

# Review of: "Designing and modeling microwave photonic spectral filters based on optical microcombs"

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**Potential competing interests:** No potential competing interests to declare.

Dear Dr. Kyriacou,

Thank you again so much for accepting to publicly review David Moss's article [Designing and modeling microwave photonic spectral filters based on optical microcombs](#) (click the title to see the full text).

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This manuscript elaborates on the design of microwave photonic filters. From my point of view, this article needs clarification to make it accessible - readable by a wider range of readers and not only a few specialists on the subject.

1) Section 2, "Theory and Principle," is too short, and the design process needs further clarification. It is inevitable for the authors to give a typical response of one microcomb and explain how this is exploited to yield a filter. In particular, the approach given in Fig. 1 must be explicitly described as how it is utilized to yield different filter types. Similarly, Figs. 2 and 3 are explained in a very abstract form, and the reader is unable to understand without contacting the cited references. From my point of view, the manuscript should provide the basic understanding, and only the readers interested in acquiring a deeper knowledge need to contact the references.

2) On the contrary, section 3, "Results and Discussion," is too long, involving a lot of details, while the basic understanding is missing. The author should explain to the reader what is illustrated in these figures and how this is advancing the current knowledge.

3) Section 3.3 elaborates on the signal bandwidth. It is my understanding that the "matched filter" response is established as inevitable everywhere, but it is not clear if it is adopted herein.

