

DESIGN FILES

ML6652RDK-01

FXplus

**10/100Mbps Media Converter
Reference Design Files**

KIT CONTENTS

- ML6652RDK-01 Reference Board Parts List
- ML6652RDK-01 Reference Board Layout and Silks
- ML6652RDK-01 Reference Board Schematics
- External Mini 5V Power Supply
- CD-ROM Containing Gerber Files & All Documentation

Parts List For ML6652RDK-01 Reference Design Board

Item	Part Type	Designator	Footprint	Description	Manufacturer	Mfg. P/N	Type	Tolerance	Avg Cost USD\$
1	0.1µF	C37	402	Capacitor	MuRata	GRP155R61A104KA01B	Ceramic	X5R	0.008
2	0.1µF	C17	402	Capacitor	MuRata	GRP155R61A104KA01B	Ceramic	X5R	0.008
3	0.01µF	C22	402	Capacitor	MuRata	GRP155R71E103KA01B	Ceramic	X7R	0.008
4	0.1µF	C8	402	Capacitor	MuRata	GRP155R61A104KA01B	Ceramic	X5R	0.008
5	0.1µF	C33	402	Capacitor	MuRata	GRP155R61A104KA01B	Ceramic	X5R	0.008
6	0.1µF	C18	402	Capacitor	MuRata	GRP155R61A104KA01B	Ceramic	X5R	0.008
7	0.1µF	C38	402	Capacitor	MuRata	GRP155R61A104KA01B	Ceramic	X5R	0.008
8	0.1µF	C15	402	Capacitor	MuRata	GRP155R61A104KA01B	Ceramic	X7R	0.008
9	0.1µF	C34	402	Capacitor	MuRata	GRP155R61A104KA01B	Ceramic	X5R	0.008
10	0.1µF	C6	402	Capacitor	MuRata	GRP155R61A104KA01B	Ceramic	X5R	0.008
11	0.1µF	C25	402	Capacitor	MuRata	GRP155R61A104KA01B	Ceramic	X5R	0.008
12	0.1µF	C45	402	Capacitor	MuRata	GRP155R61A104KA01B	Ceramic	X5R	0.008
13	0.1µF	C42	402	Capacitor	MuRata	GRP155R61A104KA01B	Ceramic	X5R	0.008
14	0.1µF	C50	402	Capacitor	MuRata	GRP155R61A104KA01B	Ceramic	X5R	0.008
15	0.1µF	C26	402	Capacitor	MuRata	GRP155R61A104KA01B	Ceramic	X5R	0.008
16	0.1µF	C49	402	Capacitor	MuRata	GRP155R61A104KA01B	Ceramic	X5R	0.008
17	0.1µF	C41	402	Capacitor	MuRata	GRP155R61A104KA01B	Ceramic	X5R	0.008
18	0.1µF	C46	402	Capacitor	MuRata	GRP155R61A104KA01B	Ceramic	X5R	0.008
19	0.1µF	C4	402	Capacitor	MuRata	GRP155R61A104KA01B	Ceramic	X5R	0.008
20	0.01µF	C30	402	Capacitor	MuRata	GRP155R71E103KA01B	Ceramic	X7R	0.008
21	0.1µF	C11	402	Capacitor	MuRata	GRP155R61A104KA01B	Ceramic	X5R	0.008
22	0.01µF	C13	402	Capacitor	MuRata	GRP155R71E103KA01B	Ceramic	X7R	0.008
23	0.1µF	C16	402	Capacitor	MuRata	GRP155R61A104KA01B	Ceramic	X5R	0.008
24	0.1µF	C9	402	Capacitor	MuRata	GRP155R61A104KA01B	Ceramic	X5R	0.008
25	0.1µF	C5	402	Capacitor	MuRata	GRP155R61A104KA01B	Ceramic	X5R	0.008
26	0.1µF	C10	402	Capacitor	MuRata	GRP155R61A104KA01B	Ceramic	X5R	0.008
27	0.1µF	C7	402	Capacitor	MuRata	GRP155R61A104KA01B	Ceramic	X5R	0.008
28	0.01µF	C14	402	Capacitor	MuRata	GRP155R71E103KA01B	Ceramic	X7R	0.008
29	0.1µF	C12	402	Capacitor	MuRata	GRP155R61A104KA01B	Ceramic	X5R	0.008
30	0.01µF	C29	402	Capacitor	MuRata	GRP155R71E103KA01B	Ceramic	X7R	0.008
31	1.4K	R20	402	Resistor	R.G. Allen	CR10B142JT	Thick Film	1%	0.0016
32	1.4K	R23	402	Resistor	R.G. Allen	CR10B142JT	Thick Film	1%	0.0016
33	1.4K	R17	402	Resistor	R.G. Allen	CR10B142JT	Thick Film	1%	0.0016
34	1µH	L7	1812	Inductor	Coilcraft	1812PS-102MB	Wirewound Chip	*	0.23
35	1µH	L5	1812	Inductor	Coilcraft	1812PS-102MB	Wirewound Chip	*	0.23
36	1µH	L8	1812	Inductor	Coilcraft	1812PS-102MB	Wirewound Chip	*	0.23
37	1µH	L4	1812	Inductor	Coilcraft	1812PS-102MB	Wirewound Chip	*	0.23
38	1µH	L3	1812	Inductor	Coilcraft	1812PS-102MB	Wirewound Chip	*	0.23
39	1µH	L6	1812	Inductor	Coilcraft	1812PS-102MB	Wirewound Chip	*	0.23
40	2K	R42	402	Resistor	R.G. Allen	CR10B202JT	Thick Film	5%	0.0016
41	2K	R41	402	Resistor	R.G. Allen	CR10B202JT	Thick Film	5%	0.0016
42	2K	R43	402	Resistor	R.G. Allen	CR10B202JT	Thick Film	5%	0.0016

