

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	Semiconductor Power Devices. , 2011, , .		515
2	Semiconductor Power Devices. , 2018, , .		111
3	On the Origin of Thermal Runaway in a Trench Power MOSFET. IEEE Transactions on Electron Devices, 2011, 58, 3477-3484.	3.0	51
4	Possible failure modes in Press-Pack IGBTs. Microelectronics Reliability, 2015, 55, 903-911.	1.7	51
5	Requirements in power cycling for precise lifetime estimation. Microelectronics Reliability, 2016, 58, 82-89.	1.7	51
6	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
7	Surge Current Ruggedness of Silicon Carbide Schottky- and Merged-PiN-Schottky Diodes. , 2008, , .		40
8	Power cycling reliability results of GaN HEMT devices. , 2018, , .		33
9	Determination of the thermal and electrical contact resistance in press-pack IGBTs. , 2013, , .		23
10	Experimental Investigation of Linear Cumulative Damage Theory With Power Cycling Test. IEEE Transactions on Power Electronics, 2019, 34, 4722-4728.	7.9	20
11	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
12	Dynamic self-clamping at short-circuit turn-off of high-voltage IGBTs. , 2013, , .		18
13	Methods for virtual junction temperature measurement respecting internal semiconductor processes. , 2015, , .		15
14	Repetitive surge current test of SiC MPS diode with load in bipolar regime. , 2018, , .		15
15	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
16	A simplified algorithm for predicting power cycling lifetime in Direct Drive wind power systems. , 2012, , .		12
17	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
18	Optimization of diodes using the SPEED concept and CIBH. , 2011, , .		10

#	ARTICLE	IF	CITATIONS
19	Surge current capability of IGBTs. , 2012, , .		9
20	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
21	Measurement of a complete HV IGBT I-V-characteristic up to the breakdown point. , 2013, , .		7
22	Reliability of discrete power semiconductor packages and systems — D<sup>2</sup>Pak and CanPAK in comparison. , 2013, , .		7
23	Observation of current filaments in IGBTs with thermoreflectance microscopy. , 2018, , .		6
24	Measurement Error Caused by the Square Root t Method Applied to IGBT Devices during Power Cycling Test. , 2020, , .		6
25	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
26	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
27	Gallium arsenide semiconductor parameters extracted from pin diode measurements and simulations. IET Power Electronics, 2016, 9, 689-697.	2.1	5
28	Temperature determination of SiC MPS diodes during surge current event with measurement and simulation. , 2019, , .		5
29	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
30	A novel Injection Enhanced Floating Emitter (IEFE) IGBT structure improving the ruggedness against short-circuit and thermal destruction. , 2017, , .		3
31	Power cycling capability of high power IGBT modules with focus on short load pulse duration. , 2017, , .		3
32	Structure and Switching Behavior Optimization of fast 4.5 kV Press-Pack Diodes. , 2019, , .		3
33	Al modification as indicator of current filaments in IGBTs under repetitive SC operation. IET Power Electronics, 2019, 12, 3893-3902.	2.1	3
34	Analysis of the plastic deformation in aluminium metallizations of Al²O³-based DAB substrates. , 2013, , .		2
35	A Clamping Circuit for Short Circuit Ruggedness Improvement of Discrete IGBT Devices based on the di/dt Feedback of Emitter Stray Inductance. , 2019, , .		2
36	Short Circuit Robustness of an Aged High Power IGBT-Module. , 2019, , .		2

#	ARTICLE	IF	CITATIONS
37	Current filament behavior in IGBTs of different voltage classes investigated by measurements and simulations. , 2020, , .		2
38	Measurements and simulations of the turn-off behaviour of diodes with deep energy levels of Se implanted in Si. , 2013, , .		1
39	Evaluation of the submodel technique for FEM simulations of power electronic housings under power cycling conditions. , 2013, , .		0
40	Determination of parameters with high impact on fatigue of new Interconnect Technologies. , 2015, , .		0
41	Investigation of deep levels in SiC-Schottky diodes with frequency resolved admittance spectroscopy. , 2015, , .		0
42	Reliability aspects of 3D integrated power devices. , 2021, , .		0