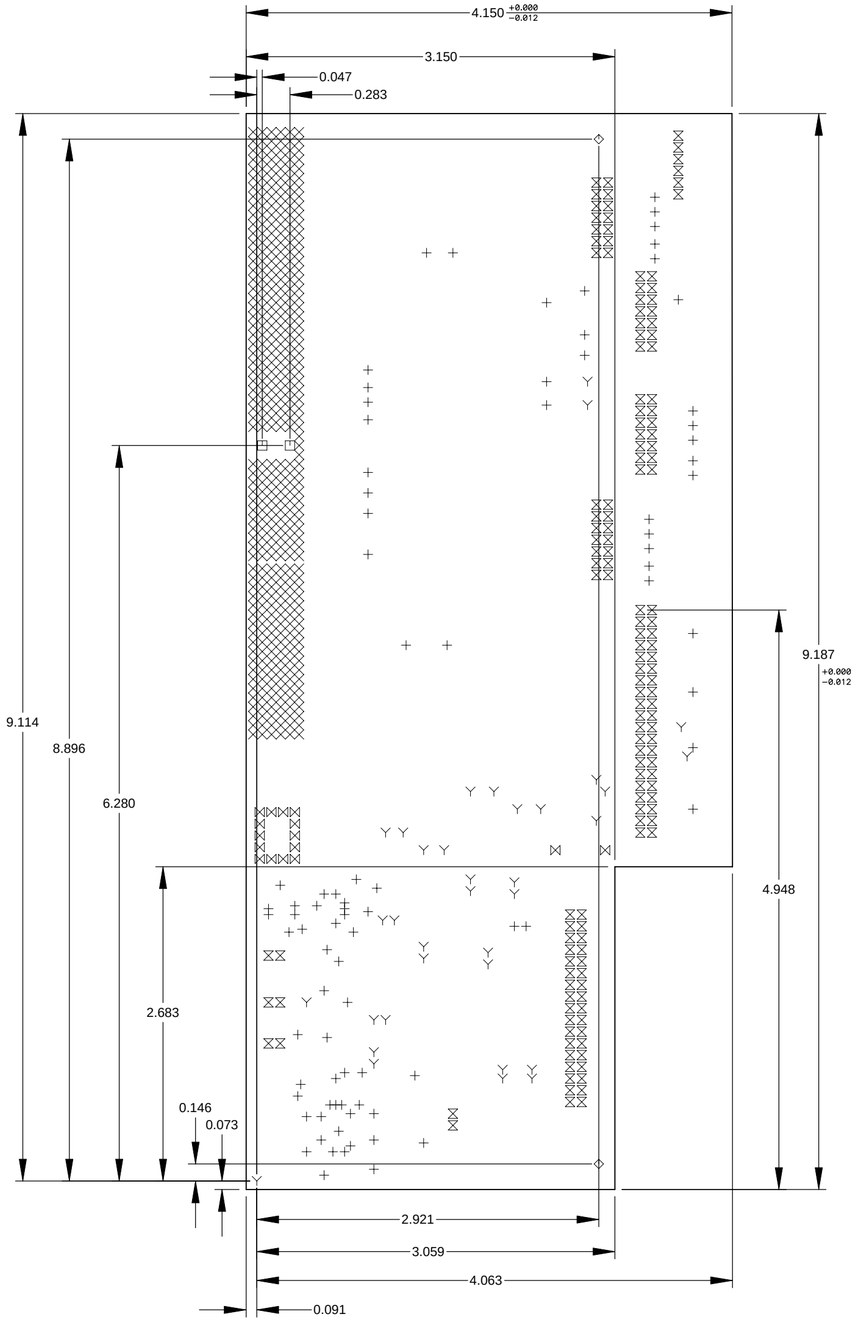


REVISIONS						
ZONE	LTR	REVISIONS	ECR	DATE	BY	APRV
	OD	initial release		01dec06	dms	p.moore

NOTES: unless otherwise specified

1.0 Applicable documents
The following items are required:
PATTERN FILM DWG # MNSN−EL−04−3016
DETAIL DRAWING DWG # MNSN−EL−04−1016 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 (−4) side of board using white epoxy ink according to the −1S pattern film and the −4S 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.

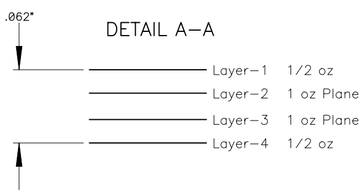
8.0 TOLERANCES
8.1 Hole size tolerance +− .003 after plating unless otherwise specified.
8.2 Conductor widths and spacing shall be within 20% of the artwork originals.
8.3 Layer to layer registration shall be .007 inches of true position
8.4 Board dimensions shall meet the rquirements of the board drawing.
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.

APPROVED FOR CONSTRUCTION 12-01-06

Drill Table				
Hole Dia (inch)	Symbol	Quantity	Plated	
0.013	+	88	Yes	+−.002
0.025	×	381	Yes	
0.032	Y	35	Yes	
0.042	⧖	144	Yes	
0.053	⋈	16	Yes	
0.080	⊡	2	No	
0.125	◈	2	No	



Print Date: Fri Dec 08, 2006
Modified Date: Fri Dec 08, 2006

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
OPERATED BY THE
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY
UNDER COOPERATIVE AGREEMENT WITH
NATIONAL SCIENCE FOUNDATION

DO NOT SCALE DRAWING

NEXT ASSEMBLY: MNSN−EL−04−0016

REFER TO SCHEMATIC: MNSN−EL−04−2016

NAME: DETAIL
QUOTA / MONSOON
Clock & Bias Transition

USED ON: Monsoon
REF:
DWG SIZE: C
REV: OD

SCALE: FULL	DESIGNED BY: P. Moore	DATE:	CHECKED BY:	DATE:	DWG NO: MNSN−EL−04−1016
DWG PRODUCED USING: PCAD2004	DRAWN BY: Dee Stover	DATE: 11OCT06	APPROVED BY:	DATE:	RELEASED: SHEET 1 OF 1