



Bill of Materials for the NCV7685GEVB Evaluation Board

Designator	Quantity	Description	Value	Tolerance	Footprint	Manufacturer	Manufacturer Part Number	Substitution Allowed	Lead Free
CF_1,CFB1_1	2	CAP / 603 / 25V / 680pF	680pF		0603	Various	C1608X7R1H681K	Yes	Yes
CFB1_2	1	CAP / 1206 / 50V / 220pF	330pF		1206	Various	CC1206KRX7R9BB331	Yes	Yes
CF_2	1	CAP / 603 / 25V / 680pF	2.2nF		0603	Various	C0603C222K5RACTU	Yes	Yes
CG1,CG2,CG3,CG4,CG5,CG6,CG7,CG8,CG9,CG10,CG11,CG12	12	CAP, SMT, 1206, 4.7uF, 16V, 20%	4.7uF	20%	1206	Murata	GRM31CR71E475KA88L	Yes	Yes
CH_1,CH_2,C2	3	CAP / 603 / 50V / 22pF	22pF		0603	AVX	06031A220KAT2A	Yes	Yes
Cdrv1,CIN1,Cdrv2,CIN2,Cdrv3,CIN3,Cdrv4,CIN4,Cdrv5,CIN5,Cdrv6,CIN6,CIN7,CIN8,CIN9,CIN14,CIN15	17	CAP, SMT, 1206, 22uF, 16V, 20%	22uF	20%	1206	Murata	GRM31CR61C226KE15L	Yes	Yes
CN1,CN2,CP3,CO4,CP7	5	CAP, SMT, 0805, 1uF, 16V, 10%	1uF	10%	0805	Murata	GRM21BR71C105KA01L	Yes	Yes
CONN1	0	CON, TH, MINIFIT JR, VRT, 4PIN, 2ROW	4PIN CONN			MOLEX	39-29-3046	Yes	Yes
C1,CP8,CP9,CP10	4	CAP, SMT, 0603, 0.1uF, 50V, 10%	0.1uF	10%	0603	Yageo	CC0603KRX7R9BB104	Yes	Yes
Cin10,Cin11,Cin12,Cin13	4	CAP / 603 / 16V / 1uF	1uF		0603	TDK	C1608X7R1C105K	Yes	Yes
Cout1,Cout2	0	CAP, SMT, 1210, 22uF, 16V	EMPTY		1210	Murata	GRM31CR61C226KE15L	Yes	Yes
D1	1	Diode-Schottky / SOD123 / 100V / 200mA	MBRA160T3G		SOD123	ON SEMICONDUCTOR	MBRA160T3G	No	Yes
D2,D3	2	Diode / SOD323 / 30V / 200mA	BAT54HT1		SOD123	ON SEMICONDUCTOR	BAT54HT1	No	Yes
D4,D5	2	LED, SMT, 1206, RED	RED		1206	Lite-On Inc	LTST-C150CKT	Yes	Yes
D6	1	LED, SMT, 1206, GRN	GRN		1206	Lite-On Inc	LTST-C150GKT	Yes	Yes
D7,D8,D9,D10,D11,D12	6	Dual Diode / SOT-23 / 4.7V / 225mW	BAV99/SOT		SOT-23	ON SEMICONDUCTOR	BAV99L1G	No	Yes
Jsen1,Jout1,Jdrv1,Jsen2	4	CON, TH, HDR, VRT, 2PIN	2PIN			3M	929647-01-02-EU	Yes	Yes
Jdrv2	0	CON, TH, HDR, VRT, 2PIN	EMPTY			3M	929647-01-02-EU	Yes	Yes
J3	1	CON, TH, HDR, VRT, 3PIN	HEADER 3			3M	NEED	Yes	Yes
LOUT1	1	IND, TH, Coiltronics, DR73, 4.7uH, 3.8 AMP	4.7uH			Coiltronics	DR73-4R7	Yes	Yes
LOUT2	1	IND, TH, Coiltronics, DR73, 15uH, 2 AMP	15uH			Coiltronics	DR73-150	Yes	Yes
L1,L2,L3,L4,L5,L6,L7,L8,L9,L10,L11,L12	12	FB, SMT, 50ohm at 100MHz, MULTI SITE	50ohm FB			Murata	BLM31PG500SN1L	Yes	Yes
