



Bill of Materials for the STR-NCP171-EVK Evaluation Board

Designator	Quantity	Description	Value	Tolerance	Footprint	Manufacturer	Manufacturer Part Number	Substitution Allowed	Lead Free
C1 C2 C3 C13	4	CAP CER 1UF 10V X7S 0402	1uF		0402	Murata	GCM155C71A105KE38	Yes	Yes
C4 C5	2	Generic 0402-0805 SMD Capacitor	DNI		0402-0805			Yes	Yes
C6 C11 C22 C25 C27 C29	6	CAP CER 1UF 16V X5R 0402	1uF		0402	Murata	GRM155R61C105KA12	Yes	Yes
C7 C10	2	CAP CER 4.7UF 35V X7S 0805	4.7uF		0805	Murata	GCM21BC7YA475KE36	Yes	Yes
C8 C9	2	Generic 0603 SMD Capacitor	10nF		0603	Murata	GCM188R72A103KA37	Yes	Yes
C12	1	Generic 0402-0603 SMD Capacitor	1nF		0402	Murata	GCM155R71H102KA37	Yes	Yes
C14 C17 C19 C21 C23 C24	6	Generic 0402 SMD Capacitor	4.7uF		0402	Murata	GRM155R60J475ME47	Yes	Yes
C15 C16	2	Generic 0402 SMD Capacitor	12.5pF		0402	Murata	GRM1555C1E120JA01	Yes	Yes
C18 C20	2	CAP CER 7.5PF 50V C0G/NP0 0402	7.5pF		0402	Murata	GJM1555C1H7R5CB01D	Yes	Yes
C26 C30	2	CAP CER 0.1UF 50V X7R 0402	0.1uF		0402	Murata	GCM155R71H104ME02	Yes	Yes
C28	1	CAP CER 10UF 25V X5R 0603	10uF		0603	Murata	GRM188R61E106MA73	Yes	Yes
D1 D4	2	Red LED	150060RS75000		0603	Würth Elektronik	150060RS75000	Yes	Yes
D2 D3	2	Generic SOD-923 Zener Diode	DNI		SOD-923			Yes	Yes
D5	1	Green LED	150060GS75000		0603	Würth Elektronik	150060GS75000	Yes	Yes
D6	1	Blue LED	150060BS75000		0603	Würth Elektronik	150060BS75000	Yes	Yes
D7	1	Yellow LED	150060YS75000		0603	Würth Elektronik	150060YS75000	Yes	Yes
D8 D9	2	Schottky Barrier Diode, 2.0 A, 20 V	NSR20F20NX		DSN2 0603	ON Semiconductor	NSR20F20NX	No	Yes
D10	1	Auto ESD Protection Diodes	SESD7L		SOT-723	ON Semiconductor	SESD7L5.0	No	Yes
FB1	1	Ferrite bead/Impedance type filter	220@100M		0805	Murata	BLM21AG221SN1	Yes	Yes
J1 J5 J13 J14	4	PLASTIC HEXAGON NUT M3	709940300		M3 Nut	Würth	709940300	Yes	Yes
J2 J3 J4	3	Rectangle power pad 200x300 mils	DNI		200x300mil			Yes	Yes
J6 J7	2	Standard 1x2pin 100mil Pitch Header	613 002 111 21		1x2pin 100mil	Würth Elektronik	613 002 111 21	Yes	Yes
J8 J9	2	Red Insulated 4mm socket for banana plugs	571-0500		Red Banana Rec	Deltron	571-0500	Yes	Yes
J10	1	DLT 8 pin connector	IPBS-104-01-T-D-GP		2x4pin 165mil	Samtec	IPBS-104-01-T-D-GP	Yes	Yes
J11 J12	2	Black Insulated 4mm socket for banana plugs	571-0100		Black Banana Rec	Deltron	571-0100	Yes	Yes
J15 J16 J19 J20	4	PLASTIC SPACER STUD METRIC THREAD M3 10MM	971100365		M3 10MM	Würth	971100365	Yes	Yes
J17	1	Standard Arm Cortex Debug Connector	FTSH-105-01-F-DV-K		2x5pin 50mil Cortex Debug	Samtec	FTSH-105-01-F-DV-K	Yes	Yes
J18	1	Mini USB1/2 Type-B Connector	65100516121		Mini USB1/2 B	Würth Elektronik	65100516121	Yes	Yes
JP1 JP2	2	Surface Mount High Current Jumper Chip Resistor	DNI		0603	Stackpole Electronics	HCJ0603ZT0R00	Yes	Yes
JP3	1	Surface Mount High Current Jumper Chip Resistor	DNI		0402	Stackpole Electronics	HCJ0402ZT0R00	Yes	Yes
Q1	1	Automotive Small Signal MOSFET 60V 340mA 2.5 Ohm Single N-Channel SOT-323	2V7002W		SOT-323	ON Semiconductor	2V7002W	No	Yes
Q2 Q3 Q4	3	Small Signal MOSFET 60V 340mA 2.5 Ohm Single N-Channel SOT-323	2N7002W		SOT-323	ON Semiconductor	2N7002W	No	Yes

