

Distributed by:

JAMECO[®]
ELECTRONICS

www.Jameco.com ♦ 1-800-831-4242

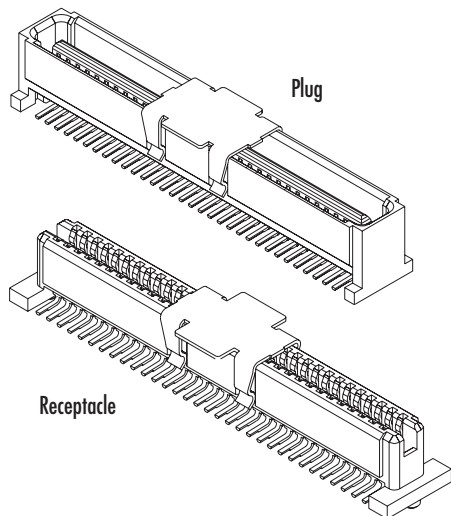
The content and copyrights of the attached
material are the property of its owner.

Jameco Part Number 1976591

1.00mm (.039") Mezzanine IEEE 1386 Board-to-Board Plug/Receptacle

71436/71439

**Dual Row, SMT
Vertical Stacking**



Features and Benefits

- Mated heights: 8, 9, 10, 11, 12, 13, 14 and 15mm
- Size 64 circuits
- Leaf-style design protects pins
- Low insertion force
- For use in combinations of 1 to 4 mated pairs
- High-temperature LCP housing for use with lead-free processing temps

Reference Information

Product Specification: PS-71436-9999
Packaging: Tube or tape and reel
UL File No.: E29179
Designed In: Millimeters

Electrical

Voltage: 100V
Current: 1.0A
Contact Resistance: 30 milliohms max.
Dielectric Withstanding Voltage: 250V
Insulation Resistance: 1000 Megohms min.

Mechanical

Contact Retention to Housing: 0.4kgf min.
Mating Force: 50g max. per contact
Unmating Force: 25g min. per contact

Physical

Housing: Glass-filled LCP, UL 94V-0
Contact: Phosphor Bronze
Plating: 30µ" Gold min.
Operating Temperature: -55 to +85°C

Circuits	Mated Stack Height	Pegs	Packaging	Order No.		Lead-free
				Plug	Receptacle	
64	8.00mm (.315")	Yes	Tape and Reel	71436-0464	71439-0464	Yes
			Tube	71436-0164	71439-0164	
		No	Tape and Reel	71436-0864	71439-0864	
			Tube	71436-0564	Contact Molex	
	9.00mm (.354")	Yes	Tape and Reel	71436-1464	71439-0464	
			Tube	71436-1164	71439-0164	
		No	Tape and Reel	71436-1864	71439-0864	
			Tube	71436-1564	Contact Molex	
	10.00mm (.394")	Yes	Tape and Reel	71436-2464	71439-0464	
			Tube	71436-2164	71439-0164	
		No	Tape and Reel	71436-2864	71439-0864	
			Tube	71436-2564	Contact Molex	
	11.00mm (.433")	Yes	Tape and Reel	71436-1464	71439-1464	
			Tube	71436-1164	71439-1164	
		No	Tape and Reel	71436-1864	71439-1864	
			Tube	71436-1564	71439-1564	
	12.00mm (.472")	Yes	Tape and Reel	71436-2464	71439-1464	
			Tube	71436-2164	71439-1164	
		No	Tape and Reel	71436-2864	71439-1864	
			Tube	71436-2564	71439-1564	
	13.00mm (.512")	Yes	Tape and Reel	71436-2464	71439-2464	
			Tube	71436-2164	71439-2164	
		No	Tape and Reel	71436-2864	71439-2864	
			Tube	71436-2564	Contact Molex	
14.00mm (.551")	Yes	Tape and Reel	71436-1464	71439-3464		
		Tube	71436-1164	71439-3164		
	No	Tape and Reel	71436-1864	71439-3864		
		Tube	71436-1564	71439-3564		
15.00mm (.591")	Yes	Tape and Reel	71436-2464	71439-3464		
		Tube	71436-2164	71439-3164		
	No	Tape and Reel	71436-2864	71439-3864		
		Tube	71436-2564	71439-3564		

Note: These order numbers are the recommended plug and receptacle combinations for mated stack heights per EIA standard 700 AAAB. Per EIA standard, board stack height measured from facing surfaces of parallel circuit boards includes solder thickness allowance of 0.1 mm (.004") per side.

