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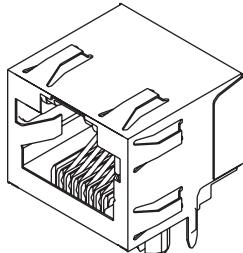
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Jameco Part Number 2040276

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—1.27 μm (50 μin) min. Gold

Solder Tail—2.54 μm (100 μin) min. Tin,

Nickel overall

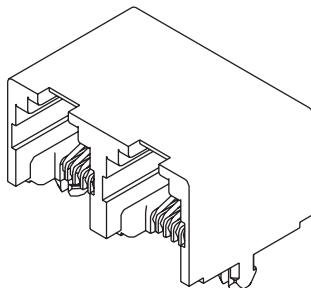
Operating Temperature: -40 to +80°C

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—1.27 μm (50 μin) min. Gold

Solder Tails—2.54 μm (100 μin) min. Tin,

Nickel overall

Operating Temperature: -40 to +80°C

0

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



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:	ECR/ECN INFORMATION:	TITLE:	PRODUCT SPECIFICATION INVERTED RIGHT ANGLE MODULAR JACKS	SHEET No.
H2	EC No: UCP2008-0143 DATE: 7/23/2007			1 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

5.0 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

<u>REVISION:</u> H2	<u>ECR/ECN INFORMATION:</u> <u>EC No:</u> UCP2008-0143 <u>DATE:</u> 7/23/2007	<u>TITLE:</u> PRODUCT SPECIFICATION INVERTED RIGHT ANGLE MODULAR JACKS	<u>SHEET No.</u> 2 of 5
<u>DOCUMENT NUMBER:</u> PS-43860-003	<u>CREATED / REVISED BY:</u> JBELL 7/23/2007	<u>CHECKED BY:</u> LSCHMIDT 7/24/2007	<u>APPROVED BY:</u> 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 ± 1/4 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 ± 1/4 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 ± 1/4 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

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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
TEMPLATE FILENAME: PRODUCT_SPEC(SIZE_A)(V.1).DOC			



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. }	Visual: No Damage to insulator material

REVISION: H2	ECR/ECN INFORMATION: <u>EC No:</u> UCP2008-0143 <u>DATE:</u> 7/23/2007	TITLE: PRODUCT SPECIFICATION INVERTED RIGHT ANGLE MODULAR JACKS	SHEET No. 4 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
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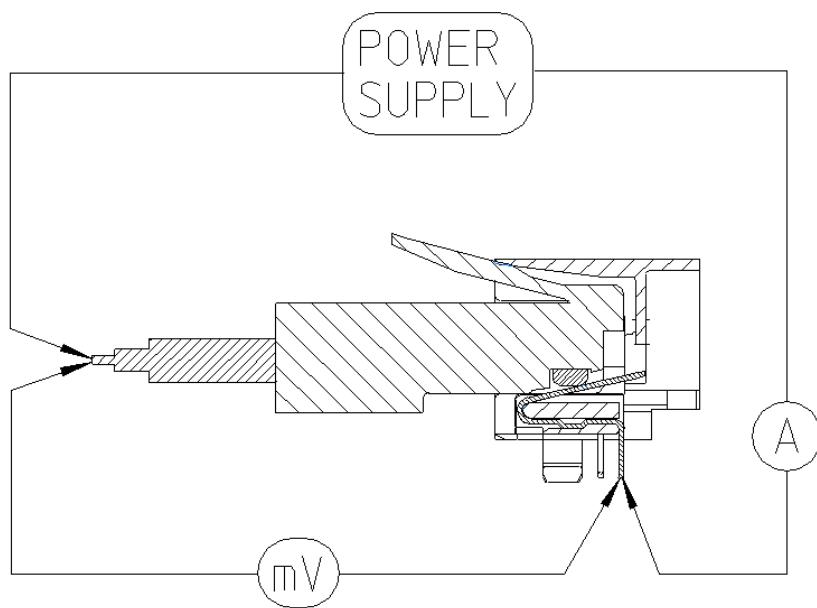


