# BergStik<sup>®</sup> UNSHROUDED HEADERS 2.54 mm (.100")

# **VERTICAL 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
- lnsulation 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

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

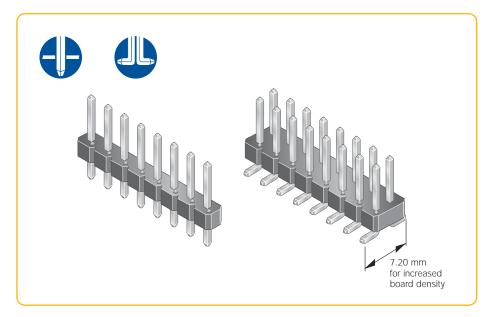
### **Reference Information**

- **S** 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
- Specifications subject to change without notice.

## MATING DATA

34
36
24
26, 28
30
50
40

▶PV<sup>™</sup> Crimp-to-Wire Housings



## **PROCESSING INFORMATION**

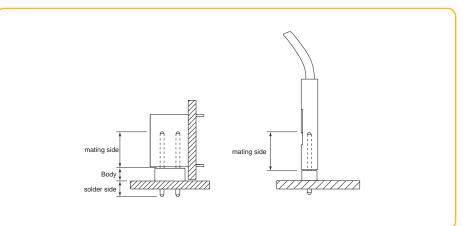
- Compatible with wave, vapor-phase,
- and IR reflow soldering processes Recommended IR profile TA 842
  - for SMT

4

42

## **RoHs INFORMATION**

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

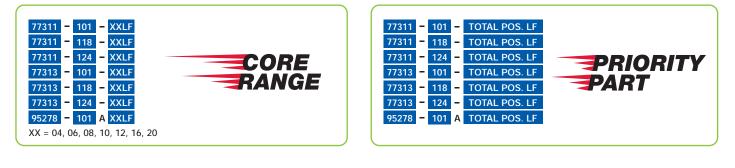


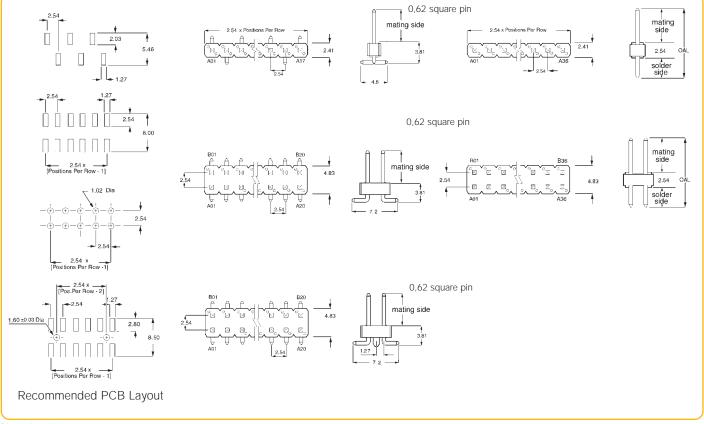


2.54 mm (.100")

## PART NUMBER

5-Digit Base Part Numbe	r 🗕	Plating	g Pin S	Style	Option	-	otal itions	LF
Through mount 77311 = Single Row 77313 = Double Row	Surface	e mount	][	Throug	Jh mount			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 pe
Surface mount	Pin style	Mating	Pin style	Mating	Solder	OAL		
<b>95293</b> = Single Row	01	5.84	01	5.84	2.41	10.80		
<b>95278</b> = Double Row	02	8.08	18	5.84	3.05	11.43	Option	Packaging
<b>98401</b> = Double Row with pegs	<b>-</b>		02	5.84	3.42	11.80	-	Plastic bag
<b>Double Row with pegs</b>			27	6.60	2.66	11.82	Α	Tape-and-reel with pick-up cap
$1 = 0.76 \mu\text{m} (30\mu'')$ gold on mating area	tin on solder si	da	22	7.75	3.06	13.35	В	Tube with pick-up cap
$8 = 0.38 \ \mu \text{m} (15 \ \mu^{"})$ gold on mating area,			24	6.75	2.90	12.20		availability on request





# BergStik<sup>®</sup> UNSHROUDED HEADERS 2.54 mm (.100")

## VERTICAL FULL 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 (50μ") nickel

### **Electrical Performance**

- Current rating: 3 A continuous
- lnsulation resistance: 5000 M $\Omega$  min.
- Dielectric withstanding voltage: 1500 V

### Mechanical Performance

- Pin retention to housing: 8.88 N (2 lbf) min.
- Retentive leg insertion force: >44.48 N max.
- Retentive leg board retention: 2.22 N

### Operating Temperature Range

-65°C to +125°C

### Packaging

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

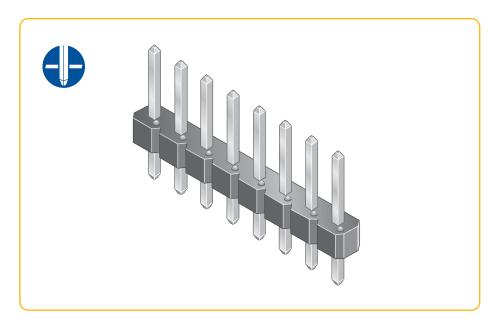
### **Reference Information**

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

## MATING DATA

2.54 mm (.100")

Dubox<sup>™</sup> Crimp-to-wire contacts 34 Dubox<sup>™</sup> Crimp-to-wire housings 36 Dubox<sup>™</sup> Vertical receptacles 24 Dubox<sup>™</sup> Low profile vertical receptacles 26, 28 Dubox<sup>™</sup> Horizontal receptacles 30 Quickie<sup>™</sup> IDC receptacles 50 ▶ PV<sup>™</sup> Crimp-to-Wire Contacts 40 ▶PV<sup>™</sup> Crimp-to-Wire Housings 42

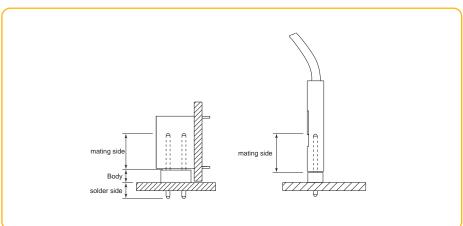


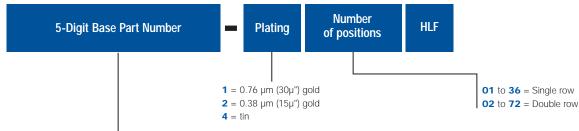
## PROCESSING INFORMATION

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





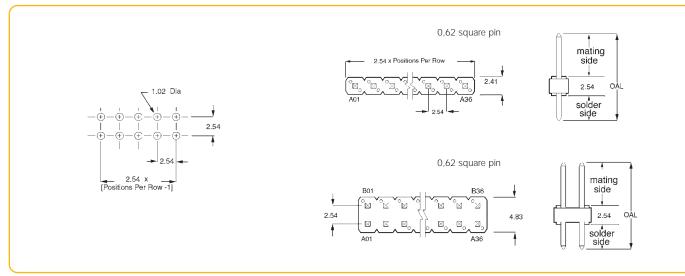
### Single Row

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

### Double Row

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





# CONTINUOUS UNSHROUDED HEADERS 2.54 mm (.100")



- 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 M $\Omega$  min.
- Dielectric withstanding voltage: 1500 V

### Mechanical Performance

Pin retention to housing: 8.88 N (2 ibf) 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
 Specifications subject to change without notice.

## MATING DATA

Dubox <sup>™</sup> Crimp-to-wire contacts	34
Dubox™ Crimp-to-wire housings	36
Dubox™ Vertical receptacles	24
Dubox™ Low profile vertical	
receptacles	26, 28
Dubox™ Horizontal receptacles	30
Quickie™ IDC receptacles	50
PV™ Crimp-to-Wire Contacts	40
PV™ Crimp-to-Wire Housings	42



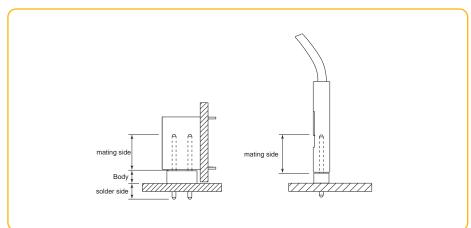
## **PROCESSING INFORMATION**

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

## **TYPICAL APPLICATIONS**

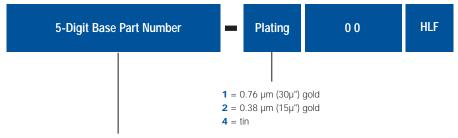


Automated cutting tooling is available for this product. Please contact your FCI partner.

