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**Part Number:** [0877159309](#)

**Status:** **Active**

**Overview:**

**Description:** 1.00mm (.039") Pitch, PCI Express\* Connector, 164 Circuits, Nylon 4/6 Glass-filled, Black Housing, Phosphor Bronze, 0.76µm (30µ") Gold (Au) Plating, with Plastic Pegs, 3.00mm (.118") Solder tail, Lead Free

**Agency Certification**

CSA LR19980  
UL E29179

**General**

Product Family Edge Card Connectors  
Series 87715  
Comments PCI 16 lanes  
Component Type Edgecard to PCB  
Overview pci\_express\_card\_edge\_connector  
Product Name PCI Express\*

**Physical**

Circuits (Loaded) 164  
Circuits (maximum) 164  
Circuits Detail All Signal  
Color - Resin Black  
Durability (mating cycles max) 50  
Entry Angle Vertical (Top Entry)  
Flammability 94V-0  
Keying to Mating Part Yes  
Material - Metal Phosphor Bronze  
Material - Plating Mating Gold  
Material - Plating Termination Tin  
Material - Resin High Temperature Thermoplastic  
PC Tail Length (in) 0.118 In  
PC Tail Length (mm) 3.00 mm  
PCB Locator Yes  
PCB Retention Yes  
PCB Thickness Recommended (in) 0.093 In  
PCB Thickness Recommended (mm) 2.36 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  
Plating min: Mating (µin) 30  
Plating min: Mating (µm) 0.75  
Plating min: Termination (µin) 100  
Plating min: Termination (µm) 2.5  
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

**Material Info**

**EU RoHS**

**ELV and RoHS  
Compliant**

**REACH SVHC**

**Contains SVHC: No**

**Halogen-Free**

**Status**

**Not Reviewed**

**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

## Reference - Drawing Numbers

Packaging Specification

PK-87715-207

Product Specification

PS-87715-200

Sales Drawing

SD-87715-207, SD-87715-901

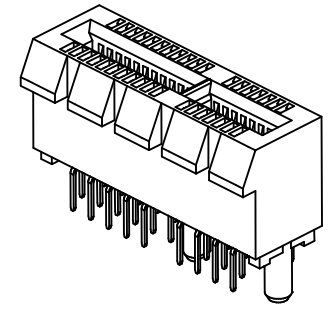
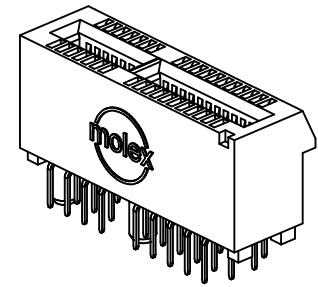
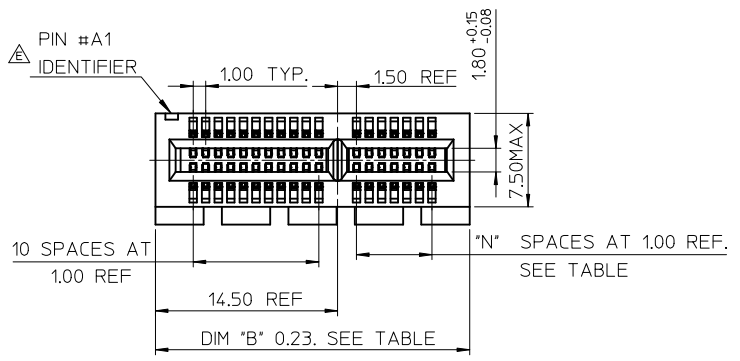
Test Summary

