PROBLEM TO BE SOLVED: To provide an amplification factor variable amplifier capable of achieving temperature compensation of an amplification factor over a wide variable amplification factor range. ;SOLUTION: A Gilbert type amplification factor variable amplifier 11 amplifies an input signal and can vary an amplification factor of the input signal in response to an amplification factor control signal. An amplification factor monitor circuit 12 is comprised of a circuit which is equivalent with a predetermined circuit included in the Gilbert type amplification factor variable amplifier 11 and has a predetermined amplification factor, and outputs a voltage corresponding to that amplification factor. An amplification factor compensation signal generation circuit 13 compares the output voltage from the amplification factor monitor circuit 12 with a temperature independent predetermined reference voltage and generates an amplification factor compensation signal corresponding to a difference therebetween.; The amplification factor compensation signal generated by the amplification factor compensation signal generation circuit 13 is used to compensate for amplification factors dependent upon temperatures of the Gilbert type amplification factor variable amplifier 11 and the amplification factor monitor circuit 12, respectively. ;COPYRIGHT: (C)2007,JPO&INPIT