

PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION

Part Number:

0038000089

Status:

Active

Overview:

kk

Description:

2.54mm (.100") Pitch KK® Wire-to-Board Header, Vertical Square Pin, 6 Circuits, Circuit 3 Voided

Documents:

Drawing (PDF)

Product Specification PS-10-07 (PDF)

Product Specification PS-99020-0088 (PDF)

RoHS Certificate of Compliance (PDF)

Agency Certification

CSA

LR19980

UL

E29179

General

Product Family

PCB Headers

Series

6410

Application

Board-to-Board

Overview

kk

Product Name

KK®

Physical

Breakaway

No

Circuits (Loaded)

5

Circuits (maximum)

6

Color - Resin

Natural (White)

Durability (mating cycles max)

25

First Mate / Last Break

No

Flammability

94V-0

Glow-Wire Compliant

No

Guide to Mating Part

No

Keying to Mating Part

None

Lock to Mating Part

None

Material - Metal

Brass

Material - Plating Mating

Tin

Material - Plating Termination

Tin

Material - Resin

Nylon

Number of Rows

1

Orientation

Vertical

PC Tail Length (in)

0.139 In

PC Tail Length (mm)

3.53 mm

PCB Locator

No

PCB Retention

None

PCB Thickness Recommended (in)

0.063 In

PCB Thickness Recommended (mm)

1.60 mm

Packaging Type

Bag

Pitch - Mating Interface (in)

0.100 In

Pitch - Mating Interface (mm)

2.54 mm

Pitch - Term. Interface (in)

0.100 In

Pitch - Term. Interface (mm)

2.54 mm

Plating min: Mating (µin)

200

Plating min: Mating (µm)

5

Plating min: Termination (µin)

200

Plating min: Termination (µm)

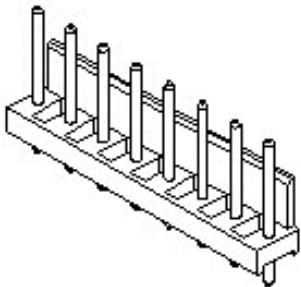
5

Polarized to Mating Part

Yes

Polarized to PCB

No



Series

image - Reference only

EU RoHS

ELV and RoHS  
Compliant

REACH SVHC

Not Reviewed

Halogen-Free

Status

Halogen-Free

China RoHS



Need more information on product environmental compliance?

Email [productcompliance@molex.com](mailto: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.

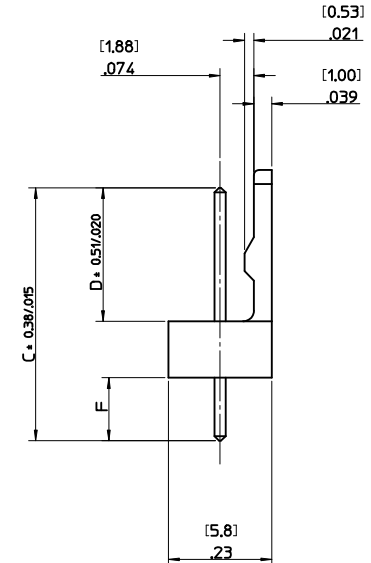
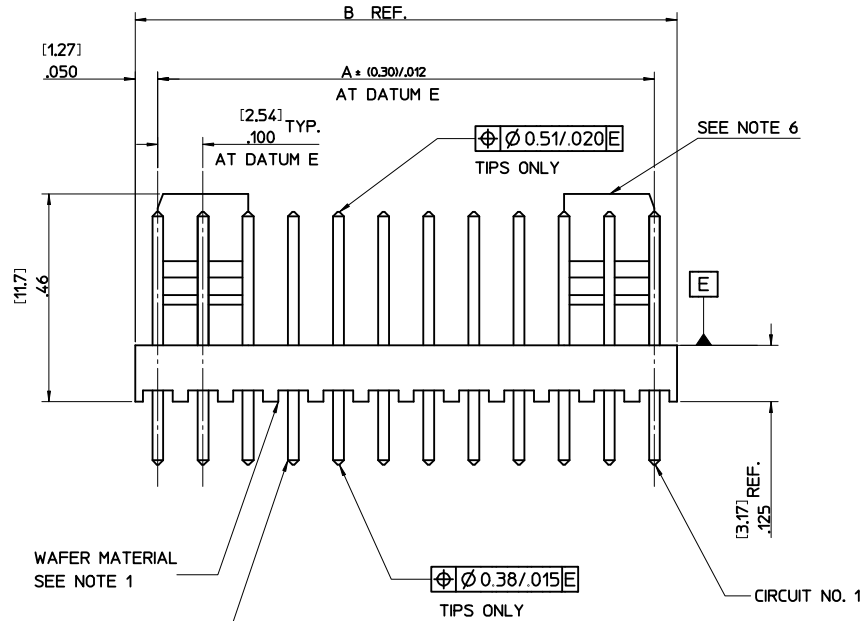
Search Parts in this Series  
6410Series

|                                                |                         |
|------------------------------------------------|-------------------------|
| Shrouded                                       | Partial                 |
| Stackable                                      | Yes                     |
| Surface Mount Compatible (SMC)                 | No                      |
| Temperature Range - Operating                  | -40°C to +105°C         |
| Termination Interface: Style                   | Through Hole            |
| <b>Electrical</b>                              |                         |
| Current - Maximum per Contact                  | 3.5A, 3.75A, 3A, 4A     |
| Voltage - Maximum                              | 250V                    |
| <b>Solder Process Data</b>                     |                         |
| Duration at Max. Process Temperature (seconds) | 5                       |
| Lead-free Process Capability                   | Wave Capable (TH only)  |
| Max. Cycles at Max. Process Temperature        | 1                       |
| Process Temperature max. C                     | 235                     |
| <b>Material Info</b>                           |                         |
| Old Part Number                                | A-6410-6A-3             |
| <b>Reference - Drawing Numbers</b>             |                         |
| Packaging Specification                        | PK-6373-001             |
| Product Specification                          | PS-10-07, PS-99020-0088 |
| Sales Drawing                                  | SDAE-6410-N             |

