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(71) Applicant: **Nokia Corporation**
02150 Espoo (FI)

(72) Inventor: **Christensen, Kare Tais**
1153 Copenhagen K (DK)

(74) Representative: **Geary, Stuart Lloyd et al**
Venner, Shipley & Co.,
20 Little Britain
London EC1A 7DH (GB)

(54) **Tuning circuit and IGFET**

(57) A tuning circuit comprising a first reactance (12), a second reactance (13) and a insulated gate field effect transistor (11) having a gate arranged to receive a control signal. The first reactance (12) is connected between the source of the field effect transistor (11) and a first node. The second reactance (13) has the same value as the first reactance (12) and is connected between the drain of the field effect transistor (11) and a second node. The first and second nodes are arranged so as to experience a balanced ac signal. Turning the

field effect transistor (11) on has the effect of making the first and second reactances (12, 13) effective in the circuit and *vice versa*.

An IGFET has a grounded region (33) surrounding source and drain regions (21, ..., 24, 26, ..., 29). The gate electrode (34) overlies the boundary between the grounded region (33) and the source and drain regions (21, ..., 24, 26, ..., 29).

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