



Bill of Materials for the NCP1255PRNGEV B Evaluation Board

Designator	Quantity	Description	Value	Tolerance	Footprint	Manufacturer	Manufacturer Part Number	Substitution Allowed	Lead Free
R1	1	resistor	2.2 k	1%	SMD0805	MULTICOMP	MCHP05W4F2201T5E	Yes	Yes
R2a, R2b	2	resistor	1.5 ohm 0.5 W	1%	SMD2510	PANASONIC	ERJ1TRQF1R5U	Yes	Yes
R3	1	resistor	1 k	1%	SMD0805	MULTICOMP	MCHP05W4F1001T5E	Yes	Yes
R4b	0	DNP	-	-	-	-	-	Yes	Yes
R4a	1	TVS Diode - Transient Voltage Suppressors	600 W	-	through-hole	FAIRCHILD SEMICONDUCTOR	P6KE220A	Yes	Yes
R5	1	resistor	80.6 k	0.1%	SMD0805	TE CONNECTIVITY/ HOLSWORTHY	RP73D2A80K6BTG	Yes	Yes
R6	1	resistor	22 ohms	1%	SMD0805	MULTICOMP	MCHP05W4F220JT5E	Yes	Yes
R7	1	resistor	4.3 k	1%	SMD0805	VISHAY BC	MCU08050C4301FP500	Yes	Yes
R9abc	3	resistor	330 k	1%	SMD0805	MULTICOMP	MCHP05W4F3303T5E	Yes	Yes
R10	1	resistor	1 k	1%	SMD0805	MULTICOMP	MCHP05W4F1001T5E	Yes	Yes
R11	1	resistor	10 k	1%	SMD0805	MULTICOMP	MCHP05W4F1002T5E	Yes	Yes
R12	1	Jumper wire	0 ohm	-	through-hole	-	-	Yes	Yes
R13	1	resistor	10 ohms	1%	through-hole	PANASONIC	ERJ-14NF10R0U	Yes	Yes
R14	1	resistor	2.2 Meg	1%	through-hole	VISHAY BC COMPONENTS	MRS25000C2204FCT00	Yes	Yes
R15	1	resistor	1 k	1%	SMD0805	MULTICOMP	MCHP05W4F1001T5E	Yes	Yes
R16	1	resistor	330 k	1%	SMD0805	MULTICOMP	MCHP05W4F3303T5E	Yes	Yes
R17	1	resistor	118 k	0.1%	SMD0805	MULTICOMP	MCTC0525B1183T5E	Yes	Yes
R18	1	resistor	80.6 ohms	1%	through-hole	VISHAY BC COMPONENTS	MRS25000C8069FCT00	Yes	Yes
R19	1	resistor	820 k	1%	through-hole	VISHAY BC COMPONENTS	MRS25000C8203FCT00	Yes	Yes
R20	1	resistor	390 k	1%	through-hole	VISHAY BC COMPONENTS	MRS25000C3903FCT00	Yes	Yes
R24	1	resistor	22 k	1%	SMD0805	MULTICOMP	MCHP05W4F2202T5E	Yes	Yes
R35abc	3	resistor	330 k	1%	SMD0805	MULTICOMP	MCHP05W4F3303T5E	Yes	Yes
C1	1	capacitor	33 nF/250 V	10%	through-hole	VISHAY	MKT 1822-333//405	Yes	Yes
C2	1	electrolytic capacitor	680 µF/35 V	20%	through-hole	RUBYCON	35ZL680MEFC12.5X20	Yes	Yes
C3	1	capacitor	10 µF/50 V	10%	radial	PANASONIC	ECA1HHG100	Yes	Yes
C4	1	capacitor	220 pF	5%	SMD0805	MULTICOMP	MCCA000335	Yes	Yes
C5	1	capacitor	1 nF	5%	SMD0805	MULTICOMP	MCCA000351	Yes	Yes
C5a	1	capacitor	470 pF	5%	SMD0805	MULTICOMP	MCCA000342	Yes	Yes
C6	1	electrolytic capacitor	1 µF 16 V	20%	radial	MURATA	MURGRM31MR71C105KA01	Yes	Yes
C7	1	electrolytic capacitor	100 µF/ 400 V	20%	through-hole	NICHICON	UCY2G101MHD	Yes	Yes
C8	1	capacitor	100 pF/1 kV	20%	through-hole	VISHAY	F101K25S3NN63J5R	Yes	Yes
C9	1	capacitor	22 nF	10%	SMD0805	MULTICOMP	MCCA000374	Yes	Yes
C10	1	capacitor	47 pF	5%	SMD0805	MULTICOMP	MCCA000326	Yes	Yes
C11	1	capacitor	680 pF/100 V	10%	through-hole	VISHAY BC COMPONENTS	D681K20Y5PH63L2R	Yes	Yes
C12	1	capacitor	470 nF	10%	radial	EPCOS	B32923C3474K	Yes	Yes
C13	1	capacitor	47 µF/25 V	20%	radial	PANASONIC	ECEA1HN470U	Yes	Yes

