

**Bill of Materials for the STR-PWRNCV890430-R0-GEVK Evaluation Board**



Designator	Quantity	Description	Value	Tolerance	Footprint	Manufacturer	Manufacturer Part Number	Substitution Allowed	Lead Free
Vin Vout	2	10A; 4mm; TH; Red; 571-0500-01 ; DELTRON	Red			DELTRON	571-0500-01	Yes	Yes
Utmp	1	Industry Standard Digital Temperature Sensor with 2-wire Interface; SO-8; ON Semiconductor			SO-8	ON Semiconductor	NCT375DR2G	No	Yes
Us	1	NCV8664C; 5V/150mA 2.0% Very Low Iq Low Dropout Linear Regulator; DPAK-3; ON Semiconductor			DPAK-3	ON Semiconductor	NCV8664CDT50RKG	No	Yes
Ulin Ulout	2	Current-Shunt Monitors Voltage Output Bidirectional Zero-Drift Low- or High-Side Current Sensing; SO-8; ON Semiconductor			SC-88/SC70-6/SOT-363	ON Semiconductor	NCS213RSQT2G	No	Yes
Uee	1	EEPROM Serial 512-Kb I2C; SO-8; ON Semiconductor			SO-8	ON Semiconductor	CAT24C512WI-GT3	No	Yes
U3	1	PCB Footprint for 2 x 2 inch PCB Module						Yes	Yes
U2	1	PCB Footprint for 1 x 1 inch PCB Module						Yes	Yes
U1	1	PCB Footprint for 0.5 x 0.5 inch PCB Module						Yes	Yes
RtrG	1	General Purpose Chip Resistors 220 Ohm +/- 1% -55 to 155 degC 0603 (1608 Metric) RoHS Tape and Reel			603	Yageo	RC0603FR-07220RL	Yes	Yes
Rpus	1	RES SMD 0 OHM JUMPER 0603; Yageo	0R		2512	Yageo	RC2512JK-070RL	Yes	Yes
Rpds	1	51; 1/10W; 1%; 0603; Yageo	51		603	Yageo	RC0603FR-0751RL	Yes	Yes
Rpdlt1 Rpdlt2	2	Chip Resistor 50 Ohm +/- 1% 0.1 W -55 to 155 degC 0603 (1608 Metric) RoHS Tape and Reel	50		603	Vishay Dale	CRCW060350R0FKEA	Yes	Yes
Rpd0 Rpd1 Rpd2 Rpd3 RpdEN RpdPG Rsc1 Rsd1 Rtmp	9	10k; 1/10W; 1%; 0603; Yageo	10k		603	Yageo	RC0603FR-0710KL	Yes	Yes
Rload1 Rload2 Rload3	3	3R3 1W 5% 2512 (6432 Metric) SMD	3.30 Ohm		2512	Vishay Dale	CRCW25123R30JNEG	Yes	Yes
Riu Rou	2	18 kOhms ± 0.1% 0.1W 1 / 10W chip resistance 0603 (1608 metric) thin film	18k		603	Yageo	RT0603BRD0718KL	Yes	Yes
Rin Rout	2	RES SMD 0.007 OHM 2W 2512; Yageo	0.007R		2512	Yageo	PE2512FKE7W0R007L	Yes	Yes
Rim Rip Ron Rop	4	4.7; 1/10W; 1%; 0603; Yageo	4R7		603	Yageo	RC0603FR-074R7L	Yes	Yes
Ril Rol	2	RES SMD 2K OHM 0.1% 1 / 10W 0603	2k		603	Yageo	RT0603BRD072KL	Yes	Yes
Rgsp	1	RES SMD 10K OHM 1% 1/4W 1206			1206	Samsung Electro-Mechanics	RC3216F103CS	Yes	Yes
ReuG	1	Chip Resistor 1.2 KOhm +/- 5% 0.1 W -55 to 155 degC 0603 (1608 Metric) RoHS Tape and Reel			603	Yageo	RC0603JR-071K2L	Yes	Yes
Ren2	1	Chip Resistor 10 KOhm +/- 1% 01 W -55 to 155 degC 0603 (1608 Metric) RoHS Tape and Reel			603	Yageo	RC0603FR-0710KL	Yes	Yes
Ren1	1	Chip Resistor 4.7 KOhm +/- 1% 0.1 W -55 to 155 degC 0603 (1608 Metric) RoHS Tape and Reel			603	Yageo	RC0603FR-074K7L	Yes	Yes
RdG	1	Chip Resistor 100 KOhm +/- 1% 0.1 W -55 to 155 degC 0603 (1608 Metric) RoHS Tape and Reel			603	Yageo	RC0603FR-07100KL	Yes	Yes
QL	1	Single N-Channel Logic Level Power MOSFET 30 V 230 A 1.15 mΩ			DFN-5-488AA	On Semiconductor	NTMFS4C302NT1G	No	Yes
Qenpmos Qrp	2	P-Channel Power MOSFET -40 V -70 A 10.4 mOhm Single 3-Pin ATPAK Pb-Free Tape and Reel			DPAK (Single Gauge) / ATPAK	On Semiconductor	ATP108-TL-H	No	Yes
Qen	1	Amplifier Transistor NPN Silicon 3-Pin TO-92 Bulk Box				On Semiconductor	BC546BTF	No	Yes
LOAD TRANSIENT SYNC	2	SMB JACK STR; 50 OHM; TH; 1-1337482-0			SMB	TE Connectivity	1-1337482-0	Yes	Yes
JStrata	1	THT Angled Socket Header WR-PHD Pitch 2.54 mm Dual Row 16 pins				WUERTH ELECTRONIC	Wuerth_613016243121	Yes	Yes
Jin Jout	2	Large Screw Terminal TERM BLK 2P SIDE ENT 5.08MM PCB				On Shore Technology Inc.	OSTTC022162	Yes	Yes
J8 J9 J10 J11 J12 J13 J14 J15 J16 J17	10	TestPoint; 1.6mm; TH; Keystone 5010	5010			Keystone Electronics	5010	Yes	Yes
J4 J5 J6 J7	4	TestPoint; 2.37mm; TH; CAMBION 160-1026-02-01-00 TERMINAL				CAMBION	160-1026-02-01-00 [NoValue]	Yes	Yes
GND_in GND_out	2	10A; 4mm; TH; Black; 571-0100-01 ; DELTRON	Black			DELTRON	571-0100-01	Yes	Yes