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# FCJ

## PART NUMBER



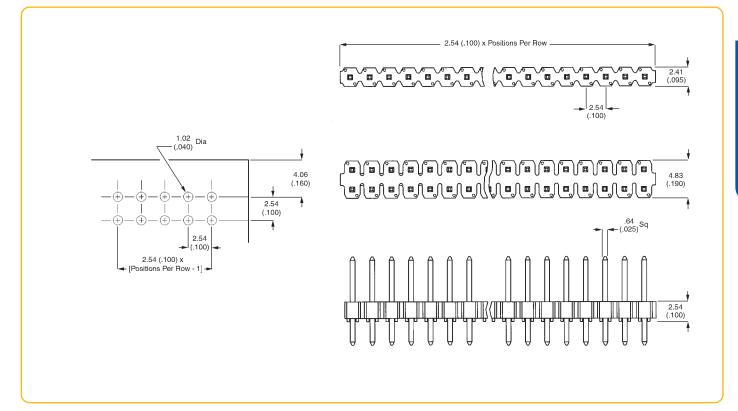
#### Single Row

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

#### Double Row

	Po	ost	Та	ail	0	AL
Base PN	mm	(in.)	mm	(in.)	mm	(in.)
67996	5.84	0.230	2.41	0.095	10.80	0.425
67997	5.84	0.230	3.05	0.120	11.43	0.450
68602	5.84	0.230	3.81	0.150	12.19	0.480





# BergStik<sup>®</sup> UNSHROUDED HEADERS 2.54 mm (.100")

# **RIGHT ANGLE SELECTIVE PLATING**



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 (50µ") 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: 8.88 N min.

### **Operating Temperature Range**

►-65°C to +125°C

### Packaging

Bags

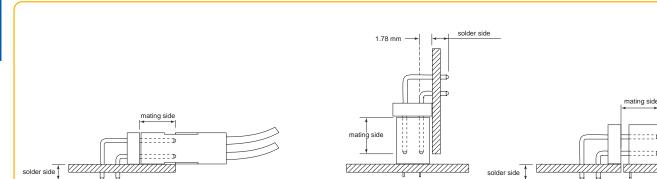
### **Reference Information**

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

**TYPICAL APPLICATIONS** 

Specifications subject to change without notice.





## **PROCESSING INFORMATION**

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

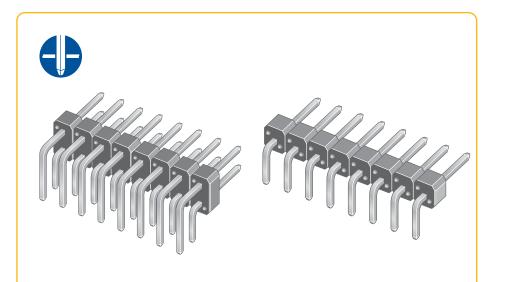
## **RoHs INFORMATION**

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

# MATING DATA

- Dubox<sup>™</sup> Crimp-to-wire contacts 34 Dubox<sup>™</sup> Crimp-to-wire housings 36
- Dubox<sup>™</sup> Vertical receptacles
- Dubox<sup>™</sup> Low profile vertical
- receptacles 26, 28
- Dubox™ Horizontal receptacles
- Quickie<sup>™</sup> IDC receptacles
- PV<sup>™</sup> Crimp-to-Wire Contacts
- PV™ Crimp-to-Wire Housings





24

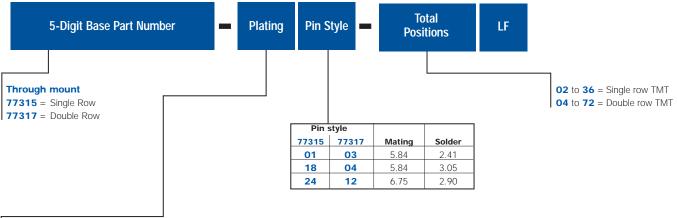
30

50

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42

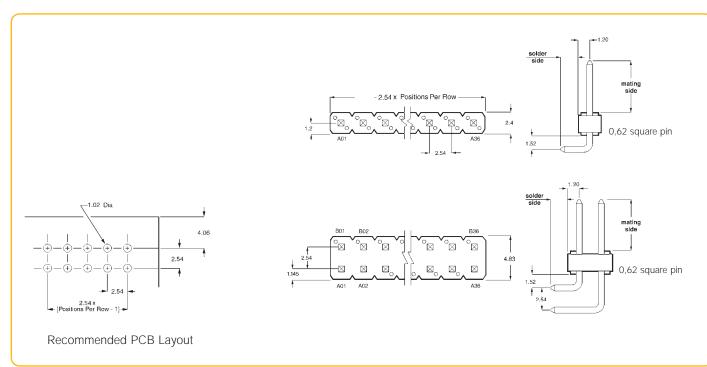




 $1 = 0.76 \ \mu m$  (30 $\mu$ ") gold on mating area, tin on solder side

**4** = tin

 $\mathbf{8} = 0.38 \ \mu m (15 \mu'')$  gold on mating area, tin on solder side



# BergStik<sup>®</sup> UNSHROUDED HEADERS 2.54 mm (.100")

## **RIGHT ANGLE FULL 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 (50µ") 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: 8.88 N min.
- Retentive leg insertion force:
- > 44.48 N max.
- Retentive leg board retention: > 2.22 N

### **Operating Temperature Range**

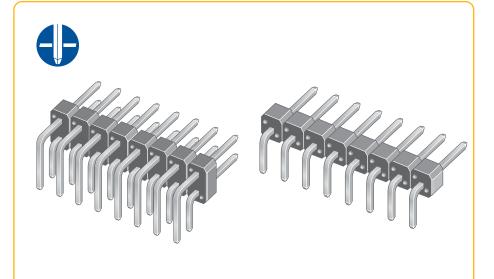
-65°C to +125°C

## Packaging

Bags

### **Reference Information**

A File no. E66906 Se File no. LR46923 Product drawing: 55101 or 55102 Product specification: BUS-12-114 Specifications subject to change without notice.



### MATING DATA

- Dubox<sup>™</sup> Crimp-to-wire contacts 34
- Dubox<sup>™</sup> Crimp-to-wire housings 36
- Dubox<sup>™</sup> Vertical receptacles
- Dubox<sup>™</sup> Low profile vertical
- receptacles 26, 28
- Dubox<sup>™</sup> Horizontal receptacles Quickie<sup>™</sup> IDC receptacles

### 30 50

24

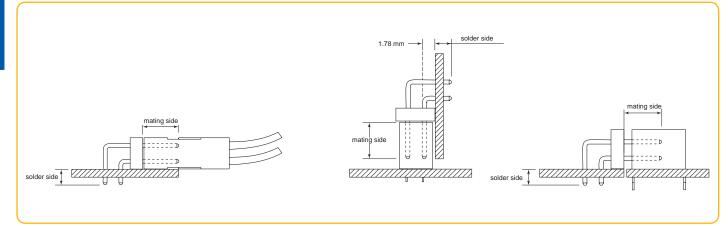
- PV<sup>™</sup> Crimp-to-Wire Contacts 40 42
- PV™ Crimp-to-Wire Housings

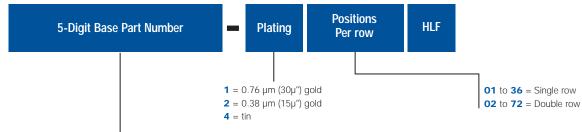
### **PROCESSING INFORMATION**

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



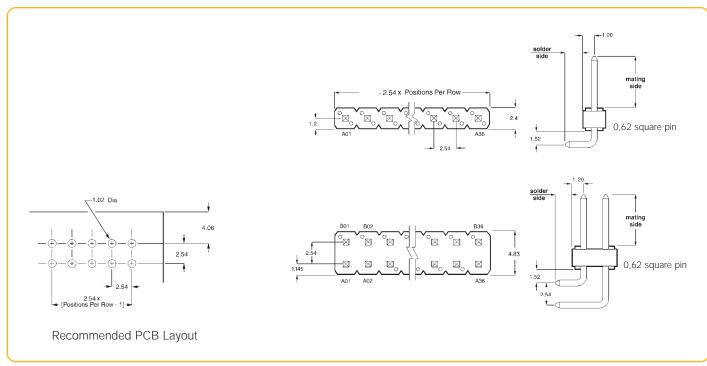


### Single Row

	Po	ost	Ta	ail
Base PN	mm	(in.)	mm	(in.)
68015	5.84	0.230	2.29	0.095
68016	5.84	0.230	3.05	0.120

#### Double Row

	P	ost	Ta	ail
Base PN	mm	(in.)	mm	(in.)
68020	5.84	0.230	2.41	0.095
68021	5.84	0.230	3.05	0.120





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

### TECHNICAL DATA Physical

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

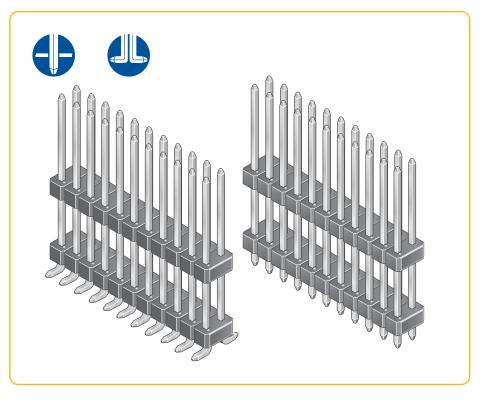
### **Reference Information**

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

## MATING DATA

2.54 mm (.100")

Dubox™ Vertical receptacles	24
Dubox <sup>™</sup> Low profile vertical	
receptacles	26,28

