

 **ELECTRONICS**
BERGSTIK™

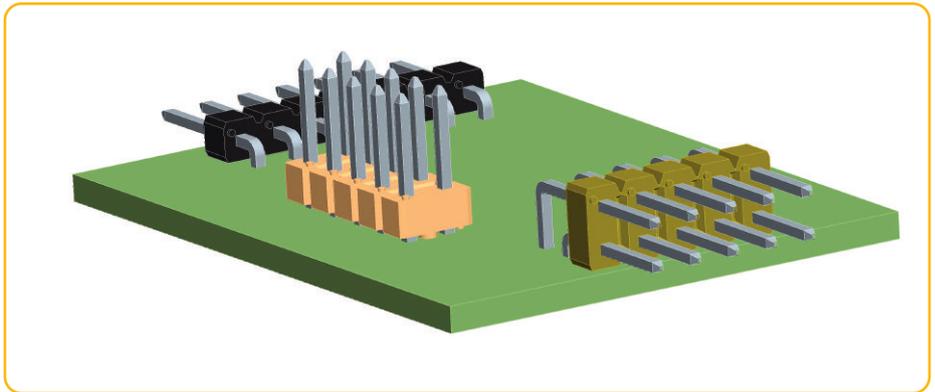
Unshrouded Headers for Pin-in-Paste Processes

BERGSTIK™ UNSHROUDED HEADERS FOR PIN-IN-PASTE PROCESSES

DESCRIPTION

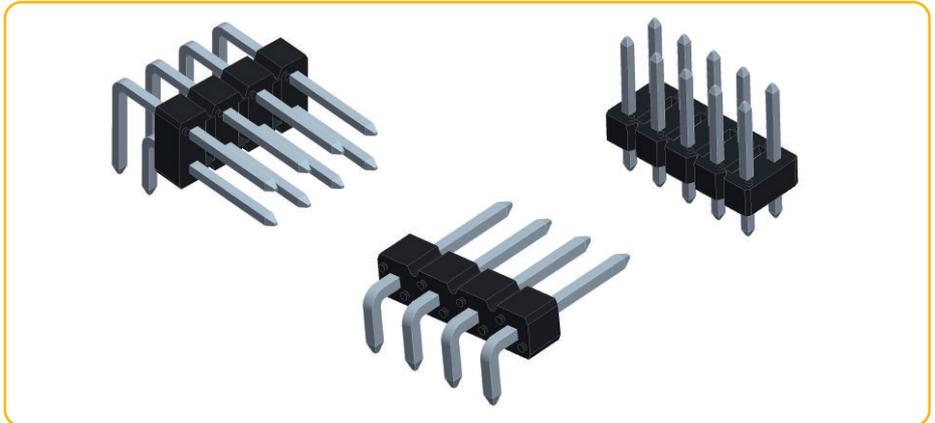
BergStik™ is FCI's brand for pin headers in 2.54 mm (0.100") pitch. The BergStik product range includes straight, right angle, surface mount and stacking headers. Three new series are now being added, dedicated to Pin-in-Paste soldering processes.

This brochure gives additional information for the correct use of BergStik PIP connectors in the application process.



PIN-IN-PASTE

Pin-in-Paste (PIP) technology allows the use of TMT products in SMT manufacturing processes. The connectors are automatically or manually placed on the board, then soldered in the same operation as the SMT components. Despite this, the mechanical strength of the TMT soldering is maintained – still an important requirement for connectors nowadays in many industrial or automotive applications.



CONNECTOR DESIGN

These connectors meet the requirements of Pin-in-Paste processing in all aspects, including plastic material, housing design and pin length.

- ▶ **PLASTIC MATERIAL:** BergStik PIP headers are moulded in high temperature thermoplastic and are able to withstand exposure to 260°C peak temperature for 30 seconds maximum in a convection, infra-red or vapour phase reflow oven.
- ▶ **HOUSING DESIGN:** a special housing has been developed for the double row straight product. A row of higher standoffs has been placed in the longitudinal center axis, between both rows of pins for a good solder paste deposit around the pin. Please follow the stencil design guidelines TA-894 and TA-897 below in order to avoid paste deposit under the standoffs.