This document was generated on 05/26/2010

PLEASE CHECK [WWW.MOLEX.COM](http://WWW.MOLEX.COM) FOR LATEST PART INFORMATION

| NO. OF CCTS | DIMN. "A"          | DIMN. "B"          |
|-------------|--------------------|--------------------|
| 2           | ( 2.54 )<br>.100   | ( 5.08 )<br>.200   |
| 3           | ( 5.08 )<br>.200   | ( 7.62 )<br>.300   |
| 4           | ( 7.62 )<br>.300   | ( 10.16 )<br>.400  |
| 5           | ( 10.16 )<br>.400  | ( 12.70 )<br>.500  |
| 6           | ( 12.70 )<br>.500  | ( 15.24 )<br>.600  |
| 7           | ( 15.24 )<br>.600  | ( 17.78 )<br>.700  |
| 8           | ( 17.78 )<br>.700  | ( 20.32 )<br>.800  |
| 9           | ( 20.32 )<br>.800  | ( 22.86 )<br>.900  |
| 10          | ( 22.86 )<br>.900  | ( 25.40 )<br>1.000 |
| 11          | ( 25.40 )<br>1.000 | ( 27.94 )<br>1.100 |
| 12          | ( 27.94 )<br>1.100 | ( 30.48 )<br>1.200 |
| 13          | ( 30.48 )<br>1.200 | ( 33.02 )<br>1.300 |
| 14          | ( 33.02 )<br>1.300 | ( 35.56 )<br>1.400 |
| 15          | ( 35.56 )<br>1.400 | ( 38.10 )<br>1.500 |
| 16          | ( 38.10 )<br>1.500 | ( 40.64 )<br>1.600 |
| 17          | ( 40.64 )<br>1.600 | ( 43.18 )<br>1.700 |
| 18          | ( 43.18 )<br>1.700 | ( 45.72 )<br>1.800 |
| 19          | ( 45.72 )<br>1.800 | ( 48.26 )<br>1.900 |
| 20          | ( 48.26 )<br>1.900 | ( 50.80 )<br>2.000 |
| 21          | ( 50.80 )<br>2.000 | ( 53.34 )<br>2.100 |
| 22          | ( 53.34 )<br>2.100 | ( 55.88 )<br>2.200 |
| 23          | ( 55.88 )<br>2.200 | ( 58.42 )<br>2.300 |
| 24          | ( 58.42 )<br>2.300 | ( 60.86 )<br>2.400 |
| 25          | ( 60.86 )<br>2.400 | ( 63.50 )<br>2.500 |
| 26          | ( 63.50 )<br>2.500 | ( 66.04 )<br>2.600 |
| 27          | ( 66.04 )<br>2.600 | ( 68.58 )<br>2.700 |
| 28          | ( 68.58 )<br>2.700 | ( 71.12 )<br>2.800 |



AE-6410- N \* (\*)

NO. OF CCTS  
WAVER ASSY.  
OPTION

PLATING TYPE

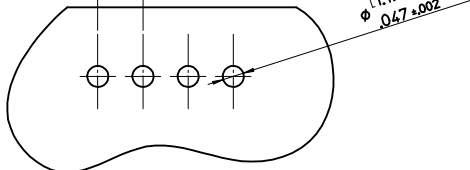
RIBS ADDED  
(4-28 CCTS. ONLY)

ALTERNATIVE WAFER CONFIGURATION

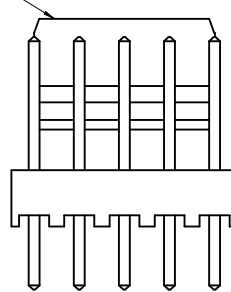
#### NOTES:

1. WAFER MATERIAL: NYLON, 94V-0
2. PIN PUSH OUT FORCE: (0.907 Kg)/2lbs MIN.
3. WAFERS STACKABLE END TO END WITH (2.54)/.100 BETWEEN END PINS
4. THIS PART CONFORMS TO MOLEX PROD. SPEC. PS99020-0088.
5. PIN SOLDERABILITY PER MOLEX SPEC. NO. 152.
6. SINGLE RAMP ON 2-6 CCTS TWO RAMP ON 7-28 CCTS, AS SHOWN.
7. PRODUCT SPECIFICATION: PS-99020-0087
8. PCB THICKNESS 1.6MM

(2.54 ± 0.05) TYP  
.100 ± 0.02  
NON-ACCUM.



