



Bill of Materials for the NCP1219PRINTGEVB Evaluation Board

Designator	Quantity	Description	Value	Tolerance	Footprint	Manufacturer	Manufacturer Part Number	Substitution Allowed	Lead Free
C1	1	Capacitor, Metalized Poly Film	0.22 uF, 1000 V	20%	Radial	Kemet/ Evox-Rifa	PHE840MX6220MB06	Yes	Yes
C2	1	Capacitor, Ceramic, SMD	1000 pF	10%	SM/0805	Vishay	VJ0805Y102KXXA	Yes	Yes
C3	1	Capacitor, Ceramic, SMD	0.1 uF	10%	SM/0805	Vishay	VJ0805Y104KXXA	Yes	Yes
C4	1	Capacitor, Ceramic, SMD	open	-	SM/0805	-	-	Yes	Yes
C5	1	Capacitor, Ceramic, SMD	100 pF	10%	SM/0805	Vishay	VJ0805Y101KXXA	Yes	Yes
C6	1	Capacitor, Electrolytic	100 uF, 400 V	20%	Radial	United Chemicon	EKXG401ELL820MM2	Yes	Yes
C7	1	Capacitor, Electrolytic	open	-	-	-	-	Yes	-
C9	1	Capacitor, Ceramic, Y-cap	1 nF, 1000 V	20%	Radial	Kemet/ Evox-Rifa	ERO610RJ4100M	Yes	Yes
C10	1	Capacitor, Ceramic, Through Hole	4700 pF, 630 V	5%	Radial	TDK	FK20C0G2J472J	Yes	Yes
C14	1	Capacitor, Ceramic, Through Hole	470 pF, 250 V	10%	Radial	TDK	FK18C0G2E471J	Yes	Yes
C15	1	Capacitor, Electrolytic	1000 uF, 35 V	20%	Radial	United Chemicon	EKZE350ELL102MK2	Yes	Yes
C16	1	Capacitor, Electrolytic	330 uF, 35 V	20%	Radial	United Chemicon	EKZE350ELL331MJ16	Yes	Yes
C18	1	Capacitor, Ceramic, SMD	open	-	SM/0805	-	-	Yes	Yes
C19	1	Capacitor, Ceramic, SMD	0.033 uF	10%	SM/0805	Vishay	VJ0805Y333KXJA	Yes	Yes
C20	1	Capacitor, Electrolytic	220 uF, 6.3 V	20%	Radial	United Chemicon	ESMG6R3ELL221ME	Yes	Yes
C21	1	Capacitor, Electrolytic	22 uF, 25 V	20%	Radial	United Chemicon	ESMG250ELL220ME1	Yes	Yes
D1 D2 D3 D4	6	Diode, Rectifier	1 A, 1000 V	-	Axial	ON Semiconductor	1N4007RLG	No	Yes
D5 D6	2	Switching Diode	100V	-	SOD-123	ON Semiconductor	MMSD914T1G	No	Yes
D12	1	Diode, Ultrafast Rectifier	4 A, 200V	-	Axial	ON Semiconductor	MUR420RLG	No	Yes
F1	1	Fuse, Radial Lead	2A, 250V	-	Radial	Littelfuse	3921200000	Yes	Yes
HS1	1	Heatsink	-	-	Custom	-	-	Yes	Yes
J1	1	AC Connector	IEC 320-C8	-	Through Hole	Qualtek	770W-X2/10	Yes	Yes
J2	1	Electrical Connection on Top Layer of PCB	-	-	-	-	-	-	-
J3	1	Electrical Connection on Top Layer of PCB	-	-	-	-	-	-	-
J4	1	Electrical Connection on Top Layer of PCB	-	-	-	-	-	-	-
J5	1	Header, 1 Row of 3	-	-	0.156	Molex	26-64-4030	Yes	Yes
JP1	1	Electrical Connection on Top Layer of PCB	-	-	-	-	-	-	-
JP2 JP3	2	jumper wire	22 AWG	-	-	Belden	8021	Yes	Yes
JP4	1	Electrical Connection on Top Layer of PCB	-	-	-	-	-	-	-
L1	1	Inductor, Power	2.2 uH	-	Radial	Coilcraft	RFB0807-2R2L	Yes	Yes
MECHANICAL	1	Screw	M3 8mm	-	-	Building Fasteners	MPMS 003 0008 PH	Yes	Yes
MECHANICAL	2	Insulating tubing	22 AWG	-	-	SPI Technology	TTI-S22-1100-NAT	Yes	Yes
Q3	1	Transistor, NPN Bipolar	open	-	SOT-23	-	-	Yes	-
Q5	1	MOSFET, Power	7 A, 650 V	-	220-3-31, Full	Infineon	SPA07N65C3	Yes	Yes
Q6	1	MOSFET, Small Signal	115 mA, 60 V	-	SOT-23	ON Semiconductor	2N7002LT1G	No	Yes
R1 R2	2	Resistor, SMD	4.75MOhm	0.01	SM/1206	Vishay	CRCW12064754FN	Yes	Yes
R3	1	Resistor, SMD	14 kOhm	0.01	SM/0805	Vishay	CRCW080520K0FN	Yes	Yes
R4	1	Resistor, SMD	412 Ohm	0.01	SM/0805	Vishay	CRCW08054120FN	Yes	Yes
R5 R8	2	Resistor, SMD	1.4MOhm	0.01	SM/1206	Vishay	CRCW12061404FN	Yes	Yes

