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**GUO et al.**(10) **Pub. No.: US 2023/0231587 A1**(43) **Pub. Date: Jul. 20, 2023**(54) **NOISE FIGURE PERFORMANCE IN  
RECEIVE PATHS OF FRONT END  
MODULES**(71) Applicant: **SKYWORKS SOLUTIONS, INC.**,  
Irvine, CA (US)(72) Inventors: **Jiunn-Sheng GUO**, Eastvale, CA (US);  
**Tianming CHEN**, Newbury Park, CA  
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**ABSTRACT**

Technology is disclosed that systematically improves the noise figure (NF) on the receive path of front end architectures. The disclosed technologies tune the elements of the receive path in concert with one another to achieve superior or optimal NF performance. This may occur even where the NF performance of individual components is sub-optimal because it is the combination of the components that is tailored to provide superior or optimal NF performance. The disclosed technologies account for trade-offs in performance that arise when tuning individual components on the receive path, taking a holistic approach to the design of the receive path rather than focusing on optimizing individual elements or selected combinations of elements on the receive path.