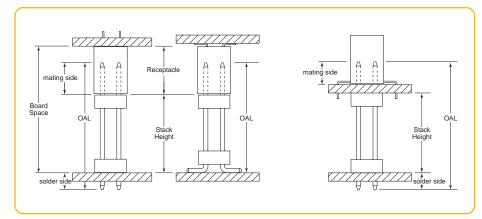


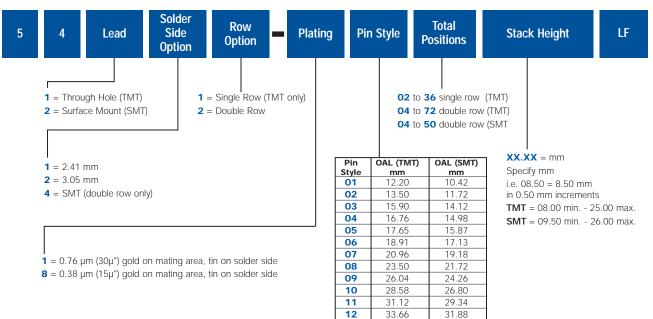
## **PROCESSING INFORMATION**

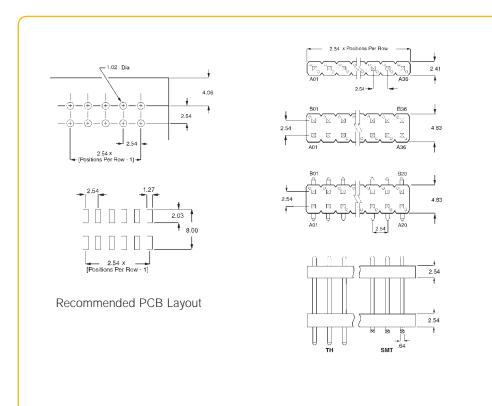
Compatible with wave, vapor-phase, and IR reflow soldering processes

## **RoHs INFORMATION**

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







### Step-by-Step Design

- 1. Determine desired board spacing
- (0.50 mm increments)
  2. Select Dubox™ receptacle and calculate stack height
- Stack Height = Board Spacing Receptacle Height 3. Find the insertion depth from the chart below.
  - Calculate max./min. OAL OAL = Stack Height + solder side + Insertion
- Depth 4. Select the Pin Style with OAL between max. and min. values

Dubox<sup>™</sup> RECEPTACLES

	Low Profile	Vertical
Height	7.00	8.50
Insertion Depth (max.)	6.10	6.10
Insertion Depth (min.)	3.86	4.34

### Example:

- 1. Application requires a board spacing of 22.50 Select the Dubox<sup>™</sup> Low Profile Receptacle with height of 7.00
- The Header Stack Height is 22.50 7.00 = 15.503. For standard board applications, the 3.05 solder side is selected
  - OAL (max.) = 15.50 + 3.05 + 6.10 = 24.65OAL (min.) = 15.50 + 3.05 + 3.86 = 22.41
- Select Pin Style 08 with OAL = 23.50
   Part Number is 54122-108721550LF

## SHUNTS 2.54 mm (.100")



- 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
- Pin: Phosphor-bronze
- Low profile only
- Plating: Gold or tin over 1.27 μm (50 μ") nickel

### **Electrical Performance**

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

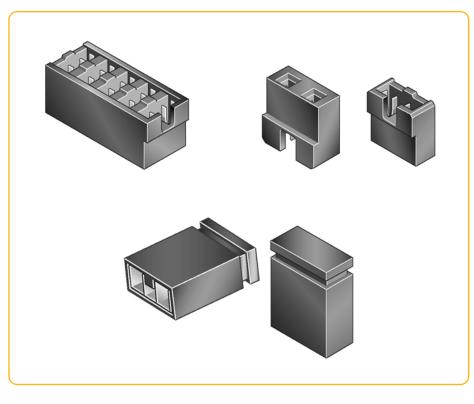
### Mechanical Performance

- 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

-55°C to +120°C

Packaging Plastic bags



## Reference Information

- File no. E66906
   File no. LR46923
   Product drawing: By 5-digit base number
   Product specification:
- BUS-12-071 Gold BUS-12-070 - Tin

Specifications subject to change without notice.

## **MATING DATA**

- Continuous unshrouded headers 14
- Unshrouded vertical headers 10, 12
   Unshrouded right angle headers 16, 18

## **INSERTION DEPTH**

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

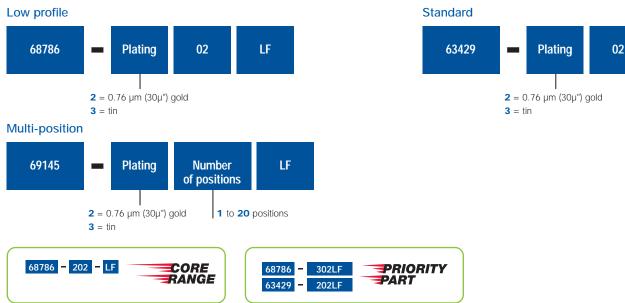
## **RoHs INFORMATION**

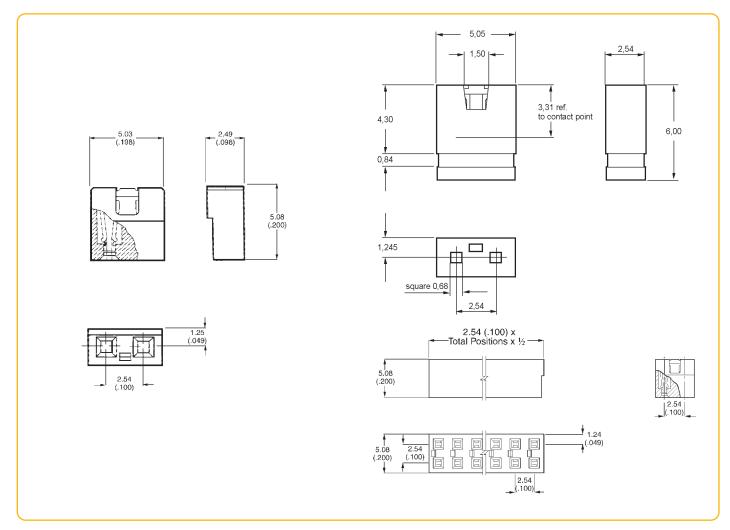
This product is RoHs compatible according to the European Union Directive 2002/95/IEC

FCi

LF

## PART NUMBER





## Dubox<sup>™</sup> VERTICAL RECEPTACLES 2.54 mm (.100")



- The Dubox<sup>™</sup> 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 603-8

### **Electrical Performance**

- Current rating:
- 3 A dc max. per individual contact 2 A dc max. per contact for fully energized connector
- Insulation resistance: 1x  $10^5$  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

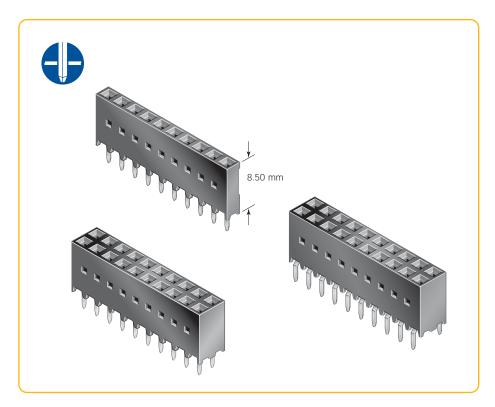
Plastic boxes or tubes

## Reference Information

**A** File no. E66906

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

Specifications subject to change without notice.



## MATING DATA

BergStik <sup>®</sup> Unshrouded		
	10,	12
BergStik <sup>®</sup> Unshrouded		
	16,	18
BergStik <sup>®</sup> Unshrouded		
stacking headers		20
BergStik <sup>®</sup> continuous Unshroude	ed	
headers		14

## **INSERTION DEPTH**

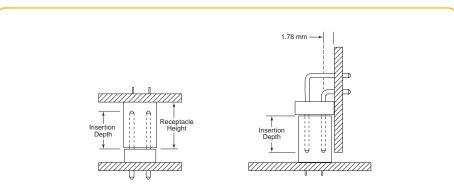
- Top Entry: 3.86 mm min. to 6.81 mm max. [provides .381 mm wipe]
- Bottom Entry: 6.25 mm min. [provides
- .381 mm wipe] plus board thickness

## **PROCESSING INFORMATION**

Compatible with wave soldering processes

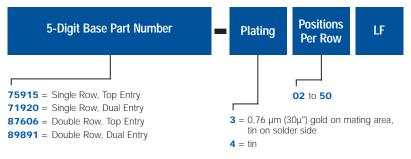
## **RoHs INFORMATION**

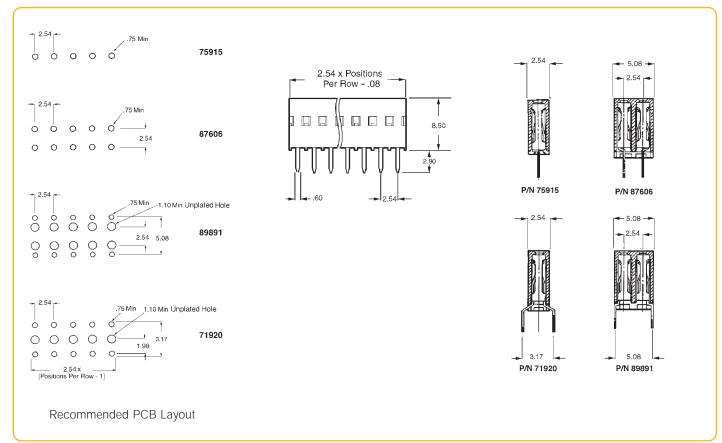
This product is RoHs compatible according to the European Union Directive 2002/95/IEC



2.54 mm (.100")

## PART NUMBER







- The Dubox<sup>™</sup> 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
- 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  $10^5$  M $\Omega$  min.
- Contact resistance: 15 m $\Omega$  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) avg.
- Withdrawal force per gold contact: 0.30 N (30 gf) min.

