

stack-up
Material:IT180A

Thickness:0.89mm +/-10% Over soldermask

Layer Name	Original design		Founder's suggestion		Copper Type	DK (1GHz)
	Build - up	Dielectric thickness (unit mil)	Dielectric thickness (unit mil)	Build - up		
L1	0.5oz+plating			0.5oz+plating	H T E	
	PP		3.24	PP 1080*1		3.69
L2	1oz			1oz	H T E	
	CORE		3.94	CORE 2116*1		3.94
L3	0.5oz			0.5oz	H T E	
	PP		11.85	PP 2313*3		3.97
L4	0.5oz			0.5oz	H T E	
	CORE		3.94	CORE 2116*1		3.94
L5	1oz			1oz	H T E	
	PP		3.24	PP 1080*1		3.69
L6	0.5oz+plating			0.5oz+plating	H T E	

Single impedance list

Layer name	Original design		Founder's suggestion		Reference layer
	line width(unit:mil)	impedance(unit:ohm)	line width(unit:mil)	impedance (unit:ohm)	
L1			5.1	51+/-5.1	L2
L1			4.5	54+/-5.4	L2
L1			3.5	60+/-6	L2
L1			5.3	50+/-5	L2
L1			54	50+/-5	L6
L3			4.8	51+/-5.1	L4&L2
L3			4.2	54+/-5.4	L4&L2
L3			3.3	60+/-6	L4&L2
L3			5	50+/-5	L4&L2
L6			5.1	51+/-5.1	L5
L6			4.5	54+/-5.4	L5
L6			3.5	60+/-6	L5
L6			5.3	50+/-5	L5

Differential impedance list

Layer name	Original design		Founder's suggestion		Reference layer
	line width/space(unit: mil)	impedance(unit:ohm)	line width/space(unit: mil)	impedance(unit:ohm)	
L1			5.11/4.6	85+/-8.5	L2
L1			4.51/4.8	90+/-9	L2
L1			3.51/5	100+/-10	L2
L3			3.31/4.5	100+/-10	L4&L2
L3			4.21/4.2	90+/-9	L4&L2
L3			4.81/4.1	85+/-8.5	L4&L2
L6			5.11/4.6	85+/-8.5	L5
L6			4.51/4.8	90+/-9	L5
L6			3.51/5	100+/-10	L5

Impedance Constraint Editor

Related Part

500

Affected Layers

Trace: COMP

Lower Reference: SOLD

Customer Requirements

Line Width: 54 Mil Tol + 10.8 Tol - 10.8

Required Impedance: 50 Ohm Tol + 5 Tol - 5

Frequency: 0 GHz

Calculation Target

Adjusted Line Width: 54 Mil Tol + 10.8 Tol - 10.8

Adjusted Impedance: 53 Ohm Tol + 5 Tol - 5

Line Width Modification

Allow Modification: Minimal impedance change

Calculate

Calculated Values (Solver Version: Server=1.0)

Proposed Line Width: 54 Mil (from: 54 to: 54)

Proposed Impedance: 52.8359 Ohm (max: 0 min: 0)

Artwork Line Width: 54 Mil

Comment

Model Specific Parameters

H1 29.81 Mil T1 1.69291 Mil

Er1 3.88818 C1 1.6 Mil

W1 54 Mil C2 0.4 Mil

W2 53.0326 Mil CEr 3.3

Models Selection >>

Coated Microstrip 1B

Diagram showing a cross-section of a microstrip with labels: CEr, C1, W2, T1, H1, Er1, W1.

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Since it is a cross-layer reference and an impedance design with a large line width, we need to compensate for 3 ohms. The actual finished product guarantees a 50 ohm impedance requirement.

OK Cancel