



Bill of Materials for the NCP1566POE12V6AGEVB Evaluation Board

Designator	Quantity	Description	Value	Tolerance	Footprint	Manufacturer	Manufacturer Part Number	Substitution Allowed	Lead Free	Comment
C1	1	MLC capacitor	2.2 µF	-		Kemet	C1210C225M1RACTU	No	Yes	Low ESR
C2	1	MLC capacitor	2.2 µF	-		Kemet	C1210C225M1RACTU	No	Yes	Low ESR
C3	1	MLC capacitor	2.2 µF	-		Kemet	C1210C225M1RACTU	No	Yes	Low ESR
C4	1	MLC capacitor	2.2 µF	-		Kemet	C1210C225M1RACTU	No	Yes	Low ESR
C5	1	Ceramic capacitor	0.1 µF	20%	0805	Generic		Yes	Yes	
C6	1	Ceramic capacitor	0.1 µF	20%	0805	Generic		Yes	Yes	
C7	1	Electrolytic Capacitor	22 µF	-		Generic	EXV226M035A9DAA	No	Yes	
C8	1	Ceramic capacitor	0.1 µF	20%	0805	Generic		Yes	Yes	
C9	1	Ceramic capacitor	0.1 µF	20%	0805	Generic		Yes	Yes	
C10	1	Ceramic capacitor	100 pF	20%	0805	Generic		Yes	Yes	
C11	1	Ceramic capacitor	100 pF	20%	0805	Generic		Yes	Yes	
C12	1	Ceramic capacitor	100 pF	20%	0805	Generic		Yes	Yes	
C13	1	Ceramic capacitor	0.1 µF	20%	0805	Generic		Yes	Yes	
C14	1	Ceramic capacitor	4.7 µF	20%	0805	Generic		Yes	Yes	
C15	1	Ceramic capacitor	10 nF	20%	0805	Generic		Yes	Yes	
C16	1	Ceramic capacitor	10 nF	20%	0805	Generic		Yes	Yes	
C17	1	Tantalum capacitor	220 µF	-		Kemet	T520Y227M010ATE040	No	Yes	Low ESR
C18	1	Tantalum capacitor	220 µF	-		Kemet	T520Y227M010ATE040	No	Yes	Low ESR
C19	1	Tantalum capacitor	220 µF	-		Kemet	T520Y227M010ATE040	No	Yes	Low ESR
C20	1	Ceramic capacitor	100 pF	20%		Generic		Yes	Yes	
C21	1	Ceramic capacitor	100 pF	20%		Generic		Yes	Yes	
C22	1	Electrolytic Capacitor	22 µF	-		Generic	EXV226M035A9DAA	No	Yes	
C23	1	Ceramic capacitor	1 µF	-	0805	Generic		Yes	Yes	
C24	1	Capacitor	820 pF	1%	0805	Generic		Yes	Yes	
C25	1	Capacitor	22 nF	20%	0805	Generic		Yes	Yes	
C26	1	MLC capacitor	0.1 µF	-	2220	Kemet	C2220X104K2RACTU	No	Yes	
C27	1	Capacitor - Y type	2.2 nF	-	1812	TDK	C4532X7R3D222K	No	Yes	
C28	1	Ceramic capacitor	10 nF	20%	0805	Generic		Yes	Yes	
C29	0	Ceramic capacitor	-	-				Yes	Yes	
C30	1	Ceramic capacitor	220 pF	20%	0805	Generic		Yes	Yes	
C31	1	Ceramic capacitor	1 µF	20%		Generic		Yes	Yes	
C32	1	Ceramic capacitor	1.5 nF	20%		Generic		Yes	Yes	

C33	0	Ceramic capacitor	-			Generic		Yes	Yes	
C34	1	Capacitor	470 pF	20%	0805	Generic		Yes	Yes	
C39	0	Ceramic capacitor	0.1 µF	20%	0805	Generic		Yes	Yes	
C40	1	MLC capacitor	0.1 µF	20%	0805			Yes	Yes	
C100	1	Ceramic capacitor	1 nF	20%	0805	Generic		Yes	Yes	
