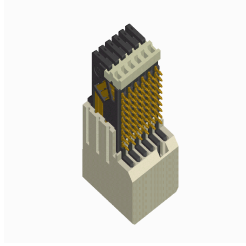


**10039851-101LF - AIRMAX®**  
**: 3-Pair, 54 - Position, 2 mm**  
**Pitch, 6 Column, 4 Walls, Right**  
**Angle Header**



[www.fci.com](http://www.fci.com)

## Mating Half

▶ 10053656-101LF

▶ 10043546-101LF

## Specifications

### General

|   |                           |
|---|---------------------------|
| Number of contacts                        | 54                        |
| Orientation                               | Right Angle               |
| Product Series                            | AirMax VS                 |
| Style                                     | 4 Wall Signal Header 2 mm |
| Termination Style                         | Press-Fit                 |
| Number of columns                         | 6                         |
| Number of differential pairs (per column) | 3                         |

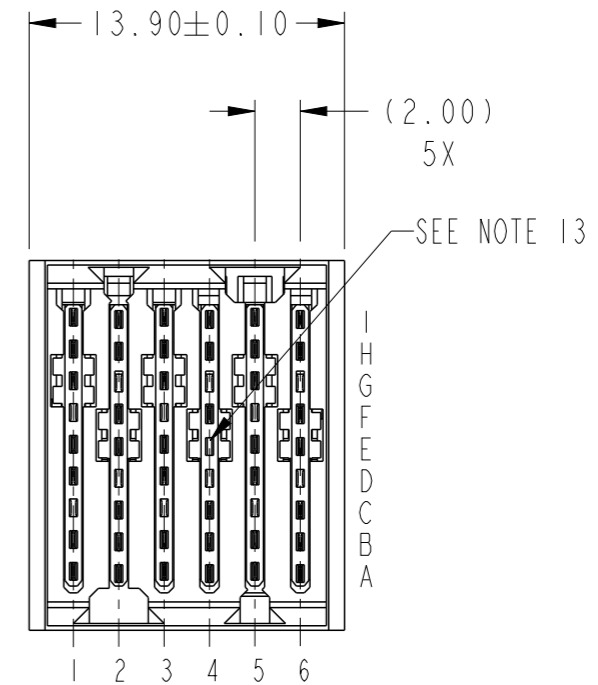
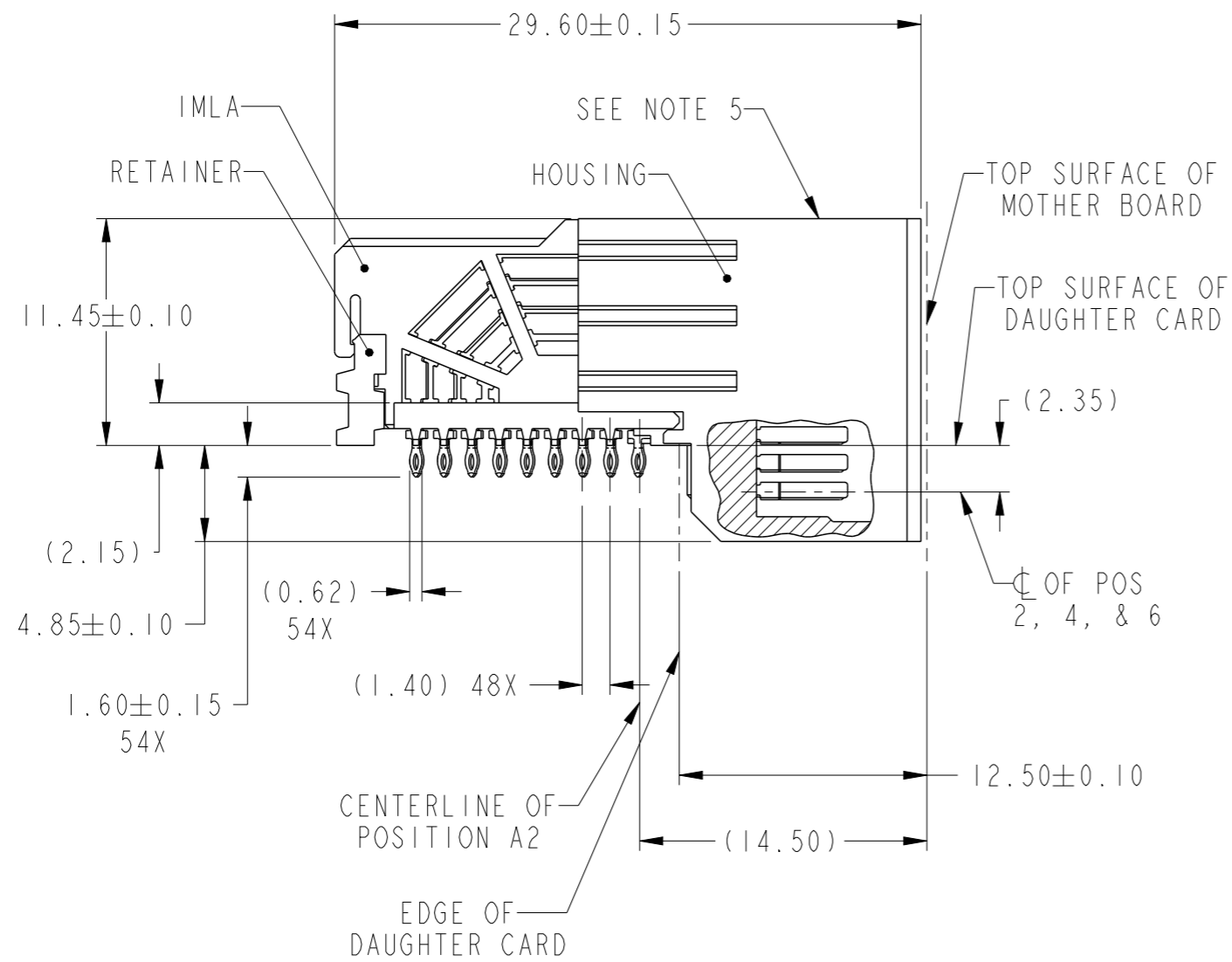
### Dimensional