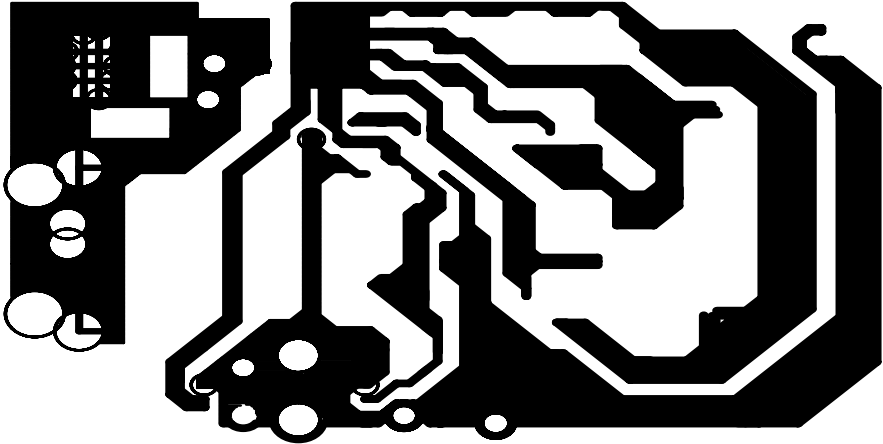
Parts List For ML6652RDK-01 Reference Design Board (continued)

