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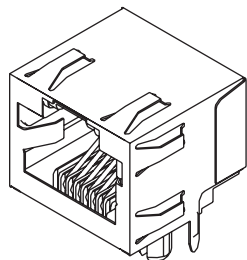
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Jameco Part Number 2040276

Modular Jack

44620

**Right Angle, RJ-45
Low Profile, Inverted Shielded
And Unshielded Versions
With RJ-11 Keepout Feature**



Features and Benefits

- Prevents mismatching of RJ-11 plugs into RJ-45 jack
- Plug latch on top
- Shield with enhanced panel grounding tabs
- 100% tested for hi-pot and continuity
- Shortened leads with bottom contacts

Reference Information

Product Specification: PS-43860-0003

Packaging:

Unshielded—Tube

Shielded—Tray

UL File No.: E107635

CSA File No.: LR19980

Mates with: FCC 68 Plugs

Designed in: Inches

Electrical

Voltage: 125V

Current: 1.5A max.

Contact Resistance: 20 milliohms max.

Dielectric Withstanding Voltage: 1000V AC

Insulation Resistance: 500 Megohms min.

Mechanical

Durability: 500 cycles

Physical

Housing: Black glass-filled nylon, UL 94V-0

Contact: Phosphor Bronze

Plating: Contact Area—1.27μm (50μ") min. Gold

Solder Tail—2.54μm (100μ") min. Tin,

Nickel overall

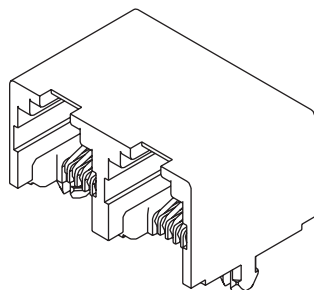
Operating Temperature: -40 to +80°C

Circuits	Loaded Contacts	Order Number			Lead-free
		Unshielded	Shielded		
			With All Panel Grounding Tabs	With Offset Panel Grounding Tabs	
8	8	44620-0001	44620-0002	44620-0003	Yes

Modular Jack

43814

**Right Angle, Low Profile
Inverted, Dual Port**



Features and Benefits

- Plug latch on top
- Shortened leads with bottom contacts
- 100% tested for hi-pot and continuity
- Packaged in tubes
- Side-by-side stackable

Reference Information

Product Specification: PS-43860-003

Packaging: Tube

UL File No.: E107635

CSA File No.: LR19980

Mates With: FCC 68 plugs

Designed In: Inches

Electrical

Voltage: 125V

Current: 1.5A

Contact Resistance: 20 milliohms max.

Dielectric Withstanding Voltage: 1000V AC

Insulation Resistance: 500 Megohms min.

Mechanical

Durability: 500 cycles min.

Physical

Housing: Black glass-filled nylon, UL 94V-0

Contact: Phosphor Bronze

Plating: Contact Area—1.27μm (50μ") min. Gold;

Solder Tails—2.54μm (100μ") min. Tin,

Nickel overall

Operating Temperature: -40 to +80°C

Circuits	Loaded Contacts	Order No.	Lead-free
6	4	43814-6421	Yes
	6	43814-6621	



PRODUCT SPECIFICATION

INVERTED RIGHT ANGLE MODULAR JACKS

1.0 SCOPE

This Product Specification covers the 1.02 mm (.040 inch) centerline (pitch) printed circuit board (PCB) modular jack connector series with selective gold and tin plating.

2.0 PRODUCT DESCRIPTION

2.1 PRODUCT NAME AND SERIES NUMBER(S)

Single Port Inverted Modular Jack	43860
Single Port Inverted Mini-PCI Modular Jack	44380
Dual Port Inverted Modular Jack	43814
Ganged Inverted Modular Jack	44248
Single Port Inverted Modular Jack with Keep-out Feature	44620

2.2 DIMENSIONS, MATERIALS, PLATINGS AND MARKINGS

See the appropriate sales drawings (SD-43860-001, SD-44380-001, SD-43814-001, SD-44248-001) 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 + 85°C
Nonoperating:* - 40°C to + 85°C
*Packaging materials should not exceed + 50°C

