

Transmitter Radiated Emissions (continued)



Note: The above plots are pre-scans and for indication purposes only. For final measurements, see accompanying tables.

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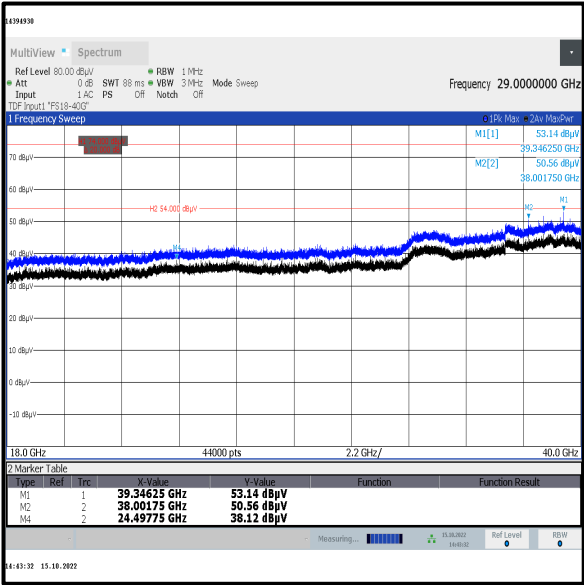
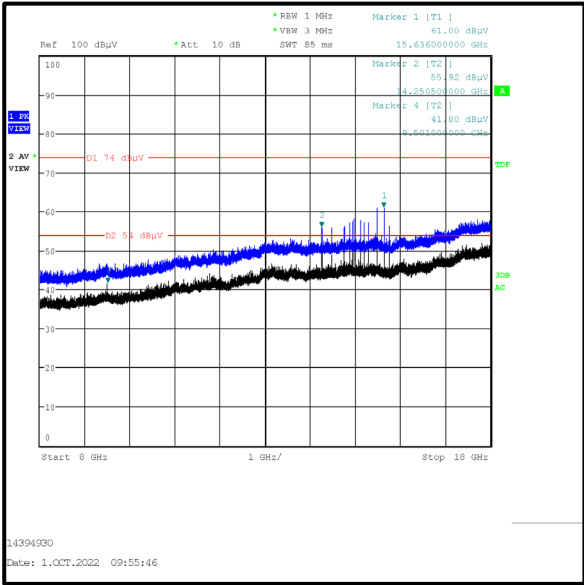
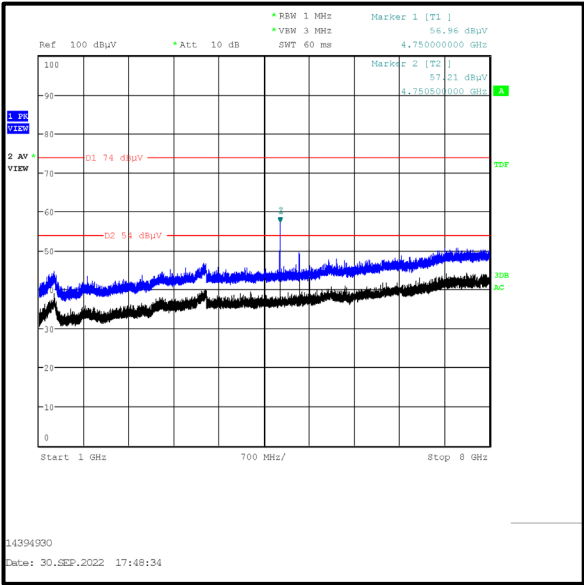
Transmitter Radiated Emissions (continued)**Results: Antenna 14 / Peak**

Frequency (MHz)	Antenna Polarity	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
4750.023	Vertical	59.2	74.0	14.8	Complied
9499.973	Vertical	49.9	74.0	24.1	Complied
14249.999	Vertical	60.2	74.0	13.8	Complied
15750.049	Vertical	63.4	74.0	10.6	Complied
23749.942	Vertical	49.8	74.0	24.2	Complied
37999.881	Vertical	61.2	74.0	12.8	Complied
76887.580	Vertical	69.9	74.0	4.1	Complied

Results: Antenna 14 / Average

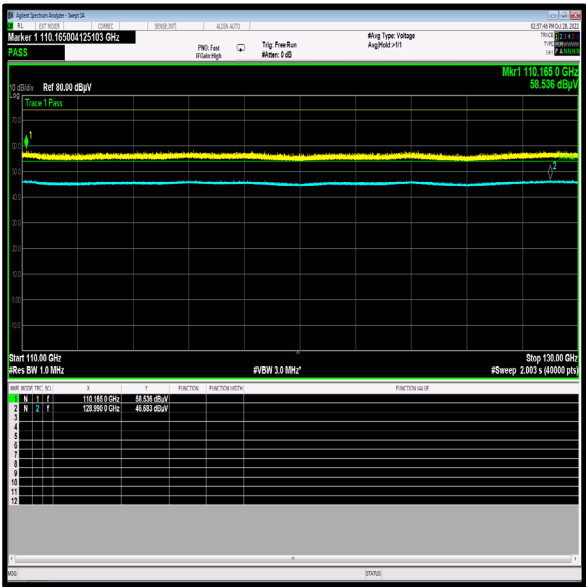
Frequency (MHz)	Antenna Polarity	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
4750.023	Vertical	43.6	54.0	10.4	Complied
9499.973	Vertical	36.1	54.0	17.9	Complied
14249.999	Vertical	43.8	54.0	10.2	Complied
15750.049	Vertical	41.8	54.0	12.2	Complied
23749.942	Vertical	39.1	54.0	14.9	Complied
37999.881	Vertical	46.2	54.0	7.8	Complied
76887.580	Vertical	44.8	54.0	9.2	Complied

