

National Semiconductor Corporation  
5/13/2011  
ADC12D800RF Reference Board  
Assembly Part Number : TBD  
Revision : ADC12D800RFRB 980600479-320C1

Bill of Materials

Item	Ref Designator	Part Description	Manufacturer	Part Number	Value	Qty	RoHS	Digi-Key P/N	Sec. Dist.	Sec. Dist. P/N	Alt. Manufacturer	Alt. P/N	Alt. Digi-Key P/N
1		ADC10D1500 Reference Board PCB, RevC	NSC	551600479-003C									
2	U1	Low Power, 12-Bit, Dual 800 MSPS or Single 1.6 GSPS ADC from the PowerWise® Family	NSC	ADC12D800RFIUT/NOPB		1			Interco				
3	U2	IC MCU USB PERIPH HI SPD 128TQFP	Cypress	CY7C68013A-128AXC		1	Y	428-1668-ND					
4	U3	5-Pin Microprocessor Reset Circuits	NSC	LM3724IM5-3.08/NOPB		1			Interco				
5	U4	IC EEPROM 2KBIT 1MHZ 8SOIC	Atmel	AT24HC02BN-SH-B		1	Y	<a href="#">AT24HC02BN-SH-B-ND</a>			Atmel	AT24C02BN-SH-B	AT24C02BN-SH-B-ND
6	U5	IC FPGA VIRTEX-4 24K 668-FCBGA	Xilinx	XC4VLX25-11FFG668C		1	Y	122-1490-ND	Nu-Horizons				
7	U6, U7	50MIL_7PIN_HEADER sm_7pin_ftr	Samtec	FTR-107-03-S-S		2		N/A	Samtec	FTR-107-03-S-S			
8	U8	Dual Remote Diode and Local Temperature Sensor with SMBus Interface and TruTherm™ Technology	NSC	LM95233CISD/NOPB		1			Interco				
9	U11	RELAY-RF303 3GHz RELAY_RF303	Teledyne	RF303-5		1	Y	N/A	Allied Electronics	280-1008			
10	U12	High Performance Frequency Synthesizer System with Integrated VCO	NSC	LMX2531LQ1570E/NOPB		1			Interco				
11	U13	Dual 2A, 500kHz Wide Input Range Buck Regulator	NSC	LM26400YMH/NOPB		1			Interco				
12	U14	NO LOAD	NO LOAD	NO LOAD		1		NO LOAD			Xilinx	XCF08P VO48 C (122-1454-5-ND)	
13	U15, U18, U19, U20, U22	Micropower 800mA Low Noise "Ceramic Stable" Adjustable Voltage Regulator for 1V to 5V Applications	NSC	LP3878MR-ADJ/NOPB		5			Interco				
14	U16	SIMPLE SWITCHER® 42V, 3A Step-Down Switching Regulator	NSC	LM25576MHX/NOPB		1			Interco				
15	U17	3A Fast-Response High-Accuracy Adjustable LDO Linear Regulator with Enable and Soft-Start	NSC	LP38853SX-ADJ/NOPB		1			Interco				
16	U21	Power Sequencer	NSC	LM3880MF-1AB/NOPB		1			Interco				
17	U23	36V, 2A PowerWise® Adjustable Frequency Synchronous Buck Regulator	NSC	LM20242MH/NOPB		1			Interco				