REVISION: H2	ECR/ECN INFORMATION: EC No: UCP2008-0143 DATE: 7/23/2007	TITLE: PRODUCT SPECIFICATION INVERTED RIGHT ANGLE MODULAR JACKS	SHEET No. 1 of 5
DOCUMENT NUMBER: PS-43860-003	CREATED / REVISED BY: JBELL 7/23/2007	CHECKED BY: LSCHMIDT 7/24/2007	APPROVED BY: FSMITH 7/25/2007



PRODUCT SPECIFICATION

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 100 mA. (Measurement locations in Section 7.0)	20 milliohms MAXIMUM [initial]
	Insulation Resistance	Unmated connector, mounted to a PCB: apply a voltage of 100 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

REVISION:	ECR/ECN INFORMATION:	TITLE:	SHEET No.
H2	EC No: UCP2008-0143 DATE: 7/23/2007	PRODUCT SPECIFICATION INVERTED RIGHT ANGLE MODULAR JACKS	2 of 5
DOCUMENT NUMBER:	CREATED / REVISED BY:	CHECKED BY:	APPROVED BY:
PS-43860-003	JBELL 7/23/2007	LSCHMIDT 7/24/2007	FSMITH 7/25/2007



PRODUCT SPECIFICATION

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) unshielded MAXIMUM insertion force 35 N (8 lbf) shielded MAXIMUM insertion force
	Durability	Mate connectors up to 500 cycles at a maximum rate of 10 cycles per minute prior to Environmental Tests.	10 milliohms MAXIMUM (change from initial)
	Vibration (Random)	Amplitude: 1.50mm (.060") peak to peak Sweep: 10-55-10 Hz in one minute Duration: 15 minutes ±X,±Y,±Z axis (45 minutes total)	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) per minute.	89 N (20 lbf) MINIMUM retention force
	PCB Separation Forces	Apply a perpendicular load on the plug at a rate of 25 ± 6 mm (1 ± ¼ inch) per minute.	4.5 N (1 lbf) MINIMUM withdrawal force before solder reflow 89 N (20 lbf) MINIMUM withdrawal force after solder reflow
	Shock (Mechanical)	Mate connectors and shock at 50 g's with three saw tooth wave form shocks in the ±X,±Y,±Z axis (18 shocks total).	10 milliohms MAXIMUM (change from initial) & Discontinuity < 1 microsecond

REVISION:	ECR/ECN INFORMATION:	TITLE:	SHEET No.
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DOCUMENT NUMBER:	CREATED / REVISED BY:	CHECKED BY:	APPROVED BY:
PS-43860-003	JBELL 7/23/2007	LSCHMIDT 7/24/2007	FSMITH 7/25/2007



PRODUCT SPECIFICATION

5.3 ENVIRONMENTAL REQUIREMENTS

	DESCRIPTION	TEST CONDITION	REQUIREMENT
	Shock (Thermal)	Mate connectors; expose to 10 cycles of: -40°C to +85°C 30 minutes dwell	10 milliohms MAXIMUM (change from initial) & Visual: No Damage
	Thermal Aging	Mate connectors; expose to: 240 hours at 85±2°C	10 milliohms MAXIMUM (change from initial) & Visual: No Damage
	Humidity (Cyclic)	Mate connectors: expose to 10 cycles at 90-95% relative humidity with temperatures at +25°C and +65°C per MIL-STD-202F method 106F (without -10°C dip)	10 milliohms MAXIMUM (change from initial) & Dielectric Withstanding Voltage: No Breakdown at 500 VAC & Insulation Resistance: 200 Megohms MINIMUM & Visual: No Damage
	Solder Resistance	Dip connector terminal tails in solder: Solder Duration: 7±0.5 seconds Solder Temperature: 260±5°C {Recommended same parameters as SMES-152. } Note: The solder resistance test simulates a wave solder process. This test should not be used to determine the suitability of the connector for a convection or IR reflow solder process.	Visual: No Damage to insulator material

REVISION:	ECR/ECN INFORMATION:	TITLE:	SHEET No.
H2	EC No: UCP2008-0143 DATE: 7/23/2007	PRODUCT SPECIFICATION INVERTED RIGHT ANGLE MODULAR JACKS	4 of 5
DOCUMENT NUMBER:	CREATED / REVISED BY:	CHECKED BY:	APPROVED BY:
PS-43860-003	JBELL 7/23/2007	LSCHMIDT 7/24/2007	FSMITH 7/25/2007

