

PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION

Part Number:

0877159005

Status:

Active

Overview:

Description:

1.00mm (.039") Pitch, PCI Express* Connector, 36 Circuits, Nylon 4/6 Glass-filled, Black Housing, Phosphor Bronze, 0.38µm (15µ") 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 1 lane
Component Type	Edgecard to PCB
Overview	pci_express_card_edge_connector
Product Name	PCI Express*

Physical

Circuits (Loaded)	36
Circuits (maximum)	36
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)	2.40 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

Lead-free Process Capability	Wave Capable (TH only)
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EU RoHS

ELV and RoHS

Compliant

REACH SVHC

Not Reviewed

Halogen-Free

Status

Not Halogen-Free

China RoHS



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

Process Temperature max. C

245

Material Info

Reference - Drawing Numbers

Packaging Specification

PK-87715-001, PK-87715-207

Product Specification

PS-87715-200

Sales Drawing

SD-87715-207, SD-87715-901

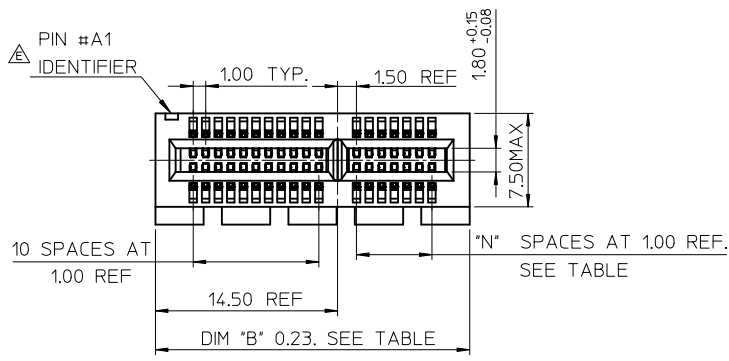
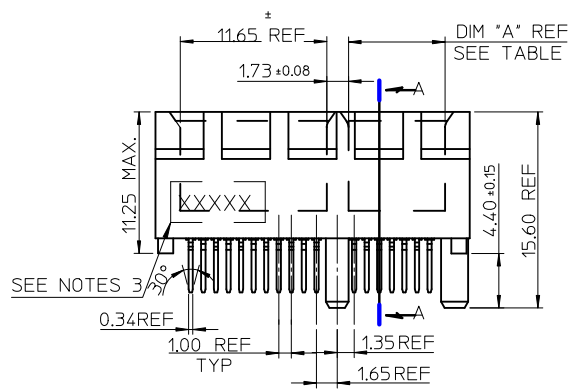
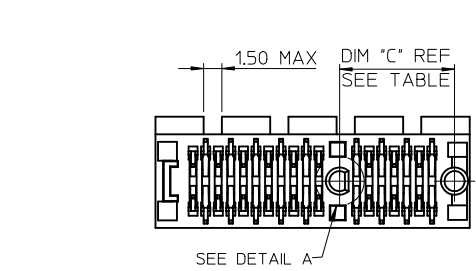
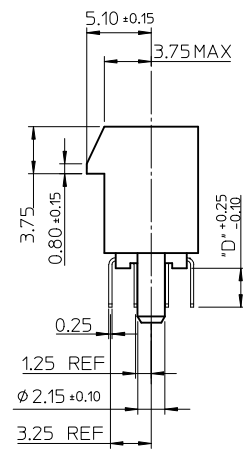
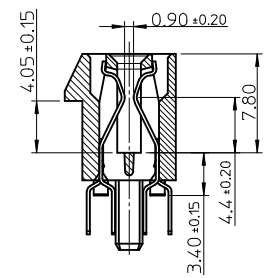
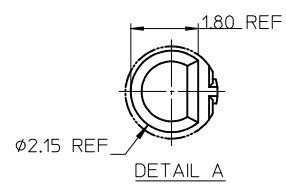
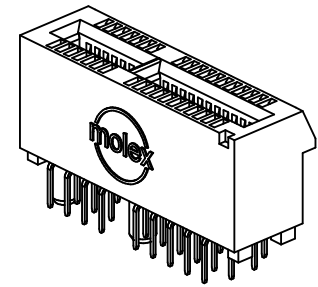
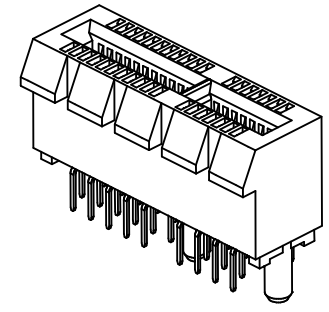
Test Summary

