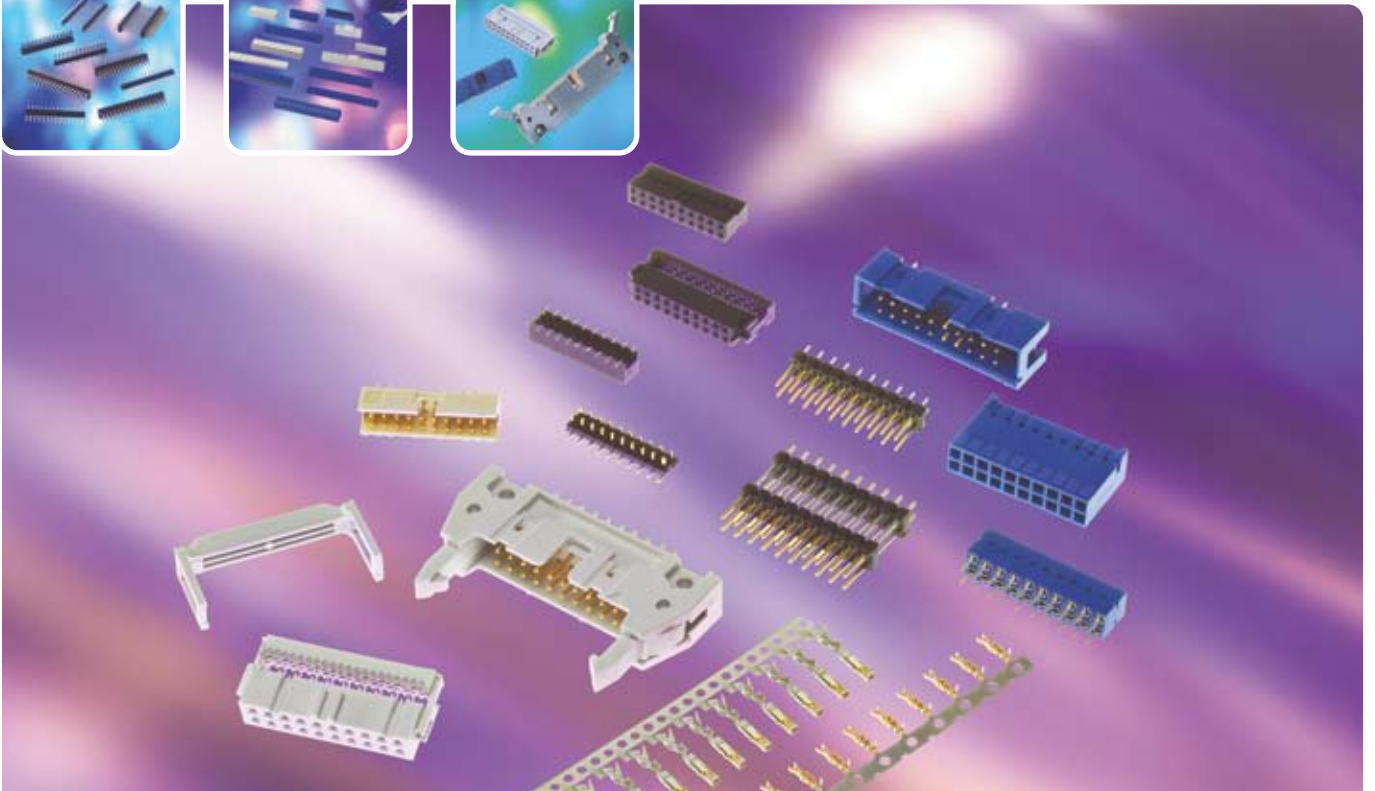




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SHORT LEAD TIMES  
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 Product Catalog

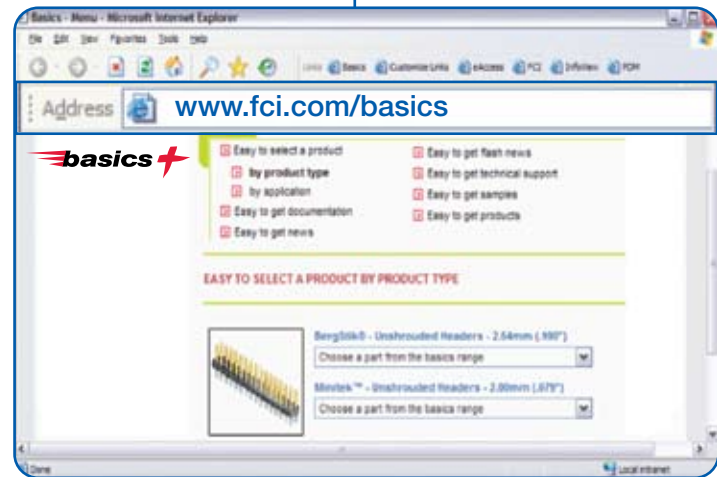


# FCI: SETTING THE STANDARD FOR CONNECTORS

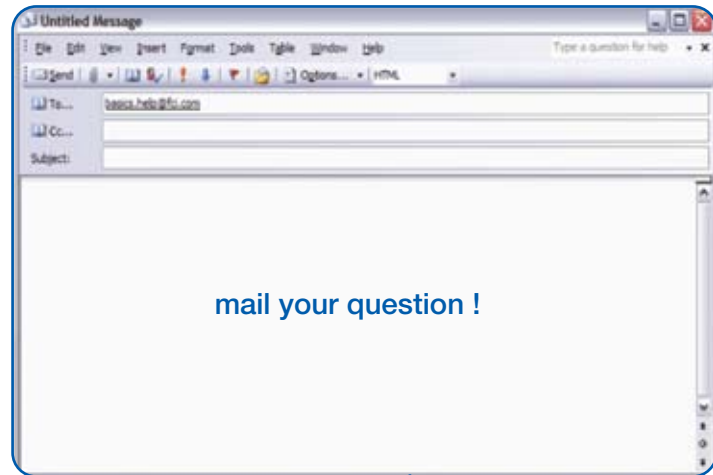
With operations in 30 countries and sales of 1.3 billion euros in 2007, FCI is a leading manufacturer of connectors. Our 14,200 employees are committed to providing customers with high-quality, innovative products for a wide range of consumer and industrial applications.



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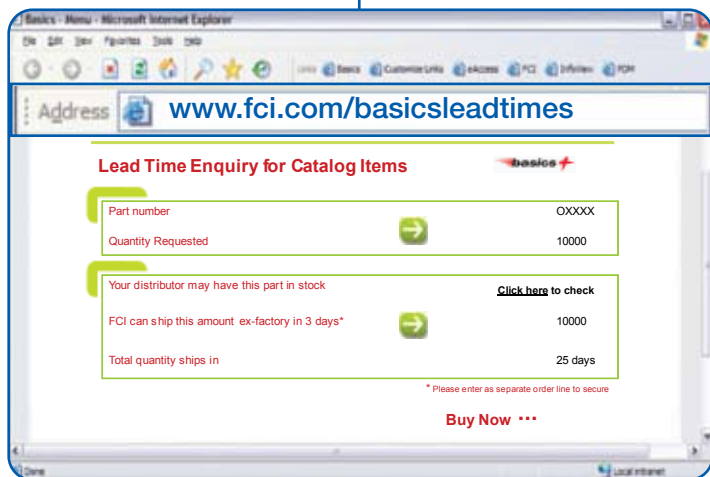
ORDER YOUR FAST SHIPMENT SAMPLES ONLINE



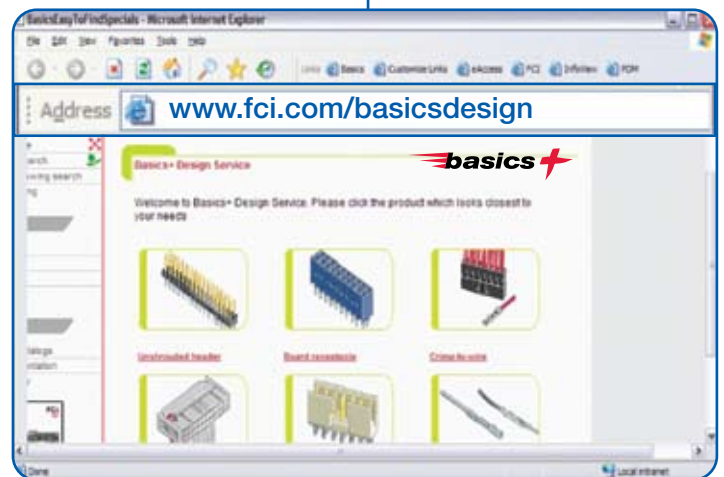
GET THE TECHNICAL HELP YOU NEED FROM [BASICS.HELP@FCI.COM](mailto:basics.help@fci.com)

# RE SERVICE. LESS WAITING.

■ CATALOG PARTS NORMALLY AVAILABLE FOR SHIPMENT IN 3 DAYS. CHECK ONLINE !

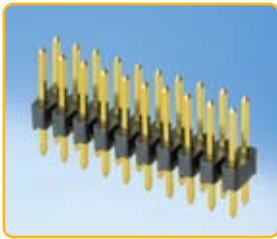


■ OR GET THE SPECIAL YOU NEED VIA THE BASICS+ DESIGN SERVICE



■ NEED SOME PRODUCTION GRADE PARTS FOR YOUR PRE-SERIES? PHONE OUR CUSTOMER SERVICE

## UNSHROUDED HEADERS



### BergStik® Unshrouded Headers 2.54mm (.100")

Vertical - standard sizes	8
Vertical - custom sizes	10
Vertical - continuous	12
Right angle - standard sizes	14
Right angle - custom sizes	16
Stacking headers	18

### Minitek™ Unshrouded Headers 2.00mm (.079")

Vertical	52
Right angle	54
Pin-in-Paste	56
Stacking	58

## SHROUDED HEADERS



### Dubox™ Shrouded Headers 2.54mm (.100)

30

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

36

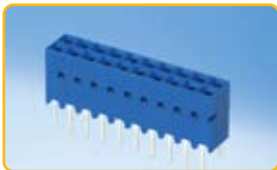
### Minitek™ Shrouded Headers 2.00mm (.079")

Vertical	64
Right angle	66
Pin-in-Paste	68
Eject latch	70

### Quickie® Shrouded Headers 2.54mm (.100")

Low Profile	42
Surface Mount and Pin-in-Paste	44
Eject latch	46

## BOARD-TO-BOARD RECEPTACLES



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

Vertical	22
Low profile vertical - through mount	24
Low profile vertical - surface mount	26
Horizontal	28

### Minitek™ Vertical receptacles

60

## CRIMP-TO-WIRE TERMINALS AND HOUSINGS



### Dubox™ Crimp-To-Wire 2.54mm (.100")

Contacts	32
Housings	34

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

Contacts	38
Housings	40

### Minitek™ Crimp-To-Wire 2.00mm (.079")

Contacts	72
Housings	72
Active latch	74

## IDC RECEPTACLES



### Quickie® IDC Receptacles 2.54mm (.100")

48

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

50

### Minitek™ IDC strain relief

76

## SHUNTS



### Dubox™ Shunts 2.54mm (.100")

20

### Minitek™ Shunts 2.00mm (.079")

62

## MORE OPTIONS

78

## APPLICATION EQUIPMENT

80

## PART NUMBER INDEX

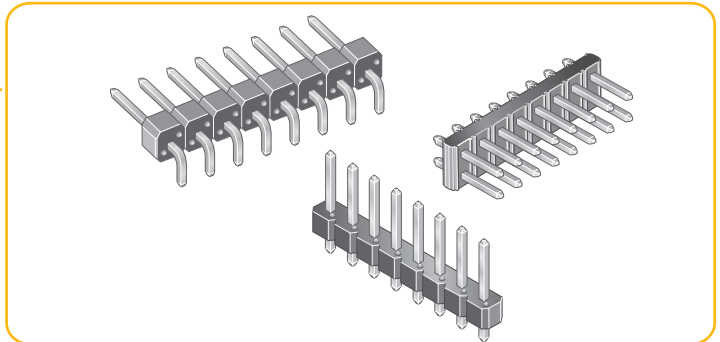
82



Pick an item from anywhere in the catalog. Most parts available to ship from our factory to you in 3 days. Check online at [www.fci.com/basics](http://www.fci.com/basics) leadtimes

## Pin-in-Paste

Our new PiP range has been specifically designed to meet the requirements of this process, complete with paste stencil design  
Pages 56, 68



## Minitek Active Latch

A latching crimp-to-wire system for demanding environments  
Pages 64, 74



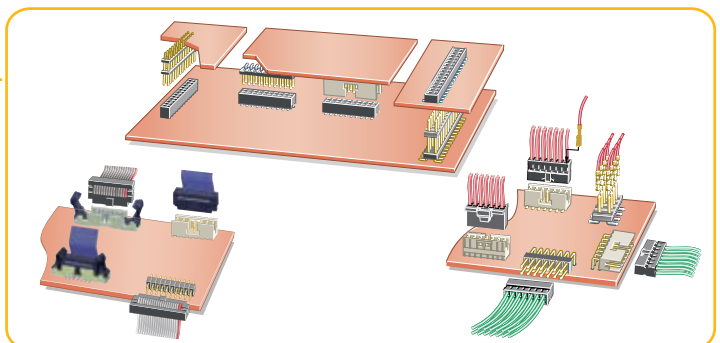
## Minitek Eject Latch Header

This ribbon cable connector mates securely, but can be unmated with no difficulty.  
Pages 70, 76



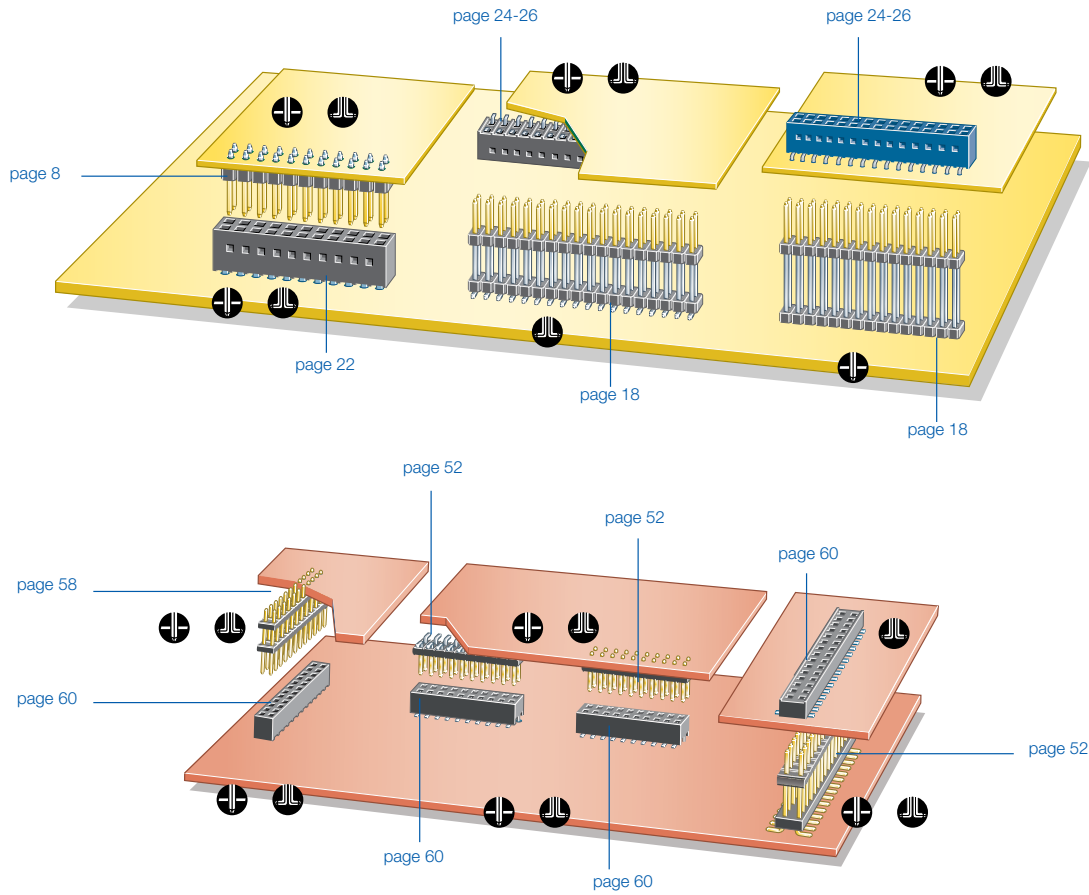
## The Minitek 2mm Modular System

Now the most complete and versatile system available: intermateable, high temperature compatible, low coplanarity and space saving  
Pages 52 – 76

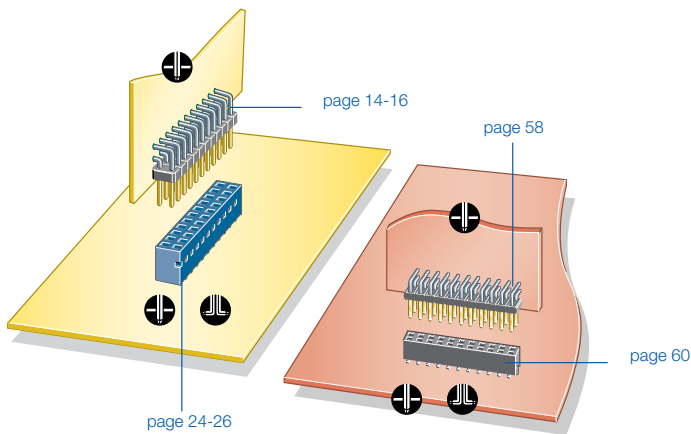


# BOARD-TO-BOARD SOLUTIONS

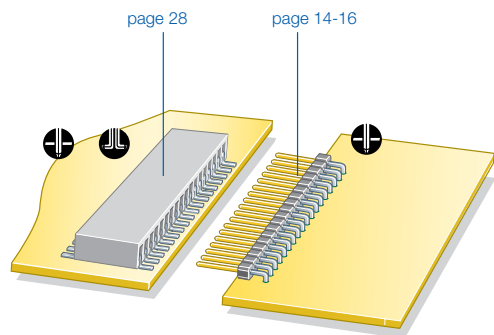
## PARALLEL



## PERPENDICULAR



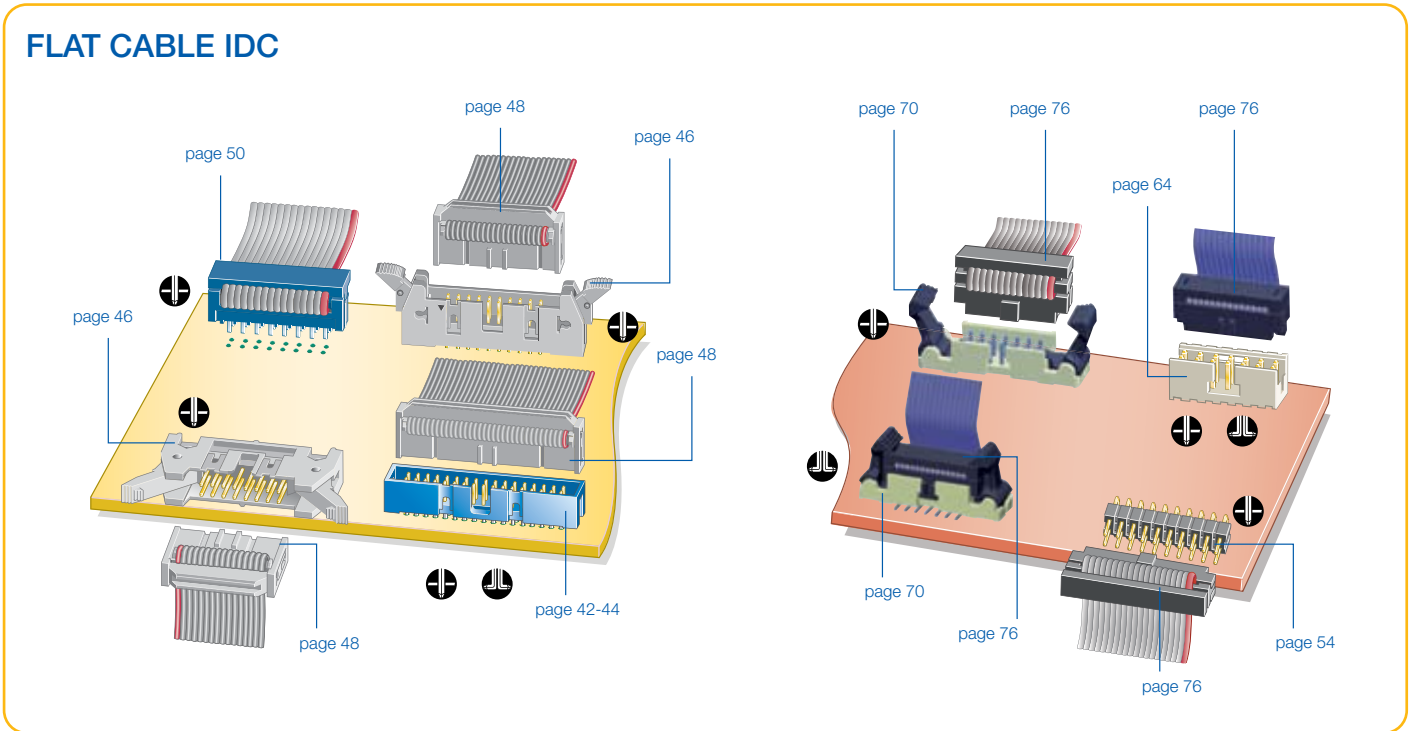
## PLANAR



- = 2.54 mm
- = 2.00 mm
- = Through Mount
- = Surface Mount

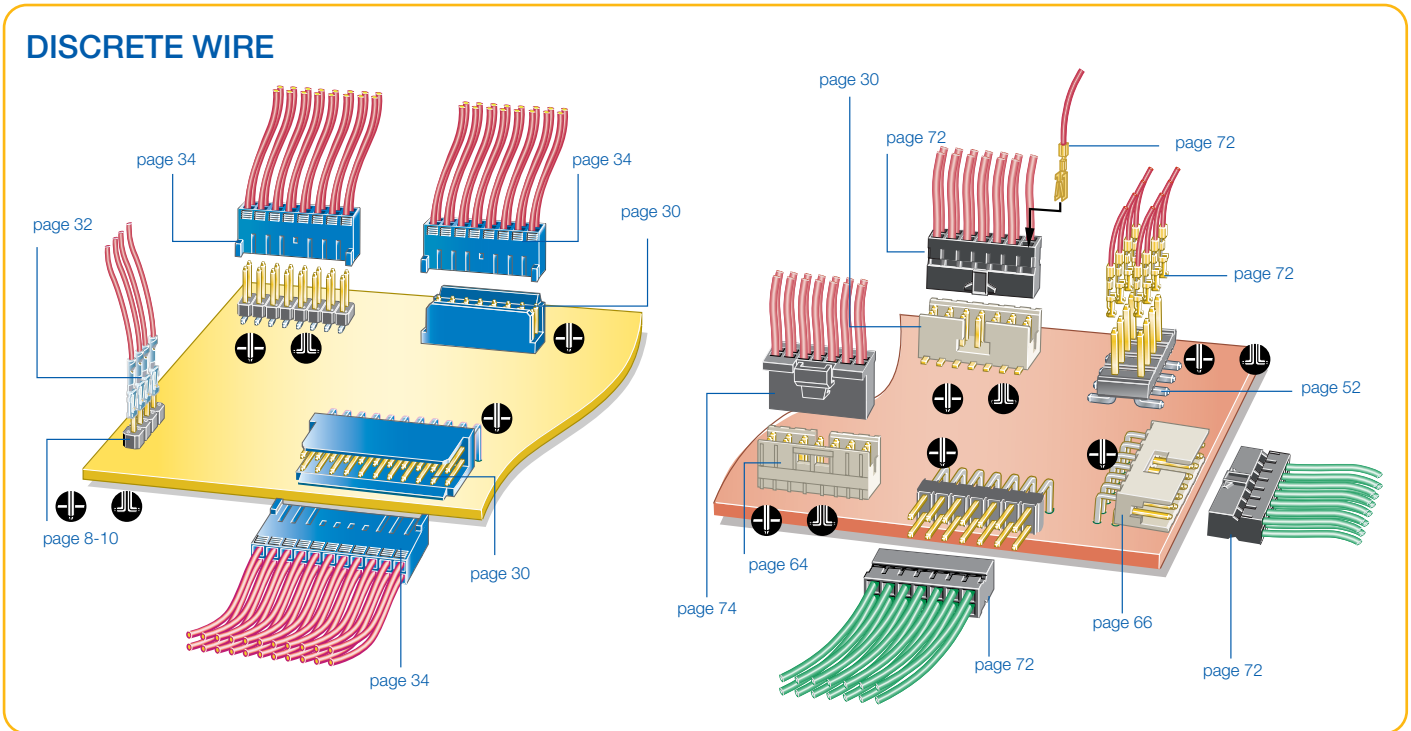
## CABLE-TO-BOARD SOLUTIONS

### FLAT CABLE IDC



## WIRE-TO-BOARD SOLUTIONS

### DISCRETE WIRE



- = 2.54 mm
- = 2.00 mm
- = Through Mount
- = Surface Mount

2.54 mm (.100")

### TECHNICAL DATA

#### PHYSICAL

- Housing: High temperature, black thermoplastic
- Flammability rating: UL 94 V-0
- Pin: Phosphor-bronze
- Plating: Gold 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

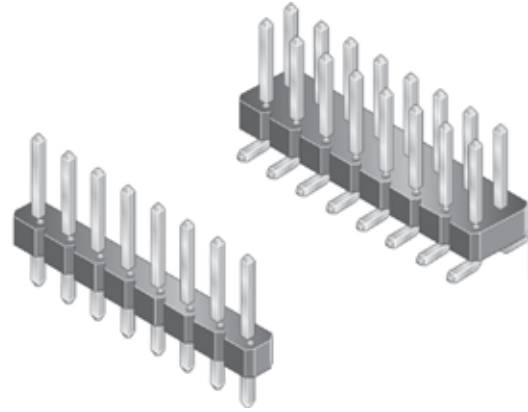
-  File no. E66906
-  File no. LR46923
- Product drawing: By 5-digit base part number
- Product specification: BUS-12-114
- Tape and Reel packaging data: TA-840