18	U24, U25 C1, C2, C3, C4, C5, C6, C7, C18, C19, C20, C21, C22, C23, C24, C25, C26, C27, C28, C29, C30, C34, C35, C36, C37, C38, C39, C40, C46, C47, C48, C49, C52, C54, C55, C56, C57, C58, C59, C60, C61, C62, C66, C68, C72, C79, C80, C81, C82, C83, C84, C85, C86, C87, C88, C89, C90, C91, C92, C93, C94, C95, C96, C97, C98, C99,	IC RCVR/DRVR ECL DIFF 5V 8TSSOP	ON Semiconductor	MC100EP16DTG		2	Y	<a href="#">MC100EP16DTGOS-ND</a>	Newark	45J0940	ON Semiconductor	MC10EP16DTG	<a href="#">MC10EP16DTGOS-ND</a>

	C100, C101, C102, C103, C104, C105, C106, C107, C108, C109, C110, C111, C114, C115, C116, C117, C118, C119, C120, C121, C122, C123, C124, C125, C126, C127, C128, C129, C130, C131, C132, C133, C134, C135, C201, C235, C238, C161, C164, C165, C167, C170, C181, C183, C185, C187, C188, C189, C193, C195, C196, C208, C210, C212, C214, C216, C219, C222, C224, C226, C229, C231, C233, C184, C197, C244	CAP .1UF 10V CERAMIC X5R 0402 10% CAP CER 1000PF 50V 5% C0G 0603 CAPACITOR TANT 2.2UF 10V 10% EIA3216 SMD	Panasonic Murata Kemet	ECJ-0EB1A104K GRM1885C1H102JA01D T491A225K010AT	0.1uF 1000pF 2.2uF	131 1 1	Y Y Y	PCC2146TR-ND 490-1451-1-ND 399-3690-1-ND			
	C67, C74, C78, C136, C137, C139, C140, C149, C155, C156, C162, C163, C166, C171, C172, C173, C174										
22	C69	CAP .1UF 16V CERAMIC X7R 0603 10%	Panasonic	ECJ-1VB1C104K	0.1uF	17	Y	PCC1762TR-ND			
23	C70, C71	CAP 4700PF 50V CERAMIC X7R 1206 10%	Kemet	C1206C472K5RACTU	4700pF	1	Y	399-1230-1-ND			
24	C75, C76, C77, C152, C206	CAP CERAMIC 12PF 50V NP0 1206 5%	Kemet	C1206C120J5GACTU	12pF	2	Y	399-1193-1-ND			
25	C138, C144, C145, C153	CAP 100PF 50V CERAMIC 0402 SMD 5%	Panasonic	ECJ-0EC1H101J	100pF	5	Y	PCC101CQTR-ND			
26	C141	CAP CERAMIC 100PF 50V 0603 SMD 5%	Panasonic	ECJ-1VC1H101J	100pF	4	Y	PCC101ACVTR-ND			
27	C142, C147	CAP CERAMIC 470PF 50V NP0 0603 5%	Panasonic	ECJ-1VC1H471J	470pF	1	Y	PCC2147CT-ND			
28	C143	CAP CERM .47UF 16V X7R 0603 10%	Kemet	C0603C474K4RACTU	0.47uF	2	Y	399-4922-2-ND			
29	C146	CAP 10000PF 16V CERM X7R 0603 10%	Panasonic	ECJ-1VB1C103K	10nF	1	Y	PCC1750TR-ND			
29b	C148	CAP CER 680PF 50V C0G 5% 0603	TDK Corporation	C1608C0G1H681J	680pF	1	Y	445-1291-1-ND			
30	C150, C151, C199	CAP 33NF 16V CERAMIC 0603 10%	Yageo (Phycomp)	CC0603KRX7R7BB333	33nF	1	Y	N/A	Newark	68C4422	
31	C154	CAP 4700PF 25V CERAMIC 0402 SMD 10%	Panasonic	ECJ-0EB1E472K	4700pF	3	Y	PCC472BQTR-ND			
32		CAP CERAMIC 4.7UF 6.3V X5R 0603 20%	Panasonic	ECJ-1VB0J475M	4.7uF	1	Y	PCC2318CT-ND			
