

**45750****Crimp, Female**

**Hot-pluggable, high-current Mini-Fit Plus HCS Terminals handle up to 12 amperes of current load and increase mating cycle durability**

The new, improved and patented Mini-Fit Plus HCS terminals are designed to be used with all existing Mini-Fit® crimp receptacle housings. The Mini-Fit Plus HCS terminals will allow for current loads up to 12.0A in 2 to 10 circuit configurations and 11.0A in 12 to 24 circuit configurations.

The unique, elliptical contact dimple design increases durability, doubling to tripling the number of mating cycles versus standard Mini-Fit terminals. Terminals are available in post-plated versions only, enhancing the long-term electrical performance and of the mating interface. The gold-plated terminals are suitable for "hot-pluggable" applications.

#### Features and Benefits

- High-current terminal design enables customers to upgrade existing crimp receptacle housings to carry an additional 3.0A to 5.0A per circuit
- Gold plated terminals are hot pluggable making them suitable for current interruption applications where hot mating and unmating is required
- High force, low-pressure contact dimple design increases durability (cycling) while minimizing contact resistance
- Two-point contact design assures high reliability
- Compatible with existing Mini-Fit application tooling allowing customers to process these terminals with existing equipment



#### SPECIFICATIONS

##### Reference Information

Packaging: Reel or bag  
Use With: 5557, 30067, 42474, and 44516 housings  
Designed In: Millimeters

##### Electrical

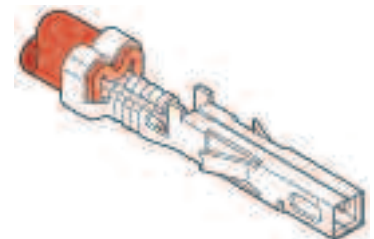
Voltage: 600V  
Current: 12.0A max.  
Current Interruption: 8.0A max. at 24V  
Contact Resistance: 10 milliohms max.  
Dielectric Withstanding Voltage: 2200V  
Insulation Resistance: 1000 Megohms min.

##### Mechanical

Contact Insertion Force: 1.54kg (3.40 lb) max.  
Contact Retention to Housing: 3.0kg (6.61 lb) min.  
Wire Pull-out Force: 6.0kg (13.23 lb) min.  
Mating Force: 1.14kg (2.51 lb) max.  
Unmating Force: 0.10kg (0.22 lb) min.  
Normal Force: 200g min.  
Durability: Tin (Sn) – 75 cycles  
Gold (Au) – 100 cycles

##### Physical

Contact: Copper (Cu) Alloy  
Plating:  
Contact Area – 100µ" Tin (Sn) or 30µ" Gold (Au)  
Underplating – 50µ" Nickel (Ni)  
Wire Range: 16, 18, 20 AWG  
Insulation Range: 3.10mm (.122") max.  
Strip Length: 3.00 to 3.50mm (.118" to .138")  
Operating Temperature: -40 to +105° C



## APPLICATIONS



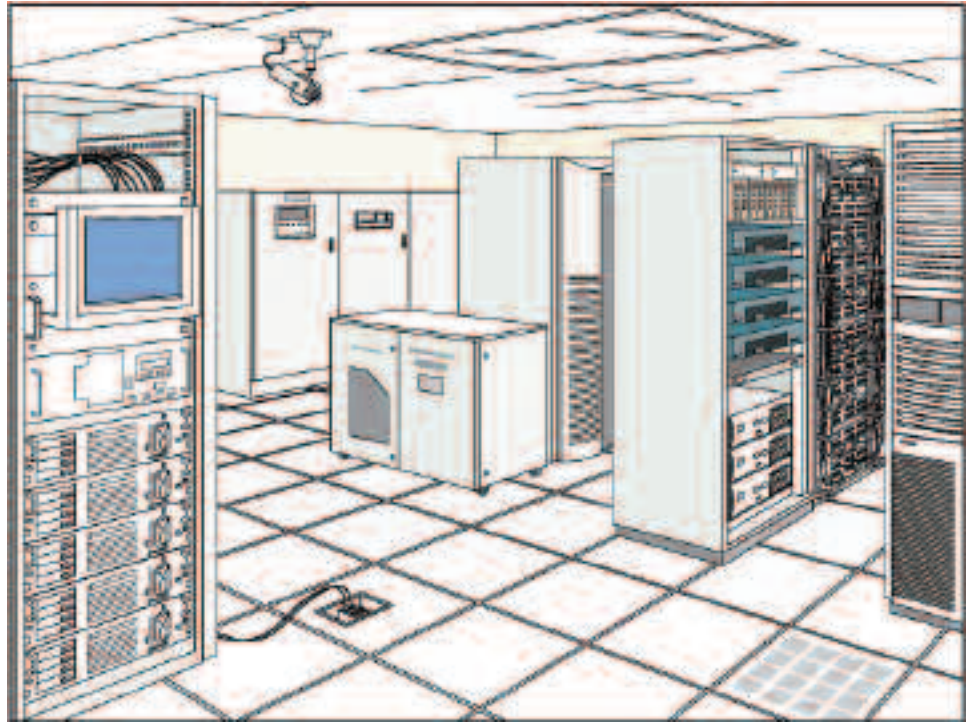
# 4.20mm (.165") Pitch Mini-Fit Plus HCS™ Terminal

