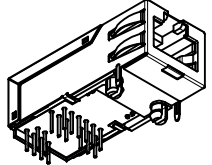
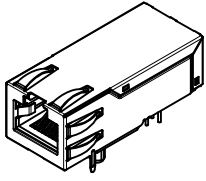
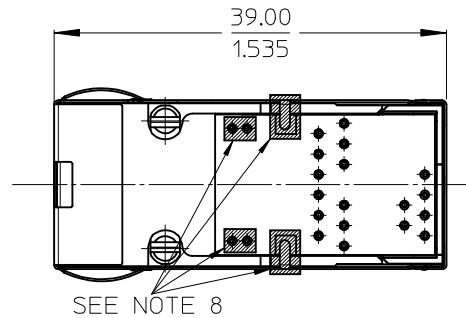
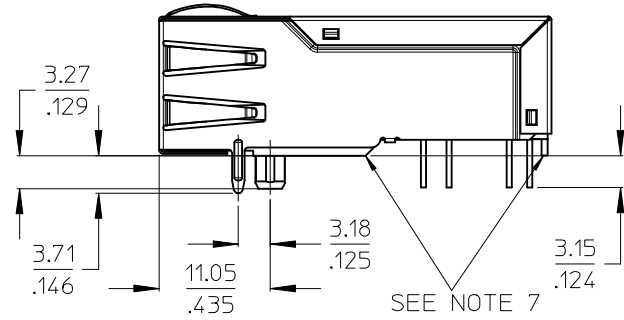
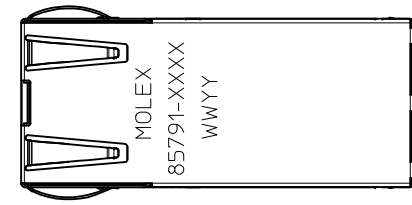
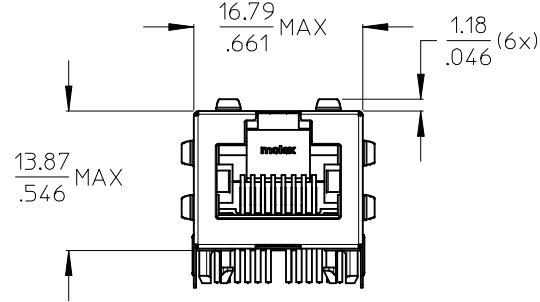


PDJack™ GIGABIT SINGLE PORT MAGNETIC JACK WITH INTEGRATED POWER OVER ETHERNET PLUS POWERED DEVICE (PD) CONTROLLER AND BRIDGE RECTIFIERS



SCALE 1:1

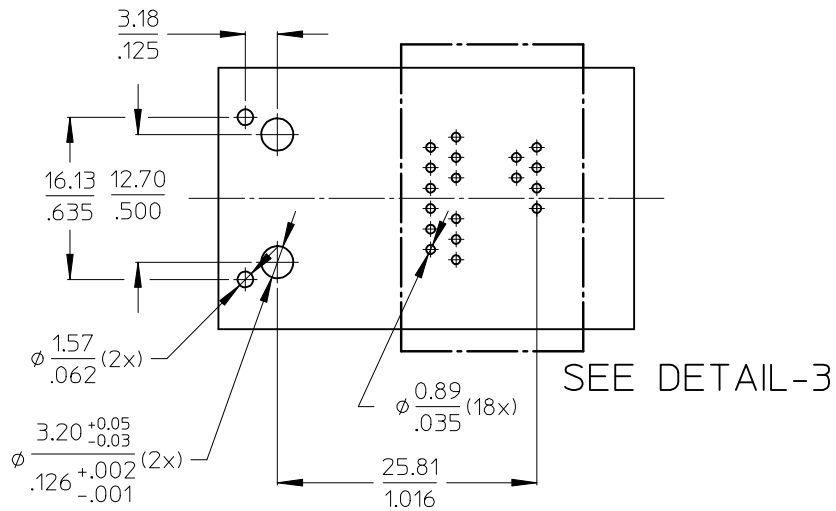


NOTES:

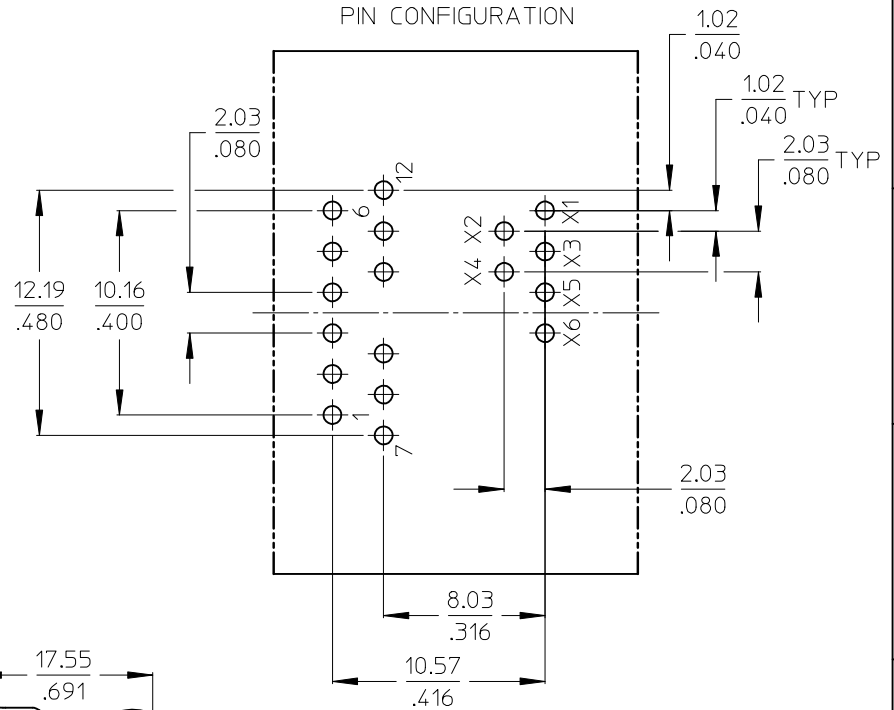
- 1 - SHIELD MATERIAL: STAINLESS STEEL (GROUND PINS ARE TIN DIPPED)
- 2 - PLASTIC MATERIAL: PBT, BLACK, UL 94V-0
- 3 - EXCEEDS PRODUCT REQUIREMENTS BASED ON PRODUCT SPECIFICATION PS-85791-001
- CONTACTS MATERIAL: PHOSPHOR BRONZE
- CONTACT PLATING: GOLD OR GOLD FLASH OVER PALLADIUM NICKEL
- 4 - JACK TO BE MATED WITH IEC 60603-7 PLUGS
- 5 - PRODUCT SPECIFICATION: PS-85791-001
- 6 - PACKAGING SPECIFICATION: PK-85759-001
- 7 - STAND OFF TO SYSTEM BOARD
- 8 - STUBBED PINS AND SHIELD LATCHES: AVOID TO ROUTE TRACES OR TO PLACE ANY VIAS OR PAD IN THIS AREA

| | | | | | | | | | |
|---|--------------------|--|---|-----------------|-------------|---|--|---|------------------|
| ENTER DESCRIPTION EC NO: IPG2013-0557 DRW:MMANGARUDOV 2012/10/16 CHKD: APPR:SSTEINKE 2012/12/21 | DESCRIPTION REV | QUALITY SYMBOLS | GENERAL TOLERANCES (UNLESS SPECIFIED) | DIMENSION STYLE | SCALE | DESIGN UNITS | THIRD ANGLE PROJECTION | | |
| | | ▼=0 □=0 | mm INCH 4 PLACES ± --- ± --- 3 PLACES ± --- ± --- 2 PLACES ± 0.25 ± --- 1 PLACE ± 0.50 ± --- ANGULAR ± .5 ° | MM ONLY | 2:1 | METRIC | DRAWN BY: MMANGARUDOV DATE: 2012/04/25 CHECKED BY: DATE: APPROVED BY: SSTEINKE DATE: 2012/06/18 MATERIAL NO. | TITLE: GIGABIT POE PLUS PDJACK(TM) 1X1 MOLEX INCORPORATED DOCUMENT NO. SD-85791-002 | SHEET NO. 1 OF 3 |
| | | DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS | | | SEE SHEET 3 | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | | |
| | | | | | SIZE A3 | | | | |

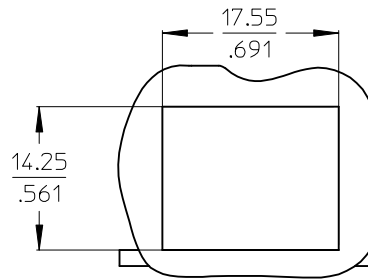
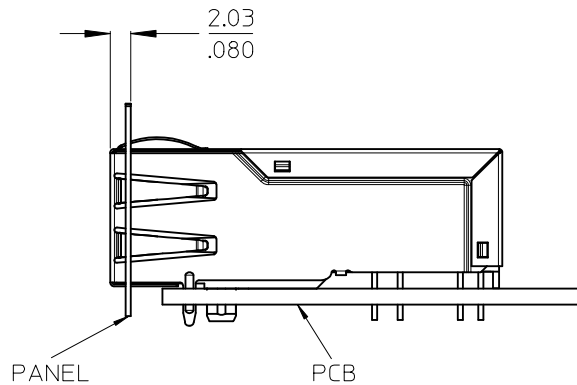
SUGGESTED BOARD LAYOUT - COMPONENT SIDE



PIN CONFIGURATION



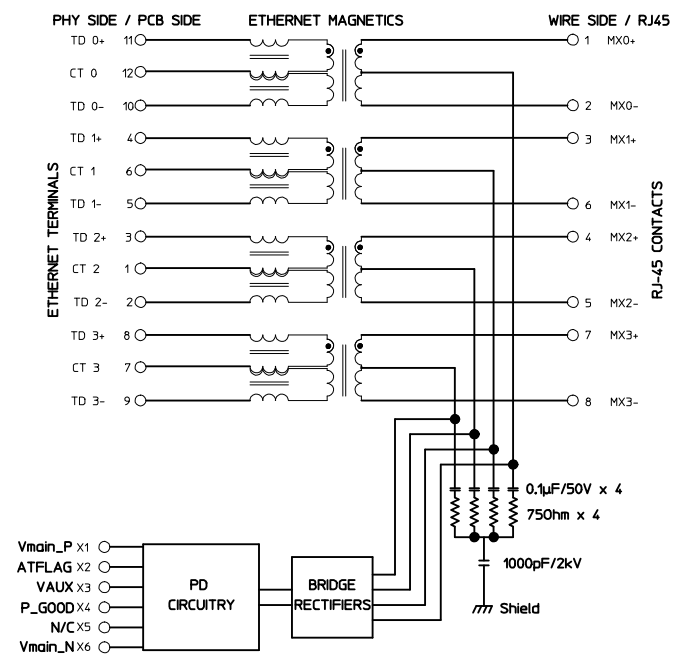
DETAIL-3
SCALE 4:1



SUGGESTED PANEL CUTOUT

| | | | | | | | | | |
|--|-------------------------------|---------------------------------------|--|----------------------------|------------------|--------------|---|------------------------|--|
| ENTER DESCRIPTION EC NO: IPG2013-0557 DRWN: MMANGARUDOV 2012/10/16 CHKD: APPR: SSTEINKE 2012/12/21 | QUALITY SYMBOLS ▽=0 ◻=0 | GENERAL TOLERANCES (UNLESS SPECIFIED) | | DIMENSION STYLE MM ONLY | | SCALE 2:1 | DESIGN UNITS METRIC | THIRD ANGLE PROJECTION | |
| | | | mm | INCH | DRAWN BY | DATE | TITLE | | |
| | | 4 PLACES | ± --- | ± --- | MMANGARUDOV | 2012/04/25 | GIGABIT POE PLUS PDJACK(TM) 1X1 | | |
| | | 3 PLACES | ± --- | ± --- | CHECKED BY | DATE | MOLEX INCORPORATED | | |
| | | 2 PLACES | ± 0.25 | ± --- | JBADER | 2012/04/25 | DOCUMENT NO. SD-85791-002 | | |
| 1 PLACE | ± 0.50 | ± --- | APPROVED BY | DATE | SHEET NO. 2 OF 3 | | | | |
| | | | ANGULAR ± .5 ° | | SSTEINKE | 2012/06/18 | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | |
| | | | DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS | | SEE SHEET 3 | | | | |

| Electrical Specifications @25°C | | |
|---|--------------------|--------------------------|
| Operating temperature (SEE PART NUMBER) | | |
| Description | Value | |
| OCL_POE+TRANSF_20mA_bias | 350µH min. | 0/70°(0/55°CClass4) |
| Turns Ratio | 1CT:1CT | |
| Insertion Loss | | Typical Values (dB max.) |
| Frequency (MHz) | Limits (dB max.) | 0.5 @ 10MHz |
| 1.0-9.9 MHz | 0.4+0.1*log(F) | 0.7 @ 50MHz |
| 10-49.9 MHz | 0.5+0.3*log(F/10) | 1.0 @ 80MHz |
| 50-79.9 MHz | 1+1.4*log(F/80) | 1.3 @ 100MHz |
| 80-100 MHz | 1.3+3*log(F/100) | |
| Return Loss | | TYPICAL Values (dB min.) |
| Frequency (MHz) | Limits (dB min.) | 27 @ 10MHz |
| 1-9.9 MHz | 27dB min. | 10 @ 100MHz |
| 10-100 MHz | 27-17*log(F/10) | |
| CMR | | TYPICAL Values (dB min.) |
| Frequency (MHz) | Limits (dB min.) | 34 @ 10MHz |
| 1-9.9 MHz | 34dB min. | 27 @ 80MHz |
| 10-79.9 MHz | 27dB min. | 21.5 @ 200MHz |
| 80-199.9 MHz | 27-14.5*log(F/80) | 10 @ 400MHz |
| 200-399.9 MHz | 21.5-39*log(F/200) | 10 @ 1000MHz |
| 400-1000 MHz | 10 | |
| NEXT | | TYPICAL Values (dB min.) |
| Frequency (MHz) | Limits (dB min.) | 50 @ 6MHz |
| 1-5.9 MHz | 50 | 34 @ 50MHz |
| 6-49.9 MHz | 45-16*log(F/10) | 25 @ 100MHz |
| 50-100 MHz | 25-30*log(F/100) | |
| Isolation PHY to Wire side | 2.25kVDC/60sec | |



| PIN | NAME | FUNCTION |
|-----|--------------|---|
| X1 | Vmain_P | Output voltage from PDJack(TM) |
| X2 | ATFLAG (LOW) | Indicates 2 Event Classification was detected. Indicates PoE+ power levels available (Class 4 devices only) |
| X3 | VAUX | Nominal voltage of 10.5V. Used as a startup supply for an external DC/DC controller. |
| X4 | P_GOOD (LOW) | Indicates power good status |
| X5 | N/C | |
| X6 | Vmain_N | Vmain reference |

| PART NUMBER | CONNECTOR CONFIGURATION | CLASS / MAX POWER | OPERATING TEMPERATURE |
|-------------|---------------------------------|-------------------|-----------------------|
| 85791-0020 | GIGABIT POE PLUS PDJack(TM)-ICM | 0 / 13W | 0°C TO +70°C |
| 85791-1020 | GIGABIT POE PLUS PDJack(TM)-ICM | 1 / 3,84W | 0°C TO +70°C |
| 85791-2020 | GIGABIT POE PLUS PDJack(TM)-ICM | 2 / 6,49W | 0°C TO +70°C |
| 85791-3020 | GIGABIT POE PLUS PDJack(TM)-ICM | 3 / 13W | 0°C TO +70°C |
| 85791-4020 | GIGABIT POE PLUS PDJack(TM)-ICM | 4 / 25,5W | 0°C TO +55°C |

| | | |
|---|-----------------|--------------------------------------|
| ENTER DESCRIPTION EC NO: IPG2013-0557 DRW:MMANGARUDOV 2012/10/16 CHKD: APPR:SSTEINKE 2012/12/21 | QUALITY SYMBOLS | $\nabla = 0$ $\nabla \square = 0$ |
| | DESCRIPTION | |
| | REV | |
| | | |

| GENERAL TOLERANCES (UNLESS SPECIFIED) | | DIMENSION STYLE | | SCALE | DESIGN UNITS | THIRD ANGLE PROJECTION | |
|--|--------|-----------------|---|--------------|---------------------------------|------------------------|--|
| | | MM ONLY | | 5:1 | METRIC | | |
| | mm | INCH | DRAWN BY | DATE | TITLE | | |
| 4 PLACES | ± --- | ± --- | MMANGARUDOV | 2012/04/25 | GIGABIT POE PLUS PDJACK(TM) 1X1 | | |
| 3 PLACES | ± --- | ± --- | CHECKED BY | DATE | | | |
| 2 PLACES | ± 0.25 | ± --- | JBADER | 2012/04/25 | MOLEX INCORPORATED | | |
| 1 PLACE | ± 0.50 | ± --- | APPROVED BY | DATE | | | |
| ANGULAR ± .5 ° | | | SSTEINKE | 2012/06/18 | SD-85791-002 | | |
| DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS | | | MATERIAL NO. | DOCUMENT NO. | | | |
| | | SIZE | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | 3 OF 3 | | |