Title (en)

RADIOFREQUENCY INTERCONNECTION BETWEEN A PRINTED CIRCUIT BOARD AND A WAVEGUIDE

Title (de)

HOCHFREQUENZVERBINDUNG ZWISCHEN EINER LEITERPLATTE UND EINEM WELLENLEITER

Title (fr)

INTERCONNEXION DE RADIOFRÉQUENCE ENTRE UNE CARTE DE CIRCUIT IMPRIMÉ ET UN GUIDE D'ONDES

Publication

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Application

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Priority

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Abstract (en)

[origin: EP3240101A1] According to one aspect the present invention refers to a system comprising a waveguide having a body with a first end having an opening, and a printed circuit board, PCB, having a bottom side and a opposed top side, wherein the PCB comprises a ground layer, a dielectric material layer and a signal layer arranged in a layer stack from the bottom side to the top side of the PCB, wherein the dielectric material layer is arranged between the ground layer and the signal layer, wherein the signal layer comprises a coupling pad and a first and a second output transmission line both connected to the coupling pad, further comprising a non-conducting slot in the ground layer, further comprising a electric wall galvanically connecting the coupling pad through the dielectric material layer to the ground layer, wherein the first end of the waveguide is arranged on the bottom side and is galvanically connected with the ground layer, wherein the opening, the non-conducting slot and the coupling pad are aligned such that in a stacking direction of the layer stack the opening, the non-conducting slot and the coupling pad at least partially overlap. In a second aspect the present invention is directed to a printed circuit board, PCB, having a bottom side and a opposed top side, wherein the PCB comprises a ground layer, a dielectric material layer and a signal layer arranged in a layer stack from the bottom side to the top side of the PCB, wherein the dielectric material layer is arranged between the ground layer and the signal layer, wherein the signal layer comprises a coupling pad and a first and a second output transmission line both connected to the coupling pad, further comprising a non-conducting slot in the ground layer, further comprising a electric wall galvanically connecting the coupling pad through the dielectric material layer to the ground layer, wherein the non-conducting slot and the coupling pad are aligned such that in a stacking direction of the layer stack the non-conducting slot and the coupling pad at least partially overlap.

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Citation (examination)

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