

Schematic: v1.2 5/4/2010

LNA Mother Board Parts List

Board: v1.2 5/4/2010

Changes from v1.1

Resistors

R10 changed to 33k

R11 changed to 22k

Capacitors

C42 added: 0.1uF, 0805

ICs

U12 added: 74LVC2G14

Misc

Updated or corrected part numbers

LNA Mother Board Parts List

Schematic: v1.2 5/4/2010

Board: v1.2 5/4/2010

Resistors

Part 1 of 6

Quan	Value	*Tol	Note	Package	Part numbers	Comment
1	1k	10%	may be thick-film	0805	R15	
1	1.30k	1%	thin-film (metal-film)	0805	R3	
1	1.50k	1%	thin-film (metal-film)	0805	R5	
4	3.3k	5%	1/4W, thick-film	1206	R109 R110 R111 R112	DigiKey RHM3.3KERCT-ND
1	4.7k	5%	may be thick-film	0805	R7	
1	4.30k	1%	thin-film (metal-film)	0805	R2	
1	4.70k	1%	thin-film (metal-film)	0805	R6	
1	5.10k	1%	thin-film (metal-film)	0805	R1	
9	5.6k	5%	1/4W, thick-film	1206	R16 R101 R102 R103 R104 R105 R106 R107 R108	DigiKey RHM5.6KERCT-ND
1	6.20k	1%	thin-film (metal-film)	0805	R4	
20	10k	10%	thin-film (metal-film)	0805	R17 R18 R19 R20 R21 R22 R23 R24 R25 R26 R27 R28 R29 R30 R31 R32 R33 R34 R35 R36	
1	22k	10%	may be thick-film	0805	R11	
6	33k	10%	may be thick-film	0805	R8 R9 R10 R12 R13 R14	

* If Tol = 10%, then any standard 5% or 1% value within 10% of the value shown may be substituted

LNA Mother Board Parts List

Schematic: v1.2 5/4/2010

Board: v1.2 5/4/2010

Capacitors

Part 2 of 6

Quan	Value	Type	Tol	V (min)	Package	Part numbers								Comment
4	15p	C0G	0.2	10	0805	C30	C32	C33	C35					
1	220p	C0G	0.2	10	0805	C24								
7	0.01u	X7R	0.2	10	0805	C1	C2	C3	C4	C5	C6	C7		
22	0.1u	X7R	0.2	10	0805	C8	C9	C10	C11	C17	C19	C20	C21	
						C22	C23	C25	C26	C27	C28	C29	C31	
						C34	C36	C37	C40	C41	C42			
6	22u	*X5R	20%	10V	B/3528/3216/1210/1206	C12	C15	C16	C18	C38	C39			
2	68u	Tant	20%	25V	D/7343	C13	C14							DigiKey 399-4706-1-ND

* Low-ESR tantalum may be substituted. See Package column for acceptable sizes.

LNA Mother Board Parts List

Schematic: v1.2 5/4/2010

Board: v1.2 5/4/2010

Diodes

Part 3 of 6

Quan	Type	Description	Package	Catalog Number	Vendor	Part numbers	Comment
19	1N4148W	Small signal	SOD-323	1N4148WXTFMSCT-ND	DigiKey	D1 D2 D3 D4 D5 D6 D7 D8 D9 D13 D14 D15 D16 D17 D18 D19 D20 D101 D102	Marking: T4
4	Schottky	20V 200mW	SOD-323	SD103CWS-FDICT-ND	DigiKey	D11 D21 D22 D23	Marking: S6 or S5 or S4
2	Avalanche	16V TVS Bipolar 400W	DO-214AC	SMAJ16CALFCT-ND	DigiKey	D10 D12	Marking: XP
2	Avalanche	5.0V TVS Unipolar 400W	DO-214AC	SMAJ5.0ALFCT-ND	DigiKey	D24 D27	Marking: AE
2	Avalanche	7.0V TVS Unipolar 400W	DO-214AC	SMAJ7.0ALFCT-ND	DigiKey	D25 D26	Marking: AM

