

ANNEX A: Test Result

1. Radiates Emission

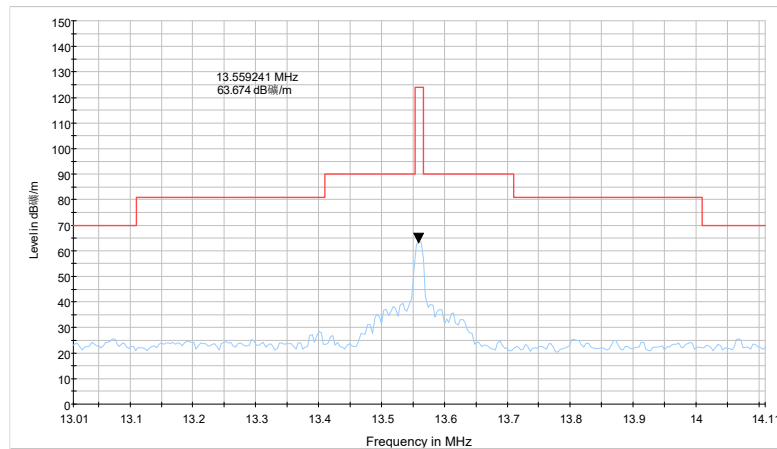
The test is in transmitting all mode, NFC-A was selected as the worst condition. The test data of the worst-case condition was recorded in this report.

The field strength of spurious emission was measured in the following position: EUT stand-up position (Z axis), lie-down position (X, Y axis). The worst emission was found in lie-down position (X axis) and the loop antenna is coplanar, the other antennas are vertical and horizontal.

A symbol ($\text{dB}\mu\text{V}/\text{m}$) in the test plot below means ($\text{dB}\mu\text{V}/\text{m}$)

