

PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION

Part Number:

0877159302

Status:

Active

Overview:

Description:

1.00mm (.039") Pitch, PCI Express* Connector, 164 Circuits, Nylon 4/6 Glass-filled, Black Housing, Phosphor Bronze, 0.38µm (15µ") Gold (Au) Plating, with Plastic Pegs, 2.54mm (.100") 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)	0.100 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
Plating min: Mating (µin)	15
Plating min: Mating (µm)	0.375
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

Solder Process Data

Duration at Max. Process Temperature (seconds)	10
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EU RoHS

ELV and RoHS

Compliant

REACH SVHC

Not Reviewed

Halogen-Free

Status

China RoHS



Not Halogen-Free

Need more information on product environmental compliance?

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

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

Search Parts in this Series

87715Series

Mates With

PCI Express Card

Lead-free Process Capability	Wave Capable (TH only)
Max. Cycles at Max. Process Temperature	1
Process Temperature max. C	260

Material Info

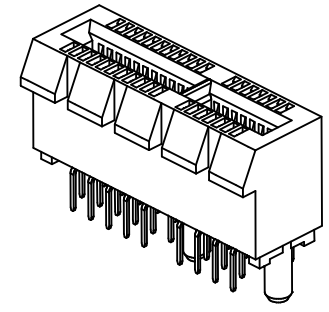
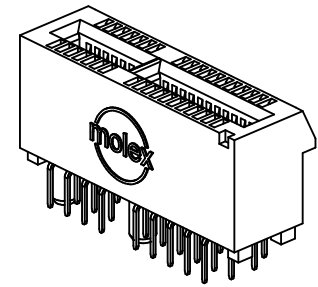
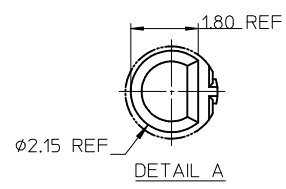
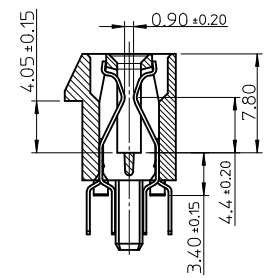
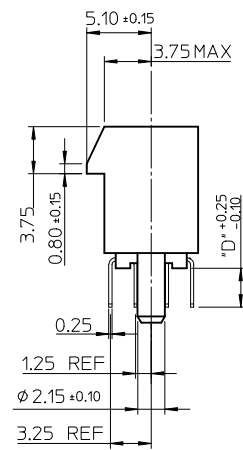
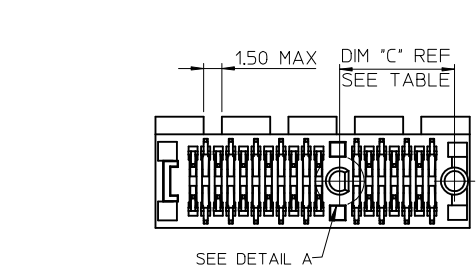
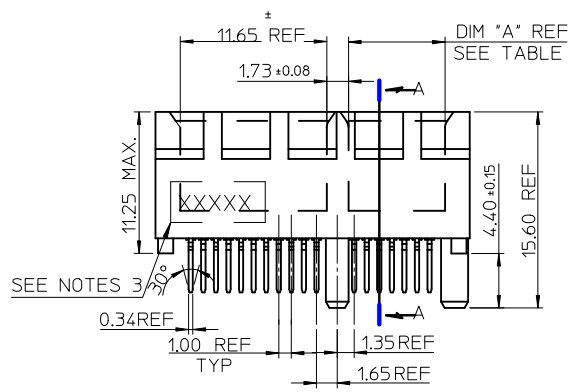
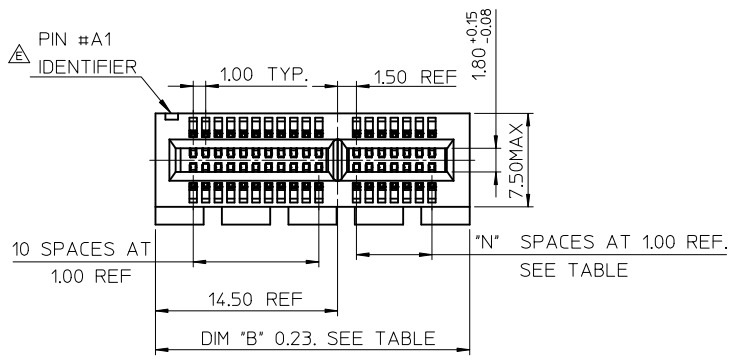
Reference - Drawing Numbers