A
0.40 to 1.60mm (.016 to .063") Pitch PCB and Wire Connectors



PRODUCT SPECIFICATION

TABLE OF CONTENTS

- 1.0 SCOPE
- 2.0 PRODUCT DESCRIPTION
- 3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS
- 4.0 RATINGS
- 5.0 PERFORMANCE
- 6.0 PROCESSING GUIDELINES

1.0 SCOPE

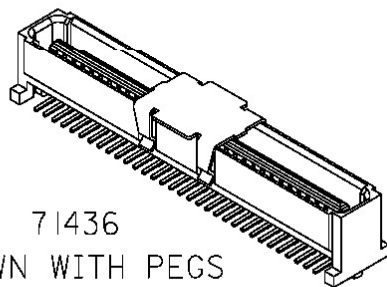
This Product Specification covers the 1.0mm pitch board-to-board plug and receptacle connectors.

2.0 PRODUCT DESCRIPTION

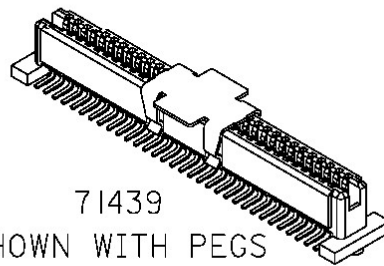
2.1 The 71436 plug and the 71439 receptacle connectors have been designed in accordance with EIA standard 700 AAAB for 1.0mm two-part connectors for use with parallel printed boards.

2.1.1 All 1.0mm connectors are available with or without locating pegs.

2.1.2 All 1.0mm connectors can be supplied with a vacuum cap for robotic placement.



71436
SHOWN WITH PEGS
AND VACUUM CAP



71439
SHOWN WITH PEGS
AND VACUUM CAP

REVISION: F	EGR/ECN INFORMATION: EC No: UCP2008-0856 DATE: 2007/10/15	TITLE: PRODUCT SPECIFICATION FOR 1.0mm BOARD-TO-BOARD CONNECTORS	SHEET No. 1 of 7
DOCUMENT NUMBER: PS-71436-9999	CREATED / REVISED BY: Marc Ibarra	CHECKED BY: Bob Barker	APPROVED BY: Steve Miller