## 45750

### Crimp, Female

- Power Supplies
- Fan Trays
- Lottery Systems
- HVAC Systems
- Personal Computers
- Lighting Systems
- Gaming Equipment
- Office Equipment
- Disk Drives
- Network servers
- Telecommunications
  - Base stations
  - Hubs and routers
- Appliances
- Business Equipment
- Printers
- PC Industry

- Automotive
- Industrial Equipment
- Medical



### Current Rating Chart

| Wire Range AWG | 2 - 3 Circuits | 4 - 6 Circuits | 7 - 10 Circuits | 12 - 24 Circuits |
|----------------|----------------|----------------|-----------------|------------------|
| 16             | 12.0A          | 12.0A          | 12.0A           | 11.0A            |
| 18             | 12.0A          | 11.0A          | 10.0A           | 9.0A             |
| 20             | 9.0A           | 9.0A           | 8.0A            | 8.0A             |

### Application Tooling

| Terminal   | Wire Range (AWG) | Insulation Dia. (max.) | Strip Length                 | Applicator |
|------------|------------------|------------------------|------------------------------|------------|
| 45750-01X1 | 16               | 3.10mm (.112")         | 3.00 - 3.50mm (.188 - .138") | 63860-1200 |
| 45750-02X1 | 18 - 20          | 2.15mm (.085)          |                              | 63860-1400 |

## ORDERING INFORMATION

| Order No.  | Plating | Wire Range (AWG) | Packaging |
|------------|---------|------------------|-----------|
| 45750-0111 | Tin     | 16               | Reel      |
| 45750-0112 |         |                  | Bag       |
| 45750-0211 |         | 18 - 20          | Reel      |
| 45750-0212 |         |                  | Bag       |
| 45750-0121 | Gold    | 16               | Reel      |
| 45750-0122 |         |                  | Bag       |
| 45750-0221 |         | 18 - 20          | Reel      |
| 45750-0222 |         |                  | Bag       |

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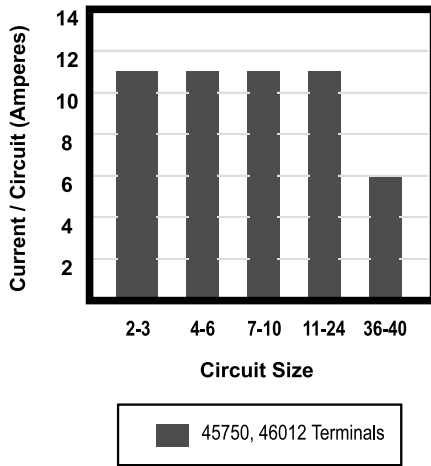
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# 4.20mm (.165") Pitch Mini-Fit Plus HCS™ Connector System



