

FINISHED HOLE SIZE TABLE

DRILL SYMBOL	DRILL SIZE	COUNT	PLATED	Min/Max
⊕	0.010	1517	Yes	+0/-0.010
□	0.020	2	Yes	+/-0.003
⊕ ^B	0.032	1	No	+/-0.003
⊗	0.039	6	No	+/-0.003
◇	0.040	2	Yes	+/-0.003
⊕ ^f	0.048	1	No	+/-0.003
⊕ ^A	0.052	4	No	+/-0.003
⊗	0.157	1	Yes	+/-0.004
⊗	0.157	3	No	+0.002/-0
Total		1537		

NOTES :

1.0 RoHS: PCB MUST COMPLY WITH WATERS RoHS REQUIREMENTS DOCUMENT 735001207.

2.0 MATERIAL:
2.1 MATERIAL TO BE IN ACCORDANCE WITH IPC-4101/129 OR BETTER.
2.2 MANUFACTURER MAY ADD THIEVING TO EXTERNAL LAYERS TO IMPROVE COPPER DISTRIBUTION FOR PLATING. THIEVING MUST BE A MINIMUM OF .150 FROM ANY DESIGN FEATURE AND NO THIEVING IS ALLOWED UNDER ANY SURFACE MOUNT COMPONENTS.

3.0 SURFACE FINISH:
3.1 ELECTROLESS NICKEL IMMERSION GOLD (ENIG) 3 - 8 MICRO INCHES OF GOLD OVER 100 - 200 MICRO INCHES OF NICKEL.

4.0 SOLDERMASK:
4.1 ALL VIAS TO BE CAPPED FROM THE PRIMARY SIDE WITH A SECONDARY SOLDERMASK. AFTER THE FINAL SURFACE FINISH IS APPLIED.
4.2 SOLDERMASK OVER BARE COPPER (SMOBC).

5.0 PRINTED CIRCUIT BOARD FABRICATION NOTES AND REGULATORY REQUIREMENTS TO COMPLY WITH WATERS DOCUMENT NUMBER 735001870.

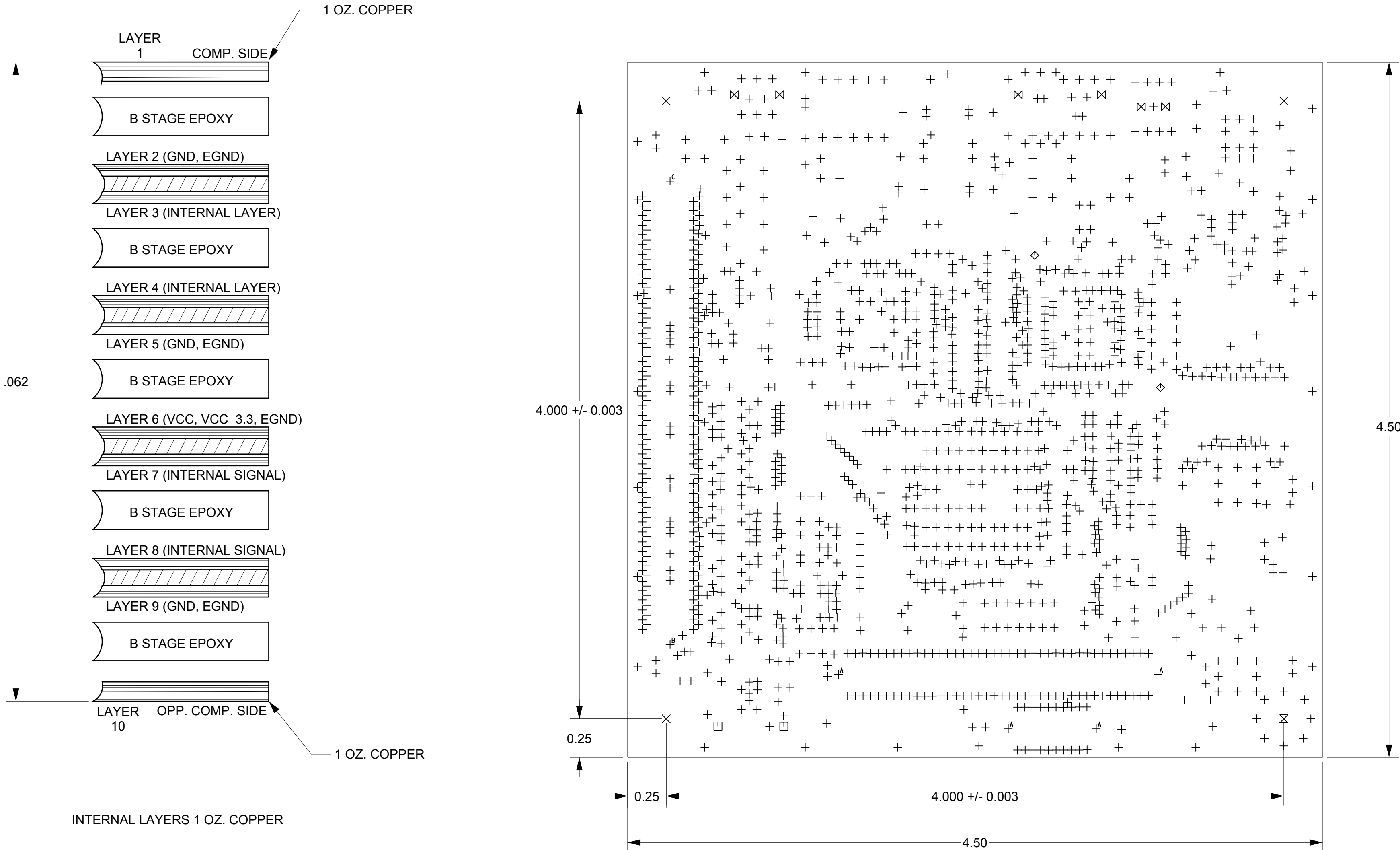
6.0 USE ARTWORK PHOTO 610000273 REV G FOR BOARD FABRICATION.

