



Bill of Materials for the NCV7684STDV1GEVB Evaluation Board

Designator	Quantity	Description	Value	Tolerance	Footprint	Manufacturer	Manufacturer Part Number	Substitution Allowed	Lead Free
C04, C08, CD1a, CD1c, DC3a	5	Ceramic Capacitor SMD	100NF, 50V, X7R	10%	CAP0603	KEMET	C0603C104K5RAC	Yes	Yes
C_JTAG	1	Ceramic Capacitor SMD	100NF, 50V, X7R	10%	CAP0603	KEMET	C0603C104K5RAC	Yes	Yes
C57	1	Ceramic Capacitor SMD	1NF, 50V, X7R	10%	CAP0603	EPCOS	B37931K5102K60	Yes	Yes
CD1b	1	Ceramic Capacitor SMD	1NF, 50V, X7R	10%	CAP0603	EPCOS	B37931K5102K60	Yes	Yes
C1, C2, Co1, Co2, Co3, Co4, Co5, Co6, Co7, Co8, Co9, Co10, Co11, Co12	14	Ceramic Capacitor SMD	1NF, 50V, X7R	10%	CAP0603	EPCOS	B37931K5102K60	Yes	Yes
CD3b, CD3c	2	Ceramic Capacitor SMD	10uF, 16V, X7R	10%	CAP1206	AVX	1206YC106KAT2A	Yes	Yes
C02, C03	2	Ceramic Capacitor SMD	10uF, 50V, X5R	10%	CAP1206	MURATA	GRM31CR61H106KA12L	Yes	Yes
C05	1	Ceramic Capacitor SMD	470pF, 50V, X7R	10%	CAP0603	PHYCOMP	CC0603KRX7R9BB471	Yes	Yes
C06	1	Ceramic Capacitor SMD	6.8nF, 50V, X7R	10%	CAP0603	PHYCOMP	223858615634	Yes	Yes
C07	1	Electrolytic Capacitor	100uF, 16V	1%	UD_6x6	NICHICON	UUD1C101MCL1GS	Yes	Yes
C01	1	Electrolytic Capacitor	47uF, 50V	1%	UD_6x6	NICHICON	UUD1H470MCL1GS	Yes	Yes
D07B, D08B, D09B, D10B, D11B, D12B, D01B, D02B, D03B, D04B, D05B, D06B	12	LED DIODE RED 200mA, 16.5LM	LAG6SP-CBEA-24-1	-	ASMT-QRBD-AEF0E	OSRAM	RC0603JR-07560KL	Yes	Yes
D07C, D08A, D08C, D09A, D09C, D10A, D10C, D11A, D11C, D12A, D12C, D01A, D01C, D02A, D02C, D03A, D03C, D04A, D04C, D05A, D05C, D06A, D06C, D07A	24	LED DIODE RED 200mA, 16.5LM	LAG6SP-CBEA-24-1	-	ASMT-QRBD-AEF0E	OSRAM	RC0603JR-07560KL	Yes	Yes
D10	1	LED DIODE RED 20mA	KP-1608SURCK	-	D0603	KINGBRIGHT	HSMS-C191	Yes	Yes
D09, D60, D61, D62	4	LED DIODE GREEN	20mA	-	D0603	AVAGO TECHNOLOGIES	HSMG-C191	Yes	Yes
J_DCShort, Jconf, HiCur, JSht, JUV, JVDD, JVS, OL1, OL2, OL3, OL4, OL5, OL6, OL7, OL8, OL9, OL10, OL11, OL12	11	SIL HEADER 2 pins Tin plated	AMPMODU Mod II	-	SIL 2.54mm	TE CONNECTIVITY	5-826629-0	Yes	Yes
Jext	1	SIL HEADER 2 pins Tin plated	AMPMODU Mod II	-	SIL 2.54mm	TE CONNECTIVITY	5-826629-0	Yes	Yes
D1	1	TVS DIODE	000V, Bidirectional, Vb = 20V	-	SMB-T3	ON Semiconductor	1SMB30CAT3G	No	Yes
U1	1	LED Driver	NCV7684	-	SSOP24	ON Semiconductor	NCV7684D1G	No	Yes
U2	1	Buck Controller	NCV885300	-	SOIC8	ON Semiconductor	NCV885300	No	Yes
U3	1	Low-Drop Voltage Regulator	5V, 400mA	2%	DPAK5	ON Semiconductor	NCV4276CDT50RKG	No	Yes
DIAG, DIAGEN, GND, VBAT, VCC, CSN	6	TestPIN True Hole	Black	-	H1.0	VERO	20-2137	Yes	Yes

