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CHARACTERIZATION OF BONDING WIRE FOR 5 GHZ WLAN MMICS APPLICATIONS

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Abstract

In this paper, the bonding-wire interconnection has been considered from the point of view of modeling and fabrication for Conductor-backed coplanar waveguide (CBCPW). The purpose was to get maximum power transfer and minimum reflection. To achieve this goal, we used a software named High Frequency Structure Simulator (HFSS). To get good results, wires of different geometries are analyzed. These were rectangular, circular and half-hexagonal. However, this article describes bonding wire of rectangular geometry with different gaps. The characterization is given in terms of an equivalent conventional lumped equivalent circuit for an incremented length of the CBCPW line on the insulation and semiconductor substrates. This representation is particularly useful in the matching of the bonding-wired is continuity. Experimentation was also done which gave convincing results.

Keywords: Bonding Wires, MMIC, Interconnects, Millimeter Wave.