LNA Mother Board Parts List

Schematic: v1.2 5/4/2010

Board: v1.2 5/4/2010

Integrated Circuits

Part 4 of 6

Quan	Type	Mark†	Description	Package	Catalog Number	Vendor					Comment
4	MOCD223-M		Dual Channel Optocoupler	SOIC-8	MOCD223M-ND	DigiKey	U1	U2	U3	U4	
2	MAX4052ACSE		CMOS Analog Multiplexer	SOIC-16	MAX4052ACSE+-ND	DigiKey	U5	U6			
1	AD8674ARZ		Quad Precision OpAmp	SOIC-14	AD8674ARZ-ND	DigiKey	U7				
1	ADR421ARZ		Voltage Reference 2.5V	SOIC-8	ADR421ARZ-ND	DigiKey	U8				
1	ADR293GRZ		Voltage Reference 5.0V	SOIC-8	ADR293GRZ-ND	DigiKey	U9				
1	74AC138SC		1-of-8 Decoder/Demultiplexer	SOIC-16	74AC138SC-ND	DigiKey	U10				
1	ADM707ARZ		Supervisory Circuit	SOIC-8	ADM707ARZ-ND	DigiKey	U11				
2	LT1963AET		Regulator, Pos, Adj, 1.5A	TO-220-5	LT1963AET#PBF-ND	DigiKey	U101	U102			
1	LT1175CT		Regulator, Neg, Adj, 0.5A	TO-220-5	LT1175CT#PBF-ND	DigiKey	U103				
1	74LVC2G14	C14_	Dual Inv. Schmitt Trigger	SOT23-6	296-13010-1-ND	DigiKey	U12				

† Identifying marking on the IC package. An underscore ("_") denotes an additional character which varies in value

LNA Mother Board Parts List

Schematic: v1.2 5/4/2010

Board: v1.2 5/4/2010

Connectors

Part 5 of 6

Part	Manufacturer Description	Manufacturer	Catalog Number	Vendor	Comment
J1	2x15 Male 0.1" CGrid-III Vert Thru Keyed 90130-1230	Waldom/Molex	WM8257-ND	Digikey	
	Mate for J1: 2x15 0.1" C-Grid III Housing 90142-0030	Waldom/Molex	WM8046-ND	Digikey	
J2	Provision for jumper - do not install				
J3	2x8 Fem 0.1" Header Vert Thru PPPC082LFBN-RC	Sullins	S7111-ND	DigiKey	
J4	Included as part of connector used for J3				
J5	1x10 Fem 0.1" Header Vert Thru PPPC101LFBN-RC	Sullins	S7043-ND	DigiKey	
J6	25-pos Male Hdr w/boss 1mm SMT DF9A-25P-1V	Hirose	H10365CT-ND	DigiKey	
J7	25-pos Male Hdr w/boss 1mm SMT DF9A-25P-1V	Hirose	H10365CT-ND	DigiKey	
J8	25-pos Male Hdr w/boss 1mm SMT DF9A-25P-1V	Hirose	H10365CT-ND	DigiKey	
J9	25-pos Male Hdr w/boss 1mm SMT DF9A-25P-1V	Hirose	H10365CT-ND	DigiKey	
J10	1x2 Fem 0.1" Header Vert Thru PPPC021LFBN-RC	Sullins	S7035-ND	DigiKey	