In-band

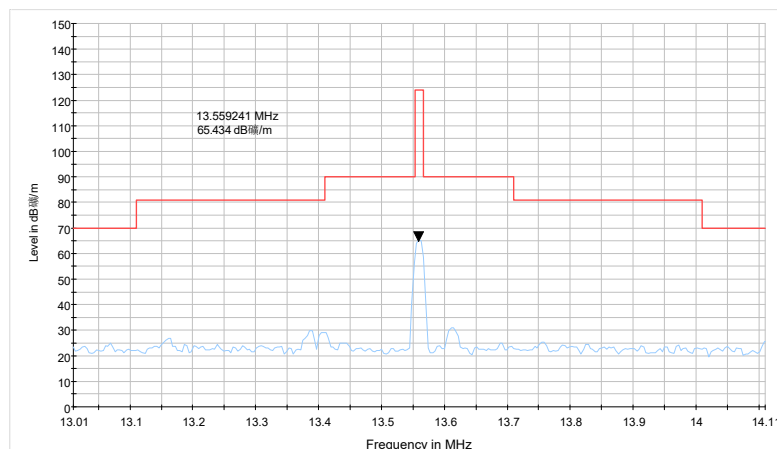
F153C



Radiates Emission from 13.01MHz to 14.11MHz

Note: This graph displays the maximum values of coaxial and coplanar by software

F153B



Radiates Emission from 13.01MHz to 14.11MHz

Note: This graph displays the maximum values of coaxial and coplanar by software

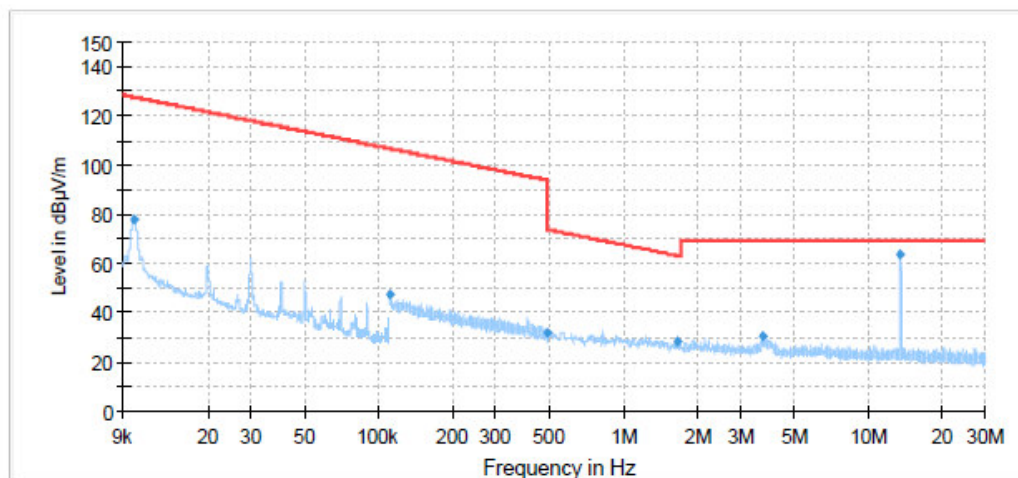
Out-of-band

The test is in transmitting all mode, NFC-A was selected as the worst condition. The test data of the worst-case condition was recorded in this report.

The following graphs display the maximum values of coaxial and coplanar for 9k-30MHz; horizontal and vertical for 30MHz to 1GHz by software.

For above 1GHz, Blue trace uses the peak detection, Green trace uses the average detection.

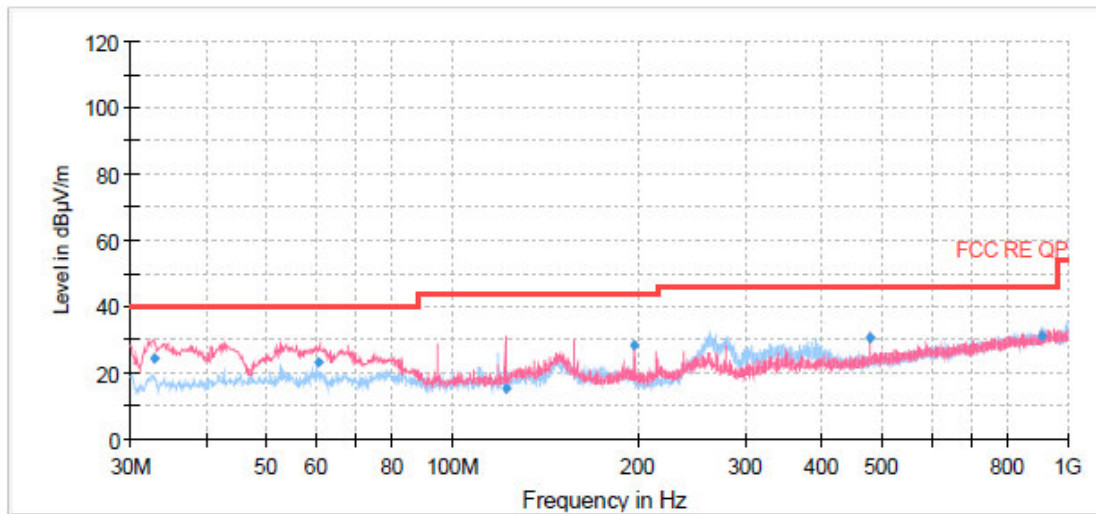
F153C



Final Result

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Azimuth (deg)	Corr. (dB/m)
0.01	78.10	127.66	49.56	500.00	10.00	18
0.11	47.14	106.77	59.63	150.00	1.00	17
0.49	31.98	73.80	41.82	150.00	303.00	17
1.65	27.95	63.24	35.28	150.00	259.00	17
3.73	30.62	69.50	38.88	150.00	348.00	17
13.56	63.67	69.50	5.83	150.00	337.00	17