## Features

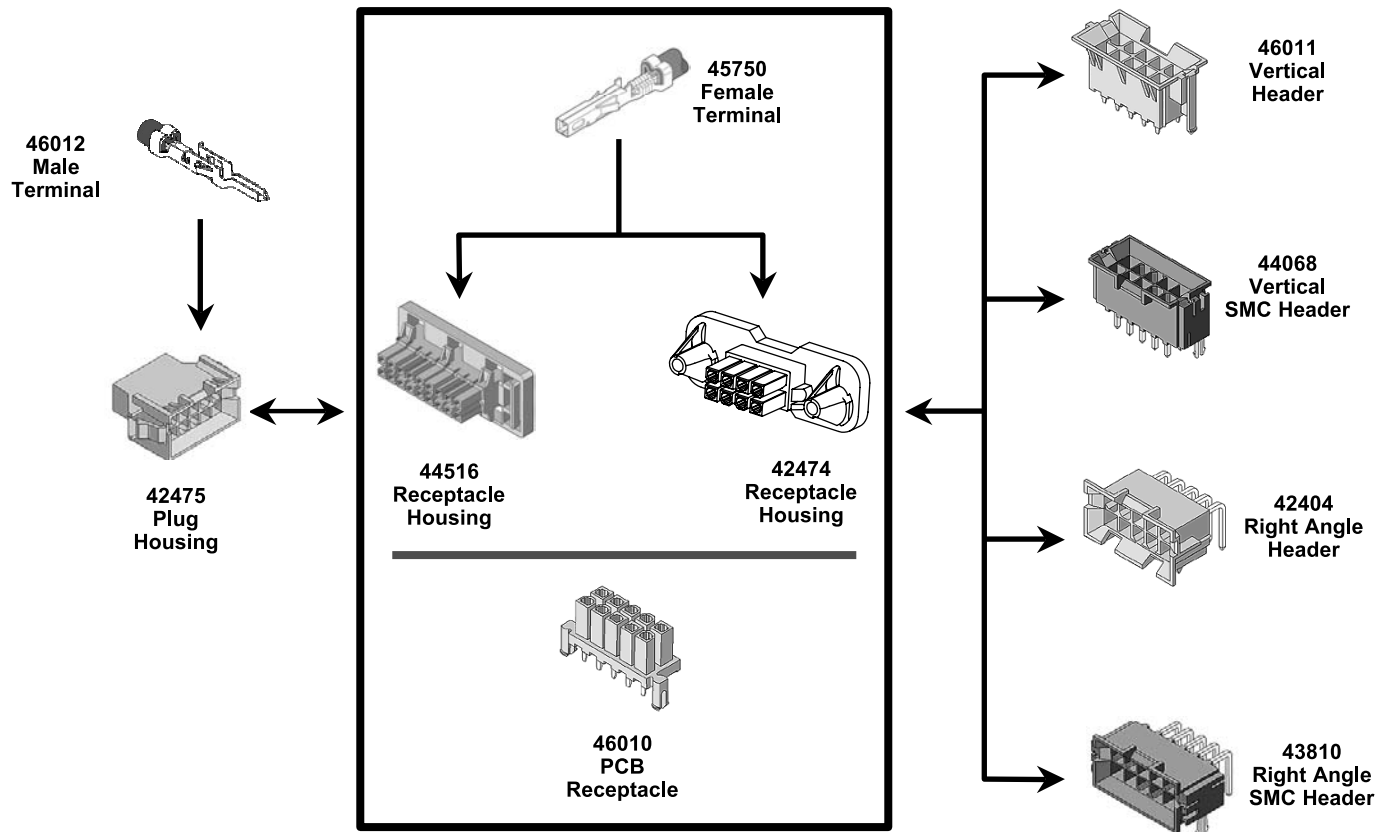
- High Current**  
 The base material of the terminals and stamped pins is a highly-conductive copper alloy. Heat generated at the contact interface is quickly dissipated. The system is suitable for applications that require high current loads.
- Hot Pluggable**  
 The gold-plated terminals, PCB receptacle and headers are ideal for applications that require repeated "hot" mates and unmates.
- Flexible Design**  
 Blind-mating, Positive Locking and Terminal Position Assurance solutions are available in the high current format.
- Configurations**  
 Receptacle housings, PCB receptacles, plug housings and headers in different combinations enable wire-to-wire, wire-to-board, panel-to-panel, panel-to-board or board-to-board designs.
- Polarized Geometry**  
 The receptacle housings and PCB receptacles are polarized to the plug housings and headers to minimize the chance of mismatching the connectors.
- Lead-free**  
 All Mini-Fit Plus HCS connectors have been lead-free since inception.

