1. Record Nr. UNINA9910784722203321 Autore Yang Jiashi <1956-> Titolo Analysis of piezoelectric devices [[electronic resource] /] / Jiashi Yang Hackensack, NJ,: World Scientific, c2006 Pubbl/distr/stampa **ISBN** 1-281-37307-9 9786611373078 981-277-318-5 Descrizione fisica xv, 520 p.: ill Disciplina 537/.2446 Soggetti Piezoelectric devices - Mathematical models Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Title from title screen. Nota di bibliografia Includes bibliographical references (p. 491-500) and index. Nota di contenuto ch. 1. Three-dimensional theories, 1.1. Nonlinear electroelasticity for strong fields. 1.2. Linear piezoelectricity for infinitesimal fields. 1.3. Linear theory for small fields superposed on a finite bias. 1.4. Cubic theory for weak nonlinearity -- ch. 2. Thickness-shear modes of plate resonators, 2.1. Static thickness-shear deformation, 2.2. Nonlinear thickness-shear deformation. 2.3. Effects of initial fields on thicknessshear deformation. 2.4. Linear thickness-shear vibration. 2.5. Effects of electrode inertia. 2.6. Inertial effects of imperfectly bounded electrodes. 2.7. Effects of electrode inertia and shear stiffness. 2.8. Nonlinear thickness-shear vibration, 2.9. Effects of initial fields on thickness-shear vibration -- ch. 3. Slowly varying thickness-shear modes. 3.1. Exact waves in a plate. 3.2. An approximate equation for thickness-shear waves. 3.3. Thickness-shear vibration of finite plates. 3.4. Energy trapping in mesa resonators. 3.5. Contoured resonators.

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