TS-87715-207

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

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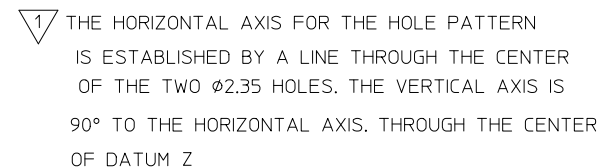


- NOTES:
- 1.MATERIALS:
- 1-1.HOUSING: SEE TABLE ,GLASS FIBER FILLED UL94V-0, COLOR: SEE TABLE.
 - 1-2.CONTACT: SEE TABLE
- 2.PLATING:
- 2-1.CONTACT AREA: GOLD, THICKNESS : SEE TABLE .
 - 2-2.SOLDER TAIL: 100 MICRINCH MIN. TIN PLATING.
 - 2-3.UNDER PLATING: NICKEL PLATING OVERALL.
- 3.WEEK CODE: XX(YEAR) 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						
			4 PLACES	3 PLACES														
				DRAWN BY TOM CHECKED BY ALLEN LIN APPROVED BY WILSON MATERIAL NO. SEE SHEET 4	DATE 2004/07/20 2004/07/20 2004/07/20													
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															



SEE SHEET 1 EC NO: SH2010-0425 DRAWN: ZHANG CHK'D: ALLEN LIN APPR: X J SONG 2010/05/14 2010/07/20 2010/06/03	DESCRIPTION REV	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE	DESIGN UNITS METRIC	 THIRD ANGLE PROJECTION	
		 =0	4 PLACES	± ---	± ---	DRAWN BY	DATE	TITLE PCI EXPRESS EDGE CARD CONNECTOR (LEAD FREE VERSION)		
		 =0	3 PLACES	± ---	± ---	CHECKED BY	DATE			
		 =0	2 PLACES	± 0.25	± ---	ALLEN LIN	2004/07/20	 MOLEX INCORPORATED		
			1 PLACE	± 0.25	± ---	APPROVED BY	DATE			
		ANGULAR ± 3 °		WILSON	2004/07/20	DOCUMENT NO.		SHEET NO.		
		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		MATERIAL NO. SEE SHEET 4		SD-87715-207		2 OF 4		
		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

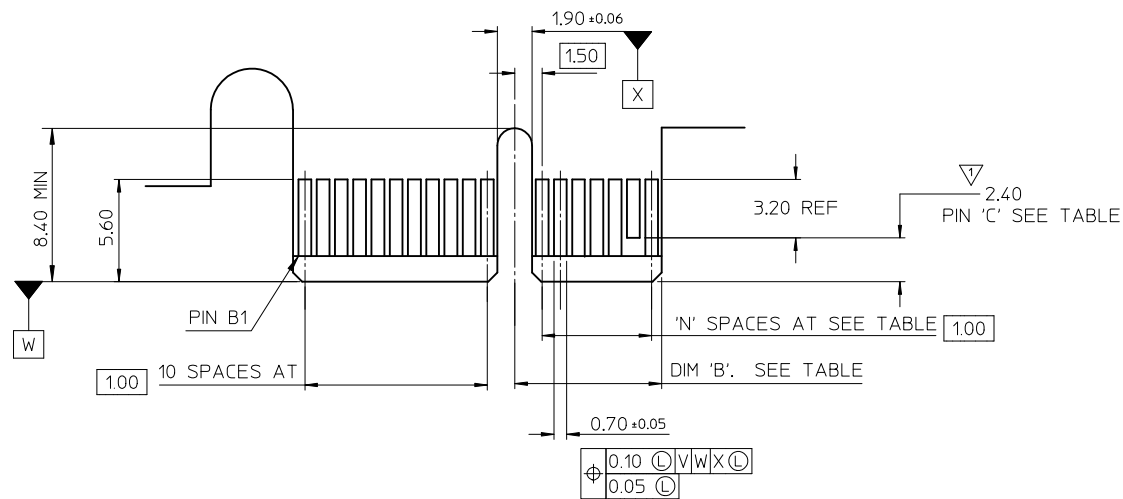
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D

