

*** Valued Customer: If this stackup is accepted, please add this PDF to the production data package ***

Job number:	ec36067	Material:	PCL-370HR	Stackup Report	Report v1.40	External	G O R I L L A C I R C U I T S I N C .	
Part number:	AFE7798EVM	Impedance:	Yes					
Customer:	TEXAS INSTRUMENTS	Date:	22-Aug-2018					
Panel size:	16X18	Created by:	TERESA.S					

Layer	Type	Cu Weight	Cu %	Material Description	Via Structure	Segment	Glass Style	Material Family	Copper Plating Thickness [mil]	Thickness after lamination [mil]
Soldermask										
I1comp	Signal	H	30	Press thk = 9.58 mil		Foil				0.80
						Prepreg	3313(54)	PCL-370HR	1.70	2.30 *
							1086(65)	PCL-370HR		9.58
							3313(54)	PCL-370HR		
I2pp	Plane	2.0	70	3.0 mil 2/2		Core		PCL-370HR		2.40
I3pp	Plane	2.0	70	Press thk = 4.72 mil		Prepreg	1086(65)	PCL-370HR		3.00
							1086(65)	PCL-370HR		2.40
I4sig	Signal	H	40	4.0 mil H/H		Core		PCL-370HR		4.72
I5pp	Plane	H	70	Press thk = 6.06 mil		Prepreg	1086(65)	PCL-370HR		0.60
							3313(54)	PCL-370HR		4.00
I6sig	Signal	H	40	4.0 mil H/H		Core		PCL-370HR		0.60
I7pp	Plane	H	70	Press thk = 6.06 mil		Prepreg	3313(54)	PCL-370HR		4.00
							1086(65)	PCL-370HR		0.60
I8sig	Signal	H	40	4.0 mil H/H		Core		PCL-370HR		6.06
I9pp	Plane	H	70	Press thk = 4.42 mil		Prepreg	1086(65)	PCL-370HR		0.60
							1086(65)	PCL-370HR		4.00
I10mix	Mixed	2.0	50	3.0 mil 2/2		Core		PCL-370HR		0.60
I11pp	Plane	2.0	70	Press thk = 9.58 mil		Prepreg	3313(54)	PCL-370HR		4.00
							1086(65)	PCL-370HR		0.60
							3313(54)	PCL-370HR		6.06
I12sold	Signal	H	30			Foil				0.60
Soldermask										4.00

* Estimated Cu Plating for reference use only.

Specification (Over mask on plated copper):	mil
Overall Board Thickness:	76.00
Tolerance:	+7.6/-7.6
Min-Max Board Thickness:	68.4-83.6

Anticipated Board Thickness:	mil
After lamination:	72.82
Over mask on plated copper::	77.82

Impedance Table

Layer	Impedance Requirement [ohms]	Tolerance [ohms]		Type	Upper Ref	Lower Ref	Designed Line Width [mil]	Plotted Line Width [mil]	Designed Spacing [mil]	Coplanar Spacing [mil]	Finished Line Width [mil]	Finished Spacing [mil]	Impedance Simulation [ohms]
		+	-										
I1comp	50	5.0	5.0	Coated SE CoPlaner	--	I2pp	15.25	16.00	--	20.00	15.25	--	49.9
I1comp	100	10.0	10.0	Coated Diff CoPlaner	--	I2pp	8.00	7.50	5.00	20.00	6.75	6.25	100.0
I6sig	50	5.0	5.0	Single-Ended CP	I5pp	I7pp	5.00	5.00	--	20.00	4.50	--	48.0
I6sig	100	10.0	10.0	Differential CP	I5pp	I7pp	5.00	4.50	12.00	20.00	4.00	13.00	100.6
I8sig	50	5.0	5.0	Single-Ended CP	I7pp	I9pp	5.00	5.00	--	20.00	4.50	--	48.0
I8sig	100	10.0	10.0	Differential CP	I7pp	I9pp	5.00	4.50	12.00	20.00	4.00	13.00	100.6
I12sold	50	5.0	5.0	Coated SE CoPlaner	--	I11pp	15.25	16.00	--	20.00	15.25	--	49.9
I12sold	100	10.0	10.0	Coated Diff CoPlaner	--	I11pp	8.00	7.50	5.00	20.00	6.75	6.25	100.0

Remarks:

Please Note: The stackup may change if the final manufacturing data is different from the information used to create this stackup

Mat Typ	Material Description	Rsn%	PNL	1 Pnl	Notes
Foil	Foil - 0.5 oz - Foil		16x18	2	
Core	PCL-370HR - 3.0 mil 2/2		16x18	2	
Core	PCL-370HR - 4.0 mil H/H		16x18	3	
Prepreg	PCL-370HR - 1086	65%	16x18	8	
Prepreg	PCL-370HR - 3313	54%	16x18	6	

Drill Progs	Technology	Depth
Drill1	Mechanical	72.82

Job number:	ec36067	Material:	PCL-370HR	Stackup Report Report v1.40 External	G O R I L L A C I R C U I T S I N C.	
Part number:	AFE7798EVM	Impedance:	Yes			
Customer:	TEXAS INSTRUMENTS	Date:	22-Aug-2018			
Panel size:	16X18	Created by:	TERESA.S			

Please Note:

IPC-6012 has a minimum dielectric requirement of 0.003543" and any targeted dielectric thickness of 0.0045" or less may violate this requirement.

Acceptance of this proposed stack-up will be taken as a waiver for this requirement. Note that with this exception, the minimum dielectric thickness shall be 0.000984". If this is not acceptable please get back to us ASAP so we can make the necessary changes.

If we do not hear back from you within 24 hours, we will proceed with this stack-up. Note that the granting of this waiver does not affect the product meeting IPC-6012 Class 2 or Class 3 requirements. Also note that targeted thickness .0046" and greater shall have a minimum tolerance of +/- .001 after lamination.