## Specifications

Current Rating: 12.0A max. (16 AWG wire)  
 Voltage Rating: 600V  
 Contact Resistance:  
     10 milliohms max. (initial)  
     20 milliohms max. (after environmental testing)  
 Operating Temperature: -40 to +105°C  
 Wire Range:  
     16 AWG (2.20 to 3.15mm insulation OD)  
     18 to 20 AWG (1.65 to 2.95mm insulation OD)  
 Plating Options: Tin, Select Gold  
 Current Interruption (Hot Pluggability): 8.0A max.,  
     24V max., 50 mating cycles max. (Gold-plated only)  
 Applicable PCB Solder Processes:  
     Wave Solder—42440, 42404, 42385, 43644, 43810,  
     43973, 44068, 45567 and 46011  
     Reflow—44068, 43810

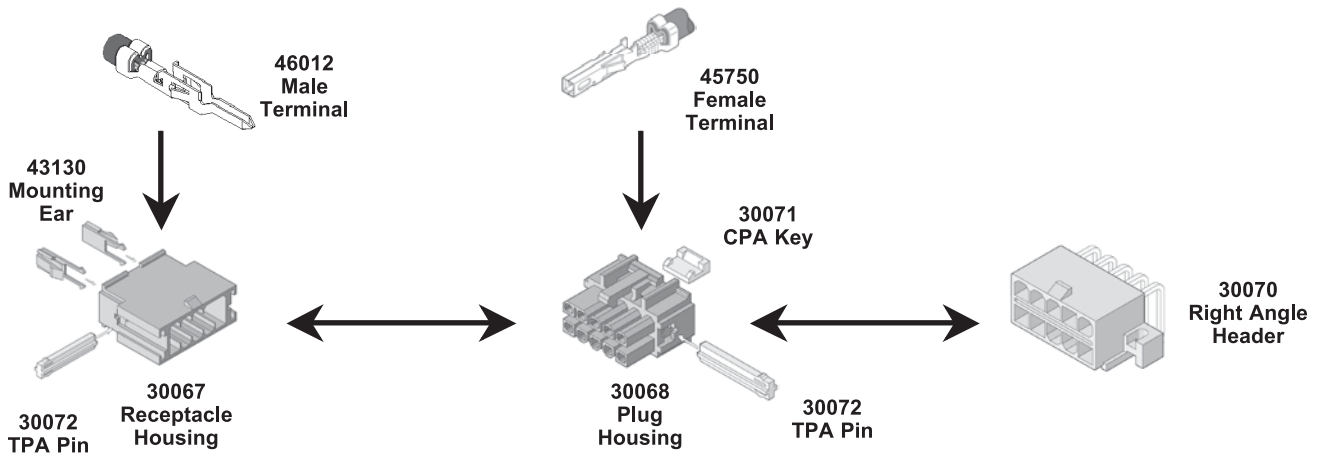
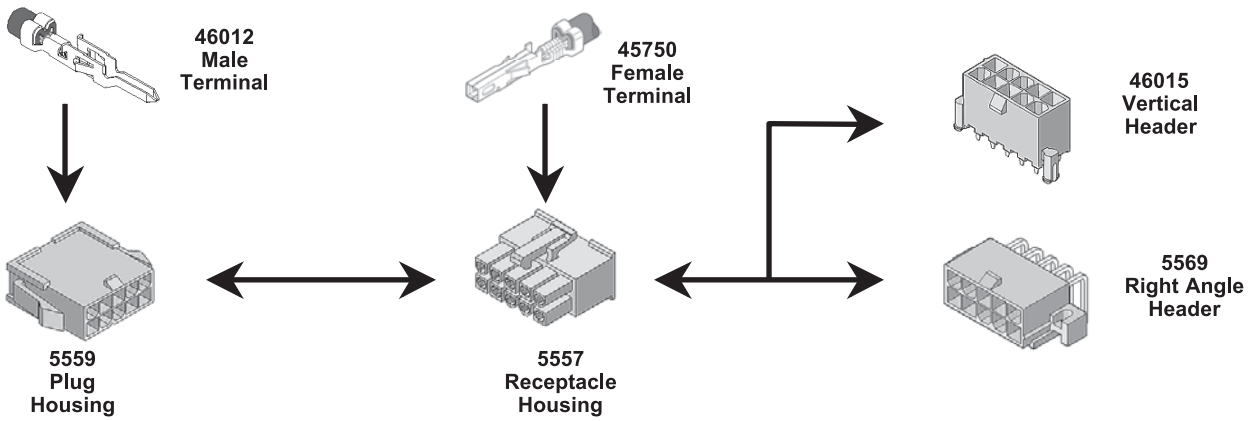
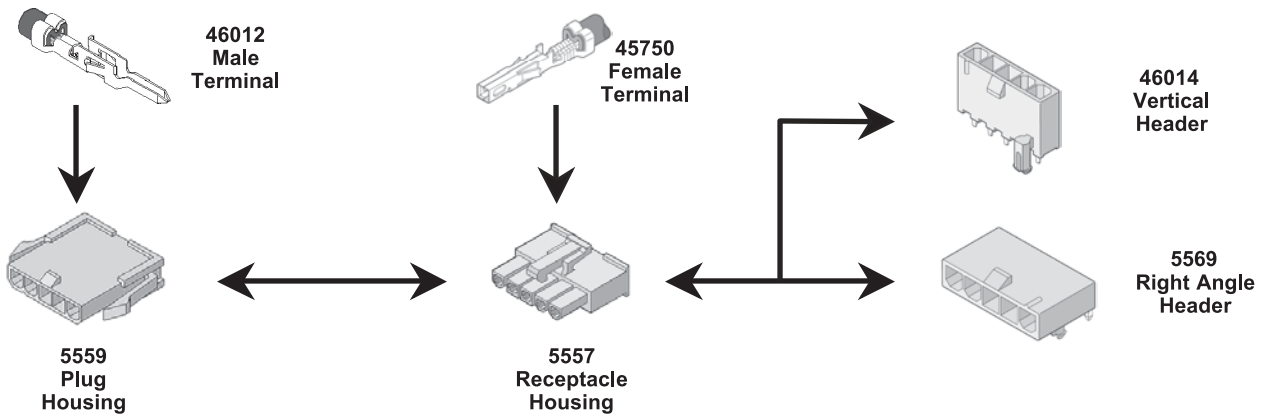
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Power Connectors