PRODUCT SPECIFICATION

2.0 PRODUCT DESCRIPTION (CONT'D)

2.2 Product Name and Item Numbers
See figure 1 and table 1.

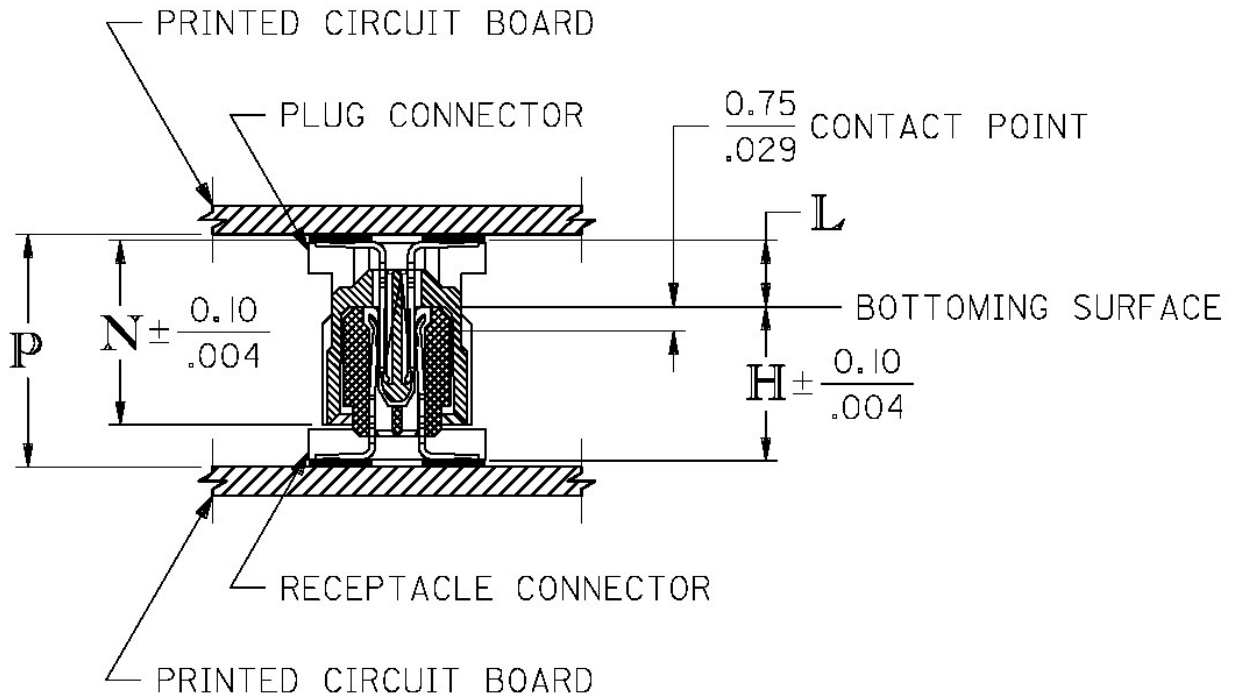


Figure 1

PLUG CONNECTOR			RECEPTACLE CONNECTOR		STACK HEIGHT DIMENSION P +0.00/-0.40 mm +.000/-0.16 Inch
ITEM NO.	DIM. N	DIM. L	ITEM NO.	DIM. H	
71436-0***	6.35/.250	2.30/.090	71439-0***	5.30/.209	8.00/.315
71436-1***	7.35/.289	3.30/.130	71439-0***	5.30/.209	9.00/.354
71436-2***	8.35/.329	4.30/.169	71439-0***	5.30/.209	10.00/.394
71436-1***	7.35/.289	3.30/.130	71439-1***	7.30/.287	11.00/.433
71436-2***	8.35/.329	4.30/.169	71439-1***	7.30/.287	12.00/.472
71436-2***	8.35/.329	4.30/.169	71439-2***	8.30/.327	13.00/.512
71436-1***	7.35/.289	3.30/.130	71439-3***	10.30/.406	14.00/.551
71436-2***	8.35/.329	4.30/.169	71439-3***	10.30/.406	15.00/.591

Table 1

REVISION: F	EGR/ECN INFORMATION: EC No: UCP2008-0856 DATE: 2007/10/15	TITLE: PRODUCT SPECIFICATION FOR 1.0mm BOARD-TO-BOARD CONNECTORS	SHEET No. 2 of 7
DOCUMENT NUMBER: PS-71436-9999	CREATED / REVISED BY: Marc Ibarra	CHECKED BY: Bob Barker	APPROVED BY: Steve Miller



PRODUCT SPECIFICATION

2.3 Dimensions, Materials, and Platings:

See appropriate sales drawings for information on dimensions, materials, and platings.

3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

3.1 See sales drawings and other sections of this specification for necessary referenced documents and specifications.

3.2 Recognized Agency Approvals:

3.2.1 Underwriters Laboratories Inc.: File Number E29179

4.0 RATINGS

4.1 VOLTAGE

250Volts AC (RMS) (contact to contact)

4.2 CURRENT (30°C Temperature rise)

0.5 Amps maximum, all circuits wired in series ; 1.0 Amps maximum, five adjacent circuits wired in series

4.3 TEMPERATURE

Operating: - 55°C to + 85°C

5.0 PERFORMANCE

5.1 ELECTRICAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
1	Contact Resistance (Low Level)	Mate connectors, measure by dry circuit: apply a maximum voltage of 20 mV and a current of 10 mA.	30 milliohms MAXIMUM [initial]
2	Contact Resistance @ Rated Current	Mate connectors: apply a maximum voltage of 20 mV at rated current.	15 milliohms MAXIMUM [initial]
3	Insulation Resistance	Apply 250±50 VDC, measure resistance between adjacent terminals.	100 megaohms MINIMUM
4	Dielectric Withstanding Voltage	Apply 250VAC for 1 minute between adjacent terminals.	No breakdown;

REVISION: F	EGR/ECN INFORMATION: EC No: UCP2008-0856 DATE: 2007/10/15	TITLE: PRODUCT SPECIFICATION FOR 1.0mm BOARD-TO-BOARD CONNECTORS	SHEET No. 3 of 7
DOCUMENT NUMBER: PS-71436-9999		CREATED / REVISED BY: Marc Ibarra	CHECKED BY: Bob Barker
		APPROVED BY: Steve Miller	