### **Operating Temperature Range**

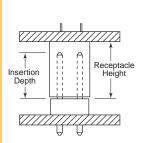
-65°C to +125°C

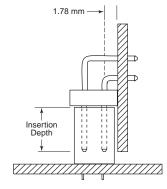
2.54 mm (.100")

# Packaging

Plastic boxes or tubes

## TYPICAL APPLICATIONS





**Reference Information** 

**S** File no. E66906

MATING DATA

vertical headers

BergStik<sup>®</sup> Unshrouded

BergStik<sup>®</sup> Unshrouded

BergStik<sup>®</sup> Unshrouded

right angle headers

stacking headers

headers

number

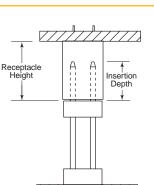
SP File no. LR46923

Product drawing: By 5-digit base part

Specifications subject to change without notice.

Product specification: BUS-12-055

BergStik<sup>®</sup> continuous Unshrouded



10, 12

16, 18

20

14

Low profile 7.0 mm

for closer board stacking

# INSERTION DEPTH

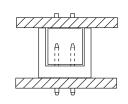
- Top Entry: 3.86 mm min. to 6.10 mm max. [provides .381 mm wipe]
- Bottom Entry: 5.08 mm min. [provides .381 mm wipe] plus board thickness

## **PROCESSING INFORMATION**

Compatible with wave soldering processes

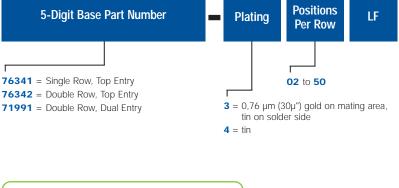
## **RoHs INFORMATION**

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



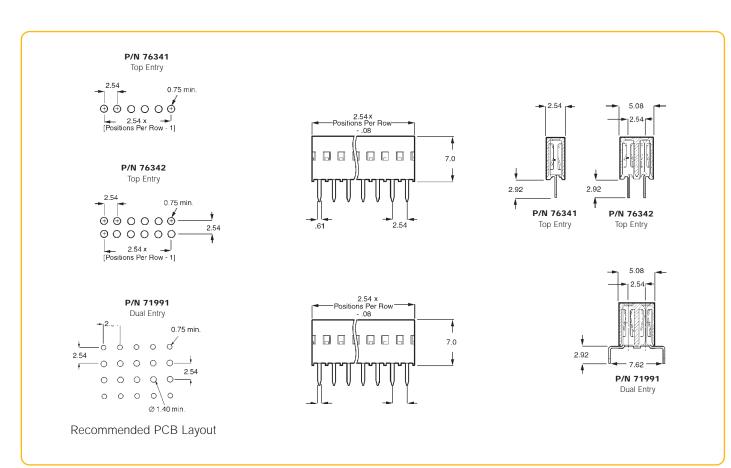
71991 - 3XXLF

XX = 05 - 20



PRIORITY

PART





- The Dubox<sup>™</sup> 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: High-temperature, grey thermoplastic
- 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> 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) avg.
- Withdrawal force per gold contact: 0.30 N (30 gf) min.

### **Operating Temperature Range**

### -65°C to +125°C

### Packaging

2.54 mm (.100")

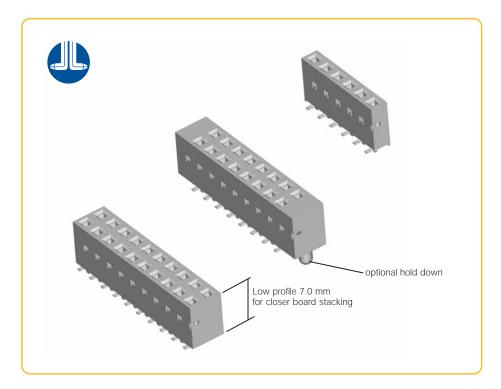
Tubes, Tape on Reel or plastic boxes

### **Reference Information**

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

Tape and Reel packaging data : TA-856

Specifications subject to change without notice.



## MATING DATA

BergStik®	Unshrouded		
vertical hea		10,	12
BergStik®	Unshrouded		
right angle	headers Unshrouded	16,	18
BergStik®	Unshrouded		
stacking he			20
DeraCtile®	a antinua un Un abraud	o d	

■BergStik<sup>™</sup> continuous Unshrouded headers 14

## **INSERTION DEPTH**

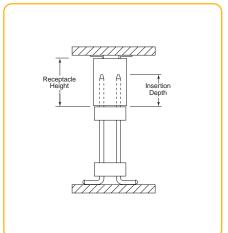
- Top Entry: 3.86 mm min. to 6.10 mm max. [provides .381 mm wipe]
- Bottom Entry: 5.08 mm min. [provides .381 mm wipe] plus board thickness

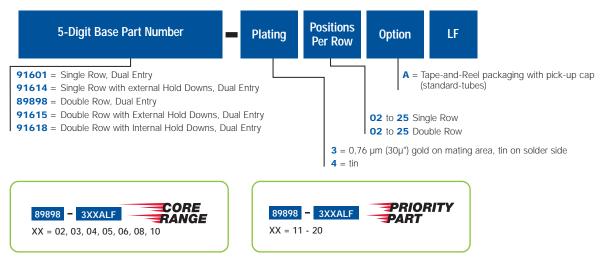
## PROCESSING INFORMATION

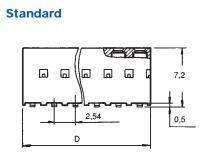
- Compatible with wave, vapor-phase, and
- IR reflow soldering processes Recommended IR profile: TA-842

## **RoHs INFORMATION**

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

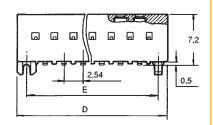






D = (no. of pos. per row x 2,54) - 0,08

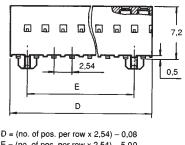
### **External Hold Downs**



D = (no. of pos. per row x 2,54) + 5

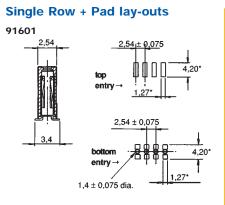
E = (no. of pos. per row x 2,54) + 2,54

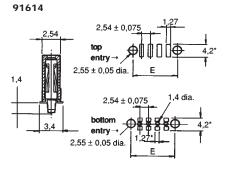
### **Internal Hold Downs**



E = (no. of pos. per row x 2,54) - 5,00

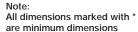


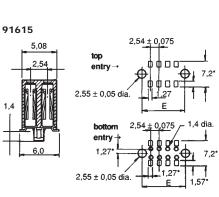




\*Note: available as of 3 position versions

#### not available in single row





**Double Row + Pad lay-outs** 

top

entry

1.57

bottom

entrv →

1,4 ± 0,075 dia.

 $2.54 \pm 0.075$ 

 $2,54 \pm 0,075$ 

1.27

**\$**99

866

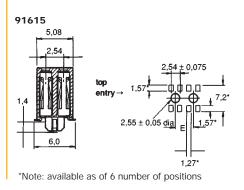
24

72

89898

6.00

\*Note: available as of 3 position versions



## Dubox<sup>™</sup> HORIZONTAL RECEPTACLES 2.54 mm (.100")



- The Dubox<sup>™</sup> 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 temperature 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:  $1 \times 10^5 \text{ M}\Omega$  min.
- Contact resistance: 15 m $\Omega$  max. initial, 20 m $\Omega$  max. after environmental tests
- Dielectric withstanding voltage: 1000 V

### Mechanical Performance

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

### **Operating Temperature Range**

-65°C to +125°C

### Packaging

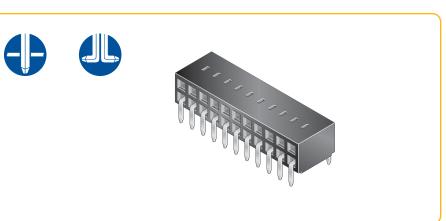
Standard: Tubes Optional: Tape-and-reel

### **Reference Information**

**R** 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 Specifications subject to change without notice.



## MATING DATA

BergStik <sup>®</sup> Unshrouded	
vertical headers	10, 12
BergStik <sup>®</sup> Unshrouded	
right angle headers BergStik <sup>®</sup> continuous	16, 18
BergStik <sup>®</sup> continuous	
Unshrouded headers	14

## **INSERTION DEPTH**

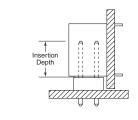
5.00 mm min. to 7.50 mm max. [provides .381 mm wipe]