33	C157	CAP 100UF 16V ELECT MVY SMD 20%	United Chemi-Con	EMVE160ADA101MF55G	100uF	1	Y	<a href="#">565-2204-6-ND</a>	United Chemi-Con	EMVY100ADA101MF55G	565-2429-2-ND
	C168, C169, C182, C209, C215, C223, C230, C241, C158, C159, C180, C192, C198, C200, C207, C213, C221, C228, C160, C211, C225, C217, C232, C239, C242, C243										
34	C177, C190, C191, C203	CAP CER 10UF 6.3V X5R 20% 0805	TDK Corporation	C2012X5R0J106M	10uF	26	Y	445-1363-2-ND			
35	C194	CAP 1UF 6.3V CERAMIC X5R 0402 10%	Panasonic	ECJ-0EBFJ105K	1uF	4	Y	PCC13493TR-ND			
36	C237	CAP 270UF 10V POLY ALUM SMD 20%	Nichicon	PCF1A271MCL1GS	270uF	1	Y	<a href="#">493-2995-1-ND</a>	United Chemi-Con	APXA100ARA271MJ80G	565-3069-2-ND
37	C240	CAP CER 1.0UF 10V X5R 10% 0805	TDK Corporation	C2012X5R1A105K	1.0uF	1	Y	445-1587-1-ND			
38	C202, C204, C175, C176, C186, C205, C218, C220, C227, C234, C245, C246, C65	CAP 1UF 6.3V CERAMIC X5R 0603 10%	Panasonic	ECJ-1VB1A105K	1.0uF	1	Y	PCC2174CT-ND			
39	C236	CAP 10000PF 16V CERAMIC 0402 SMD 10%	Panasonic	ECJ-0EB1C103K	10nF	13	Y	PCC103BQTR-ND			
40	D1, D5	CAP 2200PF 25V CERAMIC 0402 SMD 10%	Panasonic	ECJ-0EB1E222K	2200pF	1	Y	PCC222BQTR-ND			
41	D2, D3, D4	DIODE SCHOTTKY 40V 500MA SOD123	Micro Commercial Co	MBR0540	40V, 0.5A	2	Y	MBR0540TPMSCT-ND			
42	D6	DIODE SCHOTTKY 20V 4A SMC	ON Semiconductor	MBRS320T3G	20V, 4A	3	Y	MBRS320T3GOSCT-ND			
43	L1	DIODE ZENER 4.7V 150MW S-MINI 2P	Panasonic - SSG	MAZ80470ML	4.7V	1	Y	MAZ80470MLCT-ND	Panasonic - SSG	DZ2J047M0L	<a href="#">DZ2J047M0LCT-ND</a>
44	L2	FERRITE CHIP 120 OHM 3000MA 1206	Murata	BLM31PG121SN1L		1	Y	490-1056-1-ND			
45	L3, L11, L12, L13	FILTER CHIP 120 OHM 3A 0603	Murata	BLM18SG121TN1D		1	Y	490-3996-1-ND			
46		FILTER CHIP 330 OHM 1.5A 0603	Murata	BLM18SG331TN1D		4	Y	490-3997-1-ND			

47	L4, L8, L14	FILTER CHIP 26 OHM 6A 0603	Murata	BLM18SG260TN1D		3	Y	490-3995-1-ND	Coilcraft
48	L5, L6, L7, L10	10uH 3.4A EIA_481	Coilcraft	MSS1246-103ML	10uH	4	Y	N/A	
49	L9	CHOKE COMMON MODE 170OHMS 10A PCB	Steward	CM2545X171B-10		1	Y	240-2485-ND	
	LD1, LD2, LD3, LD4, LD5, LD6, LD7, LD8, LD9, LD11	LED 565NM WTR CLR GREEN 1206 SMD	Lumex	SML-LX1206GC-TR		10	Y	67-1357-1-ND	
50	LD10	LED 635NM RED WTR CLR 1206 SMD	Lumex	SML-LX1206IC-TR		1	Y	67-1356-1-ND	
51				BC817-25LT1			N	BC817-25LT1OSCT-ND	
52	Q1	TRANS NPN GP 500MA 45V SOT23	ON Semiconductor	BC817-25LT1G	45V, 0.5A	1	Y	BC817-25LT1GOSCT-ND	
