1. Record Nr. UNINA9910782586403321

Titolo	Advances in surface acoustic wave technology, systems and applications . Voume 2 [[electronic resource] /] / editors, Clemens C.W. Ruppel, Tor A. Fjeldly
Pubbl/distr/stampa	Singapore ; ; Hong Kong, : World Scientific, 2001
ISBN	1-281-96061-6 9786611960612 981-281-156-7
Descrizione fisica	1 online resource (376 p.)
Collana	Selected topics in electronics and systems ; ; v. 20
Altri autori (Persone)	RuppelClemens C. W. <1952-> FjeldlyTor A
Disciplina	621.3828
Soggetti	Acoustic surface wave devices Nuclear engineering
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Preface; Special Issue EDITORS; CONTENTS; Coupling-of-modes Analysis of SAW Devices; 1. Introduction; 2. COM Model for Surface-Acoustic Waves; 3. Improvements and Modifications of the COM Model; 4. Extraction of COM Parameters; 5. Device Modeling and Design; 6. Conclusions and Future Challenges; Theory and Applications of Green's Functions; 1. Introduction; 2. On the Diagonalization of Piezoelectric Equations in Transversally Inhomogeneous Media; 3. A Discussion on Green's Functions; 4. Summary; New Piezoelectric Substrates for SAW Devices; 1. Introduction 2. Quartz Homeotypes - Gallium Orthophosphate3. Calcium Gallo-Germanates - Langasite Langanite and Langatate; 4. Lithium Compounds - Diomignite; Pseudo and High Velocity Pseudo SAWs; 1. Introduction; 2. Fundamentals of Pseudo SAWS; 3. Characteristics of PSAW and HVPSAW Solutions; 4. Layered Solutions; 5. Conclusions; SAW Devices Beyond 5 GHz; 1. Introduction; 2. Propagation Loss in the GHz-Range for SAW Devices; 3. Influence of Electrode Resistance in SAW Devices; 4. Fabrication Process; 5. SAW Filter Using Unidirectional Transducer Beyond 5 GHz; 6. Ladder Type Filter; 7. Prospective

8. ConclusionsWireless SAW Identification and Sensor Systems; 1. Introduction; 2. Passive Wireless SAW ID Tags and Sensors; 3. SAW Identification and Sensor Systems; 4. Event-Driven SAW Sensors; 5. Measurement Accuracy; Interaction of Surface Acoustic Waves Electrons and Light; 1. Introduction; 2. Electrical boundary conditions for SAW in two dimensions; 3. SAW probing the dynamic conductivity of low-dimensional electron systems; 4. Hybrid systems; 5. Interaction between SAW and light; 6. Summary and future prospects; 7. Acknowledgments

Sommario/riassunto

Surface acoustic wave (SAW) devices are recognized for their versatility and efficiency in controlling and processing electrical signals. This has resulted in a multitude of device concepts for a wide range of signal processing functions, such as delay lines, filters, resonators, pulse compressors, convolvers, and many more. As SAW technology has found its way into mass market products such as TV receivers, pagers, keyless entry systems and cellular phones, the production volume has risen to millions of devices produced every day. At the other end of the scale, these are specialized high perfo