Abstracts

Monolithic GaAs multi-throw switches with integrated low-power decoder/driver logic

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SP4T, SP6T and SP8T GaAs MMIC switches with integrated low-power decoder/driver logic are described. The integrated decoder/driver significantly reduces the number of on chip control lines, lowering cost, improving RF performance and easing PCB integration. Reflective and terminated versions are realized. Insertion losses range from 0.5-1.7 dB, isolations range from 20-45 dB, 1 dB input power compressions range from 20-24 dBm and single tone third order intercepts range from 40 to 42 dBm at 2 GHz. The logic operates over temperatures from 196/spl deg/C to 125/spl deg/C and supply voltages from 3-7 V while consuming under 25 mW of DC power. Control current requirements are under 200 /spl mu/A, allowing standard CMOS and TTL logic families to interface. Switching times are under 100 nsec.

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