


*** Valued Customer: If this stackup is accepted, please add this PDF to the production data package. ***
 *** Preliminary stack up subject to change based on review of final data and technology. ***

Job number: TI 8 LYR 081618	Material: RO3003, RO4450F, R	External Stackup Report Report v1.76	 STREAMLINE CIRCUITS TIME AND TECHNOLOGY EXPERTS
Part number: 8 LYR, Rev: -	Impedance: Yes		
Customer: TEXAS INSTRUMENTS	Date: 17-Aug-2018		
Panel size: 12X18	Created by: Mike Garrett		

Layer	Type	CU Weight	CU %	Material Description	Via Structure	Segment	Glass Style	Material Family	Dielectric constant @ 1GHz	Thickness After lamination [mil]
Soldermask										0.80
1	Mixed	H	50	5.0 mil H/H		Core		RO3003	3.00	1.60
2	Plane	H	90	Press thk = 3.62 mil		Prepreg	4450F(4.0)(51)	RO4450F	3.52	0.80
3	Mixed	H	50	10.7 mil H/H		Core		RO4835 LOPRO	3.66	0.60
4	Plane	H	90	Press thk = 8.02 mil		Prepreg	2113(59)	370HR	4.02	10.70
5	Plane	1	90	10.0 mil 1/H		Core	2-1652	370HR	4.34	0.60
6	Mixed	H	50	Press thk = 4.52 mil		Prepreg	2116(56)	370HR	4.06	4.52
7	Plane	H	90	5.0 mil H/H		Core	1-1652	370HR	4.34	0.80
8	Mixed	H	50							5.00
Soldermask										1.60
										0.80

Specification (Over mask on plated copper):	mil
Overall Board Thickness:	55.0
Tolerance:	+5.5/-5.5
Min-Max Board Thickness:	49.5-60.5

Anticipated Board Thickness:	mil
After lamination:	52.66
Over mask on plated copper:	56.26

Grain in 18" Dimension

Impedance Table

InSolver

Layer	Impedance Requirement [ohms]	Tolerance [ohms]		Type	Upper Reference	Lower Ref	Designed Line Width [Mil]	Designed Spacing [Mil]	Finished Line Width [Mil]	Finished Spacing [Mil]	Impedance Simulation [ohms]
		+	-								
1	100	10	10	Differential		2	6.5	5.50	6.5	5.50	99.229
1	50	5	5	Single Ended		2	10.5		10.5		49.687
3	100	10	10	Differential	2	4	4.5	7.50	4.5	7.50	100.363
3	50	5	5	Single Ended	2	4	5.1		5.1		50.471
5	50	5	5	Single Ended	4		12		12		50.079
6	100	10	10	Differential	7		5	7.00	5	7.00	99.266
6	50	5	5	Single Ended	7		6.9		6.9		49.844
8	100	10	10	Differential		7	5.25	6.75	5.25	6.75	99.927
8	50	5	5	Single Ended		7	7.75		7.75		50.116

Remarks

PRELIMINARY STACK UP
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- * Any targeted thickness .0046" and greater shall have a minimum tolerance of +/- .001 after lamination.
- * Any targeted thickness .0045" and below shall not be held to the minimum dielectric .0035429" as specified in IPC-6012 section 3.6.2.15. Unless agreed upon in writing from Streamline Circuits Inc. The minimum thickness per this exception shall not be less than .0009839" per IPC-6012 section 3.6.2.17.