

**PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION**

**Part Number:** **0877156002**  
**Status:** **Planned for Obsolescence**  
**Description:** 1.00mm (.039") Pitch, PCI Express\* Connector, 36 Circuits, Nylon 6/6 Glass-filled, Black Housing, Phosphor Bronze, 0.38µm (15µ") Gold (Au) Plating, with Plastic Pegs, 2.54mm (.100") Solder tail, Lead Free

**Documents:**

[3D Model](#) [Product Specification PS-87715-200 \(PDF\)](#)  
[Drawing \(PDF\)](#) [RoHS Certificate of Compliance \(PDF\)](#)

**Agency Certification**

CSA LR19980  
 UL E29179

**General**

Product Family Edge Card Connectors  
 Series [87715](#)  
 Comments PCI 1 lane  
 Component Type Edgecard to PCB  
 Product Name PCI Express\*

**Physical**

Circuits (Loaded) 36  
 Circuits (maximum) 36  
 Circuits Detail All Signal  
 Durability (mating cycles max) 50  
 Entry Angle Vertical (Top Entry)  
 Flammability 94V-0  
 Keying to Mating Part Yes  
 Material - Plating Mating Gold  
 Material - Plating Termination Tin  
 PC Tail Length (in) 0.100 In  
 PC Tail Length (mm) 2.54 mm  
 PCB Locator Yes  
 PCB Retention Yes  
 PCB Thickness Recommended (in) 0.062 In  
 PCB Thickness Recommended (mm) 1.60 mm  
 Packaging Type Tray  
 Pitch - Mating Interface (in) 0.039 In  
 Pitch - Mating Interface (mm) 1.00 mm  
 Pitch - Term. Interface (in) 0.039 In  
 Pitch - Term. Interface (mm) 1.00 mm  
 Polarized to Mating Part Yes  
 Temperature Range - Operating -55°C to +85°C  
 Termination Interface: Style Through Hole

**Electrical**

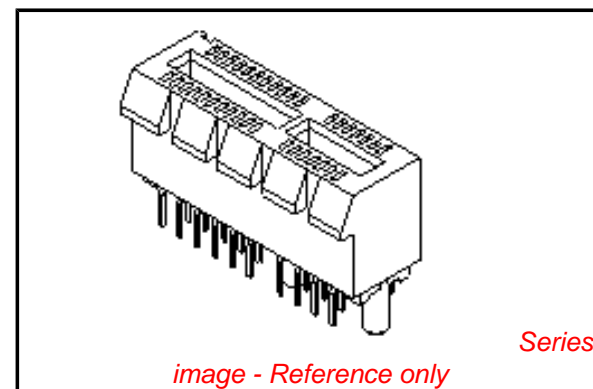
Current - Maximum per Contact 1.1A  
 Voltage - Maximum 50V AC (RMS)/DC

**Solder Process Data**

Lead-free Process Capability Wave Capable (TH only)  
 Process Temperature max. C 245

**Material Info**

**Reference - Drawing Numbers**



**EU RoHS**

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

**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**

[87715Series](#)

**Mates With**

PCI Express Card

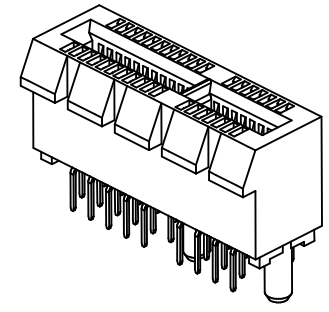
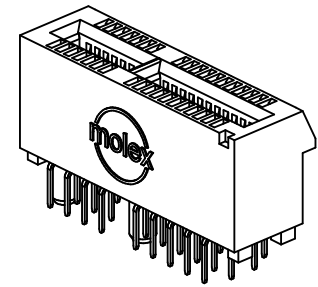
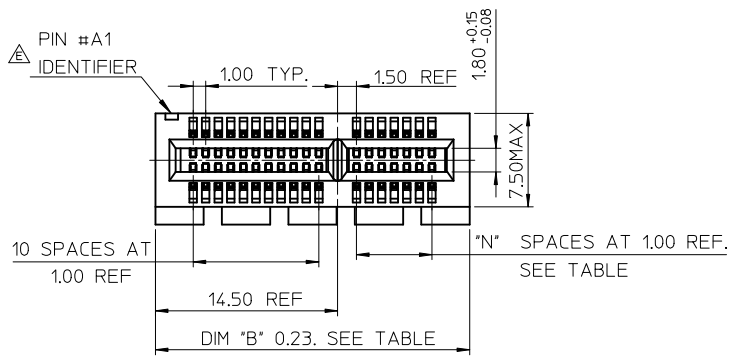
Packaging Specification  
Product Specification  
Sales Drawing  
Test Summary

