

#### INTRODUCTION:

Adam Tech .050" HPH Series Pin Headers are fine pitched, low profile, PCB mounted pin headers intended for limited space applications or where overall size is a factor. Our specially tooled insulators and contacts offer consistent high quality through automated production processes. This series offers an extensive range of single, dual and stacked versions. Each is available in thru-hole PCB or SMT mounting with choice of tin, gold or selective gold plating.

#### FEATURES:

Single and Dual Row  
Stacked, Thru-Hole and SMT mounting  
Pin Header and Female Header sets  
Lightweight and Compact  
Hi Temp Insulator available  
Choice of plating

#### MATING OPTIONS:

Mates with all industry standard .050" [1.27mm] pitch female headers designed for use with 0.4mm Sq. pins and Low profile receptacle

#### SPECIFICATIONS:

##### Material:

Standard Hi-Temp insulator: Nylon 6T or Nylon 46, rated UL94V-0  
Insulator Color: Black  
Contacts: Brass or Phosphor Bronze

##### Plating:

U = Gold over nickel underplate overall  
SG = Gold over nickel underplate on contact area, tin over copper underplate on tails.  
T = Tin over copper underplate overall

##### Electrical:

Operating voltage: 250V AC max.  
Current rating: 1 Amp max  
Contact resistance: 20 mΩ max. Initial  
Insulation resistance: 5000 MΩ min.  
Dielectric withstanding voltage: 1000V AC for 1 minute

##### Mechanical:

Mating durability: 500 Cycles min.

##### Temperature Rating:

Operating temperature: -40°C to +105°C  
Soldering process temperature: 260°C

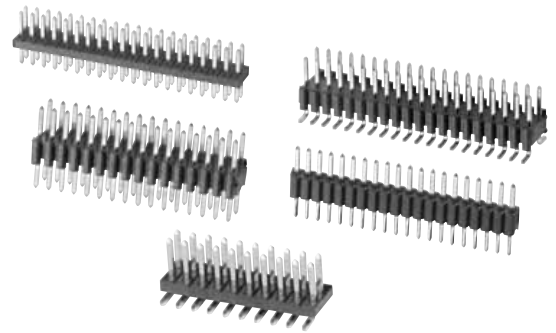
##### PACKAGING:

Anti-ESD plastic bags

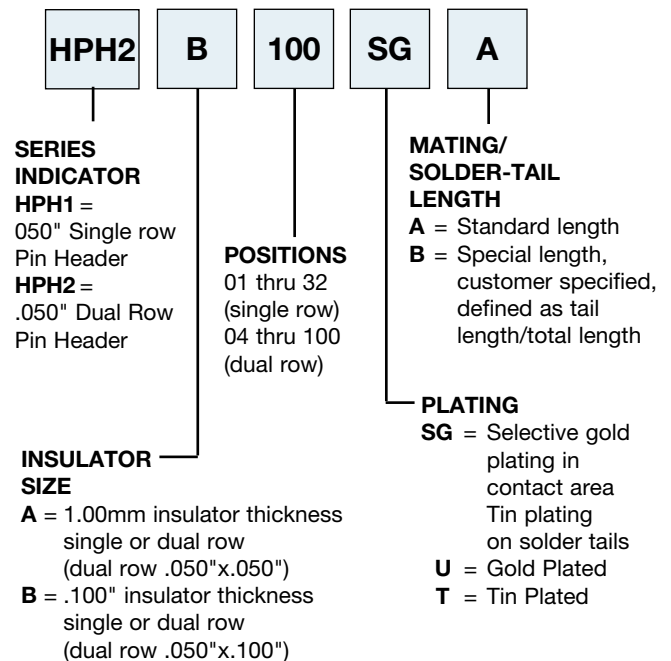
##### APPROVALS AND CERTIFICATIONS:

UL Recognized & CSA Certified, File no. E224053

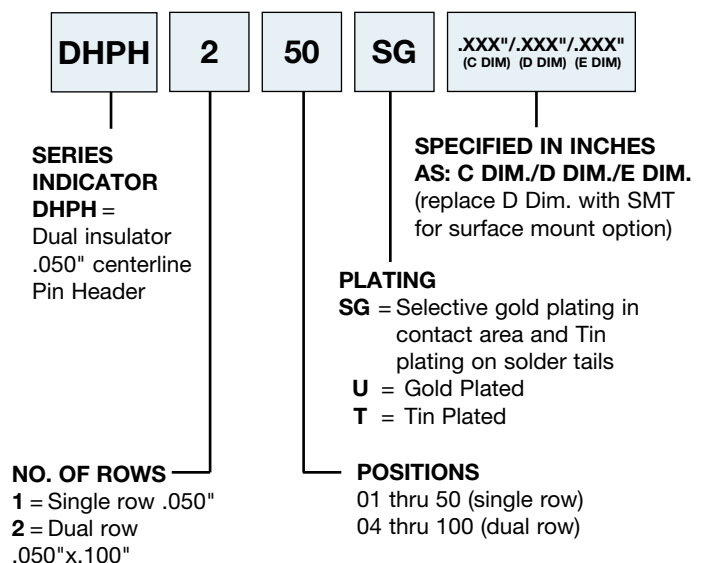
**HI-TEMP  
INSULATOR  
AVAILABLE**



#### ORDERING INFORMATION



#### ORDERING INFORMATION



#### OPTIONS:

Add designator(s) to end of part number

**HT** = Hi-Temp insulator for Hi-Temp soldering processes up to 260°C  
(Add this option for thru-hole products only. All SMT products are manufactured with Hi-Temp insulators)

