



Bill of Materials for the NCL30030GEVB Evaluation Board

Designator	Quantity	Description	Value	Tolerance	Footprint	Manufacturer	Manufacturer Part Number	Substitution Allowed	Lead Free
Cvcc	1	Aluminum Cap	27uF	20%	CAP_AL_5X11	Panasonic	EEU-FC1E270	Yes	Yes
C1,C2,C4,C6	4	Film Cap	470nF	10%	CAP-BOX-LS22M5-26MX7M	Epcos	B32923C3474K	Yes	Yes
C7,C22,C37	3	Ceramic Cap	220pF	5%	805	Yageo	CC0805JRNPO9BN221	Yes	Yes
C8	1	Ceramic Cap	10nF	5%	805	AVX	0805YA103JAT2A	Yes	Yes
C9,C16,C25	3	Ceramic Cap	47nF	10%	805	Yageo	CC0805KRX7R9BB473	Yes	Yes
C10,C13	2	Ceramic Cap	4.7nF	10%	805	Yageo	CC0805KRX7R9BB472	Yes	Yes
C11,C12,C19	3	Ceramic Cap	100nF	10%	805	Yageo	CC0805KRX7R9BB104	Yes	Yes
C14	1	Film Cap	4.7uF 250V	10%	CAP-BOX-LS175-8M5X18	Panasonic	ECQ-E2475KB	Yes	Yes
C15	1	Ceramic Cap	2.2uF	10%	805	Taiyo Yuden	UMK212BB7225KG-T	Yes	Yes
C17	1	Ceramic Cap	10nF Y1	20%	Cap_disc_20mm	Vishay	440LS10-R	Yes	Yes
C18,C24	2	Aluminum Cap	10uF 100V	20%	CAP_AL_5X11	Rubycon	100PK10MEFC5X11	Yes	Yes
C21	1	Aluminum Cap	68uF 500V	20%	CAP-ALEL-18X42-HOR-REV	Nichicon	UCY2H680MHD	Yes	Yes
C23	1	Aluminum Cap	68uF 500V	20%	CAP-ALEL-18X42-HOR	Nichicon	UCY2H680MHD	Yes	Yes
C26,C34	2	Film Cap	220p 1kV	5%	CAP-BOX-LS5-3M5X7M2	Kemet	R76QD0220SE00J	Yes	Yes
C27	1	Ceramic Cap	22pF	5%	805	Yageo	CC0805JRNPO9BN220	Yes	Yes
C28,C29,C31,C33	4	Ceramic Cap	1uF	10%	805	Yageo	CC0805KKX7R8BB105	Yes	Yes
C30	1	Aluminum Cap	22uF 50V	20%	CAP_AL_5X11	Rubycon	50YXM2MEFC5X11	Yes	Yes
C32	1	Ceramic Cap	2.2uF	10%	805	Yageo	CC0805KKX7R6BB225	Yes	Yes
C35	1	Ceramic Cap	1nF	5%	805	Yageo	CC0805JRNPO9BN102	Yes	Yes
C36	1	Ceramic Cap	100pF	5%	805	Yageo	CC0805JRNPO9BN101	Yes	Yes
D13,D21,Dboot	3	Diode	MURA160T3G	-	SMA	ON Semiconductor	MURA160T3G	No	Yes
Dout	1	Diode	STTH810FP	-	TO-220-2_vert	ST	STTH810FP	Yes	Yes
D1	1	Diode	GBU8M-BP	-	4P_inline	MCC	GBU8M-BP	Yes	Yes
D4,D12,D20	3	Diode	UFM15PL	-	SOD123FL	MCC	UFM15PL	Yes	Yes
D10	1	Diode	MMSZ18T1	-	SOD123FL	ON Semiconductor	MMSZ18T1	No	Yes
D11	1	Diode	BAS16XV2T1G	-	SOD523	ON Semiconductor	BAS16XV2T1G	No	Yes
D14,D16,D17	3	Diode	BAS21DW5T1G	-	SC-88A	ON Semiconductor	BAS21DW5T1G	No	Yes
D15	1	Diode	NHPJ08S600G	-	TO-220-UP	ON Semiconductor	NHPJ08S600G	No	Yes
D18	1	Diode	MURS480ET3G	-	SMC	ON Semiconductor	MURS480ET3G	No	Yes
D19	1	Diode	MMSZ5267BT1G	-	SOD123FL	ON Semiconductor	MMSZ5267BT1G	No	Yes
D22	1	Diode	MBR0540T1G	-	SOD123FL	ON Semiconductor	MBR0540T1G	No	Yes
D25	1	Diode	BAT54T1G	-	SOD123FL	ON Semiconductor	BAT54T1G	No	Yes
F1	1	Fuse	2A25 Slo	-	15mm_axial	Littelfuse	02092.25MXEP	Yes	Yes
J1,J2	2	Jumpers	CON3	-	Conn_3P_Scrmnt	Würth	6.91102E+11	Yes	Yes
J3	1	Jumpers	CON7	-	Conn_7P_Scrmnt	On Shore	OSTTA074163	Yes	Yes
L1,L2	2	Common Mode Choke	6.8mH	-	HOR-4P-19X10	Würth	750341633	Yes	Yes
L3	1	Fixed Inductor	100uH	-	Rad_Ind_LS5	Würth	744772101	Yes	Yes
L4	1	Fixed Inductor	33uH	-	Rad_Ind_LS5	Würth	744772330	Yes	Yes
Qfet1,Qfet2,Qfet	3	Mosfet	FCA20N60F	-	TO-220-3F	ON Semiconductor	FCA20N60F	Yes	Yes
Qfet3	1	Mosfet	BSS127S-7	-	SOT23	Diodes	BSS127S-7	Yes	Yes
Q1,Q2	2	Mosfet	2N5551G	-	TO92	Fairchild	2N5551G	Yes	Yes
R57,Rgdp	2	Resistor	100	1%	805	Yageo	RC0805FR-07100RL	Yes	Yes
Rgdp1,R53,R54,R58	4	Resistor	10	1%	805	Yageo	RC0805FR-0710RL	Yes	Yes
Rsens	1	Resistor	0.25	1%	2512	Vishay	WSL2512R2500FEA	Yes	Yes
Rsens1	1	Resistor	0.12	1%	2512	Yageo	RL2512FK-070R12L	Yes	Yes
R1	1	Varistor	320 V	-	MOV_20mm_disc	Epcos	S20K320E2	Yes	Yes

