

Bill of Materials for the NCL31010AASGEVB Evaluation Board



Designator	Quantity	Description	Value	Tolerance	Footprint	Manufacturer	Manufacturer PartNumber	Substitution Allowed	Lead Free
C1	1	Ceramic Capacitor (X7R), 10V	2.2μ	±10%	0603 (1608M)	Kemet	C0603C225K8RACTU	Yes	Yes
C2	1	Ceramic Capacitor (X7R), 25V	10n	±10%	0603 (1608M)	Kemet	C0603C103K3RACTU	Yes	Yes
C3, C26	2	Ceramic Capacitor (X5R), 25V	1μ	±10%	0603 (1608M)	Kemet	C0603C105K3PACTU	Yes	Yes
C4	1	Ceramic Capacitor (X7R), 50V	4.7n	±20%	0603 (1608M)	TDK	CGA3E2X7R1H472M080AA	Yes	Yes
C5, C10, C13, C14, C15, C16, C17, C18, C20, C21, C22, C23, C24	13	Ceramic Capacitor (X7R), 25V	100n	±10%	0603 (1608M)	Kemet	C0603C104K3RACTU	Yes	Yes
C6, C7	2	Ceramic Capacitor (X7R), 100V	1μ	±10%	1210 (3225M)	Kemet	C1210C105K1RACTU	No	Yes
C8, C9	2	Ceramic Capacitor (X5R), 16V	10u	±10%	1206 (3216M)	Kemet	C1206C106K4PAC	No	Yes
C11	1	Ceramic Capacitor (COG/NP0), 50V	68p	±5%	0603 (1608M)	Samsung	CL10C680JB8NNNC	Yes	Yes
C12	1	Ceramic Capacitor (X7R), 50V	6.8n	±10%	0603 (1608M)	Samsung	CL10B682KB8SFNC	Yes	Yes
D1, D4	2	Schottky Rectifier, 20V, 1A			SOD123FL	onsemi	MBR120VLSFT1G	No	Yes
D2	1	Schottky Rectifier, 100V			SMA	onsemi	NRVTSA4100ET3G	No	Yes
						Vishay	VS-10MQ100-M3/5AT		
D3, D5	2	Schottky Barrier Diode			SOD923	onsemi	BAS40P2T5G	No	Yes
							NSR0240P2T5G		
D6	1	Schottky Barrier Diode			SOD323	onsemi	NSR02100HT1G	No	Yes
						Nexperia	1PS76SB10,115		
J2	1	Vertical Socket Header, Dual Row, 4 pins			TH_2.54D-4	Würth Elektronik	61300421821	Yes	Yes
J4	1	Vertical Socket Header, Single Row, 2 pins			TH_2.54	Würth Elektronik	61300211821	Yes	Yes
JP1	1	Jumper	0E		0603 (1608M)	Yageo	RC0603JR-070RL	Yes	Yes

