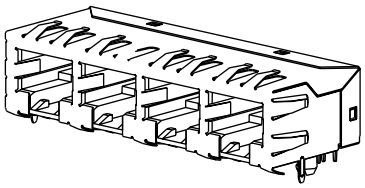
Jameco Part Number 800315

FEATURES AND SPECIFICATIONS

Modular Jack

43223

Ganged, Right Angle Low Profile, Shielded and Unshielded Versions



Features and Benefits

- 2 to 8 port (except 7) RJ11 and RJ45
- Optional shielding on RJ45 ganged jacks
- 100% tested for hi-pot and continuity
- Duplex-plated 50µ" Gold meets FCC part 68 requirements

Reference Information

Product Specification: PS-43223
Packaging: Anti-static blister reel
UL File No.: E107635
CSA File No.: LR19980
Mates With: FCC 68 plugs
Designed In: Inches

Electrical

Voltage: 125V
Current: 1.5A
Contact Resistance: 10mΩ max.
Dielectric Withstanding Voltage: 1000V AC
Insulation Resistance: 500 MΩ min.

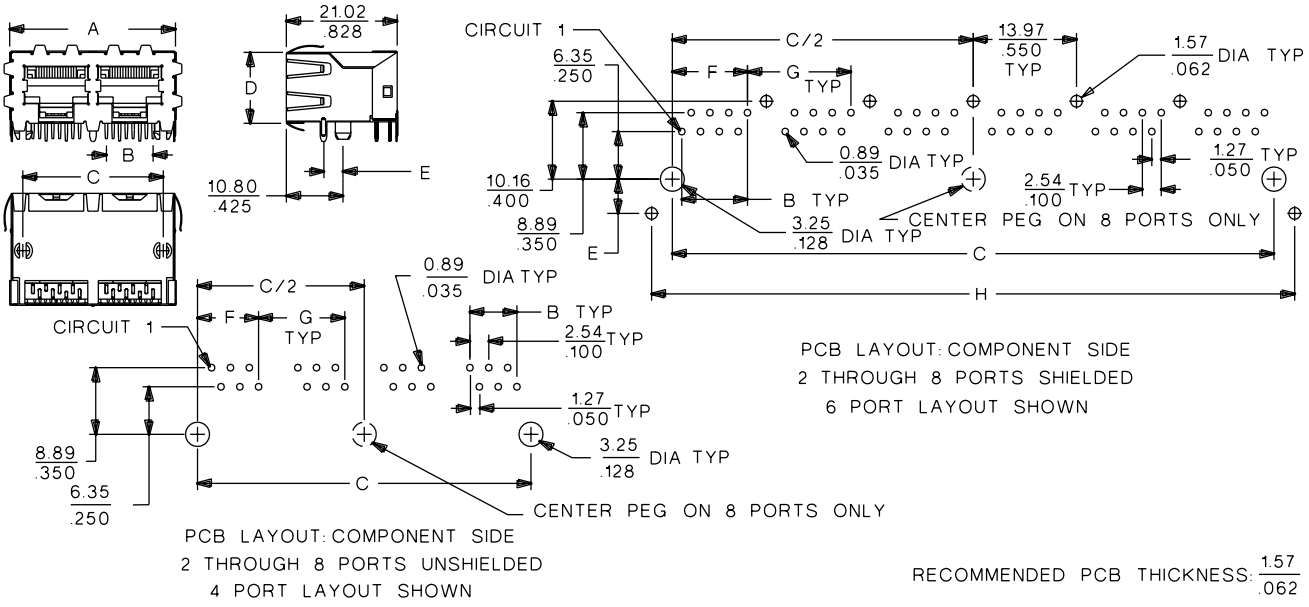
Mechanical

Durability: 500 cycles min.