|                    |       |
|--------------------|-------|
| Pitch (Slot - min) | 17 mm |
| Spacing (Column)   | 2 mm  |

### Physical

|                    |                        |
|--------------------|------------------------|
| Material (Contact) | Copper Alloy           |
| Material (Housing) | Hi-Temp Thermo Plastic |
| Plating (Contact)  | Au over Ni             |

PRODUCT NUMBER  
SEE TABLE, SHEET 5

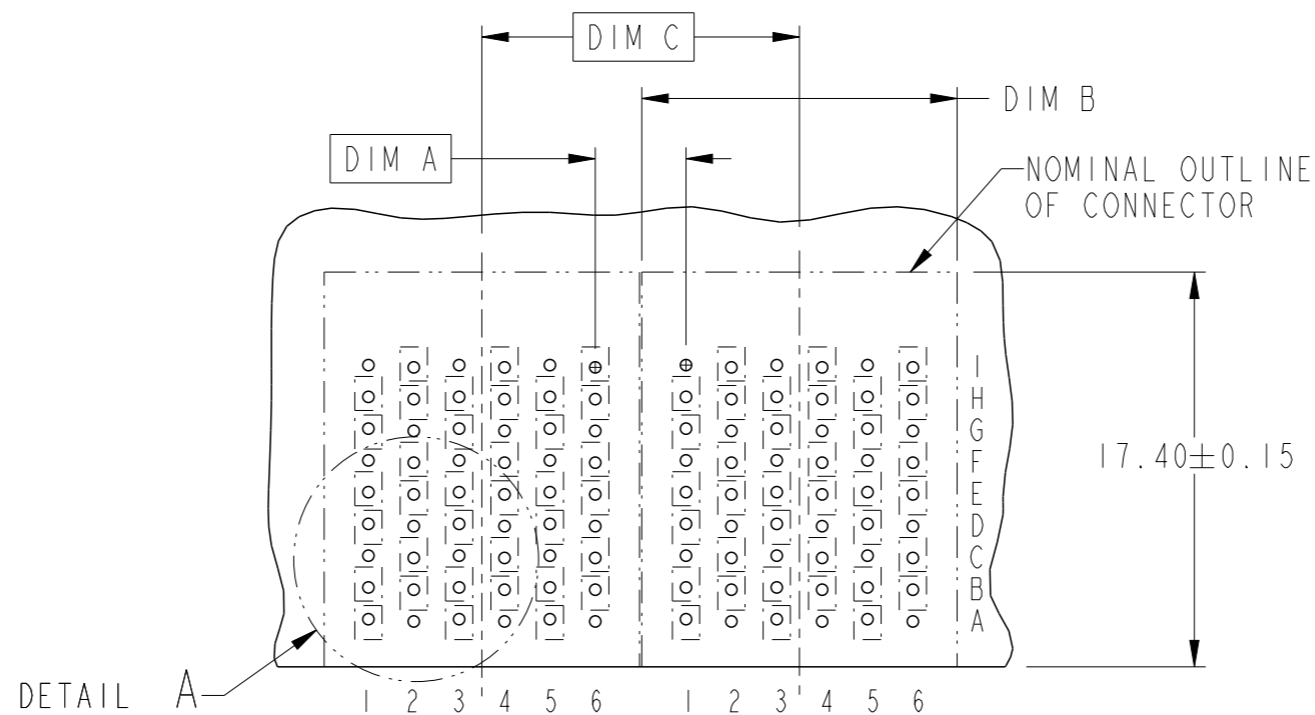


|               |     |                                       |               |            |               |   |                    |                        |                |              |
|---------------|-----|---------------------------------------|---------------|------------|---------------|---|--------------------|------------------------|----------------|--------------|
| spec ref      |     | dr                                    | Chen-Hong Tan | 2006/10/02 | projection    | MM  | size               | A3                     | scale          | 3:1          |
| tolerance std |     | eng                                   | Yong-Keat Lim | 2011/05/30 |               |   | ecn no             |                        | ELX-S-003991-1 |              |
| ASME Y14.5    |     | chr                                   | -             | -          |               |   | product family     |                        | AirMax VS      |              |
| -             |     | TOLERANCES UNLESS OTHERWISE SPECIFIED |               | appr       | Chen-Hong Tan | 2011/05/30  | AirMax VS          |                        | Released       |              |
| surface       | 3.2 | linear                                | 0.X           | ±0.3       |               | title<br>AirMax VS R/A HEADER ASSY<br>PRESS_FIT, 54 POS, 14MM | dwg no<br>10039851 | rev                    |                | F            |
|               |     |                                       | 0.XX          | ±0.10      |               |   |                    | Product - Customer Drw |                | sheet 1 of 5 |
| ASME Y14.5    |     | angular                               | 0°            | ±2°        | www.fci.com   | cat. no.  | -                  | Product - Customer Drw |                | sheet 1 of 5 |



