



 Product Catalog

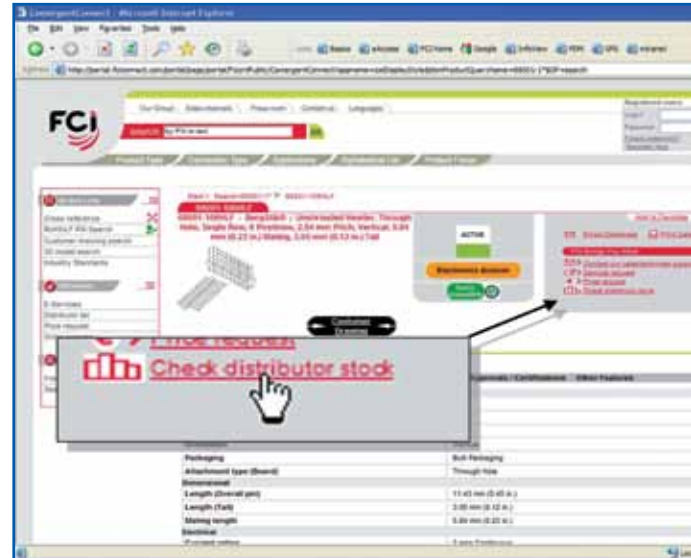
 **basics** 

FCI: SETTING THE STANDARD FOR CONNECTORS

With 13,000 employees in 30 countries and sales of 1.25 billion euros in 2008, FCI is a leading manufacturer of connectors for various markets such as automotive, telecommunication infrastructures and consumer and industrial electronics.

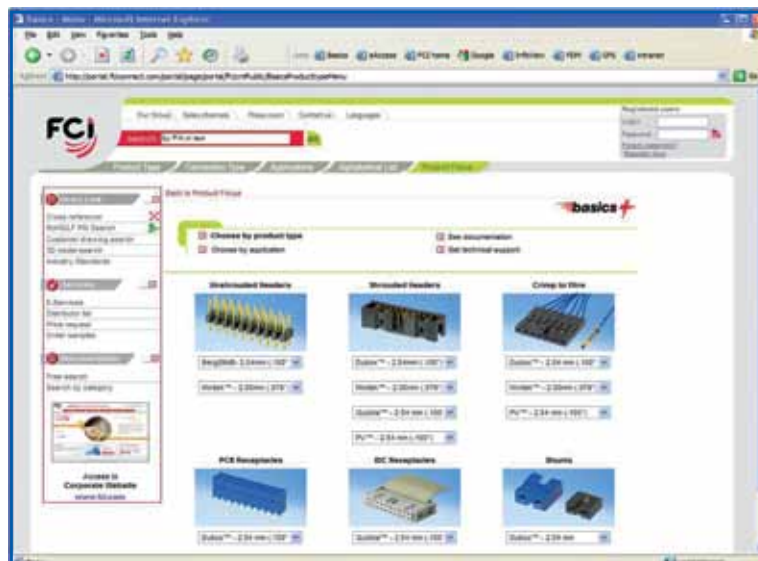


MORE SERVICE.



+ More Service

Easy product selection, samples, prototypes, documentation, drawings and more at www.fciconnect.com/basics



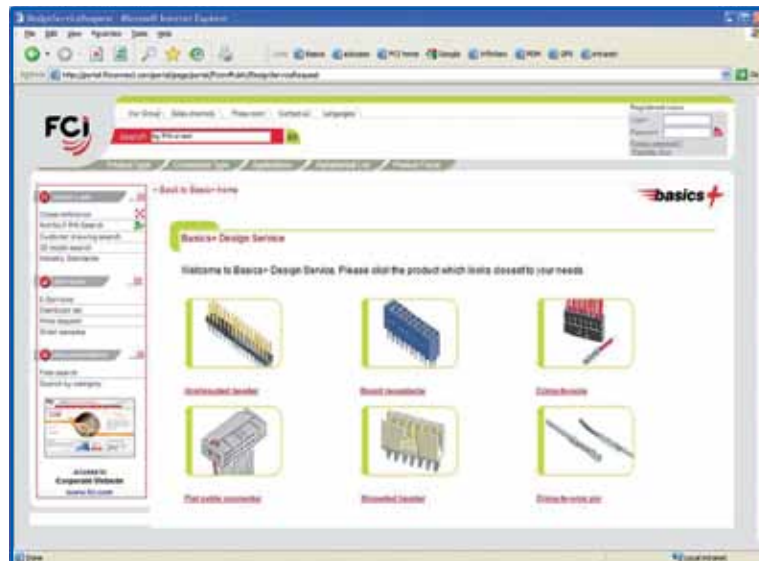
LESS WAITING.

Easy Availability

Catalog range direct from FCI's extensive local distribution network.
Global too: design here, build there.

Easy Customization

Just go here
www.fciconnect.com/basicsdesign
and tell us what you want



■ UNSHROUDED HEADERS



BergStik® Unshrouded Headers 2.54mm (.100")

Vertical - standard sizes	8
Vertical - surface mount	10
Vertical - continuous	12
Right angle - standard sizes	14
Stacking headers	16

Minitek™ Unshrouded Headers 2.00mm (.079")

Vertical	50
Right angle	52
Pin-in-Paste	54
Stacking	56

■ SHROUDED HEADERS



Dubox™ Shrouded Headers 2.54mm (.100)

28

PV™ Superior Performance Shrouded Headers 2.54mm (.100")

34

Minitek™ Shrouded Headers 2.00mm (.079")

Vertical	62
Right angle	64
Pin-in-Paste	66
Eject latch	68

Quickie® Shrouded Headers 2.54mm (.100")

Low Profile	40
Surface Mount and Pin-in-Paste	42
Eject latch	44

■ BOARD-TO-BOARD RECEPTACLES



Dubox™ Board-to-Board Receptacles 2.54mm (.100")

Vertical	20
Low profile vertical - through mount	22
Low profile vertical - surface mount	24
Horizontal	26

Minitek™ Vertical receptacles

58

■ CRIMP-TO-WIRE TERMINALS AND HOUSINGS



Dubox™ Crimp-To-Wire 2.54mm (.100")

Contacts	30
Housings	32

PV™ Superior Performance Crimp-To-Wire 2.54mm (.100")

Contacts	36
Housings	38

Minitek™ Crimp-To-Wire 2.00mm (.079")

Contacts	70
Housings	70
Active latch	72

■ IDC RECEPTACLES



Quickie® IDC Receptacles 2.54mm (.100")

46

Quickie® IDC PCB connector 2.54mm (.100")

48

Minitek™ IDC strain relief

74

■ SHUNTS



Dubox™ Shunts 2.54mm (.100")

18

Minitek™ Shunts 2.00mm (.079")

60

■ MORE OPTIONS

76

■ APPLICATION EQUIPMENT

78

■ PART NUMBER INDEX

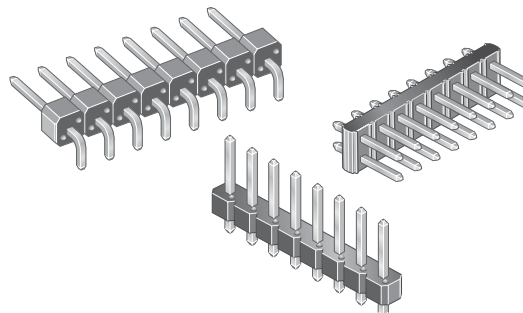
80

SHORT LEAD TIMES

Standard parts available
for immediate shipment
from participating distributors

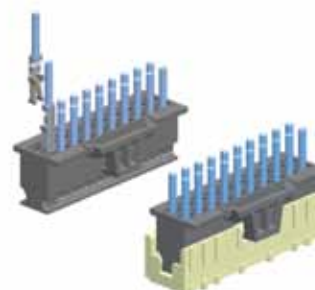
Pin-in-Paste

Our new PiP range has been specifically designed to meet the requirements of this process, complete with paste stencil design
Pages 54, 66



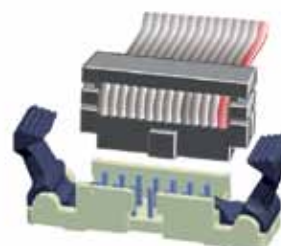
Minitek Active Latch

A latching crimp-to-wire system for demanding environments
Pages 64, 72



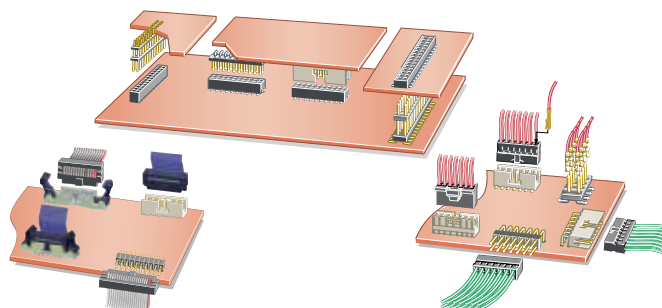
Minitek Eject Latch Header

This ribbon cable connector mates securely, but can be unmated with no difficulty.
Pages 68, 74



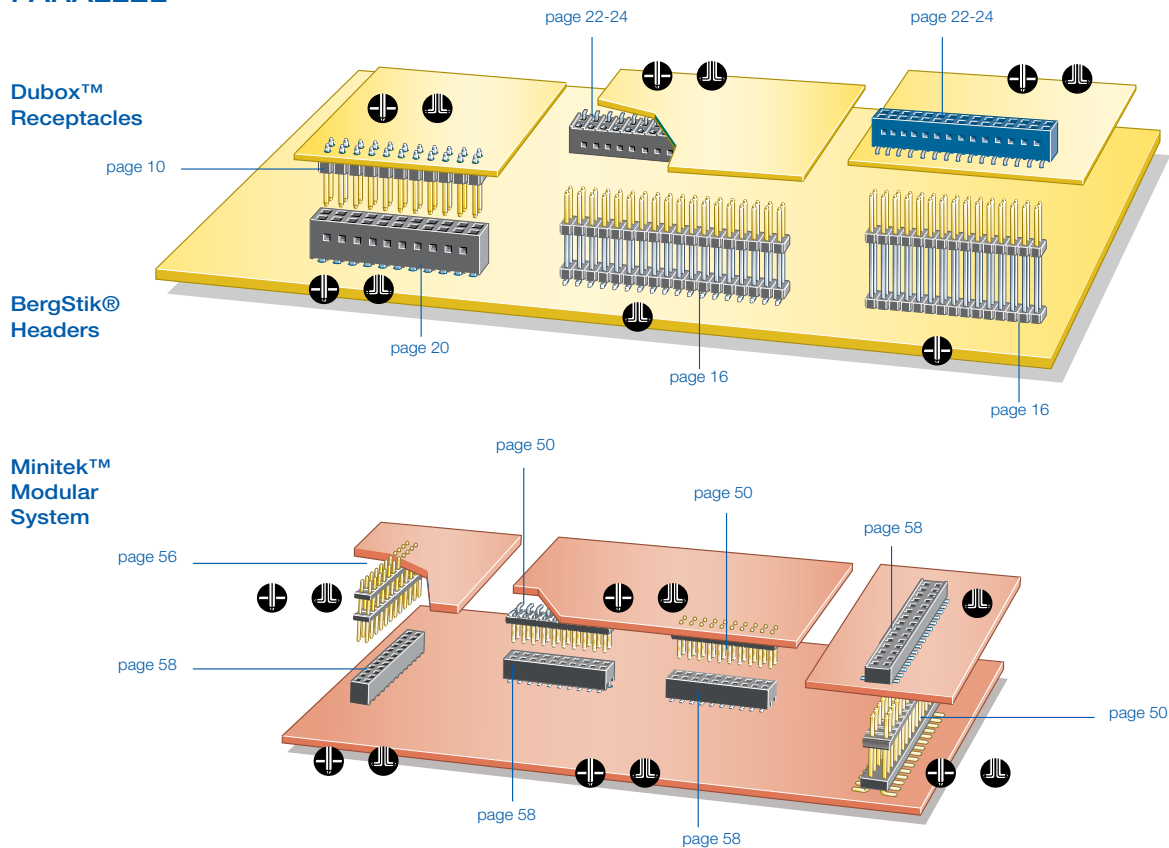
The Minitek 2mm Modular System

Now the most complete and versatile system available: intermateable, high temperature compatible, low coplanarity and space saving
Pages 50 – 74

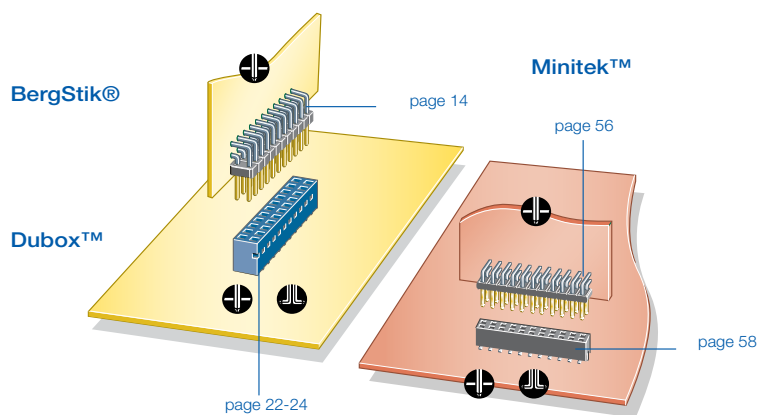


BOARD-TO-BOARD SOLUTIONS

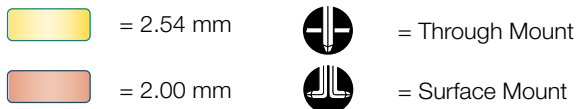
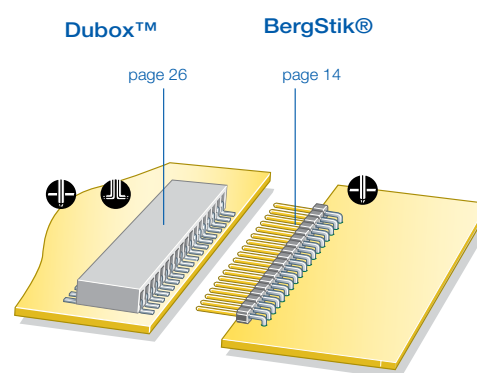
PARALLEL



PERPENDICULAR

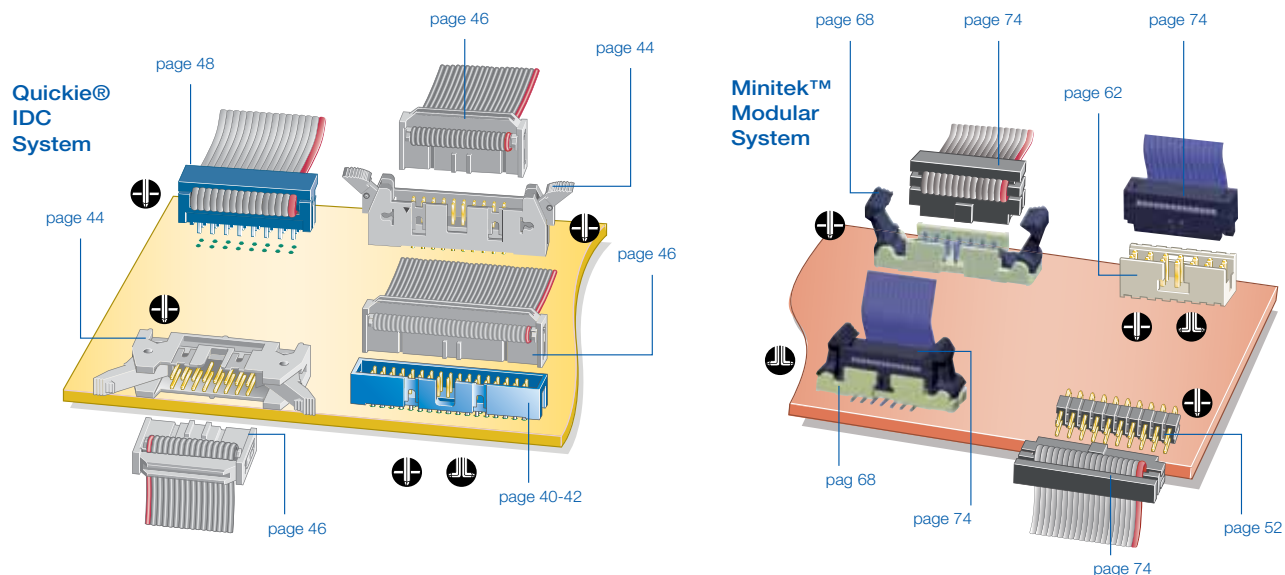


PLANAR



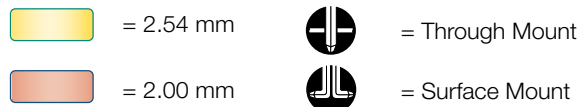
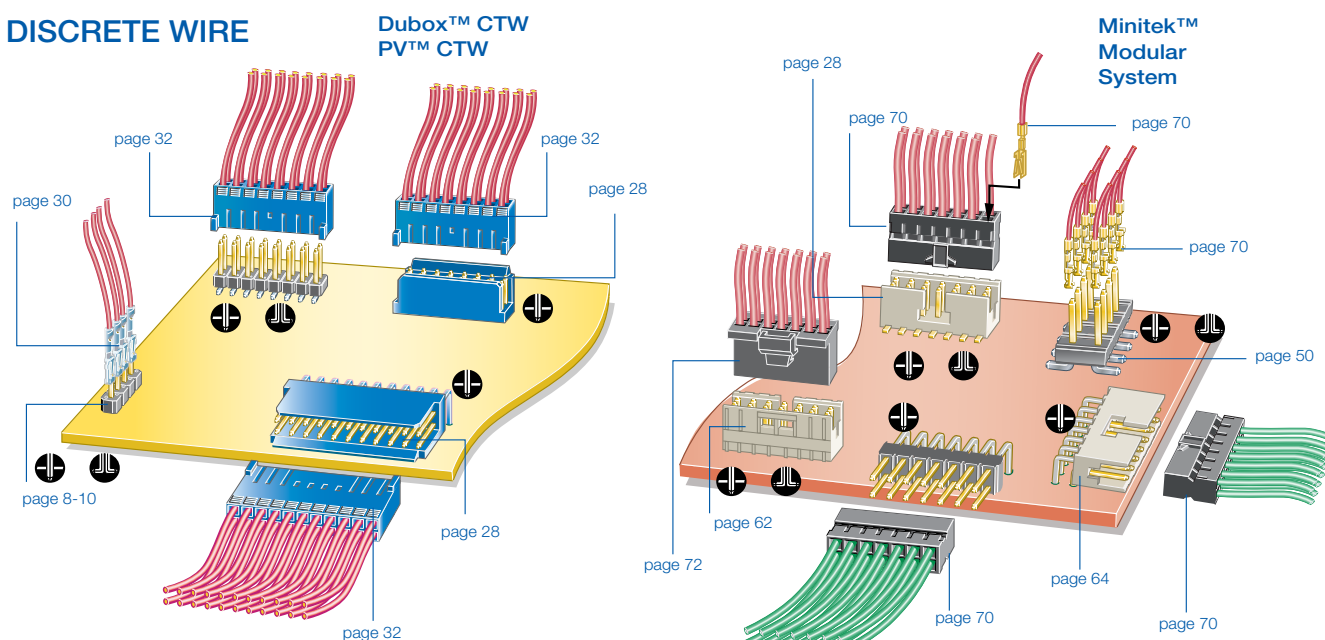
CABLE-TO-BOARD SOLUTIONS

FLAT CABLE IDC



WIRE-TO-BOARD SOLUTIONS

DISCRETE WIRE



TECHNICAL DATA

PHYSICAL

- Housing: High temperature, black thermoplastic
- Flammability rating: UL 94 V-0
- Pin: Phosphor-bronze
- Plating: Gold/GXT or tin over 1.27 µm (50 µ") nickel



ELECTRICAL PERFORMANCE

- Current rating: 3 A continuous
- Insulation resistance: 5000 MΩ min.
- Dielectric withstanding voltage: 1500 V

MECHANICAL PERFORMANCE

- Pin retention to housing: 8.8 N min.
- Retentive leg insertion force: >44.48 N max.
- Retentive leg board retention: 2.22 N

OPERATING TEMPERATURE RANGE

- -65°C to +125°C

PACKAGING

- Standard: Bags
- Optional: Tubes or
Tape-and-reel with pick-up cap

REFERENCE INFORMATION

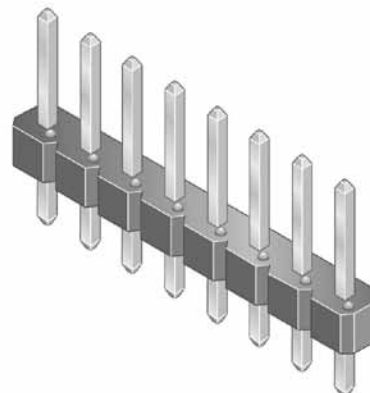
- File no. E66906
 - File no. LR46923
 - Product drawing: By 5-digit base part number
 - Product specification: BUS-12-114
- specifications subject to change without notice

PROCESSING INFORMATION

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

RoHS INFORMATION

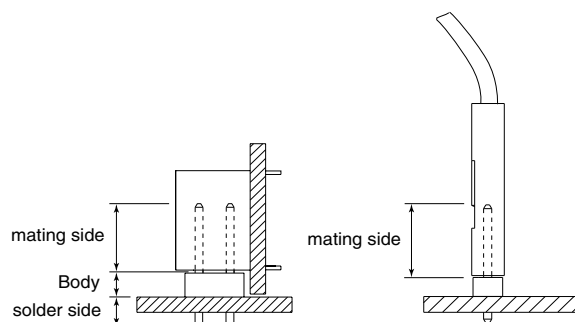
- This product is RoHS compatible according to the European Union Directive 2002/95/IEC



MATING DATA

■ Dubox™ Crimp-to-wire contacts	30
■ Dubox™ Crimp-to-wire housings	32
■ Dubox™ Vertical receptacles	20
■ Dubox™ Low profile vertical receptacles	22, 24
■ Dubox™ Horizontal receptacles	26
■ Quickie™ IDC receptacles	46
■ PV™ Crimp-to-Wire Contacts	36
■ PV™ Crimp-to-Wire Housings	38

TYPICAL APPLICATIONS



BergStik® Unshrouded Header, Vertical, Standard Sizes

PART NUMBERS



1 = 0.76 μ m (30 μ) gold / GXT
2 = 0.38 μ m (15 μ) gold / GXT
4 = tin

01 to 36 = Single row
02 to 72 = Double row

Single Row

Base PN	Post		Tail		OAL	
	mm	(inch)	mm	(inch)	mm	(inch)
68000	5.84	0.230	2.41	0.095	10.80	0.425
68001	5.84	0.230	3.05	0.120	11.43	0.450
68002	5.84	0.230	3.81	0.150	12.19	0.480
78511	8.08	0.318	3.05	0.120	13.67	0.538
68024	8.08	0.318	3.81	0.150	14.43	0.568

Double Row

Base PN	Post		Tail		OAL	
	mm	(inch)	mm	(inch)	mm	(inch)
67996	5.84	0.230	2.41	0.095	10.80	0.425
67997	5.84	0.230	3.05	0.120	11.43	0.450
68602	5.84	0.230	3.81	0.150	12.19	0.480
68691	8.08	0.318	3.05	0.120	13.67	0.538
78233	8.08	0.318	3.81	0.150	14.43	0.568

68000 - 1XXHLF
68001 - 1XXHLF
68002 - 1XXHLF

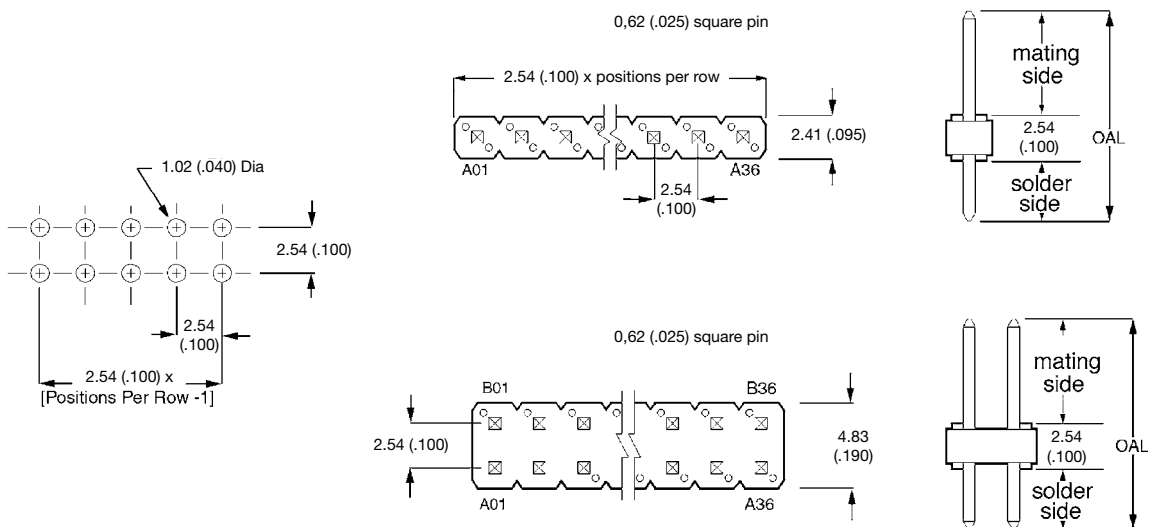
XX = 04, 06, 08, 10, 12, 16, 20

67996 - 1XXHLF
67997 - 1XXHLF
68602 - 1XXHLF

XX = 04, 06, 08, 10, 12, 16, 20

CORE RANGE

PRODUCT



Dimension : mm (inch)

TECHNICAL DATA

PHYSICAL

- Housing: High temperature, black thermoplastic
- Flammability rating: UL 94 V-0
- Pin: Phosphor-bronze
- Plating: Gold/GXT or tin over 1.27 µm (50 µ") nickel

ELECTRICAL PERFORMANCE

- Current rating: 3 A continuous
- Insulation resistance: 5000 MΩ min.
- Dielectric withstanding voltage: 1500 V

MECHANICAL PERFORMANCE

- Pin retention to housing: 9 N min.