Physical

Housing: Black fiber-filled nylon, UL 94V-0
Contact: Phosphor Bronze
Plating: Post plate 1.27 to 1.52µm (50 to 60µ") Gold in contact area, 1.90µm (75µ") min. (90/10) Tin/Lead in tail area both over Nickel overall
Operating Temperature: -40 to +80˚C

CATALOG DRAWING (FOR REFERENCE ONLY)



ORDERING INFORMATION AND DIMENSIONS

Circuits	Loaded Contacts	No. of Ports	Order No.			Dimension							
			Unshielded		Shielded								
			Flush Mount	Flangeless	Flangeless	A	B	C	D	E	F	G	H
6	4	2	43223-6022	43223-6122		25.02 (.985)	3.81 (.150)	21.54 (.848)	12.83 (.505)		6.99 (.275)	11.38 (.448)	
6	4	4	43223-6028	43223-6128		47.78 (1.881)	3.81 (.150)	44.30 (1.744)	12.83 (.505)		6.99 (.275)	11.38 (.448)	
6	4	6	43223-6034	43223-6134		70.54 (2.777)	3.81 (.150)	67.06 (2.640)	12.83 (.505)		6.99 (.275)	11.38 (.448)	
6	4	8	43223-6040	43223-6140		93.29 (3.673)	3.81 (.150)	89.81 (3.536)	12.83 (.505)		6.99 (.275)	11.38 (.448)	
6	6	2	43223-6001	43223-6101		25.02 (.985)	6.35 (.250)	21.54 (.848)	12.83 (.505)		8.26 (.325)	11.38 (.448)	
6	6	4	43223-6007	43223-6107		47.78 (1.881)	6.35 (.250)	44.30 (1.744)	12.83 (.505)		8.26 (.325)	11.38 (.448)	
6	6	6	43223-6013	43223-6113		70.54 (2.777)	6.35 (.250)	67.06 (2.640)	12.83 (.505)		8.26 (.325)	11.38 (.448)	
6	6	8	43223-6019	43223-6119		93.29 (3.673)	6.35 (.250)	89.81 (3.536)	12.83 (.505)		8.26 (.325)	11.38 (.448)	
8	8	2	43223-8022	43223-8122		30.48 (1.200)	8.89 (.350)	25.40 (1.000)	12.83 (.505)		10.16 (.400)	13.97 (.550)	
8	8	2			43223-8128	31.09 (1.224)	8.89 (.350)	25.40 (1.000)	13.30 (5.24)	4.57 (.180)	10.16 (.400)	13.97 (.550)	30.99 (1.220)
8	8	4	43223-8028	43223-8140		58.42 (2.300)	8.89 (.350)	53.34 (2.100)	12.83 (.505)		10.16 (.400)	13.97 (.550)	
8	8	4			43223-8146	59.03 (2.324)	8.89 (.350)	53.34 (2.100)	13.30 (5.24)	4.57 (.180)	10.16 (.400)	13.97 (.550)	58.93 (2.320)
8	8	6	43223-8034	43223-8158		86.36 (3.400)	8.89 (.350)	81.28 (3.200)	12.83 (.505)		10.16 (.400)	13.97 (.550)	
8	8	6			43223-8164	86.97 (3.424)	8.89 (.350)	81.28 (3.200)	13.30 (5.24)	4.57 (.180)	10.16 (.400)	13.97 (.550)	86.87 (3.420)
8	8	8	43223-8040	43223-8176		114.30 (4.500)	8.89 (.350)	109.22 (4.300)	12.83 (.505)		10.16 (.400)	13.97 (.550)	
8	8	8			43223-8182	114.91 (4.524)	8.89 (.350)	109.22 (4.300)	13.30 (5.24)	4.57 (.180)	10.16 (.400)	13.97 (.550)	114.81 (4.520)

Note: Contact Molex for alternative grounding tab option "E" 3.68mm (.145") order numbers, circuit sizes and port sizes

PRODUCT SPECIFICATION

LOW PROFILE RIGHT ANGLE MODULAR JACKS

1.0 SCOPE

This Product Specification covers the 1.27 mm (.050 inch) centerline (pitch) printed circuit board (PCB) modular jack connector series with selective gold and tin-lead plating.

2.0 PRODUCT DESCRIPTION

2.1 PRODUCT NAME AND SERIES NUMBER(S)

Low Profile Right Angle Modular Jacks 43223

2.2 DIMENSIONS, MATERIALS, PLATINGS AND MARKINGS

See the appropriate sales drawings (SDA-43223) for information on dimensions, materials, plating and markings.

