



Bill of Materials for the STR-USBC-2PORT-100W-EVK Evaluation Board

Designator	Quantity	Description	Value	Tolerance	Footprint	Manufacturer	Manufacturer Part Number	Substitution Allowed	Lead Free
C1 C130	2	Generic 0402 SMD Capacitor	1uF		0402	Murata	GCM155C71A105KE38D	Yes	Yes
C2 C41 C42 C91 C93	5	Generic 0402 SMD Capacitor	1000pF		0402	Murata	GCM155R71H102KA37D	Yes	Yes
C3 C58	2	Generic 0603 SMD Capacitor	1nF		0603	Murata	GCM188R71H102KA37J	Yes	Yes
C8 C9 C11 C12 C19 C20 C24 C28 C32 C54 C55 C63	12	Generic 0603-1210 SMD Capacitor	10uF		1210	Murata	GCM32EC71H106KA03K	Yes	Yes
C18 C56	2	Generic 0603 SMD Capacitor	DNP		0603			Yes	Yes
C21 C22 C25 C76 C77 C78	6	Generic 0805 SMD Capacitor	4.7uF		0805	Murata	GCM21BC71A475KA73L	Yes	Yes
C23 C26 C72 C79	4	Generic 0603 SMD Capacitor	0.1uF		0603	Murata	GCM188R71H104KA57D	Yes	Yes
C27 C70 C124	3	Generic 0805 SMD Capacitor	1uF		0805	Murata	GCM21BR71H105KA03L	Yes	Yes
C29 C38 C84 C88 C102 C105 C107 C108 C113	9	Generic 0402 SMD Capacitor	DNP		0402			Yes	Yes
C34 C35 C85 C86	4	Generic 0402 SMD Capacitor	10nF		0402	Murata	GCM155R71H103KA55D	Yes	Yes
C39 C90	2	Generic 0603 SMD Capacitor	1uF		0603	Murata	GRT188R61H105KE13D	Yes	Yes
C43 C95	2	Generic 0402 SMD Capacitor	3300pF		0402	Murata	GCM155R71H332KA37D	Yes	Yes
C45 C94	2	Generic 0402 SMD Capacitor	10pF		0402	Murata	GCM1555C1H100JA16D	Yes	Yes
C48 C49 C50	3	Nippon SMT Bulk Cap, 6.3mm-10mm Dia	100uF		Bulk SMT 6mm-10mm	Panasonic	EEHZA1H101P	Yes	Yes
C53 C57 C59 C80	4	Generic 0603-1210 SMD Capacitor	10uF		0603-1210	Murata	GCM32EC71H106KA03K	Yes	Yes
C74 C99 C111	3	Generic 0805 SMD Capacitor	10uF		0805	Murata	GCM21BR70J106KE22L	Yes	Yes
C75 C104 C120 C125 C127 C128	6	Generic 0603 SMD Capacitor	1uF		0603	Murata	GCM188R71C105KA64J	Yes	Yes
C96 C117	2	Generic 0603 SMD Capacitor	1uF		0603	Murata	GCM188R71E105KA64D	Yes	Yes
C97 C103 C115 C116 C121	5	Generic 0402 SMD Capacitor	0.1uF		0402	Murata	GCM155R71H104ME02D	Yes	Yes
C98 C101 C122 C126	4	Generic 0402 SMD Capacitor	390pF		0402	Murata	GCM155R71H391KA37D	Yes	Yes
C100	1	Generic 0805 SMD Capacitor	10uF		0805	Murata	GCM21BR71A106KE22K	Yes	Yes
C106	1	Generic 0402 SMD Capacitor	560pF		0402	Murata	GCM155R71H561KA37D	Yes	Yes
C109 C112 C118 C119	4	Generic 0603 SMD Capacitor	1uF		0603	Murata	GRT188R61A105KE01D	Yes	Yes
C110	1	Generic 0603-1210 SMD Capacitor	4.7uF		0603-1210	Murata	GCM32ER71H475KA55L	Yes	Yes
C114 C129	2	Generic 0603-1210 SMD Capacitor	10uF		0603-1210	Murata	GCM21BR70J106KE22	Yes	Yes
C123	1	Generic 0402 SMD Capacitor	DNP		0402			Yes	Yes
