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Patent Number(s): US2012161905-A1

Title: Resonant element for use in resonator filter in terahertz frequency band ranging from giga hertz to tera hertz, has outer layer positioned outwardly from waveguide layer and frequency adjustment layer and constituting external structure

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Abstract: NOVELTY - The element has a waveguide layer in which an electric wave is transmitted. A frequency adjustment layer is positioned on one an upper layer and a lower layer the waveguide layer. The adjustment layer changes one height and structure the element. An outer layer is positioned outwardly from the waveguide layer and the frequency adjustment layer, and constitutes an external structure the element. The adjustment layer includes an upper frequency adjustment layer positioned on the waveguide layer and a lower frequency adjustment layer positioned under the waveguide layer.

USE - Resonant element for use in resonator filter in a terahertz frequency band ranging from 100 giga hertz to 10 tera hertz (all claimed).

ADVANTAGE - The element tunes cutf frequency in an effective manner. The adjustment layer changes one the height and the structure the element and the outer layer positioned outwardly from the waveguide layer and the frequency adjustment layer and constitutes the external structure the resonant element, thus reducing economic and temporal waste caused by remanufacturing a resonator filter in an effective manner.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) a resonator filter, comprising a resonant element

(2) a method for tuning a frequency a resonator filter.

DESCRIPTION DRAWING(S) - The drawing shows a perspective view a frequency-tunable resonator filter.

Layers (500, 510, 520, 530, 540)

Drawing:

Derwent Class Code(s): V06 (Electromechanical Transducers and Small Machines); W02 (Broadcasting, Radio and Line Transmission Systems)

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