

Abstracts

Planar Dielectric Resonator Stabilized HEMT Oscillator Integrated with CPW/Aperture Coupled Patch Antenna

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A new design of an active antenna with a dielectric resonator stabilized HEMT oscillator (DRO) and an aperture-coupled patch antenna is reported. The circuit is fabricated using coplanar waveguide (CPW) with the oscillator and the antenna on opposite sides of the substrate. The active antenna was demonstrated at 7.6 GHz; however, the design can be scaled to higher frequencies. Excellent oscillator characteristics and radiation pattern have been obtained.

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