R6	1	Resistor, SMD	100Ohm	0.01	SM/1206	Vishay	CRCW120610R0FN	Yes	Yes
R9	1	Resistor, Through Hole	20 Ohm	0.01	Axial	Yageo	MFR-25FBF-20R0	Yes	Yes
R10 R11	2	Resistor, SMD	open	-	SM/1206	-	-	Yes	-
R13	1	Resistor, Through Hole	0 Ohm	Jumper	Axial	Panasonic - ECG	ERD-S2T0V	Yes	Yes
R14	1	Resistor, Through Hole	120 kOhm	0.05	Axial	Vishay	HVR3700001203JR500	Yes	Yes
R15	1	Resistor, SMD	100Ohm	0.01	SM/1206	Vishay	CRCW120610R0FN	Yes	Yes
R16	1	Resistor, Through Hole	open	-	Axial	-	-	Yes	-
R18	1	Resistor, Through Hole	100 Ohm	0.05	Axial	Vishay	5093NW100R0JBC	Yes	Yes
R20	1	Resistor, Through Hole	open	-	Axial	-	-	Yes	-
R23	1	Resistor, SMD	976 Ohm	0.01	SM/0805	Vishay	CRCW08059760FN	Yes	Yes
R24	1	Resistor, SMD	2.49 kOhm	0.01	SM/1206	Vishay	CRCW08052491FN	Yes	Yes
R25	1	Resistor, SMD	0 Ohm	0.01	SM/0805	Vishay	CRCW08050000FN	Yes	Yes
R30	1	Resistor, SMD	open	-	SM/0805	-	-	Yes	-
R31	1	Resistor, SMD	19.6 kOhm	0.01	SM/1206	Vishay	CRCW080519K6FN	Yes	Yes
R32	1	Resistor, SMD	2.26 kOhm	0.01	SM/0805	Vishay	CRCW08052K26FN	Yes	Yes
R33	1	Resistor, SMD	8.06 kOhm	0.01	SM/0805	Vishay	CRCW08058061FN	Yes	Yes
R34	1	Resistor, SMD	1 kOhm	0.01	SM/0805	Vishay	CRCW08051K00FN	Yes	Yes
R35 R37	2	Resistor, SMD	10 kOhm	0.01	SM/0805	Vishay	CRCW08051001FN	Yes	Yes
R41 R42	2	Resistor, SMD	1.8kOhm	0.01	SM/1206	Vishay	CRCW12061801FN	Yes	Yes
R51 R52 R53 R54	4	Resistor, SMD	1.69 Ohm	0.01	SM/1206	Vishay	CRCW12061R69FN	Yes	Yes
T1	1	Inductor, Common Mode Choke	10 mH	-30%, +50%	Through Hole	Epcos	B82732R2142B30	Yes	Yes
T2	1	Transformer, Flyback	400 uH	-	om, Through	ICE Components	TO09002-1	Yes	Yes
U1	1	Switchmode Controller	NCP1219	-	SOIC-7	ON Semiconductor	NCP1219AD65R2G	No	Yes
U2	1	Optocoupler	open	-	DIP-4	-	-	Yes	-
U3	1	Optocoupler	150% CTR	-	DIP-4	Vishay	SFH615A-3	Yes	Yes
U4	1	Programmable Precision Reference	TL431B	-	TO-92	ON Semiconductor	TL431BCLPRMG	Yes	Yes
ZD1	1	Diode, Zener	open	-	SOD-123	-	-	Yes	-
ZD2 ZD4	2	Diode, Zener	open	-	SOD-123	-	-	Yes	-