

Broadbanding an Electronically Switched Two-Channel Ka-Band Parametric Amplifier

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A technique using realizable waveguide networks to broadband an electronically switched, dual-channel, Ka-band parametric amplifier has been developed. A waveguide network producing a controlled resonant susceptance slope at two frequency bands, separated by 1.14 GHz, has been built to accomplish broadbanding of each channel independently. An amplifier gain of 18 dB over a bandwidth greater than 100 MHz, and a noise figure of 3.6 dB were achieved at each channel.

 [Return to main document.](#)