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MacDermid Alpha ELECTRONICS SOLUTIONS

TECHNICAL DATA SHEET

ALPHA® TRUEHEIGHT® SPACER

Tape & Reel Packaging / Spacer with Solderable Surface

DESCRIPTION

ALPHA TrueHeight Spacers are non-collapse copper discs coated with a barrier layer of nickel and finish coated with gold for optimal solderability. **ALPHA TrueHeight Spacers** are designed to be automatically pick-and-placed and reflowed onto a printed circuit board pad printed with a precise amount of solder paste. Since all sides of the spacer are coated, reflow does not result in exposed copper.

After reflow, the **ALPHA TrueHeight Spacer** provides a precise and repeatable standoff height. Electronic components that are reflow soldered can benefit from the use of **ALPHA TrueHeight Spacers** to improve soldering results, such as to prevent corner signal shorting on large BGA devices with non-characteristic warping. They are also effective at preventing component tilt and providing a fixed solder bond line under components such as large-area LGAs and power packs.

READ ENTIRE TECHNICAL DATA SHEET BEFORE USING THIS PRODUCT

FEATURES & BENEFITS

Features

- Excellent height dimensional tolerance – as low as ± 0.010mm
- Non-collapse spacer function
- Nickel/Gold coated copper disc
- Fast placement utilizing standard pick and place equipment
- 7-inch standard IEC reels available

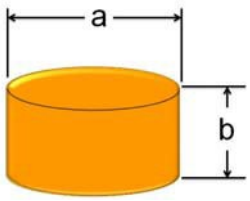
Benefits

- Advanced Spacer thickness tolerance controls provide repeatable results.
- Nickel/Gold plating ensures no exposed copper after reflow.
- Tape and reel packaging for easy integration into standard assembly processes.
- Excellent pick and place performance.

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PRODUCT INFORMATION

Part Dimensions



Size	a		b	
	mm	inch	mm	inch
DS-D076H010	0.76	0.030	0.10	0.004
DS-D076H025	0.76	0.030	0.25	0.010
DS-D076H030	0.76	0.030	0.30	0.012
DS-D076H034	0.76	0.030	0.34	0.013
DS-D076H038	0.76	0.030	0.38	0.015
DS-D050H025	0.50	0.020	0.25	0.010
DS-D050H030	0.50	0.020	0.30	0.012

Tolerance on the part dimension 'a': ±0.05mm

Tolerances on the part dimensions 'b': 0.10 ±0.010mm ; 0.25 ±0.013mm ; 0.30 ±0.015mm ; 0.34 ±0.017mm ; 0.38 ±0.020mm

Contact your local sales representative for the orderable item number for this part type.

New standard sizes are released periodically as they move into production. Your sales representative can provide the most up-to-date list of available sizes.

APPLICATION GUIDELINES

ALPHA TrueHeight Spacers are used to maintain a fixed height off the printed circuit board for electronic components. For components such as Ball Grid Array packages, excessive warping during reflow soldering can result in the corner spheres shorting with each other as the "frowning" component corners come in near direct contact with the PCB. By adding spacers on the corners of the device, a minimum height is maintained, preventing signal shorting.

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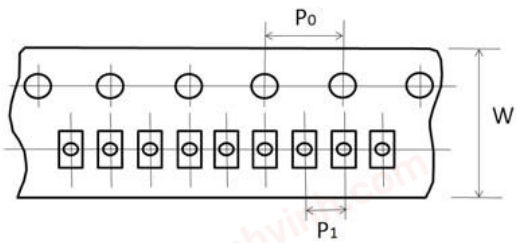
In applications such as reflow soldering of through-hole components, adequate clearance between component body and PCB must be maintained to ensure clearance for solder paste print or preforms placed into the paste to add solder volume. If a though hole component does not have adequate clearance off the PCB, **ALPHA TrueHeight Spacers** can be added to the PCB to enable reflow soldering. This will reduce processing costs (eliminate wave soldering) and improve performance (increase hole fill).

TECHNICAL DATA

Alloy Information

All ALPHA TrueHeight Spacers are constructed of copper with nickel/gold finish.

Tape and Reel Packaging Information



Part Type mm	Tape Dimensions		
	W	P0	P1
	mm	mm	mm
All sizes	8	4	2

RECYCLING SERVICES

We provide safe and efficient recycling services to help companies meet their environmental and legislative requirements and at the same time, maximize the value of their waste streams.

Our service collects solder dross, solder scrap, and various forms of solder paste waste. Please contact your local sales representative for recycling capabilities in your area.



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TECHNICAL DATA SHEET

SAFETY & WARNING

It is recommended that the company/operator read and review the Safety Data Sheets for the appropriate health and safety warnings before use. **Safety Data Sheets are available.**

STORAGE

The ALPHA TrueHeight Spacers are packaged in ESD safe reels.

These preforms are recommended to be stored in normal controlled conditions (typically 55% RH or less and at temperatures less than 30 °C (86 °F). Allow all shipping cartons to reach ambient temperature before opening to avoid condensation of humid air from the environment. A FIFO, first in first out, policy is always desirable.

To promote maximum shelf-life soldering performance, it is critical to store all preforms in a nitrogen cabinet. When properly stored in a nitrogen cabinet, a shelf life of 24 months from date of manufacture can be assured.

Be sure to contact MacDermid Alpha for the most up-to-date information and version of this Technical Data Sheet.

CONTACT INFORMATION

www.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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