C101	1	Ceramic capacitor	1 nF	20%	0805	Generic		Yes	Yes	
C104	1	Ceramic capacitor	0.1 µF	20%	0805	Generic		Yes	Yes	
R1	1	Resistor	51k	1%	0805	Generic		Yes	Yes	
R2	1	Resistor	10	1%	0805	Generic		Yes	Yes	
R3	1	Resistor	100 k	1%	0805	Generic		Yes	Yes	
R4	1	Resistor	2 k	1%	0805	Generic		Yes	Yes	
R5	1	Resistor	52.1 k	1%	0805	Generic		Yes	Yes	
R6	1	NTC	33 k@25 °C	1%	0603	AVX	NB 21 M 0 0333	Yes	Yes	
R7	1	Resistor	56m	1%	2512	CURRENT SENSE RES	RLP73N3AR056FTDF	No	Yes	Rsense
R8	1	Resistor	150 k	1%	0805	Generic		Yes	Yes	
R9	1	Resistor	43k	1%	0805	Generic		Yes	Yes	
R10	1	Resistor	470	1%	0805	Generic		Yes	Yes	
R11	1	Resistor	499	1%	0805	Generic		Yes	Yes	
R12	1	Resistor	0	1%	0805	Generic		Yes	Yes	
R13	1	Resistor	10 k	1%	0805	Generic		Yes	Yes	
R14	1	Resistor	18 k	1%	0805	Generic		Yes	Yes	
R15	1	Resistor	0	1%	0805	Generic		Yes	Yes	
R16	1	Resistor	10 k	1%	0805	Generic		Yes	Yes	
R17	1	Resistor	10 k	1%	0805	Generic		Yes	Yes	
R18	1	Resistor	10 k	1%	0805	Generic		Yes	Yes	
R19	1	Resistor	1 Meg	5%	0805	Generic		Yes	Yes	
R20	1	Resistor	0		0805	Generic		Yes	Yes	
R21	1	Resistor	5.6 k	1%	0805	Generic		Yes	Yes	
R22	1	Resistor	2 k	1%	0805	Generic		Yes	Yes	
R23a	1	Resistor	2.2	1%	0805	Generic		Yes	Yes	
R23b	1	Resistor	2.2	1%	0805	Generic		Yes	Yes	
R24a	1	Resistor	10 k	1%	0805	Generic		Yes	Yes	
R24b	1	Resistor	10 k	1%	0805	Generic		Yes	Yes	
R25a	1	Resistor	10 k	1%	0805	Generic		Yes	Yes	
R25b	1	Resistor	10 k	1%	0805	Generic		Yes	Yes	
R26	0	Resistor	1 k	1%	0805	Generic		Yes	Yes	
R27	1	Resistor	0		0805	Generic		Yes	Yes	
R29a	1	Resistor	2.2	1%	0805	Generic		Yes	Yes	
R29b	1	Resistor	2.2	1%	0805	Generic		Yes	Yes	
R30	1	Resistor	20k	1%	0805	Generic		Yes	Yes	
R31	1	Resistor	24 k	1%	0805	Generic		Yes	Yes	
R34	1	Resistor	499	1%	0805	Generic		Yes	Yes	
R35	0	Resistor	-		0805	Generic		Yes	Yes	
R36	1	Resistor	499	1%	0805	Generic		Yes	Yes	
R37	1	Resistor	1 k	1%	0805	Generic		Yes	Yes	
R38	1	Resistor	4.2 k	1%	0805	Generic		Yes	Yes	
R39	1	Resistor	4.7	1%	2512	Generic	ASC2512-4R7FT4	Yes	Yes	Welwyn
R40	1	Resistor	4.7	1%	2512	Generic	ASC2512-4R7FT4	Yes	Yes	Welwyn
R41	0	Resistor	0	1%	0805	Generic		Yes	Yes	
R42	1	Resistor	470	1%	0805	Generic		Yes	Yes	
R43	1	Resistor	1k	1%	0805	Generic		Yes	Yes	
R44	1	Resistor	1k	1%	0805	Generic		Yes	Yes	
R45	1	Resistor	10	1%	0805	Generic		Yes	Yes	
R47	1	Resistor	1 k	1%	0805	Generic		Yes	Yes	
R60	1	Resistor	470	1%	0808	Generic		Yes	Yes	
