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ELECTRONICS

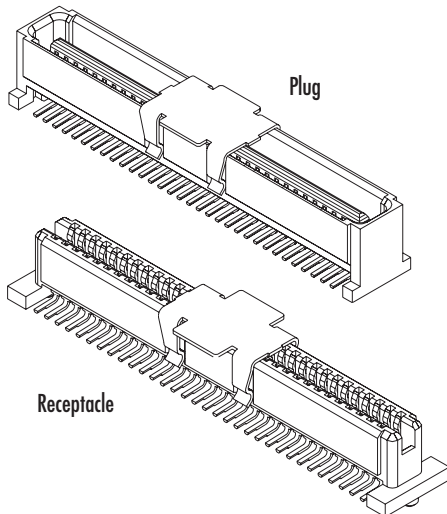
www.Jameco.com ♦ 1-800-831-4242

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Jameco Part Number 1303046

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.



PRODUCT SPECIFICATION
1.0mm BOARD-TO-BOARD CONNECTORS
PS-71436-9999

1.0 Scope:

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

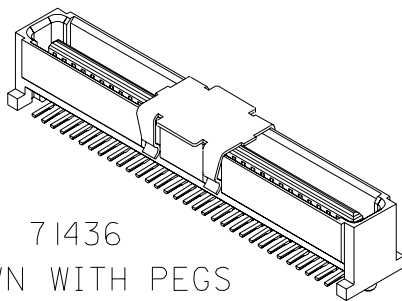
2.0 Product Description:

2.1 The 71436/71741 plug and the 71439/71742 receptacle connectors have been designed in accordance with EIA standard 700 AAAB for 1.0mm two-part connectors for use with parallel printed boards.

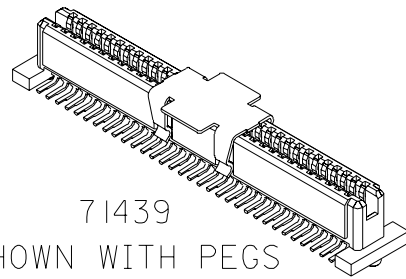
2.1.1 All 1.0mm connectors are available with or without locating pegs.

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

2.1.3 71741 plug and 71742 receptacle have passive latches (two on each side) for added retention.



71436
SHOWN WITH PEGS
AND VACUUM CAP



71439
SHOWN WITH PEGS
AND VACUUM CAP

DRWG. NO.
PS-71436-9999

REV.
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PS71436X1.DGN

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SHT. 1 OF 11

DRWG. NO.
PS-71436-9999



MOLEX INCORPORATED
LISLE, ILL. 60532 U.S.A.

