

## 6b.6 Power Line Conducted Spurious Voltage

### Conducted voltage limits:

This radio product can transmit in MOTOtalk ISM Band while resting in a battery charger that is connected to the AC power line. Each figure contains two measurement traces in addition to the two applicable limit lines (pink and red traces), the higher being applicable to measurements utilizing a quasi-peak detector and the lower being applicable to measurements utilizing an average detector. The upper data trace (light blue) portrays the amplitude of the voltage measured during sweeping with a peak detector while the lower trace (light green) represents the amplitude of the voltage measured using an average detector. These detectors facilitated the measurement process. Measurements with a quasi-peak detector lie between these bounds.

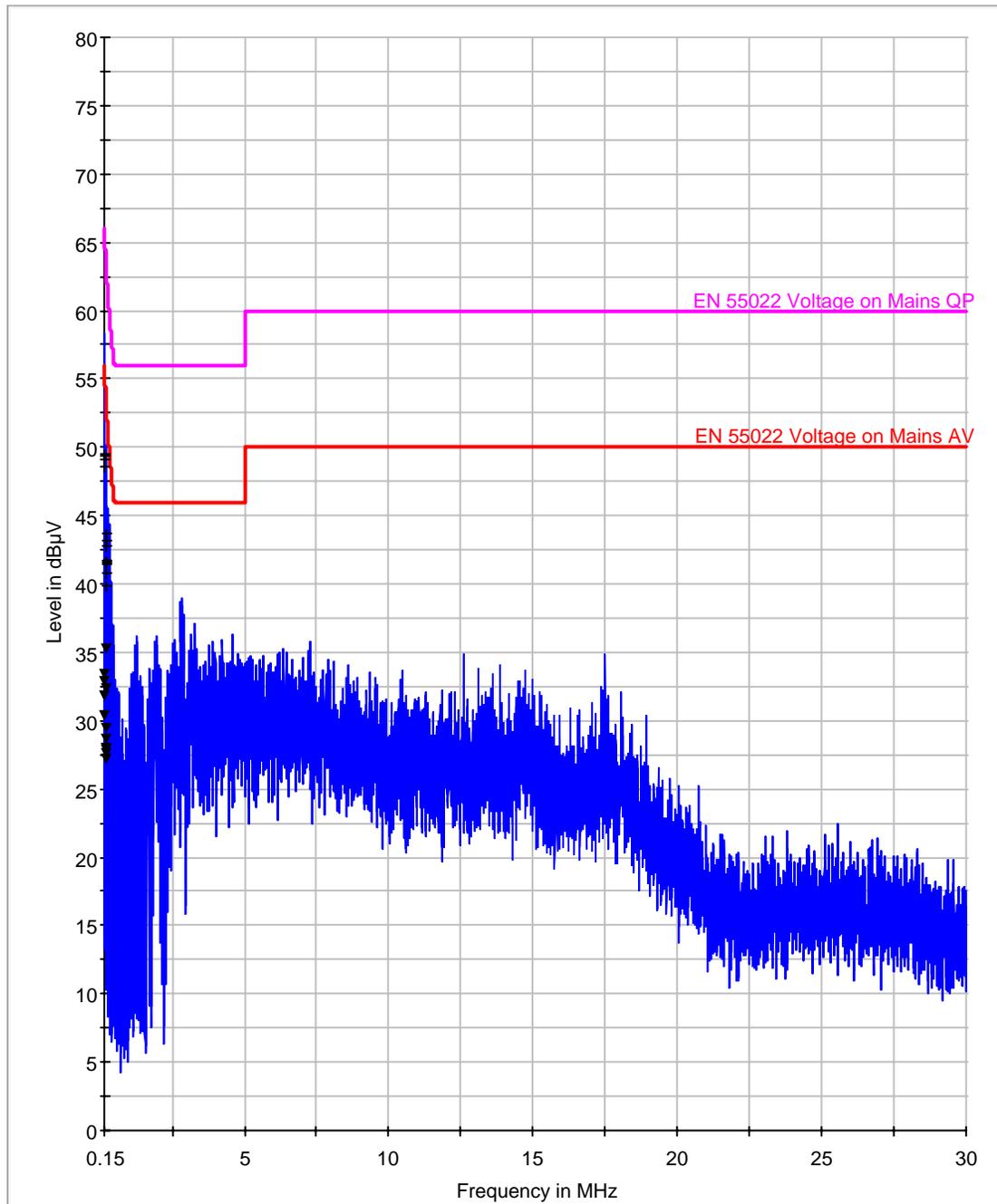
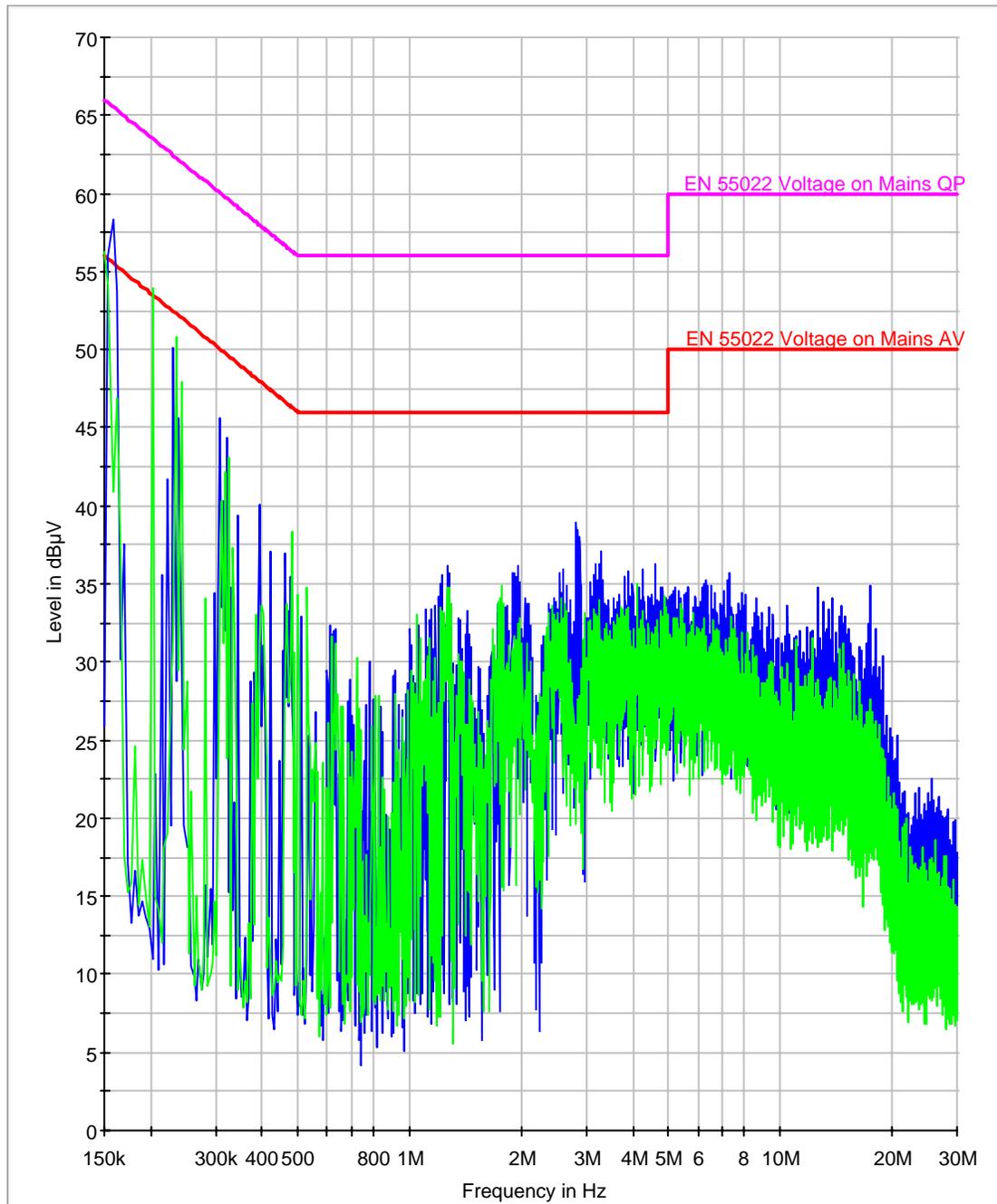