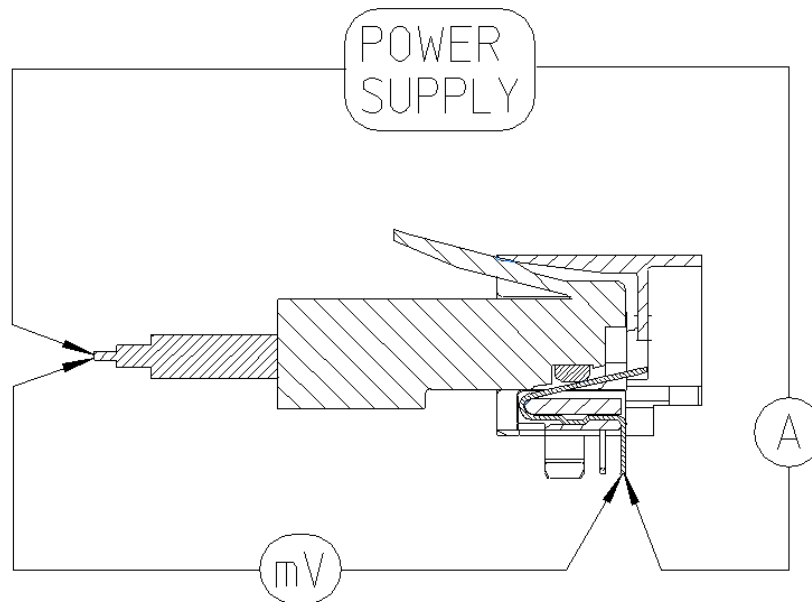


PRODUCT SPECIFICATION

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

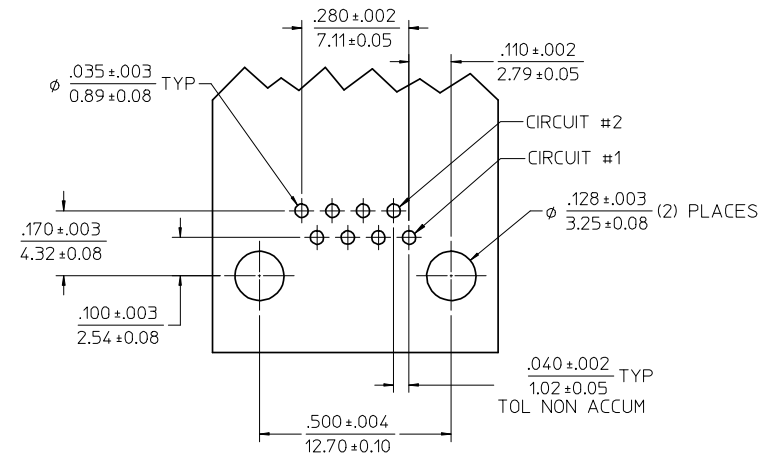
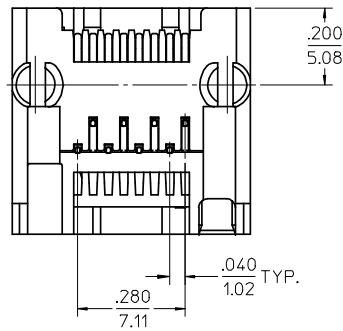
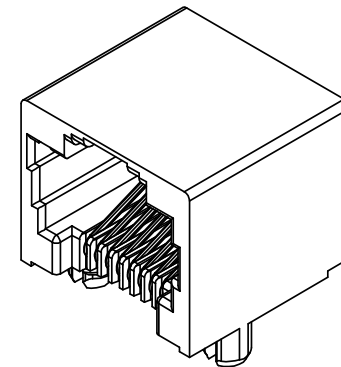
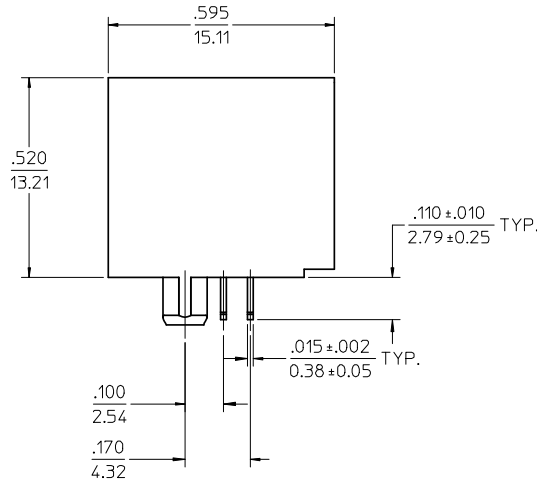
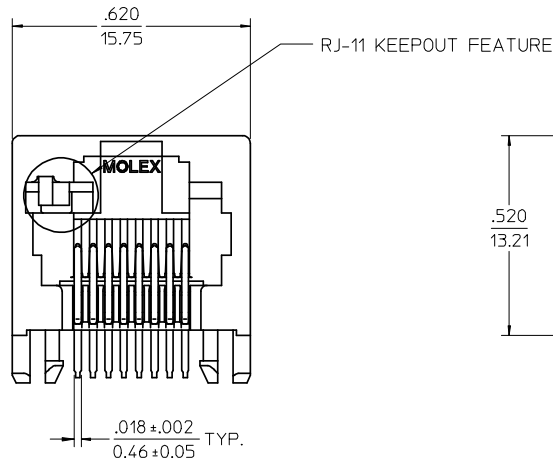


