



CONTENT PAGE

BERGSTIK® 2.54MM UNSHROUDED HEADERS

Dverview————————————————————————————————————	
For Pin-in-Paste Processes —	4-7
Vertical Headers Standard sizes ————————————————————————————————————	8-9
Vertical Headers Special sizes	10-11
Continuous Headers	12-13
Right Angle Headers Standard sizes	14-15
Right Angle Headers Special sizes	16-17
Stacking Headers —	18-19



BERGSTIK® 2.54MM UNSHROUDED HEADERS

OVERVIEW

BergStik® 2.54mm unshrouded headers are available in surface-mount (SMT), through-hole (THT), press-fit, stacking and pin-in-paste (PIP) versions. Designed in single and double row, they are available in straight or right angle options, from 2 to 72 positions.

Featuring a "breakaway" design, each connector can be cut or broken to length to suit the application profile. The maximum current rating is 3A per contact.

This product range is extended with BergStik® 2.54mm unshrouded vertical headers in 0.25µm plating, available in standard sizes. It offers an economical solution for various applications. It is also specified up to 100 mating cycles.

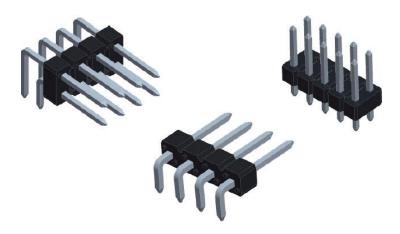
BergStik® product range provides Board-to-Board, Wire-to-Board and Cable-to-Board interconnect solutions for all electronic equipment and devices.



FEATURES	BENEFITS
High temperature thermoplastic material	Reflow compatible
 Variable spacing height for stacking headers 	Cater to a wide range of applications
Allow dual entry; mating from top or bottom	 Suitable for mezzanine application and gives more flexibility in meeting different stack height requirements
 Blank 0.64mm square contacts presents 4 surfaces of equal quality 	Can be used for wire wrapping
Standoff design	Allows cleaning to remove soldering contamination
Duplex plating	Cost-efficient
Tin-lead plating in press-fit area	Easy pin insertion onto PCB
Retention legs option	High retention force onto PCB
 Press-fit designed to fit 1.02mm diameter hole, solder-to- board product 	Same layout on THT and press-fit
Meets DIN 41651 specification, HE13 and BT D2632	Qualified product

▶ BOARD/WIRE-TO-BOARD CONNECTORS

BERGSTIK® UNSHROUDED HEADERS FOR PIN-IN-PASTE PROCESSES



Pin-in-Paste (PIP) technology allows the use of THT products in SMT manufacturing processes. THT connectors are automatically or manually soldered to PCB, and soldered in the same operation as the SMT connectors. Mechanical strength is retained through THT leads. This process is critical for applications in industrial and automotive markets.

PRODUCT

PLASTIC MATERIAL

BergStik® PIP headers are moulded in high temperature thermoplastic. The headers are able to withstand exposure to 260°C peak temperature for 30 seconds maximum in a convection, infrared or vapor 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 on the following page in order to avoid solder paste deposit under the standoffs.

▶ BERGSTIK® UNSHROUDED HEADERS FOR PIN-IN-PASTE PROCESSES



APPLICATION

FCI's application guideline helps to achieve optimum performance for BergStik® PIP process.

STENCIL DESIGN

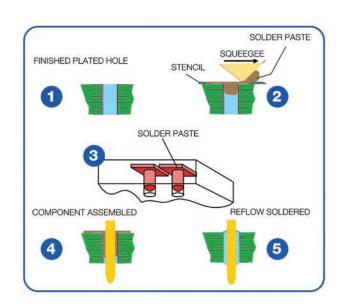
The stencil design is crucial for a good solder joint. It determines the amount of paste and the position of the paste print on the board. Each PCB hole has its own stencil aperture with enough spacing in between to allow separate solder deposits. This prevents solder robbing from one hole to another and ensures the correct amount of solder paste for each hole. The print position is placed asymmetrical to optimize the flow of molten solder paste.