LNA Mother Board Parts List

Schematic: v1.2 5/4/2010

Board: v1.2 5/4/2010

Other components

Part 6 of 6

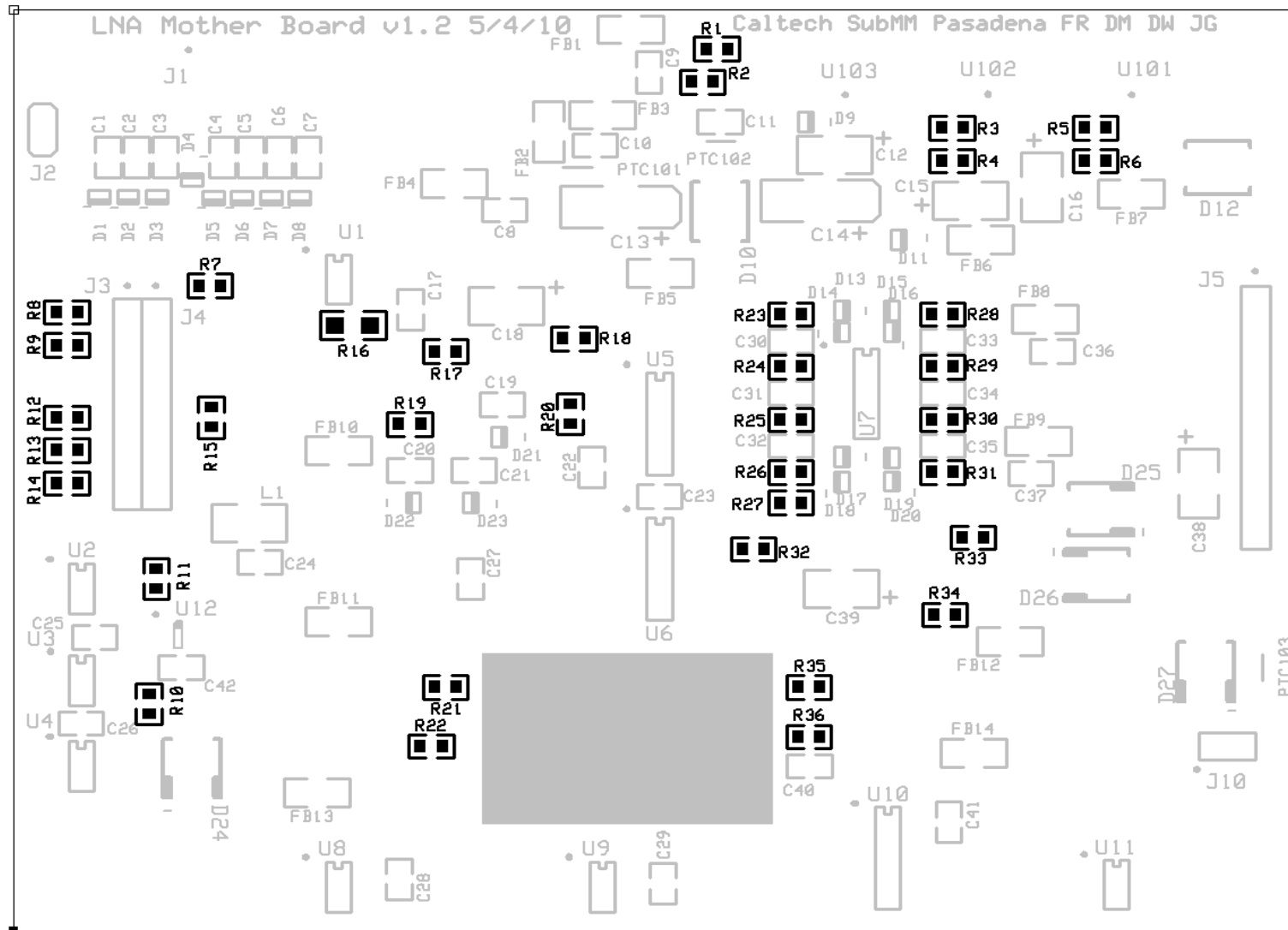
Part	Type	Description	Package	Catalog Number	Vendor	Comment
FB1-14 FB101- 112	Ferrite Bead (total quan 26)	120Ω Murata BLM31PG121SN1	1206	490-1056-1-ND	DigiKey	
L1	100uH 10%	Shielded Panasonic ELJ-SA101K	1210	PCD1109CT-ND	DigiKey	
PTC101	Resettable Fuse	60V 0.5A 60R050 Littelfuse	Radial 0.2"	576-060R0050U	Mouser	
PTC102	Resettable Fuse	60V 0.3A 60R030 Littelfuse	Radial 0.2"	576-060R0030U	Mouser	
PTC103	Resettable Fuse	60V 0.4A 60R040 Littelfuse	Radial 0.2"	576-060R0040U	Mouser	

LNA Mother Board Parts List

Schematic: v1.2 5/4/2010

Board: v1.2 5/4/2010

Resistor Placement (front side only)

