

Pang Jhl Or Pang Hlj

List of Publications by Year
in descending order

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94
papers

2,446
citations

279487

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h-index

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39
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102
all docs

102
docs citations

102
times ranked

1277
citing authors

#	ARTICLE	IF	CITATIONS
1	Thermal cycling aging effects on Sn-Ag-Cu solder joint microstructure, IMC and strength. Thin Solid Films, 2004, 462-463, 370-375.	0.8	180
2	Drop impact reliability testing for lead-free and lead-based soldered IC packages. Microelectronics Reliability, 2006, 46, 1160-1171.	0.9	144
3	Thermal cycling analysis of flip-chip solder joint reliability. IEEE Transactions on Components and Packaging Technologies, 2001, 24, 705-712.	1.4	142
4	Microstructure and intermetallic growth effects on shear and fatigue strength of solder joints subjected to thermal cycling aging. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2001, 307, 42-50.	2.6	140
5	Thermo-mechanical model for simulating laser cladding induced residual stresses with single and multiple clad beads. Journal of Materials Processing Technology, 2015, 224, 89-101.	3.1	120
6	Intermetallic growth studies on Sn-Ag-Cu lead-free solder joints. Journal of Electronic Materials, 2004, 33, 1219-1226.	1.0	101
7	Impact of Thermal Cycling on Sn-Ag-Cu Solder Joints and Board-Level Drop Reliability. Journal of Electronic Materials, 2008, 37, 880-886.	1.0	88
8	Isothermal and thermal cycling aging on IMC growth rate in lead-free and lead-based solder interface. IEEE Transactions on Components and Packaging Technologies, 2005, 28, 408-414.	1.4	77
9	Flip chip on board solder joint reliability analysis using 2-D and 3-D FEA models. IEEE Transactions on Advanced Packaging, 2001, 24, 499-506.	1.7	72
10	Mechanical Properties for 95.5Sn-3.8Ag-0.7Cu Lead-Free Solder Alloy. IEEE Transactions on Components and Packaging Technologies, 2005, 28, 830-840.	1.4	72
11	Creep and fatigue characterization of lead free 95.5Sn-3.8Ag-0.7Cu solder. , 0, , .		61
12	Bulk solder and solder joint properties for lead free 95.5Sn-3.8Ag-0.7Cu solder alloy. , 0, , .		54
13	Vibration reliability characterization of PBGA assemblies. Microelectronics Reliability, 2000, 40, 1097-1107.	0.9	52
14	Electrochemical capacitive properties of CNT fibers spun from vertically aligned CNT arrays. Journal of Solid State Electrochemistry, 2012, 16, 1775-1780.	1.2	52
15	Flip chip solder joint reliability analysis using viscoplastic and elastic-plastic-creep constitutive models. IEEE Transactions on Components and Packaging Technologies, 2006, 29, 355-363.	1.4	48
16	Nanoindentation on SnAgCu lead-free solder joints and analysis. Journal of Electronic Materials, 2006, 35, 2107-2115.	1.0	46
17	Characterisation of porosity, density, and microstructure of directed energy deposited stainless steel AISI 316L. Additive Manufacturing, 2019, 25, 286-296.	1.7	41
18	Effects of laser cladding on fatigue performance of AISI 4340 steel in the as-clad and machine treated conditions. Journal of Materials Processing Technology, 2017, 243, 246-257.	3.1	39