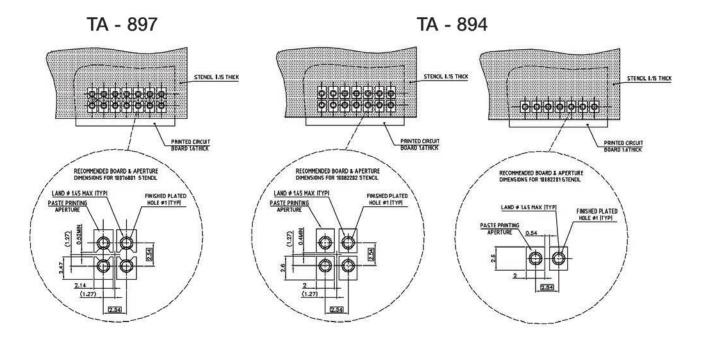
PASTE APPLICATION

The amount of paste for each hole depends on the soldering process parameters and the degree of hole filling. It is recommended to apply the squeegee at 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 to TA-894 for further information.





▶ BERGSTIK® UNSHROUDED HEADERSFOR PIN-IN-PASTE PROCESSES

TECHNICAL INFORMATION

MATERIALS

- · Housing: PCT
- · Color: Black
- Flammability Rating: UL94V-0
- Pins: Copper Alloy
- Plating: Selective Gold or GXT or full Tin over 1.2µm Nickel

ELECTRICAL PERFORMANCE

- Current Rating: 3A per contact
- Insulation Resistance: 5000M Ω min.
- Dielectric Withstanding Voltage: 1500V

ENVIRONMENTAL

• Operating Temperature: -65°C to +130°C

MECHANICAL PERFORMANCE

· Retention Force: 8.8N min

SPECIFICATIONS

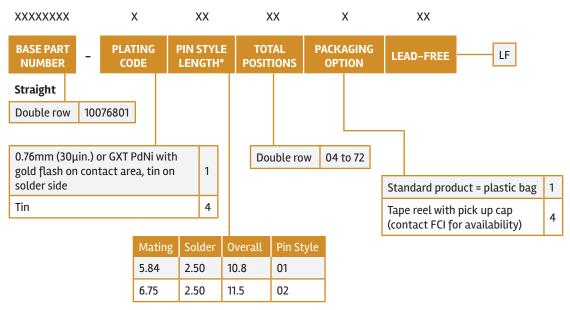
- 🔊 File no. E66906
- **G** File no. LR46923
- Product Drawing: 10076801/ 10082201/ 10082202
- Product Specification: BUS-12-019

APPROVALS AND CERTIFICATIONS

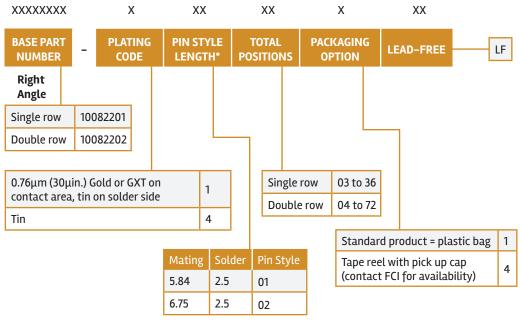
 RoHS compliant according to the European Union Directive 2002/95/IEC

▶ BERGSTIK® UNSHROUDED HEADERS FOR PIN-IN-PASTE PROCESSES





^{*}Other pin style are available upon request



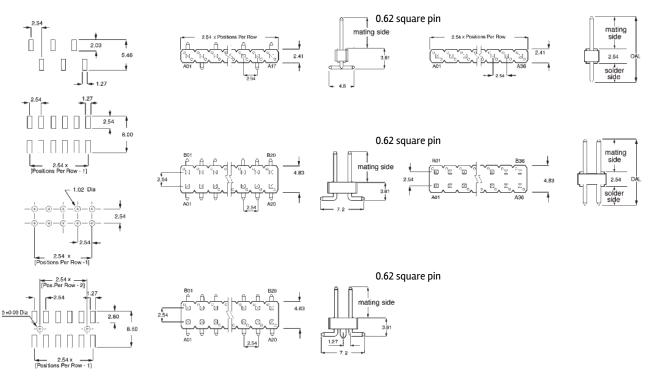
^{*}Other pin style are available upon request

BOARD/WIRE-TO-BOARD CONNECTORS

BERGSTIK® UNSHROUDED VERTICAL HEADERS STANDARD SIZES

Mating side mating side mating side 7.20mm for increased board density

PRODUCT



Recommended PCB Layouts

▶ BERGSTIK® UNSHROUDEDVERTICAL HEADERS STANDARD SIZES



TECHNICAL INFORMATION

MATERIALS

- Housing: High temperature thermoplastic, Black
- Flammability Rating: UL94V-0
- · Pin: Phosphor-bronze
- Plating: Gold or Tin over 1.27μm (50μin.) Nickel

ELECTRICAL PERFORMANCE

- Current Rating: 3A per contact
- Insulation Resistance: 5000M Ω min.
- · Dielectric Withstanding Voltage: 1500V

ENVIRONMENTAL

• Operating Temperature: -65°C to +125°C

MECHANICAL PERFORMANCE

· Retention Force: 9N min.

