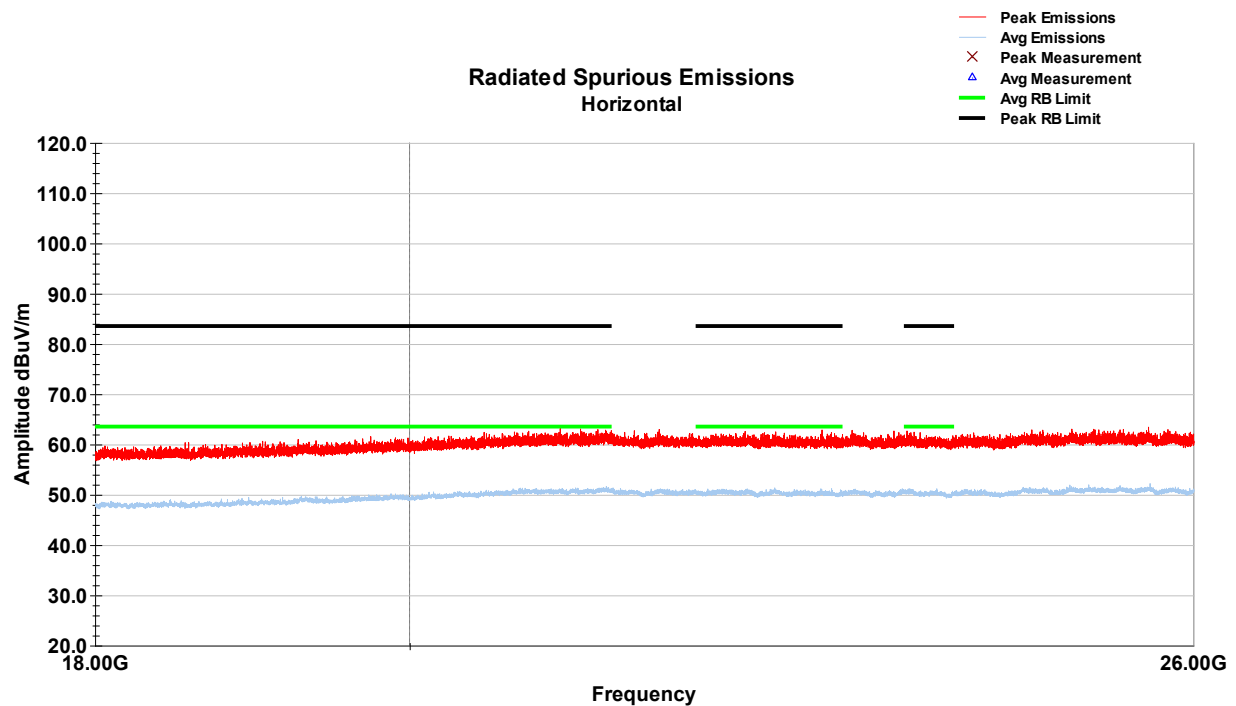
Horizontal Data – 3-18GHz – High Channel

Frequency MHz	Raw Avg dBuV	Polarity (V/H)	Azimuth degrees	Height (cm)	AF (dB/m)	Loss (dB)	DCF dB	Amp (dB)	avg Value dBuV/m	Limit dBuV/m	Margin (dB)
3693.76	36.7	H	68.0	250.0	33.1	2.4	0.0	34.4	37.7	54.0	-16.3
4000.28	33.8	H	356.0	100.0	33.3	2.5	0.0	34.4	35.1	54.0	-18.9
4921.48	28.4	H	159.0	182.0	34.1	2.9	0.0	34.2	31.2	54.0	-22.8
7384.96	29.1	H	99.0	240.0	35.7	3.6	0.0	34.6	33.7	54.0	-20.3
Final Avg = Raw Avg + AF + Loss - Amp											
Margin = Final Avg - Limit											

Frequency MHz	Raw Pk dBuV	Polarity (V/H)	Azimuth degrees	Height (cm)	AF (dB/m)	Loss (dB)	DCF dB	Amp (dB)	Final Pk dBuV/m	Limit dBuV/m	Margin dB
3693.76	48.3	H	68.0	250.0	33.1	2.4	0.0	34.4	49.4	74.0	-24.6
4000.28	43.4	H	356.0	100.0	33.3	2.5	0.0	34.4	44.7	74.0	-29.3
4921.48	42.6	H	159.0	182.0	34.1	2.9	0.0	34.2	45.4	74.0	-28.6
7384.96	41.9	H	99.0	240.0	35.7	3.6	0.0	34.6	46.5	74.0	-27.5
Final Pk = Raw Pk + AF + Loss - Amp											
Margin = Final Pk - Limit											

3.7.4 18-26 GHz

All channels had similar plots in the 18-26GHz frequency range.

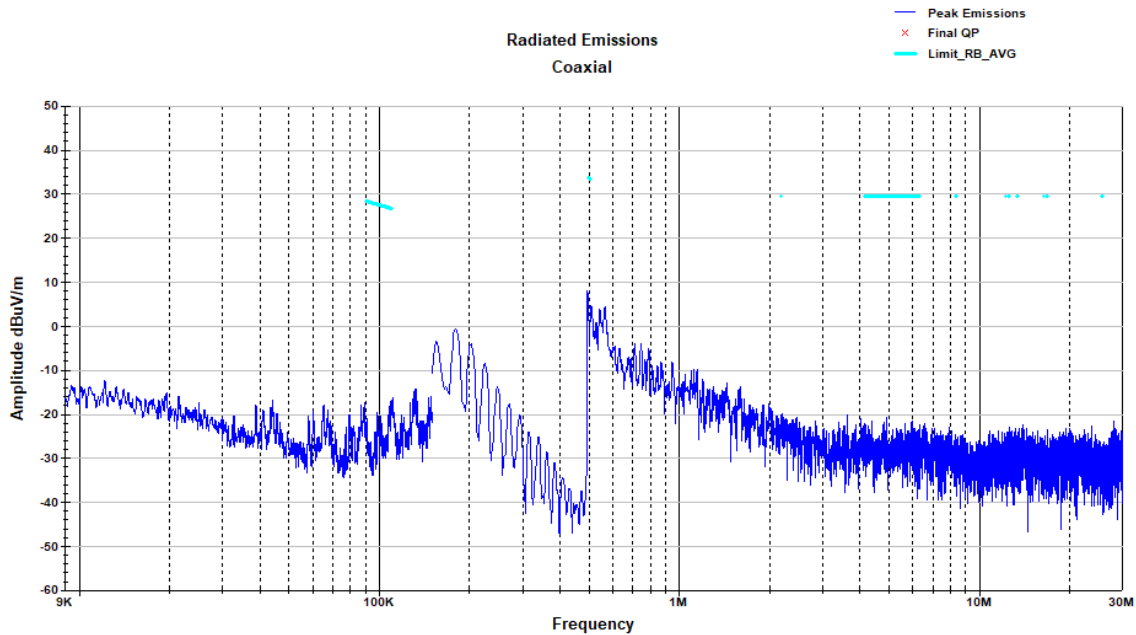


3.8 Test Data – Bluetooth Classic

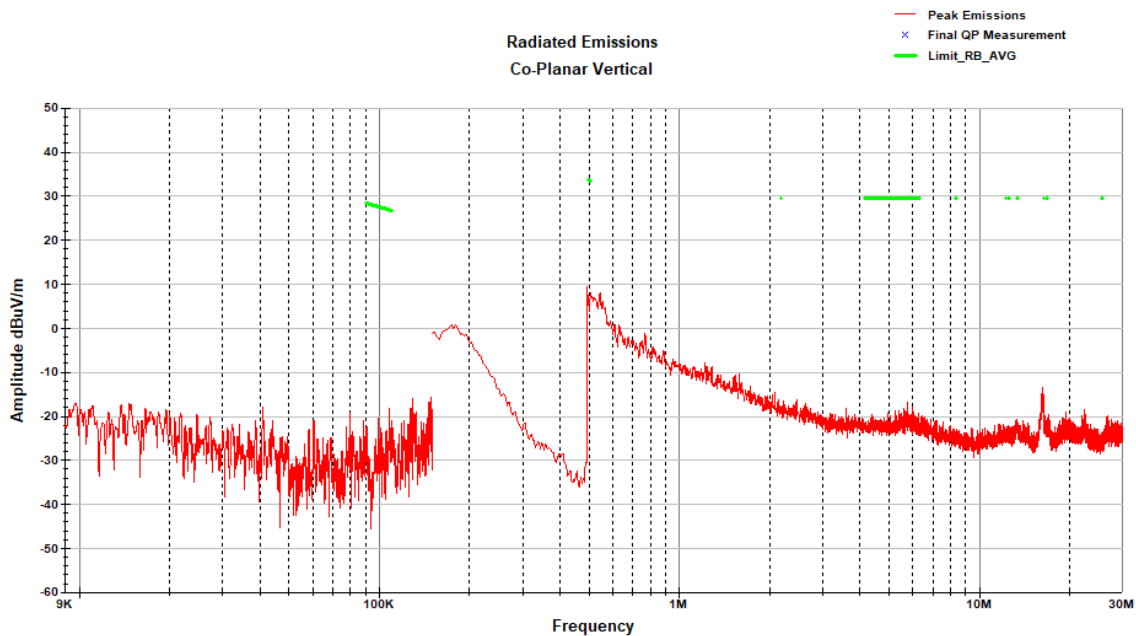
3.8.1 9kHz – 30MHz

All channels had similar plots in the 9kHz to 30MHz frequency range.

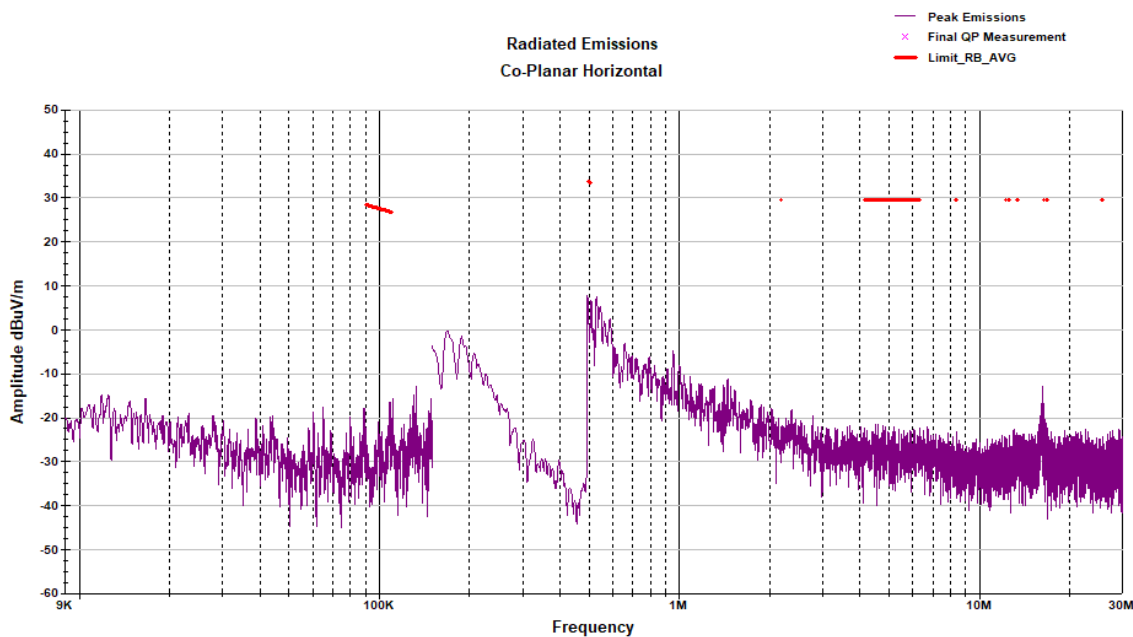
Coaxial Plot – 9 kHz-30MHz – Mid Channel



Co-Planar Vertical Plot – 9 kHz-30MHz – Mid Channel



Co-Planar Horizontal Plot – 9 kHz-30MHz – Mid Channel

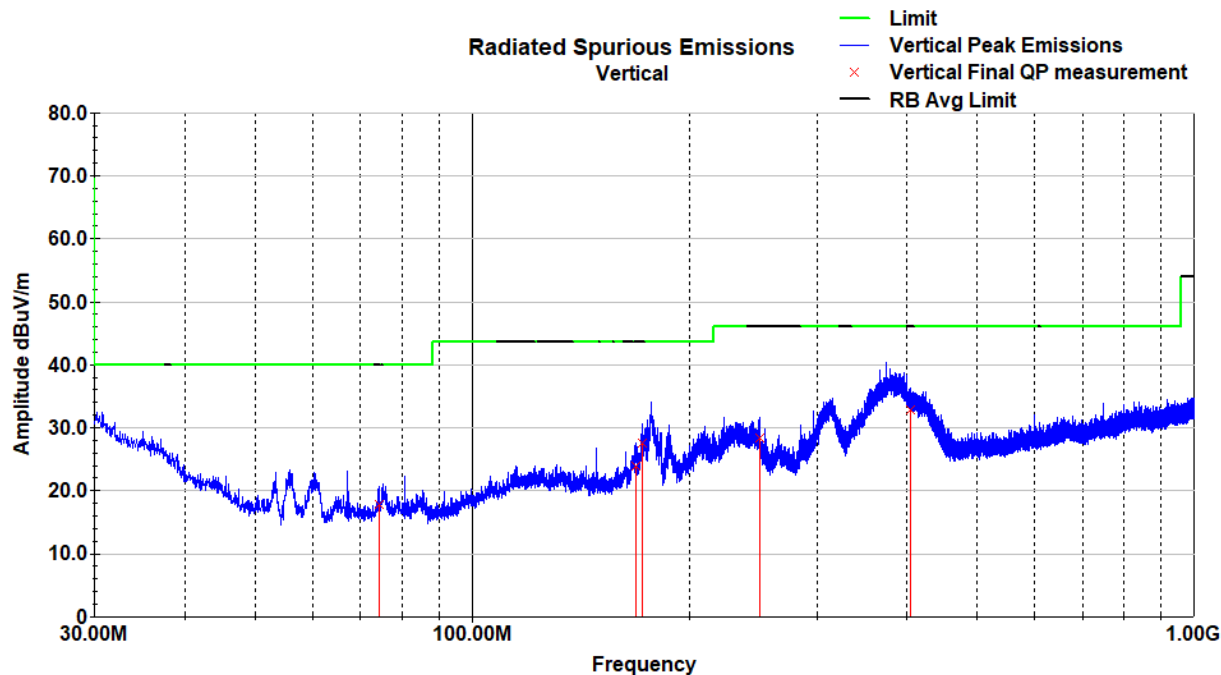


No emissions within 20dB of the limit

3.8.2 30-1000 MHz

All channels were measured and had similar plots – the worst-case plots are shown below.

Vertical Plot – 30-1000MHz – Low Channel



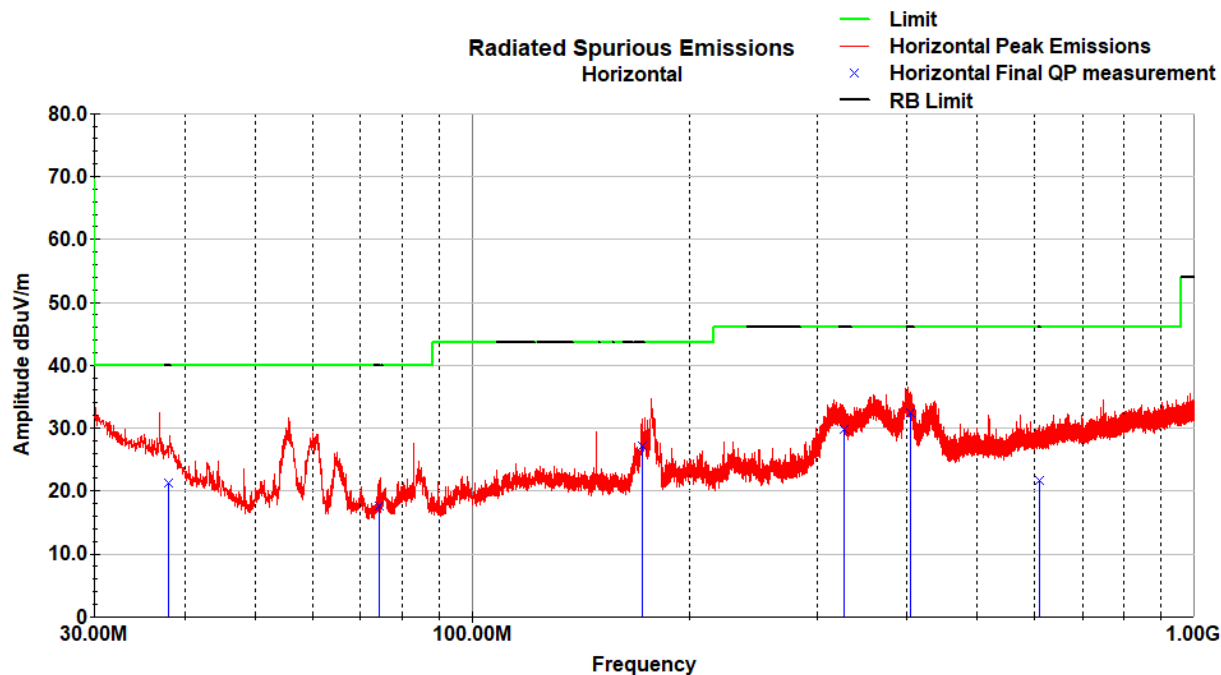
Vertical Data – 30-1000MHz – Low Channel

Frequency MHz	Raw QP (dBuV)	Polarity (V/H)	Azimuth (degrees)	Height (cm)	AF (dB/m)	Loss (dB)	Amp (dB)	QP Value (dBuV/m)	Limit (dBuV/m)	Margin (dB)
74.23	35.7	V	198.0	387.0	12.2	0.5	30.6	17.8	40.0	-22.2
168.43	37.2	V	104.0	185.0	16.3	0.8	30.4	23.9	43.5	-19.6
171.68	41.3	V	53.0	144.0	15.8	0.8	30.4	27.6	43.5	-15.9
249.92	41.3	V	119.0	100.0	16.2	1.2	30.3	28.4	46.0	-17.6
404.63	40.6	V	98.0	100.0	20.4	1.7	29.9	32.8	46.0	-13.2
QP Value = Raw QP + AF + Loss - Amp										
Margin = QP Value - Limit										

Frequency MHz	Polarity (V/H)	Peak Value (dBuV/m)	QP Limit (dBuV/m)	Margin (dB)
37.66	V	26.4	40.0	-13.6