RECOMMENDED P.C.B. HOLE DIMENSIONS  
(STANDARD SERIES)



|                                                                                                              |     |                                   |             |                                                            |        |                           |             |                                                                                                                               |                                                                     |                        |                     |
|--------------------------------------------------------------------------------------------------------------|-----|-----------------------------------|-------------|------------------------------------------------------------|--------|---------------------------|-------------|-------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|------------------------|---------------------|
| ADD VOIDED OPTION<br>EC NO: E2009-0413<br>DRWN: BMAGUIRE<br>CHKD: 2009/02/24<br>APPR: BMAGUIRE<br>2009/02/24 |     | QUALITY SYMBOLS<br><br>▽=0<br>▽=0 | DESCRIPTION | GENERAL TOLERANCES (UNLESS SPECIFIED)                      |        | DIMENSION STYLE           |             | SCALE                                                                                                                         | DESIGN UNITS                                                        | THIRD ANGLE PROJECTION |                     |
|                                                                                                              |     |                                   |             | MM/IN                                                      |        | 4:1                       |             | METRIC                                                                                                                        | ◎ □ PROJECTION                                                      |                        |                     |
| BB                                                                                                           | REV | ▽=0                               | DESCRIPTION | 4 PLACES                                                   | ± ---  | ± ---                     | DRAWN BY    | DATE                                                                                                                          | WAFFER, FRICTION LOCK<br>KK (2.54)/.100 FOR<br>(0.64)/.025 SQ. PINS |                        |                     |
|                                                                                                              |     |                                   |             | 3 PLACES                                                   | ± ---  | ± .010                    | CHECKED BY  | DATE                                                                                                                          |                                                                     |                        |                     |
|                                                                                                              |     |                                   |             | 2 PLACES                                                   | ± 0.25 | ± .014                    | BMAGUIRE    | 28/01/03                                                                                                                      | MOLEX MOLEX INCORPORATED                                            |                        |                     |
|                                                                                                              |     |                                   |             | 1 PLACE                                                    | ± 0.35 | ± ---                     | APPROVED BY | DATE                                                                                                                          |                                                                     |                        |                     |
|                                                                                                              |     |                                   |             | ANGULAR ± .5 °                                             |        | JDENNEY                   | 2005/03/11  | DOCUMENT NO.<br>SDAE-6410-N                                                                                                   |                                                                     |                        |                     |
|                                                                                                              |     |                                   |             | DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS |        | MATERIAL NO.<br>SEE CHART |             |                                                                                                                               |                                                                     |                        | SHEET NO.<br>1 OF 4 |
|                                                                                                              |     |                                   |             |                                                            |        | SIZE<br>A2                |             | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |                                                                     |                        |                     |