#### PROCESSING INFORMATION

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

#### RoHs INFORMATION

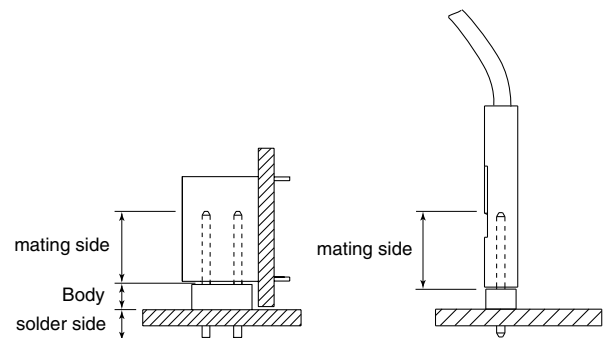
- This product is RoHs compatible according to the European Union Directive 2002/95/IEC



### MATING DATA

■ Dubox™ Crimp-to-wire contacts	32
■ Dubox™ Crimp-to-wire housings	34
■ Dubox™ Vertical receptacles	22
■ Dubox™ Low profile vertical receptacles	24, 26
■ Dubox™ Horizontal receptacles	28
■ Quickie™ IDC receptacles	48
■ PV™ Crimp-to-Wire Contacts	38
■ PV™ Crimp-to-Wire Housings	40

### TYPICAL APPLICATIONS



# BergStik® Unshrouded Header, Vertical, Standard Sizes

2.54 mm (.100")

## PART NUMBERS



**Through mount**  
**77311** = Single Row  
**77313** = Double Row

**Surface mount**  
**95293** = Single Row  
**95278** = Double Row

**02 to 36** = Single row TMT  
**03 to 17** = Single Row SMT  
**04 to 72** = Double row TMT  
**04 to 50** = Double Row SMT  
**08 to 50** = Double Row SMT with pegs

Surface mount		Through mount			
Pin style	Mating	Pin style	Mating	Solder	overall length (OAL)
01	5.84	01	5.84	2.41	10.80
02	8.08	18	5.84	3.05	11.43
		02	5.84	3.42	11.80
		27	6.60	2.66	11.82
		22	7.75	3.06	13.35
		24	6.75	2.90	12.20

Option	Packaging
-	Plastic bag
A	Tape-and-reel with pick-up cap*
B	Tube with pick-up cap
	availability on request

**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

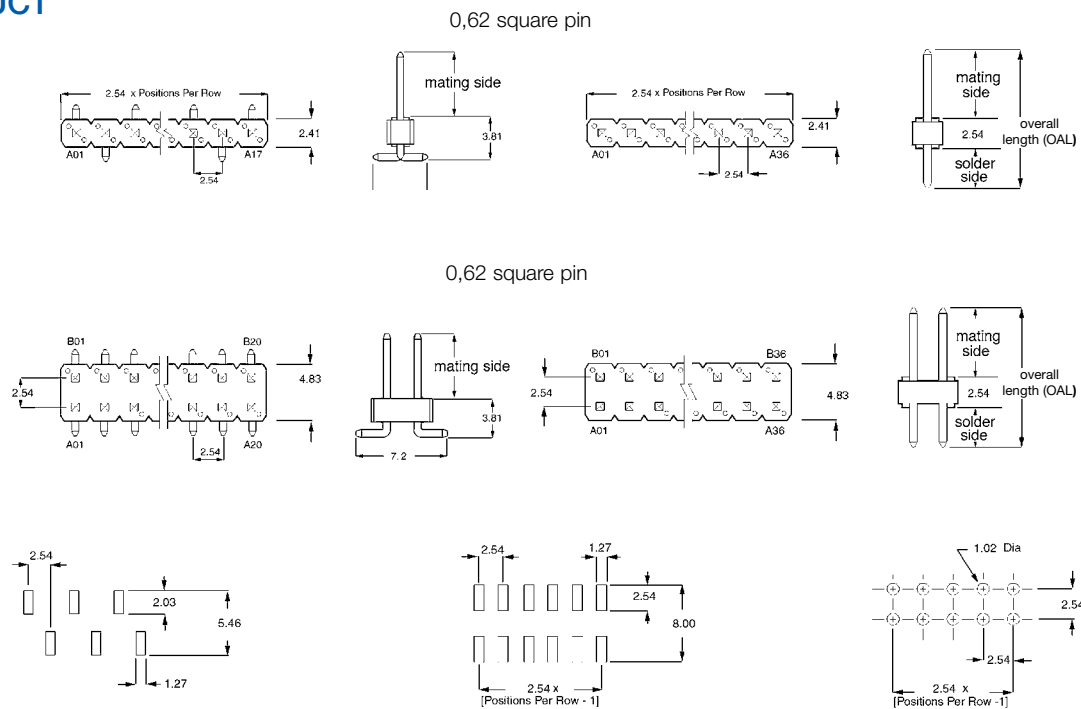
77311	-	101	-	XXLF
77311	-	118	-	XXLF
77311	-	124	-	XXLF
77313	-	101	-	XXLF
77313	-	118	-	XXLF
77313	-	124	-	XXLF
95278	-	101	A	XXLF

**CORE RANGE**

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

\* as available

## PRODUCT



Dimension in mm

2.54 mm (.100")

**TECHNICAL DATA**

**PHYSICAL**

- Housing: High temperature, black thermoplastic
- Flammability rating: UL 94 V-0
- Pin: Phosphor-bronze
- Plating: Gold 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.
- 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 (SMT pin style 01 only)

**REFERENCE INFORMATION**

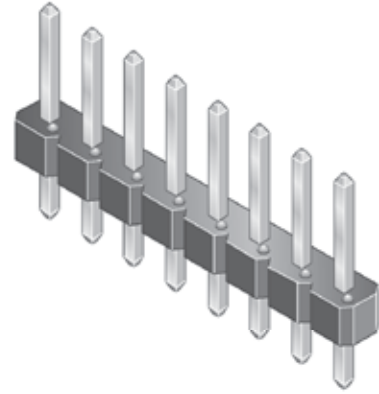
- File no. E66906
- File no. LR46923
- Product drawing: By 5-digit base part number
- Product specification: BUS-12-114

**PROCESSING INFORMATION**

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

**RoHs INFORMATION**

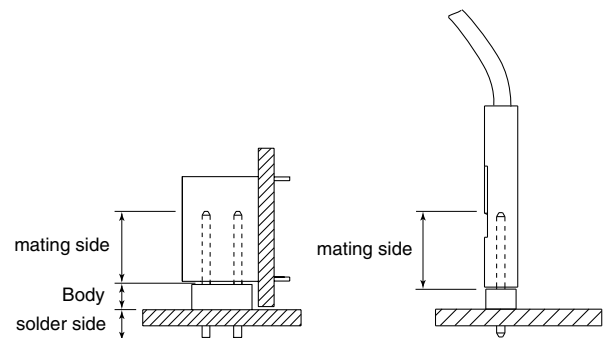
- This product is RoHs compatible according to the European Union Directive 2002/95/IEC



**MATING DATA**

■ Dubox™ Crimp-to-wire contacts	32
■ Dubox™ Crimp-to-wire housings	34
■ Dubox™ Vertical receptacles	22
■ Dubox™ Low profile vertical receptacles	24, 26
■ Dubox™ Horizontal receptacles	28
■ Quickie™ IDC receptacles	48
■ PV™ Crimp-to-Wire Contacts	38
■ PV™ Crimp-to-Wire Housings	40

**TYPICAL APPLICATIONS**

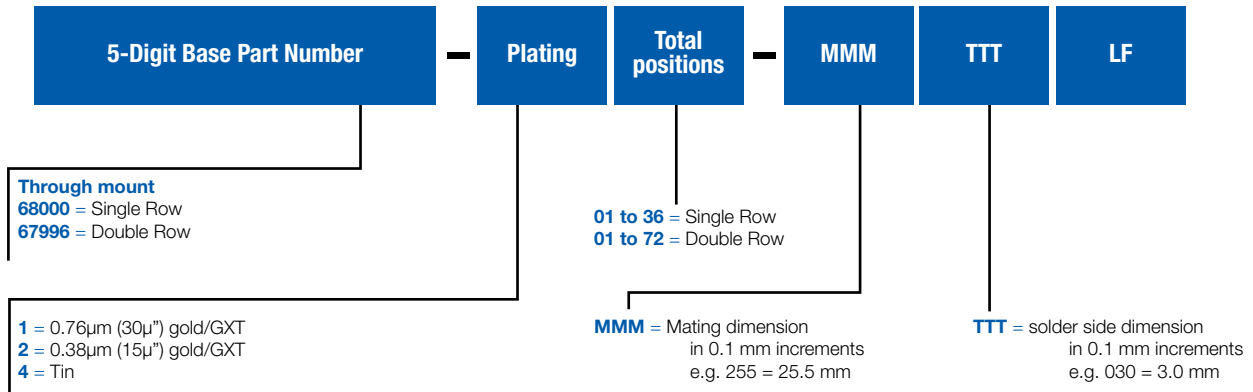


# BergStik® Unshrouded Header, Vertical, Custom Sizes

2.54 mm (.100")

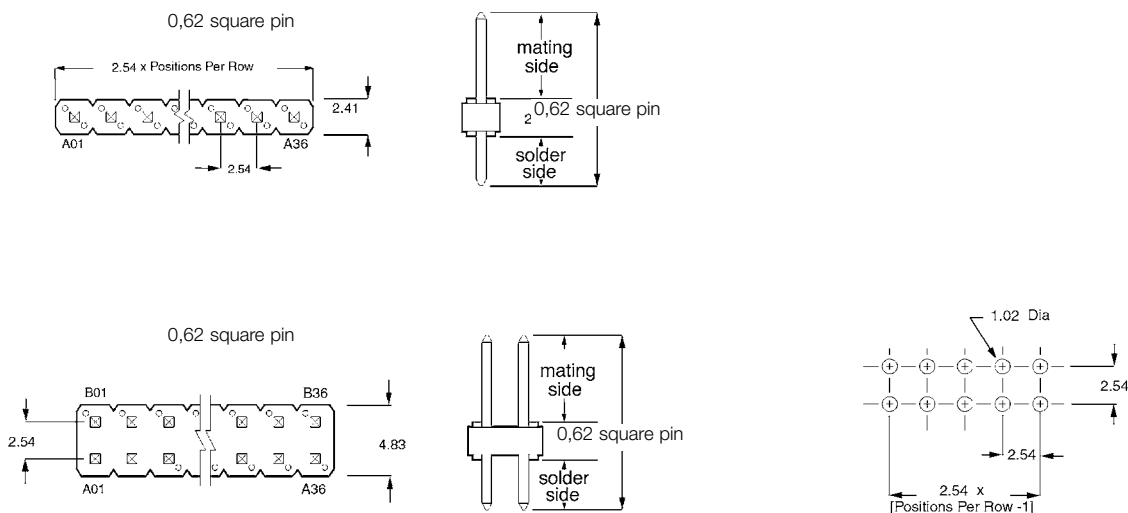
## PART NUMBERS

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



- Note:**
1. The total combined dimension for mating and solder side may not exceed 27 mm
  2. Standard packaging in bulk
  3. Special packaging availability upon request

## PRODUCT



Recommended PCB layouts

Dimension in mm

2.54 mm (.100")

## 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 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

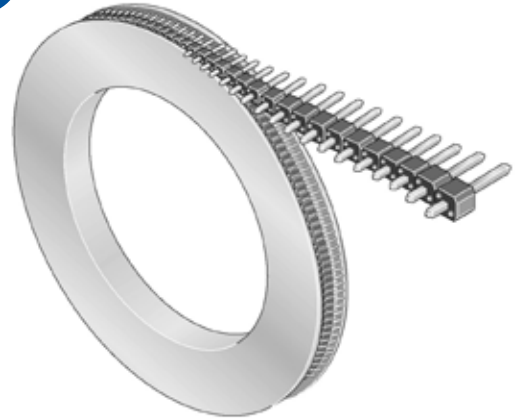
- File no. E66906
- File no. LR46923
- Product drawing: 54101 or 54102
- Product specification: BUS-12-059

### PROCESSING INFORMATION

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

### RoHs INFORMATION

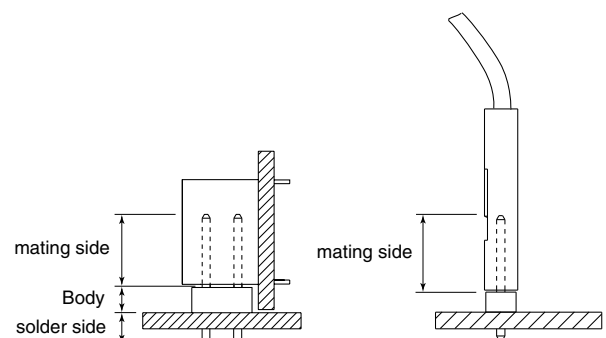
- This product is RoHs compatible according to the European Union Directive 2002/95/IEC



## MATING DATA

■ Dubox™ Crimp-to-wire contacts	32
■ Dubox™ Crimp-to-wire housings	34
■ Dubox™ Vertical receptacles	22
■ Dubox™ Low profile vertical receptacles	24, 26
■ Dubox™ Horizontal receptacles	28
■ Quickie™ IDC receptacles	48
■ PV™ Crimp-to-Wire Contacts	38
■ PV™ Crimp-to-Wire Housings	40

## TYPICAL APPLICATIONS



# BergStik® Unshrouded Header, Continuous

2.54 mm (.100")

## PART NUMBERS

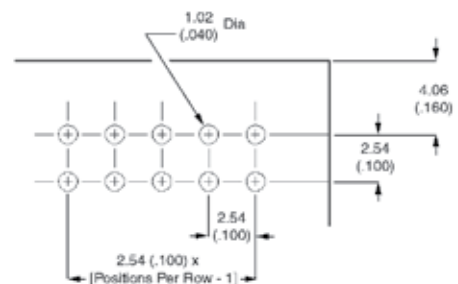
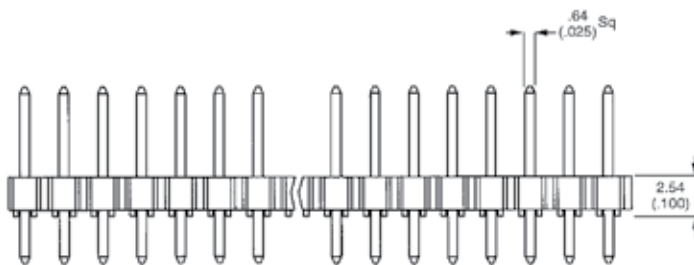
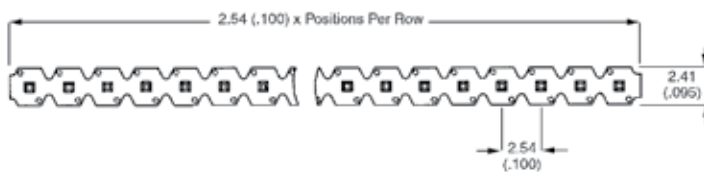


**Through mount**  
**77311** = Single Row  
**77313** = Double Row

**1** = 0.76µm (30µ") gold/GXT on mating area, tin on solder side  
**4** = tin  
**8** = 0.38µm (15µ") gold/GXT on mating area, tin on solder side

Pin Style	mating length	solder length	overall length (OAL)
<b>01</b>	5.84	2.41	10.80
<b>18</b>	5.84	3.05	11.43
<b>02</b>	5.84	3.42	11.80
<b>27</b>	6.60	2.66	11.82
<b>22</b>	7.75	3.06	13.35
<b>24</b>	6.75	2.90	12.20

## PRODUCT



Recommended PCB layouts

Dimension in mm

2.54 mm (.100")

## 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 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

- Bags

### REFERENCE INFORMATION

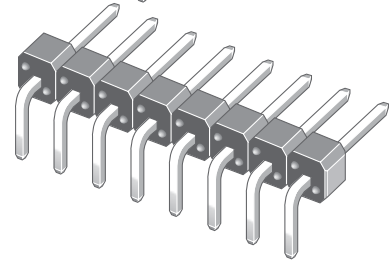
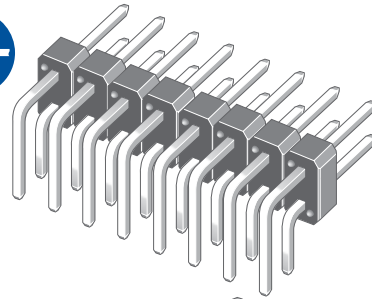
- File no. E66906
- File no. LR46923
- Product drawing: By 5-digit base part number
- Product specification: BUS-12-114

### PROCESSING INFORMATION

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

### RoHs INFORMATION

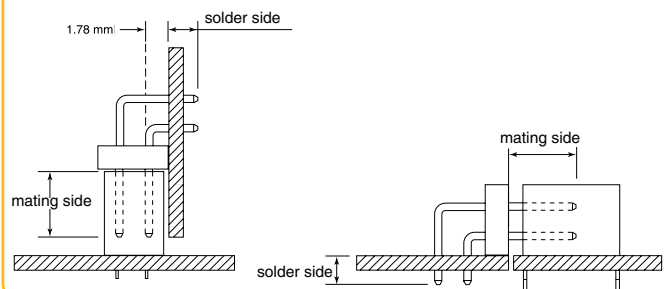
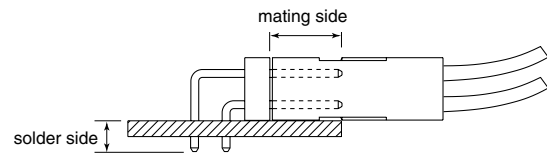
- This product is RoHs compatible according to the European Union Directive 2002/95/IEC



## MATING DATA

■ Dubox™ Crimp-to-wire contacts	32
■ Dubox™ Crimp-to-wire housings	34
■ Dubox™ Vertical receptacles	22
■ Dubox™ Low profile vertical receptacles	24, 26
■ Dubox™ Horizontal receptacles	28
■ Quickie™ IDC receptacles	48
■ PV™ Crimp-to-Wire Contacts	38
■ PV™ Crimp-to-Wire Housings	40

## TYPICAL APPLICATIONS



# BergStik® Unshrouded Header, Right Angle, Standard Sizes

2.54 mm (.100")

## PART NUMBERS



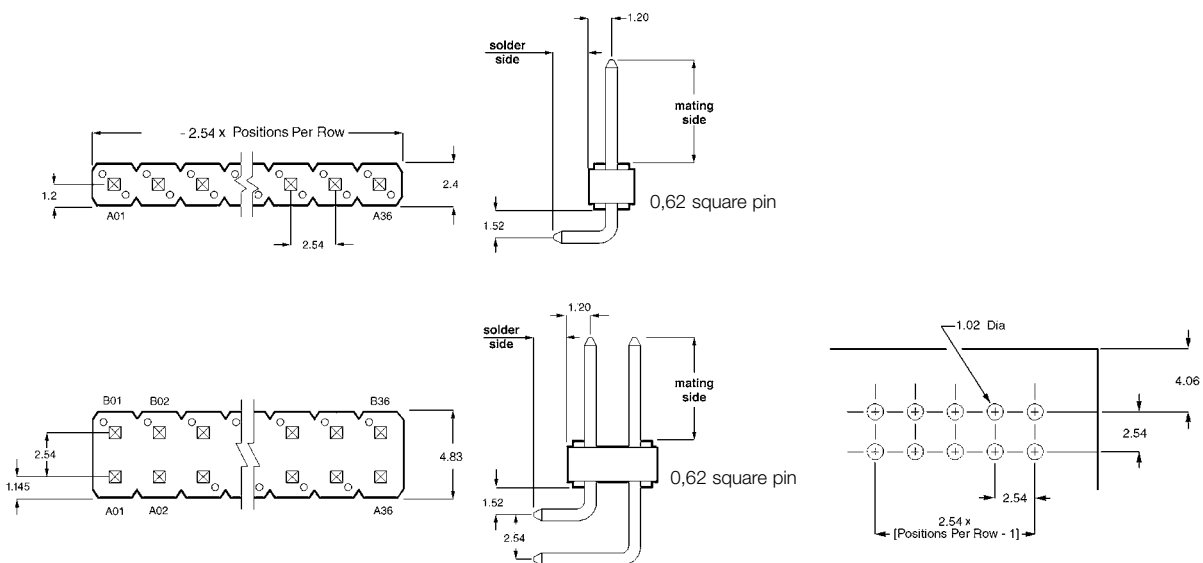
**Through mount**  
**77315** = Single Row  
**77317** = Double Row

**02 to 36** = Single row TMT  
**04 to 72** = Double row TMT

Pin style		Mating	Solder
77315	77317		
<b>01</b>	<b>03</b>	5.84	2.41
<b>18</b>	<b>04</b>	5.84	3.05
<b>24</b>	<b>12</b>	6.75	2.90

**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

## PRODUCT



Recommended PCB layouts

Dimension in mm

2.54 mm (.100")

## TECHNICAL DATA

### PHYSICAL

- Housing: High temperature, black thermoplastic
- Flammability rating: UL 94 V-0
- Pin: Phosphor-bronze
- Plating: Gold 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.
- 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

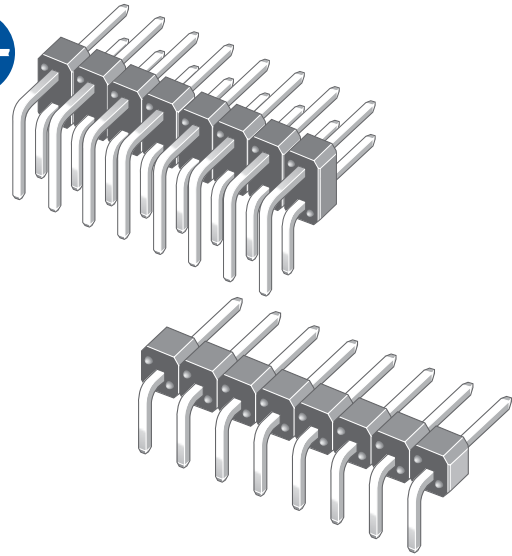
- File no. E66906
- File no. LR46923
- Product drawing: 55101 or 55102
- Product specification: BUS-12-114

### PROCESSING INFORMATION

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

### RoHs INFORMATION

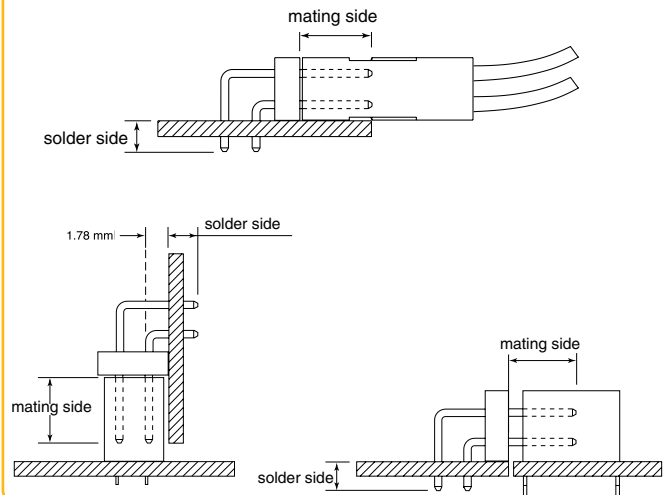
- This product is RoHs compatible according to the European Union Directive 2002/95/IEC



## MATING DATA

■ Dubox™ Crimp-to-wire contacts	32
■ Dubox™ Crimp-to-wire housings	34
■ Dubox™ Vertical receptacles	22
■ Dubox™ Low profile vertical receptacles	24, 26
■ Dubox™ Horizontal receptacles	28
■ Quickie™ IDC receptacles	48
■ PV™ Crimp-to-Wire Contacts	38
■ PV™ Crimp-to-Wire Housings	40

## TYPICAL APPLICATIONS

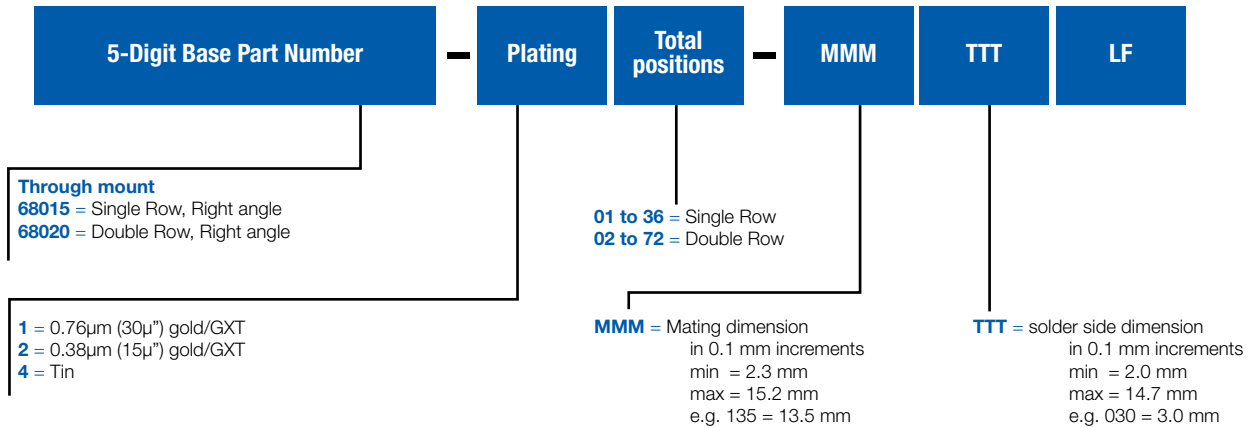


# BergStik® Unshrouded Header, Right Angle, Custom Sizes

2.54 mm (.100")