TERMINATION RESISTANCE MEASUREMENT POINTS

Connector and plug terminals and wire conductor bulk
resistance to be subtracted from measurements


8.0 OTHER INFORMATION

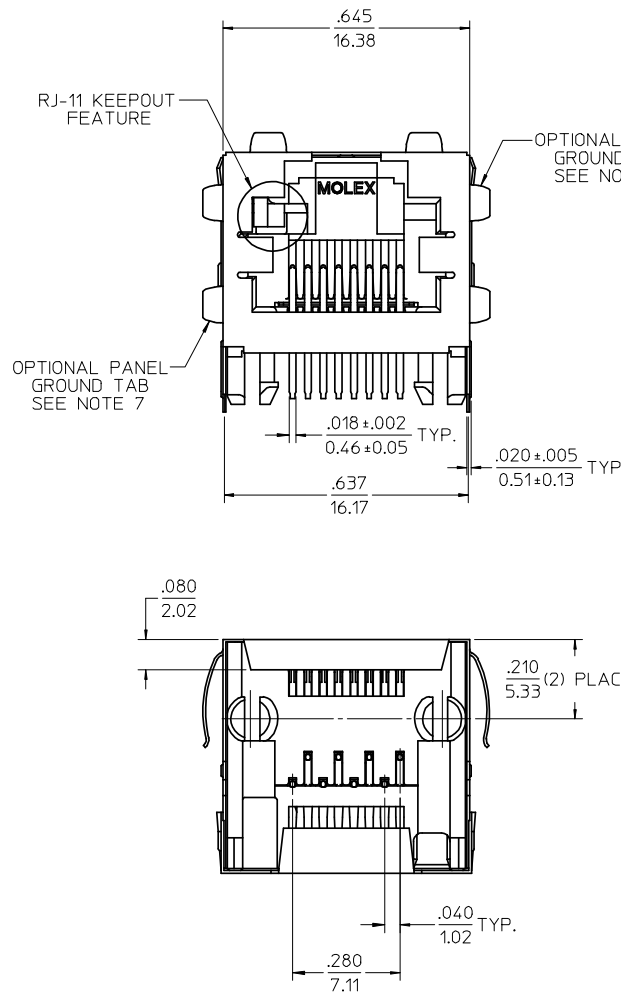
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DOCUMENT NUMBER: PS-43860-003	CREATED / REVISED BY: JBELL 7/23/2007	CHECKED BY: LSCHMIDT 7/24/2007	APPROVED BY: FSMITH 7/25/2007



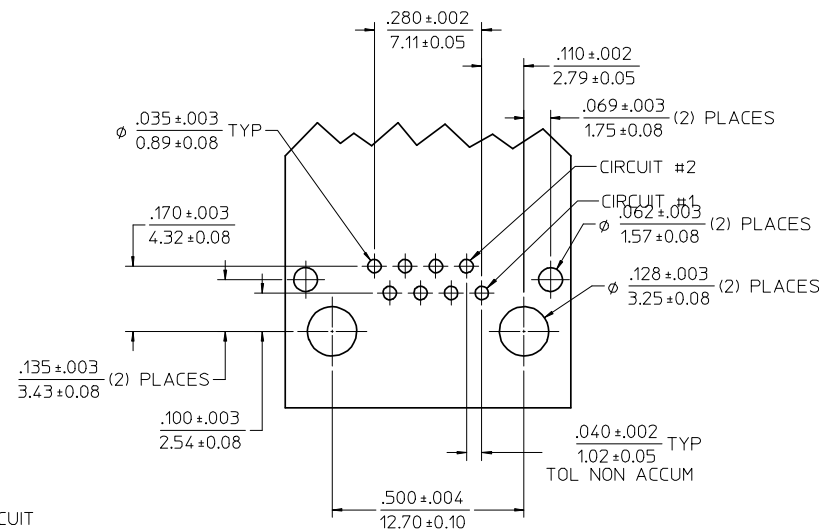
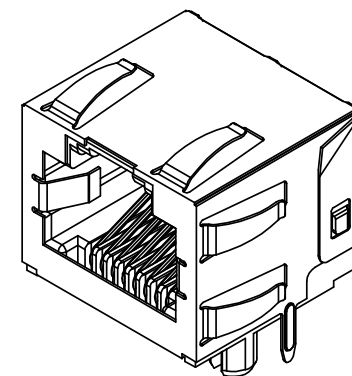
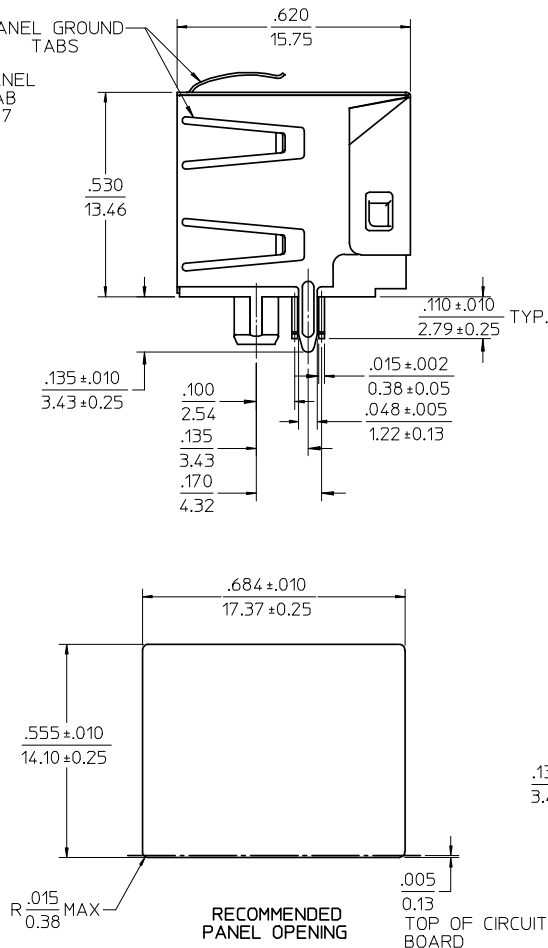
PC BOARD LAYOUT
COMPONENT SIDE OF BOARD
RECOMMENDED PCB THICKNESS: .062/1.57

- NOTES:
- 1) MATERIAL:
HOUSING: NYLON(PA), GLASS FILLED, UL94V-0, COLOR: BLACK
TERMINALS: PHOSPHOR BRONZE
 - 2) FINISH:
TERMINALS:
SELECT GOLD IN CONTACT AREA: 50 MICROINCHES (1.27 MICROMETERS) MIN.,
*SELECT TIN IN PC TAIL AREA: 100 MICROINCHES (2.54 MICROMETERS) MIN.,
WITH OVERALL NICKEL UNDERPLATE: 50 MICROINCHES (1.27 MICROMETERS) 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 TAILS.
 - 3) PRODUCT SPECIFICATION AND PROCESSING PARAMETERS: PS-43860-003.
 - 4) PACKAGING SPECIFICATION:
CONNECTOR ASSEMBLIES PACKAGED IN EXTRUDED TUBES PER MOLEX
PACKAGING SPECIFICATION PK-43860-004.
 - 5) ALL UNTOLERANCED DIMENSIONS ARE SHOWN FOR REFERENCE ONLY.
 - 6) CONFORMS TO FCC REGULATION PART 68.5 FOR MODULAR JACKS.
 - 7) THIS PART CONFORMS TO CLASS B REQUIREMENTS OF COSMETIC
SPECIFICATION PS-45499-002.

ADD NOTE 7 EC NO: UCP2008-0965 DRWN: IBELL 2007/11/08 CHKD:LSCHMIDT 2007/12/04 APPR:FSMITH 2007/12/05	DESCRIPTION	QUALITY SYMBOLS ▽=0 ▽=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE IN/MM		SCALE 4:1	DESIGN UNITS INCH	 THIRD ANGLE PROJECTION
				mm	INCH	DRAWN BY DATE		TITLE RJ-45 INVERTED MODULAR JACK ASSEMBLY WITH RJ-11 KEEPOUT FEATURE	
			4 PLACES	± ---	± ---	MKAMAR 00/03/07			
			3 PLACES	± ---	± ---	CHECKED BY DATE			
			2 PLACES	± ---	± ---	MKAMAR 00/03/07			
			1 PLACE	± ---	± ---	APPROVED BY DATE			
			ANGULAR ±1/2°		JROBERTS 00/03/07				
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	MATERIAL NO. 446200001		DOCUMENT NO. SD-44620-001		SHEET NO. 1 OF 4				
	MOLEX MOLEX INCORPORATED								
	SIZE (C) THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION								



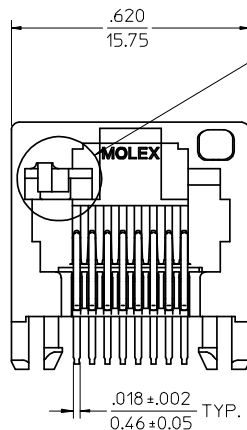
- NOTES:
- 1) MATERIAL:
HOUSING: NYLON(IPA), GLASS FILLED, UL94V-0, COLOR: BLACK
TERMINALS: PHOSPHOR BRONZE
SHIELD: BRASS
 - 2) FINISH:
TERMINALS:
SELECT GOLD IN CONTACT AREA: 50 MICROINCHES (1.27 MICROMETERS) MIN.,
*SELECT TIN IN PC TAIL AREA: 100 MICROINCHES (2.54 MICROMETERS) MIN.,
WITH OVERALL NICKEL UNDERPLATE: 50 MICROINCHES (1.27 MICROMETERS) MIN.
SHIELD:
*100 MICROINCHES (2.54 MICROMETERS) NICKEL OVER 50 MICROINCHES (1.27 MICROMETERS) COPPER UNDERPLATE, PCB GROUND TABS DIPPED IN TIN
*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 TAILS AND/OR SHIELD.
 - 3) PRODUCT SPECIFICATION AND PROCESSING PARAMETERS: PS-43860-003.
 - 4) PACKAGING SPECIFICATION:
CONNECTOR ASSEMBLIES PACKAGED IN THERMOFORMED TRAYS PER MOLEX PACKAGING SPECIFICATION PK-43860-005.
 - 5) ALL UNTOLERANCED DIMENSIONS ARE SHOWN FOR REFERENCE ONLY.
 - 6) CONFORMS TO FCC REGULATION PART 68.5 FOR MODULAR JACKS.
 - 7) AVAILABLE WITH THE (2) SPECIFIED PANEL GROUND TABS OMITTED FOR SIDE TO SIDE STACKABILITY, PER THE ASSEMBLY MATERIAL NUMBER TABLE.
 - 8) THIS PART CONFORMS TO CLASS B REQUIREMENTS OF COSMETIC SPECIFICATION PS-45499-002.



