

KSZ9021RN Socket Board - Schematic rev 1.0

Bill Of Materials

Revision History

v1.0 11/17/09 BOM for board assembly

Item	Quantity	Reference	Description	Package	Manufacturer / Part Number
1	2	C4,C5	22pF, 50V 5% COG ceramic	0603	
2	2	C102,C106	27pF, 50V 5% COG ceramic	0603	
3	2	C117,C122	470pF, 50V 5% COG ceramic	0603	
4	15	C41,C42,C43,C55,C56,C62,C63,C64,C65,C66,C72,C76,C77,C78,C125	10nF, 50V 10% X7R ceramic	0402	
5	1	C2	10nF, 50V 10% X7R ceramic	0603	
6	1	C111	33nF, 50V 10% X7R ceramic	0603	
7	2	C71,C126	0.1uF, 25V 10% X5R ceramic	0402	
8	22	C1,C7,C9,C11,C15,C40,C54,C61,C75,C88,C89,C94,C95,C104,C105,C107,C109,C110,C116,C119,C121,C124	0.1uF, 50V 10% X7R ceramic	0603	
9	3	C13,C14,C16	0.1uF, 50V 10% X7R ceramic	0805	
10	13	C3,C39,C53,C60,C70,C74,C85,C86,C103,C108,C115,C118,C120	10uF / 16V Tantalum	B-size	
11	1	C123	10uF / 16V Tantalum	C-size	
12	7	C69,C92,C97,C98,C99,C100,C101	47uF/16V Tantalum	C-size	
13	1	C93	220uF / 16V, straight leads 3.5mm spacing	Al Electrolytic / radial lead	Panasonic EEUFC1C221
14	1	C96	1000pF / 2kV, Y5P Ceramic Disc	radial lead	Panasonic ECK-A3D102KBP
15	1	CN1	USB Connector	thru hole / right-angle	TYCO / AMP 292304-1
16	3	D1,D2,D8	LED / 565nm Green	0805 SMD	Lumex SML-LXT0805GW
17	1	D10	Tri-color Dual LED (green / red)	1210 SMD	Dialight 598-8610-207F
18	1	D7	Switching Diode	SOD-123	Diodes BAV16W-7-F
19	12	FB1,FB2,FB3,FB4,FB5,FB6,FB10,FB11,FB12,FB13,FB14,FB15	Ferrite Bead	1206	Steward HI1206N101R-10
20	1	J13	Power Jack	thru hole	Switchcraft RAPC712X
21	12	JP1,JP2,JP3,JP4,JP9,JP10,JP16,JP19,JP20,JP23,JP26,JP27	Header 3X1	thru hole / 0.1" pitch	
22	1	RJ1	RJ-45 Jack	thru hole / right-angle	Belfuse SS-6488S-A-FLS-50
23	6	R17,R140,R141,R142,R143,R145	0 Ohm	0402	
24	1	R130	0 Ohm	0603	
25	2	R132,R133	27 Ohm 5%	0805	
26	6	R16,R136,R137,R138,R139,R144	49.9 Ohm 1%	0402	
27	4	R90,R91,R92,R93	75 Ohm 5%	0603	
28	3	R87,R146,R147	220 Ohm 5%	0603	
29	2	R124,R148	470 Ohm 5%	0603	
30	2	R149,R150	1.00K 1%	0603	
31	10	R6,R7,R8,R9,R33,R34,R114,R121,R122,R123	1K 5%	0603	
32	3	R89,R95,R131	1.50K 1%	0603	
33	1	R88	2.49K 1%	0603	
34	1	R96	3.92K 1%	0603	
35	6	R11,R125,R153,R154,R156,R157	4.7K 5%	0603	
36	1	R12	4.99K 1%	0603	
37	14	R1,R2,R3,R4,R5,R24,R25,R113,R117,R118,R126,R127,R128,R129	10K 5%	0603	
38	1	R155	200K 5%	0603	
39	1	S1	Switch (push button)	SMT	Panasonic EVQ-PHV03T
40	1	T1	10/100/1000 Ethernet Transformer	SMT	Pulse Engineering H5007NL

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41	5	TP17,TP18,TP19,TP20,TP24	TestPoint: GND	thru hole / 0.1" pitch	
42	1	TP4	TestPoint: INT_N	thru hole / 0.1" pitch	
43	1	Y1	25MHz +/-30ppm	cylinder	CA-301 25.0000M-C:PBFREE
44	1	Y2	6MHz +/-50ppm	cylinder	CSA309-6.000MABJ-UB
45	1	Q2	P-channel MOSFET (Pb-free)	SOT-223	Fairchild FDT434P
46	1	U8	USB UART/FIFO I.C.	48-LQFP	FTDI FT2232D
47	1	U13	Dual Bidirectional Voltage Level Translator	US8, 8-VSSOP	TI PCA9306DCUR
Micrel Components					
48	1	U1	10/100/1000 Ethernet PHY with RGMII support	48-Pin QFN	Micrel KSZ9021RN
49	1	U5	1.2V LDO Regulator (Adj.)	5-pin S-PAK	Micrel MIC49150WR
50	1	U7	3.3V LDO Regulator (Adj.)	TO-263-5	Micrel MIC29302WU
51	1	U9	5.0V LDO Regulator (Fixed)	5-Pin SOT-23	Micrel MIC5207-5.0YM5
52	1	U10	2.5V LDO Regulator (Adj.)	5-Pin SOT-23	Micrel MIC5207YM5
Unpopulated Components					
53	2	JP21,JP22	Header 2X1 (jumper)	thru hole / 0.1" pitch	
54	1	Q1	(no longer use)		
55	1	R14	49.9 Ohm 1%	0402	
56	1	R18	0 Ohm	0402	
57	1	R78	0 Ohm	1206	
58	1	R13	1K 5%	0603	
59	2	R151,R152	(no value)	0603	
60	1	TP7	TestPoint: AVDDH	thru hole / 0.1" pitch	
61	1	TP12	TestPoint: AVDDL	thru hole / 0.1" pitch	
62	1	TP14	TestPoint: DVDDL	thru hole / 0.1" pitch	
63	1	TP15	TestPoint: AVDDL_PLL	thru hole / 0.1" pitch	
64	1	TP16	TestPoint: DVDDH	thru hole / 0.1" pitch	
65	1	TP33	TestPoint: GND (KSZ9021RN paddle ground)		
66	4	TP34,TP35,TP36,TP37	TestPoint: RGMII Clock Delay (test options)	thru hole / 0.1" pitch	
67	1	T2	10/100/1000 Ethernet Transformer	SMT	TDK TLA-7T101LF Transformer
68	2	U11,U12	(no longer use)		