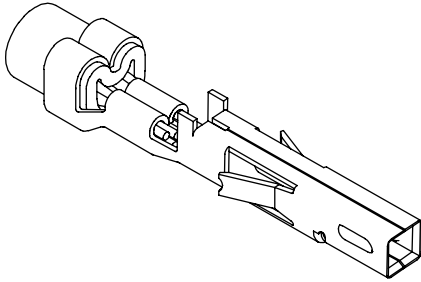
# 4.20mm (.165") Pitch Mini-Fit Plus HCS™ Connector System

Power Connectors



# 4.20mm (.165") Pitch Mini-Fit Plus HCS™ Terminal

**45750**  
Crimp, Female



### Features and Benefits

- Post-plated contacts for superior electrical performance over time
- Suitable for high current applications
- Locking tangs secure terminal to housing

### Reference Information

Packaging: Reel or bag  
Use With: 5557, 42474, 44516 and 30067 housings

### Electrical

Voltage: 600V  
Current: When mating 2-circuit connectors

| 16 AWG | 18 AWG | 20 AWG |
|--------|--------|--------|
| 12.0A  | 12.0A  | 9.0A   |

Contact Resistance: 10 milliohms max.  
Dielectric Withstanding Voltage: 1500V  
Insulation Resistance: 1000 Megohms min.

### Mechanical

Contact Insertion Force: 1.5kg max.  
Contact Retention to Housing: 3.0kg min.  
Wire Pull-Out Force: 9.0kg min.  
Normal Force: 200g min.  
Durability: Tin—75 cycles  
Gold—100 cycles

