



## Bill of Materials for the NCP1351 Adapter Evaluation Board

4/28/2011

Designator	Quantity	Description	Value	Tolerance	Footprint	Manufacturer	Manufacturer Part Number	Substitution Allowed	Lead Free
C1, C4, C5, C9	3	SMD capacitor	100 nF/50 V	5%	SMD 1206	PHYCOMP	2238 581 15649	Yes	Yes
C2	1	capacitor	10 nF/630 V	10%	Radial	Vishay	2222 372 61103	Yes	Yes
C3	1	electrolytic capacitor	4.7 $\mu$ F/50 V	20%	Radial	Panasonic	ECA1HM4R7	Yes	Yes
C5b, C5a	2	electrolytic capacitor	1000 $\mu$ F/35 V	20%	Radial	Panasonic	EEUFC1V102	No	Yes
C6	1	capacitor	100 nF/50 V	10%	Radial	AVX	SR215C104KTR	Yes	Yes
C7	1	electrolytic capacitor	220 $\mu$ F/25 V	20%	Radial	Panasonic	EEUFC1E221	Yes	Yes
C8	1	SMD capacitor	220 pF/50 V	5%	SMD 1206	PHYCOMP	2238 863 15471	Yes	Yes
C10	1	SMD capacitor	220 nF/50 V	10%	SMD 1206	AVX	CM316X7R224K50AT	Yes	Yes
C11	1	X2 capacitor	220 nF/630 V	20%	Radial	Evox Rifa	PHE840MD6220M	Yes	Yes
C12	1	electrolytic capacitor	100 $\mu$ F/400 V	20%	Radial	Panasonic	ECA2GM101	Yes	Yes
C13	1	Y1 capacitor	2.2 nF/250 V	20%	Radial	Ceramate	440LD22	Yes	Yes
C14	1	SMD capacitor	47 pF/50 V	5%	SMD 1206	PHYCOMP	2238 863 15479	Yes	Yes
C15	1	SMD capacitor	22 pF/50 V	5%	SMD 1206	PHYCOMP	2238 863 15229	Yes	Yes
C17	1	electrolytic capacitor	100 $\mu$ F/35 V	20%	Radial	Panasonic	ECA1VM101	Yes	Yes
C18	1	SMD capacitor	270 pF/50 V	5%	SMD 0805	PHYCOMP	2238 861 15271	Yes	Yes
D1	1	zener diode	15 V/225 mW	5%	SOT23	ON Semiconductor	BZX84C15LT1G	No	Yes
D2	1	ultrafast rectifier	1 A/600 V	-	Axial	ON Semiconductor	MUR160G	No	Yes
D3	1	high-speed diode	1 A/600 V	-	Axial	ON Semiconductor	1N4937G	No	Yes
D5	1	schottky diode	20 A/100 V	-	TO220	ON Semiconductor	MBR20100CTG	No	Yes
D6	1	high-speed diode	0.2 A/75 V	-	Axial	Philips	1N4148	Yes	Yes
D8,D9	1	high-speed diode	0.2 A/100 V	-	SOD-123	ON Semiconductor	MMSD4148G	No	Yes
HS1, HS2	2	heatsink	6.2 $^{\circ}$ C/W	-	Radial	Seifert	KL195/25.4/SWI	Yes	Yes
IC2	1	shunt regulator	2.5-36 V/ 1-100 mA	2%	TO92	ON Semiconductor	TL431ILPG	No	Yes
IC4	1	diode bridge	4 A/800 V	-	Radial	Multicomp	KBU4K	Yes	Yes
J1	1	connector	230 Vac/	-	Radial	Schurter	0721-PP	Yes	Yes
J2	1	connector	2"	-	rad5.08mm	Weidmuller	PM5.08/2/90	Yes	Yes
L1	1	Common mode	2*27 mH/0.8 A	-	Radial	Schaffner	RN114-0.8/02	Yes	Yes
L2	1	Inductor	2.2 $\mu$ H/10 A	-	Radial	Würth Elektronik	744772022	Yes	Yes
M1	1	Power MOSFET N-Channel	4 A/600 V	-	TO220	Infineon	SPP04N60C3	Yes	Yes
Q1	1	PNP transistor	-100 mA/-45 V	-	TO92	ON Semiconductor	BC857	No	Yes
R1	1	SMD resistor	2.2 k $\Omega$ /0.25 W	1%	SOT23	Welwyn	WCR12062K22%	Yes	Yes
R2, R7	2	resistor	1 M $\Omega$ /0.33 W	5%	Axial	Vishay	SFR2500001004J-R500	Yes	Yes
R5	1	SMD resistor	2.5 k $\Omega$ /0.25 W	2%	SMD 1206	Welwyn	WCR12062K52%	Yes	Yes
R6b, R6a	2	SMD resistor	1 $\Omega$ /1 W	5%	SMD 2512	PHYCOMP	232276260108	Yes	Yes
R8	1	resistor	1 k $\Omega$ /0.4 W	5%	Axial	Vishay	SFR2500001001J-R500	Yes	Yes
R9	1	SMD resistor	10 k $\Omega$ /0.25 W	2%	SMD 1206	Welwyn	WCR120610K2%	Yes	Yes
R10	1	SMD resistor	39 k $\Omega$ /0.25 W	2%	Axial	Welwyn	WCR120639K2%	Yes	Yes

R11, R13	2	resistor	47 k $\Omega$ /2 W	5%	Axial	Multicomp	MCF2W47K	Yes	Yes
R12	1	SMD resistor	27 k $\Omega$ /0.25 W	2%	SMD 1206	Welwyn	WCR120627K2%	Yes	Yes
R14	1	SMD resistor	-	-	-	-	-	Yes	Yes
R15	1	SMD resistor	5.1 k $\Omega$ /0.25 W	2%	SMD 1206	Welwyn	WCR12065K12%	Yes	Yes
R16	1	SMD resistor	10 $\Omega$ /0.25 W	2%	SMD 1206	Welwyn	WCR120610R2%	Yes	Yes
R17	1	SMD resistor	1.5 k $\Omega$ /0.25 W	2%	SMD 1206	Welwyn	WCR12061K52%	Yes	Yes
R18	1	SMD resistor	47 k $\Omega$ /0.25 W	2%	SMD 1206	Welwyn	WCR120647K2%	Yes	Yes
R19	1	SMD resistor	100 k $\Omega$ /0.25 W	2%	SMD 1206	Welwyn	WCR1206100K2%	Yes	Yes
R20	1	SMD resistor	150 k $\Omega$ /0.25 W	2%	SMD 1206	Welwyn	WCR1206150K2%	Yes	Yes
TP1, TP2, TP3, TP4	4	pcb foot	T POINT A	-	FIX 4 H	Richco	LCBS-TF-M4-8-01	Yes	Yes
T1	1	Transformer	86H-6232	-	Radial	Delta	86H-6232	No	Yes
U1	1	optocoupler	sfh6156/	-	SMD	Vishay	SFH6156-2T	No	Yes
U2	1	CMOS IC	NCP1351B	-	SO-8	ON Semiconductor	NCP1351B	No	Yes

**Note: Screws, nuts, and washers attached to heatsinks MUST be non-conductive (Nylon).**