2.3 SAFETY AGENCY APPROVALS

UL File Number……E107635
CSA File Number……..LR19980

3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

FCC Rules and Regulations, Part 68, Subpart F
REA Bulletin 345-81, PE-76; Specification for modular telephone set hardware
ANSI/EIA/TIA-568
IEC-60603-7
UL 1863
MIL-STD-202; General requirements for test specifications

4.0 RATINGS

4.1 VOLTAGE

56.5 V DC
150 V_{RMS} AC (Ringing voltage only)

4.2 CURRENT

1.5 Amps @ 25°C

4.3 TEMPERATURE

Operating: - 40°C to + 70°C

5.0 PERFORMANCE

5.1 ELECTRICAL REQUIREMENTS

	DESCRIPTION	TEST CONDITION	REQUIREMENT
	Contact Resistance (Low Level)	Mate connectors: apply a maximum voltage of **20** mV and a current of **15** mA. (Measurement locations in Section 7.0)	**10** milliohms MAXIMUM [initial]
	Insulation Resistance	Unmated connector, mounted to a PCB: apply a voltage of **500** VDC between adjacent terminals and between terminals to ground.	**500** Megohms MINIMUM
	Dielectric Withstanding Voltage	Mate connectors: apply a voltage of **1000** VAC for **1** minute between adjacent terminals and between terminals to ground.	No breakdown; current leakage < **5** mA
	Temperature Rise	Mate connectors: measure the temperature rise at the rated current after: **96** hours	Temperature rise; **+30**°C MAXIMUM

5.2 MECHANICAL REQUIREMENTS

	DESCRIPTION	TEST CONDITION	REQUIREMENT
	Connector Mate Force	Mate connector at a rate of **25 ± 6** mm (**1 ± ¼** inch) per minute. (Gage dimensions in Section 7.0)	**22** N (**5** lbf) MAXIMUM insertion force
	Durability	Mate connectors up to **500** cycles at a maximum rate of **20** cycles per minute prior to Environmental Tests.	**10** milliohms MAXIMUM (change from initial)
	Vibration (Random)	Mate connectors and vibrate per MIL-STD-202	**10** milliohms MAXIMUM (change from initial) & Discontinuity < **1** microsecond
	Plug Retention Force	Apply an axial pullout force on the plug at a rate of **25 ± 6** mm (**1 ± ¼** inch).	**89** N (**20** lbf) MINIMUM retention force
	PCB Separation Forces	Apply a perpendicular static load on the plug at a rate of **25 ± 6** mm (**1 ± ¼** inch).	**4.5** N (**1** lbf) MINIMUM withdrawal force before solder reflow **89** N (**20** lbf) MINIMUM withdrawal force after solder reflow

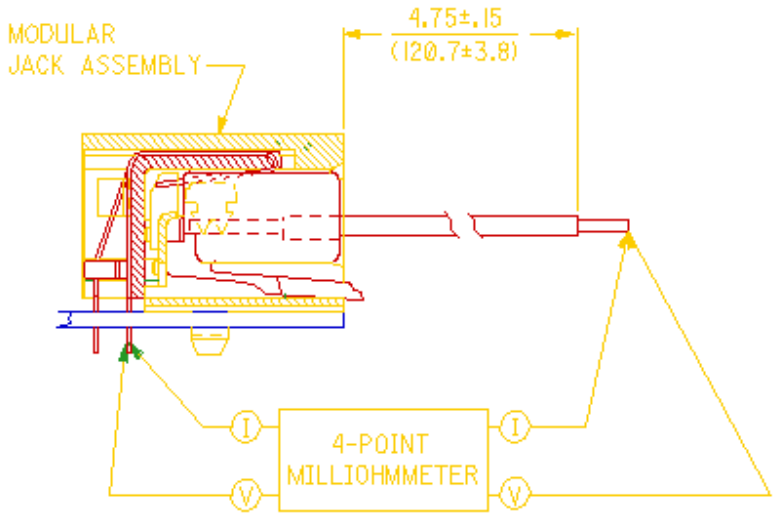
5.3 ENVIRONMENTAL REQUIREMENTS

	DESCRIPTION	TEST CONDITION	REQUIREMENT
	Thermal (Cycling)	Connectors to be placed in 95% relative humidity. Maximum temperature change is 15°C/hour. Cycle linearly per chart below. Mate connectors; expose to **10** cycles of: Temperature °C — Duration (Minutes) **30 to 5 — 120** **5 to 30 — 120** **Hold at 30 — 240** **30 to 5 — 180** **Hold at 5 — 180**	**10** milliohms MAXIMUM (change from initial) & Dielectric Withstanding Voltage: No Breakdown at 500 VAC & Insulation Resistance: 500 Megohms MINIMUM & Visual: No Damage

6.0 PACKAGING

Parts shall be packaged to protect against damage during handling, transit and storage.
See appropriate sales drawings on Sheet 1 for packaging descriptions.

