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YAMAMOTO et al.(10) **Pub. No.: US 2022/0376689 A1**(43) **Pub. Date: Nov. 24, 2022**(54) **SIGNAL DETECTION CIRCUIT**(71) Applicant: **DENSO CORPORATION**, Kariya-city
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ABSTRACT

A signal detection circuit includes: a voltage dividing circuit having at least a first pair of voltage dividing capacitors connected in series for dividing an input voltage and configured to output a divided voltage, and a detection circuit configured to detect the divided voltage. The first pair of voltage dividing capacitors are included in one semiconductor device. The semiconductor device includes: (i) a semiconductor substrate, (ii) a first conductor layer, (iii) a first dielectric layer, (iv) a second conductor layer, (v) a second dielectric layer, (vi) a third conductor layer, and (vii) a short-circuit portion configured to short-circuit the first conductor layer and the semiconductor substrate.