OPERATING TEMPERATURE RANGE

- -65°C to +125°C

PACKAGING

- Standard: Bags
- Optional: Tubes or Tape-and-reel with pick-up cap (SMT pin style 01 only)

REFERENCE INFORMATION

-  File no. E66906
-  File no. LR46923
- Product drawing: By 5-digit base part number
- Product specification: BUS-12-114
- Tape and Reel packaging data: TA-840

PROCESSING INFORMATION

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

RoHS INFORMATION

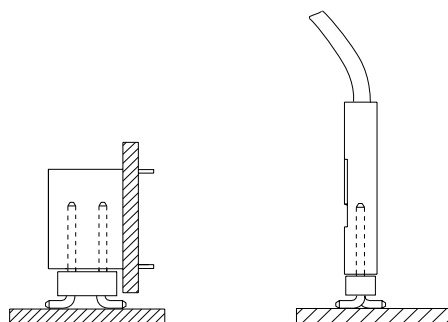
- This product is RoHS compatible according to the European Union Directive 2002/95/IEC



MATING DATA

■ Dubox™ Crimp-to-wire contacts	30
■ Dubox™ Crimp-to-wire housings	32
■ Dubox™ Vertical receptacles	20
■ Dubox™ Low profile vertical receptacles	22, 24
■ Dubox™ Horizontal receptacles	26
■ Quickie™ IDC receptacles	46
■ PV™ Crimp-to-Wire Contacts	36
■ PV™ Crimp-to-Wire Housings	38

TYPICAL APPLICATIONS



BergStik® Unshrouded Header, Vertical, Surface Mount

2.54 mm (.100")

PART NUMBERS

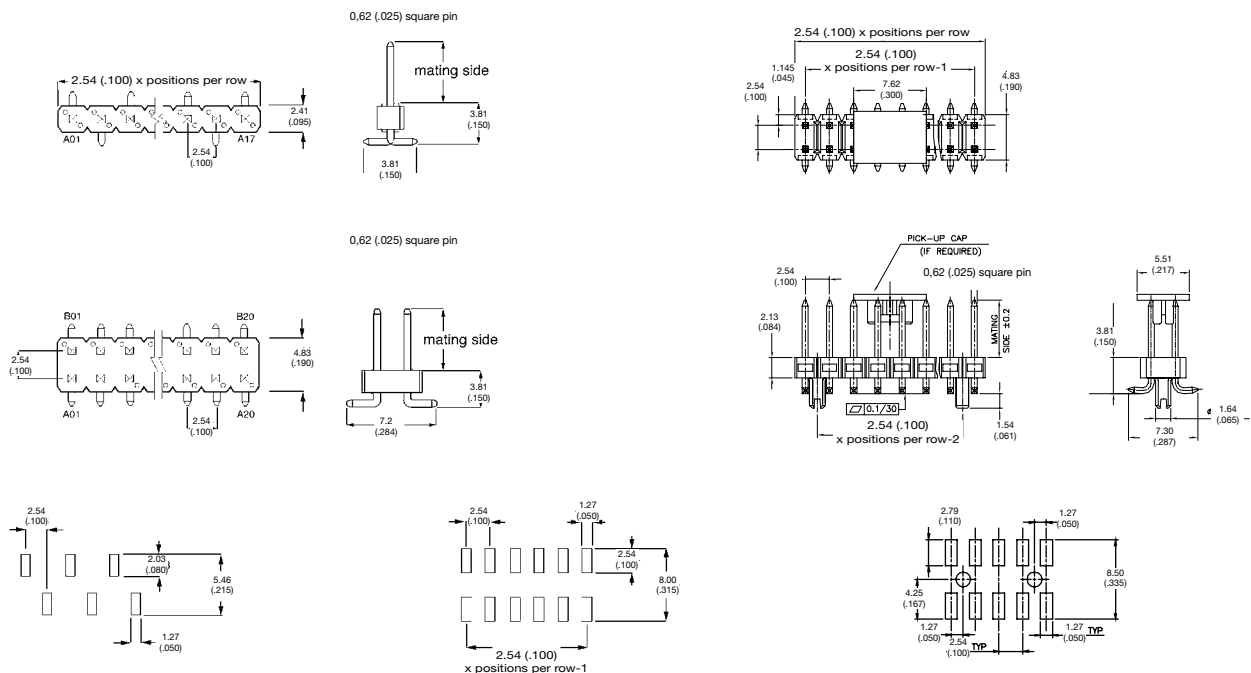
5-Digit Base Part Number	Plating	Pin Style	Option	Total Positions	LF								
Surface mount 95293 = Single Row 95278 = Double Row 98401 = Double Row SMT with pegs		<table border="1"> <thead> <tr> <th colspan="2">Surface mount</th> </tr> <tr> <th>Pin style</th> <th>Mating</th> </tr> </thead> <tbody> <tr> <td>01</td> <td>5.84</td> </tr> <tr> <td>02</td> <td>8.08</td> </tr> </tbody> </table>	Surface mount		Pin style	Mating	01	5.84	02	8.08		03 to 17 = Single Row SMT 04 to 50 = Double Row SMT 08 to 50 = Double Row SMT with pegs	
Surface mount													
Pin style	Mating												
01	5.84												
02	8.08												
1 = 0.76 µm (30µ") gold/GXT on mating area, tin on solder side 4 = tin 8 = 0.38 µm (15µ") gold/GXT on mating area, tin on solder side				<table border="1"> <thead> <tr> <th>Option</th> <th>Packaging</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>Tape-and-reel with pick-up cap*</td> </tr> <tr> <td>B</td> <td>Tube with pick-up cap</td> </tr> </tbody> </table>	Option	Packaging	A	Tape-and-reel with pick-up cap*	B	Tube with pick-up cap			
Option	Packaging												
A	Tape-and-reel with pick-up cap*												
B	Tube with pick-up cap												

95278 - 101 A XXLF
XX = 04, 06, 08, 10, 12, 16, 20

CORE RANGE

*as available

PRODUCT



Dimension : mm (inch)

Recommended PCB layouts

FEATURES

- Continuously molded and reeled
- High temperature plastic
- Various lengths cut from 1 part number
- Benchtop machine cuts, polarizes, and applies retentive leg

TECHNICAL DATA

PHYSICAL

- Housing: High temperature, black thermoplastic
- Flammability rating: UL 94 V-0
- Pin: Phosphor-bronze
- Plating: Gold/GXT or tin over 1.27 µm (50 µ") nickel



ELECTRICAL PERFORMANCE

- Current rating: 3 A continuous
- Insulation resistance: 5000 MΩ min.
- Dielectric withstanding voltage: 1500 V

MECHANICAL PERFORMANCE

- Pin retention to housing: 9 N min.

OPERATING TEMPERATURE RANGE

- 65°C to +125°C

PACKAGING

- Reel

REFERENCE INFORMATION

- File no. E66906
- File no. LR46923
- Product drawing: 54101 or 54102
- Product specification: BUS-12-059

PROCESSING INFORMATION

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

RoHS INFORMATION

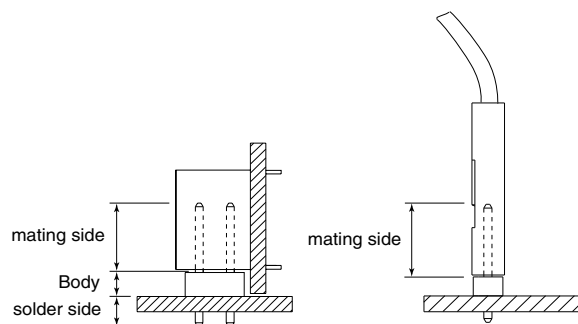
- This product is RoHS compatible according to the European Union Directive 2002/95/IEC



MATING DATA

Dubox™ Crimp-to-wire contacts	30
Dubox™ Crimp-to-wire housings	32
Dubox™ Vertical receptacles	20
Dubox™ Low profile vertical receptacles	22, 24
Dubox™ Horizontal receptacles	26
Quickie™ IDC receptacles	46
PV™ Crimp-to-Wire Contacts	36
PV™ Crimp-to-Wire Housings	38

TYPICAL APPLICATIONS



BergStrip® Unshrouded Header, Continuous

2.54 mm (.100")

PART NUMBERS



1 = 0.76µm (30µ") gold /GXT
2 = 0.38µm (15µ") gold / GXT
4 = tin

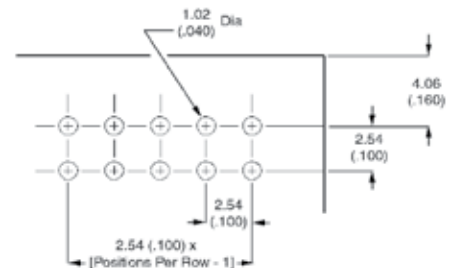
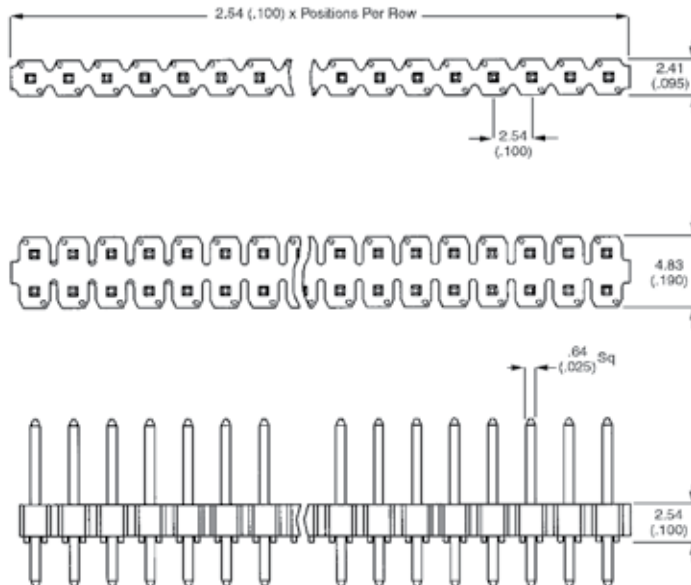
Single Row

Base PN	mating side		solder side		OAL	
	mm	(in.)	mm	(in.)	mm	(in.)
68000	5.84	0.230	2.41	0.095	10.80	0.425
68001	5.84	0.230	3.05	0.120	11.43	0.450
68002	5.84	0.230	3.81	0.150	12.19	0.480

Double Row

Base PN	mating side		solder side		OAL	
	mm	(in.)	mm	(in.)	mm	(in.)
67996	5.84	0.230	2.41	0.095	10.80	0.425
67997	5.84	0.230	3.05	0.120	11.43	0.450
68602	5.84	0.230	3.81	0.150	12.19	0.480

PRODUCT



Recommended PCB layouts

Dimension : mm (inch)

FEATURES

- High temperature plastic
- Selective plating

TECHNICAL DATA

PHYSICAL

- Housing: High temperature, black thermoplastic
- Flammability rating: UL 94 V-0
- Pin: Phosphor-bronze
- Plating: Gold/GXT or tin over 1.27 μm (50 μin) nickel



ELECTRICAL PERFORMANCE

- Current rating: 3 A continuous
- Insulation resistance: 5000 M Ω min.
- Dielectric withstanding voltage: 1500 V

MECHANICAL PERFORMANCE

- Pin retention to housing: 8.8 N min.
- Retentive leg insertion force: >44.48 N max.
- Retentive leg board retention: 2.22 N

OPERATING TEMPERATURE RANGE

- 65°C to +125°C

PACKAGING

- Bags

REFERENCE INFORMATION

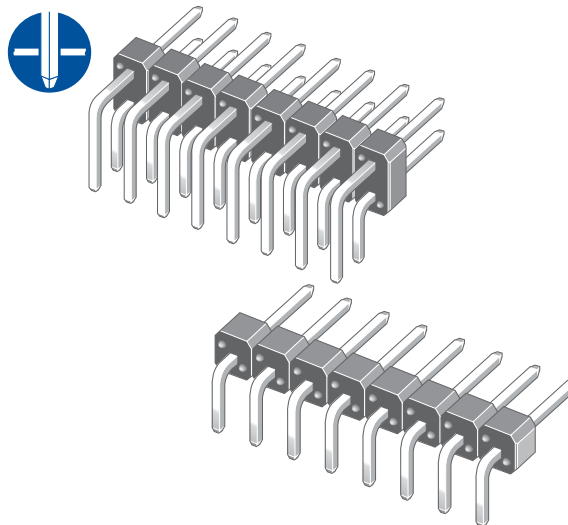
- File no. E66906
- File no. LR46923
- Product drawing: 55101 or 55102
- Product specification: BUS-12-114

PROCESSING INFORMATION

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

RoHS INFORMATION

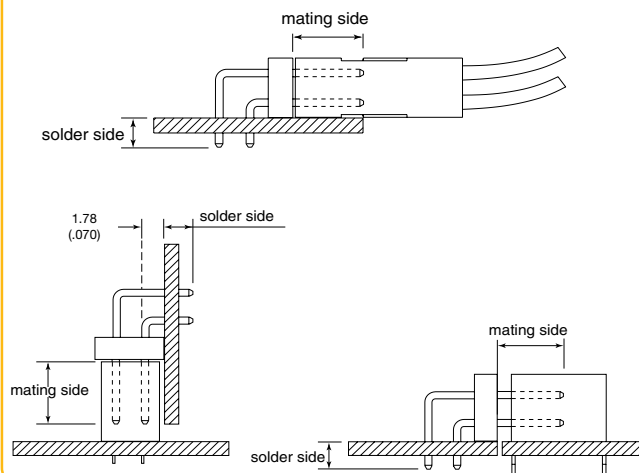
- This product is RoHS compatible according to the European Union Directive 2002/95/IEC



MATING DATA

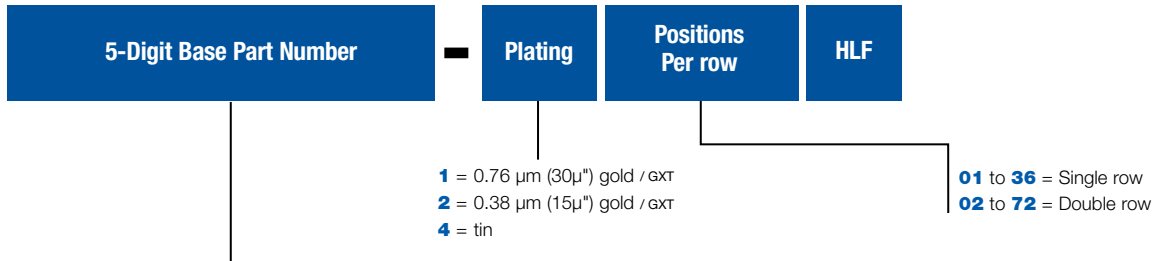
Dubox™ Crimp-to-wire contacts	30
Dubox™ Crimp-to-wire housings	32
Dubox™ Vertical receptacles	20
Dubox™ Low profile vertical receptacles	22, 24
Dubox™ Horizontal receptacles	26
Quickie™ IDC receptacles	46
PV™ Crimp-to-Wire Contacts	36
PV™ Crimp-to-Wire Housings	38

TYPICAL APPLICATIONS



BergStik® Unshrouded Header, Right Angle, Standard Sizes

PART NUMBERS



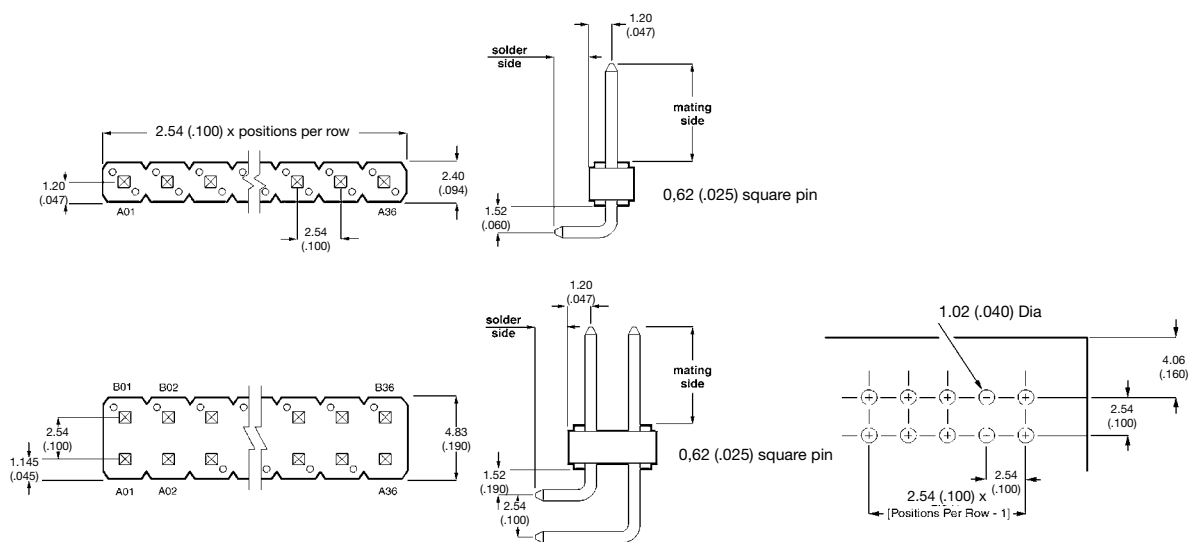
Single Row

Base PN	mating side		solder side	
	mm	(in.)	mm	(in.)
68015	5.84	0.230	2.41	0.095
68016	5.84	0.230	3.05	0.120

Double Row

Base PN	mating side		solder side	
	mm	(in.)	mm	(in.)
68020	5.84	0.230	2.41	0.095
68021	5.84	0.230	3.05	0.120

PRODUCT



Recommended PCB layouts

Dimension : mm (inch)

FEATURES

- Wide variety of stack heights in 0.5 mm increments
- High temperature plastic
- Selective plating

TECHNICAL DATA

PHYSICAL

- Housing: High temperature, black thermoplastic
- Flammability rating: UL 94 V-0
- Pin: Phosphor-bronze
- Plating: Gold/GXT or tin over 1.27 μm (50 μin) nickel



ELECTRICAL PERFORMANCE

- Current rating: 3 A continuous
- Insulation resistance: 5000 M Ω min.
- Dielectric withstanding voltage: 1500 V

MECHANICAL PERFORMANCE

- Pin retention to housing: 9 N min.

OPERATING TEMPERATURE RANGE

- 65°C to +125°C

PACKAGING

- Bags

REFERENCE INFORMATION

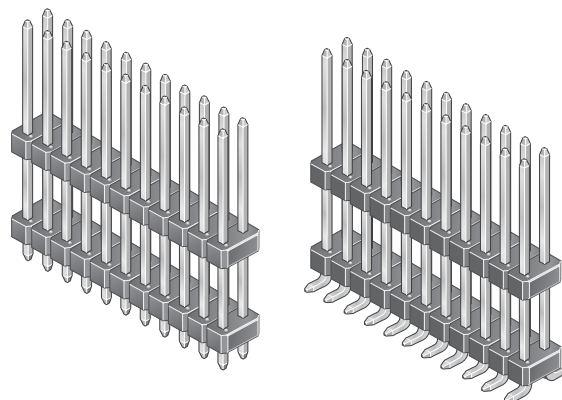
- File no. E66906
- File no. LR46923
- Product drawing: By 5-digit base part number
- Product specification: BUS-12-114

PROCESSING INFORMATION

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

RoHS INFORMATION

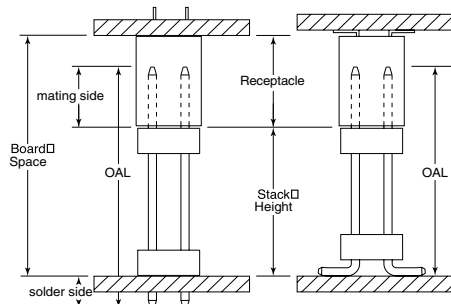
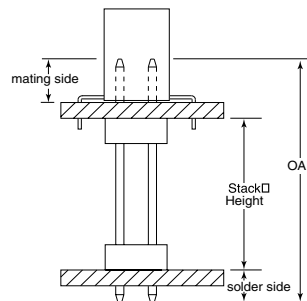
- This product is RoHS compatible according to the European Union Directive 2002/95/IEC



MATING DATA

- Dubox™ Vertical receptacles 20
- Dubox™ Low profile vertical receptacles 22, 24

TYPICAL APPLICATIONS



BergStik® Unshrouded Header, Stacking

2.54 mm (.100")

PART NUMBERS

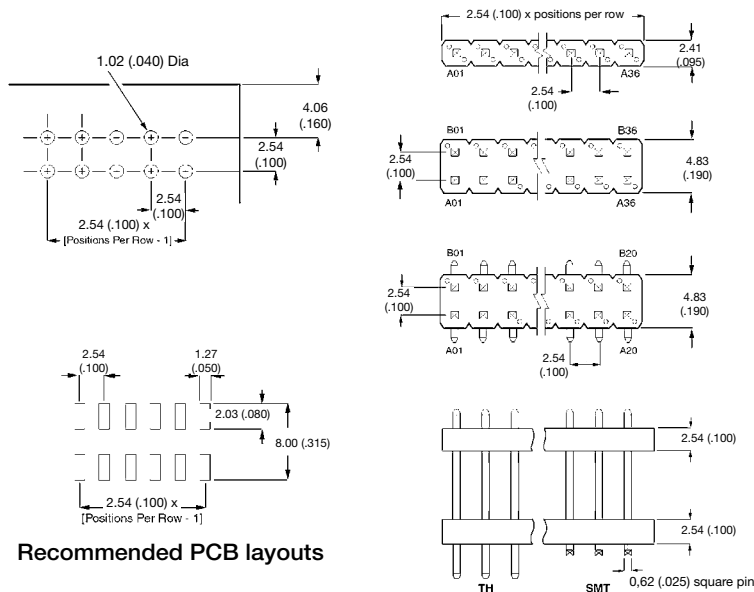
Compile your own part number using custom dimensions (Please allow for initial setup on our system)

5	4	Lead	Solder Side Option	Row Option	Plating	Pin Style	Total Positions	Stack Height	LF
		1 = Through Hole (TMT) 2 = Surface Mount (SMT)		1 = Single Row (TMT only) 2 = Double Row			02 to 36 single row (TMT) 04 to 72 double row (TMT) 04 to 50 double row (SMT)		
		1 = 2.41 mm 2 = 3.05 mm 4 = SMT (double row only)							
		1 = 0.76 µm (30µ") gold/GXT on mating area, tin on solder side 8 = 0.38 µm (15µ") gold/GXT on mating area, tin on solder side							

Pin Styl	Overall length (TMT)	Overall length (SMT)
01	12.20 (.480)	10.42 (.410)
02	13.50 (.531)	11.72 (.461)
03	15.90 (.626)	14.12 (.556)
04	16.76 (.660)	14.98 (.590)
05	17.65 (.695)	15.87 (.525)
06	18.91 (.744)	17.13 (.674)
07	20.96 (.825)	19.18 (.755)
08	23.50 (.925)	21.72 (.855)
09	26.04 (1.025)	24.26 (.955)
10	28.58 (1.125)	26.80 (1.055)
11	31.12 (1.225)	29.34 (1.155)
12	33.66 (1.325)	31.88 (1.255)

XX.XX = mm
Specify mm
i.e. 08.50 = 8.50 mm
in 0.50 mm increments
TMT = 08.00 min. - 25.00 max.
SMT = 09.50 min. - 26.00 max.

PRODUCT



Recommended PCB layouts

The board spacing

is the stack height of this header, plus the height of the receptacle (see application drawings on opposite page)

Dimension : mm (inch)

FEATURES

- Dual-beam contacts for added reliability
- Slotted cutout in low profile housing simplifies electrical testing
- Side-by-side and end-to-end stackable

TECHNICAL DATA

PHYSICAL

- Housing: thermoplastic
69145 color black
68786 and 63429 color white
- Flammability rating: UL 94 V-0
- Contact: Phosphor-bronze
- Plating: Gold/GXT or tin over 1.27 μm (50 μin) nickel



low profile only

ELECTRICAL PERFORMANCE

- Current rating: 2.5 A max. per contact
 - Insulation resistance: 50,000 $\text{M}\Omega$ min.
 - Contact resistance: 15 $\text{M}\Omega$ max. initial,
20 $\text{M}\Omega$ max. after environmental tests
- Dielectric withstanding voltage: 800 V

MECHANICAL PERFORMANCE

- Mating cycles (durability): 50-Gold, 25-Tin.
- Insertion force: 450 gf max. per gold contact
500 gf max. per tin-lead contact
- Withdrawal force: 30 gf min. per gold contact
30 gf min. per tin-lead contact.

OPERATING TEMPERATURE RANGE

- -65°C to +125°C

PACKAGING

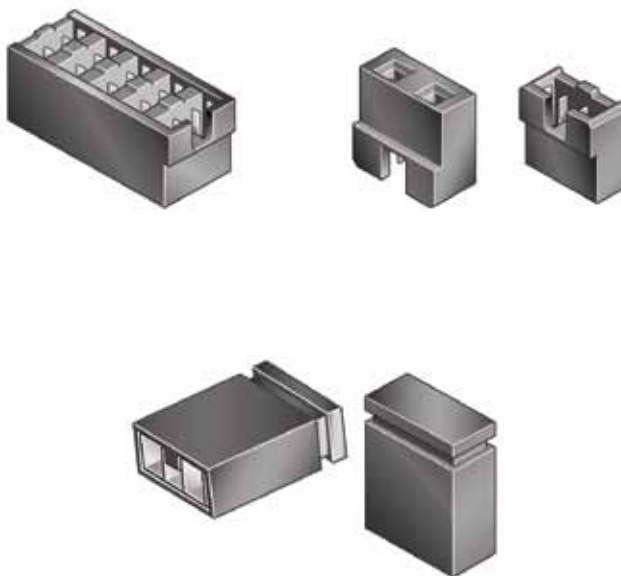
- Plastic bags

REFERENCE INFORMATION

-  File no. E66906
-  File no. LR46923
- Product drawing: By 5-digit base part number
- Product specification: BUS-12-071-gold
BUS-12-070-tin

RoHs INFORMATION

- This product is RoHs compatible according to the European Union Directive 2002/95/IEC



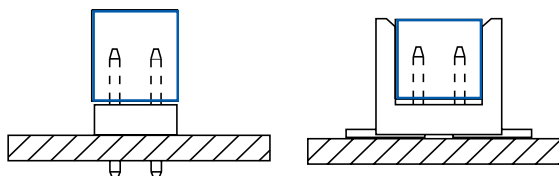
MATING DATA

- Continuous unshrouded headers 12
- Unshrouded vertical headers 8, 10
- Unshrouded right angle headers 14, 16

INSERTION DEPTH

- 4.85 mm (.191") min.
[provides 3.81 mm (.015") wipe] - Low profile

TYPICAL APPLICATIONS

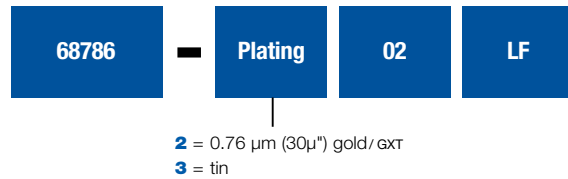


SHUNTS

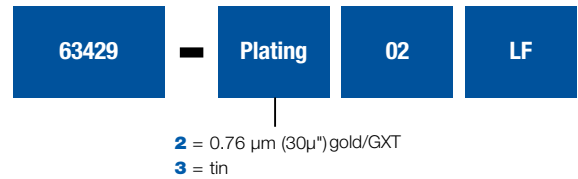
2.54 mm (.100")

PART NUMBERS

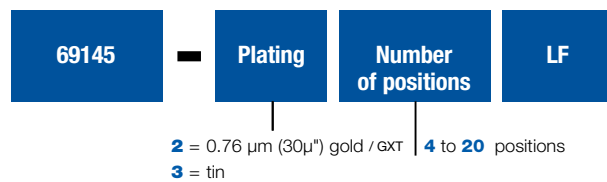
Low profile



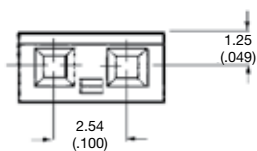
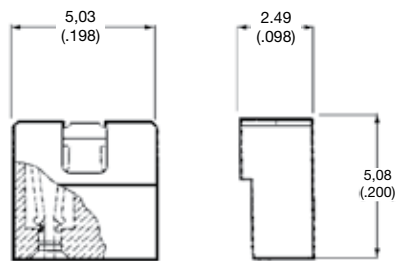
Standard



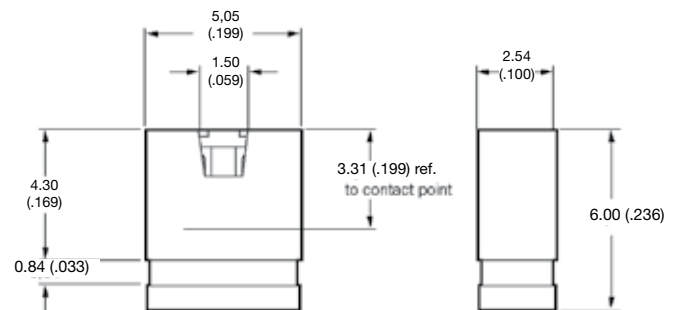
Multi-position



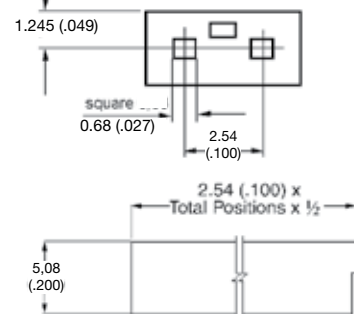
PRODUCT



68786



63429



69145

Dimension : mm (inch)

FEATURES

- The Dubox™ contact has a pre-stressed, dual beam design to enable low insertion force
- 4-wall contact design for signal protection

TECHNICAL DATA

PHYSICAL

- Housing: Glass filled thermoplastic polyester, blue
- Flammability rating: UL 94 V-0
- Contact: Phosphor-bronze
- Plating: Gold/GXT or tin in accordance with IEC 603-81

ELECTRICAL PERFORMANCE

- Current rating: 3 A dc max. per individual contact
2 A dc max. per contact for fully energized connector
- Insulation resistance: $1 \times 10^5 \text{ M}\Omega$ min.
- Contact resistance: 15 $\text{M}\Omega$ max. initial,
20 $\text{M}\Omega$ max. after environmental tests
- Dielectric withstanding voltage: 1000 V rms

MECHANICAL PERFORMANCE

- Mating cycles (durability): 200
- Insertion force per gold contact: 1.50 N (150 gf) max.
- Withdrawal force per gold contact: 0.30 N (30 gf) min.

