

ABSTRACT

The present invention provides a flexible circuit board, a light receiving/transmitting assembly, an optical module, and a connection method. The flexible circuit board comprises a top metal layer, a substrate, and a bottom metal layer which are sequentially stacked in a thickness direction, the bottom metal layer having a ground zone formed therein, and the top metal layer having a high-speed signal line formed therein; the high-speed signal line has a high-speed-signal via pad located at one end of the flexible circuit board and electrically connected to an external high-speed pin; the top metal layer has an auxiliary ground reference formed therein, the auxiliary ground reference being disposed neighboring the high-speed signal line and stacked with the ground zone; the auxiliary ground reference is electrically connected to the ground zone by means of an auxiliary conductive hole, and the auxiliary ground reference and/or the ground zone is provided with a ground via pad electrically connected to an external ground pin. The invention thus ensures a sufficient grounding reference around a high-speed link, forms a coplanar waveguide, improves impedance stability, eliminates instability resulting from sudden changes in impedance, further increases bandwidth, and improves the reliability of the entire module.

Fig. 2