

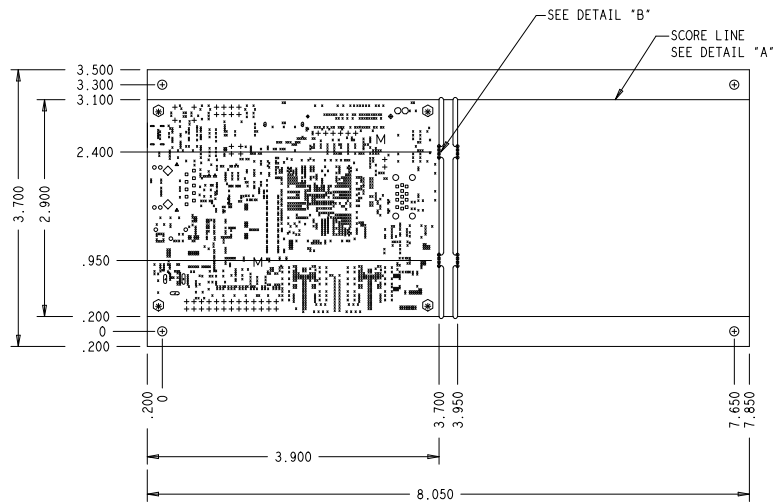
FAB NOTES:

1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE NOTED.
2. THE PWB SHALL BE FABRICATED TO IPC-6012, CLASS 2 AND WORKMANSHIP SHALL CONFORM TO IPC-A-600, CLASS 2. CURRENT REVISIONS.
3. BOARD MATERIAL SHALL BE 180 Tg/350 Td ISOLA FR-370HR OR EQUIVALENT, RoHS COMPLIANT AND LEAD FREE ASSEMBLY CAPABLE. BOARD MATERIAL SHALL MEET OR EXCEED IPC-4101B. COLOR: NATURAL.
4. BOARD MATERIAL & CONSTRUCTION TO BE U.L. APPROVED AND MARKED ON THE FINISHED BOARD.
5. MINIMUM COPPER WALL THICKNESS OF PLATED-THRU HOLES TO BE .001 INCH, WITH A MINIMUM ANNULAR RING OF .002 INCH.
6. OVERALL BOARD THICKNESS TO BE .063+8/-5 mil, AND APPLIES AFTER ALL LAMINATION AND PLATING PROCESSES, MEASURED FROM COPPER TO COPPER.
7. MAX. WARP & TWIST TO BE .0075 INCHES PER INCH.
8. BOARD MUST BE ELECTRICALLY TESTED USING SUPPLIED IPC-D-356 NETLIST.

FINISHED AS SMOOTH WALL BY VENDOR.  
PROCESS NOTES:

1. PLATE ALL EXPOSED AREAS WITH ELECTROLESS IMMERSION GOLD, NICKEL 150 MICROINCHES THK MIN. GOLD 2 MICROINCHES THK MIN.
2. APPLY LPI SOLDERMASK OVER BARE COPPER (SMOBC). COLOR: BLUE. SOLDERMASK SHALL CONFIRM TO IPC-SM-840, CLASS H, CURRENT REV.
3. SOLDERMASK ARTWORK HAS ZERO (0) OVERSIZED PADS. FABRICATION VENDOR IS ALLOWED TO ADJUST THE COMPONENT SOLDERMASK PADS TO MEET THEIR TOOLING REQUIREMENTS.
4. APPLY LPI SILKSCREEN OR EQUIVALENT PER THE ARTWORK. COLOR: WHITE.

DRILL CHART: TOP to BOTTOM				
ALL UNITS ARE IN MILS				
FIGURE	SIZE	TOLERANCE	PLATED	QTY
*	8.0	+3.0/-3.0	PLATED	1873
*	36.0	+3.0/-3.0	PLATED	23
+	38.0	+3.0/-3.0	PLATED	50
o	40.0	+3.0/-3.0	PLATED	7
o	42.0	+3.0/-3.0	PLATED	2
+	62.0	+3.0/-3.0	PLATED	2
o	91.0	+3.0/-3.0	PLATED	4
o	125.0	+3.0/-3.0	PLATED	2
+	156.0	+3.0/-3.0	PLATED	4
*	20.0	+5.0/-5.0	NON-PLATED	8
*	31.0	+5.0/-5.0	NON-PLATED	1
*	43.0	+5.0/-5.0	NON-PLATED	8
*	46.0	+5.0/-5.0	NON-PLATED	1
M	118.0	+5.0/-5.0	NON-PLATED	2
+	125.0	+5.0/-5.0	NON-PLATED	4
-	50.0x15.0	+3.0/-3.0	PLATED	4
*	59.0x31.0	+4.0/-4.0	PLATED	2
8	120.0x40.0	+4.0/-4.0	PLATED	1
8	40.0x120.0	+4.0/-4.0	PLATED	1
8	140.0x40.0	+4.0/-4.0	PLATED	1