OPERATING TEMPERATURE RANGE

- -65°C to +125°C

PACKAGING

- Plastic boxes or tubes

PROCESSING INFORMATION

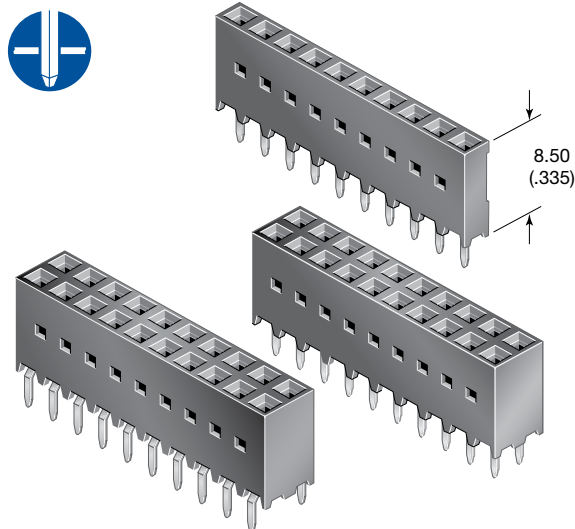
- Compatible with wave soldering processes

REFERENCE INFORMATION

-  File no. E66906
-  File no. LR46923
- Product drawing: By 5-digit base part number
- Product specification: HE 13/14 and IEC 603-8

RoHS INFORMATION

- This product is RoHS compatible according to the European Union Directive 2002/95/IEC



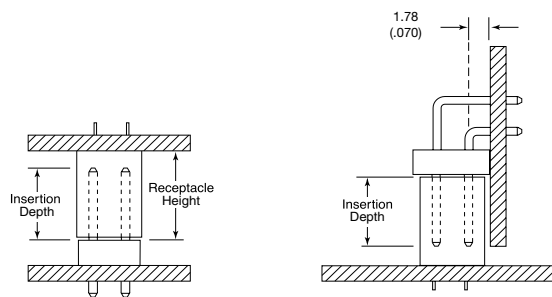
MATING DATA

- BergStik® Unshrouded vertical headers 8, 10
- BergStik® Unshrouded right angle headers 14
- BergStik® Unshrouded stacking headers 16
- BergStik® continuous Unshrouded headers 12

INSERTION DEPTH

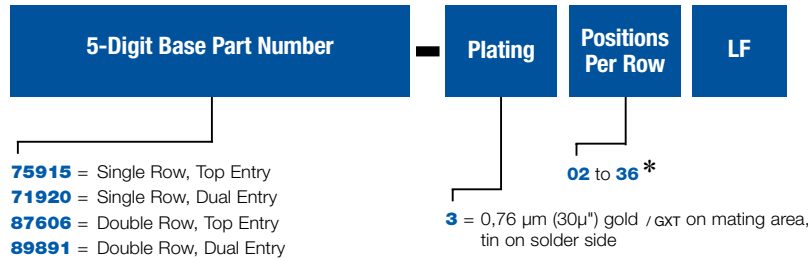
- Top Entry: 3.6 mm min. to 6.81 mm max.
[provides .381 mm wipe]
- Bottom Entry: 7 mm min.
[provides .381 mm wipe] plus board thickness

TYPICAL APPLICATIONS



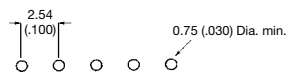
Dubox™ Vertical Receptacles

PART NUMBERS

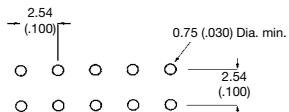


* Other sizes available on request

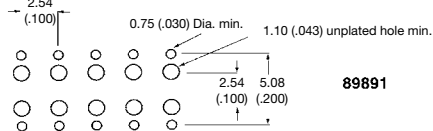
PRODUCT



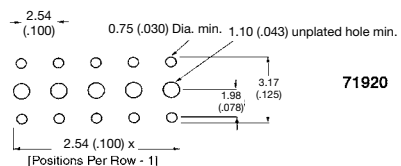
75915



87606

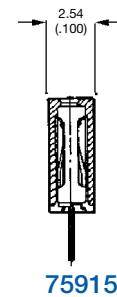
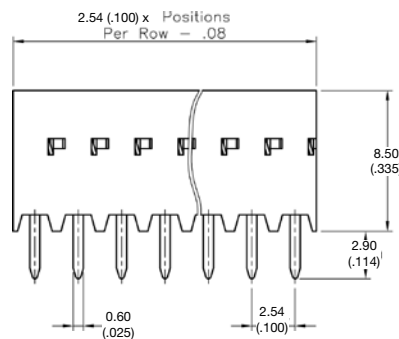


89891



71920

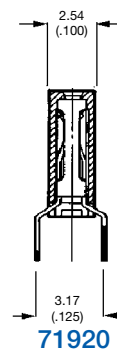
Recommended PCB layouts



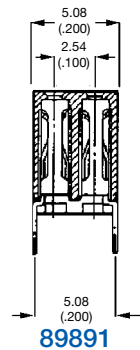
75915



87606



71920



89891

Dimension : mm (inch)

FEATURES

- The Dubox™ contact has a pre-stressed, dual beam design to enable low insertion force
- 4-wall contact design for signal protection

TECHNICAL DATA

PHYSICAL

- Housing: Glass filled thermoplastic polyester, blue
- Flammability rating: UL 94 V-0
- Contact: Phosphor-bronze
- Plating: Gold/GXT or tin over 1.27 μ m (50 μ ") nickel

ELECTRICAL PERFORMANCE

- Current rating: 3 A dc max. per individual contact
2 A dc max. per contact for fully energized connector
- Insulation resistance: 1×10^5 M Ω min.
- Contact resistance: 15 M Ω max. initial,
20 M Ω max. after environmental tests
- Dielectric withstanding voltage: 1000 V rms

MECHANICAL PERFORMANCE

- Mating cycles (durability): 200
- Insertion force per gold contact: 1.50 N (150 gf) max.
- Withdrawal force per gold contact: 0.30 N (30 gf) min.

OPERATING TEMPERATURE RANGE

- -65°C to +125°C

PACKAGING

- Plastic boxes or tubes

PROCESSING INFORMATION

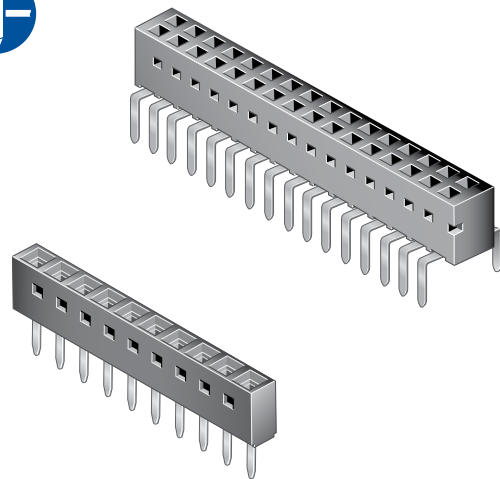
- Compatible with wave soldering processes

REFERENCE INFORMATION

- File no. E66906
- File no. LR46923
- Product drawing: By 5-digit base part number
- Product specification: BUS-12-055

RoHs INFORMATION

- This product is RoHs compatible according to the European Union Directive 2002/95/IEC



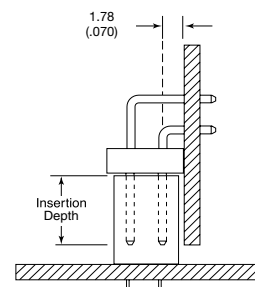
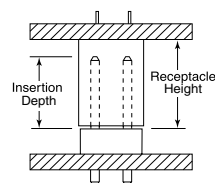
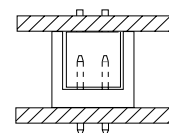
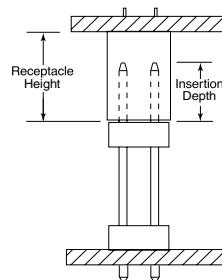
MATING DATA

- BergStik® Unshrouded vertical headers 8, 10
- BergStik® Unshrouded right angle headers 14,
- BergStik® Unshrouded stacking headers 16
- BergStik® continuous Unshrouded headers 12

INSERTION DEPTH

- Top Entry: 3.6 mm min. to 6.7 mm max.
[provides .381 mm wipe]
- Bottom Entry: 6 mm min.
[provides .381 mm wipe] plus board thickness

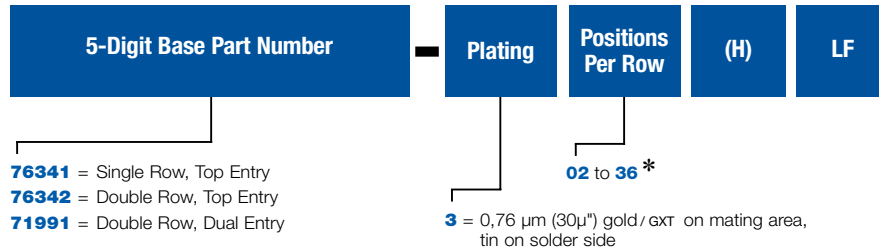
TYPICAL APPLICATIONS



Dubox™ Vertical Receptacles, Low Profile

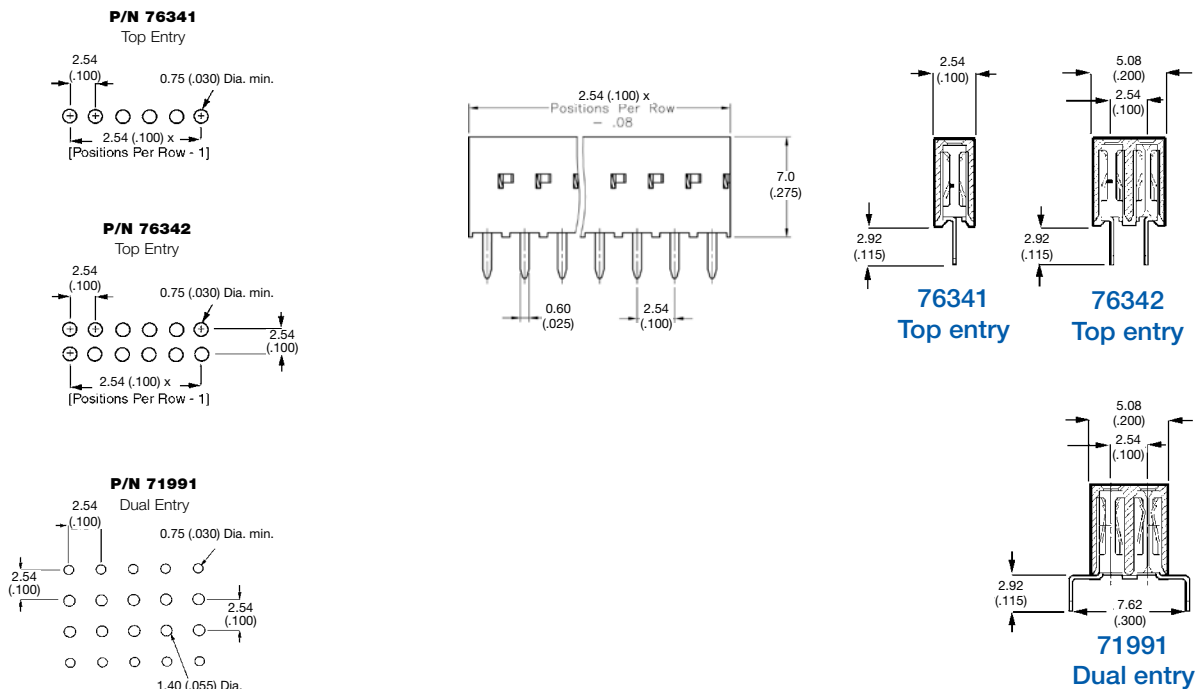
2.54 mm (.100")

PART NUMBERS



*Other sizes available on request

PRODUCT



Recommended PCB layouts

Dimension : mm (inch)

FEATURES

- The Dubox™ contact has a pre-stressed, dual beam design to enable low insertion force
- 4-wall contact design for signal protection

TECHNICAL DATA

PHYSICAL

- Housing: High temperature body, grey
- Flammability rating: UL 94 V-0
- Contact: Phosphor-bronze
- Plating: Gold/GXT or tin over 1.27 µm (50 µ") nickel



ELECTRICAL PERFORMANCE

- Current rating: 3 A dc max. per individual contact
2 A dc max. per contact for fully energized connector
- Insulation resistance: $1 \times 10^5 \text{ M}\Omega$ min.
- Contact resistance: 15 MΩ max. initial,
20 MΩ max. after environmental tests
- Dielectric withstanding voltage: 1000 V rms

MECHANICAL PERFORMANCE

- Mating cycles (durability): 200
- Insertion force per gold contact: 1.50 N (150 gf) max.
- Withdrawal force per gold contact: 0.30 N (30 gf) min.

OPERATING TEMPERATURE RANGE

- -65°C to +125°C

PACKAGING

- Plastic boxes or tubes
- Tape and reel as available

PROCESSING INFORMATION

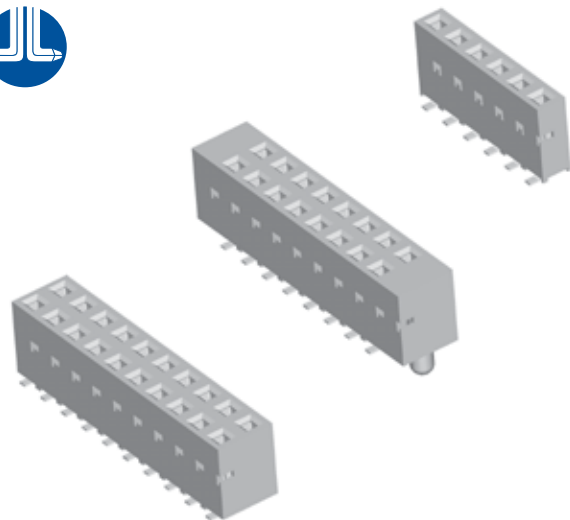
- Compatible with vapor-phase, and IR reflow soldering processes

REFERENCE INFORMATION

-  File no. E66906
-  File no. LR46923
- Product drawing: By 5-digit base part number
- Product specification: BUS-12-055

RoHS INFORMATION

- This product is RoHS compatible according to the European Union Directive 2002/95/IEC



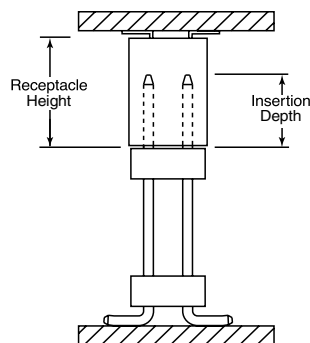
MATING DATA

- BergStik® Unshrouded vertical headers 8, 10
- BergStik® Unshrouded right angle headers 14
- BergStik® Unshrouded stacking headers 16
- BergStik® continuous Unshrouded headers 12

INSERTION DEPTH

- Top Entry: 3.6 mm min. to 6.7 mm max.
[provides .381 mm wipe]
- Bottom Entry: 6 mm min.
[provides .381 mm wipe] plus board thickness

TYPICAL APPLICATIONS



Dubox™ Vertical Receptacles, Low Profile

PART NUMBERS

5-Digit Base Part Number	Plating	Positions Per Row	Option	LF
91601 = Single Row, Dual Entry 91614 = Single Row with external Locating Pegs, Dual Entry 89898 = Double Row, Dual Entry 91615 = Double Row with External Locating Pegs, Dual Entry 91618 = Double Row with Internal Locating Pegs, Dual Entry			— = standard-tubes A = Tape-and-Reel packaging with pick-up cap *	
		02 to 25 Single Row 02 to 25 Double Row		
		3 = 0,76 µm (30µ") gold/GXT on mating area, tin on solder side		

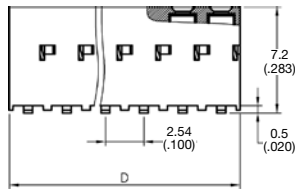
89898 - 3XXALF  **CORE RANGE**

XX = 02, 03, 04, 05, 06, 08, 10

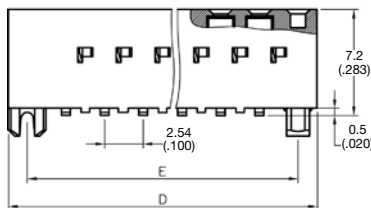
* as available

PRODUCT

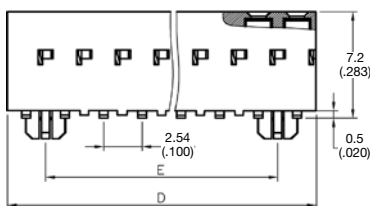
Standard



External Locating Pegs

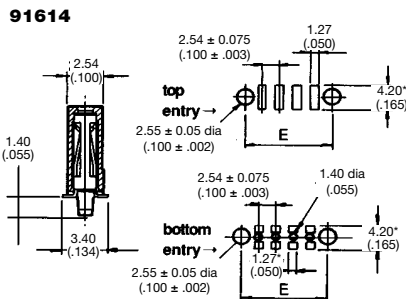
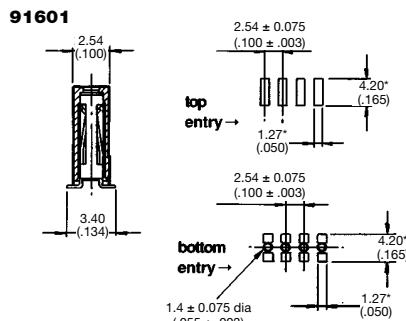


Internal Locating Pegs



Dimension : mm (inch)

Single Row + Pad lay-outs

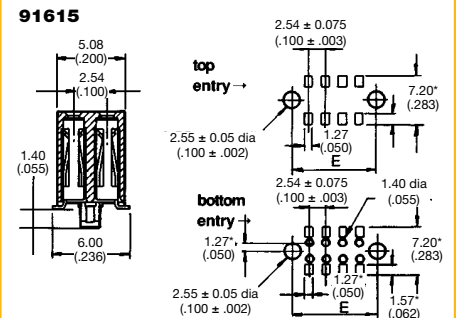
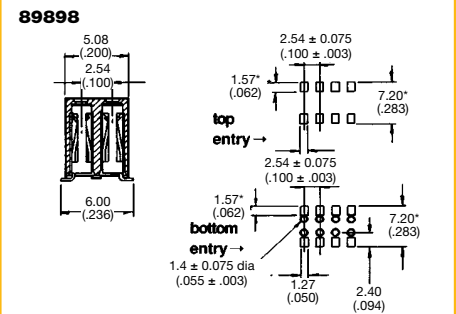


*Note: available as of 3 position versions

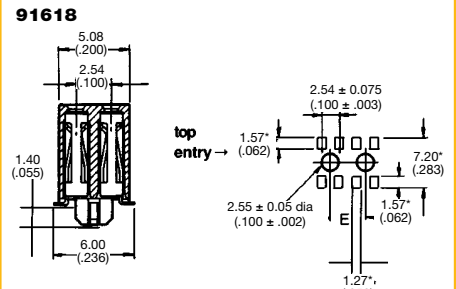
not available in single row

Note:
All dimensions marked with *
are minimum dimensions

Double Row + Pad lay-outs



*Note: available as of 3 position versions



*Note: available as of 6 number of positions

FEATURES

- The Dubox™ contact has a pre-stressed, dual beam design to enable low insertion force
- Floating solder tails self-center on circuit pads and assure coplanarity
- 4-wall contact design for signal protection

TECHNICAL DATA

PHYSICAL

- Housing: Blue thermoplastic - Through hole
High temp. grey thermoplastic - Surface mount
- Flammability rating: UL 94 V-0
- Contact: Phosphor-bronze
- Plating: Gold/GXT or tin over 1.27 µm (50 µ") nickel



ELECTRICAL PERFORMANCE

- Current rating: 3 A dc max. per individual contact
2 A dc max. per contact for fully energized connector
- Insulation resistance: 1x 10⁵ MΩ min.
- Contact resistance: 15 MΩ max. initial,
20 MΩ max. after environmental tests
- Dielectric withstanding voltage: 1000 V rms

MECHANICAL PERFORMANCE

- Mating cycles (durability): 200
- Insertion force per gold contact: 1.50 N (150 gf) max.
- Withdrawal force per gold contact: 0.30 N (30 gf) min.

OPERATING TEMPERATURE RANGE

- -65°C to +125°C

PACKAGING

- Standard: Tubes
- Optional: Tape-and-reel

PROCESSING INFORMATION

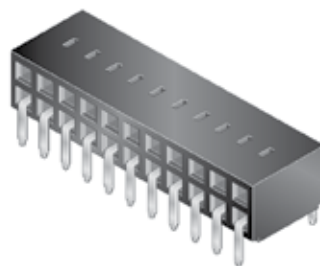
- Series 89882, 89883: compatible with wave soldering processes
- Series 71607, 71609: compatible with vapor-phase and IR reflow soldering processes

REFERENCE INFORMATION

- File no. E66906
- File no. LR46923
- Product drawing: 71607, 71609, 89882, 89883
- Product specification: HE 13/14 and IEC 603-8
- Application specification: TA-842 for SMT
- Tape and Reel packaging data : TA-856

RoHS INFORMATION

- This product is RoHS compatible according to the European Union Directive 2002/95/IEC



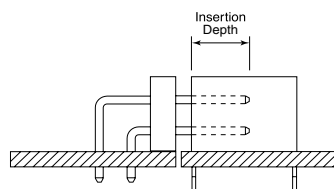
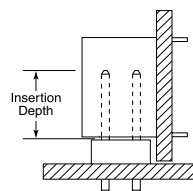
MATING DATA

- BergStik® Unshrouded vertical headers 8, 10
- BergStik® Unshrouded right angle headers 14
- BergStik® continuous Unshrouded headers 12

INSERTION DEPTH

- 3,6 mm min. to 7.50 mm max.
[provides .381 mm wipe]

TYPICAL APPLICATIONS



Dubox™ Horizontal Receptacles

PART NUMBERS

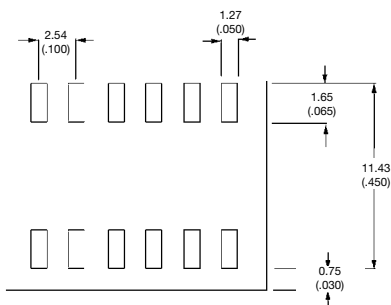
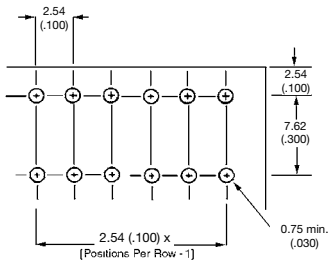


89882 = Through Hole (TMT), Single Row
89883 = Through Hole (TMT), Double Row
71607 = Surface Mount (SMT), Single Row
71609 = Surface Mount (SMT), Double Row

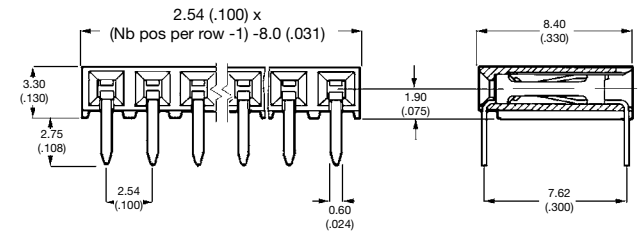
02 to 36 (TMT)
02 to 25 (SMT)

3 = 0,76 µm (30µ") gold/GXT on mating area, tin on solder side

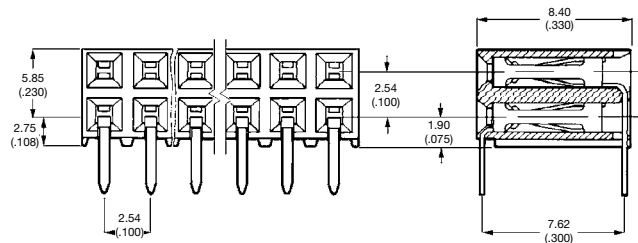
PRODUCT



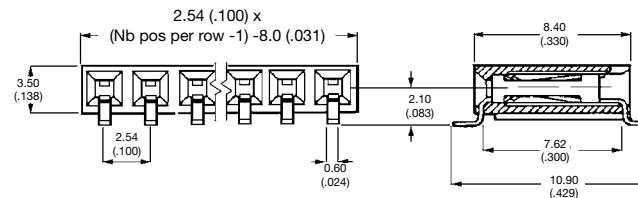
Recommended PCB layouts



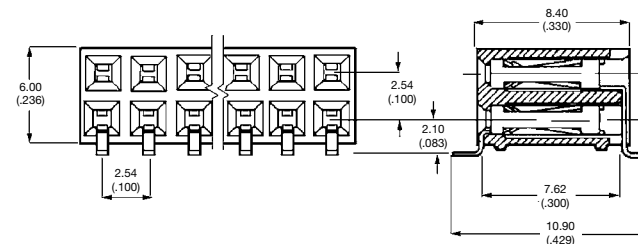
89882



89883



71607



71609

Dimension : mm (inch)

FEATURES

- For use with Dubox™ crimp-to-wire housings
- Stackable end-to-end
- Passive latching, anti-reverse and anti-miss-match when used with Dubox™ crimp-to-wire housings
- Selective plating

TECHNICAL DATA

PHYSICAL

- Housing: Glass filled thermoplastic polyester
- Housing color for series 76382, 76383: blue
- Housing color for series 76384, 76385: black
- Flammability rating: UL 94 V-0
- Contact: copper Alloy
- Plating: Gold/GXT or tin over 1.27 µm (50µ") nickel

ELECTRICAL PERFORMANCE

- Current rating: 3 A continuous
- Insulation resistance: $1 \times 10^5 \text{ M}\Omega \text{ min.}$
- Dielectric withstanding voltage: 1000 V rms

MECHANICAL PERFORMANCE

- Contact retention to housing: 20 N min.