Item	Part Type	Designator	Footprint	Description	Manufacturer	Mfg. P/N	Type	Tolerance	Avg Cost USD\$
43	2K	R15	402	Resistor	R.G. Allen	CR10B202JT	Thick Film	5%	0.0016
44	2K	R40	402	Resistor	R.G. Allen	CR10B202JT	Thick Film	5%	0.0016
45	4.02K	R30	402	Resistor	R.G. Allen	CR10B402JT	Thick Film	1%	0.0016
46	4.02K	R21	402	Resistor	R.G. Allen	CR10B402JT	Thick Film	1%	0.0016
47	5K	R16	402	Resistor	R.G. Allen	CR10B502JT	Thick Film	5%	0.0016
48	10K	R14	402	Resistor	R.G. Allen	CR10B103JT	Thick Film	5%	0.0016
49	10K	R13	402	Resistor	R.G. Allen	CR10B103JT	Thick Film	5%	0.0016
50	10µF	C43	2012	Capacitor	Nemco	PCT10-16BK	Tantalum	10%	0.78
51	10µF	C24	2012	Capacitor	Nemco	PCT10-16BK	Tantalum	10%	0.78
52	10µF	C51	2012	Capacitor	Nemco	PCT10-16BK	Tantalum	10%	0.78
53	10µF	C36	2012	Capacitor	Nemco	PCT10-16BK	Tantalum	10%	0.78
54	10µF	C20	2012	Capacitor	Nemco	PCT10-16BK	Tantalum	10%	0.78
55	10µF	C32	2012	Capacitor	Nemco	PCT10-16BK	Tantalum	10%	0.78
56	10µF	C39	2012	Capacitor	Nemco	PCT10-16BK	Tantalum	10%	0.78
57	10µF	C35	2012	Capacitor	Nemco	PCT10-16BK	Tantalum	10%	0.78
58	10µF	C40	2012	Capacitor	Nemco	PCT10-16BK	Tantalum	10%	0.78
59	10µF	C27	2012	Capacitor	Nemco	PCT10-16BK	Tantalum	10%	0.78
60	10µF	C28	2012	Capacitor	Nemco	PCT10-16BK	Tantalum	10%	0.78
61	10µF	C47	2012	Capacitor	Nemco	PCT10-16BK	Tantalum	10%	0.78
62	10µF	C48	2012	Capacitor	Nemco	PCT10-16BK	Tantalum	10%	0.78
63	10µF	C44	2012	Capacitor	Nemco	PCT10-16BK	Tantalum	10%	0.78
64	20K	R5	402	Resistor	R.G. Allen	CR10B203JT	Thick Film	5%	0.0016
65	25MHz	U2	5x7mm	Oscillator	Pletronics	SM7745HEV-25.0M	N/A	50 PPM	2
66	40K	R4	402	Resistor	R.G. Allen	CR10B403JT	Thick Film	5%	0.0016
67	50	R32	402	Resistor	R.G. Allen	CR10B500JT	Thick Film	5%	0.0016
68	50	R36	402	Resistor	R.G. Allen	CR10B500JT	Thick Film	5%	0.0016
69	50	R33	402	Resistor	R.G. Allen	CR10B500JT	Thick Film	5%	0.0016
70	50	R35	402	Resistor	R.G. Allen	CR10B500JT	Thick Film	5%	0.0016
71	50	R34	402	Resistor	R.G. Allen	CR10B500JT	Thick Film	5%	0.0016
72	50	R37	402	Resistor	R.G. Allen	CR10B500JT	Thick Film	5%	0.0016
73	51	R39	402	Resistor	R.G. Allen	CR10B510JT	Thick Film	5%	0.0016
74	51	R38	402	Resistor	R.G. Allen	CR10B510JT	Thick Film	5%	0.0016
75	75	R22	402	Resistor	R.G. Allen	CR10B750JT	Thick Film	5%	0.0016
76	75	R29	402	Resistor	R.G. Allen	CR10B750JT	Thick Film	5%	0.0016
77	75	R6	402	Resistor	R.G. Allen	CR10B750JT	Thick Film	5%	0.0016
78	82	R25	402	Resistor	R.G. Allen	CR10B820JT	Thick Film	5%	0.0016
79	82	R18	402	Resistor	R.G. Allen	CR10B820JT	Thick Film	5%	0.0016
80	82	R24	402	Resistor	R.G. Allen	CR10B820JT	Thick Film	5%	0.0016
81	100	R1	402	Resistor	R.G. Allen	CR10B101JT	Thick Film	5%	0.0016
82	100pF	C23	402	Capacitor	MuRata	GRP1555C1H101JD01B	Ceramic	COG	0.006
83	100pF	C19	402	Capacitor	MuRata	GRP1555C1H101JD01B	Ceramic	COG	0.006
84	100pF	C31	402	Capacitor	MuRata	GRP1555C1H101JD01B	Ceramic	COG	0.006
85	130	R26	402	Resistor	R.G. Allen	CR10B131JT	Thick Film	5%	0.0016
86	130	R19	402	Resistor	R.G. Allen	CR10B131JT	Thick Film	5%	0.0016
87	130	R31	402	Resistor	R.G. Allen	CR10B131JT	Thick Film	5%	0.0016
88	150	R12	402	Resistor	R.G. Allen	CR10B151JT	Thick Film	5%	0.0016
89	150	R10	402	Resistor	R.G. Allen	CR10B151JT	Thick Film	5%	0.0016