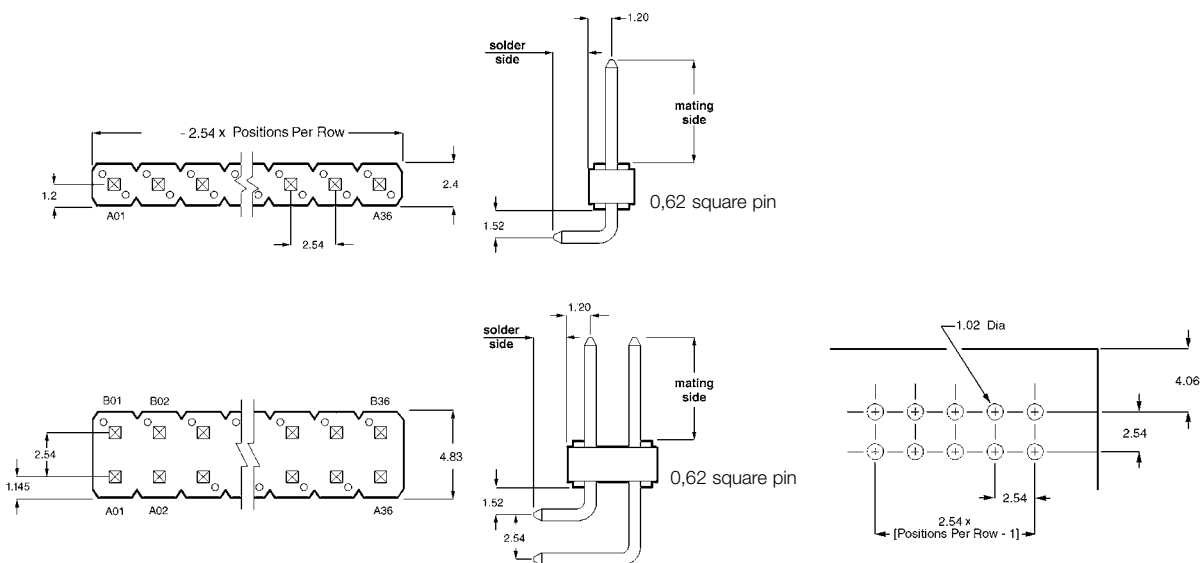
## PART NUMBERS

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



- Note:**
1. Bend dimension 1.52 mm only
  2. The total combined dimension for mating and solder side may not exceed 25,5 mm

## PRODUCT



Dimension in mm

Recommended PCB layouts

2.54 mm (.100")

## 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 or tin over 1.27  $\mu\text{m}$  (50  $\mu\text{in}$ ) nickel



### ELECTRICAL PERFORMANCE

- Current rating: 3 A continuous
- Insulation resistance: 5000 M $\Omega$  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

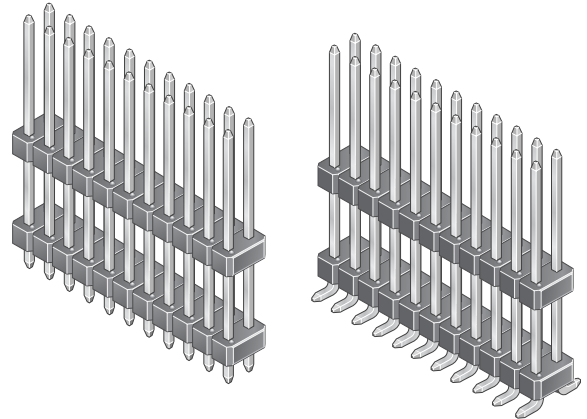
- File no. E66906
- File no. LR46923
- Product drawing: By 5-digit base part number
- Product specification: BUS-12-114

### PROCESSING INFORMATION

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

### RoHs INFORMATION

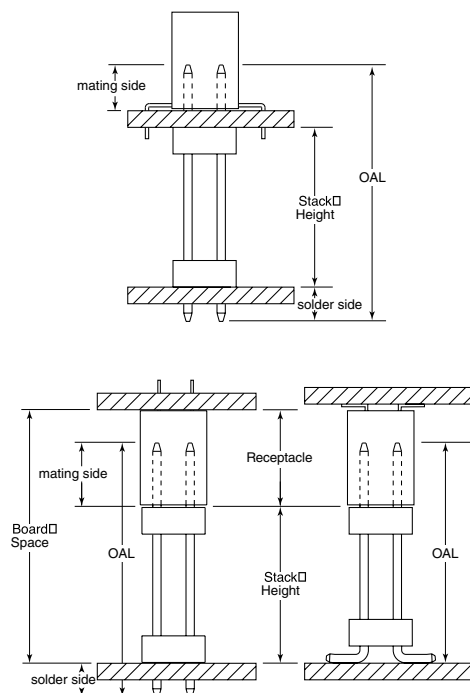
- This product is RoHs compatible according to the European Union Directive 2002/95/IEC



## MATING DATA

- Dubox™ Vertical receptacles 22
- Dubox™ Low profile vertical receptacles 24, 26

## 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)



**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)

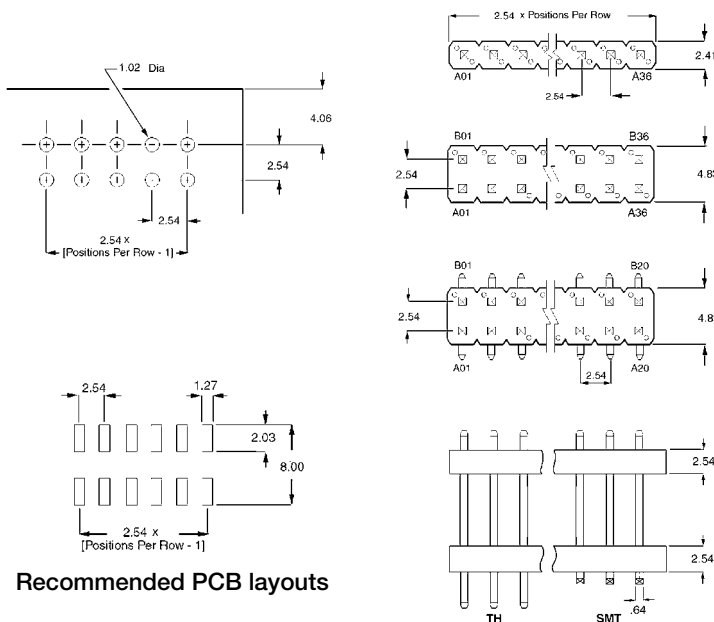
**1** = 2.41 mm  
**2** = 3.05 mm  
**4** = SMT (double row only)

Pin Style	Overall length (TMT) mm	Overall length (SMT) mm
01	12.20	10.42
02	13.50	11.72
03	15.90	14.12
04	16.76	14.98
05	17.65	15.87
06	18.91	17.13
07	20.96	19.18
08	23.50	21.72
09	26.04	24.26
10	28.58	26.80
11	31.12	29.34
12	33.66	31.88

**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.

**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

## PRODUCT



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

Recommended PCB layouts

Dimension in mm

2.54 mm (.100")

## 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: Black thermoplastic
- Flammability rating: UL 94 V-0
- Contact: Phosphor-bronze
- Plating: Gold or tin over 1.27  $\mu\text{m}$  (50  $\mu\text{in}$ ) 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

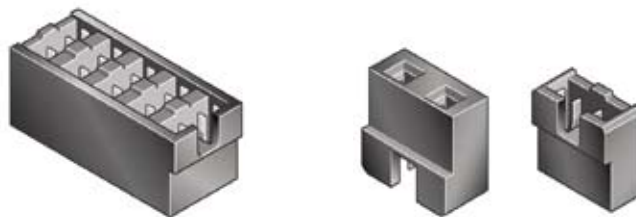
- Plastic bags

### 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



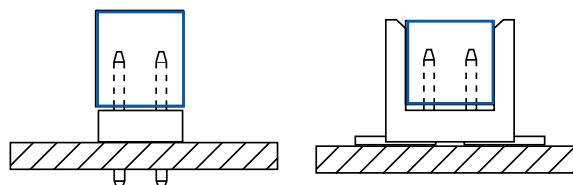
## MATING DATA

- Continuous unshrouded headers 12
- Unshrouded vertical headers 8, 10
- Unshrouded right angle headers 1 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



2 = 0.76 μm (30μ") gold  
3 = tin

### Standard



2 = 0.76 μm (30μ") gold  
3 = tin

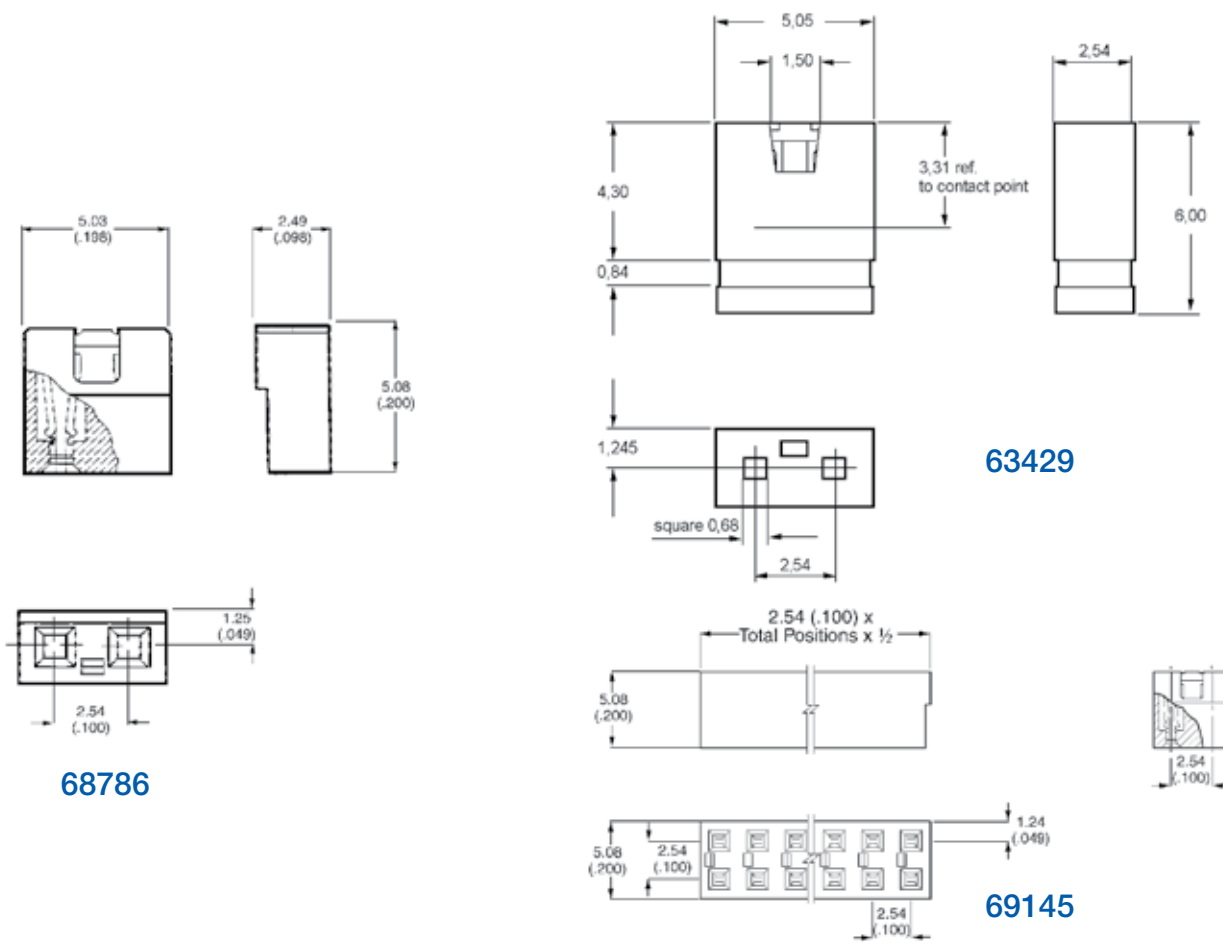
### Multi-position



2 = 0.76 μm (30μ") gold  
3 = tin  
4 to 20 positions



## PRODUCT



Dimension in mm

2.54 mm (.100")

## 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 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:  $1 \times 10^5$  M $\Omega$  min.
- Contact resistance: 15 M $\Omega$  max. initial,  
20 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

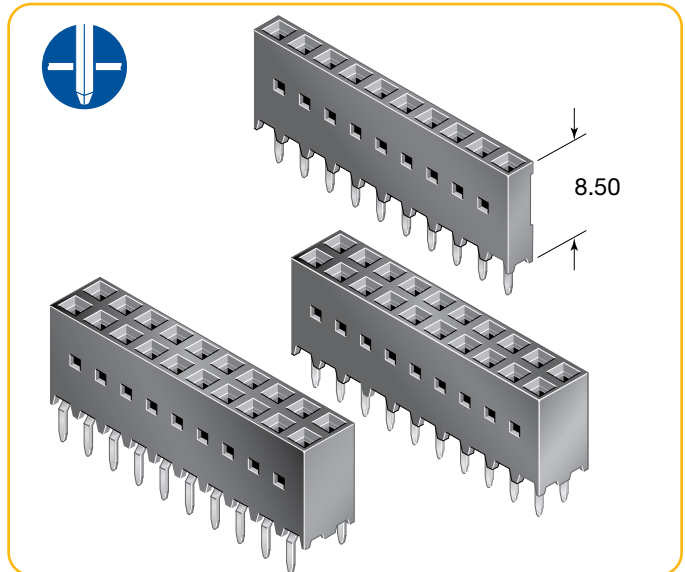
- Compatible with wave soldering processes

### 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



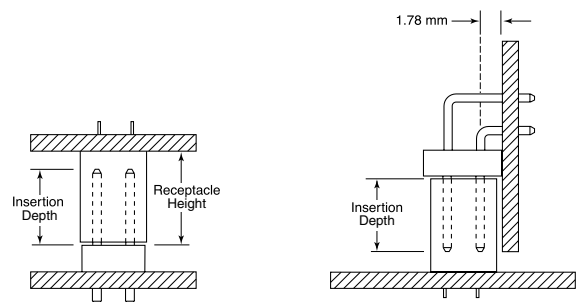
## MATING DATA

- BergStik® Unshrouded vertical headers 8, 10
- BergStik® Unshrouded right angle headers 14, 16
- BergStik® Unshrouded stacking headers 18
- 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

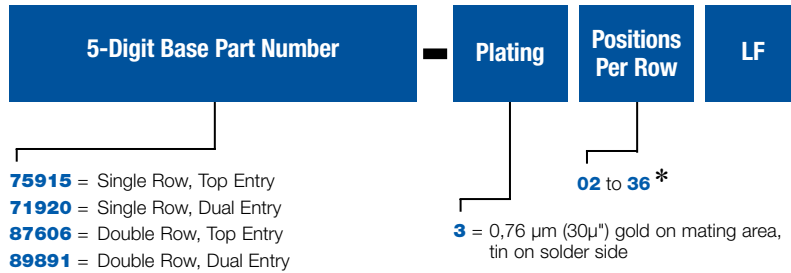
## TYPICAL APPLICATIONS



# Dubox™ Vertical Receptacles

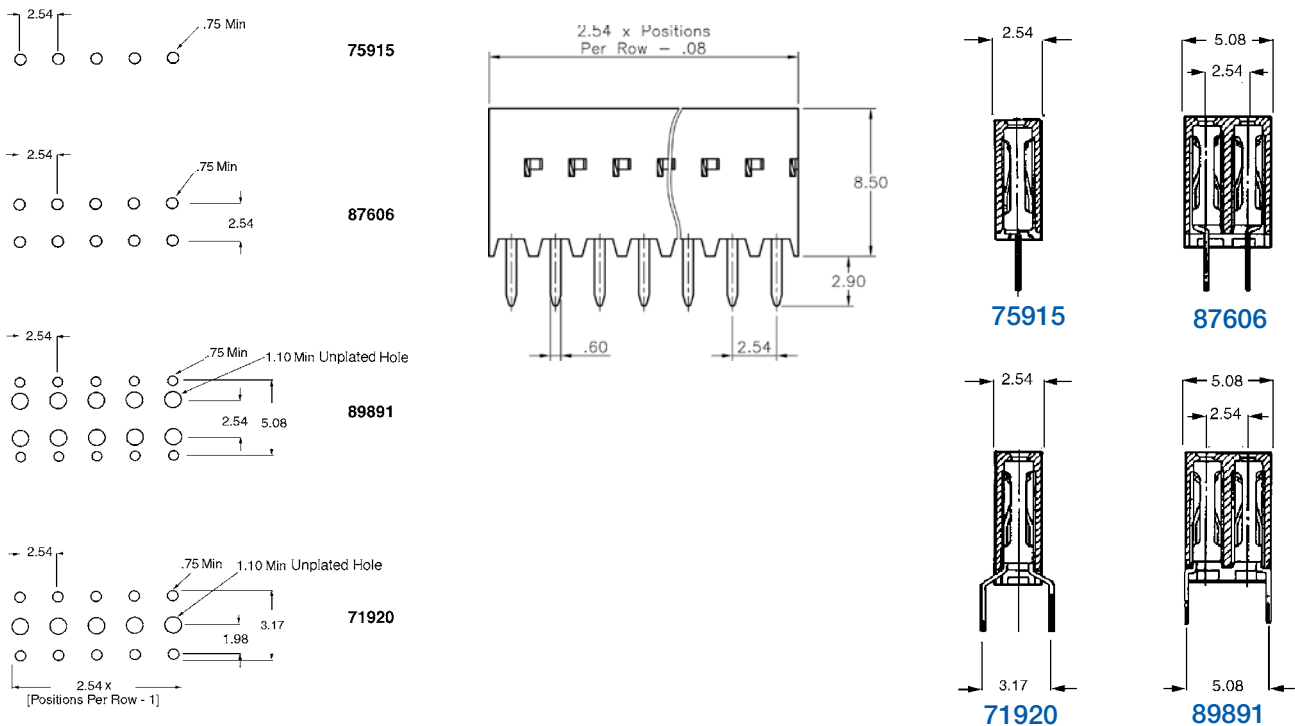
2.54 mm (.100")

## PART NUMBERS



\*Other sizes available on request

## PRODUCT



Recommended PCB layouts

Dimension in mm

2.54 mm (.100")

## 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 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 10<sup>5</sup> 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

- Plastic boxes or tubes

### PROCESSING INFORMATION

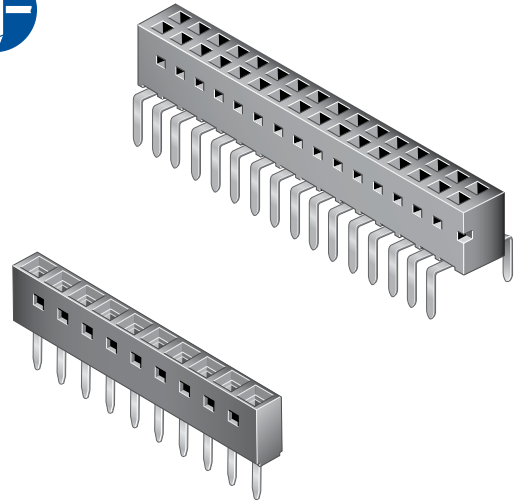
- Compatible with wave soldering processes

### 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



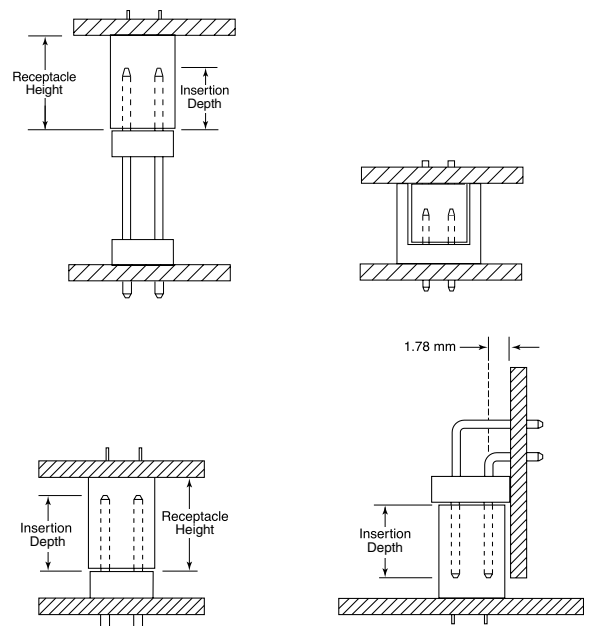
## MATING DATA

- BergStik® Unshrouded vertical headers 8, 10
- BergStik® Unshrouded right angle headers 14, 16
- BergStik® Unshrouded stacking headers 18
- 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

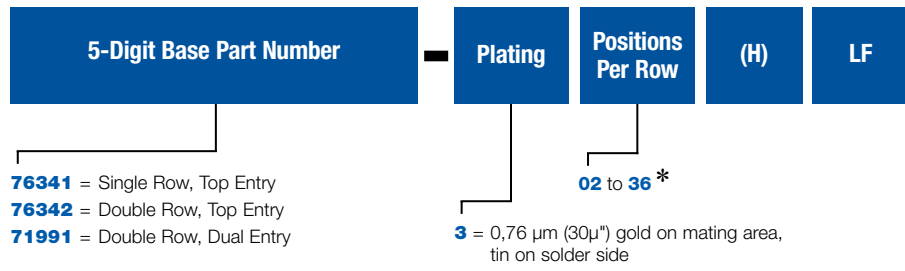
## TYPICAL APPLICATIONS



# Dubox™ Vertical Receptacles, Low Profile

2.54 mm (.100")

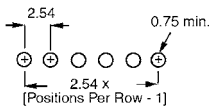
## PART NUMBERS



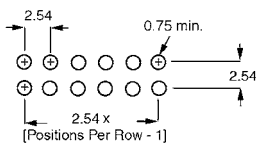
\*Other sizes available on request

## PRODUCT

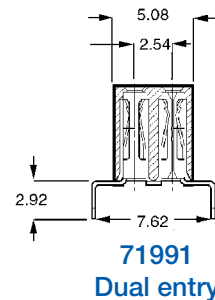
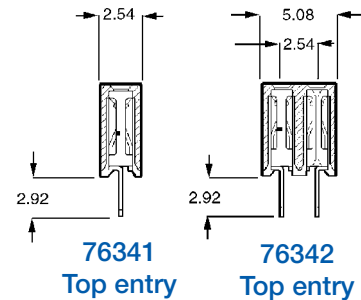
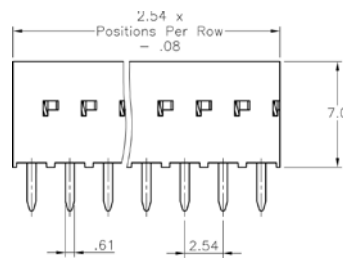
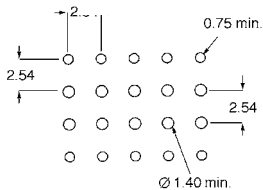
**P/N 76341**  
Top Entry



**P/N 76342**  
Top Entry



**P/N 71991**  
Dual Entry



### Recommended PCB layouts

Dimension in mm

2.54 mm (.100")

## 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 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 10<sup>5</sup> 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

- Plastic boxes or tubes
- Tape and reel as available

### PROCESSING INFORMATION

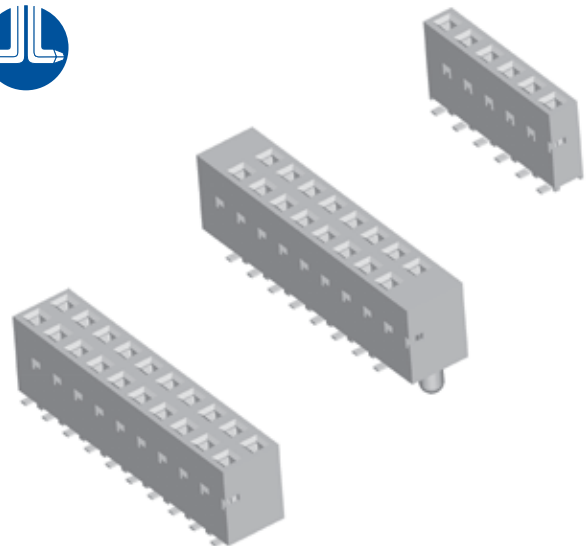
- Compatible with vapor-phase, and IR reflow soldering processes

### 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



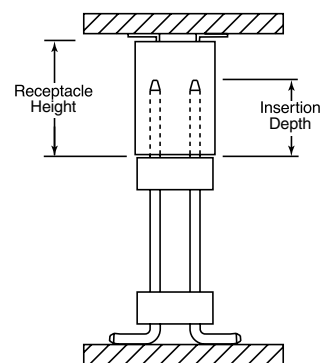
## MATING DATA

- BergStik® Unshrouded vertical headers 8, 10
- BergStik® Unshrouded right angle headers 14, 16
- BergStik® Unshrouded stacking headers 18
- 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



- 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 on mating area, tin on solder side

