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Part Number: [0438100353](#)

Status: **Active**

Description: 4.20mm (.165") Pitch Mini-Fit BMI™ Surface Mount Compatible Header, Dual Row, Right Angle, 4 Circuits, 6.35mm (.250") PCB Thickness, with Snap-In Metal Pins, PA Polyamide Nylon 4/6, UL 94V-0, with Tin (Sn) Over Nickel (Ni) Plating

Documents:

[3D Model](#)

[Drawing \(PDF\)](#)

[Product Specification PS-43810-001 \(PDF\)](#)

[RoHS Certificate of Compliance \(PDF\)](#)

Agency Certification

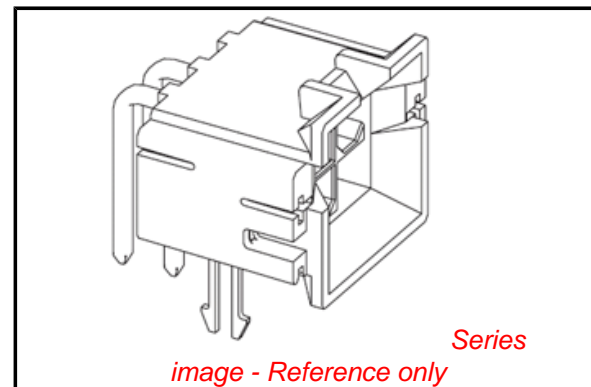
CSA LR19980
UL E29179

General

Product Family PCB Headers
Series [43810](#)
Application Board-to-Board, Wire-to-Board
Comments Current = 13A max. per circuit when header is mated to a receptacle loaded with [45750](#) Mini-Fit Plus HCS™ Crimp Terminal Crimped to to 16 AWG wire. . See Molex product specification PS-45750-001 for additional current de-rating information.
Product Name Mini-Fit SMC™

Physical

Breakaway No
Circuits (Loaded) 4
Circuits (maximum) 4
Color - Resin Black
Durability (mating cycles max) 30
Flammability 94V-0
Glow-Wire Compliant No
Guide to Mating Part Yes
Lock to Mating Part Yes
Material - Metal Brass
Material - Plating Mating Tin
Material - Plating Termination Tin
Material - Resin High Temperature Thermoplastic
Number of Rows 2
Orientation Right Angle
PC Tail Length (in) 0.200 In
PC Tail Length (mm) 5.08 mm
PCB Locator Yes
PCB Retention Yes
PCB Thickness Recommended (in) 0.125 In
PCB Thickness Recommended (mm) 3.20 mm
Packaging Type Tray
Pitch - Mating Interface (in) 0.165 In
Pitch - Mating Interface (mm) 4.20 mm
Plating min: Mating (µin) 100
Plating min: Mating (µm) 2.54
Plating min: Termination (µin) 100
Plating min: Termination (µm) 2.54
Polarized to Mating Part Yes
Polarized to PCB Yes



EU RoHS

ELV and RoHS Compliant
REACH SVHC
Not Reviewed
Halogen-Free Status
Not Reviewed

China RoHS



Need more information on product environmental compliance?

Email productcompliance@molex.com
For a multiple part number RoHS Certificate of Compliance, [click here](#)

Please visit the [Contact Us](#) section for any non-product compliance questions.

Search Parts in this Series

[43810Series](#)

Mates With

[15-06-0041](#) Mini-Fit BMI™ Panel Mount Receptacle, [39-01-2045](#) Mini-Fit Jr.™ Receptacle, [15-24-7041](#) Mini-Fit BMI™ Receptacle Header

| | |
|--------------------------------|-----------------|
| Shrouded | Fully |
| Stackable | No |
| Surface Mount Compatible (SMC) | Yes |
| Temperature Range - Operating | -40°C to +105°C |
| Termination Interface: Style | Through Hole |

Electrical

| | |
|-------------------------------|------|
| Current - Maximum per Contact | 13A |
| Voltage - Maximum | 600V |