Radiates Emission from 9kHz to 30MHz



Radiates Emission from 30MHz to 1GHz

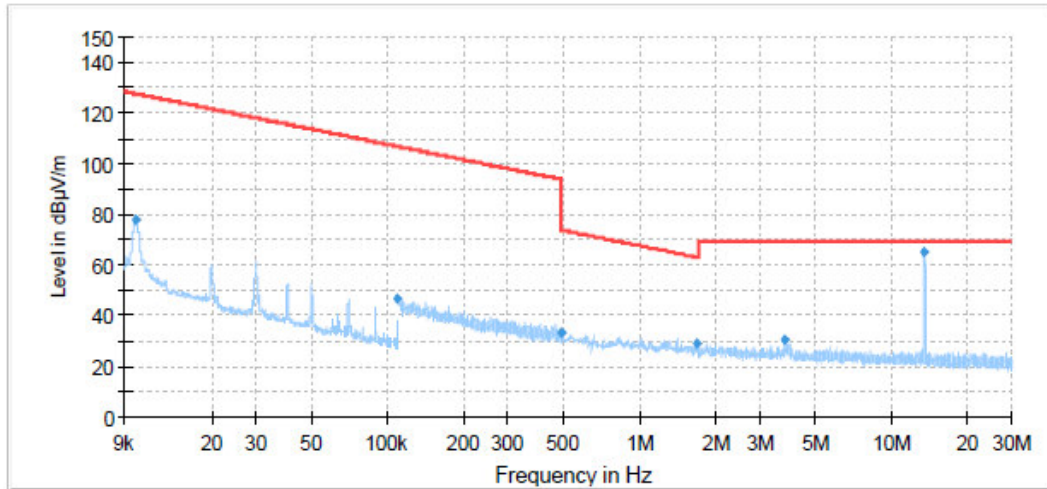
Note: This graph displays the maximum values of horizontal and vertical by software

Frequency (MHz)	Quasi-Peak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
32.87	24.18	40.00	15.82	102.0	V	330.00	17
60.44	22.94	40.00	17.06	102.0	V	263.00	19
122.39	15.55	43.50	27.95	101.0	V	88.00	17
198.01	28.33	43.50	15.17	102.0	V	226.00	18
476.20	30.81	46.00	15.19	108.0	V	0.00	25
905.06	31.08	46.00	14.92	125.0	H	204.00	31

Remark: 1. Correction Factor = Antenna factor + Insertion loss (cable loss + amplifier gain)

2. Margin = Limit – Quasi-Peak

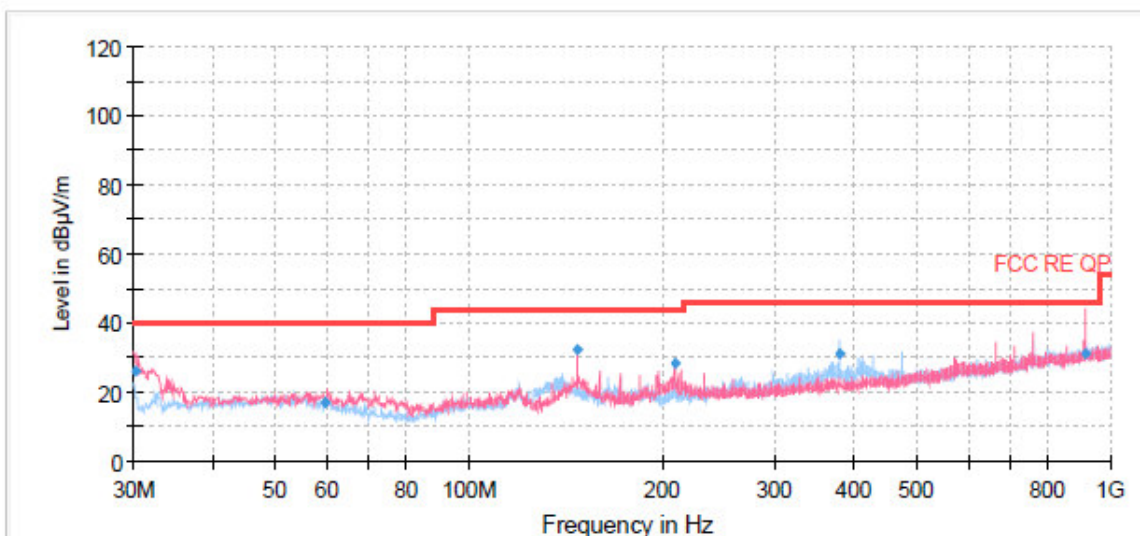
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Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Azimuth (deg)	Corr. (dB/m)
0.01	77.71	127.65	49.93	500.00	7.00	18
0.11	46.95	106.78	59.82	150.00	28.00	17
0.49	32.95	73.80	40.85	150.00	0.00	17
1.70	28.89	62.99	34.09	150.00	36.00	17
3.75	30.61	69.50	38.89	150.00	302.00	17
13.56	65.43	69.50	4.07	150.00	187.00	17