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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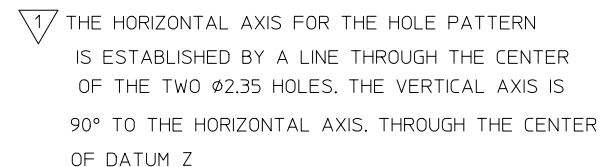


- NOTES:
- 1.MATERIALS:
- 1-1.HOUSING: SEE TABLE ,GLASS FIBER FILLED UL94V-0, COLOR: SEE TABLE.
 - 1-2.CONTACT: SEE TABLE
- 2.PLATING:
- 2-1.CONTACT AREA: GOLD, THICKNESS : SEE TABLE .
 - 2-2.SOLDER TAIL: 100 MICRINCH MIN. TIN PLATING.
 - 2-3.UNDER PLATING: NICKEL PLATING OVERALL.
- 3.WEEK CODE: XX(YEAR) XX(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 EC NO: SH2010-0425 G DRWNR:ZHANG CHKD:ALLEN LIN APPR:X.J.SONG	DESCRIPTION REV	QUALITY SYMBOLS F=0 F=0 F=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY	SCALE	DESIGN UNITS METRIC	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	SEE SHEET 4						



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

10 9 8 7 6 5 4 3 2 1

F

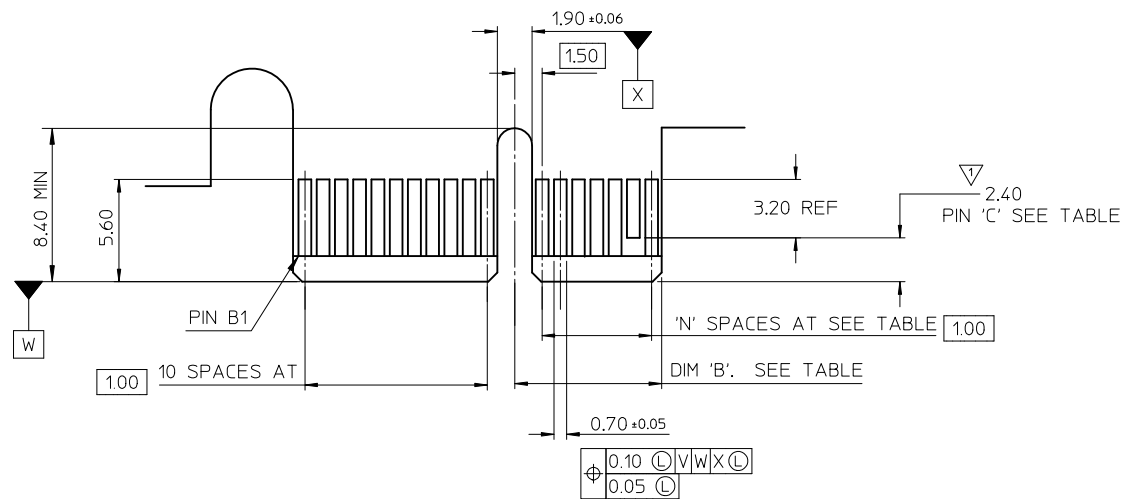
E

D

C

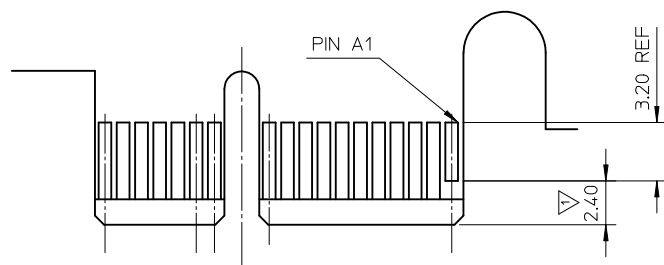
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A



