

Abstracts

A Novel Traveling-Wave Parametric Amplifier

R.C. Honey. "A Novel Traveling-Wave Parametric Amplifier." 1961 PGMTT National Symposium Digest 61.1 (1961 [MWSYM]): 11-12.

The traveling-wave parametric amplifier to be described in this paper consists of a TEM line-over-plane transmission line periodically shunted by eight varactor diodes to propagate the signal and idler frequencies and a wave guide paralleling this transmission line to propagate the pump frequency. The pump power is lightly coupled to each diode by means of probes, the sign of the coupling alternating from diode to diode. This effectively introduces an additional 180-degrees phase shift per section along the pump line, producing several interesting features of this simple configuration.

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