

ABSTRACT OF THE DISCLOSURE

A method for efficiently and inexpensively manufacturing a piezoelectric element that contains highly corrosion resistant electrodes and has excellent and stable electric characteristics is performing such that dicing occurs without forming any protective film beforehand. According to the method, a wafer is formed to have an electrode including an Al alloy disposed on a piezoelectric substrate made of a piezoelectric material. The wafer is cut while being exposed to plasma using a halogen-containing gas while cooling the wafer with cutting water. The cutting water preferably includes a compound that reacts with Al to form a protective film on a surface of an electrode including an Al alloy.

FIGURE. 4