

ABSTRACT

Logarithmic Intermediate-Frequency Amplifier

A C-MOS logarithmic IF amplifier is provided which comprises a plurality of IF amplifiers cascade-connected to each other through a first coupling capacitor, a plurality of rectifiers each receiving a signal from the corresponding one of the plurality of IF amplifiers through a second coupling capacitor different in capacity from the first coupling capacitor, and an adder for adding the output signals of these rectifiers to each other. The first and second coupling capacitors are preferable to be connected in series to cascade-connect those IF amplifiers therethrough. Each of the rectifiers is applied with an output signal of the corresponding one of the IF amplifier from the connection point of the corresponding first and second coupling capacitors. By setting the first and second capacitors at optimum capacitive values, respectively, the IF amplifiers each makes it possible to cut off the low band side of its frequency band and the rectifiers each makes it possible to expand its frequency band to the low band side.