



Bill of Materials for the NCP12700POE45W24VGEVB Evaluation Board

Designator	Quantity	Description	Value	Tolerance	Footprint	Manufacturer	Manufacturer Part Number	Substitution Allowed	Lead Free
T1	1	RM8LP XFMR w/ ML29D Material	31uH ML29D Core		RM8LP	Würth Elektronik	750318890 Rev1	Yes	Yes
R3 R5 R19 R23	4	SMT Resistor	0R0		603	Vishay	CRCW06030000Z0EAC	Yes	Yes
R10	1	SMT Resistor	100k		603	Vishay	CRCW0603100KFKEAC	Yes	Yes
R22	1	SMT Resistor	10R0		603	Panasonic Electronic Components	ERJ-3EKF10R0V	Yes	Yes
R12 R17 R20-21	4	SMT Resistor	10k		603	Vishay	CRCW060310K0FKEB	Yes	Yes
R7	1	SMT Resistor	15R		603	Vishay Dale	CRCW060315R0FKEA	Yes	Yes
R16	1	SMT Resistor	18.2k		603	Vishay	CRCW060318K2FKEA	Yes	Yes
R26	1	SMT Resistor	2.00k		603	Vishay	CRCW06032K00FKEAC	Yes	Yes
R15 R28	2	SMT Resistor	2.49k		603	Vishay	CRCW06032K49FKEA	Yes	Yes
R1	1	SMT Resistor	25.5R		603	Vishay Dale	CRCW060325R5FKEA	Yes	Yes
R13	1	SMT Resistor	374R		603	Vishay Dale	CRCW0603374RFKEA	Yes	Yes
R6	1	SMT Resistor	374k		603	Vishay	CRCW0603374KFKEA	Yes	Yes
R18	1	SMT Resistor	4.99R		603	Vishay	CRCW06034R99FKEA	Yes	Yes
R30	1	SMT Resistor	4.99k		603	Vishay	CRCW06034K99FKEAC	Yes	Yes
R24	1	SMT Resistor	75k		603	Vishay	CRCW060375K0FKEA	Yes	Yes
R25	1	SMT Resistor	8.87k		603	Vishay Dale	CRCW08058K87FKEA	Yes	Yes
R11 R27 R29 R32	4	SMT Resistor	DNI		603	Vishay		Yes	Yes
CY1	1	CAP CER 680PF 250VAC X7R 1808 CAP CER 680PF 250VAC X7R 1808	1000pF	250VAC	1808 (4520 Metric)	Johanson Dielectrics Inc.	502R29W102KV3E-****-SC	Yes	Yes
C11	1	SMT Ceramic Capacitor	0.1uF	100V	603	TDK	CGA3E3X7S2A104K080AB	Yes	Yes
C10	1	SMT Ceramic Capacitor	10nF	50V	603	TDK	CGA3E2X7R1H103K080AA	Yes	Yes
C6 C22-23	3	SMT Ceramic Capacitor	1uF	50V	603	TDK	CGA3E3X5R1H105K080AB	Yes	Yes
C9	1	SMT Ceramic Capacitor	2.2uF	50V	603	Murata	GRM188R61H225KE11D	Yes	Yes
C3	1	SMT Ceramic Capacitor	22nF	25V	603	TDK	CGJ3E2X7R1E223K080AA	Yes	Yes
C4	1	SMT Ceramic Capacitor	4.7nF	16V	603	Würth Elektronik	8.85012E+11	Yes	Yes
C13	1	SMT Ceramic Capacitor	4.7nF	50V	603	Kemet	C0603C472K5RACTU	Yes	Yes
C1	1	SMT Ceramic Capacitor	470pF	50V	603	KEMET	C0603C471J5GACTU	Yes	Yes
C12 C14	2	SMT Ceramic Capacitor	DNI		603			Yes	Yes
C5	1	SMT Ceramic Capacitor	10nF	50V	603	TDK	CGA3E2X7R1H103K080AA	Yes	Yes
C16	1	SMT Ceramic Capacitor	DNI		603			Yes	Yes
C34	1	SMT Capacitor	6800pF	200V	805	KEMET	C0805C682K2RAC7800	Yes	Yes
C2	1	Ceramic Capacitor SMT	0.1uF	200V	1206	Kemet	C1206C104KARACTU	Yes	Yes
C15	1	Ceramic Capacitor SMT	10 uF	50V	1206	TDK	CGA5L3X5R1H106M160AB	Yes	Yes