Radiates Emission from 9kHz to 30MHz



Radiates Emission from 30MHz to 1GHz

Note: This graph displays the maximum values of horizontal and vertical by software

Frequency (MHz)	Quasi-Peak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
30.12	25.88	40.00	14.12	100.0	V	310.00	17
59.59	16.82	40.00	23.18	100.0	V	1.00	19
147.45	32.15	43.50	11.36	100.0	V	22.00	15
208.88	28.03	43.50	15.47	100.0	V	267.00	18
379.08	31.38	46.00	14.62	100.0	H	1.00	23
913.59	31.33	46.00	14.67	211.0	V	246.00	31

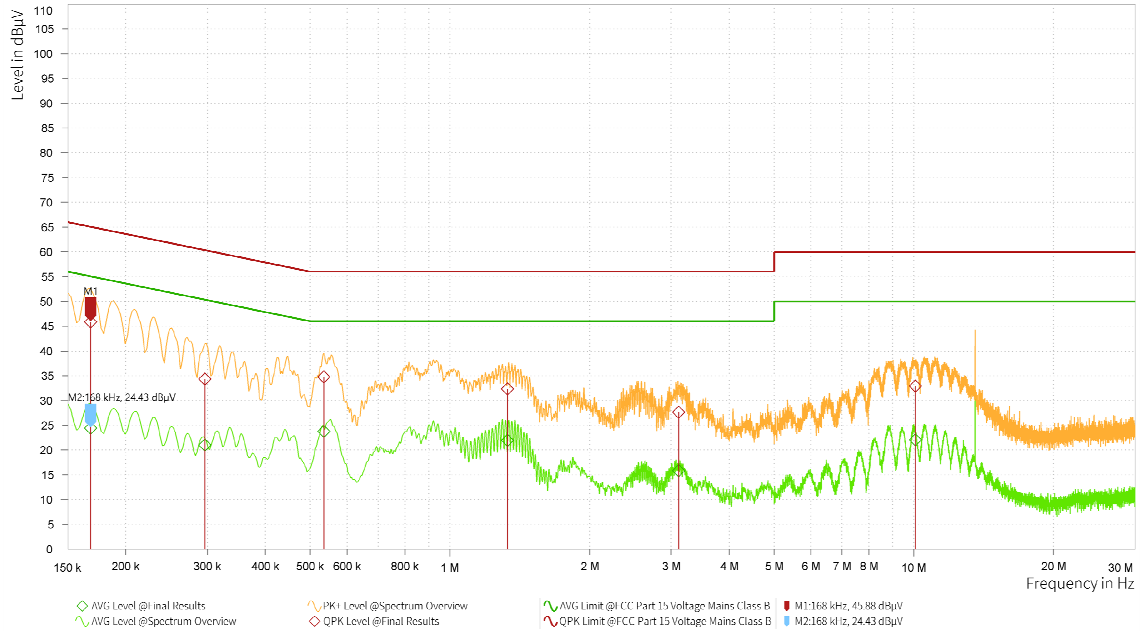
Remark: 1. Correction Factor = Antenna factor + Insertion loss (cable loss + amplifier gain)

2. Margin = Limit – Quasi-Peak

2. Conducted Emission

During the test, the Conducted Emission was performed in all modes with all channel. The test data of the worst-case condition was recorded in this report.