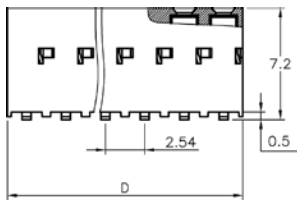
**89898 - 3XXALF**

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

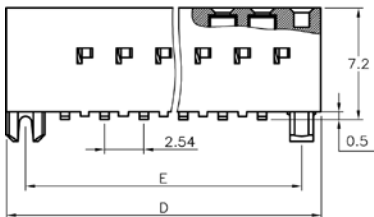
\* as available

## PRODUCT

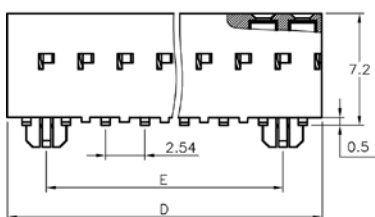
### Standard



### External Locating Pegs



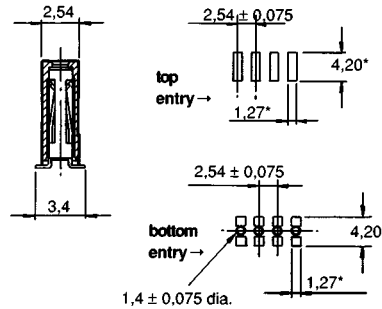
### Internal Locating Pegs



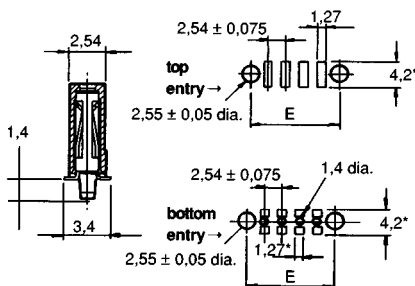
Dimension in mm

### Single Row + Pad lay-outs

#### 91601



#### 91614



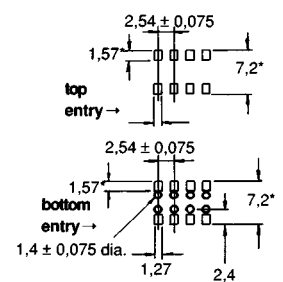
\*Note: available as of 3 position versions

not available in single row

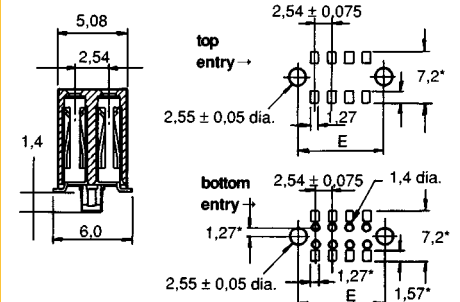
**Note:**  
All dimensions marked with \*  
are minimum dimensions

### Double Row + Pad lay-outs

#### 89898

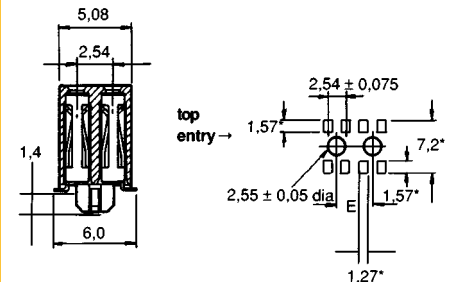


#### 91615



\*Note: available as of 3 position versions

#### 91618



\*Note: available as of 6 number of positions

2.54 mm (.100")

## 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 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 10<sup>5</sup> 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

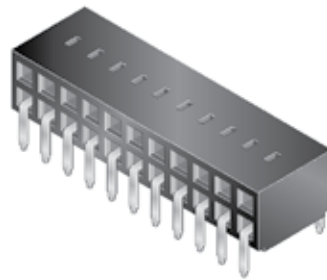
- Series 89882, 89883: compatible with wave soldering processes
- Series 71607, 71609: compatible with vapor-phase and IR reflow soldering processes

### 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



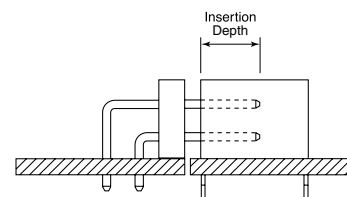
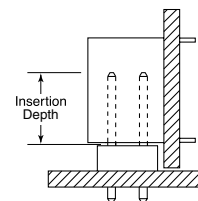
## MATING DATA

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

## INSERTION DEPTH

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

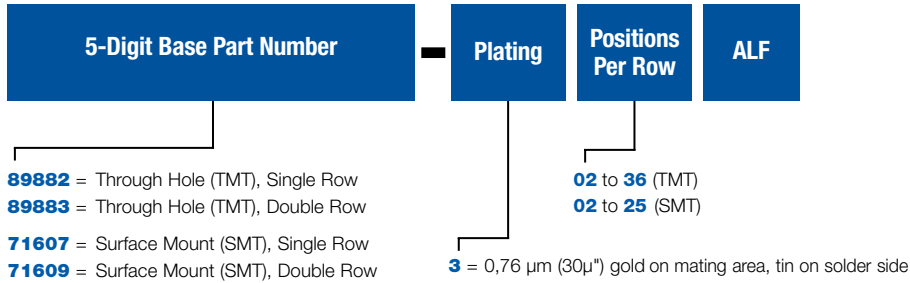
## TYPICAL APPLICATIONS



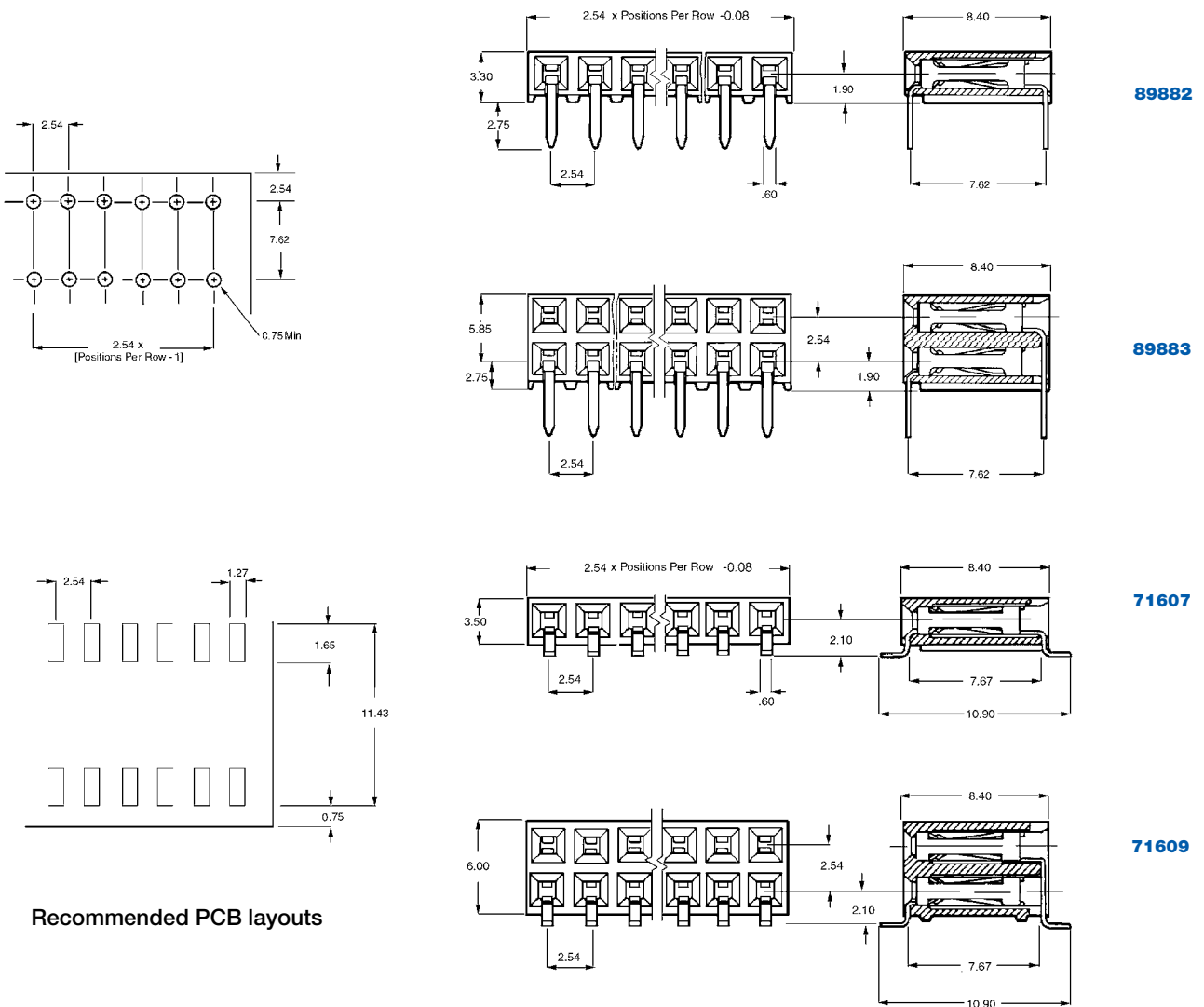
# Dubox™ Horizontal Receptacles

2.54 mm (.100")

## PART NUMBERS



## PRODUCT



Dimension in mm

2.54 mm (.100")

## 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 or tin over 1.27 μm (50μ") nickel

### ELECTRICAL PERFORMANCE

- Current rating: 3 A continuous
- Insulation resistance: 1x 10<sup>5</sup> MΩ 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

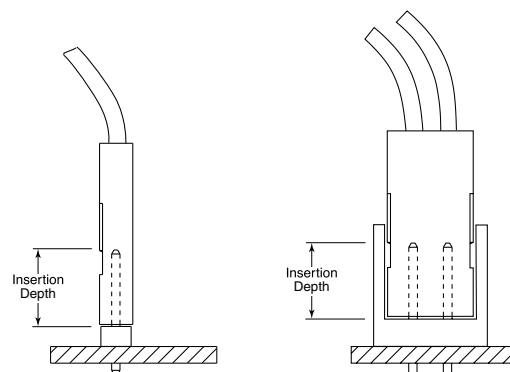
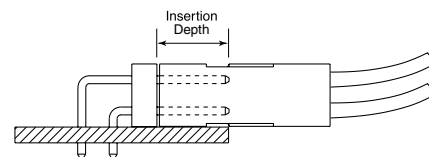
- This product is RoHs compatible according to the European Union Directive 2002/95/IEC



## MATING DATA

- Dubox™ Crimp-to-wire contacts 32
- Dubox™ Crimp-to-wire housings 34

## TYPICAL APPLICATIONS



# Dubox™ Shrouded Headers

2.54 mm (.100")

## PART NUMBERS



- 76384** = Single row, straight
- 76382** = Single row, right angle
- 76385** = Double row, straight
- 76383** = Double row, right angle

**02 up to 18**

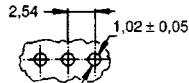
**3** = 0.76 µm (30µ") gold/GXT on mating area, tin on solder side  
**4** = tin

<b>76384</b>	-	<b>3XXLF</b>	<b>CORE RANGE</b>
<b>76385</b>	-	<b>3XXLF</b>	

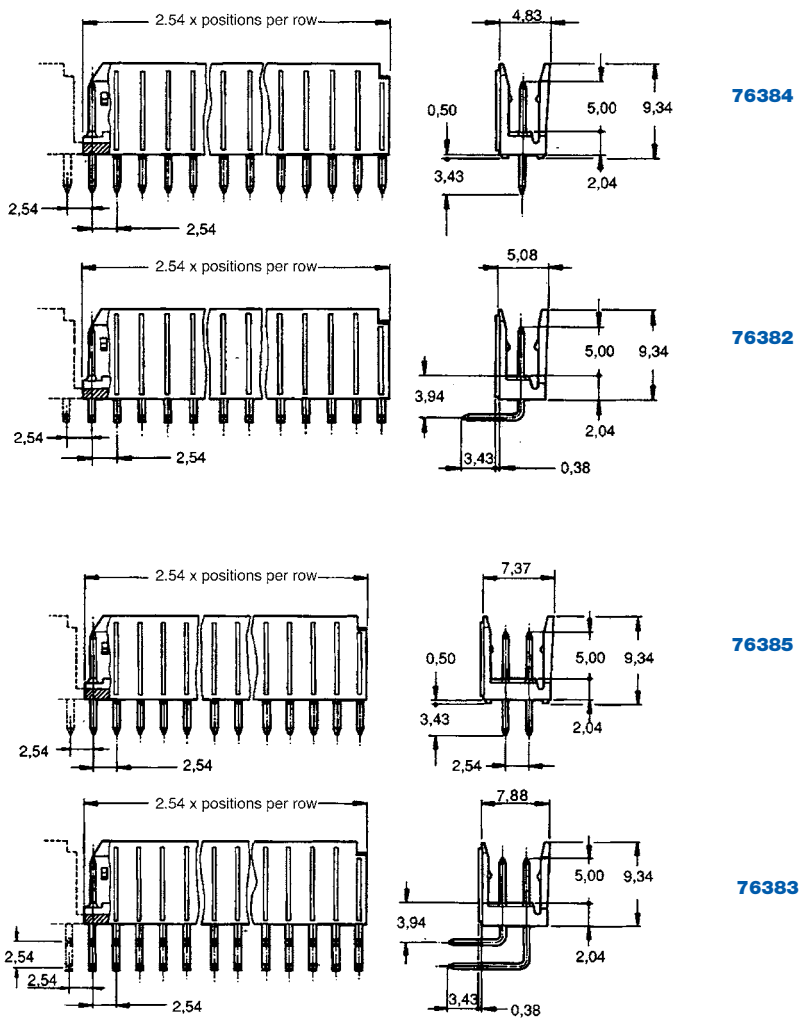
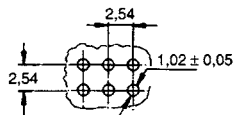
XX = 02, 03, 04, 05, 06, 08, 10

## PRODUCT

Recommended PCB layouts



Recommended PCB layouts



Dimension in mm

2.54 mm (.100")

## 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 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

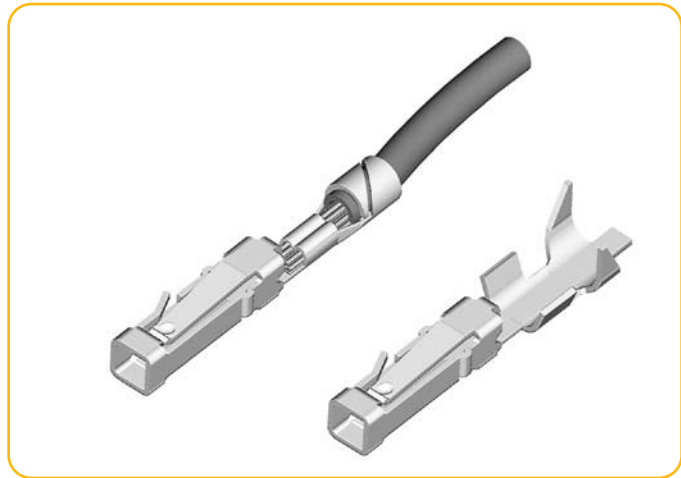
- 1 Reels
- Boxes - Loose piece

### 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



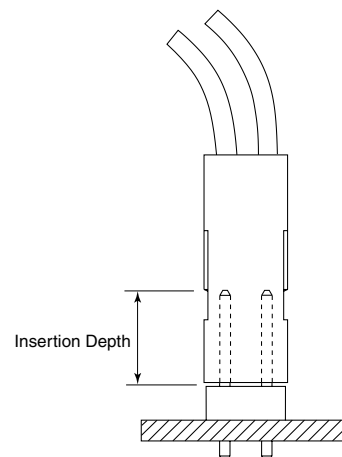
## MATING DATA

- BergStik® unshrouded straight headers 8, 10
- BergStik® unshrouded right angle headers 14, 16
- Dubox™ shrouded vert./ra. headers 30
- 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

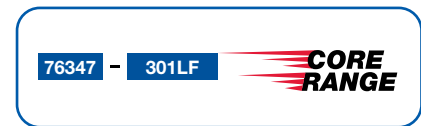
### Part numbers / Contacts on Reel

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

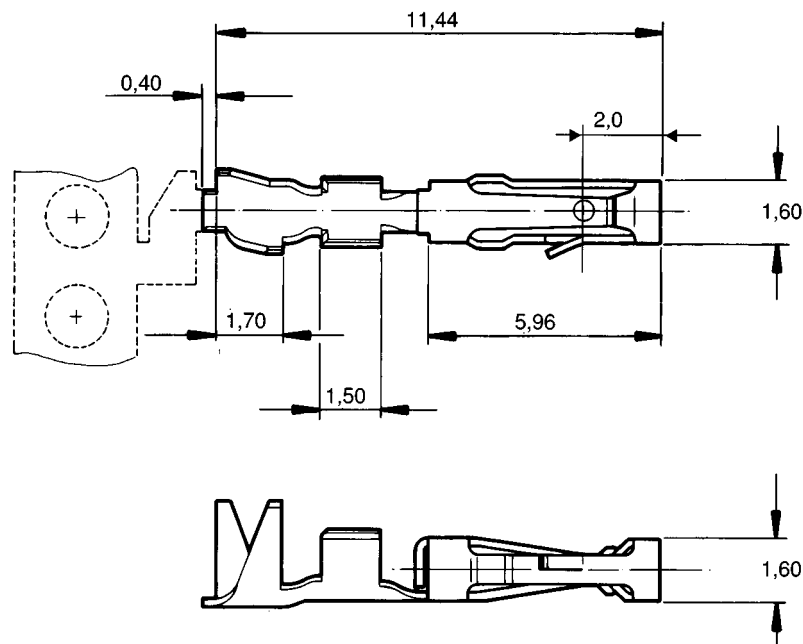
### Part numbers / Contacts loose Piece

Wire size	insulation O.D.	Selective Gold Plated	Tin plated	Packaging
<b>22-30</b>	0.90 - 1.50	<b>76357-301LF</b>	<b>76357-401LF</b>	1000/box

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



## PRODUCT



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

**Wire strip length** = 3,00 ± 0,25 mm

**Mating pin size** = 0,62 mm square

**Mating pin recommended length** = 5,00 mm min.

2.54 mm (.100")

## 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:  $1 \times 10^5$  M $\Omega$  min.
- Dielectric withstanding voltage: 1000 V rms

### OPERATING TEMPERATURE RANGE

- -65°C to +125°C



### PACKAGING

- Bulk

### PROCESSING INFORMATION

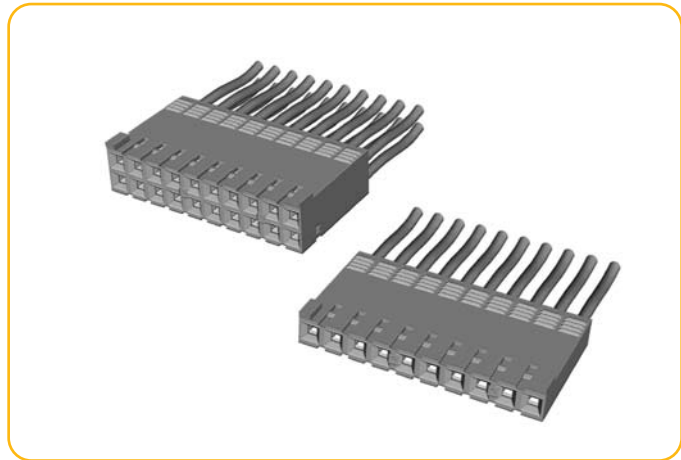
- Compatible with wave soldering processes

### 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



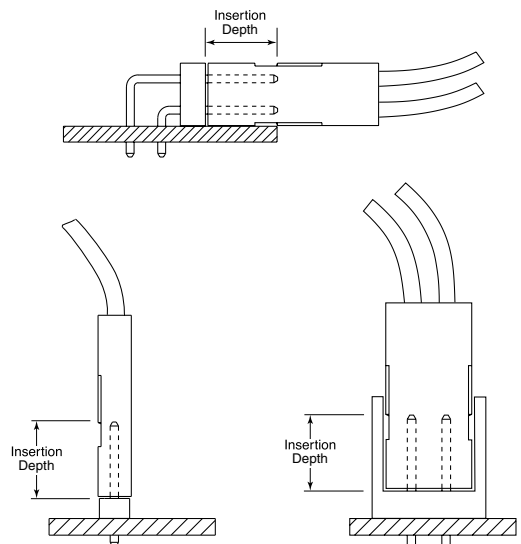
## MATING DATA

- BergStik® unshrouded straight headers 8, 10
- BergStik® unshrouded right angle headers 14, 16
- Dubox™ shrouded vert./ra. headers 30

## INSERTION DEPTH

- 3.6 mm min. to 6.0 mm max.

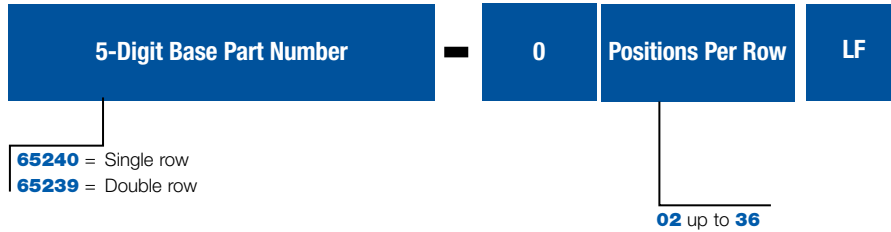
## TYPICAL APPLICATIONS



# Dubox™ Crimp-to-Wire Housings

2.54 mm (.100")

## PART NUMBERS

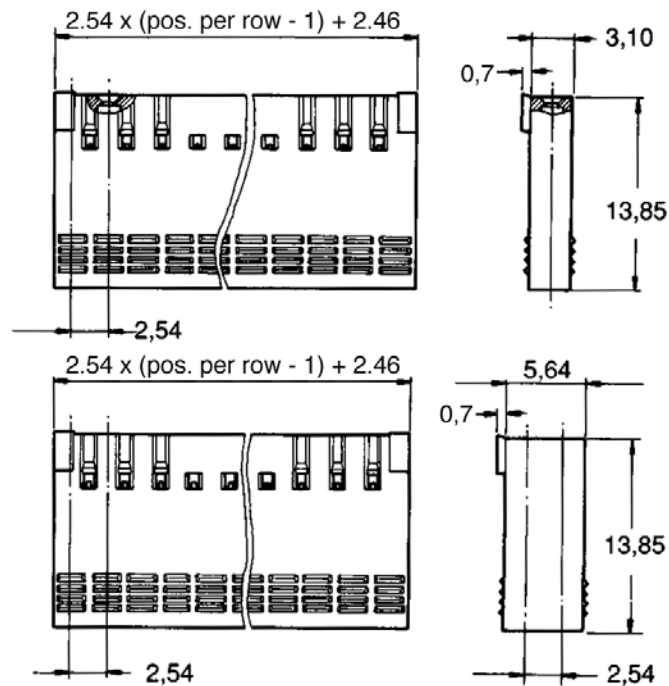


**CORE RANGE**

65239 - OXXLF  
XX = 02, 03, 04, 05, 06, 08, 10

65240 - OXXLF  
XX = 04, 06, 08, 10, 12, 16, 20

## PRODUCT



- Pin size: 0.62 mm square
- Recommended pin length: 5.00 mm min.

2.54 mm (.100")

### 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 or tin-lead over 1.27 μm (50 μ") nickel

#### ELECTRICAL PERFORMANCE

- Current rating: 3 A continuous
- Insulation resistance: 1x 10<sup>5</sup> MΩ 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

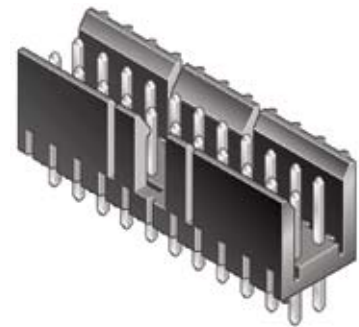
- Compatible with wave soldering processes

#### 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

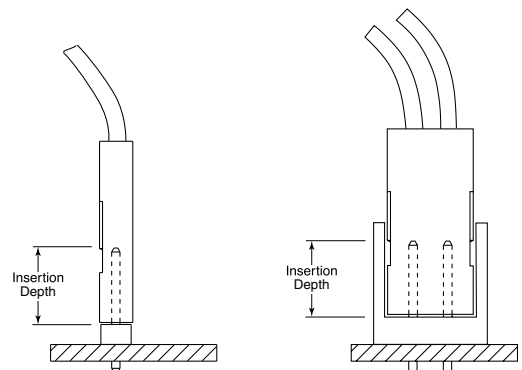
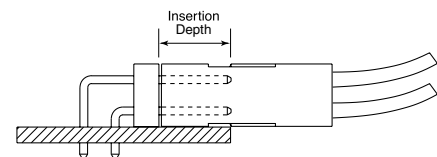
- This product is RoHs compatible according to the European Union Directive 2002/95/IEC



### MATING DATA

- PV™ Crimp-to-wire contacts 38
- PV™ Crimp-to-wire housings 40

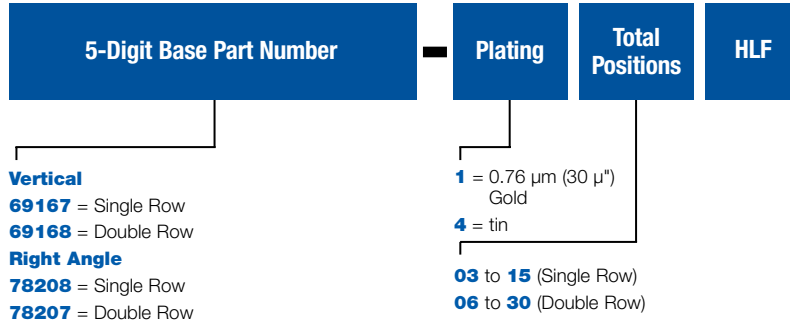
### TYPICAL APPLICATIONS



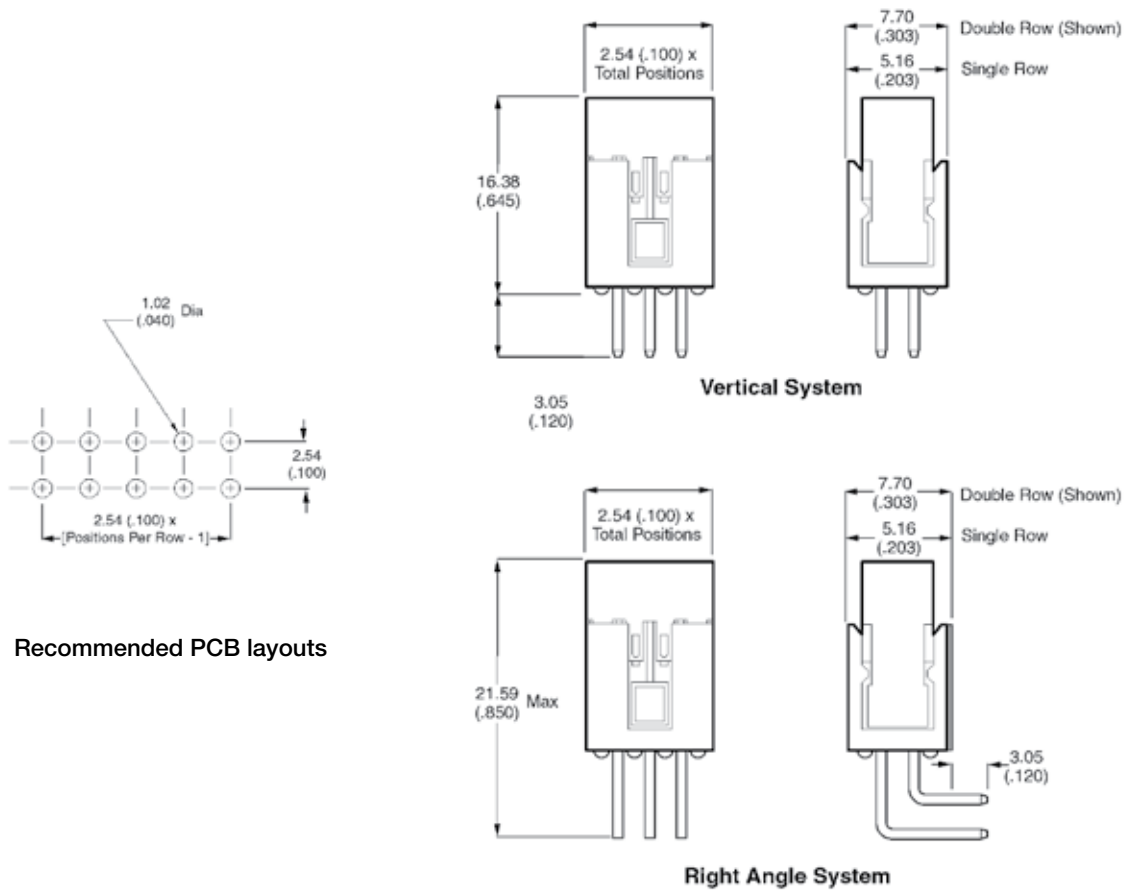
# PV™ Shrouded Headers

2.54 mm (.100")

