



The Chinese University of Hong Kong
Non-confidential Abstract of Technology Disclosure

Title:

Broadband Millimeter-Wave Waveguide to Laminated Waveguide Transition

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Patent Status:

US Patent no. 7,064,633

Non-confidential abstract:

One embodiment of the present invention is, or provides, a waveguide to laminated waveguide transition in which multi-parallel inter-coupled resonator chains are employed. The transition is formed by a pair of main conductor layers deposited on the upper and the lower surface of dielectric substrate electrically connected by a plurality of through conductor walls, which is formed by a plurality of through conductors disposed at predetermined intervals and a plurality of sub-conductor layers deposited between the dielectric layers of the dielectric substrate so as to electrically connect the plurality of through conductors within the dielectric substrate formed by laminated dielectric layers. The parallel inter-coupled resonator chains couple with metal waveguide via an aperture on one main conductive layer and directly connect with the laminated waveguide inside the substrate via a multi-branch junction. Apertures on the partition walls inside the transition produce the inter-coupling between adjacent resonator chains.

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