| ENG. NO.        |    | AE-6410-NA ( 102 )                                                 |                  |            | AE-6410-NC ( 102 )                                                 |                  |            | AE-6410-ND ( 102 )                                                 |                  |            | AE-6410-NH ( 102 )                                                 |                  |            | AE-6410-NJ ( 102 )                                                 |                  |            | AE-6410-NL ( 102 )                                                 |                  |            |
|-----------------|----|--------------------------------------------------------------------|------------------|------------|--------------------------------------------------------------------|------------------|------------|--------------------------------------------------------------------|------------------|------------|--------------------------------------------------------------------|------------------|------------|--------------------------------------------------------------------|------------------|------------|--------------------------------------------------------------------|------------------|------------|
| DIMN. "D"       |    | ( 7.50 ±0.25 )<br>.295 ±0.010                                      |                  |            | ( 7.14 ±0.25 )<br>.281 ±0.010                                      |                  |            | ( 8.05 ±0.25 )<br>.317 ±0.010                                      |                  |            | ( 7.49 ±0.25 )<br>.295 ±0.010                                      |                  |            | ( 18.80 ±0.38 )<br>.740 ±0.015                                     |                  |            | ( 8.50 ±0.38 )<br>.335 ±0.015                                      |                  |            |
| DIMN. "C"       |    | ( 14.22 ) / .560                                                   |                  |            | ( 20.32 ) / .800                                                   |                  |            | ( 14.22 ) / .560                                                   |                  |            | ( 14.98 ) / .590                                                   |                  |            | ( 25.40 ) / 1.000                                                  |                  |            | ( 23.80 ) / .937                                                   |                  |            |
| DIMN. "F"       |    | ( 3.56 ) / .140 REF                                                |                  |            | ( 10.00 ) / .394 REF                                               |                  |            | ( 2.99 ) .118 REF                                                  |                  |            | ( 4.32 ) / .170 REF                                                |                  |            | ( 3.43 ) / .135 REF                                                |                  |            | ( 12.13 ) / .477 REF                                               |                  |            |
| PLATING         |    | TIN MIN.<br>(0.005)/.0002<br>OVER<br>(0.0025)/.0001<br>COPPER MIN. |                  |            | TIN MIN.<br>(0.005)/.0002<br>OVER<br>(0.0025)/.0001<br>COPPER MIN. |                  |            | TIN MIN.<br>(0.005)/.0002<br>OVER<br>(0.0025)/.0001<br>COPPER MIN. |                  |            | TIN MIN.<br>(0.005)/.0002<br>OVER<br>(0.0025)/.0001<br>COPPER MIN. |                  |            | TIN MIN.<br>(0.005)/.0002<br>OVER<br>(0.0025)/.0001<br>COPPER MIN. |                  |            | TIN MIN.<br>(0.005)/.0002<br>OVER<br>(0.0025)/.0001<br>COPPER MIN. |                  |            |
| NO. OF CIRCUITS | 2  | AE-6410-2A(102)                                                    | 22-27-2021       |            | AE-6410-2C(102)                                                    | 38-00-6292       |            | AE-6410-2D(102)                                                    | 38-00-5882       |            | AE-6410-2H(102)                                                    | 38-00-6754       |            | AE-6410-2J(102)                                                    | NOT TOOLED       |            | AE-6410-2L(102)                                                    | NOT TOOLED       |            |
|                 | 3  | 3 A(102)                                                           | ▲ 2031           |            | 3 C(102)                                                           | ▲ 6293           |            | 3 D(102)                                                           | ▲ 5883           |            | 3 H(102)                                                           | NOT TOOLED       |            | 3 J(102)                                                           | NOT TOOLED       |            | L(102)                                                             | ▲                |            |
|                 | 4  | 4 A(102)                                                           | 2041             |            | 4 C(102)                                                           | 6294             |            | 4 D(102)                                                           | 5884             |            | 4 H(102)                                                           | 22-27-2046       |            | 4 J(102)                                                           | NOT TOOLED       |            | L(102)                                                             |                  |            |
|                 | 5  | 5 A(102)                                                           | 2051             |            | 5 C(102)                                                           | 6295             |            | 5 D(102)                                                           | 5885             |            | 5 H(102)                                                           | NOT TOOLED       |            | 5 J(102)                                                           | 22-27-2057       |            | L(102)                                                             |                  |            |
|                 | 6  | 6 A(102)                                                           | 2061             |            | 6 C(102)                                                           | 6296             |            | 6 D(102)                                                           | 5886             |            | 6 H(102)                                                           | ▲                |            | 6 J(102)                                                           | NOT TOOLED       |            | L(102)                                                             |                  |            |
|                 | 7  | 7 A(102)                                                           | 2071             |            | 7 C(102)                                                           | 6297             |            | 7 D(102)                                                           | 5887             |            | 7 H(102)                                                           | ▲                |            | 7 J(102)                                                           | NOT TOOLED       |            | L(102)                                                             |                  |            |
|                 | 8  | 8 A(102)                                                           | 2081             |            | 8 C(102)                                                           | 6298             |            | 8 D(102)                                                           | 5888             |            | 8 H(102)                                                           | ▲                |            | 8 J(102)                                                           | 22-27-2087       |            | L(102)                                                             |                  |            |
|                 | 9  | 9 A(102)                                                           | 2091             |            | 9 C(102)                                                           | 6299             |            | 9 D(102)                                                           | 5889             |            | 9 H(102)                                                           | ▲                |            | 9 J(102)                                                           | NOT TOOLED       |            | L(102)                                                             |                  |            |
|                 | 10 | 10 A(102)                                                          | 2101             |            | 10 C(102)                                                          | 6300             |            | 10 D(102)                                                          | 5890             |            | 10 H(102)                                                          | ▼                |            | 10 J(102)                                                          | ▲                |            | L(102)                                                             |                  |            |
|                 | 11 | 11 A(102)                                                          | 2111             |            | 11 C(102)                                                          | 6301             |            | 11 D(102)                                                          | 5891             |            | 11 H(102)                                                          | NOT TOOLED       |            | 11 J(102)                                                          |                  |            | L(102)                                                             |                  |            |
|                 | 12 | 12 A(102)                                                          | 2121             |            | 12 C(102)                                                          | 6302             |            | 12 D(102)                                                          | 5892             |            | 12 H(102)                                                          | 22-27-2126       |            | 12 J(102)                                                          |                  |            | L(102)                                                             |                  |            |
|                 | 13 | 13 A(102)                                                          | 2131             |            | 13 C(102)                                                          | 6303             |            | 13 D(102)                                                          | 5893             |            | 13 H(102)                                                          | NOT TOOLED       |            | 13 J(102)                                                          |                  |            | L(102)                                                             | ▼                |            |
|                 | 14 | 14 A(102)                                                          | 2141             |            | 14 C(102)                                                          | 6304             |            | 14 D(102)                                                          | 5894             |            | 14 H(102)                                                          | ▲                |            | 14 J(102)                                                          |                  |            | L(102)                                                             | NOT TOOLED       |            |
|                 | 15 | 15 A(102)                                                          | 2151             |            | 15 C(102)                                                          | 6305             |            | 15 D(102)                                                          | 5895             |            | 15 H(102)                                                          |                  |            | 15 J(102)                                                          |                  |            | L(102)                                                             | 38-00-1736       |            |
|                 | 16 | 16 A(102)                                                          | 2161             |            | 16 C(102)                                                          | 6306             |            | 16 D(102)                                                          | 5896             |            | 16 H(102)                                                          |                  |            | 16 J(102)                                                          |                  |            | L(102)                                                             | NOT TOOLED       |            |
|                 | 17 | 17 A(102)                                                          | 2171             |            | 17 C(102)                                                          | 6307             |            | 17 D(102)                                                          | 5897             |            | 17 H(102)                                                          |                  |            | 17 J(102)                                                          |                  |            | L(102)                                                             | ▲                |            |
|                 | 18 | 18 A(102)                                                          | 2181             |            | 18 C(102)                                                          | 6308             |            | 18 D(102)                                                          | 5898             |            | 18 H(102)                                                          |                  |            | 18 J(102)                                                          |                  |            | L(102)                                                             |                  |            |
|                 | 19 | 19 A(102)                                                          | 2191             |            | 19 C(102)                                                          | ▼ 6309           |            | 19 D(102)                                                          | 5899             |            | 19 H(102)                                                          |                  |            | 19 J(102)                                                          |                  |            | L(102)                                                             |                  |            |
|                 | 20 | 20 A(102)                                                          | 2201             |            | 20 C(102)                                                          | 38-00-6310       |            | 20 D(102)                                                          | 5900             |            | 20 H(102)                                                          |                  |            | 20 J(102)                                                          |                  |            | L(102)                                                             |                  |            |
|                 | 21 | 21 A(102)                                                          | 2211             |            | 21 C(102)                                                          | NOT TOOLED       |            | 21 D(102)                                                          | 5901             |            | 21 H(102)                                                          |                  |            | 21 J(102)                                                          |                  |            | L(102)                                                             |                  |            |
|                 | 22 | 22 A(102)                                                          | 2221             |            | 22 C(102)                                                          | ▲                |            | 22 D(102)                                                          | 5902             |            | 22 H(102)                                                          |                  |            | 22 J(102)                                                          |                  |            | L(102)                                                             |                  |            |
|                 | 23 | 23 A(102)                                                          | 2231             |            | 23 C(102)                                                          |                  |            | 23 D(102)                                                          | 5903             |            | 23 H(102)                                                          |                  |            | 23 J(102)                                                          |                  |            | L(102)                                                             |                  |            |
|                 | 24 | 24 A(102)                                                          | 2241             |            | 24 C(102)                                                          |                  |            | 24 D(102)                                                          | 5904             |            | 24 H(102)                                                          |                  |            | 24 J(102)                                                          |                  |            | L(102)                                                             |                  |            |
|                 | 25 | 25 A(102)                                                          | 2251             |            | 25 C(102)                                                          |                  |            | 25 D(102)                                                          | 5905             |            | 25 H(102)                                                          |                  |            | 25 J(102)                                                          |                  |            | L(102)                                                             |                  |            |
|                 | 26 | 26 A(102)                                                          | 2261             |            | 26 C(102)                                                          |                  |            | 26 D(102)                                                          | 5906             |            | 26 H(102)                                                          |                  |            | 26 J(102)                                                          |                  |            | L(102)                                                             |                  |            |
|                 | 27 | 27 A(102)                                                          | ▼ 2271           |            | 27 C(102)                                                          | ▼                |            | 27 D(102)                                                          | ▼ 5907           |            | 27 H(102)                                                          | ▼                |            | 27 J(102)                                                          | ▼                |            | L(102)                                                             | ▼                |            |
|                 | 28 |                                                                    | AE-6410-28A(102) | 22-27-2281 |                                                                    | AE-6410-28C(102) | NOT TOOLED |                                                                    | AE-6410-28D(102) | 38-00-5908 |                                                                    | AE-6410-28H(102) | NOT TOOLED |                                                                    | AE-6410-28J(102) | NOT TOOLED |                                                                    | AE-6410-28L(102) | NOT TOOLED |

