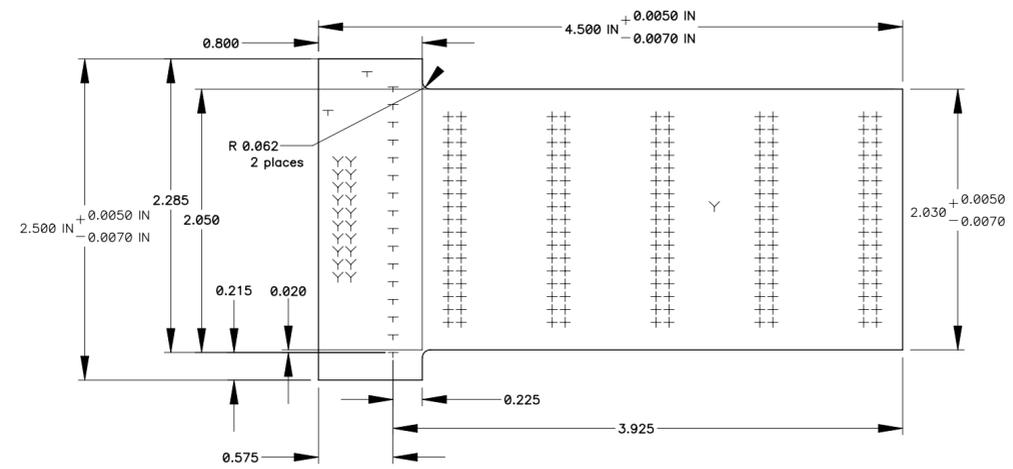


REVISIONS					
ZONE	LTR	REVISIONS	ECR	DATE	BY

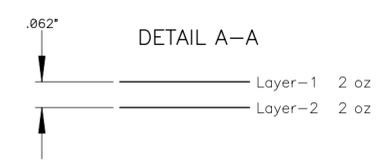


NOTES: unless otherwise specified

- 1.0 Applicable documents
The following items are required:
PATTERN FILM DWG # MNSN-EL-04-4003
DETAIL DRAWING DWG # MNSN-EL-04-1003 THIS DOCUMENT
- 2.0 BASE MATERIAL
 - 2.1 Laminate base material shall be natural color, FR-4 or equivalent. See Detail A-A for layer to layer specification and overall thickness.
 - 2.2 B-Stage shall be selected at vendors discretion to meet over all board thickness and end item requirements.
- 3.0 COPPER PLATING
 - 3.1 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.
- 4.0 SOLDERMASK
 - 4.1 Apply LPI Green soldermask over bare copper according to the soldermask pattern file per IPC-SM-840.
- 5.0 FINISH
 - 5.1 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.
- 6.0 SILK SCREEN
 - 6.1 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.
- 7.0 DIMENSIONS
 - 7.1 All dimensions are in inches.
 - 7.2 Unless otherwise specified all hole sizes apply after plating. Hole sizes are shown in the drill schedule.
- 8.0 TOLERANCES
 - 8.1 Hole size tolerance +- .003 after plating unless otherwise specified.
 - 8.2 Conductor widths and spacing shall be within 20% of the artwork originals.
 - 8.3 Layer to layer registration shall be .007 inches of true position
 - 8.4 Board dimensions shall meet the requirements of the board drawing.
 - 8.5 Warp and twist shall not exceed that defined in IPC-A-600.
- 9.0 APPEARANCE
 - 9.1 All inside and outside corners shall have a maximum radius of .065
 - 9.2 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.

Drill Table				
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 .XXX ± .010 ± .5°		 THIRD ANGLE PROJECTION	NATIONAL OPTICAL ASTRONOMY OBSERVATORIES <small>OPERATED BY THE ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY UNDER COOPERATIVE AGREEMENT WITH NATIONAL SCIENCE FOUNDATION</small>
DO NOT SCALE DRAWING		NAME DETAIL MONSOON POWER FANOUT BOARD	USED ON MONSOON
NEXT ASSEMBLY MNSN-EL-04-0003		DWG SIZE C	REF
REFER TO SCHEMATIC MNSN-EL-04-2003		DATE FEB 04	REV -
SCALE: FULL	DESIGNED BY P. SCHMITT	CHECKED BY	DWG NO MNSN-EL-04-1003
DWG PRODUCED USING PCAD 2001	DRAWN BY Dee Stover	DATE 12FEB04	RELEASED
SHEET 1 OF 1			