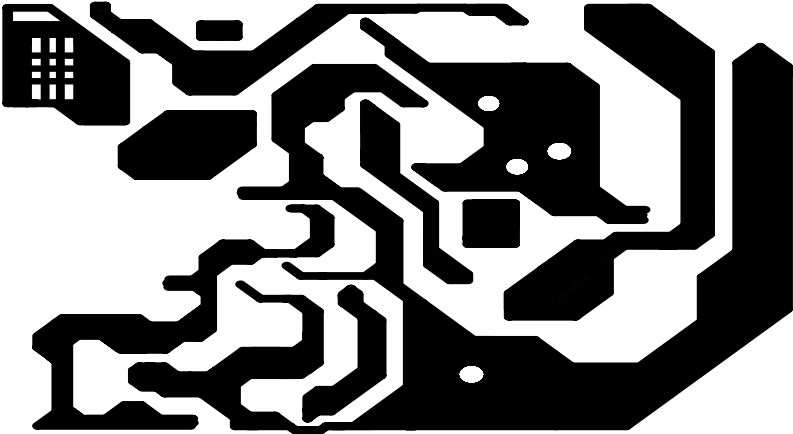
Parts List For ML6652RDK-01 Reference Design Board (continued)

Item	Part Type	Designator	Footprint	Description	Manufacturer	Mfg. P/N	Type	Tolerance	Avg Cost USD\$
90	200	R2	402	Resistor	R.G. Allen	CR10B201JT	Thick Film	5%	0.0016
91	200	R3	402	Resistor	R.G. Allen	CR10B201JT	Thick Film	5%	0.0016
92	330pF	C1	Rad0.250	Capacitor	Panasonic	ECK-D3F331KBP	Ceramic	10%	*
93	475	R27	402	Resistor	R.G. Allen	CR10B471JT	Thick Film	1%	0.0016
94	475	R28	402	Resistor	R.G. Allen	CR10B471JT	Thick Film	1%	0.0016
95	510	R11	402	Resistor	R.G. Allen	CR10B511JT	Thick Film	5%	0.0016
96	560	R8	402	Resistor	R.G. Allen	CR10B561JT	Thick Film	5%	0.0016
97	560	R9	402	Resistor	R.G. Allen	CR10B561JT	Thick Film	5%	0.0016
98	1500pF	C2	402	Capacitor	MuRata	GRP155R7H152KA01B	Ceramic	X7R	0.008
99	1500pF	C3	402	Capacitor	MuRata	GRP155R7H152KA01B	Ceramic	X7R	0.008
100	CMC	L2	1812	Inductor	Coilcraft	M2022-AS	*		0.45
101	CMC	L1	1812	Inductor	Coilcraft	M2022-AS	*		0.45
102	Connector	J2	PJ-102B		CUI Stack	PJ-102B	2.5MM	*	0.38
103	HBFR5205	U4	9pinPECL	Module	Agilent	HFBR5103	Fiber Optic PECL Module	*	34.12
104	LED	CR3	0.1x0.1	Diode, LED	Lumex	SSF-LXH240IGD	Dual LED W/holder	*	0.6
105	LED	CR4	0.1x0.1	Diode, LED	Lumex	SSF-LXH240IGD	Dual LED W/holder	*	0.6
106	LT1129-3.3	U5	SOT-223	Int. Ckt.	Linear Technology	LT1129-3.3	Voltage Regulator	5%	2.36
107	ML6652	U1	44TQFP	Int. Ckt.	Micro Linear	ML6652	Media Converter	N/A	Contact Micro Linear Sales
108	NC7WZ16	U3	SC70	Int. Ckt.	Fairchild	NC7WZ16	Dual Buffer	N/A	0.478
109	RJ45	J1	RJMG55	Connector	Amphenol	RJMG-5312-11-01	RJ45 w/integrated magnetics	*	*