PK-87715-207  
PS-87715-200  
SD-87715-207  
TS-87715-207

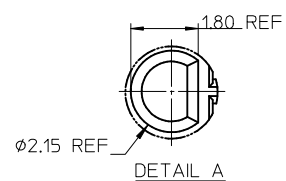
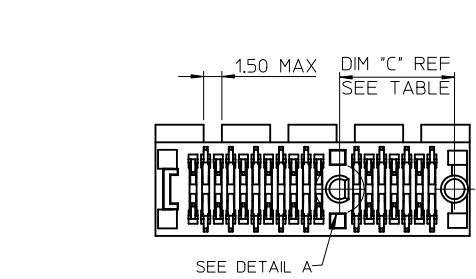
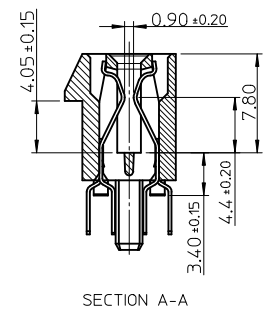
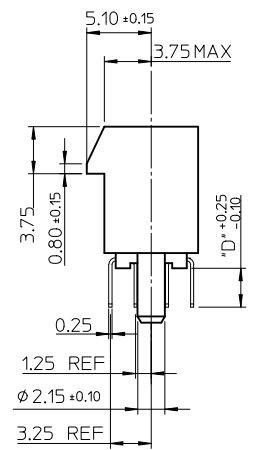
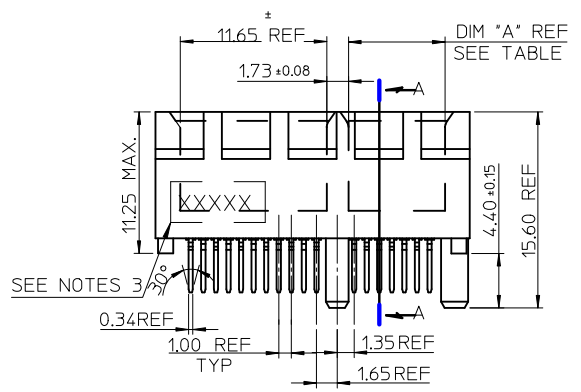
\* PCI Express is a registered trademark of PCI-SIG®

This document was generated on 06/01/2010

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- NOTES:
- 1.MATERIALS:  
1-1.HOUSING: SEE TABLE ,GLASS FIBER FILLED UL94V-0, COLOR: SEE TABLE.  
1-2.CONTACT: SEE TABLE
  - 2.PLATING:  
2-1.CONTACT AREA: GOLD, THICKNESS : SEE TABLE .  
2-2.SOLDER TAIL: 100 MICRINCH MIN. TIN PLATING.  
2-3.UNDER PLATING: NICKEL PLATING OVERALL.
  - 3.WEEK CODE: XX(YEAR) XXI(WEEK) X(LOCATION),
  - 4.PRODUCT SPECIFICATION REFER TO PS-87715-200.
  - 5.PACKAGING SPECIFICATION REFER TO PK-87715-207.
  - 6.TEST SUMMARY:REFER TO TS-87715-207.
  - 7.LEAD FREE AND ROHS COMPLIANCE PRODUCT.