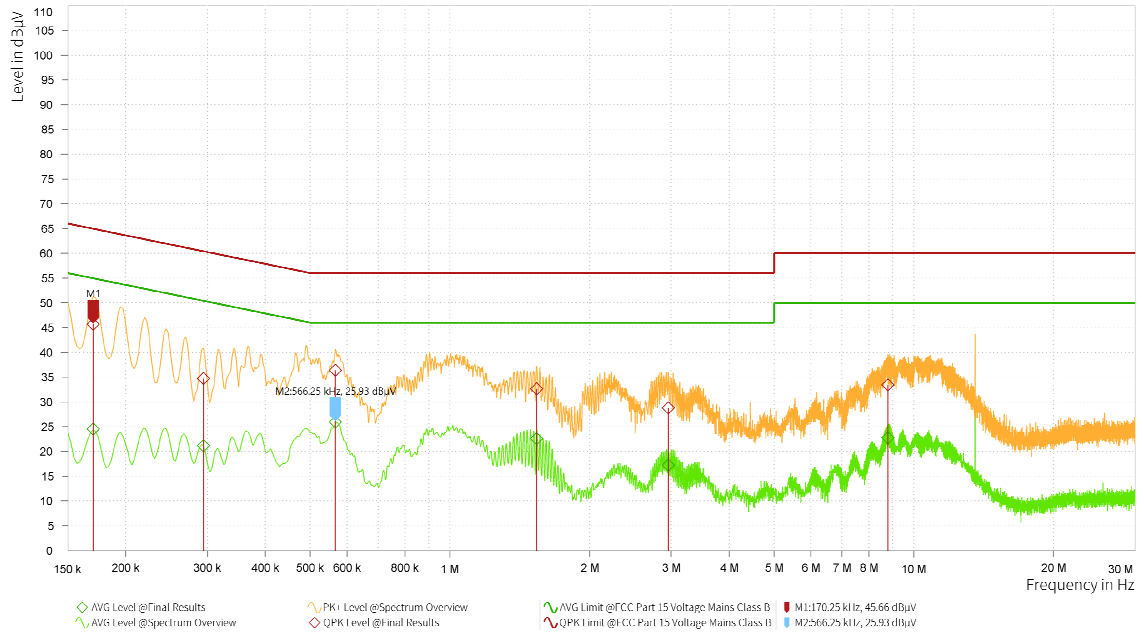
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Frequency [MHz]	QPK Level [dBμV]	QPK Limit [dBμV]	QPK Margin [dB]	AVG Level [dBμV]	AVG Limit [dBμV]	AVG Margin [dB]	Correction [dB]	Line	Meas. BW [kHz]	Meas. Time [s]
0.168	45.88	65.06	19.18	24.43	55.06	30.63	20.89	L1	9.000	1.000
0.296	34.33	60.35	26.01	21.03	50.35	29.32	20.94	L1	9.000	1.000
0.535	34.79	56.00	21.21	23.78	46.00	22.22	20.74	L1	9.000	1.000
1.331	32.37	56.00	23.63	21.94	46.00	24.06	19.93	L1	9.000	1.000
3.111	27.65	56.00	28.35	15.84	46.00	30.16	19.48	L1	9.000	1.000
10.088	32.93	60.00	27.07	22.04	50.00	27.96	19.42	L1	9.000	1.000

