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(54) **MULTI-BAND FILTER WITH SUPPRESSED SHEAR HORIZONTAL MODE**

(71) Applicant: **Skyworks Solutions, Inc.**, Irvine, CA (US)

(72) Inventors: **Yuya Hiramatsu**, Neyagawa-Shi (JP); **Masafumi Iwaki**, Osaka-Shi (JP)

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(57) **ABSTRACT**

A multi-band filter configured to allow signals to pass at multiple frequency bands includes a piezoelectric substrate and a plurality of groups of electrodes disposed on the piezoelectric substrate. Each group forms a respective filter to allow signals to pass at a corresponding frequency band. A first group forms a first filter having a first frequency band and a second group forms a second filter having a second frequency band. The first frequency band is lower than the second frequency band. The filter includes a dielectric film formed to cover at least a part of the piezoelectric substrate and the plurality of groups of electrodes. The filter also includes a passivation film disposed on the dielectric film. The passivation film has a smaller thickness for the first group than for the second group, so as to suppress a spurious response generated in the piezoelectric substrate.