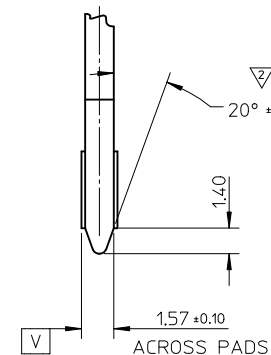
← I/O PANEL DIRECTION

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

F

E

D

C

B

A

F

F

E

E

D

D

C

C

B

B

A

A

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	3.00

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	3.00

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

DRWN:RZHANG

CHKD:ALLEN LIN

APPR:XJ.SONG

2010/05/14

2004/07/20

2010/06/03

DESCRIPTION

REV

QUALITY SYMBOLS

F_A=0

F_G=0

F_P=0

GENERAL TOLERANCES (UNLESS SPECIFIED)

mm

INCH

4 PLACES ± --- ± ---

3 PLACES ± --- ± ---

2 PLACES ± 0.25 ± ---

1 PLACE ± 0.25 ± ---

ANGULAR ± 3 °

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DIMENSION STYLE

MM ONLY

DRAWN BY

DATE

TOM

2004/07/20

CHECKED BY

DATE

ALLEN LIN

2004/07/20

APPROVED BY

DATE

WILSON

2004/07/20

MATERIAL NO.

SEE TABLE

SIZE

A3

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SCALE

DESIGN UNITS

METRIC

THIRD ANGLE PROJECTION

TITLE

PCI EXPRESS
EDGE CARD CONNECTOR
(LEAD FREE VERSION)

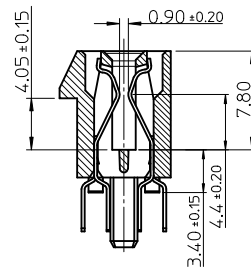
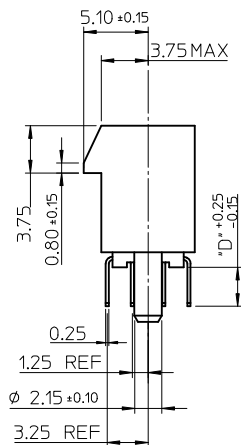
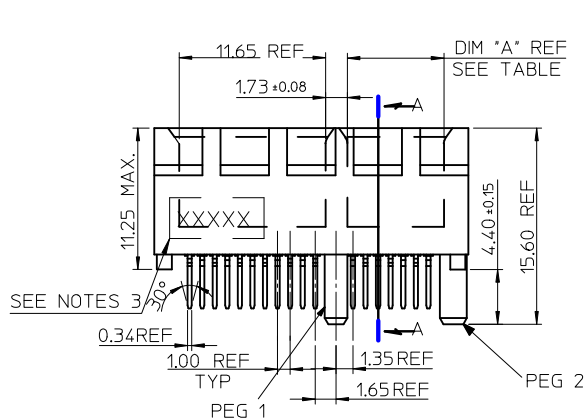
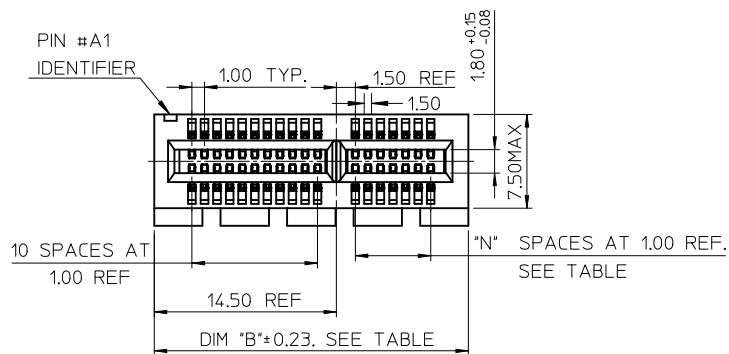
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DOCUMENT NO.