OPERATING TEMPERATURE RANGE

- -40°C to +125°C

PACKAGING

- 1x2 to 1x6 and 2x2 to 2x6: plastic bags
- Other in tube

PROCESSING INFORMATION

- Compatible with wave soldering processes

REFERENCE INFORMATION

-  File no. E66906
-  File no. LR46923
- Product drawing: By 5-digit base part number
- Application specification: TA-531

RoHs INFORMATION

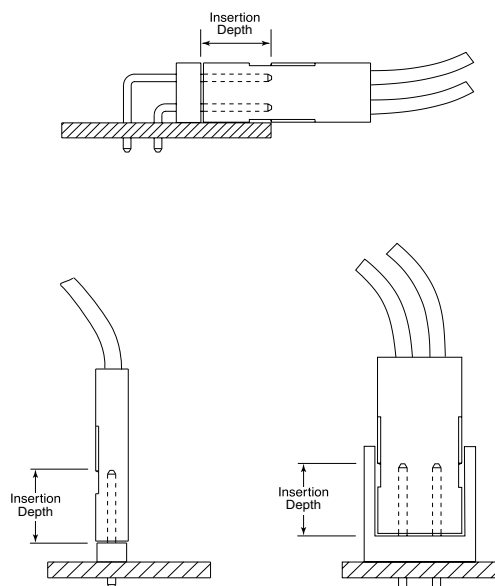
- This product is RoHs compatible according to the European Union Directive 2002/95/IEC



MATING DATA

- Dubox™ Crimp-to-wire contacts 30
- Dubox™ Crimp-to-wire housings 32

TYPICAL APPLICATIONS



FEATURES

- The Dubox™ contact has a pre-stressed, dual beam design to enable low insertion force.
- Mates with very short pins (5 mm)
- Universal crimp barrel accommodates wires from AWG 22-30
- Selective plating

TECHNICAL DATA

PHYSICAL

- Contact: phosphor bronze
- Plating: 0.76 µm (30µ") Gold/GXT over 1.27 µm (50 µ") nickel

ELECTRICAL PERFORMANCE

- Current rating: 3 A continuous
- Contact resistance after environmental test: 15Ω m max. – Contact
- Dielectric withstanding voltage: 1000 V rms

MECHANICAL PERFORMANCE

- Mating cycles (durability): 200 – Gold
- Insertion force gold finish contact: 1.3 N
- Withdrawal force (min) gold finish contact: 0.3 N.
- contact retention force to housing: 15 N per contact.

OPERATING TEMPERATURE RANGE

- -65°C to +125°C

PACKAGING

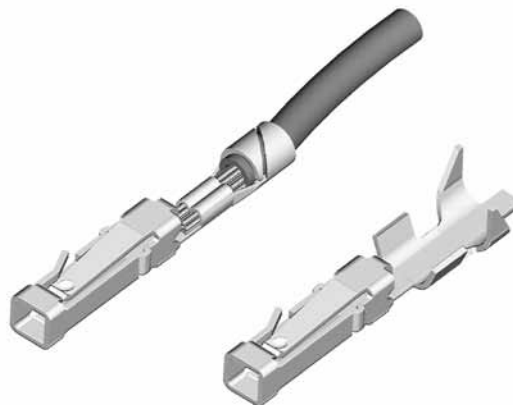
- 1 Reels
- Boxes - Loose piece

REFERENCE INFORMATION

-  File no. E66906
-  File no. LR46923
- Product drawing: By 5-digit base part number
- Product specification: BUS-12-055
- Application specification: TA-317, TA-340

RoHS INFORMATION

- This product is RoHS compatible according to the European Union Directive 2002/95/IEC



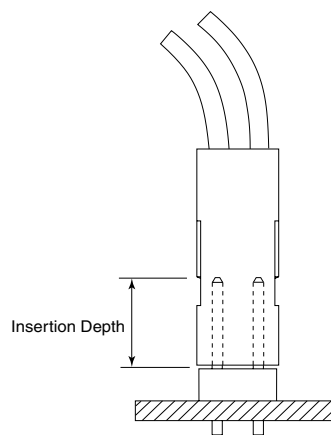
MATING DATA

- BergStik® unshrouded straight headers 8, 10
- BergStik® unshrouded right angle headers 14
- Dubox™ shrouded vert./ra. headers 28
- BergStik® continuous unshrouded headers 12

INSERTION DEPTH

- Discrete Wire: 3.6 mm min. to 5.6 mm max. [provides .381 mm wipe]
- Crimp-to-Wire Housing: 5.1 mm min. to 6.2 mm max. [provides .381 mm wipe in housing]

TYPICAL APPLICATIONS



Dubox™ Crimp-to-Wire Contacts

2.54 mm (.100")

PART NUMBERS

Part numbers / Contacts on Reel

Wire size	insulation O.D.	Selective Gold Plated	Tin plated	Packaging
22-30	0.90 - 1.50 (.035 - .059)	76347-301LF	76347-401LF	15.000/reel
22-30	0.90 - 1.50 (.035 - .059)	76347-302 LF•	76347-402LF•	15.000/reel
22-30	0.90 - 1.50 (.035 - .059)	76347-303 LF	76347-403LF	500/reel
20-22	1.10 - 1.60 (.043 - .062)	76347-311LF	76347-411LF	15.000/reel
20-22	1.10 - 1.60 (.043 - .062)	76347-312 LF•	76347-412LF•	15.000/reel

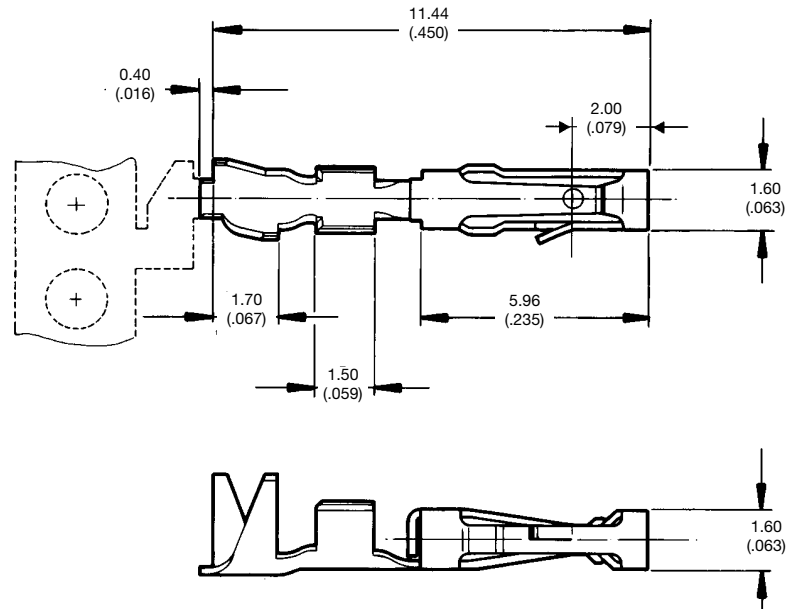
Part numbers / Contacts loose Piece

Wire size	insulation O.D.	Selective Gold Plated	Tin plated	Packaging
22-30	0.90 - 1.50 (.035 - .059)	76357-301LF	76357-401LF	1000/box

Notes: • = reeled for application machine with left-to-right feeding

76347 - 301LF **CORE RANGE**

PRODUCT



Contacts to be used with housing = 65239-xxx / 65240-xxx

Wire strip length = 3.00 ± 0.25 (.118 ± .010)

Mating pin size = 0.62 (.024) square

Mating pin recommended length = 5.00 (.197) min.

Dimension : mm (inch)

FEATURES

- For use with Dubox™ crimp-to-wire contacts
- Stackable end-to-end
- Passive latching, anti-reverse and anti-miss-match when used with Dubox™ shrouded headers
- Contacts removable for easy repairability

TECHNICAL DATA

PHYSICAL

- Housing: Glass filled thermoplastic polyester
- Housing color blue
- Flammability rating: UL 94 V-0

ELECTRICAL PERFORMANCE

- Insulation resistance: $1 \times 10^5 \text{ M}\Omega \text{ min.}$
- Dielectric withstanding voltage: 1000 V rms

OPERATING TEMPERATURE RANGE

- -65°C to +125°C

PACKAGING

- Bulk

PROCESSING INFORMATION

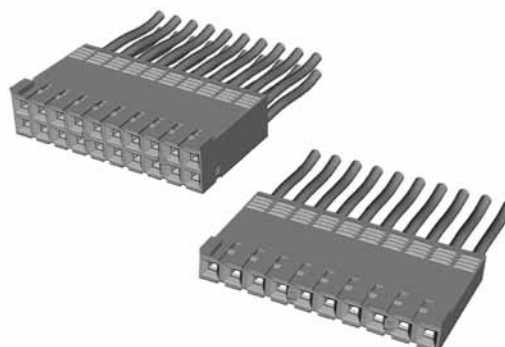
- Compatible with wave soldering processes

REFERENCE INFORMATION

-  File no. E66906
-  File no. LR46923
- Product drawing: By 5-digit base part number
- Application specification: TA-317, TA-340

RoHS INFORMATION

- This product is RoHS compatible according to the European Union Directive 2002/95/IEC



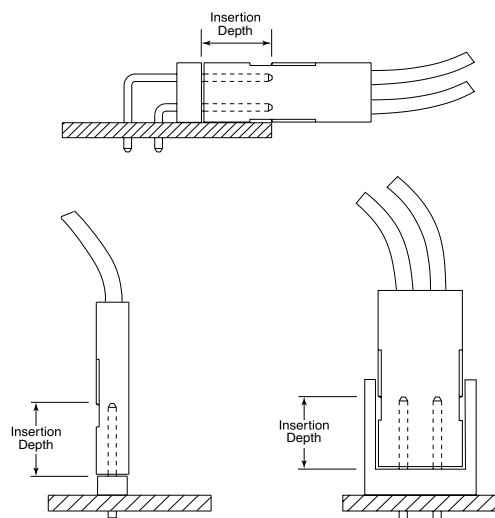
MATING DATA

- BergStik® unshrouded straight headers 8, 10
- BergStik® unshrouded right angle headers 14
- Dubox™ shrouded vert./ra. headers 28

INSERTION DEPTH

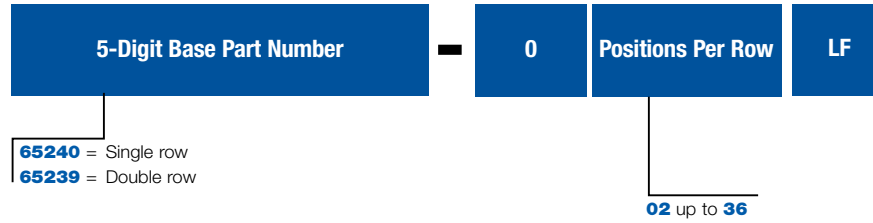
- 3.6 mm min. to 6.0 mm max.

TYPICAL APPLICATIONS



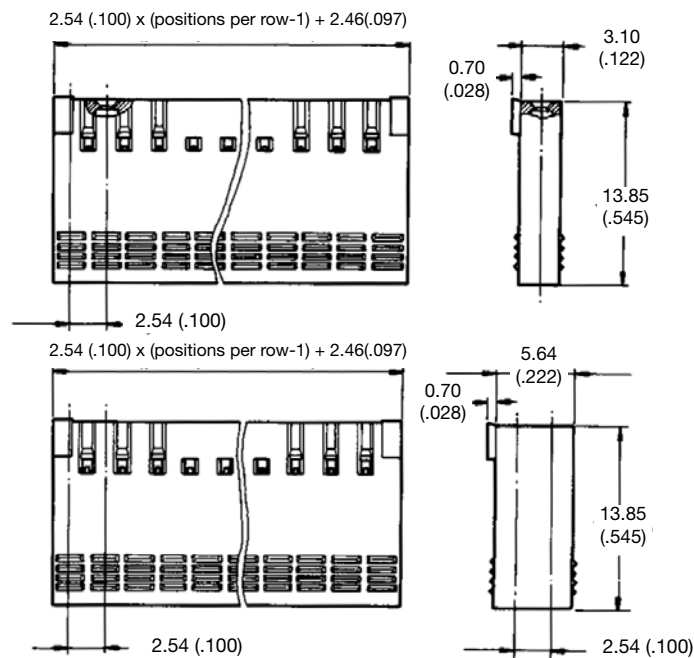
Dubox™ Crimp-to-Wire Housings

PART NUMBERS



65239 - 0XXLF	CORE RANGE
XX = 02, 03, 04, 05, 06, 08, 10	
65240 - 0XXLF	
XX = 04, 06, 08, 10, 12, 16, 20	

PRODUCT



- Pin size: 0.62 (.024) square
- Recommended pin length: 5.00 (.197) min.

Dimension : mm (inch)

FEATURES

- Housing uses our high reliability contact
- High temperature headers
- Passive latching system

TECHNICAL DATA

PHYSICAL

- Housing: Black thermoplastic
- Flammability rating: UL 94 V-0
- Contact: Phosphor-bronze
- Plating: Gold/GXT or tin-lead over 1.27 μm (50 μin) nickel

ELECTRICAL PERFORMANCE

- Current rating: 3 A continuous
- Insulation resistance: $1 \times 10^5 \text{ M}\Omega$ min.
- Dielectric withstanding voltage: 1000 V rms

MECHANICAL PERFORMANCE

- Contact retention to housing: 17.76 N min.

OPERATING TEMPERATURE RANGE

- -40°C to +125°C

PACKAGING

- Bags

PROCESSING INFORMATION

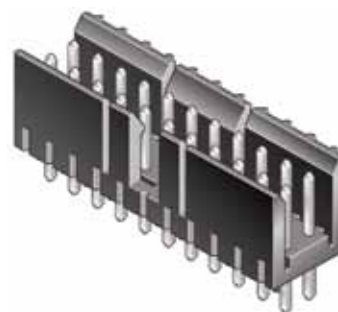
- Compatible with wave soldering processes

REFERENCE INFORMATION

-  File no. E66906
-  File no. LR46923
- Product drawing: By 5-digit base part number
- Product specification: BUS-12-067, BUS-12-075
- Application specification: TA-531

RoHS INFORMATION

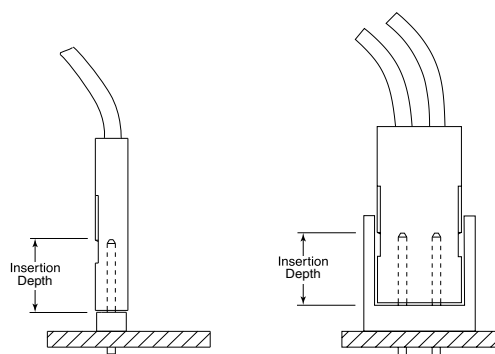
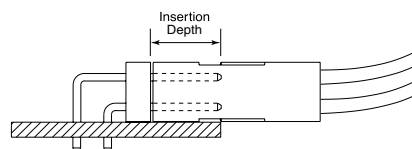
- This product is RoHS compatible according to the European Union Directive 2002/95/IEC



MATING DATA

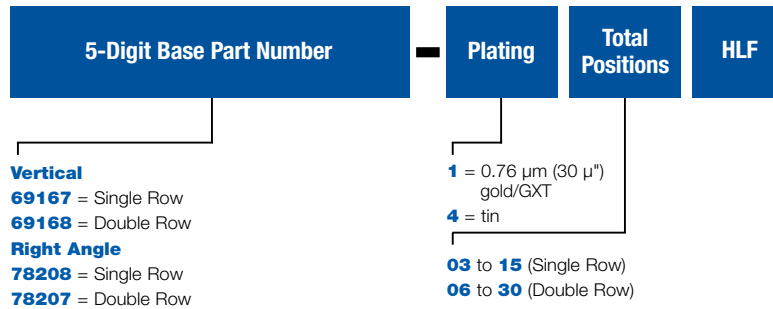
- PV™ Crimp-to-wire contacts 36
- PV™ Crimp-to-wire housings 38

TYPICAL APPLICATIONS

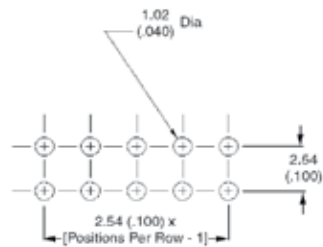


PV™ Shrouded Headers

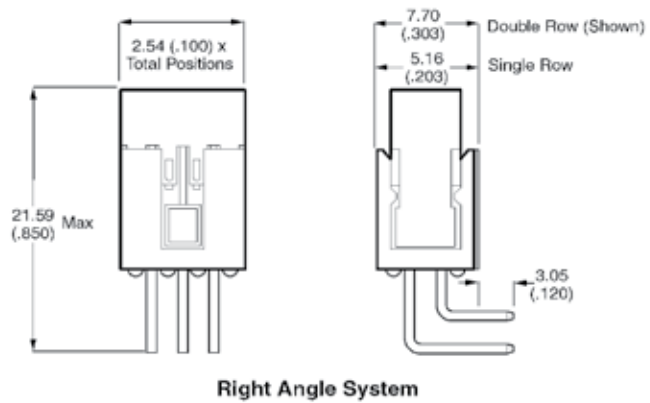
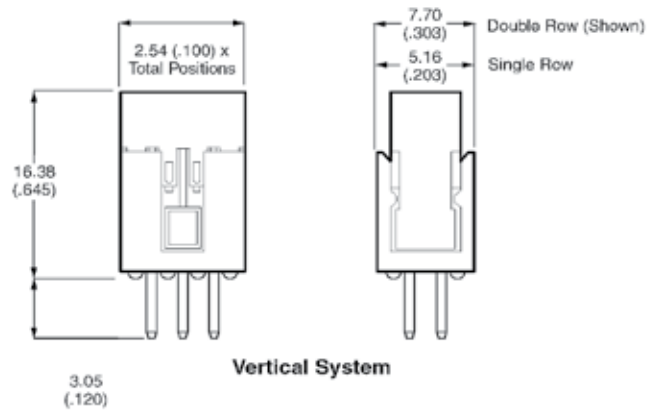
PART NUMBERS



PRODUCT



Recommended PCB layouts



Dimension : mm (inch)

FEATURES

- High reliability contacts for shock and vibration applications
- Three spring thickness options meet application specific insertion, withdrawal, and normal force requirements
- Leaf spring design provides constant retention force after repeated cycles

TECHNICAL DATA

PHYSICAL

- Contact: Brass body with beryllium-copper spring
- Pin: Brass
- Plating: Gold/GXT or tin over 1.27 μm (50 μin) nickel

ELECTRICAL PERFORMANCE

- Current rating: 3 A continuous depending on wire size
- Insulation resistance: 5000 $\text{m}\Omega$ min.
- Contact resistance after environmental test: 15 Ω m max. – Contact
- Dielectric withstanding voltage: 1000 V rms

MECHANICAL PERFORMANCE

- Mating cycles (durability): 1000 - Gold
- Insertion force per gold contact:
 - 2.35 N (240 gf) - Standard spring
 - 4.41 N (450 gf) - High spring
 - 10.79 N (1100 gf) - Ultra high spring

OPERATING TEMPERATURE RANGE

- -65°C to +125°C

PACKAGING

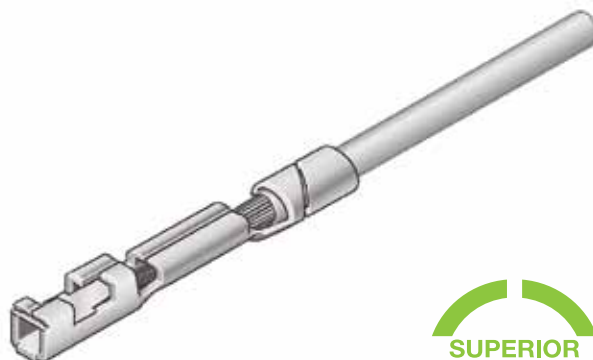
- 1 Reels
- Boxes - Loose piece

REFERENCE INFORMATION

-  File no. E66906
-  File no. LR46923
- Product drawing: By 5-digit base part number
- Product specification: BUS-12-067 Contact
- Application specification: TA-75, TA-146 - Contact, TA-295, TA-228 and TA-302

RoHS INFORMATION

- This product is RoHS compatible according to the European Union Directive 2002/95/IEC



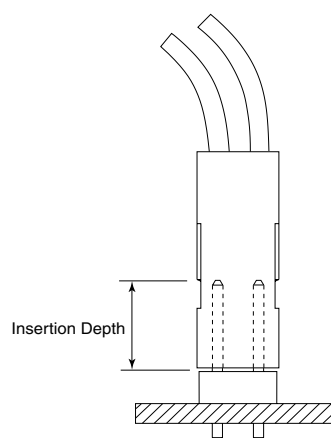
MATING DATA

- Continuous unshrouded headers 12
- Unshrouded vertical headers 8, 10
- Unshrouded right angle headers 14

INSERTION DEPTH

- Discrete Wire: 3.5 mm min. to 5.3 mm max. [provides .381 mm wipe]
- Crimp-to-Wire Housing: 4.2 mm min. to 5.3 mm max. [provides .381 mm (.015") wipe in housing]

TYPICAL APPLICATIONS



PV™ Crimp-to-Wire Contacts

PART NUMBERS

HOW TO SELECT THE RIGHT CONTACT

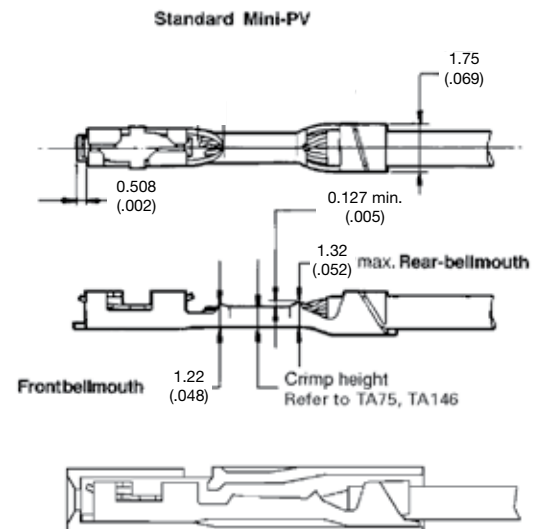
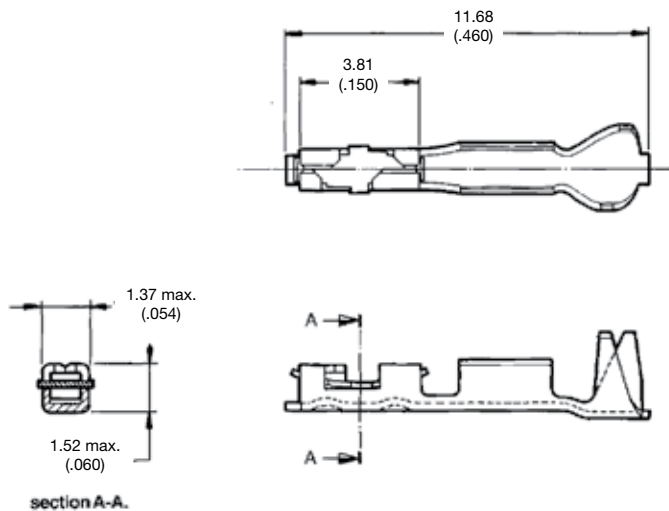
- Step 1** Select Application
- Step 2** Select Spring Force
- Step 3** Select Wire Size



1	Application	2	Spring Force
	Housing		
	40-72 Contacts Per Housing		Standard
	10-50 Contacts Per Housing		High
	2-20 Contacts Per Housing		Ultra High
	Discrete Contact		Ultra High

Wire Size (AWG)	Application Spring Force	Part Number
18, 20	Standard	48276-002LF
or two 22	High	48047-002LF
or two 24	Ultra High	47566-002LF
22, 24, 26	Standard	47457-002LF
or two 26	High	47439-002LF
or two 28	Ultra High	47565-002LF
28, 30, 32	Standard	48048-002LF
or two 30	High	47437-002LF
or two 32	Ultra High	47564-002LF

PRODUCT



Dimension : mm (inch)

FEATURES

- Lowest profile housing in the industry
- Designed for use with our high reliability PV™ Contact

TECHNICAL DATA

PHYSICAL

- Housing: Black thermoplastic
- Flammability rating: UL 94 V-0

ELECTRICAL PERFORMANCE

- Insulation resistance: $1 \times 10^5 \text{ M}\Omega \text{ min.}$
- Dielectric withstanding voltage: 1000 V rms

MECHANICAL PERFORMANCE

- Contact retention to housing: 17.76 N min.

OPERATING TEMPERATURE RANGE

- 40°C to +125°C

PACKAGING

- Bags

PROCESSING INFORMATION

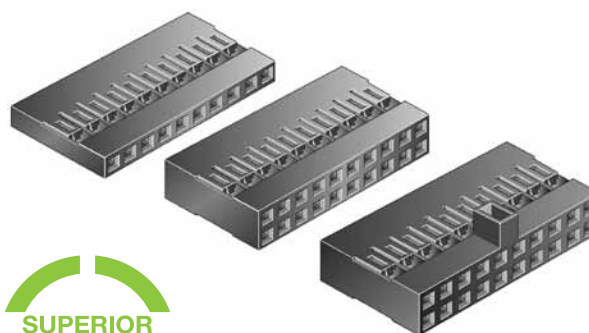
- Compatible with wave soldering processes

REFERENCE INFORMATION

- File no. E66906
- File no. LR46923
- Product drawing: By 5-digit base part number
- Product specification: BUS-12-067
- Application specification: TA-531

RoHS INFORMATION

- This product is RoHS compatible according to the European Union Directive 2002/95/IEC



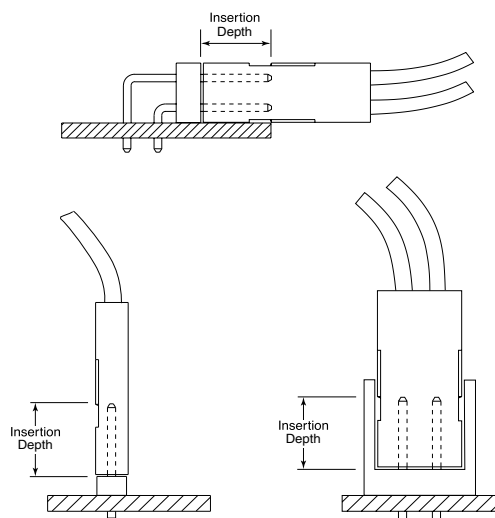
MATING DATA

- | | |
|---------------------------------|-------|
| Continuous unshrouded headers | 12 |
| Unshrouded vertical headers | 8, 10 |
| Unshrouded right angle headers | 14 |
| see previous page for terminals | 36 |

INSERTION DEPTH

- 4.2 mm (.165") min. to 5.3 mm (.210") max.
[provides .381 mm (.015") wipe in housing].

TYPICAL APPLICATIONS



PV™ Crimp-to-Wire Housings

PART NUMBERS

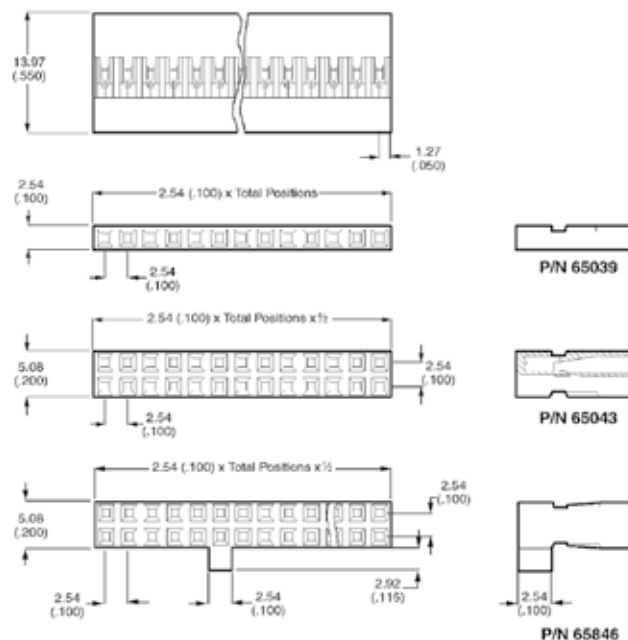


65039 = Single Row
65043 = Double Row
65846 = Double Row with Center Key

Single Row			Double Row		
Total Positions	65039	78211	Total Positions	65043	65846
2	-035		4	-035	
3	-034	-003	6	-034	
4	-033	-004	8	-033	
5	-032	-005	10	-032	
6	-031	-006	12	-031	-017
7	-030	-007	14	-030	
8	-029	-008	16	-029	
9	-028	-009	18	-028	
10	-027	-010	20	-027	
11	-026	-011	22	-026	-018
12	-025	-012	24	-025	
13	-024	-013	26	-024	-019
14	-023	-014	28	-023	-020
15	-022	-015	30	-022	
16	-021		32	-021	-021
17	-020		34	-020	-022
18	-019		36	-019	-023
			38	-018	

Single Row			Double Row		
Total Positions	65039	78211	Total Positions	65043	65846
19	-018		40	-017	-024
20	-017		42	-016	-025
21	-016		44	-015	-004
22	-015		46	-014	-026
23	-014		48	-013	-027
24	-013		50	-012	
25	-012		52	-011	-028
26	-011		54	-010	
27	-010		56	-009	-029
28	-009		58	-008	-030
29	-008		60	-007	-013
30	-007		62	-006	-031
31	-006		64	-005	-009
32	-005		66	-004	-032
33	-004		68	-003	-033
34	-003		70	-002	-034
35	-002		72	-001	-035
36	-001				

PRODUCT



Dimension : mm (inch)

FEATURES

- Recessed pins assure proper alignment and eliminate damage during mating
- End windows for latching with IDC receptacle

TECHNICAL DATA

PHYSICAL

- Housing: Glass filled, thermoplastic polyester, blue
- Flammability rating: UL 94 V-0
- Pin: Phosphor-bronze
- Plating: Gold/GXT over 1.27 μm (50 μ "") nickel

ELECTRICAL PERFORMANCE

- Current rating: 3 A continuous
- Insulation resistance: $1 \times 10^5 \text{ M}\Omega$ min.
- Dielectric withstanding voltage: 500 V rms min.

