



Bill of Materials for the NCL2801LED1GEVB Synchronous Rectification

Designator	Quantity	Description	Value	Tolerance	Footprint	Manufacturer	Manufacturer Part Number	Substitution Allowed	Lead Free
BR1	1	Diode Bridge			SIP	ON Semiconductor	GBU4J	NO	Yes
C1, C4	2	220nF 310V X-cap	220nF		15x7x12.5, 12.5LS	Wurth	890334024002	YES	Yes
C2, C3	2	1nF Y2 cap	1nF			TDK	CD45-E2GA102M-NKA	YES	Yes
C5	1	330nF 310V X-cap	330nF		15x8.5x14, 12.5LS	Wurth	890334024003CS	YES	Yes
C6	1	150nF 630V	150nF		18x7x13, 15LS	Wurth	890303325008CS	YES	Yes
C7, C8	2	1nF 50V X7R	1nF		0603	Wurth	885012206083	YES	Yes
C9	1	2.2uF 25V X7R	2.2uF		1206	Wurth	885012208066	YES	Yes
C10	1	330nF 25V X7R	330nF		1206	Wurth	885012208061	YES	Yes
C11	1	Not Fitted			0603			YES	Yes
C12	1	Not Fitted			1206	Johanson Dielectric	202R18N101JV4E	YES	Yes
C13	1	150uF 500V 105C	150uF		30x35, 10LS	Rubycon	500VXG150MEFCSN30x3	YES	Yes
C13 alt		150uF 500V 105C	150uF		30x35, 10LS	UCC	ELX501VSN151MR35S	YES	Yes
C14	1	100nF 50V X7R	100nF		1206	Wurth	885012208087	YES	Yes
C15	1	22uF 50V 105C	22uF		5x12.5, 2LS	Wurth	860080672001	YES	Yes
D1	1	3A 600V	3A 600V		Through Hole	ON Semiconductor	1N5406G	NO	Yes
D2	1	4A 600V 75ns	4A 600V 75ns		Through Hole	ON Semiconductor	MUR460G	NO	Yes
D3	1	0.2A 100V 4ns	0.2A 100V 4ns		SOD-123	ON Semiconductor	MMSD4148T1G	NO	Yes
D4	1	27V 0.5W Zener	27V 0.5W		SOD-123	ON Semiconductor	MMSZ27T1G	NO	Yes
F1	1	3.15V 300V Fuse	3.15V 300V		Through Hole	Littelfuse	36913150440	YES	Yes
J1, J2	2	3 pos screw conn			Through Hole	Wurth	691131710003	YES	Yes
J3	1	2 pos screw conn			Through Hole	Wurth	691131710002	YES	Yes
L1	1	3.3mH 4A CM	3.3mH 4A		Through Hole	Wurth	744824433	YES	Yes

L2, L3	2	390uH 2A DM	390uH 2A		Through Hole	Würth	744117	YES	Yes
L4	1	180uH 3A Boost	180uH 3A		Through Hole	Würth	760806400	YES	Yes
MOV1	1	470V 25J MOV	470V 25J		7mm disc	Littelfuse	V300LA4P	YES	Yes
Q1	1	650V 14A 190m	650V 14A		TO-220 full pack	ON Semiconductor	FCPF190N65S3L1	NO	Yes
R1, R2	2	1meg 0.25W 1%	0.25W	1%	1206	Vishay	CRCW12061M00FKEA	YES	Yes
R4, R5	2	1.5meg 0.25W 1%	0.25W	1%	1206	Vishay	CRCW12061M50FKEA	YES	Yes
R6	1	300k 0.25W 1%	0.25W	1%	1206	Vishay	CRCW1206300KFKEA	YES	Yes
R7, R8	2	22k 0.1W 1%	22k 0.1W	1%	0603	Vishay	CRCW060322k0FKEA	YES	Yes
R9	1	18k 0.1W 1%	18k 0.1W	1%	0603	Vishay	CRCW060318k0FKEA	YES	Yes
R10, R11	2	1.8meg 0.25W 1%	1.8meg 0.25W	1%	1206	Vishay	CRCW12061M80FKEA	YES	Yes
R12	1	330k 0.25W 1%	330k 0.25W	1%	1206	Vishay	CRCW1206330KFKEA	YES	Yes
R13	1	47k 0.1W 1%	47k 0.1W	1%	0603	Vishay	CRCW060347k0FKEA	YES	Yes
R14, R15	2	22Ω 0.25W 1%	22Ω	1%	1206	Vishay	CRCW120622R0FKEA	YES	Yes
R16	1	10k 0.1W 1%	10k 0.1W	1%	0603	Vishay	CRCW060310k0FKEA	YES	Yes
R17	1	150Ω 0.1W 1%	150Ω	1%	0603	Vishay	CRCW0603150R0FKEA	YES	Yes
R18, R19	2	270mΩ 1W 1%	270mΩ	1%	2512	Panasonic	ERJ-1TRQFR27U	YES	Yes
R20, R21	2	Not Fitted			2512	Panasonic	ERJ-1TNF75R0U	YES	Yes
RTH1	1	20Ω 2.8A NTC	20Ω		11.5mm disc	EPCOS	B57236S0200M000	YES	Yes
U1	1	PFC Controller			SOIC8	ON Semiconductor	NCL2801CDA	NO	Yes
HS1	1	1.813"x3" Heatsink			Aluminum Extrusi	Heatsink USA	1.813"W, 3.00"L	YES	Yes
N1	1	#4-40 Lock			Captive Lock nut	McMaster-Carr	90675A005	YES	Yes
N2	1	#6-32 Lock			Captive Lock nut	McMaster-Carr	90413A101	YES	Yes
P1, P2, P3, P4	4	Nylon supports			Snap In	Richco	TCBS-801	YES	Yes
S1	1	#4-40 x 0.312"			Panhead phillips	McMaster-Carr	90272A107	YES	Yes
S2, S3, S4	3	#6-32 x 0.375", Lock			Panhead phillips	McMaster-Carr	90403A146	YES	Yes
WA1	1	#4 x 0.281"OD			Flat washer	McMaster-Carr	92917A110	YES	Yes