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(54) Title: SYSTEMS AND METHODS OF A RECTANGULAR-TO CIRCULAR WAVEGUIDE TRANSITION

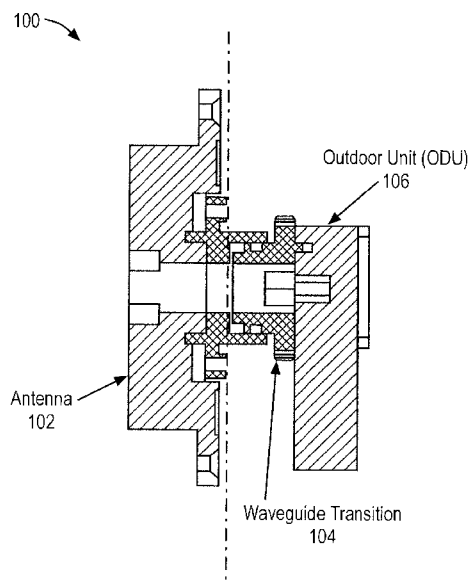


FIG. 1

(57) Abstract: Systems and methods for a filtering wave energy using a rectangular-to-circular waveguide transition are discussed herein. An exemplary system comprises a rectangular-to-circular waveguide transition and a filter card. The rectangular-to-circular waveguide transition may include a front section and a back section opposite the front section, the rectangular-to-circular waveguide transition defining a circular hole extending from the front section of the rectangular-to-circular waveguide transition through the back section, the rectangular-to-circular waveguide transition further having a first arcuate region on the face of the transition, the first arcuate region defining a first cavity extending from the circular hole through the first arcuate region, the rectangular-to-circular waveguide transition also having a second arcuate region defining a second cavity opposite the first cavity, the second cavity extending from the circular hole through the second arcuate region. The filter card may be configured to be placed across the circular hole of the rectangular-to-circular waveguide transition.



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