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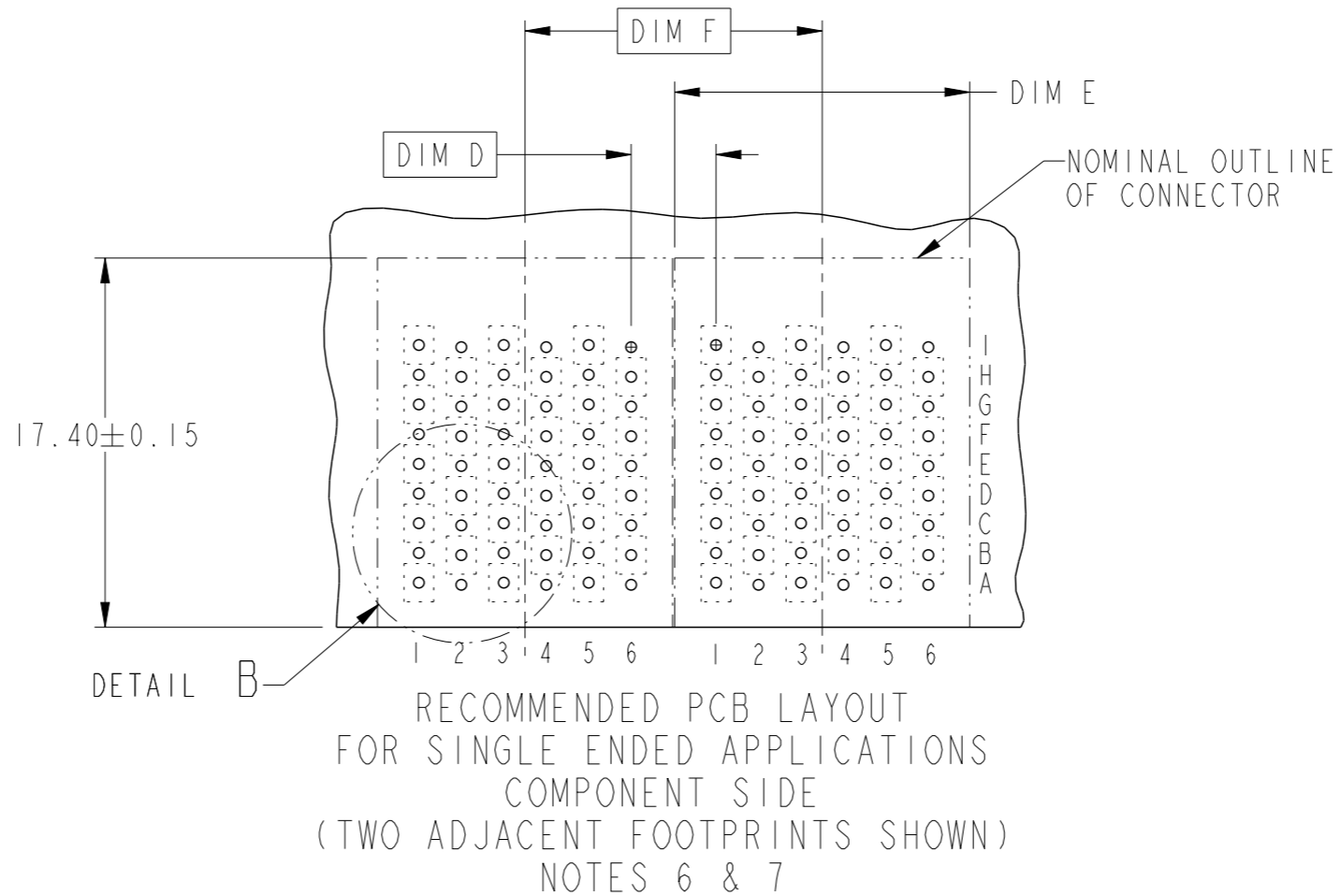
| DESCRIPTION   | DIM A | DIM B                  | DIM C |
|---|-------|------------------------|-------|
| 2-14MM MODULES<br>PLACED END-TO-END                   | 4.00  | 13.90 2X               | 14.00 |
| 1-12MM MODULE &<br>1-14MM MODULE<br>PLACED END-TO-END | 3.00  | 11.90 1X &<br>13.90 1X | 13.00 |



RECOMMENDED PCB LAYOUT  
FOR DIFFERENTIAL APPLICATIONS  
COMPONENT SIDE  
(TWO ADJACENT FOOTPRINTS SHOWN)  
NOTES 6 & 7

|               |         |               |            |                |  |                    |                        |              |          |
|---------------|---------|---------------|------------|----------------|--|--------------------|------------------------|--------------|----------|
| spec ref      | dr      | Chen-Hong Tan | 2006/10/02 | projection     | MM   | size               | A3                     | scale        | 2:1      |
| tolerance std | eng     | Yong-Keat Lim | 2011/05/30 |                |  | ecn no             | ELX-S-003991-1         | rel level    | Released |
| ASME Y14.5    | chr     | -             | -          |                |  |                    |                        |              |          |
|               | appr    | Chen-Hong Tan | 2011/05/30 | product family | AirMax VS  |                    |                        |              |          |
| surface       | linear  | 0.X           | ±0.3       |                | AirMax VS R/A HEADER ASSY<br>PRESS_FIT, 54 POS, 14MM | dwg no<br>10039851 | rev<br>F               |              |          |
|               |         | 0.XX          | ±0.10      |                |  |                    |                        |              |          |
|               |         | 0.XXX         | ±0.050     |                |  |                    |                        |              |          |
| ASME Y14.5    | angular | 0°            | ±2°        | www.fci.com    | cat. no.   | -                  | Product - Customer Drw | sheet 2 of 5 |          |

