



Bill of Materials for the NCP1615GEVB Evaluation Board

Designator	Quantity	Description	Value	Rating	Footprint	Manufacturer	Manufacturer Part Number	Substitution Allowed	Lead Free
L1	1	DM Choke	150 uH		7447021	WURTH	7447021	YES	YES
L2	1	CM Choke	8.5 mH		744823210	WURTH	744823210	YES	YES
L3	1	PFC Transformer	300 uH		EFD-30	WURTH	750313750 Rev. 01	NO	YES
C1	1	X2	100 nF	305 Vac	5 mm x 10.5 mm x 18 mm		B32922C3104M	YES	YES
C2	1	X2	220 nF	305 Vac	7 mm x 12.5 mm x 18 mm		B32922C3224M	YES	YES
C10	1	Ceramic	10 uF	6.3 V	C0603W	TDK	C1608X5R0J106K080AB	YES	YES
C16	1	Ceramic	100 pF	50 V	C0603W	TDK	C1608X7R1H10101K	YES	YES
C15	1	Ceramic	100 nF	50 V	C0603W	TDK	C1608X7R1H104K080AA	YES	YES
C8, C9, C11	3	Ceramic	220 nF	50 V	C0603W	TDK	C1608X7R1H224K080AB	YES	YES
C7	1	Ceramic	2.2 uF	16 V	C0805W	TDK	C2012X7R1C225K125AB	YES	YES
C13	1	Ceramic	10 nF	50 V	C0805W	TDK	C2012X7R1H103K	YES	YES
C14	1	Ceramic	1 nF	50 V	C0603W	TDK	CGA3E2X7R1H102K080AA	YES	YES
C3, C4	2	Y2	1 nF	250 Vac	5 mm	Murata	DE2E3KY102MA2BM01	YES	YES
C5	1	MKP	470 nF	400 V	15 mm	Panasonic	ECW-F4474JL	YES	YES
C6	1	Electrolytic	100 uF	450 V	18 mm x 40 mm	UCC	EKXG451ELL101MM40S	YES	YES
C12	1	Electrolytic	220 uF	35 V	8 mm x 15 mm	UCC	EKY-350ELL221MH15D	YES	YES
F1	1	Fuse	3 A	250 V / 3 A	2AG	LITTELFUSE	0224003.HXP	YES	YES
RV1	1	MOV	2.5 kA	470 V	10 mm	EPCOS	S10K300	YES	YES
R1, R2	2	Resistor	open		R1206W			YES	YES
R6, R20	2	Resistor	open		R0603W			YES	YES
R17, R19	2	Resistor	0		R0603W	Vishay/Dale	CRCW0603000020EA	YES	YES
R9	1	Resistor	10 kΩ		R0603W	Vishay/Dale	CRCW060310K0FKEA	YES	YES
R14	1	Resistor	120 kΩ		R0603W	Vishay/Dale	CRCW0603120KFKEA	YES	YES
R24, R25, R26, R27	4	Resistor	1 kΩ		R0603W	Vishay/Dale	CRCW06031K00FKEA	YES	YES
R13	1	Resistor	270 kΩ		R0603W	Vishay/Dale	CRCW0603270KFKEA	YES	YES
R12, R18	2	Resistor	27 kΩ		R0603W	Vishay/Dale	CRCW060327K0FKEA	YES	YES
R5, R7	2	Resistor	4.7 kΩ		R0603W	Vishay/Dale	CRCW060347K0FKEA	YES	YES
R15	1	Resistor	4.99 MΩ		R0603W	Vishay/Dale	CRCW06034M99FKEA	YES	YES
R11	1	Resistor	22 Ω		R0805W	Vishay/Dale	CRCW080522R0JNEA	YES	YES
R16	1	Resistor	27 Ω		R0805W	Vishay/Dale	CRCW080527R0JNEA	YES	YES
R10	1	Resistor	2.2 Ω		R0805W	Vishay/Dale	CRCW08052R20JNEA	YES	YES
R3, R4	2	Resistor	1 kΩ		R1206W	Vishay/Dale	CRCW12061K00JNEA	YES	YES
R22, R23	2	Resistor	1.8 MΩ		R1206W	Vishay/Dale	CRCW12061M80JNEA	YES	YES