PRODUCT SPECIFICATION

5.2 MECHANICAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
5	Terminal Retention Force	Apply axial force on terminal in housing at rate of 25±6mm (1 ± ¼ inch) per minute.	3.9 N (0.4 Kgf) MINIMUM retention force
6	Connector Mate and Unmate Forces	Mate and unmate connectors (male to female) at a rate of 25 ± 6 mm (1 ± ¼ inch) per minute.	Mate Force: 60g X no. of circuits maximum & Un-Mate Force: 23g X no. of circuits, minimum
7	Durability	Mate connectors up to 100 cycles at a maximum rate of 10mm (0.40in) per second; rest 30 seconds minimum (when unmated).	Maximum contact resistance change: 15 milliohms
8	Vibration (Random)	Amplitude: 1.9mm (.076in) peak-to-peak; Sweep: 10-55-10 Hz in one minute; Duration: 2 hours in each axis x, y and z.	Maximum contact resistance change: 15 milliohms & Discontinuity < 1 microsecond
10	Shock (Mechanical)	490 m/s ² (50g) peak saw-tooth, 11 milliseconds duration; one shock each direction in each axis x, y and z.	Maximum contact resistance change: 15 milliohms & Discontinuity < 1 microsecond

5.3 ENVIRONMENTAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT						
11	Shock (Thermal)	Mate connectors; expose to 5 cycles of: <table border="1"> <tr> <td><u>Temperature °C</u></td> <td><u>Duration (Minutes)</u></td> </tr> <tr> <td>-40 +0/-3</td> <td>30</td> </tr> <tr> <td>+105 +3/-0</td> <td>30</td> </tr> </table>	<u>Temperature °C</u>	<u>Duration (Minutes)</u>	-40 +0/-3	30	+105 +3/-0	30	Maximum contact resistance change: 15 milliohms & Visual: No Damage
<u>Temperature °C</u>	<u>Duration (Minutes)</u>								
-40 +0/-3	30								
+105 +3/-0	30								
12	Thermal Aging	Mate connectors; expose to: 250 hours at 85 ± 2°C	Maximum contact resistance change: 15 milliohms & Visual: No Damage						

REVISION: F	EGR/ECN INFORMATION: EC No: UCP2008-0856 DATE: 2007/10/15	TITLE: PRODUCT SPECIFICATION FOR 1.0mm BOARD-TO-BOARD CONNECTORS	SHEET No. 4 of 7
DOCUMENT NUMBER: PS-71436-9999	CREATED / REVISED BY: Marc Ibarra	CHECKED BY: Bob Barker	APPROVED BY: Steve Miller



PRODUCT SPECIFICATION

5.3 ENVIRONMENTAL REQUIREMENTS (continued)

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
27	Humidity (Steady State)	Mate connectors: expose to a temperature of $40 \pm 2^{\circ}\text{C}$ with a relative humidity of 90-95% for 240 hours. Per MIL-STD-202F, Method 103B, Test Condition A.	Maximum contact resistance change: 15 milliohms & Visual: No Damage
28	Humidity (Cyclic)	Test mated connectors per MIL-STD-202F, Method 106E, excluding steps 7a and 7b.	Maximum contact resistance change: 15 milliohms & Visual: No Damage
30	Temperature Rise and Current Cycling	Measure Temperature rise of mated connectors at rated current after 96 hours, then after 45 minutes ON, 15 minutes OFF for 240 hours, and finally after 96 hours at rated current.	Maximum Temperature rise: 30°C over ambient Maximum contact resistance change: 15 milliohms
36	Mixed Flowing Gas	Environmental Class II, 7 days unmated.	Maximum contact resistance change: 15 milliohms

6.0 PROCESSING GUIDELINES

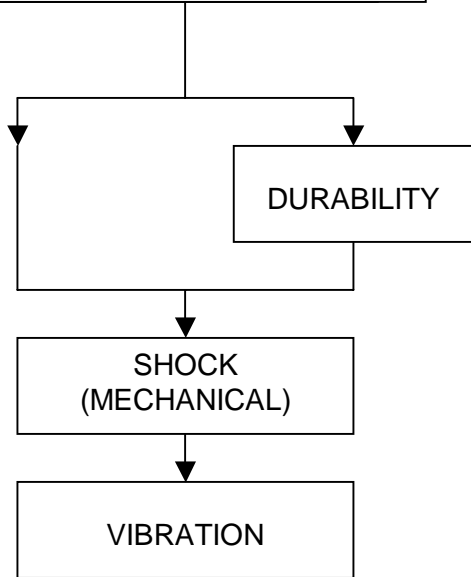
<u>PROCESSING STEPS</u>	<u>RECOMMENDATION</u>	<u>COMMENTS</u>
Resistance to Soldering Heat	Peak soldering temperature to be 265 degrees C. Maximum time within 5 degrees of peak temperature to be 40 seconds. Note: Connectors must be dried for 8 hours @ 70°C prior to processing at temperatures over 245°C . Connectors may be left in the tape and reel or tubes during the drying operation.	Appearance: No Physical Damage