**SMT** = Dual Row Surface Mount leads with Hi-Temp insulator for Hi-Temp soldering processes up to 260°C

**SMT-A** = Single Row Surface Mount Leads Type A

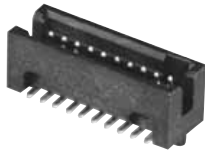
**SMT-B** = Single Row Surface Mount Leads Type B

**P** = Optional locating peg

<p>A = .050 [1.27] X No. of Positions B = .050 [1.27] X No. of Spaces</p> <p><b>Recommended PCB Layout</b></p>		<p><b>HPH1-A</b> SINGLE ROW STRAIGHT WITH 1.00mm INSULATOR</p> <p><b>HPH1-A-20-UA</b></p>
<p>A = .050 [1.27] X No. of Positions B = .050 [1.27] X No. of Spaces</p> <p><b>Recommended PCB Layout</b></p>		<p><b>HPH1-B</b> SINGLE ROW STRAIGHT WITH .100" INSULATOR</p> <p><b>HPH1-B-20-UA</b></p>
<p>A = .050 [1.27] X No. of Positions per row B = .050 [1.27] X No. of Spaces</p> <p><b>Recommended PCB Layout</b></p>		<p><b>HPH2-A</b> DUAL ROW STRAIGHT WITH 1.00mm INSULATOR</p> <p><b>HPH2-A-40-UA</b></p>
<p>A = .050 [1.27] X No. of Positions per row B = .050 [1.27] X No. of Spaces</p> <p><b>Recommended PCB Layout</b></p>		<p><b>HPH2-B</b> DUAL ROW STRAIGHT WITH .100" INSULATOR</p> <p><b>HPH2-B-40-UA</b></p>
<p>A = .050 [1.27] X No. of Positions B = .050 [1.27] X No. of Spaces</p> <p><b>Recommended PCB Layout</b></p>		<p><b>HPH1-A (SMT)</b> SINGLE ROW STRAIGHT SMT WITH 1.00mm INSULATOR</p> <p><b>HPH1-A-20-UA-SMT</b></p>
<p>A = .050 [1.27] X No. of Positions B = .050 [1.27] X No. of Spaces</p> <p><b>Recommended PCB Layout</b></p>		<p><b>HPH1-B (SMT)</b> SINGLE ROW STRAIGHT SMT WITH .100" INSULATOR</p> <p><b>HPH1-B-20-UA-SMT</b></p>

<p>A = .050 [1.27] X No. of Positions per row B = .050 [1.27] X No. of Spaces</p> <p><b>Recommended PCB Layout</b></p>		<p><b>HPH2-A (SMT)</b></p> <p><b>HPH2-A-40-UA-SMT</b></p> <p>Dwg. shown with optional peg</p>
<p>A = .050 [1.27] X No. of Positions per row B = .050 [1.27] X No. of Spaces</p> <p><b>Recommended PCB Layout</b></p>		<p><b>HPH2-B (SMT)</b></p> <p><b>HPH2-B-40-UA-SMT</b></p>
<p>A = .050 [1.27] X No. of Positions B = .050 [1.27] X No. of Spaces</p> <p><b>Recommended PCB Layout</b></p>		<p><b>DPH-1</b></p> <p><b>DPH-1-20-U-.079/.079/.354</b></p>
<p>A = .050 [1.27] X No. of Positions per row B = .050 [1.27] X No. of Spaces</p> <p><b>Recommended PCB Layout</b></p>		<p><b>DPH-2</b></p> <p><b>DPH-2-32-U-.079/.079/.354</b></p>
<p>A = .050 [1.27] X No. of Positions B = .050 [1.27] X No. of Spaces</p> <p><b>Recommended PCB Layout</b></p>		<p><b>DPH-1 (SMT)</b></p> <p><b>DPH-1-10-U-.079/SMT-A/.354</b></p>
<p>A = .050 [1.27] X No. of Positions per row B = .050 [1.27] X No. of Spaces</p> <p><b>Recommended PCB Layout</b></p>		<p><b>DPH-2 (SMT)</b></p> <p><b>DPH-2-40-U-.079/SMT/.354</b></p>

