



Bill of Materials for the NCP1237 Evaluation Board

Designator	Quantity	Description	Value	Tolerance	Footprint	Manufacturer	Manufacturer Part Number	Substitution Allowed	Lead Free
C1	1	Capacitor film X2 - 8.5x18 mm	330 nF / 250 Vac	20%	TH	Kemet / Evox-Rifa	PHE840MX6330MB11	YES	YES
C2, C4	2	Capacitor Ceramic	1 nF / 25 V	10%	0805	Vishay	VJ0805Y102KXX	YES	YES
C3, C8	2	Capacitor Ceramic	100 nF / 50 V	10%	0805	Vishay	VJ0805Y104KXA	YES	YES
C5, C21	0	-	Open	-	-	-	-	YES	YES
C6	1	Electrolytic Capacitor - 18x32 mm	100 uF / 400 V	20%	TH	United Chemicon	EKXG401ELL101MMN3S	YES	YES
C7	1	Electrolytic Capacitor	47 uF / 50 V	20%	TH	United Chemicon	ECA-1HM470	YES	YES
C9	1	Capacitor film Y2	2.2 nF / 250 Vac	20%	TH	Kemet / Evox-Rifa	PHE850EA4220MA01R17	YES	YES
C10	1	Capacitor Ceramic	6.8 nF / 630 V	5%	TH	TDK	FK20COG2J682J	YES	YES
C14	1	Capacitor Ceramic	1.0 nF / 250 V	5%	TH	TDK	FK24COG2E102J	YES	YES
C15	1	Capacitor electrolytic	470 uF / 50 V	20%	TH	United Chemicon	ECA-1HM471	YES	YES
C16	1	Capacitor electrolytic	220 uF / 50 V	20%	TH	United Chemicon	ECA-1HM221	YES	YES
C19	1	Capacitor Ceramic	10 nF / 50 V	10%	1206	Vishay	VJ1206Y103KXA	YES	YES
D1	1	Diode Ultrafast 1A / 1KV	MUR1100	-	TH	ON Semiconductor	MUR1100EG	NO	YES
D2	1	Diode bridge 600 V	W06G	-	TH	Vishay	W06G-E4/51	NO	YES
D5, D6	2	Diode	MMSD4148	-	SOD-123	ON Semiconductor	MMSD4148T1G	NO	YES
D7	1	Diode Schottky 20A / 150V	MBRF20H150	-	TO-220	ON Semiconductor	MBRF20H150CTG	NO	YES
D13	1	Diode 1A / 1000 V	1N4007	-	TH	ON Semiconductor	1N4007G	NO	YES
F1	1	Fuse	2.0 A	-	TH	Littelfuse	3921200	NO	YES
HS1, HS2	2	Heatsink - 30x20x1.5 mm	Heatsink	-	TH	custom	-	NO	YES
J1	1	AC connector	770W-X2/10	-	TH	Qualtek	770W-X2/10	NO	YES
JP3	0	Jumper	Open	-	-	-	-	-	YES
No designators	7	Jumpers	Jumper	-	TH	-	-	-	YES
L1	1	Inductor	4.7 uH / 4.2 A	20%	TH	Coilcraft	RFB0807-4R7L	YES	YES
Q5	1	MOSFET 4A / 800V	4N80 fullpack	-	TO-220	Infineon	SPA04N80C3	NO	YES
R1, R2	2	Resistor	1.5 M Ω / 200 V	1%	1206	Vishay	CRCW12061M50FKEA	YES	YES
R3	1	Resistor	14 k Ω	1%	0805	Vishay	CRCW080514K0FKEA	YES	YES
R4	1	Resistor	1.2 k Ω	1%	0805	Vishay	CRCW08051K20FKEA	YES	YES
R5, R41	2	Resistor	1 k Ω / 200 V	1%	1206	Vishay	CRCW08051K00FKEA	YES	YES
R6	1	Resistor	10 Ω	1%	1206	Vishay	CRCW080510R0FKEA	YES	YES
R7	1	Resistor	0.33 Ω	1%	2512	Vishay	WSL2512R3300FEA	YES	YES
R8	1	Resistor	47 Ω / 1/2 W	5%	TH	Vishay	NFR25H0004709JR500	YES	YES
R11	1	Resistor	10 Ω	1%	1206	Vishay	CRCW120610R0FKEA	YES	YES
R13	1	Resistor	0 Ω	-	1206	Vishay	CRCW12060000Z0EA	YES	YES
R14	1	Resistor	200 k Ω / 1/2 W	5%	TH	Vishay	HVR3700002003JR500	YES	YES
R15	1	Inductor	2.2 uH	10%	1206	Vishay	ILSB-1206ER2R2K	NO	YES
R17, R18	2	Resistor	200 Ω / 200 V	1%	1206	Vishay	CRCW1206200RFKEA	YES	YES
R23	1	Resistor	10 k Ω	1%	1206	Vishay	CRCW120610K0FKEA	YES	YES
R24	1	Resistor	3.3 k Ω	1%	1206	Vishay	CRCW12063K30FKEA	YES	YES
R31	1	Resistor	237 k Ω	1%	0805	Vishay	CRCW0805237KFKEA	YES	YES
R32	1	Resistor	20 k Ω	1%	0805	Vishay	CRCW080520K0FKEA	YES	YES
R37	1	Resistor	10 k Ω	1%	0805	Vishay	CRCW080510K0FKEA	YES	YES
T1	1	Vertical common-mode choke	2x10m	-	TH	Epcos	B82732R2142B030	NO	YES
T2	1	Custom	TO09161	-	TH	Ice Components	TO09161	NO	YES

U1	1	-	NCP1237A 65kHz	-	SOIC-7	ON Semiconductor	NCP1237AD65DR2G	NO	YES
U3	1	-	PS2561	-	DIP-4	CEL-NEC	PS2561-1-L-A	NO	YES
U4	1	Adj. Voltage Reference - TO-92	TL431B	-	TO-92	ON Semiconductor	TL431B	NO	YES
ZD1	1	SOD123 Zener diode	17V	-	SOD-123	ON Semiconductor	MMSZ5247BT1G	YES	YES
ZD4	0	-	Open	-	-	-	-	-	-