C

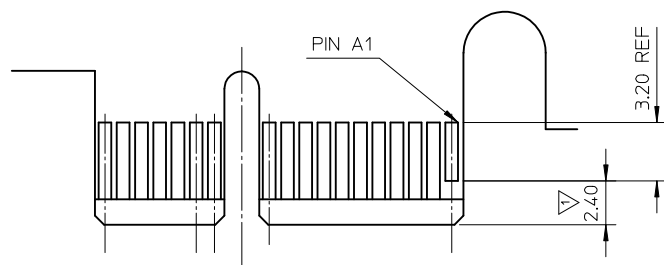
B

A



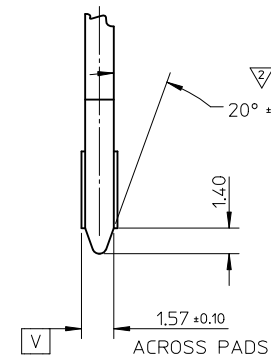
← I/O PANEL DIRECTION

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 <div>=0</div> <div>=0</div> <div>=0</div>	GENERAL TOLERANCES (UNLESS SPECIFIED)			DIMENSION STYLE MM ONLY		SCALE	DESIGN UNITS METRIC	 THIRD ANGLE PROJECTION			
			<div><div>mm</div><div>INCH</div></div>			DRAWN BY TOM		DATE 2004/07/20		TITLE 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 ± ---			MATERIAL NO.		DOCUMENT NO.				SHEET NO. 3 OF 4	
			ANGULAR ± 3 °			SEE SHEET 4		SD-87715-207					
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										

F

F

E

E

D

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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_C=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

CHECKED BY

DATE

APPROVED BY

DATE

MATERIAL NO.

SEE TABLE

SIZE

A3

THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION

SCALE

DESIGN UNITS

METRIC

THIRD ANGLE PROJECTION

TITLE

PCI EXPRESS
EDGE CARD CONNECTOR
(LEAD FREE VERSION)

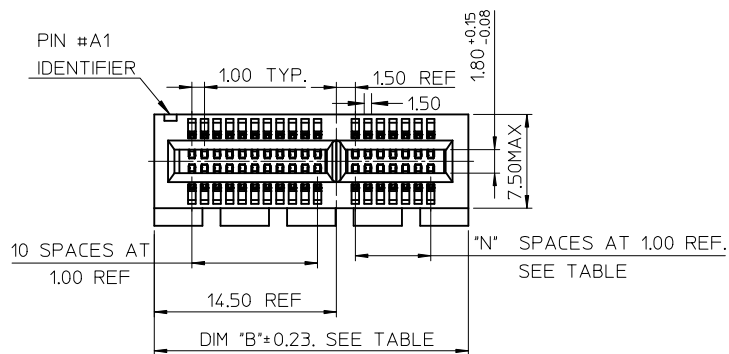
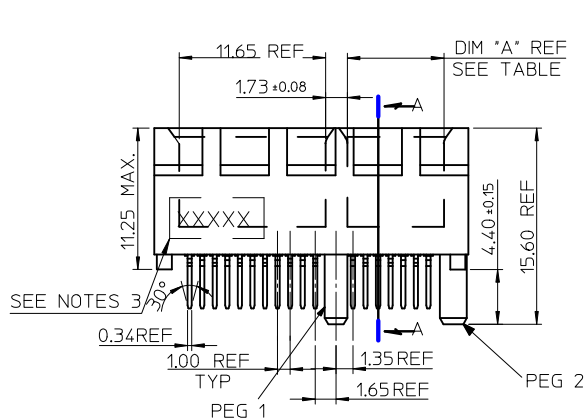
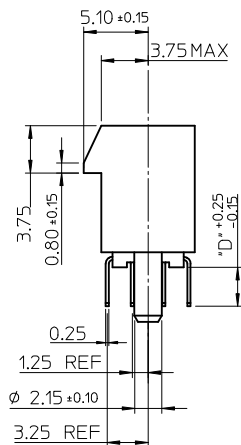
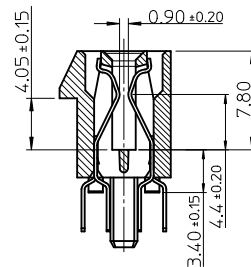
MOLEX INCORPORATED

DOCUMENT NO.

