

Revision:

## STACKUP & IMPEDANCE REPORT

Confidential / Proprietary Information

Customer Required Finished Thickness: 112.00 (+11.20 / -11.20) mils

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Planner: SSDC\_AMITHR

Job Name: 152496 Customer:

university of maryland

Measured: Over mask on plated copper Part Name: Pathfinder

Estimated Thickness after Lamination: 105.34 mils

lmp	Lyr	Туре	Image	Foil	Plt (Mil)	Family	Generic Name	Thk (Mil)	Resin %	Er	Vendor	Construction
	sm1 I1s	Signal		0.25oz	1.55	Foil NPG-170 NPG-170	0.25 oz - Foil 106 106	0.5 3.527	68 68	0.00 3.75 3.75	Tapco Nanya Nanya	
1 <u>χΩ</u>	12g 13s	Power / Ground Mixed		0.5oz 0.5oz	0	NPG-170	0.004 HHxHH	4		4.28	Nanya	1x2116
				,		NPG-170 NPG-170	1080 106	3.932	62 68	3.16 3.75	Nanya Nanya	
1χΩ	14g 15s	Power / Ground Mixed		0.5oz 0.5oz	0	NPG-170	0.004 HHxHH	4		4.28	Nanya	1x2116
Ē		25 0 0 20 10		,	920	NPG-170 NPG-170	1080 106	3.953	62 68	3.16 3.75	Nanya Nanya	DRECHE
1χΩ	16g 17s	Power / Ground Mixed		0.5oz 0.5oz	0	NPG-170	0.004 HHxHH	4		4.28	Nanya	1x2116
	1500	THE SECULATION OF		,	5/5	NPG-170 NPG-170	1080 106	3.932	62 68	3.16 3.75	Nanya Nanya	
1χΩ	18g 19s	Power / Ground Signal		0.5oz 0.5oz	0	NPG-170	0.004 HHxHH	4		4.28	Nanya	1x2116
	93720			,	eg.:	NPG-170 NPG-170	1080 106	3.932	62 68	3.16 3.75	Nanya Nanya	3750470
1χΩ	110g  111s	Power / Ground Mixed		0.5oz 0.5oz	0	NPG-170	0.004 HHxHH	4		4.28	Nanya	1x2116
	***			,		NPG-170 NPG-170	1080 106	3.645	62 68	3.16 3.75	Nanya Nanya	
	112g 113g	Power / Ground Power / Ground		1oz 1oz	0	NPG-170	0.002 H1xH1	2		3.80	Nanya	1x106
		72. N		,	ege	NPG-170 NPG-170	106 1080	3.638	68 62	3.75 3.16	Nanya Nanya	UNGONO
1xΩ	I14s I15g	Signal Power / Ground		0.5oz 0.5oz	0	NPG-170	0.004 HHxHH	4		4.28	Nanya	1x2116
Ē	10110	ALPHANIA I	1	,		NPG-170 NPG-170	106 1080	3.932	68 62	3.75 3.16	Nanya Nanya	
1χΩ	116s  117g	Mixed Power / Ground		0.5oz 0.5oz	0	NPG-170	0.004 HHxHH	4		4.28	Nanya	1x2116
		22 3		,	· ·	NPG-170 NPG-170	106 1080	3.932	68 62	3.75 3.16	Nanya Nanya	
1×Ω	118s  119g	Mixed Power / Ground		0.5oz 0.5oz	0	NPG-170	0.004 HHxHH	4		4.28	Nanya	1x2116
	100	N.C.		,	•	NPG-170 NPG-170	106 1080	3.953	68 62	3.75 3.16	Nanya Nanya	4 0446
1xΩ	120s 121g	Mixed Power / Ground		0.5oz 0.5oz	0	NPG-170	0.004 HHxHH	4		4.28	Nanya	1x2116
		20 C		,		NPG-170 NPG-170	106 1080	3.932	68 62	3.75 3.16	Nanya Nanya	
1χΩ	122s 123g	Mixed Power / Ground		0.5oz 0.5oz	0	NPG-170	0.004 HHxHH	4		4.28	Nanya	1x2116
_	124s	Mixed		0.25oz	1.55	NPG-170 NPG-170 Foil	106 106 0.25 oz - Foil	3.527	68 68	3.75 3.75 0.00	Nanya Nanya Tapco	
	sm24	F11 878240-37		A STATE OF THE STA	4075-00.557	salve)"	W. 18 18 18 18 18 18 18 18 18 18 18 18 18	0.5		area da	50/4D(\$75)	

Impedance Table															
Index	Layer	Required Impedance [ohms]	Tol [ohms] +/-	Туре	Ref 1	Lower Ref	Orig LW [mil]	Orig Spacing [mil]	Orig CP Spacing [mil]	Finished LW [mil]	Finished Spacing [mil]	Fin. CP Spacing [mil]	Impedance Simulation [ohms]	Impedance before Mask [ohms]	IMG
а	3	100	10%	Diff Stripline	4	2	3.50	4.37		3.00	4.87		99.0		**
b	5	100	10%	Diff Stripline	6	4	3.50	4.37		3.00	4.87		99.1		**
С	7	100	10%	Diff Stripline	8	6	3.50	4.37		3.00	4.87		99.0		**
d	9	100	10%	Diff Stripline	10	8	3.50	4.37		3.00	4.87		99.0		**
е	11	100	10%	Diff Stripline	12	10	3.50	4.37		3.00	4.87		97.7		**
f	14	100	10%	Diff Stripline	13	15	3.50	4.37		3.00	4.87		97.7		**
g	16	100	10%	Diff Stripline	15	17	3.50	4.37		3.00	4.87		99.0		**
h	18	100	10%	Diff Stripline	17	19	3.50	4.37		3.00	4.87		99.0		**
i	20	100	10%	Diff Stripline	19	21	3.50	4.37		3.00	4.87		99.1		**
j	22	100	10%	Diff Stripline	21	23	3.50	4.37		3.00	4.87		99.0		**