7.0 IMPEDANCE:
IMPEDANCE CONTROLLED BOARD. THE FOLLOWING VARIABLES CAN BE CHANGED IN ORDER TO MEET THE IMPEDANCE REQUIREMENTS
LINE WIDTH
DIELECTRIC SPACING BETWEEN LAYERS
DIELECTRIC SPACING TO A PLANE LAYER

8.0 CONTROLLED IMPEDANCE REQUIREMENTS FOR SINGLE SIDED SIGNALS AS FOLLOWS:
NOM. TRACE WIDTH/SPACE OF .006/.006 ON LAYER 3 IS 50 OHMS +/- 10%
NOM. TRACE WIDTH/SPACE OF .006/.006 ON LAYER 4 IS 50 OHMS +/- 10%
NOM. TRACE WIDTH/SPACE OF .006/.006 ON LAYER 7 IS 50 OHMS +/- 10%
NOM. TRACE WIDTH/SPACE OF .006/.006 ON LAYER 8 IS 50 OHMS +/- 10%

9.0 CONTROLLED IMPEDANCE REQUIREMENTS FOR DIFFERENTIAL PAIRS AS FOLLOWS:
NOM. TRACE WIDTH/SPACE OF .005/.012 ON LAYER 3 IS 100 OHMS +/- 10%
NOM. TRACE WIDTH/SPACE OF .005/.012 ON LAYER 4 IS 100 OHMS +/- 10%
NOM. TRACE WIDTH/SPACE OF .005/.012 ON LAYER 8 IS 100 OHMS +/- 10%

10.0 TEST IMPEDANCE IN ACCORDANCE WITH IPC APPROVED TIME DOMAIN REFLECTOMETRY OR EQUIVALENT IPC APPROVED METHOD.



UNLESS OTHERWISE SPECIFIED All dimensions are in inches. Remove all burrs and break sharp edges. Tolerances: Decimals XX = ± .01 .XXX = ± .005 Angles = ± 0°30' SURFACE ROUGHNESS 63✓ DO NOT SCALE PRINT	DESIGN G. FRAGOZA	DATE 09/24/09	Waters 34 Maple St. Milford MA 01757 USA		
	DRAWN B. ALEXANDER	DATE 09/24/09			
	CHECKED	DATE	PCB 3V CPU2000 1M X 16 FLASH ROHS		
	ENGR	DATE			
	ENGR	DATE	SIZE	DWG NO	REV
	APPROVED	DATE	D	510000273	G
			SCALE 1 : 1	MENTOR EXPEDITION	SHEET 1 OF 1