Solder Process Data

| | |
|------------------------------|------------------------------|
| Lead-free Process Capability | SMC & Wave Capable (TH only) |
| Process Temperature max. C | 235 |

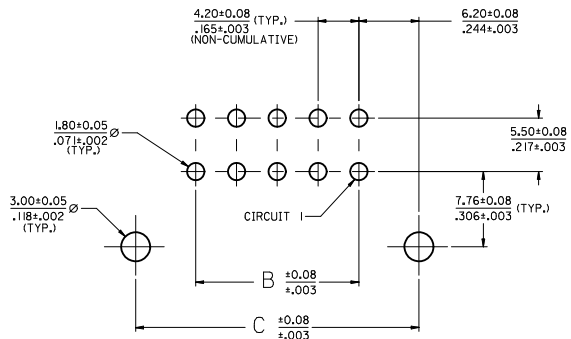
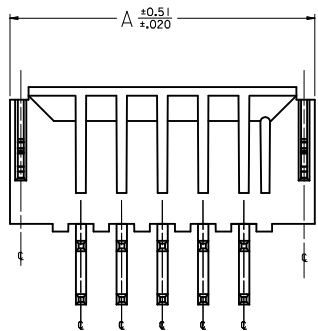
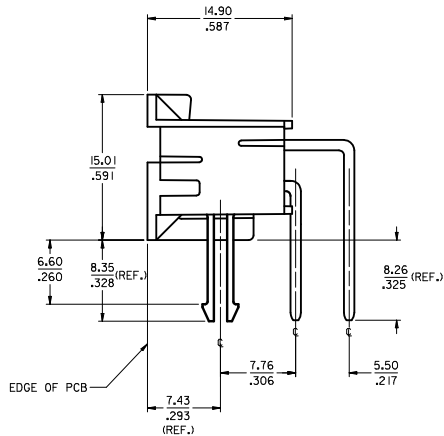
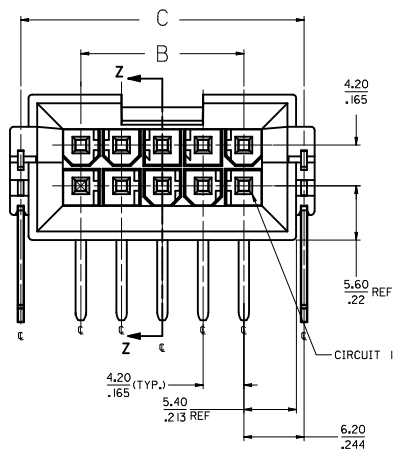
Material Info

Reference - Drawing Numbers

| | |
|-------------------------|--------------|
| Packaging Specification | PK-43810-001 |
| Product Specification | PS-43810-001 |
| Sales Drawing | SD-43810-071 |
| Test Summary | TS-43810-001 |

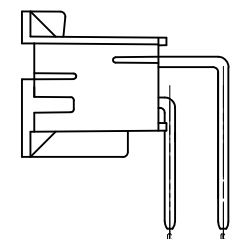
This document was generated on 05/14/2010

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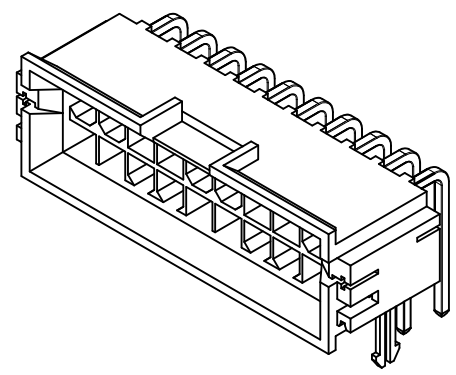