Margin = Peak Value - QP Limit

Horizontal Plot – 30-1000MHz – Low Channel

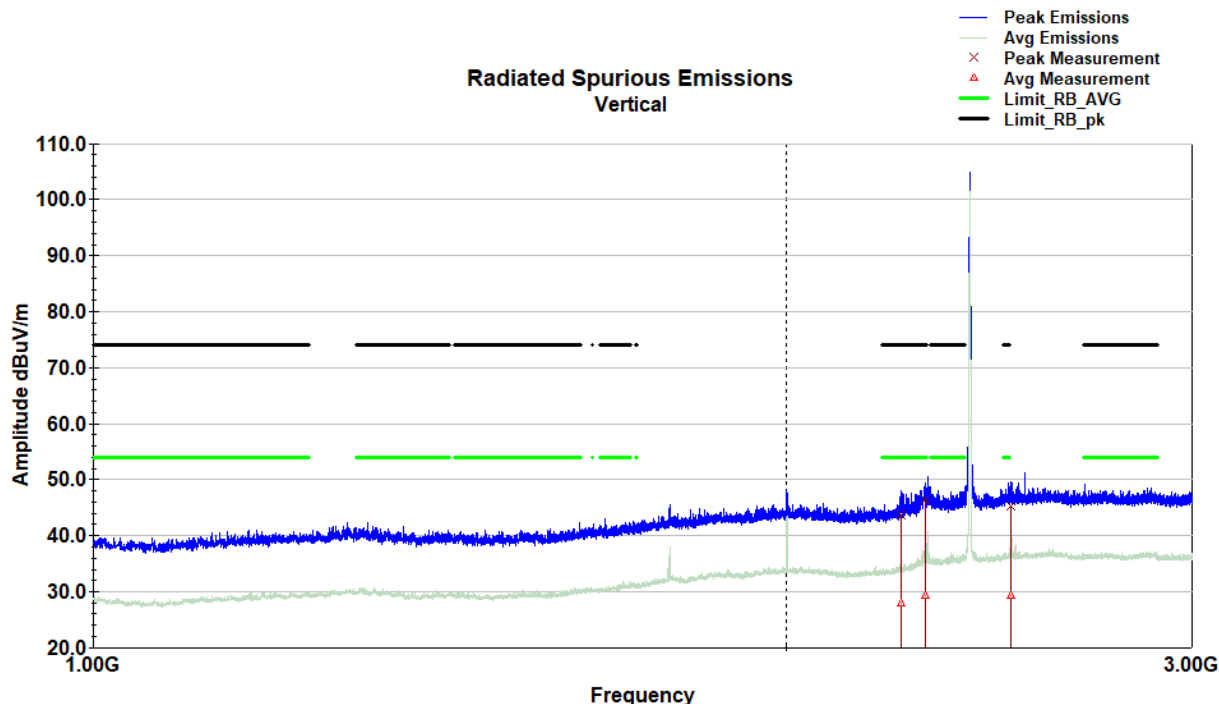


Horizontal Data – 30-1000MHz – Low Channel

Frequency MHz	Raw QP (dBuV)	Polarity (V/H)	Azimuth (degrees)	Height (cm)	AF (dB/m)	Loss (dB)	Amp (dB)	QP Value (dBuV/m)	Limit (dBuV/m)	Margin (dB)
37.97	31.6	H	110.0	100.0	20.0	0.3	30.7	21.3	40.0	-18.7
74.22	35.6	H	153.0	159.0	12.2	0.5	30.6	17.7	40.0	-22.3
171.75	40.7	H	153.0	100.0	15.8	0.8	30.4	27.1	43.5	-16.5
327.21	39.8	H	177.0	100.0	18.7	1.5	30.2	29.9	46.0	-16.2
404.59	40.1	H	200.0	129.0	20.4	1.7	30.0	32.4	46.0	-13.6
610.52	25.7	H	70.0	177.0	23.8	1.9	29.8	21.7	46.0	-24.3
QP Value = Raw QP + AF + Loss - Amp										
Margin = QP Value - Limit										

3.8.3 1-18 GHz

Vertical Plot – 1-3GHz – Low Channel

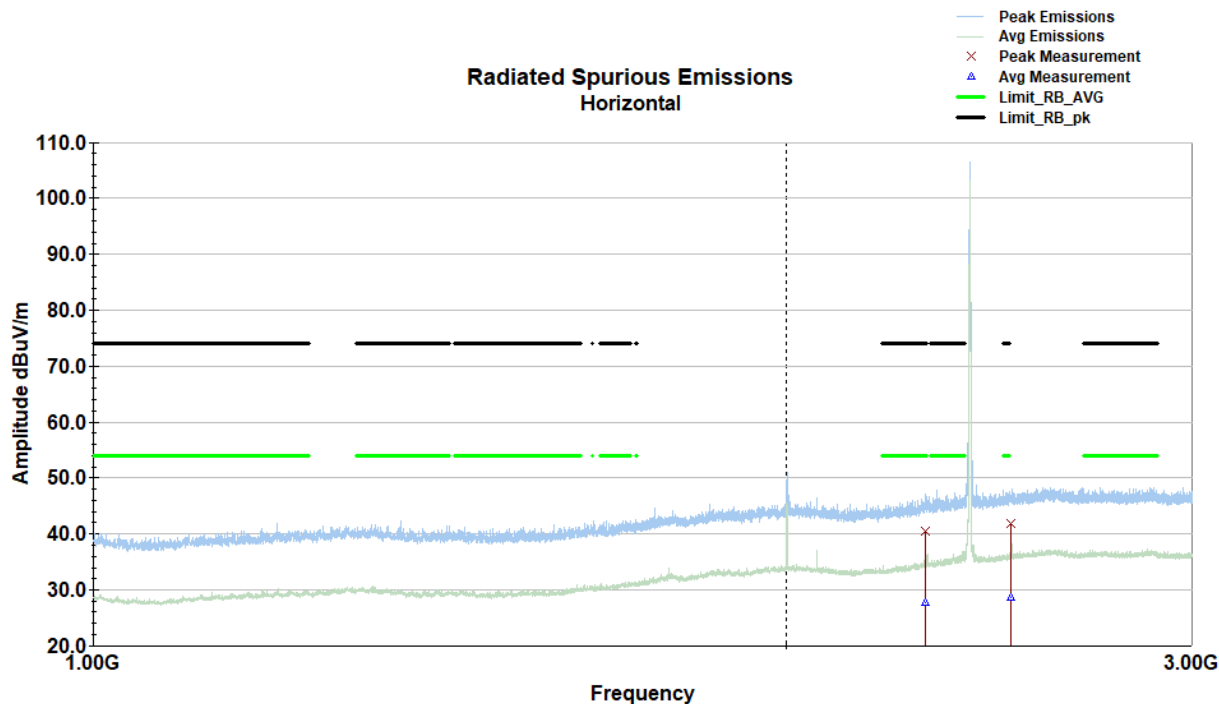


Vertical Data – 1-3GHz – Low Channel

Frequency MHz	Raw Avg dBuV	Polarity V/H	Azimuth degrees	Height cm	AF dB/m	Loss dB	DCF dB	Amp dB	Final Avg dBuV/m	Limit dBuV/m	Margin dB
2241.66	37.3	V	41.0	122.0	31.5	1.8	0.0	42.6	28.0	54.0	-25.90
2298.46	38.1	V	122.0	102.0	31.8	1.9	0.0	42.5	29.3	54.0	-24.70
2500.92	37.3	V	121.0	187.0	32.5	2.0	0.0	42.4	29.3	54.0	-24.60
Final Avg = Raw Avg + AF + Loss + DCF - Amp											
Margin = Final Avg - Limit											

Frequency MHz	Raw Pk (dBuV)	Polarity (V/H)	Azimuth (degrees)	Height (cm)	AF (dB/m)	Loss (dB)	DCF (dB)	Amp (dB)	Final Pk (dBuV/m)	Limit (dBuV/m)	Margin (dB)
2241.66	52.9	V	41.0	122.0	31.5	1.8	0.0	42.6	43.7	74.0	-30.30
2298.46	55.1	V	122.0	102.0	31.8	1.9	0.0	42.5	46.3	74.0	-27.70
2500.92	53.2	V	121.0	187.0	32.5	2.0	0.0	42.4	45.3	74.0	-28.70
Final Pk = Raw Pk + AF + Loss + DCF - Amp											
Margin = Final Pk - Limit											

Horizontal Plot – 1-3GHz – Low Channel

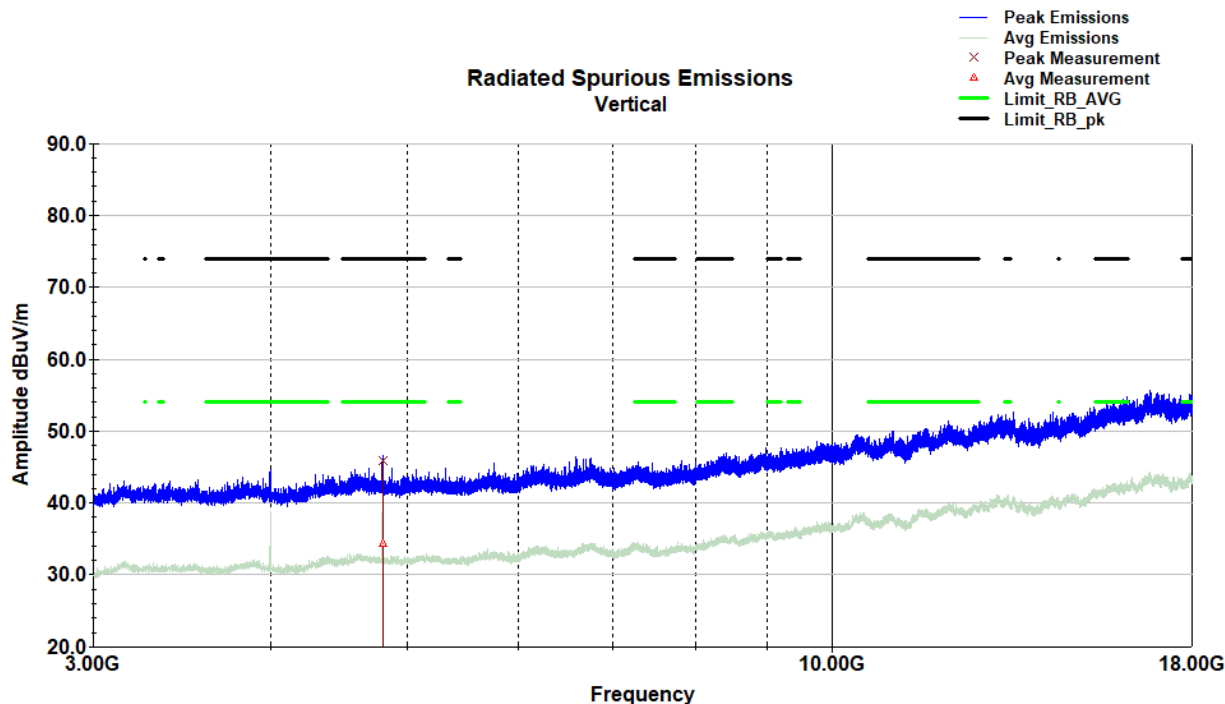


Horizontal Data – 1-3GHz – Low Channel

Frequency MHz	Raw Avg dBuV	Polarity (V/H)	Azimuth (degrees)	Height (cm)	AF (dB/m)	Loss (dB)	DCF dB	Amp (dB)	Avg Value dBuV/m	Limit (dBuV/m)	Margin (dB)
2298.59	36.6	H	223.0	164.0	31.8	1.9	0.0	42.5	27.8	54.0	-26.2
2503.57	36.5	H	242.0	131.0	32.5	2.0	0.0	42.4	28.5	54.0	-25.5
Avg + AF + Loss + DCF - Amp											
n = Final Avg - Limit											

Frequency MHz	Raw Pk dBuV	Polarity (V/H)	Azimuth (degrees)	Height (cm)	AF (dB/m)	Loss (dB)	DCF dB	Amp (dB)	Final Pk dBuV/m	Limit dBuV/m	Margin dB
2298.59	49.3	H	223.0	164.0	31.8	1.9	0.0	42.5	40.5	74.0	-33.5
2503.57	49.8	H	242.0	131.0	32.5	2.0	0.0	42.4	41.9	74.0	-32.1
Final Pk = Raw Pk + AF + Loss + DCF - Amp											
Margin = Final Pk - Limit											

Vertical Plot – 3-18GHz – Low Channel



Vertical Data – 3-18GHz – Low Channel

Frequency MHz	Raw Avg dBuV	Polarity V/H	Azimuth degrees	Height cm	AF dB/m	Loss dB	DCF dB	Amp dB	Final Avg dBuV/m	Limit dBuV/m	Margin dB
4804.75	39.7	V	88.0	125.0	34.4	2.5	0.0	42.3	34.3	54.0	-19.70
Final Avg = Raw Avg + AF + Loss + DCF - Amp											
Margin = Final Avg - Limit											

Frequency MHz	Raw Pk (dBuV)	Polarity (V/H)	Azimuth (degrees)	Height (cm)	AF (dB/m)	Loss (dB)	DCF (dB)	Amp (dB)	Final Pk (dBuV/m)	Limit (dBuV/m)	Margin (dB)
4804.75	51.3	V	88.0	125.0	34.4	2.5	0.0	42.3	45.9	74.0	-28.10
Final Pk = Raw Pk + AF + Loss + DCF - Amp											
Margin = Final Pk - Limit											

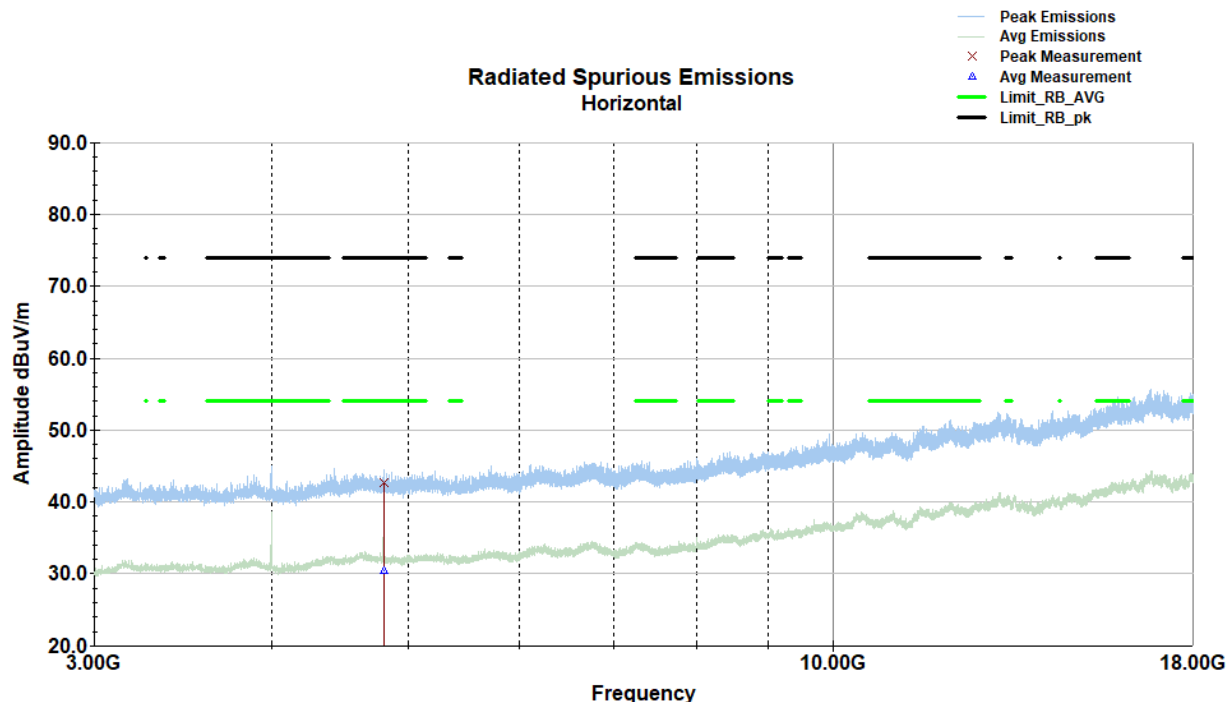
Frequency (GHz)	Polarity (V/H)	Avg Value (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)
16.18	V	43.1	54.0	-10.9
17.94	V	44.2	54.0	-9.8

Margin = Avg Value - Avg Limit

Frequency (GHz)	Polarity (V/H)	Peak Value (dBuV/m)	Peak Limit (dBuV/m)	Margin (dB)
16.19	V	54.8	74.0	-19.2
17.94	V	55.2	74.0	-18.9

Margin = Peak Value - Peak Limit

Horizontal Plot – 3-18GHz – Low Channel



Horizontal Data – 3-18GHz – Low Channel

Frequency MHz	Raw Avg dBuV	Polarity (V/H)	Azimuth degrees	Height (cm)	AF (dB/m)	Loss (dB)	DCF dB	Amp (dB)	Avg Value dBuV/m	Limit dBuV/m	Margin (dB)
4811.17	35.8	H	130.0	217.0	34.4	2.5	0.0	42.3	30.4	54.0	-23.6
Final Avg = Raw Avg + AF + Loss + DCF - Amp											
Margin = Final Avg - Limit											

Frequency MHz	Raw Pk dBuV	Polarity (V/H)	Azimuth degrees	Height (cm)	AF (dB/m)	Loss (dB)	DCF dB	Amp (dB)	Final Pk dBuV/m	Limit dBuV/m	Margin dB
4811.17	48.0	H	130.0	217.0	34.4	2.5	0.0	42.3	42.6	74.0	-31.4
Final Pk = Raw Pk + AF + Loss + DCF - Amp											
Margin = Final Pk - Limit											

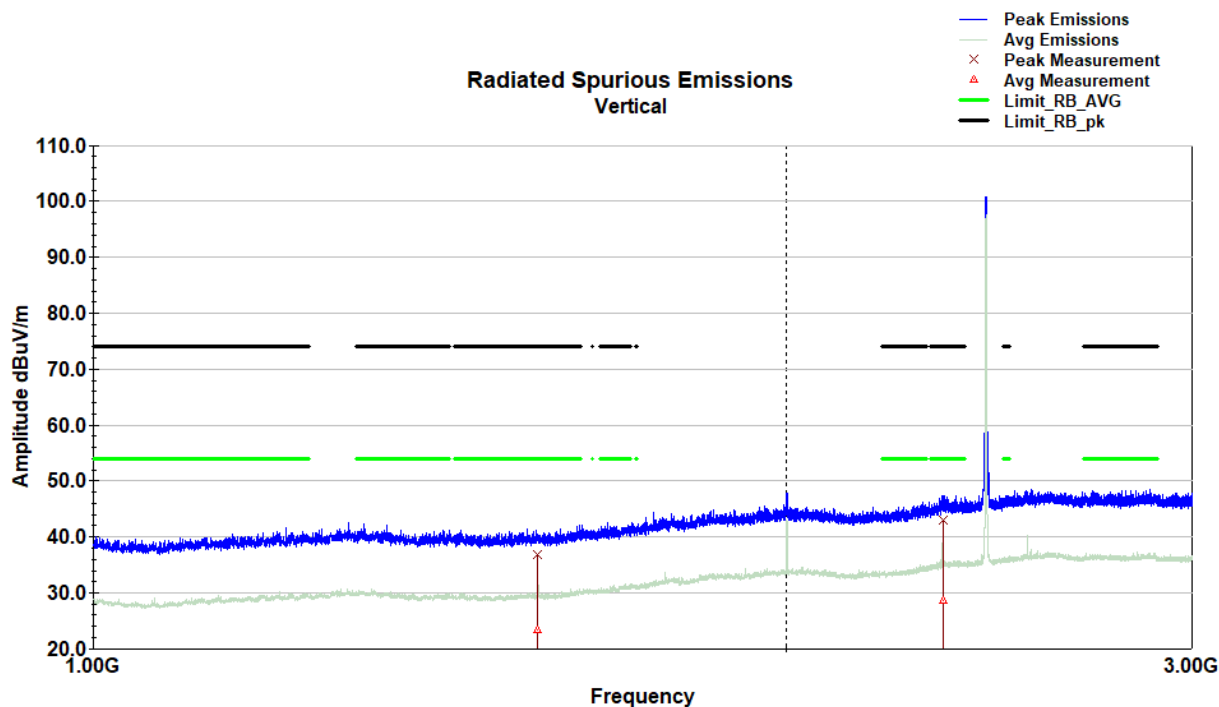
Frequency (GHz)	Polarity (V/H)	Avg Value (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)
16.05	H	43.0	54.0	-11.0
17.94	H	43.9	54.0	-10.1
17.95	H	44.0	54.0	-10.0

Margin = Avg Value - Avg Limit

Frequency (GHz)	Polarity (V/H)	Peak Value (dBuV/m)	Peak Limit (dBuV/m)	Margin (dB)
15.91	H	54.6	74.0	-19.4
17.94	H	55.0	74.0	-19.0
17.99	H	54.9	74.0	-19.1

