



Bill of Materials for the NCP1602BOOSTGEVB Evaluation Board

Designator	Quantity	Description	Value	Tolerance	Footprint	Manufacturer	Manufacturer Part Number	Substitution Allowed	Lead Free
J4	1	PC terminal block	--	--	--	Phoenix	MTBSA2.5/2-5.08	YES	YES
P1	1	4-mm Red-Connector	--	--	--	Multicomp	23.3200-22	YES	YES
P2	1	4-mm Black-Connector	--	--	--	Multicomp	23.3200-21	YES	YES
EARTH	1	4-mm Yellow-Connector	--	--	--	DELTRON	571-0700	YES	YES
L	1	4-mm Black-Connector	--	--	--	DELTRON	571-0100	YES	YES
N	1	4-mm Blue-Connector	--	--	--	DELTRON	571-0200	YES	YES
S1A:S1B:S2A:S2B	4	JUMPER	--	--	--	HARWIN	03082705	YES	YES
S3:S4A:S4B:S4C	4	Wire Strip	stiff insulated wire	--	0.700" length	Various	Various	YES	YES
VAUX:VBULK:VIN:VLINE	4	TEST POINT	--	--	--	keystone	5000	YES	YES
CSZCD:DRV:FB:GND:VCC:VCTRL	6	TEST POINT	--	--	--	Various	Various	YES	YES
-	4	Board Supports	--	--	--	TCBS-801	RICHCO	YES	YES
HS1	1	Heatsink with fixation clips to PCB	--	--	--	COLUMBIA-STAYER	TP2075T,120,12.5,NA,SP,0	NO	YES
		Heatsink MOSFET clip	--	--	--	COLUMBIA-STAYER	W950	NO	YES
		Heatsink diodes bridge clip	--	--	--	COLUMBIA-STAYER	W936R	NO	YES
F1	1	4-A fuse	4A	250V	Through-hole	Multicomp	MCPEP 4A 250V	NO	YES
C1:C2	2	Y Capacitors	1nF	400V	Through-hole	TDK	CD70ZU2GA102MYNKA	NO	YES
C4:C3A:C3B:C3C	4	X2 Capacitors	220 nF	305Vac	Through-hole	EPCOS	B32922C3224K	NO	YES
C5a : C5b	2	Filtering capacitor	220 nF	400v	Through-hole	EPCOS	B32522-E6224-K000	NO	YES
C6A,C6B	2	Bulk Capacitor	68 µF	450v	Through-hole	Rubycon	450QXW68M12.5X40	NO	YES
C7	1	Electrolytic Capacitor	22 µF	50v	Through-hole	RuBYCON	50ML22MEFC	YES	YES
U1	1	DIODES BRIDGE	GBU406	800v/4A	Through-hole	LITE-ON	GBU406	NO	YES
CM1	1	Common Mode Filter	2x3.3 mH	5A	Through-hole	Wurth Elektronik	750341632	NO	YES
L2	1	Boost Inductor	200 µH	6Apk	Through-hole	Wurth Elektronik	750370081 (EFD30)	NO	YES
Q1	1	Power MOSFET	IPA50R250CP	550V	TQ220_C	Infineon	IPA50R250CP	NO	YES
D1	1	Boost Diode	MUR550	5A, 520V	Axial	ON Semiconductor	MUR550APFG	NO	YES
D2	1	Bypass Diode	1N5406	3A, 600V	Axial	ON Semiconductor	1N5406G	NO	YES
DZ2	1	33-V ZENER DIODE	MMSZ33T1	33V, 0.5W	SOD-123	ON Semiconductor	MMSZ33T1G	NO	YES
RTH1	1	Inrush Current Limiter	15 W	1.8Amax	Through-hole	EPCOS	B57153S150M	NO	YES
D3 ,D4	2	Switching Diode	D1N4148	100V	SOD-123	ON Semiconductor	MMSD4148T1G	NO	YES
R1,R2	2	Resistor	1000 kΩ	500V	SMD, 1206	Various	Various	YES	YES