D1 D2 D6 D7 D9 D10 D12 D15 D20 D23 D24	11	Schottky Barrier Diode	NSVR05F40NX		DSN2 0402	ON Semiconductor	NSVR05F40NXT5G	No	Yes
D3	1	Generic SOD-323 Zener Diode	SZMM3Z18VT1G		SOD-323	ON Semiconductor	SZMM3Z18VT1G	No	Yes
D5	1	Generic SMB Bi-Directional TVS Diode	SZ1SMB30CAT3G		SMB	Littelfuse	SZ1SMB30CAT3G	Yes	Yes
D11	1	Auto ESD Protection Diodes	SESD7L		SOT-723	ON Semiconductor	SESD7L5.0	No	Yes
D13 D32 D33	3	Green LED	150060GS75000		0603	Würth Elektronik	150060GS75000	Yes	Yes
D14	1	Red LED	150060RS75000		0603	Würth Elektronik	150060RS75000	Yes	Yes

D16 D18 D19 D21 D25 D26 D28 D29	8	ESD Protection Diode Ultra Low Capacitance	SZESD7241		X2DFN2	ON Semiconductor	SZESD7241N2	No	Yes
D22	1	Surface Mount Schottky Power Rectifier	NRVB140SF		SOD-123	ON Semiconductor	NRVB140SFT3G	No	Yes
D30	1	Schottky Barrier Diode, 2.0 A, 20 V	NSR20F20NX		DSN2 0603	ON Semiconductor	NSR20F20NX	No	Yes
D31	1	Blue LED	150060BS75000		0603	Würth Elektronik	150060BS75000	Yes	Yes
D34	1	ESD Protection Diode	NSPM2051		UDFN2	ON Semiconductor	NSPM2051MUT	No	Yes
FB1 FB2	2	Ferrite Bead 50 Ohm 12A	50 Ohm		1206	Murata	BLM31SN500SZ1	Yes	Yes
FB3	1	Ferrite bead/Impedance type filter	220 Ohm		0805	Murata	BLM21AG221SH1	Yes	Yes
J1 J2 J12	3	Standard 1x3pin 100mil Pitch Header	613 003 111 21		1x3pin 100mil	Würth Elektronik	613 003 111 21	Yes	Yes
J4 J8	2	USB 3.1 Type C Receptacle - Horizontal THT/SMT	632 723 300 011		USB3.1 C PD	Würth	632 723 300 011	Yes	Yes
J5	1	Red Insulated 4mm socket for banana plugs	571-0500		Red Banana Rec	Deltron	571-0500	Yes	Yes
J7	1	Black Insulated 4mm socket for banana plugs	571-0100		Black Banana Rec	Deltron	571-0100	Yes	Yes
J9	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
J13	1	Mini USB1/2 Type-B Connector	65100516121		Mini USB1/2 B	Würth Elektronik	65100516121	Yes	Yes
J14 J15 J16	3	Standard 1x2pin 100mil Pitch Header	613 002 111 21		1x2pin 100mil	Würth Elektronik	613 002 111 21	Yes	Yes
L1 L3	2	Panasonic Auto Shielded 17A 6.6mohm	3.3uH		10.9x10mm	Panasonic	ETQP6M3R3YLC	Yes	Yes
L2	1	Generic 7x7mm Inductor	160nH		7x7mm	Coilcraft	XAL5030-161ME	Yes	Yes
L4	1	Fixed SMD Shielded Inductor	4.7uH		3x3mm	Würth Elektronik	78438335047	Yes	Yes
L5	1	Fixed SMD Shielded Inductor	4.7uH		2.5x2mm	Würth Elektronik	78438323047	Yes	Yes
Q1 Q2 Q3 Q4 Q5 Q7 Q9 Q10 Q11 Q12 Q13 Q14	12	Generic u8-FL N-Channel Power MOSFET	NVTF55C453		u8-FL	ON Semiconductor	NVTF55C453	No	Yes
Q6 Q19	2	Generic SO8-FL DFN-5 P-Channel Power MOSFET	NVMFS5A140PLZ		SO8-FL	ON Semiconductor	NVMFS5A140PLZ	No	Yes