## PART NUMBERS



## PRODUCT



Dimension in mm

2.54 mm (.100")

## 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 or tin over 1.27 µm (50 µ") nickel

### ELECTRICAL PERFORMANCE

- Current rating: 3 A continuous depending on wire size
- Insulation resistance: 5000 mΩ min.
- Contact resistance after environmental test: 15Ω 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

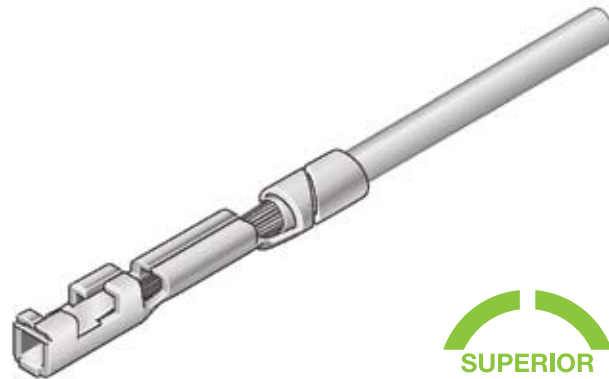
- 1 Reels
- Boxes - Loose piece

### 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



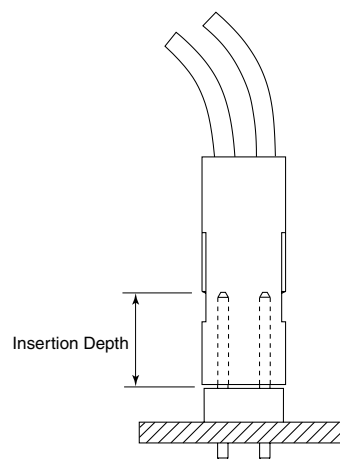
## MATING DATA

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

## 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

2.54 mm (.100")

## PART NUMBERS



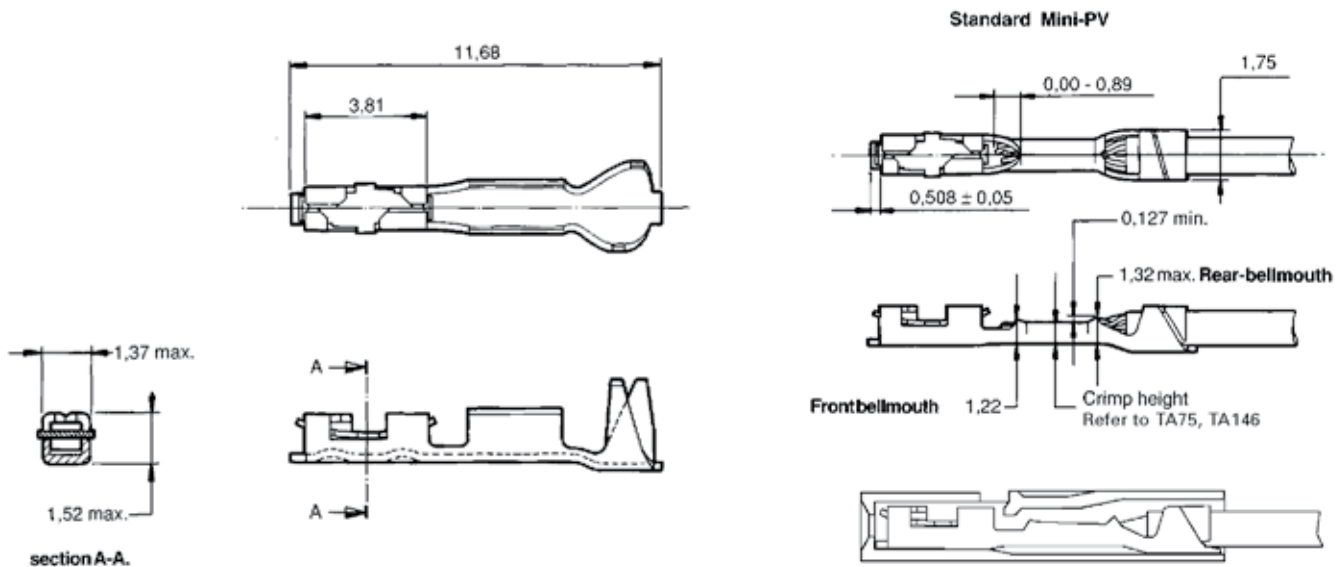
### HOW TO SELECT THE RIGHT CONTACT

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

Application	Spring Force
<b>Housing</b>	
<b>40-72</b> Contacts Per Housing	Standard
<b>10-50</b> Contacts Per Housing	High
<b>2-20</b> Contacts Per Housing	Ultra High
<b>Discrete Contact</b>	Ultra High

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

## PRODUCT



2.54 mm (.100")

## 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:  $1 \times 10^5$  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

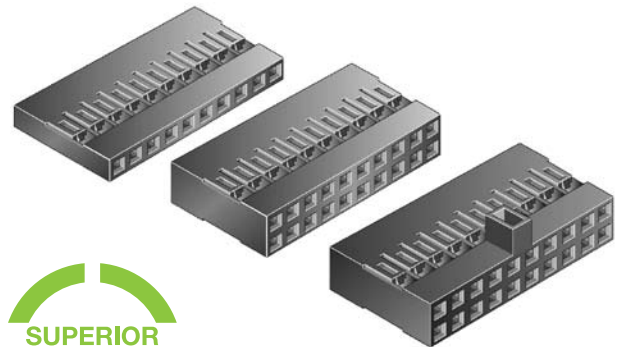
- Compatible with wave soldering processes

### REFERENCE INFORMATION

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

### RoHS INFORMATION

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



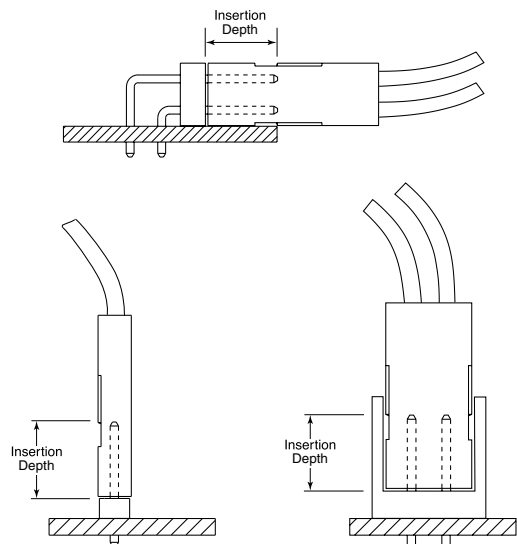
## MATING DATA

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

## 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

2.54 mm (.100")

## PART NUMBERS



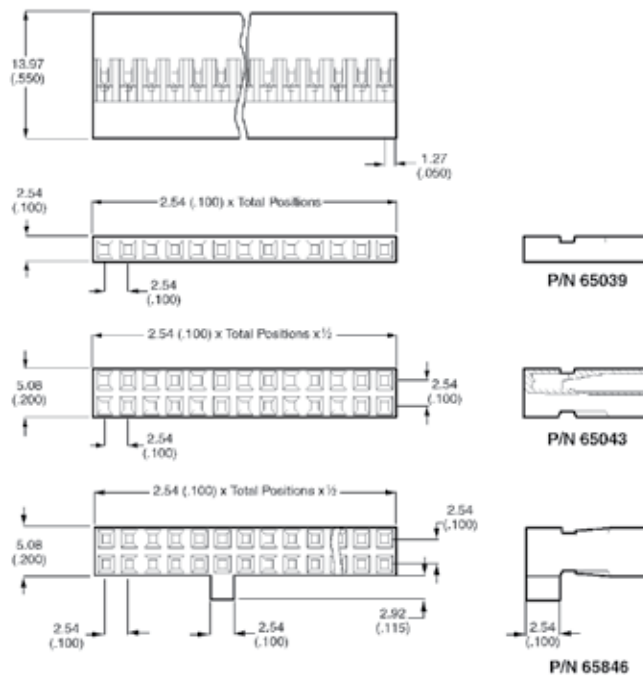
- 65039** = Single Row
- 65043** = Double Row
- 65846** = Double Row with Center Key

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

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

## PRODUCT



2.54 mm (.100")

## 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 (50μ") nickel

### ELECTRICAL PERFORMANCE

- Current rating: 3 A continuous
- Insulation resistance: 1x 10<sup>5</sup> 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

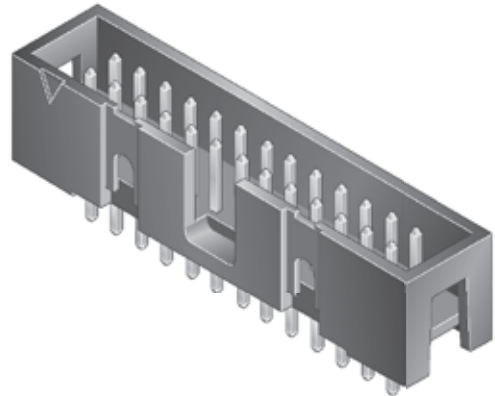
- Compatible with wave soldering processes

### REFERENCE INFORMATION

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

### RoHS INFORMATION

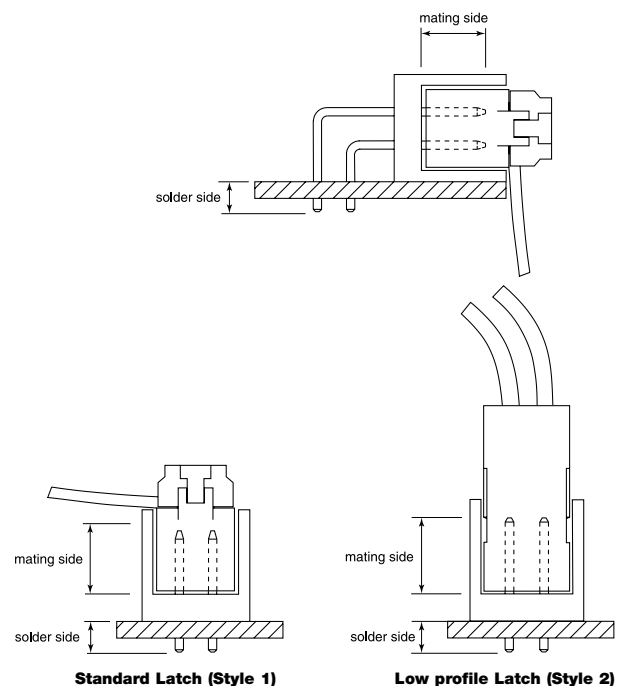
- This product is RoHS compatible according to the European Union Directive 2002/95/IEC



## MATING DATA

- Quickie™ IDC receptacles 48

## TYPICAL APPLICATIONS



# Quickie™ Shrouded Headers, Low Profile

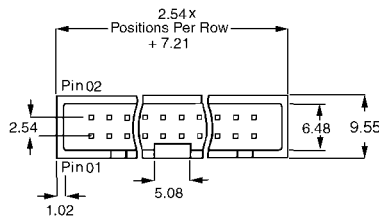
2.54 mm (.100")

## PART NUMBERS

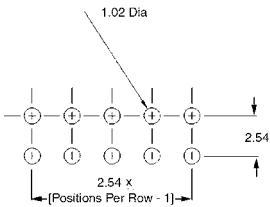
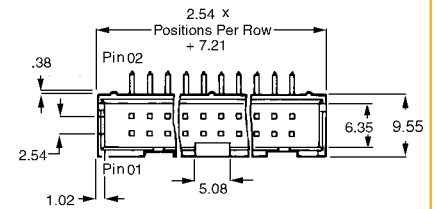
5-Digit Base Part Number	Plating	Total Positions	LF
<p><b>Through mount</b>  <b>75869</b> = Vertical  <b>75867</b> = Right angle</p>		<p><b>30</b> = 4 pos.  <b>31</b> = 6 pos.  <b>32</b> = 8 pos.  <b>01</b> = 10 pos.  <b>02</b> = 14 pos.  <b>03</b> = 16 pos.  <b>04</b> = 20 pos.  <b>05</b> = 26 pos.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

## PRODUCT

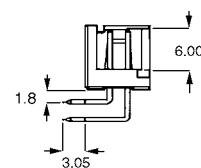
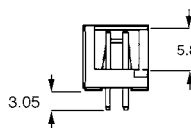
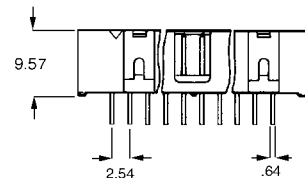
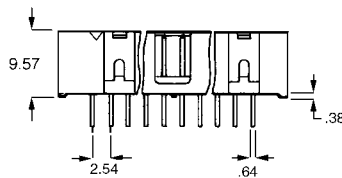
**Vertical**



**Right Angle**



### Recommended PCB layouts



Dimension in mm

2.54 mm (.100")

## 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 x 10<sup>5</sup> 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

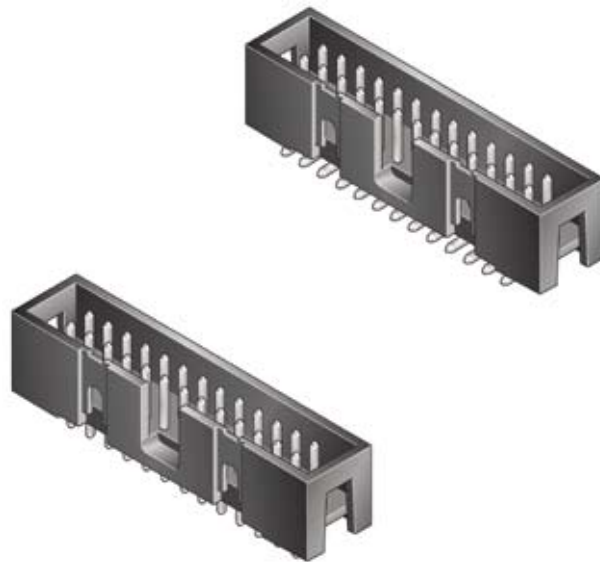
- Compatible with wave, vapor-phase, and IR reflow soldering processes

### REFERENCE INFORMATION

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

### RoHS INFORMATION

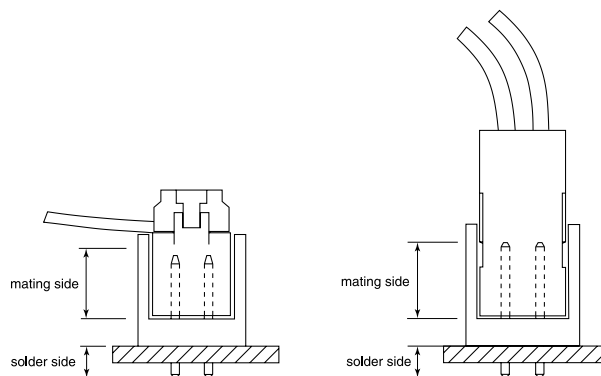
- This product is RoHS compatible according to the European Union Directive 2002/95/IEC



## MATING DATA

- Quickie™ IDC receptacles 48

## TYPICAL APPLICATIONS

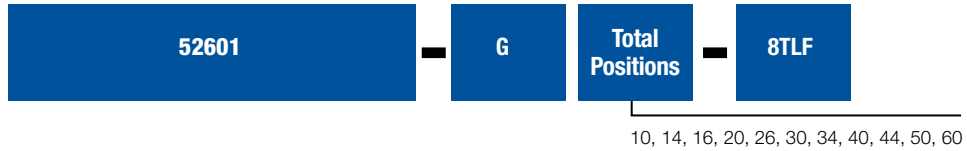


# Quickie™ Shrouded Headers, Low Profile, SMT, Pin-in-Paste

2.54 mm (.100")

## PART NUMBERS

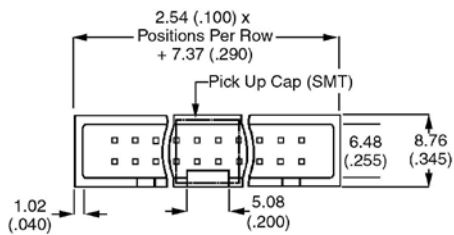
SMT (Surface Mount)



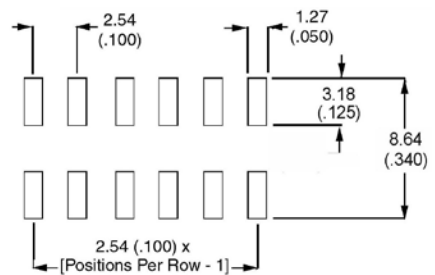
PIP (Pin-in-Paste)



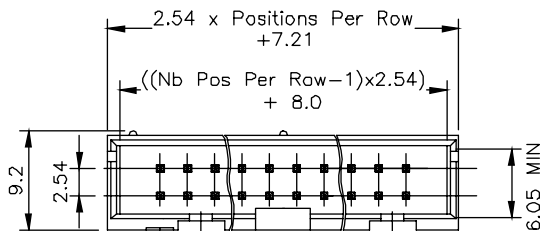
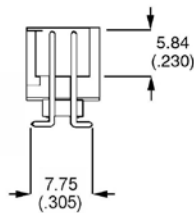
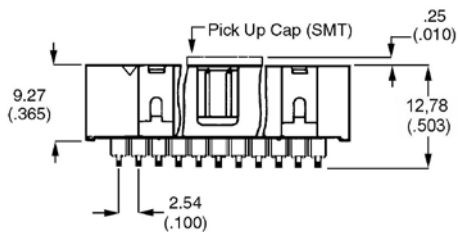
## PRODUCT



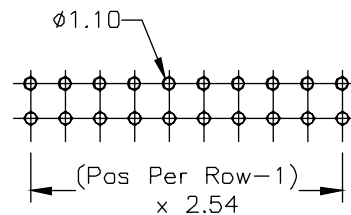
52601



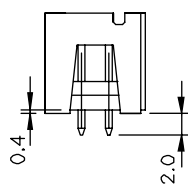
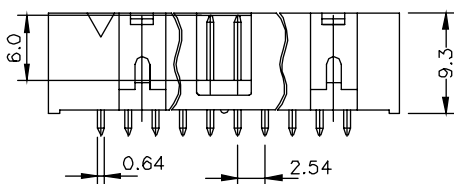
Recommended PCB layouts



10056844



Recommended PCB layouts



Dimension in mm

2.54 mm (.100")

## 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: 1x 10<sup>5</sup> 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

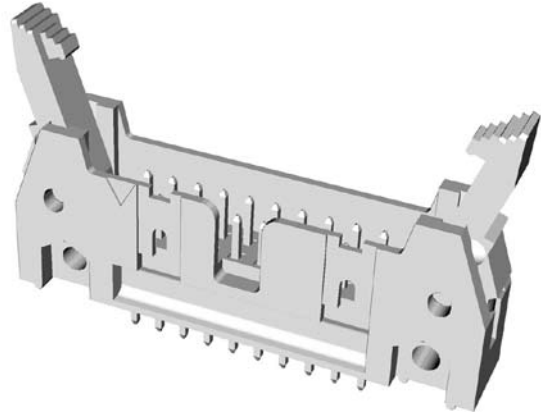
- ▶ Compatible with wave soldering processes

### REFERENCE INFORMATION

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

### RoHS INFORMATION

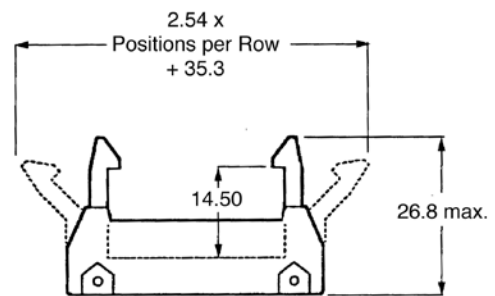
- ▶ This product is RoHS compatible according to the European Union Directive 2002/95/IEC



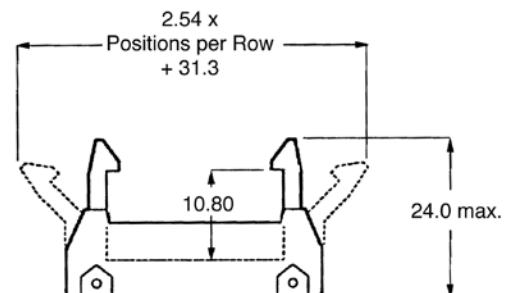
## MATING DATA

- ▶ Quickie™ IDC receptacles 48

## TYPICAL APPLICATIONS



**Standard Latch (Style 1)**

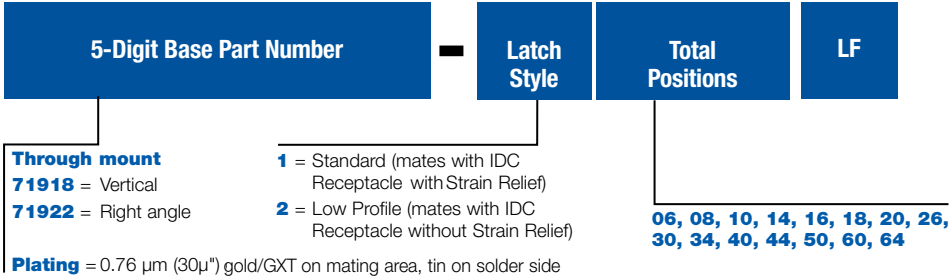


**Low profile Latch (Style 2)**

# Quickie™ Shrouded Headers, Eject Latch

2.54 mm (.100")

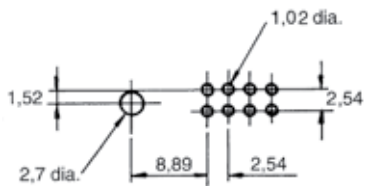
## PART NUMBERS



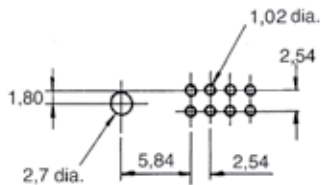
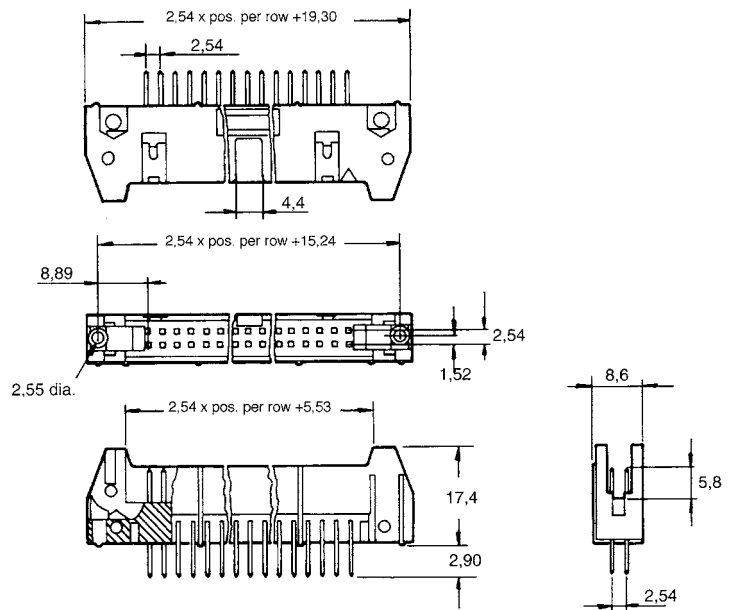
71918	-	1XXLF	<b>CORE RANGE</b>
71922	-	1XXLF	

XX = 06, 08, 10, 16, 20

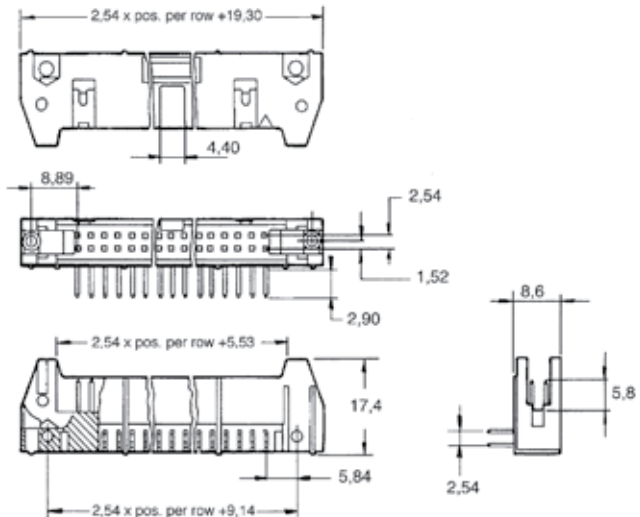
## PRODUCT



Vertical



Right Angle



Recommended PCB layouts

Dimension in mm

2.54 mm (.100")