PCB LAYOUT: COMPONENT SIDE
RECOMMENDED PCB THICKNESS: 6.35±0.18 / .250±.007

- NOTES
- 1) MATERIALS
HOUSING: NYLON 4/6 UL 94V-0 GLASS FILLED, COLOR: BLACK
TERMINAL: BRASS
BOARD RETENTION CLIP: BRASS
 - 2) FINISHES:
TERMINAL:
1.=(0.00254)/.000100 MIN. BRIGHT TIN OVER
(0.00127)/.000050 MIN. NICKEL
2.=(0.00076)/.000030 MIN. GOLD OVER
(0.00127)/.000050 MIN. NICKEL
3.=(0.00076)/.000030 MIN. SELECT GOLD AND
(0.00254)/.000100 MIN. SELECT MATTE TIN
OVER (0.00127)/.000050 MIN. NICKEL OVERALL
MOUNTING CLIP:
(0.00254)/.000100 MIN. MATTE TIN OVER
(0.00127)/.000050 MIN. NICKEL
 - 3) PRODUCT SPECIFICATION: PS-43810-001
 - 4) PACKAGING SPECIFICATION: PK-43810-001
 - 5) PARTS MATES WITH MOLEX RECEPTACLE #5557 AND #42474 AND #42385 HEADER
 - 6) PART ALLOWS FOR (1.27)/.050 MAX MIS-ALIGNMENT WITH MATING HOUSINGS IN ANY DIRECTION
 - 7) CONNECTOR ASSEMBLIES ARE NOT TO BE MATED AND UNMATED WHILE CIRCUITS ARE LIVE
 - 8) PARTS ARE NOT DESIGNED FOR CURRENT SHARING
 - 9) DISCOLORATION IN THE BANDOLIER CARRIER AREA OF THE PIN IS INHERENT TO THE PLATING PROCESS AND IS DUE TO THE MASKING EFFECT OF THE CARRIER. THIS DISCOLORATION IS IN A NON-FUNCTIONAL AREA OF THE PIN AND WILL NOT AFFECT THE PERFORMANCE OF THE HEADER ASSEMBLY.
 - 10) PART CONFORMS TO CLASS 'B' REQUIREMENTS OF COSMETIC SPECIFICATION PS-45499-002



HEADER ASSEMBLY WITH NO CLIP OPTION



20 CKT SHOWN

| | |
|-----------|---|
| 2 | D |
| 1 | D |
| SHT. REV. | |

| | | | | | | | | |
|---|--|--|---------------------|------------------------------|-----------------------|---|-----------------------|------------------|
| ADDED PN SHT 2 EC NO. UCF2010-0715 DRAWN: JAGUILAR 2010/05/26 CHKD: BELL 2010/05/27 APPR: FSWITH 2010/06/04 | QUALITY SYMBOLS | GENERAL TOLERANCES (UNLESS SPECIFIED) | DIMENSION STYLE | SCALE | DESIGN UNITS | THIRD ANGLE PROJECTION | | |
| | ▽=0 ▽=0 ▽=0 | mm INCH 4 PLACES ± --- ± --- 3 PLACES ± --- ± .010 2 PLACES ± 0.25 ± .014 1 PLACE ± 0.35 ± --- ANGULAR ±1/2° | MM/IN | 4:1 | METRIC | TITLE MINI-FIT JR BMI SMC RIGHT ANGLE HEADER ASM FOR 6.35/250 THK. PCB | | |
| | DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS | MATERIAL NO. SEE CHART | DRAWN BY MANLAPZ | DATE 01-06-97 | CHECKED BY BANDURA | DATE 03-26-97 | APPROVED BY EDGLEY | DATE 03-26-97 |
| | SIZE D | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | MOLEX INCORPORATED | DOCUMENT NO. SD-43810-071 | SHEET NO. 1 OF 2 | | | |

| | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
|---|--------------|--------------|-------------|----------------|----------------|----------------|--------|----|----|----|----|---|---|---|---|---|---|---|---|---|
| | MATERIAL NO. | CIRCUIT SIZE | CLIP OPTION | DIM. 'A' | DIM. 'B' | DIM. 'C' | FINISH | | | | | | | | | | | | | |
| M | 43810-0353 | 4 | YES | 18.81 -740 | 4.20 -165 | 16.60 -653 | I | | | | | | | | | | | | | |
| | 43810-0354 | 6 | YES | 23.01 -906 | 8.40 -331 | 20.80 -819 | I | | | | | | | | | | | | | |
| N | 43810-0355 | 8 | YES | 27.21 -1071 | 12.60 -496 | 25.00 -984 | I | | | | | | | | | | | | | |
| L | 43810-0356 | 10 | YES | 31.41 -1237 | 16.80 -661 | 29.20 -1150 | I | | | | | | | | | | | | | |
| N | 43810-0357 | 12 | YES | 35.61 -1402 | 21.00 -828 | 33.40 -1315 | I | | | | | | | | | | | | | |
| | 43810-0358 | 14 | YES | 39.81 -1567 | 25.20 -992 | 37.60 -1480 | I | | | | | | | | | | | | | |
| N | 43810-0359 | 16 | YES | 44.01 -1733 | 29.40 -1157 | 41.80 -1646 | I | | | | | | | | | | | | | |
| K | 43810-0360 | 18 | YES | 48.21 -1898 | 33.60 -1323 | 46.00 -1811 | I | | | | | | | | | | | | | |
| N | 43810-0361 | 20 | YES | 52.41 -2063 | 37.80 -1488 | 50.20 -1976 | I | | | | | | | | | | | | | |
| J | 43810-0362 | 22 | YES | 56.61 -2229 | 42.00 -1654 | 54.40 -2142 | I | | | | | | | | | | | | | |
| | 43810-0363 | 24 | YES | 60.81 -2394 | 46.20 -1819 | 58.60 -2307 | I | | | | | | | | | | | | | |
| | 43810-0364 | 4 | YES | 18.81 -740 | 4.20 -165 | 16.60 -653 | 2 | | | | | | | | | | | | | |
| | 43810-0365 | 6 | YES | 23.01 -906 | 8.40 -331 | 20.80 -819 | 2 | | | | | | | | | | | | | |
| N | 43810-0366 | 8 | YES | 27.21 -1071 | 12.60 -496 | 25.00 -984 | 2 | | | | | | | | | | | | | |
| | 43810-0367 | 10 | YES | 31.41 -1237 | 16.80 -661 | 29.20 -1150 | 2 | | | | | | | | | | | | | |
| N | 43810-0368 | 12 | YES | 35.61 -1402 | 21.00 -828 | 33.40 -1315 | 2 | | | | | | | | | | | | | |
| H | 43810-0369 | 14 | YES | 39.81 -1567 | 25.20 -992 | 37.60 -1480 | 2 | | | | | | | | | | | | | |
| N | 43810-0370 | 16 | YES | 44.01 -1733 | 29.40 -1157 | 41.80 -1646 | 2 | | | | | | | | | | | | | |
| | 43810-0371 | 18 | YES | 48.21 -1898 | 33.60 -1323 | 46.00 -1811 | 2 | | | | | | | | | | | | | |
| N | 43810-0372 | 20 | YES | 52.41 -2063 | 37.80 -1488 | 50.20 -1976 | 2 | | | | | | | | | | | | | |
| N | 43810-0373 | 22 | YES | 56.61 -2229 | 42.00 -1654 | 54.40 -2142 | 2 | | | | | | | | | | | | | |
| | 43810-0374 | 24 | YES | 60.81 -2394 | 46.20 -1819 | 58.60 -2307 | 2 | | | | | | | | | | | | | |
| F | 43810-0666 | 4 | YES | 18.81 -740 | 4.20 -165 | 16.60 -653 | 3 | | | | | | | | | | | | | |
| | 43810-0667 | 6 | YES | 23.01 -906 | 8.40 -331 | 20.80 -819 | 3 | | | | | | | | | | | | | |
| N | 43810-0668 | 8 | YES | 27.21 -1071 | 12.60 -496 | 25.00 -984 | 3 | | | | | | | | | | | | | |
| E | 43810-0669 | 10 | YES | 31.41 -1237 | 16.80 -661 | 29.20 -1150 | 3 | | | | | | | | | | | | | |
| N | 43810-0670 | 12 | YES | 35.61 -1402 | 21.00 -828 | 33.40 -1315 | 3 | | | | | | | | | | | | | |
| | 43810-0671 | 14 | YES | 39.81 -1567 | 25.20 -992 | 37.60 -1480 | 3 | | | | | | | | | | | | | |
| N | 43810-0672 | 16 | YES | 44.01 -1733 | 29.40 -1157 | 41.80 -1646 | 3 | | | | | | | | | | | | | |
| | 43810-0673 | 18 | YES | 48.21 -1898 | 33.60 -1323 | 46.00 -1811 | 3 | | | | | | | | | | | | | |
| N | 43810-0674 | 20 | YES | 52.41 -2063 | 37.80 -1488 | 50.20 -1976 | 3 | | | | | | | | | | | | | |
| N | 43810-0675 | 22 | YES | 56.61 -2229 | 42.00 -1654 | 54.40 -2142 | 3 | | | | | | | | | | | | | |
| C | 43810-0676 | 24 | YES | 60.81 -2394 | 46.20 -1819 | 58.60 -2307 | 3 | | | | | | | | | | | | | |
| N | 43810-0375 | 4 | NO | 18.81 -740 | 4.20 -165 | 16.60 -653 | I | | | | | | | | | | | | | |
| | 43810-0376 | 6 | NO | 23.01 -906 | 8.40 -331 | 20.80 -819 | I | | | | | | | | | | | | | |
| N | 43810-0377 | 8 | NO | 27.21 -1071 | 12.60 -496 | 25.00 -984 | I | | | | | | | | | | | | | |
| | 43810-0378 | 10 | NO | 31.41 -1237 | 16.80 -661 | 29.20 -1150 | I | | | | | | | | | | | | | |
| N | 43810-0379 | 12 | NO | 35.61 -1402 | 21.00 -828 | 33.40 -1315 | I | | | | | | | | | | | | | |
| | 43810-0380 | 14 | NO | 39.81 -1567 | 25.20 -992 | 37.60 -1480 | I | | | | | | | | | | | | | |
| | 43810-0381 | 16 | NO | 44.01 -1733 | 29.40 -1157 | 41.80 -1646 | I | | | | | | | | | | | | | |
| | 43810-0382 | 18 | NO | 48.21 -1898 | 33.60 -1323 | 46.00 -1811 | I | | | | | | | | | | | | | |
| N | 43810-0383 | 20 | NO | 52.41 -2063 | 37.80 -1488 | 50.20 -1976 | I | | | | | | | | | | | | | |
| N | 43810-0384 | 22 | NO | 56.61 -2229 | 42.00 -1654 | 54.40 -2142 | I | | | | | | | | | | | | | |
| | 43810-0385 | 24 | NO | 60.81 -2394 | 46.20 -1819 | 58.60 -2307 | I | | | | | | | | | | | | | |
| | 43810-0386 | 4 | NO | 18.81 -740 | 4.20 -165 | 16.60 -653 | 2 | | | | | | | | | | | | | |
| | 43810-0387 | 6 | NO | 23.01 -906 | 8.40 -331 | 20.80 -819 | 2 | | | | | | | | | | | | | |
| N | 43810-0388 | 8 | NO | 27.21 -1071 | 12.60 -496 | 25.00 -984 | 2 | | | | | | | | | | | | | |
| | 43810-0389 | 10 | NO | 31.41 -1237 | 16.80 -661 | 29.20 -1150 | 2 | | | | | | | | | | | | | |