APPLICATION DESIGN GUIDELINES

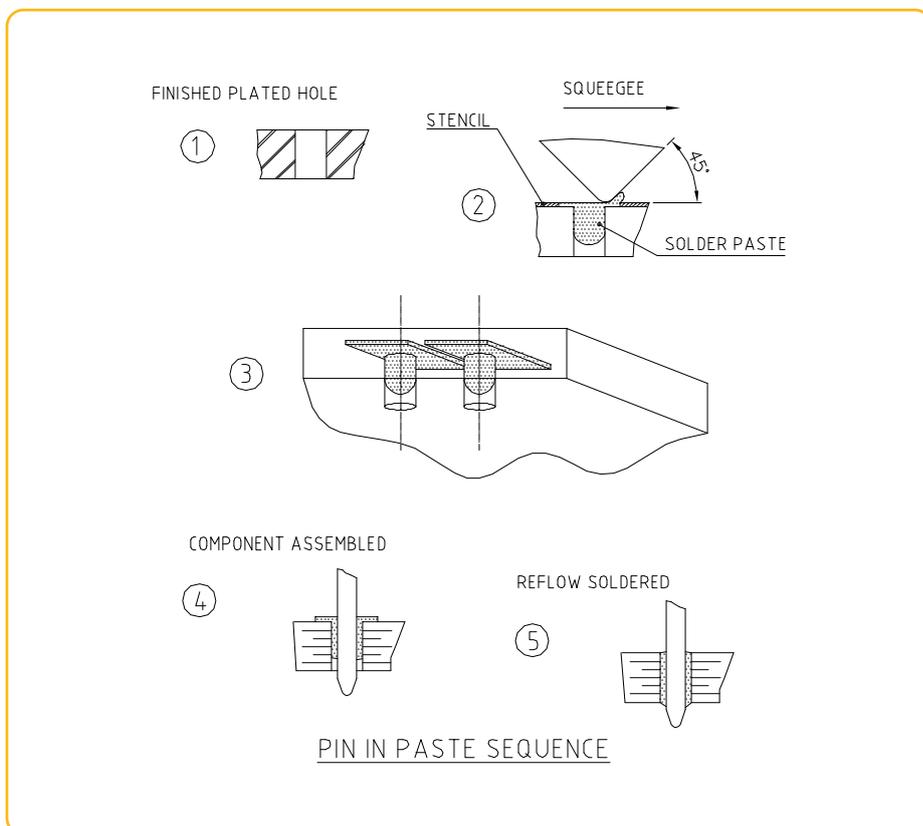
The following application guidelines will help you to achieve optimum results when using Bergstik PIP in your process.

STENCIL DESIGN: the stencil design is crucial for a good solder joint. It determines the quantity of paste and the position of the paste print on the board. Each PCB hole has its own stencil aperture with enough spacing in between to allow separate solder deposits. This prevents solder robbing from one hole to another and guarantees the correct quantity of solder paste for each hole. The print position is slightly asymmetrical so as to optimise the flow of molten solder paste.

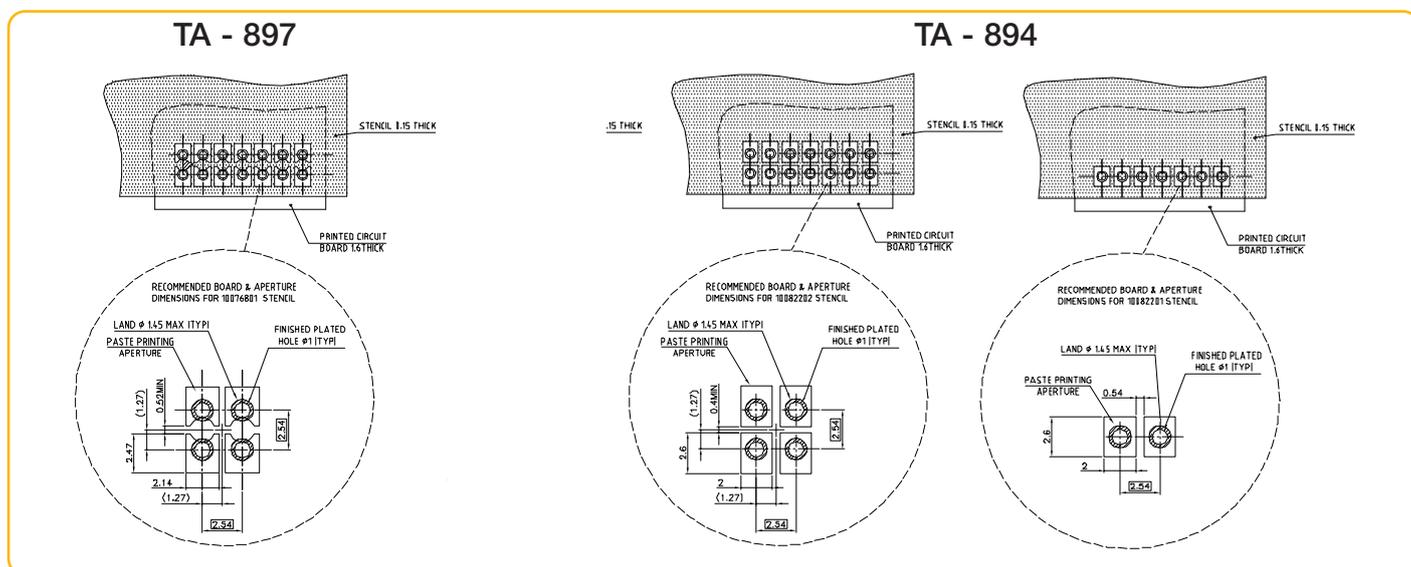
PASTE APPLICATION: the quantity of paste for each hole depends on the soldering process parameters and the degree of hole filling.

