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(54) **PIEZOELECTRIC VIBRATOR AND  
PIEZOELECTRIC VIBRATOR ASSEMBLY**

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**ABSTRACT**

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Provided are a piezoelectric vibrator and a piezoelectric vibrator assembly having a small volume, fast response, and high energy conversion efficiency. The piezoelectric vibrator includes a piezoelectric body and an amplifying unit fixedly supported on at least one of two opposite sides of the piezoelectric body. The piezoelectric body comprises a single-layer or multi-layer material with a piezoelectric effect. The amplifying unit is a flat structure formed by an elastic reinforcing element and having a same shape as the piezoelectric body. The elastic reinforcing element is a metal sheet. The piezoelectric body, when an external voltage is applied, expands or contracts along a first direction parallel to a plane of the piezoelectric body, and simultaneously, the amplifying unit contracts or expands along a second direction. The first direction and the second direction are perpendicular to each other.