Transmitter Radiated Emissions (continued)



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Transmitter Radiated Emissions (continued)



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Transmitter Radiated Emissions (continued)



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5 AC Power Line Conducted Emissions Test Results

5.1 Transmitter AC Conducted Spurious Emissions

Test Summary:

Test Engineers:	Alison Johnston & Nick Tye	Test Dates:	25 October 2022 & 26 October 2022
Test Sample Serial Number:	58644148		

FCC Reference:	Part 15.207
Test Method Used:	ANSI C63.10 Section 6.2 / FCC KDB 174176 and notes below

Environmental Conditions:

Temperature (°C):	24 to 25
Relative Humidity (%):	49 to 51

Note(s):

1. The EUT was connected to a benchtop DC power supply which supplied the unit with 24 VDC. The DC power supply was connected to 120 VAC 60 Hz single phase supply via a LISN.
2. A pulse limiter was fitted between the LISN and the test receiver.
3. In accordance with FCC KDB 174176 Q4, tests were performed with a 240 VAC 60 Hz single phase supply as this was within the input voltage range of the DC power supply.
4. Pre-scans were performed and markers placed on the highest live and neutral measured levels. Final measurements were performed on the marker frequencies and the results entered into the tables below.

Transmitter AC Conducted Spurious Emissions (continued)**Results: Antenna 1 / Live / Quasi Peak / 120 VAC 60 Hz**

Frequency (MHz)	Line	Level (dBμV)	Limit (dBμV)	Margin (dB)	Result
0.177000	Live	19.8	64.6	44.8	Complied
10.203000	Live	14.0	60.0	46.0	Complied
10.549500	Live	12.7	60.0	47.3	Complied
17.817000	Live	20.5	60.0	39.5	Complied
24.000000	Live	25.4	60.0	34.6	Complied
26.745000	Live	10.5	60.0	49.5	Complied

Results: Antenna 1 / Live / Average / 120 VAC 60 Hz

Frequency (MHz)	Line	Level (dBμV)	Limit (dBμV)	Margin (dB)	Result
10.203000	Live	13.1	50.0	36.9	Complied
10.585500	Live	7.7	50.0	42.3	Complied
18.001500	Live	28.5	50.0	21.5	Complied
21.907500	Live	16.6	50.0	33.4	Complied
24.000000	Live	21.5	50.0	28.5	Complied
28.000500	Live	25.6	50.0	24.4	Complied

Results: Antenna 1 / Neutral / Quasi Peak / 120 VAC 60 Hz

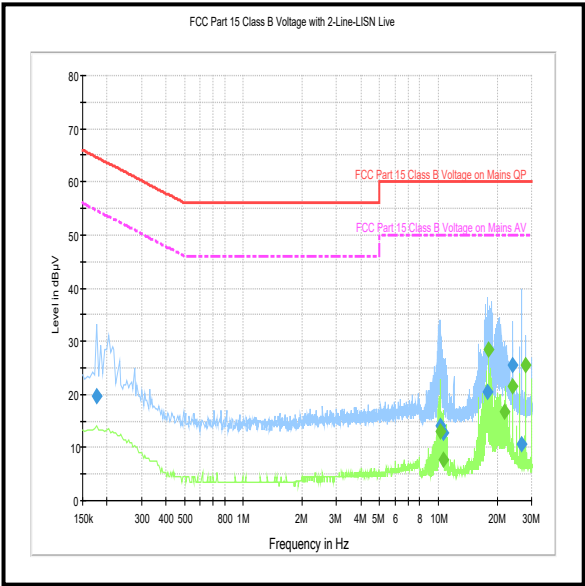
Frequency (MHz)	Line	Level (dBμV)	Limit (dBμV)	Margin (dB)	Result
0.159000	Neutral	19.8	65.5	45.7	Complied
5.037000	Neutral	9.1	60.0	50.9	Complied
10.131000	Neutral	16.2	60.0	43.8	Complied
18.784500	Neutral	19.3	60.0	40.7	Complied
24.841500	Neutral	12.4	60.0	47.6	Complied
30.000000	Neutral	30.4	60.0	29.6	Complied

Results: Antenna 1 / Neutral / Average / 120 VAC 60 Hz

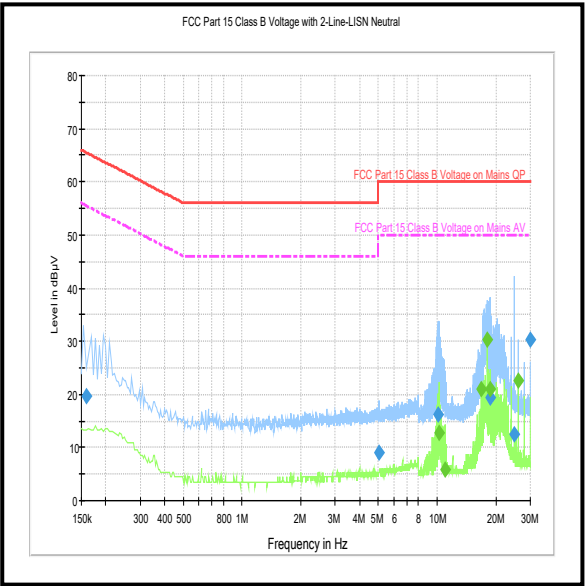
Frequency (MHz)	Line	Level (dBμV)	Limit (dBμV)	Margin (dB)	Result
10.203000	Neutral	12.8	50.0	37.2	Complied
10.963500	Neutral	5.8	50.0	44.2	Complied
16.867500	Neutral	21.1	50.0	28.9	Complied
18.001500	Neutral	30.3	50.0	19.7	Complied
18.672000	Neutral	20.9	50.0	29.1	Complied
26.002500	Neutral	22.6	50.0	27.4	Complied

Transmitter AC Conducted Spurious Emissions (continued)

Results: Antenna 1 / 120 VAC 60 Hz



Live



Neutral

Note: These plots are pre-scans and for indication purposes only. For final measurements, see accompanying tables.