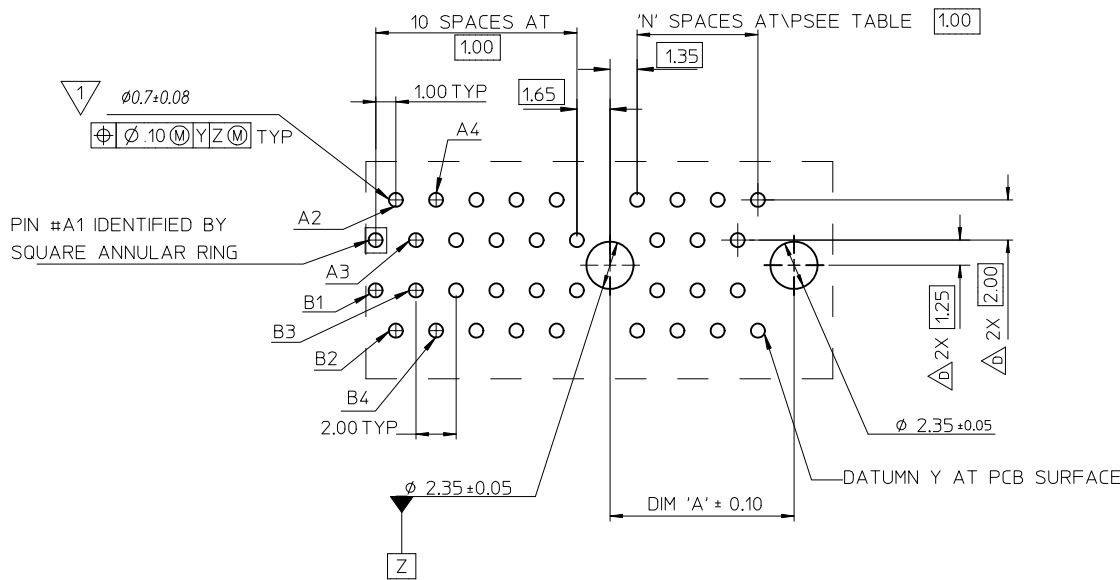


| CONNECTOR LINK WIDTH | # POS REF | N  | DIM 'A' | DIM 'B' | DIM 'C' |
|----------------------|-----------|----|---------|---------|---------|
| X4                   | 64        | 20 | 21.65   | 39.00   | 23.15   |
| X8                   | 98        | 37 | 38.65   | 56.00   | 40.15   |

| PCB THK (REF) | DIM 'D' |
|---------------|---------|
| 1.60          | 2.30    |
| 1.58          | 2.54    |
| 2.36          | 3.00    |

