

LNA Mother Board Parts List

Part 1 of 6

Schematic: v1.1 2/22/2008**Board: v1.1 2/22/08****Resistors**

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

Part	Value	*Tol	Note	Package	Part Number	Vendor
R109	3.3k	5%	1/4W, thick-film	1206	RHM3.3KERCT-ND	DigiKey
R110	3.3k	5%	1/4W, thick-film	1206	RHM3.3KERCT-ND	DigiKey
R111	3.3k	5%	1/4W, thick-film	1206	RHM3.3KERCT-ND	DigiKey
R112	3.3k	5%	1/4W, thick-film	1206	RHM3.3KERCT-ND	DigiKey

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

Summary

Quan	Value	*Tol	Note	Package	Part Number	Vendor
1	1.30k	1%	thin-film (metal-film)	0805		
1	1.50k	1%	thin-film (metal-film)	0805		
20	10k	10%	thin-film (metal-film)	0805		
1	1k	10%	may be thick-film	0805		
1	22k	10%	may be thick-film	0805		
6	33k	10%	may be thick-film	0805		
1	4.30k	1%	thin-film (metal-film)	0805		
1	4.70k	1%	thin-film (metal-film)	0805		
1	4.7k	5%	may be thick-film	0805		
1	5.10k	1%	thin-film (metal-film)	0805		
1	6.20k	1%	thin-film (metal-film)	0805		
4	3.3k	5%	1/4W, thick-film	1206	RHM3.3KERCT-ND	DigiKey
9	5.6k	5%	1/4W, thick-film	1206	RHM5.6KERCT-ND	DigiKey

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Schematic: v1.1 2/22/2008**Board: v1.1 2/22/08****Capacitors**

Part	Value	Type	Tol	Volt (min)	Package	Part Number	Vendor
C1	0.01	X7R	20%	10	0805		
C2	0.01	X7R	20%	10	0805		
C3	0.01	X7R	20%	10	0805		
C4	0.01	X7R	20%	10	0805		
C5	0.01	X7R	20%	10	0805		
C6	0.01	X7R	20%	10	0805		
C7	0.01	X7R	20%	10	0805		
C8	0.1	X7R	20%	10	0805		
C9	0.1	X7R	20%	50	0805		
C10	0.1	X7R	20%	25	0805		
C11	0.1	X7R	20%	25	0805		
C12	22u	*X5R	20%	10	B/3528/3216/1210/1206		
C13	68u	Tant	20%	25	D/7343	399-4650-1-ND	DigiKey
C14	68u	Tant	20%	25	D/7343	399-4650-1-ND	DigiKey
C15	22u	*X5R	20%	10	B/3528/3216/1210/1206		
C16	22u	*X5R	20%	10	B/3528/3216/1210/1206		
C17	0.1	X7R	20%	10	0805		
C18	22u	*X5R	20%	10	B/3528/3216/1210/1206		
C19	0.1	X7R	20%	10	0805		
C20	0.1	X7R	20%	10	0805		
C21	0.1	X7R	20%	10	0805		
C22	0.1	X7R	20%	10	0805		
C23	0.1	X7R	20%	10	0805		
C24	220	C0G	20%	10	0805		
C25	0.1	X7R	20%	10	0805		
C26	0.1	X7R	20%	10	0805		
C27	0.1	X7R	20%	10	0805		
C28	0.1	X7R	20%	10	0805		
C29	0.1	X7R	20%	10	0805		
C30	15	C0G	20%	10	0805		
C31	0.1	X7R	20%	10	0805		
C32	15	C0G	20%	10	0805		
C33	15	C0G	20%	10	0805		
C34	0.1	X7R	20%	10	0805		
C35	15	C0G	20%	10	0805		
C36	0.1	X7R	20%	10	0805		
C37	0.1	X7R	20%	10	0805		
C38	22u	*X5R	20%	10	B/3528/3216/1210/1206		
C39	22u	*X5R	20%	10	B/3528/3216/1210/1206		
C40	0.1	X7R	20%	10	0805		
C41	0.1	X7R	20%	10	0805		

