



Bill of Materials for the NCP1250B40WGEVB Evaluation Board

Designator	Quantity	Description	Value	Tolerance	Footprint	Manufacturer	Manufacturer Part Number	Substitution Allowed	Lead Free
C2	1	Cap, high voltage	10nF, 630Vdc	10%	Through-	Vishay	MKT1822310635	Yes	Yes
C3	1	Cap, electrolytic	4.7uF, 35V	20%	Through-	Panasonic	ECA-1VAD4R7X	Yes	Yes
C4	1	Cap, ceramic	100pF, 1000V	10%	Through-	Panasonic	ECK-A3A101KBP	Yes	Yes
C5a, 5b	2	Cap, electrolytic	680uF, 35V	20%	Through-	Rubycon	35ZL680MEFC12.5X20	No	Yes
C5	1	Cap, ceramic	10nF	10%	SMD1206	Multicomp	MC1206B103K500CT	Yes	Yes
C6	1	Cap, film	10nF	-	Through-	Multicomp	MCRR50103X7RK0050	Yes	Yes
C7	1	Cap, electrolytic	220uF, 25V	20%	Through-	Rubycon	25ML220M8X9	Yes	Yes
C8	1	Cap, ceramic	1nF	10%	SMD1206	Multicomp	MC1206B102K500CT	Yes	Yes
C9	1	Cap, ceramic	330pF	10%	SMD1206	Multicomp	MC1206B331K500CT	Yes	Yes
C10	1	Cap, ceramic	22pF	10%	SMD1206	Multicomp	MC1206B220K500CT	Yes	Yes
C11	1	X2 Cap	470nF, 275Vac	20%	Through-	Epcos	B32922C3474M	Yes	Yes
C12	1	Cap, high-voltage elect.	82uF, 400V	20%	Through-	Panasonic	EEU-ED2G820	Yes	Yes
C13	1	Cap, EMI Y1	2.2nF, 250Vac	20%	Through-	CERAMITE	440LD22	Yes	Yes
C15	1	Cap, ceramic	220pF	10%	SMD1206	Multicomp	MC1206B221K500CT	Yes	Yes
C17	1	Cap, electrolytic	100uF, 35v	20%	Through-	Panasonic	ECA-1VM101	Yes	Yes
C18	1	Cap, ceramic	22pF	5%	Through-	Murata	RPE5C2A220J2M1Z03A	Yes	Yes
D1	1	Diode, Zener	18V, 0.5W	-	SOT23	ON Semiconductor	BZX84C18LT3G	No	Yes
D3-4	2	Diode, fast	1N4937	-	Through-	ON Semiconductor	1N4937G	No	Yes
D5	1	Diode, power	NTST30100SG	-	TO-220	ON Semiconductor	NTST30100SG	No	Yes
D6	1	Diode, signal	1N4148	-	Through-	NXP	1N4148	Yes	Yes
D7	1	Diode, fast	MURA160	-	SMA	ON Semiconductor	MURA160T3G	No	Yes
D10	1	Diode, signal	1N4148	-	SOD123	ON Semiconductor	MMSD4148T3G	No	Yes
F1	1	Fuse	250V, 2A T	-	Through-	Multicomp	MST 2A 250V	Yes	Yes
HS1-2	2	Heat sink	-	-	-	-	-	No	Yes
IC2	1	Regulator, shunt	TL431	-	Through-	ON Semiconductor	TL431CLPG	No	Yes
IC4	1	Diode bridge	KBU4K	-	Through-	Multicomp	KBU4K	Yes	Yes
J1	1	Connector	-	-	Through-hole	Multicomp	JR-201S or 693-4300.0099	Yes	Yes
J2	1	Connector	-	-	Through-	Weidmuller	PM5.08/2/90	Yes	Yes
L1	1	Inductor, common mode	2*20mH, 2A	30%	Through-	Wurth	744822120	No	Yes
L2	1	Inductor	2.2uH, 6A	20%	Through-	Wurth	744772022	Yes	Yes
M1	1	MOSFET, high-voltage	4A, 600V	-	TO-220	ON Semiconductor	NDF04N60ZG	No	Yes
Q1	1	PNP Transistor	BC857	+	SOT23	ON Semiconductor	BC857ALT1G	No	Yes
R5	1	Resistor	1.8K	1%	SMD1206	Vishay	CRCW12061K80FKEA	Yes	Yes
R6a, 6b, 6c	3	Resistor	130%	1%	Through-	Multicomp	MF251R3	Yes	Yes
R8, R19	2	Resistor	1K, .25W	5%	Through-	Multicomp	MF251K	Yes	Yes
R9	1	Resistor	10K	1%	SMD1206	Vishay	CRCW120610K0FKEA	Yes	Yes
R10	1	Resistor	20K	1%	SMD1206	Vishay	CRCW120620K0FKEA	Yes	Yes
R11, R13	2	Resistor, power	47K, 3W	5%	Through-	Vishay	PR03000204702JAC00	Yes	Yes

R12	1	Resistor	18K	1%	SMD1206	Vishay	CRCW120618K0FKEA	Yes	Yes
R14	1	NTC Thermal sensor	100K @ 25C	5%	Through-	Vishay	NT CLE100E3104JB0	No	Yes
R15, 17, R20, R27	4	Resistor, Mains-connected	510K	1%	SMD1206	Vishay	CRCW1206510K00FKEA	Yes	Yes
R16	1	Resistor	1000%	1%	SMD1206	Vishay	CRCW120610R0FKEA	Yes	Yes
R18	1	Resistor	22K	1%	Through-	Multicomp	MF2522K	Yes	Yes
R21	1	Resistor, power	22, 1W	5%	Through-	Vishay	PR01000102209JR500	Yes	Yes
R22	1	Resistor	470K	1%	SMD1206	Vishay	CRCW1206470KFKEA	Yes	Yes
R23	1	Resistor	1K, .25W	1%	SMD1206	Vishay	CRCW2061K00FKEA	Yes	Yes
R24	1	Resistor	22000%	1%	Through-	Multicomp	MF25220	Yes	Yes
R25, R26	2	Resistor	47, 1W	5%	Through-	Vishay	PR01000104709JA500	Yes	Yes
T1	1	Transformer, Flyback PQ 26/25	-	-	Through-	CME France	17452/02	No	Yes
U1	1	Optocoupler	SFH615A-2	-	-	Vishay	SFH615A-2	No	Yes
U3	1	Controller, 65 KHz	NCP1250	-	TSOP6	ON Semiconductor	NCP1250BSN65T1G	No	Yes
V1	1	Screws, countersunk head + nut	M3x6mm	-	-	-	-	Yes	Yes
V2	1	Screw, Nylon + nut	M3x6mm	-	-	Digi-Key	H544-ND & H616-ND	Yes	Yes