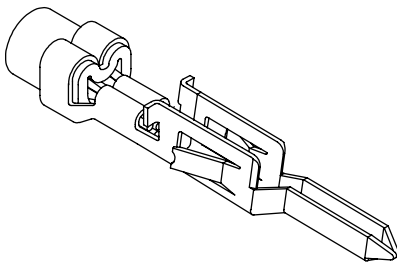
### Physical

Contact: Copper Alloy  
Plating: Tin or Select Gold  
Underplating: Nickel  
Operating Temperature: -40 to +105°C

| Plating     | Wire Range AWG | Insulation Range | Reel                       | Bag                        | Lead-free |
|-------------|----------------|------------------|----------------------------|----------------------------|-----------|
| Tin         | 16             | 2.20-3.15mm      | <a href="#">45750-3111</a> | <a href="#">45750-3112</a> | Yes       |
|             | 18-20          | 1.65-2.95mm      | <a href="#">45750-1111</a> | <a href="#">45750-1112</a> |           |
| Select Gold | 16             | 2.20-3.15mm      | <a href="#">45750-3211</a> | <a href="#">45750-3212</a> |           |
|             | 18-20          | 1.65-2.95mm      | <a href="#">45750-1211</a> | <a href="#">45750-1212</a> |           |

# 4.20mm (.165") Pitch Mini-Fit Plus HCS™ Terminal

**46012**  
Crimp, Male



### Features and Benefits

- Post-plated contacts for superior electrical performance over time
- Suitable for high current applications
- Locking tangs secure terminal to housing

### Reference Information

Packaging: Reel or bag  
Use With: 5559, 42475 and 30068 housings

### Electrical

Voltage: 600V  
Current: When mating 2-circuit connectors

| 16 AWG | 18 AWG | 20 AWG |
|--------|--------|--------|
| 12.0A  | 12.0A  | 9.0A   |

Contact Resistance: 10 milliohms max.  
Dielectric Withstanding Voltage: 1500V  
Insulation Resistance: 1000 Megohms min.

### Mechanical

Contact Insertion Force: 1.5kg max.  
Contact Retention to Housing: 3.0kg min.  
Wire Pull-Out Force: 9.0kg min.  
Durability: Tin—75 cycles  
Gold—100 cycles

### Physical

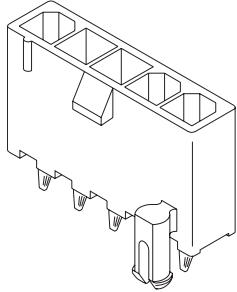
Contact: Copper Alloy  
Plating: Tin or Select Gold  
Underplating: Nickel  
Operating Temperature: -40 to +105°C

| Plating     | Wire Range AWG | Insulation Range | Reel                       | Bag                        | Lead-free |
|-------------|----------------|------------------|----------------------------|----------------------------|-----------|
| Tin         | 16             | 2.20-3.15mm      | <a href="#">46012-3141</a> | <a href="#">46012-3142</a> | Yes       |
|             | 18-20          | 1.65-2.95mm      | <a href="#">46012-1141</a> | <a href="#">46012-1142</a> |           |
| Select Gold | 16             | 2.20-3.15mm      | <a href="#">46012-3241</a> | <a href="#">46012-3242</a> |           |
|             | 18-20          | 1.65-2.95mm      | <a href="#">46012-1241</a> | <a href="#">46012-1242</a> |           |

## 4.20mm (.165") Pitch Mini-Fit Plus HCS™ Header

**46014**

**Single Row, Vertical  
With Pegs and Drain Holes**



### Features and Benefits

- Carries more amperes per circuit than 5566 series headers
- Headers standard with mounting pegs for increased board retention
- Single row configuration saves board space

### Reference Information

Packaging: Tray  
 UL File No.: E29179  
 CSA File No.: LR19980  
 TUV License No.: R75142  
 Mates With: 5557 single row receptacle housing using 45750 terminal  
 PCB Thickness: 1.60mm (.062")  
 Process: Wave solder  
 Designed In: Millimeters

### Electrical

Voltage: 600V  
 Current: (Used with 16 AWG)

| Series | Circuits |       |       |       |
|--------|----------|-------|-------|-------|
|        | 2-3      | 4-6   | 7-10  | 12-24 |
| 45750  | 12.0A    | 12.0A | 12.0A | 11.0A |

Contact Resistance: 10 milliohms max.  
 Dielectric Withstanding Voltage: 1500V  
 Insulation Resistance: 1000 Megohms min.

### Mechanical

Insertion Force to PCB: 9.0kg max.