## TECHNICAL DATA

### PHYSICAL

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

### ELECTRICAL PERFORMANCE

- Current rating: 1 A continuous
- Insulation resistance: 1x 10<sup>5</sup> 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

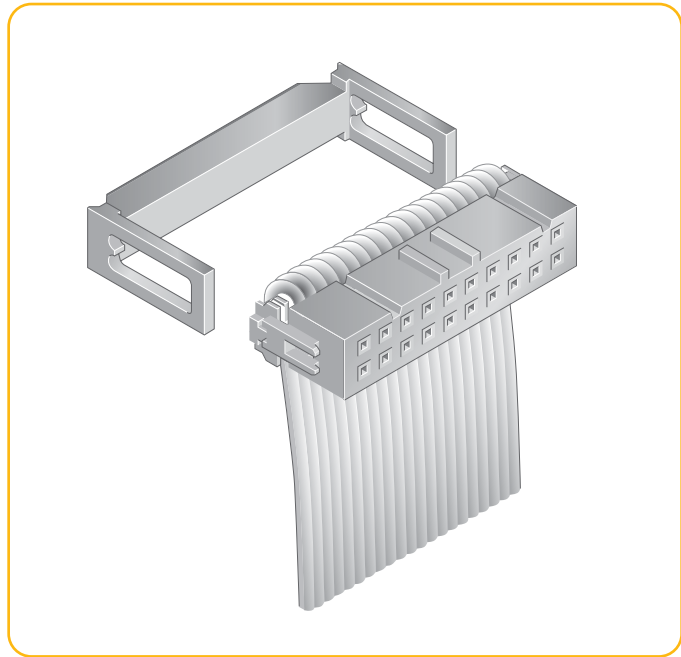
- Compatible with wave soldering processes

### REFERENCE INFORMATION

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

### RoHS INFORMATION

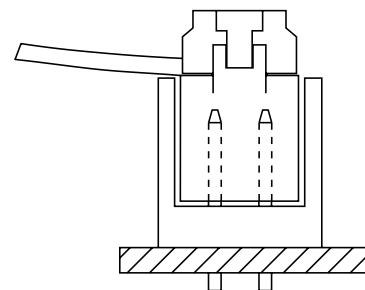
- This product is RoHS compatible according to the European Union Directive 2002/95/IEC



## MATING DATA

- BergStik® unshrouded vertical headers 8, 10, 12
- Quickie® shrouded low profile headers 42, 44
- Quickie® shrouded eject latch headers 46

## TYPICAL APPLICATIONS

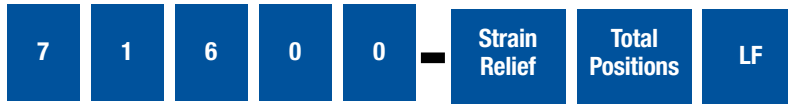


Low profile Latch (Style 2)

# Quickie™ IDC Receptacle

2.54 mm (.100")

## PART NUMBERS



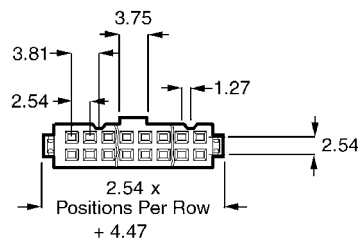
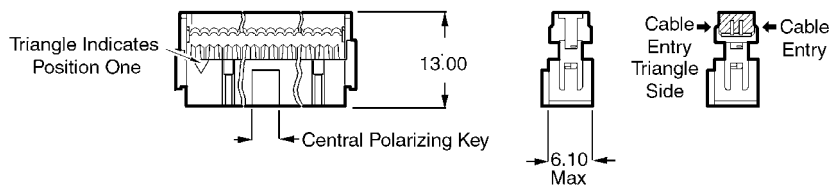
Note: 4 position available without strain relief only

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

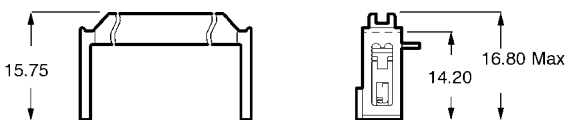
- 0 = Standard (Mates with Shrouded Eject Latch Header Latch 1)
- 1 = None (Mates with Shrouded Eject Latch Header Latch 2)
- 6 = Latching (Mates with Low Profile Headers)

**71600 - 0XXLF** **CORE RANGE**  
 XX = 04, 06, 08, 10, 16, 20

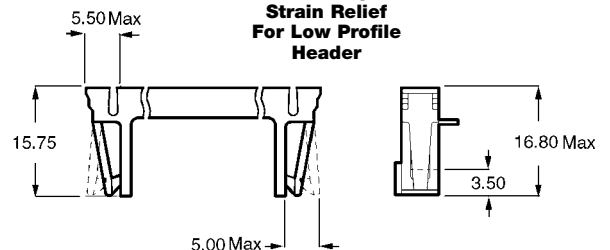
## PRODUCT



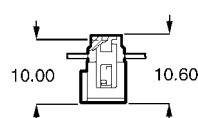
**0 Standard Strain Relief**



**6 Latching Strain Relief For Low Profile Header**



**1 Without Strain Relief**



Dimension in mm

2.54 mm (.100")

## 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 (50μ") nickel

### ELECTRICAL PERFORMANCE

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

### OPERATING TEMPERATURE RANGE

- -65°C to +125°C



### PACKAGING

- Tubes

### PROCESSING INFORMATION

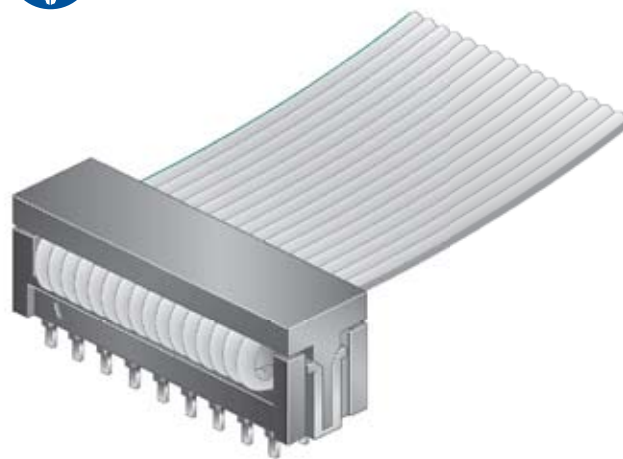
- Compatible with wave and vapor phase soldering processes — Low temperature

### REFERENCE INFORMATION

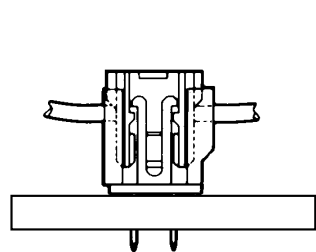
-  File no. E66906
-  File no. LR46923
- Product drawing: By 5-digit base part number
- Product specification: BUS-12-095

### RoHS INFORMATION

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



## TYPICAL APPLICATIONS



# Quickie™ IDC PCB Connector

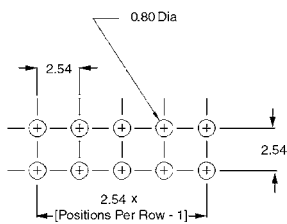
2.54 mm (.100")

## PART NUMBERS

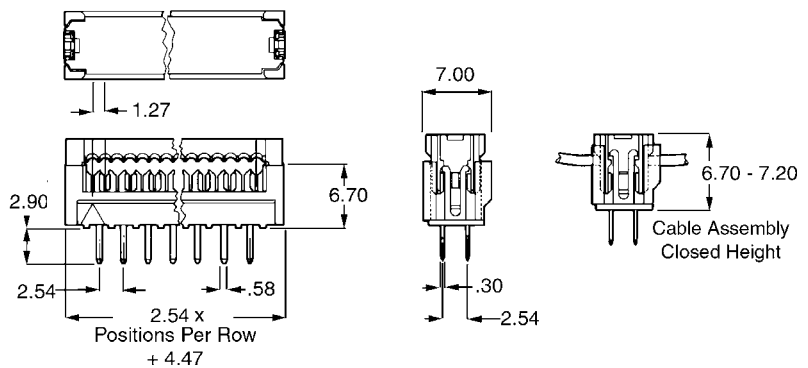


- |                     |                     |                     |
|---------------------|---------------------|---------------------|
| <b>06</b> = 6 pos.  | <b>18</b> = 18 pos. | <b>34</b> = 34 pos. |
| <b>08</b> = 8 pos.  | <b>20</b> = 20 pos. | <b>40</b> = 40 pos. |
| <b>10</b> = 10 pos. | <b>24</b> = 24 pos. | <b>50</b> = 50 pos. |
| <b>14</b> = 14 pos. | <b>26</b> = 26 pos. | <b>60</b> = 60 pos. |
| <b>16</b> = 16 pos. | <b>30</b> = 30 pos. | <b>64</b> = 64 pos. |

## PRODUCT



Recommended PCB layouts



Dimension in mm

## 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 x 10<sup>5</sup> 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

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

### PROCESSING INFORMATION

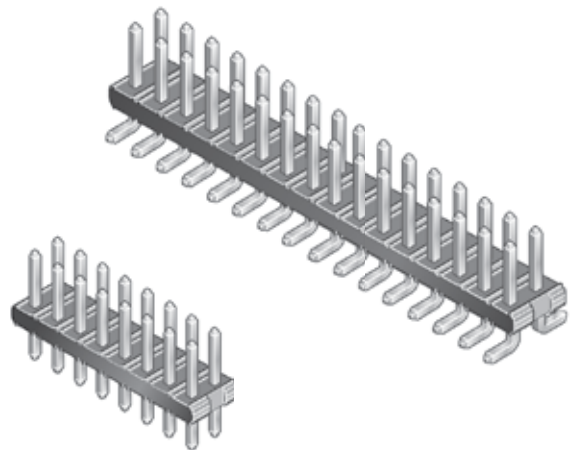
- Compatible with wave, vapor-phase, and IR reflow soldering processes

### 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

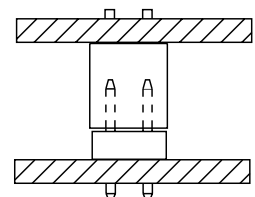
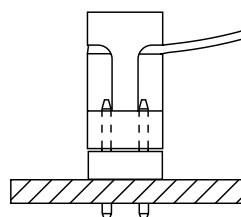
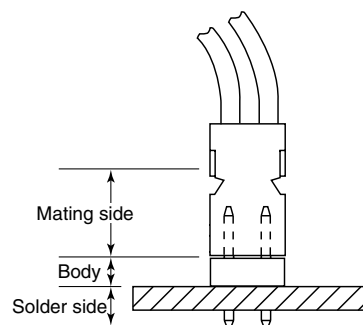
- This product is RoHs compatible according to the European Union Directive 2002/95/IEC



## MATING DATA

■ Minitek™ ctw contacts and housings	72
■ Minitek™ Vertical receptacles	60
■ Minitek™ Shunts	62
■ Minitek™ IDC receptacles	76

## TYPICAL APPLICATIONS



2.00 mm (.079")

# 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)

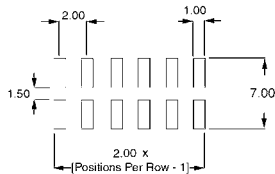
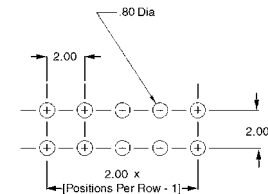
**U** = Tube without cap (TMT)  
**A** = Tape-and-reel with cap (SMT)

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

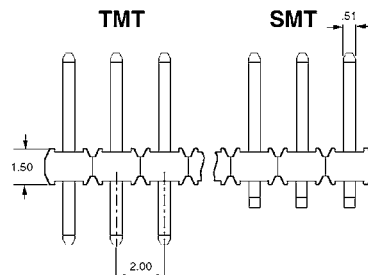
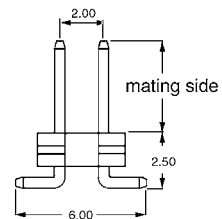
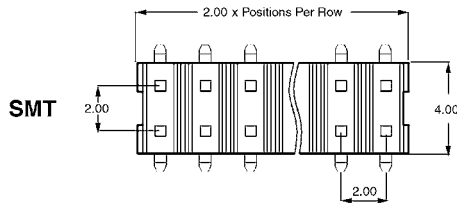
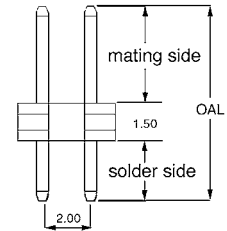
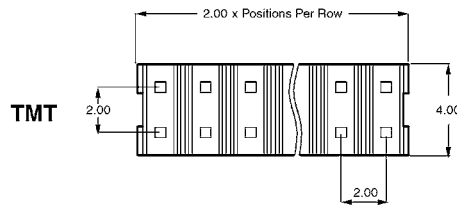
Surface Mount		Through Mount			
Pin Style	Mating side mm	Pin Style	Mating Side mm	Solder Side mm	OAL mm
<b>51</b>	2.00	<b>06</b>	4.00	2.50	8.00
<b>52</b>	4.00	<b>08</b>	4.00	3.00	8.50

2.00 mm (.079")

## PRODUCT



Recommended PCB layouts



Dimension in mm

## 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 (50μ") nickel



### ELECTRICAL PERFORMANCE

- Current rating: 3 A continuous
- Insulation resistance: 1x 10<sup>5</sup> 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 to 06 pos. packed in box)

### PROCESSING INFORMATION

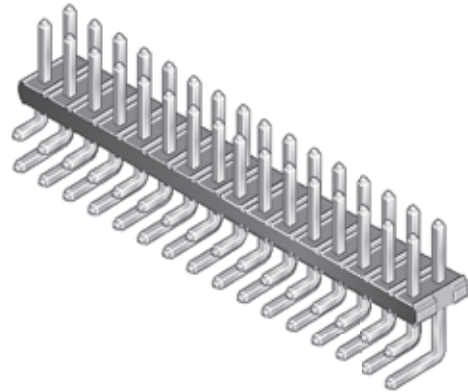
- Compatible with wave, vapor-phase, and IR reflow soldering processes

### REFERENCE INFORMATION

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

### RoHs INFORMATION

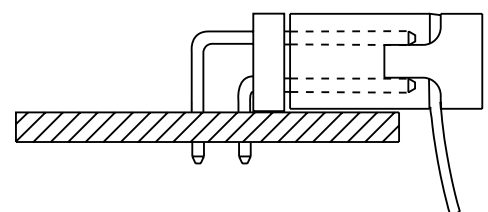
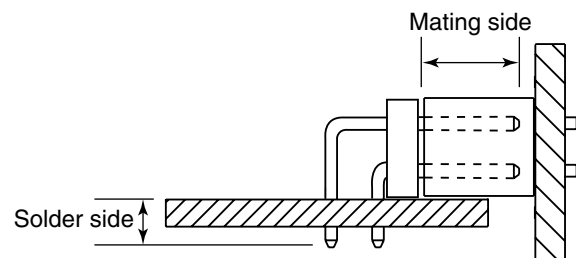
- This product is RoHs compatible according to the European Union Directive 2002/95/IEC



## MATING DATA

■ Minitek™ ctw contacts and housings	72
■ Minitek™ Vertical receptacles	60
■ Minitek™ Shunts	62
■ Minitek™ IDC receptacles	76

## TYPICAL APPLICATIONS



2.00 mm (.079")

# Minitek™ Unshrouded Right Angle Headers

## PART NUMBERS

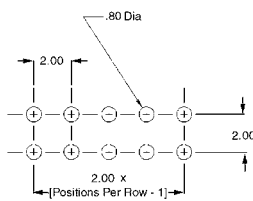


**G** = 0,76  $\mu\text{m}$  ( $30\mu\text{m}$ ) gold/GXT on mating area,  
2-6  $\mu\text{m}$  ( $79\text{-}237\mu\text{m}$ ) Tin on solder side  
**F** = Gold flash on mating area,  
2-6  $\mu\text{m}$  ( $79\text{-}237\mu\text{m}$ ) Tin on solder side

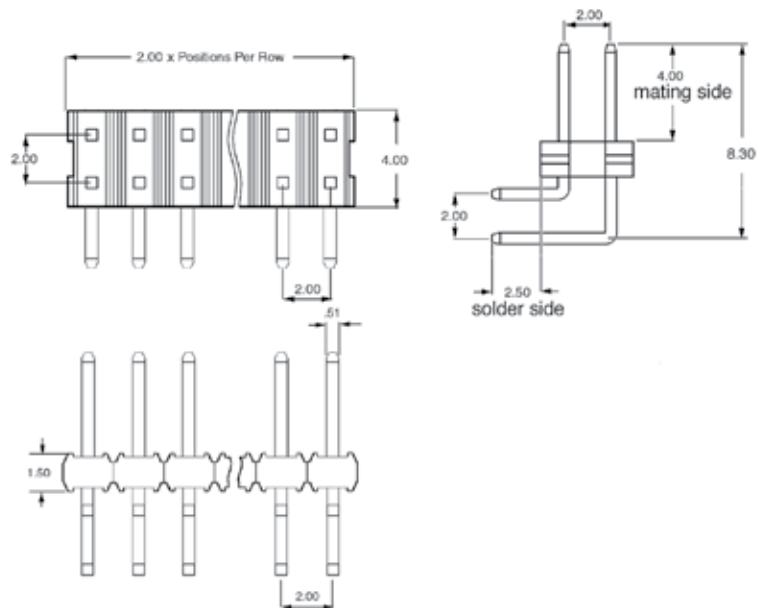
**02 to 25**

2.00 mm (.079")

## PRODUCT



Recommended PCB layouts



Dimension in mm

## 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: 1x 10<sup>5</sup> 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

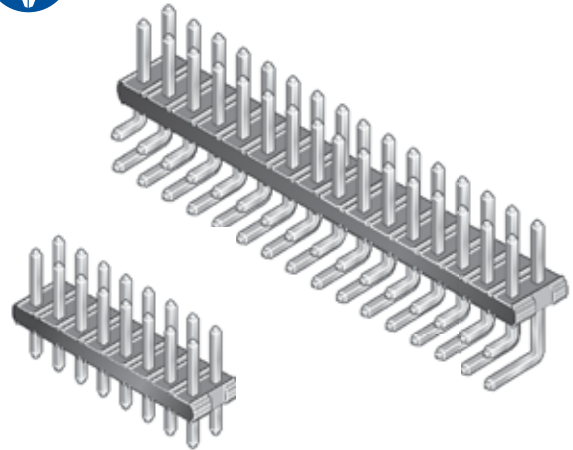
- Tubes (04 to 06 pos. packed in box)
- Tape on reel with pick up cap

### PROCESSING INFORMATION

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

### REFERENCE INFORMATION

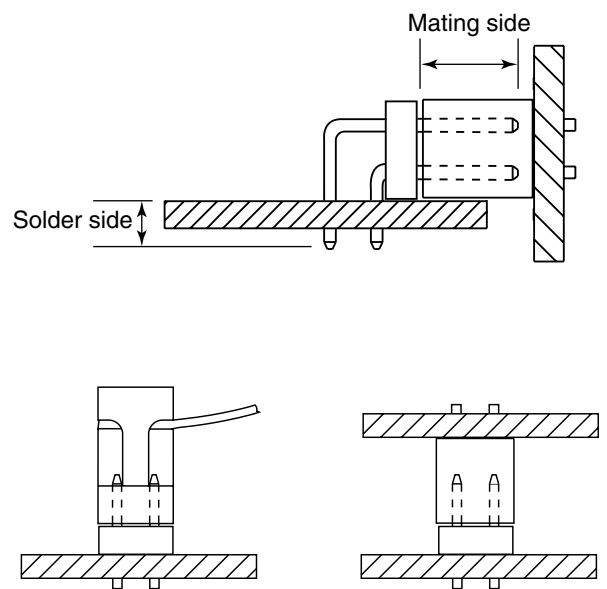
- File no. E66906
- File no. LR46923
- Product drawing: by 8-digit base part number
- Product specification: DPS-12-011 and GS-12-163
- Application specification: TA-895
- Reflow prfile: TA-842



## MATING DATA

■ Minitek™ ctw contacts and housings	72
■ Minitek™ Vertical receptacles	60
■ Minitek™ Shunts	62
■ Minitek™ IDC receptacles	76

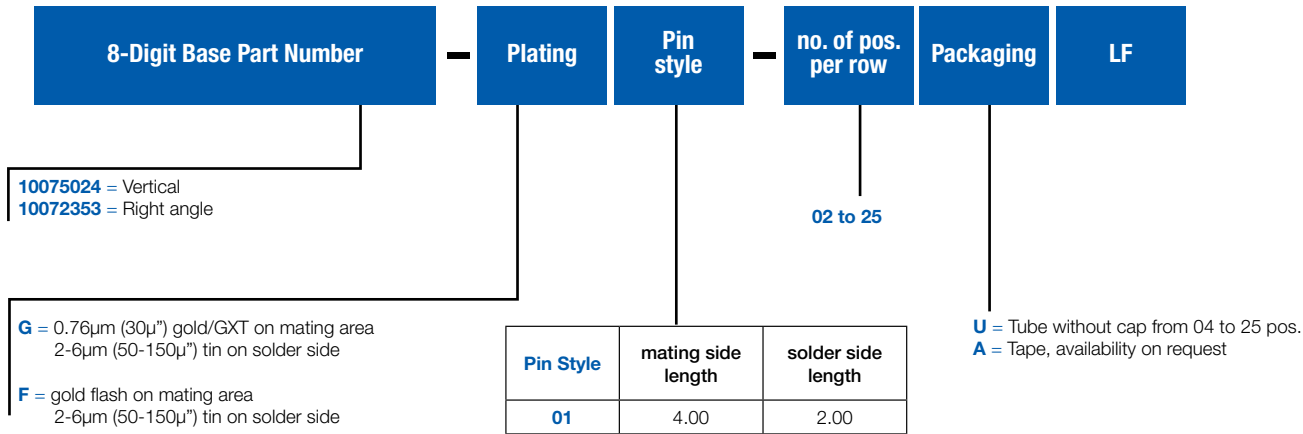
## TYPICAL APPLICATIONS



2.00 mm (.079")

# Minitek™ Unshrouded Headers, Pin-in-Paste

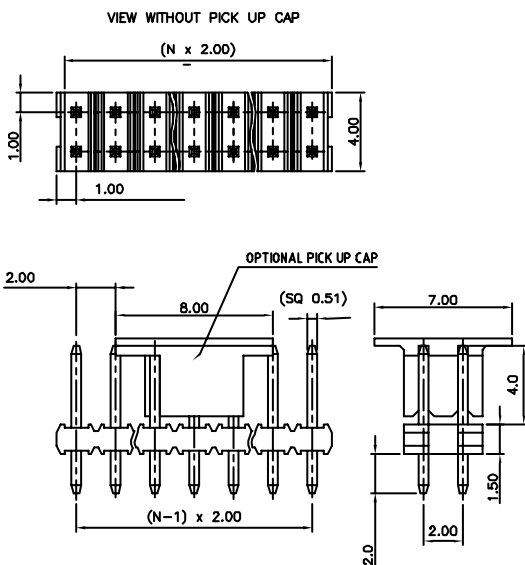
## PART NUMBERS



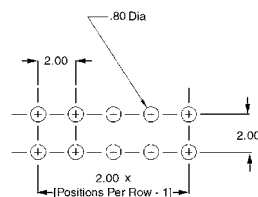
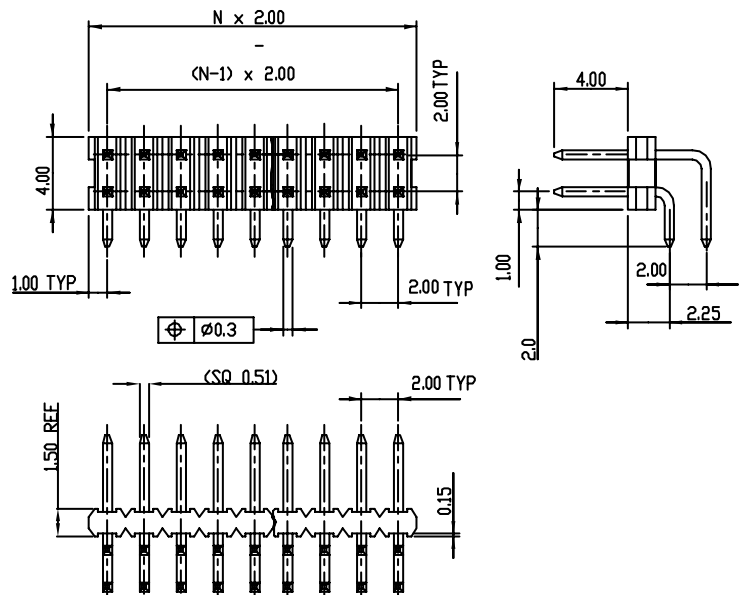
2.00 mm (.079")

## PRODUCT

### 10075024 Vertical



### 10072353 Right angle



Dimension in mm

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 over over 1.27 μm (50μ") nickel



### ELECTRICAL PERFORMANCE

- Current rating: 2 A continuous
- Insulation resistance: 1x 10<sup>5</sup> 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