R2,R20,R25,R47,R48, R49	6	Resistor	10k	1%	805	Yaego	RC0805FR-0710KL	Yes	Yes
R3	1	Thermistor	47k NTC	5%	805	Epcos	B57431V2473J62	Yes	Yes
R4,R16,R22,R24,R26, R29,R31,R33,R45,R5 1	10	Resistor	1k	1%	805	Yaego	RC0805FR-071KL	Yes	Yes
R5	1	Resistor	27k	1%	805	Yaego	RC0805FR-0727KL	Yes	Yes
R6,R7	2	Resistor	620k	1%	1206	Yageo	RC1206FR-07620KL	Yes	Yes
R8,R11,R17,R18,R34, R35,R37	7	Resistor	100k	1%	805	Yaego	RC0805FR-07100KL	Yes	Yes
R9	1	Resistor	0.09	1%	1206	Vishay	WSL1206R0900FEA	Yes	Yes
R10	1	Resistor	20k	1%	805	Yaego	RC0805FR-0720KL	Yes	Yes
R12,R14	2	Resistor	604k	1%	1206	Yageo	RC1206FR-07604KL	Yes	Yes
R13	1	Resistor	8.06k	1%	805	Yaego	RC0805FR-078K06L	Yes	Yes
R15	1	Resistor	165k	1%	805	Yaego	RC0805FR-07165KL	Yes	Yes
R19	1	Resistor	3.32k	1%	805	Yaego	RC0805FR-073K32L	Yes	Yes
R21	1	Resistor	160k	1%	805	Yaego	RC0805FR-07160KL	Yes	Yes
R23	1	Resistor	7.50k	1%	805	Yaego	RC0805FR-077K5L	Yes	Yes
R27,R32	2	Resistor	2.49k	1%	805	Yaego	RC0805FR-072K49L	Yes	Yes
R28	1	Resistor	63.4k	1%	805	Yaego	RC0805FR-0763K4L	Yes	Yes
R30	1	Resistor	24.9k	1%	805	Yaego	RC0805FR-0724k9L	Yes	Yes
R36,R46	2	Resistor	110k	1%	805	Yaego	RC0805FR-07110KL	Yes	Yes
R38,R40,R41	3	Resistor	5.49k	1%	805	Yaego	RC0805FR-075K49L	Yes	Yes
R39	1	Resistor	47.5k	1%	805	Yaego	RC0805FR-0747K5L	Yes	Yes
R42,R43	2	Resistor	16.9k	1%	1206	Yageo	RC1206FR-0716K9L	Yes	Yes
R44	1	Resistor	1.5	1%	1206	Yageo	RC1206FR-071R5L	Yes	Yes
R50	1	Resistor	10k	1%	1206	Yaego	RC1206FR-0710KL	Yes	Yes
R52	1	Resistor	4.7k 1W	5%	15MM_Axial	Yageo	RSF100JB-73-4K7	Yes	Yes
TX1	1	Transformer	XFRM_LINEAR	-	PQ2625-X12	Würth	750314934	Yes	Yes
T1	1	Transformer	XFRM_LINEAR	-	ER2817	Würth	750314657 Rev6	Yes	Yes
U1	1	IC	NCL30030	-	SO16-P2	ON Semiconductor	NCL30030B1DR2G	No	Yes
U2,U7	2	IC	NCP4328A	-	TSOP-5	ON Semiconductor	NCP4328A	No	Yes
U6	1	IC	FOD817A3SD	-	4SMD	Fairchild	FOD817A3SD	Yes	Yes
U9	1	IC	LM358	-	SO8M1	ON Semiconductor	LM358DR2G	No	Yes
U10	1	IC	TLV271SN2T1G	-	SOT23-5	ON Semiconductor	TLV271SN2T1G	No	Yes
U11	1	IC	TL431	-	TO92	ON Semiconductor	TL431ACLPRAG	No	Yes
U12	1	IC	NCP5106ADR2G	-	SO8M1	ON Semiconductor	NCP5106ADR2G	No	Yes
-	1	Heatspreader	-	-	See User's Manual	-	-	Yes	Yes
-	3	Heatspreader Mnt Tabs	-	-	-	Keystone	#4000	Yes	Yes
-	9	M3 Nut	-	-	-	MC Master Carr	90591A121	Yes	Yes
-	9	M3 X 12 Panhead Screw	-	-	-	MC Master Carr	9200FA122	Yes	Yes