MECHANICAL PERFORMANCE

- Pin retention to housing: 20 N min.

OPERATING TEMPERATURE RANGE

- -65°C to +105°C

PACKAGING

- Tubes

PROCESSING INFORMATION

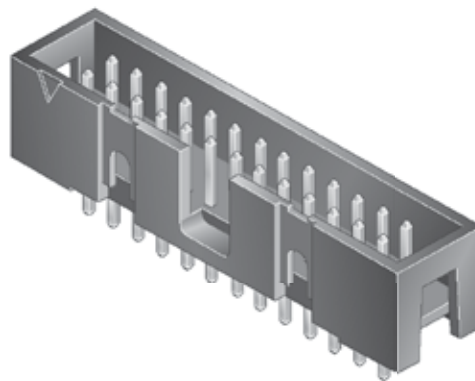
- Compatible with wave soldering processes

REFERENCE INFORMATION

-  File no. E66906
-  File no. LR46923
- Product drawing: By 5-digit base part number
- Product specification: BUS-12-082

RoHS INFORMATION

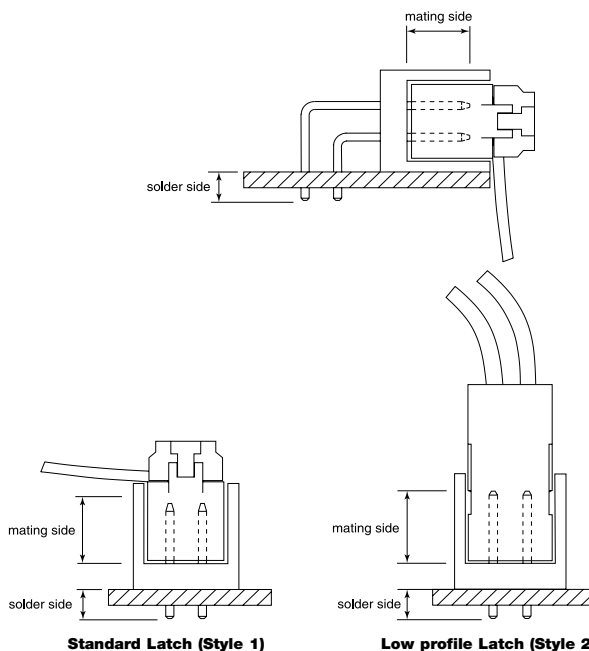
- This product is RoHS compatible according to the European Union Directive 2002/95/IEC



MATING DATA

- Quickie™ IDC receptacles 46

TYPICAL APPLICATIONS



Quickie™ Shrouded Headers, Low Profile

2.54 mm (.100")

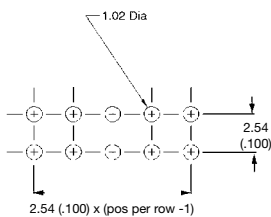
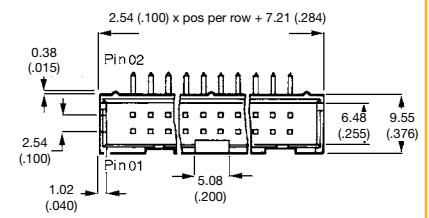
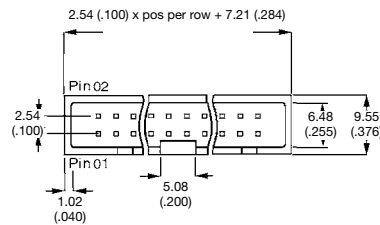
PART NUMBERS

5-Digit Base Part Number	Plating	Total Positions	LF
Through mount 75869 = Vertical 75867 = Right angle			
1 = 0.76 µm (30µ") gold/GXT on mating area, tin on solder side			
		30 = 4 pos. 31 = 6 pos. 32 = 8 pos. 01 = 10 pos. 02 = 14 pos. 03 = 16 pos. 04 = 20 pos. 05 = 26 pos. 06 = 34 pos. 07 = 40 pos. 08 = 50 pos. 09 = 60 pos. 10 = 64 pos.	

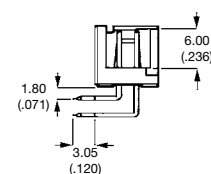
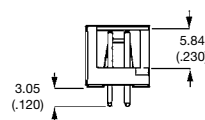
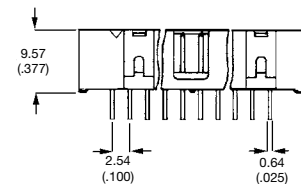
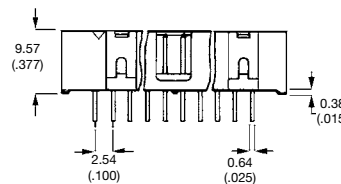
PRODUCT

Vertical

Right Angle



Recommended PCB layouts



Dimension : mm (inch)

FEATURES

- High temperature housing
- Compatible with IR reflow soldering processes
- Tape-and-Reel packaging for automatic pick-and-place

TECHNICAL DATA

PHYSICAL

- Housing: Glass filled, high temperature thermoplastic polyester, black
- Flammability rating: UL 94 V-0
- Pin: Phosphor-bronze
- Plating: Gold/GXT over 1.27 µm (50µ") nickel



ELECTRICAL PERFORMANCE

- Current rating: 3 A continuous
- Insulation resistance: 1×10^5 MΩ min.
- Dielectric withstanding voltage: 500 V rms min.

MECHANICAL PERFORMANCE

- Pin retention to housing: 20 N min.

OPERATING TEMPERATURE RANGE

- -65°C to +125°C

PACKAGING

- SMT: Tape-and-reel with pick-up cap
- PiP, right angle: Tube without pick-up cap
- PiP, straight: Tape and reel

PROCESSING INFORMATION

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

REFERENCE INFORMATION

- File no. E66906
- File no. LR46923
- Product drawing: By 5-digit base part number
- Product specification: BUS-12-055

RoHS INFORMATION

- This product is RoHS compatible according to the European Union Directive 2002/95/IEC

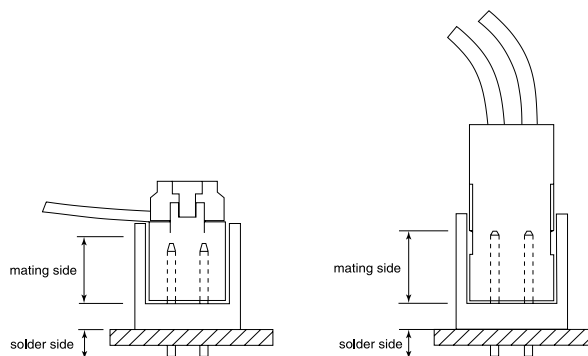


MATING DATA

- Quickie™ IDC receptacles

46

TYPICAL APPLICATIONS

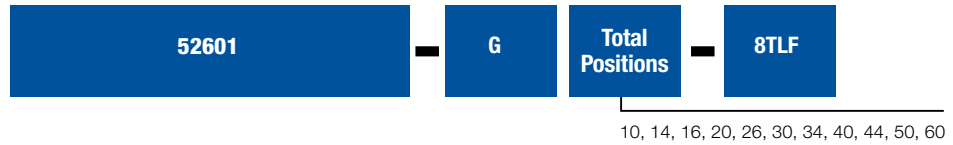


Quickie™ Shrouded Headers, Low Profile, SMT, Pin-in-Paste

2.54 mm (.100")

PART NUMBERS

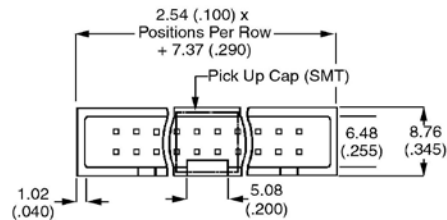
SMT (Surface Mount)



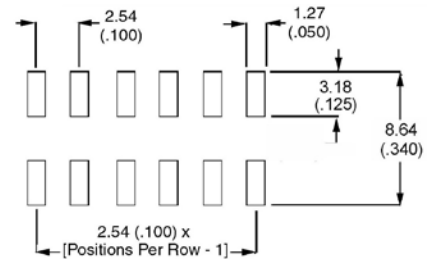
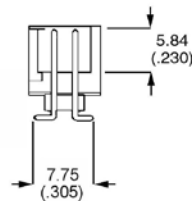
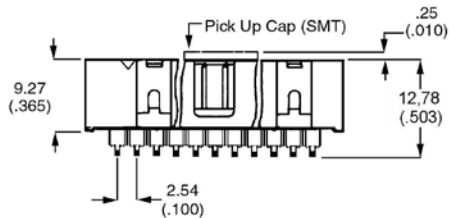
PiP (Pin-in-Paste)



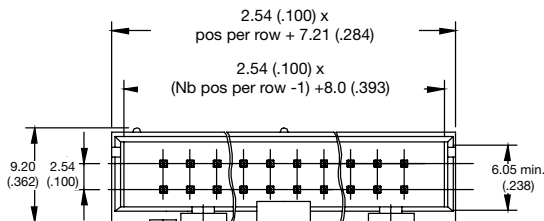
PRODUCT



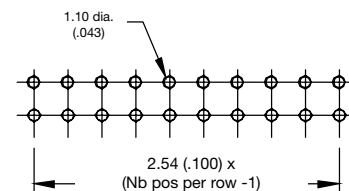
52601



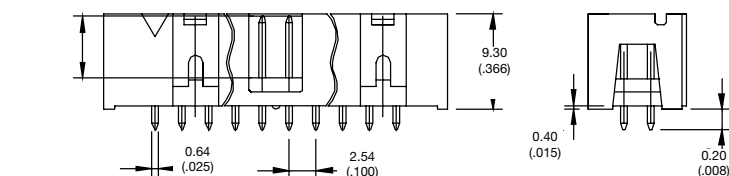
Recommended PCB layouts



10056844



Recommended PCB layouts



Dimension : mm (inch)

FEATURES

- Selective plating
- Recessed pins assure proper alignment and eliminate damage during mating

TECHNICAL DATA

PHYSICAL

- Housing: Glass filled, high temperature thermoplastic polyester, grey
- Flammability rating: UL 94 V-0
- Pin: Phosphor-bronze
- Plating: Gold/GXT over 1.27 µm (50µ") nickel



ELECTRICAL PERFORMANCE

- Current rating: 3 A continuous
- Insulation resistance: 1×10^5 MΩ min.
- Dielectric withstanding voltage: 500 V rms min.

MECHANICAL PERFORMANCE

- Pin retention to housing: 20 N min.

OPERATING TEMPERATURE RANGE

- -65°C to +105°C

PACKAGING

- Tubes

PROCESSING INFORMATION

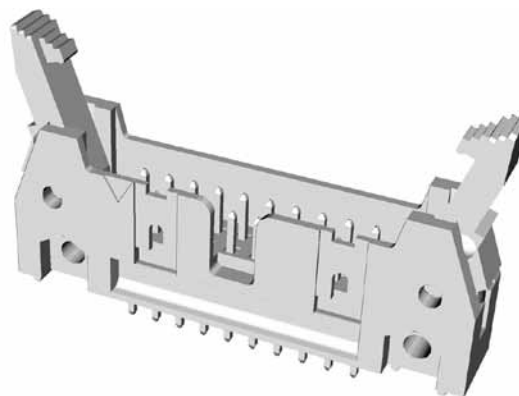
- Compatible with wave soldering processes

REFERENCE INFORMATION

- File no. E66906
- File no. LR46923
- Product drawing: By 5-digit base part number
- Product specification: BUS-12-082

RoHS INFORMATION

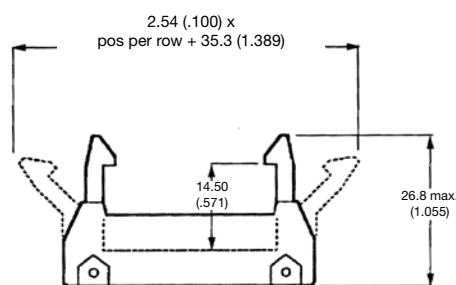
- This product is RoHS compatible according to the European Union Directive 2002/95/IEC



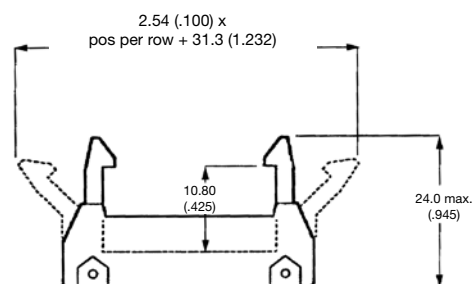
MATING DATA

- Quickie™ IDC receptacles 46

TYPICAL APPLICATIONS



Standard Latch (Style 1)



Low profile Latch (Style 2)

Quickie™ Shrouded Headers, Eject Latch

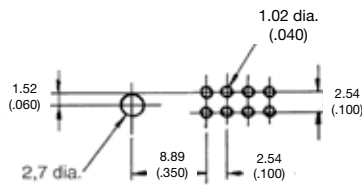
2.54 mm (.100")

PART NUMBERS

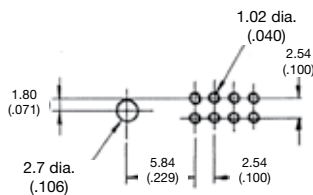
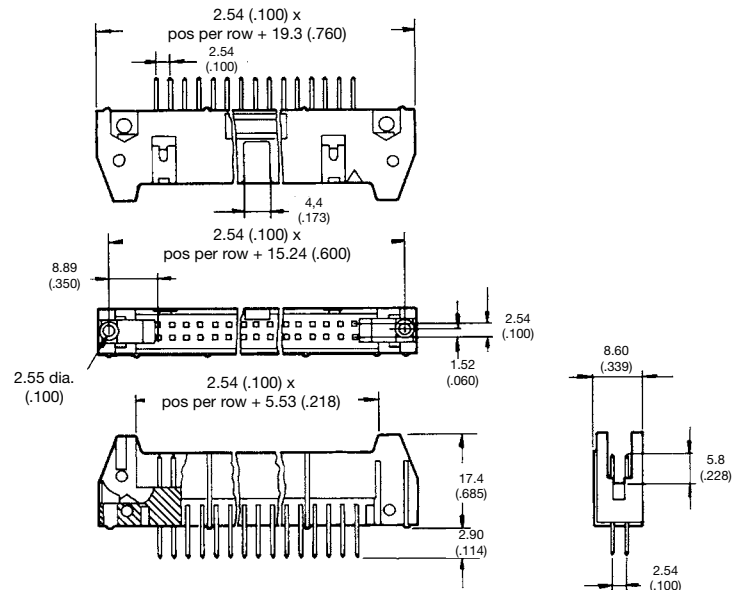
5-Digit Base Part Number	Latch Style	Total Positions	LF
Through mount 71918 = Vertical 71922 = Right angle Plating = 0.76 µm (30µ") gold/GXT on mating area, tin on solder side	1 = Standard (mates with IDC Receptacle with Strain Relief) 2 = Low Profile (mates with IDC Receptacle without Strain Relief)	06, 08, 10, 14, 16, 18, 20, 26, 30, 34, 40, 44, 50, 60, 64	

71918 - 1XXLF
71922 - 1XXLF
CORE RANGE
 XX = 06, 08, 10, 16, 20

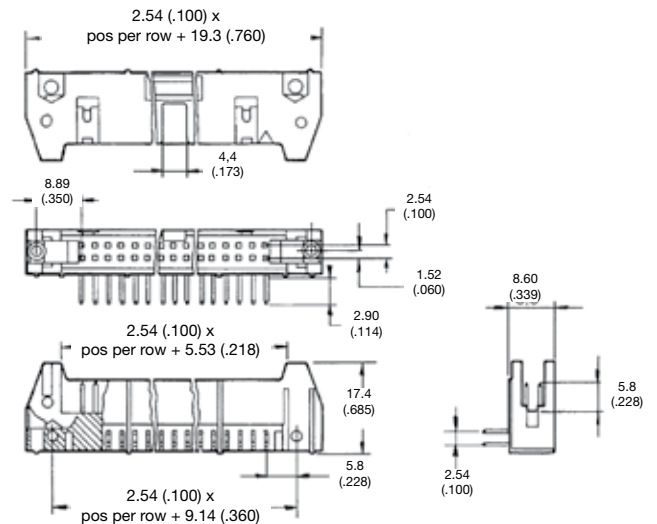
PRODUCT



Vertical



Right Angle



Recommended PCB layouts

Dimension : mm (inch)

TECHNICAL DATA

PHYSICAL

- Housing: Grey thermoplastic
Flammability rating: UL 94 V-0
- Contact: Phosphor-bronze
- Plating: 0.76 µm (30µ") Gold/GXT over
1.27 µm (50 µ") nickel

ELECTRICAL PERFORMANCE

- Current rating: 1 A continuous
- Insulation resistance: 1×10^5 MΩ min.
- Contact resistance: 15 mΩ max.
- Dielectric withstanding voltage: 1000 V min. rms (sea level)

MECHANICAL PERFORMANCE

- Mating cycles (durability): 100

OPERATING TEMPERATURE RANGE

- -65°C to +105°C

PACKAGING

- Tubes

PROCESSING INFORMATION

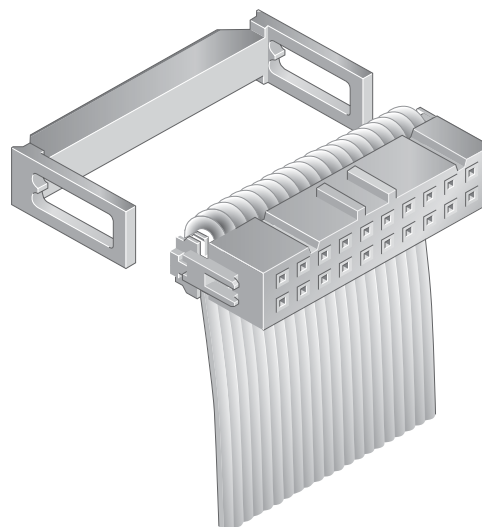
- Compatible with wave soldering processes

REFERENCE INFORMATION

-  File no. E66906
-  File no. LR46923
- Product drawing: By 5-digit base part number
- Product specification: BUS-12-095

RoHS INFORMATION

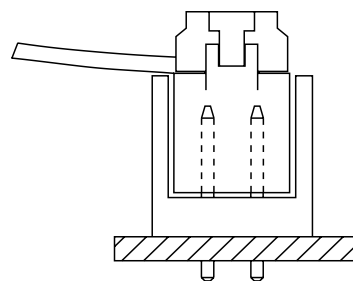
- This product is RoHS compatible according to the European Union Directive 2002/95/IEC



MATING DATA

- BergStik® unshrouded vertical headers 8, 12
- Quickie® shrouded low profile headers 40, 42
- Quickie® shrouded eject latch headers 44

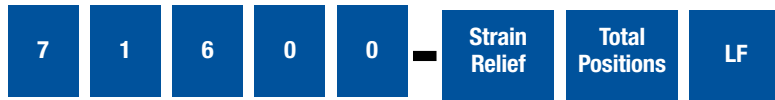
TYPICAL APPLICATIONS



Low profile Latch (Style 2)

Quickie™ IDC Receptacle

PART NUMBERS



Note: 4 position available without strain relief only

04, 06, 08, 10, 14, 16, 20, 26, 34, 40, 50, 60, 64

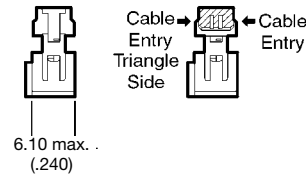
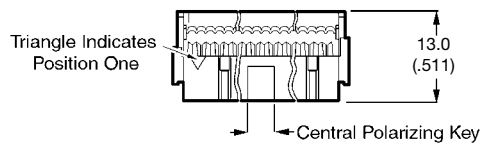
- 0 = Standard (Mates with Shrouded Eject Latch Header Latch 1)
- 1 = None (Mates with Shrouded Eject Latch Header Latch 2)
- 6 = Latching (Mates with Low Profile Headers)

71600 - 0XXLF

XX = 04, 06, 08, 10, 16, 20

CORE RANGE

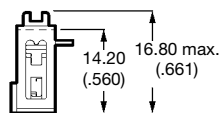
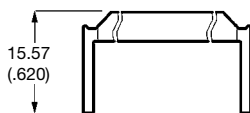
PRODUCT



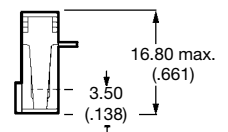
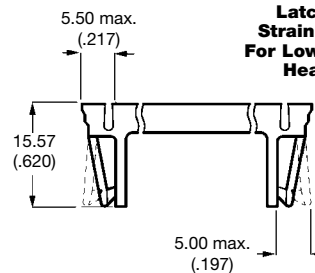
Cable specification:

Wire size: AWG 28 stranded
AWG 30 solid
Pitch: 1.27 mm (.050")

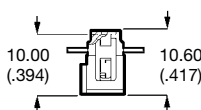
0 Standard Strain Relief



6 Latching Strain Relief For Low Profile Header



1 Without Strain Relief



Dimension : mm (inch)

FEATURES

- Ideal for daisy chain applications
- Single piece design provides one of the lowest applied costs in the industry

TECHNICAL DATA

PHYSICAL

- Housing: Blue thermoplastic
- Flammability rating: UL 94 V-0
- Pin: Phosphor-bronze
- Plating: Tin over 1.27 μm (50 μ "") nickel

ELECTRICAL PERFORMANCE

- Current rating: 1 A continuous
- Insulation resistance: $1 \times 10^5 \text{ M}\Omega$ min.
- Contact resistance: 15 m Ω max.
- Dielectric withstanding voltage: 1000 V min. rms (sea level)

OPERATING TEMPERATURE RANGE

- -65°C to +125°C

PACKAGING

- Tubes

PROCESSING INFORMATION

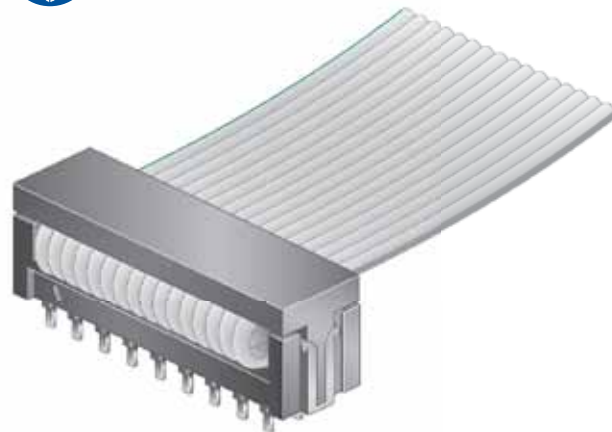
- Compatible with wave and vapor phase soldering processes — Low temperature

REFERENCE INFORMATION

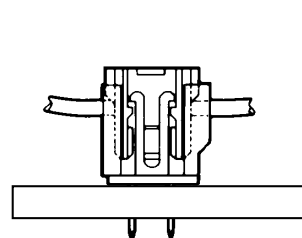
-  File no. E66906
-  File no. LR46923
- Product drawing: By 5-digit base part number
- Product specification: BUS-12-095

RoHS INFORMATION

- This product is RoHS compatible according to the European Union Directive 2002/95/IEC



TYPICAL APPLICATIONS



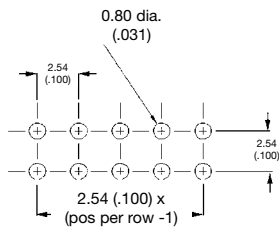
Quickie™ IDC PCB Connector

PART NUMBERS

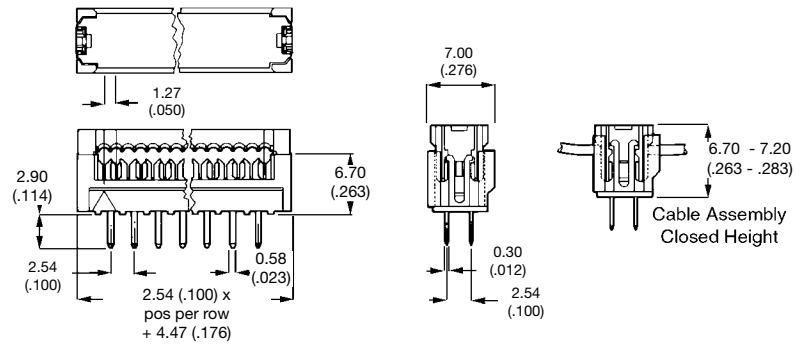


06 = 6 pos.	18 = 18 pos.	34 = 34 pos.
08 = 8 pos.	20 = 20 pos.	40 = 40 pos.
10 = 10 pos.	24 = 24 pos.	50 = 50 pos.
14 = 14 pos.	26 = 26 pos.	60 = 60 pos.
16 = 16 pos.	30 = 30 pos.	64 = 64 pos.

PRODUCT



Recommended PCB layouts



Dimension : mm (inch)

TECHNICAL DATA

PHYSICAL

- Housing: High-temperature, black thermoplastic
- Flammability rating: UL 94 V-0
- Pin: Phosphor-bronze
- Plating: Gold/GXT over 1.27 μm (50 μ'') nickel



ELECTRICAL PERFORMANCE

- Current rating: 3 A continuous
- Insulation resistance: $1 \times 10^5 \text{ M}\Omega$ min.
- Contact resistance: 25 m Ω max.
- Dielectric withstanding voltage: 650 V
- Voltage rating: 200 V.

MECHANICAL PERFORMANCE

- Mating cycles (durability): 100.