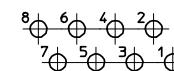
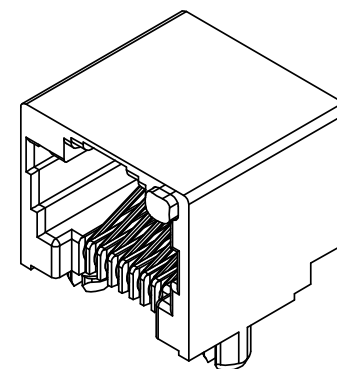
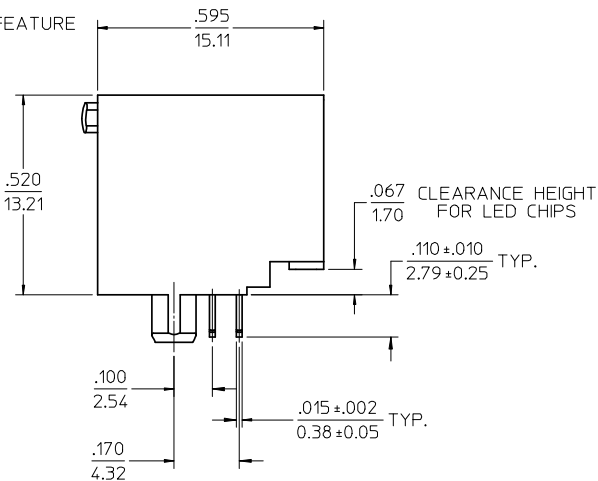
PC BOARD LAYOUT
COMPONENT SIDE OF BOARD
RECOMMENDED PCB THICKNESS: .062/1.57

ASSEMBLY MATERIAL NUMBER	PANEL GROUND TABS
446200002	ALL
446200003	SEE NOTE 7

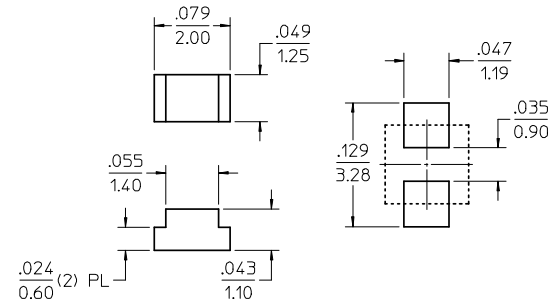
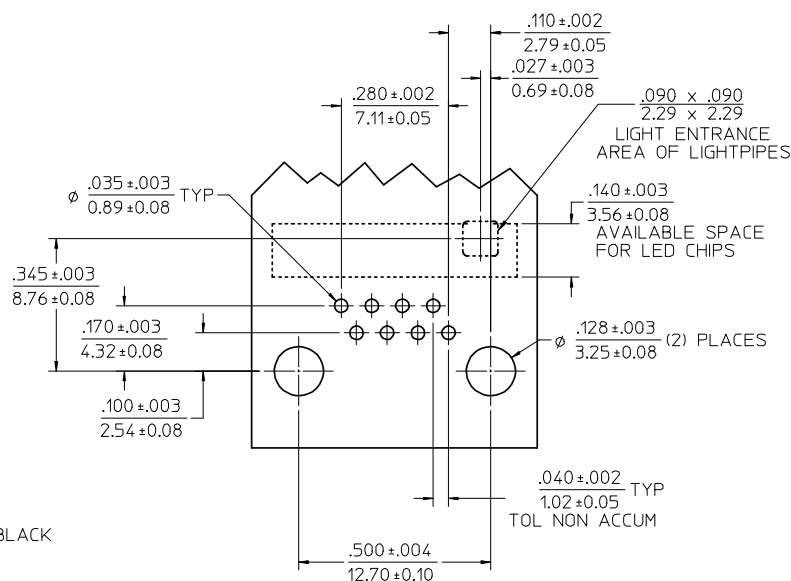
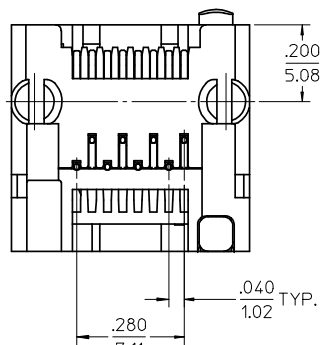
ADD NOTE 8 EC NO: UCP2008-0965 DRWN:JBELL 2007/11/08 CHKD:LSCMIDT 2007/12/04 APPR:FSMITH 2007/12/05 REV	DESCRIPTION	QUALITY SYMBOLS <div>▽=0</div> <div>▽=0</div>	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE IN/MM		SCALE 4:1	DESIGN UNITS INCH	THIRD ANGLE PROJECTION				
				mm	INCH	DRAWN BY MKAMAR	DATE 00/03/07	TITLE RJ-45 INVERTED MODULAR JACK ASSEMBLY WITH RJ-11 KEEPOUT FEATURE					
			4 PLACES	±---	±---	CHECKED BY	DATE						
			3 PLACES	±---	±---	MKAMAR	00/03/07	MOLEX MOLEX INCORPORATED					
			2 PLACES	±---	±---	APPROVED BY	DATE						
			1 PLACE	±---	±---	JROBERTS	00/03/07	DOCUMENT NO. SD-44620-001					
			ANGULAR ±1/2°			MATERIAL NO.	SHEET NO. 2 OF 4						
			DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS									SEE CHART	
			D2		C								