TS-87715-207

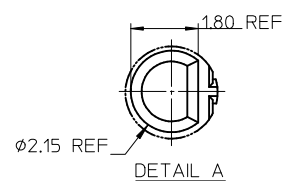
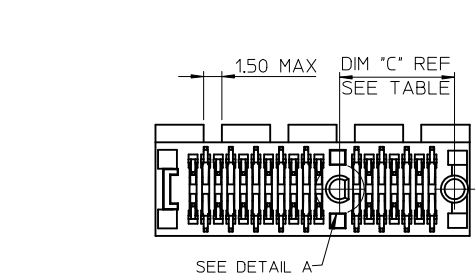
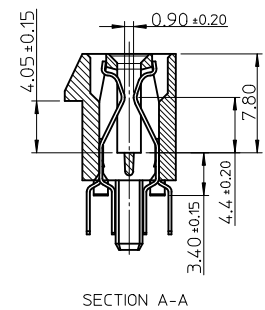
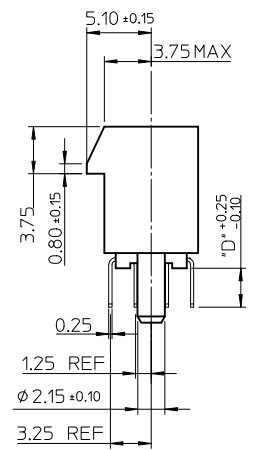
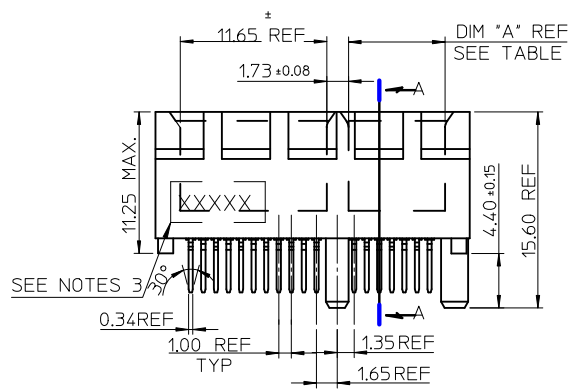
\* PCI Express is a registered trademark of PCI-SIG®

This document was generated on 06/04/2010

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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.