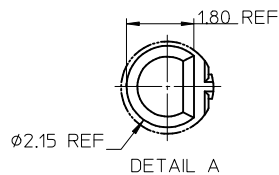
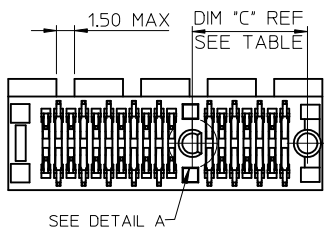
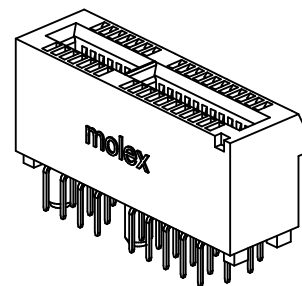
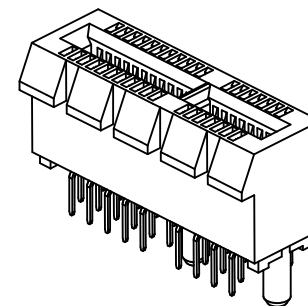
SD-87715-207

SHEET NO.

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

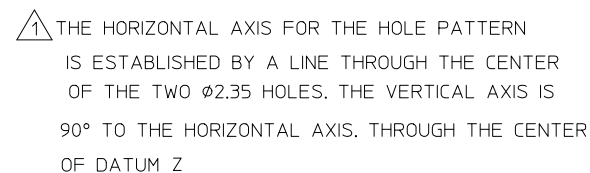
REV	DESCRIPTION	DATE	BY
REVISED	EC NO: SH2010-0425	2010/05/14	DRWNRZhang
	CHKD:Harvey	2007/05/14	
	APPR:XJ Song	2010/06/03	

QUALITY SYMBOLS
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▽F=0
▽F=0

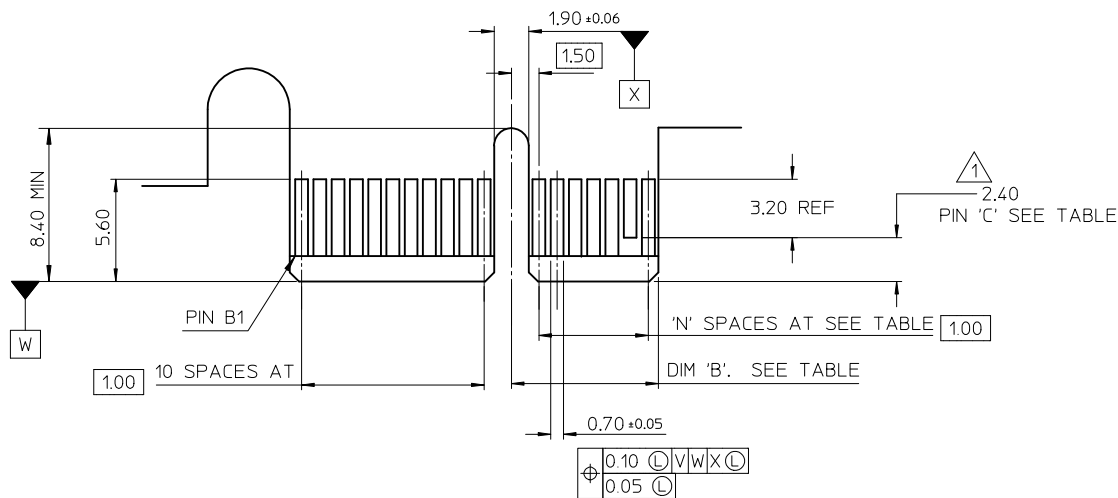
GENERAL TOLERANCES (UNLESS SPECIFIED)		
	mm	INCH
4 PLACES	± ---	± ---
3 PLACES	± ---	± ---
2 PLACES	± 0.25	± ---
1 PLACE	± 0.25	± ---
ANGULAR ± 3 °		
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		