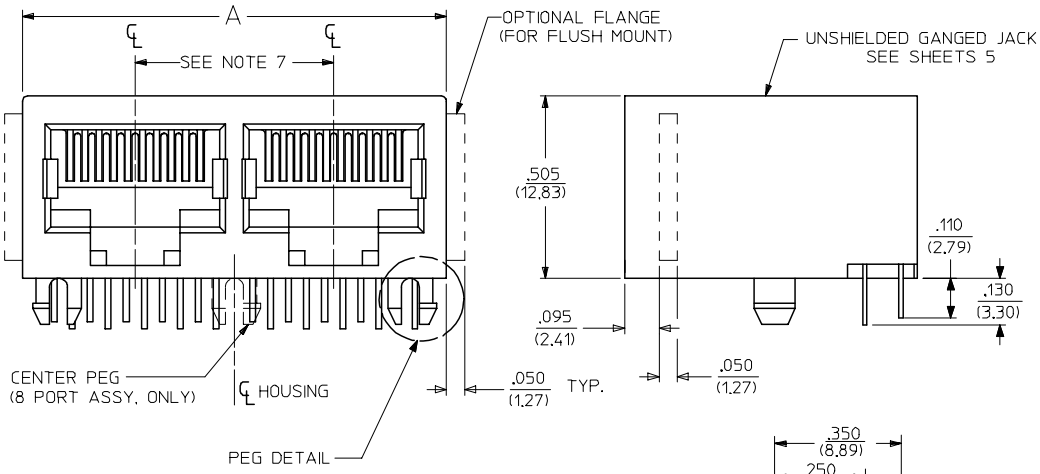
7.0 GAGES AND FIXTURES

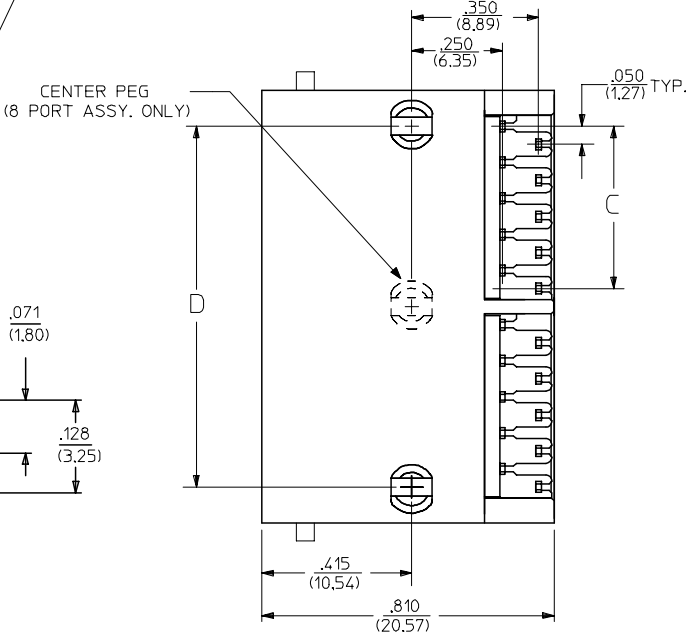


TERMINATION RESISTANCE MEASUREMENT POINTS

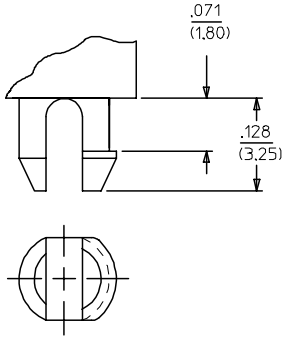
8.0 OTHER INFORMATION

NOTES:
1) MATERIAL:
   HOUSING: GLASS FILLED NYLON, UL94V-0, COLOR: BLACK
   INSULATOR: GLASS FILLED NYLON, UL94V-0, COLOR: BLACK
   TERMINALS: PHOSPHOR BRONZE: .012/(0.30) THICK
2) FINISH:
   TERMINALS:
      SELECT GOLD IN CONTACT AREA: 50 MICROINCHES MIN.,
      *SELECT TIN IN PC TAIL AREA: 100 MICROINCHES MIN.,
      WITH OVERALL NICKEL UNDERPLATE: 50 MICROINCHES MIN.
         *THE PRIMARY SHIPPING CARTON WILL BE LABELED 'COMPLIANT TO RoHS DIRECTIVE 2002/95/EC AND ELV ANNEX II OF DIRECTIVE 2000/53/EC'. CARTONS WITHOUT THIS LABEL MAY CONTAIN PRODUCT WITH TIN-LEAD IN THE PC TAIL AREA.
3) PRODUCT SPECIFICATION AND PROCESSING PARAMETERS: PS-43223-001.
4) ASSEMBLIES TO BE PACKAGED IN TRAYS, UNLESS OTHERWISE SPECIFIED.
5) SEE SHEETS 7-9 FOR P.C. BOARD LAYOUTS.
6) SEE SHEET 3 FOR THE SHIELDED JACK ASSEMBLY.
7) FOR 6 CIRCUIT JACKS CENTERLINE TO CENTERLINE SPACING IS .448/(11,38), FOR 8 CIRCUIT JACKS CENTERLINE TO CENTERLINE SPACING IS .550/(13.97).
8) ALL UNTOLERANCED DIMENSIONS ARE SHOWN FOR REFERENCE ONLY.





2 PORT 8 LOADED 10 JACK W/ SNAP-FIT PEGS SHOWN



PEG DETAIL
SCALE: 8:1

6 CIRCUIT HOUSING

CIRCUIT SIZE	NO. OF PORTS	DIM. A	DIM. C	DIM. D
6	2	.985 (25.02)	.250 (6.35)	.848 (21.54)
4	2	.985 (25.02)	.150 (3.81)	.848 (21.54)
2	2	.985 (25.02)	.050 (1.27)	.848 (21.54)