Remark: Correct factor=cable loss + LISN factor

L line Conducted Emission from 150 kHz to 30 MHz

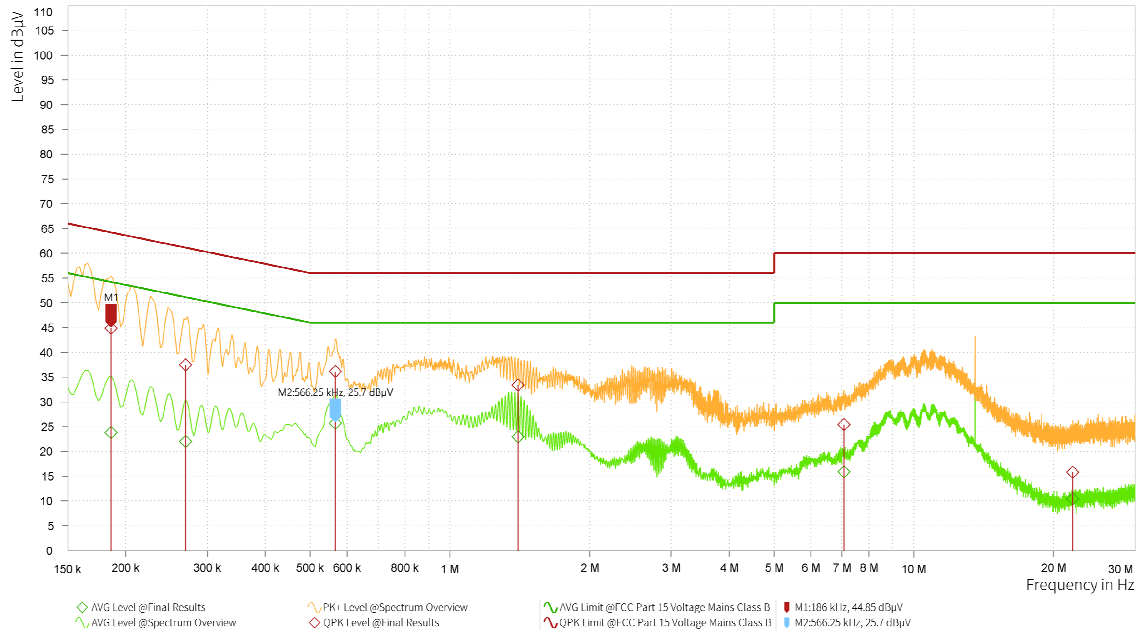


Frequency [MHz]	QPK Level [dBμV]	QPK Limit [dBμV]	QPK Margin [dB]	AVG Level [dBμV]	AVG Limit [dBμV]	AVG Margin [dB]	Correction [dB]	Line	Meas. BW [kHz]	Meas. Time [s]
0.170	45.66	64.95	19.29	24.52	54.95	30.43	20.90	N	9.000	1.000
0.294	34.71	60.41	25.70	21.16	50.41	29.25	20.96	N	9.000	1.000
0.566	36.37	56.00	19.63	25.93	46.00	20.07	20.72	N	9.000	1.000
1.538	32.62	56.00	23.38	22.57	46.00	23.43	19.83	N	9.000	1.000
2.956	28.80	56.00	27.20	17.20	46.00	28.80	19.50	N	9.000	1.000
8.799	33.42	60.00	26.58	22.78	50.00	27.22	19.42	N	9.000	1.000