C14	1	capacitor	2.2 nF/250 V	20%	radial	MURATA	DE1E3KX222MA5B	Yes	Yes
C15	1	capacitor	0.1µF	10%	SMD0805	AVX	08051C104K4T2A	Yes	Yes
D1	1	ultra-fast diode	MUR160	-	axial	ON Semiconductor	MUR160RLG	No	Yes
D2	1	rectifier	MURD530	-	DPAK-4	ON Semiconductor		No	Yes
D3	1	rectifier	1N4937	-	axial	ON Semiconductor	1N4937RLG	No	Yes
D4	1	rectifier	1N4148	-	axial	FAIRCHILD SEMICONDUCTOR	FDLL4148	Yes	Yes
D5	1	Zener diode	1N973	-	SMDSOD80	NTE Electronics	1N973B	No	
D6	1	TVS	P6KE220A	-	DO15	FAIRCHILD SEMICONDUCTOR	P6KE220A	Yes	Yes
F1'	1	socket for fuse	PCB TR5 TE5	-	radial	Wickmann	5590000000	Yes	Yes
F1	1	fuse	2 A/250 V-T	-	radial	Schurter	0034.6618	Yes	Yes
U1	1	PWM controller	NCP1255	-	SOIC8	On Semiconductor	NCP1255BD65R2G	No	Yes
U2	1	optocoupler	SFH615A-2	-	SMD	VISHAY SEMICONDUCTOR	SFH615A-4	No	Yes
U3	1	shunt regulator	NCP431	-	SMD	On Semiconductor	NCP431ACSNT1G	No	Yes
U4	1	diode bridge	KBU4K	-	through-hole	Multicomp	KBU4K	Yes	Yes
TR1	1	transformer	750313495	-	through-hole	Würth Electronic Midcom	750313495	No	Yes
J1	1	line input connector	C8 SNAP IN 2P	-	through-hole	Schurter	4300.0099	Yes	Yes
J2	1	output voltage connector		-	through-hole	TAIWAN SEMICONDUCTOR	KBU406	Yes	Yes
Q1	1	HV MOSFET	STP7NK80ZFP	-	TO220	ST Microelectronics	STP7NK80ZFP	Yes	Yes
Q2	1	PNP transistor	PMBT2907A	-	SOT23	NXP	PMBT2907A	Yes	Yes
L1	1	self 2x27mH	RN114-0.8-02	-	through-hole	SCHAFFNER	RN114-0.8-02	Yes	Yes
J2	1	PCB terminal block	CTB5000/2	-	through-hole	CAMDEN	CTB5000/2	Yes	Yes
Holes	4	plastic feet	SFCBS-M4-16M-01	-	through-hole	Richco	SFCBS-M4-16M-01	Yes	Yes