PRODUCT SPECIFICATION
1.0mm BOARD-TO-BOARD CONNECTORS
PS-71436-9999

2.0 Product Description: (cont'd)

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

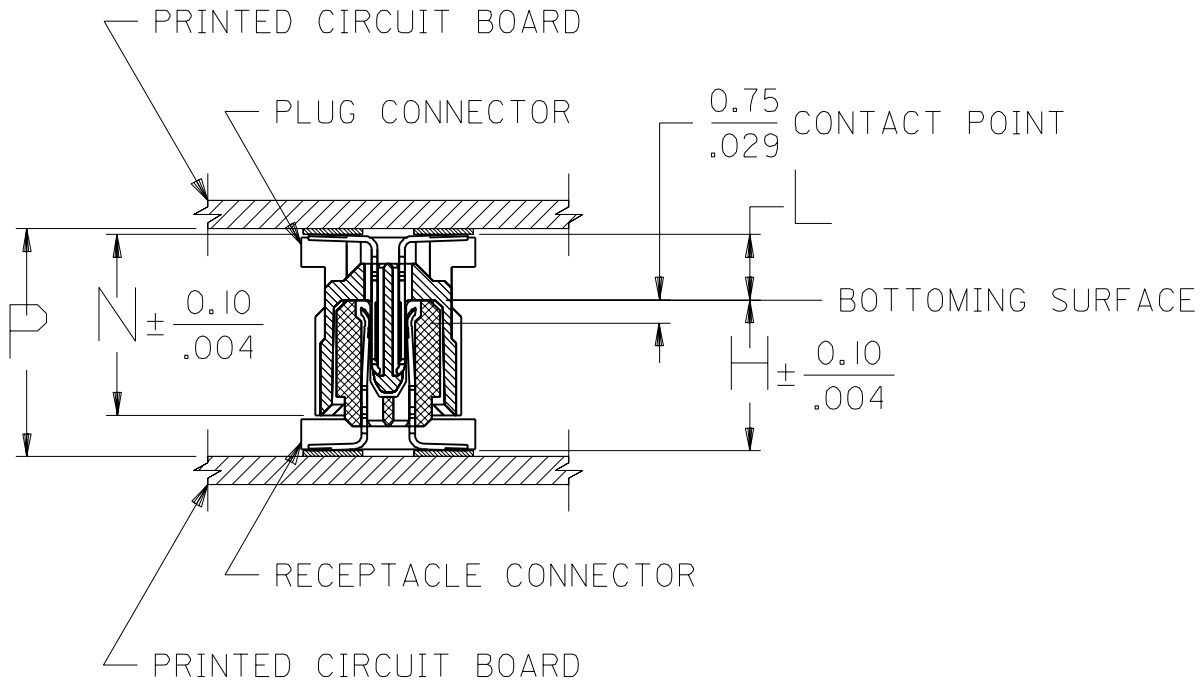


Figure 1

DRWG. NO.
PS-71436-9999

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DRWG. NO.
PS-71436-9999



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PRODUCT SPECIFICATION
1.0mm BOARD-TO-BOARD CONNECTORS
PS-71436-9999

2.0 Product Description: (cont'd)

2.2 Product Name and Item Numbers

PLUG CONNECTOR			RECEPTACLE CONNECTOR		STACK HT.
ITEM NO.	DIM. N	DIM. L	ITEM NO.	DIM. H	DIM. P
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
71741-0001	8.35/.329	4.30/.169	71742-0001	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

2.3 Dimensions, Materials, and Platings:

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

DRWG. NO.
PS-71436-9999

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DRWG. NO.
PS-71436-9999



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PRODUCT SPECIFICATION
1.0mm BOARD-TO-BOARD CONNECTORS
PS-71436-9999

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.: Pending

4.0 Ratings:

4.1 Voltage: 250V r.m.s.(contact to contact)

4.2 Current (30°C temperature rise): 0.5 Ampere maximum, all circuits wired in series; 1.0 Ampere maximum, five adjacent circuits wired in series

4.3 Operating temperature range: -55°C to +85°C

5.0 Performance:

5.1 Electrical

Item	Test Condition	Requirement
Contact Resistance (Low Level)	Mate connectors, measure by dry circuit (20mV max., 10mA max.)	30 milliohms maximum, initial
Contact Resistance (Rated)	Mate connectors, measure contact resistance at rated current	15 milliohms maximum change from initial

DRWG. NO.
PS-71436-9999

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DRWG. NO.
PS-71436-9999



MOLEX INCORPORATED
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PRODUCT SPECIFICATION
1.0mm BOARD-TO-BOARD CONNECTORS
PS-71436-9999

5.0 Performance: (cont'd)

5.1 Electrical

Item	Test Condition	Requirement
Insulation Resistance	Apply 250±50 VDC, measure resistance between adjacent terminals	1000 megohms minimum
Dielectric Withstanding Voltage	Apply 250 VAC for 1 minute between adjacent terminals	No breakdown