RJ-11 KEEPOUT FEATURE



TYPICAL PC TERMINAL HOLE LAYOUT
SCALE 5:1



RECOMMENDED SMT
LED SOLDER PATTERN
SCALE 10:1
(SEE NOTE 8)

NOTES:

- 1) MATERIAL:
HOUSING: NYLON(PA), GLASS FILLED, UL94V-0, COLOR: BLACK
TERMINALS: PHOSPHOR BRONZE
LIGHT PIPES:
POLYCARBONATE-WAVE OR HAND SOLDER ONLY (NOT DESIGNED FOR I/R REFLOW OR CONVECTION REFLOW SOLDER PROCESSES)
POLYSULFONE-MAXIMUM REFLOW TEMPERATURE: 400°F (205°C)
- 2) FINISH:
TERMINALS:
SELECT GOLD IN CONTACT AREA: 50 MICROINCHES (1.27 MICROMETERS) MIN.,
*SELECT TIN IN PC TAIL AREA: 100 MICROINCHES (2.54 MICROMETERS) MIN.,
WITH OVERALL NICKEL UNDERPLATE: 50 MICROINCHES (1.27 MICROMETERS) 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 TAILS.
- 3) PRODUCT SPECIFICATION AND PROCESSING PARAMETERS: PS-43860-003.
- 4) PACKAGING SPECIFICATION:
CONNECTOR ASSEMBLIES PACKAGED IN EXTRUDED TUBES PER MOLEX PACKAGING SPECIFICATION PK-43860-004.
- 5) APPLICATION SPECIFICATION: AS-43860-001
- 6) ALL UNTOLERANCED DIMENSIONS ARE SHOWN FOR REFERENCE ONLY.
- 7) CONFORMS TO FCC REGULATION PART 68.5 FOR MODULAR JACKS.
- 8) FOR CROSS REFERENCE OF RECOMMENDED LED'S, SEE MOLEX WEBSITE.
- 9) THIS PART CONFORMS TO CLASS B REQUIREMENTS OF COSMETIC SPECIFICATION PS-45499-002.

PC BOARD LAYOUT
COMPONENT SIDE OF BOARD
RECOMMENDED PCB THICKNESS: .062/1.57

ADD NOTE 5 & 9 EC NO: UCP2008-0965 2007/11/08 DRWN:JBELL CHKD:LSCHMIDT APPR:FSMITH 2007/12/04 2007/12/05	DESCRIPTION	QUALITY SYMBOLS ▽=0 ▽=0	REV

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

DIMENSION STYLE IN/MM	
DRAWN BY MKAMAR	DATE 00/03/07
CHECKED BY MKAMAR	DATE 00/03/07
APPROVED BY JROBERTS	DATE 00/03/07
MATERIAL NO. SEE CHART	
SIZE C	

SCALE 4:1	DESIGN UNITS INCH	THIRD ANGLE PROJECTION
TITLE RJ-45 INVERTED MODULAR JACK ASSEMBLY WITH RJ-11 KEEPOUT FEATURE		
MOLEX INCORPORATED		
DOCUMENT NO. SD-44620-001		SHEET NO. 3 OF 4
THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		

