

ABSTRACT

A vibrating device is provided which is capable of further reducing an absolute value of the temperature coefficient of resonant frequency (TCF).

In a vibrating device 1, tuning fork arms 3 to 5 extending in a Y-direction are joined to a base portion 2 and are arranged side by side in an X-direction. Each of the tuning fork arms 3 to 5 has a structure that a silicon oxide layer 12 is laminated on a Si layer 11 made of a degenerate semiconductor, and that an excitation portion 13 is provided on the silicon oxide layer 12. Given that a total thickness of the Si layer 11 is denoted by T_1 , a total thickness of the silicon oxide layer 12 is denoted by T_2 , and the temperature coefficient of resonant frequency (TCF) when the silicon oxide layer 12 is not provided on the Si layer 11 is denoted by x , a thickness ratio $T_2/(T_1+T_2)$ is within a range of $(-0.0002x^2 - 0.0136x + 0.0014) \pm 0.05$.