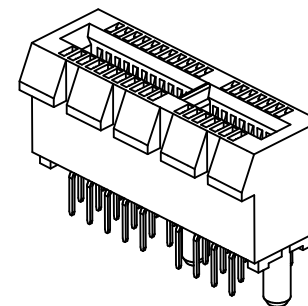
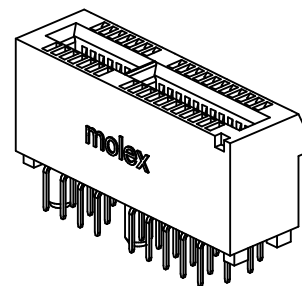
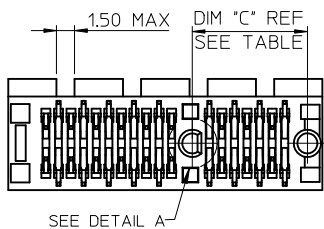
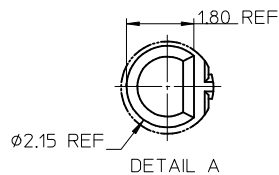
SD-87715-207

SHEET NO.

4 OF 4



SECTION A-A



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 MICROINCH 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

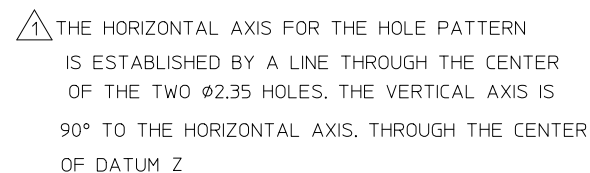
REV	DESCRIPTION	DATE	BY
REVISED	EC NO: SH2010-0425	2010/05/14	DRWNRZhang
	CHKD:Harvey	2007/05/14	
	APPR:XJ Song	2010/06/03	

QUALITY SYMBOLS
▽F=0
▽F=0
▽F=0

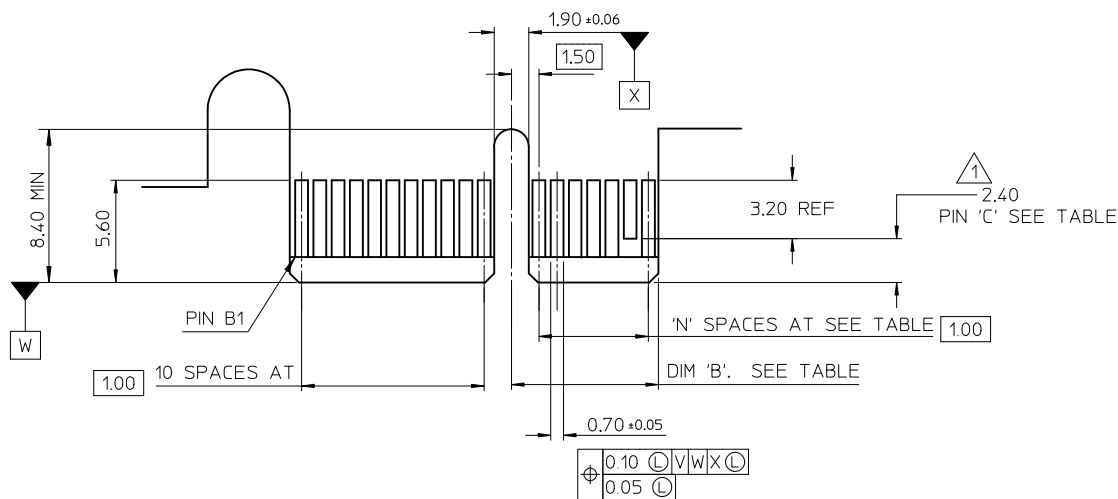
GENERAL TOLERANCES (UNLESS SPECIFIED)		
	mm	INCH
4 PLACES	± ---	± ---
3 PLACES	± ---	± ---
2 PLACES	± 0.25	± ---
1 PLACE	± 0.25	± ---
ANGULAR ± 3 °		
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		