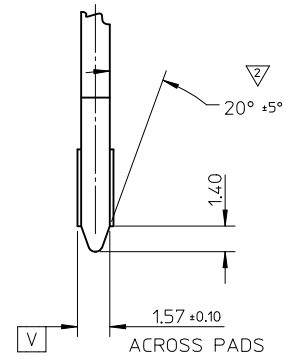
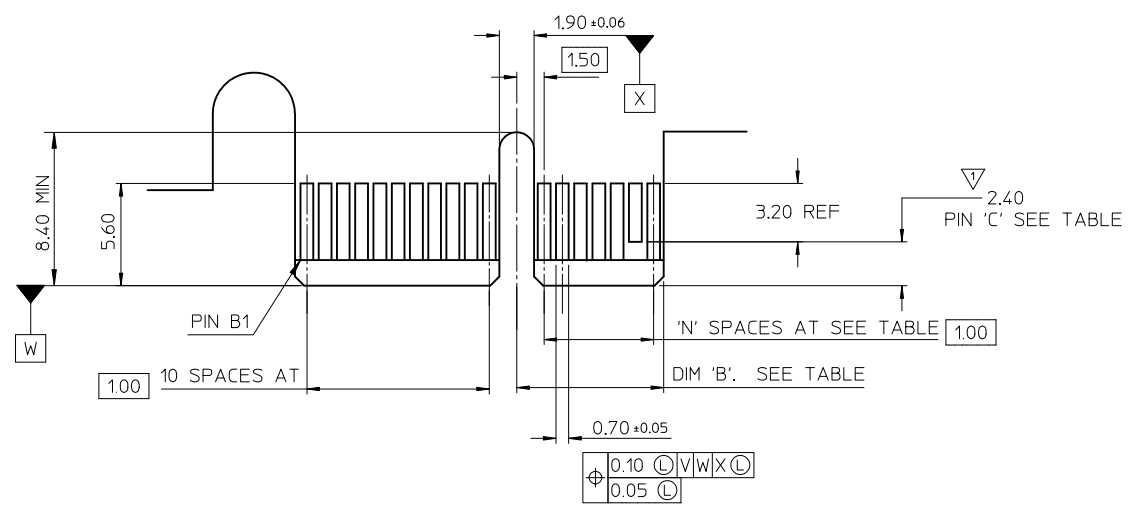
|   |  |  |                            |                    |                        |                        |  |
|---|--|--|----------------------------|--------------------|------------------------|------------------------|--|
| REVISED<br>IEC NO: SH2010-0425<br>DR:WNRZHIANG 2010/05/14<br>CHYKD:ALLEN L LIN 2004/07/20<br>APPR:X.J.SONG 2010/06/03 | QUALITY SYMBOLS<br>F=0<br>E=0<br>A=0                 | GENERAL TOLERANCES (UNLESS SPECIFIED)<br>mm INCH<br>4 PLACES ± --- ± ---<br>3 PLACES ± --- ± ---<br>2 PLACES ± 0.25 ± ---<br>1 PLACE ± 0.25 ± ---<br>ANGULAR ± 3 ° | DIMENSION STYLE<br>MM ONLY | SCALE<br>METRIC    | DESIGN UNITS<br>METRIC | THIRD ANGLE PROJECTION |  |
|   | DRAWN BY<br>TOM                                      | DATE<br>2004/07/20   | CHECKED BY<br>ALLEN LIN    | DATE<br>2004/07/20 | APPROVED BY<br>WILSON  | DATE<br>2004/07/20     | TITLE<br>PCI EXPRESS<br>EDGE CARD CONNECTOR<br>(LEAD FREE VERSION) |
|   | MATERIAL NO.<br>SEE SHEET 4                          | DOCUMENT NO.<br>SD-87715-207   | SHEET NO.<br>1 OF 4        | MOLEX INCORPORATED |                        |                        |  |
|   | DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS |  |                            |                    |                        |                        |  |

1 THE HORIZONTAL AXIS FOR THE HOLE PATTERN IS ESTABLISHED BY A LINE THROUGH THE CENTER OF THE TWO  $\phi 2.35$  HOLES. THE VERTICAL AXIS IS 90° TO THE HORIZONTAL AXIS, THROUGH THE CENTER OF DATUM Z



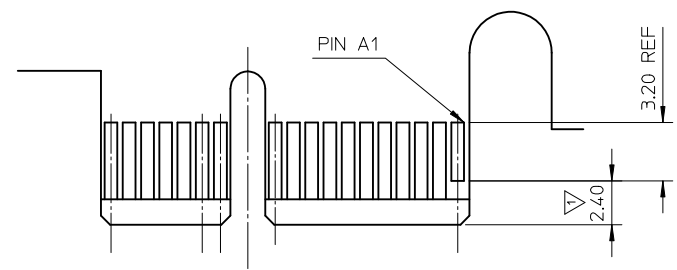
| CONNECTOR LINK WIDTH | # POS REF | N  | DIM 'A' |
|----------------------|-----------|----|---------|
| X4                   | 64        | 20 | 23.15   |
| X8                   | 98        | 37 | 40.15   |