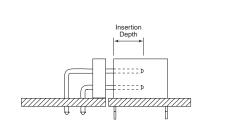
## **PROCESSING INFORMATION**

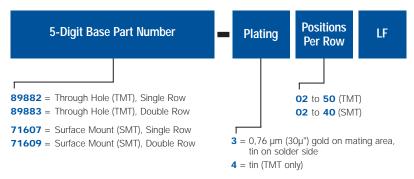
- Series 89882, 89883: compatible with wave soldering processes
- Series 71607, 71609: compatible with wave, vapor-phase and IR reflow soldering processes

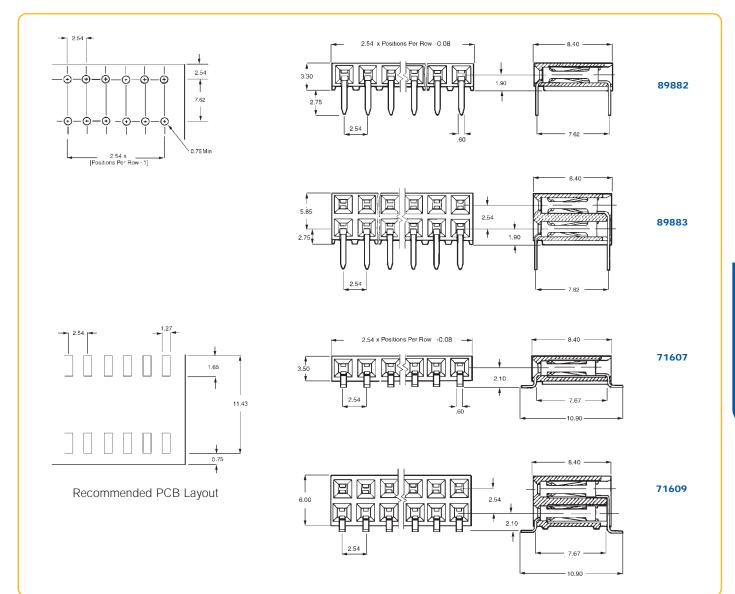
## **RoHs INFORMATION**

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









# Dubox<sup>™</sup> SHROUDED HEADERS 2.54 mm (.100")



- For use with Dubox<sup>™</sup> crimp-to-wire housings
- Stackable end-to-end
- Passive latching, anti-reverse and anti-miss-match when used with Dubox<sup>™</sup> 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: Phosphor-bronze
- Plating: Gold or tin over 1.27 μm (50μ") nickel

### **Electrical Performance**

- Current rating: 3 A continuous
- Insulation resistance: 1x  $10^5$  M $\Omega$  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

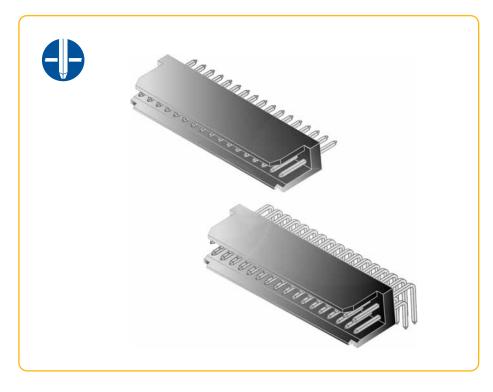
Tube

### **Reference Information**

File no. E66906
File no. LR46923
Product drawing: By 5-digit base part number

Application specification: TA-531

Specifications subject to change without notice.



## MATING DATA

Dubox™ Crimp-to-wire contacts34Dubox™ Crimp-to-wire housings36

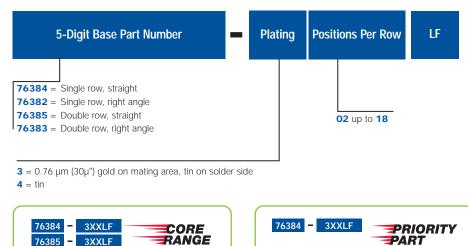
## PROCESSING INFORMATION

# Compatible with wave soldering processes

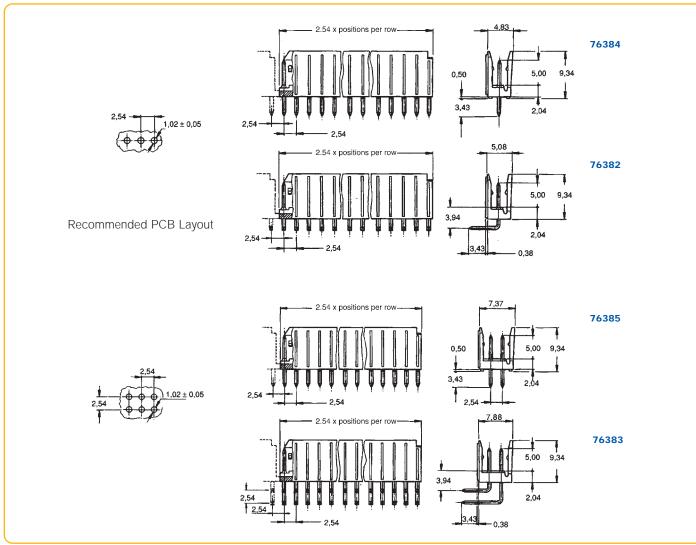
## **RoHs INFORMATION**

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

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



XX = 12 - 16





- The Dubox<sup>™</sup> contact has a pre-stressed, dual beam design to enable low insertion force.
- Mates with very short pins (5 mm)
- Universal crimp barrel accomodates 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: 15 mΩ 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

### **Operating Temperature Range**

-65°C to +125°C

### Packaging

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

Specifications subject to change without notice.

12

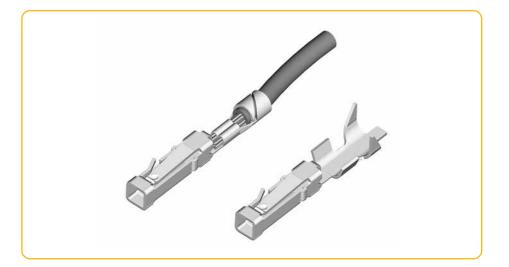
18

32

14

## MATING DATA

BergStik <sup>®</sup> unshrouded	
straight headers	10,
BergStik <sup>®</sup> unshrouded	
right angle headers	16,
Dubox™ shrouded	
vert./ra. headers	
BergStik <sup>®</sup> continuous	
unshrouded headers	

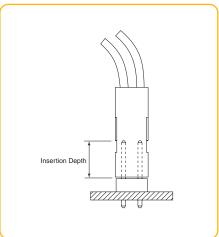


## **INSERTION DEPTH**

- Discrete Wire: 3.56 mm min. to 5.59 mm max. [provides .381 mm wipe]
- Crimp-to-Wire Housing: 5.08 mm min. to 6.22 mm max. [provides .381 mm wipe in housing]

## **RoHs INFORMATION**

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



2.54 mm (.100")

## PART NUMBER

### Part numbers / Contacts on Reel

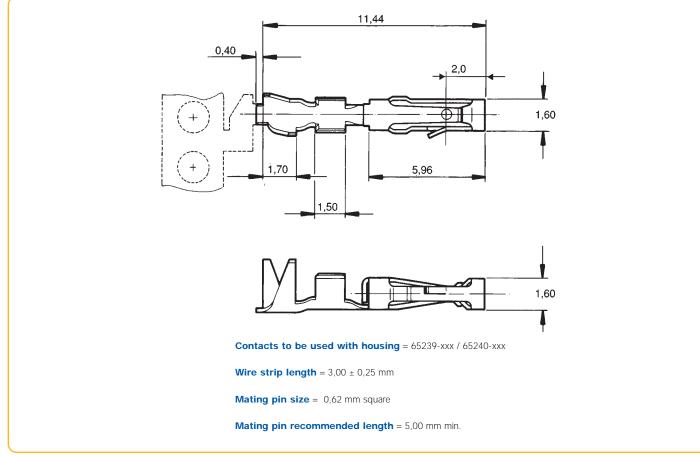
Wire size	insulation O.D.	Selective Gold Plated	Tin plated	Packaging
22-30	0.90 - 1.50	76347-301LF	76347-401LF	15.000/reel
22-30	0.90 - 1.50	76347-302 LF•	76347-402LF•	15.000/reel
22-30	0.90 - 1.50	76347-303 LF	76347-403LF	500/reel
20-22	1.10 - 1.60	76347-311LF	76347-411LF	15.000/reel
20-22	1.10 - 1.60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

Part numbers / Contacts loose Piece

Wire size	insulation O.D.	Selective Gold Plated	Tin plated	Packaging
22-30	0.90 - 1.50	76357-301LF	76357-401LF	1000/box
22-30	0.90 - 1.50	70357-301LF	70357-401LF	X00/0001
	Notes: • = reeled fo	r application machine with	left-to-right feeding	







# Dubox<sup>™</sup> CRIMP-TO-WIRE HOUSINGS 2.54 mm (.100")



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

## **TECHNICAL DATA**

### Physical

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

### **Electrical Performance**

 Insulation resistance: 1x 105 MΩ min
 Dielectric withstanding voltage: 1000 V rms

**Operating Temperature Range** -65°C to +125°C

### Packaging

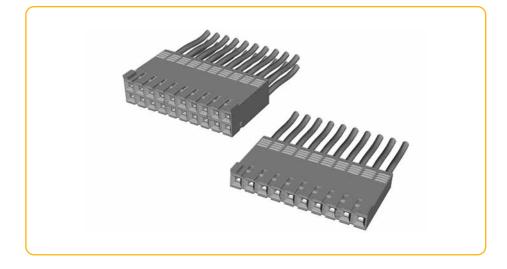
Bulk

### **Reference Information**

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

Specifications subject to change without notice.