SPECIFICATIONS

- **51** File no. E66906
- **G** File no. LR46923
- Product Drawing: 77311/77313/98401/95278
- Product Specification: BUS-12-114
- Tape and Reel Packaging Data: TA-840

APPROVALS AND CERTIFICATIONS

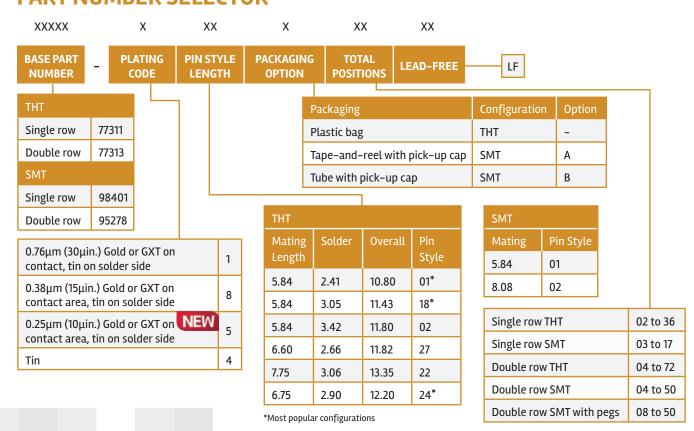
 RoHS compatible according to the European Union Directive 2002/95/IEC

PACKAGING

- Bags
- Optional: Tubes or tape-and-reel with pick-up cap (only applicable for SMT pin style 01)

PROCESSING INFORMATION

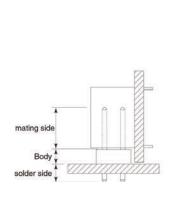
- Compatible with wave, vapor-phase, and (for SMT) IR reflow soldering processes
- · Recommended IR profile TA 842 for SMT

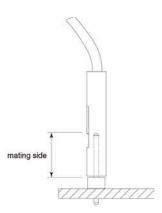


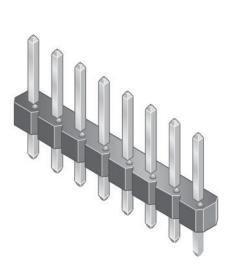
BOARD/WIRE-TO-BOARD CONNECTORS

BERGSTIK® UNSHROUDED VERTICAL HEADERS SPECIAL SIZES

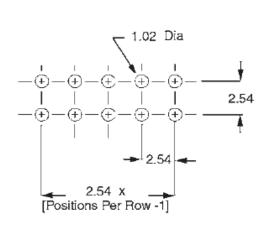
APPLICATION

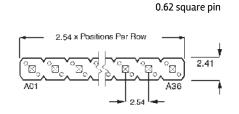


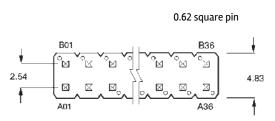


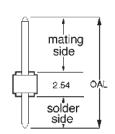


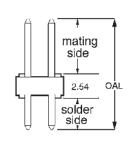
PRODUCT











Recommended PCB Layouts



TECHNICAL INFORMATION

MATERIALS

- · Housing: High temperature thermoplastic, Black
- Flammability Rating: UL94V-0
- Pin: Phosphor-bronze
- Plating: Gold or Tin over 1.27μm (50μin.) Nickel

ELECTRICAL PERFORMANCE

- · Current Rating: 3A per contact
- Insulation Resistance: 5000M Ω min
- Dielectric Withstanding Voltage: 1500V

ENVIRONMENTAL PERFORMANCE

• Operating Temperature: -65°C to +125°C

MECHANICAL PERFORMANCE

- · Retention Force: 9N min.
- Retentive Leg Insertion Force: >44.48N max.
- · Retentive Leg Board Retention: 2.22N