ML6652RDK-01 Reference Board Layers and Silks

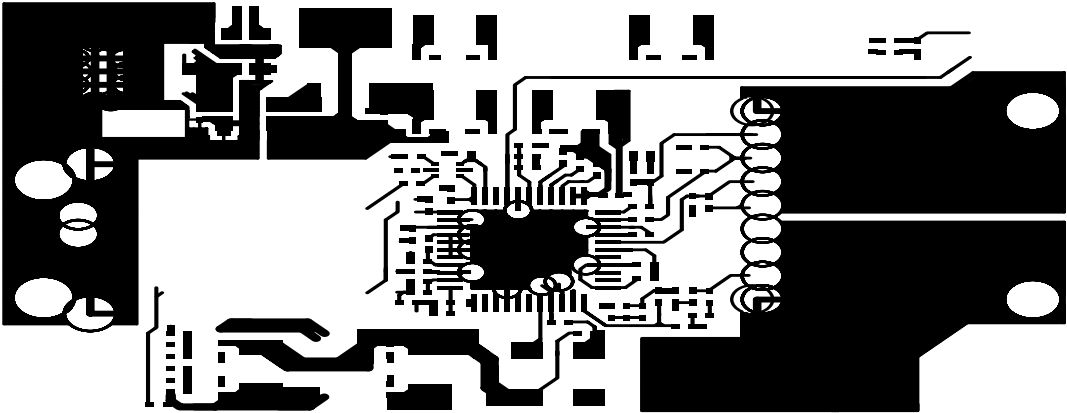


Gnd Plane

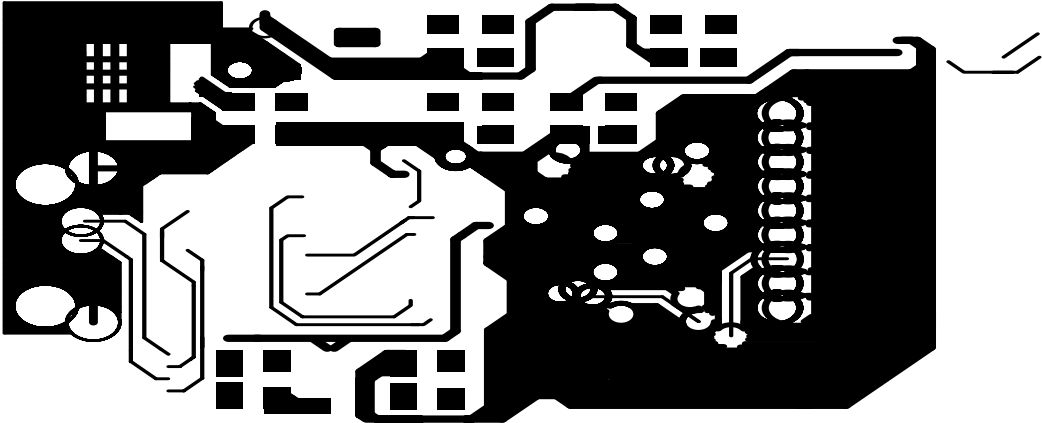


Vcc Plane

ML6652RDK-01 Reference Board Layers and Silks (continued)