| <b>SEE SHEET 1</b><br>EC NO: E2009-0413<br>DRWN: BMAGUIRE 2009/02/24<br>CHKD: 2009/02/24<br>APPR: BMAGUIRE 2009/02/24<br>REV: BB | QUALITY SYMBOLS<br>▽=0<br>▽=0            | GENERAL TOLERANCES (UNLESS SPECIFIED)<br><table border="1"> <tr> <th></th> <th>mm</th> <th>INCH</th> </tr> <tr> <td>4 PLACES</td> <td>± ---</td> <td>± ---</td> </tr> <tr> <td>3 PLACES</td> <td>± ---</td> <td>± .010</td> </tr> <tr> <td>2 PLACES</td> <td>± 0.25</td> <td>± .014</td> </tr> <tr> <td>1 PLACE</td> <td>± 0.35</td> <td>± ---</td> </tr> </table> |                                               | mm                                 | INCH                               | 4 PLACES            | ± --- | ± --- | 3 PLACES | ± --- | ± .010 | 2 PLACES | ± 0.25 | ± .014 | 1 PLACE | ± 0.35 | ± --- | DIMENSION STYLE<br><b>MM/IN</b> | SCALE<br><b>4:1</b> | DESIGN UNITS<br><b>METRIC</b> | THIRD ANGLE PROJECTION<br> |
|----------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|------------------------------------|------------------------------------|---------------------|-------|-------|----------|-------|--------|----------|--------|--------|---------|--------|-------|---------------------------------|---------------------|-------------------------------|----------------------------|
|                                                                                                                                  |                                          | mm                                                                                                                                                                                                                                                                                                                                                                 | INCH                                          |                                    |                                    |                     |       |       |          |       |        |          |        |        |         |        |       |                                 |                     |                               |                            |
|                                                                                                                                  | 4 PLACES                                 | ± ---                                                                                                                                                                                                                                                                                                                                                              | ± ---                                         |                                    |                                    |                     |       |       |          |       |        |          |        |        |         |        |       |                                 |                     |                               |                            |
|                                                                                                                                  | 3 PLACES                                 | ± ---                                                                                                                                                                                                                                                                                                                                                              | ± .010                                        |                                    |                                    |                     |       |       |          |       |        |          |        |        |         |        |       |                                 |                     |                               |                            |
| 2 PLACES                                                                                                                         | ± 0.25                                   | ± .014                                                                                                                                                                                                                                                                                                                                                             |                                               |                                    |                                    |                     |       |       |          |       |        |          |        |        |         |        |       |                                 |                     |                               |                            |
| 1 PLACE                                                                                                                          | ± 0.35                                   | ± ---                                                                                                                                                                                                                                                                                                                                                              |                                               |                                    |                                    |                     |       |       |          |       |        |          |        |        |         |        |       |                                 |                     |                               |                            |
| DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS                                                                       | DRAWN BY<br>T. MAHON<br>DATE<br>28/01/03 | CHECKED BY<br>BMAGUIRE<br>DATE<br>28/01/03                                                                                                                                                                                                                                                                                                                         | APPROVED BY<br>JDENNEHY<br>DATE<br>2005/03/11 | MATERIAL NO.<br><b>SDAE-6410-N</b> | DOCUMENT NO.<br><b>SDAE-6410-N</b> | SHEET NO.<br>2 OF 4 |       |       |          |       |        |          |        |        |         |        |       |                                 |                     |                               |                            |
| THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION    |                                          |                                                                                                                                                                                                                                                                                                                                                                    |                                               |                                    |                                    |                     |       |       |          |       |        |          |        |        |         |        |       |                                 |                     |                               |                            |
| MOLEX INCORPORATED<br>WAVER, FRICTION LOCK<br>KK (2.54)/.100 FOR<br>(0.64)/.025 SQ. PINS                                         |                                          |                                                                                                                                                                                                                                                                                                                                                                    |                                               |                                    |                                    |                     |       |       |          |       |        |          |        |        |         |        |       |                                 |                     |                               |                            |