5.2 Mechanical

Item	Test Condition	Requirement
Terminal Retention Force	Apply axial force on terminal in housing at rate of 25±6mm (1±1/4in) per minute	3.9N (0.4Kgf) minimum
Mate and Un-mate Forces	Mate and un-mate connectors at rate of 25±6mm (1±1/4in) per minute	Mate Force: 60g X no. of circuits maximum Un-mate Force: 23g X no. of circuits, minimum
Durability	Mate connectors up to 100 cycles at rate of 10mm (0.40in) per second maximum; rest 30 seconds minimum (when unmated)	Maximum contact resistance change: 15 milliohms

DRWG. NO.
PS-71436-9999

DRWG. NO.
PS-71436-9999

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PRODUCT SPECIFICATION
1.0mm BOARD-TO-BOARD CONNECTORS
PS-71436-9999

5.0 Performance: (cont'd)

5.2 Mechanical

Item	Test Condition	Requirement
Vibration	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 no greater than one microsecond
Mechanical Shock	490 m/s ² (50 g) peak sawtooth, 11 milliseconds duration; one shock each direction in each axis x, y, and z	Maximum contact resistance change: 15 milliohms Discontinuity no greater than one microsecond

5.3 Environmental

Item	Test Condition	Requirement						
Thermal Shock	Mated connectors exposed to 5 cycles of: <table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td>Temperature (°C)</td> <td>Duration (minutes)</td> </tr> <tr> <td>-40 +0, -3</td> <td>30</td> </tr> <tr> <td>+105 +3, -0</td> <td>30</td> </tr> </table>	Temperature (°C)	Duration (minutes)	-40 +0, -3	30	+105 +3, -0	30	Appearance: No damage Maximum contact resistance change: 15 milliohms
Temperature (°C)	Duration (minutes)							
-40 +0, -3	30							
+105 +3, -0	30							

DRWG. NO.
PS-71436-9999

DRWG. NO.
PS-71436-9999

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PRODUCT SPECIFICATION
1.0mm BOARD-TO-BOARD CONNECTORS
PS-71436-9999

5.0 Performance: (cont'd)

5.3 Environmental

Item	Test Condition	Requirement
Thermal Aging	Mated connectors exposed to +85°C for 250 hours	Appearance: No damage Maximum contact resistance change: 15 milliohms
Humidity (Steady State)	Mated connectors exposed to +40±2°C, 90-95%RH, for 240 hours per MIL-STD-202F, Method 103B, Test Condition A	Appearance: No damage Maximum contact resistance change: 15 milliohms
Humidity (Cyclic)	Test mated connectors per MIL-STD-202F, Method 106E, excluding steps 7a and 7b	Appearance: No damage Maximum contact resistance change: 15 milliohms
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
Mixed Flowing Gas	Environmental Class II, 7 days unmated	Maximum contact resistance change: 15 milliohms

