

06/09/10

22 layers Class 2			GND			POSSIBLE VIAS 1808 (.018 P .008 H) 2010 (.020 P .010 H)	
1	copper 3/8 OZ	0.000525	.008 h			1	SURFACE
	dielectric	0.0025	1-3				
2	copper 1/2 OZ	0.0007	0.018			2	GND /PWR PLANE
	dielectric	0.004					
3	copper 3/8 OZ	0.000525				3	Pair LYR 1 (3.5 w-5 sp)
	dielectric	0.0045					
4	copper 1/2 OZ	0.0007				4	PLANE
	dielectric	0.004					
5	copper 3/8 OZ	0.000525				5	Pair LYR 2 (3.5 w-5 sp)
	dielectric	0.0045					
6	copper 1/2 OZ	0.0007				6	PLANE
	dielectric	0.004					
7	copper 3/8 OZ	0.000525				7	Pair LYR 3 (3.5 w-5 sp)
	dielectric	0.0045					
8	copper 1/2 OZ	0.0007				8	PLANE
	dielectric	0.004					
9	copper 3/8 OZ	0.000525				9	Pair LYR 4 (3.5 w-5 sp)
	dielectric	0.0045					
10	copper 1/2 OZ	0.0007				10	PLANE
	dielectric	0.004					
11	copper 3/8 OZ	0.000525				11	Pair LYR 5 (3.5 w-5 sp)
	dielectric	0.0045					
12	copper 1/2 OZ	0.0007				12	GND /PWR PLANE
	dielectric	0.004					
13	copper 3/8 OZ	0.000525				13	Pair LYR 6 (3.5 w-5 sp)
	dielectric	0.0045					
14	copper 1/2 OZ	0.0007				14	PLANE
	dielectric	0.004					
15	copper 3/8 OZ	0.000525				15	Pair LYR 7 (3.5 w-5 sp)
	dielectric	0.0045					
16	copper 1/2 OZ	0.0007				16	PLANE
	dielectric	0.004					
17	copper 3/8 OZ	0.000525				17	Pair LYR 8 (3.5 w-5 sp)
	dielectric	0.0045					
18	copper 1/2 OZ	0.0007				18	PLANE
	dielectric	0.004					
19	copper 3/8 OZ	0.000525				19	Pair LYR 9 (3.5 w-5 sp)
	dielectric	0.0045					
20	copper 1/2 OZ	0.0007				20	PLANE
	dielectric	0.004					
21	copper 1/2 OZ	0.0007				21	other layer
	dielectric	0.0025					
22	copper 3/8 OZ	0.000525				22	SURFACE/GND

0.0032 ***FINISH COPPER FOR LAYERS 9 & 16 (.0016 EACH)
0.0038 ***FINISH COPPER FOR LAYERS 1 & 22

thk0.1059750.0311

TO DO LIST:

- 1) Vias have a 19.3 clearance between which leaves about 3.4 clearance from trace to pads on diff pairs...sal will give feedback..stackup will be final
2) Clarification from mark on (Differential pair layer jumping on slower signals, ISOLA material, and possible common wedges)...sent email to mark..
3) Fanout of 1/2 mm pitch bga (PART # TLK2711JR-ZQE) VIA IN PADS .006 HOLE .011 PADS (CELL=BGA80) .01969 PITCH 1/2 MM (16 TIMES) WORKING

I'll be sending gerber data to DDI by Monday or Tuesday to make sure were all on the same page. DFM

Notes:

Maximum number of lamination cycle for any set of laminate to experience is 4 times.
we can do up to three on two halves and the final will be the fourth for both halves and we can split it anywhere
4 mil drill requires 12 mil pad size (minimum); can drill and plate through a maximum 0.040" total board/copper thickness.
6 mil drill requires 14 mil pad size (minimum); can drill and plate through a maximum 0.060" total board/copper thickness.
8 mil drill requires 18 mil pad size (minimum); can drill and plate through a maximum 0.080" total board/copper thickness.
10 mil drill requires 20 mil pad size (minimum); can drill and plate through a maximum 0.110" total board/copper thickness.
You will have to use 12 mil or larger drill if you need make the board thick than the proposed 20-layer, 0.107" thick board.

Diff pair to pair should be three times dielectric (15)

copper	0.0007	every layer we add requires one copper and one dielectric for a totalof .0052" thicker
dielectric	0.0045	
0.0052		

Differential pair speeds and groups
layer stack up
Each set of two connectors has 2 gnds for a total of 8
Test Board
-Any suggested input
45 vs radial

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