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[Continued on nextpage]

(54) **Title:** INTERCHIP COMMUNICATION USING A DIELECTRIC WAVEGUIDE

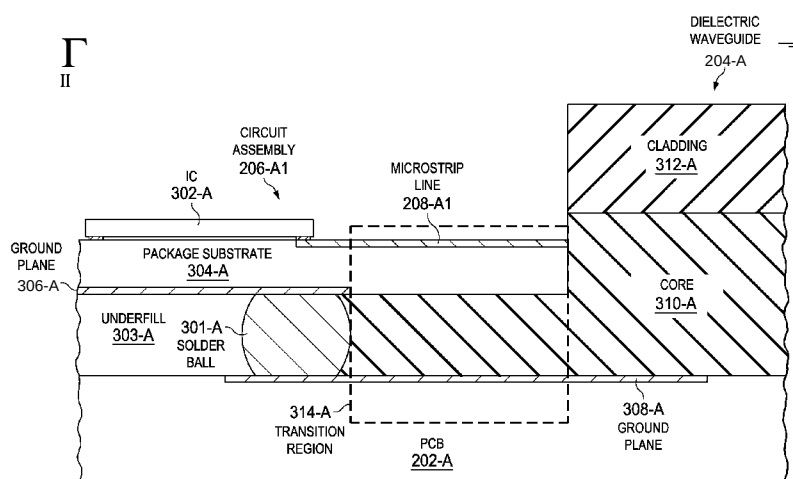


FIG. 4

(57) **Abstract:** An apparatus is provided. There is a circuit assembly (206-A1) with a package substrate (304-A) and an integrated circuit (IC) (302-A). The package substrate has a microstrip line (208-A1), and the IC is secured to the package substrate and is electrically coupled to the microstrip line. A circuit board (202-A) is also secured to the package substrate. A dielectric waveguide (204-A) is secured to the circuit board. The dielectric waveguide has a dielectric core (310-A) that extends into a transition region (314-A) located between the dielectric waveguide and the microstrip line, and the microstrip line is configured to form a communication link with the dielectric waveguide.

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