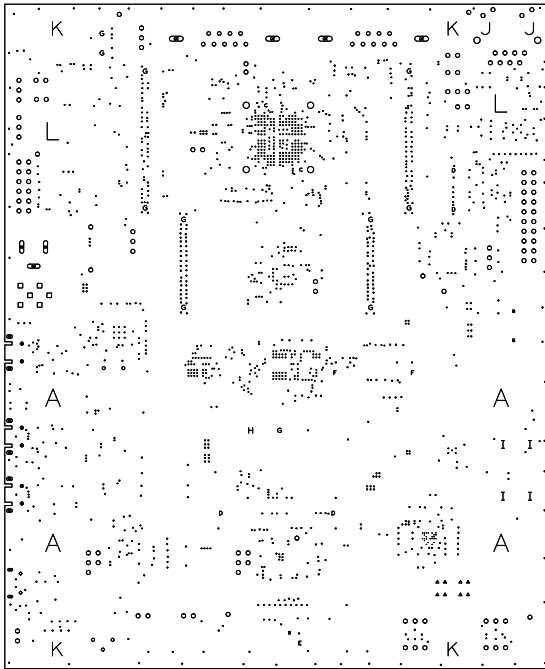


## 5 IMPEDANCE TABLE

LAYER	TRACE (mil)	SPACING (mil)	IMPEDANCE (Single end)	IMPEDANCE (Differential)	TOLERANCE
1,6 4	5.0 4.0	N/A	55 OHM	N/A	+/-10%
1 4	5.1 4.1	9.9 10.9	N/A	100 OHM	+/-10%
1,6 4	6.1 5.1	8.9 9.9	N/A	90 OHM	+/-10%



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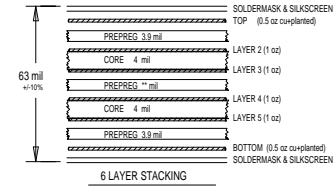
LAYER: FAB DRAWING & DRILL LEGEND	COMPANY NAME: ST
DESIGNER: Shelley	PROJECT NAME: MB1246
DATE: 2016.08.11	PROJECT NUMBER: D031-020A2
	REV B

## DRILL CHART: TOP to BOTTOM

ALL UNITS ARE IN MILS					
FIGURE	SIZE	TOLERANCE	PLATED	ROTATION	QTY
•	6.0	+3.0/-3.0	PLATED	-	24
•	8.0	+3.0/-3.0	PLATED	-	404
•	10.0	+3.0/-3.0	PLATED	-	640
•	12.0	+3.0/-3.0	PLATED	-	581
•	30.0	+3.0/-3.0	PLATED	-	5
•	33.0	+3.0/-3.0	PLATED	-	2
•	36.0	+3.0/-3.0	PLATED	-	8
•	38.0	+3.0/-3.0	PLATED	-	18
•	40.0	+3.0/-3.0	PLATED	-	116
•	48.0	+3.0/-3.0	PLATED	-	6
•	64.0	+3.0/-3.0	PLATED	-	6
A	177.0	+3.0/-3.0	PLATED	-	4
•	28.0	+2.0/-2.0	NON-PLATED	-	3
c	33.46	+2.0/-2.0	NON-PLATED	-	2
d	38.0	+2.0/-2.0	NON-PLATED	-	4
e	39.0	+2.0/-2.0	NON-PLATED	-	1
f	40.0	+2.0/-2.0	NON-PLATED	-	2
g	47.0	+2.0/-2.0	NON-PLATED	-	11
h	58.0	+2.0/-2.0	NON-PLATED	-	1
i	79.0	+2.0/-2.0	NON-PLATED	-	4
j	125.0	+2.0/-2.0	NON-PLATED	-	2
k	138.0	+2.0/-2.0	NON-PLATED	-	4
l	177.0	+2.0/-2.0	NON-PLATED	-	2
•	33.0x30.0	+5.0/-5.0	PLATED	0.000	6
•	51.0x24.0	+5.0/-5.0	PLATED	0.000	2
•	59.0x33.0	+5.0/-5.0	PLATED	0.000	6
•	126.0x40.0	+5.0/-5.0	PLATED	90.000	2
•	126.0x40.0	+5.0/-5.0	PLATED	0.000	1
•	140.0x50.0	+5.0/-5.0	PLATED	0.000	4

