

Bill of Materials for theSTR-100V-BUCK-NCP1034-GEVB Evaluation Board



Designator(Main Board)	Quantity	Description	Value	Tolerance	Footprint	Manufacturer	Manufacturer Part Number	Substitution Allowed	Lead Free
C1 C2 C22 C25 C31 C32 C33 C44 C50 C57 C63 C66	12	CAP CER 1UF 16V X5R 0402	1uF		0402	Murata	GRM155R61C105KA1 2	Yes	Yes
C3 C4 C17 C23 C38 C39 C42	7	CAP CER 10000PF 100V X7R 0603	10nF		0603	Murata	GCM188R72A103KA3 7D	Yes	Yes
C5	1	CAP Aluminum Electrolytic 47UF 20% 250V T/H	47uF		Radial 12.5x5mm	Panasonic	EEU-EE2E470	Yes	Yes
C6 C7 C8 C12	4	CAP CER 1UF 250V X7R 2220	1uF		2220	Murata	GRJ55DR72E105KWJ 1	Yes	Yes
C9 C14 C15 C27 C28	5	CAP CER 22UF 63V X7R 2220 Metal Terminal	22uF		2220	Murata	KRM55WR71J226MH 01	Yes	Yes
C10 C11 C26	0	DNI	DNI		DNI	DNI	DNI	Yes	Yes
C13	1	CAP CER 2.2NF 50V C0G 0603	2.2nF		0603	Murata	GRM1885C1H222JA0 1	Yes	Yes
C16	1	CAP CER 330PF 100V C0G 0603	330pF		0603	Murata	GCM1885C2A331JA1 6	Yes	Yes
C18 C35 C36 C37 C46 C47	6	CAP CER 1UF 25V X7R 0603	1uF		0603	Murata	GCM188R71E105KA6 4	Yes	Yes
C19	1	CAP CER 0.22UF 50V X7R 0603	0.22uF		0603	Murata	GCM188R71H224KA6 4J	Yes	Yes
C20	1	CAP CER 0.22UF 250V X7R 1210	0.22uF		1210	Murata	GCM188R71H224KA6 4J	Yes	Yes
C21 C52	2	CAP CER 10UF 25V X5R 0603	10uF		0603	Murata	GRM188R61E106MA 73	Yes	Yes
C24	0	DNI	DNI		DNI			Yes	Yes
C29 C34 C51 C62 C68	5	CAP CER 0.1UF 50V X7R 0402	0.1uF		0402	Murata	GCM155R71H104KE0 2	Yes	Yes
C30	0	DNI	DNI		DNI			Yes	Yes
C40 C41 C43	0	DNI	DNI		DNI			Yes	Yes
C45	1	CAP CER 0.1UF 100V X7R 0603	0.1uF		0603	Murata	GRM188R72A104KA3 5D	Yes	Yes
C48 C49 C53 C55 C56 C64	6	CAP CER 4.7UF 6.3V X5R 0402	4.7uF		0402	Murata	GRM155R60J475ME4 7D	Yes	Yes
C54	1	CAP CER 0.15UF 50V X7R 0603	0.15uF		0603	Murata	GCM188R71H154KA6 4	Yes	Yes
C58 C61	2	CAP CER 12PF 50V C0G/NP0 0402	12pF		0402	Murata	GJM1555C1H120JB01 D	Yes	Yes

