

Kester Chip Preforms

Chip Capacitor Sized Tape and Reel Preforms for Selectively Adding Solder Volume on PCB Assemblies



Product Description

Kester Chip Preforms are a precision technology product used for selectively increasing solder volume on printed circuit board assemblies. The Kester Chip Preforms are rectangular shape and available in a variety of sizes, based on industry standard chip capacitor dimensions. They are used in combination with solder paste. The Kester Chip Preforms are placed with industry standard pick and place equipment into a printed solder paste deposit, which adds a precise amount of solder to the pad. The solder paste acts as an adhesive for the preforms and contains sufficient flux to ensure reflow. The wide selection of standard available sizes will enable a quick and cost effective means to add exactly the amount of solder where needed.

Features:

- Available in numerous standard sizes
- Flux-free preform that relies on solder paste for reflow
- RoHS compliant alloys available
- Low temperature alloys available
- Easy automation using industry standard pick and place equipment
- IEC Tape and Reel Packaging



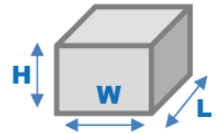
RoHS Compliance

Kester does not determine any applicable Restriction of Hazardous Substances (RoHS) exemptions for our lead containing products at the user level.

Application Notes

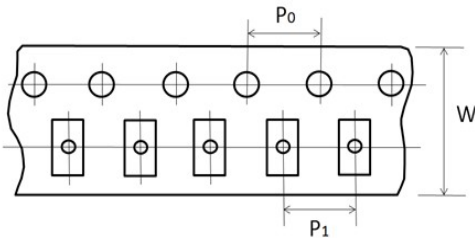
Availability

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



Tolerance Specification
 L/W: ±0.002 in [0.05 mm]
 H: +/-10%

Standard Alloy	Melting Temperature (° C)	Melting Temperature (° F)	Alloy Designation
SAC305	217 to 221	422 to 430	RoHS compliant
Sn63Pb37	183	361	Lead bearing
Sn42Bi57.6Ag0.4	138 to 139	280 to 282	RoHS compliant, low temperature
Innolot	206 to 218	403 to 424	Proprietary - RoHS compliant



P0 and P1: 4 mm and 8 mm
 W: 4 mm and 8 mm
 Tape and Reel Packaging to IEC 20686-x

Process Considerations / Recommendations

Kester Chip Preforms are used with solder paste or paste flux to precisely control solder volume. Electronic assembly applications include:

- Increase solder volume on surface mount pads to increase solder joint strength
- Increase solder volume to plated through holes by aiding in intrusive reflow
- Flux residue reduction - the preforms are 100% alloy and rely on a very small amount of solder paste for fluxing
- Solder pad bumping - provides a large amount of solder on an SMT pad for secondary operations (e.g. cable attach to PCBs)

Only 20% of the preform surface needs to be in contact with the solder paste to ensure good reflow results. The amount of solder paste to be printed can be up to 4 times smaller than the volume of the preforms and up to 10 times smaller in a nitrogen reflow environment. This small amount of paste still provides enough flux activity for perfect wetting results.

Application Notes

Storage, Handling and Shelf Life

Kester Chip Preforms are packaged on ESD proof tape and reels. When stored below 86 °F and 55% humidity, Kester guarantees a warranty period of 2 years.

Health and Safety

This product, during handling or use, may be hazardous to your health or the environment. Read the Safety Data Sheet and warning label before using this product. Safety Data Sheets are available at <https://www.kester.com/downloads/sds>.

Contact Information

To confirm this document is the most recent version, please contact Assembly@MacDermidAlpha.com

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Also read carefully warning and safety information on the Safety Data Sheet. This data sheet contains technical information required for safe and economical operation of this product. READ IT THOROUGHLY PRIOR TO PRODUCT USE. Emergency safety directory assistance: US 1 202 464 2554, Europe + 44 1235 239 670, Asia + 65 3158 1074, Brazil 0800 707 7022 and 0800 172 020, Mexico 01800 002 1400 and (55) 5559 1588

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