OPERATING TEMPERATURE RANGE

- -55°C to +125°C

PACKAGING

- Standard: TMT in tubes (04 to 06 pos. packed in box)
- SMT in Tape-and-reel
- Optional: SMT in Tubes

PROCESSING INFORMATION

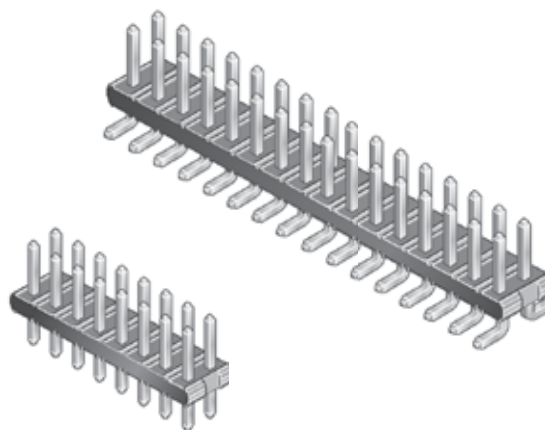
- Compatible with wave, vapor-phase, and IR reflow soldering processes

REFERENCE INFORMATION

- File no. E66906
- File no. LR46923
- Product drawing: 57102 or 57202
- Product specification: DPS-12-011 and GS-12-163
- Tape and Reel packaging data: TA-884

RoHS INFORMATION

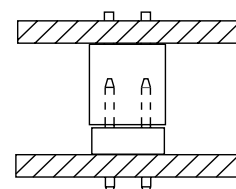
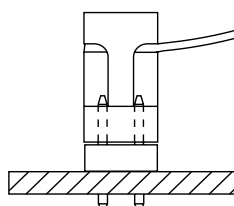
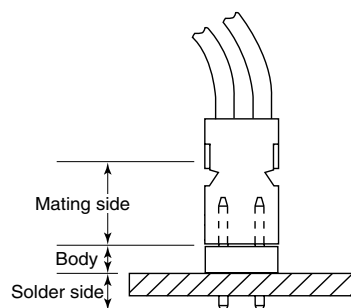
- This product is RoHS compatible according to the European Union Directive 2002/95/IEC



MATING DATA

■ Minitek™ ctw contacts and housings	70
■ Minitek™ Vertical receptacles	58
■ Minitek™ Shunts	60
■ Minitek™ IDC receptacles	74

TYPICAL APPLICATIONS



Minitek™ Unshrouded Vertical Headers

PART NUMBERS



1 = Through Mount (TMT)
2 = Surface Mount (SMT)

G = 0,76 µm (30µ") gold/GXT on mating area,
2-6 µm (79-237µ") Tin on solder side
F = Gold flash on mating area,
2-6 µm (79-237µ") Tin on solder side

02 to 25 (TMT)
02 to 25 (SMT)

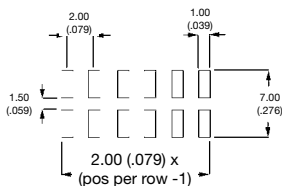
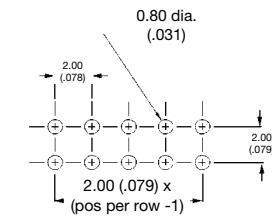
U = Tube without cap (TMT)
A = Tape-and-reel with cap (SMT)

57202 - G 52 - XXALF
XX = 02, 03, 04, 05, 06, 08, 10

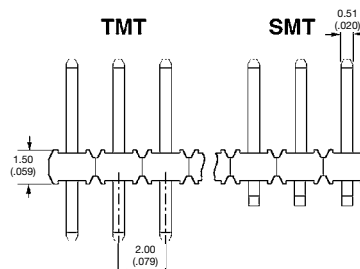
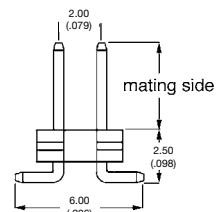
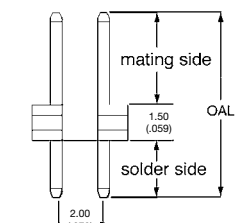
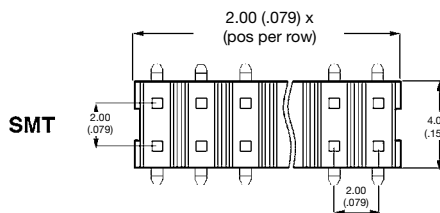
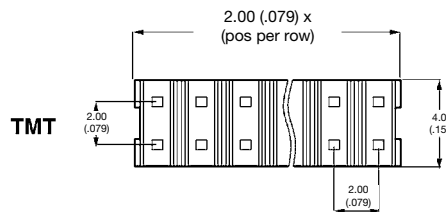
CORE RANGE

Surface Mount			Through Mount			
Pin Style	Mating side		Pin Style	Mating Side	Solder Side	OAL
51	2.00	(.079)	06	4.00 (.157)	2.50 (.098)	8.00 (.315)
52	4.00	(.157)	08	4.00 (.157)	3.00 (.118)	8.50 (.335)

PRODUCT



Recommended PCB layouts



Dimension : mm (inch)

2.00 mm (.079")

FEATURES

- High temperature plastic
- Selective plating

TECHNICAL DATA

PHYSICAL

- Housing: High-temperature, black thermoplastic
- Flammability rating: UL 94 V-0
- Pin: Phosphor-bronze
- Plating: Gold/GXT over 1.27 μm (50 μ'') nickel



ELECTRICAL PERFORMANCE

- Current rating: 3 A continuous
- Insulation resistance: $1 \times 10^5 \text{ M}\Omega \text{ min.}$
- Contact resistance: 25 m Ω max.
- Dielectric withstanding voltage: 650 V
- Voltage rating: 200 V.

MECHANICAL PERFORMANCE

- Mating cycles (durability): 100.

OPERATING TEMPERATURE RANGE

- 55°C to +125°C

PACKAGING

- Tubes (04 to 06 pos. packed in box)

PROCESSING INFORMATION

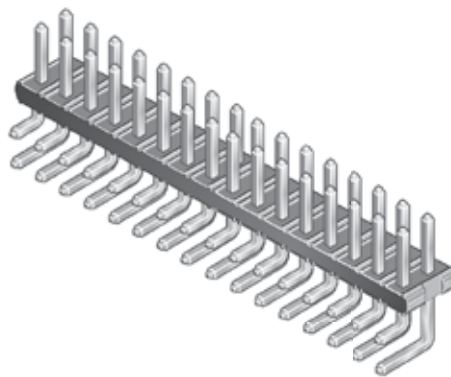
- Compatible with wave, vapor-phase, and IR reflow soldering processes

REFERENCE INFORMATION

- File no. E66906
- File no. LR46923
- Product drawing: 98423
- Product specification: DPS-12-011 and GS-12-163

RoHS INFORMATION

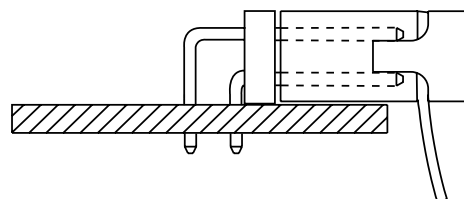
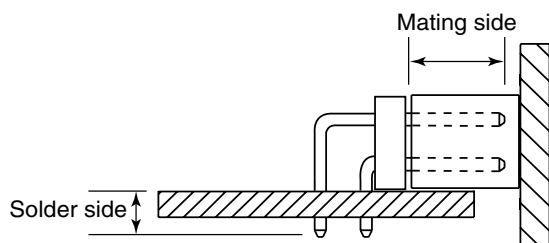
- This product is RoHS compatible according to the European Union Directive 2002/95/IEC



MATING DATA

Minitek™ ctw contacts and housings	70
Minitek™ Vertical receptacles	58
Minitek™ Shunts	60
Minitek™ IDC receptacles	74

TYPICAL APPLICATIONS



Minitek™ Unshrouded Right Angle Headers

PART NUMBERS

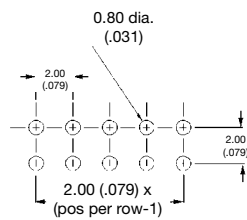


G = 0,76 µm (30µ") gold/GXT on mating area,
2-6 µm (79-237µ") Tin on solder side
F = Gold flash on mating area,
2-6 µm (79-237µ") Tin on solder side

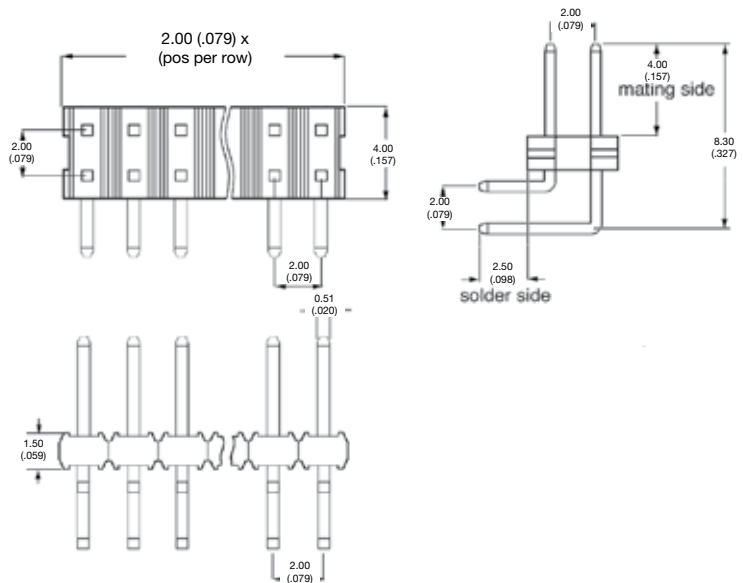
02 to 25

2.00 mm (.079")

PRODUCT



Recommended PCB layouts



Dimension : mm (inch)

TECHNICAL DATA

PHYSICAL

- Housing: High-temperature, black thermoplastic
- Flammability rating: UL 94 V-0
- Pin: Phosphor-bronze
- Plating: Gold/GXT over 1.27 μm (50 μ "") nickel

ELECTRICAL PERFORMANCE

- Current rating: 3 A continuous
- Insulation resistance: $1 \times 10^5 \text{ M}\Omega$ min.
- Contact resistance: 25 m Ω max.
- Dielectric withstanding voltage: 650 V
- Voltage rating: 200 V.

MECHANICAL PERFORMANCE

- Mating cycles (durability): 100.

OPERATING TEMPERATURE RANGE

- -55°C to +125°C

PACKAGING

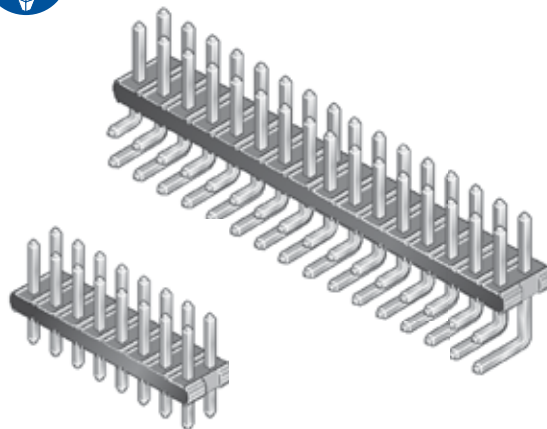
- Tubes (04 to 06 pos. packed in box)
- Tape on reel with pick up cap

PROCESSING INFORMATION

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

REFERENCE INFORMATION

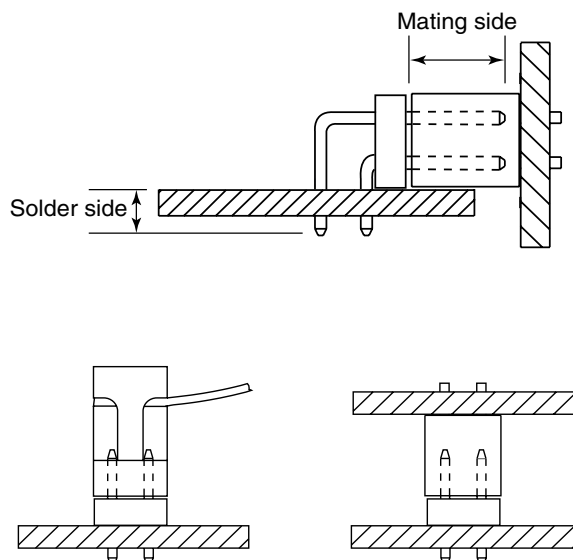
-  File no. E66906
-  File no. LR46923
- Product drawing: by 8-digit base part number
- Product specification: DPS-12-011 and GS-12-163
- Application specification: TA-895
- Reflow profile: TA-842



MATING DATA

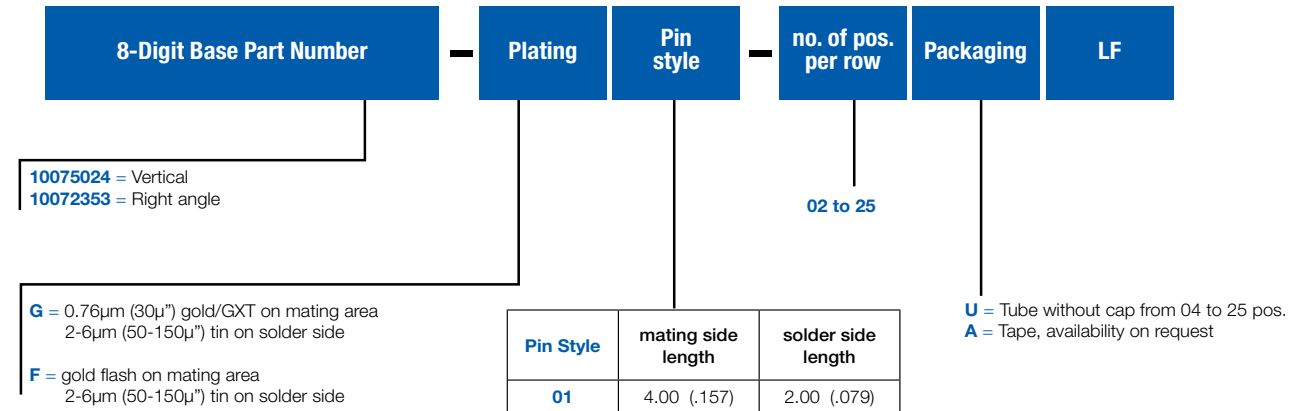
■ Minitek™ ctw contacts and housings	70
■ Minitek™ Vertical receptacles	58
■ Minitek™ Shunts	60
■ Minitek™ IDC receptacles	74

TYPICAL APPLICATIONS



Minitek™ Unshrouded Headers, Pin-in-Paste

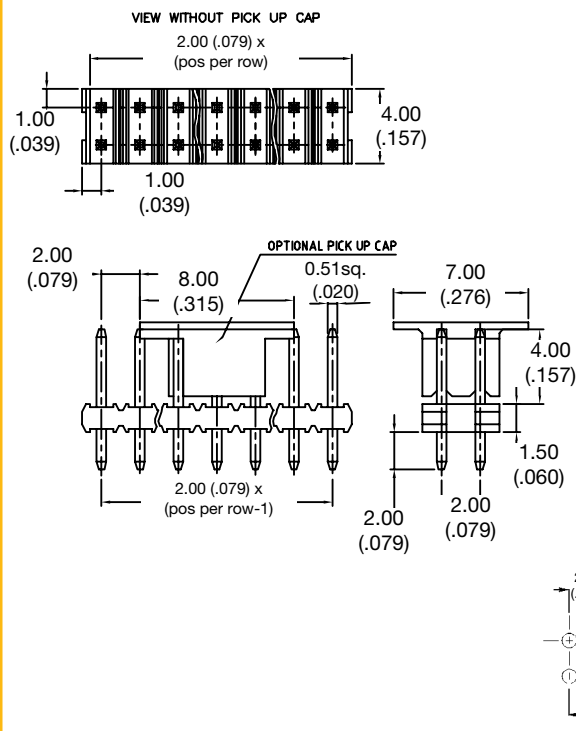
PART NUMBERS



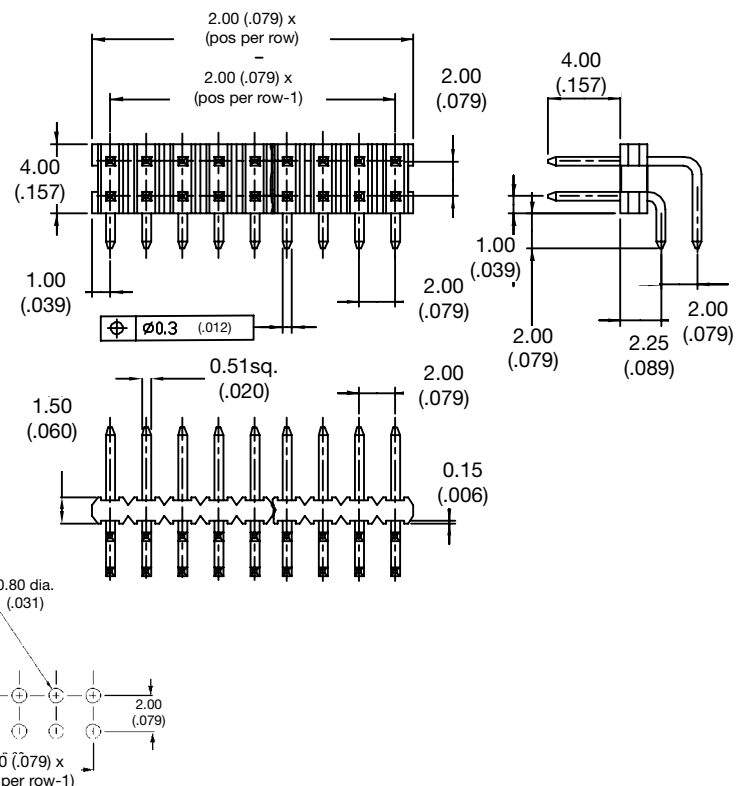
2.00 mm (.079")

PRODUCT

10075024 Vertical



10072353 Right angle



Dimension : mm (inch)

Recommended PCB layouts

FEATURES

- Wide variety of stack heights in 0.13 mm increments
- Custom sizes to meet your specific design requirements

TECHNICAL DATA

PHYSICAL

- Housing: High-temperature, black thermoplastic
- Flammability rating: UL 94 V-0
- Pin: Phosphor-bronze
- Plating: Gold/GXT over over 1.27 μm (50 μ) nickel



ELECTRICAL PERFORMANCE

- Current rating: 2 A continuous
- Insulation resistance: $1 \times 10^5 \text{ M}\Omega$ min.
- Contact resistance: 25 m Ω max.
- Dielectric withstanding voltage: 650 V
- Voltage rating: 200 V.

MECHANICAL PERFORMANCE

- Mating cycles (durability): 100.

OPERATING TEMPERATURE RANGE

- 55°C to +125°C

PACKAGING

- Standard: in bags

PROCESSING INFORMATION

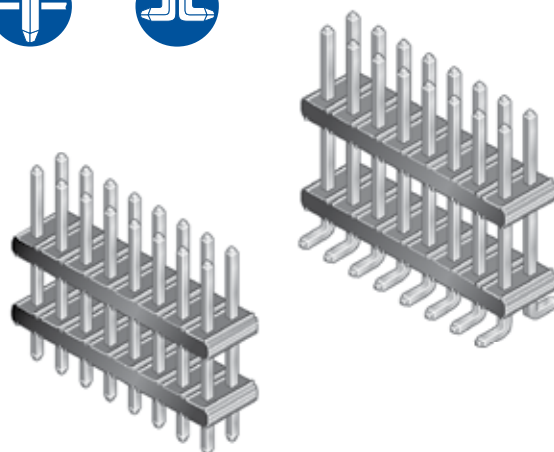
- Compatible with wave, vapor-phase, and IR reflow soldering processes

REFERENCE INFORMATION

- File no. E66906
- File no. LR46923
- Product drawing: 59112, 59132, or 59202
- Product specification: DPS-12-011

RoHS INFORMATION

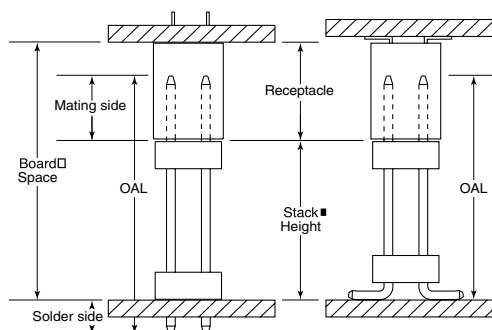
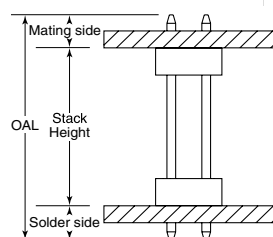
- This product is RoHS compatible according to the European Union Directive 2002/95/IEC



MATING DATA

Minitek™ ctw contacts and housings	70
Minitek™ Vertical receptacles	58
Minitek™ Shunts	60
Minitek™ IDC receptacles	74

TYPICAL APPLICATIONS



Minitek™ Unshrouded Stacking Headers

PART NUMBERS

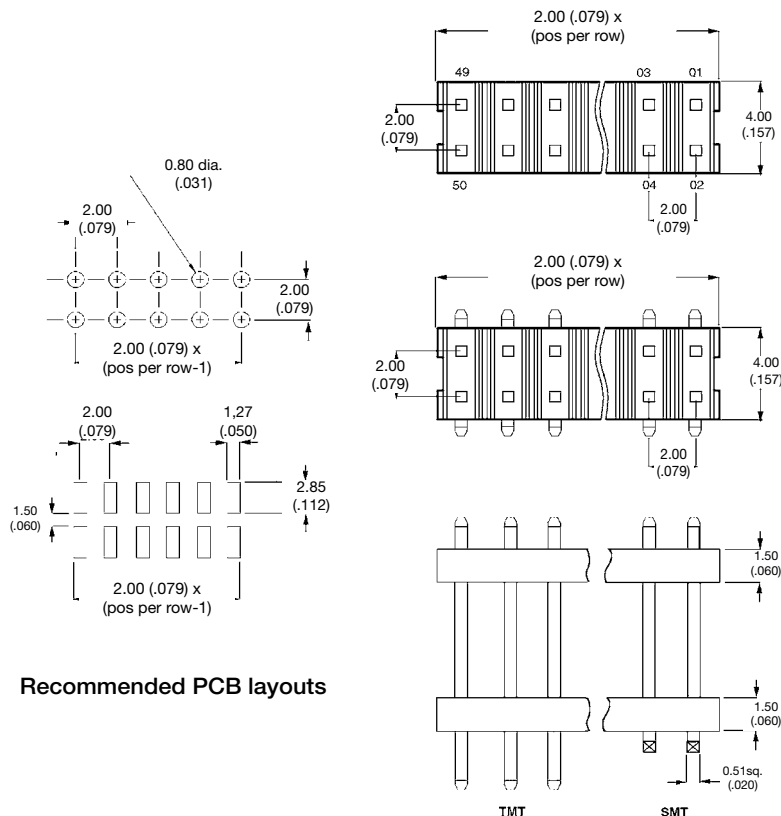
Compile your own part number using custom dimensions (Please allow for initial setup on our system)

5	9	Lead	Solder Side Option	2	Plating	Pin Style	Positions Per Row	Stack Height	LF
1 = Through Mount (TMT) 2 = Surface Mount (SMT) 1 = 2.50 3 = 3.00 0 = SMT		T = 0,76 µm (30µ") gold/GXT on mating side, tin on solder side		02 to 25 (TMT) 02 to 25 (SMT)		xxx = mm Specify mm [e.g., 037 = 03.7 mm] in 0.1 mm increments			

Pin Style	Overall length (OAL)	
	(TMT)	(SMT)
22	8.20 (.323)	6.53 (.257)
24	9.55 (.376)	7.87 (.310)
26	10.19 (.401)	8.51 (.335)
28	11.79 (.464)	10.11 (.398)
30	13.54 (.533)	11.86 (.467)
32	14.10 (.555)	12.42 (.489)
34	15.60 (.614)	13.92 (.548)
36	17.09 (.473)	15.42 (.607)
38	19.08 (.751)	17.40 (.685)
40	21.08 (.830)	19.41 (.764)

2.00 mm (.079")

PRODUCT



Recommended PCB layouts

Dimension : mm (inch)

The board spacing
is the stack height of this header,
plus the height of the receptacle
(see application drawings on opposite page)

FEATURES

- Two housing heights: 2.30 mm, 4.50 mm
- Dual-beam contact design for highly reliable electrical performance

TECHNICAL DATA

PHYSICAL

- Housing: High-temperature, black thermoplastic
- Flammability rating: UL 94 V-0
- Contact: Phosphor-bronze Beryllium-copper – 63453
- Plating: Gold/GXT over 1.27 μm (50 μin) nickel



ELECTRICAL PERFORMANCE

- Current rating: 2 A continuous
- Insulation resistance: $1 \times 10^5 \text{ M}\Omega$ min.
- Contact resistance: 20 m Ω
25 m Ω – 63453
- Dielectric withstanding voltage: 650 V
- Voltage rating: 200 V.

MECHANICAL PERFORMANCE

- Mating cycles (durability): 25
100 – 63453
- Contact retention to housing: 2.20 N (227 gf) min.
4.90 N (500 gf) min. – 63453
- Insertion force per contact: 1.80 N (184 gf) max.
1.95 N (200 gf) – 63453
- Withdrawal force per contact: 0.20 N (20 gf) min.

OPERATING TEMPERATURE RANGE

- 55°C to +125°C

PACKAGING

- Standard: TMT in Tubes
SMT in Tape-and-reel
- Optional: Tubes (SMT)

PROCESSING INFORMATION

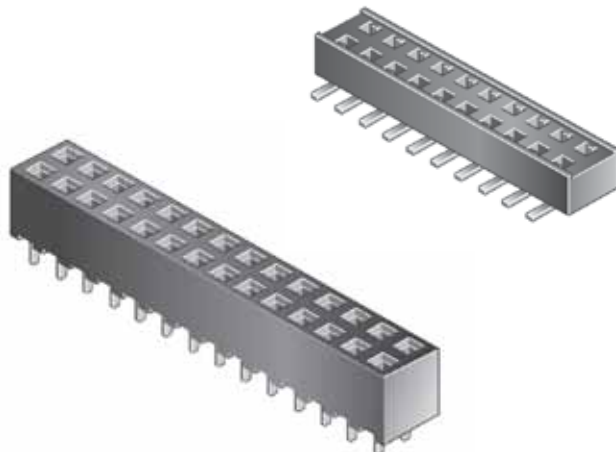
- Compatible with wave, vapor-phase, and IR reflow soldering processes

REFERENCE INFORMATION

- File no. E66906
- File no. LR46923
- Product drawing: by 5-digit base part number
- Product specification: GS-12-008
DPS-12-011 – for 63453

RoHS INFORMATION

- This product is RoHS compatible according to the European Union Directive 2002/95/IEC



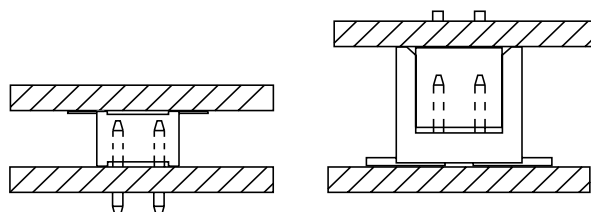
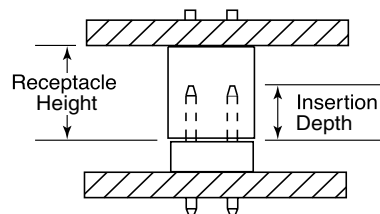
MATING DATA

- Minitek™ Unshrouded headers 50, 52, 56
- Minitek™ Shrouded headers 62, 64

INSERTION DEPTH

- 4.50 mm height: 3.00 mm min. to 4.30 mm max. [provides .381 mm wipe]
- 2.30 mm height – Top Entry: 1.30 mm min. to 2.20 mm max. [provides .381 mm wipe]
- 2.30 mm height – Bottom Entry: 1.40 mm min. to 2.20 mm max. [provides .381 mm wipe] plus board thickness

TYPICAL APPLICATIONS



Minitek™ Vertical Receptacles

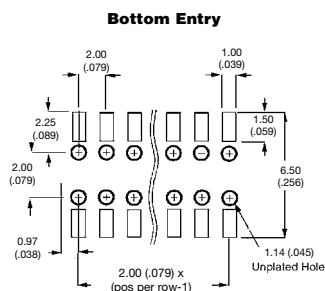
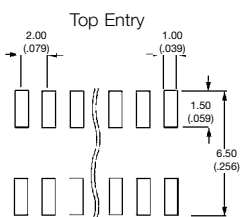
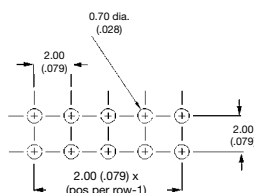
PART NUMBERS

5-Digit Base Part Number				1	Total Positions	Packaging	LF										
<table><tr><th colspan="3">Through Mount (TMT)</th></tr><tr><th>Height</th><th></th><th>Entry</th></tr><tr><td>63453</td><td>4.50</td><td>(.177)</td><td>Top</td></tr></table>				Through Mount (TMT)			Height		Entry	63453	4.50	(.177)	Top	1	Total Positions	Packaging	LF
				Through Mount (TMT)													
Height		Entry															
63453	4.50	(.177)	Top														
Surface Mount (SMT)																	
55510	4.50	(.177)	Top	1 = 0,76 μm (30μ") gold/GXT on mating area, 2-6 μm (79-237μ") Tin on solder side	04 to 50 Top Entry 04 to 30 Bottom Entry	- (dash) = Tubes (TMT) TR = Tape-and-reel (SMT)											
55508	2.30	(.090)	Top														
91596	2.30	(.090)	Bottom														

1 = 0,76 µm (30µ") gold/GXT on mating area,
2-6 µm (79-237µ") Tin on solder side

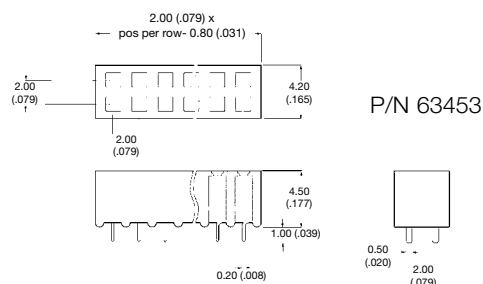
55510 - 1XXTRLF **CORE RANGE**
XX = 04, 06, 08, 10, 12, 16, 20

PRODUCT

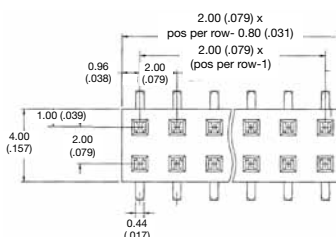


Recommended PCB layouts

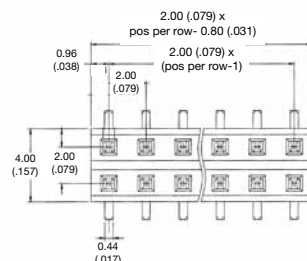
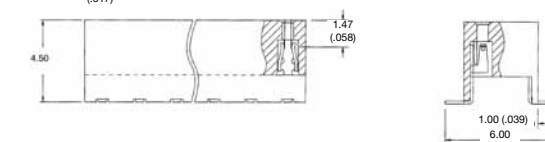
Dimension : mm (inch)



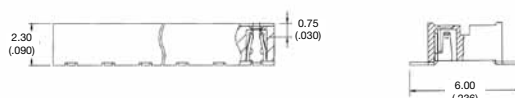
P/N 63453



P/N 55510



P/N 55508



FEATURES

- Early entry, dual-beam contacts provide long wiping action for reliable electrical contact

TECHNICAL DATA

PHYSICAL

- Housing: Black thermoplastic
- Flammability rating: UL 94 V-0
- Contact: Phosphor-bronze
- Plating: Gold/GXT or tin-lead over 1.27 μm (50 μin) nickel

ELECTRICAL PERFORMANCE

- Current rating: 1 A continuous
- Insulation resistance: $1 \times 10^5 \text{ M}\Omega$ min.
- Contact resistance: 25 $\text{m}\Omega$
- Dielectric withstanding voltage: 650 V
- Voltage rating: 200 V.