DIMENSION STYLE	SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION
MM ONLY		METRIC	
DRAWN BY	DATE	TITLE	
DAVID HU	2007/05/14	PCI EXPRESS	
CHECKED BY	DATE	EDGE CARD CONNECTOR	
HARVEY	2007/05/14	(LEAD FREE VERSION)	
APPROVED BY	DATE	MOLEX INCORPORATED	
JENNY CHEN	2007/05/14		
MATERIAL NO.	DOCUMENT NO.	SHEET NO.	
SEE SHEET 4	SD-87715-901	1 OF 4	

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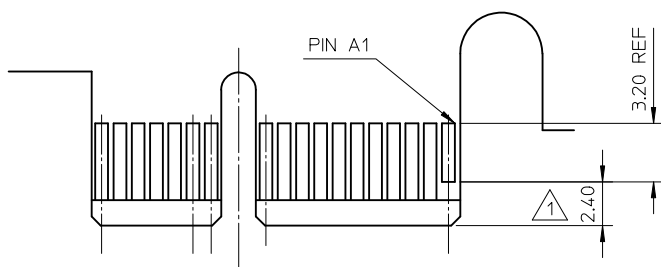


SEE SHEET 1 EC NO: SH2010-0425 DWG:RZHANG CHYD:HARVEY APPR:XJUSONG	2010/05/14 2007/05/14 2010/06/03	DESCRIPTION REV	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)	DIMENSION STYLE MM ONLY	SCALE	DESIGN UNITS METRIC	 THIRD ANGLE PROJECTION																												
			$\nabla = 0$	<table><tr><td></td><td>mm</td><td>INCH</td></tr><tr><td>4 PLACES</td><td>$\pm \text{---}$</td><td>$\pm \text{---}$</td></tr><tr><td>3 PLACES</td><td>$\pm \text{---}$</td><td>$\pm \text{---}$</td></tr><tr><td>2 PLACES</td><td>± 0.25</td><td>$\pm \text{---}$</td></tr><tr><td>1 PLACE</td><td>± 0.25</td><td>$\pm \text{---}$</td></tr></table>		mm	INCH	4 PLACES	$\pm \text{---}$	$\pm \text{---}$	3 PLACES	$\pm \text{---}$	$\pm \text{---}$	2 PLACES	± 0.25	$\pm \text{---}$	1 PLACE	± 0.25	$\pm \text{---}$	<table><tr><td>DRAWN BY</td><td>DATE</td></tr><tr><td>DAVID HU</td><td>2007/05/14</td></tr><tr><td>CHECKED BY</td><td>DATE</td></tr><tr><td>HARVEY</td><td>2007/05/14</td></tr><tr><td>APPROVED BY</td><td>DATE</td></tr><tr><td>JENNY CHEN</td><td>2007/05/14</td></tr></table>	DRAWN BY	DATE	DAVID HU	2007/05/14	CHECKED BY	DATE	HARVEY	2007/05/14	APPROVED BY	DATE	JENNY CHEN	2007/05/14	TITLE PCI EXPRESS EDGE CARD CONNECTOR (LEAD FREE VERSION)			
				mm	INCH																															
			4 PLACES	$\pm \text{---}$	$\pm \text{---}$																															
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$\nabla = 0$	$\nabla = 0$	 MOLEX INCORPORATED	DOCUMENT NO. SD-87715-901		SHEET NO. 2 OF 4																															
$\nabla = 0$	ANGULAR $\pm 3^\circ$	MATERIAL NO. SEE SHEET 1																																		
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		SIZE A3	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION																																	



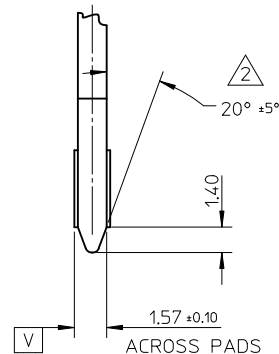
← I/O PANEL DIRECTION

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' 1
X1	36	6	8.15	B17
X16	164	70	72.15	B17, B31 B48,B81

QUALITY SYMBOLS		GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE		SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION	
				MM ONLY					
				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	SD-87715-901	
						MATERIAL NO.			
						SEE SHEET 1		3 OF 4	
						SIZE			
						A3		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION	



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Rev. F 2009/06/18