REVISION: F	EGR/ECN INFORMATION: EC No: UCP2008-0856 DATE: 2007/10/15	TITLE: PRODUCT SPECIFICATION FOR 1.0mm BOARD-TO-BOARD CONNECTORS	SHEET No. 5 of 7
DOCUMENT NUMBER: PS-71436-9999		CREATED / REVISED BY: Marc Ibarra	CHECKED BY: Bob Barker
		APPROVED BY: Steve Miller	

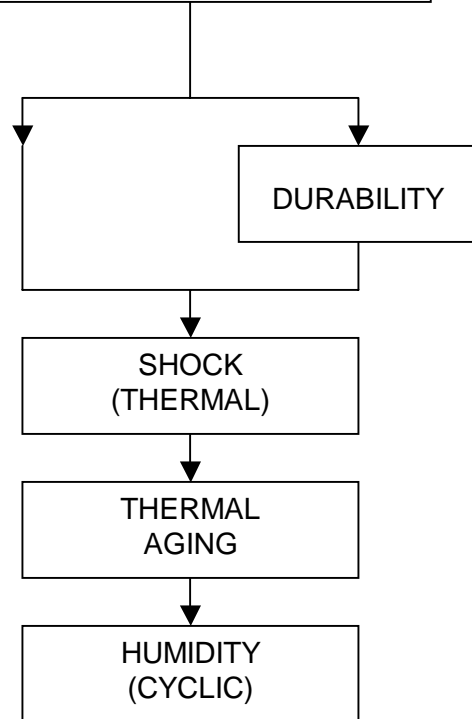


PRODUCT SPECIFICATION

MATED ENVIRONMENTAL AND MECHANICAL



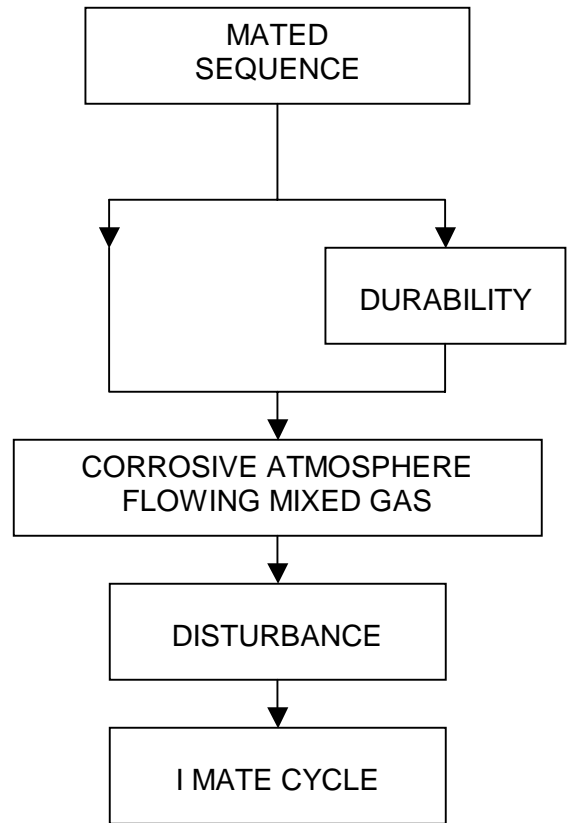
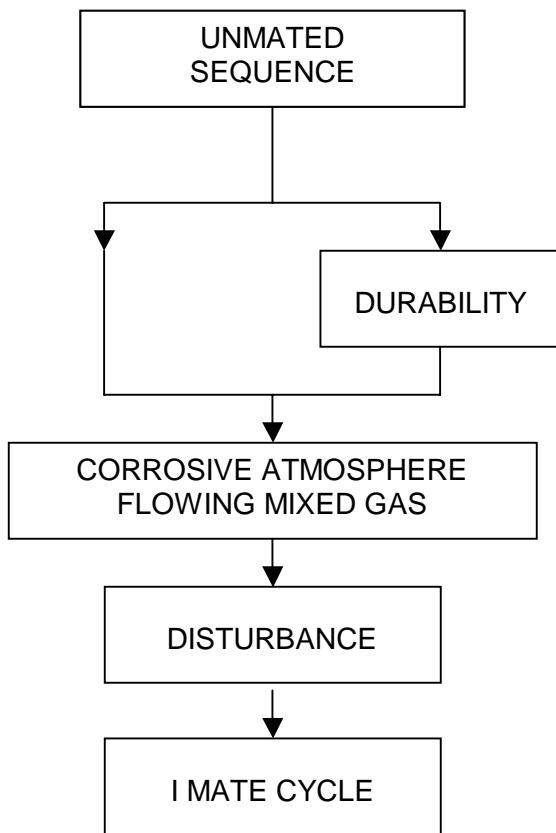
MATED ENVIRONMENTAL



