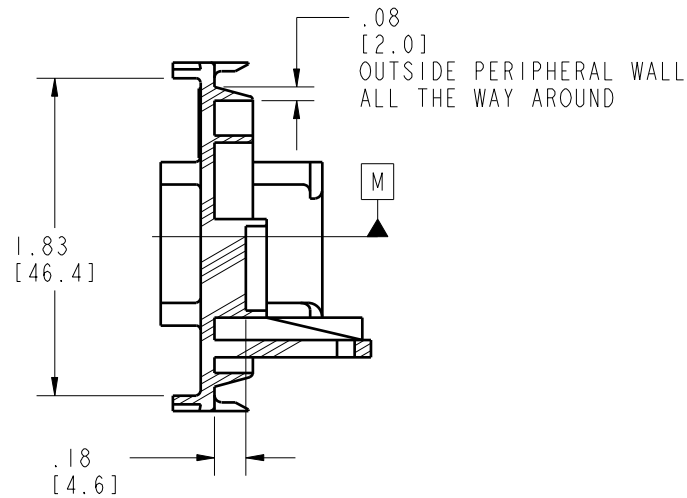
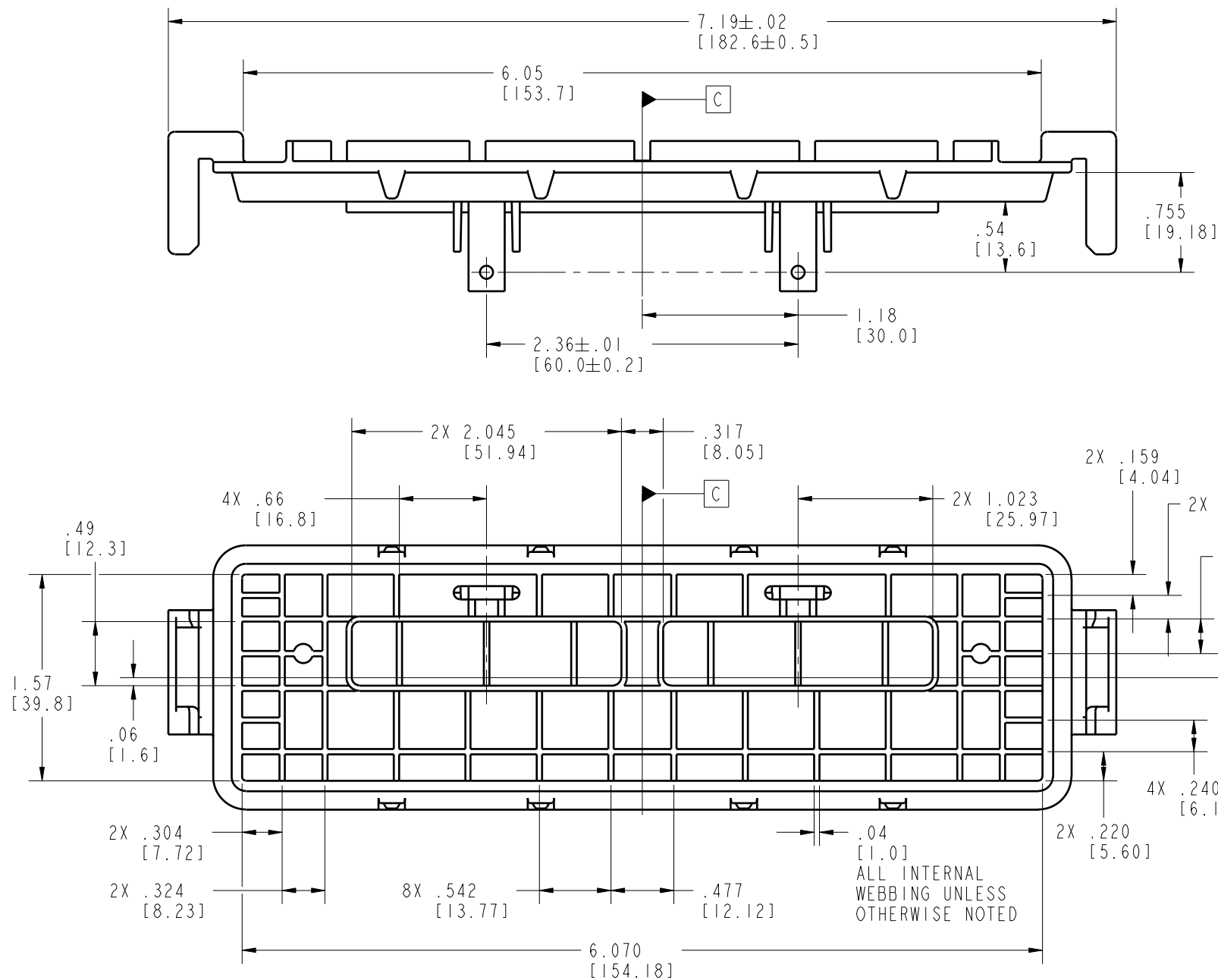




## SECTION B-B

- NOTES:
1. ALL DIMENSIONS ARE IN INCHES;  
DIMENSION INSIDE [.XX] ARE IN MM, AS REF. ONLY.
  2. MATERIAL: 30 % GLASS FILLED POLYMER, COLOR: BLACK
  3. ALL HEADERS ARE REFLOW OR WAVE SOLDERING PROCESS,  
ROHS COMPLIANT.
  4. THERMALLY CONDUCTIVE ADHESIVE PASTE SOLD SEPARATELY:  
RECOMMENDED IS LOCTITE 383.
  5. MOSFET SPRING PLATES ARE SOLD SEPARATLY (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  
FOUR SLOTS BE PROTECTED DURING CONFORMAL COATING)
  6. STANDARD PACKAGE SIZE: 36 PARTS/CARTON BOX.

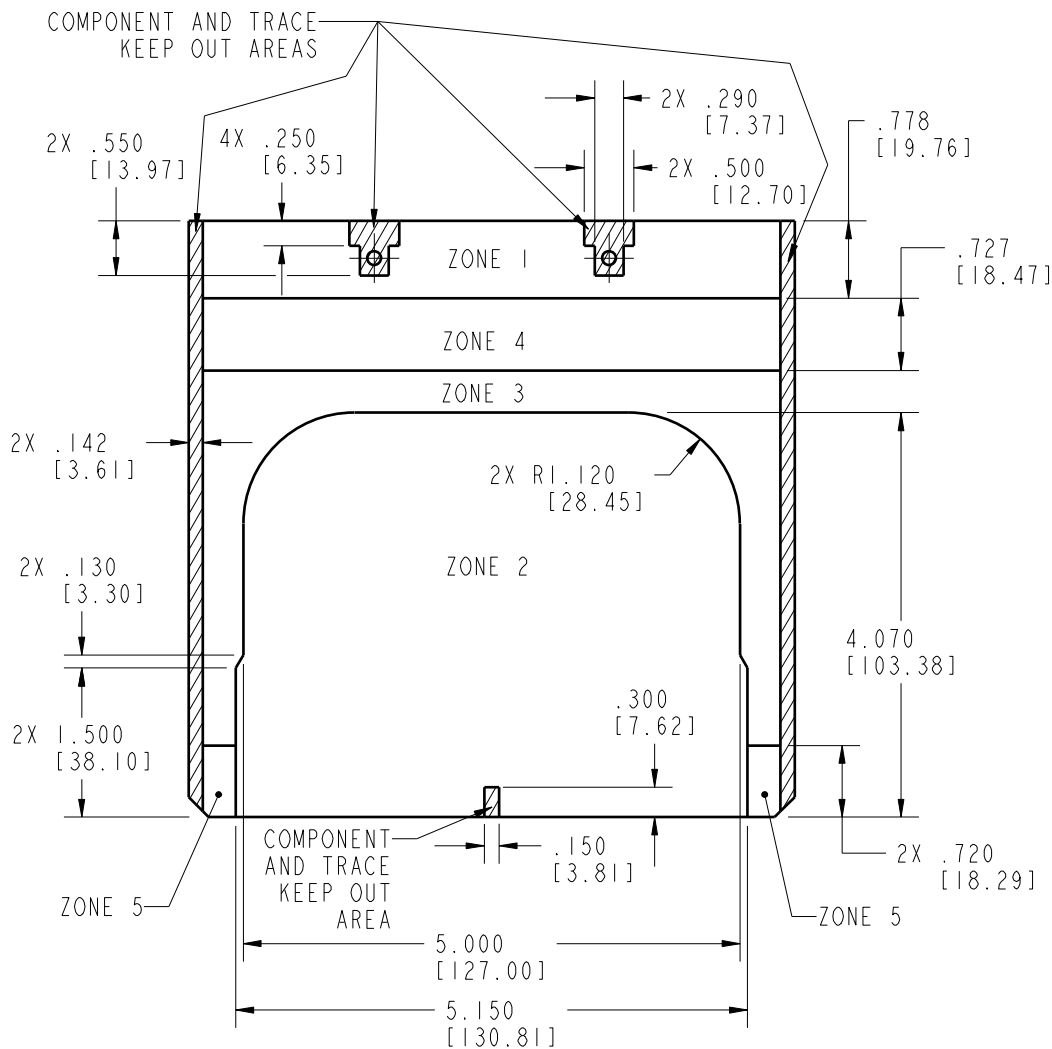


| DRAWING REVISIONS |                       |      |         |
|-------------------|-----------------------|------|---------|
| REV               | DOCUMENT              | APP  | DATE    |
| A                 | RELEASE<br>DO 07-1065 | A.C. | 1/16/08 |

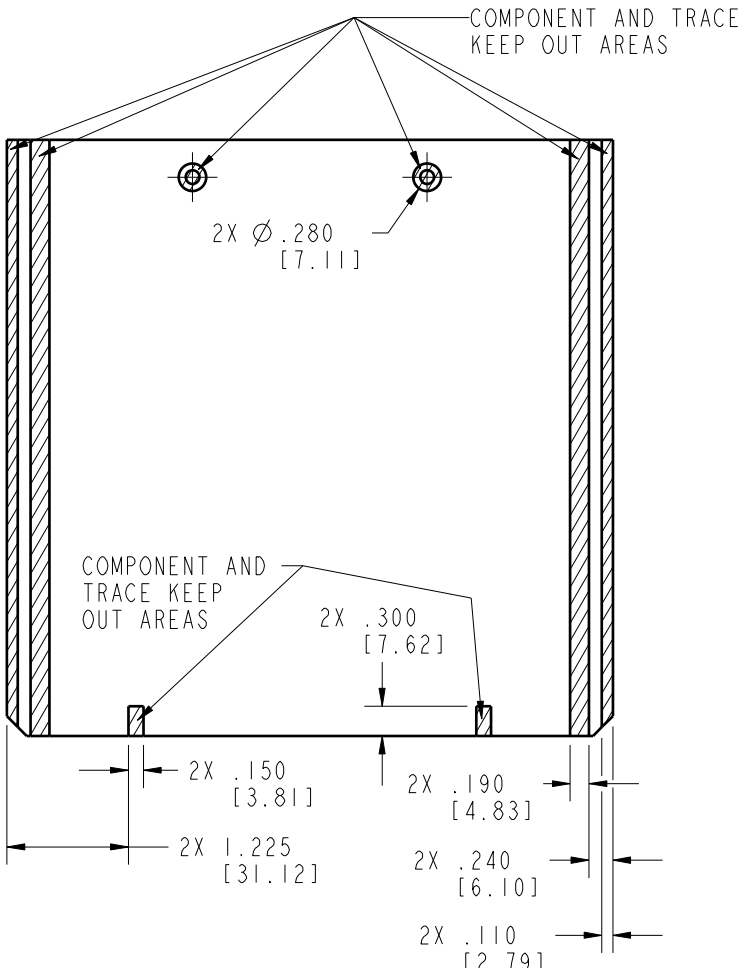
|                                                                                                                                                                                                                                                                                                                                                                |  |                                                                                       |       |                      |  |                                       |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------|-------|----------------------|--|---------------------------------------|--|
| UNITS                                                                                                                                                                                                                                                                                                                                                          |  | RoHS COMPLIANT                                                                        |       | MODELED BY:          |  |                                       |  |
|                                                                                                                                                                                                                                                                                                                                                                |  |                                                                                       |       |                      |  |                                       |  |
| ENGLISH                                                                                                                                                                                                                                                                                                                                                        |  |  | PRO/E | Cinch                |  | 1700 FINLEY RD.<br>LOMBARD, IL. 60148 |  |
| DO NOT SCALE DRAWING                                                                                                                                                                                                                                                                                                                                           |  | DRAWN BY                                                                              |       | DATE                 |  | TITLE                                 |  |
| UNLESS OTHERWISE SPECIFIED:<br>ALL DIMENSIONS ARE IN INCHES<br><br>FILLET/RADII<br>.02 MAX<br><br>TOLERANCES AND<br>LIMITS APPLY OVER<br>ADDITIVE FINISH<br><br>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. |  | A. ECKHART                                                                            |       | 1/11/08              |  | MODICE LE HEADER<br>BLANK             |  |
|                                                                                                                                                                                                                                                                                                                                                                |  | DESIGN ENGINEER                                                                       |       | MATERIAL             |  | CONTROL SPEC NUMBER                   |  |
|                                                                                                                                                                                                                                                                                                                                                                |  | A. ECKHART                                                                            |       | 1/11/08              |  |                                       |  |
|                                                                                                                                                                                                                                                                                                                                                                |  | DESIGN ENGINEERING MGR.                                                               |       | MATERIAL SPEC NUMBER |  | FINISH                                |  |
|                                                                                                                                                                                                                                                                                                                                                                |  | A. CAINES                                                                             |       | 1/16/08              |  | BLACK                                 |  |
|                                                                                                                                                                                                                                                                                                                                                                |  | MFG. ENGINEERING                                                                      |       | CAD FILE NUMBER      |  | DRAWING NUMBER                        |  |
|                                                                                                                                                                                                                                                                                                                                                                |  | R. GARZA                                                                              |       | 1/23/08              |  | 5810000028S                           |  |
|                                                                                                                                                                                                                                                                                                                                                                |  | QUALITY ASSURANCE                                                                     |       | CAGE IDENT NO. SIZE  |  |                                       |  |
|                                                                                                                                                                                                                                                                                                                                                                |  | D. DE LA PENA                                                                         |       | 1/28/08              |  | 71785 B                               |  |
|                                                                                                                                                                                                                                                                                                                                                                |  |                                                                                       |       |                      |  | SCALE 7:8                             |  |
|                                                                                                                                                                                                                                                                                                                                                                |  |                                                                                       |       |                      |  | SHEET 1 OF 5                          |  |

PCB LAYOUT WITHOUT HEAT SINKS

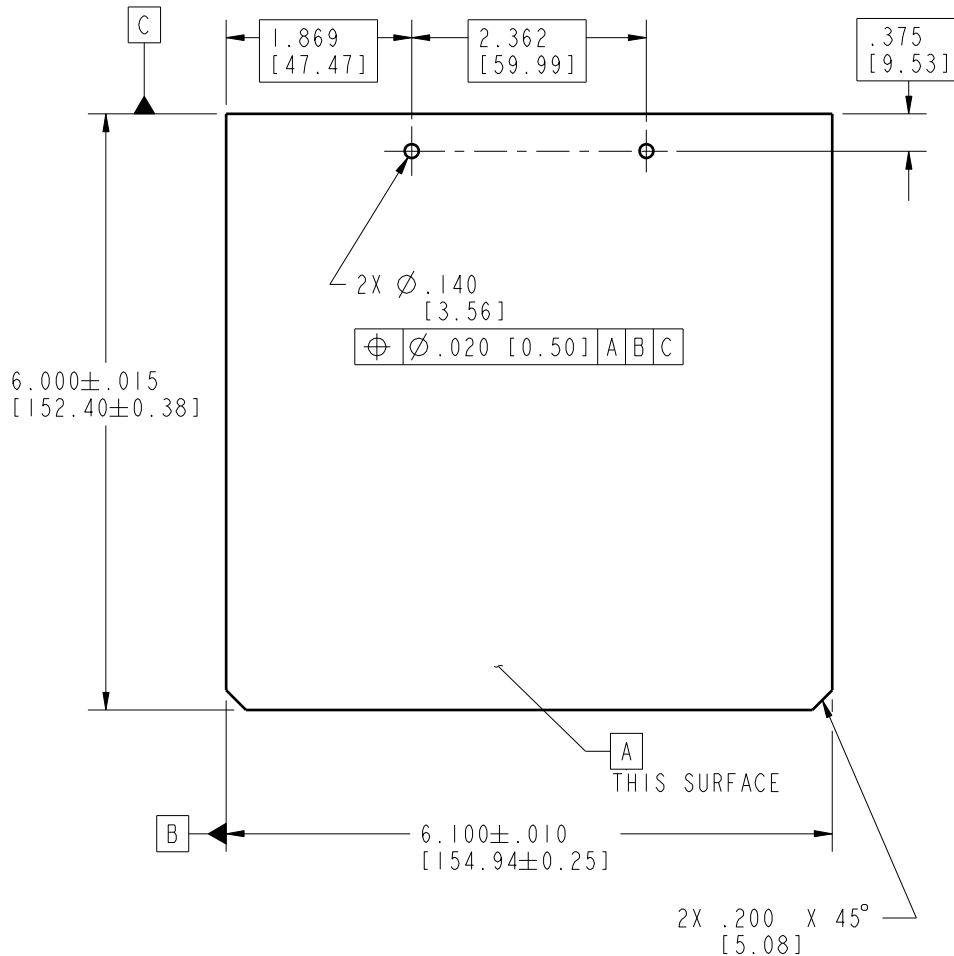
PCB TOP SIDE GENERAL  
ZONING & KEEP OUT AREAS



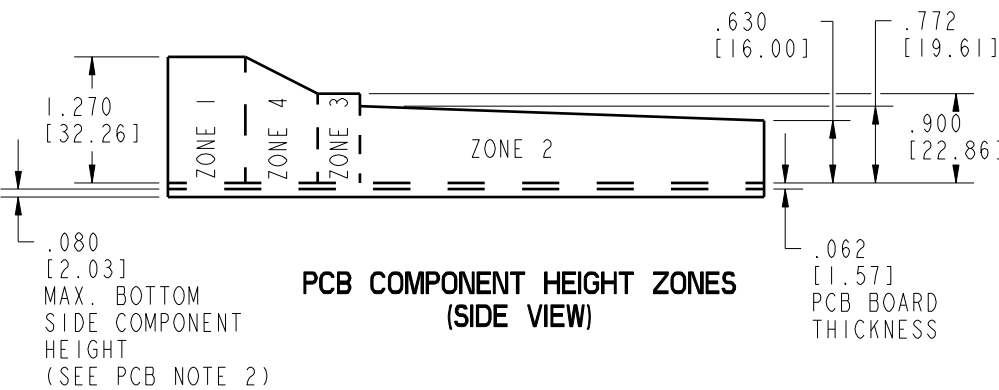
PCB BOTTOM SIDE GENERAL  
ZONING & KEEP OUT AREAS



PCB OVERALL DIMENSIONS  
AND HOLE LOCATIONS



PCB COMPONENT HEIGHT ZONES  
(SIDE VIEW)



PCB COMPONENTS HEIGHT LIMIT

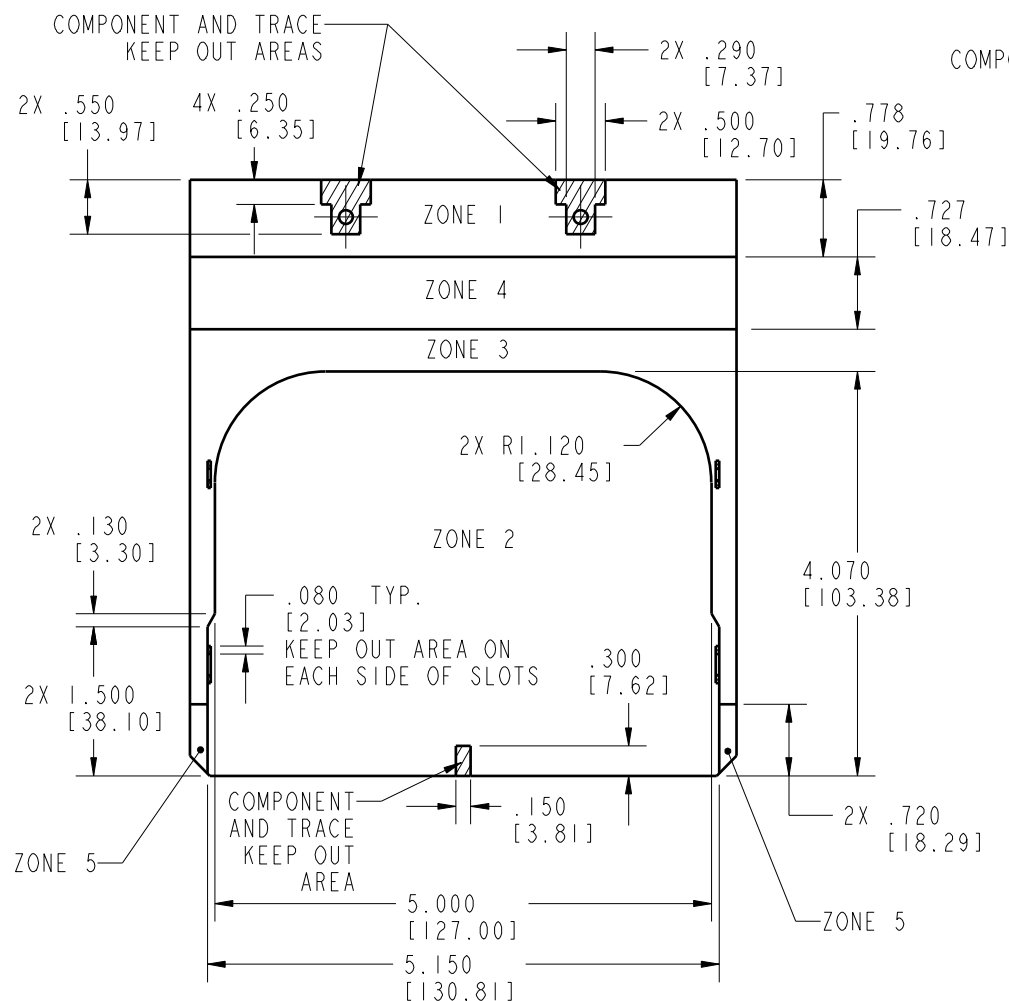
|                                        | ZONE 1 | ZONE 2         | ZONE 3 | ZONE 4         | ZONE 5 |
|----------------------------------------|--------|----------------|--------|----------------|--------|
| MAX. HEIGHT FOR COMPONENTS (ABOVE PCB) | 1.270" | SEE PCB NOTE 3 | .900"  | SEE PCB NOTE 3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

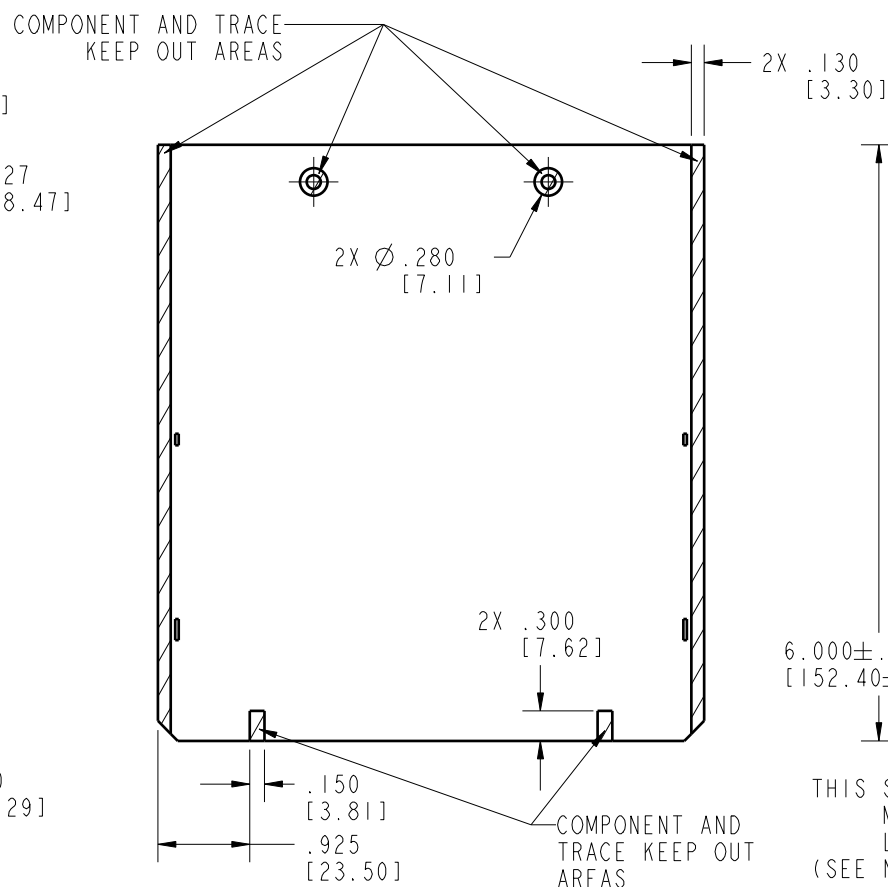
|                                                                                                                                                                                                       |                                                       |                                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|----------------------------------|
| UNITS<br><b>ENGLISH</b>                                                                                                                                                                               | <b>Cinch</b><br>1700 FINLEY RD.<br>LOMBARD, IL. 60148 |                                  |
| DO NOT SCALE DRAWING                                                                                                                                                                                  | TITLE<br>60-WAY HEADERS LE<br>MODICE                  |                                  |
| UNLESS OTHERWISE SPECIFIED:<br>ALL DIMENSIONS ARE IN INCHES<br>FILLET/RADIUS<br>.02 MAX<br>TOLERANCES<br>.X ± .1<br>.XX ± .01<br>.XXX ± .005<br>LIMITS APPLY OVER<br>ADDITIVE FINISH<br>ANGULAR ± .5° | PRO/E DRAWING                                         |                                  |
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|                                                                                                                                                                                                       | CAGE IDENT NO. SIZE<br>71785 B                        | SCALE<br>3:5                     |
|                                                                                                                                                                                                       |                                                       | SHEET 2 OF 5                     |

# PCB LAY-OUT WITH TWO HEAT SINKS

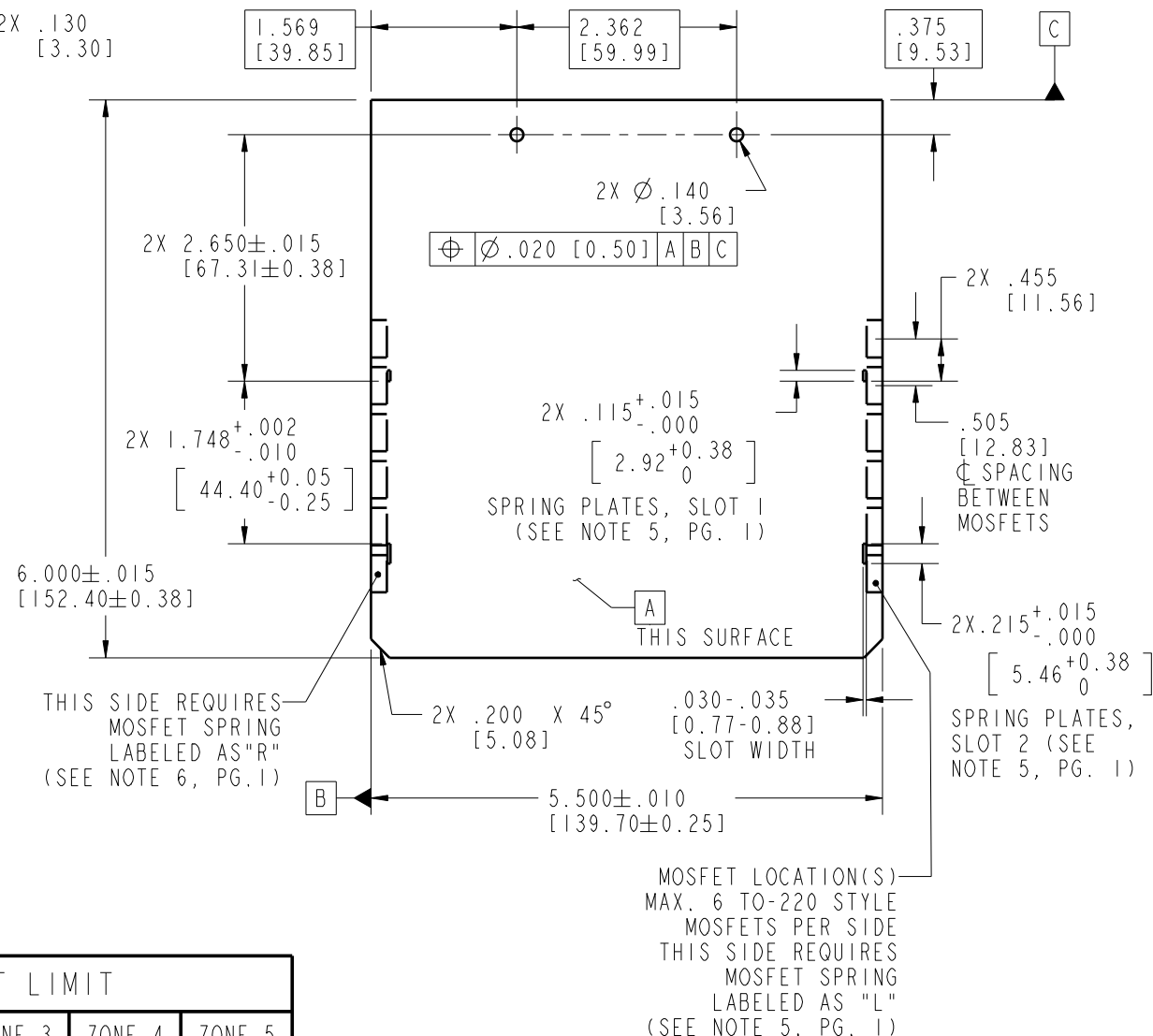
PCB TOP SIDE GENERAL ZONING & KEEP OUT AREAS



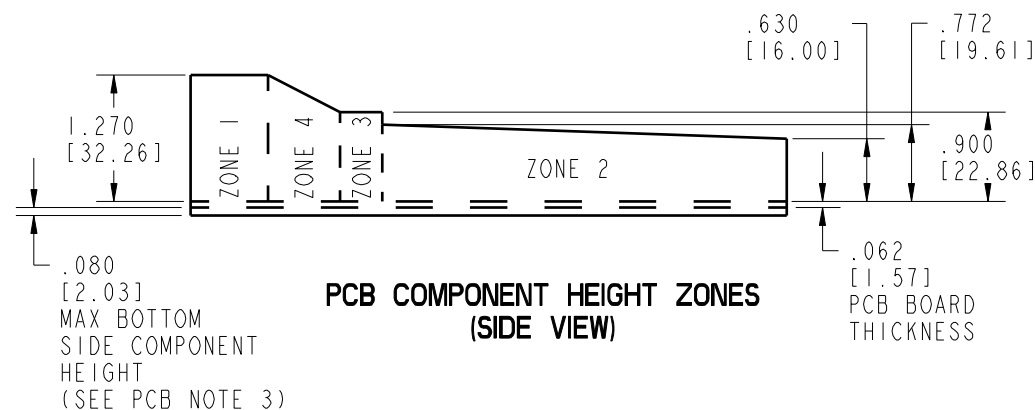
PCB BOTTOM SIDE GENERAL ZONING & KEEP OUT AREAS



PCB OVERALL DIMENSIONS AND HOLE LOCATIONS



PCB 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 4 | .900"  | SEE PCB NOTE 4 | .420"  |

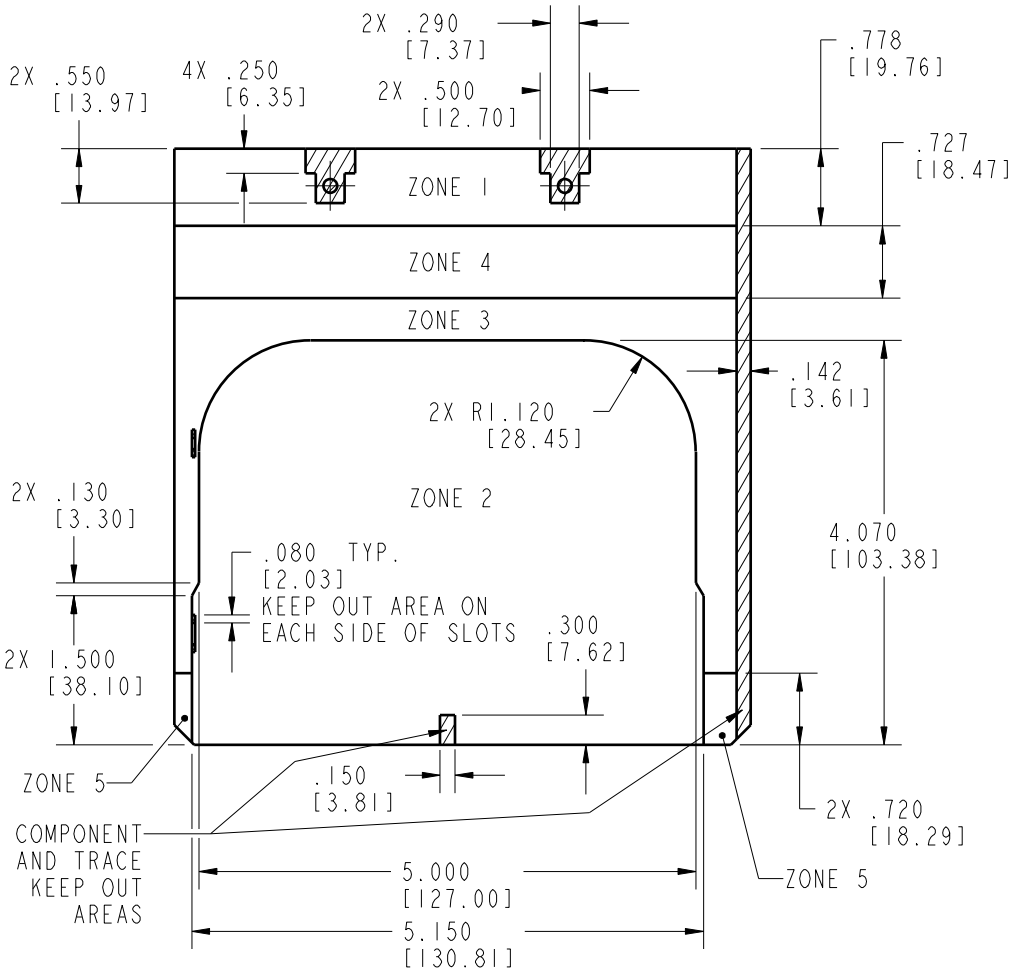
## PCB NOTES:

- 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.

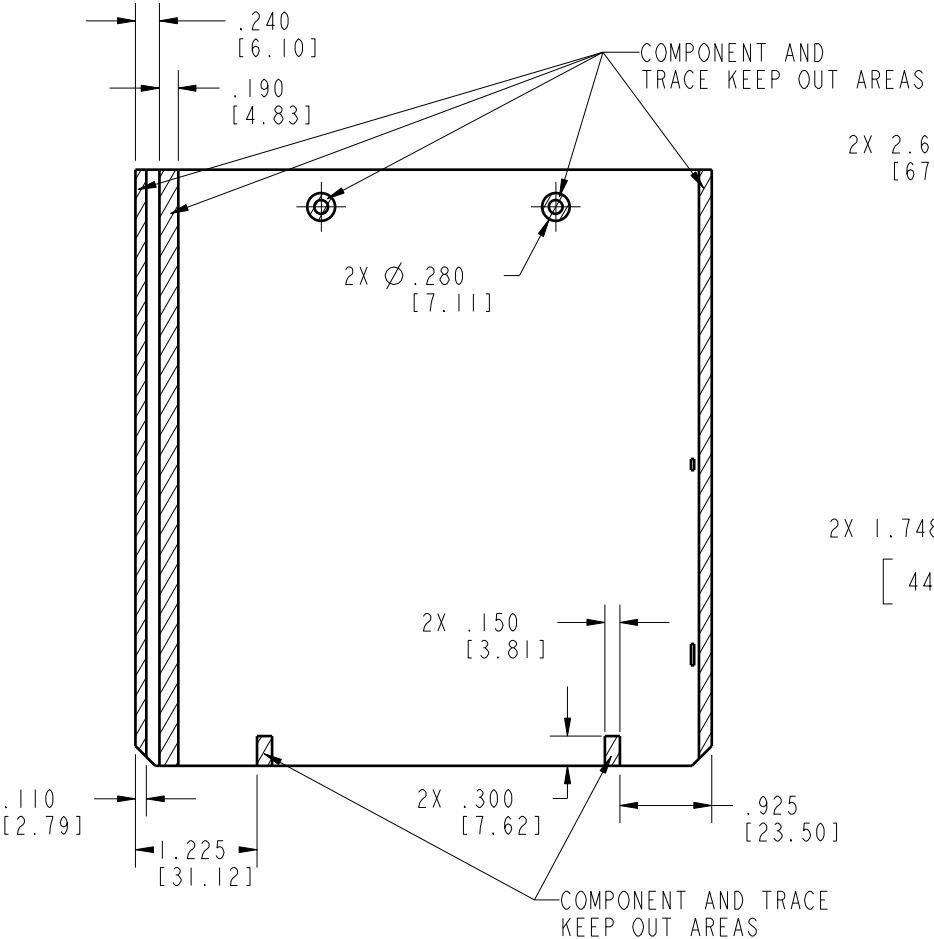
|                                                                                                                                                                                                |  |                                |  |                                                                   |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------|--|-------------------------------------------------------------------|--|
| UNITS                                                                                                                                                                                          |  | ENGLISH                        |  | <div>Cinch</div> <div>1700 FINLEY RD<br/>LOMBARD, IL. 60148</div> |  |
| DO NOT SCALE DRAWING                                                                                                                                                                           |  |                                |  |                                                                   |  |
| UNLESS OTHERWISE SPECIFIED:<br>ALL DIMENSIONS ARE IN INCHES                                                                                                                                    |  | TITLE                          |  |                                                                   |  |
| Fillet/Radii<br>.02 MAX                                                                                                                                                                        |  | 60-WAY HEADERS LE<br>MODICE    |  |                                                                   |  |
| TOLERANCES AND<br>LIMITS APPLY OVER<br>ADDITIVE FINISH                                                                                                                                         |  | PRO/E DRAWING                  |  |                                                                   |  |
| TOLERANCES<br><div>.X ± .1<br/>XX ± .01<br/>XXX ± .005<br/>ANGULAR ± .5°</div>                                                                                                                 |  | CAD FILE NUMBER<br>5810000028S |  | DRAWING NUMBER<br>581 00 00 028S                                  |  |
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|                                                                                                                                                                                                |  | 71785 B                        |  | A                                                                 |  |
|                                                                                                                                                                                                |  | SCALE                          |  | SHEET 3 OF 5                                                      |  |

PCB LAY-OUT WITH ONE HEAT SINK

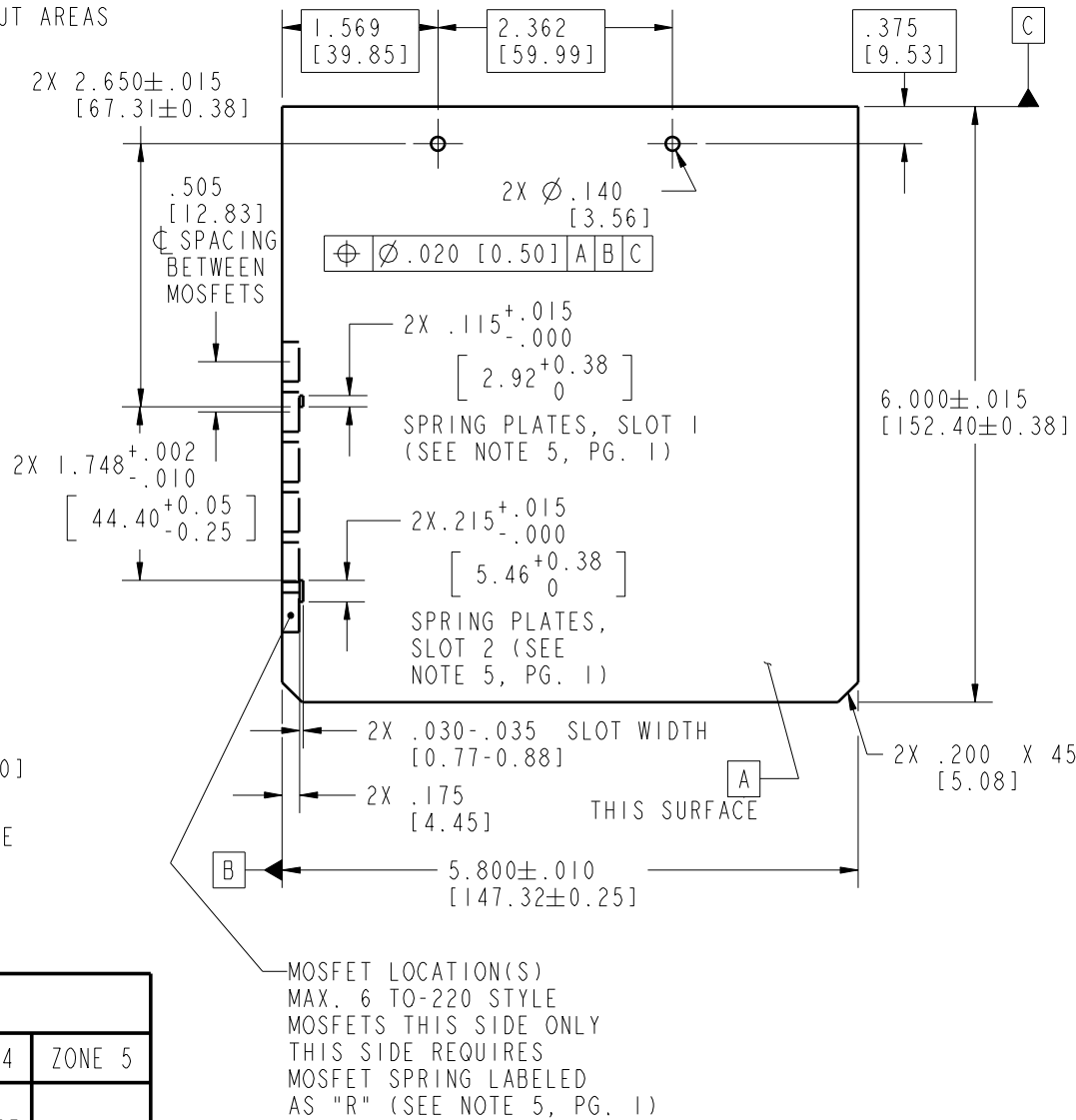
PCB TOP SIDE GENERAL ZONING & KEEP OUT AREAS



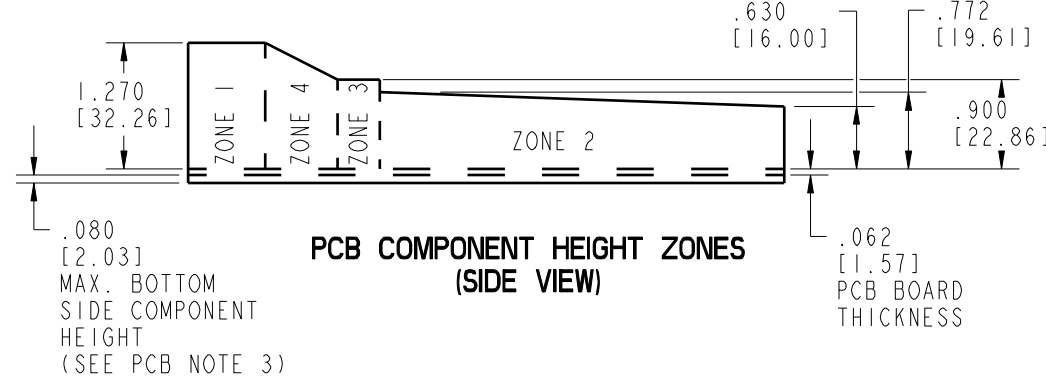
PCB BOTTOM SIDE GENERAL ZONING & KEEP OUT AREAS



PCB OVERALL DIMENSIONS AND HOLE LOCATIONS



PCB 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 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.

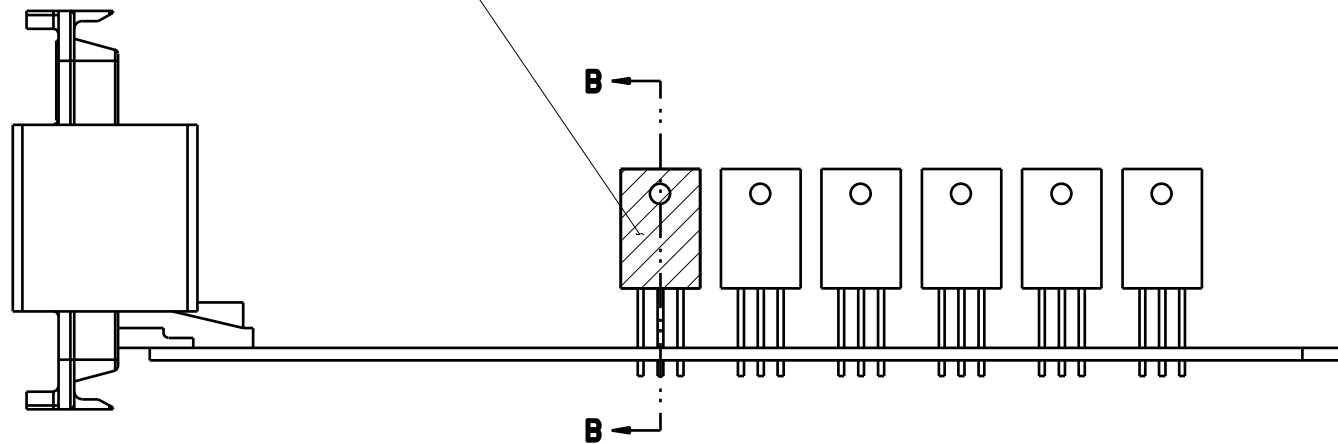
|                                                                                                                                                                                                |         |  |                                                                 |                                  |                                       |               |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|--|-----------------------------------------------------------------|----------------------------------|---------------------------------------|---------------|
| UNITS                                                                                                                                                                                          | ENGLISH |  | Cinch                                                           |                                  | 1700 FINLEY RD.<br>LOMBARD, IL. 60148 |               |
| DO NOT SCALE DRAWING                                                                                                                                                                           |         |  | TITLE                                                           |                                  |                                       |               |
| UNLESS OTHERWISE SPECIFIED:<br>ALL DIMENSIONS ARE IN INCHES                                                                                                                                    |         |  | 60-WAY HEADERS LE<br>MODICE                                     |                                  |                                       |               |
| Fillet/Radii<br>.02 MAX                                                                                                                                                                        |         |  | TOLERANCES<br>X ± .1<br>XX ± .01<br>XXX ± .005<br>ANGULAR ± .5° |                                  |                                       | PRO/E DRAWING |
| TOLERANCES AND<br>LIMITS APPLY OVER<br>ADDITIVE FINISH                                                                                                                                         |         |  | CAD FILE NUMBER<br>581000028S                                   | DRAWING NUMBER<br>581 00 00 028S | REV<br>A                              |               |
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8 7 6 5 4 3 2 1

D

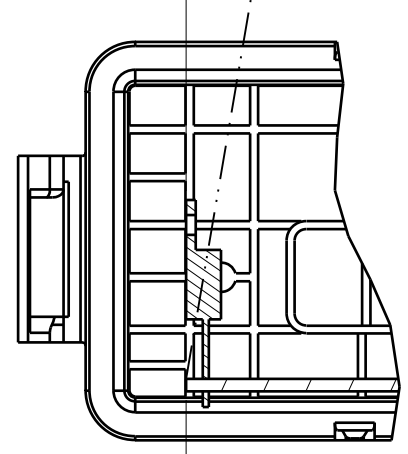
D

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



SIDE VIEW  
REQUIRED TO-220 PACKAGE PROFILE

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



MOSFET MUST LIE IN THE SAME  
PLANE WITH EDGE OF PCB  
(AS SHOWN)

REQUIRES TO-220 PACKAGING PROFILE  
PARTIAL SECTION B-B

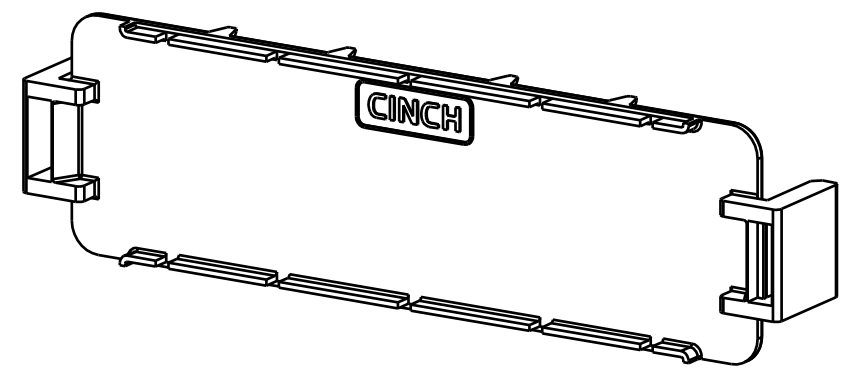
C

C

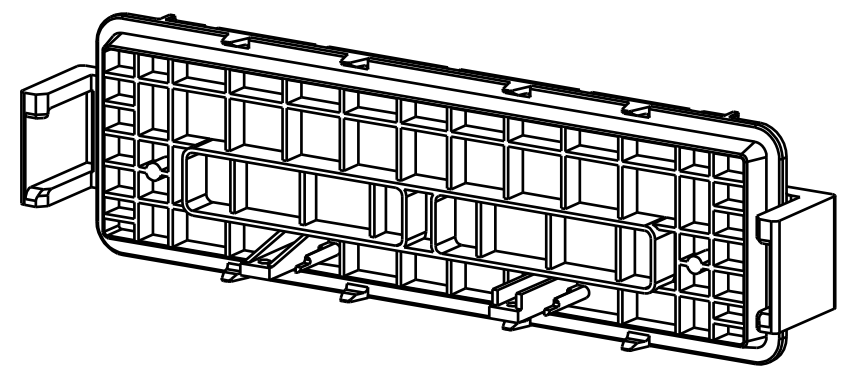


B

B



SCALE 5:8



SCALE 5:8

A

A

8 7 6 5 4 3 2 1

|                                                                                                                                                                                                |  |                                                                    |  |                                      |  |              |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------|--|--------------------------------------|--|--------------|
| 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>60-WAY HEADERS LE<br>MODICE                               |  |                                      |  |              |
| Fillet/Radii<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                                                                                                                                         |  | <b>PRO/E DRAWING</b>                                               |  |                                      |  |              |
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|                                                                                                                                                                                                |  | CAGE IDENT NO. SIZE<br>71785 B                                     |  | SCALE<br>1:1                         |  | SHEET 5 OF 5 |