

ABSTRACT

The present invention discloses a two-dimensional high-performance resonator, which is specifically an ultra-high-frequency resonator structure capable of improving an electromechanical coupling coefficient of the resonator. The resonator includes a piezoelectric layer, where an electrode layer is distributed on an upper surface of the piezoelectric layer, the electrode layer includes several electrodes arranged in a horizontal direction with a distance therebetween greater than four wavelengths, and a bridge structure is arranged on an upper portion of the electrode layer. The resonator structure can effectively improve the resonance frequency and the electromechanical coupling coefficient of the resonator, and can well meet the requirements of the 5G market, and the quality factor is greatly improved.