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

Summary

Quan	Value	Type	Tol	Volt (min)	Package	Part Number	Vendor
4	15	C0G	20%	10	0805		
1	220	C0G	20%	10	0805		
7	0.01	X7R	20%	10	0805		
21	0.1	X7R	20%	10	0805		
6	22u	*X5R	20%	10	B/3528/3216/1210/1206		
2	68u	Tant	20%	25	D/7343	399-4650-1-ND	DigiKey

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Diodes

Part	Type	Description	Package	Part Number	Vendor
D1	1N4148W	Small signal	SOD-323	1N4148WXTMSCT-ND	DigiKey
D2	1N4148W	Small signal	SOD-323	1N4148WXTMSCT-ND	DigiKey
D3	1N4148W	Small signal	SOD-323	1N4148WXTMSCT-ND	DigiKey
D4	1N4148W	Small signal	SOD-323	1N4148WXTMSCT-ND	DigiKey
D5	1N4148W	Small signal	SOD-323	1N4148WXTMSCT-ND	DigiKey
D6	1N4148W	Small signal	SOD-323	1N4148WXTMSCT-ND	DigiKey
D7	1N4148W	Small signal	SOD-323	1N4148WXTMSCT-ND	DigiKey
D8	1N4148W	Small signal	SOD-323	1N4148WXTMSCT-ND	DigiKey
D9	1N4148W	Small signal	SOD-323	1N4148WXTMSCT-ND	DigiKey
D10	Avalanche	16V TVS Bipolar 400W	DO-214AC	SMAJ16CALFCT-ND	DigiKey
D11	Schottky	20V 200mW	SOD-323	SD103CWS-FDICT-ND	DigiKey
D12	Avalanche	16V TVS Bipolar 400W	DO-214AC	SMAJ16CALFCT-ND	DigiKey
D13	1N4148W	Small signal	SOD-323	1N4148WXTMSCT-ND	DigiKey
D14	1N4148W	Small signal	SOD-323	1N4148WXTMSCT-ND	DigiKey
D15	1N4148W	Small signal	SOD-323	1N4148WXTMSCT-ND	DigiKey
D16	1N4148W	Small signal	SOD-323	1N4148WXTMSCT-ND	DigiKey
D17	1N4148W	Small signal	SOD-323	1N4148WXTMSCT-ND	DigiKey
D18	1N4148W	Small signal	SOD-323	1N4148WXTMSCT-ND	DigiKey
D19	1N4148W	Small signal	SOD-323	1N4148WXTMSCT-ND	DigiKey
D20	1N4148W	Small signal	SOD-323	1N4148WXTMSCT-ND	DigiKey
D21	Schottky	20V 200mW	SOD-323	SD103CWS-FDICT-ND	DigiKey
D22	Schottky	20V 200mW	SOD-323	SD103CWS-FDICT-ND	DigiKey
D23	Schottky	20V 200mW	SOD-323	SD103CWS-FDICT-ND	DigiKey
D24	Avalanche	5.0V TVS Unipolar 400W	DO-214AC	SMAJ5.0ALFCT-ND	DigiKey
D25	Avalanche	7.0V TVS Unipolar 400W	DO-214AC	SMAJ7.0ALFCT-ND	DigiKey
D26	Avalanche	7.0V TVS Unipolar 400W	DO-214AC	SMAJ7.0ALFCT-ND	DigiKey
D27	Avalanche	5.0V TVS Unipolar 400W	DO-214AC	SMAJ5.0ALFCT-ND	DigiKey
D101	1N4148W	Small signal	SOD-323	1N4148WXTMSCT-ND	DigiKey
D102	1N4148W	Small signal	SOD-323	1N4148WXTMSCT-ND	DigiKey