C59 C60	2	CAP CER 7.5PF 50V C0G/NP0 0402	7.5pF		0402	Murata	GJM1555C1H7R5CB01D	Yes	Yes
C65	1	CAP CER 0.015UF 100V X7R 0603	15nF		0603	Murata	GCM188R72A153KA37D	Yes	Yes
C67	1	CAP CER 68NF 50V X7R 0603	68nF		0603	Murata	GCJ188R71H683KA12	Yes	Yes
D1 D3	2	Schottky Barrier Diode	NSVR05F40NX		DSN2 0402	ON Semiconductor	NSVR05F40NXT5G	Yes	Yes
D2	1	Schottky Barrier Diode, 1A	S115FA		SOD-123FA	ON Semiconductor	S115FA	Yes	Yes
D4	1	Zener Diode, 2.7V, 500mW, Low I_ZT SOD-123 Surface Mount	MMSZ4682		SOD-123	ON Semiconductor	MMSZ4682T1G	Yes	Yes
D5	1	Yellow LED	150060YS75000		0603	Würth Elektronik	150060YS75000	Yes	Yes
D6	1	Green LED	150060GS75000		0603	Würth Elektronik	150060GS75000	Yes	Yes
D7	1	Blue LED	150060BS75000		0603	Würth Elektronik	150060BS75000	Yes	Yes
D8	1	Red LED	150060RS75000		0603	Würth Elektronik	150060RS75000	Yes	Yes
D9	1	ESD Protection Diodes	ESD7205		SOT-723	ON Semiconductor	ESD7205DT5G	Yes	Yes
D10 D11	2	Schottky Barrier Diode, 2.0 A, 20 V	NSR20F20NX		DSN2 0603	ON Semiconductor	NSR20F20NX	Yes	Yes
FB1	1	Ferrite bead 220 Ohm 0805 1LN	220@100M		0805	Würth Elektronik	782853221	Yes	Yes
J1 J4 J5 J6 J7 J8 J9 J10 J12 J17 J18	11	Standard 1x2pin 100mil Pitch Header	613 002 111 21		1x2pin 100mil	Würth Elektronik	613 002 111 21	Yes	Yes
J2 J3 J15 J16	4	PLASTIC HEXAGON NUT M3	709940300		M3 Nut	Würth	709940300	Yes	Yes
J11	1	Standard 1x3pin 100mil Pitch Header (I2C Specific)	613 003 111 21		1x3pin 100mil	Würth Elektronik	613 003 111 21	Yes	Yes
J13	1	Standard 1x4pin 100mil Pitch Header	613 004 111 21		1x4pin 100mil	Würth Elektronik	613 004 111 21	Yes	Yes
J14	1	DLT 8 pin connector	IPBS-104-01-T-D-GP		2x4pin 165mil	Samtec	IPBS-104-01-T-D-GP	Yes	Yes
J19 J20 J27 J28	4	PLASTIC SPACER STUD METRIC THREAD M3 15MM F-M	971150365		M3 15MM Standoff	Würth	971150365	Yes	Yes
J21 J22	2	Black Insulated 4mm socket for banana plugs	571-0100		Black Banana Rec	Deltron	571-0100	Yes	Yes
J23 J24	2	Red Insulated 4mm socket for banana plugs	571-0500		Red Banana Rec	Deltron	571-0500	Yes	Yes
J25	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
J26	1	Mini USB1/2 Type-B Connector	65100516121		Mini USB1/2 B	Würth Elektronik	65100516121	Yes	Yes

JP1 JP2 JP3	0	DNI	DNI		DNI	DNI	DNI	Yes	Yes
JP4	0	DNI	DNI		DNI	DNI	DNI	Yes	Yes
L1	1	Würth LHMI Shielded Power Inductor 100uH 140.8mOhm 2.6A Irated 5.2A Isat	100uH		13.5x12.5mm	Würth Elektronik	744373965101	Yes	Yes
NT1 NT2 NT3 NT4 NT5 NT6 NT7	0	DNI	DNI		DNI			Yes	Yes
Q1 Q2	2	N-Channel Power Trench MOSFET 150V, 13A, 90mOhm	FDMC86248		SO8-FL+u8FL	ON Semiconductor	FDMC86248	Yes	Yes
Q3 Q5 Q6 Q9 Q11 Q12	6	Small Signal MOSFET 60V 310mA 2.5 Ohm Single N-Channel SOT-23	2N7002E		SOT-23	ON Semiconductor	2N7002E	Yes	Yes
Q4	1	Small Signal MOSFET 60V 380mA 1.6 Ohm Single N-Channel SOT-23	2N7002K		SOT-23	ON Semiconductor	2N7002K	Yes	Yes
Q7 Q8 Q10	3	Small Signal MOSFET 60V 340mA 2.5 Ohm Single N-Channel SOT-323	2N7002W		SOT-323	ON Semiconductor	2N7002WT1G	Yes	Yes
R1 R2 R3 R4 R22 R23	6	RES SMD 4.75 OHM 1% 1/16W 0402	4.75		0402	Vishay Dale	CRCW04024R75FKE D	Yes	Yes
R5	1	RES SMD 0.03 OHM Current Sense 1/4W 0805	0.03		0805	Vishay Dale	WSL0805R0300FEA1 8	Yes	Yes
R6	1	RES SMD 0.015 OHM Current Sense 1/4W 0805	0.015		0805	Vishay Dale	WSL0805R0150FEA1 8	Yes	Yes
R7	1	RES SMD 6.19K OHM 1% 1/8W 0805	6.19K		0805	Vishay Dale	CRCW08056K19FKE A	Yes	Yes
R8 R57	2	RES SMD 10 OHM 1% 1/10W 0603	10		0603	Vishay Dale	CRCW060310R0FKE A	Yes	Yes
R9	1	RES SMD 1.5K OHM 1% 1/10W 0603	1.5K		0603	Vishay Dale	CRCW06031K50FKE A	Yes	Yes
R10	1	RES SMD 69.8K OHM 0.1% 1/10W 0603	69.8K		0603	Panasonic	ERA-3AEB6982V	Yes	Yes
R11	1	RES SMD 5.49K OHM 0.1% 1/10W 0603	5.49K		0603	Panasonic	ERA-3AEB5491V	Yes	Yes
R12	1	RES SMD 9.09K OHM 1% 1/10W 0603	9.09K		0603	Vishay Dale	CRCW06039K09FKE A	Yes	Yes
R13	1	RES SMD 10K OHM 1% 1/4W 1206	10K		1206	Vishay Dale	CRCW120610K0FKE A	Yes	Yes
R14	1	RES SMD 10.7K OHM 1% 1/10W 0603	10.7K		0603	Vishay Dale	CRCW060310K7FKE A	Yes	Yes
R15	1	RES SMD 93.1K OHM 1% 1/10W 0603	93.1K		0603	Vishay Dale	CRCW060393K1FKE A	Yes	Yes
R16 R25 R56	3	RES SMD 0 OHM JUMPER 1/10W 0603	0		0603	Vishay Dale	CRCW06030000Z0EA	Yes	Yes
R17	1	RES SMD 1.5 OHM 1% 1/8W 0805	1.5		0805	Vishay Dale	CRCW08051R50FKE A	Yes	Yes
R18 R19 R62 R74	4	RES SMD 10K OHM 1% 1/16W 0402	10K		0402	Vishay Dale	CRCW040210K0FKE D	Yes	Yes

