Tong An

List of Publications by Year
in descending order

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52	346	10	16
papers	citations	h-index	g-index

933447 940533

52	52	52	189
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	The Effect of the Surface Roughness Characteristics of the Contact Interface on the Thermal Contact Resistance of the PP-IGBT Module. IEEE Transactions on Power Electronics, 2022, 37, 7286-7298.	7.9	8
2	Protrusion of Through-Silicon-Via (TSV) Copper with Double Annealing Processes. Journal of Electronic Materials, 2022, 51, 2433-2449.	2.2	9
3	Mud-Cracking Effect of Sintered Silver Layer on Quantifying Heat Transfer Behavior of SiC Devices Under Power Cycling: Voronoi Tessellation Model. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2022, 12, 964-972.	2.5	0
4	A Lifetime Prediction Method for IGBT Modules Considering the Self-Accelerating Effect of Bond Wire Damage. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2021, 9, 2271-2284.	5.4	22
5	Thickness and metallization layer effect on interfacial and vertical cracking of sintered silver layer: A numerical investigation. Microelectronics Reliability, 2021, 124, 114290.	1.7	3
6	Constitutive modelling of annealing behavior in through silicon vias-copper. Materials Characterization, 2021, 179, 111359.	4.4	9
7	Analysis for thermal contact resistance of Press-Pack IGBTs. , 2021, , .		0
8	Finite element analysis of thermal contact resistance in Press-Pack IGBT module. , 2021, , .		0
9	A thermal network model for thermal analysis in automotive IGBT modules. , 2021, , .		3
10	Effect of Crack Evolution on the Resistance and Current Density of the Al Metallization in the IGBT Module During Power Cycling. IEEE Transactions on Device and Materials Reliability, 2020, 20, 706-715.	2.0	2
11	Crack Effect on the Equivalent Thermal Conductivity of Porously Sintered Silver. Journal of Electronic Materials, 2020, 49, 5994-6008.	2.2	11
12	In-process measurement of the grinding force in silicon wafer self-rotating grinding process. , 2020, , .		1
13	Optimization of TSV interconnects and BEOL layers under annealing process through fracture evaluation. Fatigue and Fracture of Engineering Materials and Structures, 2020, 43, 1433-1445.	3.4	6
14	Vibration lifetime estimation of PBGA solder joints using Steinberg model. Microelectronics Reliability, 2019, 102, 113474.	1.7	17
15	Effect of silicon anisotropy on interfacial fracture for three dimensional through-silicon-via (TSV) under thermal loading. Engineering Fracture Mechanics, 2019, 209, 274-300.	4.3	25
16	A Study on the Effect of Microstructure Evolution of the Aluminum Metallization Layer on Its Electrical Performance During Power Cycling. IEEE Transactions on Power Electronics, 2019, 34, 11036-11045.	7.9	21
17	Temperature and grain size dependences of mechanical properties of nanocrystalline copper by molecular dynamics simulation. Modelling and Simulation in Materials Science and Engineering, 2019, 27, 065012.	2.0	21
18	Validation of submodel technique for fracture evaluation in wafer-level package under thermal loading. , 2019, , .		0

#	Article	IF	Citations
19	FE analysis the effect of bonding wire and solder failure on the resistance and temperature of IGBT. , 2018, , .		7
20	Failure study of Sn37Pb PBGA solder joints using temperature cycling, random vibration and combined temperature cycling and random vibration tests. Microelectronics Reliability, 2018, 91, 213-226.	1.7	22
21	The experimental analysis and the mechanical model for the debonding failure of TSV-Cu/Si interface. Microelectronics Reliability, 2018, 91, 52-66.	1.7	13
22	The effect of the diffusion creep behavior on the TSV-Cu protrusion morphology during annealing. Journal of Materials Science: Materials in Electronics, 2018, 29, 16305-16316.	2.2	13
23	Mechanical properties of silicon in subsurface damage layer from nano-grinding studied by atomistic simulation. AIP Advances, 2018, 8, .	1.3	7
24	Microstructure Evolution and Protrusion of Electroplated Cu-Filled Through-Silicon Vias Subjected to Thermal Cyclic Loading. Journal of Electronic Materials, 2017, 46, 5916-5932.	2.2	11
25	Residual stress distribution in wafers ground by different grinding parameters. , 2017, , .		2
26	Study on temperature distribution of IGBT module. , 2017, , .		4
27	Electro-thermal and thermal-mechanical FE analysis of IGBT module with different bonding wire shape. , 2017, , .		9
28	Numerical simulation of the wire bonding reliability of IGBT module under power cycling. , 2017, , .		16
29	Dynamic finite element modeling of backside grinding process for TSV wafer. , 2017, , .		2
30	Model simplification method for PBGA assembly simulation under random vibration. , 2016, , .		0
31	TSV-Cu protrusion induced by thermal cycling test. , 2016, , .		1
32	Vibration reliability test and analysis of plastic ball grid array. , 2016, , .		2
33	Edge chipping of silicon wafers in rotating grinding. , 2016, , .		3
34	Thermal fatigue reliability analysis of PBGA with Sn63Pb37 solder joints. , 2016, , .		7
35	Copper pillar bump design optimization based on Taguchi method. , 2016, , .		0
36	A Study of Creep Behavior of TSV-Cu Based on Nanoindentaion Creep Test. Journal of Mechanics, 2016, 32, 717-724.	1.4	7

#	Article	IF	Citations
37	Protrusion of electroplated copper filled in through silicon vias during annealing process. Microelectronics Reliability, 2016, 63, 183-193.	1.7	23
38	Experimental and Numerical Investigation of Mechanical Properties of Electroplating Copper Filled in Through Silicon Vias. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2016, 6, 23-30.	2.5	9
39	Effect of electroplating parameter on the TSV-Cu protrusion during annealing and thermal cycling. , 2015, , .		1
40	The characterization of TSV Cu protrusion under thermal cycling. , 2015, , .		2
41	An equivalent model of TSV silicon interposer. , 2012, , .		2
42	Interfacial stress in Through Silicon Vias. , 2012, , .		0
43	Effects of via pitch on silicon stress in TSV interposer. , 2012, , .		3
44	Cracking of the Intermetallic Compound Layer in Solder Joints Under Drop Impact Loading. Journal of Electronic Packaging, Transactions of the ASME, 2011, 133, .	1.8	10
45	Effects of IMC thickness on fracturing of solder joints. , 2010, , .		2
46	Mechanical properties of intermetallic compounds in solder joints. , 2010, , .		5
47	Fracture simulation of solder joint interface by Cohesive Zone Model. , 2009, , .		1
48	A simplified computational model for solder joints under drop impact loadings. , 2009, , .		1
49	Influence of strain rate effect on behavior of solder joints under drop impact loadings. , 2009, , .		2
50	Dynamic Stress of Solder Joints under Board-Level Drop/Impact. , 2007, , .		1
51	Fracture Simulation of Solder Joints by a Lattice Model. , 2007, , .		0
52	Comparison of junction temperature variations of IGBT modules under DC and PWM power cycling test conditions. Journal of Power Electronics, 0, , .	1.5	0