

L-Band Phase Shifter with Switching FET's for Phased Array Antenna

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An L-band 3-bit phase shifter has been developed with switching GaAs MESFET's. To get simple and low loss phase shifter, the switching performance of the FET is improved. The FET has an on-state resistance of 1.5ohms by optimizing device structures. By using the phase shift circuit consisting of the FET and a short stub, a phase shifter insertion loss becomes 1.7 ± 0.2 dB over the range of 1540 - 1660MHz. A phased array antenna is also developed with the phase shifter.

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