|             |                    |            |            |  |                                       |  |              |   |                         |                        |   |
|-------------|--------------------|------------|------------|--|---------------------------------------|--|--------------|---|-------------------------|------------------------|---|
| SEE SHEET 1 | EC NO: SH2010-0425 | 2010/05/14 | 2010/05/14 | QUALITY SYMBOLS<br>$F_A=0$<br>$F_G=0$<br>$F_P=0$ | GENERAL TOLERANCES (UNLESS SPECIFIED) | DIMENSION STYLE<br>MM ONLY                           |              | SCALE   | DESIGN UNITS<br>METRIC  | THIRD ANGLE PROJECTION |   |
|             | DRWR:ZHANG         | 2004/07/20 | 2004/07/20 |  |                                       | mm   | INCH         | DRAWN BY<br>TOM   | DATE<br>2004/07/20      | TITLE                  |   |
|             | CHKD:ALLEN LIN     | 2004/07/20 | 2004/07/20 |  |                                       | 4 PLACES   | ± ---        | ± ---   | CHECKED BY<br>ALLEN LIN | DATE<br>2004/07/20     | PCI EXPRESS<br>EDGE CARD CONNECTOR<br>(LEAD FREE VERSION) |
|             | APPR:XJSONG        | 2010/06/03 | 2010/06/03 |  |                                       | 3 PLACES   | ± ---        | ± ---   | APPROVED BY<br>WILSON   | DATE<br>2004/07/20     |   |
|             |                    |            | 2 PLACES   | ± 0.25   | ± ---                                 | MATERIAL NO.   | DOCUMENT NO. | SHEET NO.   |                         |                        |   |
|             |                    |            | 1 PLACE    | ± 0.25   | ± ---                                 | SEE SHEET 4  |              | SD-87715-207  | 2 OF 4                  |                        |   |
|             |                    |            |            |  | ANGULAR ± 3°                          | DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS |              | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |                         |                        |   |



← I/O PANEL DIRECTION

PRIMARY (COMPONENT) SIDE



I/O PANEL DIRECTION →

SECONDARY (SOLDER) SIDE

- 1 NO TIE BAR PERMITTED FROM CARD EDGE TO LEADING EDGE OF PAD FOR PINS A1 AND "C".
- 2 CHAMFER EDGES MUST BE FREE OF CUTTING BURRS.
- 3. TOLERANCE: .XX±.13

| CONNECTOR LINK WIDTH | # POS REF | N  | DIM 'B' | 'C'             |
|----------------------|-----------|----|---------|-----------------|
| X4                   | 64        | 20 | 22.15   | B17, B31        |
| X8                   | 98        | 37 | 39.15   | B17, B31<br>B48 |

SEE SHEET 1  
 EC NO: SH2010-0425 2010/05/14  
 DR: WNRZhang 2010/07/20  
 CHK: ALLEN LIN 2004/07/20  
 APPR: XJ.SONG 2010/06/03

| QUALITY SYMBOLS  | GENERAL TOLERANCES (UNLESS SPECIFIED) |       |
|------------------|---------------------------------------|-------|
|                  | mm                                    | INCH  |
| $F_{\sqrt{A}}=0$ | 4 PLACES ± ---                        | ± --- |
| $F_{\sqrt{B}}=0$ | 3 PLACES ± ---                        | ± --- |
| $F_{\sqrt{C}}=0$ | 2 PLACES ± 0.25                       | ± --- |
|                  | 1 PLACE ± 0.25                        | ± --- |
|                  | ANGULAR ± 3°                          |       |

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

| DIMENSION STYLE |            | SCALE                     | DESIGN UNITS |
|-----------------|------------|---------------------------|--------------|
| MM ONLY         |            |                           | METRIC       |
| DRAWN BY        | DATE       | TITLE                     |              |
| TOM             | 2004/07/20 | PCI EXPRESS               |              |
| CHECKED BY      | DATE       | EDGE CARD CONNECTOR       |              |
| ALLEN LIN       | 2004/07/20 | (LEAD FREE VERSION)       |              |
| APPROVED BY     | DATE       | MOLEX INCORPORATED        |              |
| WILSON          | 2004/07/20 | MATERIAL NO. DOCUMENT NO. |              |
| SEE SHEET 4     |            | SD-87715-207              |              |

| THIRD ANGLE PROJECTION  |           |
|---|-----------|
| SIZE  | SHEET NO. |
| A3  | 3 OF 4    |
| THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |           |