	R2, R3, R4, R5, R6, R8, R9, R13, R14, R16, R17, R25, R69, R127, R128	RES 49.9 OHM 1/10W 1% 0603 SMD	Panasonic	ERJ-3EKF49R9V	49.9	15	Y	P49.9HTR-ND	
53	R7, R12	RES 3.3K OHM 1/10W .1% 0603 SMD	Panasonic	ERA-3YEB332V	3.3K	2	Y	P3.3KYTR-ND	
54	R10, R11	RES 20.0 OHM 1/10W 1% 0603 SMD	Panasonic	ERJ-3EKF20R0V	20.0	2	Y	P20.0HTR-ND	
55	R15, R34	RES 4.7K OHM 1/10W 5% 0603 SMD	Panasonic	ERJ-3GEYJ472V	4.7K	2	Y	P4.7KGTR-ND	
56	R18	RES 47K OHM 1/4W 5% 1206 SMD	Panasonic	ERJ-8GEYJ473V	47K	1	Y	P47KETR-ND	
57	R19, R21	RES 2.2K OHM 1/4W 5% 1206 SMD	Panasonic	ERJ-8GEYJ222V	2.2K	2	Y	P2.2KETR-ND	
58		RES ZERO OHM 1/10W 5% 0603 SMD							
59	R20, R22, R31, R38, R43, R65, R126	Assembly for R20: mount on 2 pads closest to J20 Assembly for R38: mount on 2 pads closest to U1	Panasonic	ERJ-3GEY0R00V	0	2	Y	P0.0GTR-ND	
60	R24	RES 1.0M OHM 1/4W 5% 1206 SMD	Panasonic	ERJ-8GEYJ105V	1.0M	1	Y	P1.0METR-ND	
	R23, R32, R33, R35, R36, R37, R80, R107, R26, R27, R28, R44, R45, R46, R113, R114, R86, R87, R104	RES 10K OHM 1/10W 5% 0603 SMD	Panasonic	ERJ-3GEYJ103V	10K	19	Y	P10KGCT-ND	
61	R56, R57	RES 49.9 OHM 1/10W 1% 0402 SMD	Panasonic	ERJ-2RKF49R9X	49.9	2	Y	P49.9LCT-ND	
62	R29, R47, R48, R49, R50, R51, R52, R54, R55, R115, R142	RES 330 OHM 1/10W 5% 0603 SMD	Panasonic	ERJ-3GEYJ331V	330	11	Y	P330GTR-ND	
63	R30, R39, R41, R42	RES 100 OHM 1/10W 1% 0603 SMD	Panasonic	ERJ-3EKF1000V	100	4	Y	P100HTR-ND	
64									
65	R40	NO LOAD	NO LOAD	NO LOAD		0		NO LOAD	Panasonic ERJ-3GEYJ103V (P10KHTR-ND)
	R53, R66, R129, R131, R134, R136	RES 33 OHM 1/10W 5% 0603 SMD	Panasonic	ERJ-3GEYJ330V	33	6	Y	P33GTR-ND	
66	R67, R68	RES 150 OHM 1/10W 1% 0603 SMD	Rohm	MCR03EZPFX1500	150	2	Y	RHM150HTR-ND	
67	R70, R71	RESISTOR .22 OHM 1/10W 1% 0603	Panasonic	ERJ-3RQFR22V	0.22	2	Y	P.22AJTR-ND	
68	R72	RES 820 OHM 1/10W 5% 0603 SMD	Panasonic	ERJ-3GEYJ821V	820	1	Y	P820GCT-ND	
69	R73	NO LOAD	NO LOAD	NO LOAD		0			
70	R74	RES 100 OHM 1/10W 5% 0402 SMD	Panasonic	ERJ-2GEJ101X	100	1	Y	P100JTR-ND	
71	R75	RES ZERO OHM 1/10W 5% 0402 SMD	Panasonic	ERJ-2GE0R00X	0	1	Y	P0.0JTR-ND	
72									
73	R76, R77	NO LOAD	NO LOAD	NO LOAD		2		NO LOAD	Panasonic ERJ-2GE0R00X (P0.0JTR-ND)
74	R78	RESISTOR 3.3 OHM 1/10W 5% 0603	Panasonic	ERJ-3RQJ3R3V	3.3	1	Y	P3.3AHTR-ND	
75	R79	RES 4.3K OHM 1/10W 5% 0603 SMD Not 1%!	Panasonic	ERJ-3GEYJ432V	4.3K	1	Y	P4.3KGCT-ND	