#	ARTICLE	IF	CITATIONS
19	Thermal fatigue reliability analysis for PBGA with Sn-3.8Ag-0.7Cu solder joints. , 0, , .		37
20	Thermal cycling aging effects on microstructural and mechanical properties of a single PBGA solder joint specimen. IEEE Transactions on Components and Packaging Technologies, 2001, 24, 10-15.	1.4	35
21	Reliability of PBGA assemblies under out-of-plane vibration excitations. IEEE Transactions on Components and Packaging Technologies, 2002, 25, 293-300.	1.4	35
22	Design for reliability (DFR) methodology for electronic packaging assemblies. , 0, , .		32
23	Mechanical characterization in failure strength of silicon dice. , 0, , .		32
24	Fracture of Sn-Ag-Cu Solder Joints on Cu Substrates: I. Effects of Loading and Processing Conditions. Journal of Electronic Materials, 2012, 41, 375-389.	1.0	32
25	Determination of interface fracture toughness of adhesive joint subjected to mixed-mode loading using finite element method. International Journal of Adhesion and Adhesives, 2006, 26, 249-260.	1.4	30
26	The influence of solder volume and pad area on Sn ^{3.8} Ag ^{0.7} Cu and Ni UBM reaction in reflow soldering and isothermal aging. Microelectronics Reliability, 2008, 48, 611-621.	0.9	30
27	Effect of Intermetallic and Kirkendall Voids Growth on Board Level Drop Reliability for SnAgCu Lead-Free BGA Solder Joint. , 0, , .		27
28	Thermo-mechanical analysis of solder joint fatigue and creep in a flip chip on board package subjected to temperature cycling loading. , 0, , .		26
29	Stress intensity factors for fatigue analysis of weld toe cracks in a girth-welded pipe. International Journal of Fatigue, 2016, 87, 279-287.	2.8	26
30	Drop Impact Analysis of Sn-Ag-Cu Solder Joints using Dynamic High-Strain Rate Plastic Strain as the Impact Damage Driving Force. , 0, , .		25
31	Electromigration effect on intermetallic growth and Young's modulus in SAC solder joint. Journal of Electronic Materials, 2006, 35, 2116-2125.	1.0	25
32	Lead free solder joint reliability characterization for PBGA, PQFP and TSSOP assemblies. , 0, , .		22
33	Drop Impact Reliability Testing for Lead-Free and Leaded Soldered IC Packages. , 0, , .		22
34	Fatigue life prediction model for laser clad AISI 4340 specimens with multiple surface cracks. International Journal of Fatigue, 2016, 87, 235-244.	2.8	22
35	Investigation on material characteristics and fatigue crack behavior of thermite welded rail joint. Construction and Building Materials, 2021, 276, 122249.	3.2	22
36	Digital image correlation for solder joint fatigue reliability in microelectronics packages. Microelectronics Reliability, 2008, 48, 310-318.	0.9	20

#	ARTICLE	IF	CITATIONS
37	Modeling stress strain curves for lead-free 95.5Sn-3.8Ag-0.7Cu solder. , 0, , .		19
38	Effect of Stress State on Growth of Interfacial Intermetallic Compounds Between Sn-Ag-Cu Solder and Cu Substrates Coated with Electroless Ni Immersion Au. Journal of Electronic Materials, 2008, 37, 1843-1850.	1.0	18
39	Mechanical deflection system (MDS) test and methodology for PBGA solder joint reliability. IEEE Transactions on Advanced Packaging, 2001, 24, 507-514.	1.7	17
40	Structural fatigue investigation of transverse surface crack growth in rail steels and thermite welds subjected to in-plane and out-of-plane loading. Engineering Structures, 2020, 204, 110076.	2.6	17
41	Thermal Deformation Measurement by Digital Image Correlation Method. , 0, , .		16
42	Flip chip solder joint fatigue life model investigation. , 0, , .		15
43	Lead-free 95.5Sn-3.8Ag-0.7Cu solder joint reliability analysis for micro-BGA assembly. , 0, , .		15
44	Drop test reliability assessment of leaded & lead-free solder joints for IC packages. , 0, , .		15
45	Vibration fatigue analysis for FCOB solder joints. , 0, , .		15
46	Performance Assessment on Board-level Drop Reliability for Chip Scale Packages (Fine-Pitch BGA). , 0, , .		15
47	Combined Thermal and Electromigration Exposure Effect on SnAgCu BGA Solder Joint Reliability. , 0, , .		15
48	A general methodology for calculating mixed mode stress intensity factors and fracture toughness of solder joints with interfacial cracks. Engineering Fracture Mechanics, 2014, 131, 9-25.	2.0	15
49	Finite element and experimental study on multiaxial fatigue analysis of rail clip failures. Fatigue and Fracture of Engineering Materials and Structures, 2020, 43, 2390-2401.	1.7	14
50	Structural fatigue investigation of thermite welded rail joints considering weld-induced residual stress and stress relaxation by cyclic load. Engineering Structures, 2021, 235, 112033.	2.6	14
51	Modeling Board-Level Four-Point Bend Fatigue and Impact Drop Tests. , 0, , .		11
52	Fatigue Growth Analysis of Pre Induced Surface Defects Using Piezoelectric Wafer Based Impedance Method and Digital Image Correlation System. Journal of Nondestructive Evaluation, 2014, 33, 413-426.	1.1	11
53	Directed energy deposition build process control effects on microstructure and tensile failure behaviour. Journal of Materials Processing Technology, 2021, 294, 117139.	3.1	11
54	Mechanical failure strength characterization of silicon dice. , 0, , .		10

