

Abstracts

A Miniaturized Ka-Band MMIC High-Gain Medium Power Amplifier in Coplanar Line Technique by Using a Conventional 0.5 μm MESFET Technology

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This paper presents a miniaturized Ka-band MMIC high-gain medium power amplifier in coplanar line technique by using a conventional 0.5 μm GaAs-MESFET technology. To our knowledge a MESFET amplifier with 7 dB gain at Ka-band has never been shown before. In the frequency band 26.3 GHz to 28.3 GHz, the input and output return losses are better than 10 dB. The 1 dB compression point $P_{\text{sub 1dB}}$ is higher than 23 dBm at 26.5 GHz. The single ended one-stage amplifier occupies a chip-size of 0.46 x 0.64 mm².

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