| ENG. NO.        | AE-6410-NA ( 501 )                                                        | AE-6410-NA ( 516 )                                                         | AE-6410-NK ( 516 )                                                         | AE-6410-NC ( 501 )                                                         | AE-6410-NA ( 509 )                                                         | AE-6410-NS ( 501 )                                                        | AE-6410-NA ( 503 )                                                         |
|-----------------|---------------------------------------------------------------------------|----------------------------------------------------------------------------|----------------------------------------------------------------------------|----------------------------------------------------------------------------|----------------------------------------------------------------------------|---------------------------------------------------------------------------|----------------------------------------------------------------------------|
| DIMN. "D"       | ( 7.50 $\pm$ 0.25 )<br>.295 $\pm$ 0.010                                   | ( 7.50 $\pm$ 0.25 )<br>.295 $\pm$ 0.010                                    | ( 9.22 ) REF<br>.363                                                       | ( 7.14 $\pm$ 0.25 )<br>.281 $\pm$ 0.010                                    | ( 7.50 $\pm$ 0.25 )<br>.295 $\pm$ 0.010                                    | ( 7.50 $\pm$ 0.25 )<br>.295 $\pm$ 0.010                                   | ( 7.50 $\pm$ 0.25 )<br>.295 $\pm$ 0.010                                    |
| DIMN. "C"       | ( 14.22 ) / .560                                                          | ( 14.22 ) / .560                                                           | ( 15.88 ) / .625                                                           | ( 20.32 ) / .800                                                           | ( 14.22 ) / .560                                                           | ( 16.51 ) / .649                                                          | ( 14.22 ) / .560                                                           |
| DIMN. "F"       | ( 3.56 ) / .140 REF                                                       | ( 3.56 ) / .140 REF                                                        | ( 3.48 $\pm$ 0.25 )<br>.137 $\pm$ 0.010                                    | ( 10.00 ) / .394 REF                                                       | ( 3.56 ) / .140 REF                                                        | ( 5.84 ) / .230 REF                                                       | ( 3.56 ) / .140 REF                                                        |
| PLATING         | GOLD MIN.<br>(0.0005)/.000020<br>OVER<br>(0.00076)/.000030<br>NICKEL MIN. | GOLD MIN.<br>(0.00025)/.000010<br>OVER<br>(0.00076)/.000030<br>NICKEL MIN. | GOLD MIN.<br>(0.00025)/.000010<br>OVER<br>(0.00076)/.000030<br>NICKEL MIN. | GOLD MIN.<br>(0.00051)/.000020<br>OVER<br>(0.00076)/.000030<br>NICKEL MIN. | GOLD MIN.<br>(0.00127)/.000050<br>OVER<br>(0.00076)/.000030<br>NICKEL MIN. | GOLD MIN.<br>(0.0005)/.000020<br>OVER<br>(0.00076)/.000030<br>NICKEL MIN. | GOLD MIN.<br>(0.00076)/.000030<br>OVER<br>(0.00127)/.000050<br>NICKEL MIN. |
| NO. OF CIRCUITS | 2                                                                         | AE-6410-2A(501) 22-29-2021                                                 | AE-6410-2A(516) 22-29-2022                                                 | AE-6410-2K(516) 38-00-0932                                                 | AE-6410-2C(501) NOT TOOLED                                                 | AE-6410-2A(509) 38-00-7250                                                | AE-6410-2A(503) 38-00-7062                                                 |
|                 | 3                                                                         | 3 A(501) 2031                                                              | 3 A(516) 2032                                                              | 3 K(516) 0933                                                              | 3 C(501) 38-00-5909                                                        | 3 A(509) NOT TOOLED                                                       | 3 A(503) 7063                                                              |
|                 | 4                                                                         | 4 A(501) 2041                                                              | 4 A(516) 2042                                                              | 4 K(516) 0934                                                              | 4 C(501) NOT TOOLED                                                        | 4 A(509) 38-00-7251                                                       | 4 A 7064                                                                   |
|                 | 5                                                                         | 5 A(501) 2051                                                              | 5 A(516) 2052                                                              | 5 K(516) 0935                                                              | 5 A(509) NOT TOOLED                                                        | 5 A(509) NOT TOOLED                                                       | 5 A 7065                                                                   |
|                 | 6                                                                         | 6 A(501) 2061                                                              | 6 A(516) 2062                                                              | 6 K(516) 0936                                                              | 6 C(501)                                                                   | 6 A(509)                                                                  | 6 A 7066                                                                   |
|                 | 7                                                                         | 7 A(501) 2071                                                              | 7 A(516) 2072                                                              | 7 K(516) 0937                                                              | 7 C(501)                                                                   | 7 A(509)                                                                  | 7 A 7067                                                                   |
|                 | 8                                                                         | 8 A(501) 2081                                                              | 8 A(516) 2082                                                              | 8 K(516) 0938                                                              | 8 C(501)                                                                   | 8 A(509)                                                                  | 8 A 38-00-7068                                                             |
|                 | 9                                                                         | 9 A(501) 2091                                                              | 9 A(516) 2092                                                              | 9 K(516) 0939                                                              | 9 C(501)                                                                   | 9 A(509)                                                                  | 9 A NOT TOOLED                                                             |
|                 | 10                                                                        | 10 A(501) 2101                                                             | 10 A(516) 2102                                                             | 10 K(516) 0940                                                             | 10 C(501)                                                                  | 10 A(509)                                                                 | 10 A NOT TOOLED                                                            |
|                 | 11                                                                        | 11 A(501) 2111                                                             | 11 A(516) 2112                                                             | 11 K(516) 0941                                                             | 11 C(501)                                                                  | 11 A(509)                                                                 | 11 A NOT TOOLED                                                            |
|                 | 12                                                                        | 12 A(501) 2121                                                             | 12 A(516) 2122                                                             | 12 K(516) 0942                                                             | 12 C(501)                                                                  | 12 A(509)                                                                 | 12 A 38-00-7072                                                            |
|                 | 13                                                                        | 13 A(501) 2131                                                             | 13 A(516) 2132                                                             | 13 K(516) 0943                                                             | 13 C(501)                                                                  | 13 A(509)                                                                 | 13 A NOT TOOLED                                                            |
|                 | 14                                                                        | 14 A(501) 2141                                                             | 14 A(516) 2142                                                             | 14 K(516) 0944                                                             | 14 C(501)                                                                  | 14 A(509)                                                                 | 14 A 38-00-7074                                                            |
|                 | 15                                                                        | 15 A(501) 2151                                                             | 15 A(516) 2152                                                             | 15 K(516) 0945                                                             | 15 C(501)                                                                  | 15 A(509)                                                                 | 15 A NOT TOOLED                                                            |
|                 | 16                                                                        | 16 A(501) 2161                                                             | 16 A(516) 2162                                                             | 16 K(516) 0946                                                             | 16 C(501)                                                                  | 16 A(509)                                                                 | 16 A                                                                       |
|                 | 17                                                                        | 17 A(501) 2171                                                             | 17 A(516) 2172                                                             | 17 K(516) 0947                                                             | 17 C(501)                                                                  | 17 A(509)                                                                 | 17 A                                                                       |
|                 | 18                                                                        | 18 A(501) 2181                                                             | 18 A(516) 2182                                                             | 18 K(516) 0948                                                             | 18 C(501)                                                                  | 18 A(509)                                                                 | 18 A                                                                       |
|                 | 19                                                                        | 19 A(501) 2191                                                             | 19 A(516) 2192                                                             | 19 K(516) 0949                                                             | 19 C(501)                                                                  | 19 A(509)                                                                 | 19 A NOT TOOLED                                                            |
|                 | 20                                                                        | 20 A(501) 2201                                                             | 20 A(516) 2202                                                             | 20 K(516) 0950                                                             | 20 C(501)                                                                  | 20 A(509)                                                                 | 20 A 38-00-7080                                                            |
|                 | 21                                                                        | 21 A(501) 2211                                                             | 21 A(516) 2212                                                             | 21 K(516) 0951                                                             | 21 C(501)                                                                  | 21 A(509)                                                                 | 21 A NOT TOOLED                                                            |
|                 | 22                                                                        | 22 A(501) 2221                                                             | 22 A(516) 2222                                                             | 22 K(516) 0952                                                             | 22 C(501)                                                                  | 22 A(509)                                                                 | 22 A NOT TOOLED                                                            |
|                 | 23                                                                        | 23 A(501) 2231                                                             | 23 A(516) 2232                                                             | 23 K(516) 0953                                                             | 23 C(501)                                                                  | 23 A(509)                                                                 | 23 A NOT TOOLED                                                            |
|                 | 24                                                                        | 24 A(501) 2241                                                             | 24 A(516) 2242                                                             | 24 K(516) 0954                                                             | 24 C(501)                                                                  | 24 A(509)                                                                 | 24 A 38-00-0441                                                            |
|                 | 25                                                                        | 25 A(501) 2251                                                             | 25 A(516) 2252                                                             | 25 K(516) 0955                                                             | 25 C(501)                                                                  | 25 A(509)                                                                 | 25 A NOT TOOLED                                                            |
|                 | 26                                                                        | 26 A(501) 2261                                                             | 26 A(516) 2262                                                             | 26 K(516) 0956                                                             | 26 C(501)                                                                  | 26 A(509)                                                                 | 26 A                                                                       |
|                 | 27                                                                        | 27 A(501) 2271                                                             | 27 A(516) 2272                                                             | 27 K(516) 0957                                                             | 27 C(501)                                                                  | 27 A(509)                                                                 | 27 A(503)                                                                  |
|                 | 28                                                                        | AE-6410-28A(501) 22-29-2281                                                | AE-6410-28A(516) 22-29-2282                                                | AE-6410-28K(516) 38-00-0958                                                | AE-6410-28C(501) NOT TOOLED                                                | AE-6410-28A(509) NOT TOOLED                                               | AE-6410-28A(503) NOT TOOLED                                                |