Transmitter AC Conducted Spurious Emissions (continued)**Results: Antenna 1 / Live / Quasi Peak / 240 VAC 60 Hz**

Frequency (MHz)	Line	Level (dBμV)	Limit (dBμV)	Margin (dB)	Result
0.190500	Live	19.8	64.0	44.2	Complied
9.676500	Live	15.6	60.0	44.4	Complied
12.003000	Live	10.5	60.0	49.5	Complied
15.162000	Live	12.3	60.0	47.7	Complied
18.001500	Live	32.0	60.0	28.0	Complied
24.000000	Live	25.7	60.0	34.3	Complied

Results: Antenna 1 / Live / Average / 240 VAC 60 Hz

Frequency (MHz)	Line	Level (dBμV)	Limit (dBμV)	Margin (dB)	Result
9.609000	Live	11.5	50.0	38.5	Complied
15.999000	Live	19.2	50.0	30.8	Complied
18.001500	Live	29.5	50.0	20.5	Complied
19.999500	Live	28.5	50.0	21.5	Complied
24.000000	Live	20.8	50.0	29.2	Complied
28.000500	Live	26.1	50.0	23.9	Complied

Results: Antenna 1 / Neutral / Quasi Peak / 240 VAC 60 Hz

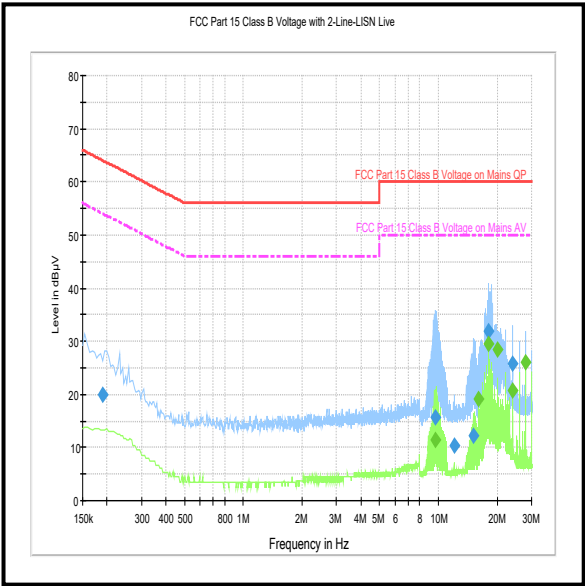
Frequency (MHz)	Line	Level (dBμV)	Limit (dBμV)	Margin (dB)	Result
0.159000	Neutral	18.7	65.5	46.8	Complied
9.676500	Neutral	14.9	60.0	45.1	Complied
15.198000	Neutral	11.2	60.0	48.8	Complied
17.268000	Neutral	23.9	60.0	36.1	Complied
18.622500	Neutral	24.1	60.0	35.9	Complied
28.000500	Neutral	27.9	60.0	32.1	Complied

Results: Antenna 1 / Neutral / Average / 240 VAC 60 Hz

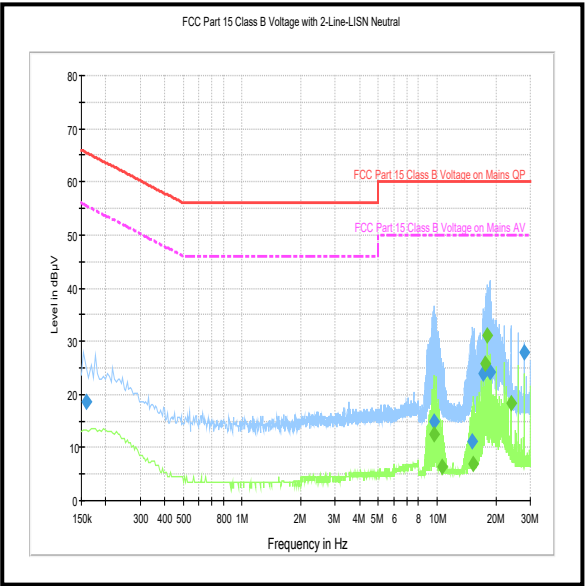
Frequency (MHz)	Line	Level (dBμV)	Limit (dBμV)	Margin (dB)	Result
9.667500	Neutral	12.4	50.0	37.6	Complied
10.581000	Neutral	6.5	50.0	43.5	Complied
15.324000	Neutral	6.8	50.0	43.2	Complied
17.673000	Neutral	25.8	50.0	24.2	Complied
18.001500	Neutral	31.1	50.0	18.9	Complied
24.036000	Neutral	18.4	50.0	31.6	Complied

Transmitter AC Conducted Spurious Emissions (continued)

Results: Antenna 1 / 240 VAC 60 Hz



Live



Neutral

Note: These plots are pre-scans and for indication purposes only. For final measurements, see accompanying tables.

