ABSTRACT OF THE DISCLOSURE

SURFACE ACOUSTIC WAVE FILTER

A surface acoustic wave filter is free from any loss arising from the impedance mismatching by finding out optimum values achieving a widened band and lowered loss for the electrode width of the interdigital transducer and reflector electrodes. The surface acoustic wave filter includes interdigital transducers and reflectors arranged on both sides of the transducer. The piezoelectric substrate has a ratio $h/\lambda$ of an electrode thickness h to a surface acoustic wave wavelength $\lambda$ lying within the range of $0.05 \leqq h/\lambda \leqq 0.15$ and has an electrode width ratio wr/pr of a reflector electrode width wr to an electrode pitch pr lying within the range of $0.5 \leqq wr/pr \leqq 0.6$ and has an electrode width ratio wi/pi of an interdigital transducer interdigital electrode width wi to a pitch pi lying within the range of $0.6 \leqq wi/pi \leqq 0.9$.

Fig. 1