Abstracts

An active integrated 24-GHz antenna using a flip-chip mounted HEMT

M.M. Kaleja, P. Heide and E.M. Biebl. "An active integrated 24-GHz antenna using a flip-chip mounted HEMT." 1999 Microwave and Guided Wave Letters 9.1 (Jan. 1999 [MGWL]): 34-36.

In this paper an active integrated microstrip antenna at 24 GHz employing a three-terminal active device is presented. A high electron mobility transistor (HEMT) is integrated in a purely uniplanar microstrip structure by means of flip-chip technology, i.e., all terminals of the passive microstrip circuit are located on top of the substrate and no via-holes are needed. A radiated output power of 10 mW and a dc-to-RF efficiency of 20% are obtained. The deviations of the frequencies of operation from the predicted values are below /spl plusmn/0.5%.

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