Transmitter AC Conducted Spurious Emissions (continued)**Results: Antenna 3 / Live / Quasi Peak / 120 VAC 60 Hz**

Frequency (MHz)	Line	Level (dB μ V)	Limit (dB μ V)	Margin (dB)	Result
0.150000	Live	19.7	66.0	46.3	Complied
10.126500	Live	15.1	60.0	44.9	Complied
12.016500	Live	9.5	60.0	50.5	Complied
15.999000	Live	22.2	60.0	37.8	Complied
18.775500	Live	19.3	60.0	40.7	Complied
28.000500	Live	29.2	60.0	30.8	Complied

Results: Antenna 3 / Live / Average / 120 VAC 60 Hz

Frequency (MHz)	Line	Level (dB μ V)	Limit (dB μ V)	Margin (dB)	Result
10.090500	Live	8.3	50.0	41.7	Complied
15.999000	Live	18.4	50.0	31.6	Complied
18.271500	Live	23.9	50.0	26.1	Complied
20.287500	Live	12.0	50.0	38.0	Complied
24.000000	Live	21.9	50.0	28.1	Complied
28.000500	Live	25.7	50.0	24.3	Complied

Results: Antenna 3 / Neutral / Quasi Peak / 120 VAC 60 Hz

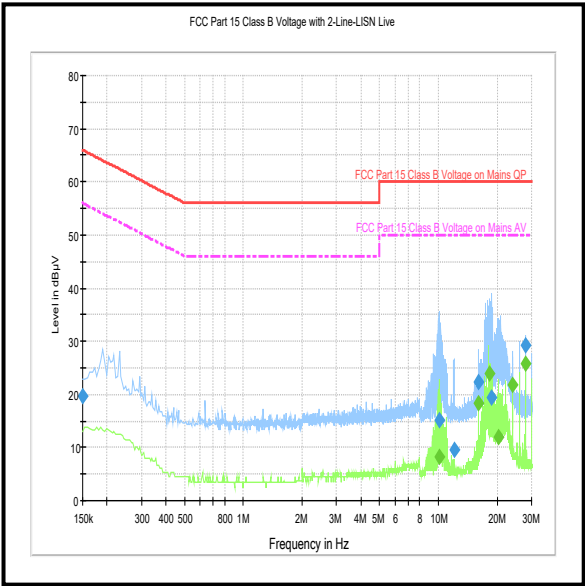
Frequency (MHz)	Line	Level (dB μ V)	Limit (dB μ V)	Margin (dB)	Result
0.150000	Neutral	19.5	66.0	46.5	Complied
10.126500	Neutral	18.5	60.0	41.5	Complied
10.819500	Neutral	10.9	60.0	49.1	Complied
18.001500	Neutral	32.8	60.0	27.2	Complied
18.685500	Neutral	25.0	60.0	35.0	Complied
24.000000	Neutral	26.2	60.0	33.8	Complied

Results: Antenna 3 / Neutral / Average / 120 VAC 60 Hz

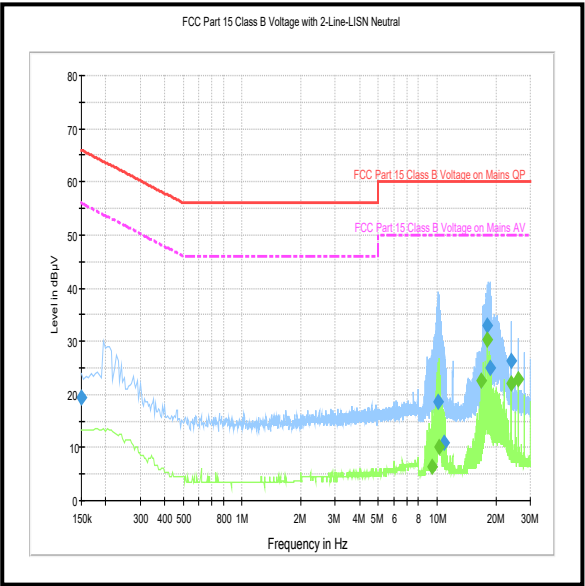
Frequency (MHz)	Line	Level (dB μ V)	Limit (dB μ V)	Margin (dB)	Result
9.442500	Neutral	6.4	50.0	43.6	Complied
10.203000	Neutral	10.0	50.0	40.0	Complied
16.867500	Neutral	22.6	50.0	27.4	Complied
18.001500	Neutral	30.3	50.0	19.7	Complied
24.036000	Neutral	22.0	50.0	28.0	Complied
26.002500	Neutral	22.8	50.0	27.2	Complied

Transmitter AC Conducted Spurious Emissions (continued)

Results: Antenna 3 / 120 VAC 60 Hz



Live



Neutral

Note: These plots are pre-scans and for indication purposes only. For final measurements, see accompanying tables.

Transmitter AC Conducted Spurious Emissions (continued)**Results: Antenna 3 / Live / Quasi Peak / 240 VAC 60 Hz**

Frequency (MHz)	Line	Level (dB μ V)	Limit (dB μ V)	Margin (dB)	Result
0.163500	Live	20.2	65.3	45.1	Complied
8.992500	Live	18.8	60.0	41.2	Complied
11.998500	Live	10.9	60.0	49.1	Complied
18.708000	Live	21.8	60.0	38.2	Complied
20.832000	Live	17.7	60.0	42.3	Complied
23.995500	Live	19.5	60.0	40.5	Complied

Results: Antenna 3 / Live / Average / 240 VAC 60 Hz

Frequency (MHz)	Line	Level (dB μ V)	Limit (dB μ V)	Margin (dB)	Result
8.952000	Live	13.0	50.0	37.0	Complied
9.820500	Live	7.0	50.0	43.0	Complied
15.999000	Live	16.9	50.0	33.1	Complied
18.001500	Live	30.4	50.0	19.6	Complied
22.002000	Live	24.0	50.0	26.0	Complied
28.000500	Live	26.4	50.0	23.6	Complied