- Standard: in bags

### PROCESSING INFORMATION

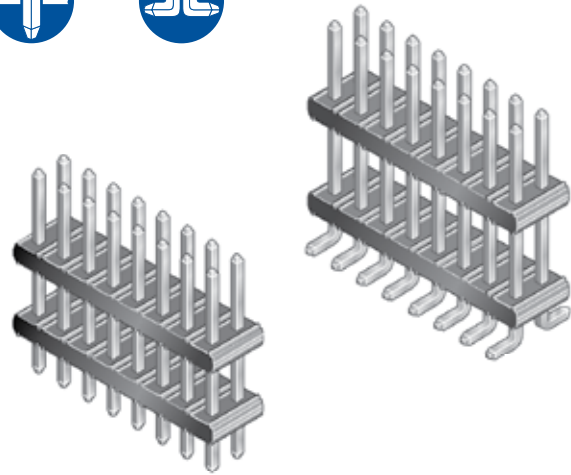
- Compatible with wave, vapor-phase, and IR reflow soldering processes

### REFERENCE INFORMATION

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

### RoHs INFORMATION

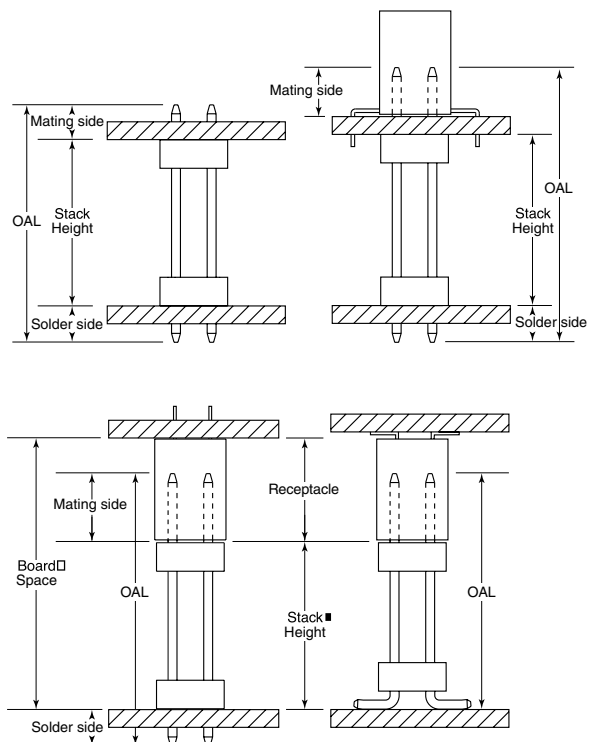
- This product is RoHs compatible according to the European Union Directive 2002/95/IEC



## MATING DATA

Minitek™ ctw contacts and housings	72
Minitek™ Vertical receptacles	60
Minitek™ Shunts	62
Minitek™ IDC receptacles	76

## TYPICAL APPLICATIONS



2.00 mm (.079")

# Minitek™ Unshrouded Stacking Headers

## PART NUMBERS

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



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

**1** = 2.50  
**3** = 3.00  
**0** = SMT

**T** = 0,76 μm (30μ")  
 Gold on mating side,  
 tin on solder side

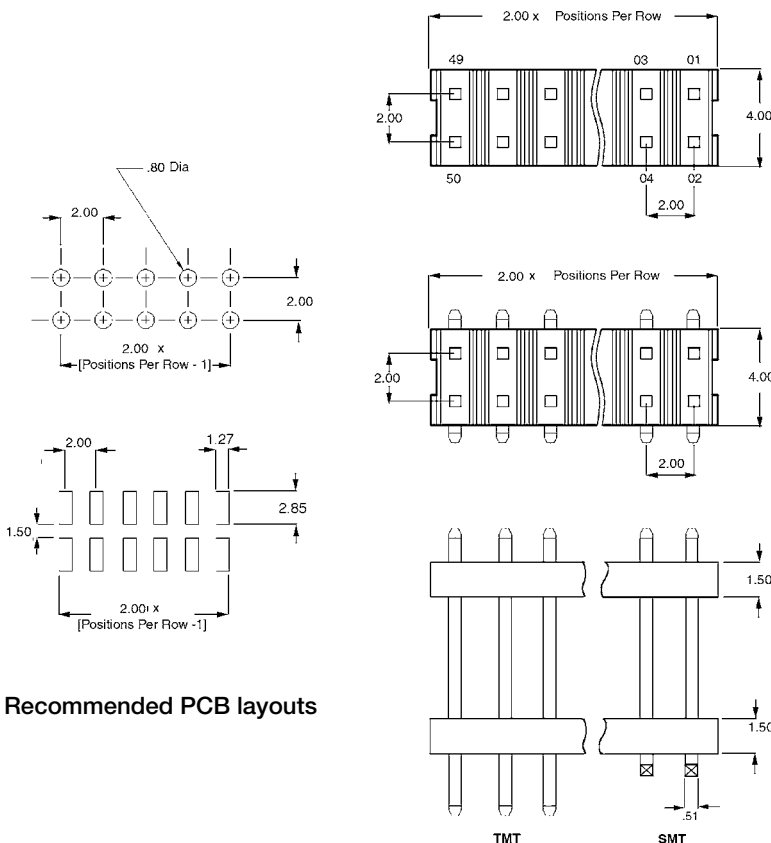
**02 to 25** (TMT)  
**02 to 25** (SMT)

**XXX** = mm  
 Specify mm  
 [e.g., 037 = 03.7 mm]  
 in 0.1 mm increments

Pin Style	Overall length (OAL)	
	(TMT) mm	(SMT) mm
<b>22</b>	8.20	6.53
<b>24</b>	9.55	7.87
<b>26</b>	10.19	8.51
<b>28</b>	11.79	10.11
<b>30</b>	13.54	11.86
<b>32</b>	14.10	12.42
<b>34</b>	15.60	13.92
<b>36</b>	17.09	15.42
<b>38</b>	19.08	17.40
<b>40</b>	21.08	19.41

2.00 mm (.079")

## PRODUCT



Recommended PCB layouts

Dimension in mm

**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 performances

## TECHNICAL DATA

### PHYSICAL

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



### ELECTRICAL PERFORMANCE

- Current rating: 2 A continuous
- Insulation resistance: 1 x 10<sup>5</sup> MΩ min.
- Contact resistance: 20 mΩ  
25 mΩ - 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

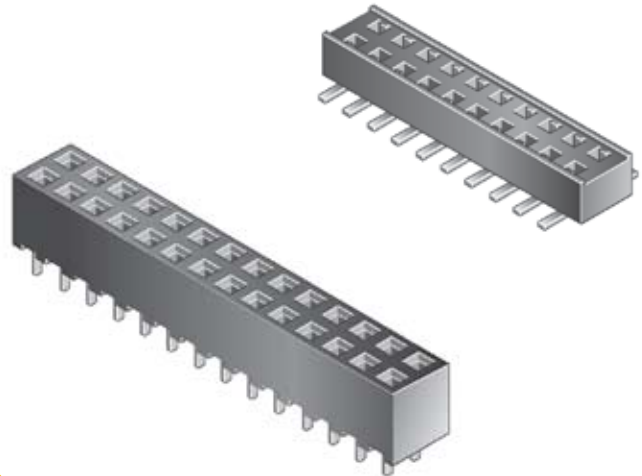
- Compatible with wave, vapor-phase, and IR reflow soldering processes

### 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



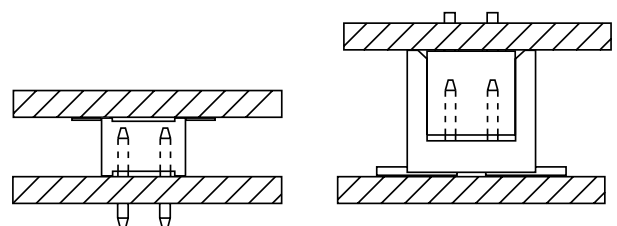
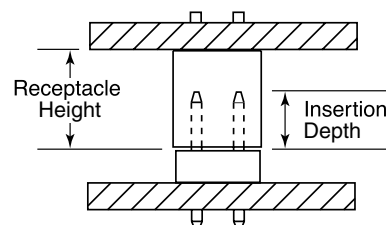
## MATING DATA

- Minitek™ Unshrouded headers 52, 54, 58
- Minitek™ Shrouded headers 64, 66

## 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



2.00 mm (.079")

# Minitek™ Vertical Receptacles

## PART NUMBERS

5-Digit Base Part Number		1	Total Positions	Packaging	LF								
<table border="1"> <thead> <tr> <th colspan="2">Through Mount (TMT)</th> </tr> <tr> <th>Height</th> <th>Entry</th> </tr> </thead> <tr> <td>4.50</td> <td>Top</td> </tr> </table>		Through Mount (TMT)		Height	Entry	4.50	Top	1	04 to 50 Top Entry 04 to 30 Bottom Entry	-	-		
Through Mount (TMT)													
Height	Entry												
4.50	Top												
<table border="1"> <thead> <tr> <th colspan="2">Surface Mount (SMT)</th> </tr> <tr> <th>Height</th> <th>Entry</th> </tr> </thead> <tr> <td>4.50</td> <td>Top</td> </tr> <tr> <td>2.30</td> <td>Top</td> </tr> <tr> <td>2.30</td> <td>Bottom</td> </tr> </table>		Surface Mount (SMT)		Height	Entry	4.50	Top	2.30	Top	2.30	Bottom	-	-
Surface Mount (SMT)													
Height	Entry												
4.50	Top												
2.30	Top												
2.30	Bottom												
		-	-										

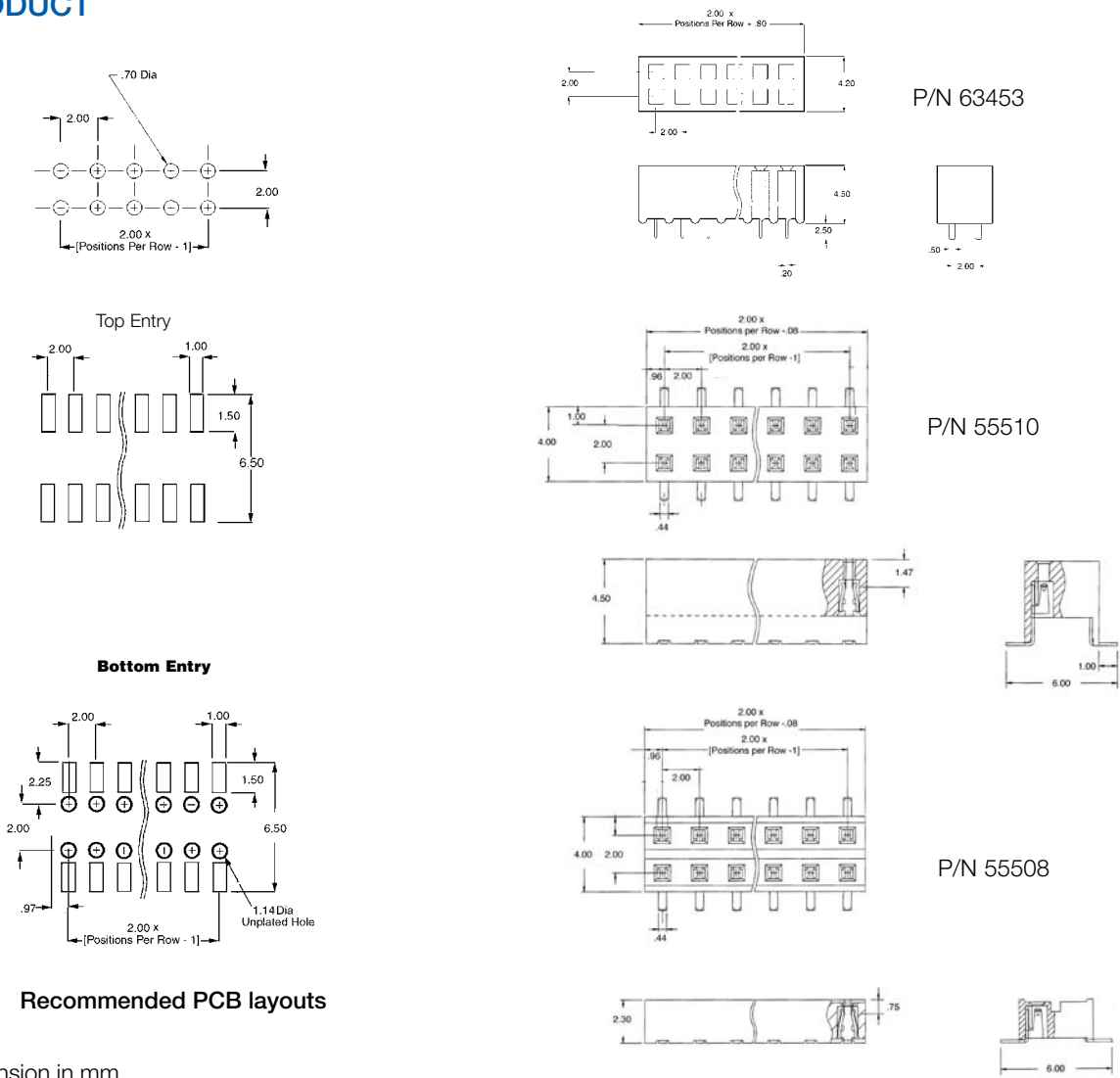
1 = 0,76 μm (30μ") Gold on mating area,  
2-6 μm (79-237μ") Tin on solder side

- (dash) = Tubes (TMT)  
TR = Tape-and-reel (SMT)

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

2.00 mm (.079")

## PRODUCT



## 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 or tin-lead over 1.27 µm (50 µ") nickel

### ELECTRICAL PERFORMANCE

- Current rating: 1 A continuous
- Insulation resistance: 1x 10<sup>5</sup> MΩ min.
- Contact resistance: 25 mΩ
- 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

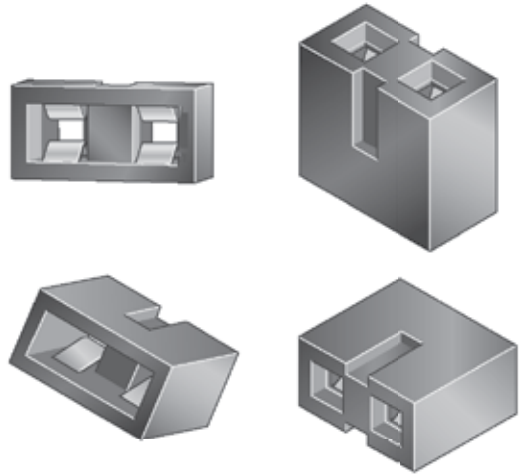
- Compatible with wave, vapor-phase, and IR reflow soldering processes

### 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



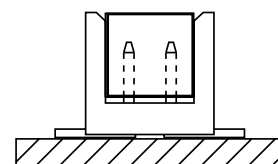
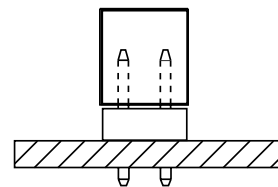
## MATING DATA

- Minitek™ Unshrouded headers 52, 54, 58
- Minitek™ Shrouded headers 64, 66

## INSERTION DEPTH

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

## TYPICAL APPLICATIONS



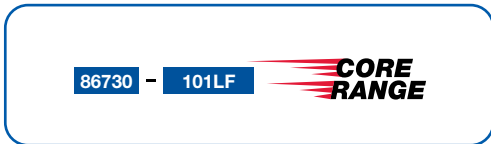
2.00 mm (.079")

# Minitek™ Shunts

## PART NUMBERS

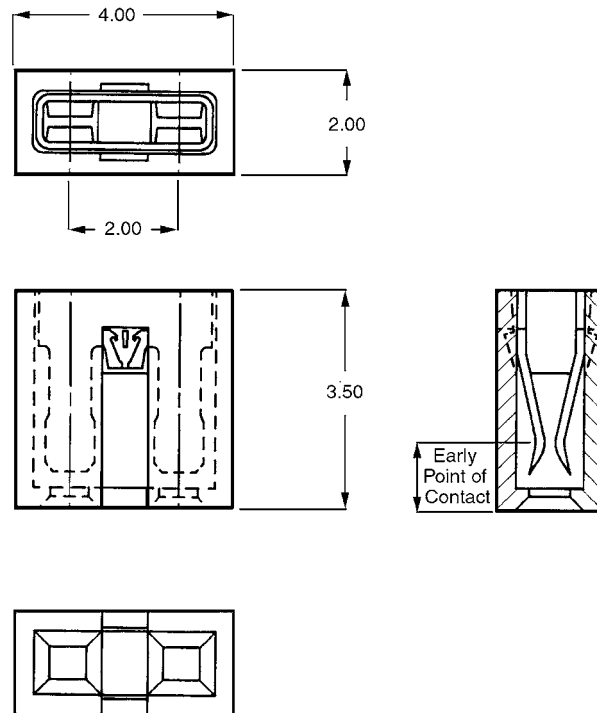


**1** = 0,76 μm (30μ") Gold on mating area,  
2-6 μm (79-237μ") Tin on solder side  
**0** = Gold flash



2.00 mm (.079")

## PRODUCT



Dimension in mm

## 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: 1x 10<sup>5</sup> 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

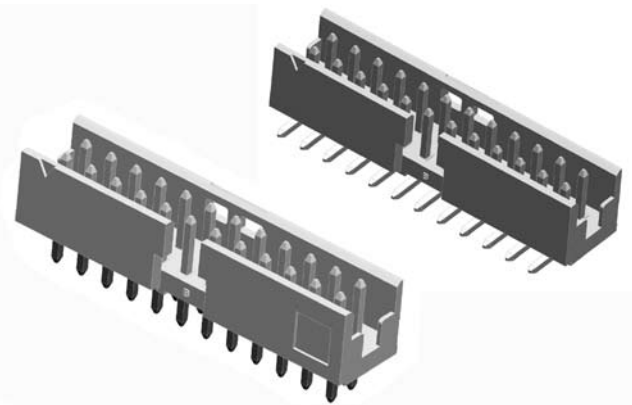
- Compatible with wave, vapor-phase, and IR reflow soldering processes

### 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

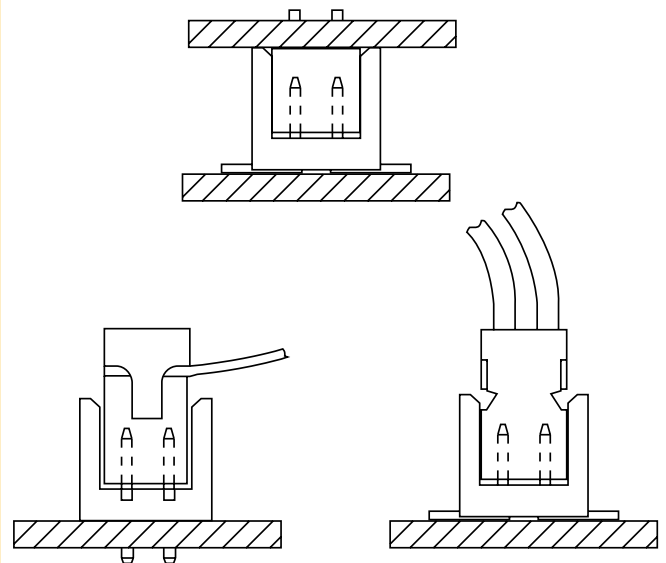
- This product is RoHS compatible according to the European Union Directive 2002/95/IEC



## MATING DATA

■ Minitek™ ctw contacts and housings	72
■ Minitek™ Vertical receptacles	60
■ Minitek™ Shunts	62
■ Minitek™ IDC receptacles	76
■ Minitek™ Active latch	74

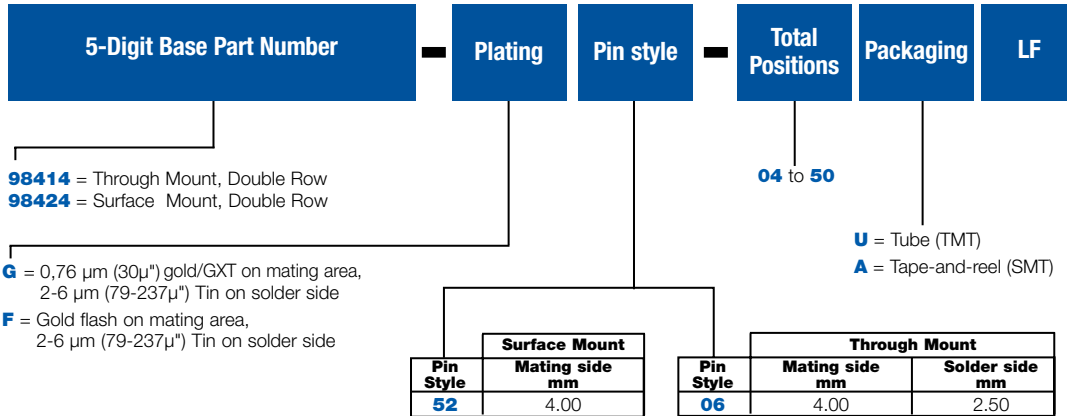
## TYPICAL APPLICATIONS



2.00 mm (.079")

# Minitek™ Shrouded Vertical Headers

## PART NUMBERS

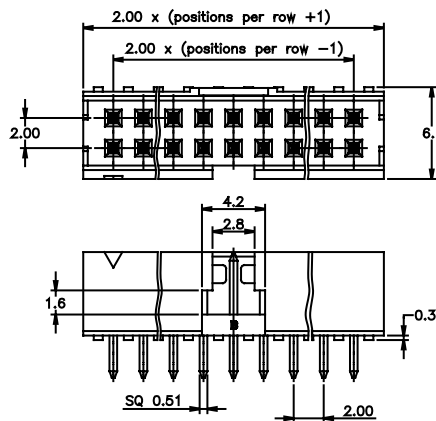
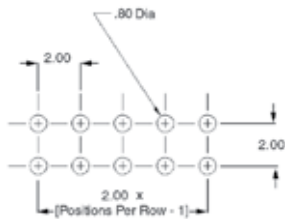


**98424 - G 52 - XX ALF**

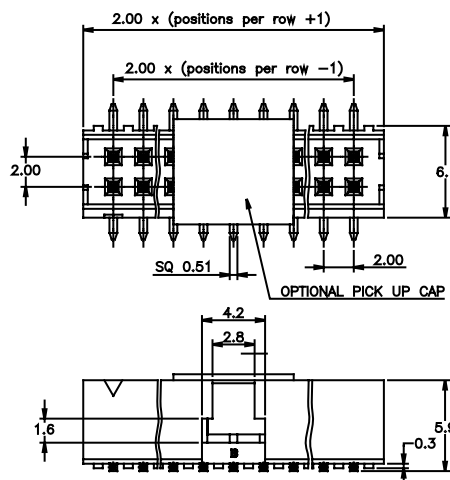
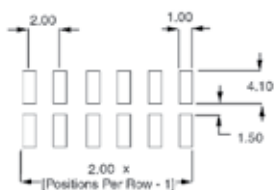
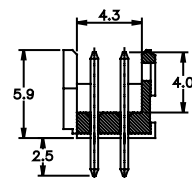
XX = 04, 06, 08, 10, 12, 16, 20

2.00 mm (.079")

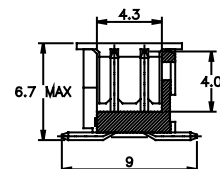
## PRODUCT



**98414** Through mount



**98424** Surface mount



Recommended PCB layouts

Dimension in mm

## 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 μ") nickel



### ELECTRICAL PERFORMANCE

- Current rating: 2 A continuous
- Insulation resistance: 1x 10<sup>5</sup> 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: Tubes (04 pos. packed in box)

### PROCESSING INFORMATION

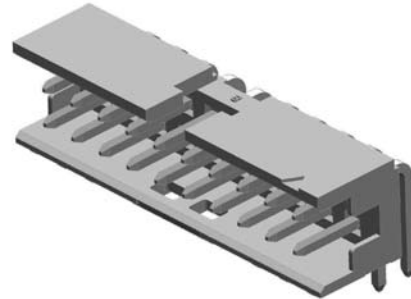
- Compatible with wave, vapor-phase, and IR reflow soldering processes

### REFERENCE INFORMATION

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

### RoHS INFORMATION

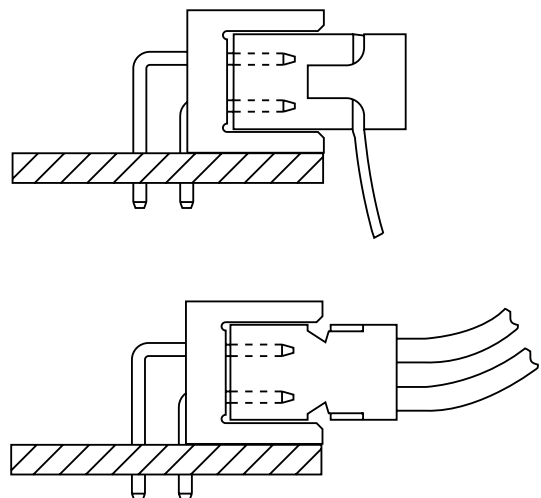
- This product is RoHS compatible according to the European Union Directive 2002/95/IEC



## MATING DATA

■ Minitek™ ctw contacts and housings	72
■ Minitek™ Vertical receptacles	60
■ Minitek™ Shunts	62
■ Minitek™ IDC receptacles	76
■ Minitek™ Active latch	74

## TYPICAL APPLICATIONS



2.00 mm (.079")

# Minitek™ Shrouded Right Angle Headers

## PART NUMBERS

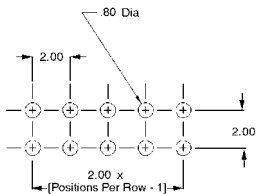


04 to 50 (Double Row)

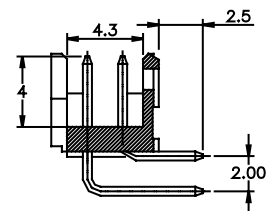
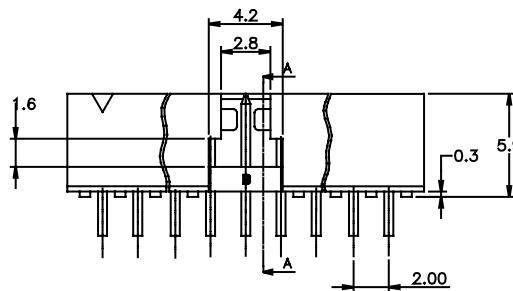
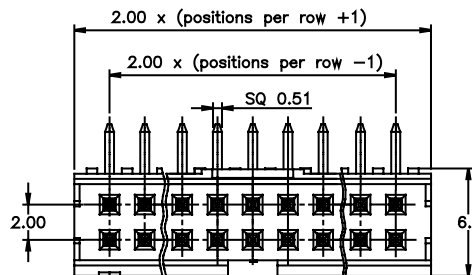
- G** = 0,76 μm (30μ") gold/GXT on mating area,  
2-6 μm (79-237μ") Tin on solder side
- F** = Gold flash on mating area,  
2-6 μm (79-237μ") Tin on solder side