Figure 6b-6.1. MOTotalk mode Mains Voltage with Peak and Average Detector



**Figure 6b-6.2: MOTotalk mode Phase Line and Neutral Line Voltage with a Peak and Average Detector N (Green) L1 (Blue)**

**Result Table\_Single**

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Bandwidth (Hz)	PE	Line
0.150000	49.4	30.4	9000.000	GND	L1
0.158000	48.6	31.8	9000.000	GND	L1
0.202000	43.8	27.8	9000.000	GND	L1
0.230000	41.5	28.0	9000.000	GND	L1
0.234000	41.5	27.2	9000.000	GND	L1
0.242000	41.7	28.7	9000.000	GND	L1
0.150000	49.5	33.5	9000.000	GND	N
0.158000	49.1	32.9	9000.000	GND	N
0.202000	39.9	35.2	9000.000	GND	N
0.230000	43.1	32.3	9000.000	GND	N
0.234000	42.8	29.4	9000.000	GND	N
0.242000	40.8	27.6	9000.000	GND	N

**Limits**

Frequency	QP value	QP Limit	QP Margin	Avr Value	Avr Limit	Avr Margin	Ph
<b>&lt;= 500kHz</b>							
150000	49.40	66.00	16.60	30.40	56.00	25.60	L1
158000	48.60	65.77	17.17	31.80	55.77	23.97	L1
202000	43.80	64.51	20.71	27.80	54.51	26.71	L1
230000	41.50	63.70	22.20	28.00	53.70	25.70	L1
234000	41.50	63.59	22.09	27.20	53.59	26.39	L1
242000	41.70	63.36	21.66	28.70	53.36	24.66	L1
150000	49.50	66.00	16.50	33.50	56.00	22.50	N
158000	49.10	65.77	16.67	32.90	55.77	22.87	N
202000	39.90	64.51	24.61	35.20	54.51	19.31	N
230000	43.10	63.70	20.60	32.30	53.70	21.40	N
234000	42.80	63.59	20.79	29.40	53.59	24.19	N
242000	40.80	63.36	22.56	27.60	53.36	25.76	N

**Table 6b-4.3: Line Voltage Data- Quasi-Peak and Average**