



Bill of Materials for the STR-NCP3231-EVK Evaluation Board

Item Number	Quantity	Part Reference	MFR	MFRPN	Package	Value	Voltage	Description
1	8	C1 C12 C15 C16 C18 C22 C35 C39	Murata	GRM188R60J476ME15	0603	DNP	6.3V	CAP CER 47UF 6.3V X5R 0603
2	12	C2 C3 C4 C5 C6 C27 C28 C29 C30	Murata	GRM188R	0603	10uF	35V	CAP CER 10UF 35V X5R 0603
3	10	C7 C8 C9 C10 C11 C13 C14 C36	Murata	GRM188R	0603	47uF	6.3V	CAP CER 47UF 6.3V X5R 0603
4	1	C17	Würth Elektronik	88501220	0402	2.2nF	50V	Generic 0402 SMD Capacitor
5	2	C19 C50	TDK	CGA2B2X	0402	22nF	6.3V	Generic 0402 SMD Capacitor
6	1	C20	Würth Elektronik	88501220	0402	680pF	50V	Generic 0402 SMD Capacitor
7	1	C21	Würth Elektronik	88501200	0402	10pF	50V	Generic 0402 SMD Capacitor
8	6	C23 C26 C59 C62 C64 C66	Murata	GRM155R	0402	1uF	16V	CAP CER 1UF 16V X5R 0402
9	2	C24 C65	Murata	GRM188R	0603	10uF	25V	CAP CER 10UF 25V X5R 0603
10	3	C25 C63 C67	Murata	GCM155R	0402	0.1uF	50V	CAP CER 0.1UF 50V X7R 0402
11	1	C34		DNP	Radial 3.5-5mm	DNP	35V	Generic Multiple Pitch THT Capacitor
12	1	C40		DNP	0603	DNP	50V	Generic 0603 SMD Capacitor
13	5	C41 C43 C45 C48 C49	Murata	GCM155C71A105KE38	0402	1uF	10V	CAP CER 1UF 10V X7S 0402
14	2	C42 C47	Murata	GRM155R	0402	10nF	50V	Monolithic Ceramic SMD Capacitor
15	1	C44		DNP	Radial 2.5-	DNP	6.3V	Generic Multiple Pitch THT Capacitor
16	1	C46	Taiyo Yuden	TMK105B	0402	0.22uF	25V	Generic 0402 SMD Capacitor
17	6	C51 C54 C56 C58 C60 C61	Murata	GRM155R60J475ME47	0402	4.7uF	6.3V	Generic 0402 SMD Capacitor
18	2	C52 C53	Murata	GRM1555	0402	12.5pF	25V	Generic 0402 SMD Capacitor
19	2	C55 C57	Murata	GJM1555	0402	7.5pF	50V	CAP CER 7.5PF 50V C0G/NP0 0402
20	1	D7	Würth Elektronik	150060RS75000	0603	150060RS75000	5V	Red LED
21	1	D8	Würth Elektronik	150060GS	0603	150060GS75000	5V	Green LED
22	1	D9	Würth Elektronik	150060BS75000	0603	150060BS75000	5V	Blue LED
23	1	D10	Würth Elektronik	150060YS	0603	150060YS75000	5V	Yellow LED
24	2	D11 D12	ON Semiconductor	NSR20F20NX	DSN2 0603	NSR20F20NX	20V	Schottky Barrier Diode, 2.0 A, 20 V
25	1	D13	ON Semiconductor	SESD7L5	SOT-723	SESD7L	5.5V	Auto ESD Protection Diodes
26	1	FB1	Murata	BLM21AG221SN1	0805	220@100M		Ferrite bead/Impedance type filter
27	1	J1	Würth Elektronik	613 004 111 21	1x4pin 100mil	613 004 111 21		Standard 1x4pin 100mil Pitch Header
28	5	J2 J5 J6 J7 J8	Würth Elektronik	613 002 111 21	1x2pin 100mil	613 002 111 21		Standard 1x2pin 100mil Pitch Header
29	4	J3 J4 J14 J15	Würth	709940300	M3 Nut	709940300		PLASTIC HEXAGON NUT M3
