Abstracts

Low-Noise Distributed Amplifier with Active Load

P.K. Ikalainen. "Low-Noise Distributed Amplifier with Active Load." 1996 Microwave and Guided Wave Letters 6.1 (Jan. 1996 [MGWL]): 7-9.

Conventional distributed amplifiers show a marked increase in noise figure at frequencies below 2---6 GHz, depending on the design, because of noise emanating from a resistor that terminates the input line. It is shown in this letter that a low-noise device can be configured to emulate a one-port resistor, but with lower apparent noise temperature than the physical ambient temperature. The use of such an "electronically cold" resistor in the design of a low-noise distributed amplifier is discussed together with simulated results. The new distributed amplifier shows improved noise performance.

❑ Return to main document.