WHAT IS CLAIMED IS:

1. An apparatus for applying an alternating electric field to a subject's body, the apparatus comprising:
a plurality of electrode elements;
a support configured to hold the electrode elements against the subject's body;
a plurality of thermistors, each of the thermistors having a first terminal and a second terminal, wherein each of the thermistors is positioned to sense a temperature at a corresponding respective one of the electrode elements;
a connector having a plurality of first pins and a second pin;
a plurality of first conductors, each of which provides an electrically conductive path between (a) a respective one of the first pins, (b) a respective one of the electrode elements, and (c) the first terminal of the corresponding thermistor; and
a second conductor that provides an electrically conductive path between the second pin and the second terminal of at least one of the thermistors.

2. The apparatus of claim 1, wherein the second terminals of all the thermistors are wired together.

3. The apparatus of claim 2, wherein the second terminals of all the thermistors are wired together using at least one of (a) at least one trace on a flex circuit and (b) at least one wire.

4. The apparatus of claim 1, wherein the plurality of thermistors are arranged in series, beginning with a first one of the thermistors and ending with a last one of the thermistors, and wherein the second terminal of each of the thermistors except for the last thermistor is wired to the first terminal of a respective subsequent thermistor, and wherein the second conductor provides an electrically conductive path between the second pin of the connector and the second terminal of the last thermistor.

5. The apparatus of claim 1, wherein the second conductor provides an electrically conductive path between the second pin and the second terminal of only a single one of the thermistors.

6. The apparatus of claim 1, wherein the plurality of electrode elements comprises at least four electrode elements, and wherein the plurality of thermistors comprises at least four thermistors.

7. The apparatus of claim 1, wherein the plurality of electrode elements comprises at least nine electrode elements, and wherein the plurality of thermistors comprises at least nine thermistors.

8. The apparatus of claim 1, wherein each of the electrode elements comprises a conductive plate and a dielectric layer disposed on the conductive plate, and wherein the support is configured to hold the electrode elements against the subject's body so that the dielectric layer of each of the electrode elements faces the subject's body.

9. The apparatus of claim 1, wherein the second terminals of all the thermistors are wired together, and wherein the second conductor provides an electrically conductive path between the second pin and the second terminal of all the thermistors.