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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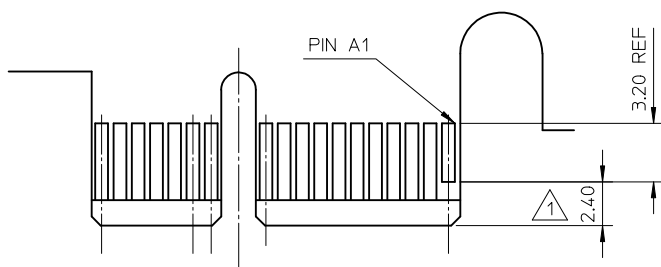


SEE SHEET 1 EC NO: SH2010-0425 DWG:RZHANG CHYD:HARVEY APPR:XJUSONG	2010/05/14 2007/05/14 2010/06/03	DESCRIPTION REV	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION																											
			$\nabla = 0$ $\nabla = 0$ $\nabla = 0$		<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	$\pm \text{---}$	$\pm \text{---}$																															
				3 PLACES	$\pm \text{---}$	$\pm \text{---}$																															
2 PLACES	± 0.25	$\pm \text{---}$																																			
1 PLACE	± 0.25	$\pm \text{---}$																																			
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CHECKED BY	DATE																																				
HARVEY	2007/05/14																																				
APPROVED BY	DATE																																				
JENNY CHEN	2007/05/14																																				
ANGULAR $\pm 3^\circ$		MATERIAL NO. SEE SHEET 1		DOCUMENT NO. SD-87715-901	SHEET NO. 2 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																																	



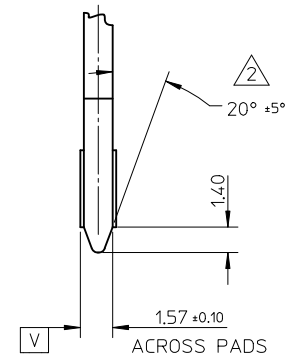
← I/O PANEL DIRECTION

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	
				3 PLACES	± ---	CHECKED BY	DATE	EDGE CARD CONNECTOR	
				2 PLACES	± 0.25	HARVEY	2007/05/14	(LEAD FREE VERSION)	
				1 PLACE	± 0.25	APPROVED BY	DATE	MOLEX INCORPORATED	
				ANGULAR ± 3 °		JENNY CHEN	2007/05/14	MOLEX INCORPORATED	
				DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		MATERIAL NO.		DOCUMENT NO.	
						SEE SHEET 1		SD-87715-901	
						THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		SHEET NO.	
								3 OF 4	

F

E

D

C

B

A

B

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				
87715-9009					30 MICROINCH	3.00			
87715-0001					15 MICROINCH	2.54			

B

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	3.00			
87715-9303					GOLD FLASH				
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

DRW:RZHANG 2010/05/14

CHK:D HARVEY 2007/05/14

APPR:XJ SONG 2010/06/03

B

REV

DESCRIPTION

QUALITY SYMBOLS

$F_A=0$

$F_C=0$

$F_P=0$

GENERAL TOLERANCES (UNLESS SPECIFIED)

	mm	INCH
4 PLACES	$\pm$ ---	$\pm$ ---
3 PLACES	$\pm$ ---	$\pm$ ---
2 PLACES	$\pm$ 0.25	$\pm$ ---
1 PLACE	$\pm$ 0.25	$\pm$ ---

ANGULAR $\pm$ 3 °

DRAFT WHERE APPLICABLE
MUST REMAIN
WITHIN DIMENSIONS

DIMENSION STYLE

MM ONLY

DRAWN BY	DATE
DAVID HU	2007/05/14
CHECKED BY	DATE
HARVEY	2007/05/14
APPROVED BY	DATE
JENNY CHEN	2007/05/14

MATERIAL NO.

SEE SHEET 1

SIZE

A3

THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION

SCALE

DESIGN UNITS

METRIC

THIRD ANGLE PROJECTION

TITLE

PCI EXPRESS
EDGE CARD CONNECTOR
(LEAD FREE VERSION)

MOLEX INCORPORATED

DOCUMENT NO.

SD-87715-901

SHEET NO.

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