SPECIFICATIONS

- 5 File no. E66906
- **G** File no. LR46923
- Product Drawing: 68000/67996
- Product Specification: BUS-12-114

APPROVALS AND CERTIFICATIONS

 RoHS compatible according to the European Union Directive 2002/95/IEC

PACKAGING

- Bags
- Optional: Tubes or tape-and-reel with pick-up cap (only applicable for SMT pin style 01)

PROCESSING INFORMATION

Compatible with wave, vapor-phase, and IR reflow soldering processes

PART NUMBER SELECTOR

Customize your own part number using custom dimensions (Please allow for initial setup on our system)



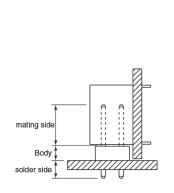
Note: 1. The total combined dimension for mating and solder side may not exceed 27mm

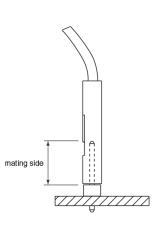
- 2. Standard packaging in bulk
- 3. Special packaging availability upon request

▶ BOARD/WIRE-TO-BOARD CONNECTORS

BERGSTIK® UNSHROUDED CONTINUOUS HEADERS

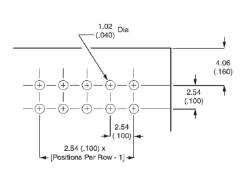
APPLICATION

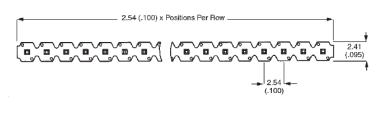


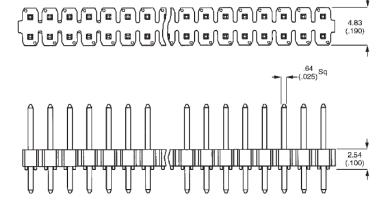




PRODUCT







Recommended PCB Layouts

BERGSTIK® UNSHROUDED CONTINUOUS HEADERS



TECHNICAL INFORMATION

MATERIALS

- · Housing: High temperature thermoplastic, Black
- Flammability Rating: UL94V-0
- Pin: Phosphor-bronze
- Plating: Gold or Tin over 1.27μm (50μin.) Nickel

ELECTRICAL PERFORMANCE

- · Current Rating: 3A per contact
- Insulation Resistance: 5000M Ω min
- Dielectric Withstanding Voltage: 1500V

ENVIRONMENTAL PERFORMANCE

• Operating Temperature: -65°C to +125°C

MECHANICAL PERFORMANCE

· Retention Force: 9N min.

SPECIFICATIONS

- 🔊 File no. E66906
- **G** File no. LR46923
- Product Drawing: 54101/54102/77311/77313
- Product Specification: BUS-12-059

APPROVALS AND CERTIFICATIONS

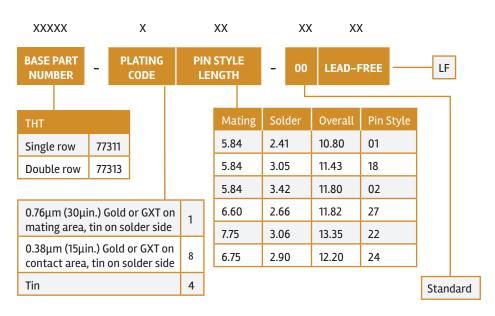
 RoHS compatible according to the European Union Directive 2002/95/IEC

PACKAGING

• Reel

PROCESSING INFORMATION

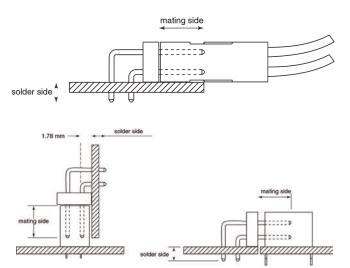
Compatible with wave, vapor-phase, and IR reflow soldering processes