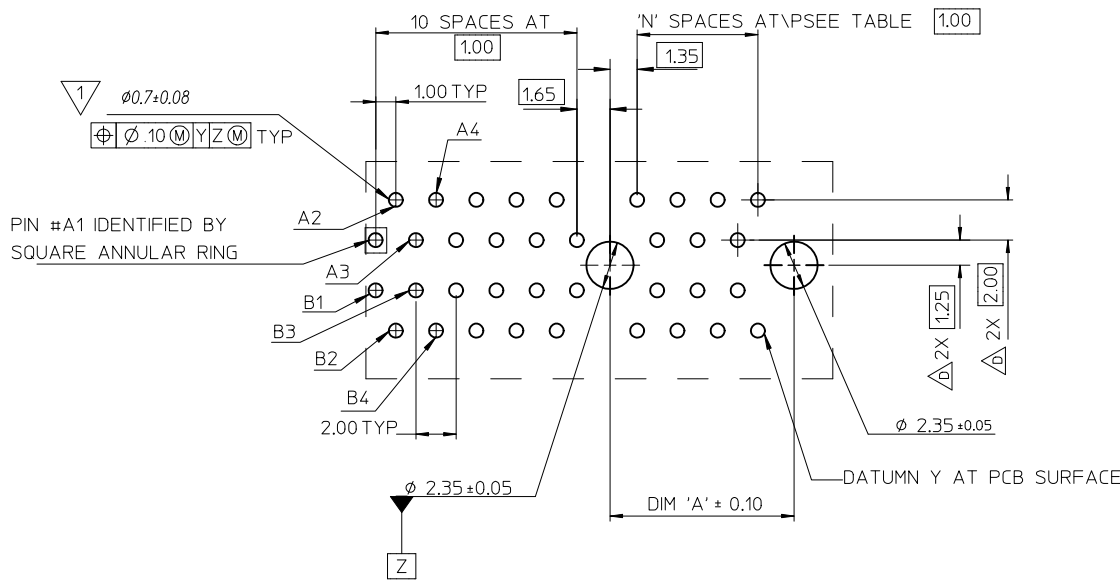


CONNECTOR LINK WIDTH	# POS REF	N	DIM 'A'	DIM 'B'	DIM 'C'
X4	64	20	21.65	39.00	23.15
X8	98	37	38.65	56.00	40.15

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

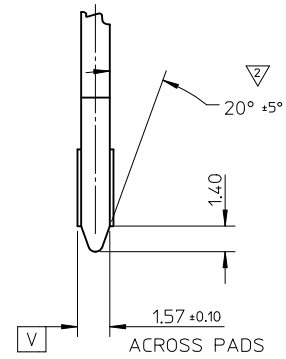
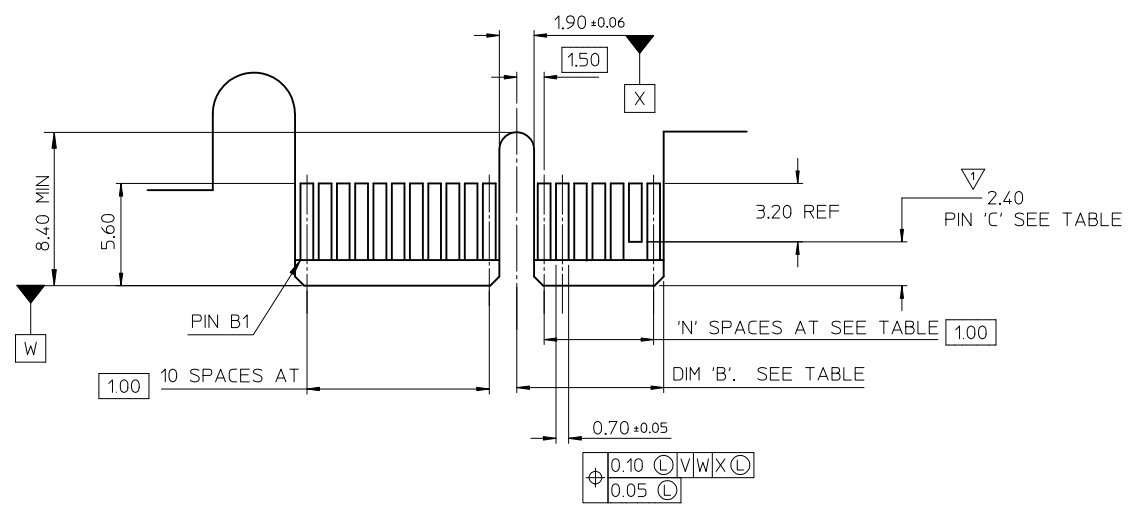
REVISED IEC NO: SH2010-0425 DR:WNRZHHANG 2010/05/14 CHYKD:ALLEN L LIN 2004/07/20 APPR:X.J.SONG 2010/06/03	QUALITY SYMBOLS F=0 E=0 E=0	GENERAL TOLERANCES (UNLESS SPECIFIED) mm INCH 4 PLACES ± --- ± --- 3 PLACES ± --- ± --- 2 PLACES ± 0.25 ± --- 1 PLACE ± 0.25 ± --- ANGULAR ± 3 °	DIMENSION STYLE MM ONLY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

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



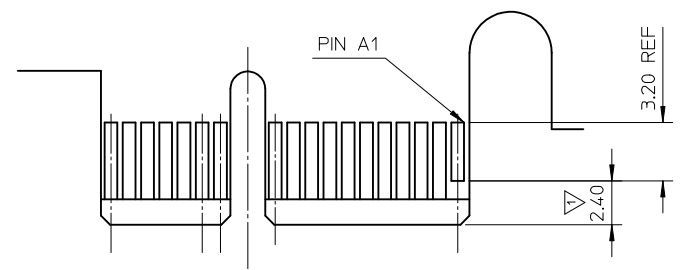
CONNECTOR LINK WIDTH	# POS REF	N	DIM 'A'
X4	64	20	23.15
X8	98	37	40.15

SEE SHEET 1 EC NO: SH2010-0425 DRAWN: ZHANG 2010/05/14 CHKD: ALLEN LIN 2004/07/20 APPR: XJSONG 2010/06/03	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE	SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION
	$F_A=0$	mm	INCH	MM ONLY		METRIC	
	$F_G=0$	4 PLACES ± ---	± ---	DRAWN BY	DATE	TITLE	
	$F_P=0$	3 PLACES ± ---	± ---	TOM	2004/07/20	PCI EXPRESS EDGE CARD CONNECTOR (LEAD FREE VERSION)	
	2 PLACES ± 0.25	± ---	CHECKED BY	DATE	MOLEX INCORPORATED		
	1 PLACE ± 0.25	± ---	ALLEN LIN	2004/07/20	DOCUMENT NO.		SHEET NO.
	ANGULAR ± 3°		APPROVED BY	DATE	SD-87715-207		2 OF 4
			WILSON	2004/07/20	MATERIAL NO.		
			DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		SEE SHEET 4		
			SIZE	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION			
			A3				



