

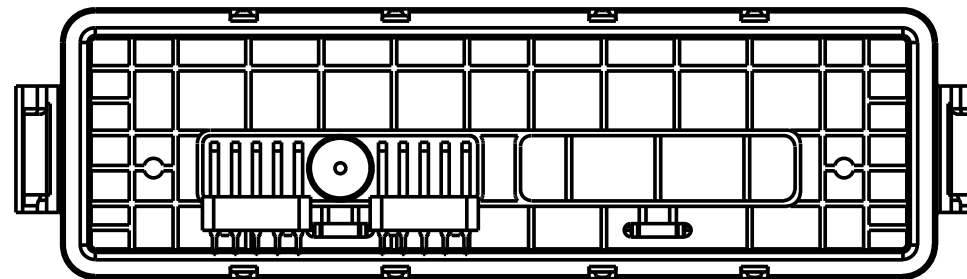
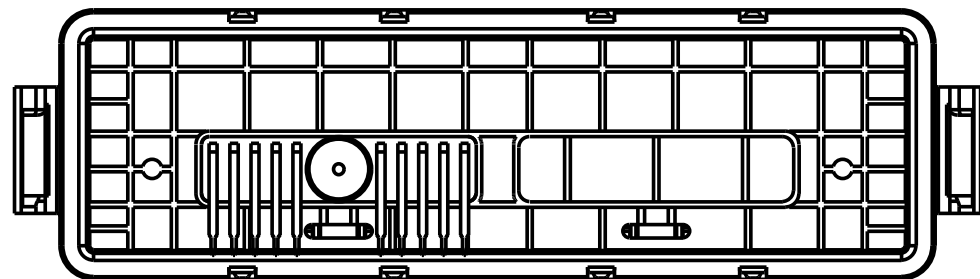
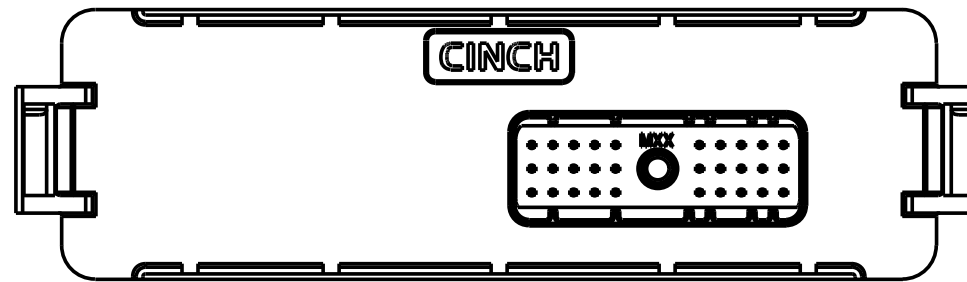
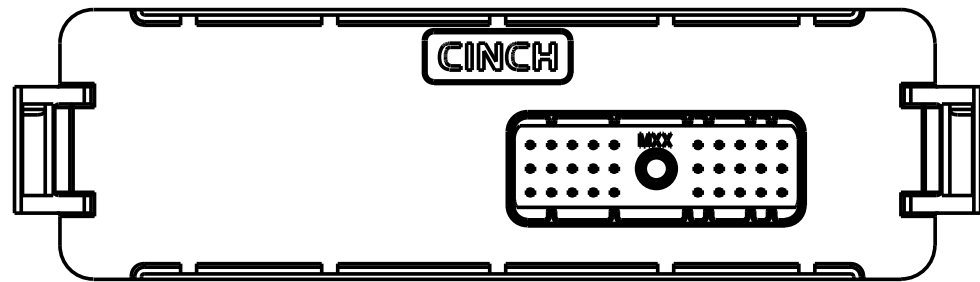
# CINCH PART NUMBER MATRIX

P/N: 581 01 30 045

P/N: 581 01 30 051

30-WAY HEADER ASSEMBLY WITH OUT FERRITE FILTERS

30-WAY HEADER ASSEMBLY WITH FERRITE FILTERS



MATES WITH CINCH HARNESS CONNECTORS P/N:  
581 01 30 029 (30-WAY)