6	3	1.433 (36.40)	.250 (6.35)	1.296 (32.92)
4	3	1.433 (36.40)	.150 (3.81)	1.296 (32.92)
2	3	1.433 (36.40)	.050 (1.27)	1.296 (32.92)
6	4	1.881 (47.78)	.250 (6.35)	1.744 (44.30)
4	4	1.881 (47.78)	.150 (3.81)	1.744 (44.30)
2	4	1.881 (47.78)	.050 (1.27)	1.744 (44.30)
6	5	2.329 (59.16)	.250 (6.35)	2.192 (55.68)
4	5	2.329 (59.16)	.150 (3.81)	2.192 (55.68)
2	5	2.329 (59.16)	.050 (1.27)	2.192 (55.68)
6	6	2.777 (70.54)	.250 (6.35)	2.640 (67.06)
4	6	2.777 (70.54)	.150 (3.81)	2.640 (67.06)
2	6	2.777 (70.54)	.050 (1.27)	2.640 (67.06)
6	8	3.673 (93.29)	.250 (6.35)	3.536 (89.81)
4	8	3.673 (93.29)	.150 (3.81)	3.536 (89.81)
2	8	3.673 (93.29)	.050 (1.27)	3.536 (89.81)

8 CIRCUIT HOUSING

CIRCUIT SIZE	NO. OF PORTS	DIM. A	DIM. C	DIM. D
10	2	1.200 (30.48)	.450 (11.43)	1.000 (25.40)
8	2	1.200 (30.48)	.350 (8.89)	1.000 (25.40)
6	2	1.200 (30.48)	.250 (6.35)	1.000 (25.40)
10	3	1.750 (44.45)	.450 (11.43)	1.550 (39.37)
8	3	1.750 (44.45)	.350 (8.89)	1.550 (39.37)
6	3	1.750 (44.45)	.250 (6.35)	1.550 (39.37)
4	3	1.750 (44.45)	.150 (3.81)	1.550 (39.37)
10	4	2.300 (58.42)	.450 (11.43)	2.100 (53.34)
8	4	2.300 (58.42)	.350 (8.89)	2.100 (53.34)
4	4	2.300 (58.42)	.150 (3.81)	2.100 (53.34)
4	5	2.850 (72.39)	.150 (3.81)	2.650 (67.31)
10	5	2.850 (72.39)	.450 (11.43)	2.650 (67.31)
8	5	2.850 (72.39)	.350 (8.89)	2.650 (67.31)
10	6	3.400 (86.36)	.450 (11.43)	3.200 (81.28)
8	6	3.400 (86.36)	.350 (8.89)	3.200 (81.28)
10	8	4.500 (114.30)	.450 (11.43)	4.300 (109.22)
8	8	4.500 (114.30)	.350 (8.89)	4.300 (109.22)