R3	1	Resistor	80 mΩ	1%, 3W	Through-hole	Vishay	LVR03R0800FE12	NO	YES
R4	1	Resistor	10 kΩ	5%	SMD, 1206	Various	Various	YES	YES
R5	1	Resistor	2.2 Ω	1%	SMD, 1206	Various	Various	YES	YES
R6	1	Resistor	22 Ω	1%	SMD, 1206	Various	Various	NO	YES
C13	1	Capacitor	100 nF	50v	SMD, 1206	Various	Various	YES	YES
C10	1	Capacitor	220 nF	50v	SMD, 1206	Various	Various	YES	YES
C9	1	Capacitor	2.2 µF	50v	SMD, 1206	Various	Various	YES	YES
C11,C12	2	Capacitor	NC	50v	SMD, 1206	Various	Various	YES	YES
R8	1	Resistor	680 kΩ	1%	SMD, 1206	Various	Various	YES	YES
R9,R10	2	Resistor	1800 kΩ	1%	SMD, 1206	Various	Various	YES	YES
R27	1	Resistor	0 Ω	5%	2512	Various	Various	YES	YES
R11	1	Resistor	27 kΩ	1%	SMD1206	Various	Various	YES	YES
C8	1	Capacitor	1 nF	50v	1206	Various	Various	YES	YES
R22	1	Resistor	5100 kΩ	1%/ 500V	SMD, 1206	Various	Various	YES	YES
R23	1	Resistor	240 kΩ	1%	SMD, 1206	Various	Various	YES	YES
R24	1	Resistor	240 kΩ	1%	SMD, 1206	Various	Various	YES	YES
Q2	1	Switch Mosfet	NC(**)	--	SOT23	Infineon	BSS127	YES	YES
R30	1	Resistor	0 Ω	1%	SMD, 1206	Various	Various	YES	YES
R21	1	Resistor	39 kΩ	1%	SMD, 1206	Various	Various	YES	YES
R31	1	Resistor	10 kΩ	1%	SMD, 1206	Various	Various	YES	YES
R32	1	Resistor	4700 kΩ	5%	SMD, 1206	Various	Various	YES	YES
R33	1	Resistor	1000 kΩ	5%	SMD, 1206	Various	Various	YES	YES
R42	1	Resistor	NC(**)	10%	SMD, 1206	Various	Various	YES	YES
R41	1	Resistor	NC(**)	10%	SMD, 1206	Various	Various	YES	YES
R40	1	Resistor	NC(**)	10%	SMD, 1206	Various	Various	YES	YES
C30	1	Capacitor	NC(**)	50v	SMD, 1206	Various	Various	YES	YES
D6	1	Diode	NC(**)	100V	SOD-123	ON Semiconductor	MMSD4148T1G	YES	YES
D5 (*)	1	Resistor	NC(**)	1%	SMD, 1206	Various	Various	YES	YES
R39	1	Resistor	NC(**)	1%	SMD, 1206	Various	Various	YES	YES
R37	1	Resistor	NC(**)	1%	SMD, 1206	Various	Various	YES	YES
R36	1	Resistor	NC(**)	1%	SMD, 1206	Various	Various	YES	YES
R38	1	Resistor	NC(**)	1%	SMD, 1206	Various	Various	YES	YES
R34	1	Resistor	NC(**)	1%	SMD, 1206	Various	Various	YES	YES
R12	1	Resistor	22 kΩ	1%	SMD, 1206	Various	Various	YES	YES
R7,R2	2	Resistor	0 Ω	1%	SMD, 1206	Various	Various	YES	YES
U2	1	PFC Controller	NCP1602	--	TSOP6	ON Semiconductor	NCP1602AEA	NO	YES

(*) D5 (name not printed on the pcb) is actually, when used, for a 0Ω resistor which cooper footprint is placed just parallel to D6 cooper footprint
 (**) NC means not connected