76	R81, R84, R133	NO LOAD 0.1W 5% r0603	Panasonic	ERJ-3GEY0R00V	0	3		P0.0GTR-ND	
77	R82	RES 10 OHM 1/10W 5% 0603 SMD	Panasonic	ERJ-3GEYJ100V		1	Y	P10GTR-ND	
78	R83	NO LOAD	NO LOAD	NO LOAD		1		NO LOAD	Panasonic ERJ-3GEY0R00V (P0.0GTR-ND)
79	R85	RES 3.3K OHM 1/10W 5% 0603 SMD	Panasonic	ERJ-3GEYJ332V	3.3K	1	Y	P3.3KGTR-ND	
80	R88	RES 26.7K OHM 1/10W 1% 0603 SMD	Panasonic	ERJ-3EKF2672V	26.7K	1	Y	P26.7KHTR-ND	
81	R89, R90	RES 5.9K OHM 1/10W .5% 0603 SMD	Yageo	RT0603DRD075K9L	5.9K	2	Y	311-5.9KDTR-ND	
82	R91	RES 18.7K OHM 1/10W 1% 0603 SMD	Panasonic	ERJ-3EKF1872V	18.7K	1	Y	P18.7KHTR-ND	
83	R92	RES 205K OHM 1/10W 1% 0603 SMD	Rohm	MCR03EZPFX2053	205K	1	Y	RHM205KHCT-ND	
	R93, R101, R124, R111, R117	RES 1.0K OHM 1/10W 5% 0603 SMD	Panasonic	ERJ-3GEYJ102V	1.0K	5	Y	P1.0KGTR-ND	
84	R94	RES 15K OHM 1/10W 5% 0603 SMD	Panasonic	ERJ-3GEYJ153V	15K	1	Y	P15KGTR-ND	
85	R95	RES 30K OHM 1/10W 5% 0603 SMD	Panasonic	ERJ-3GEYJ303V	30K	1	Y	P30KGTR-ND	
86	R96, R110	RES 5.1K OHM 1/10W 5% 0603 SMD	Panasonic	ERJ-3GEYJ512V	5.1K	2	Y	P5.1KGTR-ND	
87	R97	RES 2.2K OHM 1/10W 5% 0603 SMD	Panasonic	ERJ-3GEYJ222V	2.2K	1	Y	P2.2KGTR-ND	
88	R98	RES 1.8K OHM 1/10W 5% 0603 SMD	Panasonic	ERJ-3GEYJ182V	1.8K	1	Y	P1.8KGTR-ND	
89	R99	RES 680 OHM 1/10W 5% 0603 SMD	Panasonic	ERJ-3GEYJ681V	680	1	Y	P680GTR-ND	
90	R102	RES 2.80K OHM 1/10W 1% 0603 SMD	Panasonic	ERJ-3EKF2801V	2.80K	1	Y	P2.80KHCT-ND	
91	R103	RES 47.5K OHM 1/10W 1% 0603 SMD	Panasonic	ERJ-3EKF4752V	47.5K	1	Y	P47.5KHCT-ND	
92									
93	R105, R140, R141	NO LOAD	NO LOAD	NO LOAD		3		NO LOAD	Panasonic ERJ-3GEYJ103V (P10KHTR-ND)
94	R106	RES 7.87K OHM 1/10W 1% 0603 SMD	Panasonic	ERJ-3EKF7871V	7.87K	1	Y	P7.87KHTR-ND	
95	R108	RES 20.0K OHM 1/10W 1% 0603 SMD	Panasonic	ERJ-3EKF2002V	20.0K	1	Y	P20.0KHTR-ND	
96	R109	RES 1.3K OHM 1/10W 5% 0603 SMD	Panasonic	ERJ-3GEYJ132V	1.3K	1	Y	P1.3KGCT-ND	

97	R112, R118	RES 2.4K OHM 1/10W 5% 0603 SMD	Panasonic	ERJ-3GEYJ242V	2.4K	2	Y	P2.4KGCT-ND			
98	R116	RES 360 OHM 1/10W 5% 0603 SMD	Panasonic	ERJ-3GEYJ361V	360	1	Y	P360GCT-ND			
99	R120, R121, R122	RES 22K OHM 1/10W 5% 0603 SMD	Panasonic	ERJ-3GEYJ223V	22K	3	Y	P22KGCT-ND			
100	R125	RES 2.15K OHM 1/10W 1% 0603 SMD	Panasonic	ERJ-3EKF2151V	2.15K	1	Y	P2.15KHCT-ND			
101	R130, R132, R135, R137	RES 95.3 OHM 1/10W 1% 0603 SMD	Panasonic	ERJ-3EKF95R3V	95.3	4	Y	P95.3HCT-ND			
102	R138, R139	NO LOAD	NO LOAD	NO LOAD		2		NO LOAD	Panasonic	ERJ-3GEYJ103V (P100HTR-ND)	