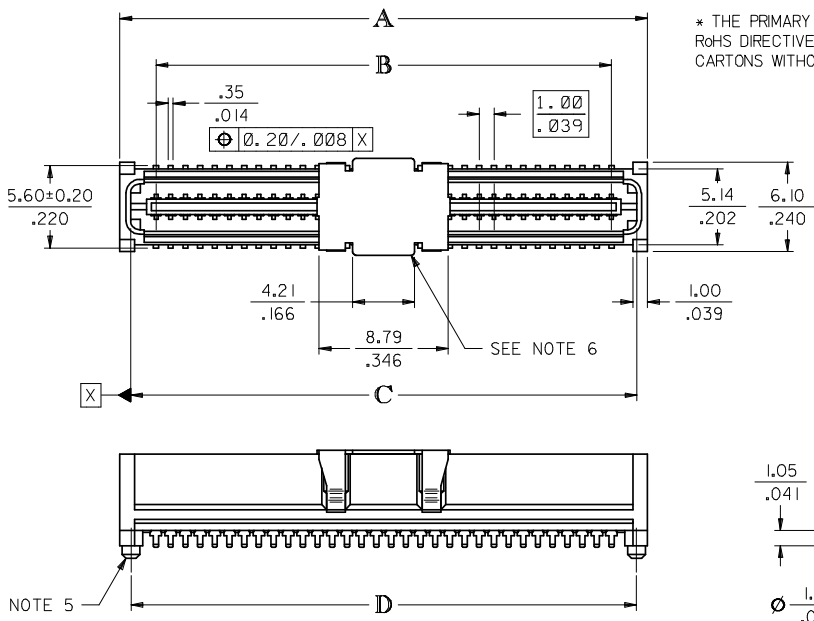
REVISION: F	EGR/ECN INFORMATION: EC No: UCP2008-0856 DATE: 2007/10/15	TITLE: PRODUCT SPECIFICATION FOR 1.0mm BOARD-TO-BOARD CONNECTORS	SHEET No. 6 of 7
DOCUMENT NUMBER: PS-71436-9999	CREATED / REVISED BY: Marc Ibarra	CHECKED BY: Bob Barker	APPROVED BY: Steve Miller



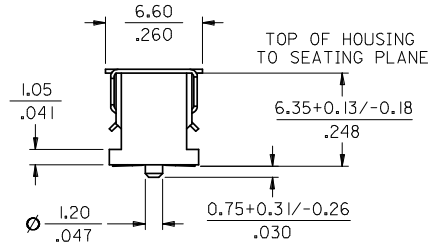
PRODUCT SPECIFICATION



REVISION: F	EGR/ECN INFORMATION: EC No: UCP2008-0856 DATE: 2007/10/15	TITLE: PRODUCT SPECIFICATION FOR 1.0mm BOARD-TO-BOARD CONNECTORS	SHEET No. 7 of 7
DOCUMENT NUMBER: PS-71436-9999	CREATED / REVISED BY: Marc Ibarra	CHECKED BY: Bob Barker	APPROVED BY: Steve Miller



* THE PRIMARY SHIPPING CARTON WILL BE LABEL *COMPLIANT TO RoHS DIRECTIVE 2002/95/EC AND ELV ANNEX II OF DIRECTIVE 2000/53/EC* CARTONS WITHOUT THIS LABEL MAY CONTAIN PRODUCT WITH LEAD.