30	1	J9	Samtec	IPBS-104-01-T-D-GP	2x4pin 165mil	IPBS-104-01-T-D-GP		DLT 8 pin connector
31	2	J10 J11	Deltron	571-0500	Red Banana Rec	571-0500		Red Insulated 4mm socket for banana plugs
32	2	J12 J13	Deltron	571-0100	Black Banana Rec	571-0100		Black Insulated 4mm socket for banana plugs
33	4	J16 J17 J20 J21	Würth	971100365	M3 10MM	DNP		PLASTIC SPACER STUD METRIC THREAD M3 10MM
34	1	J18	Samtec	FTSH-105-01-F-DV-K	2x5pin 50mil Cortex Debug	FTSH-105-01-F-DV-K		Standard Arm Cortex Debug Connector
35	1	J19	Würth Elektronik	65100516121	Mini USB1/2 B	65100516121		Mini USB1/2 Type-B Connector
36	2	JP1 JP2	Stackpole Electronics	HCJ0603ZTOR00	0603	DNP		Surface Mount High Current Jumper Chip Resistor
37	1	JP3	Stackpole Electronics	HCJ0402ZTOR00	0402	DNI		Surface Mount High Current Jumper Chip Resistor
40	1	L1	Würth Elektronik	7443340030	10x10mm	0.33uH		Generic 10x10mm Inductor
39	1	NT1		DNP	5mil	NET TIE		Net Tie/Isolation Small
40	5	Q1 Q2 Q3 Q4 Q5	ON Semiconductor	2V7002W	SOT-323	2V7002W	60V	Automotive Small Signal MOSFET 60V 340mA 2.5 Ohm Single N-Channel SOT-323

41	3	Q6 Q7 Q8	ON Semiconductor	2N7002W	SOT-323	2N7002W	60V	Small Signal MOSFET 60V 340mA 2.5 Ohm Single N-Channel SOT-323
42	1	R1	Vishay	CRCW040210R0FK	0402	10		RES SMD 10 OHM 1% 1/16W 0402
43	1	R2	Vishay	CRCW0402133RFB	0402	133		RES SMD 133 OHM 1% 1/16W 0402
44	1	R3	Vishay	CRCW04020000Z0	0402	0		RES SMD 0 OHM 1% 1/16W 0402
45	1	R4	Vishay	CRCW040215K0FK	0402	15K		RES SMD 15K OHM 1% 1/16W 0402
46	8	R5 R12 R17 R46 R47 R53 R57 R58	Vishay	CRCW040210K0FK	0402	10K		RES SMD 10K OHM 1% 1/16W 0402
47	4	R6 R16 R27 R34	Vishay	CRCW04021K00FK	0402	1K		RES SMD 1K OHM 1% 1/16W 0402
48	1	R7	Vishay	CRCW04027K87FK	0402	7.87K		RES SMD 7.87K OHM 1% 1/16W 0402
49	2	R8 R13	Vishay	CRCW04021R00FK	0402	1		RES SMD 1 OHM 1% 1/16W 0402
50	1	R9		DNP	0402	DNP		Generic 0402 SMD Resistor
51	1	R10	Vishay	CRCW040249K9FK	0402	49.9K		RES SMD 49.9K OHM 1% 1/16W 0402
52	2	R11 R48	Vishay	CRCW04025K11FK	0402	5.11K		RES SMD 5.11K OHM 1% 1/16W 0402
53	2	R14 R33	Bourns Inc.	CSS2H-2512R-1L00FCT-ND	2512	1m		Generic 2512 SMD Resistor
54	1	R15	Vishay	CRCW08051R00FK	0805	DNP		RES SMD 1 OHM 1% 1/8W 0805
55	1	R18	Vishay	CRCW04024K12FK	0402	4.12K		RES SMD 4.12K OHM 1% 1/16W 0402
56	2	R19 R35	Vishay	CRCW040234K0FK	0402	34K		RES SMD 34K OHM 1% 1/16W 0402
57	2	R20 R32	Vishay	CRCW04020000Z0	0402	DNP		RES SMD 0 OHM 1% 1/16W 0402
58	1	R21	Vishay	CRCW04023K32FK	0402	3.32K		RES SMD 3.32K OHM 1% 1/16W 0402