MHF1,MHF2,MHF3,MHF4,MHF5	0	MH Plated, 250R125, MOTHERBOARD	EMPTY			-	-	Yes	Yes
PWR1,PWR2,PWR3,PWR4	0	CON, THMT, 160mil WIRE	EMPTY			Various	WIRE	Yes	Yes
Qdrv1,Qdrv2,Qdrv3,Qdrv4,	12	XSTR, SMT, u8FL, NTTFS4928, MOSFET, N	NTTFS4928			ON SEMICONDUCTOR	NTTFS4928	No	Yes

Qdrv5,Qdrv6,Qdrv7,Qdrv8,										Yes	Yes
Qdrv9,Qdrv10,Qdrv11,										Yes	Yes
Qdrv12										Yes	Yes
Q1,Q2,Q3,Q4	4	FET N-ch / SOT-23 / 60V / 2.50hm 310mA	2N7002ET1G				ON SEMICONDUCTOR	2N7002ET1G	No	Yes	Yes
RA3,RP8,RP11	3	RES / 0603 / 1% / TBD	1.5k	1%	0603		Various	-	Yes	Yes	Yes
RBODE_1,RBODE_2	2	RES / 0603 / 1% / 10	10	1%	0603		Various	CRCW060310R0FKEA	Yes	Yes	Yes
RFB_1	1	RES / 0603 / 1% / 27.4k	27.4k	1%	0603		Various	-	Yes	Yes	Yes
RFB_2	1	RES / 0603 / 1% / TBD	15.8k	1%	0603		Various	-	Yes	Yes	Yes
Rsense1,R1,Rsense2,	15	RES, SMT, 0603, 100, 1/16W, 1%	100	1%	0603		Various	-	Yes	Yes	Yes
Rsense3,R3,Rsense4,									Yes	Yes	Yes
Rsense5,Rsense6,Rsense7,									Yes	Yes	Yes
Rsense8,Rsense9,Rsense10,									Yes	Yes	Yes
Rsense11,RFB1_1,Rsense12									Yes	Yes	Yes
RFB1_2	1	RES / 0603 / 1% / 412	255	1%	0603		Various	-	Yes	Yes	Yes
RP3,RP5,RFB2_1,RFB2_2	4	RES / 0603 / 1% / 3k	3k	1%	0603		Various	CRCW06033K00FKEA	Yes	Yes	Yes
RF_1	1	RES / 0603 / 1% / TBD	34.8k	1%	0603		Various	-	Yes	Yes	Yes
RF_2	1	RES / 0603 / 1% / 2k	12.4k	1%	0603		Various	CRCW06032K00FKEA	Yes	Yes	Yes
RF1,RF2,RF3,RF4,RF5,RF6,	12	RES, SMT, 0603, 560, 1/16W, 1%	560	1%	0603		-	-	Yes	Yes	Yes
RF7,RF8,RF9,RF10,RF11,									Yes	Yes	Yes
RF12									Yes	Yes	Yes
RG1,RG2,RG3,RG4,RG5,RG6,	12	RES, SMT, 0805, 10, 1/16W, 5%	10	5%	0805		Various	-	Yes	Yes	Yes
RG7,RG8,RG9,RG10,RG11,									Yes	Yes	Yes
RG12									Yes	Yes	Yes
RL1,RL2,RL3,RL4,RL5,RL6,	12	RES, SMT, 0805, 1.00, 1/8W, 1%	1	1%	0805		Various	CRCW08051R0FRT1E3	Yes	Yes	Yes
RL7,RL8,RL9,RL10,RL11,									Yes	Yes	Yes
RL12									Yes	Yes	Yes
RP1,RP2,R5,R7,R10,R11	6	RES, SMT, 0603, 332, 1/10W, 1%	332	1%	0603		Various	-	Yes	Yes	Yes
RP6,RP9	2	RES / 0603 / 1% / TBD	825	1%	0603		Various	-	Yes	Yes	Yes
RP7,RP10	2	RES / 0603 / 1% / 3k	4.02k	1%	0603		Various	CRCW06033K00FKEA	Yes	Yes	Yes
RSB1,RS1,RSB2,RS12,RSB3,	24	RES, SMT, 2512	100mOhm		2512		Bourns	CRA2512-FZ-R100ELF	Yes	Yes	Yes