9	J1
8	J1
7	J1
6	H
5	H
4	J
3	J
2	J
1	J1
SH	REV

ADD PCB THICKNESS
EC NO: UCP2005-2739
DRWN: LSCHMDT 2005/06/20
CHKD: ELHAG 2005/06/22
APPR: FSMITH 2005/06/23
DESCRIPTION
REV
J1

QUALITY SYMBOLS
▼ = 0
▽ (C) = 0

GENERAL TOLERANCES (UNLESS SPECIFIED)

	mm	INCH
4 PLACES	± ---	± ---
3 PLACES	± ---	± ---
2 PLACES	± ---	± ---
1 PLACE	± ---	± ---
ANGULAR ±1/2°		

DRAFT WHERE APPLICABLE
MUST REMAIN WITHIN DIMENSIONS

SCALE	4:1
DESIGN UNITS	INCH
DIMENSION STYLE	IN/MM
DRAWN BY	JTR
DATE	10/18/1993
CHECKED BY	JTR
DATE	10/18/1993
APPROVED BY	RAS
DATE	10/18/1993
MATERIAL NO.	SEE SHEET 5
DOCUMENT NO.	SDA-43223
SHEET NO.	1 OF 9

THIRD ANGLE PROJECTION
REVISE ON CAD ONLY

TITLE: LOW PROFILE GANGED,RIGHT ANGLE MODULAR JACK ASSEMBLY

MOLEX INCORPORATED

C

FLUSH MOUNT (UNSHIELDED)

ASSEMBLY NUMBER	CONNECTOR SIZE	NUMBER OF CIRCUITS	NUMBER OF PORTS	PACKAGING STYLE	PACKAGING SPECIFICATION
43223-6001	6	6	2	TRAY	PK-43249-004
43223-6004	6	6	3	↑	↑
43223-6007	6	6	4		
43223-6010	6	6	5		
43223-6013	6	6	6		
43223-6019	6	6	8		
43223-6022	6	4	2		
43223-6025	6	4	3		
43223-6028	6	4	4		
43223-6031	6	4	5		
43223-6034	6	4	6		
43223-6040	6	4	8		
43223-6043	6	2	2		
43223-6046	6	2	3		
43223-6049	6	2	4		
43223-6052	6	2	5		
43223-6055	6	2	6	↓	↓
43223-6058	6	2	8	TRAY	PK-43249-004
43223-8001	8	10	2	TRAY	PK-43249-004
43223-8004	8	10	3	↑	↑
43223-8007	8	10	4		
43223-8010	8	10	5		
43223-8013	8	10	6		
43223-8019	8	10	8		
43223-8022	8	8	2		
43223-8025	8	8	3		
43223-8028	8	8	4		
43223-8031	8	8	5		
43223-8034	8	8	6		
43223-8040	8	8	8		
43223-8041	8	4	5	↓	↓
43223-8042	8	6	3	TRAY	PK-43249-004

FLANGELESS (UNSHIELDED)

ASSEMBLY NUMBER	CONNECTOR SIZE	NUMBER OF CIRCUITS	NUMBER OF PORTS	PACKAGING STYLE	PACKAGING SPECIFICATION
43223-6101	6	6	2	TRAY	PK-43249-004
43223-6104	6	6	3	↑	↑
43223-6107	6	6	4		
43223-6110	6	6	5		
43223-6113	6	6	6		
43223-6119	6	6	8		
43223-6122	6	4	2		
43223-6125	6	4	3		
43223-6128	6	4	4		
43223-6131	6	4	5		
43223-6134	6	4	6		
43223-6140	6	4	8		
43223-6143	6	2	2		
43223-6146	6	2	3		
43223-6149	6	2	4		
43223-6152	6	2	5		
43223-6155	6	2	6	↓	↓
43223-6158	6	2	8	TRAY	PK-43249-004
43223-8101	8	10	2	TRAY	PK-43249-004
43223-8104	8	10	3	↑	↑
43223-8107	8	10	4		
43223-8110	8	10	5		
43223-8113	8	10	6		
43223-8119	8	10	8		
43223-8122	8	8	2		
43223-8131	8	8	3		
43223-8140	8	8	4		
43223-8149	8	8	5		
43223-8158	8	8	6	↓	↓
43223-8176	8	8	8	TRAY	PK-43249-004