R1 R2 R4 R13 R16 R17 R22 R28	8	RES SMD 10K OHM 1% 1/16W 0402	10K		0402	Vishay	CRCW040210K0FK	Yes	Yes
R3 R9	2	RES 0.06 OHM 1% 1/4W 1206	60mOhm		1206	Vishay	WSL1206R0600FEA	Yes	Yes
R5 R11	2	RES SMD 1K OHM 1% 1/10W 0603	1K		0603	Vishay	CRCW06031K00FK	Yes	Yes
R6 R7 R8 R10	4	RES SMD 4.75 OHM 1% 1/10W 0603	4.75		0603	Vishay	CRCW06034R75FK	Yes	Yes
R12	1	RES SMD 1K OHM 1% 1/16W 0402	1K		0402	Vishay	CRCW04021K00FK	Yes	Yes
R14	1	RES SMD 5.11K OHM 1% 1/10W 0603	5.11K		0603	Vishay	CRCW06035K11FK	Yes	Yes
R15	1	RES SMD 4.53K OHM 1% 1/16W 0402	4.53K		0402	Vishay	CRCW04024K53FK	Yes	Yes
R18 R21	2	RES SMD 10K OHM 1% 1/10W 0603	10K		0603	Vishay	CRCW060310K0FK	Yes	Yes
R19 R20	2	RES SMD 8.45K OHM 1% 1/10W 0603	8.45K		0603	Vishay	CRCW06038K45FK	Yes	Yes
R23	1	RES SMD 5.11K OHM 1% 1/16W 0402	5.11K		0402	Vishay	CRCW04025K11FK	Yes	Yes
R24	1	RES SMD 8.87K OHM 1% 1/16W 0402	8.87K		0402	Vishay	CRCW04028K87FK	Yes	Yes
R25	1	RES SMD 9.76K OHM 1% 1/16W 0402	9.76K		0402	Vishay	CRCW04029K76FK	Yes	Yes
R26	1	RES SMD 665 OHM 1% 1/16W 0402	665		0402	Vishay	CRCW0402665RFB	Yes	Yes
R27 R31	2	RES SMD 100 OHM 1% 1/16W 0402	100		0402	Vishay	CRCW0402100RFB	Yes	Yes
R29	1	RES SMD 100 OHM 1% 1/10W 0603	100		0603	Vishay	CRCW0603100RFB	Yes	Yes
R30	1	RES SMD 2.32K OHM 1% 1/16W 0402	2.32K		0402	Vishay	CRCW04022K32FK	Yes	Yes
SW1	1	SWITCH TACTILE SPST-NO 0.05A 12V	434153017835		MOM1 SMD	Würth Elektronik	434153017835	Yes	Yes
TP1 TP4 TP5 TP6 TP7 TP9 TP11 TP13 TP15	9	Passive Probe Tip Tektronix P5050 (Tan) Tip	DNI		0.75mm			Yes	Yes
TP2 TP3	2	Passive Probe Tip Old	DNI		0.6mm			Yes	Yes
TP8 TP10 TP12 TP14 TP16	5	Surface Mount 1mm Circle Test Point	DNI		1mm Circle			Yes	Yes
U1	1	Digital Temperature Sensor with 2-wire Interface	NCT375		DFN8 2x2mm	ON Semiconductor	NCT375MNR2G	No	Yes
U2	1	Linear VR, Dual Power Mode	NCP171		XDFN4	ON Semiconductor	NCP171AMX280275TCG	No	Yes
U3 U4	2	Current-Shunt Monitor, Voltage Output, Bi-Directional Zero-Drift, Gain = 100V/V	NCS214R		SC-70-6	ON Semiconductor	NCS214RSQT2G	No	Yes
U5	1	Low Quiescent Current, Programmable Delay Time, Supervisory Circuit	NCP308MTADJTBG		WDFN6 2x2mm	ON Semiconductor	NCP308MTADJTBG	No	Yes
U6	1	EFM32 Giant Gecko 32-bit Microcontroller	EFM32GG380F1024		QFP100 14x14	Silicon Labs	EFM32GG380F1024-QFP100	Yes	Yes
U7	1	3.3V Voltage Regulator, LDO, Ultra Low Noise, Ultra Low Iq, 500 mA	NCP705		WDFN6	ON Semiconductor	NCP705MT33TCG	No	Yes
U8	1	USB to BASIC UART IC	FT230X		QFN16 4x4	FTDI	FT230XQ-R	Yes	Yes
Y1	1	Crystals 32.768 kHz 12.5 pF +/-20 PPM -40/+85C	32.768 kHz		2 pin w/ shell	Micro Crystal	MS3V-T1R-32.768kHz-12.5pF-20PPM-TA-QC-Au	Yes	Yes
Y2	1	CRYSTAL 48.0000MHZ 8PF SMD	48MHz		5x3.2mm	NDK	NX5032GA-48.00000MHZ-LN-CD-1	Yes	Yes