← 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 B48

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

QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)	
	mm	INCH
= 0	4 PLACES ± ---	± ---
= 0	3 PLACES ± ---	± ---
= 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

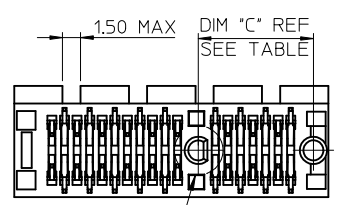
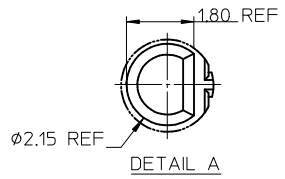
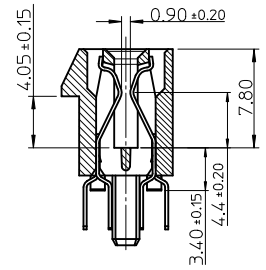
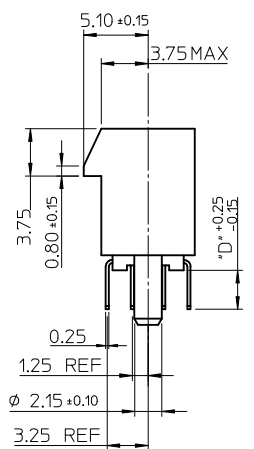
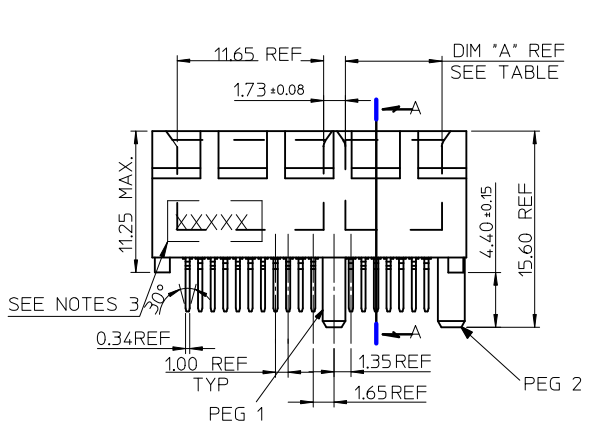
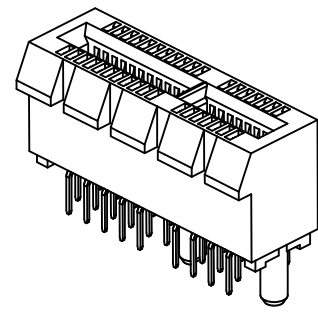
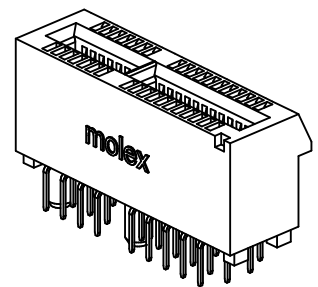
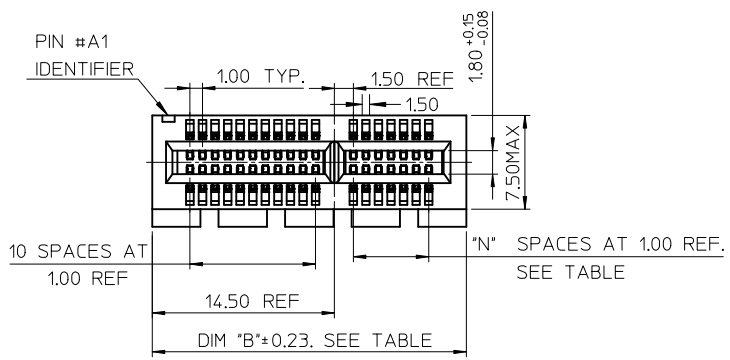
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MOLEX P/N	CIRCUIT SIZE	HOUSING MATERIAL	HOUSING COLOR	TERMINAL MATERIAL	CONTACT PLATING	SOLDER TAIL 'D' LENGTH
87715-9100	64	NYLON46	BLACK	PHOSPHOR BRONZE	GOLD FLASH	2.54
87715-9101					10 MICROINCH	
87715-9102					15 MICROINCH	
87715-9103					GOLD 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 EC NO: SH2010-0425 DRWNR:ZHANG 2010/05/14 CHKD:ALLEN LIN 2004/07/20 APPR:XJ.SONG 2010/06/03	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)	DIMENSION STYLE	SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION
	$F_A=0$ $F_C=0$ $F_P=0$	mm INCH 4 PLACES ± --- ± --- 3 PLACES ± --- ± --- 2 PLACES ± 0.25 ± --- 1 PLACE ± 0.25 ± --- 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.	DOCUMENT NO.	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION	
			SEE TABLE			