FLANGELESS (SHIELDED)

ASSEMBLY NUMBER	DIMENSION "B"	CONNECTOR SIZE	NUMBER OF CIRCUITS	NUMBER OF PORTS	NUMBER OF REAR SHIELD GROUND TABS	PACKAGING STYLE	PACKAGING SPECIFICATION
43223-8128	.180	8	8	2	1	TRAY	PK-44150-004
43223-8146	.180	8	8	4	3	↑	↑
43223-8164	.180	8	8	6	5		
43223-8182	.180	8	8	8	7		
43223-8185	.180	8	8	8	1		
43223-8188	.180	8	8	4	1		
43223-8194	.180	8	2	8	7	TRAY	PK-44150-004
43223-8301	.145	8	8	2	1	TRAY	PK-44150-004
43223-8302	.145	8	8	4	3	↑	↑
43223-8303	.145	8	8	6	5		
43223-8304	.145	8	8	8	7		
43223-8305	.145	8	8	8	1		
43223-8306	.145	8	8	4	1		
43223-8307	.145	8	2	8	7	TRAY	PK-44150-004

ASSEMBLY NUMBER	CONNECTOR SIZE	NUMBER OF CIRCUITS	NUMBER OF PORTS	PACKAGING STYLE	PACKAGING SPECIFICATION
43223-8191	8	6	2	TUBE	PK-43249-005
43223-8192	8	4	4	TUBE	PK-43249-005
43223-8193	8	4	3	TUBE	PK-43249-005
43223-8195	8	8	2	TUBE	PK-43249-005
43223-8196	8	8	3	TUBE	PK-43249-005
43223-8197	8	8	4	TUBE	PK-43249-005

SNAP FIT PEG VERSIONS

SEE SHEET ONE
EC NO: UCP2004-0870
DRWN: LSCHMDT 2004/01/02
CHKD: LSCHMDT 2004/01/02
APPR: FSMITH 2004/01/09
DESCRIPTION
REV: H

QUALITY SYMBOLS
▼ = 0
▽ = 0

GENERAL TOLERANCES (UNLESS SPECIFIED)

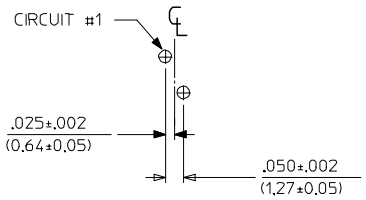
	mm	INCH
4 PLACES	± ---	± ---
3 PLACES	± ---	± ---
2 PLACES	± ---	± ---
1 PLACE	± ---	± ---

ANGULAR ±1/2°

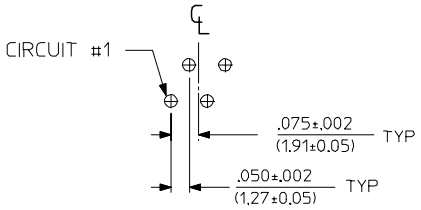
DRAFT WHERE APPLICABLE
MUST REMAIN WITHIN DIMENSIONS

SCALE 4:1 | DESIGN UNITS INCH | THIRD ANGLE PROJECTION | REVISE ON CAD ONLY
DIMENSION STYLE IN/MM
DRAWN BY JTR DATE 10/12/1993
CHECKED BY JTR DATE 10/12/1993
APPROVED BY RAS DATE 10/12/1993
TITLE: LOW PROFILE RIGHT ANGLE GANGED MODULAR JACK ASSEMBLY
MOLEX INCORPORATED
MATERIAL NO. SEE CHART | DOCUMENT NO. SDA-43223 | SHEET NO. 5 OF 9

