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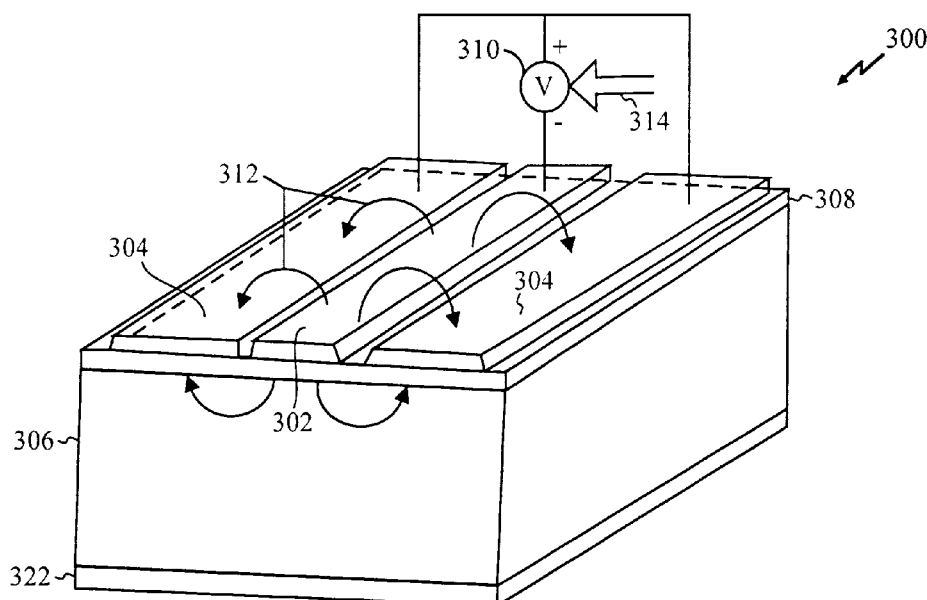
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(54) Title: **ELECTRICALLY TUNABLE BANDPASS FILTERS**



(57) **Abstract:** A tunable bandpass filter includes at least one resonator having a reactance with a resonant frequency, a ferroelectric film having a dielectric constant with a value that changes with an applied electric field, and an electric field generating device for generating relatively constant electric fields of different strengths. The ferroelectric film is electrically coupled to the resonator so that the reactance of the resonator and therefore the resonant frequency of the resonator and the passband of the filter depends on the dielectric constant of the ferroelectric film. The electric field generating device is constructed and arranged to generate relatively constant electric fields within the ferroelectric film, thereby making the resonant frequency of the resonator and the passband of the filter a function of the strength of the relatively constant electric field.



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