



Bill of Materials for the NCP1083WIRGEVB Evaluation Board

Designator	Quantity	Description	Value	Tolerance	Footprint	Manufacturer	Manufacturer Part Number	Substitution Allowed	Lead Free
U1	1	Power over Ethernet controller	NCP1083	-	TSSOPEP20	ON Semi	NCP1083DEG	No	Yes
Cbias1,Cf1	2	Capacitor SMD	100nF/50V	10%	0805-C-S	Walsin	0805B103K500CT	Yes	Yes
Cline_Cpd1	2	Capacitor SMD	100nF/100V	10%	1206-C	AVX	12061C104KAT2A	Yes	Yes
Csn1	1	Capacitor SMD	100pF/200V	10%	0805-C-S	AVX	08052A101JAT2A	Yes	Yes
Cfb1	1	Capacitor SMD	12nF/50V	10%	0805-C-S	AVX	08055C123KAT2A	Yes	Yes
Cfb2	1	Capacitor SMD	1nF/50V	10%	0805-C-S	Walsin	0805B102K500CT	Yes	Yes
Cvddh	1	Capacitor SMD	2.2uF/16V	(+80%) to (-20%)	0805-C-S	AVX	0805YC225MAT2A	Yes	Yes
Cgnd	1	Capacitor SMD	2200pF/2kV	10%	1812	Walsin	1812B222K202LT	Yes	Yes
Cvddl	1	Capacitor SMD	470nF/50V	10%	0805-C-S	AVX	08055C474KAZ2A	No	Yes
Csn2	1	Capacitor SMD	470pF/200V	10%	0805-C-S	AVX	08052C47KJAT2A	Yes	Yes
Css	1	Capacitor SMD	47nF/50V	10%	0805-C-S	AVX	08055C473KAT2A	Yes	Yes
Cft	1	Capacitor SMD	47pF/50V	10%	0805-C-S	Walsin	0805N470J500LT	Yes	Yes
Cpd2, Cpd	2	Electrolytic Capacitor	100uF/63V	(+20%) to (-20%)	CRD10.0L17.0RM5.0	Hitano	EXR101M63	No	Yes
Cf	1	Capacitor Polar	10uF/20V	10%	C-TANT-B	AVX	TAJB106K020R	Yes	Yes
Cout,Cout1	2	Capacitor Polar	33u/25V/100mR	10%	C-TANT-E	AVX	TPSD336K025R0100	No	Yes
T3	1	PoE Plus Transformer	SM-00123	-	EPD20	NUFLUX	SM-00123	No	Yes
Daux2,Dcs,	4	SMD Switching Diode	BAS16HT1G	-	SOD323	ON Semi	BAS16HT1G	No	Yes
Daux1,Dsec	2	Schottky Rectifier	MBR20H100CTG	-	TO-220AB	ON Semi	MBR20H100CTG	No	Yes
Dsn,Dsn1	2	SMD Ultrafast Rectifiers	MURS120T3G	-	403A-03	ON Semi	MURS120T3G	No	Yes
Dbr1,Dbr2,Dbr3, Dbr4,Dbr5,Dbr6	6	SMD Schottky Rectifier	MBR51100T3G	-	403A-03	ON Semi	MBR51100T3G	No	Yes
Zline	1	SMD TVS Zener	1SMA58AT3G	-	SMA	ON Semi / Multicomp	1SMA58AT3G / SMAJ58A	Yes	Yes
Zvrs	1	SMD TVS Zener	1SMB100AT3G	-	403A-03	ON Semi / Multicomp	1SMB100AT3G / SMAJ58A	Yes	Yes
Zaux1,Zvaux	2	SMD Zener	MM3Z3V3ST1G	-	SOD323	ON Semi	MM3Z3V3ST1G	Yes	Yes
Zbr3,Zbr4	2	SMD Zener	MMSZ16T1G	-	SOD123	ON Semi	MMSZ16T1G	Yes	Yes
JOUT	1	Header, 6-Pin	Header 6	-	HDR1X6	FCI	8614-00-36-1-Y0-10	Yes	Yes
P1	1	Header, 10-Pin	Header 10	-	HDR1X10	FCI	8614-00-36-1-Y0-10	Yes	Yes
L1	1	Drum Core Choke	10uH/3A	-	10X12	Prismatic	9404037403	No	Yes
Q1	1	MOSFET N-CHANNEL	FDP39N20	-	TO-220-AB	Fairchild	FDP39N20	No	Yes
Q4	1	MOSFET N-CHANNEL	FDS3992	-	SO-8	Fairchild	FDS3992	No	Yes
Qgate	1	Transistor PNP	BFT92	-	SOT23	Philips	BFT92	Yes	Yes