DRWG. NO. PS-71436-9999

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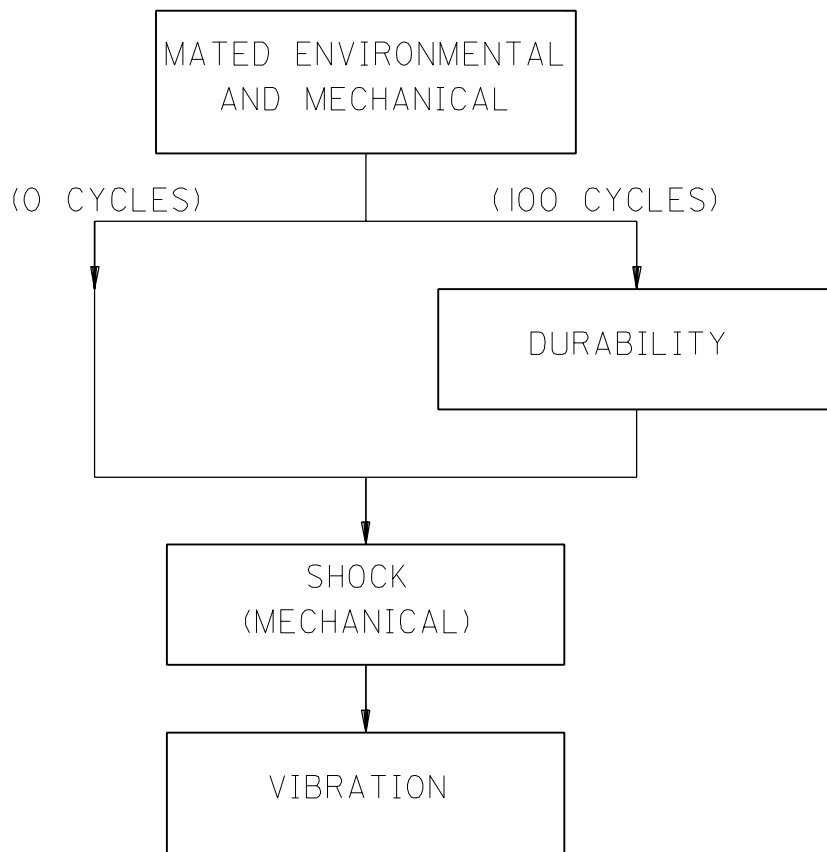
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PRODUCT SPECIFICATION
1.0mm BOARD-TO-BOARD CONNECTORS
PS-71436-9999



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PS-71436-9999

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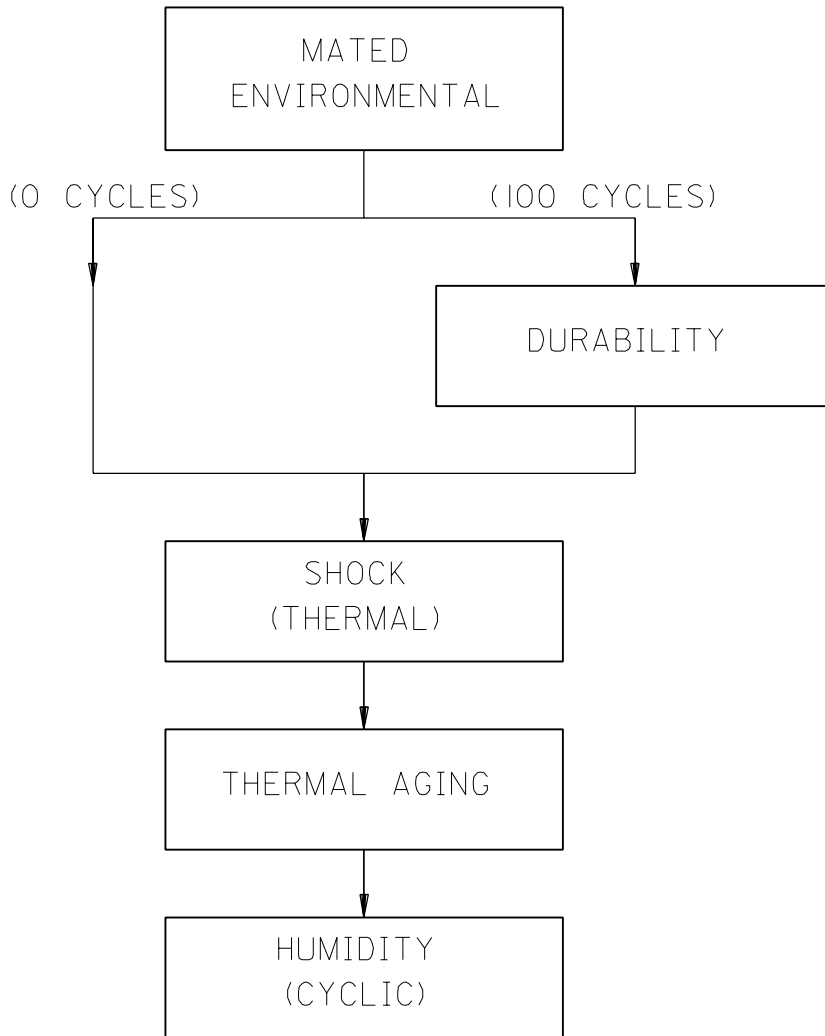
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DRWG. NO.
PS-71436-9999