C18-21	4	Ceramic Capacitor SMT	1uF	100V	1206	TDK	C3216X7R2A105K160AA	Yes	Yes
C7	1	Ceramic Capacitor SMT	470pF	200V	1206	Kemet	C1206C471J2GACTU	Yes	Yes
C8 C17	2	Aluminum Electrolytic Cap	330uF/35V	35V	(10.3x10.3x10)mm	Panasonic Electric Components	EEE-FP1V331AP	Yes	Yes
D2-5	4	High Voltage Diode	200V 200mA	200V	SOD-123T	ON Semiconductor	MMSD3070	No	Yes
Q2	1	Power NFET	120V 7.2mOhm	120V	SOIC8_FL	ON Semiconductor/Fairchild	FDMS86202	Yes	Yes
Q1	1	Power NFET	150V 11mOhm	150V	SOIC8_FL	ON Semiconductor/Fairchild	FDMS86255	Yes	Yes
U8	1	Optoisolator	1.17V 50mA	80V	4-SMD_Gull Wing	ON Semiconductor	FODM8801BV	No	Yes
L1-2	2	SMT Inductor	0.47uH		8.1X8.6X	Würth Elektronik	744314047	Yes	Yes
PGO	1	Green Test Point			Through Hole	E-Mark Inc	01-1036	Yes	Yes
VIN+ VOUT+	2	Red Test Point			Through Hole	E-Mark Inc	01-1178	Yes	Yes
VIN- VOUT-	2	Black Test Point			Through Hole	E-Mark Inc	01-1015	Yes	Yes
Q4	1	NPN Transistor	80V 200mA	40V	SOT-23-3	ON Semiconductor	BSS64L	No	Yes
Z2	1	Zener Diode	12 V		SOD-323	ON Semiconductor	MM3Z12VB	Yes	Yes
Z1	1	Zener Diode	24V		SOD-323	ON Semiconductor	SZMM3Z24VT1G	Yes	Yes
Z4	1	Zener Diode	DNI		SOD-123	ON Semiconductor		No	Yes
U1	1	NCP12700				ON Semiconductor	NCP12700C	No	Yes
U2	1	Sync Rec	20V		DFN8	ON Semiconductor	NCP4306AAZZAMN1TBG	No	Yes
RT1	1	SMT Resistor	100k		603	Panasonic Electronic Components	ERT-J1VV104J	Yes	Yes
R31	1	SURFACE MOUNT RESISTOR	0R0		805	Vishay Dale	CRCW08050000Z0EAHP	Yes	Yes
R4 R33	2	SURFACE MOUNT RESISTOR	100R		805	Vishay	CRCW0805100RFKEAC	Yes	Yes
R14	1	SURFACE MOUNT RESISTOR	DNI		805			Yes	Yes
D1	1	Schottky Diodes	600V 1A	600V		ON Semiconductor	ES1JFL	No	Yes
U4	1	IC VREF SHUNT ADJ SOT23	2.5V	36V	SOT-23	ON Semiconductor	NCP431ACSNT1G	No	Yes
R2 R35	2	SMT Sense Resistor	10k		1206	Susumu	HRG3216P-1002-B-T1	Yes	Yes
R8-9	2	SMT Sense Resistor	80mOhm		1206	Vishay	WSL1206R0800FEA	Yes	Yes
R34 R36	2	SMT Sense Resistor	DNI		1206			Yes	Yes