#	ARTICLE	IF	CITATIONS
55	Drop Reliability Performance Assessment for PCB Assemblies of Chip Scale Packages (CSP). , 0, , .		10
56	Flip chip solder joint fatigue analysis using 2D and 3D FE models. , 0, , .		9
57	Lead-free 96.5Sn-3.5Ag flip chip solder joint reliability analysis. , 0, , .		9
58	Modeling plated copper interconnections in a bumpless flip chip package. , 0, , .		8
59	Isothermal and thermal cycling aging on IMC growth rate in Pb-free and Pb-based solder interfaces. , 0, , .		8
60	Intermetallic growth studies on SAC/ENIG and SAC/CU-OSP lead-free solder joints. , 0, , .		8
61	A YOLOv3-based Deep Learning Application Research for Condition Monitoring of Rail Thermite Welded Joints. , 2020, , .		8
62	Application of digital speckle correlation to micro-deformation measurement of a flip chip assembly. , 0, , .		7
63	Isothermal cyclic bend fatigue test method for lead free solder joints. , 0, , .		7
64	Intermetallic Growth and Failure Study for Sn-Ag-Cu/ENIG PBGA Solder Joints Subject to Thermal Cycling. , 0, , .		6
65	Interfacial IMC and Kirkendall void on SAC Solder Joints subject to Thermal Cycling. , 0, , .		6
66	IMC consideration in FEA simulation for PB-free solder joint reliability. , 0, , .		6
67	Solder joint reliability modeling of 96.5Sn/3.5Ag flip chip bumps under temperature cycling condition. , 0, , .		5
68	Digital Image Correlation and its Applications in Electronics Packaging. , 0, , .		5
69	Thermal cycling fatigue analysis of copper pillar-to-solder joint reliability. , 2008, , .		5
70	Fatigue Monitoring of Double Surface Defects Using PZT Based Electromechanical Impedance and Digital Image Correlation Methods. Advanced Materials Research, 0, 891-892, 551-556.	0.3	5
71	On the moduli of viscoelastic materials. , 0, , .		4
72	Harsh solder joint reliability tests by impact drop and highly accelerated life test (HALT). , 0, , .		4

#	ARTICLE	IF	CITATIONS
73	Impact of Drop-In Lead Free Solders on Microelectronics Packaging. , 0, , .		4
74	An integrated fatigue assessment approach of rail welds using dynamic 3D FE simulation and strain monitoring technique. Engineering Failure Analysis, 2021, 120, 105080.	1.8	4
75	Investigation of IMC Layer Effect on PBGA Solder Joint Thermal Fatigue Reliability. , 0, , .		3
76	In-Situ Study of the Effect of Electromigration on Strain Evolution and Mechanical Property Change in Lead-free Solder Joints. , 0, , .		3
77	Modeling thermal cycling and thermal shock tests for FCOB. , 0, , .		2
78	Effect of processing parameters on the morphology of the interfacial intermetallics between Cu and SnPb solders. , 0, , .		2
79	in-situ electromigration study on Sn ²⁺ Ag ⁺ Cu solder joint by digital image speckle analysis. Journal of Electronic Materials, 2006, 35, 1993-1999.	1.0	2
80	Strain-rate effects on mechanical properties for SAC387 and SAC105-Y solder. , 2008, , .		2
81	Fatigue Crack Growth and Coalescence Algorithm Starting from Multiple Surface Cracks. Advanced Materials Research, 0, 891-892, 1003-1008.	0.3	2
82	Mechanical Properties and Microstructural Analysis of Rail Thermite Welding Joints. , 2018, , .		2
83	Dynamic finite element modeling and fatigue damage analysis of thermite welds. Fatigue and Fracture of Engineering Materials and Structures, 2020, 43, 119-136.	1.7	2
84	Thermal analysis of a wirebond chip-on-board package. , 0, , .		1
85	Failure Study of Sn-Ag-Cu Lead-free Solder Joint by Digital Image Speckle Analysis (DISA). , 0, , .		1
86	Nanoindentation on SnAgCu lead-free solder and analysis. , 2005, , .		1
87	Damage monitoring using fiber optic sensors and by analysing electro-mechanical admittance signatures obtained from piezo sensor. Proceedings of SPIE, 2015, , .	0.8	1
88	Metro Door System Reliability, Availability and Maintainability Analysis. , 2018, , .		1
89	Failure Assessment Diagram (FAD) analysis of fatigue test results for X65 welded joints. MATEC Web of Conferences, 2018, 165, 21011.	0.1	1
90	In-situ reliability analysis of solder joint by digital image correlation. , 0, , .		0

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91	In-situ electromigration studies on Sn-Ag-Cu solder joint by digital image speckle analysis (DISA). , 0, , .		0
92	Foreword Special Section on ITherm 2004 Mechanics Track. IEEE Transactions on Components and Packaging Technologies, 2005, 28, 387-389.	1.4	0
93	Failure analysis of lead-free Sn-Ag-Cu solder joints for 316 I/O PBGA package. , 0, , .		0
94	Microstructure and Wear Performance Assessment of Laser Cladded Rail Steel for Service Life Extension at Sharp-Radius Curves. , 2018, , .		0