



Bill of Materials for the NCL30002DIM1GEVB Evaluation Board

Designator	Quantity	Description	Value	Tolerance	Footprint	Manufacturer	Manufacturer Part Number	Substitution Allowed	Lead Free
1	C2	Capacitor	470p NPO	2%	0402	TDK	C1005C0G1H471G	Yes	Yes
2	C3,C4	Capacitor	220nF 250V	10%	Box Cap LS=5mm	Epcos	B32529D3224+***	Yes	Yes
1	C5	Capacitor	680uF	20%	Radial Al El 16x15 LS=7.5mm	Nichicon	UHE1V681MHD3	Yes	Yes
1	C6	Capacitor	33nF 250V	10%	Box Cap LS=5mm	Epcos	B32529C3333+***	Yes	Yes
1	C7	Capacitor	22uF 25V Tant	20%	7342	Vishay	595D226X0025D2T	Yes	Yes
1	C8	Capacitor	22uF X5R 25V	10%	1210	Taiyo Yuden	TMK325B7226MM-TR	Yes	Yes
1	C10	Capacitor	1nF	10%	0402	Kemet	C0402C102K3GACTU	Yes	Yes
1	C11	Capacitor	10uF	10%	0603	Taiyo Yuden	LMK107BJ106MALTD	Yes	Yes
1	C12	Capacitor	10n	10%	0402	Taiyo Yuden	TMK105B7103KV-F	Yes	Yes
1	C13	Capacitor	1n 500V NPO	10%	1206	Johanson	501R18N102JV4E	Yes	Yes
1	C14	Capacitor	100n	10%	0402	Taiyo Yuden	EMK105B7104KV-F	Yes	Yes
1	D1	DIODE ULT FAST 3A 600V SMB	MURS360BT3G	NA	SMB	On Semiconductor	MURS360BT3G	No	Yes
1	D4	RECT BRIDGE	MB6S	NA	MB6S	MCC	MB6S	Yes	Yes
3	D7, D10, D12	DIODE SWITCH	BAS21DW5T1G	NA	SOT-353	On Semiconductor	BAS21DW5T1G	No	Yes
0	D9	Not Used	-	-	-	-	-	Yes	Yes
1	D11	DIODE ZENER	NZ9F16VST5G	NA	SOD-923	On Semiconductor	NZ9F16VST5G	No	Yes
3	L1,L2,L3	Inductor	470uH	NA	Radial Drum Core LS=2mm	Würth Electronics	7447462471	No	Yes
1	L4	Inductor	125uH	NA	EE16 6-Pin	Würth Electronics	750313017	No	Yes
1	Q1	MOSFET	NDD05N50	NA	D-Pak	On Semiconductor	NDD05N50ZT4G	No	Yes
1	Q3	MOSFET	NDD05N50	NA	I-Pak	On Semiconductor	NDD05N50Z-1G	No	Yes
1	Q2	TRANS GP SS NPN	MMBT3904	NA	SOT-323	On Semiconductor	MMBT3904WT1G	No	Yes
1	Q4	TRANS GP SS PNP	MMBT3906	NA	SOT-323	On Semiconductor	MMBT3906WT1G	No	Yes
2	Q5, Q6	MOSFET N-CH	BSS127	NA	SOT-23	Diodes Inc	BSS127SSN-7	Yes	Yes
1	RT1	THERMISTOR	470 Ohm PTC	20%	0603	Epcos	B59601A0085A062	Yes	Yes
1	RV1	Varistor	MOV 130V	NA	7mm Radial	Littelfuse	V130LA2P	Yes	Yes
1	R1	Resistor	10	5%	0603	Stackpole	RMCF0603JT10R0	Yes	Yes
1	R2	Resistor	15	5%	0603	Stackpole	RMCF0603JT15R0	Yes	Yes
1	R4	Resistor	100k	5%	1206	Stackpole	RMCF1206JT100K	Yes	Yes
1	R6	Resistor	931k	1%	0402	Stackpole	RMCF0402FT931K	Yes	Yes
1	R7	Resistor	22k	5%	0805	Stackpole	RMCF0805JT22K0	Yes	Yes
3	R8,R17	Resistor	1.00k	1%	0402	Stackpole	RMCF0402FT1K00	Yes	Yes
1	R9	Resistor	0.24 1/4W	1%	1206	Stackpole	RMCF1206FTR240	Yes	Yes
2	R12,R32	Resistor	1Meg	1%	0805	Stackpole	HVCB0805FDC1M00	Yes	Yes
1	R13	Resistor	931k	1%	0402	Stackpole	RMCF0402FT931K	Yes	Yes
1	R14	Resistor	57.6k	1%	0402	Stackpole	RMCF0402FT57K6	Yes	Yes
0	R15 (*)	Not Used	13k	1%	0402	Stackpole	RMCF0402FT13K0	Yes	Yes
1	R16	Resistor	100k	1%	0402	Stackpole	RMCF0402FT100K	Yes	Yes
1	R18	Resistor	10k Pot	5%	3.51mm x 3.20mm	TTI	22AR10KLF	Yes	Yes
2	R19,R20	Resistor	6.2k	5%	0805	Stackpole	RMCF0805JT6k20	Yes	Yes
2	R21,R24	Resistor	82.0k	1%	0805	Stackpole	RMCF0805FT82K0	Yes	Yes
1	R22	Resistor	3.3	5%	1206	Stackpole	RPC1206JT3R30	Yes	Yes
1	R23	Resistor	22.1k	1%	0402	Stackpole	RMCF0402FT22K1	Yes	Yes
1	R25	Resistor	20k	1%	0402	Stackpole	RMCF0402FT20K0	Yes	Yes
1	R26	Resistor	4.75k	1%	0402	Stackpole	RMCF0402FT4K75	Yes	Yes
1	R27	Resistor	57.6k	1%	0402	Stackpole	RMCF0402FT57K6	Yes	Yes

2	R28, R29	Resistor	100k	5%	0805	Stackpole	RMCF0805JT100K0	Yes	Yes
1	R30	Resistor	200	5%	1206	Stackpole	RMCF1206JT200R	Yes	Yes
0	R31	Not Used	-	-	-	-	-	Yes	Yes
2	R33, R34	Resistor	3.3k	5%	1206	Stackpole	RMCF1206JT3K30	Yes	Yes
1	R35	Resistor	1Meg	1%	0402	Stackpole	RMCF0402FT1M00	Yes	Yes
1	U1	IC BUCK LED DRIVER PFC 8-SOIC	NCL30002	NA	SOIC-8	On Semiconductor	NCL30002DR2G	No	Yes
6"	W1	Wire stripped at ends.	Wire, Red, 24AWG	NA	UL1569 Stranded	McMaster Carr	7587K922	Yes	Yes
6"	W2	Wire stripped at ends.	Wire, Blk, 24AWG	NA	UL1569 Stranded	McMaster Carr	7587K921	Yes	Yes
12"	W3, W4	Wire stripped at ends.	Wire,Wht, 24AWG	NA	UL1569 Stranded	McMaster Carr	7587K924	Yes	Yes

* Optional resistor to increase Vcc hysteresis

*** Different ordering option for capacitors