Results: Antenna 3 / Neutral / Quasi Peak / 240 VAC 60 Hz

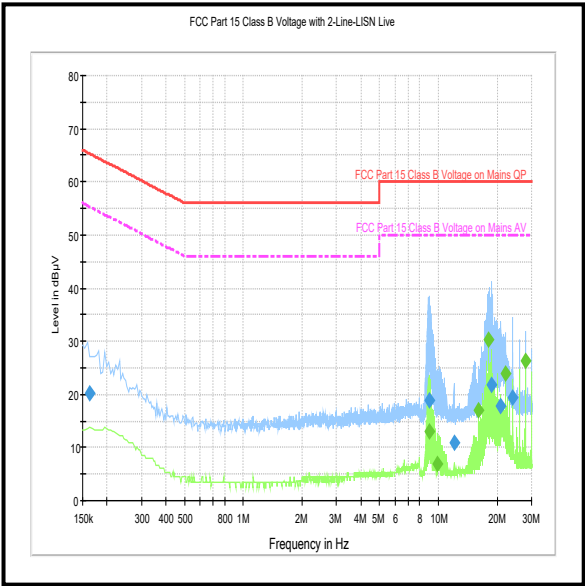
Frequency (MHz)	Line	Level (dB μ V)	Limit (dB μ V)	Margin (dB)	Result
0.168000	Neutral	18.7	65.1	46.4	Complied
8.911500	Neutral	20.2	60.0	39.8	Complied
15.238500	Neutral	10.3	60.0	49.7	Complied
18.708000	Neutral	22.3	60.0	37.7	Complied
23.995500	Neutral	17.3	60.0	42.7	Complied
28.000500	Neutral	27.9	60.0	32.1	Complied

Results: Antenna 3 / Neutral / Average / 240 VAC 60 Hz

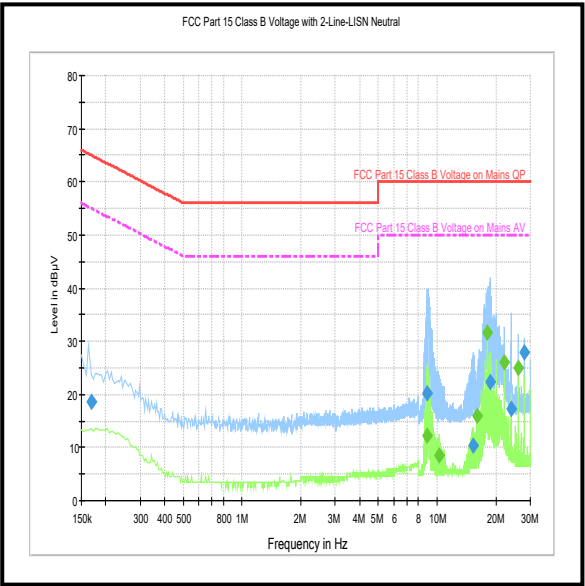
Frequency (MHz)	Line	Level (dB μ V)	Limit (dB μ V)	Margin (dB)	Result
8.911500	Neutral	12.4	50.0	37.6	Complied
10.203000	Neutral	8.4	50.0	41.6	Complied
15.999000	Neutral	15.8	50.0	34.2	Complied
18.001500	Neutral	31.5	50.0	18.5	Complied
22.002000	Neutral	25.9	50.0	24.1	Complied
26.002500	Neutral	24.9	50.0	25.1	Complied

Transmitter AC Conducted Spurious Emissions (continued)

Results: Antenna 3 / 240 VAC 60 Hz



Live



Neutral

Note: These plots are pre-scans and for indication purposes only. For final measurements, see accompanying tables.

Transmitter AC Conducted Spurious Emissions (continued)**Results: Antenna 11 / Live / Quasi Peak / 120 VAC 60 Hz**

Frequency (MHz)	Line	Level (dB μ V)	Limit (dB μ V)	Margin (dB)	Result
0.186000	Live	19.5	64.2	44.7	Complied
9.105000	Live	18.5	60.0	41.5	Complied
11.998500	Live	10.9	60.0	49.1	Complied
18.708000	Live	23.2	60.0	36.8	Complied
24.004500	Live	22.4	60.0	37.6	Complied
26.970000	Live	14.3	60.0	45.7	Complied

Results: Antenna 11 / Live / Average / 120 VAC 60 Hz

Frequency (MHz)	Line	Level (dB μ V)	Limit (dB μ V)	Margin (dB)	Result
9.123000	Live	11.9	50.0	38.1	Complied
10.203000	Live	5.6	50.0	44.4	Complied
11.998500	Live	6.5	50.0	43.5	Complied
18.672000	Live	25.5	50.0	24.5	Complied
24.000000	Live	22.6	50.0	27.4	Complied
28.000500	Live	25.9	50.0	24.1	Complied

Results: Antenna 11 / Neutral / Quasi Peak / 120 VAC 60 Hz

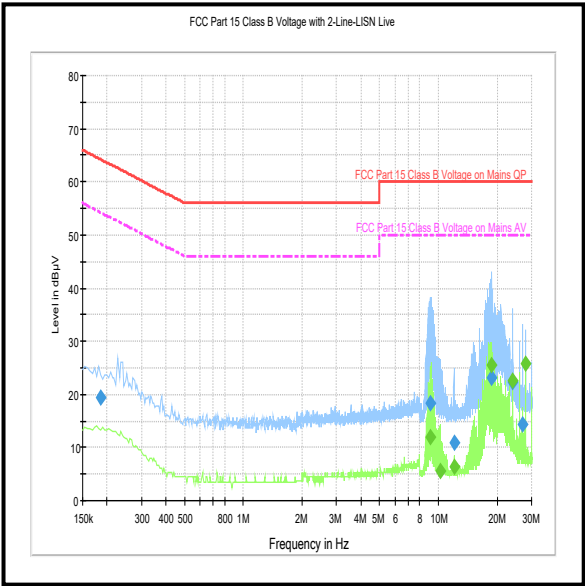
Frequency (MHz)	Line	Level (dB μ V)	Limit (dB μ V)	Margin (dB)	Result
0.154500	Neutral	19.8	65.8	46.0	Complied
9.217500	Neutral	18.4	60.0	41.6	Complied
15.274500	Neutral	10.8	60.0	49.2	Complied
18.622500	Neutral	24.9	60.0	35.1	Complied
23.995500	Neutral	15.6	60.0	44.4	Complied
27.046500	Neutral	15.4	60.0	44.6	Complied