## TYPICAL APPLICATIONS



## MATING DATA

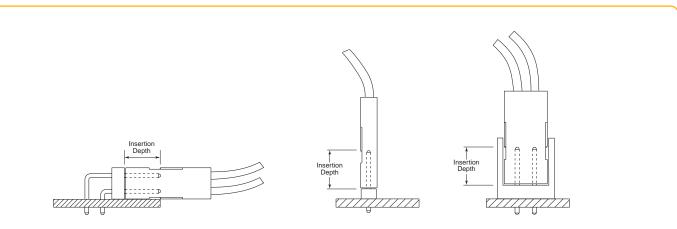
BergStik <sup>®</sup> unshrouded	
vertical headers	10, 12
BergStik <sup>®</sup> unshrouded	
right angle headers	16, 18
Dubox™ shrouded	
headers	32

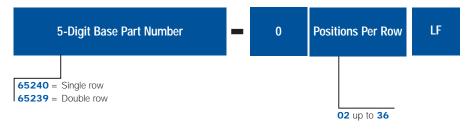
## **INSERTION DEPTH**

▶ 4.0 mm min. to 6.0 mm max.

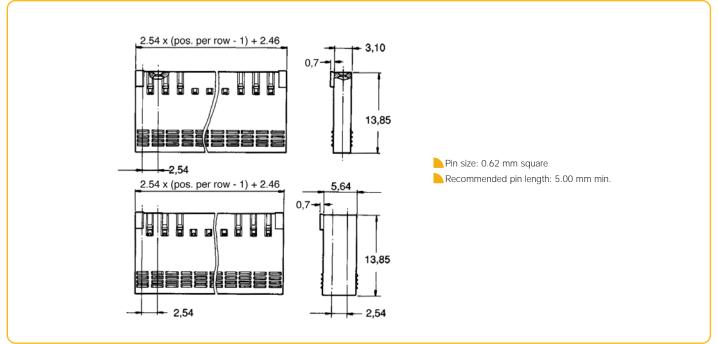
## **RoHs INFORMATION**

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









# PV<sup>™</sup> SHROUDED HEADERS 2.54 mm (.100")



- 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: 100000 m $\Omega$  min.

Dielectric withstanding voltage: 1000 V

### Mechanical Performance

Contact retention to housing: 17.76 N min.

**Operating Temperature Range** -40°C to +95°C

### Packaging

Bags

### **Reference Information**

**S** 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

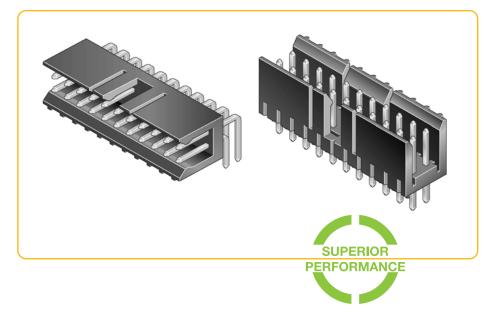
Specifications subject to change without notice.

## MATING DATA

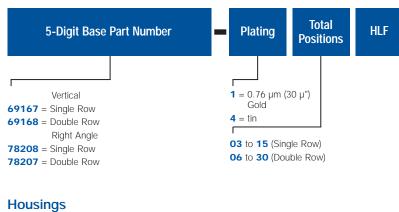
PV™	Crimp-to-wire contact	40
PV™	crimp-to-wire housings	42

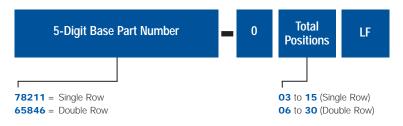
## **PROCESSING INFORMATION**

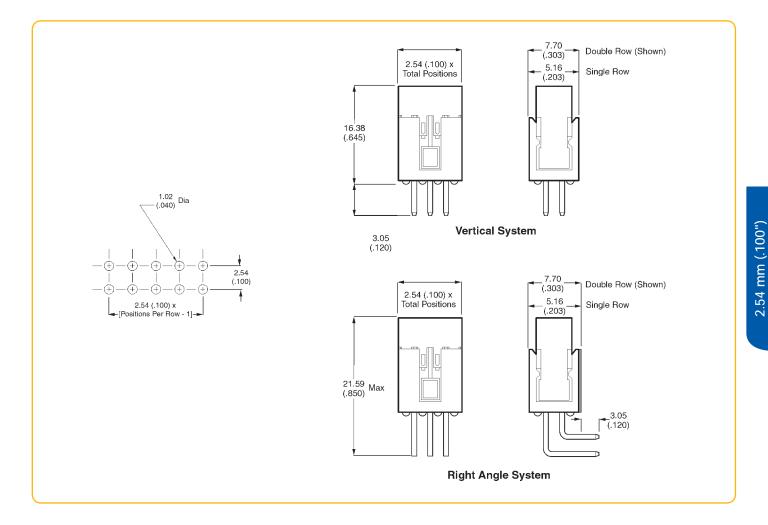
This product is RoHs compatible according to the European Union Directive 2002/95/IEC











# PV<sup>™</sup> CRIMP-TO-WIRE CONTACTS 2.54 mm (.100")



- 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
- lnsulation resistance: 5000 m $\Omega$  min.
- Contact resistance after environmental test: 15 mΩ max. Contact
- Dielectric withstanding voltage: 1000 V

### 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

Reels Boxes - Loose piece

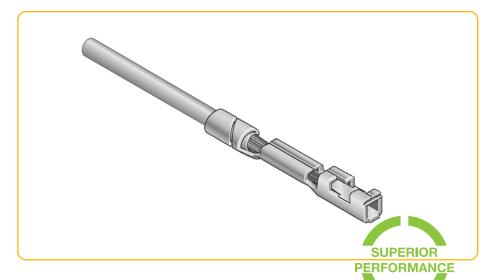
### **Reference Information**

- **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

Specifications subject to change without notice.

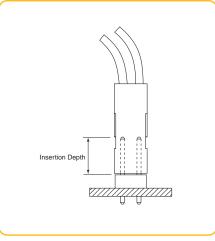
## MATING DATA

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



## **INSERTION DEPTH**

- Discrete Wire: 3.56 mm (.140") min. to 5.59 mm (.220") max.
- [provides . 381 mm (.015") wipe] Crimp-to-Wire Housing: 5.08 mm
- (.200") min. to 6.22 mm (.245") max. [provides . 381 mm (.015") wipe in housing]



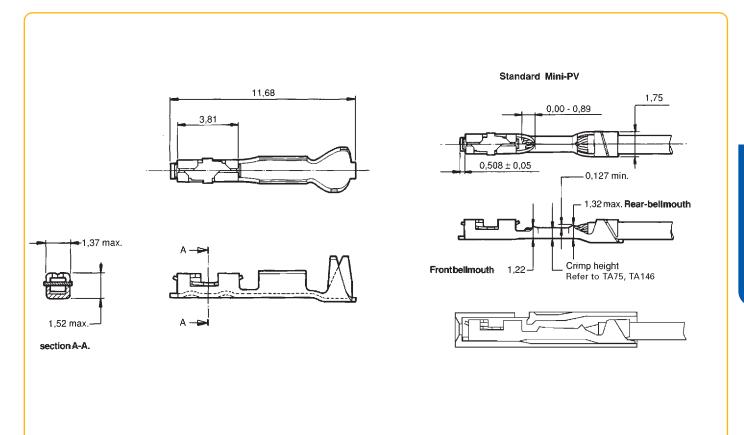
	SELECT
	Select Application
	Select Spring Force
Step 3	Select Wire Size

5-Dia	iit Rase	Part	Number
	n Duse	1 41 4	

3-Digit Dash Number

1		2
Applicat	tion	Spring Force
Housing		
40-72	Contacts Per Housing	Standard
10-50	Contacts Per Housing	High
2-20	Contacts Per Housing	Ultra High
Discre	te Contact	Ultra High
		1

Wire Size (AWG)	Application Spring Force	Part Number
18, 20	Standard	48231-000
or two 22	High	48047-000
or two 24	Ultra High	48052-000
22, 24, 26	Standard	48049-000
or two 26	High	48046-000
or two 28	Ultra High	48051-000
28, 30, 32	Standard	48048-000
or two 30	High	48045-000
or two 32	Ultra High	48050-000
	Standard	75543-015
32, 34, 36	High	75543-013
	Ultra High	75543-017



## **PV<sup>™</sup> CRIMP-TO-WIRE HOUSINGS** 2.54 mm (.100")



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

### **TECHNICAL DATA** Physical

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

### **Electrical Performance**

Insulation resistance: 100,000 M $\Omega$  min Dielectric withstanding voltage: 1000 V min.

