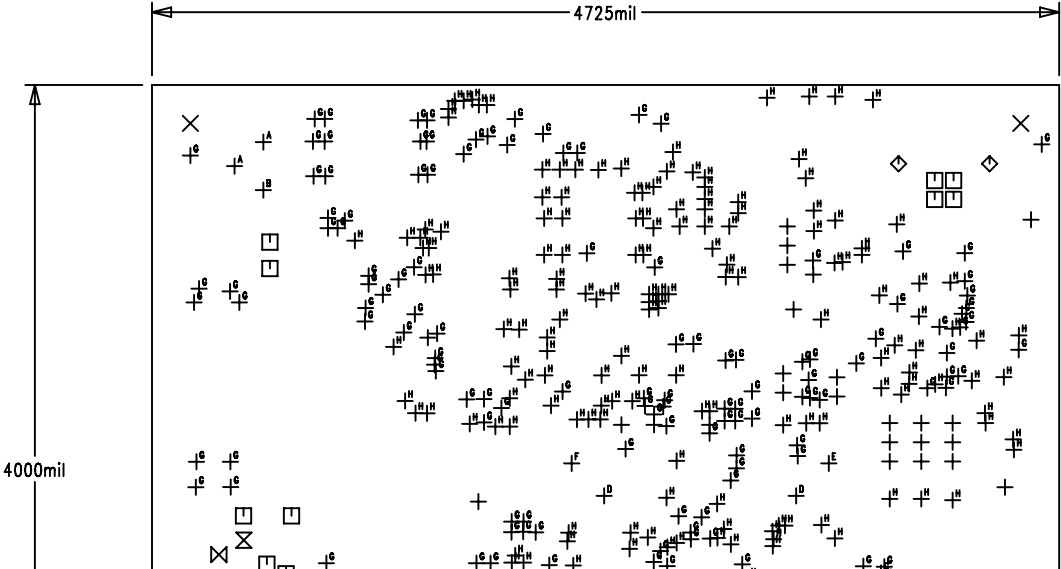
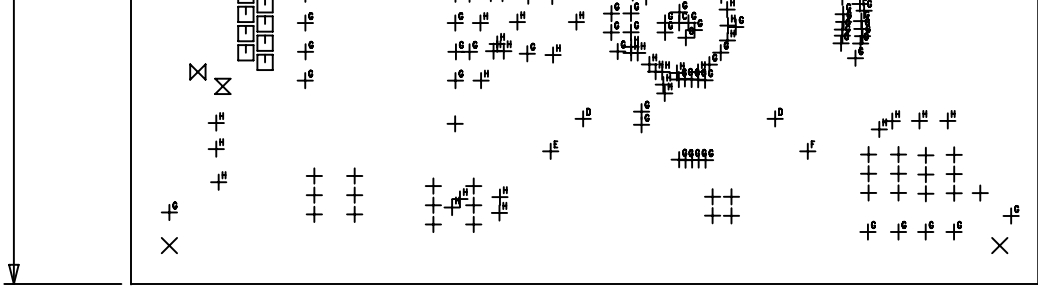



SIZE	QTY	SYM	PLATED	TOL
37	55	+	YES	+/-0.0
157	4	×	YES	+/-0.0
35	16	□	YES	+/-0.0
91	2	◇	YES	+/-0.0
62	2	⊠	YES	+/-0.0
128	2	⊠	NO	+/-0.0
110	2	+ <sup>A</sup>	YES	+/-0.0
120	1	+ <sup>B</sup>	YES	+/-0.0