2.00 mm (.079")

## PRODUCT



Recommended PCB layouts



Dimension in mm

## 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: 1x 10<sup>5</sup> 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

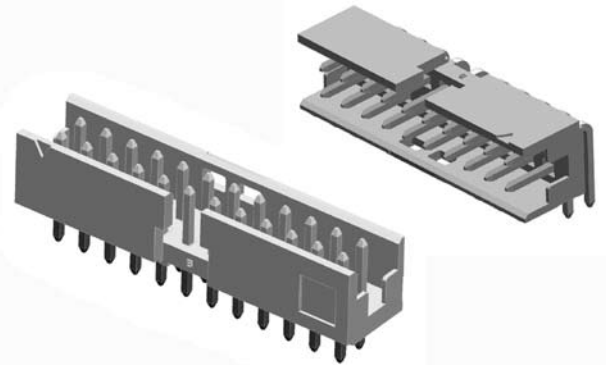
- Tubes (04 pos. packed in box)
- Tape on reel with pick up cap

### PROCESSING INFORMATION

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

### REFERENCE INFORMATION

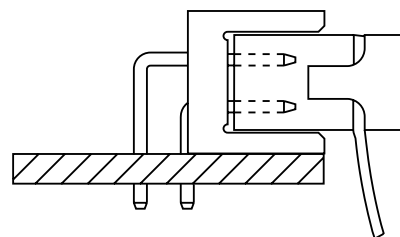
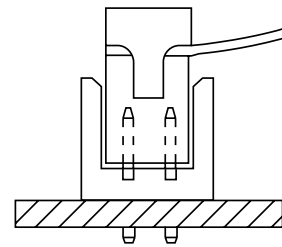
- File no. E66906
- File no. LR46923
- Product drawing: by 8-digit base part number
- Product specification: DPS-12-011 and GS-12-163
- Application specification: TA-895
- Reflow prprofile: TA-842



## MATING DATA

■ Minitek™ ctw contacts and housings	72
■ Minitek™ Vertical receptacles	60
■ Minitek™ Shunts	62
■ Minitek™ IDC receptacles	76
■ Minitek™ Active latch	74

## TYPICAL APPLICATIONS



2.00 mm (.079")

# Minitek™ Shrouded Headers, Pin-in-Paste

## PART NUMBERS



10075025 = Vertical  
10072354 = Right angle

04 to 50 (Double row)

**G** = 0.76µm (30µ") gold/GXT on mating area  
2-6µm (50-150µ") tin on solder side

**F** = gold flash on mating area  
2-6µm (50-150µ") tin on solder side

Pin Style	mating side length	solder side length
01	4.00	2.00

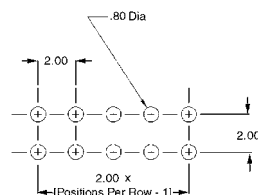
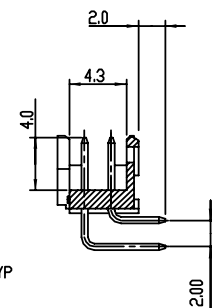
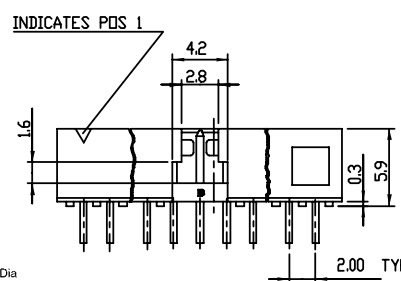
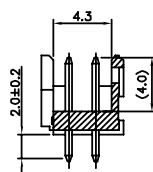
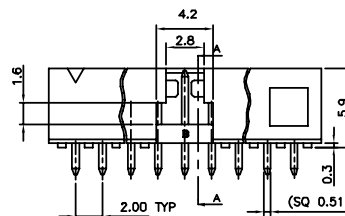
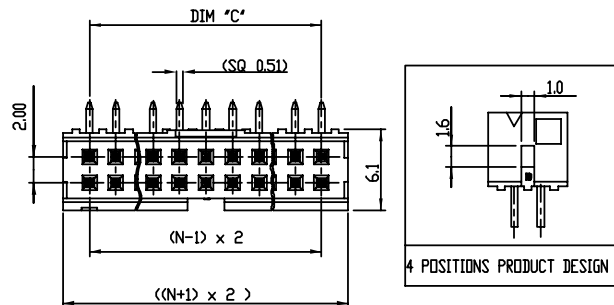
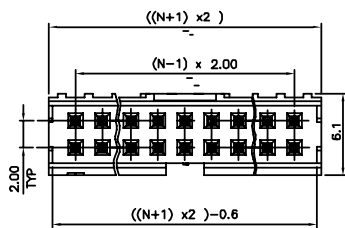
**U** = Tube without cap from 04 to 25 pos.  
**A** = Tape, availability on request

2.00 mm (.079")

## PRODUCT

10075025 Vertical

10072354 Right angle



Dimension in mm

Recommended PCB layouts

## Shrouded Eject Latch Headers

### 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 μ") nickel

#### ELECTRICAL PERFORMANCE

- Current rating: 2 A continuous
- Insulation resistance: 1 x 10<sup>5</sup> MΩ min.
- Contact resistance: 25 mΩ 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

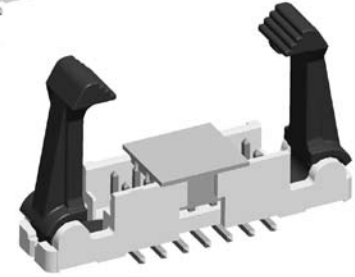
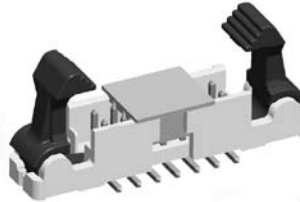
- Compatible with wave, vapor-phase, and IR reflow soldering processes

#### REFERENCE INFORMATION

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

#### RoHs INFORMATION

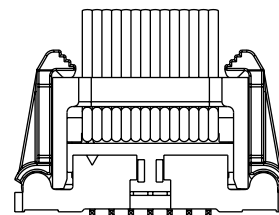
- This product is RoHs compatible according to the European Union Directive 2002/95/IEC



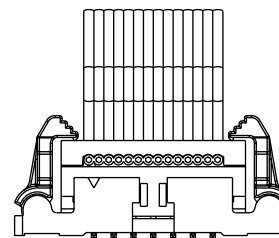
### MATING DATA

- Minitek™ IDC receptacles 76

### TYPICAL APPLICATIONS



with strain relief  
standard latch



without strain relief  
low profile latch

2.00 mm (.079")



## Housings and Contacts

### 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 over 1.27  $\mu\text{m}$  (50  $\mu\text{m}$ ) nickel



#### ELECTRICAL PERFORMANCE

- Current rating: 2 A continuous
- Insulation resistance:  $1 \times 10^5 \text{ M}\Omega$  min.
- Contact resistance: 20  $\text{m}\Omega$
- 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

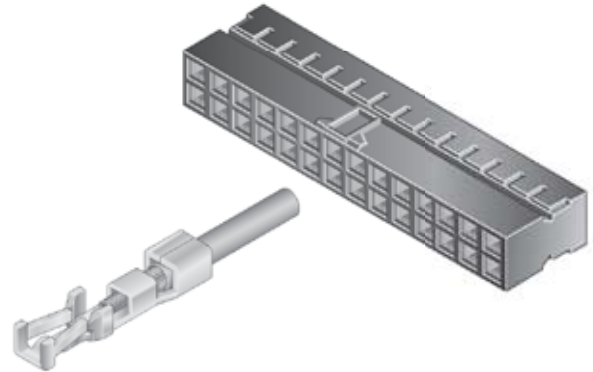
- Reels – Contacts
- Bags – Housings

#### 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



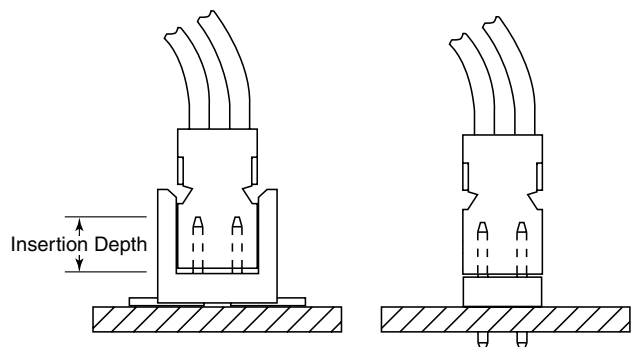
### MATING DATA

- Minitek™ Unshrouded headers 52, 54, 58
- Minitek™ Shrouded headers 64, 66

### 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



2.00 mm (.079")

# Minitek™ Crimp-to-wire Housings and Contacts

## PART NUMBERS

### Contacts



26 AWG to 30 AWG

1 = 0,76 μm (30μ") Gold on mating area  
 0 = Gold flash

### Housings



04 to 50 (Double Row)

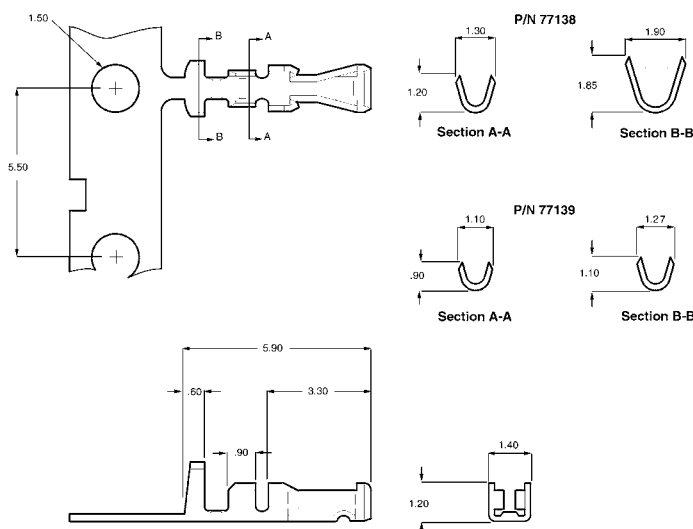
77138	101LF	<b>CORE RANGE</b>
10087010	0XXLF	

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

2.00 mm (.079")

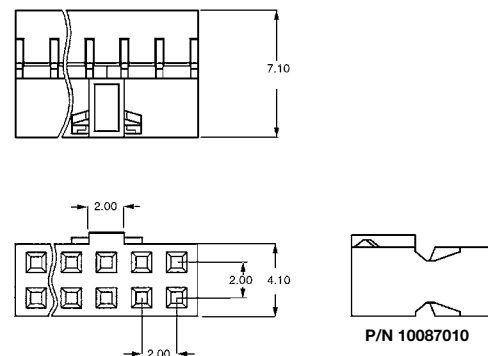
## PRODUCT

### Contacts



Dimension in mm

### Housings



## Housings, Active latch

### 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:  $1 \times 10^5 \text{ M}\Omega$  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

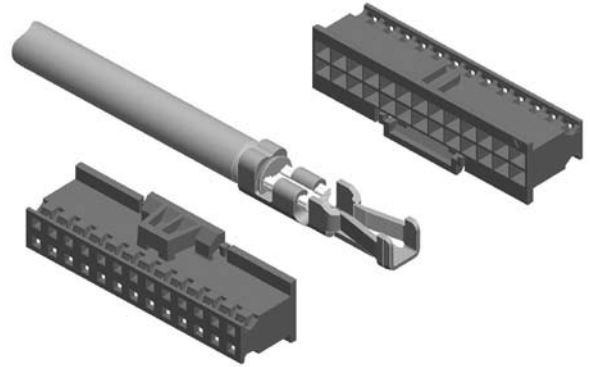
- ▶ Standard: Plastic bags

#### REFERENCE INFORMATION

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

#### RoHs INFORMATION

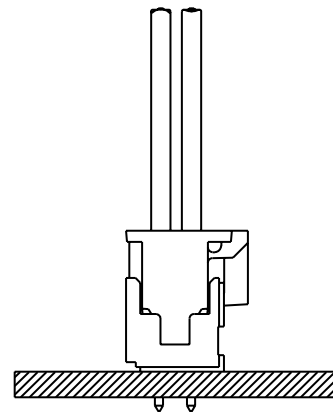
- ▶ This product is RoHs compatible according to the European Union Directive 2002/95/IEC



### MATING DATA

- |                             |            |
|-----------------------------|------------|
| ▶ Minitek™ Shrouded headers | 64, 66, 68 |
| ▶ Minitek™ CTW contacts     | 72, 74     |

### TYPICAL APPLICATIONS

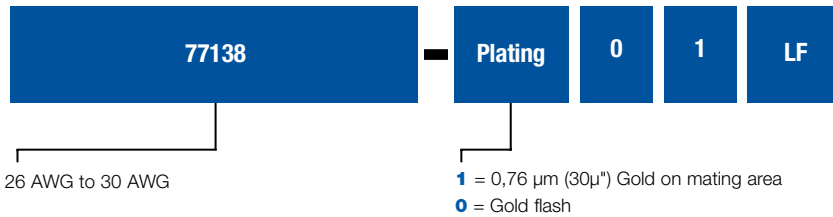


2.00 mm (.079")

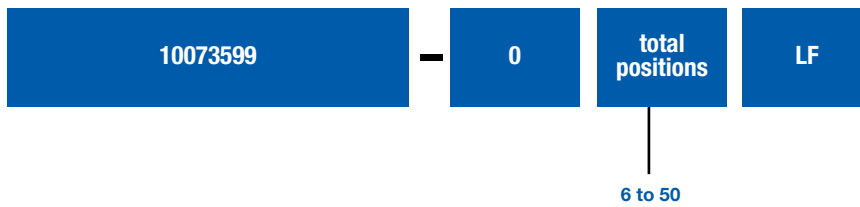
# Minitek™ Crimp-to-wire Housings, Active latch

## PART NUMBERS

### Contacts



### Housings



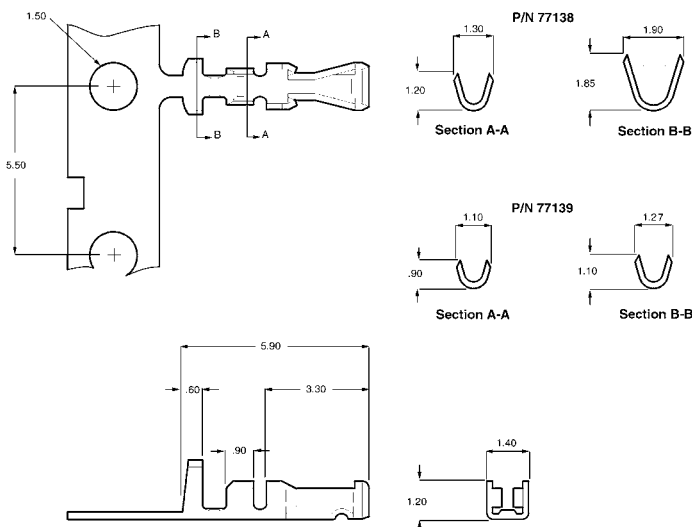
77138	-	101LF	<b>CORE RANGE</b>
10073599	-	0XXLF	

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

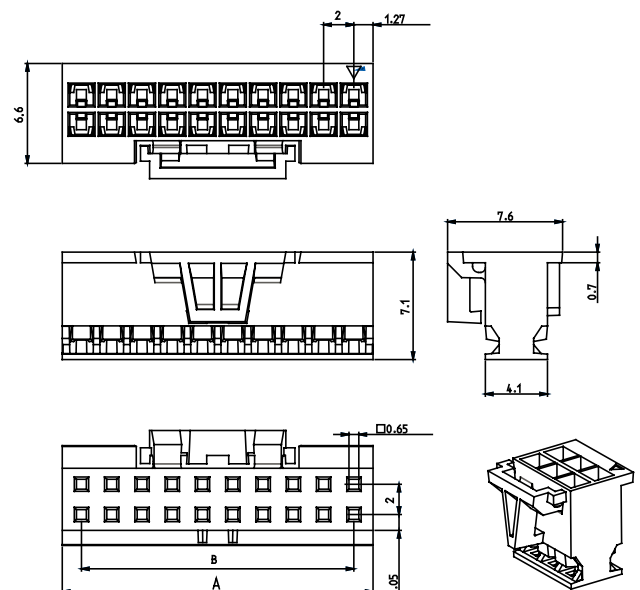
2.00 mm (.079")

## PRODUCT

### Contacts



### Housings



Dimension in mm

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 over 1.27 μm (50 μ") nickel



### ELECTRICAL PERFORMANCE

- ▶ Current rating: 1 A continuous
- ▶ Insulation resistance: 1x 10<sup>5</sup> MΩ min.
- ▶ Contact resistance: 30 mΩ
- ▶ 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



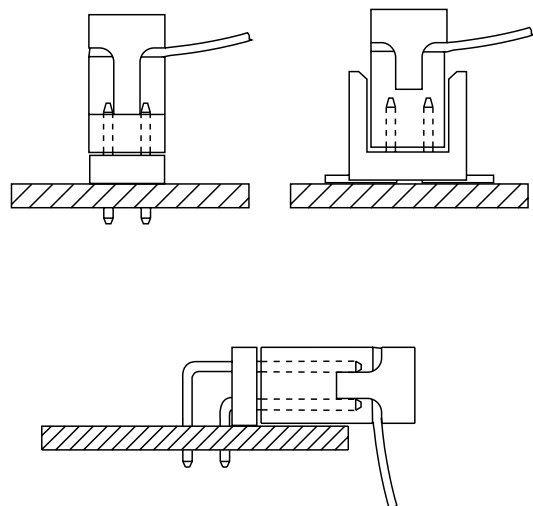
## MATING DATA

- ▶ Minitek™ Unshrouded headers 52, 54, 58
- ▶ Minitek™ Shrouded headers 64, 66

## INSERTION DEPTH

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

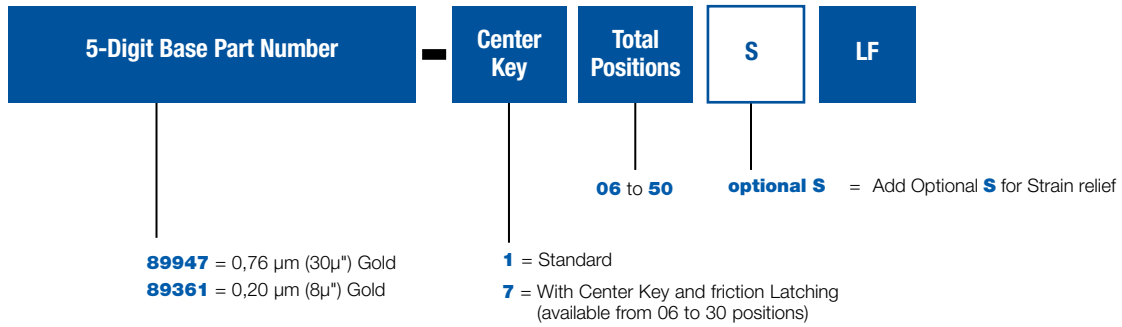
## TYPICAL APPLICATIONS



2.00 mm (.079")

# Minitek™ IDC Receptacle

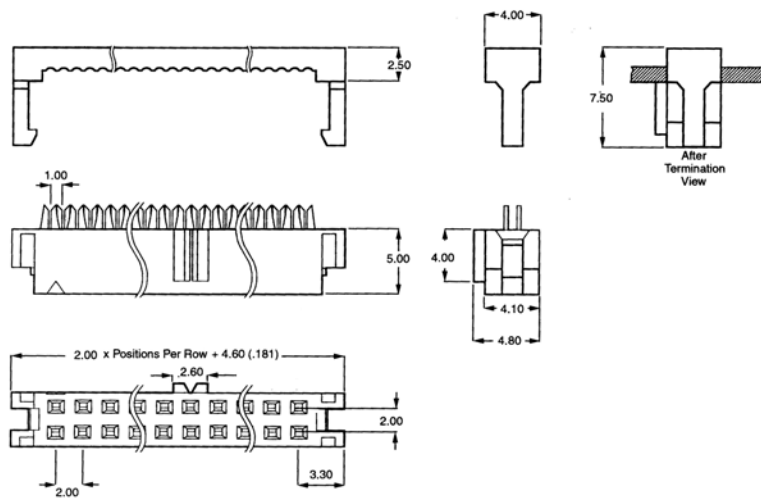
## PART NUMBERS



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

2.00 mm (.079")

## PRODUCT



Dimension in mm

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.

▀ Locating pins on SMT headers



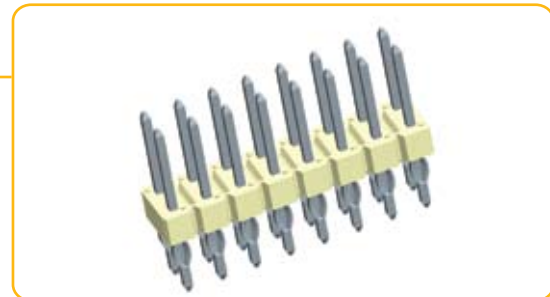
▀ Polarized (missing) positions



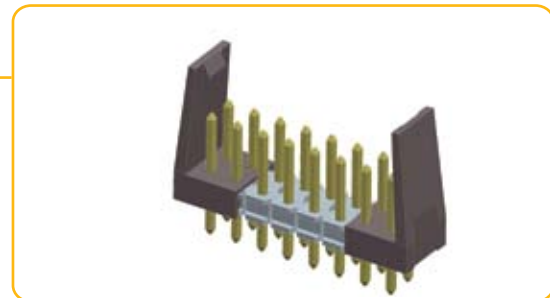
▀ Kinked legs



▀ Press-fit pins



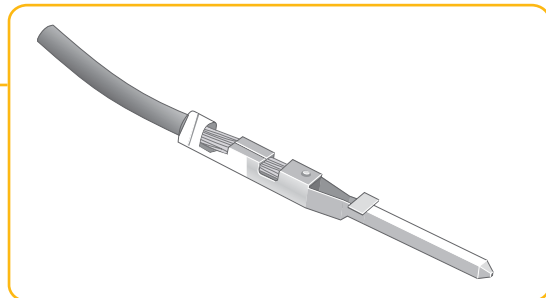
▀ Add-on latches for headers



Wide body headers



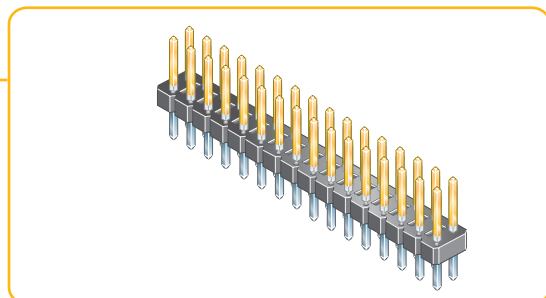
Crimp-to-wire pin



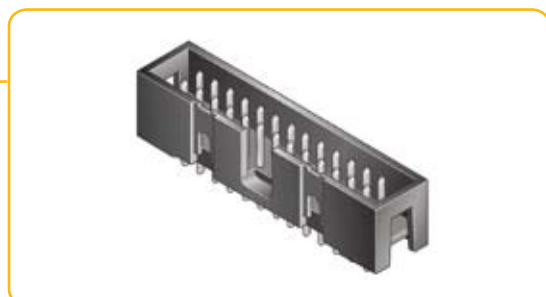
Printed housings



Additional plating options



Pin-in-paste headers



Visit: [www.fci.com/basicdesign](http://www.fci.com/basicdesign) to specify your design need



## 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
Minitex	AWG 26-30	RCY21151	155250-101	HT-0080
Minitex	AWG 32-36	RCY21152	155250-102	HT-0080

## Application Equipment

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### BergStik® AND Bergstrip®

- ▶ Manual cutting tool: HT 320
- ▶ Automatic cutting machine for Bergstrip: BSS-300

### Quickie® IDC

- ▶ Manual flat cable cutter: HT 209
- ▶ Quickie assembly hand tool: HT 210
- ▶ 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](mailto:doug.sheaffer@fciconnect.com)

#### ▶ Europe

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

#### ▶ Asia

Phone: +65 549 6666  
E-mail: [fcising\\_sales@fciconnect.com](mailto:fcising_sales@fciconnect.com)

BASE PART NUMBER	PAGE	BASE PART NUMBER	PAGE
47437	39	76385	31
47439	39	77138	73, 75
47457	39	77311	9, 13
47564	39	77313	9, 13
47565	39	77315	15
47566	39	77317	15
48047	39	78207	37
48048	39	78208	37
48276	39	86730	63
52601	45	87606	23
54XXX	19	89361	77
55508	61	89882	29
55510	61	89883	29
57102	53	89891	23
57202	53	89898	27
59112	59	89947	77
59132	59	91596	61
59202	59	91601	27
63453	61	91614	27
65039	41	91615	27
65043	41	91618	27
65239	35	95278	9
65240	35	98414	65
65846	41	98423	55
67996	11	98424	65
68000	11	98464	67
68015	17	10056844	45
68020	17	10056845	45
68786	21	10072353	57
69145	21	10073599	75
69167	37	10075024	57
69168	37	10075025	69
69830	51	10075324	69
71600	49	10078991	71
71607	29	10078995	71
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71918	47		
71920	23		
71922	47		
71991	25		
75867	43		
75869	43		
75915	23		
76341	25		
76342	25		
76347	33		
76357	33		
76382	31		
76383	31		
76384	31		

A large rectangular area with rounded corners, outlined in blue, containing 25 horizontal blue lines for writing notes.

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