R20 R58	2	RES SMD 100K OHM 1% 1/10W 0603	100K		0603	Vishay Dale	CRCW0603100KFKE A	Yes	Yes
R21	0	DNI	DNI		DNI			Yes	Yes
R24 R26 R33 R40 R41 R42 R54 R55 R59 R64 R71 R72 R73	13	RES SMD 10K OHM 1% 1/10W 0603	10K		0603	Vishay Dale	CRCW060310K0FKE A	Yes	Yes
R27	1	RES SMD 324K OHM 0.1% 1/10W 0603	324K		0603	Panasonic	ERA-3AEB3243V	Yes	Yes
R28	1	RES SMD 499 OHM 1% 1/4W 1206	499		1206	Vishay Dale	CRCW1206499RFKE A	Yes	Yes
R29 R76	2	RES SMD 10K OHM 0.1% 1/16W 0402	10K		0402	Panasonic	ERA-2AEB103X	Yes	Yes
R30	1	RES SMD 8.06K OHM 1% 1/10W 0603	8.06K		0603	Vishay Dale	CRCW06038K06FKE A	Yes	Yes
R31	1	RES SMD 40.2K OHM 1% 1/10W 0603	40.2K		0603	Vishay Dale	CRCW060340K2FKE A	Yes	Yes
R32 R34 R35	3	RES SMD 1K OHM 1% 1/16W 0402	1K		0402	Vishay Dale	CRCW04021K00FKE D	Yes	Yes
R36	1	3362P 250mil Square Trimpot Trimming Potentiometer	100k		250mil	Bourns Inc.	3362P-1-104LF	Yes	Yes
R37	1	RES SMD 75K OHM 0.1% 1/16W 0402	75K		0402	Panasonic	ERA-2AEB753X	Yes	Yes
R38	1	RES SMD 15K OHM 0.1% 1/16W 0402	15K		0402	Panasonic	ERA-2AEB153X	Yes	Yes
R39	1	RES SMD 4.75K OHM 1% 1/10W 0603	4.75K		0603	Vishay Dale	CRCW06034K75FKE A	Yes	Yes
R43	1	RES SMD 73.2K OHM 1% 1/10W 0603	73.2K		0603	Vishay Dale	CRCW060373K2FKE A	Yes	Yes
R44 R45 R49	3	RES SMD 3.09K OHM 1% 1/10W 0603	3.09K		0603	Vishay Dale	CRCW06033K09FKE A	Yes	Yes
R46	1	RES SMD 27.4K OHM 1% 1/10W 0603	27.4K		0603	Vishay Dale	CRCW060327K4FKE A	Yes	Yes
R47	1	RES SMD 10K OHM 1% 1/8W 0805	10K		0805	Vishay Dale	CRCW080510K0FKE A	Yes	Yes
R48	1	RES SMD 422K OHM 1% 1/10W 0603	422K		0603	Vishay Dale	CRCW0603422KFKE A	Yes	Yes
R50	1	RES SMD 442K OHM 1% 1/10W 0603	442K		0603	Vishay Dale	CRCW0603442KFKE A	Yes	Yes
R51	0	DNI	DNI		DNI			Yes	Yes