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This index covers all technical items - papers, correspondence, reviews, etc. - that appeared in this periodical during 1997, and items from previous years that were commented upon or corrected in 1997.

The Author Index contains the primary entry for each item, listed under the first author's name, and cross-references from all coauthors. The Subject Index contains several entries for each item under appropriate subject headings, and subject cross-references.

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AlGaAs-GaAs lightly doped emitter HBT for low-power ccts. *Chang, C.E.*, + , MGWL Nov 97 377-379

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AlInAs/InGaAs/InP DHBT K-band power cell, design and high perform. *Virk, R.S.*, + , MGWL Oct 97 323-325

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GaAs HBTs, thermally stable cascode for microwave appls. *Bayraktaroglu, B.*, + , MGWL Jul 97 187-189

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- Millimeter wave FET integrated circuits**
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AlGaAs-InGaAs PHEMT Ka-band variable-gain MMIC amp. *Kashiwa, T.*, + , *MGWL Aug 97 251-252*

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MODFET integrated circuits

AlGaAs-InGaAs PHEMT Ka-band variable-gain MMIC amp. *Kashiwa, T.*, + , *MGWL Aug 97 251-252*

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MODFET oscillators

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InAlAs/InGaAs/InP HEMTs, hot electron effects on DC/RF characts. *Menozi, R.*, + , *MGWL Jan 97 3-5*

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Nonlinear optics; cf. Optical mixers; Optical mixing

Nonlinear wave propagation; cf. Electromagnetic propagation in nonlinear media

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Numerical analysis; cf. Convergence of numerical methods; Finite difference methods; Finite element methods; Iterative methods; Moment methods; Monte Carlo methods; Newton method; Transmission line matrix methods

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Phased arrays

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InP/InGaAs heterojunction phototransistor optoelectronic mixer. *Liu, C.P., + , MGWL Mar 97 72-74*

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Ku-band low-noise MMIC VCO, PHEMT technol. *Portilla, J., + , MGWL Nov 97 380-382*

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