

Bill of Materials for the NCV7685LOWR1GEVK Evaluation Kit



Designator	Quantity	Description	Value	Tolerance	Footprint	Manufacturer	Manufacturer Part Number	Substitution Allowed	Lead Free
C1, C10, C30, C50, C6, C60	6	Ceramic Capacitor SMD	100NF, 50V, X7R	10%	CAP0603	KEMET	C0603C104K5RAC	Yes	Yes
C12, C32, C52, C62	4	Ceramic Capacitor SMD	10NF, 50V, X7R	10%	CAP0603	MULTICOMP	U0603R103KCT	Yes	Yes
C13, C33, C53, C63	4	Ceramic Capacitor SMD	1NF, 50V, X7R	10%	CAP0603	EPCOS	B37931K5102K60	Yes	Yes
C15, C2, C3	3	Ceramic Capacitor SMD	10uF, 50V, X5R	10%	CAP1206	MURATA	GRM31CR61H106KA12L	Yes	Yes
C8	1	Ceramic Capacitor SMD	470uF, 50V, X7R	10%	CAP0603	PHYCOMP	CC0603KRX7R9BB471	Yes	Yes
C7	1	Ceramic Capacitor SMD	6.8uF, 50V, X7R	10%	CAP0603	PHYCOMP	223858815934	Yes	Yes
C14	1	Electrolytic Capacitor	220uF, 16V	1%	UD_6x6	PANASONIC	EEEFPC221XAP	Yes	Yes
C4	1	Electrolytic Capacitor	47uF, 50V	1%	UD_6x6	NICHICON	UUD1H470MCL1GS	Yes	Yes
D01B ... D12B D01C ... D12C D01D ... D12D D01E ... D12E	48	LED DIODE RED 200mA, 19LM	Advanced Power TOPLED LEDs	-	PLCC-6	OSRAM	LR-G6SP-CADB-1-1	Yes	Yes
D01A ... D12A	12	LED DIODE Yellow 50mA, 14cd	Power TOPLED LEDs	-	PLCC-4	OSRAM	LY E67B-U2AA-26-1	Yes	Yes
LED1W ... LED4W	4	LED DIODE White 3x50mA	CLP6B-WKW	-	6x5mm	CREE	CLP6B-WKW-CD0E0453	Yes	Yes
D100, D101, D103	3	LED DIODE GREEN	20mA	-	D0603	AVAGO TECHNOLOGIES	HSMG-C191	Yes	Yes
CON_DIAG	1	Connector Header 5 pin	160V/8A 5Way	-	3.5mm	Phoenix Contact	MCV 1.5/5-G-3.5	Yes	Yes
CON_FCN	1	Connector Header 6 pin	160V/8A 6Way	-	3.5mm	Phoenix Contact	MCV 1.5/6-G-3.5	Yes	Yes
CON_KEY	1	Connector Header 2 pin	160V/8A 2Way	-	3.5mm	Phoenix Contact	MCV 1.5/2-G-3.5	Yes	Yes
U10, U30, U50, U60	4	LED Driver	NCV7685	-	SSOP24	ON Semiconductor	NCV7685DQR2G	No	Yes
U2	1	Buck Controller	NCV8853	-	SOIC8	ON Semiconductor	NCV885301D1R2G	No	Yes
U3, U4, U5, U6, U7, U8, U9	3	TestPIN True Hole	White	-	H1.0	VERO	20-313139	Yes	Yes
VCC, VS	2	TestPIN True Hole	Red	-	H1.0	VERO	20-313137	Yes	Yes
GND	1	TestPIN True Hole	Black	-	H1.0	VERO	20-2137	Yes	Yes
SCOPEGND1, SCOPEGND2	2	Wire Bridge	SCOPEGND	-	SCOPEGND	AMPHENOL	FCI - 75160-105-38LF	Yes	Yes
QL1	1	SIL Header	1x2 pins, 100 mils	-	X3APH	TYCO	1-826629-6	Yes	Yes
ZD1	1	Zener Diode	3V3 / 500mW / 10mA	-	SOD123	ON Semiconductor	MMS23V3T1G	No	Yes
D1, U2, U3, U4, U5, U6, U7, U8, U9	9	Shottky Diode	40V, 3A	-	DO-214AC	ON Semiconductor	MBRA340T3G	No	Yes
L1	1	Inductor	6.8uH, 11.5A	20%	13.5x12.5x6.2mm	BOURNS	SRP1265A-6R8M	Yes	Yes
Q1	1	Transistor Power Mosfet	P-MOS, -60V, -2.6V	-	WDFN8	ON Semiconductor	NVTF55116PLTAG	Yes	Yes
R3, R101, R12, R13, R30, R32, R33, R52, R53, R62, R63, R7, R15, R35, R55, R65	12	SMD Resistor	10k, 0603, 63mW	5%	R0603	PHYCOMP	232270260103	Yes	Yes
R50, RB	4	SMD Resistor	22k, 0603, 63mW	5%	R0603	YAGEO	RC0603JR-0722KL	Yes	Yes
R100	2	SMD Resistor	3k9, 0603, 63mW	-99%	R0602	MULTICOMP	MC0063W060313K9	Yes	Yes
RA	1	SMD Resistor	1k3, 0603, 63mW	1%	R0603	MULTICOMP	MC0063W060311K3	Yes	Yes
R4	1	SMD Resistor	20k, 0603, 63mW	1%	R0603	MULTICOMP	MC0063W0603120K	Yes	Yes
R4	1	SMD Resistor	12k, 0603, 63mW	1%	R0603	VISHAY	CRCW060312K0FKEA	Yes	Yes

R103	1	SMD Resistor	3k, 0603, 63mW	1%	R0603	PANASONIC	ERA3AEB302V	Yes	Yes
R10_R60	2	SMD Resistor	2k, 0603, 63mW	1%	R0603	PANASONIC	ERA3AEB202V	Yes	Yes
R16	1	SMD Resistor	8k2, 0603, 63mW	1%	R0603	VISHAY	CRCW06038K20FKEAHP	Yes	Yes
R6	1	SMD Resistor	12mR, 1206, 1W	5%	R1206	MULTICOMP	MCLRP06JTETRO12	Yes	Yes

Accessories:

Standoff - plexi	4	Spacer	3.0M, 5mm 6.6 Nylon	-	SPACER_3.0_5 mm	DURATOOL	D01487	Yes	Yes
Standoff - board	8	Spacer	3.0M, 10mm 6.6 Nylon	-	SPACER_3.0_10 mm	DURATOOL	D01489	Yes	Yes
Screw board	4	Machine Crew	M3, Nylon 6.6 (Polyamide 6.6)	-	10mm	DURATOOL	119030010	Yes	Yes
Screw Plexi	4	Machine Crew	M3, Nylon 6.6 (Polyamide 6.6)	-	12mm	DURATOOL	119030012	Yes	Yes
Plexi Board	1	https://www.koplast.org/	Custom Made	-	120 x 60mm	koplast	custom made	Yes	Yes
Jumper	1	Jumper (Busbar), Jumper Socket	M20 Connectors, 2 Ways, 2.54 mm	-	2.54mm	HARWIN	M7686-05	Yes	Yes