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PRODUCT SPECIFICATION
1.0mm BOARD-TO-BOARD CONNECTORS
PS-71436-9999



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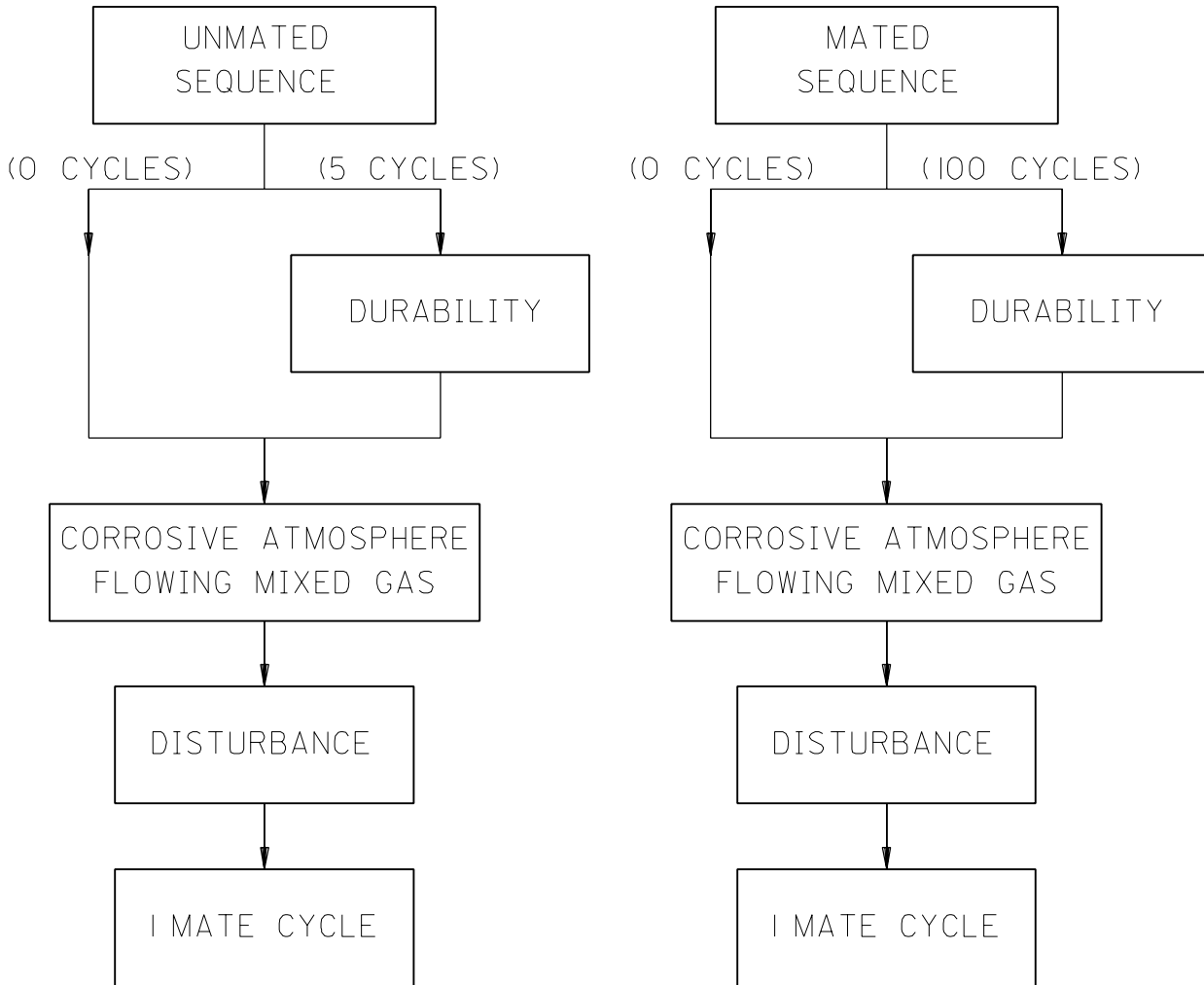
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MOLEX INCORPORATED
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PRODUCT SPECIFICATION
1.0mm BOARD-TO-BOARD CONNECTORS
PS-71436-9999