MECHANICAL PERFORMANCE

- Mating cycles (durability): 50
- Insertion force per contact: 6.41 N (650 gf) max.
- Withdrawal force per contact: 0.49 N (50 gf) min.

OPERATING TEMPERATURE RANGE

- 55°C to +125°C

PACKAGING

- Bags

PROCESSING INFORMATION

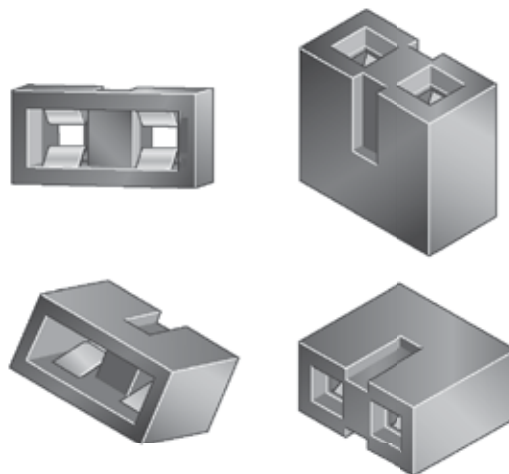
- Compatible with wave, vapor-phase, and IR reflow soldering processes

REFERENCE INFORMATION

- File no. E66906
- File no. LR46923
- Product drawing: by 5-digit base part number
- Product specification: DPS-12-012

RoHS INFORMATION

- This product is RoHS compatible according to the European Union Directive 2002/95/IEC



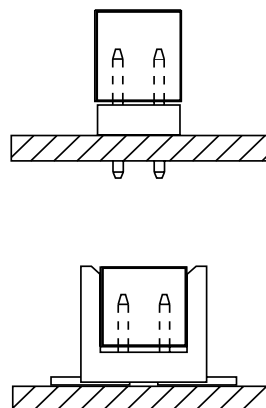
MATING DATA

- | | |
|-------------------------------|------------|
| ■ Minitek™ Unshrouded headers | 50, 52, 56 |
| ■ Minitek™ Shrouded headers | 62, 64 |

INSERTION DEPTH

- 2.24 mm min. [provides .381 mm wipe]

TYPICAL APPLICATIONS



Minitek™ Shunts

PART NUMBERS

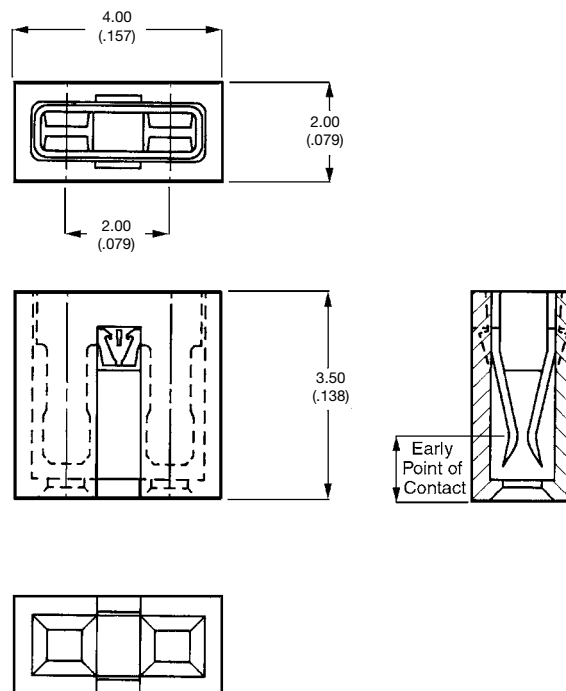


1 = 0,76 µm (30µ") gold/GXT on mating area,
2-6 µm (79-237µ") Tin on solder side
0 = Gold flash

86730 - 101LF **CORE RANGE**

2.00 mm (.079")

PRODUCT



Dimension : mm (inch)

FEATURES

- 4-wall design prevents mis-mating
- Selective plating
- Co-planarity 0.1 (SMT)

TECHNICAL DATA

PHYSICAL

- Housing: High temperature, cream-colored thermoplastic
- Flammability rating: UL 94 V-0
- Pin: Phosphor-bronze
- Plating: Gold/GXT over 1.27 µm (50 µ") nickel



ELECTRICAL PERFORMANCE

- Current rating: 2 A continuous
- Insulation resistance: 1×10^5 MΩ min.
- Contact resistance: 25 mΩ max.
- Dielectric withstanding voltage: 650 V
- Voltage rating: 200 V.

MECHANICAL PERFORMANCE

- Mating cycles (durability): 100

OPERATING TEMPERATURE RANGE

- 40°C to +125°C

PACKAGING

- Standard: TMT in Tubes (04 to 06 pos. packed in box)
SMT in Tape-and-reel
- Optional: SMT in Tubes (04 and 06 in box)

PROCESSING INFORMATION

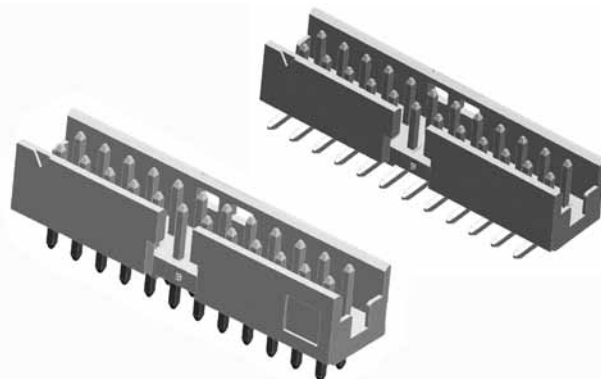
- Compatible with wave, vapor-phase, and IR reflow soldering processes

REFERENCE INFORMATION

- File no. E66906
- File no. LR46923
- Product drawing: 98414 or 98424
- Product specification: DPS-12-011 and GS-12-163
- Tape and Reel packaging data TA-884

RoHS INFORMATION

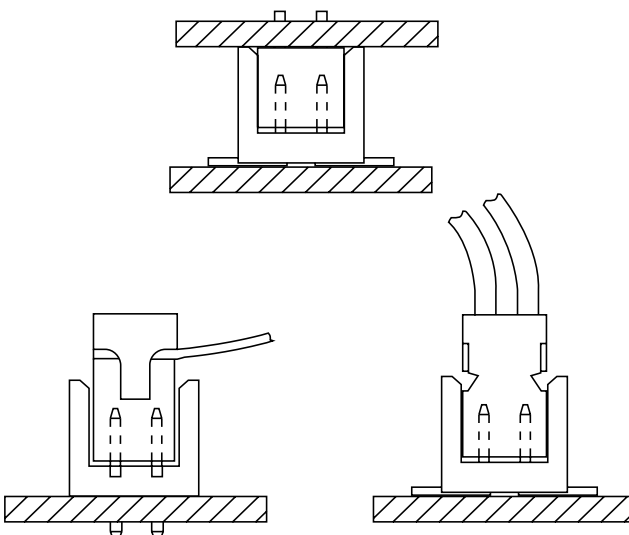
- This product is RoHS compatible according to the European Union Directive 2002/95/IEC



MATING DATA

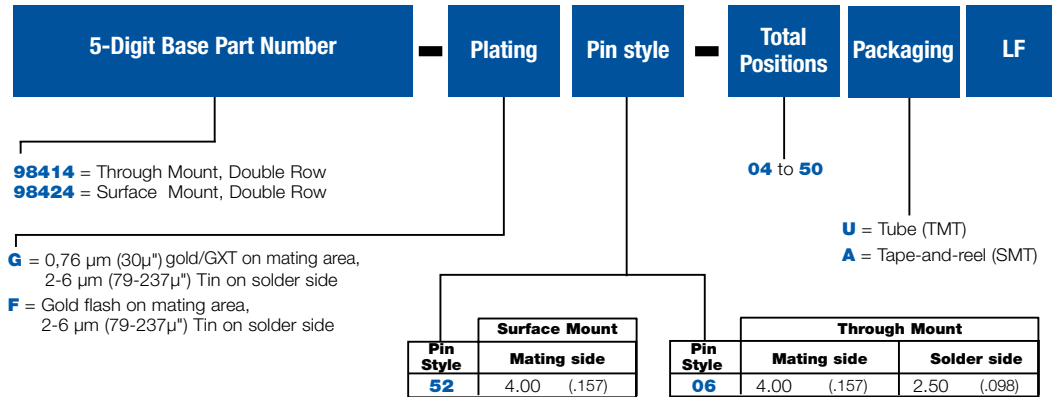
Minitek™ ctw contacts and housings	70
Minitek™ Vertical receptacles	58
Minitek™ Shunts	60
Minitek™ IDC receptacles	74
Minitek™ Active latch	72

TYPICAL APPLICATIONS



Minitek™ Shrouded Vertical Headers

PART NUMBERS

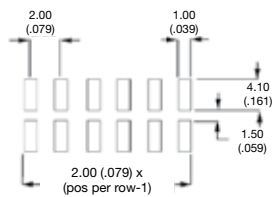
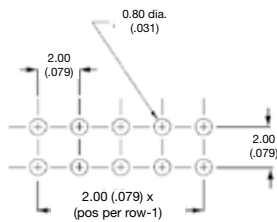


98424 - G 52 - XX ALF
 XX = 04, 06, 08, 10, 12, 16, 20

CORE RANGE

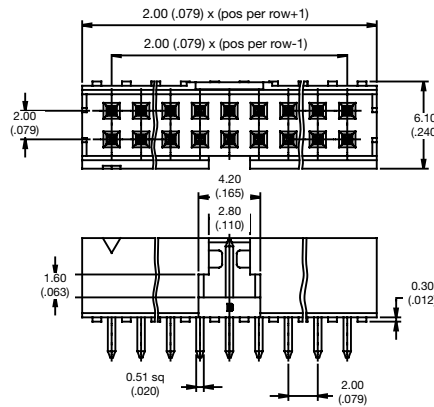
2.00 mm (.079")

PRODUCT

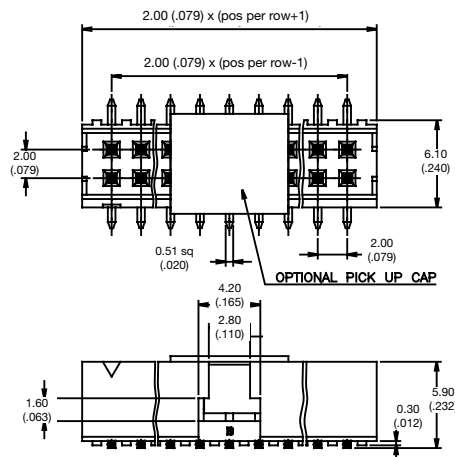
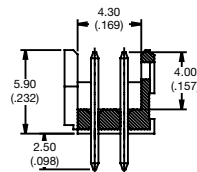


Recommended PCB layouts

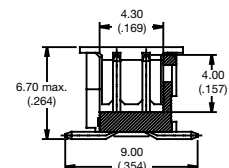
Dimension : mm (inch)



98414 Through mount



98424 Surface mount



FEATURES

- 4-wall design prevents mis-mating
- Selective plating

TECHNICAL DATA

PHYSICAL

- Housing: High temperature, cream-colored thermoplastic
- Flammability rating: UL 94 V-0
- Pin: Phosphor-bronze
- Plating: Gold/GXT over 1.27 μm (50 μin) nickel



ELECTRICAL PERFORMANCE

- Current rating: 2 A continuous
- Insulation resistance: $1 \times 10^5 \text{ M}\Omega \text{ min.}$
- Contact resistance: 25 $\text{m}\Omega \text{ max.}$
- Dielectric withstanding voltage: 650 V
- Voltage rating: 200 V.

MECHANICAL PERFORMANCE

- Mating cycles (durability): 100

OPERATING TEMPERATURE RANGE

- -40°C to $+125^\circ\text{C}$

PACKAGING

- Standard: Tubes (04 pos. packed in box)

PROCESSING INFORMATION

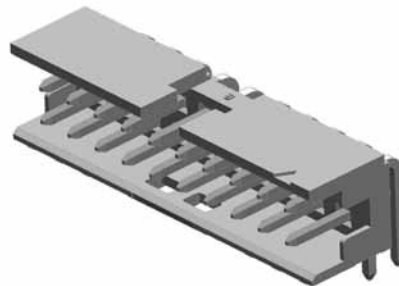
- Compatible with wave, vapor-phase, and IR reflow soldering processes

REFERENCE INFORMATION

- File no. E66906
- File no. LR46923
- Product drawing: 98464
- Product specification: DPS-12-011 and GS-12-163

RoHS INFORMATION

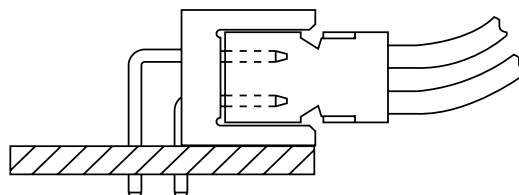
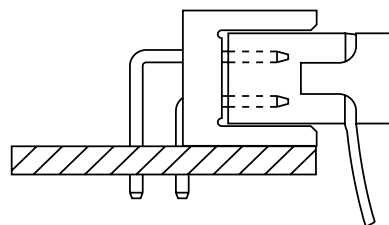
- This product is RoHS compatible according to the European Union Directive 2002/95/IEC



MATING DATA

■ Minitek™ ctw contacts and housings	70
■ Minitek™ Vertical receptacles	58
■ Minitek™ Shunts	60
■ Minitek™ IDC receptacles	74
■ Minitek™ Active latch	72

TYPICAL APPLICATIONS



Minitek™ Shrouded Right Angle Headers

PART NUMBERS



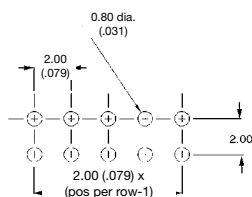
04 to 50 (Double Row)

G = 0,76 µm (30µ") gold/GXT on mating area,
2-6 µm (79-237µ") Tin on solder side

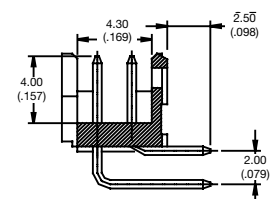
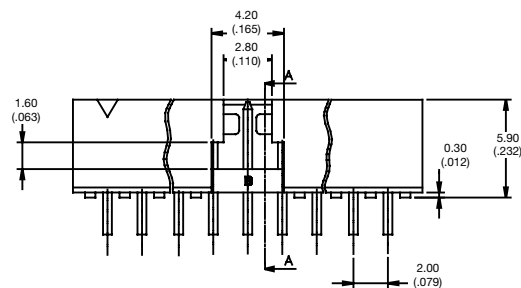
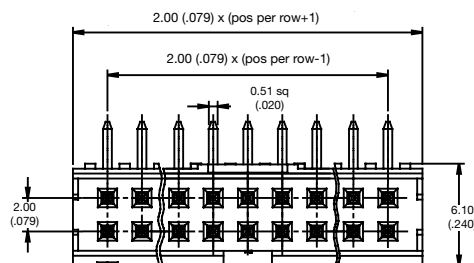
F = Gold flash on mating area,
2-6 µm (79-237µ") Tin on solder side

2.00 mm (.079")

PRODUCT



Recommended PCB layouts



Dimension : mm (inch)

TECHNICAL DATA

PHYSICAL

- Housing: High-temperature, black thermoplastic
- Flammability rating: UL 94 V-0
- Pin: Phosphor-bronze
- Plating: Gold/GXT over 1.27 µm (50µ") nickel

ELECTRICAL PERFORMANCE

- Current rating: 3 A continuous
- Insulation resistance: 1×10^5 MΩ min.
- Contact resistance: 25 mΩ max.
- Dielectric withstanding voltage: 650 V
- Voltage rating: 200 V.



MECHANICAL PERFORMANCE

- Mating cycles (durability): 100.

OPERATING TEMPERATURE RANGE

- -55°C to +125°C

PACKAGING

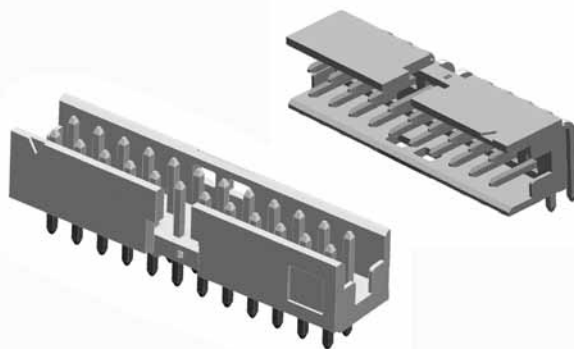
- Tubes (04 pos. packed in box)
- Tape on reel with pick up cap

PROCESSING INFORMATION

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

REFERENCE INFORMATION

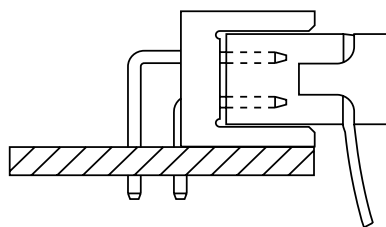
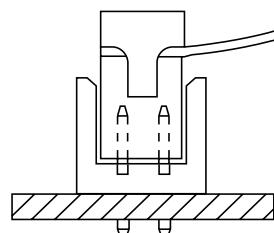
- File no. E66906
- File no. LR46923
- Product drawing: by 8-digit base part number
- Product specification: DPS-12-011 and GS-12-163
- Application specification: TA-895
- Reflow prffile: TA-842



MATING DATA

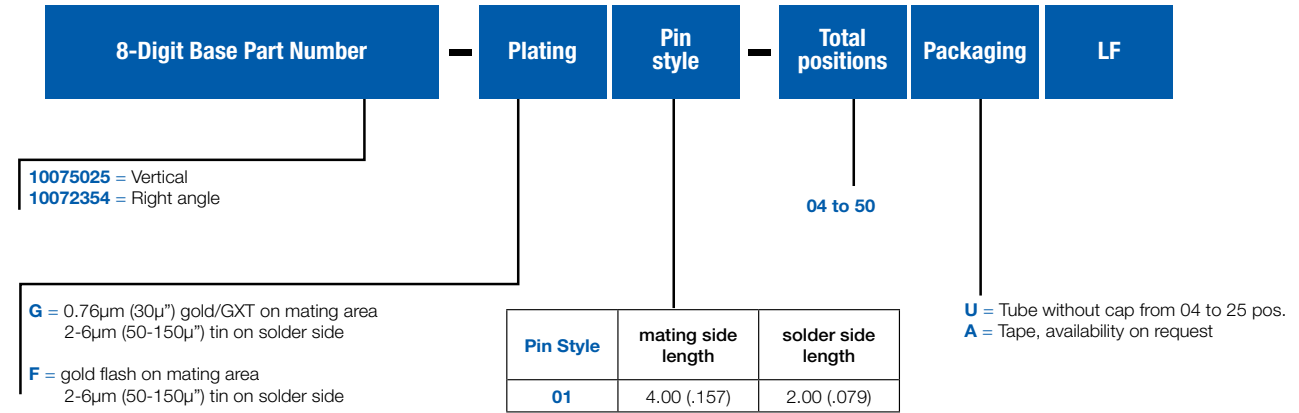
■ Minitek™ ctw contacts and housings	70
■ Minitek™ Vertical receptacles	58
■ Minitek™ Shunts	60
■ Minitek™ IDC receptacles	74
■ Minitek™ Active latch	72

TYPICAL APPLICATIONS



Minitek™ Shrouded Headers, Pin-in-Paste

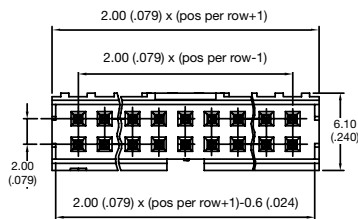
PART NUMBERS



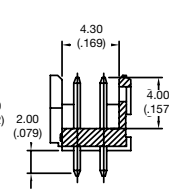
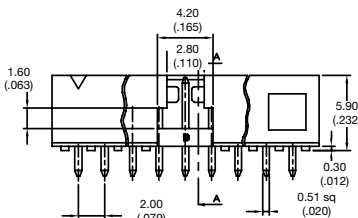
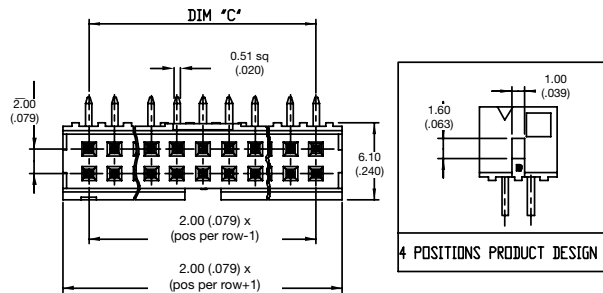
2.00 mm (.079")

PRODUCT

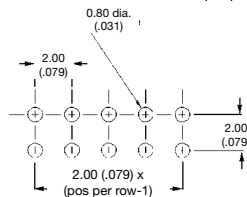
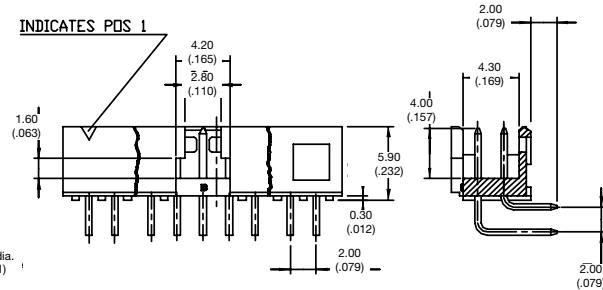
10075025 Vertical



10072354 Right angle



INDICATES POS 1



Dimension : mm (inch)

Recommended PCB layouts

FEATURES

- Secure latching of cable connector
- Easy ejection when required
- Works with IDC connectors with or without strain relief
- Low profile

TECHNICAL DATA

PHYSICAL

- Housing: Body, cream-colored LCP, Latch black PA
- Flammability rating: UL 94 V-0
- Pin: Phosphor-bronze
- Plating: Gold/GXT over 1.27 μm (50 μin) nickel

ELECTRICAL PERFORMANCE

- Current rating: 2 A continuous
- Insulation resistance: $1 \times 10^5 \text{ M}\Omega \text{ min.}$
- Contact resistance: 25 $\text{m}\Omega \text{ max.}$
- Dielectric withstanding voltage: 650 V
- Voltage rating: 200 V.

MECHANICAL PERFORMANCE

- Latching retention force: 30 N min.