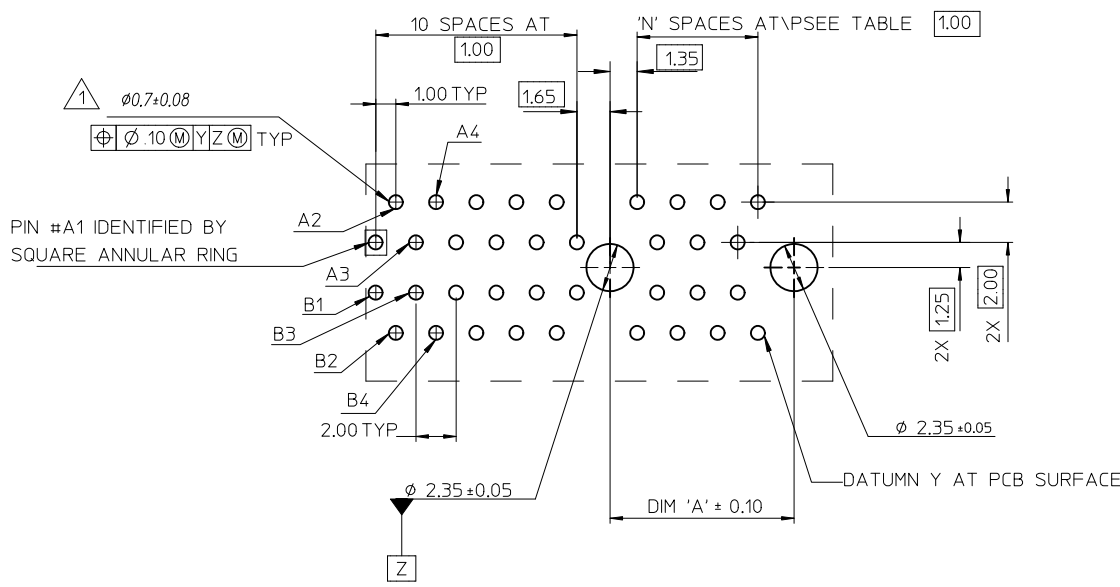


- NOTES:  
 1.MATERIALS:  
 1-1.HOUSING: SEE TABLE ,GLASS FIBER FILLED UL94V-0, COLOR: SEE TABLE.  
 1-2.CONTACT: SEE TABLE  
 2.PLATING:  
 2-1.CONTACT AREA: GOLD, THICKNESS : SEE TABLE .  
 2-2.SOLDER TAIL: 100 MICRINCH MIN. TIN PLATING.  
 2-3.UNDER PLATING: NICKEL PLATING OVERALL.  
 3.DATE CODE: YY MM DD.  
 4.PRODUCT SPECIFICATION REFER TO PS-87715-200.  
 5.TEST SUMMARY:REFER TO TS-87715-207.

CONNECTOR LINK WIDTH	# POS REF	N	DIM 'A'	DIM 'B'	DIM 'C'
X1	36	6	7.65	25.00	9.15
X16	164	70	71.65	89.00	73.15

PCB THK (REF)	DIM 'D'
1.58	2.54
2.36	3.00

REVISED EC NO: SH2010-0425 DRWNR:ZHANG 2010/05/14 CHKD:HARVEY 2007/05/14 APPR:X.J.SONG 2010/06/03	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)	DIMENSION STYLE	SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION	
	$\nabla = 0$ $\nabla = 0$ $\nabla = 0$	mm    INCH 4 PLACES ± --- ± --- 3 PLACES ± --- ± --- 2 PLACES ± 0.25 ± --- 1 PLACE ± 0.25 ± --- ANGULAR ± 3°	MM ONLY	DRAWN BY: DAVID HU    DATE: 2007/05/14 CHECKED BY: HARVEY    DATE: 2007/05/14 APPROVED BY: JENNY CHEN    DATE: 2007/05/14	METRIC		
	DESCRIPTION	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	SEE SHEET 4	TITLE		PCI EXPRESS EDGE CARD CONNECTOR (LEAD FREE VERSION)	
	REV			MATERIAL NO. DOCUMENT NO.		MOLEX INCORPORATED	
			SHEET NO.		SD-87715-901		
			THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		1 OF 4		

