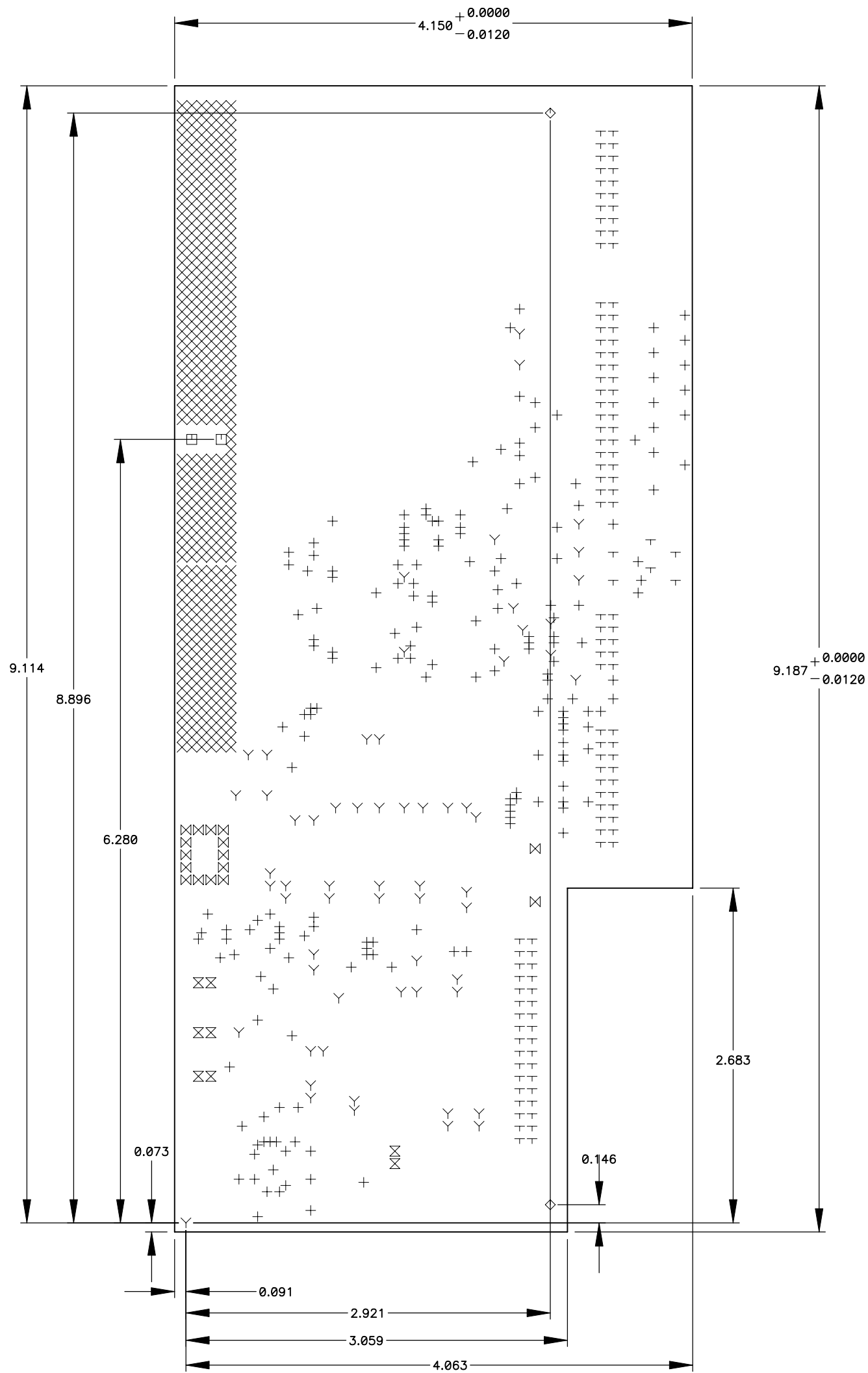


REVISIONS						
ZONE	LTR	REVISIONS		ECR	DATE	BY
	OD	INITIAL RELEASE			04DEC06	dms
						p.moore



NOTES: unless otherwise specified

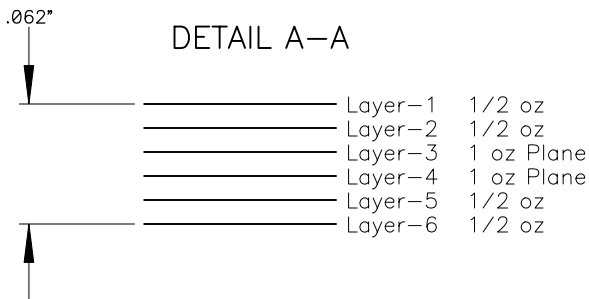
- 1.0 Applicable documents
The following items are required:
PATTERN FILM DWG # MNSN-EL-04-3015
DETAIL DRAWING DWG # MNSN-EL-04-1015 THIS DOCUMENT
- 2.0 BASE MATERIAL
2.1 Laminate base material shall be natural color, FR-4 or equivalent.
See Detail A-A for layer to layer specification and overall thickness.
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 be tin/lead solder plated and reflow solder finished 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 (-6) side of board using white epoxy ink according to the -1ss pattern film and the -6ss 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 $\pm .003$ 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 rquirements 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
0.013	+	193	Yes
0.025	X	381	Yes
0.032	Y	62	Yes
0.037	+	124	Yes
0.042	X	8	Yes
0.053	M	16	Yes
0.080	□	2	No
0.125	◇	2	No

$\pm .002$

DETAIL A-A



APPROVED FOR
CONSTRUCTION
12-04-06

QTY REQ'D	PART OR IDENTIFYING NO	ITEM DESCRIPTION			ITEM NO
TOLERANCES UNLESS OTHERWISE NOTED .XX $\pm .03$ ANGULAR .XXX $\pm .010$ $\pm .5^\circ$		 THIRD ANGLE PROJECTION		NATIONAL OPTICAL ASTRONOMY OBSERVATORIES OPERATED BY THE ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY UNDER COOPERATIVE AGREEMENT WITH NATIONAL SCIENCE FOUNDATION	
DO NOT SCALE DRAWING		NAME		USED ON Monsoon QUOTA	REF
NEXT ASSEMBLY MNSN-EL-04-0015		DETAIL MONSOON / QUOTA CCD ACQUISITION TRANSITION BRD		DWG SIZE C	REV OD
REFER TO SCHEMATIC MNSN-EL-04-2015					
SCALE: FULL	DESIGNED BY D. Stover	DATE 01nov04	CHECKED BY	DATE	DWG NO MNSN-EL-04-1015
DWG PRODUCED USING PCAD2004	DRAWN BY Dee Stover	DATE 15nov04	APPROVED BY	DATE	RELEASED
				SHEET	1 OF 1