103	SW1	SWITCH TACT MOM 130GF H=5MM	ITT Industries/C&K Div	PTS635SL50		1	Y	CKN9017-ND			
104	SW2	SWITCH ROCKER SPDT HORZ ACT RA	ITT Industries/C&K Div	7101J1AQE2		1	Y	CKN2005-ND			
105	T1	FO-3 soic6_026_wg049_L079	Anaren	B0430J50100A00		1	Y	N/A	Anaren	B0430J50100A00	
106	Y1	CRYSTAL 24.00 MHZ 12PF HC-49/US	ECS Inc.	ECS-240-12-4X		1	Y	XC1005-ND			
107	Y2	OSC 100MHz osc_100m_5x7	Pletronics	SM7745DV-100.0M	100MHz	1		N/A	Pletronics	SM7745DSV-100.00M	
108	Y3	OSC 50.000 MHZ 3.3V SMT	TXC CORPORATION	7W-50.000MBA-T	50MHz	1	Y	887-1379-1-ND			
109	J1, J3	CONN HEADER .100 SINGL STR 36POS	Sullins	PTC36SAAN		2	N	S1012-36-ND			
110	J2	CONN RECEPT USB TYPE B PCB	Mill-Max	897-43-004-90-000000		1	Y	ED90064-ND			
111	J4	HEADER 10x3 blkcon_10x3				1		N/A			
	J4_SHa, J4_SHb, J4_SHc, J4_SHd, J15_SH, J21_SH, J22_SH										
112	J22_SH	Jumper Shunt, 15uin gold plated, 0.100" pitch	Tyco/AMP	382811-6		7	Y	A26227-ND			
113	J5	HEADER 6 blkcon_6x1	Sullins	PTC36SAAN		1	N	S1012-36-ND			
114	J6	CONN 6 PIN SING. ROW SHDR6X1	Sullins	PTC36SAAN		1	N	S1012-36-ND			
	J7, J8, J9, J10, J11, J19, J26										
115	J19, J26	CONN JACK END LAUNCH PC GOLD SMA	Emerson/Johnson	142-0701-851		7	Y	J658-ND			
116	J12	CONN PWR JACK 2.1X5.5MM HIGH CUR	CUI Inc	PJ-102AH		1	Y	CP-102AH-ND			
117	J13	HEADER 3 blkcon_3x1	Sullins	PTC36SAAN		1	N	S1012-36-ND			
118	J14	JUMPER3 blkcon_3x2	Sullins	PTC36DAAN		1	N	S2012-36-ND			
119	J15, J17, J18	CONN HEADER .100 DUAL STR 72POS	Sullins	PTC36DAAN		3	N	S2012-36-ND			
120	J16, J24	CONN RCPT 38POS VERT .64MM	Tyco Electronics	5767054-1		2	Y	5767054-1-ND	Arrow	5767054-1	
121	J20	JUMPER 2X1 th_2_hdr1x2_m_str_100	Sullins	PTC36SAAN		1	N	S1012-36-ND			
122	J21, J22	JUMPER1 blkcon_2x1	Sullins	PTC36SAAN		2	N	S1012-36-ND			
123	J23	JUMPER5 blkcon_5x2	Sullins	PTC36DAAN		1	N	S2012-36-ND			
124	J25	HEADER 3X2 blkcon_3x2	Sullins	PTC36DAAN		1	N	S2012-36-ND			
	J27, J28, J29, J30, J31, J32										
125	J31, J32	NO LOAD	NO LOAD	NO LOAD		0		NO LOAD	Johnson Components	142-0701-851 (J658-ND)	
126	J33	NO LOAD	NO LOAD	NO LOAD		0		NO LOAD			
127	TP1, TP2, TP3, TP4	NO LOAD [Pad on board only]	NO LOAD	NO LOAD		4		NO LOAD			
	TP5, TP6, TP7, TP8, TP9, TP10, TP11										
128	TP9, TP10, TP11	HDR 1X1 .100 Singl Str 36 Pos.	SULLINS ELECT	PBC36SAAN		7	Y	S1011E-36-ND			