Abstract (en)
[origin: WO8400082A1] A method of frequency trimming piezoelectric devices (1) such as quartz crystal resonators and surface acoustic wave filters. The device may be entirely enclosed in glass encapsulation (43) or be provided a housing (52) with a window (51) transparent to optical energy at a predetermined wavelength, for example, at 1.06 micrometer. A Q-switched, Nd-YAG laser (4) is directed by an optical x-y deflection system (5) so as to penetrate the housing (52) or window (51) and impinge on conductive patterns or electrodes (42) deposited on the piezoelectric substrate (41) of the device. The frequency characteristics of the device vary as the conductive material is caused to evaporate. The intensity and direction of the laser beam is controlled so as to bring the frequency characteristics, that is, resonant frequency, frequency response, etc., within specification. The device may be stored for a period of time between encapsulation and the final trimming procedures so as to substantially obviate significant short-term aging phenomena.

Citation (search report)
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