Margin = Peak Value - Peak Limit

Vertical Plot – 1-3GHz – Mid Channel

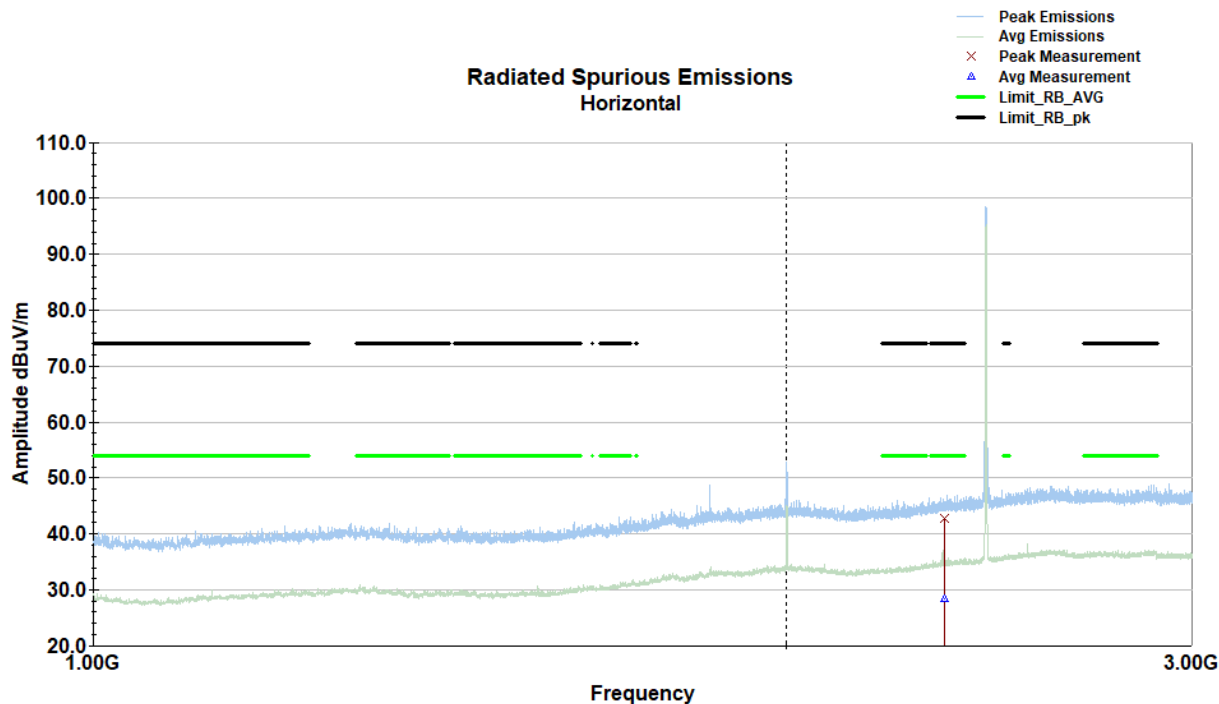


Vertical Data – 1-3GHz – Mid Channel

Frequency MHz	Raw Avg dBuV	Polarity V/H	Azimuth degrees	Height cm	AF dB/m	Loss dB	DCF dB	Amp dB	Final Avg dBuV/m	Limit dBuV/m	Margin dB
1558.06	37.0	V	201.0	160.0	27.8	1.4	0.0	42.8	23.4	54.0	-30.50
2337.94	37.2	V	29.0	102.0	31.9	1.9	0.0	42.4	28.6	54.0	-25.40
Avg + AF + Loss + DCF - Amp											
Margin = Final Avg - Limit											

Frequency MHz	Raw Pk (dBuV)	Polarity (V/H)	Azimuth (degrees)	Height (cm)	AF (dB/m)	Loss (dB)	DCF (dB)	Amp (dB)	Final Pk (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1558.06	50.4	V	201.0	160.0	27.8	1.4	0.0	42.8	36.9	74.0	-37.10
2337.94	51.6	V	29.0	102.0	31.9	1.9	0.0	42.4	43.0	74.0	-31.00
Final Pk = Raw Pk + AF + Loss + DCF - Amp											
Margin = Final Pk - Limit											

Horizontal Plot – 1-3GHz – Mid Channel

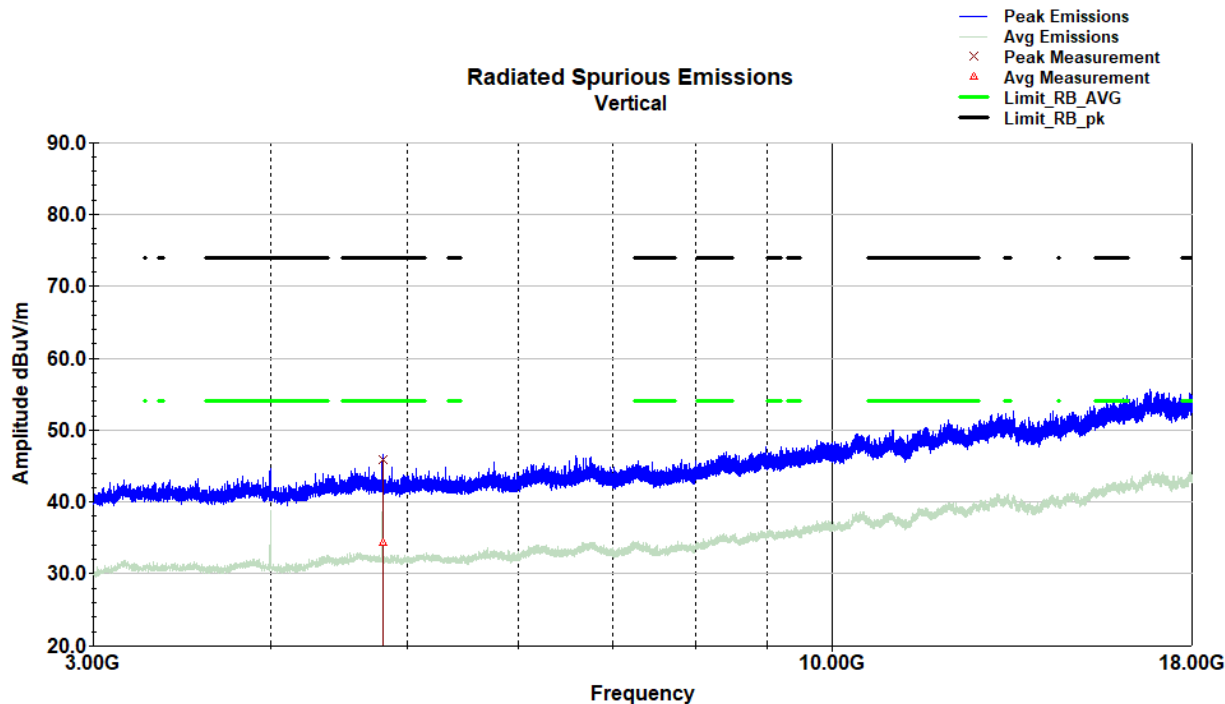


Horizontal Data – 1-3GHz – Mid Channel

Frequency MHz	Raw Avg dBuV	Polarity (V/H)	Azimuth (degrees)	Height (cm)	AF (dB/m)	Loss (dB)	DCF dB	Amp (dB)	Avg Value dBuV/m	Limit (dBuV/m)	Margin (dB)
2340.54	37.0	H	124.0	112.0	31.9	1.9	0.0	42.4	28.4	54.0	-25.5
Avg + AF + Loss + DCF - Amp											
n = Final Avg - Limit											

Frequency MHz	Raw Pk dBuV	Polarity (V/H)	Azimuth (degrees)	Height (cm)	AF (dB/m)	Loss (dB)	DCF dB	Amp (dB)	Final Pk dBuV/m	Limit dBuV/m	Margin dB
2340.54	51.4	H	124.0	112.0	31.9	1.9	0.0	42.4	42.8	74.0	-31.2
Final Pk = Raw Pk + AF + Loss + DCF - Amp											
Margin = Final Pk - Limit											

Vertical Plot – 3-18GHz – Mid Channel



Vertical Data – 3-18GHz – Mid Channel

Frequency MHz	Raw Avg dBuV	Polarity V/H	Azimuth degrees	Height cm	AF dB/m	Loss dB	DCF dB	Amp dB	Final Avg dBuV/m	Limit dBuV/m	Margin dB
4804.75	39.7	V	88.0	125.0	34.4	2.5	0.0	42.3	34.3	54.0	-19.70
Final Avg = Raw Avg + AF + Loss + DCF - Amp											
Margin = Final Avg - Limit											

Frequency MHz	Raw Pk (dBuV)	Polarity (V/H)	Azimuth degrees	Height (cm)	AF (dB/m)	Loss (dB)	DCF (dB)	Amp (dB)	Final Pk dBuV/m	Limit dBuV/m	Margin (dB)
4804.75	51.3	V	88.0	125.0	34.4	2.5	0.0	42.3	45.9	74.0	-28.10
Final Pk = Raw Pk + AF + Loss + DCF - Amp											
Margin = Final Pk - Limit											

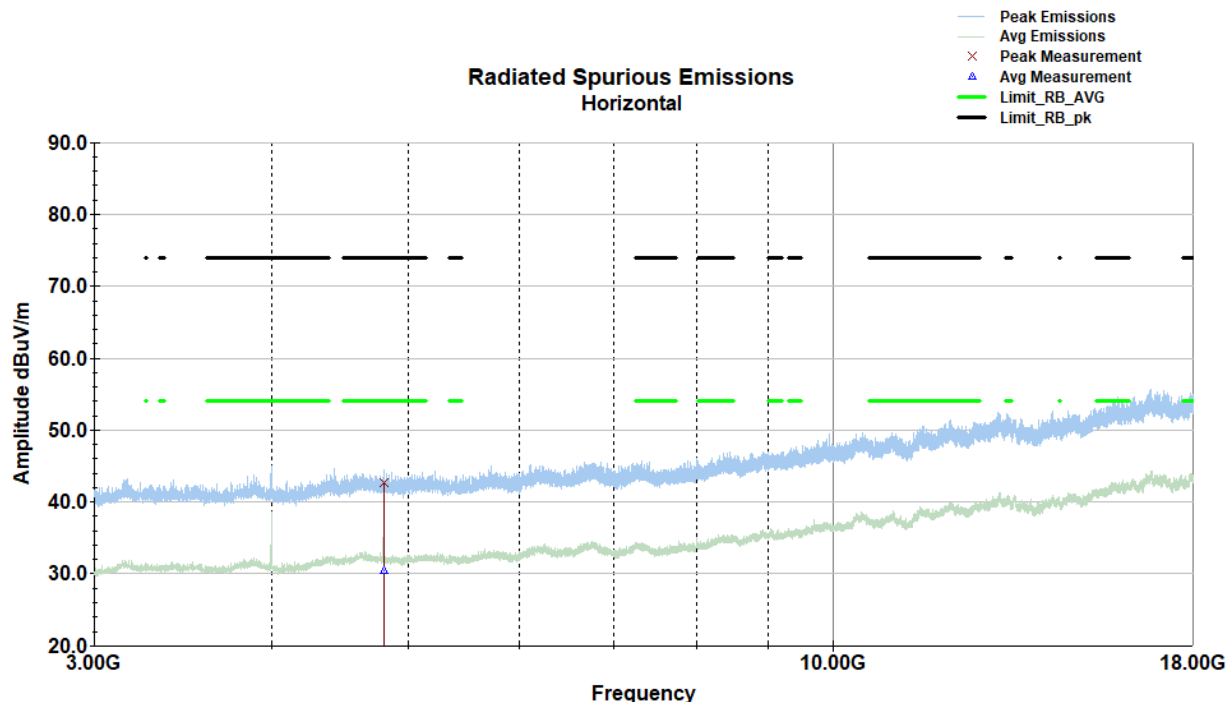
Frequency (GHz)	Polarity (V/H)	Avg Value (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)
16.18	V	43.1	54.0	-10.9
17.92	V	44.0	54.0	-10.0
17.94	V	44.2	54.0	-9.8

Margin = Avg Value - Avg Limit

Frequency (GHz)	Polarity (V/H)	Peak Value (dBuV/m)	Peak Limit (dBuV/m)	Margin (dB)
16.19	V	54.8	74.0	-19.2
17.94	V	55.2	74.0	-18.8
17.96	V	55.0	74.0	-19.0

Margin = Peak Value - Peak Limit

Horizontal Plot – 3-18GHz – Mid Channel



Horizontal Data – 3-18GHz – Mid Channel

Frequency MHz	Raw Avg dBuV	Polarity (V/H)	Azimuth degrees	Height (cm)	AF (dB/m)	Loss (dB)	DCF dB	Amp (dB)	Avg Value dBuV/m	Limit dBuV/m	Margin (dB)
4811.17	35.8	H	130.0	217.0	34.4	2.5	0.0	42.3	30.4	54.0	-23.6

Final Avg = Raw Avg + AF + Loss + DCF - Amp

Margin = Final Avg - Limit

Frequency MHz	Raw Pk dBuV	Polarity (V/H)	Azimuth degrees	Height (cm)	AF (dB/m)	Loss (dB)	DCF dB	Amp (dB)	Final Pk dBuV/m	Limit dBuV/m	Margin dB
4811.17	48.0	H	130.0	217.0	34.4	2.5	0.0	42.3	42.6	74.0	-31.4

Final Pk = Raw Pk + AF + Loss + DCF - Amp

Margin = Final Pk - Limit

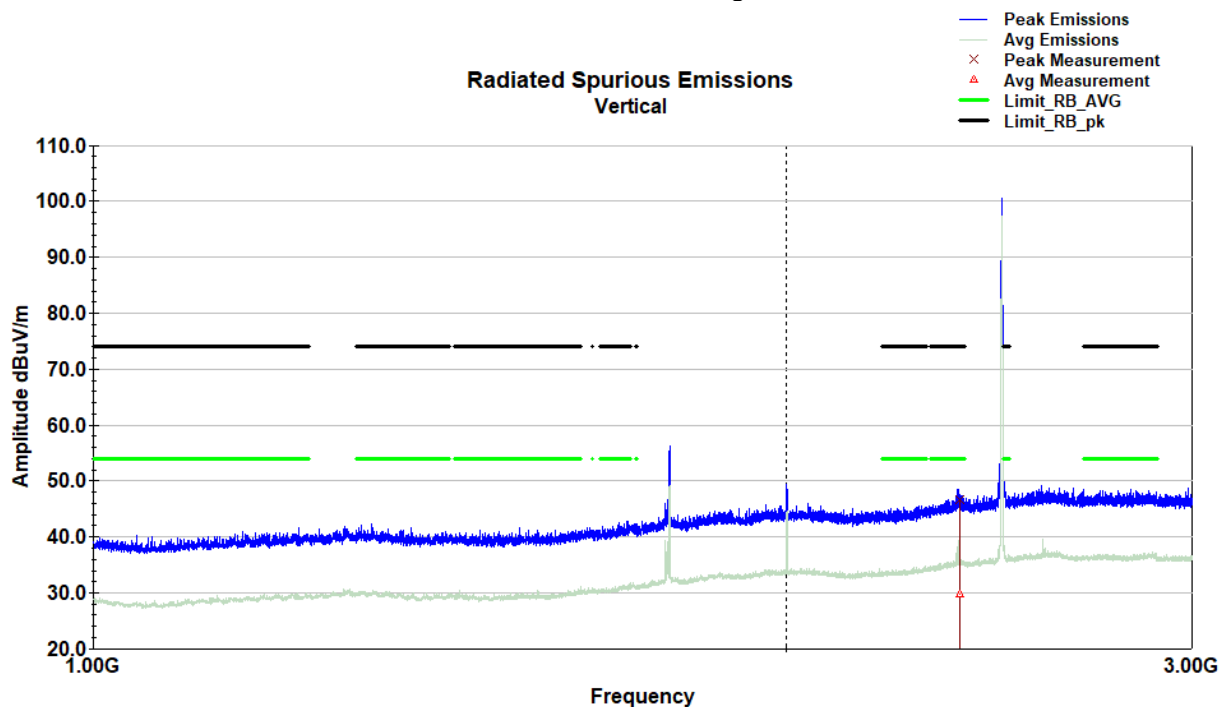
Frequency (GHz)	Polarity (V/H)	Avg Value (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)
16.05	H	43.0	54.0	-11.0
17.94	H	43.9	54.0	-10.1
17.95	H	44.0	54.0	-10.0
17.97	H	43.8	54.0	-10.2

Margin = Avg Value - Avg Limit

Frequency (GHz)	Polarity (V/H)	Peak Value (dBuV/m)	Peak Limit (dBuV/m)	Margin (dB)
15.91	H	54.6	74.0	-19.4
17.94	H	55.0	74.0	-19.0
17.97	H	54.6	74.0	-19.4
17.99	H	54.9	74.0	-19.1

Margin = Peak Value - Peak Limit

Vertical Plot – 1-3GHz – High Channel

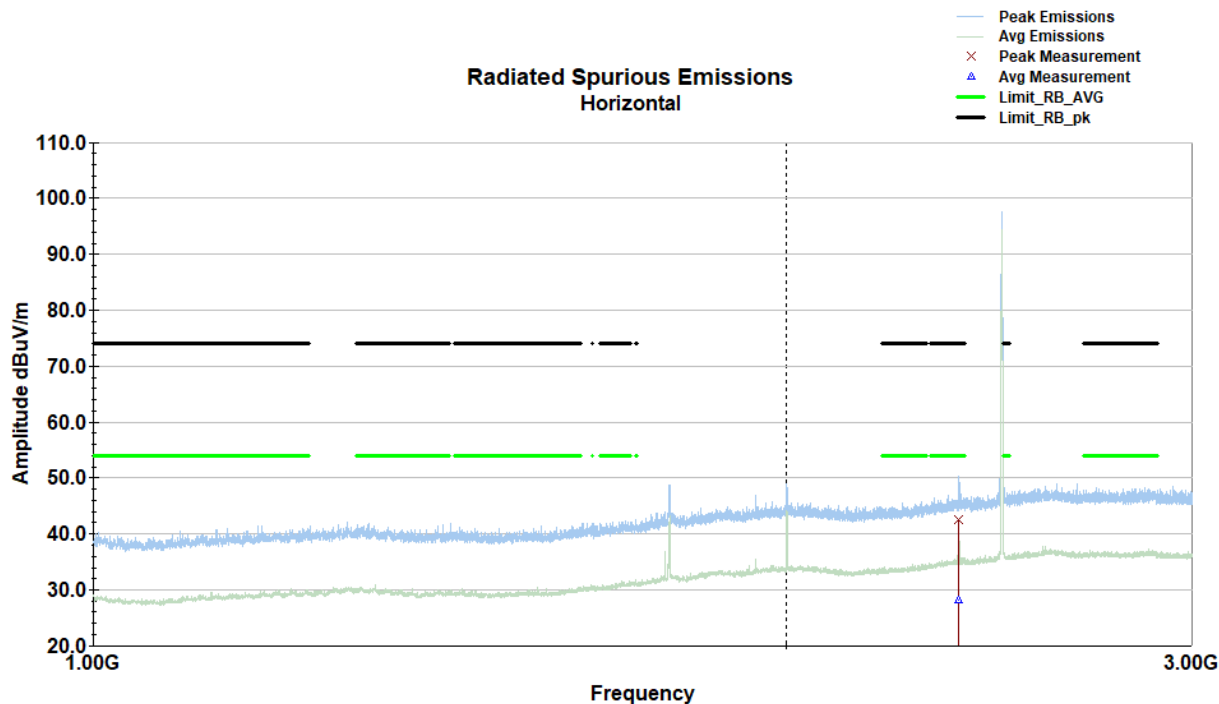


Vertical Data – 1-3GHz – High Channel

Frequency MHz	Raw Avg dBuV	Polarity V/H	Azimuth degrees	Height cm	AF dB/m	Loss dB	DCF dB	Amp dB	Final Avg dBuV/m	Limit dBuV/m	Margin dB
2378.35	38.3	V	213.0	113.0	32.0	1.9	0.0	42.4	29.8	54.0	-24.20
Final Avg = Raw Avg + AF + Loss + DCF - Amp											
Margin = Final Avg - Limit											