Results: Antenna 11 / Neutral / Average / 120 VAC 60 Hz

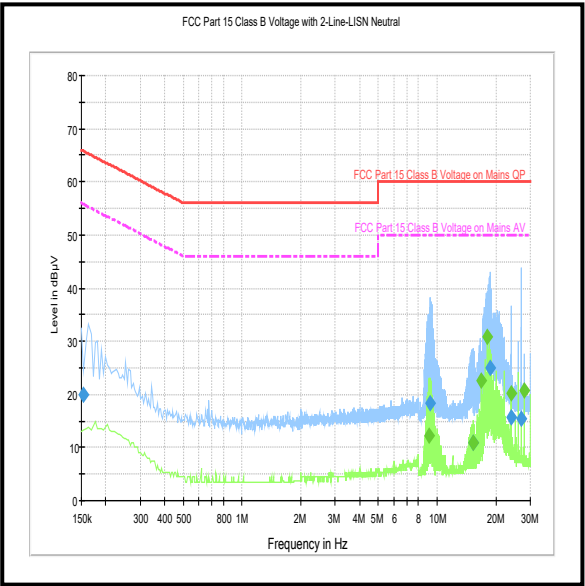
Frequency (MHz)	Line	Level (dB μ V)	Limit (dB μ V)	Margin (dB)	Result
9.064500	Neutral	12.3	50.0	37.7	Complied
15.261000	Neutral	10.8	50.0	39.2	Complied
16.867500	Neutral	22.6	50.0	27.4	Complied
18.001500	Neutral	30.9	50.0	19.1	Complied
24.036000	Neutral	20.1	50.0	29.9	Complied
28.000500	Neutral	20.9	50.0	29.1	Complied

Transmitter AC Conducted Spurious Emissions (continued)

Results: Antenna 11 / 120 VAC 60 Hz



Live



Neutral

Note: These plots are pre-scans and for indication purposes only. For final measurements, see accompanying tables.

Transmitter AC Conducted Spurious Emissions (continued)**Results: Antenna 11 / Live / Quasi Peak / 240 VAC 60 Hz**

Frequency (MHz)	Line	Level (dB μ V)	Limit (dB μ V)	Margin (dB)	Result
0.262500	Live	16.9	61.4	44.5	Complied
9.519000	Live	18.3	60.0	41.7	Complied
11.998500	Live	11.3	60.0	48.7	Complied
18.780000	Live	22.7	60.0	37.3	Complied
24.000000	Live	26.5	60.0	33.5	Complied
28.000500	Live	29.9	60.0	30.1	Complied

Results: Antenna 11 / Live / Average / 240 VAC 60 Hz

Frequency (MHz)	Line	Level (dB μ V)	Limit (dB μ V)	Margin (dB)	Result
9.613500	Live	8.2	50.0	41.8	Complied
10.032000	Live	6.3	50.0	43.7	Complied
15.999000	Live	16.0	50.0	34.0	Complied
18.001500	Live	30.5	50.0	19.5	Complied
19.999500	Live	23.7	50.0	26.3	Complied
24.000000	Live	21.6	50.0	28.4	Complied

Results: Antenna 11 / Neutral / Quasi Peak / 240 VAC 60 Hz

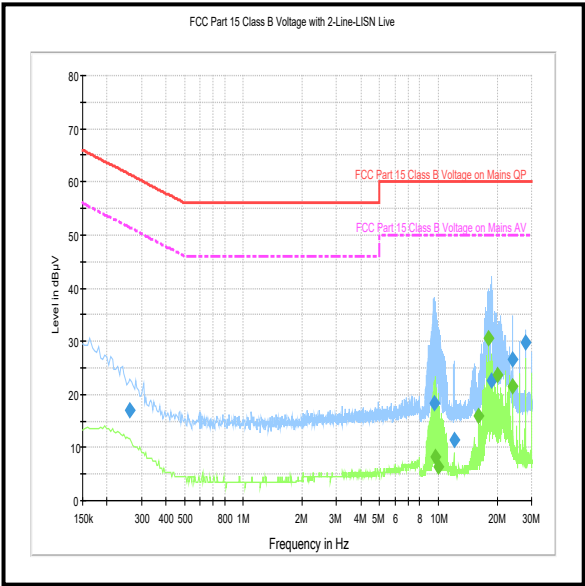
Frequency (MHz)	Line	Level (dB μ V)	Limit (dB μ V)	Margin (dB)	Result
0.177000	Neutral	19.3	64.6	45.3	Complied
9.519000	Neutral	18.8	60.0	41.2	Complied
11.998500	Neutral	11.8	60.0	48.2	Complied
15.463500	Neutral	13.2	60.0	46.8	Complied
18.622500	Neutral	25.2	60.0	34.8	Complied
24.004500	Neutral	18.9	60.0	41.1	Complied

