



Bill of Materials for the NCP1608BOOST Evaluation Board

Designator	Quantity	Description	Value	Tolerance	Footprint	Manufacturer	Manufacturer Part Number	Substitution Allowed	Lead Free
BRIDGE	1	Bridge Rectifier, 4 A, 600 V	-	-	KBL	Vishay	KBL06-E4/51	Yes	Yes
C1, C2	2	Capacitor, EMI Suppression, 305 Vac	0.47 μ F	20%	Radial	EPCOS	B32923C3474M	Yes	Yes
C3	1	Capacitor, Ceramic, SMD, 50 V	8.2 nF	5%	1206	TDK Corporation	C3216C0G1H822J	Yes	Yes
CBULK	1	Capacitor, Electrolytic, 450 V	68 μ F	20%	Radial	United Chemi-Con	EKXG451ELL680MMN3S	Yes	Yes
CCOMP	1	Capacitor, Ceramic, SMD, 25 V	0.68 μ F	10%	1206	TDK Corporation	C3216X7R1E684K	Yes	Yes
CCOMP1	1	Capacitor, Ceramic, SMD, 25 V	3.3 μ F	10%	1206	TDK Corporation	C3216X7R1E335K	Yes	Yes
CCS, CZCD	2	Capacitor, Ceramic, SMD	open	-	1206	-	-	-	-
CIN	1	Capacitor, EMI Suppression, 305 Vac	0.1 μ F	20%	Radial	EPCOS	B32921A2104M	Yes	Yes
CT1	1	Capacitor, Ceramic, SMD, 50 V	1 nF	10%	1206	Yageo	CC1206KRX7R9BB102	Yes	Yes
CT2	1	Capacitor, Ceramic, SMD, 50 V	220 pF	10%	1206	Yageo	CC1206KRX7R9BB221	Yes	Yes
CVCC	1	Capacitor, Electrolytic, 25 V	47 μ F	20%	Radial	Panasonic	EEU-FC1E470	Yes	Yes
CVCC2	1	Capacitor, Ceramic, SMD, 50 V	0.1 μ F	10%	1206	Yageo	CC1206KRX7R9BB104	Yes	Yes
D1	1	Diode, Switching, 100 V	-	-	SOD123	ON Semiconductor	MMSD4148T1G	No	Yes
DAUX	1	Diode, Zener, 18 V	-	-	SOD123	ON Semiconductor	MMSZ4705T1G	No	Yes
DBOOST	1	Diode, Ultrafast, 4 A, 600 V	-	-	Axial	ON Semiconductor	MUR460RLG	No	Yes
DDRV	1	Diode, Switching	open	-	SOD123	-	-	-	-
DVCC	1	Diode, Zener	open	-	SOD123	-	-	-	-
F1	1	Fuse, SMD, 2 A, 600 V	-	-	SMD	Littelfuse	0461002.ER	Yes	Yes
J1	1	Header 1 Row of 2, 100 mil	-	-	2.54 mm	3M	929400-01-36-RK	Yes	Yes
J2, J3	2	Connector, 156 mil 3 pin	-	-	156 mil	MOLEX	26-60-4030	Yes	Yes
L1	1	Inductor, Radial, 4 A	180 μ H	10%	Radial	Coilcraft	PCV-2-184-05L	No	Yes
L2	1	Line Filter, 2.7 A	4.7 mH	-	Through Hole	Panasonic	ELF-20N027A	Yes	Yes
LBOOST	1	Inductor, 400 μ H, NB:NZCD = 10:1	-	-	Custom	Coilcraft	JA4224-AL	No	Yes
MECHANICAL	1	Shorting Jumper	-	-	-	3M	929955-06	Yes	Yes
MECHANICAL	1	Heatsink	-	-	TO-220	Aavid	590302B03600	Yes	Yes
MECHANICAL	1	Screw, Phillips, 4-40, 1/4", Steel	-	-	-	Building Fasteners	PMSSS 440 0025 PH	Yes	Yes
MECHANICAL	1	Nut, Hex 4-40, Steel	-	-	-	Building Fasteners	HNSS440	Yes	Yes
MECHANICAL	1	Shoulder Washer #4, Nylon	-	-	-	Keystone	3049	Yes	Yes
MECHANICAL	1	TO-220 Thermal Pad, 9 mil	-	-	-	Wakefield	173-9-240P	Yes	Yes
MECHANICAL	4	Standoffs, Hex 4-40, 0.75", Nylon	-	-	-	Keystone	4804K	Yes	Yes
MECHANICAL	4	Nut, Hex 4-40, Nylon	-	-	-	Building Fasteners	NY HN 440	Yes	Yes
NTC	1	Thermistor, Inrush Current Limiter	4.7 Ω	20%	Radial	EPCOS	B57238S479M	Yes	Yes
Q1	1	MOSFET, N-Channel, 11.6 A, 560 V	-	-	TO-220	Infineon	SPP12N50C3	Yes	Yes
R1	1	Resistor, SMD	100 Ω	1%	1206	Vishay	CRCW1206100RFKEA	Yes	Yes
RCOMP1	1	Resistor, SMD	20 k Ω	1%	1206	Vishay	CRCW120620K0FKEA	Yes	Yes
RCS	1	Resistor, 0.25 W Axial	510 Ω	5%	Axial	Yageo	CFR-25JB-510R	Yes	Yes
RCT	1	Resistor, SMD	0 Ω	-	1206	Vishay	CRCW12060000Z0EA	Yes	Yes
RCTUP1,RCTUP2	2	Resistor, 0.25 W Axial	750 k Ω	5%	Axial	Yageo	CFR-25JB-750K	Yes	Yes
RDRV	1	Resistor, SMD	10 Ω	1%	1206	Vishay	CRCW120610R0FKEA	Yes	Yes
RO1A, RO1B	2	Resistor, SMD	2 M Ω	1%	1206	Vishay	CRCW12062M00FKEA	Yes	Yes
ROUT2A	1	Resistor, SMD	25.5 k Ω	1%	1206	Vishay	CRCW120625K5FKEA	Yes	Yes
ROUT2B	1	Resistor, SMD	open	-	1206	-	-	-	-
RS1, RS2	2	Resistor, SMD, 1 W	0.25 Ω	1%	2512	Vishay	WSL2512R2500FEA	Yes	Yes
RS3	1	Resistor, SMD	open	-	2512	-	-	-	-
RSTART1,RSTART2	2	Resistor, 0.25 W Axial	330 k Ω	5%	Axial	Yageo	CFR-25JB-330K	Yes	Yes
RZCD	1	Resistor, 0.25 W Axial	100 k Ω	5%	Axial	Yageo	CFR-25JB-100K	Yes	Yes
U1	1	CrM PFC Controller	NCP1608	-	SOIC-8	ON Semiconductor	NCP1608BDR2G	No	Yes