59	4	R22 R24 R28 R29	Vishay	CRCW04024R99FK	0402	4.99		RES SMD 4.99 OHM 1% 1/16W 0402
60	5	R23 R25 R26 R31 R37	Vishay	CRCW04024K99FK	0402	4.99K		RES SMD 4.99K OHM 1% 1/16W 0402
61	1	R30	Vishay	CRCW040253K6FK	0402	53.6K		RES SMD 53.6K OHM 1% 1/16W 0402
62	5	R36 R38 R41 R43 R44	Vishay	CRCW0402100KFK	0402	100K		RES SMD 100K OHM 1% 1/16W 0402
63	1	R39	Vishay	CRCW04024K75FK	0402	4.75K		RES SMD 4.75K OHM 1% 1/16W 0402
64	1	R40	Vishay	CRCW040271K5FK	0402	71.5K		RES SMD 71.5K OHM 1% 1/16W 0402
65	1	R42	Vishay	CRCW04024K02FK	0402	4.02K		RES SMD 4.02K OHM 1% 1/16W 0402
66	1	R45	Vishay	CRCW04027K50FK	0402	7.5K		RES SMD 7.5K OHM 1% 1/16W 0402
67	1	R49	Vishay	CRCW04028K87FK	0402	8.87K		RES SMD 8.87K OHM 1% 1/16W 0402
68	1	R50	Vishay	CRCW04029K76FK	0402	9.76K		RES SMD 9.76K OHM 1% 1/16W 0402
69	1	R51	Vishay	CRCW0402665RFB	0402	665		RES SMD 665 OHM 1% 1/16W 0402
70	2	R52 R56	Vishay	CRCW0402100RFB	0402	100		RES SMD 100 OHM 1% 1/16W 0402
71	1	R54	Vishay	CRCW0603100RFB	0603	100		RES SMD 100 OHM 1% 1/10W 0603
72	1	R55	Vishay	CRCW04022K32FK	0402	2.32K		RES SMD 2.32K OHM 1% 1/16W 0402
73	1	RT1	muRata	NCP15XH103F03RC	0402	10k		NTC Thermistor, 10k 1%, 3900K 1%, 0402
74	1	SW1	Würth Elektronik	434153017835	MOM1 SMD	434153017835	12V	SWITCH TACTILE SPST-NO 0.05A 12V

75	16	TP1 TP2 TP3 TP5 TP6 TP7 TP8 TP9 TP10 TP11 TP13 TP14 TP16 TP18 TP20 TP22	DNP	DNP	0.75mm	DNI		Passive Probe Tip Tektronix P5050 (Tan) Tip
76	2	TP4 TP12	DNP	DNP	63mil	DNI		63mil Hole 100mil Pad
77	5	TP15 TP17 TP19 TP21 TP23	DNP	DNP	1mm Circle	DNI		Surface Mount 1mm Circle Test Point
78	1	U1	ON Semiconductor	NCP3231M NTXG	QFN40 6x6	NCP3231		High Current Synchronous Buck Converter
79	1	U2	ON Semiconductor	NCT375MN R2G	DFN8 2x2mm	NCT375		Digital Temperature Sensor with 2-wire Interface
80	2	U3 U4	ON Semiconductor	NCS214RS QT2G	SC-70-6	NCS214R		Current-Shunt Monitor, Voltage Output, Bi- Directional Zero-Drift, Gain = 100V/V
81	1	U5	Silicon Labs	EFM32GG3 80F1024- QFP100	QFP100 14x14	EFM32GG380F1024		EFM32 Giant Gecko 32-bit Microcontroller
82	1	U6	ON Semiconductor	NCP705MT 33TCG	WDFN6	NCP705		3.3V Voltage Regulator, LDO, Ultra Low Noise, Ultra Low Iq, 500 mA
83	1	U7	FTDI	FT230XQ-R	QFN16 4x4	FT230X		USB to BASIC UART IC
84	1	Y1	Micro Crystal	MS3V-T1R- 32.768kHz- 12.5pF- 20PPM-TA- QC-Au	2 pin w/ shell	32.768 kHz		Crystals 32.768 kHz 12.5 pF +/-20 PPM - 40/+85C
85	1	Y2	NDK	NX5032GA- 48.000000 MHZ-LN- CD-1	5x3.2mm	48MHz		CRYSTAL 48.0000MHZ 8PF SMD