

kester® Chip Preforms

Increase Solder Volume

With electrical component sizes becoming ever smaller, printing sufficient amounts of solder paste onto miniaturized, overpopulated PCBs has become increasingly challenging. **Kester Chip Preforms** are specifically designed to overcome these solder volume deficiencies, enhancing the solder joint strength and reliability and providing 100% hole fill.

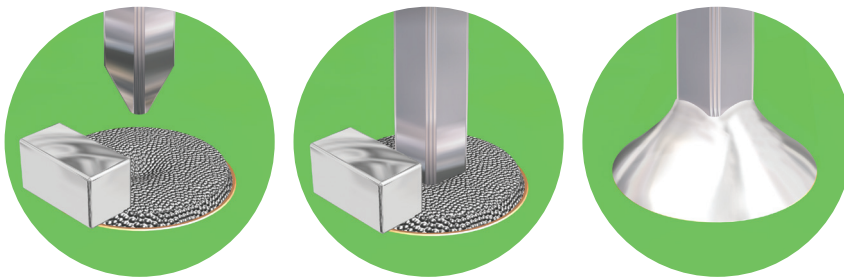
Kester Chip Preforms in tape and reel packaging provide an easy to implement method for increasing the solder volume of SMT and through-hole components assembled using surface mount technology. Specifically targeted

for use with solder paste in SMT assembly applications, small solder rectangles are inserted into solder paste to precisely increase solder volume, the solder paste acting as both an adhesive and flux vehicle. The solder rectangles are 100% alloy, and due to the minimal amount of solder paste required to provide adequate wetting, near zero flux residue is realized.

The entire family of solder rectangles in tape and reel packaging are placed with standard pick and place equipment, utilizing industry standard chip capacitor size preforms for ease of use.

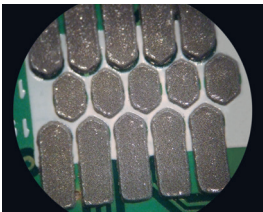


Supplemented with Kester Chip Preforms

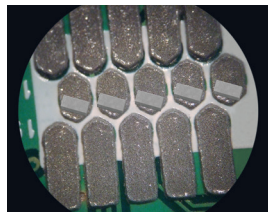


A preform added to solder paste yields 100% hole fill plus fillet.

Restricted Printing Area



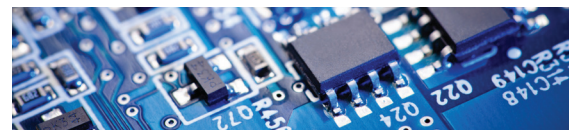
Solder paste as printed



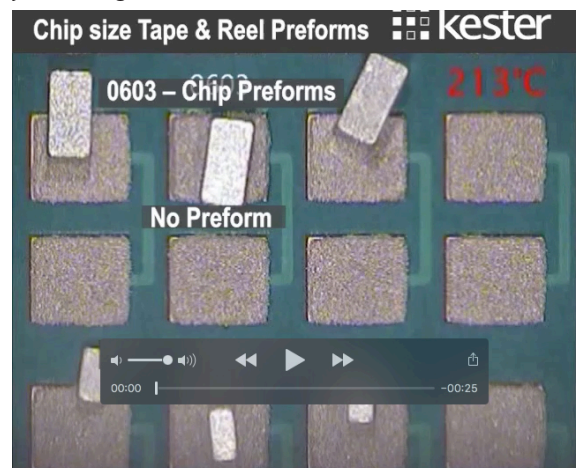
Preforms placed in paste



Solder paste and preforms reflowed



Add a preform to an SMT component lead to increase joint strength.



Visit MacDermid Alpha's YouTube channel for preform technology videos.



Kester Chip Preforms enable the use of standard pick and place equipment.



Preforms provide additional solder for tight pitch components and thick PCBs ensuring 100% hole fill and fillet formation.

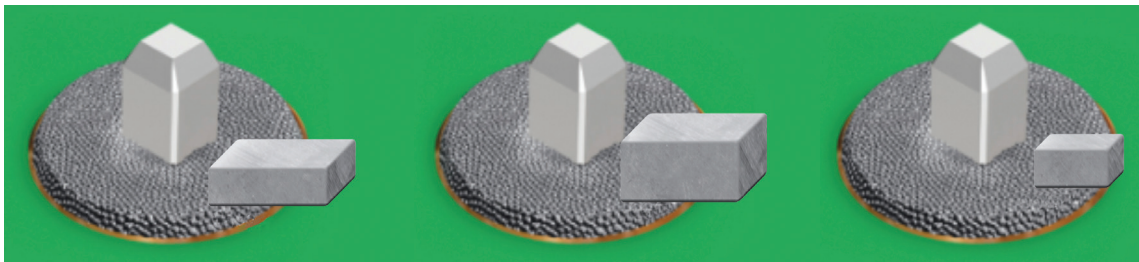
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Kester Chip Preforms provide customers with:

- Increased solder joint reliability
- Improved first pass yields
- Increased solder volume without the need for PCB layout changes or use of step stencils
- A significant time-to-market advantage with the use of tape and reel packaging

Kester Chip Preforms are available in a wide variety of solder alloys, including low temperature, RoHS compliant alloys, such as SnBiAg and the Innolot for extra joint strength.

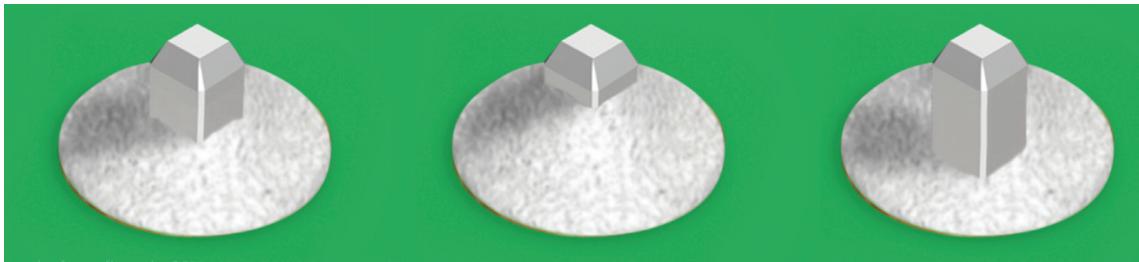


0603H

0603

0402

Different chip cap. size solder preforms applied before reflow



Desired result after reflow, the 0603 chip cap. size creating the largest fillet

Kester Chip Preforms	Dimensions (in)			Solder Volume (in ³)	Dimensions (mm)			Solder Volume (mm ³)
	L	W	H		L	W	H	
0402H	0.039	0.024	0.010	9.154E-06	1.00	0.60	0.25	0.150
0402	0.039	0.020	0.020	1.526E-05	1.00	0.50	0.50	0.250
0603H	0.063	0.031	0.020	3.906E-05	1.60	0.80	0.50	0.640
0603	0.063	0.031	0.031	6.249E-05	1.60	0.80	0.80	1.024
0805	0.079	0.051	0.030	1.212E-04	2.01	1.30	0.76	1.986
1406	0.140	0.060	0.030	2.543E-04	3.56	1.52	0.77	4.167



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