Frequency MHz	Raw Pk (dBuV)	Polarity (V/H)	Azimuth (degrees)	Height (cm)	AF (dB/m)	Loss (dB)	DCF (dB)	Amp (dB)	Final Pk dBuV/m	Limit dBuV/m	Margin (dB)
2378.35	55.1	V	213.0	113.0	32.0	1.9	0.0	42.4	46.6	74.0	-27.40
Final Pk = Raw Pk + AF + Loss + DCF - Amp											
Margin = Final Pk - Limit											

Horizontal Plot – 1-3GHz – High Channel

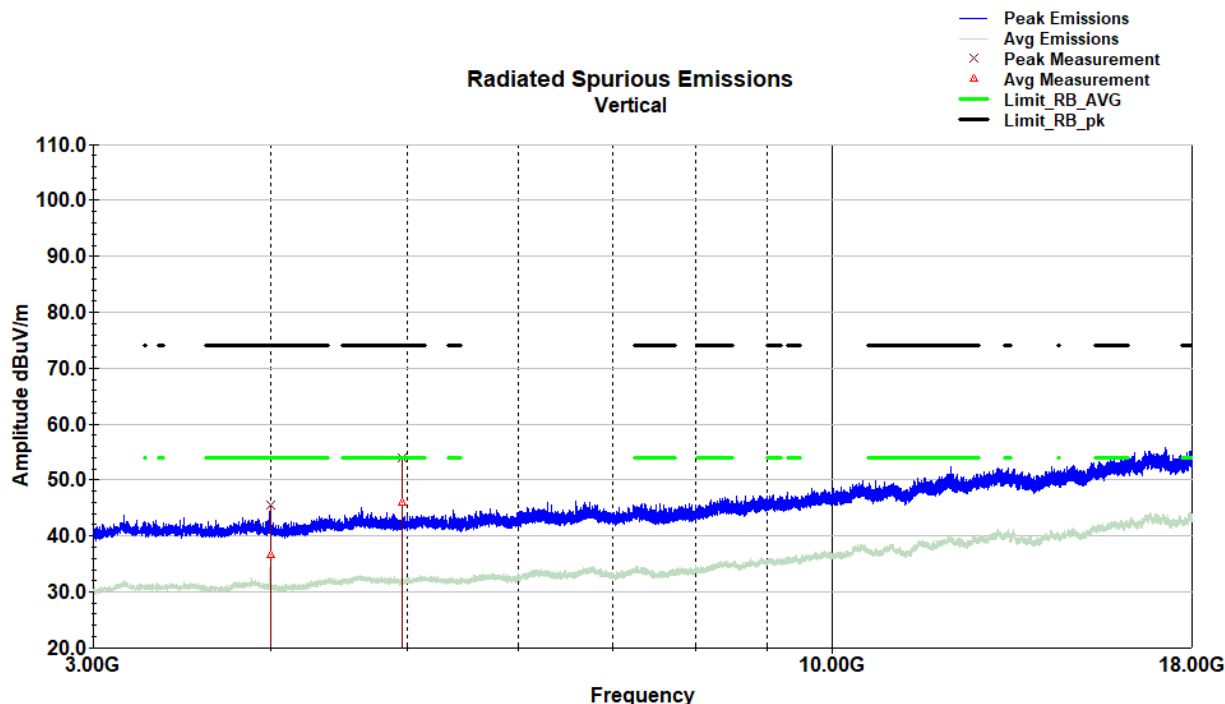


Horizontal Data – 1-3GHz – High Channel

Frequency MHz	Raw Avg dBuV	Polarity (V/H)	Azimuth (degrees)	Height (cm)	AF (dB/m)	Loss (dB)	DCF dB	Amp (dB)	Avg Value dBuV/m	Limit (dBuV/m)	Margin (dB)
2376.09	36.6	H	205.0	122.0	32.0	1.9	0.0	42.4	28.1	54.0	-25.9
Final Avg = Raw Avg + AF + Loss + DCF - Amp											
Margin = Final Avg - Limit											

Frequency MHz	Raw Pk dBuV	Polarity (V/H)	Azimuth (degrees)	Height (cm)	AF (dB/m)	Loss (dB)	DCF dB	Amp (dB)	Final Pk dBuV/m	Limit dBuV/m	Margin dB
2376.09	51.0	H	205.0	122.0	32.0	1.9	0.0	42.4	42.5	74.0	-31.5
Final Pk = Raw Pk + AF + Loss + DCF - Amp											
Margin = Final Pk - Limit											

Vertical Plot – 3-18GHz – High Channel



Vertical Data – 3-18GHz – High Channel

Frequency MHz	Raw Avg dBuV	Polarity V/H	Azimuth degrees	Height cm	AF dB/m	Loss dB	DCF dB	Amp dB	Final Avg dBuV/m	Limit dBuV/m	Margin dB
4000.25	43.3	V	25.0	233.0	33.4	2.3	0.0	42.3	36.7	54.0	-17.30
4959.75	51.5	V	100.0	117.0	34.2	2.5	0.0	42.3	45.9	54.0	-8.10

Final Avg = Raw Avg + AF + Loss + DCF - Amp

Margin = Final Avg - Limit

Frequency MHz	Raw Pk (dBuV)	Polarity (V/H)	Azimuth (degrees)	Height (cm)	AF (dB/m)	Loss (dB)	DCF (dB)	Amp (dB)	Final Pk (dBuV/m)	Limit (dBuV/m)	Margin (dB)
4000.25	52.2	V	25.0	233.0	33.4	2.3	0.0	42.3	45.6	74.0	-28.40
4959.75	59.7	V	100.0	117.0	34.2	2.5	0.0	42.3	54.1	74.0	-19.90

Final Pk = Raw Pk + AF + Loss + DCF - Amp

Margin = Final Pk - Limit

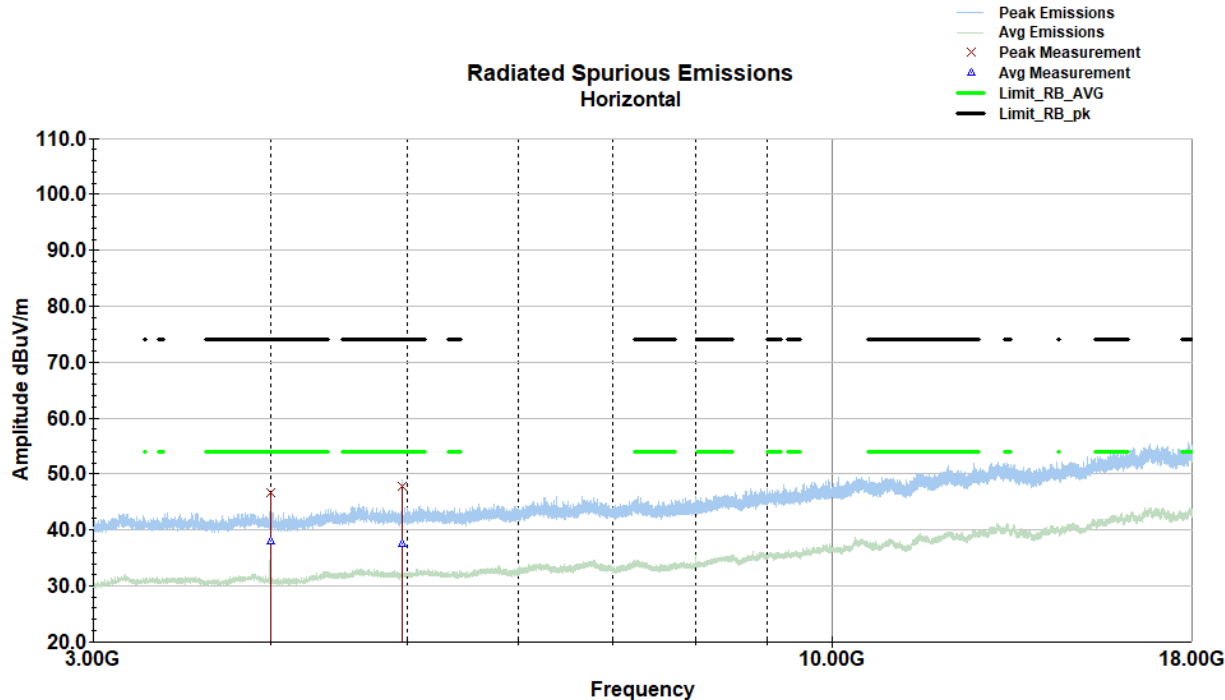
Frequency (GHz)	Polarity (V/H)	Avg Value (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)
16.03	V	42.9	54.0	-11.1
17.94	V	44.1	54.0	-9.9
17.96	V	44.0	54.0	-10.0

Margin = Avg Value - Avg Limit

Frequency (GHz)	Polarity (V/H)	Peak Value (dBuV/m)	Peak Limit (dBuV/m)	Margin (dB)
16.18	V	54.3	74.0	-19.7
17.85	V	54.9	74.0	-19.1
17.92	V	55.0	74.0	-19.0

Margin = Peak Value - Peak Limit

Horizontal Plot – 3-18GHz – High Channel



Vertical Data – 3-18GHz – High Channel

Frequency MHz	Raw Avg dBuV	Polarity (V/H)	Azimuth (degrees)	Height (cm)	AF (dB/m)	Loss (dB)	DCF dB	Amp (dB)	Avg Value dBuV/m	Limit (dBuV/m)	Margin (dB)
4000.50	44.5	H	11.0	102.0	33.4	2.3	0.0	42.3	37.9	54.0	-16.1
4960.00	43.1	H	96.0	102.0	34.2	2.5	0.0	42.3	37.5	54.0	-16.5

Final Avg = Raw Avg + AF + Loss + DCF - Amp

Margin = Final Avg - Limit

Frequency MHz	Raw Pk dBuV	Polarity (V/H)	Azimuth (degrees)	Height (cm)	AF (dB/m)	Loss (dB)	DCF dB	Amp (dB)	Final Pk dBuV/m	Limit dBuV/m	Margin dB
4000.50	53.2	H	11.0	102.0	33.4	2.3	0.0	42.3	46.6	74.0	-27.4
4960.00	53.3	H	96.0	102.0	34.2	2.5	0.0	42.3	47.7	74.0	-26.3

Final Pk = Raw Pk + AF + Loss + DCF - Amp

Margin = Final Pk - Limit

Frequency (GHz)	Polarity (V/H)	Avg Value (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)
16.04	H	43.0	54.0	-11.0
17.91	H	43.8	54.0	-10.2
17.92	H	43.8	54.0	-10.2

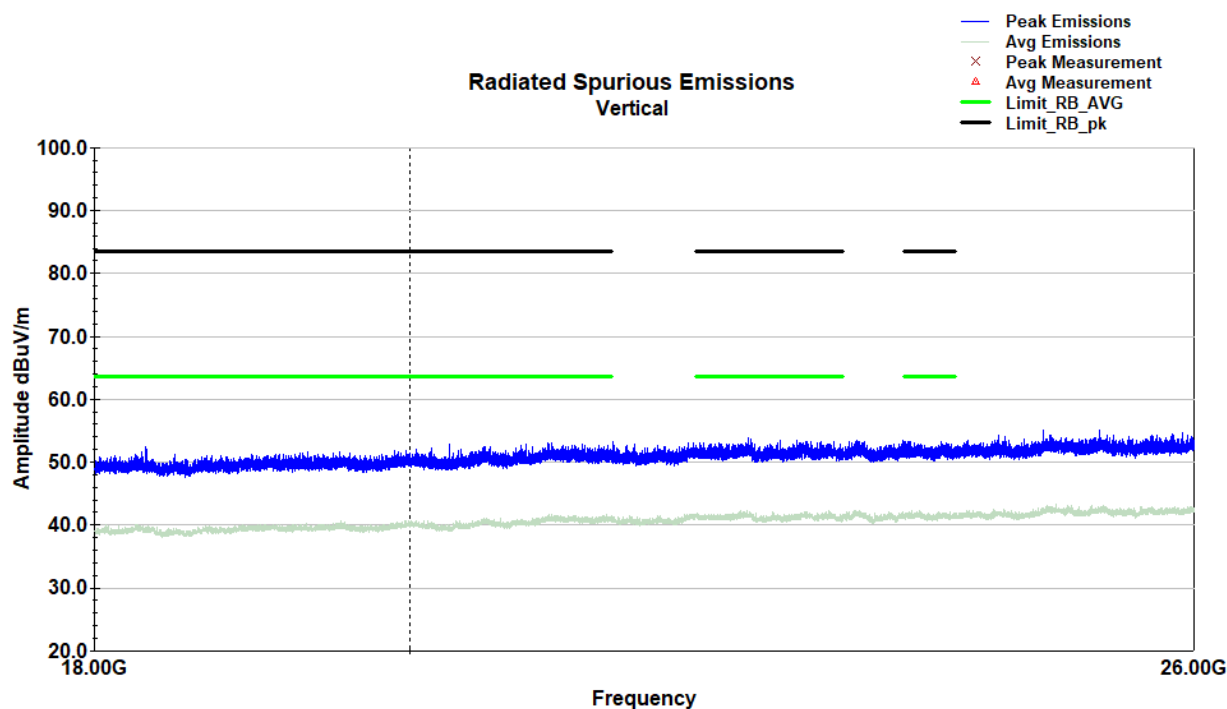
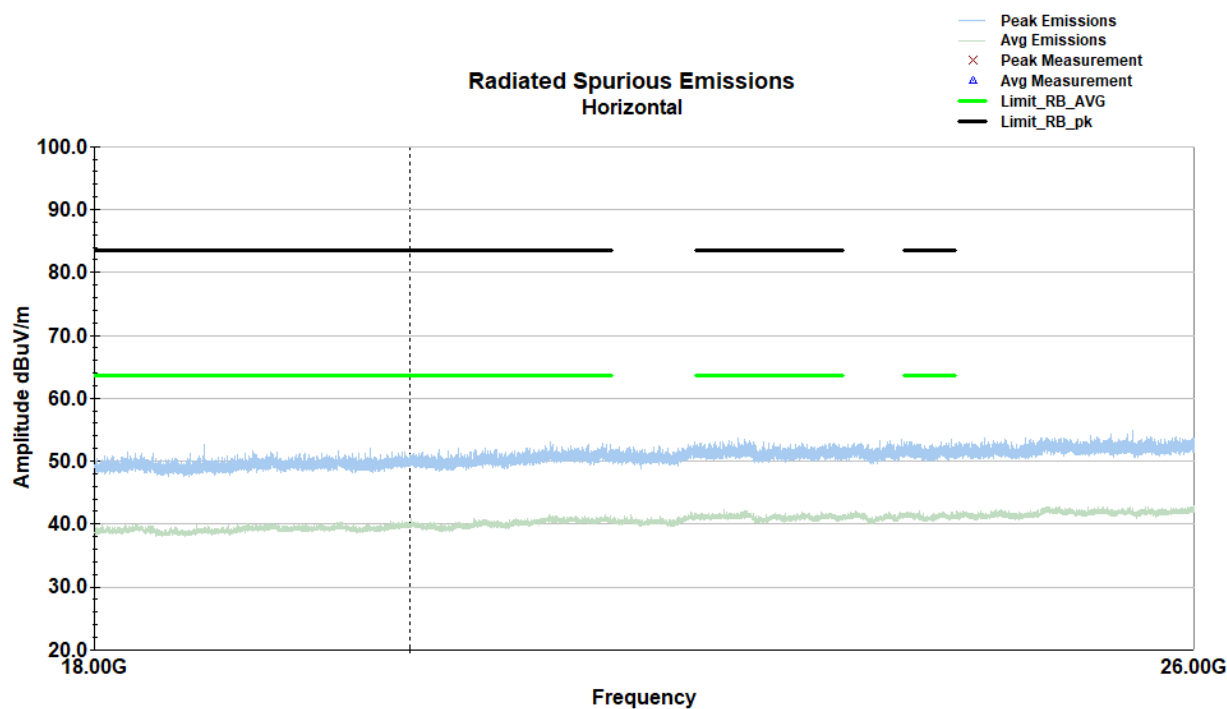
Margin = Avg Value - Avg Limit

Frequency (GHz)	Polarity (V/H)	Peak Value (dBuV/m)	Peak Limit (dBuV/m)	Margin (dB)
16.09	H	53.8	74.0	-20.2
17.90	H	54.2	74.0	-19.8
17.99	H	55.1	74.0	-18.9

Margin = Peak Value - Peak Limit

3.8.4 18-26 GHz

All channels had similar plots in the 18-26GHz frequency range.

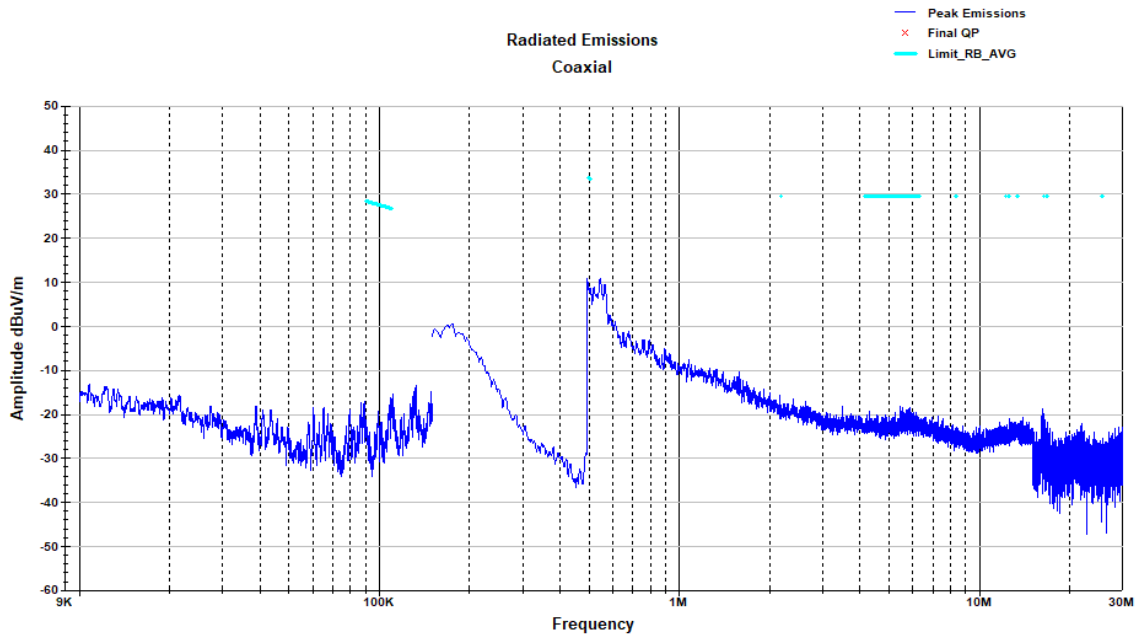


3.9 Test Data – BLE

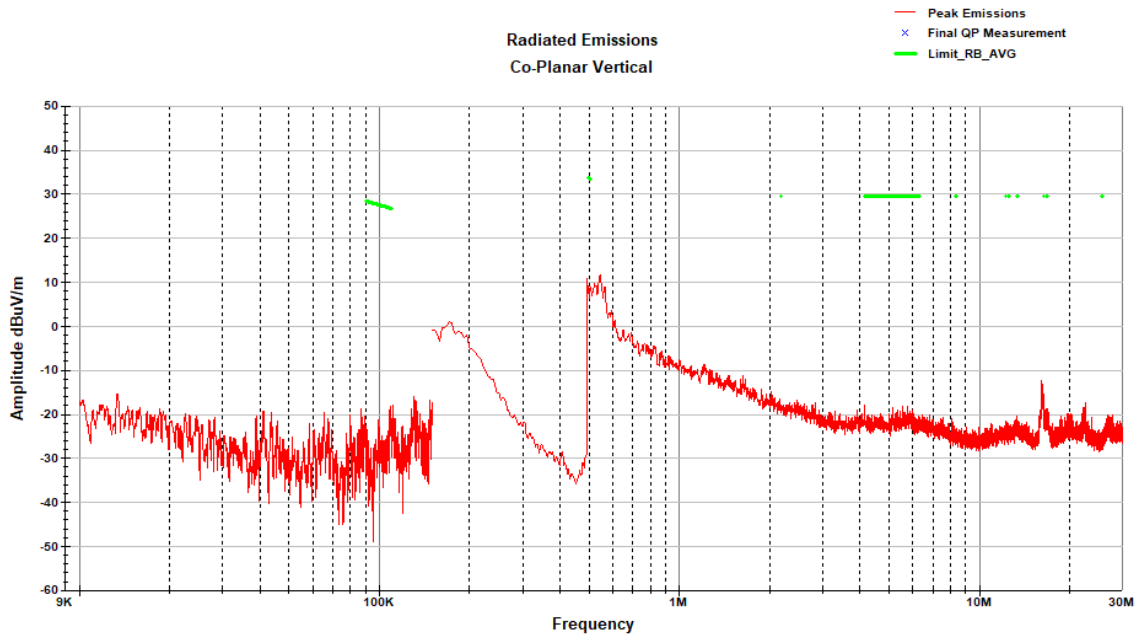
3.9.1 9 kHz-30 MHz

All channels had similar plots in the 9kHz to 30MHz frequency range.