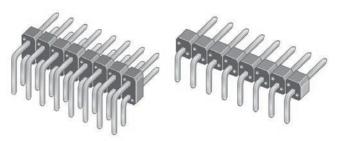
BOARD/WIRE-TO-BOARD CONNECTORS

BERGSTIK® UNSHROUDED RIGHT ANGLE HEADERS STANDARD SIZES

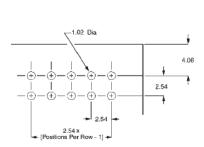
APPLICATION

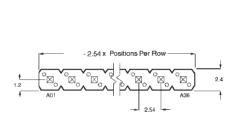


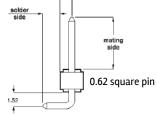


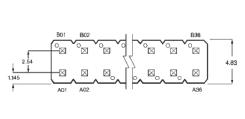


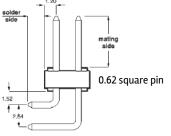
PRODUCT











Recommended PCB Layouts

▶ BERGSTIK® UNSHROUDED RIGHT ANGLE HEADERS STANDARD SIZES



TECHNICAL INFORMATION

MATERIALS

- · Housing: High temperature thermoplastic, Black
- Flammability Rating: UL94V-0
- Pin: Phosphor-bronze
- Plating: Gold or Tin over 1.27μm (50μin.) Nickel

ELECTRICAL PERFORMANCE

- Current Rating: 3A per contact
- Insulation Resistance: 5000M Ω min
- Dielectric Withstanding Voltage: 1500V

ENVIRONMENTAL PERFORMANCE

• Operating Temperature: -65°C to +125°C

MECHANICAL PERFORMANCE

• Retention Force: 9 N min.

SPECIFICATIONS

- 🔊 File no. E66906
- **G** File no. LR46923
- Product Drawing: 77315/ 77317
- Product Specification: BUS-12-114

APPROVALS AND CERTIFICATIONS

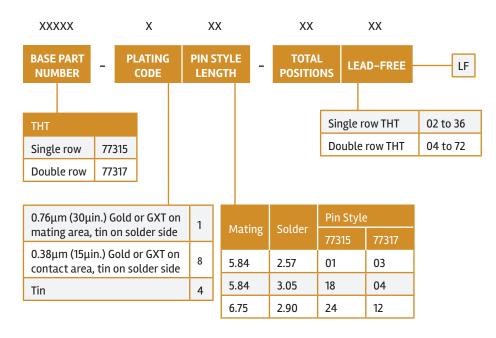
 RoHS compatible according to the European Union Directive 2002/95/IEC

PACKAGING

Bags

PROCESSING INFORMATION

Compatible with wave, vapor-phase, and IR reflow soldering processes

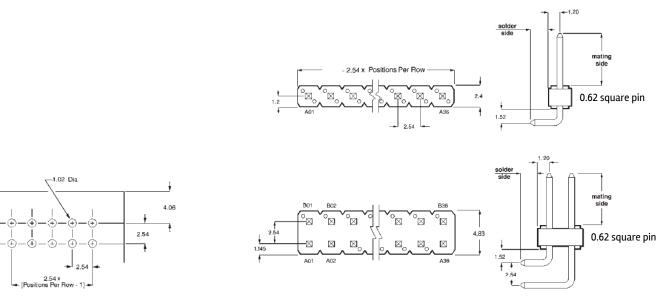


▶ BOARD/WIRE-TO-BOARD CONNECTORS

BERGSTIK® UNSHROUDED RIGHT ANGLE HEADERS SPECIAL SIZES

solder side 1.78 mm solder aide solder aide solder aide

PRODUCT



Recommended PCB Layouts



TECHNICAL INFORMATION

MATERIALS

- Housing: High temperature thermoplastic, Black
- Flammability Rating: UL94V-0
- · Pin: Phosphor-bronze
- Plating: Gold or Tin over 1.27μm (50μin.) Nickel

ELECTRICAL PERFORMANCE

- Current Rating: 3A per contact
- Insulation Resistance: 5000M Ω min
- Dielectric Withstanding Voltage: 1500V

ENVIRONMENTAL PERFORMANCE

• Operating Temperature: -65°C to +125°C

MECHANICAL PERFORMANCE

- · Retention Force: 9N min.
- Retentive Leg Insertion Force: >44.48N max.
- · Retentive Leg Board Retention: 2.22N

SPECIFICATIONS

- **51** File no. E66906
- **G** File no. LR46923
- · Product Drawing: 55101/55102/68015/68020
- Product Specification: BUS-12-114

