Abstracts

Low-Noise Receiver Design Trends Using State-of-the-Art Building Blocks

H.C. Okean and A.J. Kelly. "Low-Noise Receiver Design Trends Using State-of-the-Art Building Blocks." 1977 Transactions on Microwave Theory and Techniques 25.4 (Apr. 1977 [T-MTT] (Special Issue on Low-Noise Technology)): 254-267.

The current state-of-the-art and the various design tradeoffs encompassing the variety of low-noise microwave and millimeter-wave receiver "building blocks" which have evolved during the past two decades are described. Key examples of these are the high-idler non-cryogenic parametric amplifier, the gallium arsenide field-effect transistor (GaAs FET) amplifier, and the image-enhanced Schottky-diode mixer. It is then shown how this inventory of building blocks can best be integrated into optimum receiver configurations for application in a multiplicity of future and present microwave and miltimeter-wave communications, radar, and radiometer systems.

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