

Bill of Materials for the NCV7685HIGH1GEVK Evaluation Kit



Designator	Quantity	Description	Value	Tolerance	Footprint	Manufacturer	Manufacturer Part Number	Substitution Allowed	Lead Free
C1	19	Ceramic Capacitor SMD	100NF, 50V, X7R	10%	CAP0603	KEMET	C0603C104K5RAC	Yes	Yes
C24, C62, C69, C70, C71, C72, C73	6	Ceramic Capacitor SMD	220NF, 25V, X7R	10%	CAP0603	KEMET	C0603C224K3RACTU	Yes	Yes
C3	6	Ceramic Capacitor SMD	1NF, 50V, X7R	10%	CAP0603	EPCOS	B37931K5102K60	Yes	Yes
C4, C5, C6, C7, C8, C9, C10, C11, C12, C13, C14, C15, C16, C17, C18, C19, C20, C21, C22, C23, C25, C26, C27, C28, C29, C30, C31, C32, C33, C34, C35, C36, C37, C38, C39, C40, C41, C42, C43, C44, C45, C46, C47, C48, C49, C50, C51, C52, C53, C54, C55, C56, C57, C58, C59, C60, C61, C63, C64, C65, C66, C67, C68, C69, C70, C71, C72, C73, C74, C75, C76, C77, C78, C79, C80, C81, C82, C83, C84, C85, C86, C87, C88, C89, C90, C91, C92, C93, C94, C95, C96, C97, C98, C99, C100, C101, C102, C103, C104, C105, C106, C107, C108, C109, C110, C111, C112, C113, C114, C115, C116, C117, C118, C119, C120, C121, C122, C123, C124, C125, C126, C127, C128, C129, C130, C131, C132, C133, C134, C135, C136, C137, C138, C139, C140, C141, C142, C143, C144, C145, C146, C147, C148, C149, C150, C151, C152, C153, C154, C155, C156, C157, C158, C159, C160, C161, C162, C163, C164, C165, C166, C167, C168, C169, C170, C171, C172, C173, C174, C175, C176, C177, C178, C179, C180, C181, C182, C183, C184, C185, C186, C187, C188, C189, C190, C191, C192, C193, C194, C195, C196, C197, C198, C199, C200, C201, C202, C203, C204, C205, C206, C207, C208, C209, C210, C211, C212, C213, C214, C215, C216, C217, C218, C219, C220, C221, C222, C223, C224, C225, C226, C227, C228, C229, C230, C231, C232, C233, C234, C235, C236, C237, C238, C239, C240, C241, C242, C243, C244, C245, C246, C247, C248, C249, C250, C251, C252, C253, C254, C255, C256, C257, C258, C259, C260, C261, C262, C263, C264, C265, C266, C267, C268, C269, C270, C271, C272, C273, C274, C275, C276, C277, C278, C279, C280, C281, C282, C283, C284, C285, C286, C287, C288, C289, C290, C291, C292, C293, C294, C295, C296, C297, C298, C299, C300, C301, C302, C303, C304, C305, C306, C307, C308, C309, C310, C311, C312, C313, C314, C315, C316, C317, C318, C319, C320, C321, C322, C323, C324, C325, C326, C327, C328, C329, C330, C331, C332, C333, C334, C335, C336, C337, C338, C339, C340, C341, C342, C343, C344, C345, C346, C347, C348, C349, C350, C351, C352, C353, C354, C355, C356, C357, C358, C359, C360, C361, C362, C363, C364, C365, C366, C367, C368, C369, C370, C371, C372, C373, C374, C375, C376, C377, C378, C379, C380, C381, C382, C383, C384, C385, C386, C387, C388, C389, C390, C391, C392, C393, C394, C395, C396, C397, C398, C399, C400, C401, C402, C403, C404, C405, C406, C407, C408, C409, C410, C411, C412, C413, C414, C415, C416, C417, C418, C419, C420, C421, C422, C423, C424, C425, C426, C427, C428, C429, C430, C431, C432, C433, C434, C435, C436, C437, C438, C439, C440, C441, C442, C443, C444