Results: Antenna 11 / Neutral / Average / 240 VAC 60 Hz

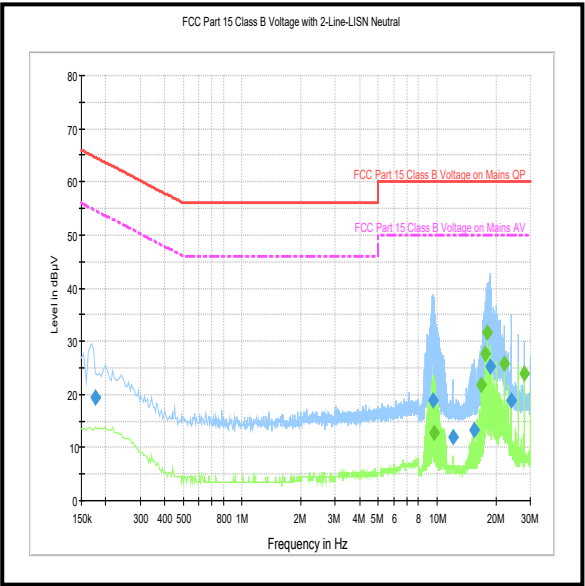
Frequency (MHz)	Line	Level (dB μ V)	Limit (dB μ V)	Margin (dB)	Result
9.649500	Neutral	12.7	50.0	37.3	Complied
16.867500	Neutral	21.8	50.0	28.2	Complied
17.673000	Neutral	27.5	50.0	22.5	Complied
18.001500	Neutral	31.7	50.0	18.3	Complied
22.002000	Neutral	25.8	50.0	24.2	Complied
28.000500	Neutral	24.0	50.0	26.0	Complied

Transmitter AC Conducted Spurious Emissions (continued)

Results: Antenna 11 / 240 VAC 60 Hz



Live



Neutral

Note: These plots are pre-scans and for indication purposes only. For final measurements, see accompanying tables.

Transmitter AC Conducted Spurious Emissions (continued)**Results: Antenna 14 / Live / Quasi Peak / 120 VAC 60 Hz**

Frequency (MHz)	Line	Level (dB μ V)	Limit (dB μ V)	Margin (dB)	Result
0.190500	Live	19.3	64.0	44.7	Complied
8.956500	Live	17.9	60.0	42.1	Complied
10.203000	Live	9.9	60.0	50.1	Complied
12.003000	Live	10.5	60.0	49.5	Complied
18.622500	Live	24.4	60.0	35.6	Complied
24.004500	Live	22.1	60.0	37.9	Complied

Results: Antenna 14 / Live / Average / 120 VAC 60 Hz

Frequency (MHz)	Line	Level (dB μ V)	Limit (dB μ V)	Margin (dB)	Result
8.835000	Live	11.9	50.0	38.1	Complied
10.257000	Live	7.7	50.0	42.3	Complied
15.999000	Live	18.9	50.0	31.1	Complied
18.001500	Live	29.2	50.0	20.8	Complied
22.002000	Live	22.8	50.0	27.2	Complied
28.000500	Live	26.1	50.0	23.9	Complied

Results: Antenna 14 / Neutral / Quasi Peak / 120 VAC 60 Hz

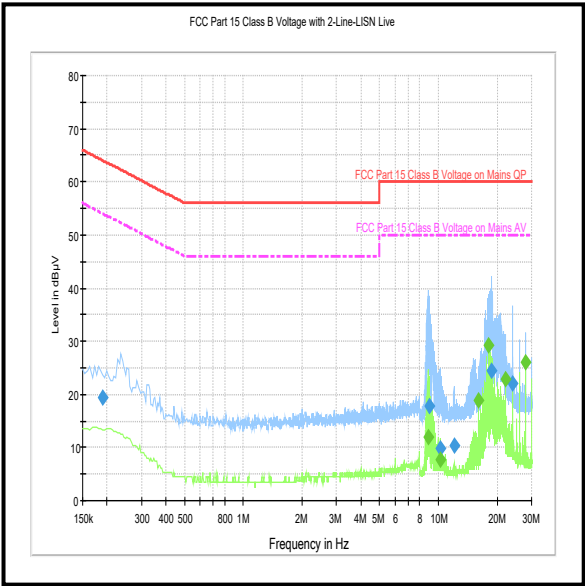
Frequency (MHz)	Line	Level (dB μ V)	Limit (dB μ V)	Margin (dB)	Result
0.154500	Neutral	20.1	65.8	45.7	Complied
8.911500	Neutral	20.2	60.0	39.8	Complied
10.135500	Neutral	10.0	60.0	50.0	Complied
12.003000	Neutral	11.8	60.0	48.2	Complied
18.712500	Neutral	23.8	60.0	36.2	Complied
24.000000	Neutral	21.5	60.0	38.5	Complied

Results: Antenna 14 / Neutral / Average / 120 VAC 60 Hz

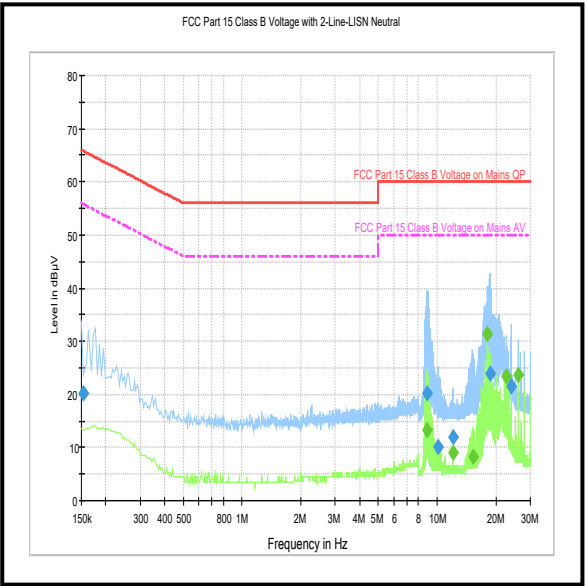
Frequency (MHz)	Line	Level (dB μ V)	Limit (dB μ V)	Margin (dB)	Result
8.907000	Neutral	13.4	50.0	36.6	Complied
11.998500	Neutral	9.1	50.0	40.9	Complied
15.328500	Neutral	8.1	50.0	41.9	Complied
18.001500	Neutral	31.3	50.0	18.7	Complied
22.578000	Neutral	23.4	50.0	26.6	Complied
26.002500	Neutral	23.8	50.0	26.2	Complied

Transmitter AC Conducted Spurious Emissions (continued)

Results: Antenna 14 / 120 VAC 60 Hz



Live



Neutral

Note: These plots are pre-scans and for indication purposes only. For final measurements, see accompanying tables.