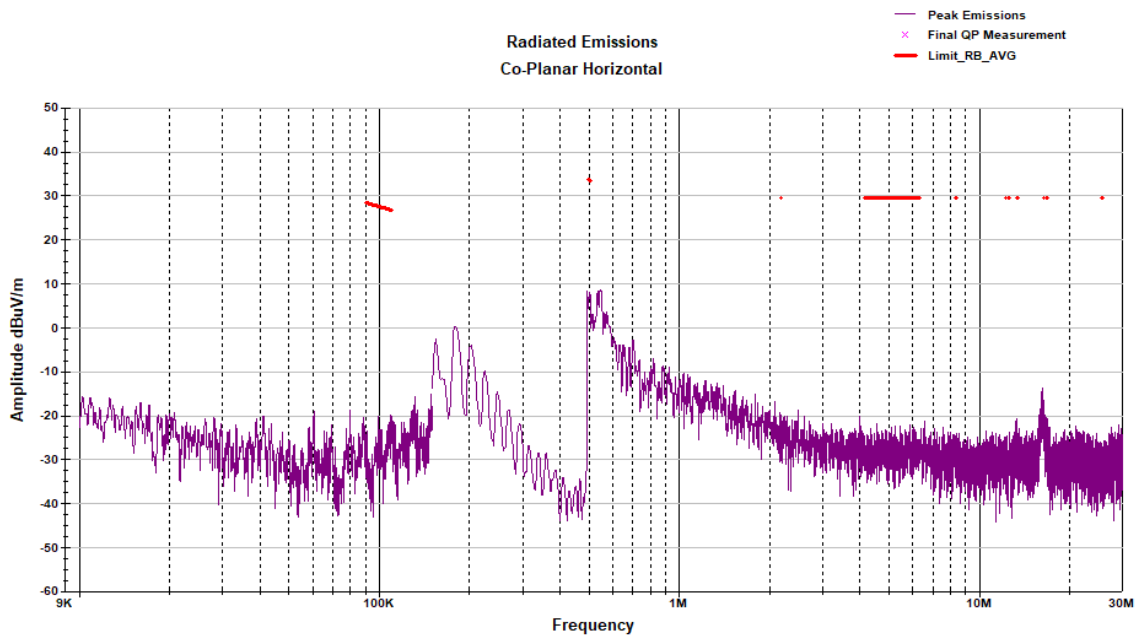
Coaxial Plot – 9 kHz-30MHz – Mid Channel



Co-Planar Vertical Plot – 9 kHz-30MHz – Mid Channel



Co-Planar Horizontal Plot – 9 kHz-30MHz – Mid Channel

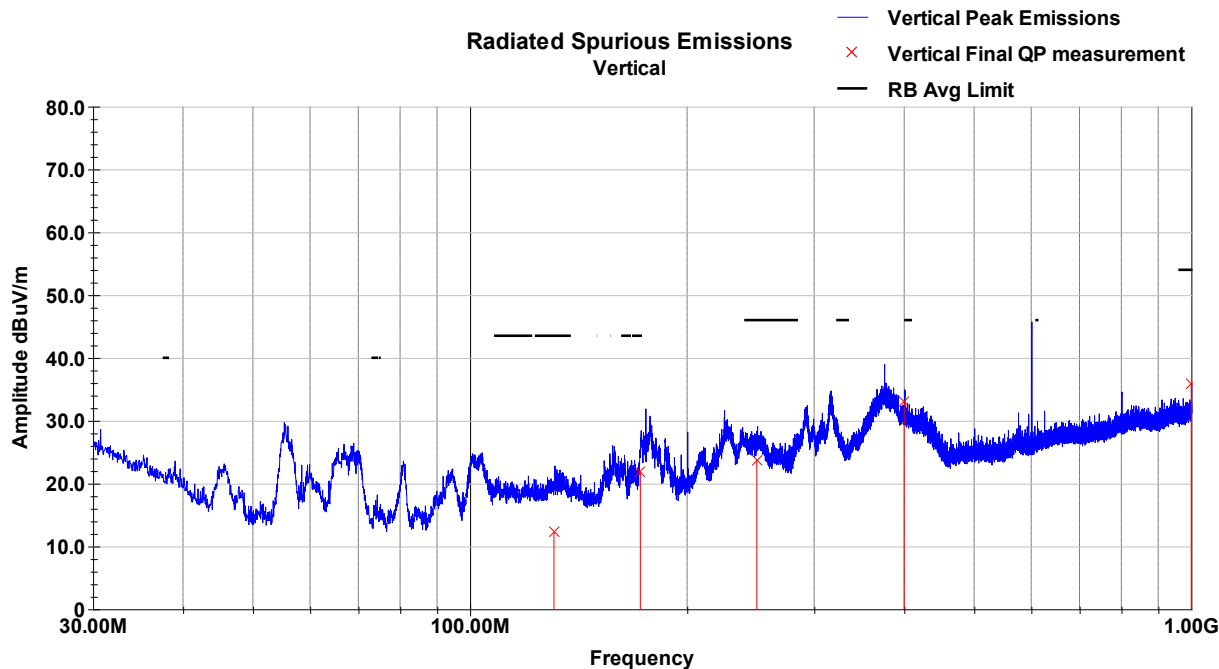


No emissions within 20dB of the limit

3.9.2 30-1000 MHz

All channels were measured and had similar plots – the worst-case plots are shown below.

Vertical Plot – 30-1000MHz – Low Channel



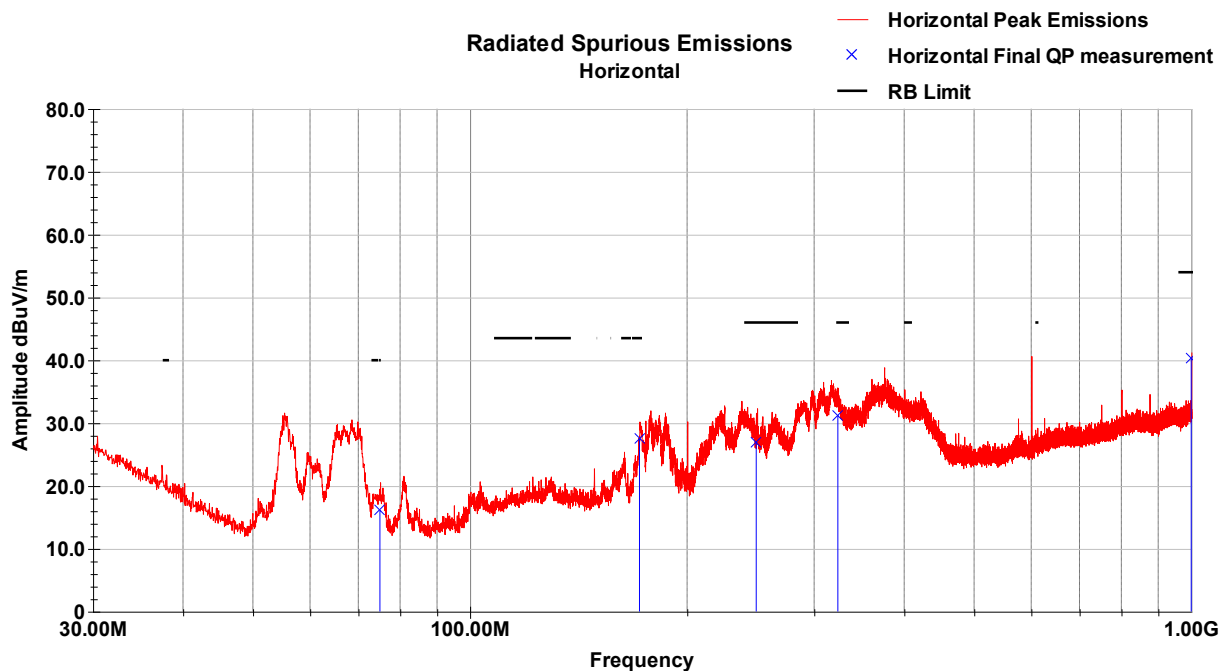
Vertical Data – 30-1000MHz – Low Channel

Frequency MHz	Raw QP (dBuV)	Polarity (V/H)	Azimuth (degrees)	Height (cm)	AF (dB/m)	Loss (dB)	Amp (dB)	QP Value (dBuV/m)	Limit (dBuV/m)	Margin (dB)
130.73	24.4	V	279.0	159.0	17.8	1.8	31.8	12.2	43.5	-31.3
172.26	35.7	V	167.0	144.0	15.8	2.1	31.8	21.9	43.5	-21.7
249.88	36.5	V	171.0	100.0	16.2	2.6	31.7	23.7	46.0	-22.3
399.98	40.8	V	248.0	113.0	20.2	3.3	31.4	33.1	46.0	-13.0
1000.00	34.3	V	313.0	113.0	27.9	4.8	31.0	36.0	54.0	-18.0
QP Value = Raw QP + AF + Loss - Amp										
Margin = QP Value - Limit										

Frequency MHz	Polarity (V/H)	Peak Value (dBuV/m)	QP Limit (dBuV/m)	Margin (dB)
322.60	V	30.3	46.0	-15.7

Margin = Peak Value - QP Limit

Horizontal Plot – 30-1000MHz – Low Channel



Horizontal Data – 30-1000MHz – Low Channel

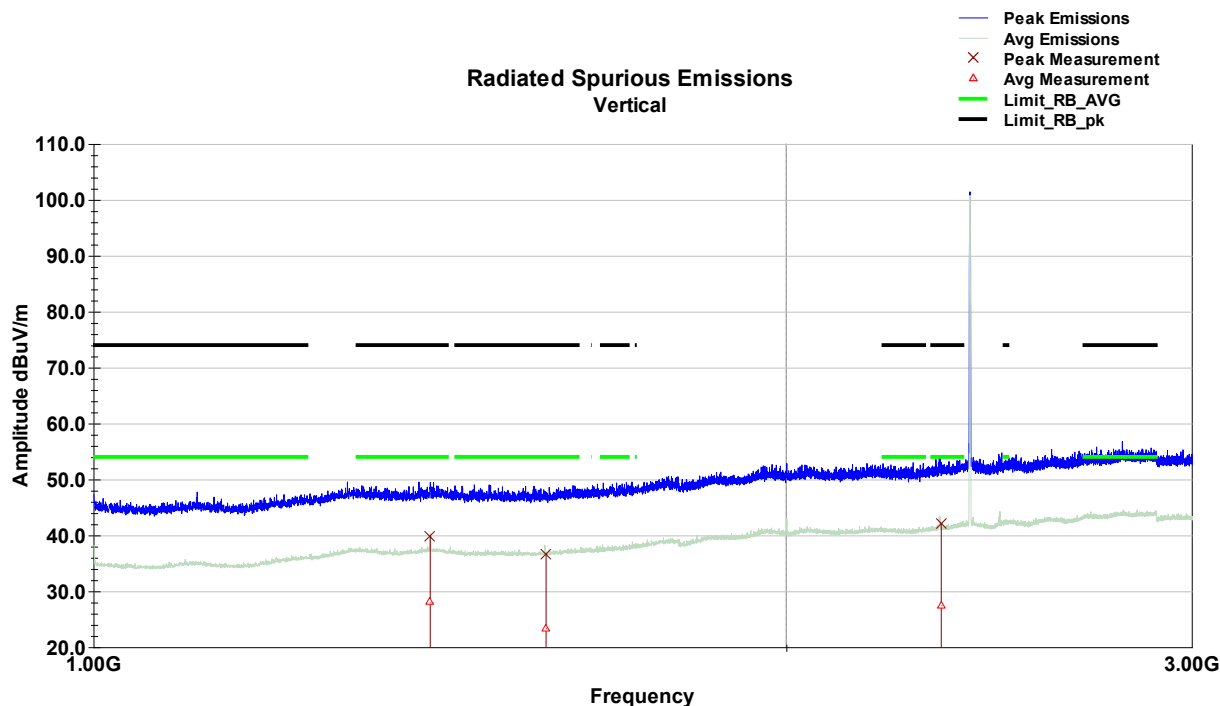
Frequency MHz	Raw QP (dBuV)	Polarity (V/H)	Azimuth (degrees)	Height (cm)	AF (dB/m)	Loss (dB)	Amp (dB)	QP Value (dBuV/m)	Limit (dBuV/m)	Margin (dB)
75.01	34.5	H	343.0	231.0	12.1	1.3	31.9	16.1	40.0	-23.9
171.81	41.3	H	91.0	113.0	15.8	2.1	31.8	27.5	43.5	-16.0
249.43	39.8	H	199.0	129.0	16.2	2.6	31.7	26.9	46.0	-19.1
323.65	41.0	H	197.0	100.0	18.7	3.0	31.6	31.2	46.0	-14.8
1000.00	38.6	H	137.0	174.0	27.9	4.8	31.0	40.2	54.0	-13.7
QP Value = Raw QP + AF + Loss - Amp										
Margin = QP Value - Limit										

Frequency MHz	Polarity (V/H)	Peak Value (dBuV/m)	QP Limit (dBuV/m)	Margin (dB)
400.00	H	35.4	46.0	-10.6

Margin = Peak Value - QP Limit

3.9.3 1-18 GHz

Vertical Plot – 1-3GHz – Low Channel

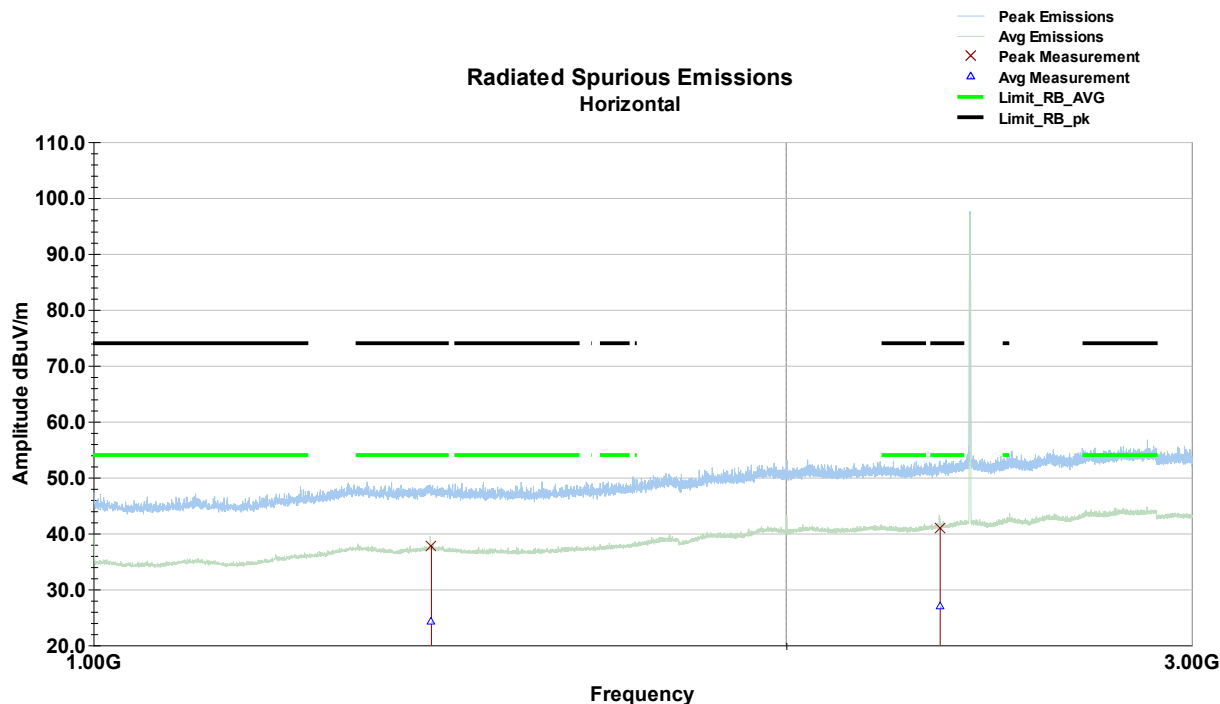


Vertical Data – 1-3GHz – Low Channel

Frequency MHz	Raw Avg dBuV	Polarity V/H	Azimuth degrees	Height cm	AF dB/m	Loss dB	DCF dB	Amp dB	Final Avg dBuV/m	Limit dBuV/m	Margin dB
1400.82	31.8	V	193.0	151.0	29.0	1.5	0.0	34.2	28.0	54.0	-25.9
1572.86	28.1	V	136.0	170.0	28.3	1.5	0.0	34.5	23.4	54.0	-30.5
2335.56	28.8	V	68.0	188.0	31.4	1.9	0.0	34.6	27.5	54.0	-26.5
Avg + AF + Loss + DCF - Amp											
Margin = Final Avg - Limit											

Frequency MHz	Raw Pk (dBuV)	Polarity (V/H)	Azimuth degrees	Height (cm)	AF (dB/m)	Loss (dB)	DCF (dB)	Amp (dB)	Final Pk (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1400.82	43.6	V	193.0	151.0	29.0	1.5	0.0	34.2	39.8	74.0	-34.2
1572.86	41.3	V	136.0	170.0	28.3	1.5	0.0	34.5	36.6	74.0	-37.4
2335.56	43.5	V	68.0	188.0	31.4	1.9	0.0	34.6	42.2	74.0	-31.8
Final Pk = Raw Pk + AF + Loss + DCF - Amp											
Margin = Final Pk - Limit											