APPROVALS AND CERTIFICATIONS

 RoHS compatible according to the European Union Directive 2002/95/IEC

PACKAGING

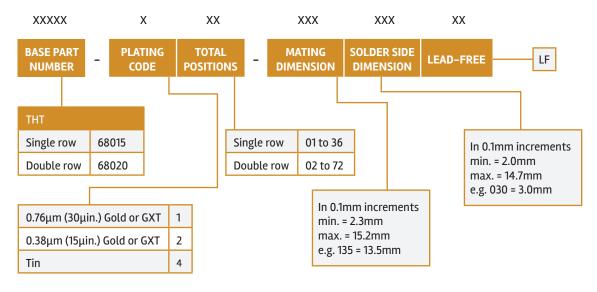
Bags

PROCESSING INFORMATION

Compatible with wave, vapor-phase, and IR reflow soldering processes

PART NUMBER SELECTOR

Customize your own part number using custom dimensions (Please allow for initial setup on our system)



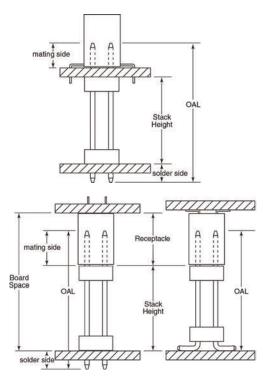
Note: 1. Bend dimension 1.52mm only

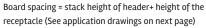
2. The total combined dimension for mating and solder side may not exceed 25.5mm

BOARD/WIRE-TO-BOARD CONNECTORS

BERGSTIK® UNSHROUDED STACKING HEADERS

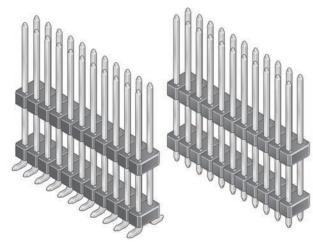
APPLICATION



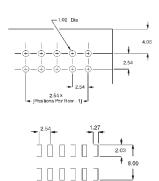




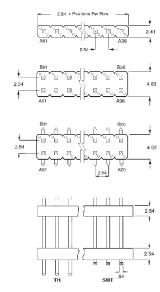




PRODUCT



2.54 x [Positions Per Row - 1]



Recommended PCB Layouts

▶ BERGSTIK® UNSHROUDED STACKING HEADERS



TECHNICAL INFORMATION

MATERIALS

- · Housing: High temperature thermoplastic, Black
- Flammability Rating: UL94V-0
- · Pin: Phosphor-bronze
- Plating: Gold or Tin over 1.27μm (50μin.) Nickel

ELECTRICAL PERFORMANCE

- · Current Rating: 3A per contact
- Insulation Resistance: $5000M\Omega$ min
- Dielectric Withstanding Voltage: 1500V

ENVIRONMENTAL PERFORMANCE

Operating Temperature: -65°C to +125°C

MECHANICAL PERFORMANCE

· Retention Force: 9N min.

SPECIFICATIONS

- 🔊 File no. E66906
- **G** File no. LR46923
- Product Drawing: By 5-digit base part number
- Product Specification: BUS-12-114

APPROVALS AND CERTIFICATIONS

 RoHS compatible according to the European Union Directive 2002/95/IEC

PACKAGING

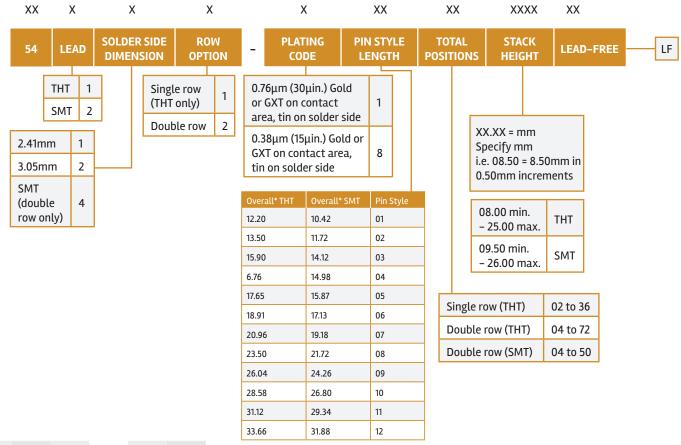
• Bags

PROCESSING INFORMATION

Compatible with wave, vapor-phase, and IR reflow soldering processes

PART NUMBER SELECTOR

Customize your own part number using custom dimensions (Please allow for initial setup on our system)



^{*}Other overall lengths available upon request (Up to 65mm)

