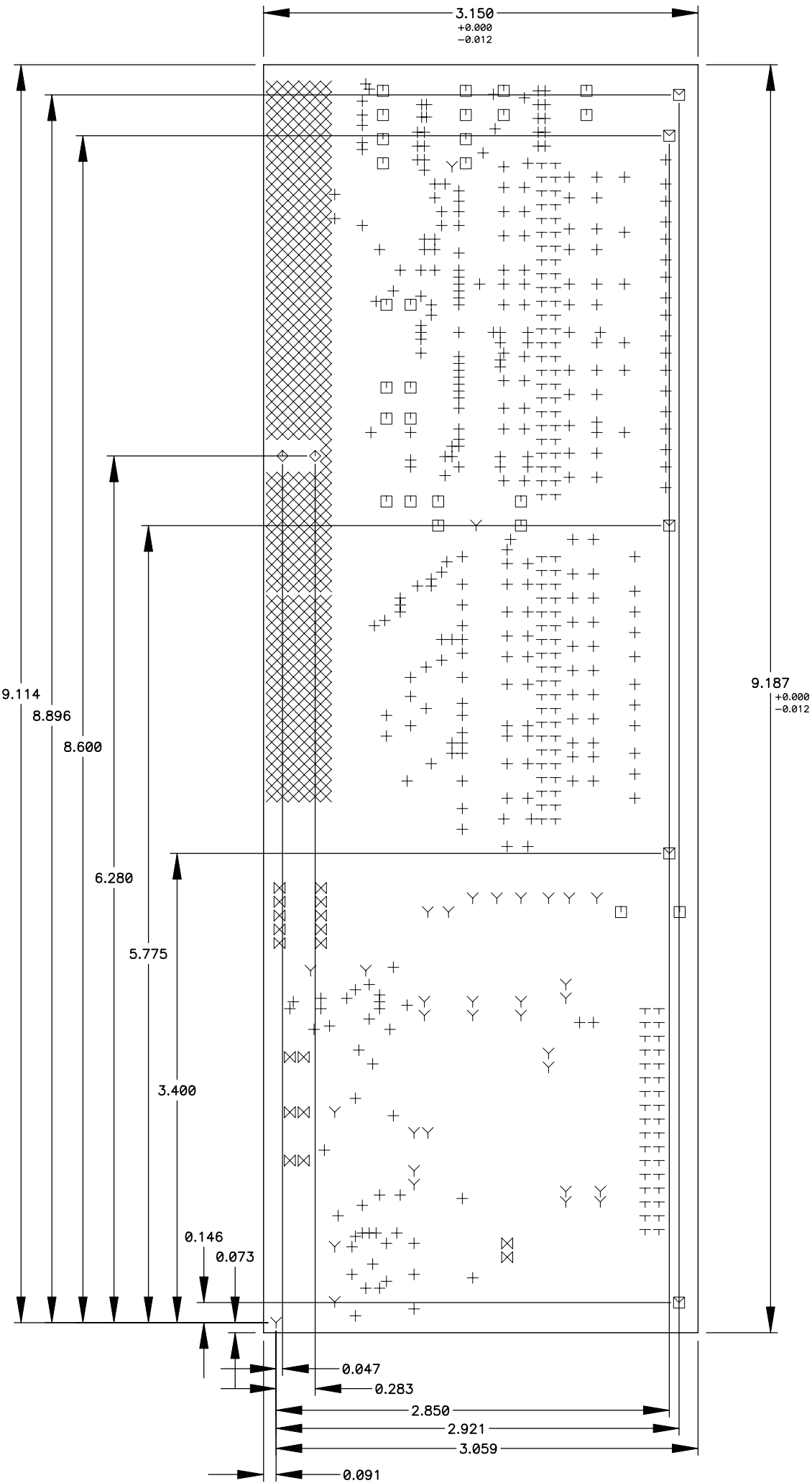


REVISIONS						
ZONE	LTR	REVISIONS	ECR	DATE	BY	APRV
	A	repositioned inductors in circuit, change to shield grounds 47uF cap pattern change	MNSN-0110	05oct05	dms	p.moore



NOTES: unless otherwise specified

- 1.0 Applicable documents
The following items are required:
PATTERN FILM DWG # MNSN-EL-04-3010
DETAIL DRAWING DWG # MNSN-EL-04-1010 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 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.

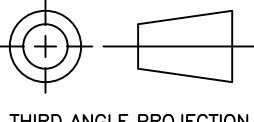
Drill Table			
Hole Dia (inch)	Symbol	Quantity	Plated
0.013	+	319	Yes
0.024	X	381	Yes
0.032	Y	34	Yes
0.037	+	124	Yes
0.042	M	18	Yes
0.053	□	26	Yes
0.080	◇	2	No
0.125	⊠	5	No

$\pm .002$

DETAIL A-A

- .062"
- Layer-1 1/2 oz
 - Layer-2 1/2 oz
 - Layer-3 1 oz Plane
 - Layer-4 1 oz Plane
 - Layer-5 1/2 oz
 - Layer-6 1/2 oz

Modified Date: Wed Oct 05, 2005
Print Date: Wed Oct 05, 2005

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	REF
NEXT ASSEMBLY MNSN-EL-04-0010		DETAIL Generic Clock & Bias Transition		Monsoon	
REFER TO SCHEMATIC MNSN-EL-04-2010				DWG SIZE C	REV A
SCALE: FULL	DESIGNED BY D. Stover	DATE 01nov04	CHECKED BY	DATE	DWG NO MNSN-EL-04-1010
DWG PRODUCED USING PCAD2004	DRAWN BY Dee Stover	DATE 15nov04	APPROVED BY	DATE	RELEASED
				SHEET	1 OF 1