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(54) **PIEZOELECTRIC ELEMENT, DROPLET DISCHARGE HEAD, FERROELECTRIC MEMORY, AND PIEZOELECTRIC ACTUATOR**

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(57) **ABSTRACT**

A piezoelectric element includes a first electrode, a second electrode and a piezoelectric film located between the first electrode and the second electrode. The first electrode is an electrode to which a relatively positive voltage is applied when the first electrode is driven, the second electrode is an electrode to which a relatively negative voltage is applied when the second electrode is driven, and a coefficient A obtained by the following logarithmic approximation formula in an aging test in which an electric field of 10 V/μm is applied at an ambient temperature of 80° C. is equal to or greater than -4.200×10^{-2}.

$$\Phi_2 = A \times \ln(t) + B$$

Φ_2: Schottky barrier height [eV] between the second electrode and the piezoelectric film when a positive electric field of 12.68 V/μm is applied to the first electrode

t: Aging period [h]

A: Coefficient

B: Coefficient