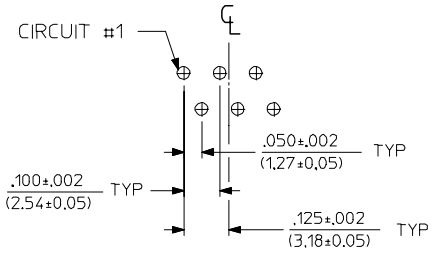
C



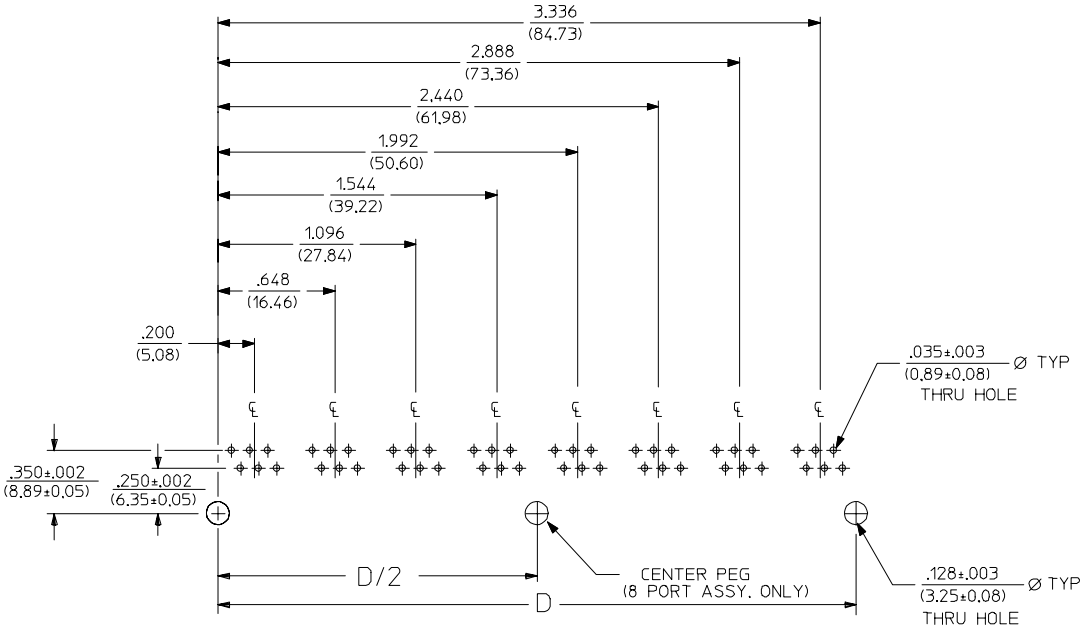
6 LOADED 2 DETAIL
SCALE: 4/1



6 LOADED 4 DETAIL
SCALE: 4/1



6 LOADED 6 DETAIL
SCALE: 4/1



SUGGESTED P.C. BOARD LAYOUT
COMPONENT SIDE OF BOARD
8 PORT, 6 LOADED 6, LAYOUT SHOWN
(SNAP-FIT & PRESS-FIT VERSIONS)

NUMBER OF PORTS	DIM. D
2	.848 (21,54)
3	1.296 (32,92)
4	1.744 (44.30)
5	2.192 (55,68)
6	2.640 (67.06)
8	3.536 (89.81)

NOTES:
1. RECOMMENDED PCB THICKNESS: .062±.005/(1,57±0,13)

ADD PCB THICKNESS
EC NO: UCP2005-2739 2005/06/20
DRWN:LSCHMDT 2005/06/22
CHKD:ELHAG 2005/06/23
APPR:FSMITH 2005/06/23
DESCRIPTION
J1
REV

QUALITY SYMBOLS
▼ = 0
▽(C) = 0

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

SCALE 2:1 | DESIGN UNITS INCH | THIRD ANGLE PROJECTION | REVISE ON CAD ONLY
DIMENSION STYLE IN/MM
DRAWN BY JTR DATE 10/12/1993
CHECKED BY JTR DATE 10/12/1993
APPROVED BY RAS DATE 10/12/1993

TITLE: LOW PROFILE RIGHT ANGLE GANGED MODULAR JACK ASSEMBLY

MOLEX INCORPORATED

MATERIAL NO. SEE SHT 5,6 | DOCUMENT NO. SDA-43223 | SHEET NO. 7 OF 9

C