Remark: Correct factor=cable loss + LISN factor

N line Conducted Emission from 150 kHz to 30 MHz

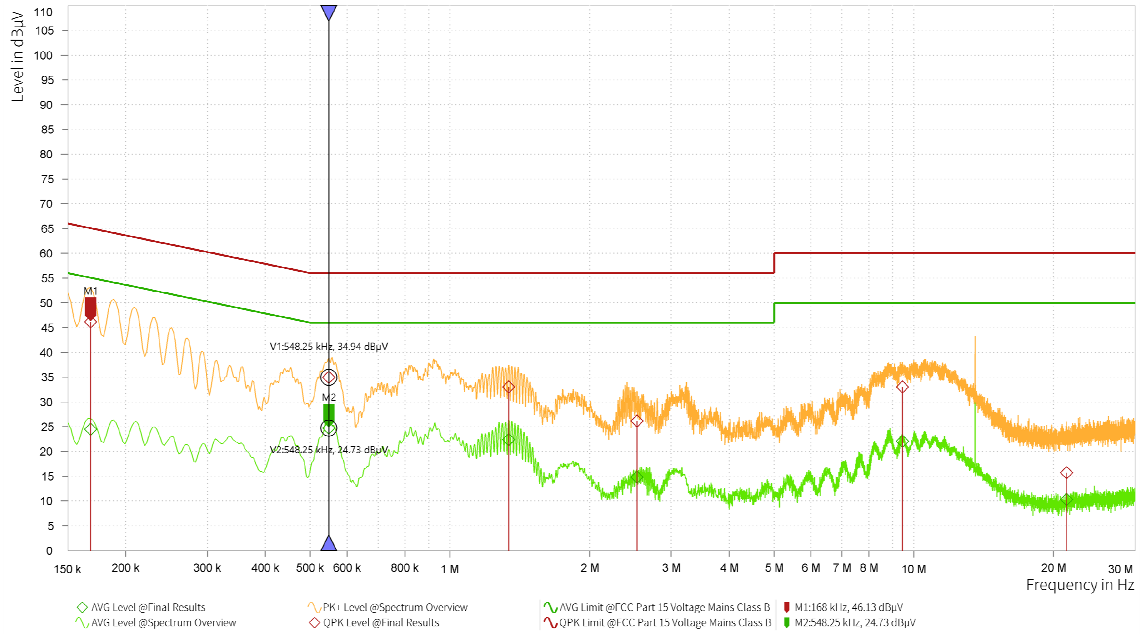
F153B



Frequency [MHz]	QPK Level [dBμV]	QPK Limit [dBμV]	QPK Margin [dB]	AVG Level [dBμV]	AVG Limit [dBμV]	AVG Margin [dB]	Correction [dB]	Line	Meas. BW [kHz]	Meas. Time [s]
0.186	44.85	64.21	19.36	23.81	54.21	30.40	21.02	L1	9.000	1.000
0.269	37.46	61.14	23.68	22.03	51.14	29.11	20.96	L1	9.000	1.000
0.566	36.15	56.00	19.85	25.70	46.00	20.30	20.71	L1	9.000	1.000
1.403	33.40	56.00	22.60	22.96	46.00	23.04	19.89	L1	9.000	1.000
7.069	25.42	60.00	34.58	15.90	50.00	34.10	19.41	L1	9.000	1.000
22.007	15.81	60.00	44.19	10.43	50.00	39.57	19.70	L1	9.000	1.000

Remark: Correct factor=cable loss + LISN factor

L line Conducted Emission from 150 kHz to 30 MHz



Frequency [MHz]	QPK Level [dBμV]	QPK Limit [dBμV]	QPK Margin [dB]	AVG Level [dBμV]	AVG Limit [dBμV]	AVG Margin [dB]	Correction [dB]	Line	Meas. BW [kHz]	Meas. Time [s]
0.168	46.13	65.06	18.92	24.48	55.06	30.57	20.90	N	9.000	1.000
0.548	34.94	56.00	21.06	24.73	46.00	21.27	20.74	N	9.000	1.000
1.338	33.03	56.00	22.97	22.37	46.00	23.63	19.94	N	9.000	1.000
2.531	26.13	56.00	29.87	14.81	46.00	31.19	19.55	N	9.000	1.000
9.452	33.01	60.00	26.99	22.05	50.00	27.95	19.43	N	9.000	1.000
21.352	15.69	60.00	44.31	10.27	50.00	39.73	19.73	N	9.000	1.000

Remark: Correct factor=cable loss + LISN factor

N line Conducted Emission from 150 kHz to 30 MHz