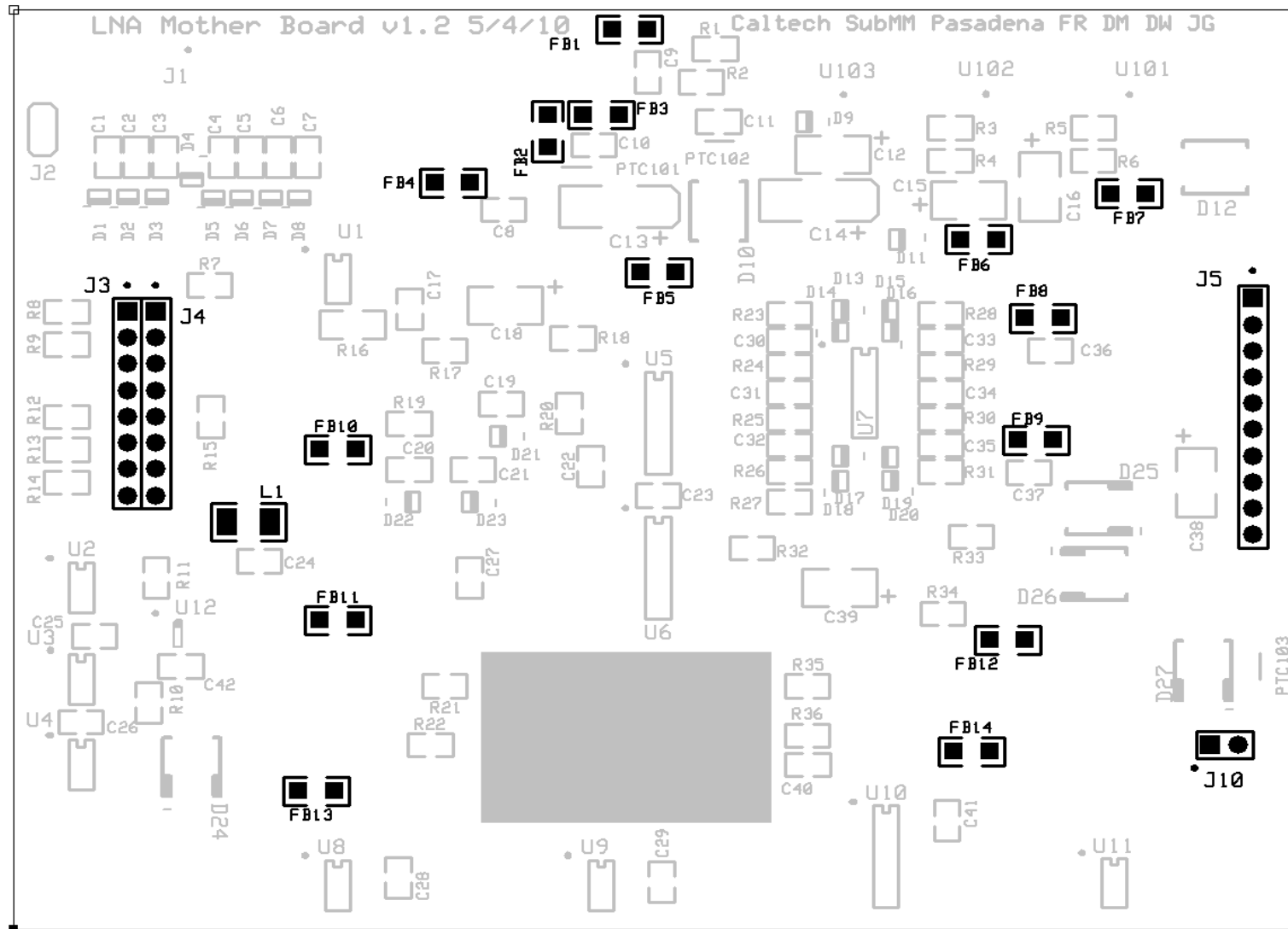


LNA Mother Board Parts List

Schematic: v1.2 5/4/2010

Board: v1.2 5/4/2010

Other Front Side Components

