



Bill of Materials for the NCP1249AD65GEVB Evaluation Board

Designator	Quantity	Description	Value	Tolerance	Footprint	Manufacturer	Manufacturer Part Number	Substitution Allowed	Lead Free
C1	1	Ceramic Capacitor	5n6/630V	5%	Radial	TDK Corporation	FK20C0G2J562J	Yes	Yes
C10	1	Electrolytic Capacitor	22u/25V	20%	Radial	Koshin	KLH-025V22ME110	Yes	Yes
C11, C22	2	Suppression Film Capacitors	100n	10%	Through Hole	Epcos	B32922C3104K	Yes	Yes
C12, C13	2	Ceramic Capacitor	2n2/X1/Y1	20%	Disc - Radial	Murata	DE1E3KX222MA5B	Yes	Yes
C14, C25	2	Ceramic Capacitor	100n	10%	0805	Kemet	C0805C104K5RAC	Yes	Yes
C15	1	Electrolytic Capacitor	47u/50V	20%	Radial	Koshin	KLH-050V470ME110	Yes	Yes
C16, C20	2	Ceramic Capacitor	330p	10%	0805	Kemet	C0805C331K5RAC	Yes	Yes
C17	1	Ceramic Capacitor	22p	10%	0805	Kemet	C0805C220K5RAC	Yes	Yes
C18, C23	DNP	Ceramic Capacitor	NU	-	0805	-	-	Yes	Yes
C19	1	Ceramic Capacitor	1n2	10%	0805	Kemet	C0805C122K5RAC	Yes	Yes
C2	1	Ceramic Capacitor	220p/630V	10%	0805	TDK Corporation	FK26C0G2J221J	Yes	Yes
C21	1	Ceramic Capacitor	10n	10%	0805	Kemet	C0805C103K5RAC	Yes	Yes
C24	1	Electrolytic Capacitor	10u/35V	20%	Radial	Koshin	KLH-035V10ME110	Yes	Yes
C26	1	Ceramic Capacitor	2n2/X1/Y1	20%	Disc - Radial	Murata	DE1E3KX222MA5B	Yes	Yes
C27	1	Ceramic Capacitor	150n	10%	0805	Kemet	C0805C154K5RAC	Yes	Yes
C3	1	Ceramic Capacitor	2n2	10%	0805	Kemet	C0805C222K5RAC	Yes	Yes
C4	1	Bulk Capacitor	100uF/400V	20%	Through Hole	United Chemi-Con	EKXG401ELL101MMN3S	Yes	Yes
C5	1	Ceramic Capacitor	1n2/630V	5%	Radial	TDK Corporation	FK26C0G2J122J	Yes	Yes
C6, C7, C8	3	Electrolytic Capacitor	470u/25V	20%	Radial	Panasonic - ECG	ECA-1EHG471	Yes	Yes
C9	1	Ceramic Capacitor	33n	10%	0805	Kemet	C0805C333K5RAC	Yes	Yes
D1, D2, D3, D4, D10, D11, D17, D18	8	Standard Recovery Rectifier	MRA4007T3G	-	SMA	ON Semiconductor	MRA4007T3G	No	Yes
D14	1	Zener diode	MMSZ15	5%	SOD123	ON Semiconductor	MMSZ15T3G	No	Yes
D16	1	30 V Schottky Diode	BAT54	-	SOD123	ON Semiconductor	BAT54T1G	Yes	Yes
D5, D6, D9, D12, D13, D15, D19	7	Diode	MMSD4148	-	SOD123	ON Semiconductor	MMSD4148T3G	No	Yes
D7	1	Standard Recovery Rectifier	1N4007	-	DO41-10B	ON Semiconductor	1N4007G	No	Yes
D8	1	Diode Schottky 100 V 30 A	NTST30100SG	-	TO220	ON Semiconductor	NTST30100SG	Yes	Yes
F1	1	Fuse (MST ser.)	1.6 A	-	Through Hole	Schurter Inc	34.6617	Yes	Yes
IC1	1	SMPS Controller	NCP1249A/B	-	SO-10	ON Semiconductor	NCP1249A	No	Yes