CIRCUIT SIZE	DIM. A	DIM. B	DIM. C	DIM. D
20	13.90 .547	9.00 .354	12.58 .495	12.40 .488
30	18.90 .744	14.00 .551	17.58 .692	17.40 .685
40	23.90 .941	19.00 .748	22.58 .889	22.40 .882
50	28.90 1.138	24.00 .945	27.58 1.086	27.40 1.079
60	33.90 1.335	29.00 1.142	32.58 1.283	32.40 1.276
64	35.90 1.413	31.00 1.220	34.58 1.361	34.40 1.354
70	38.90 1.531	34.00 1.339	37.58 1.480	37.40 1.472
80	43.90 1.728	39.00 1.535	42.58 1.676	42.40 1.669
84	45.90 1.807	41.00 1.614	44.58 1.755	44.40 1.748
90	48.90 1.925	44.00 1.732	47.58 1.873	47.40 1.866
100	53.90 2.122	49.00 1.929	52.58 2.070	52.40 2.063
110	58.90 2.319	54.00 2.126	57.58 2.267	57.40 2.260
120	63.90 2.516	59.00 2.323	62.58 2.464	62.40 2.457

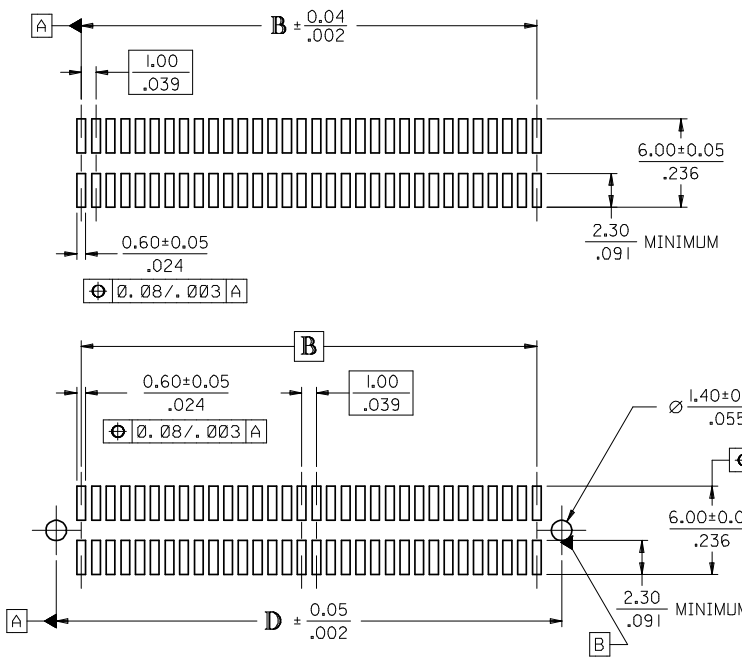
NOTES:

- 64-CIRCUIT PLUG ASSEMBLY WITH PEGS AND VACUUM CAP SHOWN FOR ILLUSTRATION PURPOSES ONLY.
- HOUSING MATERIAL: G.F. THERMOPLASTIC; UL RATING: 94V-0; COLOR: WHITE
TERMINAL MATERIAL: PHOSPHOR BRONZE; 0.205/.0080 THICK
VACUUM CAP MATERIAL: STAINLESS STEEL; 0.255/.0100 THICK
- COPLANARITY OF SMT TAILS: 0.10/.004 MAX.
- PACKAGING SPECIFICATIONS: REFER TO CHART ON SHEET 2.
- PEGS ARE OPTIONAL. REFER TO CHART ON SHEET 2.
- VACUUM PICK & PLACE CAP IS OPTIONAL. REFER TO CHART ON SHEET 2.
- THIS PART CONFORMS TO EIA STANDARD 700 AAAB FOR 1.0mm TWO-PART CONNECTORS FOR USE WITH PARALLEL PRINTED BOARDS.
- THIS PART, WHEN MATED WITH MOLEX 1.0mm RECEPTACLE CONNECTOR SERIES 71439, CONFORMS TO MOLEX PRODUCT SPECIFICATION PS-71436-9999. REFER TO CHART ON SHEET 2 FOR MATED STACK HEIGHT(S) FOR THIS PLUG.
- DIMENSIONS ARE IN MILLIMETER/INCH. INCH DIMENSIONS SHOWN FOR REFERENCE ONLY.