Horizontal Plot – 1-3GHz – Low Channel

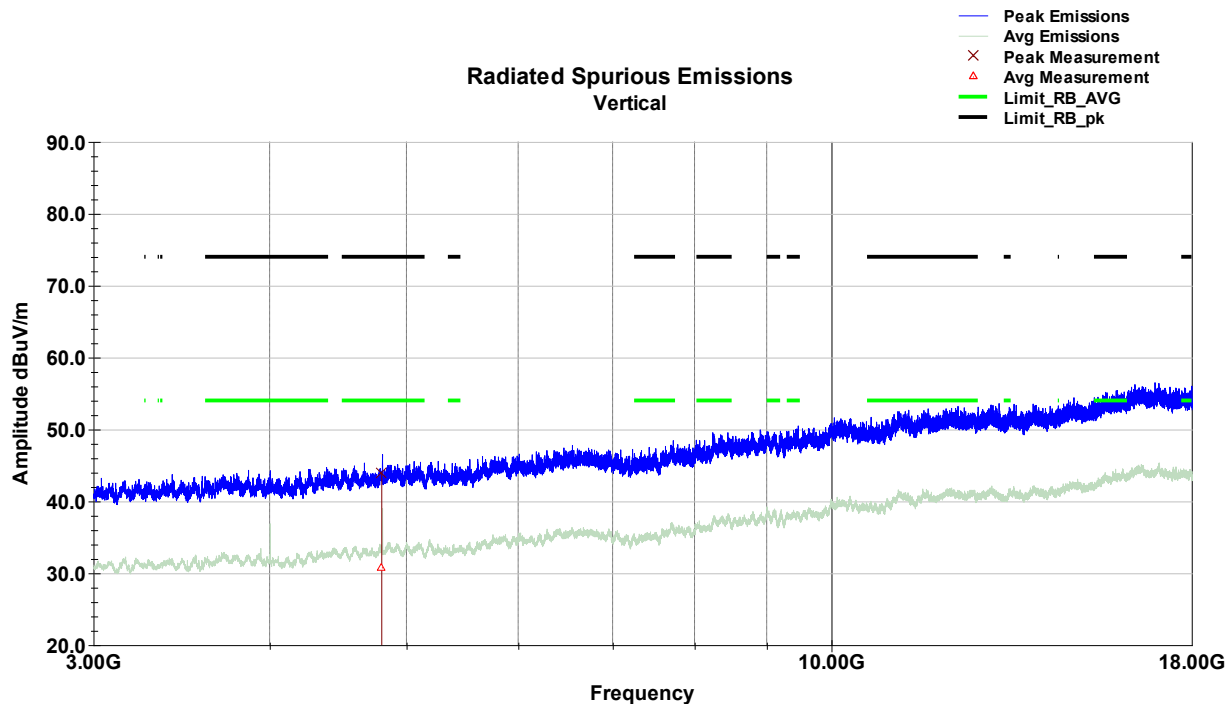


Horizontal Data – 1-3GHz – Low Channel

Frequency MHz	Raw Avg dBuV	Polarity (V/H)	Azimuth degrees	Height (cm)	AF (dB/m)	Loss (dB)	DCF dB	Amp (dB)	Avg Value dBuV/m	Limit dBuV/m	Margin (dB)
1402.36	28.0	H	198.0	247.0	29.0	1.5	0.0	34.3	24.3	54.0	-29.7
2332.96	28.2	H	197.0	100.0	31.4	1.9	0.0	34.6	26.9	54.0	-27.1
Final Avg = Raw Avg + AF + Loss + DCF - Amp											
Margin = Final Avg - Limit											

Frequency MHz	Raw Pk dBuV	Polarity (V/H)	Azimuth degrees	Height (cm)	AF (dB/m)	Loss (dB)	DCF dB	Amp (dB)	Final Pk dBuV/m	Limit dBuV/m	Margin dB
1402.36	41.5	H	198.0	247.0	29.0	1.5	0.0	34.3	37.7	74.0	-36.3
2332.96	42.2	H	197.0	100.0	31.4	1.9	0.0	34.6	40.9	74.0	-33.1
Final Pk = Raw Pk + AF + Loss + DCF - Amp											
Margin = Final Pk - Limit											

Vertical Plot – 3-18GHz – Low Channel



Vertical Data – 3-18GHz – Low Channel

Frequency MHz	Raw Avg dBuV	Polarity V/H	Azimuth degrees	Height cm	AF dB/m	Loss dB	DCF dB	Amp dB	Final Avg dBuV/m	Limit dBuV/m	Margin dB
4802.42	28.1	V	82.0	136.0	34.0	2.8	0.0	34.1	30.8	54.0	-23.2
Final Avg = Raw Avg + AF + Loss + DCF - Amp											
Margin = Final Avg - Limit											

Frequency MHz	Raw Pk (dBuV)	Polarity (V/H)	Azimuth (degrees)	Height (cm)	AF (dB/m)	Loss (dB)	DCF (dB)	Amp (dB)	Final Pk (dBuV/m)	Limit (dBuV/m)	Margin (dB)
4802.42	41.1	V	82.0	136.0	34.0	2.8	0.0	34.1	43.8	74.0	-30.2
Final Pk = Raw Pk + AF + Loss + DCF - Amp											
Margin = Final Pk - Limit											

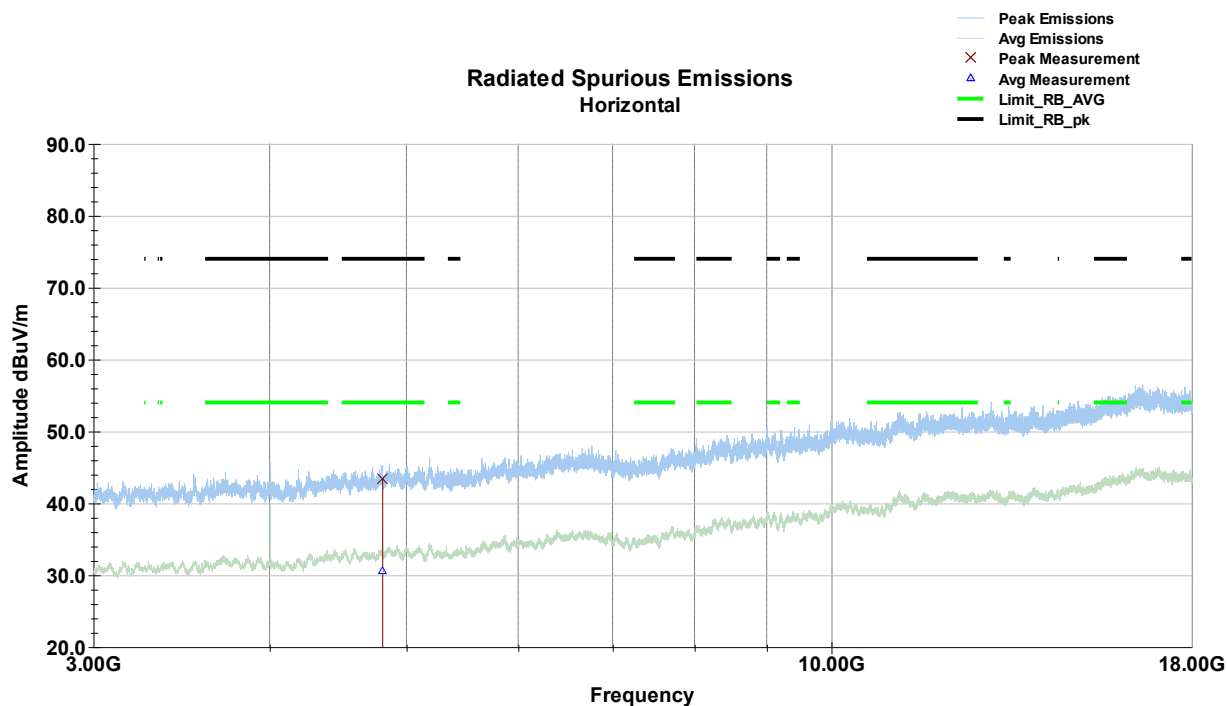
Frequency (GHz)	Polarity (V/H)	Avg Value (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)
16.07	V	44.6	54.0	-9.4
17.75	V	44.6	54.0	-9.4

Margin = Avg Value - Avg Limit

Frequency (GHz)	Polarity (V/H)	Peak Value (dBuV/m)	Peak Limit (dBuV/m)	Margin (dB)
15.93	V	55.5	74.0	-18.5
17.99	V	56.1	74.0	-17.9

Margin = Peak Value - Peak Limit

Horizontal Plot – 3-18GHz – Low Channel



Horizontal Data – 3-18GHz – Low Channel

Frequency MHz	Raw Avg dBuV	Polarity (V/H)	Azimuth (degrees)	Height (cm)	AF (dB/m)	Loss (dB)	DCF dB	Amp (dB)	Avg Value dBuV/m	Limit (dBuV/m)	Margin (dB)
4810.50	28.0	H	111.0	112.0	34.0	2.8	0.0	34.2	30.6	54.0	-23.4

Final Avg = Raw Avg + AF + Loss + DCF - Amp

Margin = Final Avg - Limit

Frequency MHz	Raw Pk dBuV	Polarity (V/H)	Azimuth (degrees)	Height (cm)	AF (dB/m)	Loss (dB)	DCF dB	Amp (dB)	Final Pk dBuV/m	Limit dBuV/m	Margin dB
4810.50	40.8	H	111.0	112.0	34.0	2.8	0.0	34.2	43.4	74.0	-30.6

Final Pk = Raw Pk + AF + Loss + DCF - Amp

Margin = Final Pk - Limit

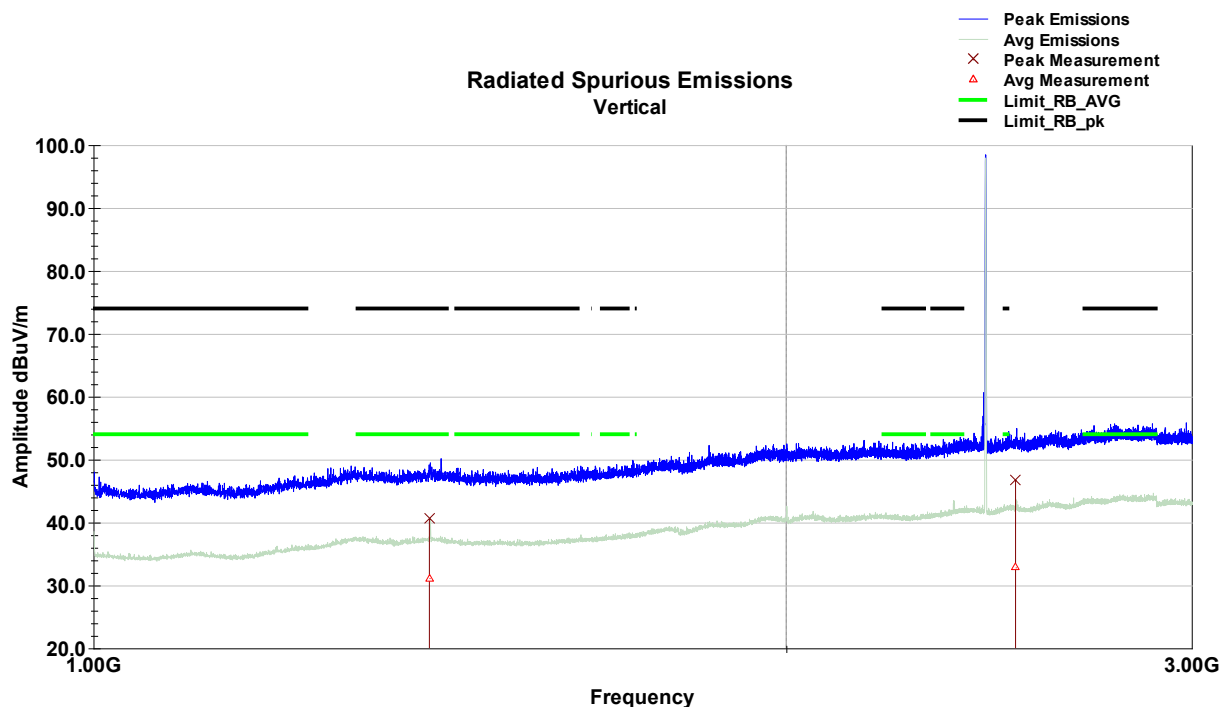
Frequency (GHz)	Polarity (V/H)	Avg Value (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)
16.07	H	44.3	54.0	-9.7
17.75	H	44.5	54.0	-9.5
17.94	H	44.8	54.0	-9.2

Margin = Avg Value - Avg Limit

Frequency (GHz)	Polarity (V/H)	Peak Value (dBuV/m)	Peak Limit (dBuV/m)	Margin (dB)
16.14	H	55.1	74.0	-18.9
17.79	H	56.2	74.0	-17.8
17.94	H	55.8	74.0	-18.2

Margin = Peak Value - Peak Limit

Vertical Plot – 1-3GHz – Mid Channel

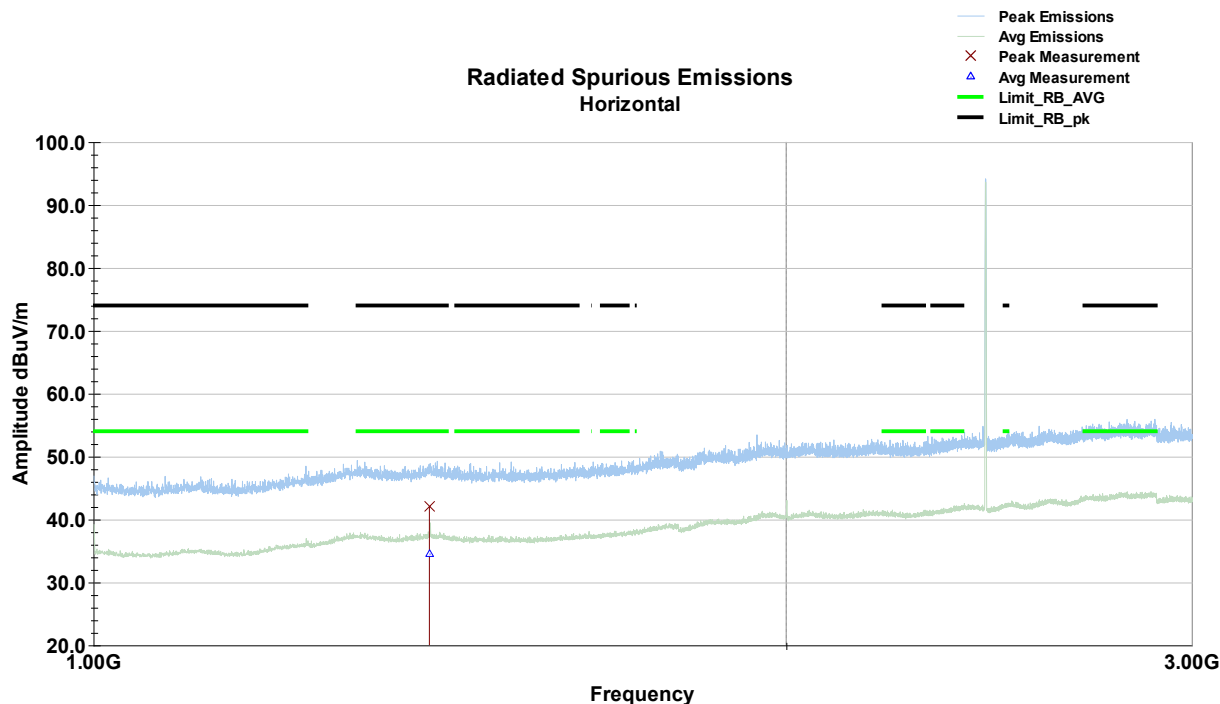


Vertical Data – 1-3GHz – Mid Channel

Frequency MHz	Raw Avg dBuV	Polarity V/H	Azimuth degrees	Height cm	AF dB/m	Loss dB	DCF dB	Amp dB	Final Avg dBuV/m	Limit dBuV/m	Margin dB
1399.53	34.9	V	202.0	150.0	29.0	1.5	0.0	34.2	31.2	54.0	-22.80
2515.64	33.2	V	173.0	152.0	32.0	2.0	0.0	34.3	32.9	54.0	-21.10
Final Avg = Raw Avg + AF + Loss + DCF - Amp											
n = Final Avg - Limit											

Frequency MHz	Raw Pk (dBuV)	Polarity (V/H)	Azimuth degrees	Height (cm)	AF (dB/m)	Loss (dB)	DCF (dB)	Amp (dB)	Final Pk (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1399.53	44.3	V	202.0	150.0	29.0	1.5	0.0	34.2	40.6	74.0	-33.40
2515.64	47.1	V	173.0	152.0	32.0	2.0	0.0	34.3	46.8	74.0	-27.20
Final Pk = Raw Pk + AF + Loss + DCF - Amp											
Margin = Final Pk - Limit											

Horizontal Plot – 1-3GHz – Mid Channel

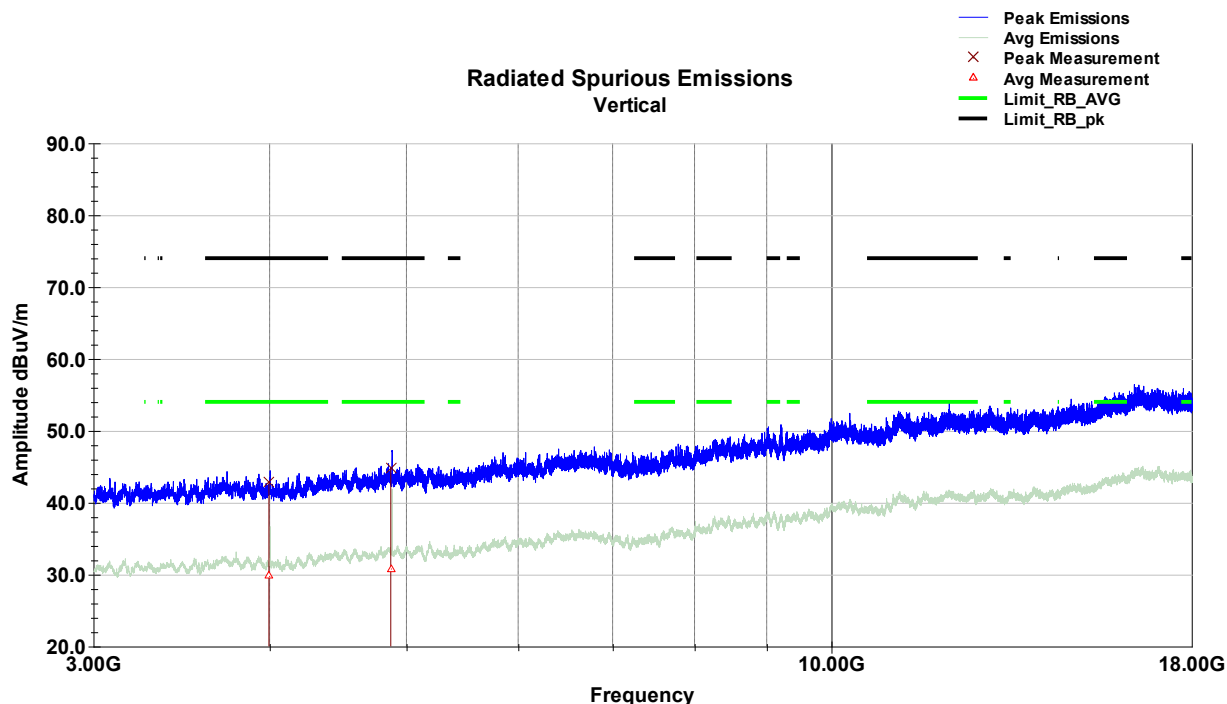


Horizontal Data – 1-3GHz – Mid Channel

Frequency MHz	Raw Avg dBuV	Polarity (V/H)	Azimuth degrees	Height (cm)	AF (dB/m)	Loss (dB)	DCF dB	Amp (dB)	Avg Value dBuV/m	Limit (dBuV/m)	Margin (dB)
1399.54	38.3	H	254.0	175.0	29.0	1.5	0.0	34.2	34.6	54.0	-19.40
Final Avg = Raw Avg + AF + Loss + DCF - Amp											
Margin = Final Avg - Limit											

Frequency MHz	Raw Pk dBuV	Polarity (V/H)	Azimuth degrees	Height (cm)	AF (dB/m)	Loss (dB)	DCF dB	Amp (dB)	Final Pk dBuV/m	Limit dBuV/m	Margin dB
1399.54	45.9	H	254.0	175.0	29.0	1.5	0.0	34.2	42.1	74.0	-31.90
Final Pk = Raw Pk + AF + Loss + DCF - Amp											
Margin = Final Pk - Limit											

Vertical Plot – 3-18GHz – Mid Channel



Vertical Data – 3-18GHz – Mid Channel

Frequency MHz	Raw Avg dBuV	Polarity V/H	Azimuth degrees	Height cm	AF dB/m	Loss dB	DCF dB	Amp dB	Final Avg dBuV/m	Limit dBuV/m	Margin dB
3995.15	28.5	V	173.0	250.0	33.3	2.5	0.0	34.4	29.8	54.0	-24.2
4873.84	28.1	V	11.0	152.0	34.1	2.8	0.0	34.2	30.9	54.0	-23.1