RSA3,RSB4,RS14,RSB5,RS15,									Yes	Yes	Yes
RSB6,RS16,RSB7,RS17,RSB8,									Yes	Yes	Yes
RS18,RSB9,RS19,RSB10,									Yes	Yes	Yes
RS10,RSB11,RS11,RSB12,									Yes	Yes	Yes
RS12									Yes	Yes	Yes
RT1,RT4,R24,R25	4	RES / 0603 / 1% / 0	0	1%	0603		Various	CRCW06030000Z0EA	Yes	Yes	Yes
RT2,RT3	2	RES, SMT, 0603, 6.8K, THERMISTOR, 5%	6.8K	5%	0603		PANASONIC	ERT1VR682J	Yes	Yes	Yes
RV1,RV2	2	POT, THMT	10k				Copal Elect	CT6EP103	Yes	Yes	Yes
RV3	1	POT, THMT	1k				Copal Elect	CT6EP102	Yes	Yes	Yes
Radj1,Radj4	2	RES / 0603 / 1% / 200	200	1%	0603		Various	-	Yes	Yes	Yes
Radj2	1	RES / 0603 / 1% / 600	600	1%	0603		Various	-	Yes	Yes	Yes
Radj5	1	RES / 0603 / 1% / 715	715	1%	0603		Various	-	Yes	Yes	Yes
Rgnd1,Rgnd2,Rgnd3,Rgnd4,	12	RES / 0603 / 1% / 1	1	1%	0603		Various	CRCW06031R00FKEA	Yes	Yes	Yes
Rgnd5,Rgnd6,Rgnd7,Rgnd8,									Yes	Yes	Yes
Rgnd9,Rgnd10,Rgnd11,									Yes	Yes	Yes
Rgnd12									Yes	Yes	Yes
Rterm1,Rterm2,Rterm3,	4	RES, SMT, 0603, 1K, 1/16W, 5%	1k	5%	0603		Various	-	Yes	Yes	Yes
Rterm4									Yes	Yes	Yes
R2	1	RES, SMT, 0603, 100K, 1/16W, 5%	100k	5%	0603		Various	-	Yes	Yes	Yes
R4	1	-	2k				-	-	Yes	Yes	Yes
R6,R8	2	RES, SMT, 0603, 681, 1/16W, 1%	681	1%	0603		Various	CRCW06036813FRT1E3	Yes	Yes	Yes
R9,R12,R13	3	RES, SMT, 0603, 49.9, 1/16W, 1%	49.9	1%	0603		Various	-	Yes	Yes	Yes
R21,R22,R26	0	TBD	EMPTY				Various	-	Yes	Yes	Yes
R27,R28,R29	3	RES / 0603 / 1% / 10k	10k	1%	0603		Various	-	Yes	Yes	Yes
SW1	1	SWITCH, TH, DIP, VRT, 4POS, SPST	SW DIP-4				CTS Electrocomponents	208-4	Yes	Yes	Yes
Tpwr1,TP1,TPwr2,TP2,	0	TESTPOINT, 100R63, 500T, COMPACT	Loop				KEYSTONE	5007K	Yes	Yes	Yes
TPwr3,TPwr4,TPwr5,TPwr6									Yes	Yes	Yes
Udrv1,Udrv2,Udrv3	3	IC, OP Amp, SOIC14	LM6588		SOIC14		National Semi	LM6588	Yes	Yes	Yes
U3,U6	2	IC, OP Amp, SOIC8	LT1813		SOIC8		Linear Tech	LT1813CS8	Yes	Yes	Yes
U7	1	OP-Amp / SOIC8 / Dual / LMV	LMV393DR		SOIC8		ON SEMICONDUCTOR	LMV393DR	No	Yes	Yes
VR1,VR2	2	VR CNTRL / SOIC8 / 1ph / Sync PWM	NCP3170A		SOIC8		ON SEMICONDUCTOR	NCP3170A	No	Yes	Yes
VR3,VR4	2	IC, VR, SOT223, ADJ	NCP1117LP		SOT223		ON SEMICONDUCTOR	NCP1117LPSTADT	No	Yes	Yes
Z4	1	Zener / SOD323 / 18V / 225mW	MM3Z18VT1G		SOD323		ON SEMICONDUCTOR	MM3Z18VT1G	No	Yes	Yes