| DESCRIPTION   | DIM D | DIM E                  | DIM F |
|---|-------|------------------------|-------|
| 2-14MM MODULES<br>PLACED END-TO-END                   | 4.00  | 13.90 2X               | 14.00 |
| 1-12MM MODULE &<br>1-14MM MODULE<br>PLACED END-TO-END | 3.00  | 11.90 1X &<br>13.90 1X | 13.00 |



|               |  |               |            |                |           |        |                |          |     |       |        |         |    |     |  |  |       |                           |  |                         |          |   |                        |              |
|---------------|--|---------------|------------|----------------|-----------|--------|----------------|----------|-----|-------|--------|---------|----|-----|--|--|-------|---------------------------|--|-------------------------|----------|---|------------------------|--------------|
| spec ref      | dr   | Chen-Hong Tan | 2006/10/02 | projection     | MM        | size   | A3             | scale    | 2:1 |       |        |         |    |     |  |  |       |                           |  |                         |          |   |                        |              |
| tolerance std | eng  | Yong-Keat Lim | 2011/05/30 |                |           | ecn no | ELX-S-003991-1 |          |     |       |        |         |    |     |  |  |       |                           |  |                         |          |   |                        |              |
| ASME Y14.5    | chr  | -             | -          |                |           |        | rel level      | Released |     |       |        |         |    |     |  |  |       |                           |  |                         |          |   |                        |              |
| surface 3.2   | appr   | Chen-Hong Tan | 2011/05/30 | product family | AirMax VS | dwg no | 10039851       | rev      | F   |       |        |         |    |     |  |  |       |                           |  |                         |          |   |                        |              |
| ASME Y14.5    | <table border="1"> <tr> <td>linear</td> <td>0.X</td> <td>±0.3</td> </tr> <tr> <td></td> <td>0.XX</td> <td>±0.10</td> </tr> <tr> <td></td> <td>0.XXX</td> <td>±0.050</td> </tr> <tr> <td>angular</td> <td>0°</td> <td>±2°</td> </tr> </table> |               | linear     | 0.X            | ±0.3      |        | 0.XX           | ±0.10    |     | 0.XXX | ±0.050 | angular | 0° | ±2° |  | <table border="1"> <tr> <td>title</td> <td>AirMax VS R/A HEADER ASSY</td> </tr> <tr> <td></td> <td>PRESS_FIT, 54 POS, 14MM</td> </tr> </table> | title | AirMax VS R/A HEADER ASSY |  | PRESS_FIT, 54 POS, 14MM | cat. no. | - | Product - Customer Drw | sheet 3 of 5 |
| linear        | 0.X  | ±0.3          |            |                |           |        |                |          |     |       |        |         |    |     |  |  |       |                           |  |                         |          |   |                        |              |
|               | 0.XX   | ±0.10         |            |                |           |        |                |          |     |       |        |         |    |     |  |  |       |                           |  |                         |          |   |                        |              |
|               | 0.XXX  | ±0.050        |            |                |           |        |                |          |     |       |        |         |    |     |  |  |       |                           |  |                         |          |   |                        |              |
| angular       | 0°   | ±2°           |            |                |           |        |                |          |     |       |        |         |    |     |  |  |       |                           |  |                         |          |   |                        |              |
| title         | AirMax VS R/A HEADER ASSY  |               |            |                |           |        |                |          |     |       |        |         |    |     |  |  |       |                           |  |                         |          |   |                        |              |
|               | PRESS_FIT, 54 POS, 14MM  |               |            |                |           |        |                |          |     |       |        |         |    |     |  |  |       |                           |  |                         |          |   |                        |              |