Final Avg = Raw Avg + AF + Loss + DCF - Amp

Margin = Final Avg - Limit

Frequency MHz	Raw Pk (dBuV)	Polarity (V/H)	Azimuth (degrees)	Height (cm)	AF (dB/m)	Loss (dB)	DCF (dB)	Amp (dB)	Final Pk (dBuV/m)	Limit (dBuV/m)	Margin (dB)
3995.15	41.6	V	173.0	250.0	33.3	2.5	0.0	34.4	42.9	74.0	-31.1
4873.84	42.1	V	11.0	152.0	34.1	2.8	0.0	34.2	44.8	74.0	-29.2

Final Pk = Raw Pk + AF + Loss + DCF - Amp

Margin = Final Pk - Limit

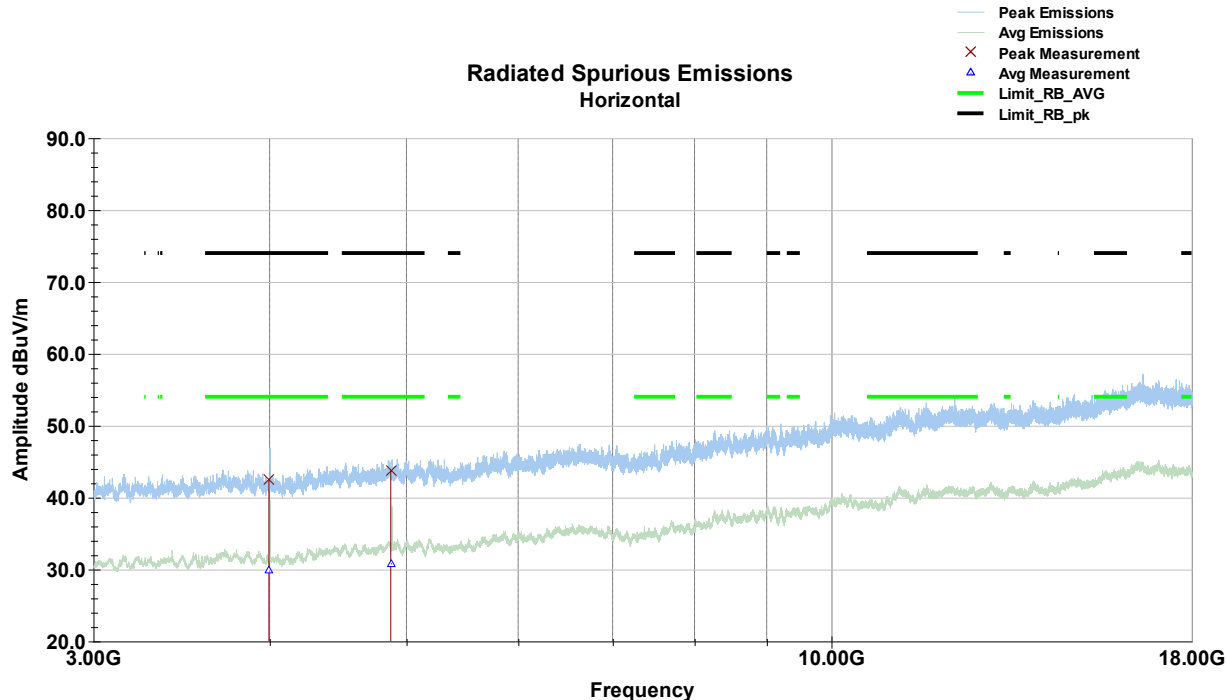
Frequency (GHz)	Polarity (V/H)	Avg Value (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)
16.07	V	44.2	54.0	-9.8
17.95	V	44.6	54.0	-9.4

Margin = Avg Value - Avg Limit

Frequency (GHz)	Polarity (V/H)	Peak Value (dBuV/m)	Peak Limit (dBuV/m)	Margin (dB)
15.85	V	55.3	74.0	-18.7
17.74	V	56.0	74.0	-18.0

Margin = Peak Value - Peak Limit

Horizontal Plot – 3-18GHz – Mid Channel



Horizontal Data – 3-18GHz – Mid Channel

Frequency MHz	Raw Avg dBuV	Polarity (V/H)	Azimuth (degrees)	Height (cm)	AF (dB/m)	Loss (dB)	DCF dB	Amp (dB)	Avg Value dBuV/m	Limit (dBuV/m)	Margin (dB)
3995.16	28.5	H	0.0	100.0	33.3	2.5	0.0	34.4	29.9	54.0	-24.1
4873.61	28.1	H	241.0	145.0	34.1	2.8	0.0	34.2	30.9	54.0	-23.1

Final Avg = Raw Avg + AF + Loss + DCF - Amp

Margin = Final Avg - Limit

Frequency MHz	Raw Pk dBuV	Polarity (V/H)	Azimuth (degrees)	Height (cm)	AF (dB/m)	Loss (dB)	DCF dB	Amp (dB)	Final Pk dBuV/m	Limit dBuV/m	Margin dB
3995.16	41.3	H	0.0	100.0	33.3	2.5	0.0	34.4	42.6	74.0	-31.4
4873.61	41.0	H	241.0	145.0	34.1	2.8	0.0	34.2	43.8	74.0	-30.2

Final Pk = Raw Pk + AF + Loss + DCF - Amp

Margin = Final Pk - Limit

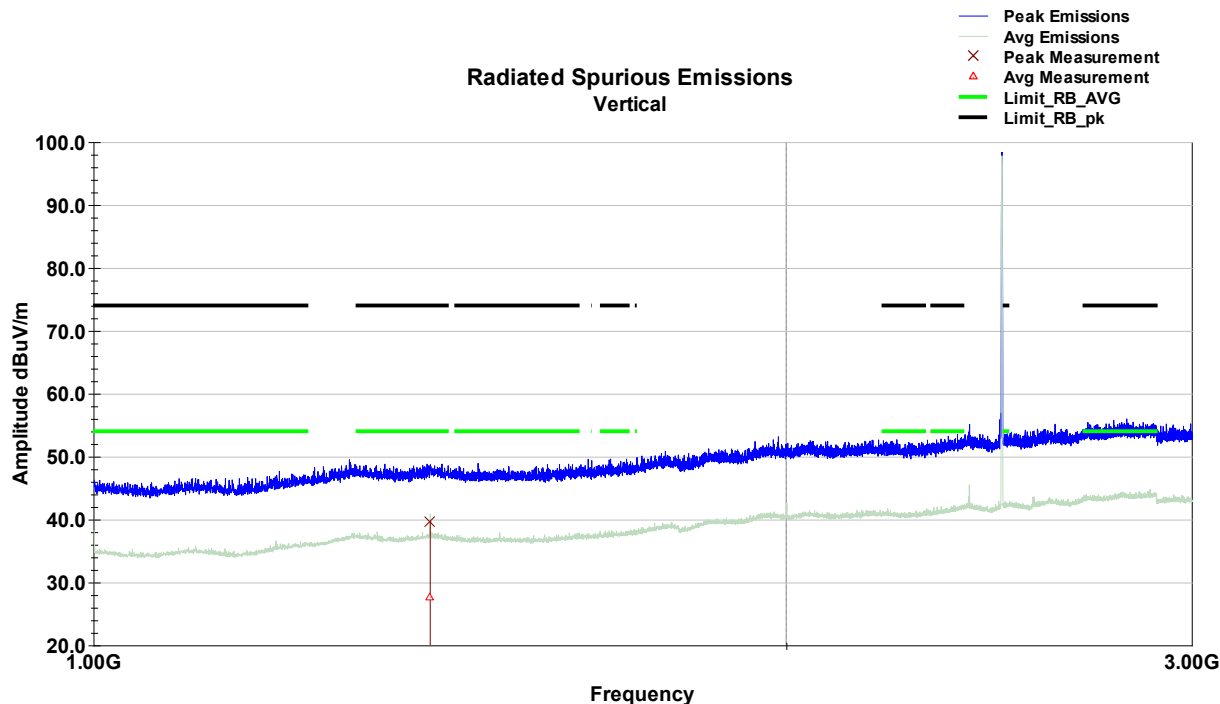
Frequency (GHz)	Polarity (V/H)	Avg Value (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)
16.08	H	44.3	54.0	-9.7
17.85	H	44.3	54.0	-9.7
17.91	H	44.6	54.0	-9.4

Margin = Avg Value - Avg Limit

Frequency (GHz)	Polarity (V/H)	Peak Value (dBuV/m)	Peak Limit (dBuV/m)	Margin (dB)
16.07	H	55.7	74.0	-18.3
17.83	H	55.8	74.0	-18.2
17.91	H	55.7	74.0	-18.3

Margin = Peak Value - Peak Limit

Vertical Plot – 1-3GHz – High Channel

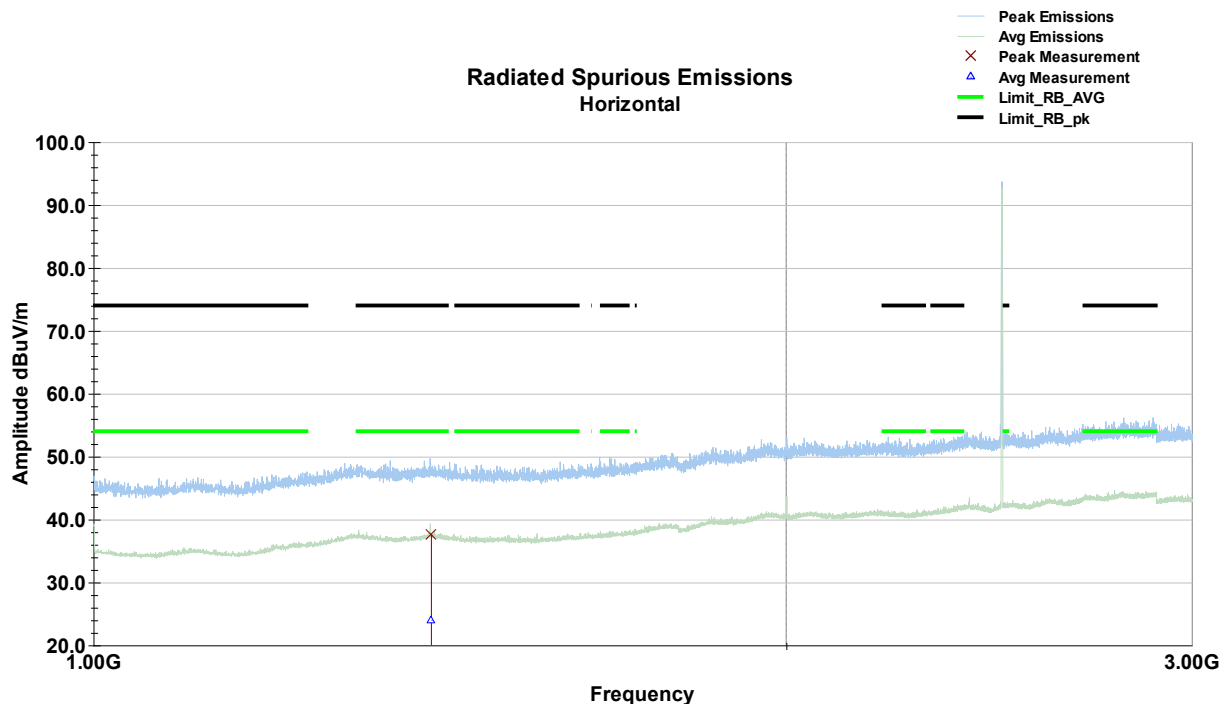


Vertical Data – 1-3GHz – High Channel

Frequency MHz	Raw Avg dBuV	Polarity V/H	Azimuth degrees	Height cm	AF dB/m	Loss dB	DCF dB	Amp dB	Final Avg dBuV/m	Limit dBuV/m	Margin dB
1400.82	31.5	V	189.0	232.0	29.0	1.5	0.0	34.2	27.7	54.0	-26.30
Final Avg = Raw Avg + AF + Loss + DCF - Amp											
Margin = Final Avg - Limit											

Frequency MHz	Raw Pk (dBuV)	Polarity (V/H)	Azimuth degrees	Height (cm)	AF (dB/m)	Loss (dB)	DCF (dB)	Amp (dB)	Final Pk (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1400.82	43.4	V	189.0	232.0	29.0	1.5	0.0	34.2	39.7	74.0	-34.30
Final Pk = Raw Pk + AF + Loss + DCF - Amp											
Margin = Final Pk - Limit											

Horizontal Plot – 1-3GHz – High Channel

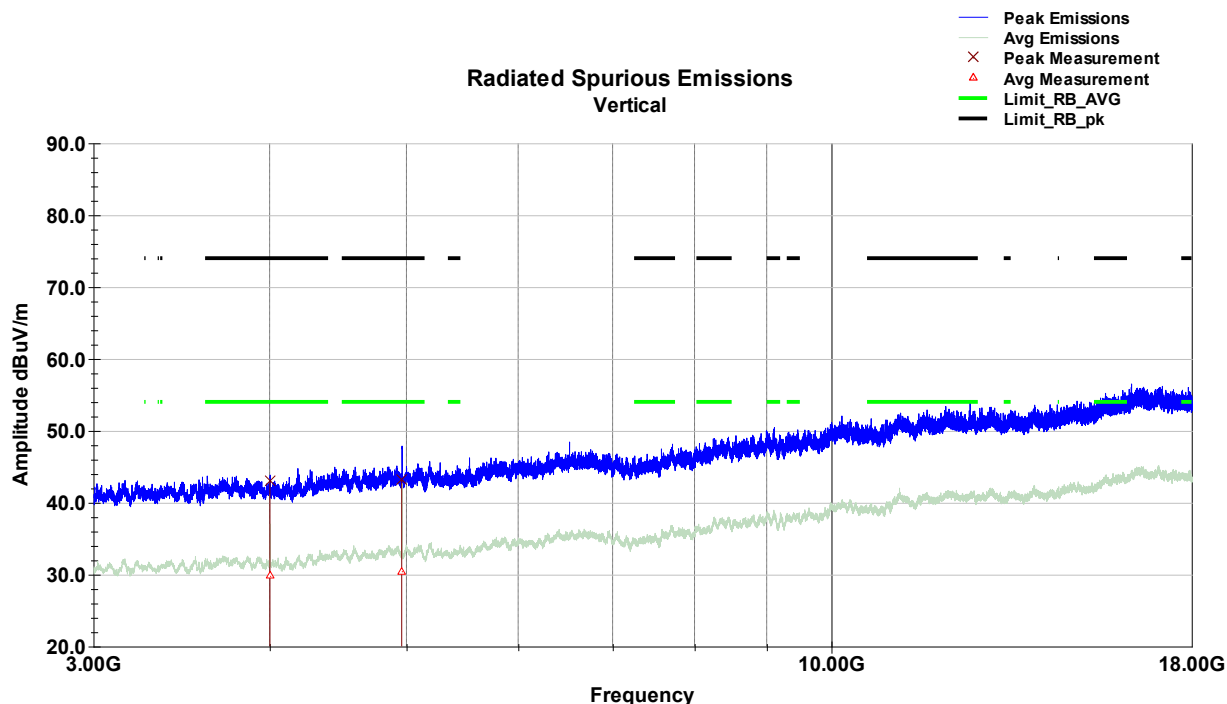


Horizontal Data – 1-3GHz – High Channel

Frequency MHz	Raw Avg dBuV	Polarity (V/H)	Azimuth degrees	Height (cm)	AF (dB/m)	Loss (dB)	DCF dB	Amp (dB)	Avg Value dBuV/m	Limit dBuV/m	Margin (dB)
1402.36	27.8	H	251.0	100.0	29.0	1.5	0.0	34.3	24.1	54.0	-29.90
Final Avg = Raw Avg + AF + Loss + DCF - Amp											
Margin = Final Avg - Limit											

Frequency MHz	Raw Pk dBuV	Polarity (V/H)	Azimuth degrees	Height (cm)	AF (dB/m)	Loss (dB)	DCF dB	Amp (dB)	Final Pk dBuV/m	Limit dBuV/m	Margin (dB)
1402.36	41.3	H	251.0	100.0	29.0	1.5	0.0	34.3	37.6	74.0	-29.90
Final Pk = Raw Pk + AF + Loss + DCF - Amp											
Margin = Final Pk - Limit											

Vertical Plot – 3-18GHz – High Channel



Vertical Data – 3-18GHz – High Channel

Frequency MHz	Raw Avg dBuV	Polarity V/H	Azimuth degrees	Height cm	AF dB/m	Loss dB	DCF dB	Amp dB	Final Avg dBuV/m	Limit dBuV/m	Margin dB
4001.43	28.5	V	29.0	168.0	33.3	2.5	0.0	34.4	29.8	54.0	-24.2
4961.98	27.8	V	168.0	137.0	34.1	2.9	0.0	34.3	30.5	54.0	-23.5

Final Avg = Raw Avg + AF + Loss + DCF - Amp

Margin = Final Avg - Limit

Frequency MHz	Raw Pk (dBuV)	Polarity (V/H)	Azimuth (degrees)	Height (cm)	AF (dB/m)	Loss (dB)	DCF (dB)	Amp (dB)	Final Pk (dBuV/m)	Limit (dBuV/m)	Margin (dB)
4001.43	41.6	V	29.0	168.0	33.3	2.5	0.0	34.4	43.0	74.0	-31.0
4961.98	40.5	V	168.0	137.0	34.1	2.9	0.0	34.3	43.1	74.0	-30.9

Final Pk = Raw Pk + AF + Loss + DCF - Amp

Margin = Final Pk - Limit

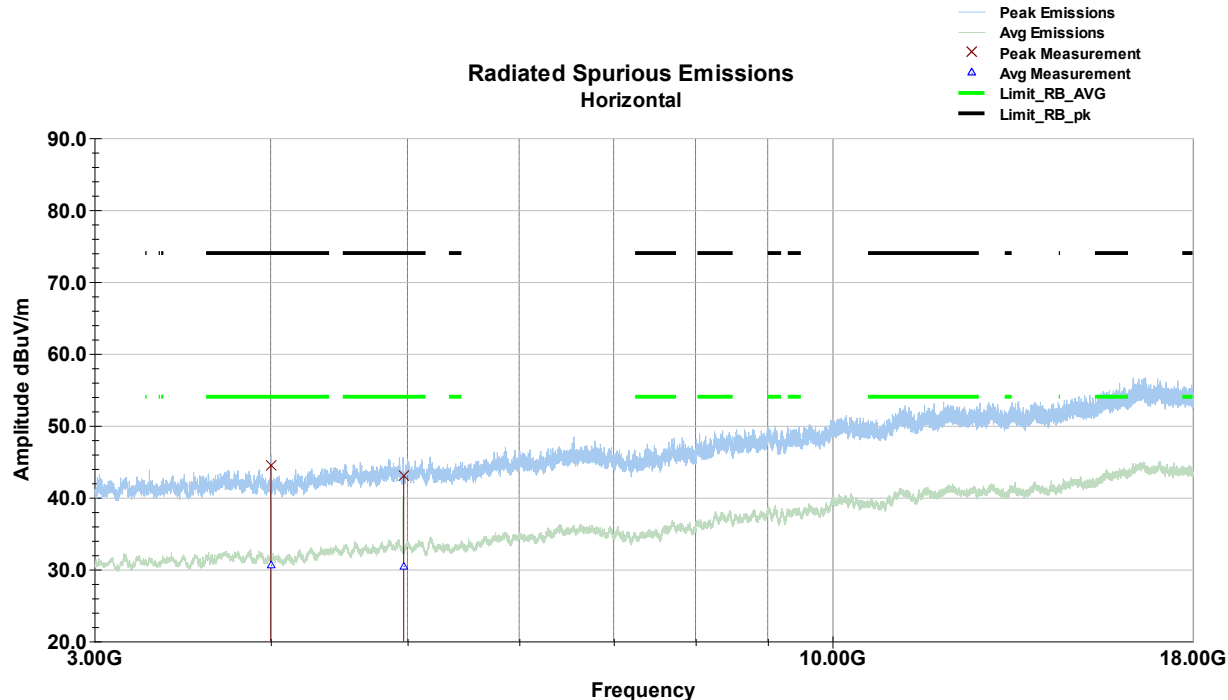
Frequency (GHz)	Polarity (V/H)	Avg Value (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)
16.07	V	44.3	54.0	-9.7
17.89	V	44.5	54.0	-9.5
17.93	V	44.6	54.0	-9.4