### Physical

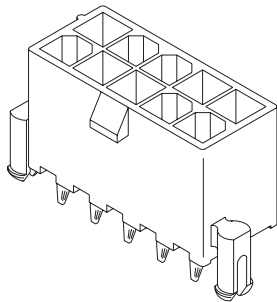
Housing: 6/6 nylon, UL 94V-0  
 Contact: High Copper Alloy  
 Plating: Tin or Select Gold  
 Underplating: Nickel  
 Operating Temperature: -40 to +105°C

| Circuits | Order No.                  |                            | Lead-free |
|----------|----------------------------|----------------------------|-----------|
|          | Tin                        | Select Gold                |           |
| 3        | <a href="#">46014-0300</a> | <a href="#">46014-0302</a> | Yes       |
| 4        | <a href="#">46014-0400</a> | <a href="#">46014-0402</a> |           |
| 5        | <a href="#">46014-0500</a> | <a href="#">46014-0502</a> |           |

## 4.20mm (.165") Pitch Mini-Fit Plus HCS™ Header

**46015**

**Dual Row, Vertical  
With Pegs, Without Drain Holes**



### Features and Benefits

- Carries more amperes per circuit than 5566 series headers
- Headers standard with mounting pegs for increased board retention
- Positive housing locks

### Reference Information

Packaging: Tray  
 UL File No.: E29179  
 CSA File No.: LR19980  
 TUV License No.: R75142  
 Mates With: 5557 housings using 45750 terminal  
 PCB Thickness: 1.60mm (.062")  
 Process: Wave solder  
 Designed In: Millimeters

### Electrical

Voltage: 600V  
 Current: (Used with 16 AWG)

| Series | Circuits |       |       |       |
|--------|----------|-------|-------|-------|
|        | 2-3      | 4-6   | 7-10  | 12-24 |
| 45750  | 12.0A    | 12.0A | 12.0A | 11.0A |

Contact Resistance: 10 milliohms max.  
 Dielectric Withstanding Voltage: 1500V  
 Insulation Resistance: 1000 Megohms min.

### Mechanical

Insertion Force to PCB: 9.0kg max.

### Physical

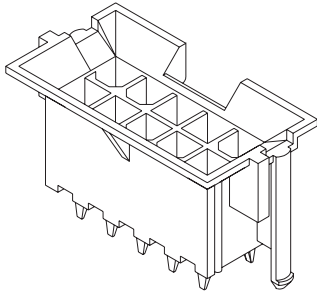
Housing: 6/6 nylon, UL 94V-0  
 Contact: High Copper Alloy  
 Plating: Tin or Select Gold  
 Underplating: Nickel  
 Operating Temperature: -40 to +105°C

| Circuits | Order No.                  |                            | Lead-free |
|----------|----------------------------|----------------------------|-----------|
|          | Tin                        | Select Gold                |           |
| 2        | <a href="#">46015-0201</a> | <a href="#">46015-0208</a> | Yes       |
| 4        | <a href="#">46015-0401</a> | <a href="#">46015-0408</a> |           |
| 6        | <a href="#">46015-0601</a> | <a href="#">46015-0608</a> |           |
| 8        | <a href="#">46015-0801</a> | <a href="#">46015-0808</a> |           |
| 10       | <a href="#">46015-1001</a> | <a href="#">46015-1008</a> |           |
| 12       | <a href="#">46015-1201</a> | <a href="#">46015-1208</a> |           |

| Circuits | Order No.                  |                            | Lead-free |
|----------|----------------------------|----------------------------|-----------|
|          | Tin                        | Select Gold                |           |
| 14       | <a href="#">46015-1401</a> | <a href="#">46015-1408</a> | Yes       |
| 16       | <a href="#">46015-1601</a> | <a href="#">46015-1608</a> |           |
| 18       | <a href="#">46015-1801</a> | <a href="#">46015-1808</a> |           |
| 20       | <a href="#">46015-2001</a> | <a href="#">46015-2008</a> |           |
| 22       | <a href="#">46015-2201</a> | <a href="#">46015-2208</a> |           |
| 24       | <a href="#">46015-2401</a> | <a href="#">46015-2408</a> |           |

# 4.20mm (.165") Pitch Mini-Fit Plus HCS™ Header

## 46011 Dual Row, Vertical With Drain Holes



### Features and Benefits

- Carries more amperes per circuit than 42440 series headers
- .100" lead-in for self-aligning connection with receptacle
- Polarizing pegs for increased board retention during wave soldering