Transmitter AC Conducted Spurious Emissions (continued)**Results: Antenna 14 / Live / Quasi Peak / 240 VAC 60 Hz**

Frequency (MHz)	Line	Level (dB μ V)	Limit (dB μ V)	Margin (dB)	Result
0.177000	Live	20.6	64.6	44.0	Complied
8.835000	Live	20.7	60.0	39.3	Complied
10.198500	Live	9.4	60.0	50.6	Complied
15.198000	Live	10.7	60.0	49.3	Complied
18.622500	Live	24.4	60.0	35.6	Complied
23.995500	Live	20.9	60.0	39.1	Complied

Results: Antenna 14 / Live / Average / 240 VAC 60 Hz

Frequency (MHz)	Line	Level (dB μ V)	Limit (dB μ V)	Margin (dB)	Result
8.794500	Live	12.6	50.0	37.4	Complied
9.501000	Live	7.6	50.0	42.4	Complied
15.999000	Live	17.8	50.0	32.2	Complied
18.001500	Live	30.9	50.0	19.1	Complied
22.002000	Live	24.4	50.0	25.6	Complied
28.000500	Live	27.1	50.0	22.9	Complied

Results: Antenna 14 / Neutral / Quasi Peak / 240 VAC 60 Hz

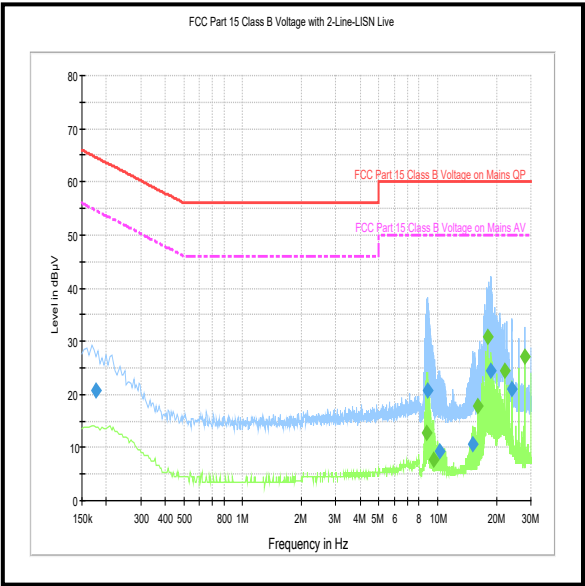
Frequency (MHz)	Line	Level (dB μ V)	Limit (dB μ V)	Margin (dB)	Result
0.159000	Neutral	19.6	65.5	45.9	Complied
8.875500	Neutral	19.4	60.0	40.6	Complied
15.198000	Neutral	11.2	60.0	48.8	Complied
16.458000	Neutral	13.2	60.0	46.8	Complied
18.784500	Neutral	23.6	60.0	36.4	Complied
26.002500	Neutral	28.7	60.0	31.3	Complied

Results: Antenna 14 / Neutral / Average / 240 VAC 60 Hz

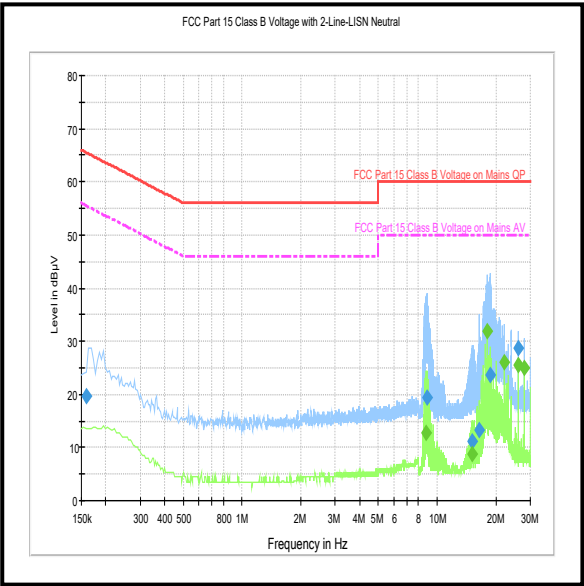
Frequency (MHz)	Line	Level (dB μ V)	Limit (dB μ V)	Margin (dB)	Result
8.794500	Neutral	12.7	50.0	37.3	Complied
15.153000	Neutral	8.7	50.0	41.3	Complied
18.001500	Neutral	31.8	50.0	18.2	Complied
22.002000	Neutral	25.9	50.0	24.1	Complied
26.002500	Neutral	25.5	50.0	24.5	Complied
28.000500	Neutral	25.0	50.0	25.0	Complied

Transmitter AC Conducted Spurious Emissions (continued)

Results: Antenna 14 / 240 VAC 60 Hz



Live



Neutral

Note: These plots are pre-scans and for indication purposes only. For final measurements, see accompanying tables.

--- END OF REPORT ---