For the squeegee, FCI recommends a 45° angle. You can use a smaller angle for an even greater degree of hole filling. The squeegee moves in parallel with the shorter sides of the stencil apertures.

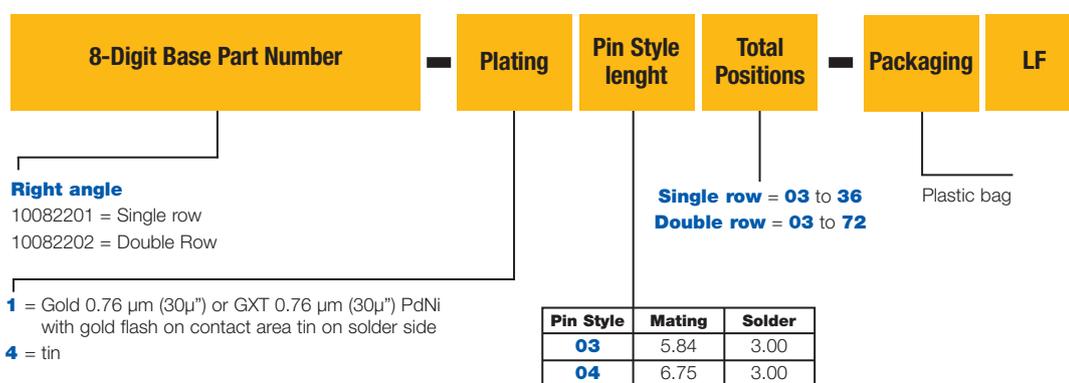
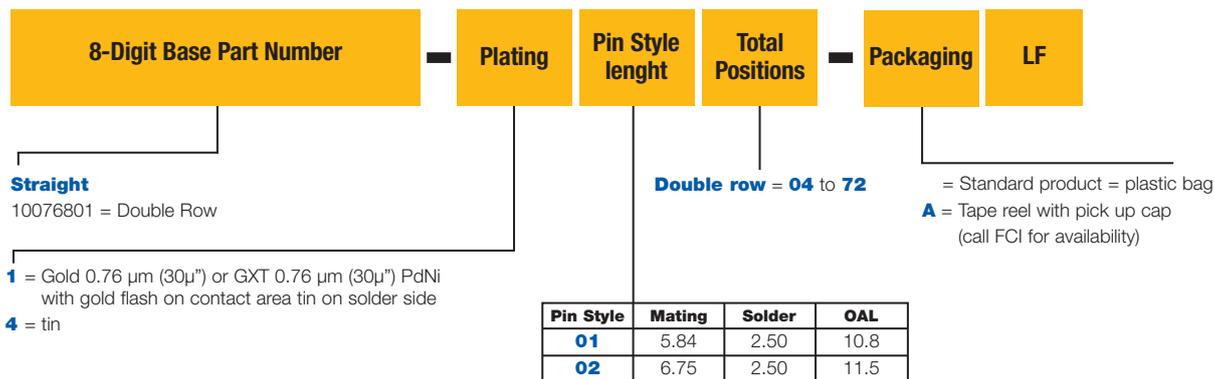
BOARD LAYOUT: Please use a hole of 1.00 +/- 0.05 mm for an optimum paste deposit. For automatic pick-and-place, lean towards the upper end of the tolerance.



Refer also to TA-894 for further information.



PART NUMBER



TECHNICAL DATA

MATERIALS	Housing: PCT Colour: Black Flammability rating: UL 94 V-O Pins: Copper Alloy Plating: Selective Gold or GXT or full tin over 1.27µm nickel
ELECTRICAL PERFORMANCE	Insulation resistance: 5000 MΩ min Dielectric withstanding voltage: 1500 V
MECHANICAL PERFORMANCE	Pin retention to housing: 8.8 N min.
OPERATING TEMPERATURE RANGE	-65°C to +130°C
ROHS INFORMATION	This product is RoHS compliant according to the European Union Directive 2002/95/IEC
REFERENCE INFORMATION	File no. E66906 File no. LR46923 Product drawing: by 8-digit base part number Product specification: BUS-12-019



BASICS+ SERVICE PROGRAM

BergStik is a part of the *Basics+* product range. The *Basics+* Program is built around 2.54 mm and 2 mm pitch connectors for board-to-board, wire-to-board and cable-to-board applications.

Basics+ makes the entire product design-in-process very simple, with easy-to-use product selection, technical hot-line, fast sample service, and core range products. Included are established, proven brands such as BergStik, Dubox, Quickie, Minitek and BergCon PV.