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(54) Title: MILLIMETER WAVE TRANSMISSION LINE ARCHITECTURE

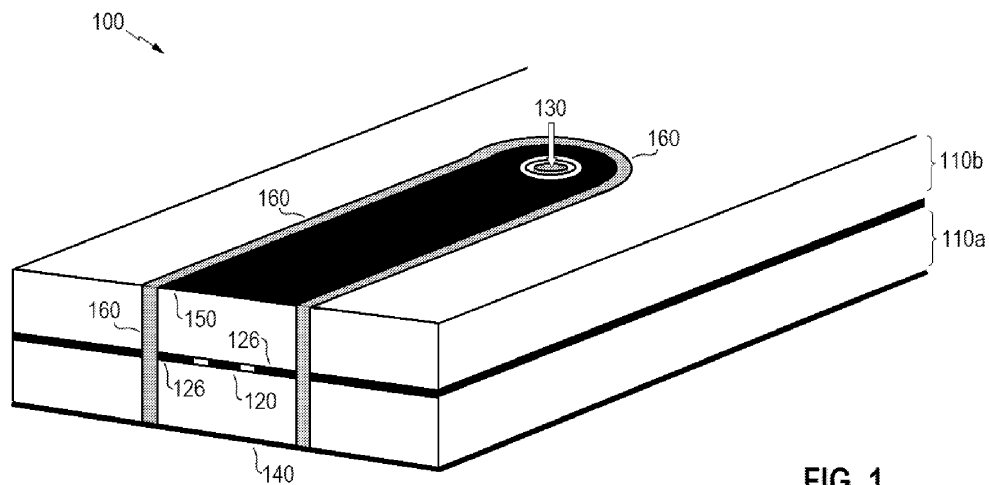


FIG. 1

(57) Abstract: Circuits and methods include transmission lines formed from a conductive cladding on a substrate surface. The transmission line includes additional reference conductors positioned co-planar on the surface, including a gap between the transmission line and each of the reference conductors. The transmission line and the reference conductors are at least partially encapsulated (e.g., sandwiched) between two substrates. Isolation boundaries may be included as ground planes, e.g., above and below the transmission line, on opposing surfaces of the substrates, and Faraday walls, e.g., vertically, through the substrates. Current densities generated by various electromagnetic signals are distributed among the transmission line and the reference conductors (as a tri-conductor arrangement), and may be partially further distributed to the isolation (ground) boundaries.

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WO 2019/094477 A1

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