## **Mechanical Performance**

Contact retention to housing: 17.76 N min.

## **Operating Temperature Range**

-40°C to +105°C

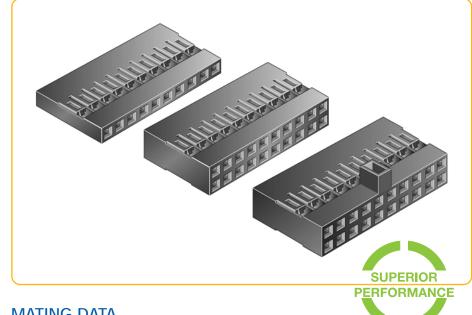
### Packaging

Bags

### **Reference Information**

- **S** File no. E66906 **G** File no. LR46923
- Product drawing: By 5-digit base part number
- Product specification: BUS-12-067
- Application specification: TA-531
- Specifications subject to change without notice.

## **TYPICAL APPLICATIONS**

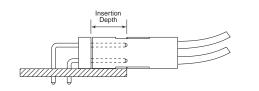


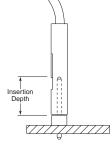
## MATING DATA

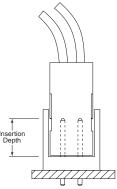
- Continuous unshrouded headers 14
- Unshrouded vertical headers 10, 12
- Unshrouded right angle headers 16

## **INSERTION DEPTH**

5.08 mm (.200") min. to 6.22 mm (.245") max. [provides .381 mm (.015") wipe in housing]









65039 = Single Row

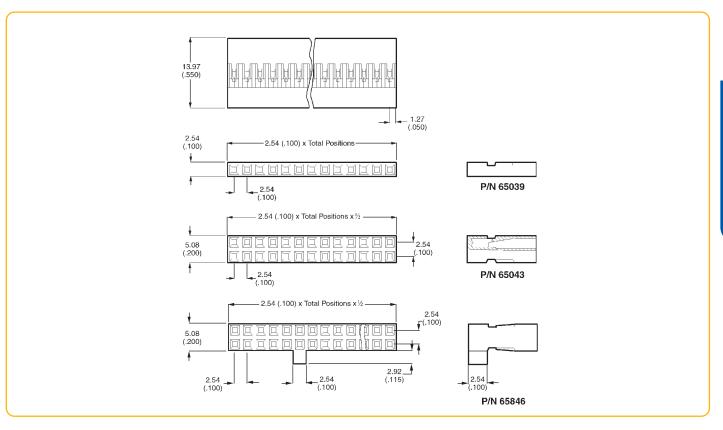
78211 = Single Row with Center Key

65043 = Double Row

65846 = Double Row with Center Key

	.,				
	Sing	le Row	]	Doul	le Row
Total Positions	65039	78211	Total Positions	65043	65846
1	-036		4	-035	-014
2	-035		6	-034	-015
3	-034	-003	8	-033	-016
4	-033	-004	10	-032	-010
5	-032	-005	12	-031	-017
6	-031	-006	14	-030	-007
7	-030	-007	16	-029	-011
8	-029	-008	18	-028	-008
9	-028	-009	20	-027	-006
10	-027	-010	22	-026	-018
11	-026	-011	24	-025	-001
12	-025	-012	26	-024	-019
13	-024	-013	28	-023	-020
14	-023	-014	30	-022	-002
15	-022	-015	32	-021	-021
16	-021		34	-020	-022
17	-020		36	-019	-023
18	-019		38	-018	-003

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



## Quickie<sup>™</sup> SHROUDED LOW PROFILE HEADERS 2.54 mm (.100")



- 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 or tin over 1.27 µm (50µ") nickel

### **Electrical Performance**

- Current rating: 3 A continuous
- Insulation resistance: 10,000 M $\Omega$  min
- Dielectric withstanding voltage: 500 V min.

### **Mechanical Performance**

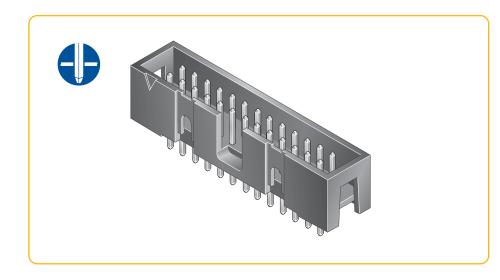
Pin retention to housing: 20 N min.

### **Operating Temperature Range**

-65°C to +125°C

### Packaging

Tubes



50

### **Reference Information**

- **File no. E66906**
- **G** File no. LR46923
- Product drawing: By 5-digit base part number

Product specification: BUS-12-082 Specifications subject to change without notice.

## MATING DATA

Quickie<sup>™</sup> IDC receptacles

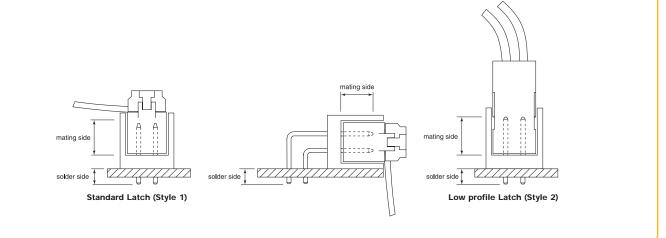
## **PROCESSING INFORMATION**

Compatible with wave soldering processes

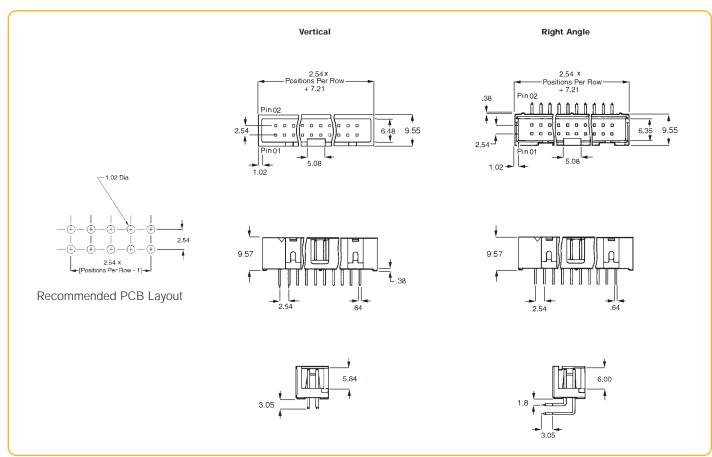
## **RoHs INFORMATION**

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

# LATCHING STYLES



5-Digit Base Part Number	Plating	Total Positions	LF
Through mount 75869 = Vertical 75867 = Right angle		<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.	
<ul> <li>1 = 0.76 μm (30μ") gold on mating area, tin on solder side</li> <li>2 = tin</li> <li>3 = 0.38 μm (15μ") gold on mating area, tin on solder side</li> </ul>		<b>07</b> = 40 pos. <b>08</b> = 50 pos. <b>09</b> = 60 pos. <b>10</b> = 64 pos.	



Dimensions in mm

Technical / Application Support / Drawings / Specifications / Samples: www.fciconnect.com/basics

45



- 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 or tin over 1.27 μm (50μ") nickel

### **Electrical Performance**

- Current rating: 3 A continuous
- Insulation resistance: 10,000 M $\Omega$  min.
- Dielectric withstanding voltage: 500 V rms

### Mechanical Performance

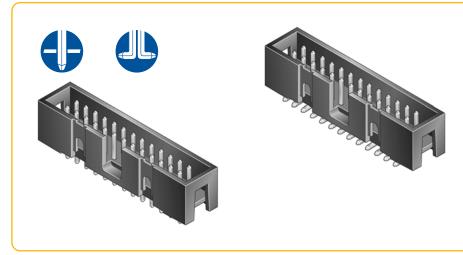
Pin retention to housing: 20 N min.

### **Operating Temperature Range**

►-65°C to +125°C

### Packaging

SMT: Tape-and-reel with pick-up cap PiP: Tube with pick-up cap



### **Reference Information**

### **S** File no. E66906

- File no. LR46923
- Product drawing: By 5-digit base part number

Product specification: BUS-12-055 Specifications subject to change without notice.

