
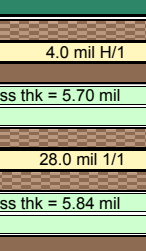


\*\*\* Valued Customer: If this stackup is accepted, please add this PDF to the production data package. \*\*\*  
 \*\*\* Preliminary stack up subject to change based on review of final data and technology. \*\*\*

Job number:	TI 6 LYR 051618 PR0C010	Material:	RO4835 LOPRO, 370	<b>External Stackup Report</b> Report v1.76	 <b>STREAMLINE CIRCUITS</b> TIME AND TECHNOLOGY EXPERTS
Part number:	PR0C010, Rev: B	Impedance:	Yes		
Customer:	TEXAS INSTRUMENTS	Date:	11-Jun-2018		
Panel size:	18X24	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	37							4.0 mil H/1	Core		RO4835 LOPRO	3.66	1.60	
2	Plane	1	88												4.00	
										Press thk = 5.70 mil	Prepreg	1080(66)		370HR	3.90	5.70
												1080(66)		370HR	3.90	
3	Mixed	1	70													1.20
										28.0 mil 1/1	Core	4-7628		370HR	4.36	28.00
4	Mixed	1	82													1.20
										Press thk = 5.84 mil	Prepreg	1080(66)		370HR	3.90	5.84
						1080(66)		370HR	3.90							
5	Plane	1	88							1.20						
				4.0 mil 1/H	Core	1-2116		370HR	4.26	4.00						
6	Mixed	H	49							1.60						
Soldermask										0.80						

Specification (Over mask on plated copper):	mil
Overall Board Thickness:	62.0
Tolerance:	+6.2/-6.2
Min-Max Board Thickness:	55.8-68.2

Anticipated Board Thickness:	mil
After lamination:	53.54
Over mask on plated copper:	57.14

#### 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	5.2	5.00	4.375	5.83	101.900
1	50	5	5	Single Ended CP		2	7.08		7.08		50.718

#### Remarks

PRELIMINARY STACK UP
----------------------

- \* 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.