R21	1	Resistor	681 kΩ		R1206W	Vishay/Dale	CRCW1206681KFKEA	YES	YES
R8	1	Resistor	100 mΩ		3 W	TT Electronics	LOB3R100FLFLT	YES	YES
RT1	1	NTC	10 Ω		5 mm	EPCOS	B57153S0100M000	YES	YES
RT2	1	NTC	220 kΩ		2.5 mm	Vishay/Dale	NTCLE100E3224JB0	YES	YES
Q3	1	BJT, NPN, MMBT3904L	MMBT3904L	40 V / 200 mA	SOT-23	ON Semiconductor	MMBT3904LT1G	NO	YES
Q2	1	BJT, PNP, MMBT589	MMBT589	30 V / 1 A	SOT-23	ON Semiconductor	MMBT589LT1G	NO	YES
D4	1	Diode, Fast Acting, 1N5406	1N5406	600 V / 3 A	DO201AD	ON Semiconductor	1N5406G	NO	YES
BD1	1	Diode, Bridge, GBU406	GBU406	600 V / 4 A	18.5 mm x 22 mm	Diodes	GBU406	YES	YES
D3, D6, D7, D8	4	Diode, General Purpose, MMSD4148	MMSD4148	100 V / 200 mA	SOD-123	ON Semiconductor	MMSD4148T1G	NO	YES
ZD3	1	Diode, Zener, 22V	22 V	500 mW	SOD-123	ON Semiconductor	MMSZ22T1G	NO	YES
ZD1	1	Diode, Zener, 27V	27 V	500 mW	SOD-123	ON Semiconductor	MMSZ27T1G	NO	YES
ZD2	1	Diode, Zener, 33V	33 V	500 mW	SOD-123	ON Semiconductor	MMSZ33T1G	NO	YES
D1, D2	2	Diode, Rectifier, MRA4007	MRA4007	1000 V / 1 A	SMA	ON Semiconductor	MRA4007T3G	NO	YES
D5	1	Diode, Fast Acting, MUR550	MUR550	520 V / 5 A	DO201AD	ON Semiconductor	MUR550APFRLG	NO	YES
U1	1	PFC Controller, NCP1615C	NCP1615C		SO16NB LESS, PIN_15	ON Semiconductor	NCP1615C	NO	YES
Q1	1	MOSFET, IPA50R250CP	IPA50R250CP	500 V / 13 A	TO-220FP	Infineon	IPA50R250CP	YES	YES
TP1, TP2, TP3, TP4	4	Test Point	-	-	0.040"	Keystone Electronics	5001	YES	YES
J3, J4	2	SIP-2P	-	-	0.1" Pitch	TE Connectivity	104351-1	YES	YES
J2	1	2T Screw Block	-	-	10 mm Pitch	On Shore Technology	ED200/2DS	YES	YES
J1	1	3T Screw Block	-	-	5 mm Pitch	On Shore Technology	OSTTA030161	YES	YES
HS1	1	Heatsink	-	-	25 mm x 54 mm			YES	YES
-	1	HEX NUT 1/4" STN STEEL (FET)	-	-	1/4", 4-40 Thread	B&F Fastener Supply	HNSS440	YES	YES
-	1	HEX NUT 5/16" STN STEEL (Bridge)	-	-	5/16", 6-32 Thread	B&F Fastener Supply	HNSS 632	YES	YES
-	1	Heatsink Lug	-	-	0.130"	Keystone Electronics	680	YES	YES
-	1	PSM Jumper	-	-	0.1" Pitch	TE Connectivity	881545-1	YES	YES
-	1	Stainless Steel Pan Head Phillips	-	-	1/4", 4-40 Thread	McMaster-Carr	91772A106	YES	YES
-	1	Stainless Steel Pan Head Phillips	-	-	3/8", 6-32 Thread	McMaster-Carr	91772A146	YES	YES
-	4	Nylon Standoff	-	-	6-32 / 1 1/4"	Keystone Electronics	4820	YES	YES
-	4	Nylon Nut	-	-	6-32 / 1/4"	Keystone Electronics	9606	YES	YES