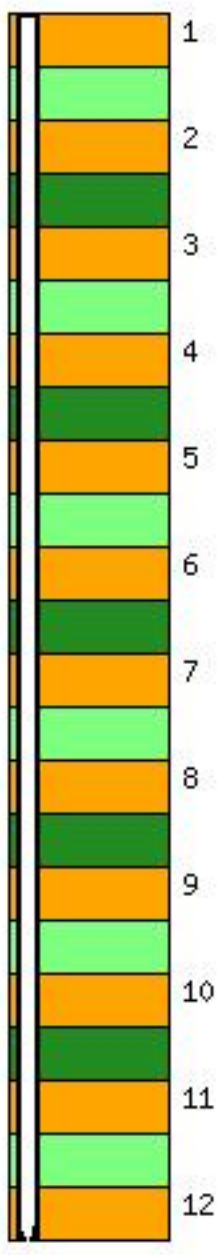
Date: Fri May 13 18:31:54 2022
Customer Name: MISTRAL SOLUTIONS PVT LTD
Customer P/N: AM62A
Customer Rev: NONE
Customer Mat: I-SPEED
Plant: Wuxi
Cat/Tool Num: P29_RFS_1105

SANMINA

Lay #	Thick (in)	Picture	Type Dk Df	Description	Drill Picture
0.0006/0.0013			4.5 0.019	Soldermask	
1	0.0020		F/S/LPHTE	0.5oz w/plating	1
	0.0030	1067HRC	2.91 0.0058	fill	
2	0.0006		P/RTF5P	0.5oz	2
	0.0030	1080	3.14 0.0059	core	
3	0.0006		M/RTF5P	0.5oz	3
	0.0044	0106*2	2.93 0.0058	fill	
4	0.0006		P/RTF5P	0.5oz	4
	0.0030	1080	3.14 0.0059	core	
5	0.0006		M/RTF5P	0.5oz	5
	0.0044	0106*2	2.93 0.0058	fill	
6	0.0006		P/RTF5P	0.5oz	6
	0.0030	1080	3.14 0.0059	core	
7	0.0006		P/RTF5P	0.5oz	7
	0.0045	0106*2	2.92 0.0058	fill	
8	0.0006		P/RTF5P	0.5oz	8
	0.0030	1080	3.14 0.0059	core	
9	0.0006		P/RTF5P	0.5oz	9
	0.0044	0106*2	2.93 0.0058	fill	
10	0.0006		M/RTF5P	0.5oz	10
	0.0030	1080	3.14 0.0059	core	
11	0.0006		P/RTF5P	0.5oz	11
	0.0030	1067HRC	2.91 0.0058	fill	
12	0.0020		F/S/LPHTE	0.5oz w/plating	12
0.0006/0.0013			4.5 0.019	Soldermask	



0.0486	Total thickness (in) Over plated copper
0.0458	After lamination thickness (in)
0.0472	Over laminate thickness (in) (with soldermask)
0.0490	Customer Requirement (in)
+/-0.0049	Customer Tolerance (in)

Notes and Recommendations:

1. Assume copper usage: 75% for GND layer, 60% for Mix layer.

2. In order to meet impedance, suggest to use 3mil core instead of 4mil core,
   L1-2&L12-11 Pre-preg is about 2.95mil(1x 1067 PP)
   The final board thickness is 49mil exclude solder mask.

3. Suggest to relax tolerance to +/-5ohm for 40OHM impedance.

4. Suggest to relax tolerance to +/-5ohm for 33OHM impedance.

5. For "L10 33E single ended(6.3mils for 33E SE)"
   --> We need adjust 6.3mil to 8mil to meet 33ohm+/-5ohm.

6. For "L10 66E differential(5.5mil/6.3mil for 66E differential)"
   --> We need adjust 5.5mil/6.3mil to 7.4mil/4.4mil to meet 66ohm+/-10%.

7. For "L3 66E single ended(3 mils for 66E SE)"
   --> 3mil line can not be ajusted to more thin.
   the impedance value only meet 57ohm.

8. For "L3 133E differential(3mils/6.5mil for 133E differential)"
   --> 3mil line can not be ajusted to more thin.
   the impedance value only meet 110ohm.

Impedance Constraint Information (I)

Imp #	Impedance Type		Affect Lyr (1)	Affect Lyr (2)	Cust L/W	Line Width (1)	Line Width (2)	Spacing (1)	Spacing (2)	Ref Plane Top	Ref Plane Bot	Targ ohms	Tol ohms	Predicted ohms@2GHz
1	EC MS		1	None	0.004	0.004	0.004	0.0043		None	2	90	9	89.38
2	EC MS		1	None	0.0035	0.0035	0.0035	0.0055		None	2	100	10	99.52
3	Surf MS		1	None	0.0055	0.0055				None	2	50	5	49.28
4	EC SL		3	None	0.005	0.005	0.005	0.004		4	2	80	8	81.17
5	EC SL		3	None	0.004	0.004	0.004	0.004		4	2	90	9	90.86
6	EC SL		3	None	0.0035	0.0035	0.0035	0.005		4	2	100	10	99.70
7	EC SL		3	None	0.003	0.003	0.003	0.0065		4	2	133	13.3	109.88
8	Stripline		3	None	0.0055	0.0058				4	2	40	5	40.04
9	Stripline		3	None	0.004	0.004				4	2	50	5	49.33
10	Stripline		3	None	0.003	0.003				4	2	66	6.6	56.75
11	EC SL		5	None	0.005	0.005	0.005	0.004		6	4	80	8	81.17
12	EC SL		5	None	0.004	0.004	0.004	0.004		6	4	90	9	90.86
13	EC SL		5	None	0.0035	0.0035	0.0035	0.005		6	4	100	10	99.70
14	Stripline		5	None	0.0055	0.0058				6	4	40	5	40.04
15	Stripline		5	None	0.004	0.004				6	4	50	5	49.33
16	EC SL		10	None	0.0055	0.0074	0.0074	0.0044		9	11	66	6.6	65.37
17	EC SL		10	None	0.005	0.005	0.005	0.004		9	11	80	8	81.17
18	EC SL		10	None	0.004	0.004	0.004	0.004		9	11	90	9	90.86
19	EC SL		10	None	0.0035	0.0035	0.0035	0.005		9	11	100	10	99.70
20	Stripline		10	None	0.0063	0.008				9	11	33	5	32.59
21	Stripline		10	None	0.0055	0.0058				9	11	40	5	40.04
22	Stripline		10	None	0.004	0.004				9	11	50	5	49.33
23	EC MS		12	None	0.004	0.004	0.004	0.0043		None	11	90	9	89.38
24	EC MS		12	None	0.0035	0.0035	0.0035	0.0055		None	11	100	10	99.52
25	Surf MS		12	None	0.0055	0.0055				None	11	50	5	49.28

Trace widths measured at base of trace
All dimensions in inches (unless otherwise noted)

Products built using these specified nominal dimensions will have variation in physical and electrical results based on acceptable manufacturing materials and process tolerance.
This data is intended to provide one possible solution to meet a particular set of impedance and thickness requirements.
If any of these values are attached to fabrication prints, they should be marked as 'reference'.