LAYER STACKUP

FINISHED PCB THICKNESS TO BE 63 +8/-5 mil

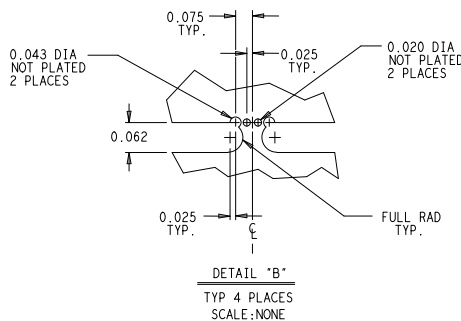
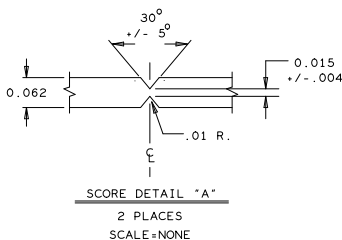
PRPREG (0.673 mil)	LAYER 1-SIGNAL -0.5 Oz.Cu + PLATING
CORE (2.919 mil)	LAYER 2-GND PLANE -1.0 Oz.Cu.
PRPREG (4.858 mil)	LAYER 3-SIGNAL -0.5 Oz.Cu.
CORE (4.858 mil)	LAYER 4-SIGNAL -0.5 Oz.Cu.
PRPREG (12.183 mil)	LAYER 5-PWR PLANE -1.0 Oz.Cu.
CORE (4.858 mil)	LAYER 6-GND PLANE -1.0 Oz.Cu.
PRPREG (9.533 mil)	LAYER 7-SIGNAL -0.5 Oz.Cu.
CORE (4.858 mil)	LAYER 8-SIGNAL-0.5 Oz.Cu
PRPREG (12.183 mil)	LAYER 9-GND PLANE -1.0 Oz.Cu.
CORE (4.858 mil)	LAYER 10-SIGNAL -0.5 Oz.Cu + PLATING
PRPREG (2.919 mil)	
(0.673 mil)	

EXTERNAL IMPEDANCE (LAYERS 1 & 10)

SINGLE ENDED	40.0 OHM - 6.8 MIL
SINGLE ENDED	45.0 OHM - 5.5 MIL
SINGLE ENDED	50.0 OHM - 4.5 MIL
DIFF 85 OHM	4.7 MIL WIDTH/5.3 MIL SPACE
DIFF 90 OHM	5.0 MIL WIDTH/12.0 MIL SPACE
DIFF 100 OHM	4.0 MIL WIDTH/12.0 MIL SPACE

INTERNAL IMPEDANCE

SINGLE ENDED	40.0 OHM - 6.2 MIL LAYERS 3,4,7,8
SINGLE ENDED	45.0 OHM - 5.0 MIL LAYERS 3,4,7,8
SINGLE ENDED	50.0 OHM - 4.0 MIL LAYERS 3,4,7,8
DIFF 85 OHM	4.5 MIL WIDTH/5.0 MIL SPACE LAYERS 3,4,7,8
DIFF 90 OHM	4.5 MIL WIDTH/10.0 MIL SPACE LAYERS 3,4,7,8
DIFF 100 OHM	3.9 MIL WIDTH/12.0 MIL SPACE LAYERS 3,4,7,8



APPROVED		CIRCUITCO.	
CHECKED			
DRAFTING	CalCad		
ENGR		FABRICATION DRAWING, MinnowBoard Max RevA1	
TOLERANCES UNLESS OTHERWISE SPECIFIED			
X.XX ± 0.01 X.XXX ± 0.005 ANGLES ± 1/2°			
DO NOT SCALE DRAWING			
		SCALE	NONE
		SHEET	1 OF 1
		000-00028	