IC2	1	Secondary Side SMPS Controller	NCP4355B	-	SOIC-08	ON Semiconductor	NCP4355BDR2G	No	Yes
L1	1	WE-TI Radial Leaded Wire Wound Inductor	1uH	20%	Radial	Würth Elektronik	744 772 010	No	Yes
L2	1	WE-FI Leaded Toroidal Line Choke	150uH	20%	744 701 8	Würth Elektronik	744 701 8	No	Yes
-	2	Jumper straps (see image below)*	Jumper Wire	-	-	Various	Various	Yes	Yes
L3	1	Inductor	744 841 414	-	744 841 414	Würth Elektronik	744 841 414	No	Yes
L4	1	Power Line Choke	B82734W	-	B82734W	Epcos	B82734W2202B030	Yes	Yes
LED1	1	LED 3 mm Green	LED-3MM-GREEN	-	Through Hole	Vishay	TLHG4400	Yes	Yes
NTC	1	Sensing NTC Thermistor	470k	5%	Disc - Radial	Vishay	NTCLE100E3474JB0	Yes	Yes
OK1, OK2	2	Optocoupler	PC817C	-	4-DIP	Sharp	PC817X2J000F	Yes	Yes
Q1	1	N MOSFET Transistor	SPP11N60C3	-	TO220	Infineon	SPP11N60C3	Yes	Yes
Q2	DNP	Transistor PNP	NU(BC807)	-	SOT23	ON Semiconductor	BC807-40LT1G	Yes	Yes
R1, R2	2	Resistor SMD	2k7	1%	1206	Rohm	MCR18EZH2F2701	Yes	Yes
R10, R13, R16	3	Resistor SMD	2R2	1%	0805	Rohm	MCR10EZHFL2R20	Yes	Yes
R11	1	Resistor SMD	220R	1%	0805	Rohm	MCR10EZPF2200	Yes	Yes
R12	1	Resistor	15R	1%	0207	Vishay	MRS25000C1509FRP00	Yes	Yes
R14	1	Resistor SMD	820k	1%	0805	Rohm	MCR10EZPF8203	Yes	Yes
R15	1	Resistor SMD	51k	1%	0805	Rohm	MCR10EZPF5102	Yes	Yes
R17	1	Resistor SMD	22	1%	0805	Rohm	MCR10EZPF22R0	Yes	Yes
R18	1	Resistor SMD	2M2	1%	0805	Rohm	MCR10EZPF2204	Yes	Yes
R19	1	Resistor SMD	10k	1%	0805	Rohm	MCR10EZPF1002	Yes	Yes
R20	DNP	Resistor SMD	NU(100k)	1%	0805	Rohm	MCR10EZPF1003	Yes	Yes
R21	1	Resistor SMD	2k7	1%	0805	Rohm	MCR10EZPF2701	Yes	Yes
R22	DNP	Resistor SMD	NU(220)	1%	0805	Rohm	MCR10EZPF2200	Yes	Yes
R23	1	Resistor SMD	2k4	1%	0805	Rohm	MCR10EZPF2401	Yes	Yes
R24, R36, R39	3	Resistor SMD	1k	1%	0805	Rohm	MCR10EZPF1001	Yes	Yes
R25	1	Resistor SMD	82k	1%	0805	Rohm	MCR10EZPF8202	Yes	Yes
R26	1	Resistor SMD	18k	1%	0805	Rohm	MCR10EZPF1802	Yes	Yes
R27, R28, R29, R30	4	Resistor SMD	1R	1%	1206	Rohm	MCR18EZHFL1R00	Yes	Yes
R3	1	Resistor SMD	5M6	5%	1206	Rohm	MCR18EZHJ565	Yes	Yes
R31	1	Resistor SMD	8M2	1%	0805	Rohm	MCR10EZPF8204	Yes	Yes
R32	1	Resistor SMD	180k	1%	0805	Rohm	MCR10EZPF1803	Yes	Yes
R33	1	Surge protecting varistor	B72210P2301K101	20%	Disc - Radial	Epcos	B72210P2301K101	Yes	Yes
R34	1	Resistor Through Hole, High Voltage	4M7	5%	Axial Lead	Welwyn	VRW37-4M7JI	Yes	Yes
R35	1	Jumper	Wire Strap	-	Disc - Radial	Various	Various	Yes	Yes
R37, R41	2	Resistor SMD	15k	1%	0805	Rohm	MCR10EZPF1502	Yes	Yes
R38	1	Resistor SMD	3k9	1%	0805	Rohm	MCR10EZPF3901	Yes	Yes
R4, R8	2	Resistor SMD	4M7	5%	1206	Rohm	MCR18EZHJ475	Yes	Yes
R40	DNP	Resistor SMD	NU(220k)	1%	0805	Rohm	MCR10EZPF2203	Yes	Yes
R42	1	Resistor SMD	270	1%	0805	Rohm	MCR10EZPF2700	Yes	Yes
R43	1	Resistor SMD	305k	1%	0805	Vishay	M55342E06B305BRWS	Yes	Yes
R44	1	Resistor SMD	56k	1%	0805	Rohm	MCR10EZPF5602	Yes	Yes
R5, R6	2	Resistor	330k	1%	0207	Vishay	HVR2500003303FR500	Yes	Yes
R7	1	Resistor	2R2	1%	0207	Vishay	MBB02070C2208FRP00	Yes	Yes
R9	1	Resistor SMD	10M	1%	0805	Rohm	MCR10EZPF1005	Yes	Yes
TR1	1	Transformer	KA5038-BL	-	KA5038-BL	CoilCraft	KA5038-BL	Yes	Yes
X1	1	Terminal Block, 2 Way	CTB5000/2	-	W237-102	Cadem El.	CTB5000/2	Yes	Yes
X2	1	Terminal Block, 3 Way	CTB5000/3	-	W237-113	Cadem El.	CTB5000/3	Yes	Yes

CONNECT ACROSS WITH STRAP, ONE THRU EACH HOLE