, C445, C446, C447, C448, C449, C450, C451, C452, C453, C454, C455, C456, C457, C458, C459, C460, C461, C462, C463, C464, C465, C466, C467, C468, C469, C470, C471, C472, C473, C474, C475, C476, C477, C478, C479, C480, C481, C482, C483, C484, C485, C486, C487, C488, C489, C490, C491, C492, C493, C494, C495, C496, C497, C498, C499, C500, C501, C502, C503, C504, C505, C506, C507, C508, C509, C510, C511, C512, C513, C514, C515, C516, C517, C518, C519, C520, C521, C522, C523, C524, C525, C526, C527, C528, C529, C530, C531, C532, C533, C534, C535, C536, C537, C538, C539, C540, C541, C542, C543, C544, C545, C546, C547, C548, C549, C550, C551, C552, C553, C554, C555, C556, C557, C558, C559, C560, C561, C562, C563, C564, C565, C566, C567, C568, C569, C570, C571, C572, C573, C574, C575, C576, C577, C578, C579, C580, C581, C582, C583, C584, C585, C586, C587, C588, C589, C590, C591, C592, C593, C594, C595, C596, C597, C598, C599, C600, C601, C602, C603, C604, C605, C606, C607, C608, C609, C610, C611, C612, C613, C614, C615, C616, C617, C618, C619, C620, C621, C622, C623, C624, C625, C626, C627, C628, C629, C630, C631, C632, C633, C634, C635, C636, C637, C638, C639, C640, C641, C642, C643, C644, C645, C646, C647, C648, C649, C650, C651, C652, C653, C654, C655, C656, C657, C658, C659, C660, C661, C662, C663, C664, C665, C666, C667, C668, C669, C670, C671, C672, C673, C674, C675, C676, C677, C678, C679, C680, C681, C682, C683, C684, C685, C686, C687, C688, C689, C690, C691, C692, C693, C694, C695, C696, C697, C698, C699, C700, C701, C702, C703, C704, C705, C706, C707, C708, C709, C710, C711, C712, C713, C714, C715, C716, C717, C718, C719, C720, C721, C722, C723, C724, C725, C726, C727, C728, C729, C730, C731, C732, C733, C734, C735, C736, C737, C738, C739, C740, C741, C742, C743, C744, C745, C746, C747, C748, C749, C750, C751, C752, C753, C754, C755, C756, C757, C758, C759, C760, C761, C762, C763, C764, C765, C766, C767, C768, C769, C770, C771, C772, C773, C774, C775, C776, C777, C778, C779, C780, C781, C782, C783, C784, C785, C786, C787, C788, C789, C790, C791, C792, C793, C794, C795, C796, C797, C798, C799, C800, C801, C802, C803, C804, C805, C806, C807, C808, C809, C810, C811, C812, C813, C814, C815, C816, C817, C818, C819, C820, C821, C822, C823, C824, C825, C826, C827, C828, C829, C830, C831, C832, C833, C834, C835, C836, C837, C838, C839, C840, C841, C842, C843, C844, C845, C846, C847, C848, C849, C850, C851, C852, C853, C854, C855, C856, C857, C858, C859, C860, C861, C862, C863, C864, C865, C866, C867, C868, C869, C870, C871, C872, C873, C874, C875, C876, C877, C878, C879, C880, C881, C882, C883, C884, C885, C886, C887, C888, C889, C890, C891, C892, C893, C894, C895, C896, C897, C898, C899, C900, C901, C902, C903, C904, C905, C906, C907, C908, C909, C910, C911, C912, C913, C914, C915, C916, C917, C918, C919, C920, C921, C922, C923, C924, C925, C926, C927, C928, C929, C930, C931, C932, C933, C934, C935, C936, C937, C938, C939, C940, C941, C942, C943, C944, C945, C946, C947, C948, C949, C950, C951, C952, C953, C954, C955, C956, C957, C958, C959, C960, C961, C962, C963, C964, C965, C966, C967, C968, C969, C970, C971, C972, C973, C974, C975, C976, C977, C978, C979, C980, C981, C982, C983, C984, C985, C986, C987, C988, C989, C990, C991, C992, C993, C994, C995, C996, C997, C998, C999, C1000									
