ABSTRACT

A method for electrically connecting a metal element (5) to a multilayer composite printed circuit board (3) by means of ultrasonic welding is described. The composite printed circuit board (3) has, in a connecting region (25), a first metal layer (17), at least one insulator layer (13) supporting the first metal layer (17) and at least one second metal layer (9) which is spaced apart from the first metal layer (17) by the insulator layer (13). The method comprises: (i) arranging the metal element (5) adjacent to the first metal layer (17) of the composite printed circuit board (3); (ii) applying an ultrasonic sonotrode (27) with a sonotrode surface (29) to a surface (31) of the metal element (5) opposite the composite printed circuit board (3); and (iii) bringing about ultrasonic vibrations at the sonotrode surface (29). The ultrasonic vibrations are brought about with a frequency of less than 55 kHz, a power of more than 400 W and over a contact area (30) between the sonotrode surface (29) and the metal element (5) of at least 2 mm^2.

(FIG. 1)