R100	1	Resistor	2.2	1%	1206	Generic		Yes	Yes	
R101	1	Resistor	2.2	1%	1206	Generic		Yes	Yes	
R102	1	Resistor	10k	1%	0805	Generic		Yes	Yes	
R103	0	Resistor	-					Yes	Yes	
R104	1	Resistor	2 k		0805	Generic		Yes	Yes	
RA	1	Resistor	5.6k		0805	Generic		Yes	Yes	Replaces D6
L1	1	Inductor	1.5 µH			Generic	MSS1038-152NL	No	Yes	
L2	1	Inductor	8.2 µH			Coilcraft	XAL1010-822ME	No	Yes	
L3	1	Inductor	660 µH			Coilcraft	DO1606CT-684	No	Yes	
T1	1	Transformer	-			PCA Electronics	EPC3786G-LF	No	Yes	
J1a	1	Test Jack	-			Hirschmann	973582101	Yes	Yes	Red
J1b	1	Test Jack	-			Hirschmann	973582100	Yes	Yes	Black
J2a	1	30 A PC screw	-			Keystone	CAT. NO. 8199	Yes	Yes	
J2b	1	30 A PC screw	-			Keystone	CAT. NO. 8199	Yes	Yes	
Q1A	1	N-channel MOSFET	FDMS2572		Power 56	ON Semiconductor	FDMS2572	No	Yes	
Q1B	0	N-channel MOSFET	FDMS2572		Power 56	ON Semiconductor	FDMS2572	No	Yes	
Q2	1	P-channel MOSFET	IRF6217		SO-8	International Rectifier	IRF6217	No	Yes	
Q3	1	N-channel MOSFET	BSC123N08NS3		SO-8FL	Infineon		Yes	Yes	

Q4	0	N-channel MOSFET	-	SO-8FL	ON Semiconductor		Yes	Yes	
Q5	1	N-channel MOSFET	BSC123N08NS3	SO-8FL	Infineon		Yes	Yes	
Q6	0	N-channel MOSFET	-	SO-8FL	ON Semiconductor		Yes	Yes	
Q7	1	Bipolar transistor	MMBTA06LT1G		ON Semiconductor		Yes	Yes	
Q8	1	Bipolar transistor	MMBT2222A		ON Semiconductor		Yes	Yes	
Q9	1	Bipolar transistor	FMMT624		Diode Inc.		No	Yes	
Q10	1	Bipolar transistor	FMMT624		Diode Inc.		No	Yes	
U1	1	PWM Controller	NCP1566		ON Semiconductor		No	Yes	
U2	1	optocoupler	PS2801		CEL	PS2801-1	No	Yes	
U6	1	optocoupler	PS2801		CEL	PS2801-1	No	Yes	
U8	1	shunt regulator	NCP431	SOT-23	ON Semiconductor	NCP431ACSNT1G	No	Yes	SOT-23
U9	1	shunt regulator	NCP431	SOT-23	ON Semiconductor	NCP431ACSNT1G	No	Yes	SOT-23
DA	1	signal diode	MMSD914	SOD-123			Yes	Yes	Replaces R26 cath to R60
D1	1	signal diode	MMSD914	SOD-123			Yes	Yes	
D2	1	signal diode	MMSD914	SOD-123			Yes	Yes	
D3	1	signal diode	MMSD914	SOD-123			Yes	Yes	
D4	1	signal diode	MMSD914	SOD-123			Yes	Yes	
D5	1	Zener diode	MMSZ5242	SOD-123		MMSZ5242BT1G	Yes	Yes	
D6	0	Zener diode	MMSZ4689	SOD-123			Yes	Yes	
D7	1	signal diode	MMSD914	SOD-123			Yes	Yes	
D8	1	Zener diode	MMSZ4699T1G	SOD-123			Yes	Yes	
D9	1	signal diode	MMSD914	SOD-123			Yes	Yes	
D10	1	Zener diode	MMSZ4702T1G	SOD-123			Yes	Yes	
D11	1	signal diode	MMSD914	SOD-123			Yes	Yes	
D12	1	signal diode	MMSD914	SOD-123			Yes	Yes	
D13	1	Zener diode	MMSZ4702T1G	SOD-123			Yes	Yes	