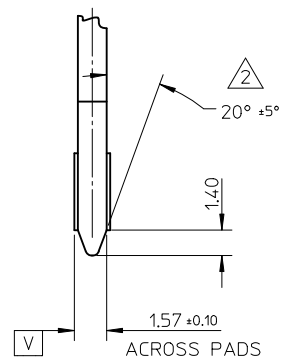
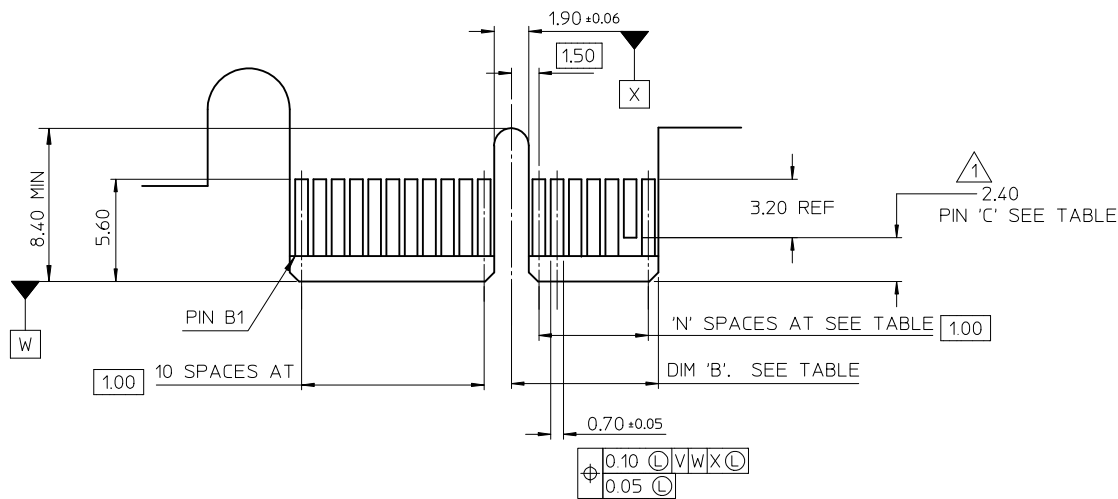


1 THE HORIZONTAL AXIS FOR THE HOLE PATTERN IS ESTABLISHED BY A LINE THROUGH THE CENTER OF THE TWO  $\phi 2.35$  HOLES. THE VERTICAL AXIS IS 90° TO THE HORIZONTAL AXIS, THROUGH THE CENTER OF DATUM Z

CONNECTOR LINK WIDTH	# POS REF	N	DIM 'A'
X1	36	6	9.15
X16	164	70	73.15

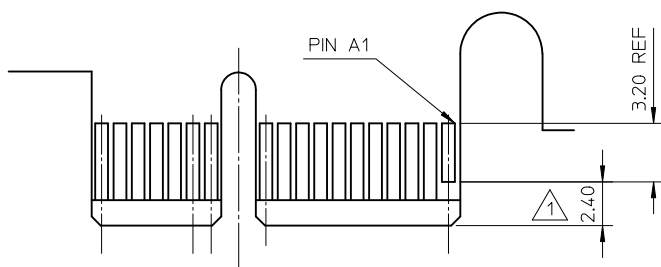
SEE SHEET 1 EC NO: SH2010-0425 DRW:RZHIANG 2010/05/14 CH:KD:HARVEY 2007/05/14 APPR:XJ:SONG 2010/06/03	QUALITY SYMBOLS $F_A=0$ $F_C=0$ $F_P=0$	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE <b>MM ONLY</b>		SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION	
				mm	INCH	DRAWN BY	DATE		TITLE
		4 PLACES	± ---	± ---	DAVID HU	2007/05/14	PCI EXPRESS EDGE CARD CONNECTOR (LEAD FREE VERSION)		
		3 PLACES	± ---	± ---	CHECKED BY	DATE			
2 PLACES	± 0.25	± ---	HARVEY	2007/05/14	APPROVED BY	DATE	MOLEX INCORPORATED		
1 PLACE	± 0.25	± ---	JENNY CHEN	2007/05/14	MATERIAL NO.	DOCUMENT NO.			
		ANGULAR ± 3°		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		SEE SHEET 1		SHEET NO. 2 OF 4	
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← 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' 1
X1	36	6	8.15	B17
X16	164	70	72.15	B17, B31 B48, B81