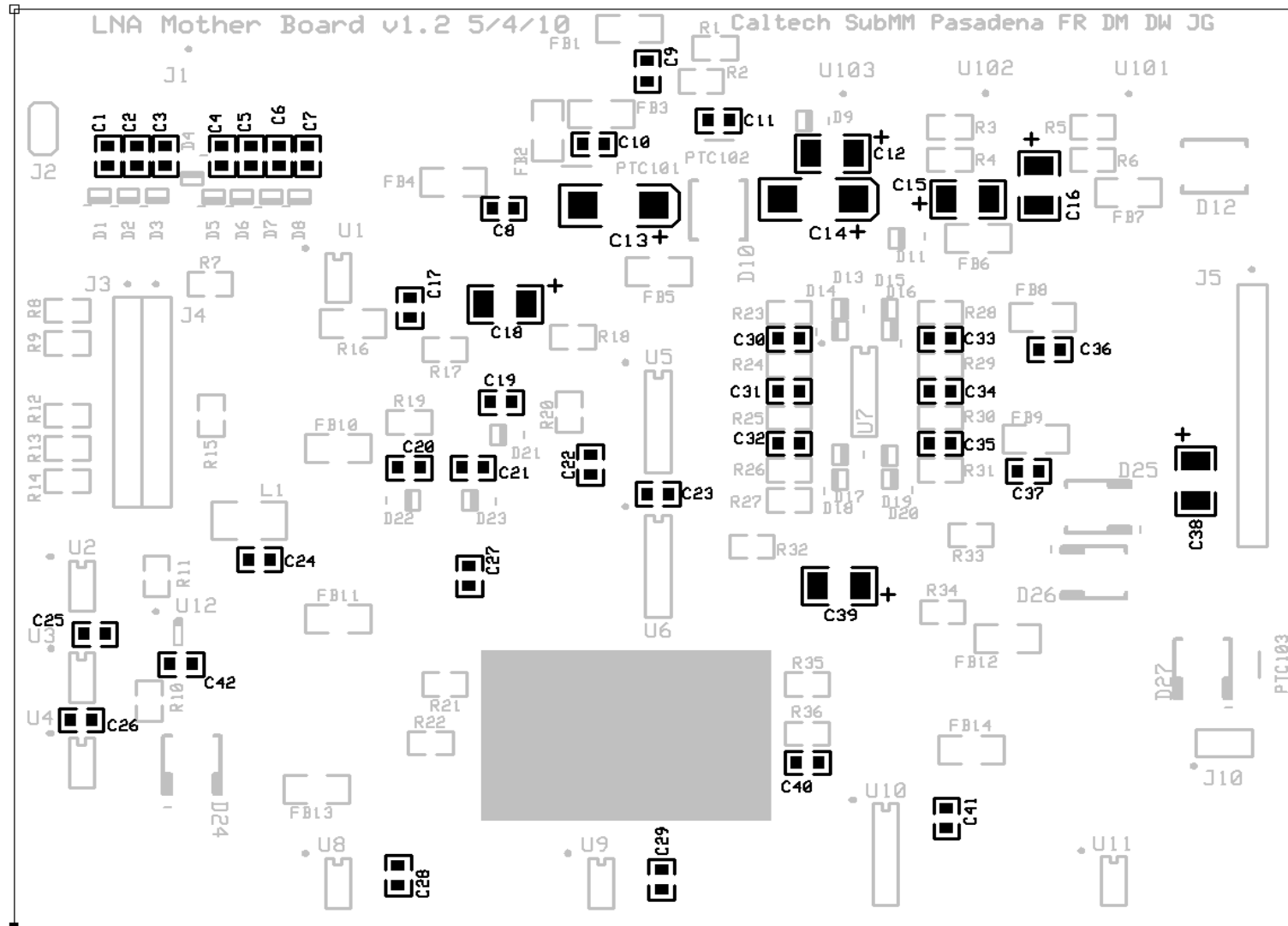


LNA Mother Board Parts List

Schematic: v1.2 5/4/2010

Board: v1.2 5/4/2010

Capacitor Placement