Summary

Quan	Type	Description	Package	Part Number	Vendor
19	1N4148W	Small signal	SOD-323	1N4148WXTMSCT-ND	DigiKey
4	Schottky	20V 200mW	SOD-323	SD103CWS-FDICT-ND	DigiKey
2	Avalanche	16V TVS Bipolar 400W	DO-214AC	SMAJ16CALFCT-ND	DigiKey
2	Avalanche	5.0V TVS Unipolar 400W	DO-214AC	SMAJ5.0ALFCT-ND	DigiKey
2	Avalanche	7.0V TVS Unipolar 400W	DO-214AC	SMAJ7.0ALFCT-ND	DigiKey

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Integrated Circuits

Part	Type	Description	Package	Part Number	Vendor
U1	MOCD223-M	Dual Channel Optocoupler	SOIC-8	MOCD223M-ND	DigiKey
U2	MOCD223-M	Dual Channel Optocoupler	SOIC-8	MOCD223M-ND	DigiKey
U3	MOCD223-M	Dual Channel Optocoupler	SOIC-8	MOCD223M-ND	DigiKey
U4	MOCD223-M	Dual Channel Optocoupler	SOIC-8	MOCD223M-ND	DigiKey
U5	MAX4052ACSE	CMOS Analog Multiplexer	SOIC-16	MAX4052ACSE	Maxim
U6	MAX4052ACSE	CMOS Analog Multiplexer	SOIC-16	MAX4052ACSE	Maxim
U7	AD8674ARZ	Quad Precision OpAmp	SOIC-14	AD8674ARZ-ND	DigiKey
U8	ADR421ARZ	Voltage Reference 5.0V	SOIC-8	ADR421ARZ-ND	DigiKey
U9	ADR293GRZ	Voltage Reference 2.5V	SOIC-8	ADR293GRZ-ND	DigiKey
U10	74AC138SC	1-of-8 Decoder/Demultiplexer	SOIC-16	74AC138SC-ND	DigiKey
U11	ADM707ARZ	Supervisory Circuit	SOIC-8	ADM707ARZ-ND	DigiKey
U101	LT1963AET	Regulator, Pos, Adj, 1.5A	TO-220-5	LT1963AET-ND	DigiKey
U102	LT1963AET	Regulator, Pos, Adj, 1.5A	TO-220-5	LT1963AET-ND	DigiKey
U103	LT1175CT	Regulator, Neg, Adj, 0.5A	TO-220-5	LT1175CT-ND	DigiKey

Summary

Quan	Type	Description	Package	Part Number	Vendor
4	MOCD223-M	Dual Channel Optocoupler	SOIC-8	MOCD223M-ND	DigiKey
2	MAX4052ACSE	CMOS Analog Multiplexer	SOIC-16	MAX4052ACSE	Maxim
1	AD8674ARZ	Quad Precision OpAmp	SOIC-14	AD8674ARZ-ND	DigiKey
1	ADR421ARZ	Voltage Reference 5.0V	SOIC-8	ADR421ARZ-ND	DigiKey
1	ADR293GRZ	Voltage Reference 2.5V	SOIC-8	ADR293GRZ-ND	DigiKey
1	74AC138SC	1-of-8 Decoder/Demultiplexer	SOIC-16	74AC138SC-ND	DigiKey
1	ADM707ARZ	Supervisory Circuit	SOIC-8	ADM707ARZ-ND	DigiKey
2	LT1963AET	Regulator, Pos, Adj, 1.5A	TO-220-5	LT1963AET-ND	DigiKey
1	LT1175CT	Regulator, Neg, Adj, 0.5A	TO-220-5	LT1175CT-ND	DigiKey

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Connectors

Part	Manufacturer Description	Manufacturer	Part Number	Vendor
J1	2x15 Male 0.1" CGrid-III Vert Thru Keyed 90130-1230	Waldom/Molex	WM8257-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

