



Bill of Materials for the NCP1339CGEV B Evaluation Board

Designator	Quantity	Description	Value	Tolerance	Footprint	Manufacturer	Manufacturer Part Number	Substitution Allowed	Lead Free
C1	1	Y1 capacitor, 250 V	2.2nF, 250V	20%	through-hole	CERAMITE	440LD22	Yes	Yes
C2	1	X2 capacitor, 305 V	330nF	305 V	through-hole	EPCOS	B32922D3334M784	No	Yes
C3	1	X2 capacitor, 305 V	220nF	305 V	through-hole	EPCOS	B32922C3224M784	No	Yes
C4	1	Electrolytic capacitor, 400 V	120uF	400 V	through-hole	RUBYCON	400KXW120MEFC18X30	No	Yes
C5, C6, C9, C13	4	Ceramic Capacitor, SMD, 50 V	1nF	10%, 50 V	SMD0805	Standard	Standard	Yes	Yes
C7	1	Ceramic capacitor, SMD, 50 V	2.2nF	10%, 50 V	SMD0805	Standard	Standard	Yes	Yes
C8	1	Ceramic capacitor, SMD, 50 V	22pF	10%, 50 V	SMD0805	Standard	Standard	Yes	Yes
C10, C14, C18	3	Ceramic Capacitor, SMD, 50 V	220pF	10%, 50 V	SMD0805	Standard	Standard	Yes	Yes
C11	1	Ceramic Capacitor, Axial, 1000V	1.5nF	10%, 1000V	through-hole	VISHAY	F152K43Y5RN6UK5R	Yes	Yes
C12, C21	2	Electrolytic capacitor, 35 V	220uF	20%, 35 V	through-hole	Standard	Standard	Yes	Yes
C15	1	Ceramic capacitor, SMD, 50 V	100nF	10%, 50 V	SMD0805	Standard	Standard	Yes	Yes
C16	1	Ceramic Capacitor, Axial, 1000V	100pF	10%, 1000V	through-hole	MURATA	DEBB33A101KC1B	Yes	Yes
C19, C20	2	Electrolytic capacitor, 35 V	680uF	35V, 2.4 A	through-hole	RUBYCON	35ZL680M12.5X20	No	Yes
C27	1	Ceramic capacitor, SMD, 50 V	47nF	10%, 50 V	SMD0805	Standard	Standard	Yes	Yes
C28	1	Electrolytic capacitor, 35 V	22uF	20%, 35 V	through-hole	Standard	Standard	Yes	Yes
C29	1	Ceramic capacitor, SMD, 50 V	10nF	10%, 50 V	SMD0805	Standard	Standard	Yes	Yes
D1, D2	2	Diode, Axial, 1A, 1000V	MRA4007	1A, 1000V, SMA	SMA	ON Semiconductor	MRA4007T3G	No	Yes
D3, D4, D9	3	Diode, SMD, 100 V	D1N4148	100 V	SOD-123	Standard	MMSD4148	Yes	Yes
D5	1	18 V Zener Diode, Axial	zener	18 V, DO-35	DO-35	Standard	Standard	Yes	Yes
D6, D7	2	Fast Recovery Diode, Axial	D1N4937	1A, 800 V, DO-35	DO-41	ON Semiconductor	1N4937G	No	Yes
D10	1	Diode, Axial, 200mA, 250V	BAV21	200mA, 250V, DO-35	DO-35	Standard	Standard	Yes	Yes
D12	1	Schottky Diode, TO-220, 20 A, 150 V	MBR20H150	20A, 150 V	TO-220	ON Semiconductor	MBRF20H150CTG	No	Yes
HS1, HS2	2	Heatsink, 13°C/W, For M1 & D12	-	13°C/W	through-hole	AAVID THERMALLOY	SW25-2	No	Yes
HSC1, HSC2	2	Heatsink clip for TO-220, For M1 & D12	-	-	-	AAVID THERMALLOY	5901	No	Yes
IC1	1	QR controller	-	-	SOIC-13 Narrow	ON Semiconductor	NCP1339CDR2G	No	Yes
IC2	1	Diode Bridge, 4 A, 800 V	KBU4K	-	through-hole	MULTICOMP	KBU4K	No	Yes
IC4, IC6	2	Optocoupler SFH6156-2, SMD	SFH6156-2	-	SMD-4	VISHAY	SFH6156-2T	No	Yes
IC5	1	Shunt Regulator, 2.5 - 36 V, 1 - 100 mA	NCP431	-	SOT-23	ON Semiconductor	NCP431AVSNT1G	Yes	Yes
F1	1	Fuse, 2A, 250V	2A, 250V	-	through-hole	SCHURTER	.0034.6618	No	Yes

