



1) Please provide a block diagram that showing the signal path and frequency of all oscillators in the device in accordance with Section 2.1033(b)(5) of the FCC Rules. There are not any oscillators on the submitted block diagram.

The updated block diagram with oscillators info has been uploaded to database.

2) The test report mentions peak (page 9) for prescan and then average for final, then later QP for the measurements made (page 10/11). MP-5 only defines QP for purposes of RF lighting tests. This device is NOT an RF light and therefore must use a peak/average detector as given in MP-5. Please correct.

We have revised page 10 to 11.

The revised test report has been uploaded to database.

3) The limits used to not calculate to what is expected. Page 10/11 and cites 82.5 dBuV/m. Test distance given is 10 meter (page 9) and is also supported in test photos. Please show how the limit was derived. Please note that MP-5 only recognizes a 20 dB correction factor. Our calculations show  $20 \log 1500 = 63.5 \text{ dBuV/m @ } 30 \text{ m}$ . For 10 meters, correction would be  $20 \log (30/10) = 9.54 \text{ dB}$  correction. This would yield a limit of 73.0 dBuV/m @ 10 m.

We have discussed the induction cooker limit of FCC part 18 with George Chen before. And he also accepted our opinion for the previous case.

For the mentioned how to calculate the test limit, in my opinion:

That will relate to near field and far field discussion and the different limit value should not judge by different rules: part 15 or 18.

We can refer Maxwell electromagnetic theory which was indicated

(1) The distance boundary between near field and far field:

$$|\vec{E}| / (2|\vec{D}|) = C/F \times (1/2|\vec{D}|);$$

$$|\vec{E}| = 48 / F(\text{MHz}) \quad \text{Or} \quad F(\text{MHz}) = 48 / |\vec{E}|$$

(2) For the product was performed in 10m, the operating near file frequency is  $48/10\text{m} = 4.8\text{MHz}$ .

That means if operating frequency is less than 4.8MHz when test in 10m distance and that will consider as near field.

The fundamental frequency of induction cooker is about 20KHz to 30KHz which is less than 4.8MHz.

That should be considered near field distance changed. And we can refer the rules of FCC part 15 section 15.31.(f).(2)

(2) At frequencies below 30 MHz, measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field. Pending the development of an appropriate measurement procedure for measurements performed below 30 MHz, when performing measurements at a closer distance than specified, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade).

We will consider the test limit is:  $20\log(1500) + 40\log(30/10) = 82.5\text{dBuV/m}$ .

4) From current data reported at 10 meters – correcting the limit to 73.0 dBuV/m as given above would appear to show the device above the limits. Also, limits are Avg as given in MP-5 – but average results do not appear to be reported. It appears additional data and correction to report will be necessary.

[We have revised page 10 to 11.](#)

[The revised test report has been uploaded to database.](#)

5) Manual does not appear to contain information to be compliant with 18.213(a) & (c). This information can be solved by including information similar to 15.105 but removing references to Part 15 and Class A/B.

[The revised user manual has been uploaded to database.](#)

6) FYI...The test report plots show the conducted emission limit rule follow EN 55011 – however the limits do match 18.307. In the future please ensure these are labeled properly.

[We have revised page 13 to 14.](#)

[The revised test report has been uploaded to database.](#)