Q8	1	General Purpose Auto BJT PNP	SMMBT3906WT1G		SC-70	ON Semiconductor	SMMBT3906WT1G	No	Yes
Q15 Q16 Q17 Q18 Q20 Q21	6	Automotive Small Signal MOSFET 60V 340mA 2.5 Ohm Single N-Channel SOT-323	2V7002W		SOT-323	ON Semiconductor	2V7002W	No	Yes
R5 R6 R138 R175	4	Generic 0402 SMD Resistor	100		0402	Vishay	CRCW0402100RFKED	Yes	Yes
R7 R8 R116 R117	4	Generic 0402 SMD Resistor	1M		0402	Vishay	CRCW04021M00FKED	Yes	Yes
R9 R10 R107 R111 R128 R132 R134 R143 R145 R148 R153 R156 R157 R158 R159 R161 R172 R177 R183	20	Generic 0402 SMD Resistor	10k		0402	Vishay	CRCW040210K0FKED	Yes	Yes
R11 R64	2	Generic 0805 SMD Resistor	1		0805	Vishay	CRCW08051R00JNEAHP	Yes	Yes
R18 R26 R66 R70	4	Generic 2512 SMD Resistor	0.003		2512	Panasonic	ERJ-MP4PF3M0U	Yes	Yes
R27	1	Generic 1206 SMD Resistor	1k		1206	Vishay	CRCW12061K00JNEA	Yes	Yes
R30 R65	2	Generic 0805 SMD Resistor	DNP		0805			Yes	Yes
R31 R34 R38 R39 R40 R44 R45 R74 R76 R82 R84 R85 R90 R91 R142 R144 R163 R165 R166	19	Generic 0402 SMD Resistor	0		0402	Vishay	CRCW04020000Z0ED	Yes	Yes
R32 R41 R42 R48 R52 R73 R75 R88 R89 R103 R104 R126 R135 R141 R146 R147 R164 R167 R178 R184	20	Generic 0402 SMD Resistor	DNP		0402			Yes	Yes
R33	1	Generic 0603 SMD Resistor	10k		0603	Vishay	CRCW060310K0FKEA	Yes	Yes
R35 R36 R51 R79 R80 R102	6	Generic 0402 SMD Resistor	1		0402	Vishay	CRCW04021R00JNEDIF	Yes	Yes
R46 R47 R49 R50 R94 R95 R100 R101	8	Generic 0402 SMD Resistor	10		0402	Vishay	CRCW040210R0JNTD	Yes	Yes
R53 R105	2	Generic 0402 SMD Resistor	15.4k		0402	Vishay	CRCW040215K4FKED	Yes	Yes
R54 R106	2	Generic 0402 SMD Resistor	20.5k		0402	Vishay	CRCW040220K5FKED	Yes	Yes
R55 R107	2	Generic 0402 SMD Resistor	20k		0402	Vishay	CRCW040220K0FKED	Yes	Yes
R56 R108	2	Generic 0402 SMD Resistor	90.9k		0402	Vishay	CRCW040290K9FKED	Yes	Yes
R58 R112	2	Generic 0402 SMD Resistor	22.6k		0402	Vishay	CRCW040222K6FKED	Yes	Yes
R60 R115	2	Generic 0603 SMD Resistor	DNP		0603			Yes	Yes
R61 R114	2	Generic 0402 SMD Resistor	14k		0402	Vishay	CRCW040214K0FKED	Yes	Yes
R109 R190 R191	3	Generic 0402 SMD Resistor	21.5k		0402	Vishay	CRCW040221K5FKED	Yes	Yes
R110	1	Generic 0402 SMD Resistor	12.1k		0402	Vishay	CRCW040212K1FKED	Yes	Yes
R113	1	Generic 0402 SMD Resistor	25k		0402	Vishay	CRCW040225K0FKED	Yes	Yes
R122 R139 R154 R176 R180	5	Generic 0402 SMD Resistor	100k		0402	Vishay	CRCW0402100KFKED	Yes	Yes
R123 R124 R125 R149 R155 R160 R168 R169 R171 R174 R179	11	Generic 0402 SMD Resistor	1k		0402	Vishay	CRCW04021K00FKED	Yes	Yes
R127	1	Generic 0402 SMD Resistor	510		0402	Vishay	CRCW0402510RFKED	Yes	Yes
