

Bill of Materials for the SECO-1KW-MCTRL-GEVB and SECO-1KW-MDK-GEVK Evaluation Board

Designator	Quantity	Description	Value	Tolerance	Footprint	Manufacturer	Manufacturer Part Number	Substitution Allowed	Lead Free
C1	1	ALU electrolyte low impedance 10µF 35V 2.6Ohm 20% Würth Elektronik	10 µF			Würth Elektronik	865080540004	Yes	Yes
C2	1	MLC capacitor 100nF 25V X7R 10% Würth Electronics	100 nF			Würth Elektronik	885012206071	Yes	Yes
C3, C5	2	MLC capacitor 100nF 50V X7R 10% Würth Electronics	100 nF			Würth Elektronik	885012206095	Yes	Yes
C4, C16	2	Film X2 capacitor 1µF 310V PP ± 10 % Würth Electronics	1 µF			Würth Elektronik	890334026027CS	Yes	Yes
C6	1	Polymer ALU elco 100µF 35V 30mOhm 20% Würth Elektronik	100 µF			Würth Elektronik	875115652007	Yes	Yes
C7	1	MLC capacitor 330nF 16V X7R 5% Murata	330 nF			Murata	GRM188R71C334JA01D	Yes	Yes
C8, C9	2	MLC capacitor 1nF 25V NP0 5% Würth Electronics	1 nF			Würth Elektronik	885012006044	Yes	Yes
C10, C52, C54, C55, C57, C62, C64	7	MLC capacitor 10nF 50V X7R 10% Würth Electronics	10 nF			Würth Elektronik	885012206089	Yes	Yes
C11	1	MLC capacitor 2µ2 10V X7R 10% Würth Electronics	2µ2			Würth Elektronik	885012206027	Yes	Yes
C12	1	MLC capacitor 220nF 50V X7R 10% Murata	220 nF			Murata	GRM188R71H224KAC4D	Yes	Yes
C13	1	MLC capacitor 68pF 50V C0G 5% Murata	68 pF			Murata	GRM1885C1H680JA01D	Yes	Yes
C14	1	MLC capacitor 470nF 50V X5R 10% Murata	470 nF			Murata	GRM188R61H474KA12D	Yes	Yes
C15	1	MLC capacitor 1nF 50V NP0 5% Würth Electronics	1 nF			Würth Elektronik	885012006063	Yes	Yes
C17, C51	2	Film X2 capacitor 680nF 310V PP ± 10 % Würth Electronics	680 nF			Würth Elektronik	890334026020CWurth Electronics		
			100 nF			Würth Elektronik	885012207072	Yes	Yes
C21	1	Polymer ALU elco 330µF 35V 20mOhm 20% Würth Elektronik	330 µF			Würth Elektronik	875075661010	Yes	Yes
C22, C24, C32	3	MLC capacitor 100nF 25V X5R 20% Würth Electronics	100 nF			Würth Elektronik	885012105018	Yes	Yes
C23, C25, C33	3	MLCC capacitor 22µF 25V X7R ± 20% TDK	22 µF			TDK	C4532X7R1E226M250KC	Yes	Yes
C34, C43, C47	3	MLC capacitor 1nF 50V X7R 10% Würth Electronics	1 nF			Würth Elektronik	885012206083	Yes	Yes
C35	1	Film X2 capacitor 100nF 310V PP ± 10 % Würth Electronics	100 nF			Würth Elektronik	890334025017CS	Yes	Yes
C36	1	ALU electrolytic capacitor 10µF 450V ± 20% Rubycon	10 µF			Rubycon	450BXF10M10X16	Yes	Yes
C37	1	MLC capacitor 330nF 50V X7R 1% Würth Electronics	330 nF			Würth Elektronik	885012207101	Yes	Yes
C38	1	MLC capacitor 47nF 50V X7R 10% Würth Electronics	47 nF			Würth Elektronik	885012206093	Yes	Yes

F2	1	Fuse, Cartridge, Time Delay, 4 A, 250 V, 5mm x 20mm, 0.2" x 0.79", FST Series	4 A	Schurter	0034.3123	Yes	Yes
FC1	1						

SHSA1, SHSA2, SHSB1, SHSB2	4	steel brass spacer for M3	spacer for M3	Würth Elektronik	963030042	Yes	Yes
ST1, ST2, ST3, ST4, ST5, ST6	6	Steel spacer external/internal M3x6 thread 30mm Würth Elektronik	Spacer M3 M/F 6/30 HEX7			Yes	Yes
TP1, TP2	2	PTH testpoint eyelet 3.2mm red Keystone Electronics	RED	Keystone Electronics	5005	Yes	Yes
TP3, TP17, TP24	3	PTH testpoint eyelet 3.2mm orange Keystone Electronics	ORANGE	Keystone Electronics	5008	Yes	Yes
TP4, TP18, TP21	3	PTH testpoint eyelet 3.2mm white Keystone Electronics	WHITE	Keystone Electronics	5007	Yes	Yes
TP5, TP9, TP13, TP22	4	PTH testpoint eyelet 3.2mm brown Keystone Electronics	BROWN	Keystone Electronics	5120	Yes	Yes
TP6, TP7, TP8, TP10, TP11, TP12, TP14, TP25, TP26	9	PTH testpoint eyelet 3.2mm yellow Keystone Electronics	YELLOW	Keystone Electronics	5009	Yes	Yes
TP15, TP16	2	PTH testpoint eyelet 3.2mm blue Keystone Electronics	BLUE	Keystone Electronics	5122	Yes	Yes
TP20, TP23, TP28	3	PTH testpoint eyelet 3.2mm purple Keystone Electronics	PURPLE	Keystone Electronics	5124	Yes	Yes
TP27	1	PTH testpoint eyelet 3.2mm black Keystone Electronics	BLACK	Keystone Electronics	5006	Yes	Yes
TR1, TR2	2	Custom transformer for PFC 2 Phase PFC Controller, 10V to 20V Supply, 50 µA Startup, 3.5mA Operating, 30kHz, SOIC-16	750314724	Würth Elektronik	750314724	Yes	Yes
U1	1	Inverter Intelligent Power Module (IPM), 600 V, 10 A	NCP1632	ON Semiconductor	NCP1632DR2G	No	Yes
U2	1	Low voltage rail to rail op amp, ON Semiconductor	NFAQ1060L36T	ON Semiconductor	NFAQ1060L36T	No	Yes
U3, U4, U5	3	Low Voltage Precision Adjustable Shunt Regulator 1.24 -16 V output, 20mA ±0.2%	NCS2003SN2T1G	ON Semiconductor	NCS2003SN2T1G	No	Yes
U7	1		TLV431	ON Semiconductor	TLV431CSN1T1G	No	Yes
WAC1, WAC2, WWSA1, WWSA2, WWSB1, WWSB2, WPDA, WPDB, WPDD, WPQA, WPQB, WSHC1, WSHC2, WSHD1 WHAD, WHAQ, WHBD, WHBQ	14	Plain washer for M3 screw according DIN125A	plain washer M3 DIN125A			Yes	Yes
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