SEE SHEET 1 EC NO: SH2010-0425 DR: WNRZHANG 2010/05/14 CHKD: HARVEY 2007/05/14 APPR: XJ.SONG 2010/06/03	DESCRIPTION	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE		SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION	
		▽ <sub>A</sub> =0	mm	INCH	MM ONLY					
		▽ <sub>C</sub> =0	4 PLACES ± --- ± ---		DRAWN BY	DATE	TITLE			
		▽ <sub>B</sub> =0	3 PLACES ± --- ± ---		DAVID HU	2007/05/14	PCI EXPRESS EDGE CARD CONNECTOR (LEAD FREE VERSION)			
	2 PLACES ± 0.25 ± ---		CHECKED BY	DATE	MOLEX INCORPORATED					
	1 PLACE ± 0.25 ± ---		HARVEY	2007/05/14					SD-87715-901	
	ANGULAR ± 3 °		APPROVED BY	DATE	DOCUMENT NO.					
			JENNY CHEN	2007/05/14					SHEET NO.	
			MATERIAL NO.		3 OF 4					
			SEE SHEET 1						THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION	
			DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		SIZE					
			A3							

MOLEX P/N	CIRCUIT SIZE	HOUSING MATERIAL	HOUSING COLOR	TERMINAL MATERIAL	CONTACT PLATING	SOLDER TAIL 'D' LENGTH	PEG 1	PEG 2	DESCRIPTION
87715-9000	36	NYLON46	BLACK	PHOSPHOR BRONZE	GOLD FLASH	2.54	WITH	WITH	TOOLED
87715-9001					10 MICROINCH				
87715-9002					15 MICROINCH				
87715-9003					GOLD FLASH	3.00			
87715-9004					10 MICROINCH				
87715-9005					15 MICROINCH				
87715-9006					30 MICROINCH	2.54			
87715-9009					30 MICROINCH	3.00			
87715-0001				15 MICROINCH	2.54		WITHOUT		



MOLEX P/N	CIRCUIT SIZE	HOUSING MATERIAL	HOUSING COLOR	TERMINAL MATERIAL	CONTACT PLATING	SOLDER TAIL 'D' LENGTH	PEG 1	PEG 2	DESCRIPTION
87715-9300	164	NYLON46	BLACK	PHOSPHOR BRONZE	GOLD FLASH	2.54	WITH	WITH	TOOLED
87715-9301					10 MICROINCH				
87715-9302					15 MICROINCH				
87715-9303					GOLD FLASH	3.00			
87715-9304					10 MICROINCH				
87715-9305					15 MICROINCH				
87715-9306					30 MICROINCH	2.54			
87715-9309					30 MICROINCH	3.00			



SEE SHEET 1 EC NO: SH2010-0425 DR: WZRZHANG 2010/05/14 CH: KDHARVEY 2007/05/14 APPR: XJSONG 2010/06/03	QUALITY SYMBOLS $F_A=0$ $F_C=0$ $F_P=0$	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE <b>MM ONLY</b>		SCALE	DESIGN UNITS <b>METRIC</b>	THIRD ANGLE PROJECTION			
				mm	INCH	DRAWN BY	DATE	TITLE			
		4 PLACES ± --- ± ---				DAVID HU	2007/05/14	PCI EXPRESS EDGE CARD CONNECTOR (LEAD FREE VERSION)			
		3 PLACES ± --- ± ---				CHECKED BY	DATE				
2 PLACES ± 0.25 ± ---				HARVEY	2007/05/14	MOLEX INCORPORATED					
1 PLACE ± 0.25 ± ---				APPROVED BY	DATE						
ANGULAR ± 3 °				JENNY CHEN	2007/05/14	DOCUMENT NO.		SHEET NO.			
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS				SEE SHEET 1		SD-87715-901		4 OF 4			
				SIZE A3		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION					