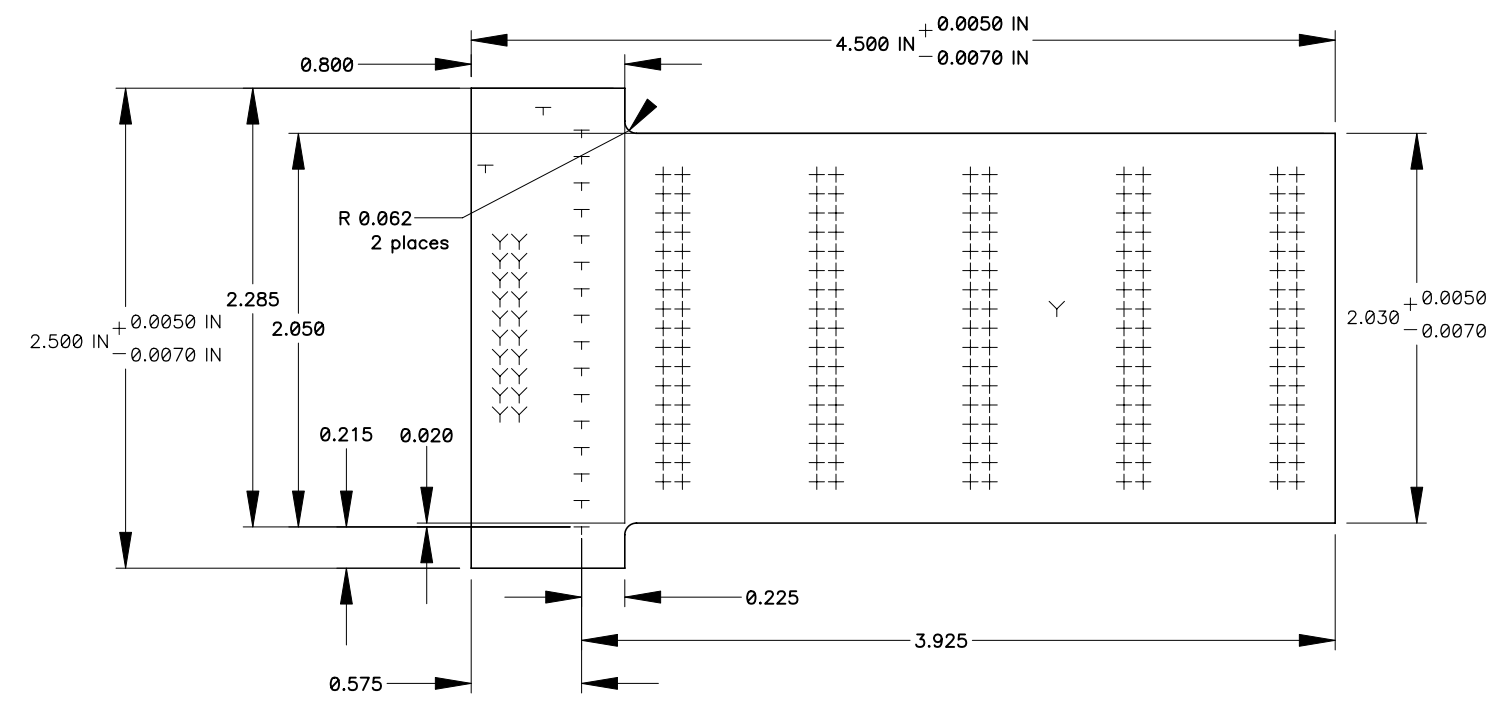


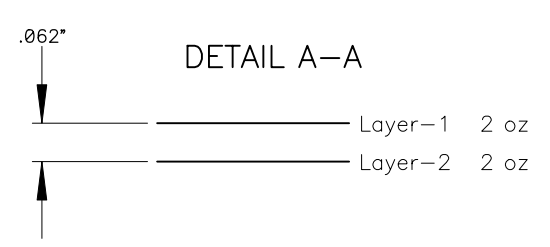
REVISIONS					
ZONE	LTR	REVISIONS	ECR	DATE	BY



- NOTES: unless otherwise specified
- Applicable documents  
The following items are required:  
PATTERN FILM DWG # MNSN-EL-04-4003  
DETAIL DRAWING DWG # MNSN-EL-04-1003 THIS DOCUMENT
  - BASE MATERIAL
    - Laminate base material shall be natural color, FR-4 or equivalent. See Detail A-A for layer to layer specification and overall thickness.
    - B-Stage shall be selected at vendors discretion to meet over all board thickness and end item requirements.
  - COPPER PLATING
    - Copper plating shall have a minimum purity of 99.5 percent and a minimum thickness of .001 inch. This also applies to the plating in the holes.
  - SOLDERMASK
    - Apply LPI Green soldermask over bare copper according to the soldermask pattern file per IPC-SM-840.
  - FINISH
    - The printed circuit board shall have HASL finish or equivalent on all exposed metalization. Solder plating shall conform to the visual criteria of IPC-A-600.
  - SILK SCREEN
    - Silk screen top (-1) and bottom (-2) side of board using white epoxy ink according to the -1S pattern film and the -2S pattern film. Ink shall not cover any exposed metal.
  - DIMENSIONS
    - All dimensions are in inches.
    - Unless otherwise specified all hole sizes apply after plating. Hole sizes are shown in the drill schedule.
  - TOLERANCES
    - Hole size tolerance +- .003 after plating unless otherwise specified.
    - Conductor widths and spacing shall be within 20% of the artwork originals.
    - Layer to layer registration shall be .007 inches of true position
    - Board dimensions shall meet the requirements of the board drawing.
    - Warp and twist shall not exceed that defined in IPC-A-600.
  - APPEARANCE
    - All inside and outside corners shall have a maximum radius of .065
    - Remove all burrs and smooth sharp edges to .010 max.

VENDOR NOTE: NOTIFY US OF ANY CONFLICTING REQUIREMENTS OR IF BOARDS CANNOT BE MANUFACTURED TO MEET THE ABOVE REQUIREMENTS, DUE TO VENDORS PROCESS AND/OR TECHNIQUES OR BECAUSE PHOTO TOOLS AND/OR SPECIFICATIONS ARE INADEQUATE.

Hole Dia (inch)	Symbol	Quantity	Plated
0.039	+	170	Yes
0.042	Y	21	Yes
0.047	T	18	Yes



QTY REQ'D	PART OR IDENTIFYING NO	ITEM DESCRIPTION	ITEM NO
TOLERANCES UNLESS OTHERWISE NOTED .XX ± .03 ANGULAR ±.5° .XXX ± .010		 THIRD ANGLE PROJECTION	<b>NATIONAL OPTICAL ASTRONOMY OBSERVATORIES</b> <small>OPERATED BY THE ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY UNDER COOPERATIVE AGREEMENT WITH NATIONAL SCIENCE FOUNDATION</small>
DO NOT SCALE DRAWING		NAME <b>DETAIL MONSOON POWER FANOUT BOARD</b>	USED ON MONSOON
NEXT ASSEMBLY <b>MNSN-EL-04-0003</b>		DWG SIZE C	REF -
REFER TO SCHEMATIC <b>MNSN-EL-04-2003</b>		SCALE: FULL	DESIGNED BY P. SCHMITT
DWG PRODUCED USING PCAD 2001		DATE FEB 04	CHECKED BY DATE
DRAWN BY Dee Stover		DATE 12FEB04	APPROVED BY DATE
DWG NO <b>MNSN-EL-04-1003</b>		RELEASED	SHEET 1 OF 1