

PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION

Part Number: [0428789272](#)
Status: **Active**
Overview: [modular_plugs_jacks](#)
Description: Modular Jack, Vertical, Low Profile, 8/2, Panel Stops

Documents:

[3D Model](#) [Product Specification PS-42878 \(PDF\)](#)
[Drawing \(PDF\)](#) [RoHS Certificate of Compliance \(PDF\)](#)

Agency Certification

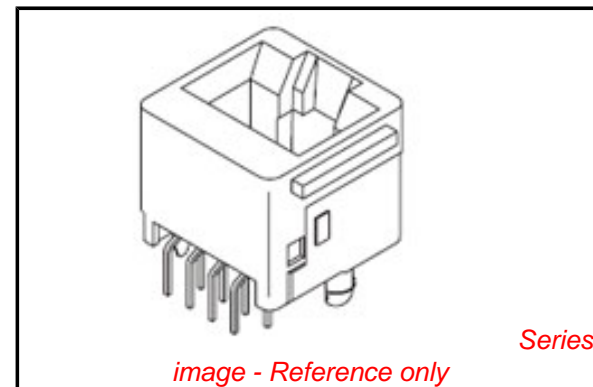
CSA LR19980
 UL E107635

General

Product Family Modular Jacks/Plugs
 Series [42878](#)
 Comments Flush Mount|Flangeless|2 PCB Thick
 Component Type PCB Jack
 Magnetic No
 Overview [modular_plugs_jacks](#)
 Performance Category 3
 Power over Ethernet (PoE) N/A
 Product Name RJ45

Physical

Boot Color N/A
 Color - Resin Black
 Durability (mating cycles max) 500
 Flammability 94V-0
 Inverted / Top Latch N/A
 Lightpipes/LEDs None
 Material - Metal Phosphor Bronze
 Material - Plating Mating Gold
 Material - Plating Termination Tin
 Material - Resin Polyester
 Orientation Vertical (Top Entry)
 PCB Locator Yes
 PCB Retention Yes
 PCB Thickness Recommended (in) 0.062 In
 PCB Thickness Recommended (mm) 1.57 mm
 Packaging Type Tray
 Pitch - Mating Interface (in) 0.040 In
 Pitch - Mating Interface (mm) 1.02 mm
 Pitch - Term. Interface (in) 0.050 In
 Pitch - Term. Interface (mm) 1.27 mm
 Plating min: Mating (µin) 50
 Plating min: Mating (µm) 1.25
 Plating min: Termination (µin) 100
 Plating min: Termination (µm) 2.5
 Ports 1
 Positions / Loaded Contacts 8/2
 Surface Mount Compatible (SMC) No
 Temperature Range - Operating -40°C to +85°C
 Termination Interface: Style Through Hole
 Waterproof / Dustproof No
 Wire/Cable Type N/A



EU RoHS

**ELV and RoHS
 Compliant**
REACH SVHC
 Not Reviewed
**Halogen-Free
 Status**
 Not Reviewed

China RoHS



**Need more information on product
 environmental compliance?**

Email productcompliance@molex.com
 For a multiple part number RoHS Certificate of
 Compliance, [click here](#)

Please visit the [Contact Us](#) section for any
 non-product compliance questions.

Search Parts in this Series

[42878Series](#)

Mates With

FCC 68 Plugs

Electrical

| | |
|-------------------------------|---------------|
| Current - Maximum per Contact | 1.5A |
| Shielded | No |
| Voltage - Maximum | 150V AC (RMS) |

Solder Process Data

| | |
|--|------------------------|
| Duration at Max. Process Temperature (seconds) | 5 |
| Lead-free Process Capability | Wave Capable (TH only) |
| Max. Cycles at Max. Process Temperature | 1 |
| Process Temperature max. C | 235 |

Material Info**Reference - Drawing Numbers**

| | |
|-------------------------|----------------|
| Packaging Specification | PK-42878-492 |
| Product Specification | PS-42878 |
| Sales Drawing | SDA-42878-**** |
| Test Summary | TS-42878-001 |