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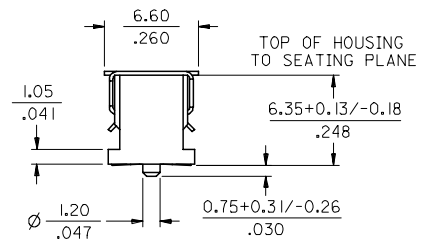
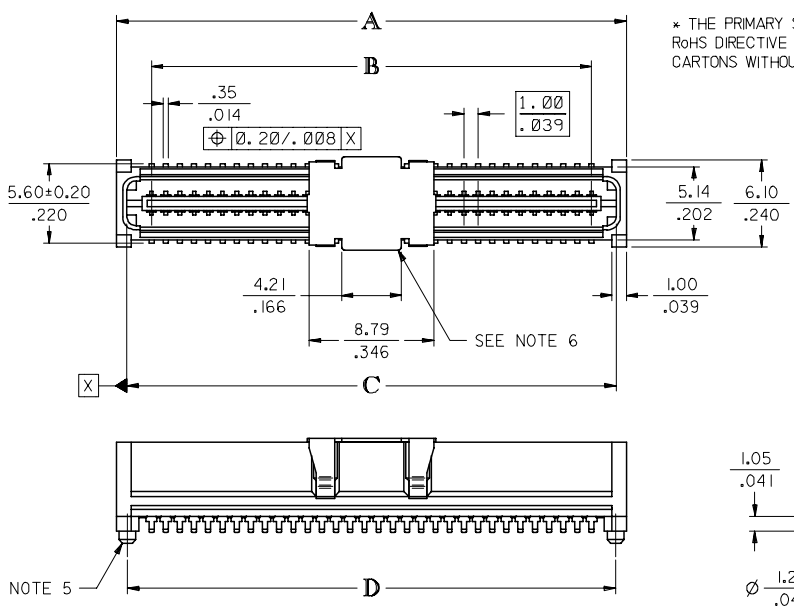
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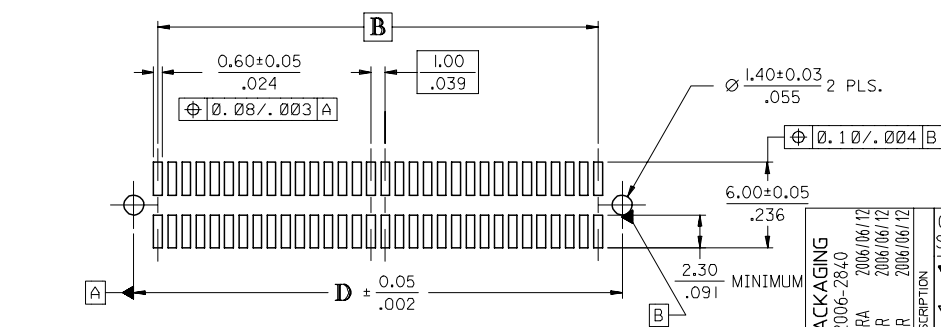
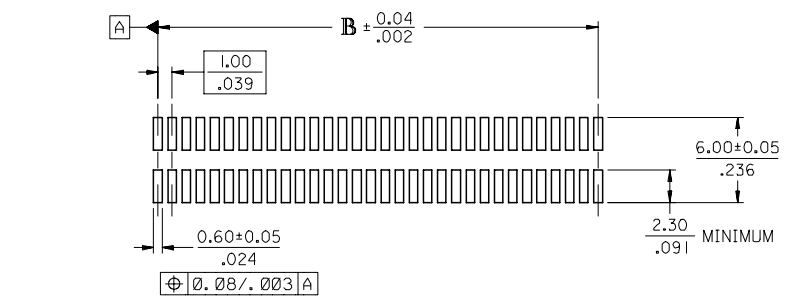
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10



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



**RECOMMENDED PCB LAYOUT
(WITH AND WITHOUT PEGS)**

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

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	F
SHT	REV

MODIFY PACKAGING	QUALITY SYMBOLS
EC NO: UCP2006-2840	▽=0
DRWN:MS/BARRA 2006/06/12	▽=0
CHKD:BBARKER 2006/06/12	
APPR:SMILLER 2006/06/12	
REV	DESCRIPTION

GENERAL TOLERANCES (UNLESS SPECIFIED)	
mm	INCH
4 PLACES ± ---	± ---
3 PLACES ± ---	± .005
2 PLACES ± 0.13	± .01
1 PLACE ± 0.25	± ---
ANGULAR ±1/2°	
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	

DIMENSION STYLE	
MM/IN	
DRAWN BY	DATE
REED	1995/03/23
CHECKED BY	DATE
REED	1995/03/23
APPROVED BY	DATE
BIXLER	1995/03/23
MATERIAL NO.	
DOCUMENT NO.	
SHEET NO.	

SCALE 4:1 DESIGN UNITS INCH

THIRD ANGLE PROJECTION

SALES ASSY. 1.0MM BOARD TO BOARD PLUG CONNECTOR 2.30/.090 STACK HEIGHT

molex MOLEX INCORPORATED

SDA-71436-0***

1 OF 2

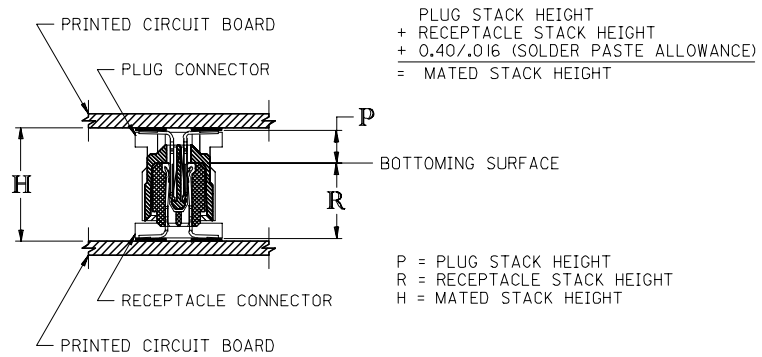
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STANDARD

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 FC NO: UCP2006-2840 DRWN:MS:BARRA 2006/06/12 CHKD:BBARKER 2006/06/12 APPR:SMILLER 2006/06/12 REVISIONS	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)	DIMENSION STYLE	SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION
	$\nabla=0$ $\sphericalangle=0$	mm INCH 4 PLACES ± --- ± --- 3 PLACES ± --- ± --- 2 PLACES ± --- ± --- 1 PLACE ± --- ± --- ANGULAR ±1/2°	MM/IN	---	INCH	
	DESCRIPTION	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	DRAWN BY DATE SMR 1995/03/23 CHECKED BY DATE SMR 1995/03/23 APPROVED BY DATE SMR 1995/03/23	TITLE	SALES ASSY, 1.0MM BOARD TO BOARD PLUG CONNECTOR 2.30/.090 STACK HEIGHT	
			MATERIAL NO. SEE TABLE SIZE C	DOCUMENT NO. SDA-71436-0***	MOLEX INCORPORATED SHEET NO. 2 OF 2	