| MOLEX P/N  | CIRCUIT SIZE | HOUSING MATERIAL | HOUSING COLOR | TERMINAL MATERIAL | CONTACT PLATING | SOLDER TAIL 'D' LENGTH |
|------------|--------------|------------------|---------------|-------------------|-----------------|------------------------|
| 87715-9100 | 64           | NYLON46          | BLACK         | PHOSPHOR BRONZE   | GOLD FLASH      | 2.54                   |
| 87715-9101 |              |                  |               |                   | 10 MICROINCH    |                        |
| 87715-9102 |              |                  |               |                   | 15 MICROINCH    |                        |
| 87715-9103 |              |                  |               |                   | GOLD FLASH      | 3.00                   |
| 87715-9104 |              |                  |               |                   | 10 MICROINCH    |                        |
| 87715-9105 |              |                  |               |                   | 15 MICROINCH    |                        |
| 87715-9106 |              |                  |               |                   | 30 MICROINCH    | 2.54                   |
| 87715-9107 |              |                  |               |                   | GOLD FLASH      | 2.30                   |
| 87715-9108 |              |                  |               |                   | 15 MICROINCH    |                        |
| 87715-9109 | 30 MICROINCH |                  |               |                   |                 |                        |

| MOLEX P/N  | CIRCUIT SIZE | HOUSING MATERIAL | HOUSING COLOR | TERMINAL MATERIAL | CONTACT PLATING | SOLDER TAIL 'D' LENGTH |
|------------|--------------|------------------|---------------|-------------------|-----------------|------------------------|
| 87715-9200 | 98           | NYLON46          | BLACK         | PHOSPHOR BRONZE   | GOLD FLASH      | 2.54                   |
| 87715-9201 |              |                  |               |                   | 10 MICROINCH    |                        |
| 87715-9202 |              |                  |               |                   | 15 MICROINCH    |                        |
| 87715-9203 |              |                  |               |                   | GOLD FLASH      | 3.00                   |
| 87715-9204 |              |                  |               |                   | 10 MICROINCH    |                        |
| 87715-9205 |              |                  |               |                   | 15 MICROINCH    |                        |
| 87715-9206 |              |                  |               |                   | 30 MICROINCH    | 2.54                   |
| 87715-9207 |              |                  |               |                   | GOLD FLASH      | 2.30                   |
| 87715-9208 |              |                  |               |                   | 15 MICROINCH    |                        |
| 87715-9209 | 30 MICROINCH |                  |               |                   |                 |                        |

| MOLEX P/N  | CIRCUIT SIZE | HOUSING MATERIAL | HOUSING COLOR | TERMINAL MATERIAL | CONTACT PLATING | SOLDER TAIL 'D' LENGTH |
|------------|--------------|------------------|---------------|-------------------|-----------------|------------------------|
| 87715-9602 | 98           | NYLON46          | BLACK         | BRASS             | 15 MICROINCH    | 2.54                   |

|   |                               |   |                 |            |   |                        |
|---|-------------------------------|---|-----------------|------------|---|------------------------|
| SEE SHEET 1<br>EC NO: SH2010-0425<br>DRWNR:ZHANG 2010/05/14<br>CHKD:ALLEN LIN 2004/07/20<br>APPR:XJ.SONG 2010/06/03 | QUALITY SYMBOLS               | GENERAL TOLERANCES (UNLESS SPECIFIED)   | DIMENSION STYLE | SCALE      | DESIGN UNITS  | THIRD ANGLE PROJECTION |
|   | $F_A=0$<br>$F_C=0$<br>$F_P=0$ | mm INCH<br>4 PLACES ± --- ± ---<br>3 PLACES ± --- ± ---<br>2 PLACES ± 0.25 ± ---<br>1 PLACE ± 0.25 ± ---<br>ANGULAR ± 3 ° | MM ONLY         |            | METRIC  |                        |
|   | DESCRIPTION                   | DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS  | DRAWN BY        | DATE       | TITLE   |                        |
|   | REV                           |   | TOM             | 2004/07/20 | PCI EXPRESS EDGE CARD CONNECTOR (LEAD FREE VERSION)   |                        |
|   |                               |   | CHECKED BY      | DATE       | MOLEX MOLEX INCORPORATED  |                        |
|   |                               |   | ALLEN LIN       | 2004/07/20 | SD-87715-207  |                        |
|   |                               |   | APPROVED BY     | DATE       | SHEET NO.   |                        |
|   |                               |   | WILSON          | 2004/07/20 | 4 OF 4  |                        |
|   |                               |   | MATERIAL NO.    | SEE TABLE  | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |                        |