J1	1	Input Connector, 2.5 A, 260 V	-	2.5 A, 260 V	through-hole	MULTICOMP	JR-201S(PCB)	Yes	Yes
J2	1	Output Connector	-	10A, 300V	through-hole	WEIDMULLER	PM5.08/2/90	No	Yes
J3	1	Test point	-	-	through-hole	Keystone	5010	Yes	Yes
L1	1	Differential Mode Choke, 300uH, 2A	300uH	2A	through-hole	WURTH	7447060	No	Yes
L2	1	Common Mode Choke, 2*10 mH, 2 A	10mH	2A	through-hole	WURTH	744823210	No	Yes
L3	1	Radial Coil, 2.2 uH, 6 A, 20%	2.2uH	6 A, 20%	through-hole	WURTH	744772022	No	Yes
M1	1	MOSFET, 600 V, 9 A	FCPF9N60NT	79A, 600 V	TO-220	ON Semiconductor	FCPF9N60NT	No	Yes
Q1	1	PNP transistor, SMD	BC857	-	SOT23	ON Semiconductor	BC857ALT1G	Yes	Yes
R1, R2	2	Resistor, Axial, 3 W, 5%	18kΩ	3 W, 5%	through-hole	Standard	Standard	Yes	Yes
R3	1	Resistor, Axial, 1 W, 1%	10Ω	1%	through-hole	Standard	Standard	Yes	Yes
R4, R5	2	Ceramic Resistor, SMD, 0.25W, 50 V	2.7kΩ	5%	SMD0805	Standard	Standard	Yes	Yes
R6	1	Ceramic Resistor, SMD, 0.25W, 50 V	5.6MΩ	5%	SMD0805	Standard	Standard	Yes	Yes
R7, R8	2	Ceramic Resistor, SMD, 0.25W, 50 V	4.7MΩ	5%	SMD0805	Standard	Standard	Yes	Yes
R9	1	Ceramic Resistor, SMD, 0.25W, 50 V	10MΩ	5%	SMD0805	Standard	Standard	Yes	Yes
R10	1	Ceramic Resistor, SMD, 0.25W, 50 V	20kΩ	5%	SMD0805	Standard	Standard	Yes	Yes
R11	1	Ceramic Resistor, SMD, 0.25W, 50 V	300kΩ	5%	SMD0805	Standard	Standard	Yes	Yes
R12	1	Ceramic Resistor, SMD, 0.25W, 50 V	1.5kΩ	5%	SMD0805	Standard	Standard	Yes	Yes
R13	1	NTC, 100 kΩ at 25°C, Beta = 4190	100k @ 25°C	0.05	through-hole	VISHAY	NTCLE100E3104JB0	No	Yes
R14, R21, R40	3	Ceramic Resistor, SMD, 0.25W, 50 V	1kΩ	5%	SMD0805	Standard	Standard	Yes	Yes
R15	1	Ceramic Resistor, SMD, 0.25W, 50 V	10Ω	5%	SMD0805	Standard	Standard	Yes	Yes
R16	1	Ceramic Resistor, SMD, 0.25W, 50 V	47kΩ	5%	SMD0805	Standard	Standard	Yes	Yes
R17	1	Ceramic Resistor, SMD, 1W, 1%, 50 V	0.47Ω	1 W, 1%	SMD2512	Standard	Standard	Yes	Yes
R18	1	Ceramic Resistor, SMD, 1W, 1%, 50 V	0.62Ω	1 W, 1%	SMD2512	Standard	Standard	Yes	Yes
R20	1	Ceramic Resistor, SMD, 0.25W, 50 V	47Ω	5%	SMD0805	Standard	Standard	Yes	Yes
R22, R29	2	Ceramic Resistor, SMD, 0.25W, 50 V	10kΩ	5%	SMD0805	Standard	Standard	Yes	Yes
R23	1	Ceramic Resistor, SMD, 0.25W, 50 V	27kΩ	5%	SMD0805	Standard	Standard	Yes	Yes
R25	1	Ceramic Resistor, SMD, 0.25W, 50 V	39kΩ	5%	SMD0805	Standard	Standard	Yes	Yes
R27, R42, R52	3	Ceramic Resistor, SMD, 0.25W, 50 V	0Ω	5%	SMD0805	Standard	Standard	Yes	Yes
R53	1	Ceramic Resistor, SMD, 0.25W, 50 V	2.2MΩ	5%	SMD0805	Standard	Standard	Yes	Yes
R54	1	Ceramic Resistor, SMD, 0.25W, 50 V	8.2MΩ	5%	SMD0805	Standard	Standard	Yes	Yes
T1	1	QR Transformer	-	-	through-hole	CME	17212	No	Yes