### Reference Information

Packaging: Tray  
UL File No.: E29179  
CSA File No.: LR19980  
TUV License No.: R75142  
Mates With: 42474, 44516 and 5557 receptacles and 46010 PCB receptacles  
Use With: 44476 HCS terminals  
PCB Thickness: 1.60mm (.062")  
Process: Wave solder  
Designed In: Millimeters

### Electrical

Voltage: 600V  
Current: (Used with 16 AWG)

| Series | Circuits |       |       |       |
|--------|----------|-------|-------|-------|
|        | 2-3      | 4-6   | 7-10  | 12-24 |
| 45750  | 12.0A    | 12.0A | 12.0A | 11.0A |

Contact Resistance: 10 milliohms max.  
Dielectric Withstanding Voltage: 1500V  
Insulation Resistance: 1000 Megohms min.

### Mechanical

Insertion Force to PCB: 5.0kg max.

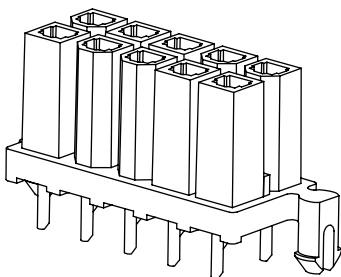
### Physical

Housing: 6/6 nylon, UL 94V-0  
Contact: High Copper Alloy  
Plating: Tin or Select Gold  
Underplating: Nickel  
Operating Temperature: -40 to +105°C

| Circuits | Order No.                  |                            | Lead-free |
|----------|----------------------------|----------------------------|-----------|
|          | Tin                        | Select Gold                |           |
| 4        | <a href="#">46011-0402</a> | <a href="#">46011-0403</a> | Yes       |
| 6        | <a href="#">46011-0602</a> | <a href="#">46011-0603</a> |           |
| 10       | <a href="#">46011-1002</a> | <a href="#">46011-1003</a> |           |
| 14       | <a href="#">46011-1402</a> | <a href="#">46011-1403</a> |           |
| 18       | <a href="#">46011-1802</a> | <a href="#">46011-1803</a> |           |
| 24       | <a href="#">46011-2402</a> | <a href="#">46011-2403</a> |           |

# 4.20mm (.165") Pitch Mini-Fit Plus HCS™ PCB Receptacle Header

## 46010 Right Angle Dual Row



### Features and Benefits

- Fully polarized housing prevents mismatching
- Board mounted receptacle for board-to-board applications
- Mateable with Mini-Fit BMI™ style housings and headers only
- The 46010 is not a floating connector. Guidance and float must be provided to align the connectors during mating and to provide stress-free positioning after mating.

### Reference Information

Packaging: Tray  
UL File No.: E29179  
CSA File No.: LR19980  
TUV License No.: R75142  
Mates With: 42404 and 46011 headers, 42475 plug  
Process: Wave solder  
Designed In: Millimeters

### Electrical

Voltage: 600V  
Current: (Used with 16 AWG)

| Series | Circuits |       |       |       |
|--------|----------|-------|-------|-------|
|        | 2-3      | 4-6   | 7-10  | 12-24 |
| 45750  | 12.0A    | 12.0A | 12.0A | 11.0A |

Contact Resistance: 10 milliohms max.  
Dielectric Withstanding Voltage: 1500V  
Insulation Resistance: 1000 Megohms min.

### Mechanical

Insertion Force to PCB: 9.0kg max.

### Physical

Housing: 6/6 nylon, UL 94V-0  
Contact: Copper Alloy  
Plating: Tin or Select Gold  
Underplating: Nickel  
Operating Temperature: -40 to +105°C

| Circuits | Order No.                  |                            | Lead-free |
|----------|----------------------------|----------------------------|-----------|
|          | Tin                        | Select Gold                |           |
| 4        | <a href="#">46010-0421</a> | <a href="#">46010-0422</a> | Yes       |
| 6        | <a href="#">46010-0621</a> | <a href="#">46010-0622</a> |           |
| 10       | <a href="#">46010-1021</a> | <a href="#">46010-1022</a> |           |
| 14       | <a href="#">46010-1421</a> | <a href="#">46010-1422</a> |           |
| 18       | <a href="#">46010-1821</a> | <a href="#">46010-1822</a> |           |
| 24       | <a href="#">46010-2421</a> | <a href="#">46010-2422</a> |           |