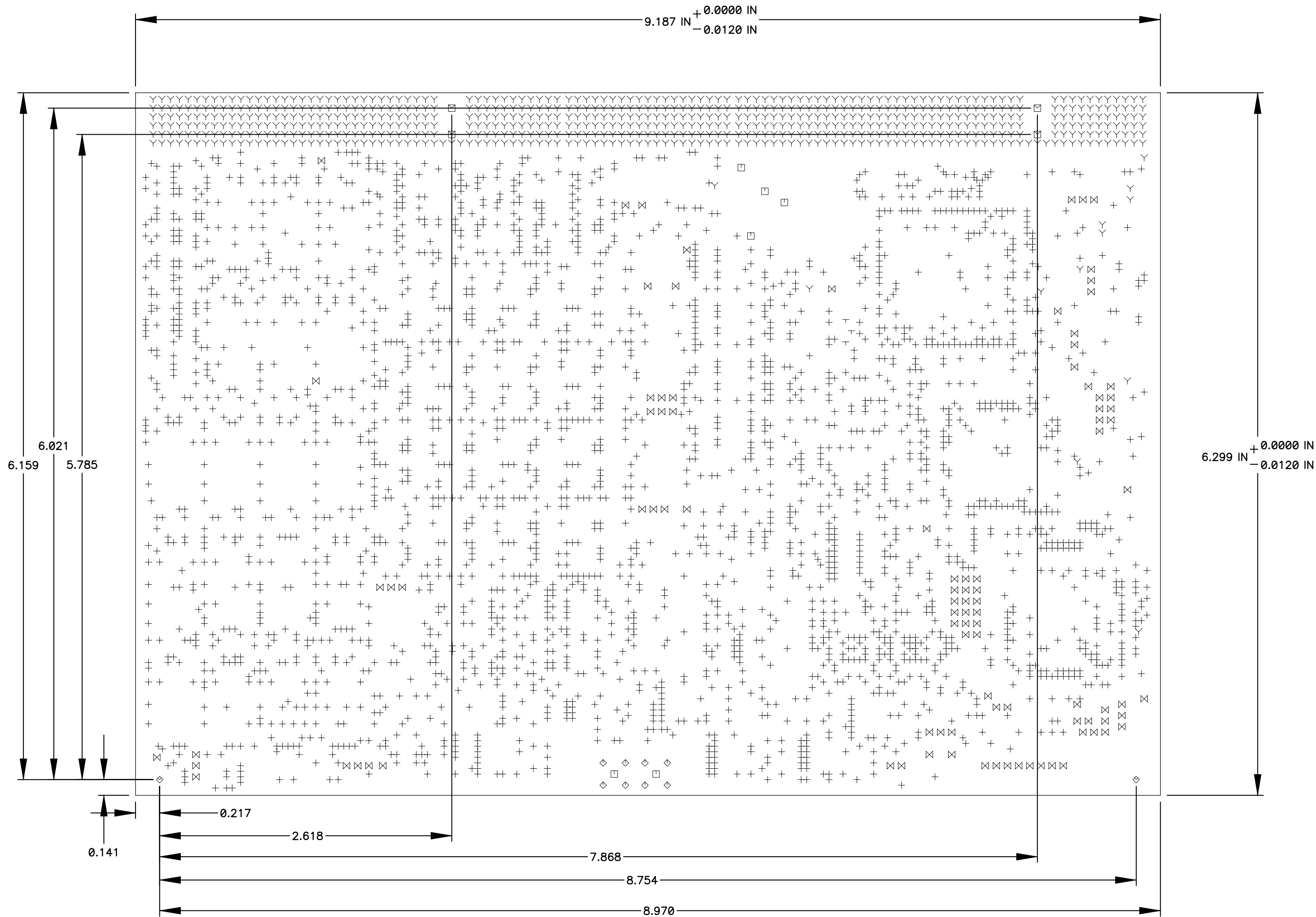
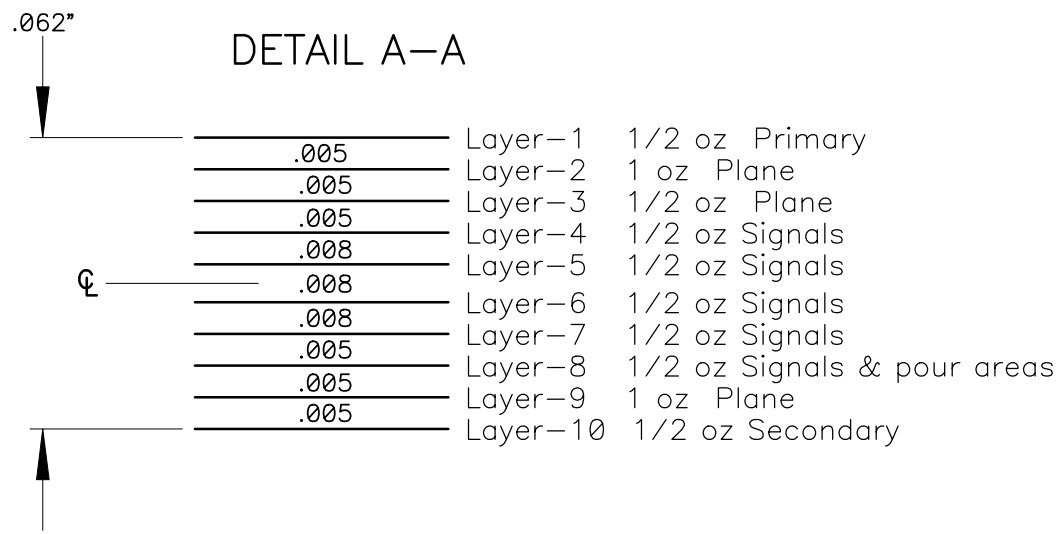


REVISIONS						
ZONE	LTR	REVISIONS	ECR	DATE	BY	APRV
	A	part changes see eco	MNSN-0112	14dec05	dms	mh pjs



Drill Table				
Hole Dia (inch)	Symbol	Quantity	Plated	
0.013	+	2814	Yes	
0.024	Y	660	Yes	
0.027	+	3	Yes	
0.042	X	97	Yes	
0.052	□	6	Yes	
0.067	◇	8	Yes	
0.080	□	4	No	
0.110	◇	2	No	



NOTES: unless otherwise specified

- 1.0 Fabricate circuit board to conform to IPC-6014.  
Applicable documents  
The following items are required:  
PATTERN FILM / GERBER DATA DWG # MNSN-EL-04-3008  
DETAIL DRAWING DWG # MNSN-EL-04-1008 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 SMOBC, all exposed metal shall be coated in molten solder and hot air leveled, (HASL).
- 6.0 SILK SCREEN
  - 6.1 Silk screen top (-1) and bottom (-10) side of board using white epoxy ink according to the -1ss pattern film and the -10ss 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.

QTY REQ'D	PART OR IDENTIFYING NO	ITEM DESCRIPTION			ITEM NO
TOLERANCES UNLESS OTHERWISE NOTED .XX ± .03 .XXX ± .010		 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-04-0008		DETAIL MONSOON CLOCK & BIAS BOARD		MONSOON	
REFER TO SCHEMATIC MNSN-EL-04-2008				DWG SIZE C	REV A
SCALE: FULL	DESIGNED BY Dee Stover	DATE 06AUG02	CHECKED BY	DATE	DWG NO MNSN-EL-04-1008
DWG PRODUCED USING PCAD 2004	DRAWN BY Dee Stover	DATE 06APR04	APPROVED BY	DATE	RELEASED
				SHEET 1	OF 1