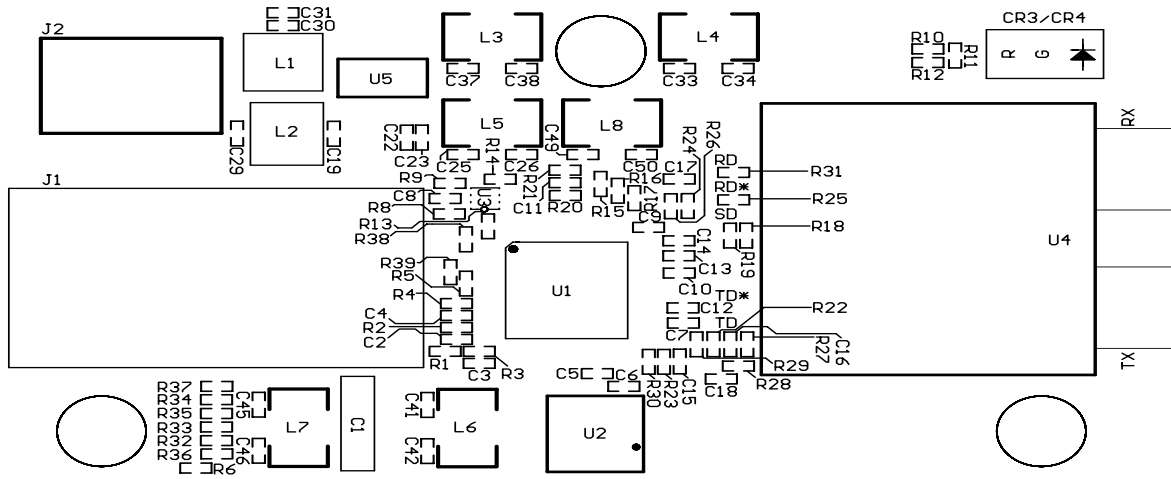


Top

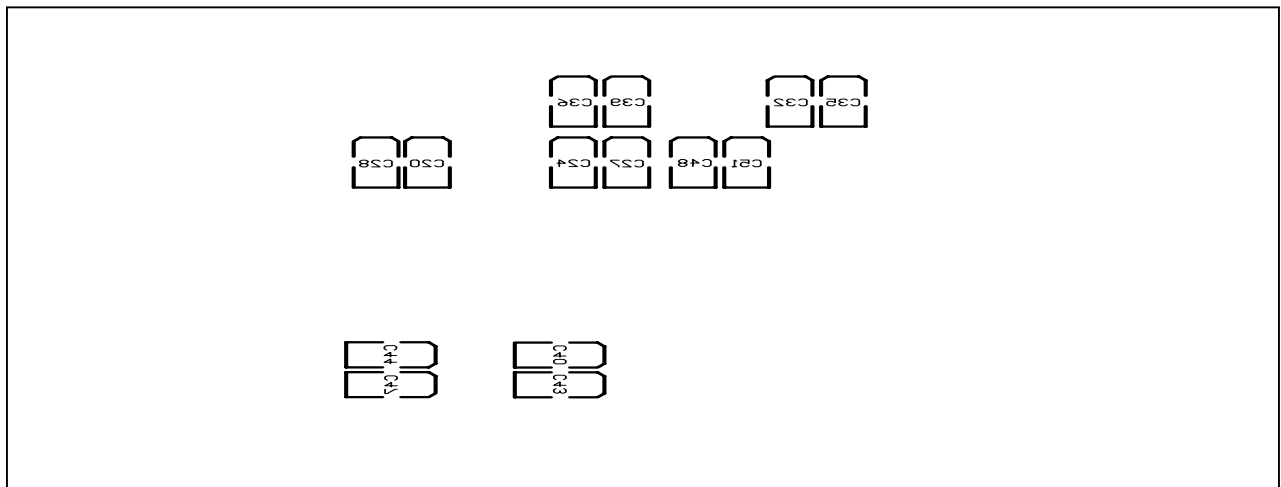


Bottom

ML6652RDK-01 Reference Board Layers and Silks (continued)