### MALE HEADER



### ORDERING INFORMATION

**HSH**

**50**

**G**

#### SERIES INDICATOR

**HSH** =  
.050" Shrouded  
Male header

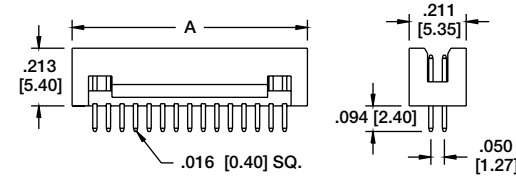
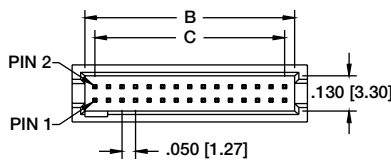
#### PLATING

**G** = Gold plated  
**T** = Tin plated  
**SG** = Gold plating  
in contact  
area, tin  
plated  
solder tails

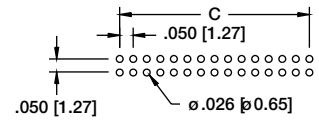
**TOTAL  
POSITIONS**  
10 thru 100

#### OPTIONS:

**SMT** = Surface mount leads with  
Hi-Temp insulator  
**P** = Peg option (thru hole only)



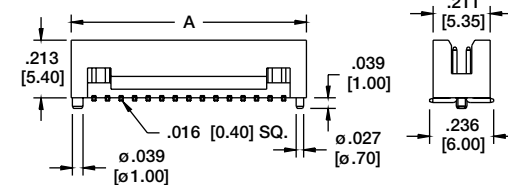
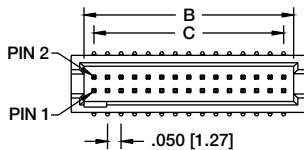
#### Recommended PCB Layout



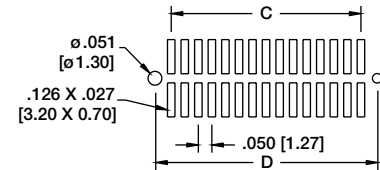
Standard: With key & without peg

A = .050 X No. of Spaces + .168 [4.27]  
B = .050 X No. of Spaces + .074 [1.87]  
C = .050 X No. of Spaces

**HSH SERIES  
SHROUDED MALE HEADER**



#### Recommended PCB Layout

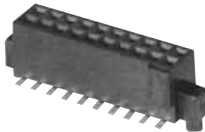


Standard: With key & with peg

A = .050 X No. of Spaces + .168 [4.27]  
B = .050 X No. of Spaces + .074 [1.87]  
C = .050 X No. of Spaces  
D = .050 X No. of Spaces + .120 [3.05]

**HSH-SMT SERIES  
SHROUDED MALE HEADER**

### FEMALE HEADER



### ORDERING INFORMATION

**HFH**

**50**

**G**

#### SERIES INDICATOR

**HFH** =  
.050" Female header

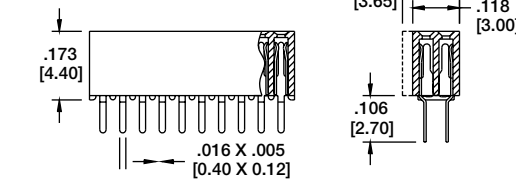
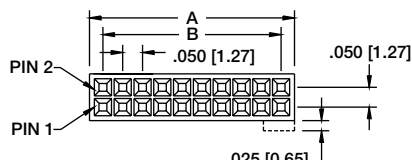
#### PLATING

**G** = Gold plated  
**T** = Tin plated  
**SG** = Gold plating  
in contact  
area, tin  
plated  
solder tails

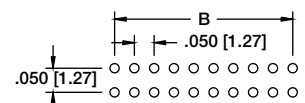
**TOTAL  
POSITIONS**  
10 thru 100

#### OPTIONS:

**SMT** = Surface mount leads  
with Hi-Temp insulator  
**NP** = No peg  
**NK** = No Key  
**P** = Peg option (thru hole only)



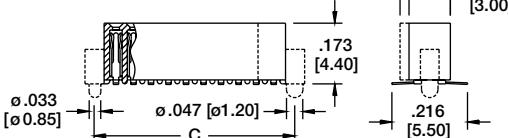
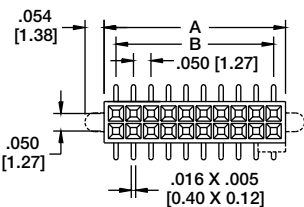
#### Recommended PCB Layout



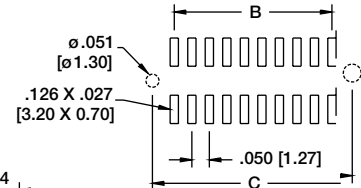
Standard: With key & without peg

A = .050 X No. of Spaces + .068 [1.73]  
B = .050 X No. of Spaces  
C = .050 X No. of Spaces + .120 [3.05]

**HFH SERIES  
SHROUDED FEMALE HEADER**



#### Recommended PCB Layout



Standard: With key & with peg

A = .050 X No. of Spaces + .068 [1.73]  
B = .050 X No. of Spaces  
C = .050 X No. of Spaces + .120 [3.05]

**HFH-SMT SERIES  
SHROUDED FEMALE HEADER**