PLATING PER ES-88:

30 GOLD - 0.00076/.000030 MINIMUM GOLD PLATING IN CONTACT AREA,
0.0019/.000075 MINIMUM TIN PLATING IN TERMINAL AREA,
OVER 0.00127/.000050 MINIMUM NICKEL PLATING OVERALL

2	F
1	G
SHT	REV



RECOMMENDED PCB LAYOUT (WITH AND WITHOUT PEGS)

RECOMMENDED PCB THICKNESS: 1.00±0.10/.039±.004 MINIMUM

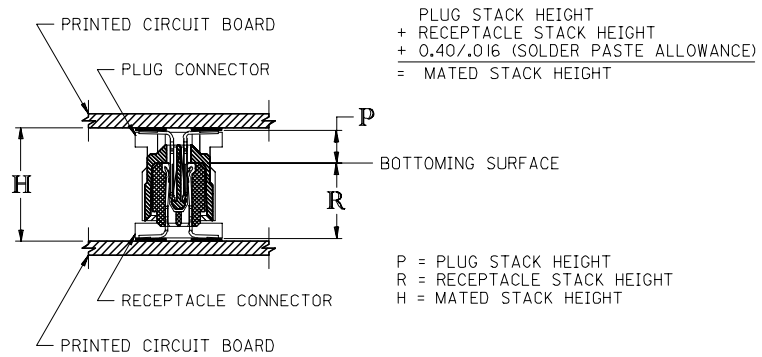
CORRECT DESIGN UNITS EC NO: UCP2008-2464 DRAWN: SIBARRA 2008/04/07 CHKD: BARKER 2008/04/16 APPR: MILLER 2008/04/16	QUALITY SYMBOLS ▽=0 ▽=0	GENERAL TOLERANCES (UNLESS SPECIFIED)	DIMENSION STYLE MM/IN	SCALE 4:1	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION
	4 PLACES ±--- ±---	3 PLACES ±--- ±.005	2 PLACES ±0.13 ±.01	1 PLACE ±0.25 ±---	ANGULAR ±1/2°	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS
REED 1995/03/23	CHECKED BY DATE	REED 1995/03/23	APPROVED BY DATE	BIXLER 1995/03/23	TITLE SALES ASSY. 1.0MM BOARD TO BOARD PLUG CONNECTOR 2.30/090 STACK HEIGHT	
MOLEX INCORPORATED			DOCUMENT NO. SDA-71436-0***	SHEET NO. 1 OF 2		
THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION						

STANDARD

CIRCUIT SIZE	PLUG ASSEMBLY ITEM NUMBER	PEGS	PICK & PLACE CAP	PACKAGING SPEC. NUMBER	PACKAGING TYPE
64	71436-0164	YES	NO	PK-70873-0607	TUBE
64	71436-0364	YES	YES	PK-70873-0607	TUBE
64	71436-0464	YES	YES	PK-70873-063	TAPE & REEL
64	71436-0564	NO	NO	PK-70873-0606	TUBE
64	71436-0764	NO	YES	PK-70873-0606	TUBE
64	71436-0864	NO	YES	PK-70873-063	TAPE & REEL

RECOMMENDED PLUG/RECEPTACLE COMBINATION FOR MATED STACK HEIGHT PER EIA STANDARD 700 AAAB

MATED STACK HEIGHT	RECEPTACLE HEIGHT	RECEPTACLE SERIES NO.	PLUG HEIGHT	PLUG SERIES NO.
8.00/.315	5.30/.209	71439-0***	2.30/.090	71436-0***



MODIFY PACKAGING EC NO: UCP2006-2840 DRWN:MS:BARRA 2006/06/12 CHKD:BBARKER 2006/06/12 APPR:SMILLER 2006/06/12 REVISION DESCRIPTION	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)	DIMENSION STYLE	SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION
	$\nabla=0$ $\nabla=0$	mm INCH	MM/IN	---	INCH	
		4 PLACES ± --- ± ---	DRAWN BY DATE			
		3 PLACES ± --- ± ---	SMR 1995/03/23			
	2 PLACES ± --- ± ---	CHECKED BY DATE				
	1 PLACE ± --- ± ---	SMR 1995/03/23				
	ANGULAR ±1/2°	APPROVED BY DATE				
		SMR 1995/03/23				
		MATERIAL NO.				
		SEE TABLE				
		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS				
		SIZE C				
		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION				

TITLE: SALES ASSY, 1.0MM BOARD TO BOARD PLUG CONNECTOR 2.30/.090 STACK HEIGHT
 MOLEX MOLEX INCORPORATED
 DOCUMENT NO. SDA-71436-0***
 SHEET NO. 2 OF 2