

Josef Lutz

List of Publications by Year in descending order

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42
papers

1,143
citations

1040056

9
h-index

1058476

14
g-index

43
all docs

43
docs citations

43
times ranked

779
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 1 | Correction of Delay-Time-Induced Maximum Junction Temperature Offset During Electrothermal Characterization of IGBT Devices. IEEE Transactions on Power Electronics, 2021, 36, 2564-2573. | 7.9 | 19 |
| 2 | Influence of Lateral Temperature Gradients on the Failure Modes at Power Cycling. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2021, 11, 407-414. | 2.5 | 6 |
| 3 | Reliability aspects of 3D integrated power devices. , 2021, , . | | 0 |
| 4 | Temperature Influence on the Accuracy of the Transient Dual Interface Method for the Junction-to-Case Thermal Resistance Measurement. IEEE Transactions on Power Electronics, 2021, 36, 7451-7460. | 7.9 | 11 |
| 5 | Current filament behavior in IGBTs of different voltage classes investigated by measurements and simulations. , 2020, , . | | 2 |
| 6 | Measurement Error Caused by the Square Root t Method Applied to IGBT Devices during Power Cycling Test. , 2020, , . | | 6 |
| 7 | The Influence of the Gate Driver and Common-Source Inductance on the Short-Circuit Behavior of IGBT Modules and Protection. IEEE Transactions on Power Electronics, 2020, 35, 10789-10798. | 7.9 | 9 |
| 8 | Difference in Device Temperature Determination Using p-n-Junction Forward Voltage and Gate Threshold Voltage. IEEE Transactions on Power Electronics, 2019, 34, 2781-2793. | 7.9 | 45 |
| 9 | Experimental Investigation of Linear Cumulative Damage Theory With Power Cycling Test. IEEE Transactions on Power Electronics, 2019, 34, 4722-4728. | 7.9 | 20 |
| 10 | Structure and Switching Behavior Optimization of fast 4.5 kV Press-Pack Diodes. , 2019, , . | | 3 |
| 11 | A Clamping Circuit for Short Circuit Ruggedness Improvement of Discrete IGBT Devices based on the di/dt Feedback of Emitter Stray Inductance. , 2019, , . | | 2 |
| 12 | Al modification as indicator of current filaments in IGBTs under repetitive SC operation. IET Power Electronics, 2019, 12, 3893-3902. | 2.1 | 3 |
| 13 | Short Circuit Robustness of an Aged High Power IGBT-Module. , 2019, , . | | 2 |
| 14 | Temperature determination of SiC MPS diodes during surge current event with measurement and simulation. , 2019, , . | | 5 |
| 15 | Power cycling reliability results of GaN HEMT devices. , 2018, , . | | 33 |
| 16 | Observation of current filaments in IGBTs with thermoreflectance microscopy. , 2018, , . | | 6 |
| 17 | Repetitive surge current test of SiC MPS diode with load in bipolar regime. , 2018, , . | | 15 |
| 18 | Semiconductor Power Devices. , 2018, , . | | 111 |

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 19 | A novel Injection Enhanced Floating Emitter (IEFE) IGBT structure improving the ruggedness against short-circuit and thermal destruction. , 2017, , . | | 3 |
| 20 | Power cycling capability of high power IGBT modules with focus on short load pulse duration. , 2017, , . | | 3 |
| 21 | Gallium arsenide semiconductor parameters extracted from pin diode measurements and simulations. IET Power Electronics, 2016, 9, 689-697. | 2.1 | 5 |
| 22 | Requirements in power cycling for precise lifetime estimation. Microelectronics Reliability, 2016, 58, 82-89. | 1.7 | 51 |
| 23 | Determination of parameters with high impact on fatigue of new Interconnect Technologies. , 2015, , . | | 0 |
| 24 | Investigation of deep levels in SiC-Schottky diodes with frequency resolved admittance spectroscopy. , 2015, , . | | 0 |
| 25 | Possible failure modes in Press-Pack IGBTs. Microelectronics Reliability, 2015, 55, 903-911. | 1.7 | 51 |
| 26 | Methods for virtual junction temperature measurement respecting internal semiconductor processes. , 2015, , . | | 15 |
| 27 | Switching ruggedness and surge current capability of diodes using the self-adjusting p emitter efficiency diode concept. IET Circuits, Devices and Systems, 2014, 8, 205-212. | 1.4 | 5 |
| 28 | Dynamic self-clamping at short-circuit turn-off of high-voltage IGBTs. , 2013, , . | | 18 |
| 29 | Evaluation of the submodel technique for FEM simulations of power electronic housings under power cycling conditions. , 2013, , . | | 0 |
| 30 | Determination of the thermal and electrical contact resistance in press-pack IGBTs. , 2013, , . | | 23 |
| 31 | Measurement of a complete HV IGBT I-V-characteristic up to the breakdown point. , 2013, , . | | 7 |
| 32 | Analysis of the plastic deformation in aluminium metallizations of Al ₂ O ₃ -based DAB substrates. , 2013, , . | | 2 |
| 33 | Measurements and simulations of the turn-off behaviour of diodes with deep energy levels of Se implanted in Si. , 2013, , . | | 1 |
| 34 | Reliability of discrete power semiconductor packages and systems — D ² Pak and CanPAK in comparison. , 2013, , . | | 7 |
| 35 | A simplified algorithm for predicting power cycling lifetime in Direct Drive wind power systems. , 2012, , . | | 12 |
| 36 | Surge current capability of IGBTs. , 2012, , . | | 9 |

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|----|--|-----|-----------|
| 37 | Optimization of diodes using the SPEED concept and CIBH. , 2011, , . | | 10 |
| 38 | On the Origin of Thermal Runaway in a Trench Power MOSFET. IEEE Transactions on Electron Devices, 2011, 58, 3477-3484. | 3.0 | 51 |
| 39 | Semiconductor Power Devices. , 2011, , . | | 515 |
| 40 | Seebeck difference - temperature sensors integrated into smart power technologies. Power Semiconductor Devices & IC's, 2009 ISPSD 2009 21st International Symposium on, 2009, , . | 0.0 | 4 |
| 41 | On the formation of stationary destructive cathode-side filaments in p-n ⁺ diodes. Power Semiconductor Devices & IC's, 2009 ISPSD 2009 21st International Symposium on, 2009, , . | 0.0 | 12 |
| 42 | Surge Current Ruggedness of Silicon Carbide Schottky- and Merged-PiN-Schottky Diodes. , 2008, , . | | 40 |