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Titolo	High Impulse Voltage and Current Measurement Techniques : Fundamentals – Measuring Instruments – Measuring Methods / / by Klaus Schon
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Soggetti	Power electronics Energy systems Quality control Reliability Industrial safety Power Electronics, Electrical Machines and Networks Energy Systems Quality Control, Reliability, Safety and Risk
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 and index.
Nota di contenuto	Characterisation and Generation of High Impulse Voltages and Currents -- Representation of Impulses in Time and Frequency Domain -- Transfer Behaviour of Linear Systems and Convolution -- Digital Recorder, Impulse Voltmeter and Impulse Calibrator -- Measurement of High-Voltage Impulses -- Measurement of High-Current Impulses -- Calibration of the measuring systems -- Evaluation of Uncertainties of Measurement.
Sommario/riassunto	Equipment to be installed in electric power-transmission and distribution systems must pass acceptance tests with standardized high-voltage or high-current test impulses which simulate the stress

on the insulation caused by external lightning discharges and switching operations in the grid. High impulse voltages and currents are also used in many other fields of science and engineering for various applications. Therefore, precise impulse-measurement techniques are necessary, either to prevent an over- or understressing of the insulation or to guarantee the effectiveness and quality of the application. The book deals with: principal generator circuits for generating high-voltage and high-current impulses measuring systems and their calibration according to IEC 60060 and IEC 62475 methods of estimating uncertainties of measurement mathematical and experimental basis for characterizing the transfer behavior of spatially extended systems used for measuring fast transients. This book is intended for engineers and technicians as well as students of high-voltage engineering and electrical power supply systems.