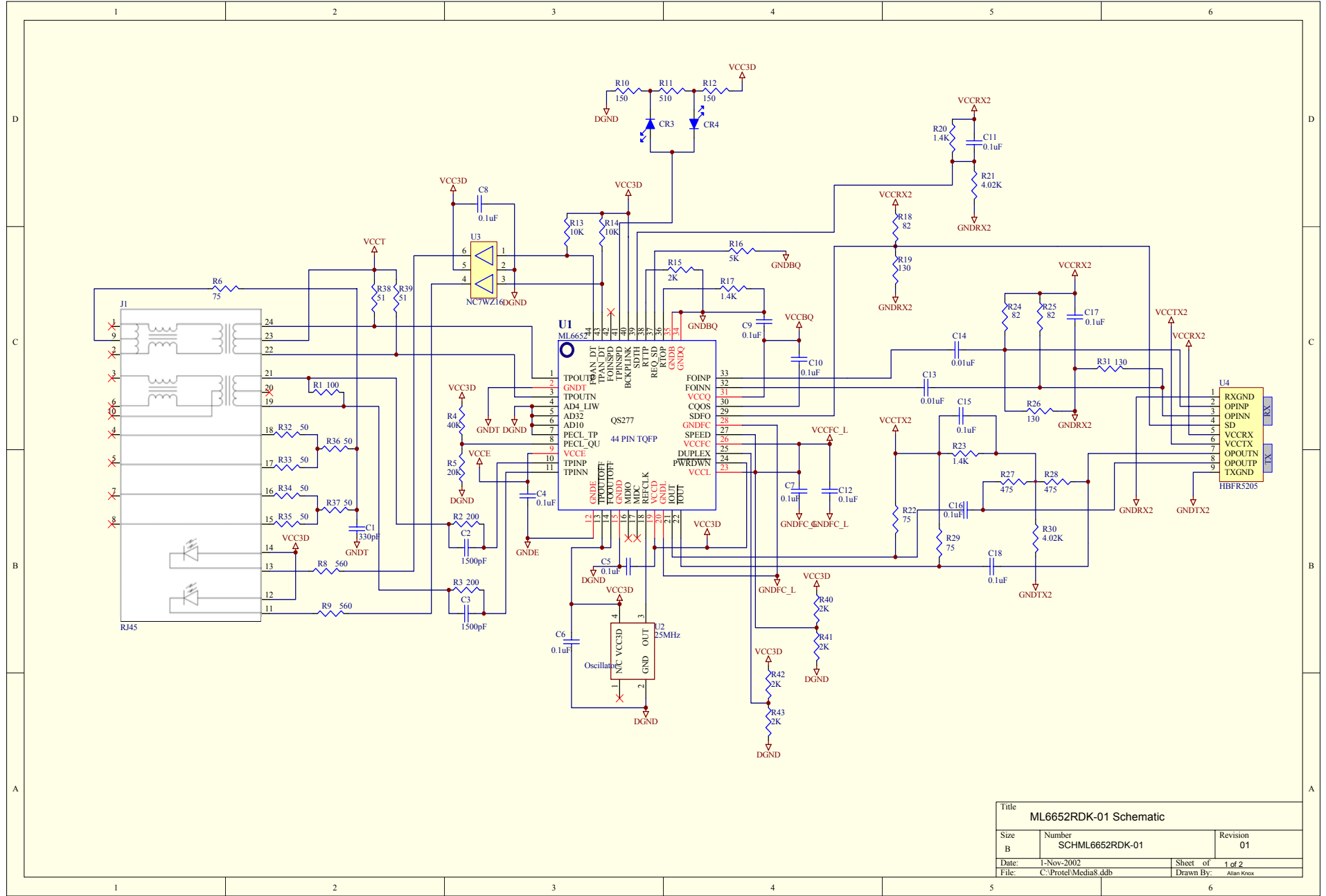


Top Silk



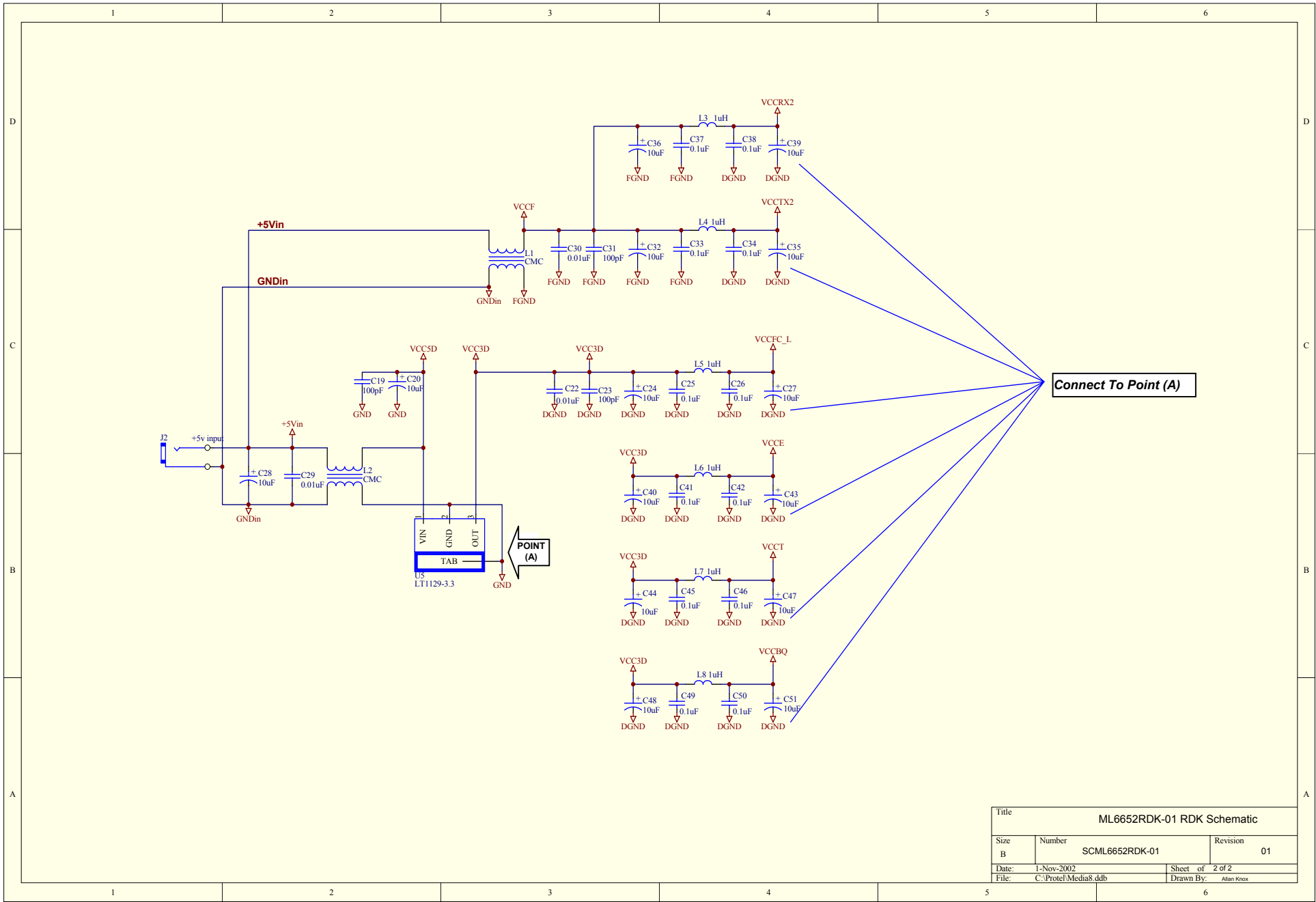
Bottom Silk

ML6652RDK-01Schematics



Title		
ML6652RDK-01 Schematic		
Size	Number	Revision
B	SCHML6652RDK-01	01
Date:	1-Nov-2002	Sheet of 1 of 2
File:	C:\Protel\Media8.ddb	Drawn By: Allan Knox

ML6652RDK-01Schematics



Title			
ML6652RDK-01 RDK Schematic			
Size	Number	Revision	
B	SCML6652RDK-01	01	
Date:	1-Nov-2002	Sheet of	2 of 2
File:	C:\Protel\Media8.ddb	Drawn By:	Alan Knox