

## Quasi-static discrete Green's function for SAW devices

---

*D.P. Morgan. "Quasi-static discrete Green's function for SAW devices." 2001 Transactions on Microwave Theory and Techniques 49.4 (Apr. 2001, Part II [T-MTT] (Special Issue on Microwave Acoustic Wave Devices for Wireless Communications and Sensing)): 844-847.*

A discrete Green's function is derived for surface acoustic wave device analysis, giving the currents in an infinite array of regular electrodes when a voltage is applied to one electrode. Simple formulas are obtained by using the quasi-static approximation, which assumes the frequency to be such that electrode reflections are insignificant. The function exhibits distortion associated with the nonuniform charge distribution, and is shown to be causal.

 [Return to main document.](#)