PwG, GN	2	TestPIN True Hole	Black	-	H1.0	VERO	20-2137	Yes	Yes
SCOPEGND1, SCOPEGND2	2	Wire Bridge	SCOPEGND	-	SCOPEGND	AMPHENOL	FCI - 75160-105-36LF	Yes	Yes
R_ref	1	SMD Resistor	620R, 1206, 250mW	1%	R1206	WELWYN	WCR1206-620RFI	No	Yes
R2	1	SMD Resistor	8.06k, 0603, 63mW	1%	R0603	MULTICOMP	MC0063W060318K06	Yes	Yes
H1, H2, H3	3	SIL Header	1x5 pins, 100 mils	-	X5APH	TYCO	1-826629-6	Yes	Yes
I2C	1	SIL Header	1x3 pins, 100 mils	-	X3APH	TYCO	1-826629-6	Yes	Yes
ZD1	1	Zener Diode	4.7V, 300mW	5%	SOD323	ON Semiconductor	SZMM3Z4V7T1G	No	Yes
ZDg1,ZDg2, ZDg3, ZDvb	4	Zener Diode	3.3V, 300mA	5%	SOD323	ON Semiconductor	SZMM3Z3V3T1G	No	Yes
D12, D13	2	Shottky Diode	40V, 3A	-	SMA-2	ON Semiconductor	NRVBA340T3G	No	Yes
SP1, SP2, SP3, SP4	4	Spacer	3.0M, 5mm 6.6 Nylon	-	SPACER_3.0_5 mm	DURATOOL	D01487	Yes	Yes
CON_MCU1	1	SODIMM200 Connector	200 Pins	-	1612618-4	TE CONNECTIVITY	TE-1612618-4	Yes	Yes
ONMCU-V1	1	MCU board	TSM-105-04-T-SV	-	-	ON Semiconductor	-	No	Yes
ZD	1	Shunt Regulator	TL431, +2.5V 36V 100mA	2%	SOT-23	ON Semiconductor	NCP431ACSNT1G;	No	Yes
SW_RES	1	Reset SWITCH	4.5x4.5mm SMD	-	SPNO	BOURNS	7914G-001-000	Yes	Yes
J_USB	1	Mini USB A/B	SMD, RA, 5 contacts	-	MUSB-05-F	TE CONNECTIVITY	1734328-1	Yes	Yes
H_JTAG	1	Header Connector	2x5 pins, 1.27mm	-	SHF-105	SAMTEC	SHF-105-01-L-D-TH	Yes	Yes
L1	1	Inductor	15uH, 51mR, 2.2A	20%	SLF7055	TDK	SLF7055T-150M2R1-3PF	Yes	Yes
Q1	1	Transistor Power Mosfet	P-MOS, -60V, -2.6V	-	WDFN8	ON Semiconductor	NVTF5116PLTAG	Yes	Yes
R3	1	SMD Resistor	10k, 0603, 63mW	5%	R0603	PHYCOMP	232270260103	Yes	Yes
R60	1	SMD Resistor	10k, 0603, 63mW	5%	R0603	PHYCOMP	232270260103	Yes	Yes
R60	1	SMD Resistor	24k, 0603, 63mW	1%	R0603	MULTICOMP	MC0063W0603124K	Yes	Yes
R57	1	SMD Resistor	22k, 0603, 63mW	5%	R0603	YAGEO	RC0603JR-0722KL	Yes	Yes
R5, R22, R62	3	SMD Resistor	22k, 0603, 63mW	5%	R0603	YAGEO	RC0603JR-0722KL	Yes	Yes
R575	1	SMD Resistor Array	39R, 1206, 63mW	5%	CRA3A4E	PHYCOMP	235003410399	Yes	Yes
Ruv	1	SMD Resistor	160k, 0603, 63mW	1%	R0603	MULTICOMP	MC0063W06031160K	Yes	Yes
R58	1	SMD Resistor	3k3, 0603, 63mW	1%	R0603	MULTICOMP	MC0063W060353K3	Yes	Yes
R09, R10, R61	3	SMD Resistor	3k3, 0603, 63mW	1%	R0603	MULTICOMP	MC0063W060353K3	Yes	Yes
R4	1	SMD Resistor	4k3, 0603, 63mW	1%	R0603	MULTICOMP	MC0063W060314K3	Yes	Yes
R4	1	SMD Resistor	24k, 0603, 63mW	1%	R0603	MULTICOMP	MC0063W0603124K	Yes	Yes
R55, R56	2	SMD Resistor	4k7, 0603, 63mW	1%	R0603	MULTICOMP	MC0063W060314K7	Yes	Yes
RB	1	SMD Resistor	3k9, 0603, 63mW	1%	R0603	VISHAY	CRCW06033K90FKEA	Yes	Yes
RB	1	SMD Resistor	11k, 0603, 63mW	1%	R0603	VISHAY	CRCW060311K0FKEA	Yes	Yes
RA	1	SMD Resistor	30k, 0603, 63mW	1%	R0603	VISHAY	CRCW060330K0FKEA	Yes	Yes
R1	1	SMD Resistor	2k, 0603, 63mW	1%	R0603	PANASONIC	ERA3AEB202V	Yes	Yes

Revb1, Eevb2	2	SMD Resistor	1k, 0603, 63mW	0.1%	R0603	VISHAY	MCT0603MD1001BP100	Yes	Yes
R16	1	SMD Resistor	8k2, 0603, 63mW	1%	R0603	VISHAY	CRCW06038K20FKEAH P	Yes	Yes
R12	1	SMD Resistor	36mR, 0603, 63mW	1%	R0603	PANASONIC	ERJ3BWFR036V	Yes	Yes
Supply	1	DC Power Connector	2.1mm, 2A, 12V	-	DC10AS	CLIFF ELECTRONIC	DC-10AS+DCPP1	Yes	Yes