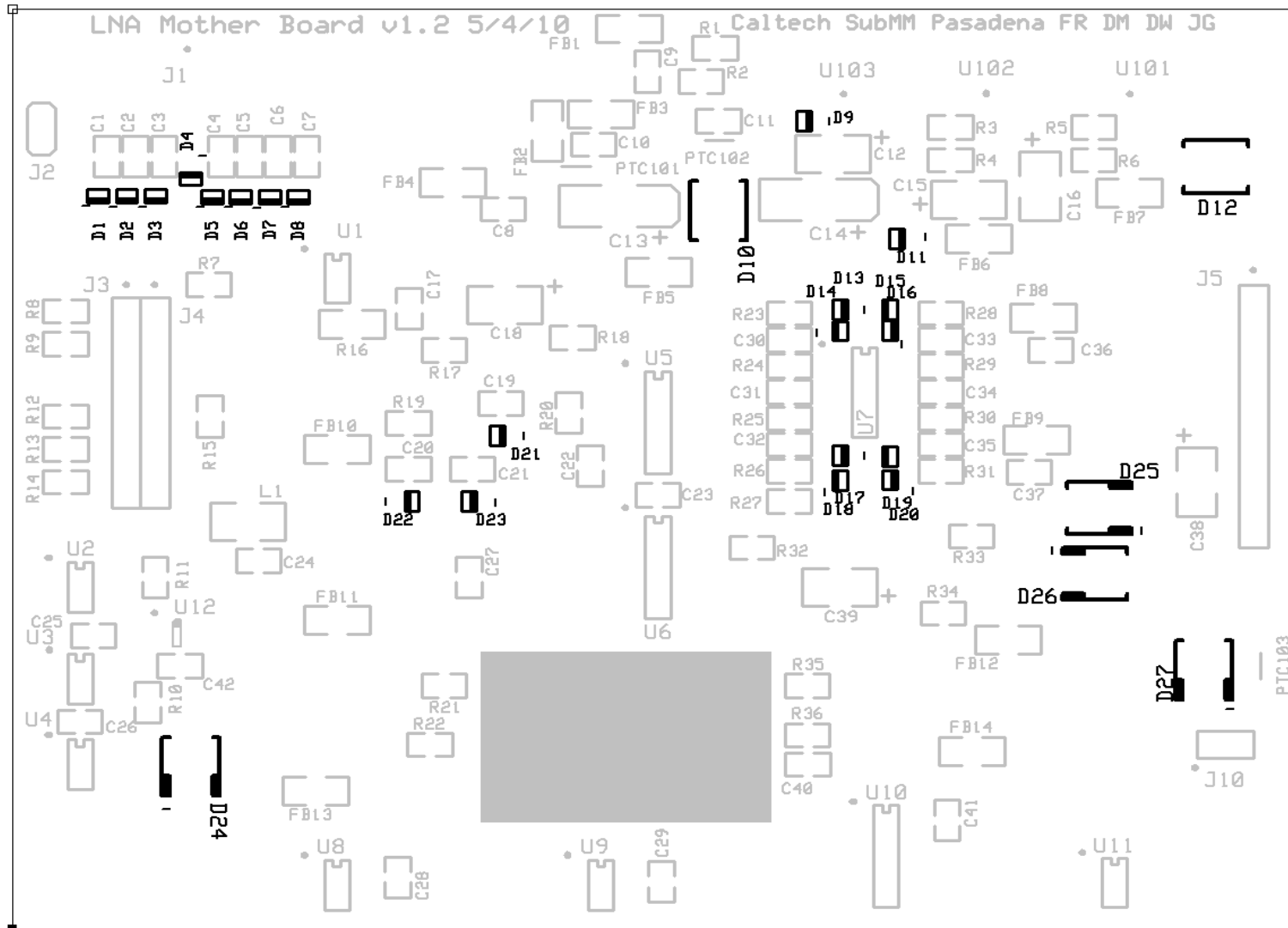


LNA Mother Board Parts List

Schematic: v1.2 5/4/2010

Board: v1.2 5/4/2010

Diode Placement (front side only)