L1	1	Power Inductor	0.24μ	±20%	0806 (2016M)	Murata	DFE201610E-R24M=P2 DFE2MCAHR24MJ0L	No	Yes
L2	1	Shielded Power Inductor	100μ	±20%	10x5.0	Würth Elektronik	7447714101	No	Yes
LED1	1	LED, Green			0603 (1608M)	Kingbright	KP-1608CGCK	No	Yes
LED2	1	LED, Red			0603 (1608M)	Kingbright	KPT-1608EC	No	Yes
P3	1	Vertical Pin Header, Single Row, 10 pins			TH_2.54-10	Würth Elektronik	61301011121	Yes	Yes
P4, P10	2	Vertical Pin Header, Single Row, 8 pins			TH_2.54-8	Würth Elektronik	61300811121	Yes	Yes
P6	1	Vertical Socket Header, Single Row, 6 pins			TH_2.54-6	Würth Elektronik	61300611821	Yes	Yes
P7, P8, P13, P17, P18	5	Vertical Pin Header, Single Row, 2 pins			TH_2.54	Würth Elektronik	61300211121	Yes	Yes
P9	1	Vertical Socket Header, Single Row, 4 pins			TH_2.54-4	Würth Elektronik	61300411821	Yes	Yes
P11	1	Vertical Pin Header, Single Row, 6 pins			TH_2.54-6	Würth Elektronik	61300611121	Yes	Yes
P12, P14	2	Vertical Pin Header, Dual Row, 6 pins			TH_2.54D-6	Würth Elektronik	61300621121	Yes	Yes
P15, P16	2	Vertical Pin Header, Single Row, 3 pins			TH_2.54-3	Würth Elektronik	61300311121	Yes	Yes
Q1, Q2, Q3	3	P-Channel MOSFET, 50V/10Ω			SOT23-3	onsemi	BSS84LT1G	No	Yes
Q4, Q5, Q6, Q7	4	N-Channel MOSFET, 60 V			SOT23-3	onsemi Nexperia	2N7002L 2N7002NXBKR	No	Yes
R1, R3	2	Resistor	4K3	±1%	0603 (1608M)	Yageo	RC0603FR-074K3L	Yes	Yes
R2, R42, R43, R44, R45, R46, R48, R52	8	Resistor	33K	±1%	0603 (1608M)	Yageo	RC0603FR-0733KL	Yes	Yes
R4	1	Resistor	1K5	±1%	0603 (1608M)	Yageo	RC0603FR-071K5L	Yes	Yes
R5, R6, R11, R12, R16, R18	6	Resistor	0E		0402 (1005M)	Yageo	RC0402JR-070RL	Yes	Yes
R7	1	Resistor	1K05	±1%	0603 (1608M)	Yageo	RC0603FR-071K05L	Yes	Yes
R14	1	Resistor	3K9	±1%	0603 (1608M)	Yageo	RC0603FR-073K9L	Yes	Yes
R19, R20, R50	3	Resistor	10K	±1%	0603 (1608M)	Yageo	RC0603FR-0710KL	Yes	Yes
R30	1	Resistor	4K7	±1%	0603 (1608M)	TE Connectivity	CRG0603F4K7	Yes	Yes
R32	1	Resistor	1K	±1%	0603 (1608M)	Yageo	RC0603FR-071KL	Yes	Yes
R33	1	Resistor	2K	±1%	0603 (1608M)	TE Connectivity	CPF0603F2K0C1	Yes	Yes
R34, R35	2	Resistor	3K	±1%	0603 (1608M)	Yageo	RC0603FR-073KL	Yes	Yes

R38, R39, R40	3	Resistor	1M	±1%	0603 (1608M)	Yageo	RC0603FR-071ML	Yes	Yes
R47	1	Resistor	47K	±1%	0603 (1608M)	Yageo	RC0603FR-0747KL	Yes	Yes
R49	1	Resistor	22K	±1%	0603 (1608M)	Yageo	RC0603FR-0722KL	Yes	Yes
R51	1	Resistor	2K7	±1%	0603 (1608M)	Yageo	RC0603FR-072K7L	Yes	Yes
R54	1	Resistor	390m	±1%	0603 (1608M)	Panasonic	ERJ3RQFR39V	Yes	Yes
U1	1	Dual Supply I2C Voltage Translator, 5.5V			MikroPak UQFN-8 (1616M)	onsemi	FXMA2102L8X FXMAR2102L8X	No	Yes
U2, U4, U6, U9	4	Non-Inverting 3-State Buffer, 5.5V			SC88A / SC70-5	onsemi	NL17SZ125DFT2G NLV17SZ125DFT2G	No	Yes
U3, U8	2	SPDT Analog Switch, 5.5V			SC88-6 / SC70-6	onsemi	FSA4157P6X NLASB3157DFT2G	No	Yes
U7	1	Non-Inverting 3-State Buffer			SC88A-5 / SC70-5	onsemi TI	NC7SV125P5X SN74LVC1G125DCK3	No	Yes
U10	1	Synchr. Step-Down Converter, 60V, 0.5A			SOP-8 EP	Richtek	RT6204GSP RT6210GSP	No	Yes
U11, U12	2	Voltage Supervisor	2.7		TSOP-5 / SOT23-5	onsemi Rohm	NCV303LSN27T1G BD4827G-TR BU4827G-TR	No	Yes
Shunt on P14, P15, P12/P16	3	Jumper, grid 2.54mm, Red	0E			Fisher Elektronik	CAB 4 G R	Yes	Yes