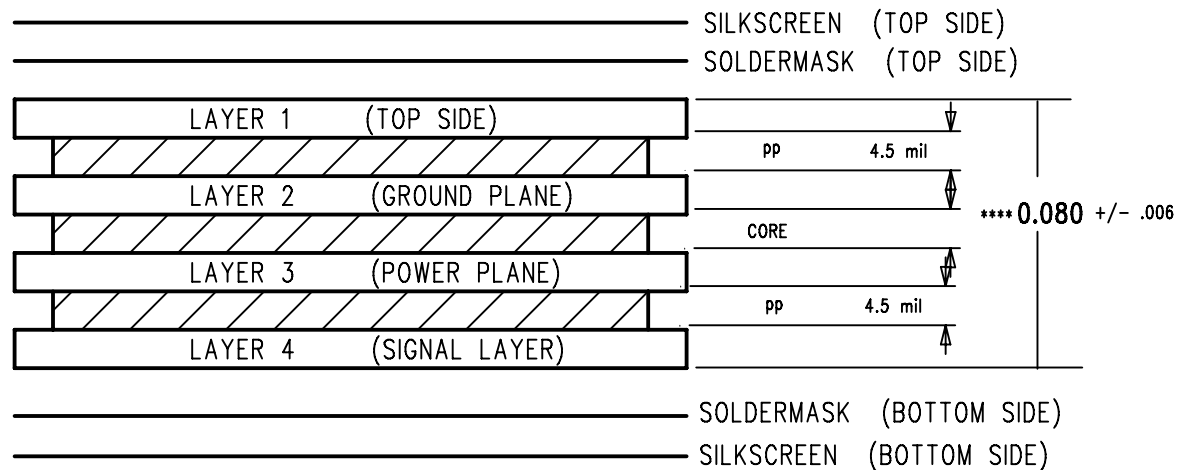


60	1	+ <sup>C</sup>	YES	+/-0.0
173.23	4	+ <sup>D</sup>	NO	+/-0.0
64.96	2	+ <sup>E</sup>	NO	+/-0.0
72.83	2	+ <sup>F</sup>	NO	+/-0.0
10	176	+ <sup>G</sup>	YES	+/-0.0
12	193	+ <sup>H</sup>	YES	+/-0.0



ART WORK BY:		OTTER COMPUTER INC.		 3075 LAWRENCE EXPWY SANTA CLARA, CA 95051 TEL:408-735-7358 FAX:408-735-7355 <a href="http://www.otterusa.com">http://www.otterusa.com</a> E-MAIL:otter@otterusa.com
JOB NO.		ARTWORK FOR:		
90504		micrel		
DWG. NUMBER:		BOARD NAME:		
XXXXXX		KSZ9021RN Socket Board		REV:
LAYER:		DRILL DRAWING		SHEET: 9 OF 13
GERBER:		90504GBR		
				DATE: JUNE-12-2009

## LAYUP DETAIL 4 LAYER



POWER AND GROUND PLANE USE 1OZ COPPER,  
ALL OTHER SIGNAL LAYERS USE 1OZ COPPER.

### NOTES: (UNLESS OTHERWISE SPECIFIED)

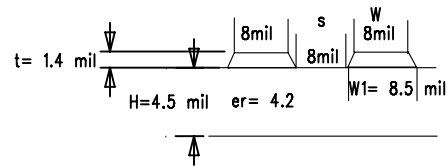
1. PRIMARY DIMENSIONS ARE IN INCHES, +/- .005.
2. THIS IS A 4 LAYER BOARD.
3. MATERIAL: 0.080 +/- .006 THICK GLASS EPOXY,  
NATURAL COLOR, LAMINATED NEMA GRADE FR-4, 1 OUNCE COPPER.
4. FINISH:  
LIQUID PHOTO IMAGINABLE (LPI), SOLDERMASK OVER BARE COPPER (SBOBC)  
FINISH TO BE ELECTROLESS AU IMMERSION , USING A HOT AIR LEVELING PROCESS.

- \*\* 5. SOLDERMASK:DARK GREEN PC401 OR EQUIVALENT.
6. SILKSCREEN: WHITE NON-CONDUCTIVE EPOXY INK, COMPONENT SIDE.

7. ALL HOLE DIAMETERS APPLY AFTER PLATING, +/- .003

8. ALL HOLES TO BE WITHIN +/- .003 TRUE POSITION WITH

8. ALL HOLES TO BE WITHIN  $\pm 0.005$  TRUE POSITION WITH RESPECT TO THE CIRCUIT SIDE PAD.
9. REGISTRATION: FRONT TO BACK TO BE WITHIN .005 TRUE POSITION.
10. FABRICATION TOLERANCES: END PRODUCT LINE WIDTHS AND LANDS SHALL NOT VARY MORE THAN THE SMALLER OF .002 OR 20% OF THE TRACE WIDTH FROM THE MASTER PATTERN. THE MINIMUM ANNULAR RING SHALL BE .002 ON EXTERNAL LAYERS AND .001 ON INTERNAL LAYERS.
11. WARP AND TWIST: SHALL NOT EXCEED .007 PER INCH.
12. ACCEPTABILITY: SHALL BE BASED ON IPC-600E.
13. PLACE VENDOR LOGO AND DATE CODE ON SOLDER SIDE.
- \*\* 14 .SOLDERMASK NEED DARK GREEN COLOUR
- \*\* 15. 8mils traces and 8 space is 100 ohm differential pairs impedance control.



## GOLD PLATING REQUIREMENTS

1. General surfacing requirements must meet ANSI/IPC-A-600E, Section 2.7.1
2. Gold plating must meet MIL-G-45204C, Type I, Grade C, Class 1
3. Must be a minimum of 99.7% gold
4. Minimum plating thickness is 50uinch/1.3um
5. Knoop hardness of 130-200

## NICKEL PLATING REQUIREMENTS

1. General surfacing requirements must meet ANSI/IPC-A-600E, Section 2.7.1
2. Nickel plating must meet QQ-N-290A, Class 1 (Corrosion protective plating), Grade G
3. Minimum plating thickness is 200uinch/5um

All contact pads, through hole, and SMD on the whole board: minimum gold plating of 50 micro-inches over 200 micro-inches nickel plating on the whole board.

- \*\*\*16. all pads need gold plated
- \*\*\*17. BOARD MATERIAL HAS TO MEET ROHS COMPLIANCE.