OPERATING TEMPERATURE RANGE

- 40°C to +125°C

PACKAGING

- Standard: Tubes

PROCESSING INFORMATION

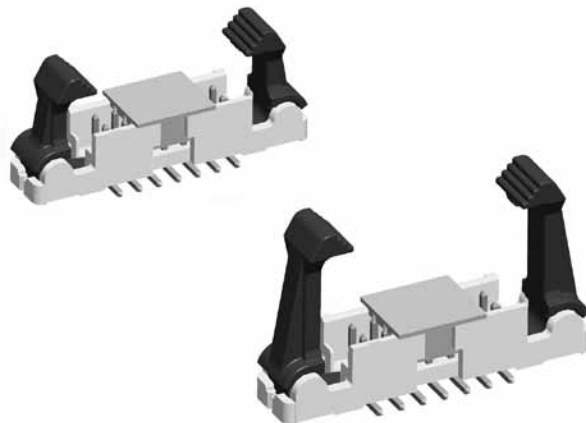
- Compatible with wave, vapor-phase, and IR reflow soldering processes

REFERENCE INFORMATION

- File no. E66906
- File no. LR46923
- Product drawing: 8-digit part number
- Product specification: GS-12-469

RoHS INFORMATION

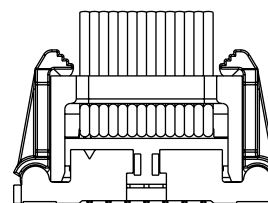
- This product is RoHS compatible according to the European Union Directive 2002/95/IEC



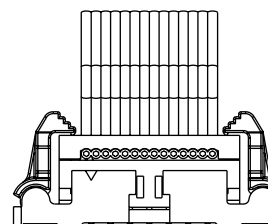
MATING DATA

- Minitek™ IDC receptacles 74

TYPICAL APPLICATIONS



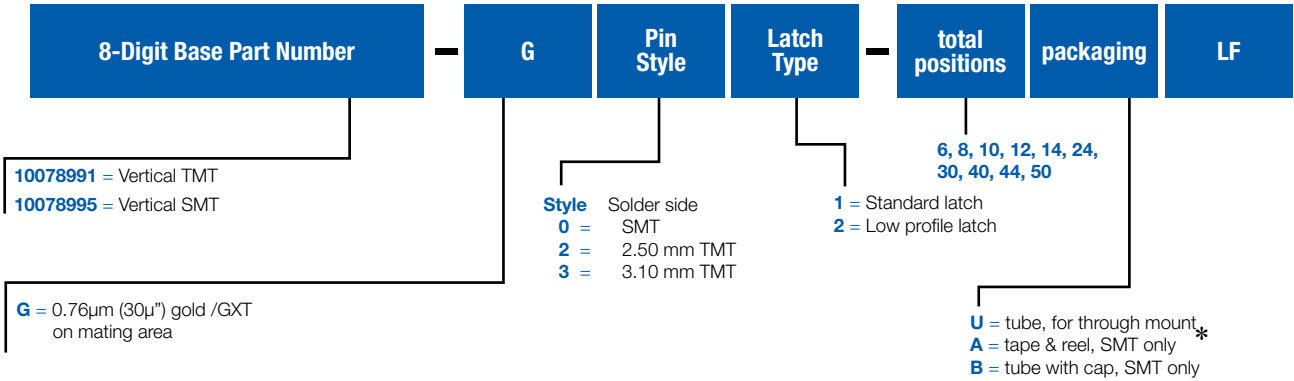
with strain relief
standard latch



without strain relief
low profile latch

Minitek™ Shrouded Eject Latch Headers

PART NUMBERS



10078991 - G 22 - XX U LF
10078995 - G 02 - XX U LF
XX = 06, 08, 10, 12, **CORE RANGE**

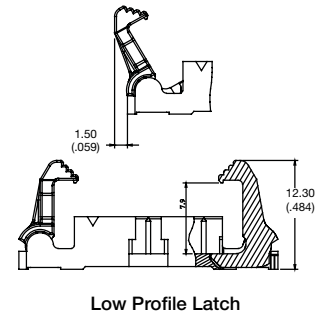
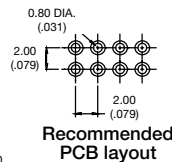
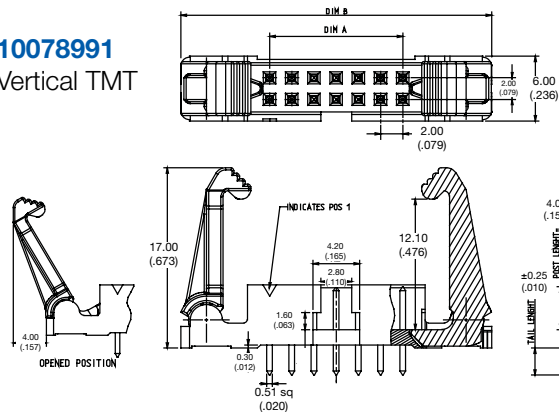
* as available

2.00 mm (.079")

PRODUCT

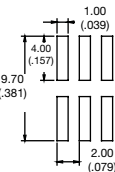
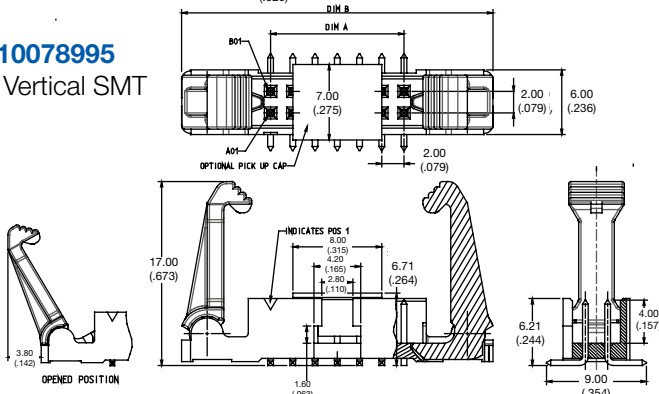
10078991

Vertical TMT

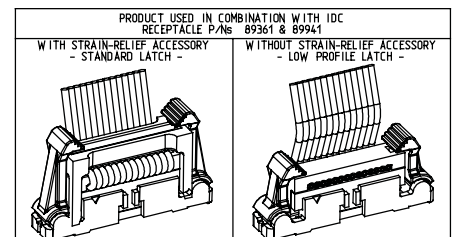


10078995

Vertical SMT



Recommended PCB layout



Dimension : mm (inch)

FEATURES

- Dual-beam contact design for highly reliable electrical performance
- Latching key assures proper alignment and friction retention

TECHNICAL DATA

PHYSICAL

- Housing: Black thermoplastic
- Flammability rating: UL 94 V-0
- Contact: Phosphor-bronze
- Plating: Gold/GXT over 1.27 μm (50 μin) nickel



ELECTRICAL PERFORMANCE

- Current rating: 2 A continuous
- Insulation resistance: $1 \times 10^5 \text{ M}\Omega$ min.
- Contact resistance: 20 m Ω
- Dielectric withstanding voltage: 650 V
- Voltage rating: 200 V.

MECHANICAL PERFORMANCE

- Mating cycles (durability): 100
- Contact retention to housing: 7.83 N (800 gf) min.
- Mating force per contact: 1.77 N (180 gf) max.
- Unmating force per contact: 0.20 N (20gf) min.

OPERATING TEMPERATURE RANGE

- -40°C to +125°C

PACKAGING

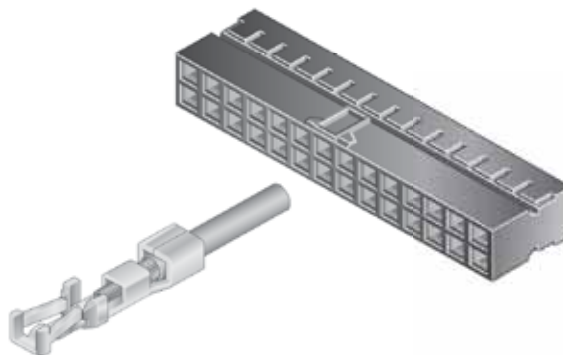
- Reels – Contacts
- Bags – Housings

REFERENCE INFORMATION

- File no. E66906
- File no. LR46923
- Product drawing: 77138 or 77139 – Contact
69307, 90311 – Housing
- Product specification: 110-036
- Application specification: 100-006, TA-959

RoHS INFORMATION

- This product is RoHS compatible according to the European Union Directive 2002/95/IEC



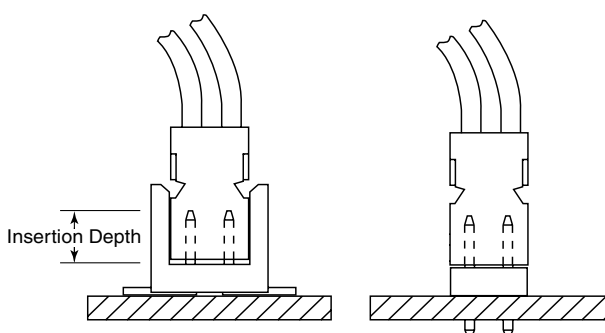
MATING DATA

- Minitek™ Unshrouded headers 50, 52, 56
- Minitek™ Shrouded headers 62, 64

INSERTION DEPTH

- 2.40 mm min. to 3.30 mm max.
[provides .381 mm wipe]
- 3.63 mm min. to 4.00 mm max.
[provides .381 mm wipe in housing]

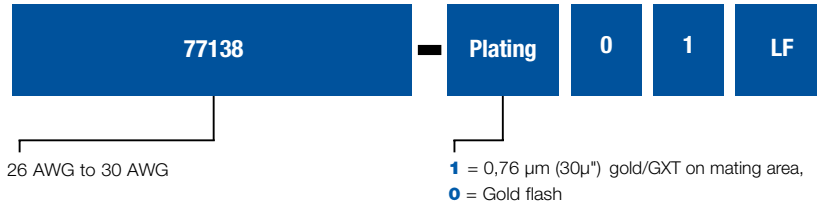
TYPICAL APPLICATIONS



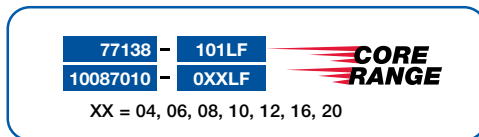
Minitek™ Crimp-to-wire Housings and Contacts

PART NUMBERS

Contacts



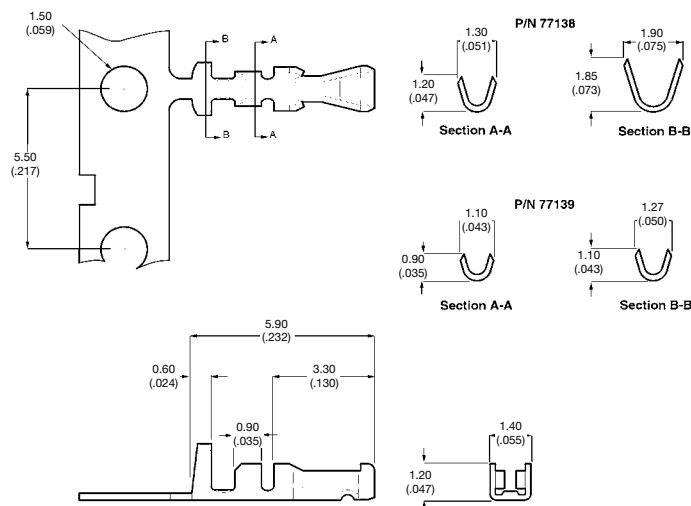
Housings



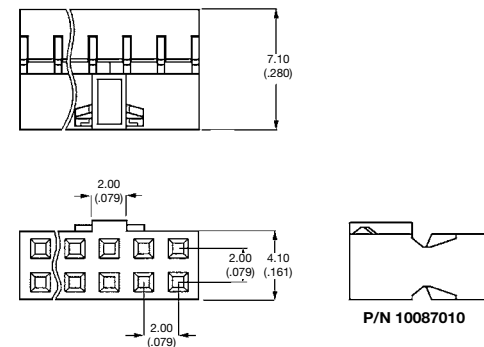
2.00 mm (.079")

PRODUCT

Contacts



Housings



Dimension : mm (inch)

FEATURES

- Latching retention 15/25 N (depending on size) due to latch alone
- Latches with audible click
- Mates with standard Minitek headers
- Latch can be released and parts unmated

TECHNICAL DATA

PHYSICAL

- Housing: Polyamide, black
- Flammability rating: UL 94 V-0

ELECTRICAL PERFORMANCE

- Insulation resistance: $1 \times 10^5 \text{ M}\Omega \text{ min.}$
- Dielectric withstanding voltage: 500 V

MECHANICAL PERFORMANCE

- Latching retention force: 15 N min. (for 2x3 and 2x4 pos)
- Latching retention force: 25 N min. (for 2x5 and 2x25 pos)

OPERATING TEMPERATURE RANGE

- -55°C to +125°C

PACKAGING

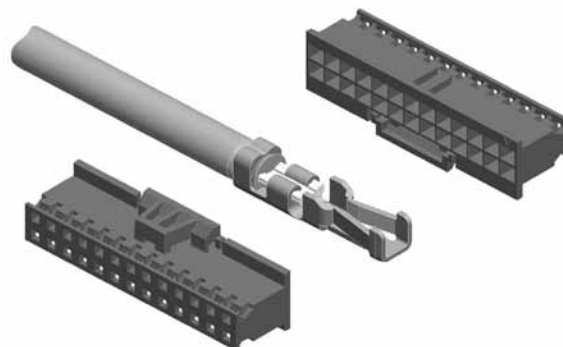
- Standard: Plastic bags

REFERENCE INFORMATION

-  File no. E66906
-  File no. LR46923
- Product drawing: 8-digit part number
- Product specification: GS-12-415

RoHS INFORMATION

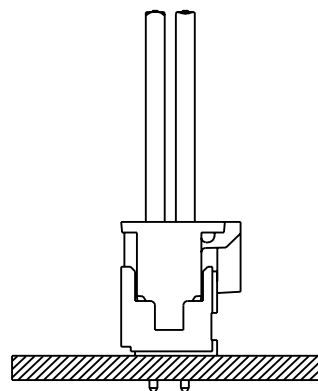
- This product is RoHS compatible according to the European Union Directive 2002/95/IEC



MATING DATA

- | | |
|-----------------------------|------------|
| ■ Minitek™ Shrouded headers | 62, 64, 66 |
| ■ Minitek™ CTW contacts | 70, 72 |

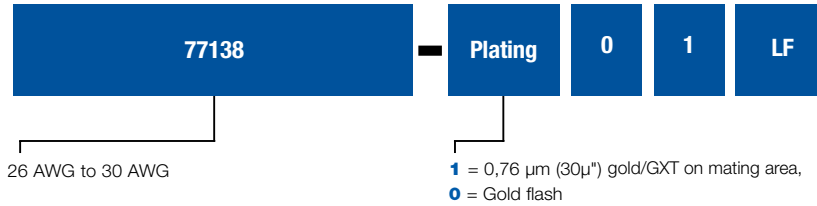
TYPICAL APPLICATIONS



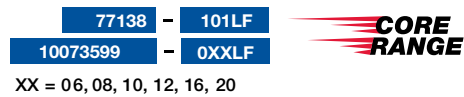
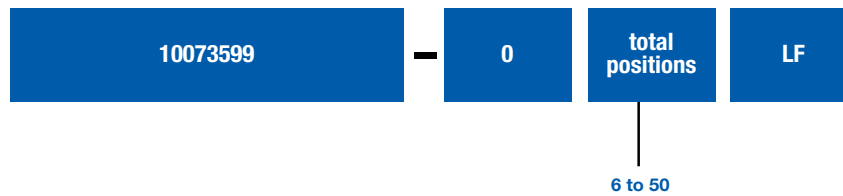
Minitek™ Crimp-to-wire Housings, Active latch

PART NUMBERS

Contacts



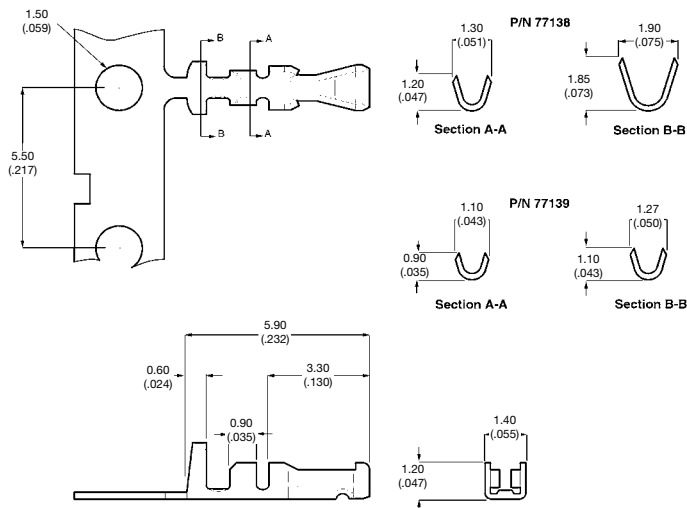
Housings



2.00 mm (.079")

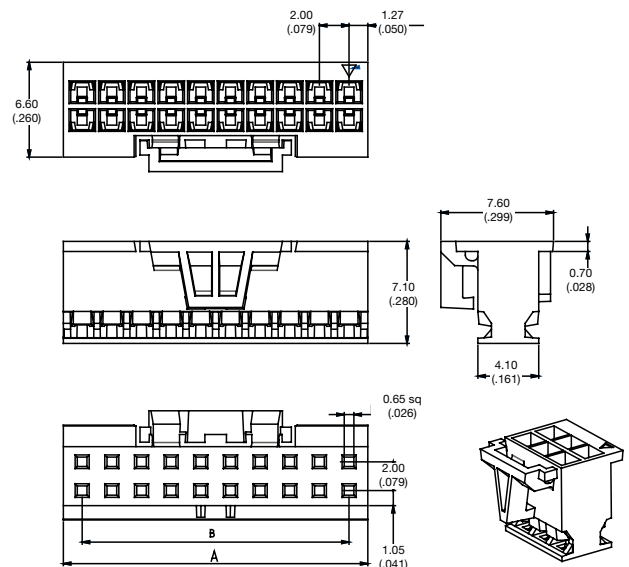
PRODUCT

Contacts



Dimension : mm (inch)

Housings



DESIGN FOR 10073599-006LF
& 10073599-008LF ONLY

FEATURES

- Early entry, single-beam contacts provide long wiping action for reliable electrical contact
- Center key polarization and friction latch options

TECHNICAL DATA

PHYSICAL

- Housing: Black thermoplastic
- Flammability rating: UL 94 V-0
- Contact: Phosphor-bronze
- Plating: Gold/GXT over 1.27 μm (50 μin) nickel



ELECTRICAL PERFORMANCE

- Current rating: 1 A continuous
- Insulation resistance: $1 \times 10^5 \text{ M}\Omega \text{ min.}$
- Contact resistance: 30 m Ω
- Dielectric withstanding voltage: 650 V

MECHANICAL PERFORMANCE

- Mating cycles (durability): 100

OPERATING TEMPERATURE RANGE

- -40°C to +105°C

PACKAGING

- Tubes

REFERENCE INFORMATION

-  File no. E66906
-  File no. LR46923
- Product drawing: 89947 or 89361
- Product specification: BUS-12-115

RoHS INFORMATION

- This product is RoHS compatible according to the European Union Directive 2002/95/IEC



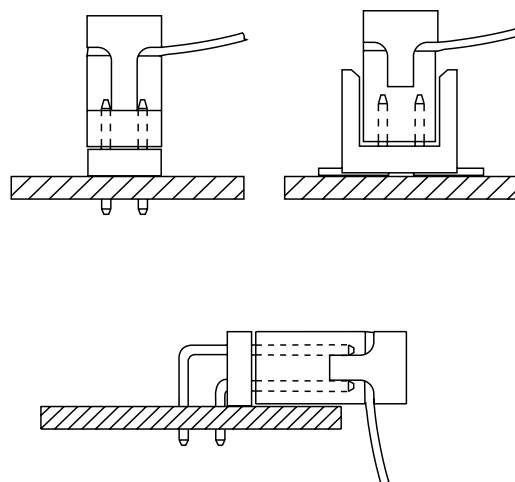
MATING DATA

- | | |
|-------------------------------|------------|
| ■ Minitek™ Unshrouded headers | 50, 52, 56 |
| ■ Minitek™ Shrouded headers | 62, 64 |

INSERTION DEPTH

- 2.55 mm min. to 4.57 mm max.
[provides .381 mm wipe]

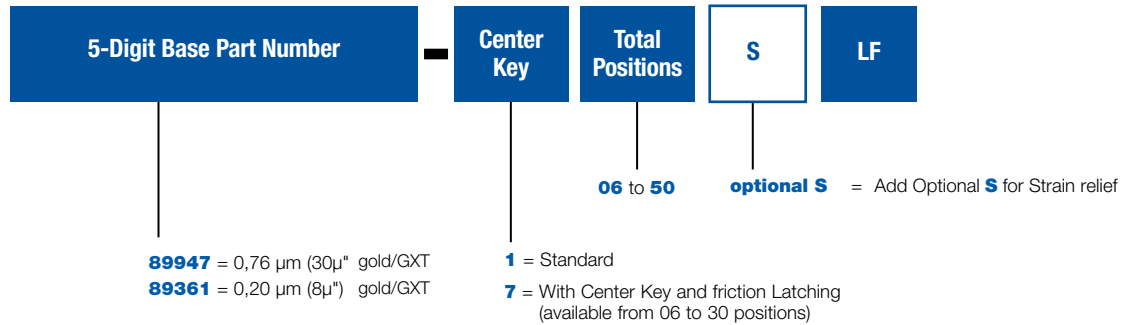
TYPICAL APPLICATIONS



2.00 mm (.079")

Minitek™ IDC Receptacle

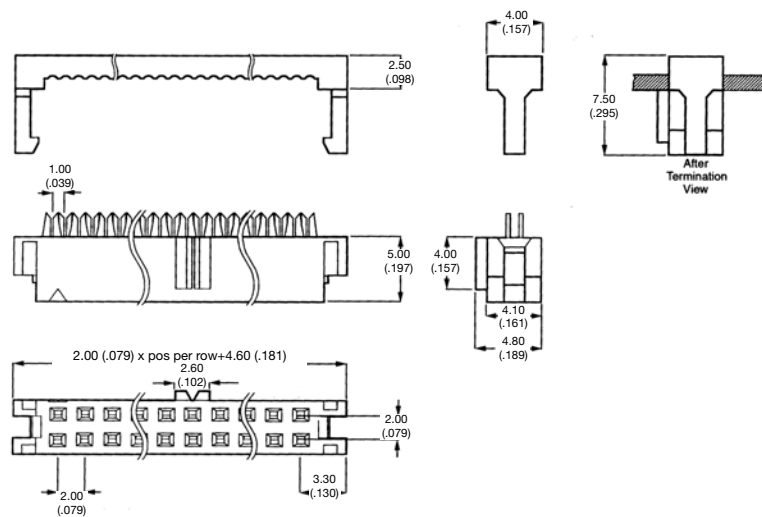
PART NUMBERS



89361 - 7XXLF **CORE RANGE**
XX = 04, 06, 08, 10, 12, 16, 20

2.00 mm (.079")

PRODUCT



Dimension : mm (inch)

MORE OPTIONS

If you need something more than the standard parts in this catalog, Basics+ has many more options to help you in your design process. Here are just some examples.

► Polarized (missing) positions

These are highly specific, so please contact us with your requirement



► Kinked legs

See drawing 69190 and 69192 at www.fciconnect.com



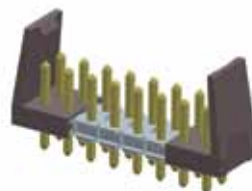
► Press-fit pins

See drawing 94674 at www.fciconnect.com



► Add-on latches for headers

Please contact us with your requirement

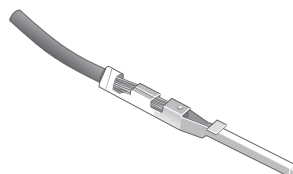


► Wide body headers



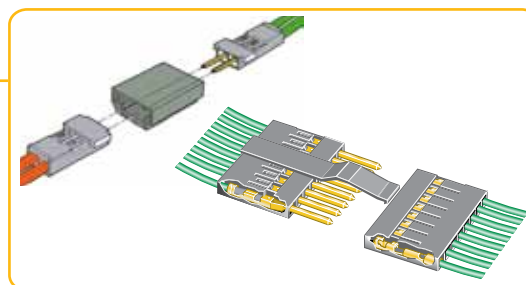
► Crimp-to-wire pin

See drawing 47791 and 75653 at www.fciconnect.com



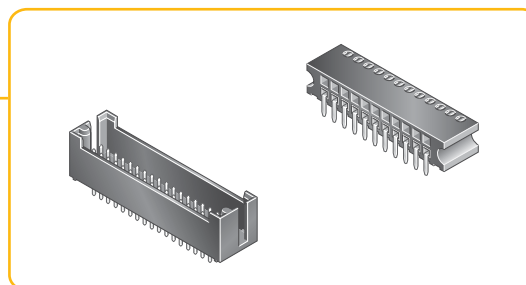
■ Flying latch

See drawing 67009,
68105 and 68106 at
www.fciconnect.com



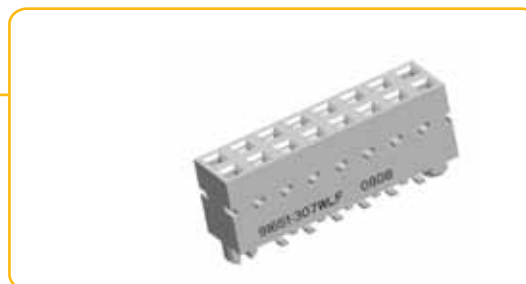
■ Guide pin header / receptacles

See drawing 64991
and 66527 at
www.fciconnect.com



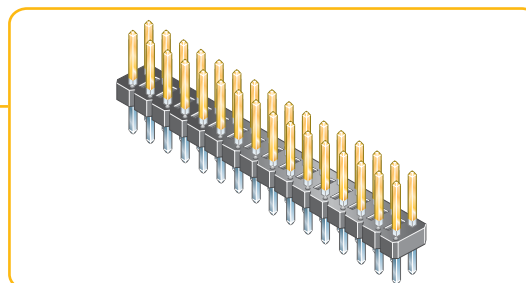
■ Printed housings

Please contact us with
your requirement



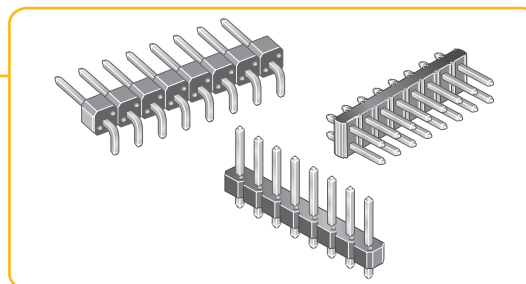
■ Additional plating options

Please contact us with
your requirement



■ Pin-in-paste headers

See drawing 10076801,
10082201 and 10082202 at
www.fciconnect.com



Visit: www.fciconnect.com/basicsdesign to specify your design need

Application Equipment



DUBOX™ CRIMP-TO-WIRE CONTACTS

Contact Description	Wire size	Hand Tool	Mini-Applicator (right to left feeding)	Mini-Applicator (left to right feeding)	Repair Tool
Dubox	AWG 20-22	RCY21235	RCY20027	RCY20017	HT 272
Dubox	AWG 22-24	RCY21234	RCY20008	RCY20029	HT 272
Dubox	AWG 26-30	RCY21234	RCY20008	RCY20029	HT 272
Small insulation Dubox	AWG 28-32	-	RCY20028		HT 272

PV™ CRIMP-TO-WIRE CONTACTS

Contact Description	Wire size	Hand Tool	Mini-Applicator	Repair Tool
Standard Mini-PV	AWG 18-20	HT-0073	133867-104	HT-0080
Standard Mini-PV	AWG 22-26	HT-0095	133867-105	HT-0080
Standard Mini-PV	AWG 28-32	HT-0095	133867-106	HT-0080
Standard Mini-PV	AWG 34-36	HT-0112	133867-108	HT-0080
Small Insulation PV	AWG 22-26	HT-207	-	HT-0080
Small Insulation PV	AWG 28-32	HT-217	-	HT-0080

MINITEK™ CRIMP-TO-WIRE CONTACTS

Contact Description	Wire size	Hand Tool	Mini-Applicator	Repair Tool
Minittek	AWG 26-30	HT 151	155250-101	HT-0080
Minittek	AWG 32-36	HT 152	155250-102	HT-0080

Application Equipment



BergStik® AND Bergstrip®

- Manual cutting tool: HT 320

Quickie® IDC

- Manual flat cable cutter: HT 209
- Quickie assembly hand tool: HT 210
- Hand Press: QP-104
- Many other variations of manual, semi- automatic and automatic tools available upon request.

Minitek® IDC

- Manual flat cable cutter: HT 209
- Hand Press: QP-104

Where to get your tooling

These toolings and more detailed advice, pricing, availability etc. are available through your distributor or from the following suppliers:

■ Americas

Phone: 1-800-843-6911
E-mail: doug.sheaffer@fciconnect.com

■ Europe

Föhrenbach Application Tooling N.V.
Phone: +32 3 216 19 98
Email : application.tooling@foehrenbach.be

■ Asia

Phone: +65 549 6666
E-mail: fcising_sales@fciconnect.com

BASE PART NUMBER	PAGE	BASE PART NUMBER	PAGE
47437	37	76342	23
47439	37	76347	31
47457	37	76357	31
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47566	37	76384	29
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48048	37	77138	71, 73
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52601	43	78208	35
54XXX	17	86730	61
55508	59	87606	21
55510	59	89361	75
57102	51	89882	27
57202	51	89883	27
59112	57	89891	21
59132	57	89898	25
59202	57	89947	75
63453	58	91596	59
65039	39	91601	25
65043	39	91614	25
65239	33	91615	25
65240	33	91618	25
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67997	9, 13	98401	11
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68001	9, 13	98423	53
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69168	35	10078991	69
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71609	27		
71918	45		
71920	21		
71922	45		
71991	23		
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75869	41		
75915	21		
76341	23		



A large rectangular area with a blue border, containing 25 horizontal lines for writing notes.

ELXBASICSUS0610ELT

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sales offices, headquarters, agents and local distributors,
visit www.fciconnect.com



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