This document was generated on 06/07/2010

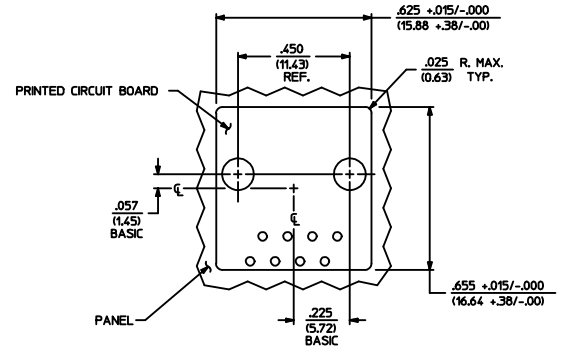
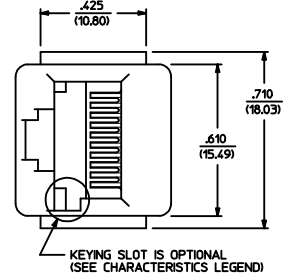
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| MODULAR JACK CHARACTERISTICS LEGEND | |
|--|--|
| EXTERNAL CONNECTOR BODY DIMENSIONS: (SEE NOTES 8 AND 9) JACKS ARE AVAILABLE IN STANDARD 4, 6, AND 8 POSITION BODY SIZES | |
| NUMBER OF CONTACT POSITIONS: CONNECTOR SIZE 4 CAN ACCOMMODATE 2 OR 4 TERMINALS, CONNECTOR SIZE 6 CAN ACCOMMODATE 2, 4, OR 6 TERMINALS, CONNECTOR SIZE 8 CAN ACCOMMODATE 2, 4, 6, 8, OR 10 TERMINALS | |
| POLARIZATION OPTION: "NO"= JACKS WITHOUT KEYING SLOT "YES"= JACKS WITH KEYING SLOT (AVAILABLE ON CONNECTOR SIZE 8 ONLY) | |
| MOUNTING EARS OPTION: "YES"= JACKS WITH MOUNTING EARS "NO"= JACKS WITHOUT MOUNTING EARS | |

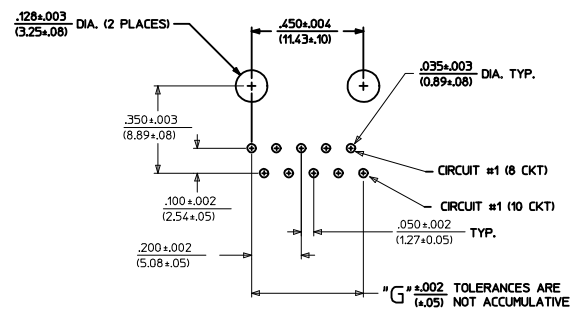
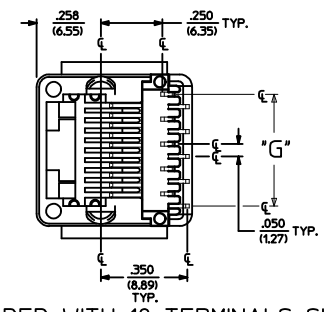
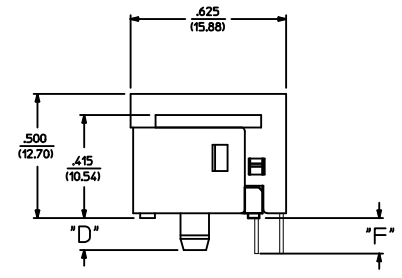
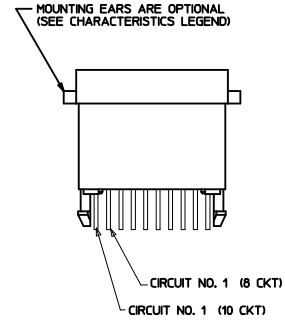
- NOTES:
- 1) MATERIALS: HOUSING- POLYESTER, GLASS FILLED, UL94V-0, COLOR - BLACK
TERMINALS- PHOSPHOR BRONZE ALLOY, .015/(0.38) THICK.
 - 2) TERMINAL PLATING:
SELECT GOLD IN CONTACT AREA: 50 MICRONS MIN.
*SELECT TIN IN PC TAIL AREA: 100 MICRONS MIN.
WITH OVERALL NICKEL UNDERPLATE: 50 MICRONS MIN.
*THE 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.
 - 3) THESE MODULAR JACKS MEET THE PERFORMANCE REQUIREMENTS OF MOLEX PRODUCT SPECIFICATION PS-42878.
 - 4) CONNECTORS ARE SHIPPED IN THERMOFORMED TRAYS, PER PACKAGING SPECIFICATION PK-42878-492.
 - 5) ALL JACKS ARE DESIGNED TO BE USED WITH .062/(1.57) OR .125/(3.18) THICK P.C. BOARDS.
 - 6) ALL JACKS CONFORM TO AND ACCEPT PLUGS WHICH CONFORM TO FCC RULES AND REGULATIONS PART 68, SUBPART F.
 - 7) ALL JACKS MUST BE CAPABLE OF FITTING INTO MOLEX GAGE G-42410 (CONNECTOR SIZE 8).
 - 8) SEE SHEETS 1 & 4 FOR CONNECTOR SIZE 4.
 - 9) SEE SHEETS 2 & 4 FOR CONNECTOR SIZE 6.
 - 10) ENGRAVED NUMBERS ON HOUSING BODY ARE FOR MOLDING IDENTIFICATION ONLY, THEY ARE NOT INTENDED FOR ASSEMBLY IDENTIFICATION PURPOSES.
 - 11) THIS PART CONFORMS TO CLASS B REQUIREMENTS OF COSMETIC SPECIFICATION PS-45499-002 WITH THE EXCEPTION OF THE SINK WHICH CONFORMS TO CLASS C REQUIREMENTS.

| P.C. BOARD THICKNESS | DIM. "D" (MTG. PEGS) | DIM. "F" (P.C. TAILS) |
|----------------------|----------------------|-----------------------------------|
| .062/(1.57) | .128 (3.25) | .120 +.015/-0.25 (3.05 +.38/-6.3) |
| .125/(3.18) | .191 (4.85) | .205 +.015/-0.25 (5.21 +.38/-6.3) |

| CONNECTOR SIZE | CIRCUIT SIZE | DIM. "G" |
|----------------|--------------|--------------|
| 8 | 10 | .450 (11.43) |
| 8 | 8 | .350 (8.89) |
| 8 | 6 | .250 (6.35) |
| 8 | 4 | .150 (3.81) |
| 8 | 2 | .050 (1.27) |



PANEL CUT-OUT FOR CONNECTOR SIZE 8



P.C. BOARD LAYOUT FOR CONNECTOR SIZE 8
10 CIRCUIT SHOWN

SIZE 8 MODULAR JACK LOADED WITH 10 TERMINALS SHOWN ABOVE

| | | | | | | | |
|--|---|---|--------------------------------|--------------------|---------------------|--|--|
| ADD COSMETIC SPEC EEC NO. UCP2009-1267 DRAWN: JKL/STENLER 2008/12/01 CHKD: BEL 2008/12/02 APPR: FSW/TH 2008/12/02 H2 REV | QUALITY SYMBOLS | GENERAL TOLERANCES (UNLESS SPECIFIED) | DIMENSION STYLE | SCALE | DESIGN UNITS | THIRD ANGLE PROJECTION | |
| | =0 =0 | mm INCH 4 PLACES ± --- ± --- 3 PLACES ± --- ± .010 2 PLACES ± 0.25 ± --- 1 PLACE ± --- ± --- ANGULAR ±1/2° | IN/MM | 1:1 | INCH | DRAWN BY DATE BAP 1992/04/09 CHECKED BY DATE BAP 1992/04/09 APPROVED BY DATE RAS 1992/04/09 | TITLE ASSEMBLY, VERTICAL LOW PROFILE MODULAR JACKS (CONNECTOR SIZE 8) |
| | DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS | MATERIAL NO. SEE SHEET 5 SIZE D | DOCUMENT NO. SDA-42878-**** | MOLEX INCORPORATED | SHEET NO. 3 OF 5 | | |
| | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | | | | | |

| *X=NOT TOOLED | PART CHARACTERISTICS | | | | | *X=NOT TOOLED | PART CHARACTERISTICS | | | | | *X=NOT TOOLED | PART CHARACTERISTICS | | | | |
|---------------|----------------------|-------------------------|---------------------|-----------------------|---------------------|---------------|----------------------|----------------------|-------------------------|---------------------|----------------------------------|---------------|----------------------|----------------------|----------------------|-------------------------|---------------------|
| | ASSEMBLY ITEM NUMBER | EXTERNAL CONNECTOR SIZE | NUMBER OF POSITIONS | P. C. BOARD THICKNESS | POLARIZATION OPTION | | MOUNTING EARS OPTION | ASSEMBLY ITEM NUMBER | EXTERNAL CONNECTOR SIZE | NUMBER OF POSITIONS | BOARD THICKNESS/P.C. TAIL OPTION | | POLARIZATION OPTION | MOUNTING EARS OPTION | ASSEMBLY ITEM NUMBER | EXTERNAL CONNECTOR SIZE | NUMBER OF POSITIONS |
| 42878-8408 | 8 POS. BODY | 8 | .062 | NO | YES | 42878-8984 | 8 POS. BODY | 4 | .062 | NO | YES | 42878-1001 | 8 POS. BODY | 10 | .062 | NO | YES |
| 42878-8410 | ↑ | ↑ | ↑ | NO | NO | 42878-8986 | ↑ | ↑ | ↑ | NO | NO | 42878-1003 | ↑ | ↑ | .062 | NO | NO |
| 42878-8456 | ↓ | ↓ | ↓ | YES | YES | 42878-9032 | ↓ | ↓ | ↓ | YES | YES | 42878-1025 | ↓ | ↓ | .125 | NO | YES |
| 42878-8458 | | | .062 | YES | NO | 42878-9034 | | | .062 | YES | NO | 42878-1027 | | | ↑ | NO | NO |
| 42878-8504 | | | .125 | NO | YES | 42878-9080 | | | .125 | NO | YES | 42878-1037 | | | ↓ | YES | YES |
| 42878-8506 | | | ↑ | NO | NO | 42878-9082 | | | ↑ | NO | NO | 42878-1039 | 8 POS. BODY | 10 | .125 | YES | NO |
| 42878-8552 | | ↓ | ↑ | YES | YES | 42878-9128 | | ↓ | ↓ | YES | YES | | | | | | |
| 42878-8554 | | 8 | .125 | YES | NO | 42878-9130 | | 4 | .125 | YES | NO | | | | | | |
| 42878-8696 | | 6 | .062 | NO | YES | 42878-9272 | | 2 | .062 | NO | YES | | | | | | |
| 42878-8698 | | ↑ | ↑ | NO | NO | 42878-9274 | | ↑ | ↑ | NO | NO | | | | | | |
| 42878-8744 | | ↓ | ↓ | YES | YES | 42878-9320 | | ↓ | ↓ | YES | YES | | | | | | |
| 42878-8746 | | | .062 | YES | NO | 42878-9322 | | | .062 | YES | NO | | | | | | |
| 42878-8792 | | | .125 | NO | YES | 42878-9368 | | | .125 | NO | YES | | | | | | |
| 42878-8794 | | ↑ | ↑ | NO | NO | 42878-9370 | | ↑ | ↑ | NO | NO | | | | | | |
| 42878-8840 | | ↓ | ↓ | YES | YES | 42878-9416 | | ↓ | ↓ | YES | YES | | | | | | |
| 42878-8842 | 8 POS. BODY | 6 | .125 | YES | NO | 42878-9418 | 8 POS. BODY | 2 | .125 | YES | NO | | | | | | |

| CHARACTERISTICS LEGEND | |
|--|--|
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| MOUNTING EARS OPTION: "YES" - PART WITH MOUNTING EARS "NO" - PART WITHOUT MOUNTING EARS | |
| (SEE SHEET 3 FOR PART DESCRIPTIONS AND DIMENSIONS) | |

| | | | | | | | |
|---|---|---------------------------------------|-------|-------|--------------|------------------------|--------------------|
| SEE SHEET ONE EC NO: UCP2004-667 DRW:LSCHMIDT 2004/03/03 CHK:LSCHMIDT 2004/03/03 APPR:ESMITH 2004/03/03 | QUALITY SYMBOLS | GENERAL TOLERANCES (UNLESS SPECIFIED) | | SCALE | DESIGN UNITS | THIRD ANGLE PROJECTION | REVISE ON CAD ONLY |
| | ▽ 0 ▽ 0 | mm | INCH | --- | INCH | | |
| | | 4 PLACES ± --- | ± --- | IN/MM | | | |
| | | 3 PLACES ± --- | ± --- | | | | |
| | 2 PLACES ± --- | ± --- | | | | | |
| | 1 PLACE ± --- | ± --- | | | | | |
| | ANGULAR ±1/2° | | | | | | |
| | DRAFT WHERE APPLICABLE | | | | | | |
| | MUST REMAIN WITHIN DIMENSIONS | | | | | | |
| | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | | | | | |