

Special Problem II.B-24

Two amplifiers are connected as shown below.

The noise spectral power density at the output of the second amplifier is $223,200 k$ W/Hz (where k is Boltzman's Constant).

Note that the antenna temperature is a relatively high value of $T_A = 420 \text{ K}^\circ$.

The manufacture of the first amplifier has stated that its noise figure is $F_1 = 3.0$.

Determine the value of the noise figure provided by the manufacturer of the second amplifier.