EN EN/IO2 IO0 IO1 IO2 IO3 PG PG/IO3 Vaux	9	Board-To-Board Connector; Header; 36; 22-28-4360	3 POS			Würth electronics	Wuerth_61300311121	Yes	Yes
Dz	1	36V 3 W Zener Voltage Regulator 2-Pin SMB Pb-Free Tape and Reel			SMB-2-403A-03_H	On Semiconductor	SZ1SMB5938BT3G	No	Yes
DpzL	1	Zener Voltage Regulator 225 mW 3-Pin SOT-23 Pb-Free Tape and Reel			SOT-23-3-318-08			Yes	Yes
Dpz	1	Zener Voltage Regulator 500 mW 2-Pin SOD-123 Pb-Free Tape and Reel			SOD-123-2-425-04	On Semiconductor		No	Yes
Dii Div Doi Dov	4	MMSZ52xxxT1G; 3.0V/0.5W; SOD-123; ON Semiconductor			SOD-123	ON Semiconductor	MMSZ5225BT1G	No	Yes
Csi Cso	2	0.1uF; 50V; X7R; 10%; 0603; GRM188R70J474KA01D; Murata	0.1u		603	Murata	G CJ188R71H104KA12D	Yes	Yes
Cout2	1	4.7uF; 10V; X7R; 10%; 0805; GCM21BR71C475KA73L; Murata	4.7u		805	Murata	GCM21BR71C475KA73L	Yes	Yes
Cout1	1	22uF; 10V; X7R; 10%; 1206; GCM31CR71A226KE02L; Murata	22u		1206	Murata	GCM31CR71A226KE02L	Yes	Yes
Cout	1	100uF; 63 V; 20%; EEUFR1J101B; Panasonic	100u		Rad_5	Panasonic	EEU-FR1J101B	Yes	Yes
CL	1	Current Loop Wire for Oscilloscope Current Probe	0.005		2.5 sqmm Cu Wire	N/A		Yes	Yes
Cin2 Csmem Cstmp	3	1uF; 50V; X7R; 10%; 0805; GCM21BR71H105KA03L; Murata	1u		805	Murata	GCM21BR71H105KA03L	Yes	Yes
Cin1	1	10uF; 25V; X7R; 10%; 1206; GRT31CR71E106KE13; Murata	10u		1206	Murata	GRM32EE70G107ME19L	Yes	Yes
Cin	1	100uF; 63 V; 20%; EEUFR1J101B; Panasonic	100u		Rad_5	Panasonic	EEUFR1J101B	Yes	Yes
Cin	1	22µF ± 10% 10V ceramic capacitors X7R 1206 (3216 metric)					GCM31CR71A226KE02L	Yes	Yes
Cout	1	10µF ± 10% 10V ceramic capacitors X7R 0805 (2012 metric)					GCM21BR71A106KE22K	Yes	Yes
L1	1	2.2µH shielded thin film inductor 2.6A 84mOhm Max 1008 (2520 metric)					TFM252012ALMA2R2MTAA	Yes	Yes
Rrst	1	10 kOhms ± 1% 0.1W 1 / 10W chip resistance 0603 (1608 metric) moisture resistant thick film					RC0603FR-0710KL	Yes	Yes
U1	1	Buck switching regulator IC positive fixed 3.3V 1 output 600mA 8-VDFN with exposed pad				ON Semiconductor	NCV890430MW50TXG	No	Yes