PRODUCT SPECIFICATION

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

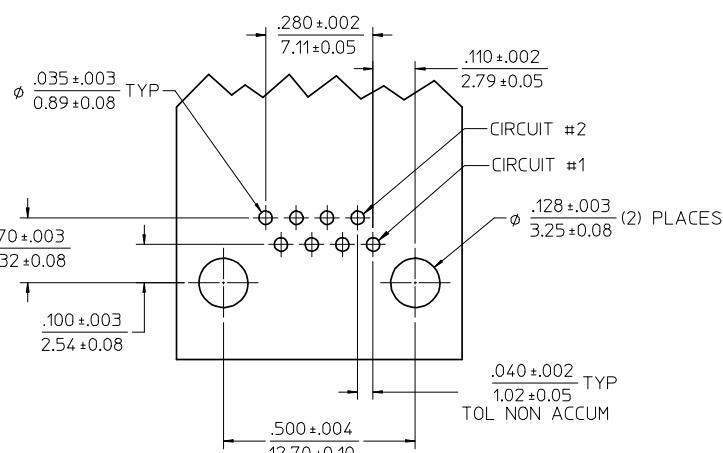
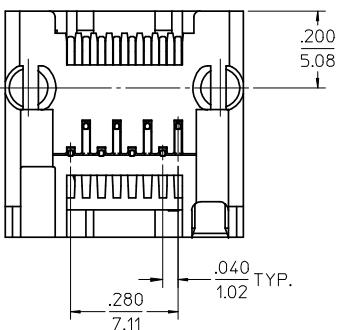
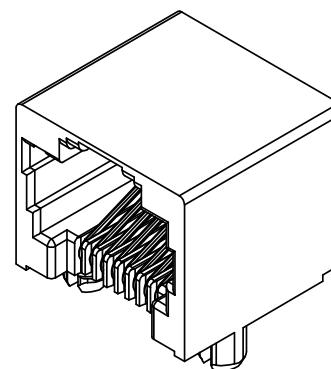
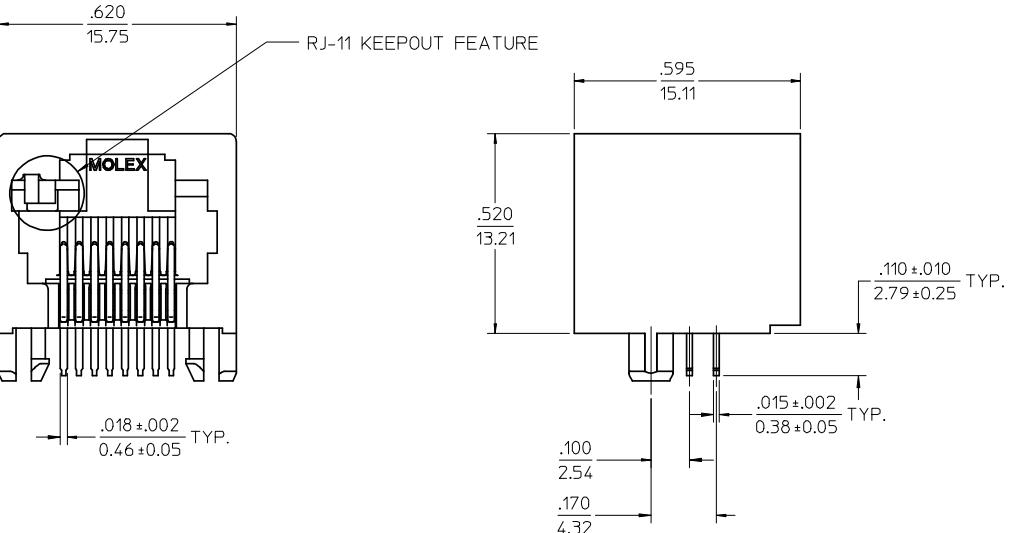


TERMINATION RESISTANCE MEASUREMENT POINTS

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

8.0 OTHER INFORMATION

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

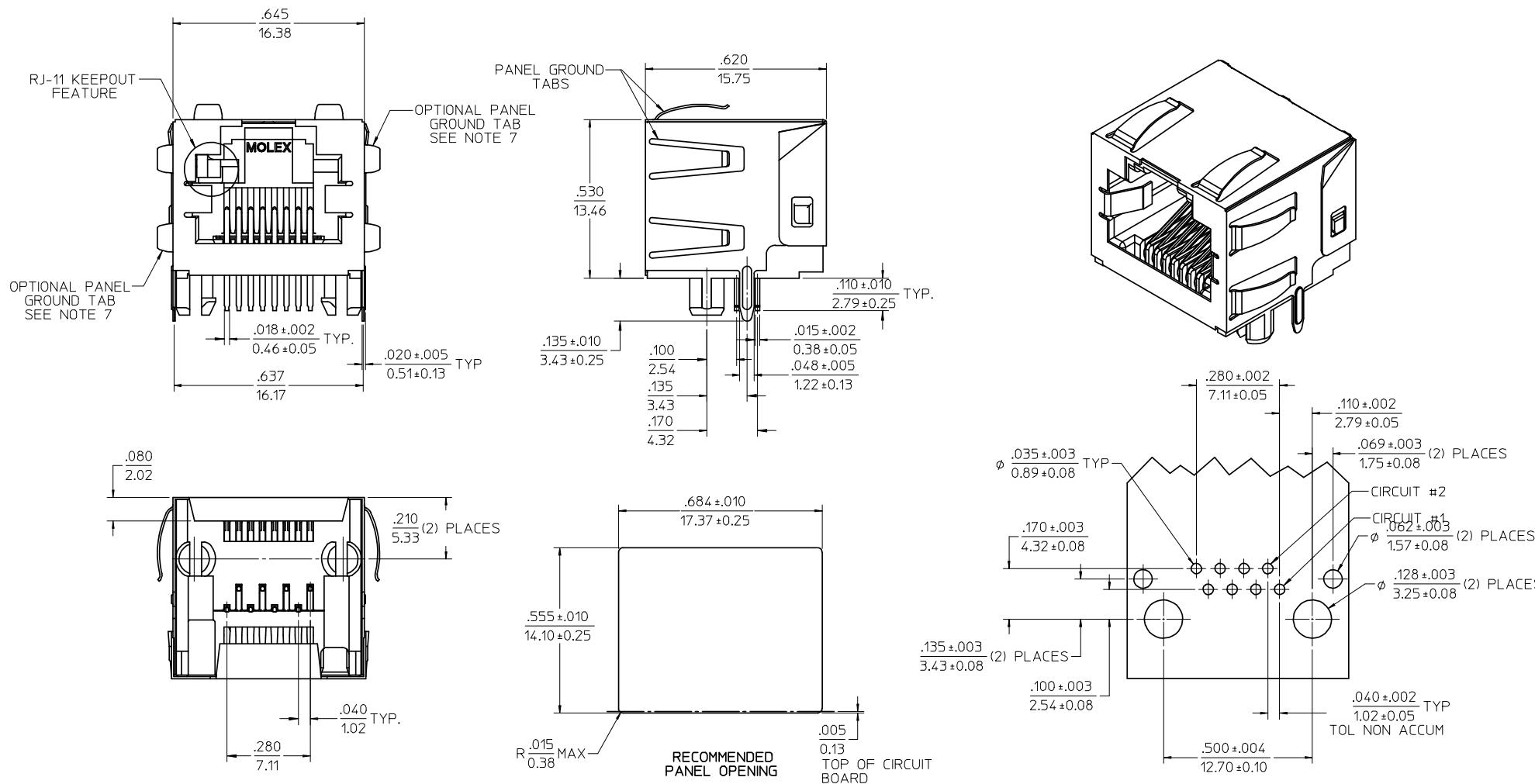
4) PACKAGING SPECIFICATION:
CONNECTOR ASSEMBLIES PACKAGED IN EXTRUDED TUBES PER MOLEX
PACKAGING SPECIFICATION PK-43860-004.

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	DRAWN: BELL	CHKD: SCHMIDT	APPR:FSMITH	REV: D2	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE IN/MM		SCALE 4:1	DESIGN UNITS INCH	PROJECTION
							mm	INCH	DRAWN BY	DATE			
						▼=0	4 PLACES	± ---	± ---	MKAMAR	00/03/07	RJ-45 INVERTED MODULAR	
						▼=0	3 PLACES	± ---	± ---	CHECKED BY	DATE	JAROBERTS	00/03/07
						▼=0	2 PLACES	± ---	± ---	MKAMAR	00/03/07	JACK ASSEMBLY WITH	
						▼=0	1 PLACE	± ---	± ---	APPROVED BY	DATE	JAROBERTS	00/03/07
						▼=0	ANGULAR ± 1/2°		MATERIAL NO.	446200001	molex	MOLEX INCORPORATED	
						▼=0	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		SIZE	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION			



NOTES:

1) MATERIAL:
HOUSING: NYLON(PA), 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	DRAWN: BELL	CHKD: SCHMIDT	APPR'D: SMITH	REV: D2	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE IN/MM	SCALE 4:1	DESIGN UNITS INCH	PROJECTION	
							mm	INCH					
						▼=0	4 PLACES	± ---	± ---	MKAMAR	00/03/07	RJ-45 INVERTED MODULAR JACK ASSEMBLY WITH RJ-11 KEEPOUT FEATURE	
						▼=0	3 PLACES	± ---	± ---	CHECKED BY	DATE		
						▼=0	2 PLACES	± ---	± ---	MKAMAR	00/03/07		
						▼=0	1 PLACE	± ---	± ---	APPROVED BY	DATE		
						▼=0	ANGULAR ±1/2°		JROBERTS	00/03/07	molex	MOLEX INCORPORATED	
						▼=0	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		MATERIAL NO.	SEE CHART	DOCUMENT NO.	SD-44620-001	
						▼=0	SIZE	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION					SHEET NO. 2 OF 4

