



Bill of Materials for the NCP1351 Evaluation Board

Designator	Quantity	Description	Value	Tolerance	Footprint	Manufacturer	Manufacturer Part Number	Substitution Allowed	Lead Free
C1	1	X-class EMI suppression capacitor	220nF, 275 VAC	20%	18X10mm, 15mm pitch	NIC	NPX224M275VX2MF	Yes	Yes
C2	1	General purpose high voltage electrolytic	47uF, 400 V	20%	Ø16mm,	NIC	NRE-H470M400V16X31.5F	Yes	Yes
C3	1	Ceramic chip capacitor	470pF, 100 V	10%	1206	NIC	NMC1206X7R471K100F	Yes	Yes
C4	1	Ceramic chip capacitor	100nF, 50 V	10%	0603	NIC	NMC0603X7R104K50F	Yes	Yes
C5, C9	2	Ceramic chip capacitor	220nF, 50 V	10%	0805	NIC	NMC0805X7R224K50F	Yes	Yes
C6	1	General purpose low voltage electrolytic	4.7uF, 35 V	20%	Ø5mm,	NIC	NRWA4R7M50V5X11F	Yes	Yes
C7	1	Ceramic chip capacitor	180pF, 50 V	5%	0603	NIC	NMC0603NPO181J50F	Yes	Yes
C8	1	Ceramic chip capacitor	47nF, 50V	10%	0603	NIC	NMC0603X7R473K50F	Yes	Yes
C10	1	Ceramic chip capacitor	10nF, 1 Kv	10%	1210	JOHANSON	102S41W103KV4E	Yes	Yes
C11	1	General purpose low voltage electrolytic	1uF, 50 v	20%	Ø5mm,	NIC	NRWA1R0M50V5X11F	Yes	Yes
C12	1	Ceramic Y-class capacitor	1nF	20%	Radial, pitch	Murata	DE1E3KX102MN4AL01	Yes	Yes
C13	1	Miniature low impedance electrolytic	470uF, 63 v	20%	Ø12.5mm,	NIC	NRSZ471M63V12.5X25F	Yes	Yes
C14	1	Open	-	-	-	-	-	-	-
C15	1	Ceramic chip capacitor	220nF, 100 v	10%	1206	NIC	NMC1206X7R224K100F	Yes	Yes
C16	1	Ceramic chip capacitor	1uF, 50 v	10%	1206	NIC	NMC1206X7R105K50F	Yes	Yes
D1, D2, D3, D4	4	Axial Lead, Standard Recovery	1 A, 1000 V	-	Axial	ON Semiconductor	1N4007RLG	No	Yes
D5, D8	2	Switching diode	200 mA, 100 V	-	SOD-123	ON Semiconductor	MMSD4148T1G	No	Yes
D6	1	Zener Diode	20V, 1.5 W	-	SMA	ON Semiconductor	1SMA5932BT3G	No	Yes
D7	1	Ultrafast rectifier	1 A, 600 V	-	SMA	ON Semiconductor	MURA160T3G	No	Yes
D9	1	Ultrafast Power Rectifier	8 A, 400V	-	TO-220	ON Semiconductor	MUR840G	No	Yes
D10	1	Zener diode	33V, 200 mW	5%	SOD323	ON Semiconductor	MM3Z33VT1G	No	Yes
IC1	1	Variable Off-Time PWM Controller	-	-	SOIC8	ON Semiconductor	NCP1351BDR2G	No	Yes
IC2	1	Opto-coupler HCPL-817	-	-	HCPL-817-300E	Agilent	HCPL-817-W0AE	Yes	Yes
L1	1	Common Mode Choke	-	-	WE-LF 662/SH	Würth/Midcom	744 662 0027	Yes	Yes
AC	1	Screw Terminal	-	-	5mm pitch	Keystone	8718	Yes	Yes
LED	1	Screw Terminal	-	-	5mm pitch	Phoenix	1985881	Yes	Yes
M1, M2	2	Heatsink	25.9°C/W	-	-	Aavid	577102B00000G	Yes	Yes
Q1	1	General purpose NPN	45 V	-	SOT-23	ON Semiconductor	BC847ALT1G	No	Yes
Q2	1	MOSFET	600 V	-	TO-220	IR	IRFBC40A	Yes	Yes
Q3	1	General purpose PNP	-45 V	-	SOT-23	ON Semiconductor	BC857ALT1G	No	Yes
R1	1	Resistor thick film NRC	150 Ω, 0.33 W	5%	1210	NIC	NRC25J151F	Yes	Yes
R2	1	Resistor thick film NRC	2.2 kΩ, 0.1 W	5%	0603	NIC	NRC06J222F	Yes	Yes
R3	1	Resistor thick film NRC	3 kΩ, 0.1 W	5%	0603	NIC	NRC06J302F	Yes	Yes
R4a, R4b	2	Resistor thick film NRC	1.2 Ω, 1 W	5%	2512	NIC	NRC100J1R2F	Yes	Yes
R5	1	Metal Film Resistor	1 MΩ, 0.5 W	5%	Axial	Vishay	SFR2500001004J-R500	Yes	Yes
R6	1	Metal Film Resistor	2 MΩ, 0.5 W	5%	Axial	Vishay	SFR2500001004J-R500	Yes	Yes
R7	1	Resistor thick film NRC	2.2 kΩ, 0.125 W	5%	0805	NIC	NRC10J222BF	Yes	Yes
R8	1	Resistor thick film NRC	10 Ω, 0.25 W	5%	1206	NIC	NRC12J100F	Yes	Yes
R9	1	Resistor thick film NRC	6.8 kΩ, 0.1 W	5%	0603	NIC	NRC06J682TRF	Yes	Yes
R10	1	Carbon film resistor	12 kΩ, 2 W	5%	Axial	NIC	NCF200J123TRF	Yes	Yes

R11	1	Resistor thick film NRC	200 Ω , 0.125 W	5%	0805	NIC	NRC10J201F	Yes	Yes
R12, R13	2	Resistor thick film NRC	1.8 Ω , 0.33 W	1%	1210	NIC	NRC25J1R8F	Yes	Yes
R14	1	Resistor thick film NRC	2.2 k Ω , 0.125 W	5%	0805	NIC	NRC10J222BF	Yes	Yes
R15	1	Resistor thick film NRC	4.3 k Ω , 0.125 W	5%	0805	NIC	NRC10J432F	Yes	Yes
R16	1	Resistor Thick Film Chip	Short	-	0805	Vishay	CRCW08050000Z0EA	Yes	Yes
Tx1	1	24W Flyback transformer	25W LED TRANSFORMER	-	NIC 10 pin vertical	NIC	NLT282224W3P4020S5P1F	Yes	Yes