Margin = Avg Value - Avg Limit

Frequency (GHz)	Polarity (V/H)	Peak Value (dBuV/m)	Peak Limit (dBuV/m)	Margin (dB)
16.07	V	55.7	74.0	-18.3
17.72	V	55.7	74.0	-18.3
17.89	V	56.1	74.0	-17.9

Margin = Peak Value - Peak Limit

Horizontal Plot – 3-18GHz – High Channel



Vertical Data – 3-18GHz – High Channel

Frequency MHz	Raw Avg dBuV	Polarity (V/H)	Azimuth (degrees)	Height (cm)	AF (dB/m)	Loss (dB)	DCF dB	Amp (dB)	Avg Value dBuV/m	Limit (dBuV/m)	Margin (dB)
4001.68	29.3	H	359.0	153.0	33.3	2.5	0.0	34.4	30.7	54.0	-23.3
4969.82	27.7	H	163.0	128.0	34.1	2.9	0.0	34.2	30.5	54.0	-23.5

Final Avg = Raw Avg + AF + Loss + DCF - Amp

Margin = Final Avg - Limit

Frequency MHz	Raw Pk dBuV	Polarity (V/H)	Azimuth (degrees)	Height (cm)	AF (dB/m)	Loss (dB)	DCF dB	Amp (dB)	Final Pk dBuV/m	Limit dBuV/m	Margin dB
4001.68	43.2	H	359.0	153.0	33.3	2.5	0.0	34.4	44.5	74.0	-29.5
4969.82	40.2	H	163.0	128.0	34.1	2.9	0.0	34.2	43.0	74.0	-31.0

Final Pk = Raw Pk + AF + Loss + DCF - Amp

Margin = Final Pk - Limit

Frequency (GHz)	Polarity (V/H)	Avg Value (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)
15.96	H	44.1	54.0	-9.9
17.72	H	44.4	54.0	-9.6
17.88	H	44.6	54.0	-9.4

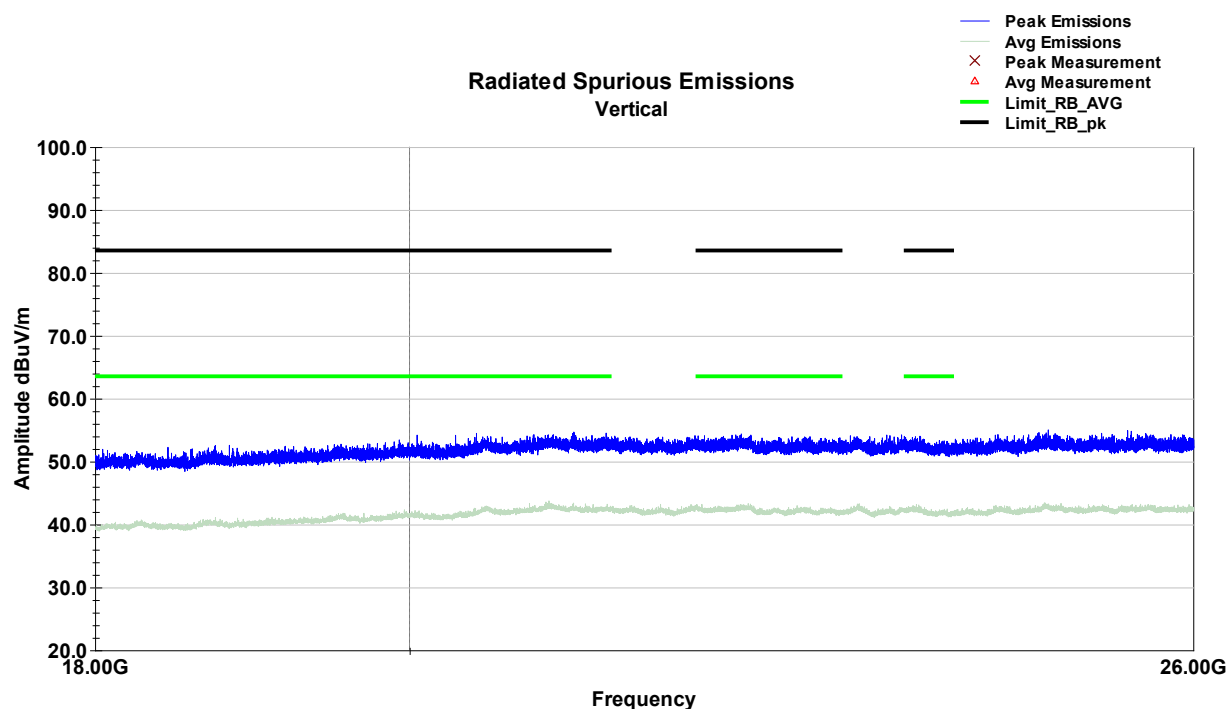
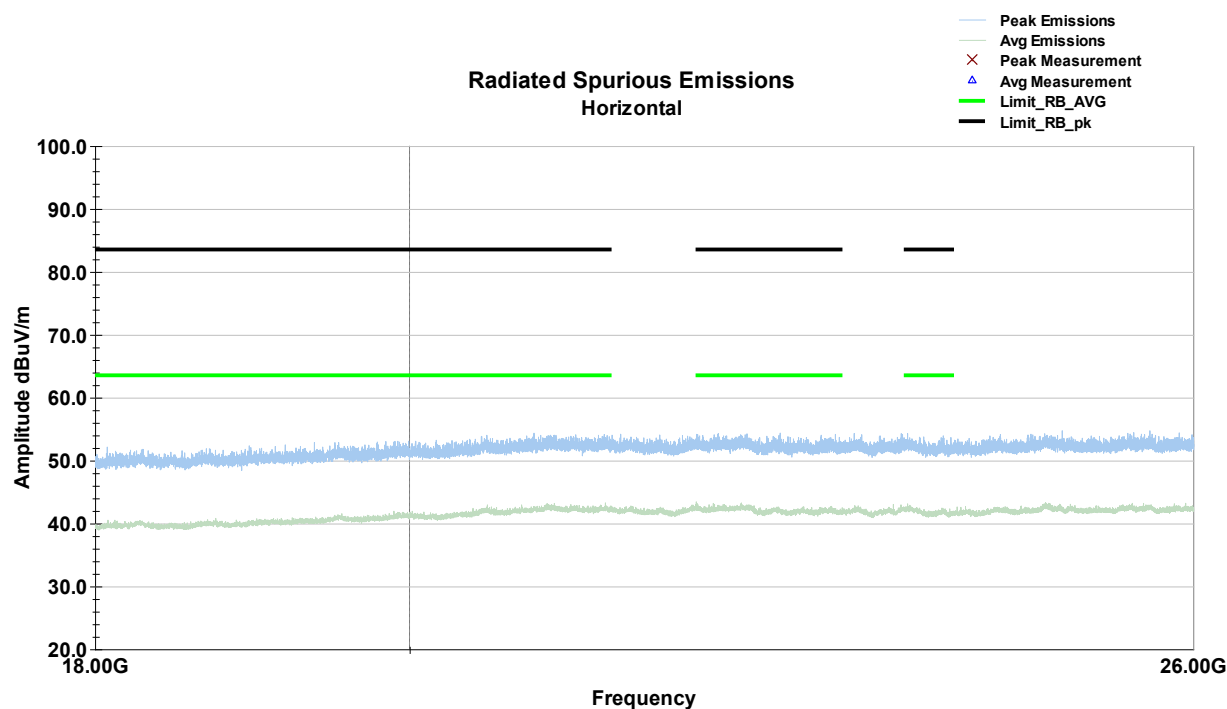
Margin = Avg Value - Avg Limit

Frequency (GHz)	Polarity (V/H)	Peak Value (dBuV/m)	Peak Limit (dBuV/m)	Margin (dB)
15.96	H	56.0	74.0	-18.0
17.74	H	55.5	74.0	-18.5
17.96	H	55.7	74.0	-18.3

Margin = Peak Value - Peak Limit

3.9.4 18-26 GHz

All channels had similar plots in the 18-26GHz frequency range.



4 AC Powerline Conducted Emissions

4.1 Test Result

Test Description	Test Specification		Test Result
AC Powerline Conducted Emissions	15.207	RSS-GEN 8.8	Compliant

4.2 Test Method

With the receiver's resolution bandwidth was set to 9 kHz, exploratory scans were performed over the measuring frequency range (0.15 MHz to 30 MHz) using a max hold mode incorporating a Peak detector and Average detector and using the TILE! software. The final test data was measured using a Quasi-Peak detector and Average detector and compared against the limits indicated in the table below.

Frequency Range	Limits (dBuV)
0.15 to 0.5 MHz	Avg 56 to 46 QP 66 to 56
0.5 to 5 MHz	Avg 46 Pk 56
5 to 30 MHz	Avg 50 Pk 60

4.3 Test Site

SGS EMC Laboratory, Suwanee, GA

Environmental Conditions

Temperature: 23.6 °C

Relative Humidity: 49.7 %

Atmospheric Pressure: 97.5 kPa

4.4 Test Equipment

Test End Date: 26-Aug-2025

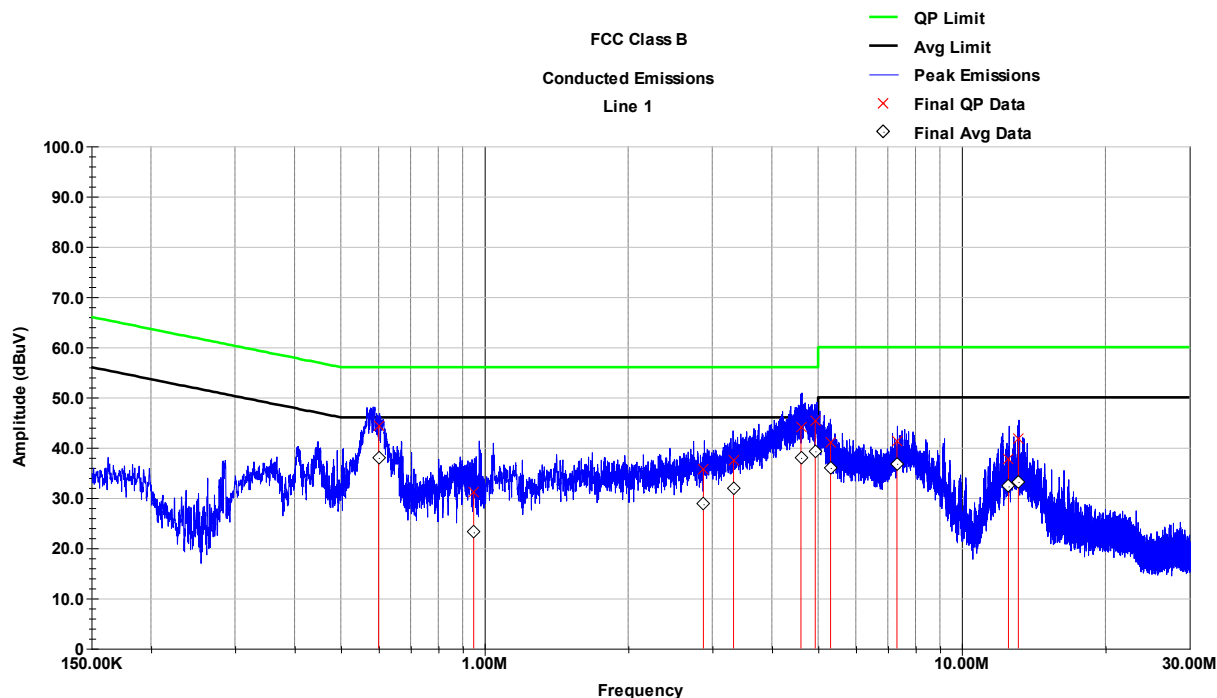
Tester: LM

Equipment	Model	Manufacturer	Asset	Cal Date	Cal Due Date
EMI TEST RECEIVER	ESW44	ROHDE & SCHWARZ	22027	14-Nov-2024	14-Nov-2025
LINE IMPEDANCE STABILIZATION NETWORK	NNB 51	TESEQ	B085882	10-Apr-2025	10-Apr-2026
RF CABLE	UC-N-MM-78	MAURY MICROWAVE	17017	6-Aug-2025	6-Aug-2026
CONDUCTED COMB GENERATOR	CGC-255	COM-POWER CORPORATION	B079696	CNR	CNR

Software: TILE! software profile "Conducted Emissions 240521.til" dated 21-May-2024

4.5 Test Data

Line 1 Conducted Emissions – Peak Plot



Line 1 Conducted Emissions – Tabular Data

Frequency MHz	LISN dB	CF dB	TL dB	Raw Avg dBuV	Final Avg dBuV	Avg Limit dBuV	Avg Margin dB	Raw QP dBuV	Final QP dBuV	QP Limit dBuV	QP Margin dB
0.600	9.8	0.00	0.0	28.1	38.0	46.0	-8.0	34.4	44.2	56.0	-11.8
0.949	9.8	0.00	0.0	13.3	23.1	46	-22.9	21.3	31.1	56.0	-24.9
2.875	9.8	0.00	0.0	18.9	28.7	46	-17.3	25.8	35.6	56.0	-20.4
3.325	9.8	0.00	0.0	21.9	31.8	46	-14.2	27.5	37.4	56.0	-18.6
4.602	9.9	0.00	0.0	28.1	38.0	46.0	-8.0	34.1	44.0	56.0	-12.0
4.933	9.9	0.00	0.0	29.4	39.3	46.0	-6.7	35.5	45.4	56.0	-10.6
5.311	9.9	0.00	0.0	26.0	35.9	50.0	-14.1	31.1	41.0	60.0	-19.0
7.314	9.9	0.00	0.0	26.9	36.8	50.0	-13.2	31.2	41.2	60.0	-18.8
12.528	10.0	0.10	0.0	22.3	32.3	50.0	-17.7	27.7	37.7	60.0	-22.3
13.139	10.0	0.10	0.0	23.1	33.1	50.0	-16.9	31.8	41.9	60.0	-18.1

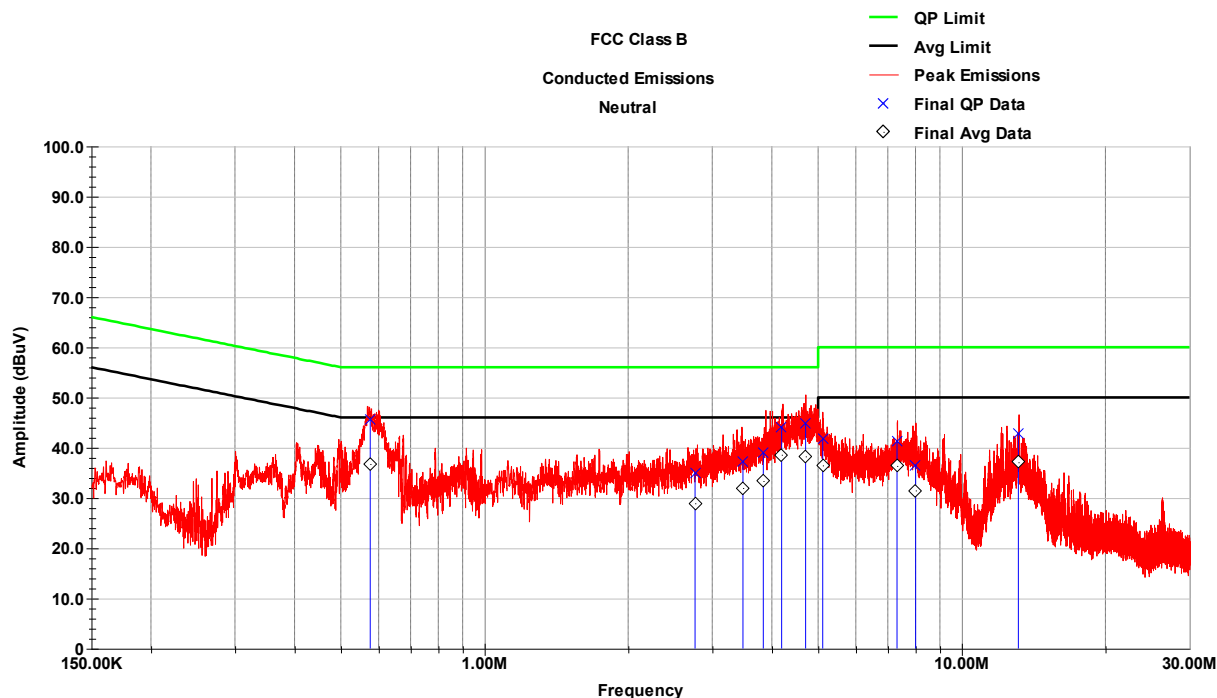
Final QP = Raw QP + LISN + CF + TL

QP Margin = Final QP - QP Limit

Final Avg = Raw Avg + LISN + CF + TL

Avg Margin = Final Avg - Avg Limit

Neutral Conducted Emissions – Peak Plot



Neutral Conducted Emissions – Tabular Data

Frequency MHz	LISN dB	CF dB	TL dB	Raw Avg dBuV	Final Avg dBuV	Avg Limit dBuV	Avg Margin dB	Raw QP dBuV	Final QP dBuV	QP Limit dBuV	QP Margin dB
0.576	9.8	0.00	0.0	27.0	36.8	46.0	-9.2	35.8	45.6	56.0	-10.4
2.762	9.8	0.00	0.0	19.1	29	46	-17	25.2	35	56.0	-21.0
3.479	9.8	0.00	0.0	22.1	32	46	-14	27.5	37.3	56.0	-18.7
3.838	9.8	0.00	0.0	23.5	33.4	46	-12.6	29.0	38.9	56.0	-17.1
4.194	9.8	0.00	0.0	28.8	38.6	46.0	-7.4	34.3	44.2	56.0	-11.8
4.707	9.8	0.00	0.0	28.4	38.3	46.0	-7.7	34.9	44.7	56.0	-11.3
5.112	9.8	0.00	0.0	26.6	36.5	50.0	-13.5	31.9	41.8	60.0	-18.2
7.316	9.9	0.00	0.0	26.5	36.4	50.0	-13.6	31.3	41.2	60.0	-18.8
8.005	9.9	0.00	0.0	21.6	31.5	50.0	-18.5	26.6	36.6	60.0	-23.4
13.139	10.0	0.10	0.0	27.1	37.1	50.0	-12.9	32.9	42.9	60.0	-17.1

Final QP = Raw QP + LISN + CF + TL

QP Margin = Final QP - QP Limit

Final Avg = Raw Avg + LISN + CF + TL

Avg Margin = Final Avg - Avg Limit

5 Measurement Uncertainty

The measurement uncertainty figures are be calculated in accordance with TR 100 028-1 [2] and correspond to an expansion factor (coverage factor) $k = 2$ (which provide confidence levels of 95,45 % in the case where the distributions characterizing the actual measurement uncertainties are normal (Gaussian)).

Measurement uncertainty is not used to adjust the measurements to determine compliance.

Parameter	Expanded Uncertainty for Normal k factor equal to 2	
	Required	Laboratory Actual
Radio Frequency	$\pm 1 \times 10^{-5}$	$\pm 9.8 \times 10^{-8}$
total RF power, conducted	± 1.5 dB	± 1.2 dB
RF power density, conducted	± 3 dB	± 0.7 dB
spurious emissions, conducted	± 3 dB	± 2.1 dB
all emissions, radiated	± 6 dB	± 4.8 dB
temperature	$\pm 1^{\circ}\text{C}$	$\pm 0.5^{\circ}\text{C}$
humidity	± 5 %	± 3.5 %
DC and low frequency voltages	± 3 %	± 0.4 %

6 Revision History

Revision Level	Description of changes	Revision Date
0	Initial release	30 January 2026
1	Corrected FCC and IC IDs on title page and in section 2.3	03 February 2026
2	Added RSE test plots for 9kHz to 30MHz frequency range	03 April 2026