A

B

C

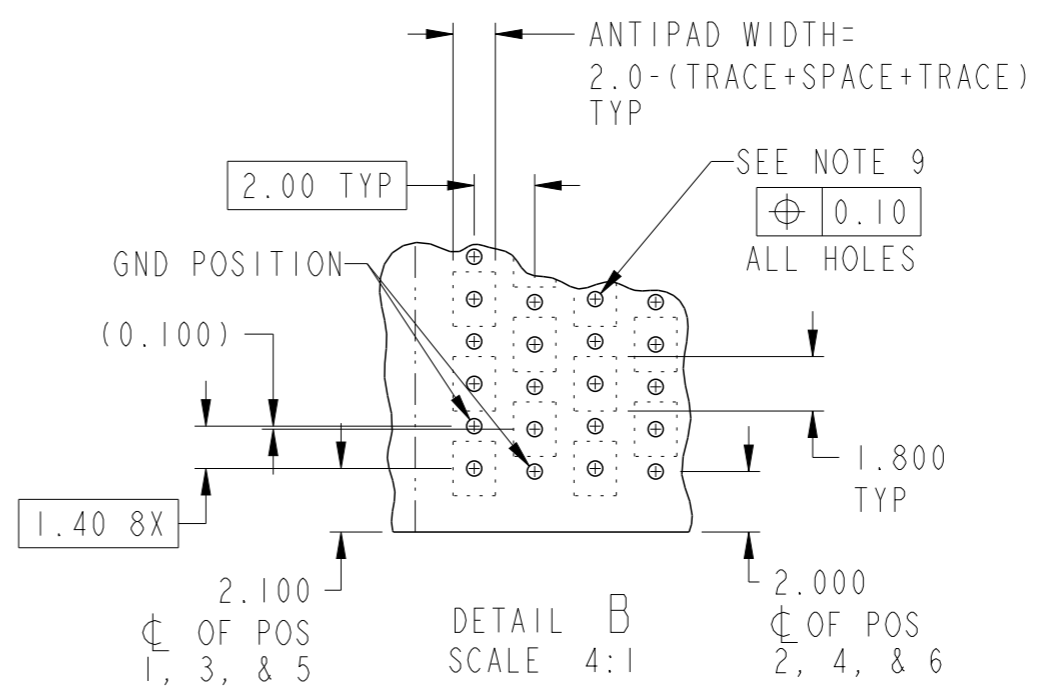
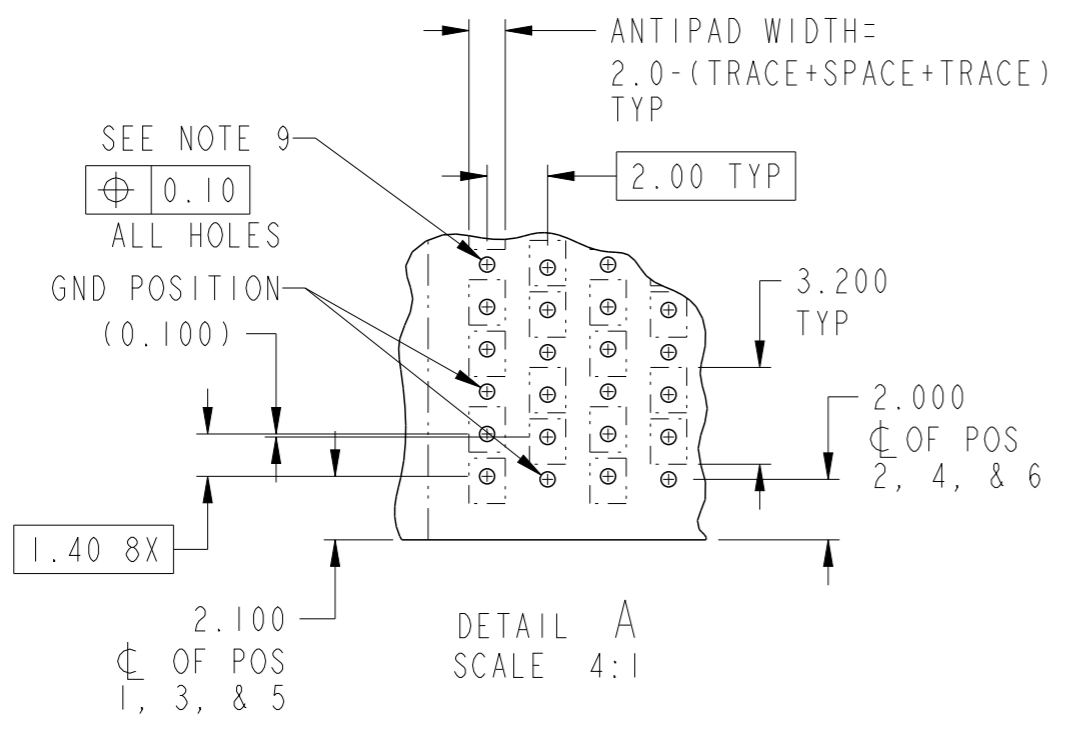
D