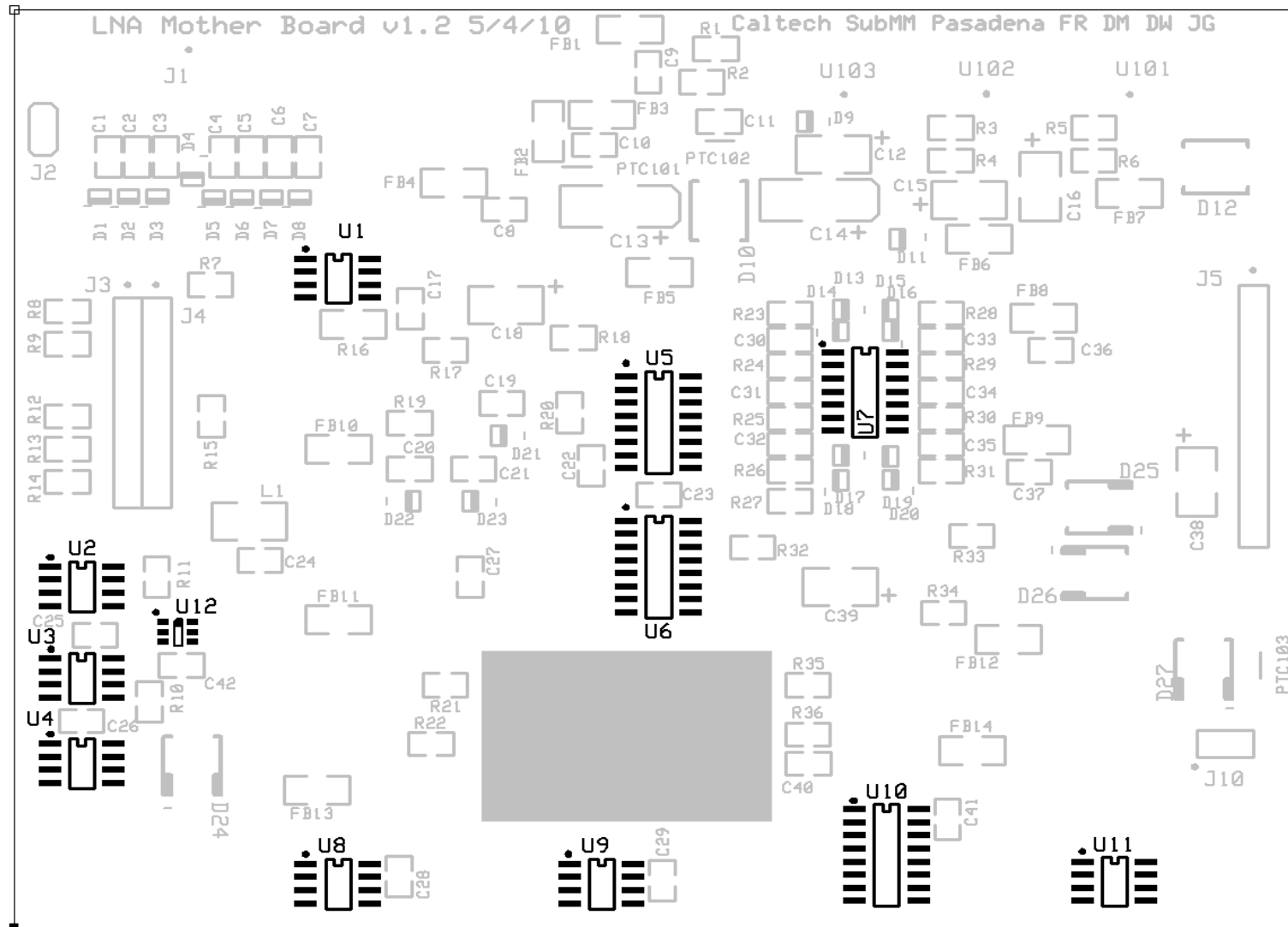


LNA Mother Board Parts List

Schematic: v1.2 5/4/2010

Board: v1.2 5/4/2010

IC Placement (front side only)



LNA Mother Board Parts List

Schematic: v1.2 5/4/2010

Board: v1.2 5/4/2010

Back Side Components (as seen from back side)