R131	1	Generic 0402 SMD Resistor	1		0402	Vishay	CRCW04021R00FKED	Yes	Yes
R140	1	Generic 0402 SMD Resistor	4.7k		0402	Vishay	CRCW04024K70FKED	Yes	Yes
R150	1	Generic 0402 SMD Resistor	1.02k		0402	Vishay	CRCW04021K02FKED	Yes	Yes
R151	1	Generic 0402 SMD Resistor	8.66k		0402	Vishay	CRCW04028K66FKED	Yes	Yes
R152	1	Generic 0402 SMD Resistor	324		0402	Vishay	CRCW0402324RFKED	Yes	Yes
R162 R173	2	Generic 0402 SMD Resistor	6.04k		0402	Vishay	CRCW04026K04FKED	Yes	Yes
R170	1	Generic 0402 SMD Resistor	11.5k		0402	Vishay	CRCW040211K5FKED	Yes	Yes
R181	1	Generic 0402 SMD Resistor	82k		0402	Vishay	CRCW040282K0FKED	Yes	Yes
R182	1	Generic 0402 SMD Resistor	261k		0402	Vishay	CRCW0402261KFKED	Yes	Yes
R185	1	ES SMD 10.5K OHM 1% 1/16W 04	10.5K		0402	Vishay	CRCW040210K5FK	Yes	Yes

R192 R195	2	RES SMD 1K OHM 1% 1/16W 0402	499	0402	Vishay	CRCW0402499RFK	Yes
R193 R194	2	RES SMD 1K OHM 1% 1/16W 0402	1K	0402	Vishay	CRCW04021K00FK	Yes
SW1	1	TACT SWITCH	434121025816	MOM1 SMD	Würth Elektronik	434121025816	Yes
P6 TP9 TP10 TP11 TP14 TP15 TP16 TP17 TP18 TP19 TP20 TP21 TP22	18	Surface Mount 1mm Circle Test Poir	TP	1mm Circle			Yes
U1	1	Temp Monitor	NVT211C	WDFN8 2x2	ON Semiconductor	NVT211C	Yes
U6 U13	2	4 Switch Buck-Boost	NCV81599	QFN32 5x5	ON Semiconductor	NCV81599MWTXG	Yes
U14 U22	2	USB-PD Port Control	FUSB302TMPX	14-lead MLP	ON Semiconductor	FUSB302TMPX	Yes
U15 U23	2	High Speed Digital (HSD) Port Pr	FUSB252	UMLP	ON Semiconductor	FUSB252UMX	Yes
U16 U21	2	r, Voltage Output, Bi-Directional Zer	NCV213	SC-70-6	ON Semiconductor	NCV213RSQT2G	Yes
U17	1	w-power ARM Cortex -M4 32bit MC	STM32L476Rx	LQFP64 10x10	ST Micro	STM32L476RET6	Yes
U18 U20	2	r, Voltage Output, Bi-Directional Zer	NCV214	SC-70-6	ON Semiconductor	NCV214RSQT2G	Yes
U19	1	MHz Automotive Buck Switching R	NCV890100M	DFN8 3x3	ON Semiconductor	NCV890100M	Yes
U24	1	y Cvcle Step?Down Synchronous R	NCV890430	DFN8 3x3	ON Semiconductor	NCV890430MW50TXG	Yes
U25	1	USB to BASIC UART IC	FT230X	QFN16 4x4	FTDI	FT230XQ-R	Yes
U26	1	it Current, I Q 13 m A, Ultra-Low N	NCV8705	WDFN6	ON Semiconductor	NCV8705MTADJTCG	Yes
U27	1	512Kb I2C CMOS Serial EEPROM	CAT24C512	UDFN-8	ON Semiconductor	CAT24C512HU5	Yes
Y1	1	CRYSTAL 32.000MHZ 8PF SMD	32MHz	4pin 3.2x2.5mm	AVX	CX3225GB32000D0HPQCC	Yes
USB Cable	1	BL USB A-MNI B CON 3' 28/28 AW	3021003-03		Qualtek	3021003-03	Yes
Standoffs	4	HEX SPACER M3 PLASTIC 10MM	R30-9401000		Harwin Inc.	R30-9401000	Yes
Screws	4	CH SCREW PAN HEAD PHILLIPS	NMS-306		Essentra Components	NMS-306	Yes