A

B

C

D



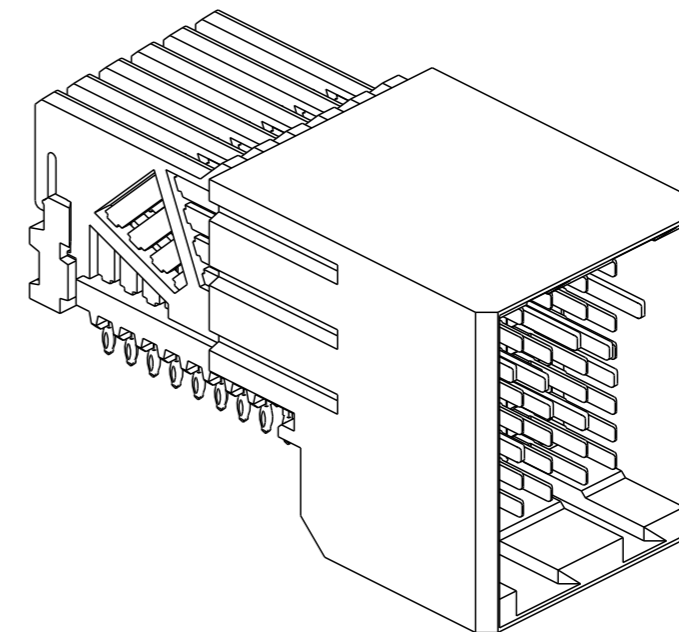
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|                                       |         |        |               |             |                |                           |                        |        |                |     |
|---------------------------------------|---------|--------|---------------|-------------|----------------|---------------------------|------------------------|--------|----------------|-----|
| spec ref                              |         | dr     | Chen-Hong Tan | 2006/10/02  | projection     | MM                        | size                   | A3     | scale          | 2:1 |
| tolerance std                         |         | eng    | Yong-Keat Lim | 2011/05/30  |                |                           | ecn no                 |        | ELX-S-003991-1 |     |
| ASME Y14.5                            |         | chr    | -             | -           |                |                           | rel level              |        | Released       |     |
| TOLERANCES UNLESS OTHERWISE SPECIFIED |         | appr   | Chen-Hong Tan | 2011/05/30  | product family |                           | AirMax VS              |        | rev            |     |
| surface                               | 3.2     | linear | 0.X           | ±0.3        |                | AirMax VS R/A HEADER ASSY |                        | dwg no | 10039851       |     |
|                                       |         |        | 0.XX          | ±0.10       |                |                           |                        |        |                |     |
|                                       |         |        | 0.XXX         | ±0.050      |                |                           |                        |        |                |     |
| ASME Y14.5                            | angular | 0°     | ±2°           | www.fci.com | cat. no.       | -                         | Product - Customer Drw |        | sheet 4 of 5   |     |

| PART NUMBER    | PRESS-FIT TAIL PLATING TYPE | SHORT DETECT CONTACT |
|----------------|-----------------------------|----------------------|
| 10039851-101   | TIN/LEAD ALLOY OVER NICKEL  | NO                   |
| 10039851-101LF | TIN OVER NICKEL (LEAD FREE) |                      |
| 10039851-111   | TIN/LEAD ALLOY OVER NICKEL  | YES<br>(SEE NOTE 13) |
| 10039851-111LF | TIN OVER NICKEL (LEAD FREE) |                      |