**NOTE:**

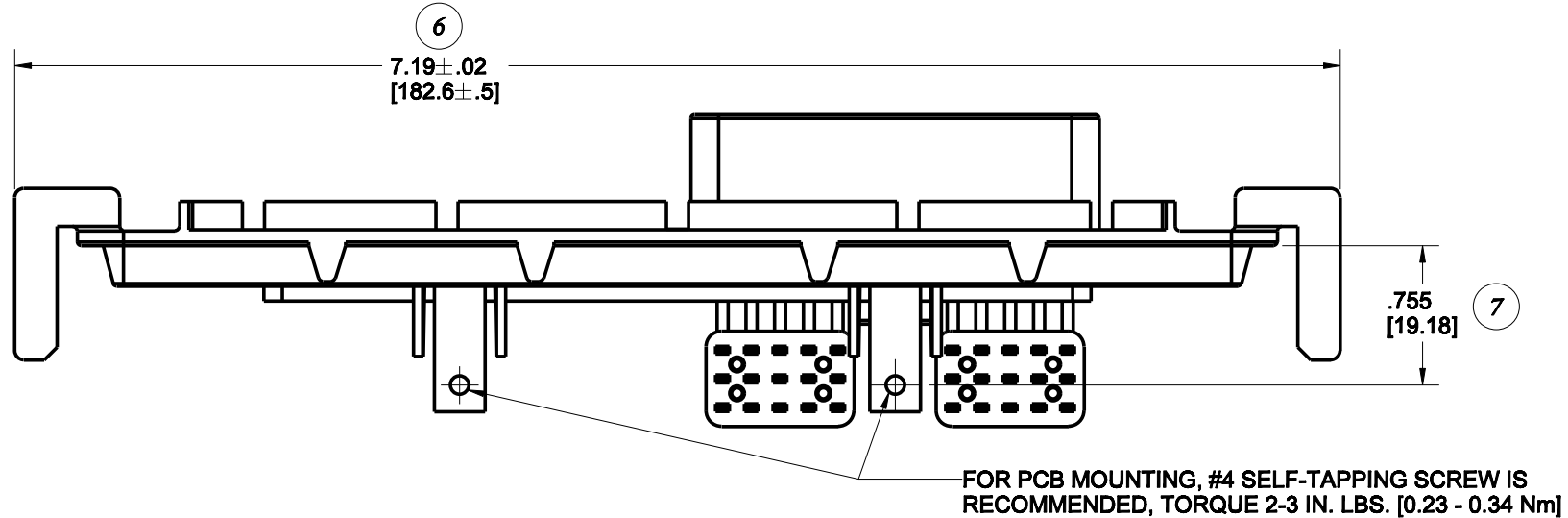
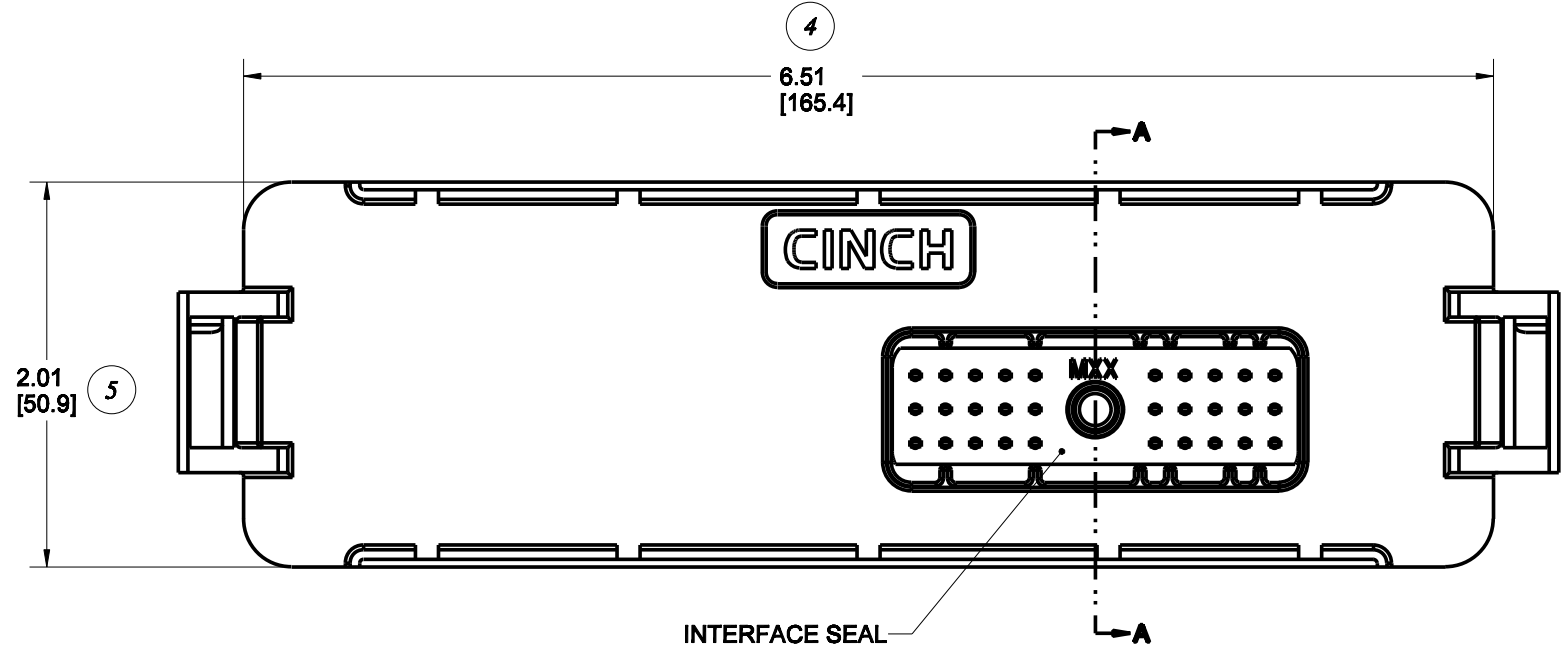
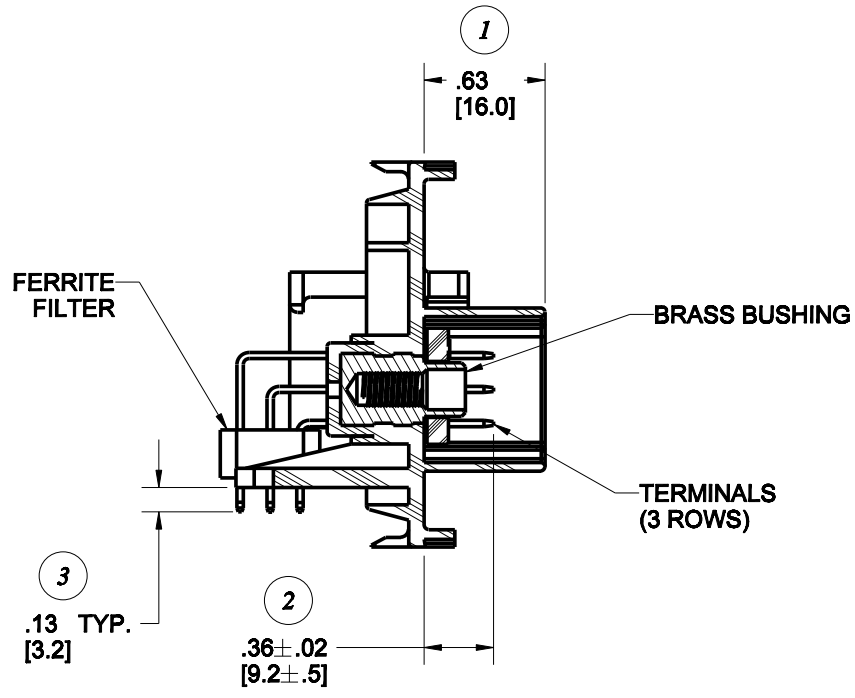
1. ALL DIMENSIONS ARE IN INCHES;  
DIMENSIONS INSIDE [.XX] ARE IN mm, AS REF. ONLY.
2. MATERIALS:  
INTERFACE SEAL: SILICONE RUBBER, COLOR BLUE;  
INSULATOR: 30 % GLASS FILLED POLYMER, COLOR BLACK;  
BUSHING: BRASS ALLOY, UNPLATED 10-24 UNC THREAD;  
TERMINAL BLADE: 1.5 mm BRASS WITH TIN OVER NICKEL PLATING;  
FILTERS: FERRITE BLOCKS.
3. ALL HEADERS ARE REFLOW OR WAVE SOLDERING PROCESS, ROHS COMPLIANT.
4. MATES WITH CINCH SHS PUSH-TO-SEAT HARNESS CONNECTORS (SEE TABLE ABOVE).
5. THERMALLY CONDUCTIVE ADHESIVE PASTE SOLD SEPARATELY: RECOMMENDED IS LOCTITE 383.
6. MOSFET SPRING PLATES ARE SOLD SEPARATELY (FOR INSTALLATION REFER TO ENCLOSURE ASSEMBLY INSTRUCTIONS)  
SPRING LABELED AS "L" IS CINCH P/N: 581 00 00 020 AND SPRING LABELED AS "R" IS CINCH P/N: 581 00 00 021.  
(IT IS RECOMMENDED THAT THE 4 SLOTS BE PROTECTED DURING CONFORMAL COATING)
7. STANDARD PACKAGE SIZE: 36 PARTS/CARTON BOX.

**DRAWING REVISIONS**

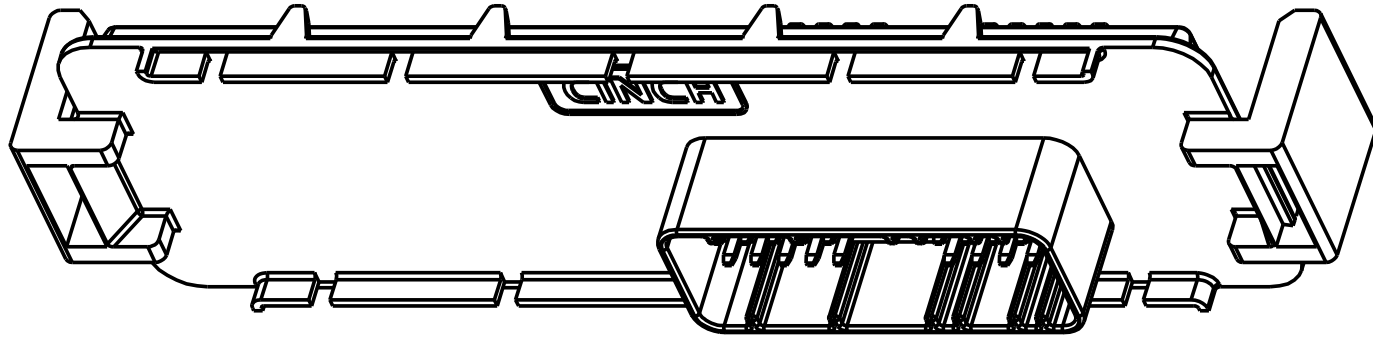
| REV | DOCUMENT   | APP  | DATE    |
|-----|--|------|---------|
| A   | D.O. 05-1217<br>REL. FOR PRODUCTION  | A.C. | 9/9/05  |
| B   | ECN: 06A069<br>ADDED SHEET 5<br>ADDED SHEET 6<br>MODIFIED SHEET 3<br>MODIFIED SHEET 4          | A.C. | 3/24/06 |
| C   | ECN: 06A479<br>REFORMATTED DRAWING<br>PCB LAYOUTS REDRAWN<br>WITH ADDITIONAL KEEP<br>OUT AREAS | A.C. | 1/22/07 |

RoHS COMPLIANT

|  |   |         |  |
|--|---|---------|--|
| UNITS  | ENGLISH                                     | PRO/E   | MODELED BY:                                  |
| DO NOT SCALE DRAWING   |   | DATE    |  |
| UNLESS OTHERWISE SPECIFIED:<br>ALL DIMENSIONS ARE IN INCHES  | DRAWN BY<br><b>B. KOSTIC</b>                | 9/02/05 | 1700 FINLEY RD<br>LOMBARD, IL. 60148         |
| FILLET/RADII<br>.02 MAX  | DESIGN ENGINEER                             | 9/02/05 | TITLE<br><b>30-WAY HEADERS LE<br/>MODICE</b> |
| TOLERANCES AND<br>LIMITS APPLY OVER<br>ADDITIVE FINISH   | DESIGN ENGINEERING MGR.<br><b>A. CAINES</b> | 9/5/05  | MATERIAL                                     |
| TOLERANCES<br>X ± .1<br>XX ± .01<br>XXX ± .005<br>ANGULAR ± .5°  | MFG. ENGINEERING<br><b>R. GARZA</b>         | 9/15/05 | MATERIAL SPEC NUMBER                         |
| THIS DOCUMENT IS THE PROPERTY<br>OF CINCH. NEITHER THIS DOCUMENT<br>NOR ANY OF THE INFORMATION<br>CONTAINED IN IT MAY BE DUPLICATED<br>OR DISCLOSED WITHOUT PRIOR<br>WRITTEN CONSENT OF CINCH. | QUALITY ASSURANCE<br><b>D. DE LA PENA</b>   | 9/15/05 | FINISH                                       |
|  |   |         | PROJECT NUMBER<br><b>A 14562</b>             |
|  |   |         | CAD FILE NUMBER<br><b>5810130045</b>         |
|  |   |         | DRAWING NUMBER<br><b>581 01 30 045S</b>      |
|  |   |         | CAGE IDENT NO. <b>71785</b> SIZE <b>B</b>    |
|  |   |         | SCALE <b>7:10</b> SHEET <b>1 OF 6</b>        |



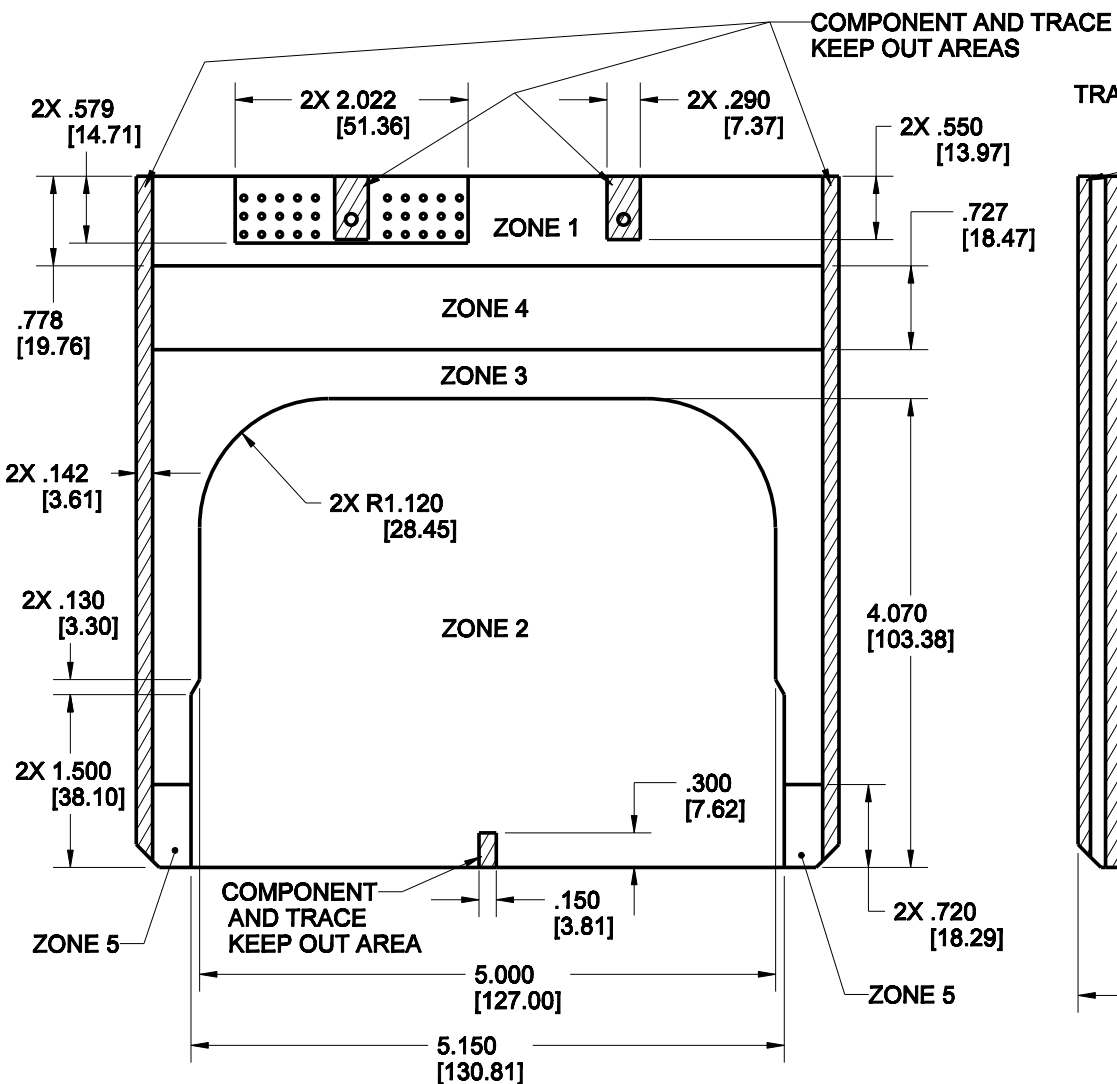
CINCH P/N: 581 01 30 051 SHOWN  
(HEADER WITH FILTERS)



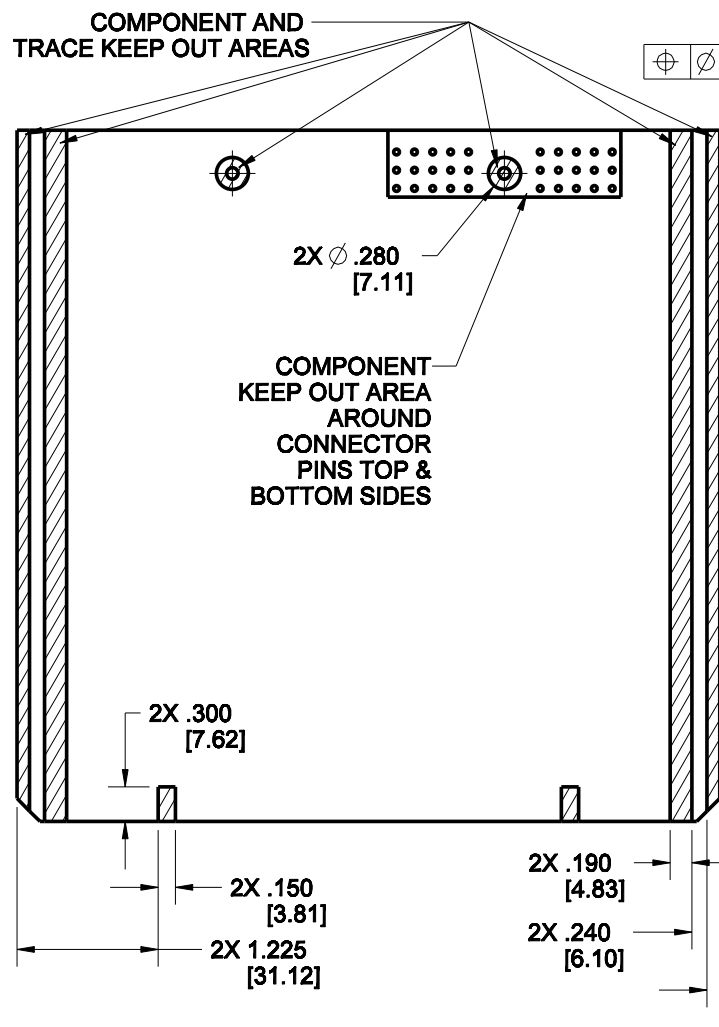
|   |  |  |   |                                     |                 |
|---|--|--|---|-------------------------------------|-----------------|
| UNITS<br><b>ENGLISH</b>   |  | <b>Cinch</b>                             |   | 1700 FINLEY RD<br>LOMBARD, IL 60148 |                 |
| DO NOT SCALE DRAWING  |  | TITLE<br><b>30-WAY HEADERS LE MODICE</b> |   |                                     |                 |
| UNLESS OTHERWISE SPECIFIED:<br>ALL DIMENSIONS ARE IN INCHES   |  | PRO/E DRAWING                            |   |                                     |                 |
| FILLET/RADI<br>.02 MAX  | TOLERANCES<br>X ± .1<br>.XX ± .01<br>.XXX ± .005<br>ANGULAR ± .5 | CAD FILE NUMBER<br><b>5810130045</b>     | DRAWING NUMBER<br><b>581 01 30 045S</b> |                                     | REV<br><b>C</b> |
| THIS DOCUMENT IS THE PROPERTY OF CINCH. NEITHER THIS DOCUMENT NOR ANY OF THE INFORMATION CONTAINED IN IT MAY BE DUPLICATED OR DISCLOSED WITHOUT PRIOR WRITTEN CONSENT OF CINCH. |  | CAGE IDENT NO.<br><b>71785</b>           | SIZE<br><b>B</b>                        | SCALE<br>1:1                        | SHEET 2 OF 6    |

# PCB LAY-OUT WITHOUT HEAT SINKS

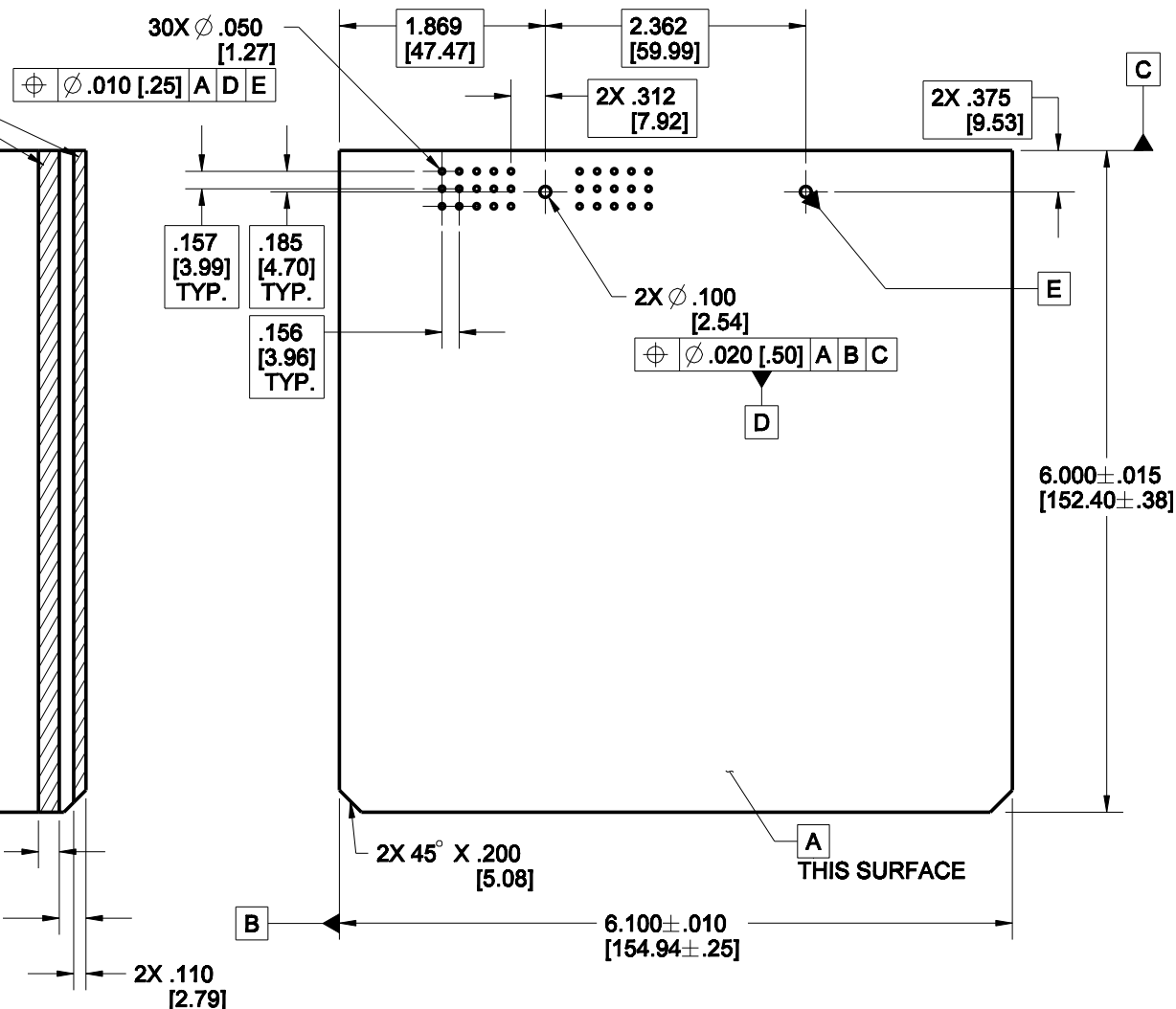
**PCB TOP SIDE GENERAL ZONING & KEEP OUT AREAS**



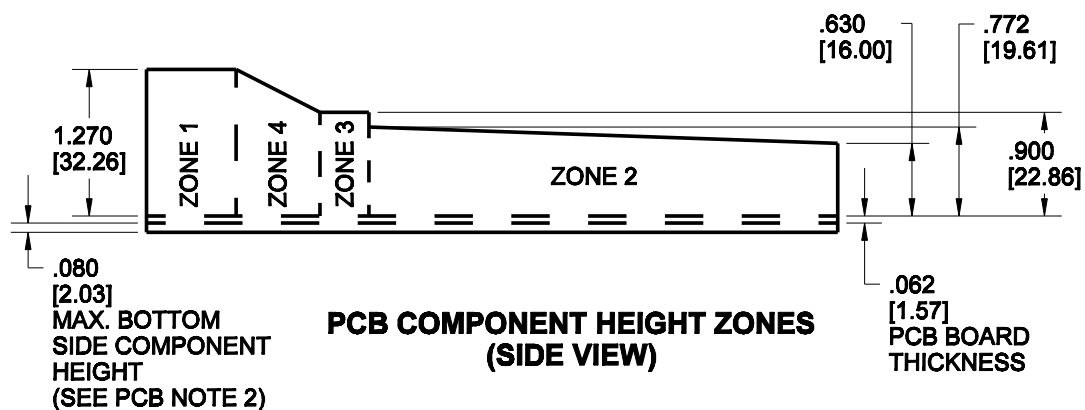
**PCB BOTTOM SIDE GENERAL ZONING & KEEP OUT AREAS**



**PCB OVERALL DIMENSIONS AND HOLE LOCATIONS**



**PCB COMPONENT HEIGHT ZONES (SIDE VIEW)**



**PCB COMPONENTS HEIGHT LIMIT**

|  | ZONE 1 | ZONE 2         | ZONE 3 | ZONE 4         | ZONE 5 |
|--|--------|----------------|--------|----------------|--------|
| MAX. HEIGHT FOR COMPONENTS (ABOVE PCB) | 1.270" | SEE PCB NOTE 3 | .900"  | SEE PCB NOTE 3 | .420"  |

**PCB NOTES:**

- ON BOTTOM SIDE OF THE PCB, COMPONENTS OR TRACES MUST BE MIN. .100" AWAY FROM THE EDGE OF THE PCB.
- THE BOTTOM SIDE OF THE PCB SHOULD NOT HAVE COMPONENTS OR LEADS THAT EXTEND HIGHER THAN .080" (SEE PG. 6 SIDE VIEW).
- AREA HAS VARIABLE HEIGHT. SEE PCB COMPONENT HEIGHT ZONES VIEW FOR DETAILS.

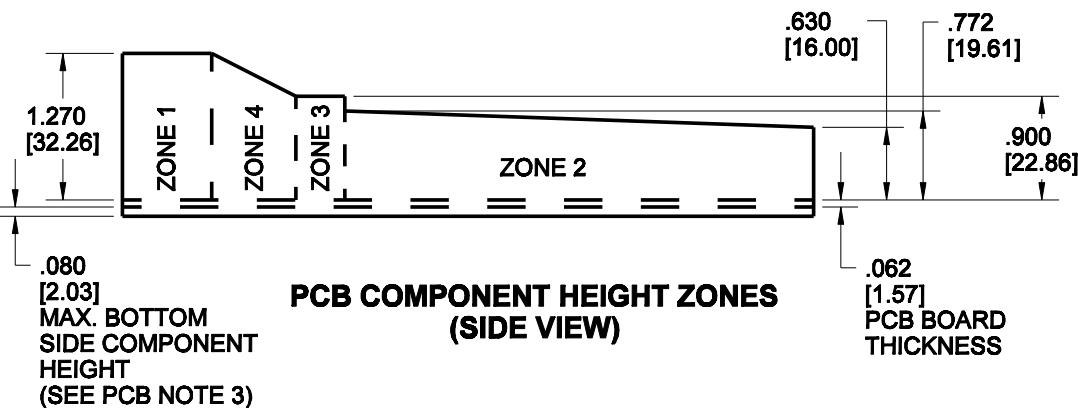
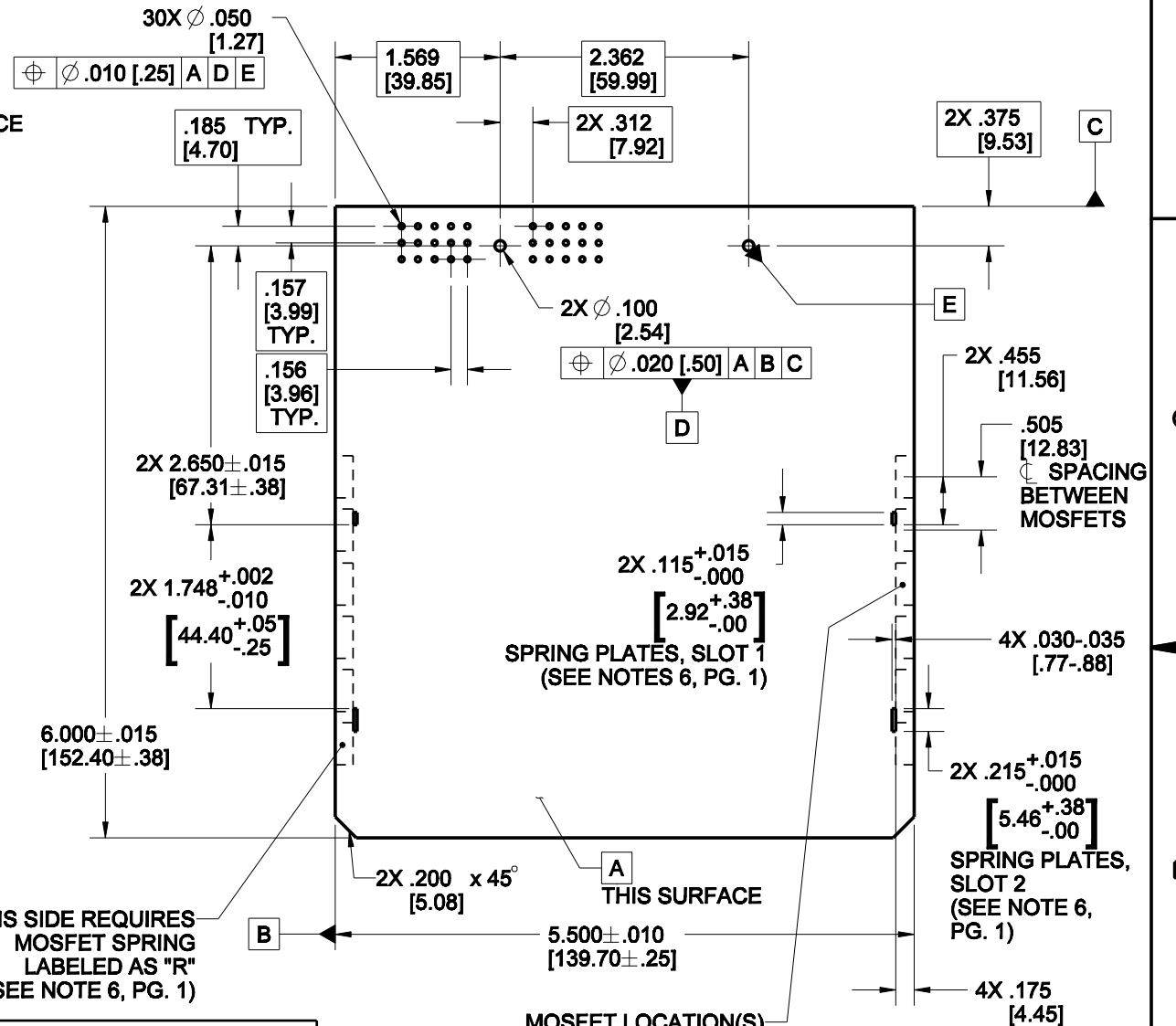
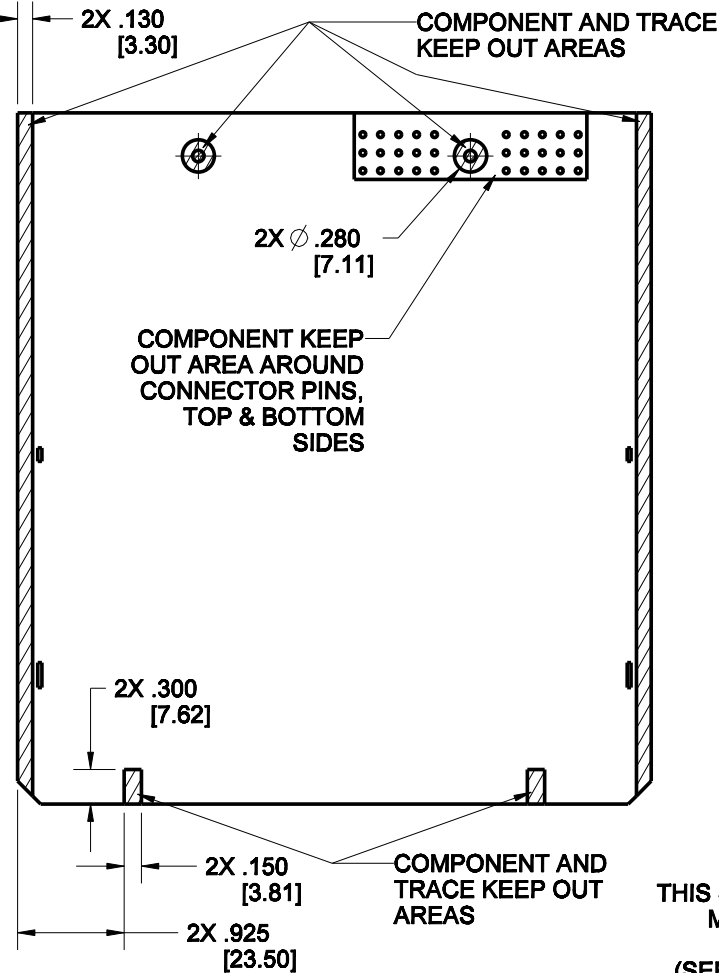
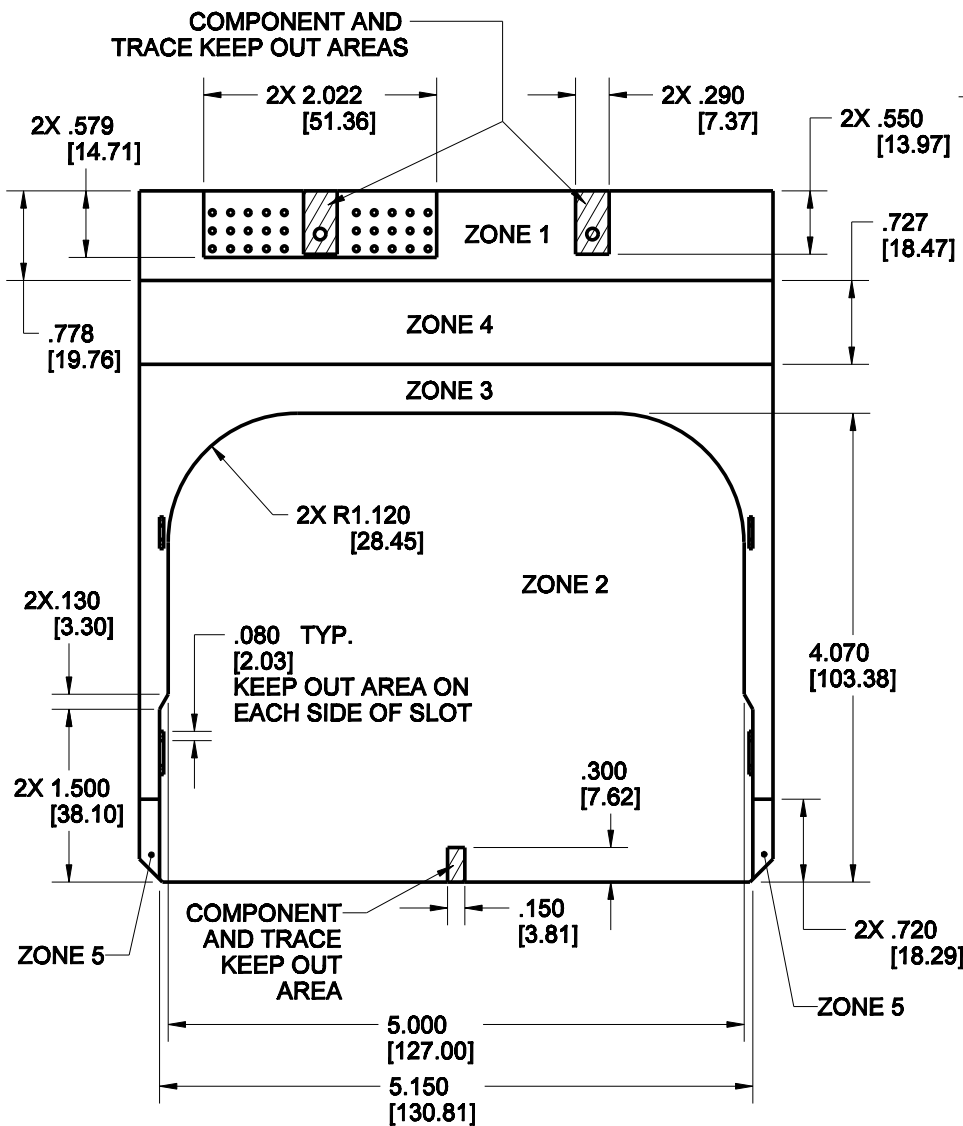
|   |         |  |  |  |                                     |  |
|---|---------|--|--|--|-------------------------------------|--|
| UNITS   | ENGLISH |  | <b>Cinch</b>   |  | 1700 FINLEY RD<br>LOMBARD, IL 60148 |  |
| DO NOT SCALE DRAWING  |         |  |  |  | TITLE                               |  |
| UNLESS OTHERWISE SPECIFIED:<br>ALL DIMENSIONS ARE IN INCHES   |         |  | PRO/E DRAWING  |  |                                     |  |
| FILLET/RADI<br>.02 MAX  |         |  | TOLERANCES<br>X ± .1<br>.XX ± .01<br>.00X ± .005<br>ANGULAR ± .5 |  |                                     |  |
| TOLERANCES AND LIMITS APPLY OVER ADDITIVE FINISH  |         |  | CAGE IDENT NO.   |  | SCALE                               |  |
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| CAD FILE NUMBER   |         |  | DRAWING NUMBER   |  | REV                                 |  |
| 5810130045  |         |  | 581 01 30 045S   |  | C                                   |  |
| CAGE IDENT NO.  |         |  | SCALE  |  | SHEET 3 OF 6                        |  |
| 71785   |         |  | 3:5  |  | SHEET 3 OF 6                        |  |

# PCB LAY-OUT WITH TWO HEAT SINKS

## PCB TOP SIDE GENERAL ZONING & KEEP OUT AREAS

## PCB BOTTOM SIDE GENERAL ZONING & KEEP OUT AREAS

## PCB OVERALL DIMENSIONS AND HOLE LOCATIONS



### PCB COMPONENTS HEIGHT LIMIT

|  | ZONE 1 | ZONE 2         | ZONE 3 | ZONE 4         | ZONE 5 |
|--|--------|----------------|--------|----------------|--------|
| MAX. HEIGHT FOR COMPONENTS (ABOVE PCB) | 1.270" | SEE PCB NOTE 4 | .900"  | SEE PCB NOTE 4 | .420"  |

- PCB NOTES:**
- IF MOSFET SPRINGS ARE USED, ZONE 3 SHOULD CONTAIN ONLY MOSFETS AND TRACES BETWEEN THE SPRINGS AND EDGE OF THE BOARD.
  - ON BOTTOM SIDE OF THE PCB, COMPONENTS OR TRACES MUST BE MIN. .100" AWAY FROM THE EDGE OF THE PCB.
  - THE BOTTOM SIDE OF THE PCB SHOULD NOT HAVE COMPONENTS OR LEADS THAT EXTEND HIGHER THAN .080" (SEE PG. 6 SIDE VIEW).
  - AREA HAS VARIABLE HEIGHT. SEE PCB COMPONENT HEIGHT ZONES VIEW FOR DETAILS.

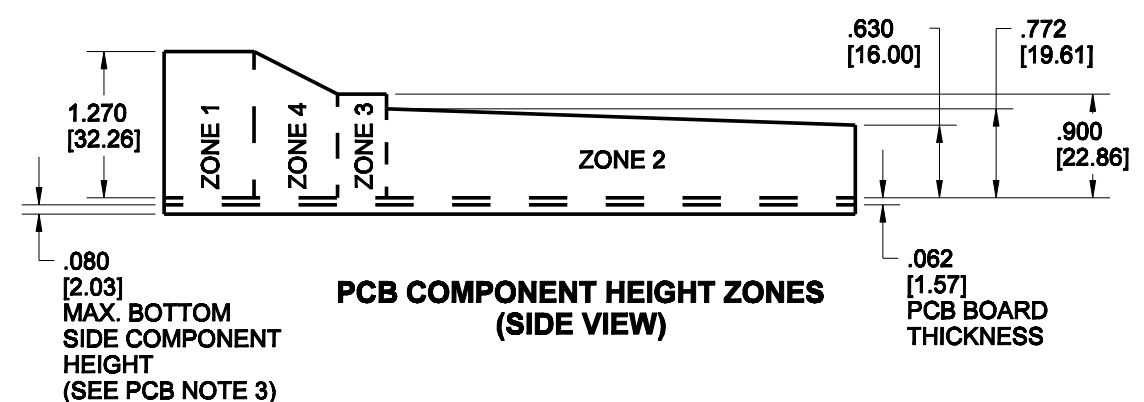
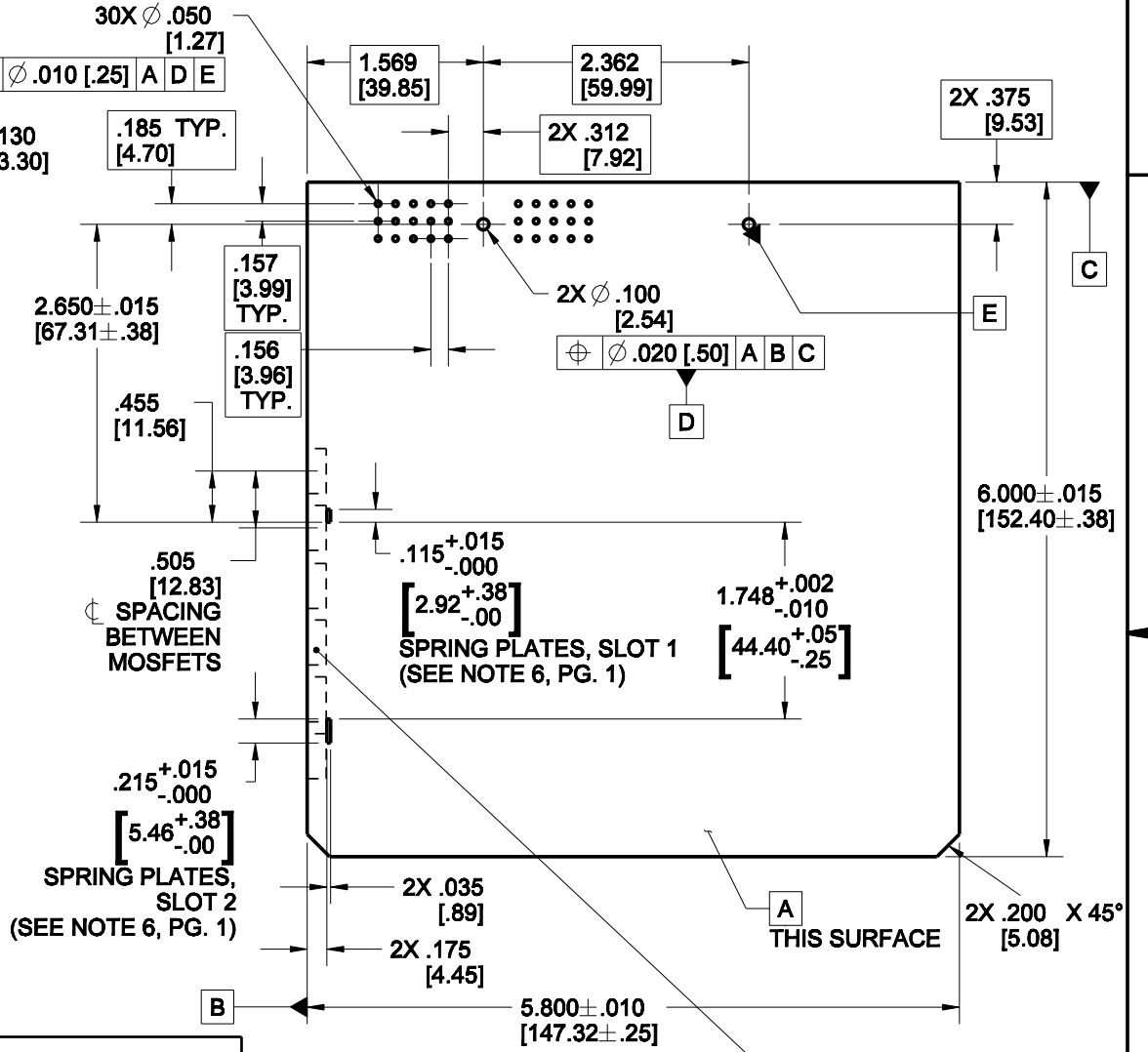
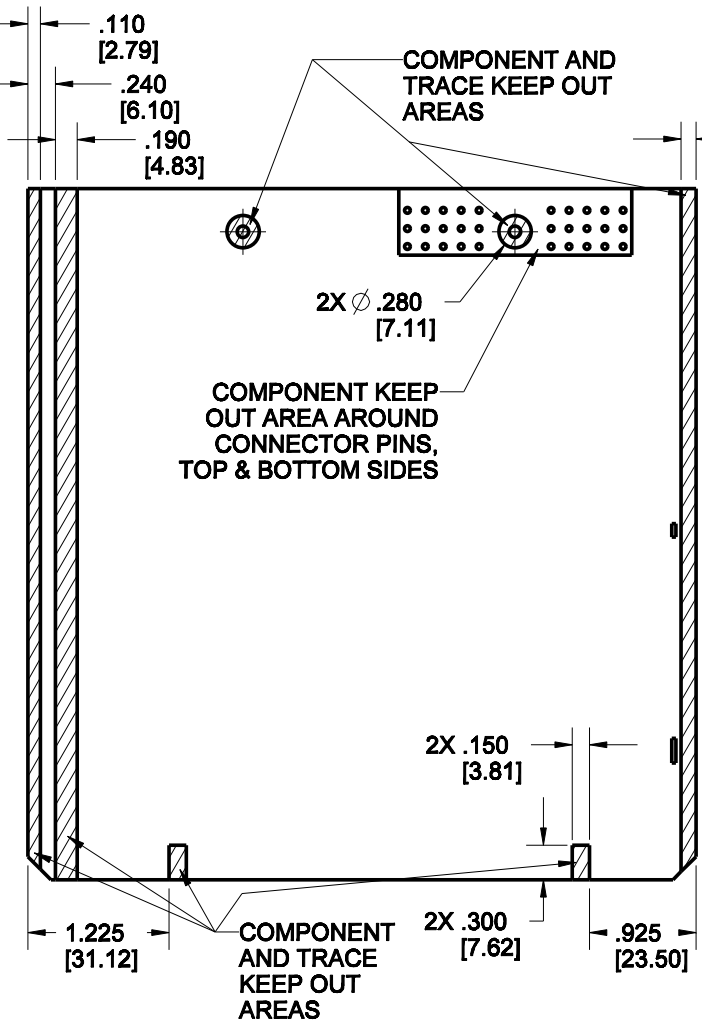
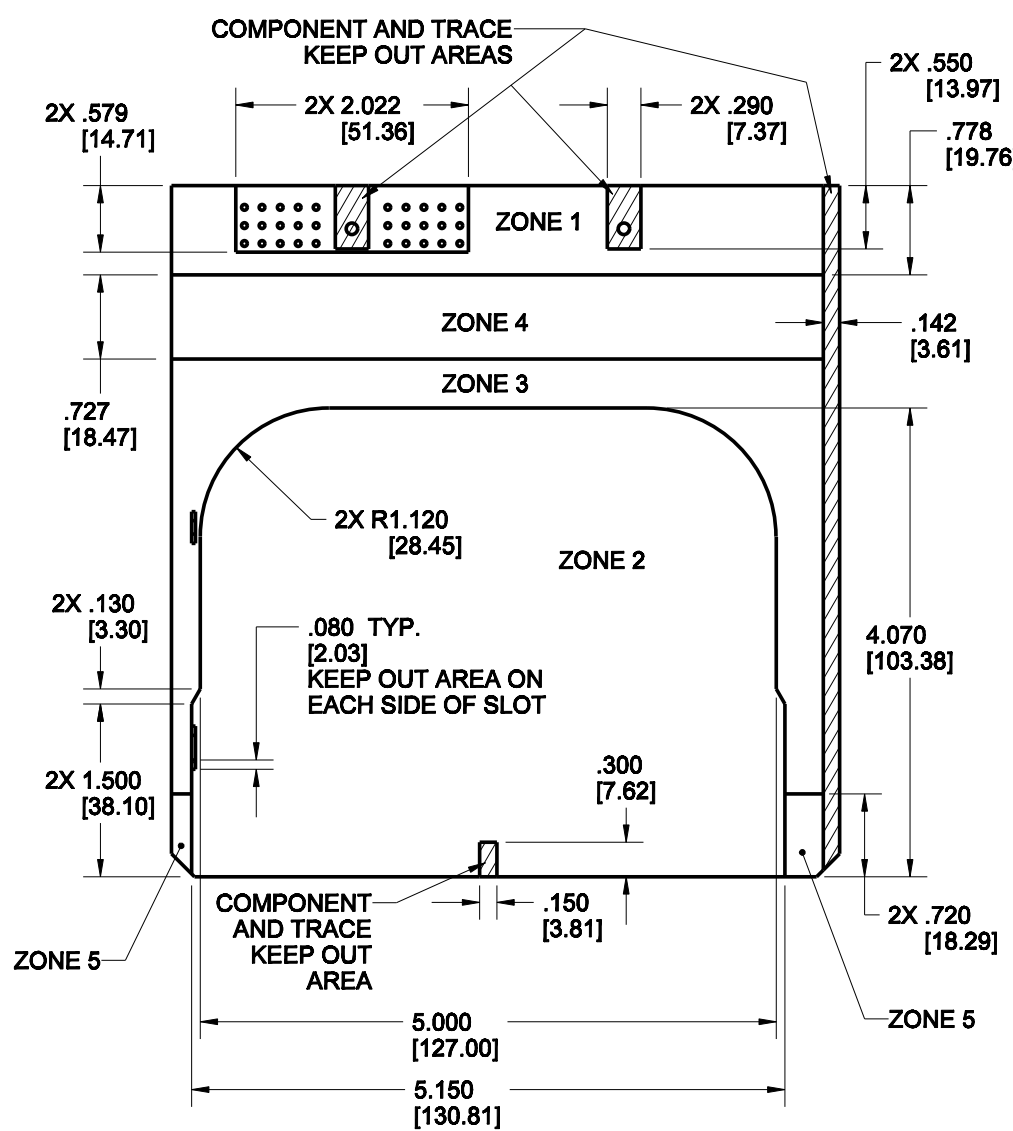
|   |         |  |                  |  |                                     |  |
|---|---------|--|------------------|--|-------------------------------------|--|
| UNITS   | ENGLISH |  |                  |  | 1700 FINLEY RD<br>LOMBARD, IL 60148 |  |
| DO NOT SCALE DRAWING  |         |  |                  |  | TITLE                               |  |
| UNLESS OTHERWISE SPECIFIED:<br>ALL DIMENSIONS ARE IN INCHES   |         |  | TOLERANCES       |  | PRO/E DRAWING                       |  |
| FILLET/RADIUS   |         |  | X $\pm$ .1       |  | CAD FILE NUMBER                     |  |
| TOLERANCES AND LIMITS APPLY OVER ADDITIVE FINISH  |         |  | .XX $\pm$ .01    |  | 5810130045                          |  |
|   |         |  | .00XX $\pm$ .005 |  | DRAWING NUMBER                      |  |
|   |         |  | ANGULAR $\pm$ .5 |  | 581 01 30 045S                      |  |
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|   |         |  | 71785            |  | C                                   |  |
|   |         |  | SCALE            |  | SHEET 4 OF 6                        |  |
|   |         |  | 3:5              |  |                                     |  |

# PCB LAY-OUT WITH ONE HEAT SINK

## PCB TOP SIDE GENERAL ZONING & KEEP OUT AREAS

## PCB BOTTOM SIDE GENERAL ZONING & KEEP OUT AREAS

## PCB OVERALL DIMENSIONS AND HOLE LOCATIONS



| PCB COMPONENTS HEIGHT LIMIT            |        |                |        |                |        |
|--|--------|----------------|--------|----------------|--------|
|  | ZONE 1 | ZONE 2         | ZONE 3 | ZONE 4         | ZONE 5 |
| MAX. HEIGHT FOR COMPONENTS (ABOVE PCB) | 1.270" | SEE PCB NOTE 4 | .900"  | SEE PCB NOTE 4 | .420"  |

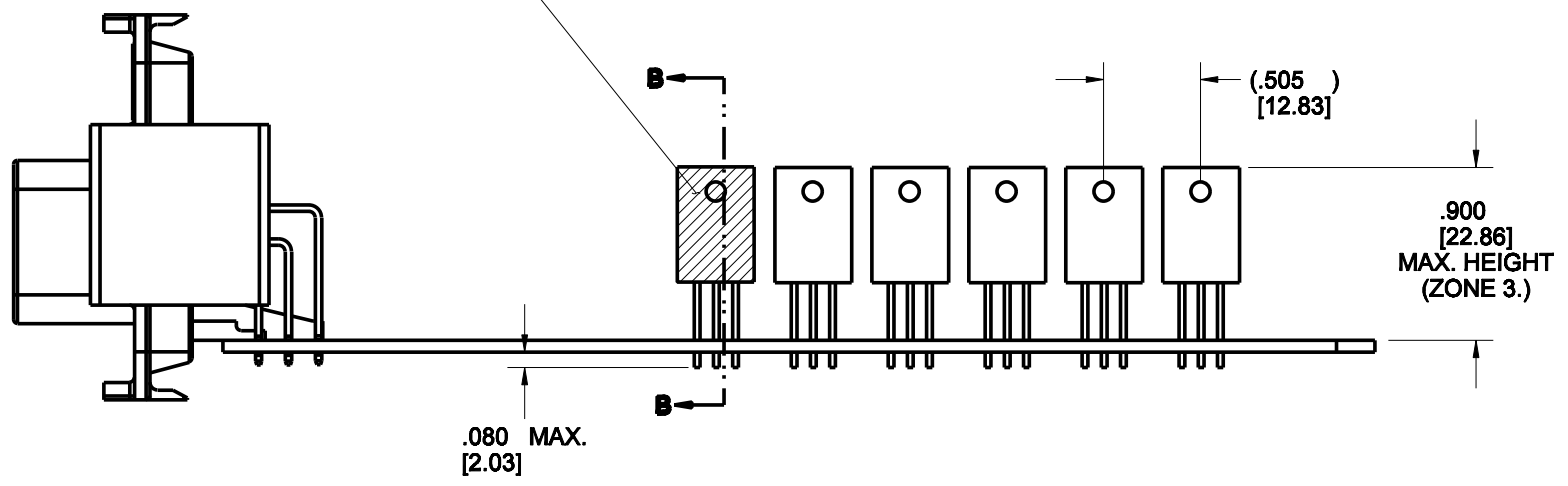
**PCB NOTES:**

- IF MOSFET SPRINGS ARE USED, ZONE 3 SHOULD CONTAIN ONLY MOSFETS AND TRACES BETWEEN THE SPRINGS AND EDGE OF THE BOARD.
- ON BOTTOM SIDE OF THE PCB, COMPONENTS OR TRACES MUST BE MIN. .100" AWAY FROM THE EDGE OF THE PCB.
- THE BOTTOM SIDE OF THE PCB SHOULD NOT HAVE COMPONENTS OR LEADS THAT EXTEND HIGHER THAN .080" (SEE PG. 6 SIDE VIEW).
- AREA HAS VARIABLE HEIGHT. SEE PCB COMPONENT HEIGHT ZONES VIEW FOR DETAILS.

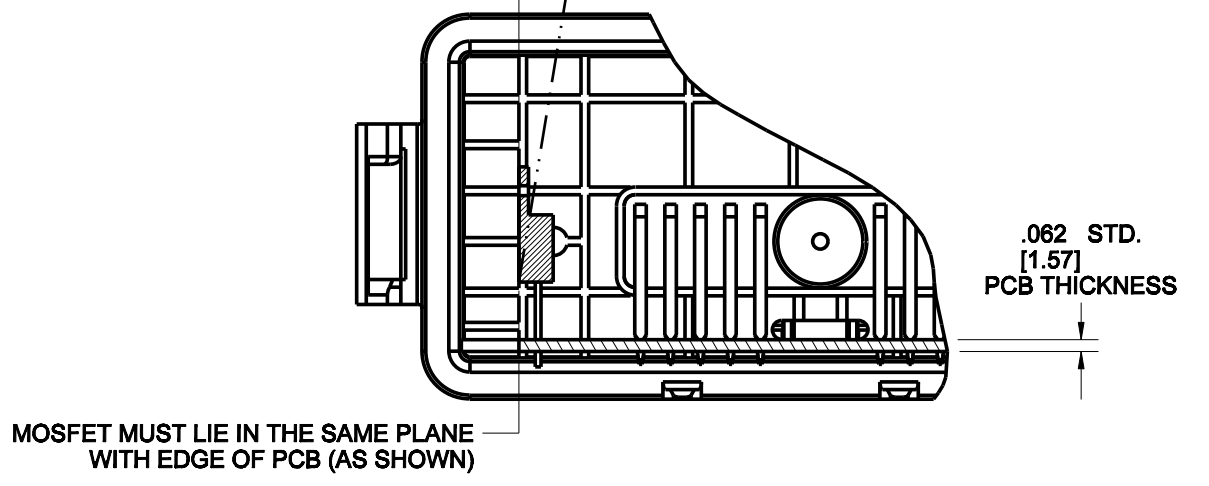
|  |  |                             |                                     |
|--|--|-----------------------------|-------------------------------------|
| UNITS  | ENGLISH  | <b>Cinch</b>                | 1700 FINLEY RD<br>LOMBARD, IL 60148 |
| DO NOT SCALE DRAWING   |  | 30-WAY HEADERS LE<br>MODICE |                                     |
| UNLESS OTHERWISE SPECIFIED:<br>ALL DIMENSIONS ARE IN INCHES  |  | PRO/E DRAWING               |                                     |
| FILLET/RADI<br>.02 MAX   | TOLERANCES<br>X ± .1<br>.XX ± .01<br>.00X ± .005<br>ANGULAR ± .5 | TITLE                       | 581 01 30 045S                      |
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|  |  | DRAWING NUMBER              | 581 01 30 045S                      |
|  |  | SCALE                       | 3:5                                 |
|  |  | SHEET                       | 5 OF 6                              |

APPLY THIN BEAD OF THERMALLY CONDUCTIVE ADHESIVE PASTE TO ENTIRE SURFACE OF EVERY MOSFET (SEE NOTE 5.)

FOR EASE OF ASSEMBLY IT IS RECOMMENDED THAT MOSFET(S) BE TILTED UP TO 10° IN POSITIVE DIRECTION (SEE DOTTED LINE)



**SIDE VIEW  
REQUIRED TO-220 PACKAGE PROFILE**



**SECTION B-B**

|  |                  |  |   |                                     |                 |
|--|------------------|--|---|-------------------------------------|-----------------|
| UNITS<br><b>ENGLISH</b>  |                  | <b>Cinch</b>   |   | 1700 FINLEY RD<br>LOMBARD, IL 60148 |                 |
| DO NOT SCALE DRAWING   |                  |  |   |                                     |                 |
| UNLESS OTHERWISE SPECIFIED:<br>ALL DIMENSIONS ARE IN INCHES  |                  | TITLE<br><b>30-WAY HEADERS LE<br/>MODICE</b>                     |   |                                     |                 |
| FILLET/RADI<br>.02 MAX   |                  | TOLERANCES<br>X ± .1<br>.XX ± .01<br>.XXX ± .005<br>ANGULAR ± .5 |   |                                     |                 |
| TOLERANCES AND<br>LIMITS APPLY OVER<br>ADDITIVE FINISH   |                  | PRO/E DRAWING  |   |                                     |                 |
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| CAGE IDENT NO.<br><b>71785</b>   | SIZE<br><b>B</b> | SCALE<br>1:1   | SHEET 6 OF 6                            |                                     |                 |

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[F358300-B](#) [F407400](#) [F444110](#) [F487000](#) [F509500B-B](#) [827153-1](#) [8N1515-32-24P](#) [9-1326729-8](#) [925474-1](#) [928905-1](#) [964562-4](#) [968782-1](#)  
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[12066261](#) [12110546](#) [12110546-B](#) [12131792](#)