|                                                                                                                                     |                               |                                       |        |                                                                                                                               |            |                                                                             |                               |                        |
|-------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------------------------------|--------|-------------------------------------------------------------------------------------------------------------------------------|------------|-----------------------------------------------------------------------------|-------------------------------|------------------------|
| <b>SEE SHEET 1</b><br>EC NO: E2009-0413<br>DRAWN: BMAGUIRE 2009/02/24<br>CHKD: 2009/02/24<br>APPR: BMAGUIRE 2009/02/24<br><b>BB</b> | QUALITY SYMBOLS<br>▽=0<br>▽=0 | GENERAL TOLERANCES (UNLESS SPECIFIED) |        | DIMENSION STYLE<br><b>MM/IN</b>                                                                                               |            | SCALE<br><b>4:1</b>                                                         | DESIGN UNITS<br><b>METRIC</b> | THIRD ANGLE PROJECTION |
|                                                                                                                                     |                               | mm                                    | INCH   | DRAWN BY                                                                                                                      | DATE       | TITLE                                                                       |                               |                        |
|                                                                                                                                     |                               | 4 PLACES ± ---                        | ± ---  | T. MAHON                                                                                                                      | 28/01/03   | <b>WAFER, FRICTION LOCK<br/>KK (2.54)/.100 FOR<br/>(0.64)/.025 SQ. PINS</b> |                               |                        |
|                                                                                                                                     |                               | 3 PLACES ± ---                        | ± .010 | CHECKED BY                                                                                                                    | DATE       |                                                                             |                               |                        |
|                                                                                                                                     |                               | 2 PLACES ± 0.25                       | ± .014 | BMAGUIRE                                                                                                                      | 28/01/03   |                                                                             |                               |                        |
|                                                                                                                                     |                               | 1 PLACE ± 0.35                        | ± ---  | APPROVED BY                                                                                                                   | DATE       |                                                                             |                               |                        |
|                                                                                                                                     |                               | ANGULAR ± .5 °                        |        | JDENNEHY                                                                                                                      | 2005/03/11 |                                                                             |                               |                        |
| DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS                                                                          |                               | SEE CHART                             |        | MATERIAL NO.                                                                                                                  |            | DOCUMENT NO.                                                                |                               |                        |
|                                                                                                                                     |                               | SIZE <b>A2</b>                        |        | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |            | SHEET NO.<br><b>3 OF 4</b>                                                  |                               |                        |

F

E

D

C

B

A

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B

A

| VOIDED OPTION |             |          |               |                             |               |             |
|---------------|-------------|----------|---------------|-----------------------------|---------------|-------------|
| PART No.      | ENG No.     | CKT SIZE | VOID LOCATION | DIM A                       | DIM B         | DIM D       |
| 38-00-7222    | A-6410-3A-2 | 3        | 2             | (5.08 ±0.10) / .200 ±.004   | (7.62)/.300   | (7.50)/.295 |
| 4749          | -4A-3       | 4        | 3             | (7.62 ±0.13) / .300 ±.005   | (10.16)/.400  | (7.50)/.295 |
| 0611          | -5A-3       | 5        | 3             | (10.16 ±0.13) / .400 ±.005  | (12.70)/.500  | (7.50)/.295 |
| 0089          | -6A-3       | 6        | 3             | (12.70 ±0.13) / .500 ±.005  | (15.24)/.600  | (7.50)/.295 |
| 0090          | -6A-51      | 6        | 3,4,5         | (12.70 ±0.13) / .500 ±.005  | (15.24)/.600  | (7.50)/.295 |
| 5370          | -15A-02     | 15       | 2             | (35.56 ±0.13) / 1.400 ±.005 | (38.10)/1.500 | (7.50)/.295 |
| 5371          | -19A-12     | 19       | 12            | (45.72 ±0.15) / 1.800 ±.006 | (48.26)/1.900 | (7.50)/.295 |
| 7688          | -12A-09     | 12       | 9             | (27.94 ±0.13) / 1.100 ±.005 | (30.48)/1.200 | (7.50)/.295 |
|               |             |          |               |                             |               |             |

|                                                                                         |                    |                                 |                                                            |        |                          |                         |                                                                                                                               |                                                                             |                          |        |  |  |
|-----------------------------------------------------------------------------------------|--------------------|---------------------------------|------------------------------------------------------------|--------|--------------------------|-------------------------|-------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|--------------------------|--------|--|--|
| ADD VOIDED OPTION<br>EC NO: E2009-0413<br>DRWN:BMAGUIRE<br>CHKD:<br>APPR:BMAGUIRE<br>BB | DESCRIPTION<br>REV | QUALITY SYMBOLS<br><br>=0<br>=0 | GENERAL TOLERANCES (UNLESS SPECIFIED)                      |        | DIMENSION STYLE<br>MM/IN |                         | SCALE<br>4:1                                                                                                                  | DESIGN UNITS<br>METRIC                                                      | THIRD ANGLE PROJECTION   |        |  |  |
|                                                                                         |                    |                                 |                                                            | mm     | INCH                     | DRAWN BY<br>T. MAHON    | DATE<br>28/01/03                                                                                                              | TITLE<br>WAFER, FRICTION LOCK<br>KK (2.54)/.100 FOR<br>(0.64)/.025 SQ. PINS |                          |        |  |  |
|                                                                                         |                    |                                 | 4 PLACES                                                   | ± ---  | ± ---                    | CHECKED BY<br>BMAGUIRE  | DATE<br>28/01/03                                                                                                              |                                                                             |                          |        |  |  |
|                                                                                         |                    |                                 | 3 PLACES                                                   | ± ---  | ± .010                   | APPROVED BY<br>JDENNEHY |                                                                                                                               | DATE<br>2005/03/11                                                          | MOLEX MOLEX INCORPORATED |        |  |  |
|                                                                                         |                    |                                 | 2 PLACES                                                   | ± 0.25 | ± .014                   |                         |                                                                                                                               |                                                                             |                          |        |  |  |
| 1 PLACE                                                                                 | ± 0.35             | ± ---                           | ANGULAR ± .5 °                                             |        | MATERIAL NO.             |                         | DOCUMENT NO.                                                                                                                  |                                                                             | SHEET NO.                |        |  |  |
|                                                                                         |                    |                                 | DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS |        | SEE TABLE                |                         | SDAE-6410-N                                                                                                                   |                                                                             |                          | 4 OF 4 |  |  |
|                                                                                         |                    |                                 |                                                            |        | SIZE<br>A3               |                         | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |                                                                             |                          |        |  |  |