U10, U20, U30, U4, U50, U60	6	LED Driver	NCV7685	-	SSOP24	ON Semiconductor	NCV7685DQR2G	No	Yes
U3	1	Low-Drop Voltage Regulator	3V3, 400mA	-	DPAK5	ON Semiconductor	NCV4276DT33RKG	No	Yes
U2	1	Buck Controller	NCV8853	-	SOIC8	ON Semiconductor	NCV885301D1R2G	No	Yes
U9	1	I/O Expander for I2C/Bus			TSSOP16	ON Semiconductor	PCA9654EDTR2G	No	Yes
VCC, VS, VDD	5	TestPIN True Hole	White	-	H1.0	VERO	20-313139	Yes	Yes
GND	3	TestPIN True Hole	Red	-	H1.0	VERO	20-313137	Yes	Yes
	1	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
QL1	1	SIL Header	1x2 pins, 100 mils	-	X3APH	TYCO	1-826629-6	Yes	Yes
Jrst	1	Pin HEADER	10 pins 1.27mm	-	2x5 1.27	Würth Elektronik	WR-PHD	Yes	Yes
ZD1 ... ZD9	9	Zener Diode	3V3 / 500mW / 10mA	-	SOD123	ON Semiconductor	MMS23V3T1G	No	Yes
D1, D2, D3, D4, D5, D_b1, D_b4, D13	8	Shottky Diode	40V, 3A	-	DO-214AC	ON Semiconductor	MBRA340T3G	No	Yes
D_b2, D_b3	2	SMD Resistor	0R, 1206, 0.25W	1%	R1206	WELWYN	WCR12060R0	Yes	Yes
URSL	1	RSL10 Bluetooth MCU	RSL10-SIP	-	Sip_RSL10-B	ON Semiconductor	RSL10-SIP	No	Yes
SW	1	Switch button	2.5mm, 160gf		4.2x3.2mm	J-bend	WS-TASV	Yes	Yes
L1	1	Inductor	6.8uH, 11.5A	20%	13.5x12.5x 6.2mm	BOURNS	SRP1265A-6R8M	Yes	Yes
Q1	1	Transistor Power Mosfet	P-MOS, -60V, -14A	-	WDFN8	ON Semiconductor	NVTFSS116PLTAG	Yes	Yes

Q30, Q40	2	Transistor Mosfet	N-MOS, 60V/100mV	-	SOT23	ON Semiconductor	MMBF170	No	Yes
Q9	1	Transistor Mosfet	P-MOS, -30V, 900mA	-	SOP23	ON Semiconductor	NDS352AP	No	Yes
R101, R13, R30, R40, R45, R97, R26, R43, R53, R63	11	SMD Resistor	10k, 0603, 63mW	5%	R0603	PHYCOMP	232270260103	Yes	Yes
R12, R22, R28, R32, R42, R52, R62	7	SMD Resistor	100k, 0603, 63mW	1%	R0603	Vishay	CRCW0603-100KFKEA	Yes	Yes
R23, R29	2	SMD Resistor	68R, 0603, 100mW	5%	R0603	MULTICOMP	MC0063W0603568R	Yes	Yes
R4, R25, R34, R55, R65	5	SMD Resistor	22k, 0603, 63mW	5%	R0603	YAGEO	RC0603JR-0722KL	Yes	Yes
R7, R8, R9	3	SMD Resistor	8.06k, 0603, 100mW	1%	R0603	MULTICOMP	MCWR06X8061FTL	Yes	Yes
R98, R99	2	SMD Resistor Array	4x10kΩ, 1206, 63mW	5%	CRA3A4E R1206	PHYCOMP	235003510103	Yes	Yes
R50, RB	2	SMD Resistor	3k9, 0603, 63mW	1%	R0602	MULTICOMP	MC0063W060313K9	Yes	Yes
R100, R102	2	SMD Resistor	1k3, 0603, 63mW	1%	R0603	MULTICOMP	MC0063W060311K3	Yes	Yes
R3	1	SMD Resistor	6k2, 0603, 63mW	1%	R0603	MULTICOMP	MC0063W060316K2	Yes	Yes
RA	1	SMD Resistor	16k, 0603, 63mW	1%	R0603	MULTICOMP	MC0063W0603116K	Yes	Yes
R11, R21, R31, R35, R41, R44, R51, R61	8	SMD Resistor	2.49k, 0603, 100mW	1%	R0603	VISHAY	CRCW06032K49FKEA	Yes	Yes
R103	1	SMD Resistor	3k, 0603, 63mW	1%	R0603	PANASONIC	ERA3AEB302V	Yes	Yes
R10, R20, 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	MCLR06JTETR012	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