NOTES:

1. CONNECTOR MATERIALS:  
HOUSING & RETAINER: HIGH TEMP THERMOPLASTIC, NATURAL, UL94V-0  
IMLA PLASTIC: HIGH TEMP THERMOPLASTIC, BLACK, UL94V-0  
CONTACT: COPPER ALLOY
2. CONTACT PLATING:  
SEPARABLE INTERFACE:  
PERFORMANCE-BASED PLATING, QUALIFIED TO MEET THE REQUIREMENTS OF FCI PRODUCT SPECIFICATION GS-12-239 INCLUDING TELCORDIA GR-1217-CORE (NOVEMBER 1995) CENTRAL OFFICE TEST SEQUENCE  
  
PRESS-FIT TAILS: SEE TABLE
3. PRODUCT SPECIFICATION: GS-12-239
4. APPLICATION SPECIFICATION: GS-20-035
5. PRODUCT MARKING, (PART NUMBER & LOT CODE), ON THIS SURFACE
6. REFER TO CUSTOMER DRAWING 10035911 FOR INFORMATION REGARDING PCB LAYOUT OF POWER AND GUIDE MODULES RELATIVE TO SIGNAL MODULES
7. POSITIONS F OF ODD NUMBERED COLUMNS AND POSITIONS G OF EVEN NUMBERED COLUMNS CORRESPOND TO EARLY MATE HEADER PINS
8. THERE IS NO GROUND BUSSING WITHIN THE CONNECTOR SYSTEM
9. REFER TO CUSTOMER DRAWING 10045979 FOR INFORMATION ON PCB HOLE DIAMETERS AND PLATING OPTIONS.



10. LEAD FREE PRODUCT MEETS EUROPEAN UNION DIRECTIVES AND OTHER COUNTRY REGULATIONS AS DESCRIBED IN GS-22-008.
11. THE HOUSING WILL WITHSTAND EXPOSURE TO 260°C PEAK TEMPERATURE FOR 40 SECONDS IN A CONVECTION, INFRA-RED OR VAPOR PHASE REFLOW OVEN.
12. PACKAGING MEETS GS-14-920 LEAD FREE LABELING SPECIFICATION.
13. MATING PIN E4 HAS 0.5mm LESS NOMINAL WIPE THAN THE SHORTEST SIGNAL PIN.

|  |  |             |               |  |                |                        |           |              |                |     |
|--|--|-------------|---------------|--|----------------|------------------------|-----------|--------------|----------------|-----|
| spec ref   |  | dr          | Chen-Hong Tan | 2006/10/02   | projection     | MM                     | size      | A3           | scale          | 3:1 |
| tolerance std  |  | eng         | Yong-Keat Lim | 2011/05/30   |                |                        | ecn no    |              | ELX-S-003991-1 |     |
| ASME Y14.5   |  | chr         | -             | -  |                |                        | rel level |              | Released       |     |
| surface 3.2  |  | appr        | Chen-Hong Tan | 2011/05/30   | product family |                        | AirMax VS |              | rev            |     |
| ASME Y14.5   |  |             |               | AirMax VS R/A HEADER ASSY<br>PRESS_FIT, 54 POS, 14MM |                | dwg no<br>10039851     |           | rev<br>F     |                |     |
| TOLERANCES UNLESS OTHERWISE SPECIFIED<br>linear: 0.X ±0.3, 0.XX ±0.10, 0.XXX ±0.050<br>angular: 0° ±2° |  | www.fci.com |               | cat. no.   | -              | Product - Customer Drw |           | sheet 5 of 5 |                |     |