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Other components

Part	Type	Description	Package	Part Number	Vendor
FB1	Ferrite Bead	120Ω Murata BLM31PG121SN1	1206	490-1056-1-ND	DigiKey
FB2	Ferrite Bead	120Ω Murata BLM31PG121SN1	1206	490-1056-1-ND	DigiKey
FB3	Ferrite Bead	120Ω Murata BLM31PG121SN1	1206	490-1056-1-ND	DigiKey
FB4	Ferrite Bead	120Ω Murata BLM31PG121SN1	1206	490-1056-1-ND	DigiKey
FB5	Ferrite Bead	120Ω Murata BLM31PG121SN1	1206	490-1056-1-ND	DigiKey
FB6	Ferrite Bead	120Ω Murata BLM31PG121SN1	1206	490-1056-1-ND	DigiKey
FB7	Ferrite Bead	120Ω Murata BLM31PG121SN1	1206	490-1056-1-ND	DigiKey
FB8	Ferrite Bead	120Ω Murata BLM31PG121SN1	1206	490-1056-1-ND	DigiKey
FB9	Ferrite Bead	120Ω Murata BLM31PG121SN1	1206	490-1056-1-ND	DigiKey
FB10	Ferrite Bead	120Ω Murata BLM31PG121SN1	1206	490-1056-1-ND	DigiKey
FB11	Ferrite Bead	120Ω Murata BLM31PG121SN1	1206	490-1056-1-ND	DigiKey
FB12	Ferrite Bead	120Ω Murata BLM31PG121SN1	1206	490-1056-1-ND	DigiKey
FB13	Ferrite Bead	120Ω Murata BLM31PG121SN1	1206	490-1056-1-ND	DigiKey
FB14	Ferrite Bead	120Ω Murata BLM31PG121SN1	1206	490-1056-1-ND	DigiKey
FB101	Ferrite Bead	120Ω Murata BLM31PG121SN1	1206	490-1056-1-ND	DigiKey
FB102	Ferrite Bead	120Ω Murata BLM31PG121SN1	1206	490-1056-1-ND	DigiKey
FB103	Ferrite Bead	120Ω Murata BLM31PG121SN1	1206	490-1056-1-ND	DigiKey
FB104	Ferrite Bead	120Ω Murata BLM31PG121SN1	1206	490-1056-1-ND	DigiKey
FB105	Ferrite Bead	120Ω Murata BLM31PG121SN1	1206	490-1056-1-ND	DigiKey
FB106	Ferrite Bead	120Ω Murata BLM31PG121SN1	1206	490-1056-1-ND	DigiKey
FB107	Ferrite Bead	120Ω Murata BLM31PG121SN1	1206	490-1056-1-ND	DigiKey
FB108	Ferrite Bead	120Ω Murata BLM31PG121SN1	1206	490-1056-1-ND	DigiKey
FB109	Ferrite Bead	120Ω Murata BLM31PG121SN1	1206	490-1056-1-ND	DigiKey
FB110	Ferrite Bead	120Ω Murata BLM31PG121SN1	1206	490-1056-1-ND	DigiKey
FB111	Ferrite Bead	120Ω Murata BLM31PG121SN1	1206	490-1056-1-ND	DigiKey
FB112	Ferrite Bead	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

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Quan	Type	Description	Package	Part Number	Vendor
26	Ferrite Bead	120Ω Murata BLM31PG121SN1	1206	490-1056-1-ND	DigiKey
1	100uH 10%	Shielded Panasonic ELJ-SA101K	1210	PCD1109CT-ND	DigiKey
1	Resettable Fuse	60V 0.5A 60R050 Littelfuse	Radial 0.2"	576-060R0050U	Mouser
1	Resettable Fuse	60V 0.3A 60R030 Littelfuse	Radial 0.2"	576-060R0030U	Mouser
1	Resettable Fuse	60V 0.4A 60R040 Littelfuse	Radial 0.2"	576-060R0040U	Mouser