## MATING DATA

Quickie™ IDC receptacles

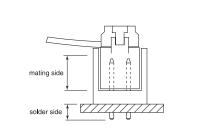
### PROCESSING INFORMATION

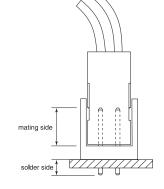
Compatible with wave, vapor-phase, and IR reflow soldering processes

## **RoHs INFORMATION**

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

## **TYPICAL APPLICATIONS**





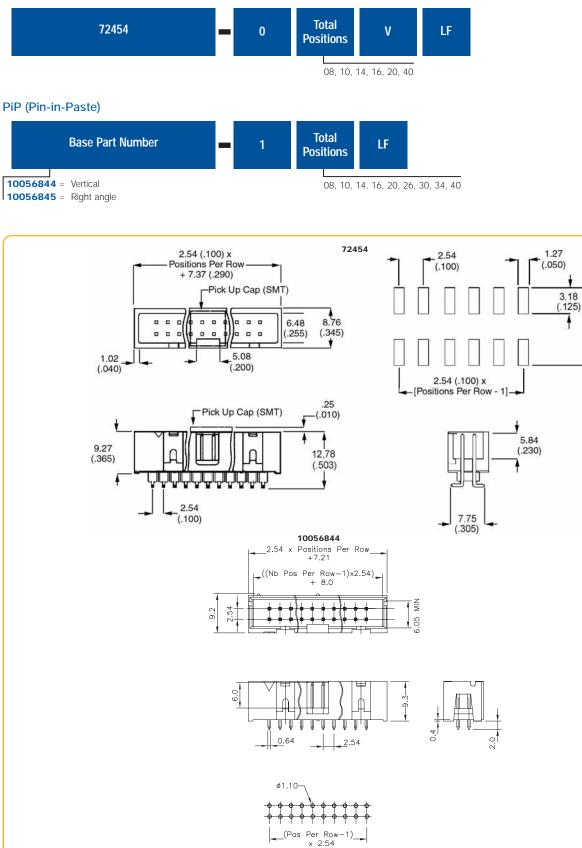
50

8.64

(.340)

## PART NUMBER

SMT (Surface Mount)





### Selective plating

Recessed pins assure proper alignment and eliminate damage during mating

### TECHNICAL DATA Physical



- Housing: Glass filled, thermoplastic polyester, grey
- Flammability rating: UL 94 V-0

### **Electrical Performance**

- Current rating: 3 A continuous
- Insulation resistance: 10,000 M $\Omega$  min
- Dielectric withstanding voltage: 1500 V

### **Mechanical Performance**

Pin retention to housing: 20 N min.

**Operating Temperature Range** -65°C to +125°C

### Packaging

Tubes

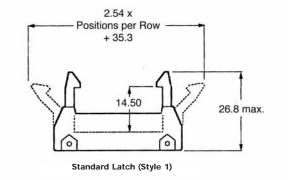
### **Reference Information**

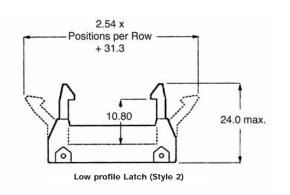
**SU** File no. E66906

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

Specifications subject to change without notice.







### MATING DATA

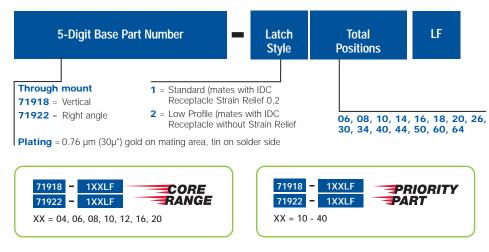
Quickie™ IDC receptacles 50

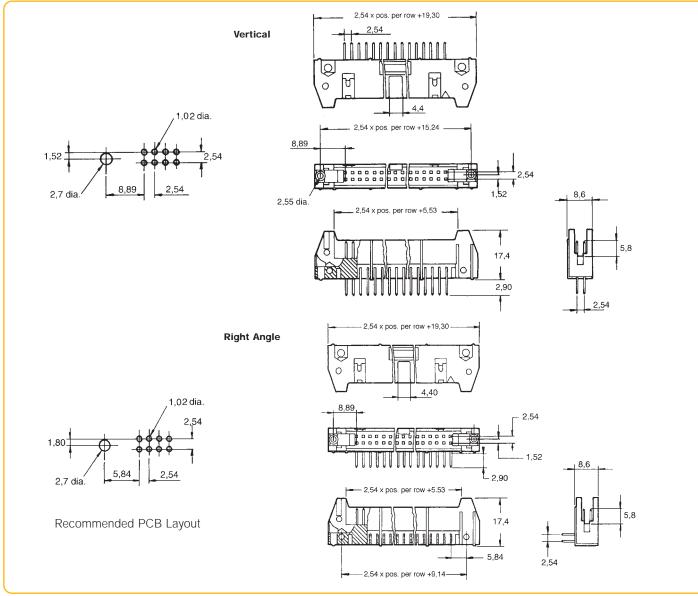
## **PROCESSING INFORMATION**

Compatible with wave soldering processes

## **RoHs INFORMATION**

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





# Quickie<sup>™</sup> IDC RECEPTACLES 2.54 mm (.100")

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## **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: 50,000 M $\Omega$  min.
- Contact resistance: 15 m $\Omega$  max.
- Dielectric withstanding voltage: 1000 V min. rms (sea level)

### Mechanical Performance Mating cycles (durability): 100

# Operating Temperature Range

►-65°C to +125°C

## Packaging

Tubes

### **Reference Information**

**File no. E66906 File no. LR46923** 

- Product drawing: By 5-digit base part number
- Product specification: BUS-12-095

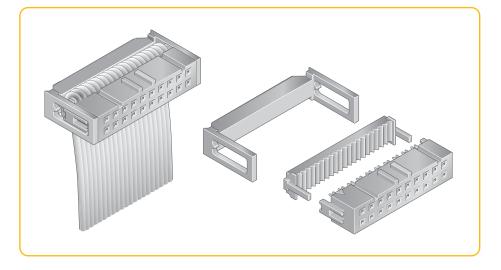
Specifications subject to change without notice.

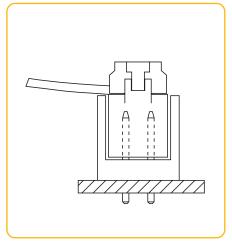
## MATING DATA

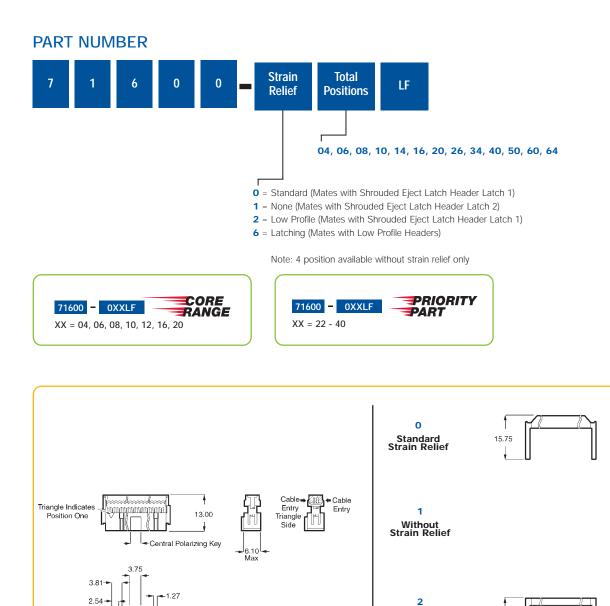
BergStik <sup>®</sup> unshrouded	
vertical headers	10, 12, 14
Quickie <sup>®</sup> shrouded	
low profile headers	44, 46
Quickie <sup>®</sup> shrouded	
eject latch headers	48

## **RoHs INFORMATION**

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

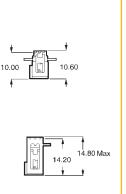






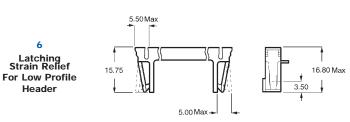
2.54

2.54 x Positions Per Row + 4.47



14.20

16.80 Max



Dimensions in mm

13.75

Low Profile

Strain Relief

# Quickie<sup>™</sup> IDC 2-ROW PCB CONNECTORS 2.54 mm (.100")



 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: 50,000 M $\Omega$  min.
- Contact resistance: 15 m $\Omega$  max.
- Dielectric withstanding voltage: 1000 V min.

### **Operating Temperature Range**

►-65°C to +125°C

### Packaging

Tubes

### **Reference Information**

File no. E66906
File no. LR46923
Product drawing: By 5-digit base part number

Product specification: 110-019

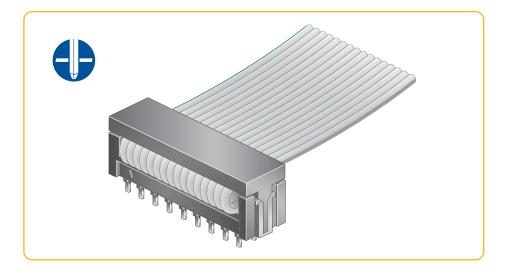
Specifications subject to change without notice.

## **PROCESSING INFORMATION**

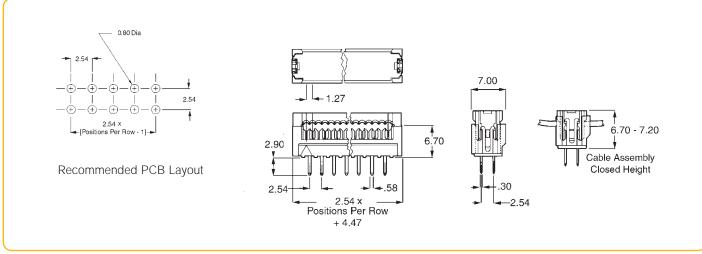
Compatible with wave and vapor phase soldering processes — Low temperature

## **RoHs INFORMATION**

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



#### PART NUMBER Total LF Positions = 6 pos. = 18 pos. = 34 pos. = 8 pos. = 20 pos. = 40 pos. = 10 pos. = 24 pos. = 50 pos. = 14 pos. = 26 pos. = 60 pos. = 16 pos. = 30 pos. = 64 pos.



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