U2	1	HIGH ISOLATION VOLTAGE SSOP PHOTOCOUPLER	PS2801-1-F3-A	-	SSOP4	CEL	PS2801-1	No	Yes
U3	1	Programmable Shunt Voltage Reference	TL432BIDBZTG4	-	SOT23	Texas-Instruments	TL432BIDBZTG4	No	Yes
Rgate	1	Resistor SMD	10	-	0805-R-S	Walsin	WR08X10R0FTL	Yes	Yes
Rfb4	1	Resistor SMD	100K	1%	0805-R-S	Walsin	WR08X1003FTL	Yes	Yes
Rvau4	1	Resistor SMD	10K	1%	0805-R-S	Walsin	WR08X1002FTL	Yes	Yes
Rinrush	1	Resistor SMD	121k	1%	0805-R-S	Walsin	WR08X1213FTL	Yes	Yes
Rbr3,Rbr4	2	Resistor SMD	150k	1%	0805-R-S	Walsin	WR08X1503FTL	Yes	Yes
Rfb1	1	Resistor SMD	15k	1%	0805-R-S	Walsin	WR08X1502FTL	Yes	Yes
Rosc	1	Resistor SMD	182K	1%	0805-R-S	Walsin	WR08X1823FTL	Yes	Yes
Rbias2	1	Resistor SMD	1M	1%	0805-R-S	Walsin	WR08X1004FTL	Yes	Yes
Rterm	1	Resistor SMD	2.2	1%	0805-R-S	Walsin	WR08X2R2JTL	Yes	Yes
Rvau1	1	Resistor SMD	2.21K	1%	0805-R-S	Walsin	WR08X2211FTL	Yes	Yes
Rdet1	1	Resistor SMD	24.9k	1%	0805-R-S	Walsin	WR08X2492FTL	Yes	Yes
Rst12	1	Resistor SMD	3.3K	1%	0805-R-S	Walsin	WR08X3301FTL	Yes	Yes
Rfb2	1	Resistor SMD	3.92k	1%	0805-R-S	Walsin	WR08X3921FTL	Yes	Yes
Rclass	1	Resistor SMD	30.1	1%	0805-R-S	Yageo	RC0805FR-0730R1L	Yes	Yes
Rsn1	1	Resistor SMD	330E /1W	5%	2512-S	Walsin	WR25X331JTL	Yes	Yes
Rilim1	1	Resistor SMD	44.2K	1%	0805-R-S	Walsin	WR08X4422FTL	Yes	Yes
Rdet1	1	Resistor SMD	475K	1%	0805-R-S	Walsin	WR08X4753FTL	Yes	Yes
Raux1,Rbias1, Rsl	3	Resistor SMD	5.1k	5%	0805-R-S	Walsin	WR08X512JTL	Yes	Yes
Rbw,Rsn2	2	Resistor SMD	75	1%	0805-R-S	Walsin	WR08X750JTL	Yes	Yes
Rfb3	1	Resistor SMD	8.25K	1%	0805-R-S	Walsin	WR08X8251FTL	Yes	Yes
Rdet2	1	Resistor SMD	845	1%	0805-R-S	Yageo	RC0805FR-07845RL	Yes	Yes
CST	1	SMT Current Sensors-CST Series	500uH	-	SMD	Coilcraft	CST2-050LB	No	Yes
HS1	1	A10-220 Type copper heat sink	Custom, see drawing	-	25mm X 14.5mm	-	-	Yes	Yes
HS2	1	L Type Mosfet copper heat sink	Custom, see drawing	-	25mm X (38+20) mm	-	-	Yes	Yes
HS3	1	L Type Diode copper heat sink	Custom, see drawing	-	25mm X (38+20) mm	-	-	Yes	Yes
-	3	Screws	M3 X 10	-	-	-	-	Yes	Yes
-	6	Plain Washer	M3	-	-	-	-	Yes	Yes
-	3	Spring Washer	M3	-	-	-	-	Yes	Yes
-	3	Nut	M3	-	-	-	-	Yes	Yes
Cfb3	1	Capacitor	NC	-	0805-C-S	NC	NC	Yes	Yes
Csl	1	Capacitor	NC	-	0805-C-S	NC	NC	Yes	Yes
Zbr1,Zbr2	2	Diode Zener 16V	MMSZ16T1G	-	SOD123	NC	NC	Yes	Yes
Rcs	1	Resistor	OR4/3W	-	2512-S	NC	NC	Yes	Yes
Rbr1,Rbr2	2	Resistor	150K	-	0805-R-S	NC	NC	Yes	Yes
Rfb5	1	Resistor	NC	-	0805-R-S	NC	NC	Yes	Yes
Q2,Q3	2	P-Channel 30V (D-S) MOSFET	SI7113DN	-	POWERPACK 1212-8	NC	NC	Yes	Yes