TOTAL HOLES: 1871

## 4 LAYER STACK-UP



## PCB SPECIFICATIONS:

- A. MATERIAL: FR-4, ☒ TG-170 ☐ TG-150 ☐ TG-140  
B. MATERIAL FAMILY: N/A  
C. SOLDERMASK COLOR: ☐ GREEN ☒ BLUE ☐ RED ☐ BLACK  
D. SILKSCREEN COLOR: ☒ WHITE ☐ YELLOW ☐ BLACK  
E. SURFACE FINISH: ☒ ENIG ☐ IMMERSION SILVER ☐ IMMERSION TIN  
☐ HASL ☐ HASL(PB-FREE) ☐ GOLDEN FINGER  
F. IMPEDANCE CONTROL: ☐ NO ☒ YES (SEE IMPEDANCE TABLE FOR DETAIL INFORMATION)  
G. THROUGH VIA: PLUG THE VIAS WHICH ARE COVERED WITH SOLDERMASK ONE OR TWO SIDE.  
PLUG MATERIAL: ☒ SOLDERMASK ☐ NON-CONDUCTIVE EPOXY.  
H. STACK-UP: SEE LAYER STACK-UP SEQUENCE FOR OVERALL THICKNESS.

## PCB REQUIREMENTS:

- THIS BOARD WILL CONFORM TO:  
IPC-A-600, CURRENT REV., CLASS II  
IPC-6012, CURRENT REV., CLASS II
- UNLESS OTHERWISE SPECIFIED ALL HOLE DIMENSIONS APPLY AFTER PLATING.  
ALL HOLES SHALL BE LOCATED WITHIN .003" DIAMETER OF TRUE POSITION.
- PLATED HOLE WALL THICKNESS SHALL NOT BE LESS THAN .001 INCH MINIMUM  
AVERAGE, WITH NO READING LESS THAN .0008 BY CROSS SECTION.
- MATERIAL FR4 RATING 94V-0 MINIMUM EPOXY GLASS LAMINATE.
- BOARD SHALL BE LPI SOLDER MASKED OVER BARE COPPER BOTH SIDES PER  
IPC-SM-840 CLASS II.
- SILKSCREEN SHALL BE PERMANENT NON-CONDUCTIVE INK AND WITH NO OVERLAP  
ON ANY COMPONENT PAD OR THROUGH HOLE.
- MFGR, TO LEGIBLY ETCH OR STAMP/SCREEN WITH PERMANENT NON-CONDUCTIVE INK  
A. U.L. CODE D. MFGR. LOGO  
B. DATE CODE E. SUCCESSFUL ELECTRICAL BOARD TEST.  
C. FLAMMABILITY RATING
- REMOVE THE FLASHS WHICH SMALLER THAN HOLE SIZE.
- REMOVE ALL SHAPE EDGES AND BURRS .005 MAXIMUM.
- PLEASE USE THE SUPPLIED IPC 356 NETLIST TO VERIFY BOARD BEFORE  
FABRICATING BOARD.

UNLESS OTHERWISE SPECIFIED		SIGNATURES	DATE	LOGO	COMPANY NAME
DIMENSIONS ARE IN INCHES TOLERANCES ON: 2 PL DECIMALS + 3 PL DECIMALS + ANGLES + FRACTIONS +		DRAWN	YY-MM-DD	TITLE PROJECT NAME *	
		CHECKED	YY-MM-DD		
		ENGRG	YY-MM-DD	SIZE B DWG NO ***** REV **	
		ISSUED		SCALE 1:1 SHEET 1 OF 1	