| N | 43810-0390 | 12 | NO | 35.61 -1402 | 21.00 -828 | 33.40 -1315 | 2 | | | | | | | | | | | | | |
| | 43810-0391 | 14 | NO | 39.81 -1567 | 25.20 -992 | 37.60 -1480 | 2 | | | | | | | | | | | | | |
| N | 43810-0392 | 16 | NO | 44.01 -1733 | 29.40 -1157 | 41.80 -1646 | 2 | | | | | | | | | | | | | |
| | 43810-0393 | 18 | NO | 48.21 -1898 | 33.60 -1323 | 46.00 -1811 | 2 | | | | | | | | | | | | | |
| N | 43810-0394 | 20 | NO | 52.41 -2063 | 37.80 -1488 | 50.20 -1976 | 2 | | | | | | | | | | | | | |
| N | 43810-0395 | 22 | NO | 56.61 -2229 | 42.00 -1654 | 54.40 -2142 | 2 | | | | | | | | | | | | | |
| | 43810-0396 | 24 | NO | 60.81 -2394 | 46.20 -1819 | 58.60 -2307 | 2 | | | | | | | | | | | | | |
| | 43810-0677 | 4 | NO | 18.81 -740 | 4.20 -165 | 16.60 -653 | 3 | | | | | | | | | | | | | |
| | 43810-0678 | 6 | NO | 23.01 -906 | 8.40 -331 | 20.80 -819 | 3 | | | | | | | | | | | | | |
| N | 43810-0679 | 8 | NO | 27.21 -1071 | 12.60 -496 | 25.00 -984 | 3 | | | | | | | | | | | | | |
| | 43810-0680 | 10 | NO | 31.41 -1237 | 16.80 -661 | 29.20 -1150 | 3 | | | | | | | | | | | | | |
| N | 43810-0681 | 12 | NO | 35.61 -1402 | 21.00 -828 | 33.40 -1315 | 3 | | | | | | | | | | | | | |
| | 43810-0682 | 14 | NO | 39.81 -1567 | 25.20 -992 | 37.60 -1480 | 3 | | | | | | | | | | | | | |
| N | 43810-0683 | 16 | NO | 44.01 -1733 | 29.40 -1157 | 41.80 -1646 | 3 | | | | | | | | | | | | | |
| | 43810-0684 | 18 | NO | 48.21 -1898 | 33.60 -1323 | 46.00 -1811 | 3 | | | | | | | | | | | | | |
| N | 43810-0685 | 20 | NO | 52.41 -2063 | 37.80 -1488 | 50.20 -1976 | 3 | | | | | | | | | | | | | |
| N | 43810-0686 | 22 | NO | 56.61 -2229 | 42.00 -1654 | 54.40 -2142 | 3 | | | | | | | | | | | | | |
| | 43810-0687 | 24 | NO | 60.81 -2394 | 46.20 -1819 | 58.60 -2307 | 3 | | | | | | | | | | | | | |

N - NOT TOOLED

N - NOT TOOLED

| | | | | | | | |
|--|--|--|--|------------------------|---------------------|--|--|
| ADDED PN TO CHART EC NO. UCP2010-0715 D DRAWN: JAGUILAR 2010/05/26 CHYK: BEL 2010/05/27 APPROV: FSM TH 2010/06/04 | QUALITY SYMBOLS | GENERAL TOLERANCES (UNLESS SPECIFIED) | DIMENSION STYLE | SCALE | DESIGN UNITS | THIRD ANGLE PROJECTION | |
| | ▽=0 ▽=0 ▽=0 | 4 PLACES ±.010 3 PLACES ±.014 2 PLACES ±.025 1 PLACE ±.035 ANGULAR ±1/2° | mm INCH | MM/IN DATE 00-07-20 | METRIC | MINI-FIT JR BMI SMC RIGHT ANGLE HEADER ASM FOR 6.35/250 THK. PCB | |
| | DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS | MATERIAL NO. SEE CHART | DATE 00-07-20 DATE 00-07-20 DATE 00-07-20 DATE 00-07-20 DATE 00-07-20 DATE 00-07-20 | MOLEX INCORPORATED | SHEET NO. 2 OF 2 | | |